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Mullan BUILD RFC Design Basis Report

MULLAN BUILD

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Mullan BUILD RFC Design Basis Report

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Mullan BUILD RFC Design Basis Report

1.0 Introduction

This Design Basis Report (DBR) provides an overview of the design, analyses, key design criteria, assumptions, and decisions related to the RFC design and future construction of the Mullan BUILD project. This DBR has been prepared for review by Missoula City/County to provide additional context about the design at the RFC stage. Design decisions and design exceptions have been documented throughout the design review workshops, which have taken place after each progress deliverable. All comments and decisions that have resulted from these reviews are documented and saved on the project SharePoint site in the 13.0 Deliverable Package Folder.

1.1 Project Summary

In November 2019, Missoula County/City was awarded a federal BUILD Grant for the development of infrastructure West of Reserve Street in the Mullan Road area of Missoula. The purpose of the grant is to promote maximum benefit within the area from development and mitigate negative impacts by increasing housing affordability, safety, multi-modal trips, and also improving environmental quality. The Mullan BUILD project is of major local significance because of the widespread impacts that implementation will bring to the current and future residents, business owners, developers, and others in the community.

1.1.1 Project Location

The project is located in the Mullan Road area of Missoula, Montana within a mix of residential, commercial, and agricultural lands. The project limits extend south to Mullan Road, north to West Broadway, west to the Missoula International Airport and Grant Creek, and to Reserve Street on the eastern edge of the site. The land use begins to transition from existing agriculture and residential land on the western edge to commercial use approaching Reserve Street. See **Attachment A** for a project site map depicting the site location and project elements as listed in section 1.1.2.

1.1.2 Project Elements

The RFC package includes six roadway elements and one trail element, due to funding purposes, the scope to be built as part of the Base BUILD Alternate A Bid Schedule Contract has been either partially or fully deferred, see Attachment G for further detail on deferred scoping items. The project elements are listed below and contain a brief summary of the items full scope:

1) **Mary Jane Boulevard South** – Completes a new extension of the existing street beginning at its current termination at Melrose Place and continuing south to its proposed connection at Mullan Road. The full scope will include an intersection upgrade at its future intersection with O'Leary Street, a roundabout at its intersection with Mullan Road, two minor future intersections, four future driveway connections, chip seal and striping of existing Mary Jane Boulevard from Melrose Place to England Boulevard, and necessary utility infrastructure.

2) **Mary Jane Boulevard Existing** – Completes chip seal and striping of existing Mary Jane Boulevard from Melrose Place to Camden Street.

3) **Mary Jane Boulevard North** – Completes a new extension of Mary Jane Blvd. beginning at its current termination at Camden St and continuing North to its proposed connection with West Broadway. The full scope will include an intersection upgrade at England Boulevard and Mary Jane Boulevard, intersection upgrades at its connection with West Broadway, upgrading the existing intersections at Flynn and Camden, four future intersections, and necessary utility infrastructure.

4) F**lynn Lane Trail** – Extends the existing shared-used path at Hellgate Elementary School, north along Flynn Lane Terminating just north of Camden St.

4-1 & 4-2) **George Elmer Drive South** – Upgrades George Elmer Drive to City of Missoula urban standards, from Mullan Road to where it terminates today just north of the Flynn-Lowney Ditch. As well as continuing George Elmer from its current termination at Pius Way, north to the future intersection with England Blvd. This scope also includes the completion of intersection improvements at Mullan Road, upgrading existing intersections at Pius and Bell Tower, three future intersections, and necessary utility infrastructure.

5) **George Elmer Drive Existing** – Completes chip seal and striping of existing George Elmer Drive from Bell Tower Road to Pius Way.

6) **England Boulevard** – Extends England Boulevard from Flynn Lane, where it currently terminates, to a future intersection with George Elmer Drive. The full scope also includes intersection improvements or traffic calming at its intersection with Mary Jane Blvd. and at Flynn Lane, a temporary “L” intersection where it meets George Elmer Drive, one future intersection, and necessary utility infrastructure.

2.0 Roadway Design Criteria

This section summarizes the standard criteria and approach in designing the Mullan BUILD roadways. Each corridor was designed to City of Missoula standards and conforms to guidance set forth in the AASHTO Green Book, 2018, seventh edition (AASHTO, 2018). Bike Facilities within the BUILD corridors were designed to City of Missoula standards and conform to guidance set forth in the Guide for the Development of Bicycle Facilities, 2012, fourth edition (AASHTO, 2012) and the NACTO Urban Bikeway Design Guide, second edition, 2014 (NACTO, 2014).

Controlling criteria of the BUILD roadways are listed below in Table **1.**

Table 1: Summary of BUILD Design Criteria

Project Element	Design Criteria	Standard	As Designed
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Functional System	**Section 1.4.3.4.3, Green Book & MDT Guide to Functional Classification, Figure 2**	Urban Collector
West Broadway Street		**Current Classification**	Principal Arterial (NHS Non-Interstate System)
Mullan Road			Minor Arterial (Urban System)
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Design Speed	**Section 6.3.1.1 Green Book** 30-40 miles per hour	30 miles per hour
West Broadway Street		**Current Posted Speed**	55 miles per hour
Mullan Road			45 miles per hour
West Broadway Street	Lane Width	**Current Lane Widths**	10-12’
Mullan Road		**Current Lane Widths**	10-12’
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Horizontal Curve Radius	**Table 3-13 Green Book** 353’ (3% Crown) 273’ (e = 2%)[1]	273’ min
West Broadway Street Mullan Road		Not Applicable	Not Applicable
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Superelevation Rate	**Table 3-13 Green Book** 273’ Curve (e = 2%)[1] 300’ curve (e = 0%)[1] 353’ curve (3% Crown)	(e = 2%)[1] for curves between 273’ and 353’
West Broadway Street Mullan Road		Not Applicable	Not Applicable
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Stopping Sight Distance	**Table 6-3, Green Book** 200’	200’ Min
West Broadway Street		**Table 6-3, Green Book** 495’	495’ Min

Project Element	Design Criteria	Standard	As Designed
Mullan Road		**Table 6-3, Green Book** 360'	360' Min
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Maximum Grade	**Table 6-7, Green Book** 9%	5% Max
West Broadway Street	Maximum Grade	**Table 6-7, Green Book** 7%	5% Max
Mullan Road	Maximum Grade	**Table 6-7, Green Book** 8%	5% Max
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Cross Slope	**City of Missoula** **Section 6.3.1.6, Green Book** 2% -5%	3% Max
West Broadway Street	Cross Slope	**City of Missoula** **Section 6.3.1.6, Green Book** 2% -5%	3% Max
Mullan Road	Cross Slope	**City of Missoula** **Section 6.3.1.6, Green Book** 2% -5%	3% Max
Mary Jane Boulevard South (1) Mary Jane Boulevard North (2) George Elmer Drive South (4-1,4-2) England Boulevard (5)	Vertical Clearance	**Section 5.2.2.7.2, Green Book** 14'	14'
West Broadway Street	Vertical Clearance	**Section 5.2.2.7.2, Green Book** 14'	14'
Mullan Road	Vertical Clearance	**Section 5.2.2.7.2, Green Book** 14'	14'

[1]e = Superelevation Slope

The assumptions/decisions made in determining the controlling design criteria summarized above and additional design criteria are summarized in Sections 2.1-2.13 as follows: Functional system, Design Speed, Typical Pavement sections, Traffic Volumes and Intersections, Typical Roadway Sections, Horizontal Alignment, Vertical Alignment, Bicycle and Pedestrian, Grading, Drainage/Hydraulics, Utilities, and Construction Cost Estimates.

2.1 Functional System

As summarized in Table 1, all streets in the Mullan BUILD project will be classified as urban collectors per City of Missoula and AASHTO standards. This section summarizes the information utilized in making this decision.

An urban collector street is defined in Section 1.4.3.4.3 of the Green Book as the following. *An urban collector provides both land access service and traffic circulation within residential neighborhoods and commercial and industrial areas… the urban collector also collects traffic from local streets in residential neighborhoods and channels it into the arterial system… the urban collector street system may also carry local bus routes. The design of urban collector streets should fit the community context and serve a range of cyclists, pedestrians and transit users.*

In addition to AASHTO, the Montana Department of Transportation (MDT) also provides functional classification characteristics for urban collectors, and splits them into two types (major and minor); the City of Missoula does not. Typically, MDT would characterize the roads in the BUILD project as major urban collectors per the MDT Guide to Functional Classification, Figure 2 (MDT,2017). Characteristics listed in this figure are analogous with the AASHTO definition above.

As part of the Mullan Area Master Plan done by Dover-Kohl provides classifications and associated roadway typical sections for the BUILD roadways were provided to the BUILD team. Roadways within the plan were classified as either main street collectors or neighborhood collectors. See Attachment B for the Mullan Area Master Plan and Section 2.6 below for further discussion on the classification of each street and the roadway sections.

In conclusion, the characteristics listed above support using an urban collector for design purposes, in order to meet both current and future needs of the Mullan Area. The design criteria summarized below in Sections 2.2-2.13 all conform to urban collector design guidelines set forth by AASHTO.

MDT operates and maintains West Broadway Street and Mullan Road. West Broadway Street is classified as a Principal Arterial (on the NHS Non-Interstate System) and Mullan Road is classified as a Minor Arterial (on the Urban System) as listed above in Table 1. All design and impacts on these routes will conform to the guidelines set forth by MDT.

2.2 Design Speed

The design speed for urban collector streets should be in the range of 30 to 40 miles per hour (mph) per Section 6.3.1.1 of the Green Book. Due to the residential zoning of the area, lower design speeds were used to encourage reduced speeds and traffic calming. The design speeds for the urban collector streets are as follows:

- Mary Jane Avenue – 30 MPH
- England Boulevard – 30 MPH
- George Elmer Drive – 30 MPH

The design speeds for routes on MDT's system conform to the current posted speed limits, and are as follows:

- West Broadway Street – 55 MPH
- Mullan Road – 45 MPH

2.2.1 Posted Speed

The posted speed limits within Mullan BUILD project will be set in accordance with the responsible agencies policy. This will include input from the Mullan Area Master Plan, The Mullan BUILD project's recommendations, and any applicable speed studies.

MDT will utilize speed studies to determine the 85% percentile speed, prior to recommending modifying posted speeds. Currently West Broadway Street is posted at a 55-mph speed limit. Mullan Road is currently posted at a 45-mph speed limit. The City of Missoula will request these studies to be conducted after the project is implemented as it will have an impact on observed speeds.

It is anticipated The City of Missoula's posted speeds will not exceed 30 mph on any of the collector streets and posted speeds as low as 25-mph in certain areas, such as on Mary Jane, may be implemented to increase safety.

2.3 Typical Pavement Sections

Typical pavement sections were developed by Tetra Tech after gathering field information from eight borings along the proposed Mullan BUILD corridors and based upon average daily traffic counts, percent truck traffic, and truck ESAL loading data provided by Kittelson.

Additional truck loading (approximately 20% over the 20-year design life) was included due to the future construction activity that is anticipated to occur in the area. See Table 2 below and the Geotechnical Report for a summary of the pavement sections for each Corridor provided by Tetra Tech.

Table 2: Summary of BUILD Typical Pavement Sections

Project Element	Pavement Thickness (in.)	Base Thickness (in.)	Pit run Subbase Thickness (in.)
1) Mary Jane Boulevard South	4	9	8
2) Mary Jane Boulevard North	4	10	8
4-1) George Elmer Drive South	4	9	8
4-2) George Elmer Drive South	4	9	8
5) England Boulevard	4	10	8

The pavement sections recommended above all include a Mirafi 380i Geotextile Fabric placed on native subgrade within the roadway prism. The sections above were used in the roadway design with one variation. Instead of 9 inches of base on George Elmer Drive South and Mary Jane Boulevard South; 10 inches has been proposed for consistency with the other sections.

2.4 Traffic Volumes and Analysis

This section summarizes the traffic volume/analysis and the subsequent intersection treatment recommendations and design for the Mullan BUILD project. At the RFC design level, anticipated/recommended intersection types to be built as part of the BUILD project have been included.

The recommended intersection types were established using the project's Traffic Analysis and Intersection Control Evaluation work. An existing conditions memo was produced to document current conditions of both motorized and non-motorized conditions, See Attachment C for the existing conditions memo by Kittelson.

Intersection recommendations have been provided in a subsequent memo that takes into consideration traffic safety, level of service, and other operational factors. This traffic intersection control analysis was conducted with outputs from the local MPO travel demand model.
See Attachment D for further discussion on the recommended intersections by Kittelson.
The final selection of the actual intersection control treatment will be made by the City and County and will also factor in R/W availability and cost.

The design vehicle will be a controlling factor and is discussed further in section 2.5.1.5 below. Design vehicles were determined using traffic data and discussion during the 30% design review on August 19th, 2020. It was determined that intersections on MDT's routes will be designed to

accommodate a WB-67. Intersections on the City collector routes will be designed to accommodate a WB-40 and a WB-50 to assure that busses and fire trucks can navigate the intersections.

2.5 Intersections

This section summarizes the standard criteria and approach in designing the Mullan BUILD roundabout and stop-control intersections.

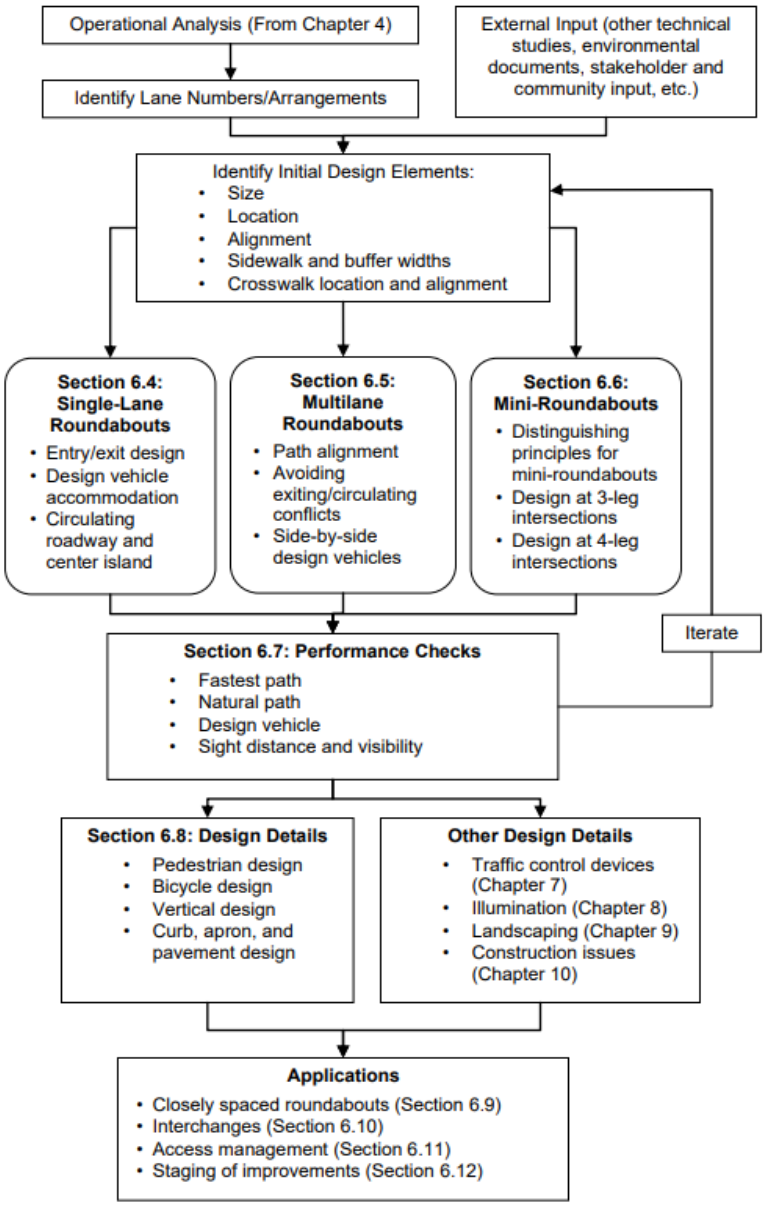


Figure 1 - NCHRP report 672 Roundabout Design Guidance

2.5.1 Roundabout Intersections

Roundabouts have been designed for the RFC phase utilizing the guidance set forth in Exhibit 6-1 of the NCHRP Report 672 by the U.S. Department of Transportation and the Federal Highway Administration (FHWA). See Figure 1 Below for the guidance set forth in Exhibit 6-1. The design included the external input and identifying lane numbers/arrangements and included the Iterative process of Identifying Initial Design Elements and Performance Checks for the initial designs, largely described in the beginning of this section. As design progressed, these elements and checks were finalized and design moved towards the design detail and application portion of the process.

2.5.1.1 Initial Roundabout Design Elements

The initial design elements including size (category), location, alignment, sidewalk and buffer widths, and crosswalk location alignments for each roundabout is largely determined by the traffic analyses and volumes described further in the subsequent memo by Kittelson. The NCHRP Report 672 by FHWA, separates roundabouts into three categories: mini, single-lane, and multi-lane. A summary

of each category can be found In Sections 1.3.1-1.3.3 of Report 672. From the initial design, elements categories can be assigned to specific roundabouts. Associated criteria for each category of roundabout can then be applied in the design and will be further discussed in the sections below.

Table 3 below summarizes the Roundabout Category assigned at each roundabout location within the BUILD project. It is important to note that as part of the scope deferment process the roundabouts at England Boulevard/George Elmer Drive and England Boulevard/Mary Jane Boulevard have been deferred in the RFC package. These will still be mentioned below but were not part of the scope for the RFC design. See the Mullan BUILD project scope exhibit, Attachment G, for more information.

Table 3: Summary of BUILD Roundabout Categories

Roundabout Location	Roundabout Design Designation
Mullan Road and Mary Jane Boulevard	Multi-Lane Roundabout
Mullan Road and George Elmer Drive	Multi-Lane Roundabout
England Boulevard and Mary Jane Boulevard	Mini-Roundabout
England Boulevard and George Elmer Drive	Single-Lane Roundabout

2.5.1.2 Size, Location and Alignment

As described in section 2.5.1 many of the design criteria is set forth by the category of the roundabout. Roundabout size, location, and alignment were determined based on guidance in Section 6.3 of Report 672. The main objectives of the size, location, and alignment of the roundabout are to control design speeds, accommodate the design vehicle, and also minimize right-of-way acquisition. All three influence each other in accomplishing these objectives.

The size of a roundabout is largely determined by the Inscribed circle diameter (ICD). The ICD is a function of available space/right of way, accommodation of the design vehicle, and providing adequate speed control and is part of the iterative process. To adequately size each roundabout, it was first ensured that design vehicles could navigate the roundabout while also balancing speeds into and within the roundabout. The smallest possible ICD was used that achieved both of these objectives so that right of way acquisition could be minimized. Table 4 Below summarizes the recommended inscribed circle diameter and the designed inscribed circle diameters for each roundabout within the BUILD project.

Table 4: Summary of BUILD Roundabout Categories

Roundabout Location	Recommended ICD	Designed ICD
Mullan Road and Mary Jane Boulevard	150 to 300 ft (Multi-Lane Roundabout)	150 ft
Mullan Road and George Elmer Drive	150 to 300 ft (Multi-Lane Roundabout)	150 ft
England Boulevard and Mary Jane Boulevard	45 to 90 ft (Mini-Roundabout)	90 ft
England Boulevard and George Elmer Drive	90 to 180 ft (Single-Lane Roundabout)	130 ft

The location of the roundabouts also is a function of right of way, and adequately controlling design speeds which also influences the size. By moving the roundabout from the center of the intersection, skew is added to alignments which influences the speed in/out and within the roundabout, balancing this with the ability of design vehicles to navigate the entry and exit alignments while also not increasing right of way acquisition is how an optimal location and alignment was determined.

At the interior roundabouts (those not on either Mullan Road or West Broadway Street), roundabouts were placed at the center of existing alignments or at the intersection of proposed alignments. Skew to alignments was added in some locations to meet design speed standards. The intersection of England and Mary Jane ideally would have a large ICD, however, existing R/W considerations necessitated a mini-roundabout at this location. Additional traffic calming may be required at this location.

On Mullan Road, both roundabout locations were shifted North. At George Elmer Drive and Mullan Road the roundabout was shifted north of the existing intersection so that a frontage road could be constructed and driveways currently located along Mullan Road could be linked to the frontage road and provide two common access point onto Mullan on either side of the roundabout. At South Mary Jane Boulevard and Mullan Road the roundabout was shifted to the North to limit the number of separate parcels that would have R/W impacts.

2.5.1.3 Non-Motorized Safety

One criterion that was largely focused on in designing these intersections was the need for non-motorized safety. This includes the design of sidewalks and crosswalks. As part of the design, no right turn by-pass lanes were added since these should be avoided in areas where non-motorized vehicles are expected. The guidelines for pedestrian and bicyclists in sections 6.8.1 and 6.8.2 of NCHRP Report 672, and NCHRP Report 834, were followed for creating pedestrian refuge islands and crosswalks. In addition to this, all roundabout crossings were designed with crosswalk paint, RRFB's, and all necessary ADA improvements including curb ramps and detectable warning devices to further increase safety at these locations.

2.5.1.4 Entry/Exit Design and Maximum Entry Design Speed

Roundabout entry/exits and design speeds will be designed per NCHRP Report 672. Per Section 6.2.1 in NCHRP Report 672, achieving appropriate vehicular speeds for entering and traveling through the roundabout is a critical design objective as it has profound impacts on safety of all users. Key criterion in achieving this are maximum entry design speeds which are a function of entry, exit, and roundabout geometry. See Table 5 Below for a summary of the design speed as recommended in Section 6.4.7 of NCHRP Report 672, all roundabouts within the BUILD project will be designed to these recommendations.

Table 5: Summary of Maximum Entry Design Speeds

Roundabout Category	Maximum Entry Design Speed
Mini-Roundabout	20 mph
Single-Lane Roundabout	25 mph
Multi-Lane Roundabout	25 to 30 mph

To ensure that these maximum entry design speeds were met, fastest path calculations were done for each leg of all the roundabouts being proposed as part of this project. Per NCHRP Report 672 and recommendations by Kittelson, the spline method was used for calculating these speeds. This is

done by drawing the fastest possible path a vehicle could travel through each movement of the roundabout. Then from these paths the minimum radius of each movement is measured. Then using equation 6-1 from NCHRP Report 672 for a cross-slope of -2% which is: V=3.4614*R^0.3673 where V is the predicted speed (mph) and R is the radius of curvature (ft) we can calculate the predicted speed from the measured minimum curve radii. The results of these calculations can be found in attachment E. Looking at these results some of the entry/exit speeds may seem high but there are some assumptions with the equation used that should be noted. When predicting the entry and exit speeds of the roundabout, these equations do not take into account acceleration or deceleration coming into or out of the roundabout. This will lead to the predicted speeds being overestimated. Another assumption with the equation used is assuming a cross slope of 2%. All of the proposed roads that are part of the build project will have a cross-slope of 3% which would further decrease these predicted speeds.

2.5.1.5 Design Vehicle and Roundabout Circulation

Per section 6.2.4 in Report 672 WB-50 vehicles are commonly the largest vehicles along urban collectors and larger trucks, such as WB-67 vehicles, may need to be addressed at intersections on interstate freeway or state highway systems.

Using this guidance, it was determined that all roundabouts involving collector intersections that were not on Mullan Road or West Broadway Street would use a WB-50 as the design vehicle. Roundabouts fitting this description are all either mini or single-lane roundabouts. All single lane roundabouts were designed to accommodate a WB-50 truck. The mini roundabout will utilize mountable curb across the entire center island with no landscaping so that a WB-50 can navigate the roundabout while driving over the center island if needed.

Roundabouts located along Mullan Road and West Broadway Street will be within MDT routes and also will see a larger percent of truck traffic than those located within the BUILD core area. Consequently, it was determined that a WB-67 would be used as the design vehicle at these intersections. The roundabouts at these locations are all multi-lane and were designed to allow a WB-67 to make each turning movement, but not side-by-side another WB-67. This was done since designing the roundabout to accommodate a W-67 without any off tracking into the other lane would mean increasing the size/cost of the roundabout drastically which would also lead to the need for more right-of-way. Per Section 6.5.3 of Report 672 “The combination of vehicle types to be accommodated side-by-side is dependent upon the specific site traffic conditions…where semi-trailer traffic is infrequent, it may be appropriate to design the width for two passenger vehicles or a passenger car and a single-unit truck side-by-side.” Along both Mullan and West Broadway heavy truck traffic is infrequent (less than 10%). Using this guidance, intersections were designed to accommodate a WB-67 with no vehicle side by side to navigate the roundabout while a WB-40 and WB-50 are able to navigate the roundabouts without encroaching into the other lanes.

2.5.1.6 Performance Checks

As design progressed and the roundabout design was finalized all roundabouts were checked per the recommendations in Section 6.7 of Report 672 for path alignment considerations, sight distance, fastest path, and angles of visibility. Associated calculations and documentation of these checks will be included with the final design. A summary of the roundabout fastest path calculations can be seen in Attachment E.

2.5.2 Stop Control Intersections

This section broadly summarizes the standard criteria and approach in designing the Mullan BUILD stop-control intersections, for more information regarding each stop-control intersection see the RFC plans. Stop-control intersections were determined as part of the traffic analysis, see Attachment D for further discussion on intersection recommendations.

2.5.2.1 Stop Control Intersections Summary

The roadway elements designed for the BUILD project were designed as the through streets at stop-controlled intersections, these include George Elmer Drive, Mary Jane Boulevard, and England Boulevard. At the locations identified as stop-control intersections on the RFC plans, the roads intersecting these through streets will be stop controlled. Some stop-control intersections were designed at existing intersections while others were designed to accommodate future roads that are expected to be constructed in the Mullan area. Locations where existing intersections are being improved, include removing and reconstructing existing asphalt and sidewalk as well as the relocation of some existing utilities. All stop-control intersections were designed within existing and/or proposed right-of-way. Bike/Pedestrian safety and crossings at the stop-control intersections will be discussed further in Section 2.9. For more detailed information regarding each stop-control intersection see the RFC plans.

2.5.3 Left Turn Lane Development

Left turn lanes located at stop-control intersections were designed using city of Missoula Standards and conform to guidance set forth in the Green Book (AASHTO, 2018) and NCHRP Web Only Document 193, Development of Left-Turn Lane Warrants for Unsignalized Intersections (NCHRP, 2013). A design speed of 30 miles per hour was used. See Table 7 below for the design criteria used to develop the left turn lanes within the BUILD corridors.

Table 6: Left Turn Design Criteria

Left Turn Lane Location	Design Criteria	Standard	As Designed
George Elmer Drive & Herons Landing Drive	Queue Length	**Traffic Analysis & Green Book Table 9-23** 25’	25’
George Elmer Drive & Herons Landing Drive	Deceleration Length	**Green Book Table 9-23** 150’	150’
George Elmer Drive & Herons Landing Drive	Taper	**Green Book Figure 9-34a** 8:1 to 15:1	8:1 to 15:1

2.6 Typical Roadway Sections

This section summarizes the typical roadway sections presented in the RFC design plans for each roadway corridor. Typical roadway sections presented in the RFC Design are per the Mullan Area Master Plan provide by Dover-Kohl. A summary of these sections can be seen below in table 8 and are further discussed in Attachment B. Although these provided sections were used to develop the typical sections for this project, they aren’t followed directly for all roadway segments. Modifications

were made in certain areas on a case-by-case basis such as adding bulb-outs for traffic calming and bio-retention swales for stormwater management. For detailed information on the Mullan Build typical section see the typical sections in the RFC plans. A summary of the typical sections for each corridor will be discussed further in Sections 2.6.1 – 2.6.4 below.

Table 7: Summary of Mullan Area Master Plan Typical Roadway Sections

Street Types	Left Sidewalk (ft)	Left Boulevard & Bike Lane (from left to right)	Roadway Description (from left back of curb to right back of curb)	Right Boulevard & Bike Lane (from left to right)	Right Sidewalk (ft)	Total Width (ft)
Main Street Collector	6'	7' Boulevard 6' Bike Lane 3' Buffer	8' Parking 10' Lane 10' Lane 8' Parking **Roadway Width = 36'**	3' Buffer 6' Bike Lane 7' Boulevard	6'	80'
Neighborhood Collector (Existing Street Segments)	5'	12' Boulevard	8.5' Parking 10' Lane 10' Lane 3' Buffer (Both Sides) 5' Bike Lane (both sides) **Roadway width = 45.5'**	12' Boulevard	5'	80'
Neighborhood Collector	6'	6' Bike Lane 10' Boulevard	8' Parking 10' Lane 10' Lane 8' Parking **Roadway width = 36'**	10' Boulevard 6' Bike Lane	6'	80'

2.6.1 MaryJane Boulevard South

Mary Jane Boulevard South was developed using the Mullan Area Master Plan. The sections proposed in the Mullan Area Master Plan that will meet the needs of this corridor are a main street and a proposed and existing neighborhood collector. See table 9 below for a summary of the main street and neighborhood collector segments within the Mary Jane Boulevard South corridor.

Table 8: Summary of Mary Jane Boulevard South Typical Roadway Sections

Segment Description	Stations	Master Plan Section
Mullan Road Roundabout Approach to O'Leary Street Intersection	15+00 to 19+58	Main Street Collector
O'Leary Street Intersection to current termination of Mary Jane Boulevard South	20+80 to 29+76	Neighborhood Collector
Current termination at Melrose Place to England Boulevard Intersection	29+76 to 45+80	Neighborhood collector (Existing Street Segment)

2.6.2 Mary Jane Boulevard North

Mary Jane Boulevard North was developed using the Mullan Area Master Plan. The sections proposed in the Master Plan that will meet the needs of this corridor are a Main Street Collector and Existing Neighborhood Collector. See table 10 below for a summary of the main street collector segment within the Mary Jane Boulevard North corridor.

Table 9: Summary of Mary Jane Boulevard North Typical Roadway Sections

Segment Description	Stations	Master Plan Section
Current termination at Camden Street to Flynn Lane	61+40 to 71+00	Main Street Collector
Flynn Lane to West Broadway Street	71+00 to 81+60	Neighborhood collector
England Boulevard Intersection to Camden Street	49+80 to 60+40	Neighborhood collector (Existing Street Segment)

2.6.3 George Elmer Drive South

The typical roadway section for George Elmer South (4-1) was developed by utilizing the existing segment of George Elmer Drive through 44 Ranch and the Mullan Area Master Plan. The existing roadway section at George Elmer Drive south is approximately 32 feet wide and includes 5-foot bike lanes on either side with two 11-foot wide drive lanes. The proposed section that will meet the needs of this corridor are the main street and neighborhood collector.

Additionally, to integrate the proposed Herons Landing Subdivision and the portion of Tipperary Way Trail that is proposed to be built in the future, a modified section will be used in this area. The modified section proposes a 120-foot right of way (20-foot additional on either side of existing right of way) to allow for Tipperary Way Trail and a curve-linear sidewalk with bike lane and buffer to be constructed. Landscaping beyond the edge of the sidewalk will be performed as part of the Herons Landing project and not the BUILD project.

2.6.4 England Boulevard

England Boulevard was developed using the Mullan Area Master Plan, the sections proposed in the Master Plan that will likely meet the needs of this corridor are a Neighborhood Collector. See Table 13 Below for a summary of the neighborhood collector segment within the England Boulevard corridor.

Table 10: Summary of England Boulevard Typical Roadway Sections

Segment Description	Stations	Master Plan Section
George Elmer Drive Intersection to Flynn Lane Intersection	29+92 to 65+84	Neighborhood Collector

2.7 Horizontal Alignment

This section will provide a summary of the Horizontal alignment designs, design criteria/standards, and assumptions/considerations used in the design of each roadway.

The design standard for a horizontal curve radius ranges from 353' for a normal crowned road to a 273' minimum with a super elevation rate of emax equal to 2% per Table 3-13 in the Green Book. Table 3-13 provides the minimum radii and superelevation rates for low-speed streets in urban areas. This table was utilized as the speeds on all the BUILD roadways will be on the low end for urban collectors.

Also, per section 3.3.6 of the Green Book, it states that various factors often combine to make horizontal curves on low-speed streets in urban areas impractical due to factors including: *wide pavement areas, need to meet grade of adjacent property, surface drainage considerations, the desire to maintain low-speed operation and frequency of intersection cross streets, alleys and driveways*. All of these are important considerations, especially maintaining low speed operation as traffic safety improvement is one of the highest priorities of the Mullan BUILD project. However, given the location of the two super-elevated curves these constraints do not pertain. Also, given a design speed of 30 mph and possible posted speed of 25 mph, low speeds should be maintained. If the city does decide that super elevation is not wanted on these routes, a design exception will be needed.

Beyond the horizontal alignment design standards, additional considerations included the following: dedicated/undedicated right of way and practical tie-in locations to existing and known proposed roadways.

2.7.1 Mary Jane Boulevard South

Mary Jane Boulevard South is approximately 3745 feet in length (existing and proposed).
The proposed construction of May Jane Boulevard South is approximately 2040 feet in length and begins at Mullan Road and terminates at an existing stub-out near Melrose Place to the North. This portion of roadway was not located within a dedicated right of way easement at the time design started, but since then right of way has been acquired and now this segment is within existing right of way. The existing portion of Mary Jane Boulevard South is approximately 1720 feet in length and begins at Melrose Place and extends to the England Boulevard Intersection and is within existing right-of-way.

Key horizontal design features within this corridor include future intersections and two horizontal curves. One future intersection of importance is at O'Leary Street which provides access to the future Hellgate Meadows West development approximately 1000 feet along the centerline alignment north of the Mullan Road intersection. The two curves located along the roadway are a 600-foot curve beginning approximately 1000 feet north of Mullan Road along the centerline alignment, and a 1500-foot curve beginning approximately 1150 feet north of Mullan Road along the centerline alignment.

Approximately 1455 feet north of Mullan Road along the centerline alignment, the roadway was designed to implement WGM's design for a proposed development and also coincides with an existing sewer line and associated utility easement. The design contains two horizontal curves. The first is a 650-foot curve beginning approximately 1600 feet along the centerline alignment, and the second is a 273-foot curve beginning approximately 1800 feet along the centerline alignment.

The 273-foot curve has been designed with super elevation of e=2%, a summary table of the key stations for this design are located in the Typical Sections in Section B of the plan set. A design consideration at this location is the proposed development by WGM. As design progressed, there needed to be close coordination between the BUILD project and the development in this area.

At the tie in point with Melrose Place, the existing Mary Jane Boulevard transitions to a 46-foot wide (top back of curb to top back of curb) roadway. This portion of Mary Jane will be temporarily striped until chip seal takes place. See Section I for the permanent pavement marking and signing for this portion of roadway.

2.7.2 Mary Jane Boulevard North

Mary Jane Boulevard North is approximately 3380 feet in length (existing and proposed). The existing portion of Mary Jane Boulevard North is approximately 1330 feet in length and begins at the England Boulevard Intersection and extends to the current termination at Camden Street. This portion of the corridor is all within existing right-of-way. The proposed construction of Mary Jane Boulevard North is approximately 2050 feet in length and begins at its current termination at Camden Street and terminates at West Broadway Street to the North. Also included in the proposed construction of this roadway, although it has been deferred in the RFC design, is a mini-roundabout at the existing England and Mary Jane Intersection. This roadway is all within an 80-foot dedicated right of way easement and runs north-south. The horizontal centerline alignment was determined by offsetting the right of way boundary 40 feet to the middle of the right of way to allow for the construction of the typical section.

The proposed roadway is divided into two segments by an intersection at Flynn Lane, which will be improved, approximately 1060 feet along the centerline alignment north of the Camden Street intersection. The key features along this portion (Camden Street to Flynn Lane) are two horizontal curves. The first is a 498-foot curve beginning approximately 40 feet along the centerline alignment and a 499-foot curve beginning approximately 280 feet along the centerline alignment. There are no horizontal constraints on this portion of the roadway.

North of the Flynn intersection, the horizontal alignment was designed to properly tie-into IMEG's design for the Summit Beverage development. As part of this development an interim 24' access road with 2' shoulders was constructed in the fall of 2020 so that Summit Beverage has access to their property prior to commencement of the BUILD project. The access road minimized waste and cost as much as possible. To ensure this, a interim section was developed. A similar section was created to be constructed in the Fall of 2021 to provide access from Broadway to the new VA site. The proposed sections will be built to 2" below the proposed finished grade. By doing this, once final construction begins, the shoulders can be removed and the subgrade widened from the 24' section to the proposed section and the final 2" asphalt lift can be placed on top of the existing asphalt to reach finished grade without having to remove material. Typical Sections for the interim sections and how they will integrate with the final build out can be found in Section B of the RFC plans.

This portion of roadway is located within a dedicated 80-foot right of way easement. An additional 5' utility easement is proposed on either side of the existing right of way to accommodate dry utilities. The alignment contains one 250-foot curve beginning approximately 830 feet along the centerline alignment north of Flynn Lane. No super elevation was applied at this location.

2.7.4 George Elmer Drive South

The first segment (4-1) of George Elmer Drive South is approximately 1900 feet long following the existing George Elmer Drive Alignment. The corridor begins at the intersection with Mullan Road and terminates just south of Bell Tower Road. This portion of the project will consist of improvements to the existing George Elmer Drive that runs South to North with no curves for its entirety.

Some of the key horizontal features of this roadway are two of the future intersections. The first is located approximately 1300' North of the Mullan Road Intersection along the centerline alignment where proposed Herons Landing Drive intersects running east-west. The Tipperary Way Trail is proposed to intersect George Elmer Drive at a mid-block RRFB crossing approximately 1660 feet north of the Mullan Road intersection. There are no horizontal design constraints or concerns on this segment of roadway. This segment of road is all within a dedicated 80' right of way easement. A 90' right of way (5' maintenance easement on either side of existing right of way) is proposed on the portion of roadway south of the proposed Herons Landing subdivision. Within the Herons Landing subdivision a 120' right of way is proposed to accommodate Tipperary Way Trail and a curve-Linear sidewalk as discussed in Section 2.6.3.

The second segment (4-2) of George Elmer Drive North is approximately 1400 feet long and begins at its current termination at Pius way. The proposed roadway terminates at the intersection of the proposed England Boulevard roadway. This segment of road is all within a dedicated 80' right of way easement and runs South to North and contains no horizontal curves or design constraints/concerns. A 90' right of way (5' maintenance easement on either side of existing right of way) is proposed.

2.7.3 England Boulevard

England Boulevard is approximately 3050 feet in length and begins at the proposed intersection with George Elmer Drive and terminates at Flynn Lane to the East. This roadway is all within an 80-foot dedicated right of way easement and runs east-west. The horizontal centerline alignment was determined by offsetting the right of way boundary 40 feet to the middle of the right of way to allow for the construction of the 80' wide typical section. A 90' right of way (5' maintenance easement on either side of existing right of way) is proposed.

The key horizontal features within this corridor are two horizontal curves. The first, is a 300-foot curve beginning approximately 1950 feet along the centerline alignment and the second is a 750-foot curve beginning approximately 2650 feet along the centerline alignment. The 273-foot curve has been designed with super elevation of e=2%, a summary Table of the key stations for this design are located in the Typical Sections in Section B of the plan set.

2.8 Vertical Alignment

This section will provide a summary of the vertical alignment design, design criteria/standards, and assumptions/considerations used in the vertical alignment design of each roadway.

The design standards for vertical alignment include stopping sight distance, maximum grade, cross slope, and vertical clearance. See Table 1 in Section 2.0 for a summary of the vertical alignment design standards using a 30-mph design speed.

Vertical alignments for each corridor were designed to achieve a minimum stopping sight distance of 200 feet using vertical curves and appropriate grade changes. All roadway designs meet minimum K-values (37-Crest & 19-Sag); K-values are a function of horizontal distance along the alignment and percent grade change required to maintain proper sight distance at vertical curve locations.

All roadways are below the maximum grade of 9% and are designed with a 3% crowned cross slope.

Vertical clearance is not of concern on this project as there are no proposed or existing overhead/underpass components in this project.

Beyond the vertical alignment design standards, additional considerations include drainage, keeping embankment slopes low, providing safe and practical vertical approaches to existing and proposed roadway tie-in locations.

To help achieve ideal drainage, a minimum vertical grade of 0.5% was used to avoid ponding on the roadways. This minimum vertical grade meets the city minimum of 0.4%. Keeping embankment slopes low was achieved by matching existing ground as much as possible while also maintaining positive drainage slopes. To provide safe and practical vertical approaches, gradual grades into tie in locations were implemented where possible.

2.8.1 Mary Jane Boulevard South

Mary Jane Boulevard South begins matching existing ground at Mullan Road and continues north along the center line alignment approximately 1455 feet north of Mullan Road where a proposed development designed by WGM begins. The minimum grade along the alignment prior to the proposed development is 0.60% and the maximum is 1.34%.

Key elements along this segment of the alignment are three low points located approximately 300, 840, and 1475 feet north along the centerline alignment. Low points were placed to help balance embankment quantities along this segment of the alignment. There are no vertical alignment constraints or concerns in this section of the corridor.

Key design elements where WGM's proposed design begin are one low point and four vertical curves with radii of 30 and 53.5 feet located approximately 1600 and1700 feet along the centerline alignment, respectively. K-values at these locations are 37(sag) and 19 (crest) which meet the minimum design standard K-values of 19 for crest curves and 37 for sag curves. The low point is located approximately 1940 feet along the centerline alignment. Low points were placed to help balance embankment quantities along this segment of the alignment.

A design consideration at this location is the proposed development by WGM. There has been close coordination between the BUILD project and the development by WGM to make sure the designs match.

2.8.2 Mary Jane Boulevard North

Mary Jane Boulevard North begins matching existing ground at its current termination at Camden Street, and terminates matching existing ground at West Broadway Street to the North. The road is divided by an intersection at Flynn Lane approximately 1060 feet along the centerline alignment north

of the Camden Street intersection. At the intersection, Mary Jane Boulevard North terminates and matches existing ground on the south side of Flynn Lane. The minimum grade along this alignment is 0.57% and the maximum is 0.66%.

The key design element along this segment is a low point approximately 300 feet north of Camden along the centerline alignment to help balance embankment quantities. There are no vertical curves or vertical alignment constraints/concerns along the southern segment (Camden Street to Flynn Lane).

North of the Flynn Lane intersection, the vertical alignment was designed to implement IMEG's design for a proposed development. The design begins matching existing ground at Flynn Lane and terminates matching existing ground at W. Broadway Street. The alignment does not contain any vertical curves. There is a low point located 720 feet north of Flynn Lane along the centerline alignment.

There are no vertical alignment constraints or concerns in this segment of the corridor.

2.8.3 George Elmer Drive South

The first segment of George Elmer Drive South (4-1) follows the existing George Elmer Drive vertical alignment. The corridor begins at the intersection with Mullan Road and terminates just south of the proposed Bell Tower Road. The existing minimum grade along this alignment is 0.50% and the maximum is 1.61%.

Key vertical elements include one vertical curves and two low points. The vertical curve is 200 feet in length and is located approximately 1800 feet along the centerline alignment with a K-value of 269 (crest), which is above the minimum K-values of 37 for a sag curve. There are existing low points located approximately 995 and 1480 feet north of the Mullan Road Intersection along the centerline alignment. There are no vertical alignment constraints or concerns in this corridor.

The second segment of George Elmer Drive South (4-2) ties-in to existing ground at the current termination at Pius way, and terminates matching finished ground at the intersection with England Boulevard. The minimum grade along this alignment is 0.50% and the maximum is 0.75%.

Key vertical elements within this corridor consist of two distinct low points. These are located approximately 3520 and 4420 feet along the centerline alignment. The low points along this alignment were placed to provide positive drainage for the conveyance of the stormwater west towards Grant Creek. There are no vertical curves or constraints/concerns in this corridor.

2.8.4 England Boulevard

England Boulevard matches the proposed finished ground at the intersection with George Elmer Drive and terminates matching existing ground at Flynn Lane to the East. The minimum grade along this alignment is 0.50% and the maximum is 3.64%.

Key vertical elements within this corridor are three vertical curves, a distinct high point, and three local low points. The vertical curves are located along the centerline alignment approximately 360, 500, and 1840 feet east of the proposed intersection with George Elmer Drive, with a K-values of 54 (sag), 25 (crest), and 73 (crest) respectively, well above the minimum K-value. The second curve is

located at a high point which allows stormwater runoff west of the high point to be conveyed toward Grant Creek and the east side of the high point to be drained via sumps. There are three localized low points located approximately 600, 2240, and 2760 feet along the centerline alignment east of the proposed intersection with George Elmer Drive, these low points were placed to keep road fill down and help balance embankment quantities along this segment of the alignment. There are no vertical alignment constraints or concerns in this corridor.

2.9 Bicycle and Pedestrian

Traffic safety improvement is one of the highest priorities of the Mullan BUILD project, a large part of this is the bicycle and pedestrian interaction with the proposed roadways. This section outlines the standard criteria and approach in designing the Mullan BUILD bicycle and pedestrian facilities within each corridor. Each corridors facility was designed to City of Missoula standards and conform to guidance set forth in the Guide for the Development of Bicycle Facilities, 2012, fourth edition (AASHTO, 2012) and the NACTO Urban Bikeway Design Guide, second edition, 2014 (NACTO, 2014). See Section I in the plan set for permanent pavement marking and signing for these facilities.

Unique features that were included in the design are rectangular rapid flashing beacons (RRFB), protected bike lanes, modified ADA ramps, and bike crossing markings/MMA paint. For more detail and information on the RRFBS see attachment D and Section I in the plan set.

Modified ADA ramps (12’ wide) designed to meet ADA and City of Missoula grade standards were included at all bike/pedestrian shared crossings. The shared ramp allows for safer crossings at intersections for bikers while also allowing enough room for pedestrians and bikes to cross simultaneously.

Intersection crossing markings (dotted lines per MUTCD 3B.08) were included at all bike crossings. Per guidance from NACTO, *intersection crossing markings indicate the intended path of bicyclists. They guide bicyclists on a safe and direct path through intersection, including driveways and ramps. They provide a clear boundary between the paths of through bicyclists and either through or crossing motor vehicles in the adjacent lane,* (NACTO, 2014). Additional pavement markings indicating shared lane, and bike only lanes were also included to help reduce both bike/vehicle conflict but also bike/pedestrian conflicts. The decision to stripe the bike facilities this way came from the guidance listed above as well as through the deliverable workshops that occurred after each deliverable. Additional markings and signage detail are provided in the RFC design addressing bike/pedestrian conflicts.

2.10 Grading

Grading within the RFC design corridors consists of sidewalk, boulevard, and embankment slopes. All sidewalks and boulevards will be graded to match City of Missoula Standards at 1.5% draining toward the roadway prism. Slopes are designed at 1.5% to allow for a buffer in construction so that the 2% maximum is not exceeded. Additionally, all sidewalks will be designed for ADA accessibility and will not exceed a 5% running slope. Embankment slopes have been designed to be 4H:1V in most locations to improve safety and allow for easier maintenance and establishment of vegetation as stated in Section 5.4.4.2 Roadside Slopes in the Green Book.

Grading at both stop-control and roundabout intersections has been included in the RFC design, see Section C in the plan set for these details. Drainage at the intersections consists of matching existing cross slopes at existing intersections and providing positive drainage. Gutter slopes at the intersections meet the minimum 0.4% City of Missoula Standards. All cross slopes at ADA crossings are below 2% and all running slopes below 5% in conformance with ADA standards.

2.11 Drainage and Hydraulics

Drainage within the Mullan BUILD roadway corridors will be achieved via sumps, or piping and discharge to stormwater treatment features. Due to the flat topography in the area, the roadway cross-sections were designed with a 3% crown to provide for improved drainage into the gutter. See hydraulic memo for the stormwater conveyance systems and the treatment facilities design. For more detail on the runoff management for each corridor see section F from the RFC plans.

Crossing structures are located on South Mary Jane Boulevard, England Boulevard, and South George Elmer Drive. These were designed as if the Flynn-Lowney ditch was to be in place when this project is constructed, but per recent discussions this ditch may be closed in which case these crossings would no longer be needed.

The crossing along South Mary Jane Boulevard and England Boulevard crosses over the Flynn Lowney Ditch where there is no exiting crossing present. The crossing if constructed, will be an elliptical pipe with headwalls that will not impede the existing ditch flow. Discussion with the Hellgate Valley Irrigation District is ongoing and a detailed solution that satisfies their requirements is pending. The ongoing discussions to close the ditch, will likely lead to this crossing to no longer being needed.

The crossing at George Elmer Drive is an existing culvert with headwalls that will need to be extended in order to accommodate the improvements within this corridor. Discussion with the Hellgate Valley Irrigation District is ongoing and a detailed solution that satisfies their requirements is pending. The ongoing discussions to close the ditch, will likely lead to this crossing to no longer being needed.

2.12 Utilities

Both dry and wet utilities will be part of this project, necessary utility infrastructure for both water and sewer will be designed and incorporated in to the roadway design where appropriate.

Dry (Private) utility conflicts/relocations and new dry utilities will be installed/constructed as part of this project. All new dry utility locations to be installed/constructed during this project must also be considered in the typical section design. Existing conflicts within the roadway corridors have been identified and are detailed in the Dry Utility memo, See Attachment F and Section M of the plan set. Relocation of the dry utilities at these locations will be necessary and has been coordinated and designed as part of the Mullan BUILD project.

2.13 Construction Cost Estimate

A RFC cost estimate was developed for all roadway corridors included in the Mullan BUILD project. The estimate includes cost for the roadway and associated components, sidewalk and boulevard, and earthwork including topsoil stripping and excavation, intersection control, necessary utility infrastructure and relocations.

3.0 Trail Design Criteria

This section summarizes the design standards/criteria and approach in designing the Mullan BUILD trails. Each trail was designed to City of Missoula standards and conforms to standards set forth in the AASHTO Guide for the development of Bicycle Facilities, 2012 4th edition (AASHTO, 2012) and NACTO, 2014. Major design features considered in the trail design are as follows: Design Speed, Typical Pavement sections, Typical Trail Sections, Horizontal Alignment, Vertical Alignment, Grading, Drainage/Hydraulics, Utilities, and Construction Cost Estimate. Each Criteria and design assumptions/decisions are summarized in Sections 3.1-3.10 below. Note that do to funding constraints, the trail portions of the Mullan BUILD project were deferred. See Attachment G as well as the RFC plans for more information.

3.1 Design Speed

Section 5.2.4 in the Guide for the Development of Bicycle Facilities states for most paths in relatively flat areas (grades less than 2%) a design speed of 18 mph is generally sufficient. Given the entire site is relatively flat and proposed trails generally follow existing grade that very rarely exceeds 2% a design speed of 18 miles per hour was assumed for all trails in the Mullan Build project.

3.2 Typical Pavement Sections

Typical sections for all of the trails within the Mullan BUILD will have the same pavement section of 3 inches of Asphalt concrete on top of 10 inches of aggregate base course. This pavement section applies to traffic class I for poor soil subgrade per Missoula Parks and Recreation design Manual Table D.2. From the Geotechnical investigation by Tetra Tech within the roadway corridors, subgrade class was determined to be poor due to the silty and clayey soils. Traffic class I applies to bicycles and occasional light maintenance vehicles which will be suitable for all trails within the Mullan BUILD project.

3.3 Trail Crossings

This section will summarize and describe trail intersections of existing roadways, the Grant Creek stream alignment, and proposed BUILD roadways for each trail within Mullan BUILD. The design of the trails at intersections/crossing will be a critical aspect to ensure the overall safety of the trails, as these are the primary locations of conflict with vehicles. In addition to adequate sight distance, painted crossings per NACTO standards and RFB's are proposed to be constructed at all major road-trail crossings and appropriate safety features will be constructed at minor road-trail crossings.

3.3.1 Flynn Lane Trail

Flynn Lane Trail crosses Flynn Lane at Camden Street and will include two new ADA accessible ramps and will be properly marked with signage and pavement markings, see Section I and the Flynn Lane trail plan and profile sheets in Section C of the plan set for more information.

3.4 Typical Trail Sections

This section summarizes the typical trail sections presented in the RFC design plans for the Flynn Trail. Typical trail sections represented in the RFC Design are per Missoula parks and recreation design manual and the ASSHTO Guide for the Development of Bicycle Facilities.

City of Missoula parks and recreation recommends a 10-foot minimum width per section 6 A.1, while ASSHTO recommends a width ranging from 10-14 feet per Section 5.2.1. Cross slopes will be

designed at 1.5% to allow for a buffer in construction so that the 2% maximum as recommended in both manuals (Section 5.2.6, AASHTO and Section 7, Missoula Parks and Recreation) is not exceeded.

3.4.1 Flynn Lane Trail Typical Trail Sections

Given the possibility of higher usage rates on the Flynn Lane Trail due to a likely increase in residential areas and the proximity of Hellgate Elementary School a trail width of 10 feet with 1-foot shoulders on either side with 4H:1V side slopes was chosen. This will be discussed further in Section 3.7.

3.5 Horizontal Alignment

This section will provide a summary of the Horizontal alignment designs, design criteria/standards, and assumptions/considerations used in the design of Flynn Lane trail.

The design standard for a horizontal curve radius for a trail with an 18-mph design speed is 60 feet minimum, per Table 5-2 in the AASHTO Guide for Development of Bicycle Facilities. There are no curves along the Flynn Lane Trail

3.5.1 Flynn Lane Trail

Flynn Lane Trail is approximately 2700 feet long beginning just North of Camden Street and terminates at the existing shared use path near Hellgate Elementary School. The trail is all within dedicated right of way.

The trail follows Flynn Lane before intersecting with England Boulevard roughly 1350 feet along the trail centerline alignment. From the intersection at England Boulevard it continues along Flynn Lane before terminating at the shared use path near Hellgate Elementary School 2700 feet along the trail centerline alignment. There are no horizontal design constraints or concerns on this segment of trail.

3.6 Vertical Alignment

This section will provide a summary of the vertical alignment design criteria/standards and assumption/considerations used in the design of Flynn Lane trail. This section will also summarize key elements of the design such as intersection and tie-in locations along the vertical alignment.

The design standards for vertical alignment include stopping sight distance, vertical curve length, maximum grade, and vertical clearance. See Table 11 below for a summary of the design standards for trail vertical alignments using an 18-mph design speed.

Table 11: Summary of Trail Vertical Alignment Design Standards

Design Criteria	Design Standard	Design Standard Reference
Stopping Sight Distance	180 feet	Figure 5-6 & Figure 5-7, AASHTO Guide for Development of Bicycle Facilities
Vertical Curve Length	60-foot min (3% grade change) 135-foot min (4% grade change) 180-foot min (5% grade change)	Figure 5-8, AASHTO Guide for Development of Bicycle Facilities

Design Criteria	Design Standard	Design Standard Reference
Maximum Grade	5%	Section 5.2.7, AASHTO Guide for Development of Bicycle Facilities
Vertical Clearance	10 feet	Section 5.2.1, AASHTO Guide for Development of Bicycle Facilities

Vertical alignments for Flynn Lane Trail were designed to achieve a minimum stopping sight distance of 180 feet using vertical curves and appropriate grade changes. A stopping sight distance of 180 feet was chosen as it corresponds to the maximum allowable grade within the corridor (5%). Using this value will increase safety between pedestrians and bicyclists along the trails.

Vertical curve lengths are a function of grade change (grade approaching the curve minus the grade out of the curve). All trails are below the maximum grade of 5% and are designed with a 1.5% cross slope as discussed in section 3.4.3.

Vertical clearance is not of concern on Flynn Lane Trail, as it is relatively flat and matches existing ground.

Beyond the vertical alignment design standards, additional considerations included in the vertical alignment include providing safe and practical intersection approaches at existing and known proposed roadway tie-in locations, and keeping embankment slopes as low as possible. To provide safe and practical vertical approaches, gradual grades into tie in locations were implemented where possible. Keeping embankment slopes low was achieved by matching existing ground as much as possible.

Many of these standards are not applicable to Flynn Lane Trail as it is generally flat and follows existing ground through its entirety.

3.7 Grading

Grading within the RFC design of Flynn Lane trail consists of trail cross slopes, embankment slopes and ramp transitions at road intersections. All BUILD corridors will follow the same grading design standards. Trail cross slopes will follow city of Missoula Standards and will be graded at 1.5% draining toward the roadway prism. Slopes are set at 1.5% to allow for a buffer in construction so that the 2% maximum is not exceeded. Additionally, all trails will be designed for ADA accessibility and will not exceed a 5% running slope. Embankment slopes have been designed to be 4H:1V to improve safety and allow for easier maintenance and establishment of vegetation. Trails primarily follow existing ground, consequently embankment slopes will be minimal.

3.8 Drainage and Hydraulics

Drainage within the Mullan BUILD trail corridors will be achieved via surface flow, runoff will be directed towards roadway prisms where possible.

3.9 Utilities

Both dry and wet utilities will be a portion of this project, however they will not interact with the trail design. Potential dry utility conflicts with the trail designs are identified in the Dry Utility Memo. Relocation of dry utilities, if conflicts are determined, will be necessary and will be coordinated and

designed as part of the Mullan BUILD project, See Attachment F and Section M of the plan set for more detail.

4.0 References

American Association of State Highway and Transportation Officials (AASHTO). *Guide for the Development of Bicycle Facilities*, Fourth Edition, 2012.

American Association of State Highway and Transportation Officials (AASHTO). *A Policy on Geometric Design of Highways and Streets, Seventh Edition, 2018.*

City of Missoula Parks and Recreation. *Missoula Parks and Recreation Design Manual 2018 Edition for Public Right-of-Ways, Greenways, and other Public Recreation Facilities, October 2017.*

Federal Highway Administration (FWHA). *NCHRP Report 672 Roundabouts: An Informational Guide, Second Edition, 2010.*

Montana Department of Transpiration (MDT). *A Guide to Functional Classification, Highway Systems and Other Route Designations in Montana,* March 2017. Available online at <https://www.mdt.mt.gov/publications/docs/manuals/route_designations.pdf>. Accessed May 2020.

National association of City Transportation Officials (NACTO). *Urban Bikeway Design Guide*, Second Edition, 2014.

National Cooperative Highway Research Program (NCHRP), *Development of Left-Turn Lane Warrants for Unsignalized Intersections, 2013. Available online at* https://doi.org/10.17226/22607. Accessed September 2020.

ATTACHMENT A

Mullan Build Overall Project Area

OVERALL SITE MAP

MULLAN BUILD

RFC DESIGN PROJECT ELEMENTS

- 1 — MARY JANE BOULEVARD SOUTH
- 2 — MARY JANE BOULEVARD NORTH
- 3 — FLYNN LANE TRAIL
- 4-1 & 4-2 — GEORGE ELMER DRIVE SOUTH
- 5 — ENGLAND BOULEVARD

July, 2021

ATTACHMENT B

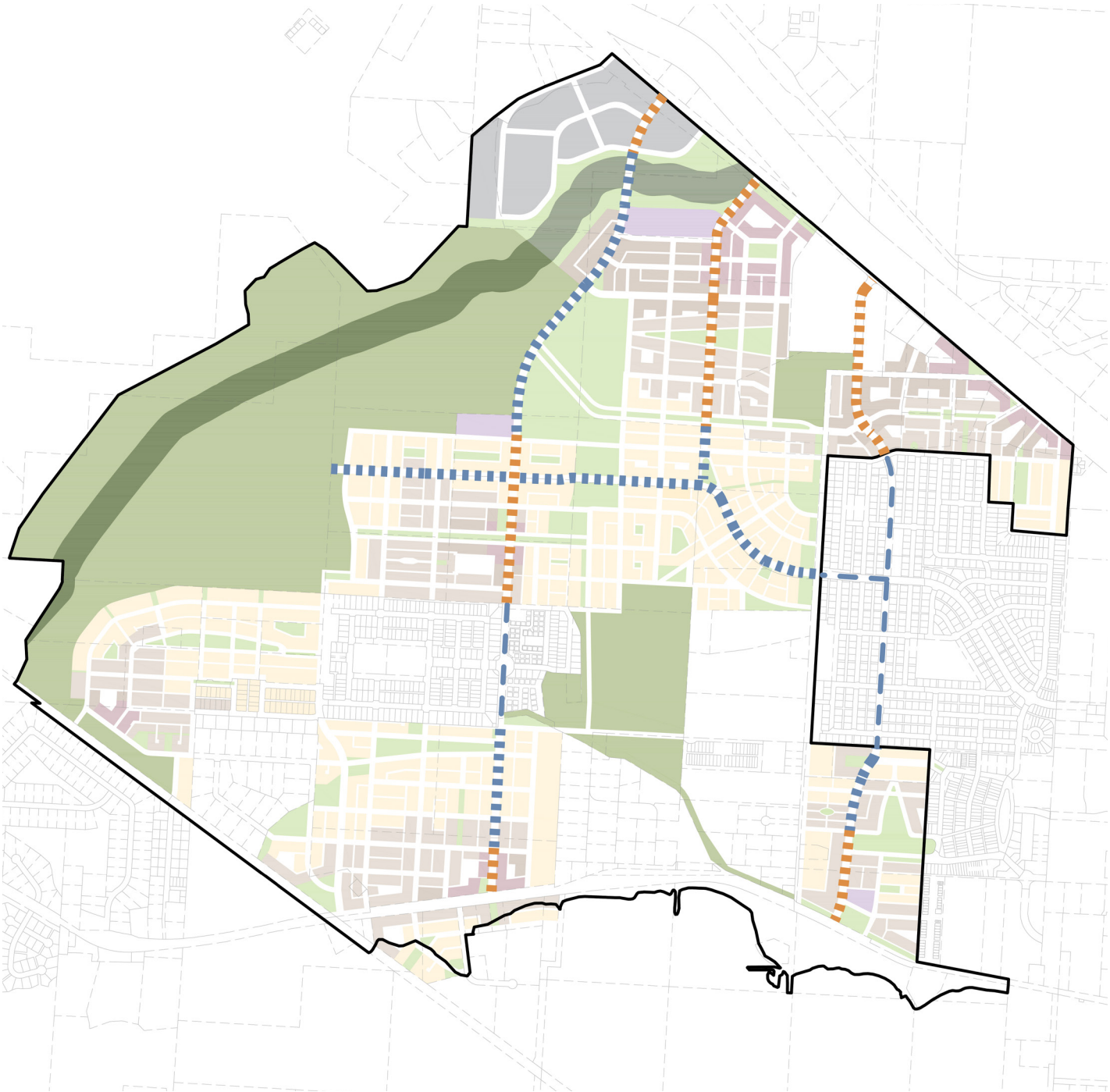
Mullan Area Master Plan

STREET ATLAS

Main Street Collector

Neighborhood Collector

Neighborhood Collector
Existing Street Segments



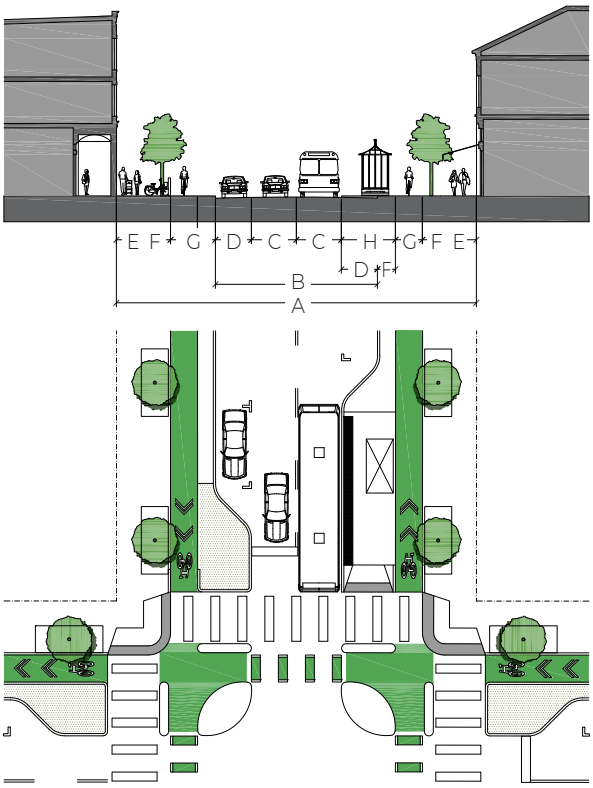
Mullan Area Master Plan - BUILD Grant Street Atlas

(preliminary draft for review)

STREET TYPES - TYPICAL SECTIONS AND INTERSECTIONS

The Typical Intersections shown represent possible intersection concepts only and are not fully engineered designs nor do they represent the full range of intersection treatments that may be appropriate.

A. Main Street Collector

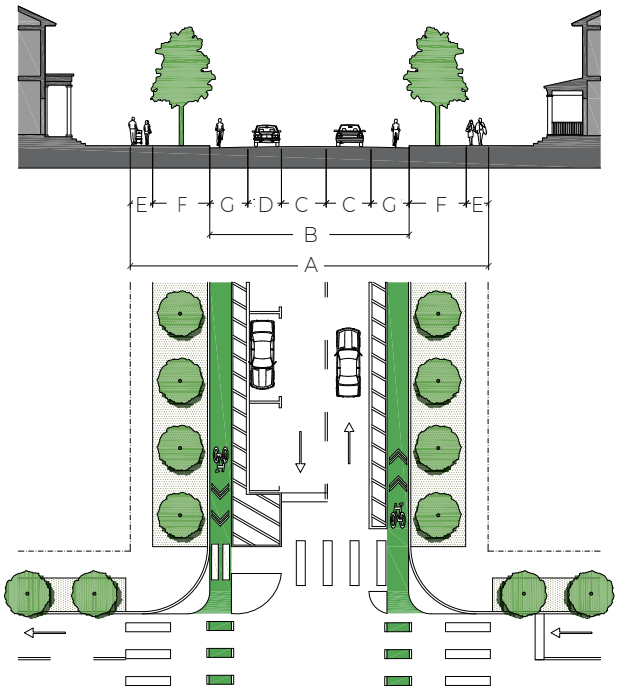


Thoroughfare Type	Main Street Collector	
Right-of-Way Width	80 feet	A
Pavement Width	36 feet	B
Traffic Lanes	Two lanes - 10 feet wide	C
Transit	Bus	H
Bicycle / Micro-Mobility Facility	Two - 6' Protected Lanes 3 foot buffer	G
Parking Lanes/Curbside Flex Zone	Both sides @ 8 feet marked	D
Sidewalk: Clear & Frontage Zones	6 feet	E
Landscape Zone - Sidewalk	7' wide x 15' Tree Wells [1]	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale, Tree Box Filter	F

[1] Smaller tree wells are permitted if suspended pavement system is utilized.

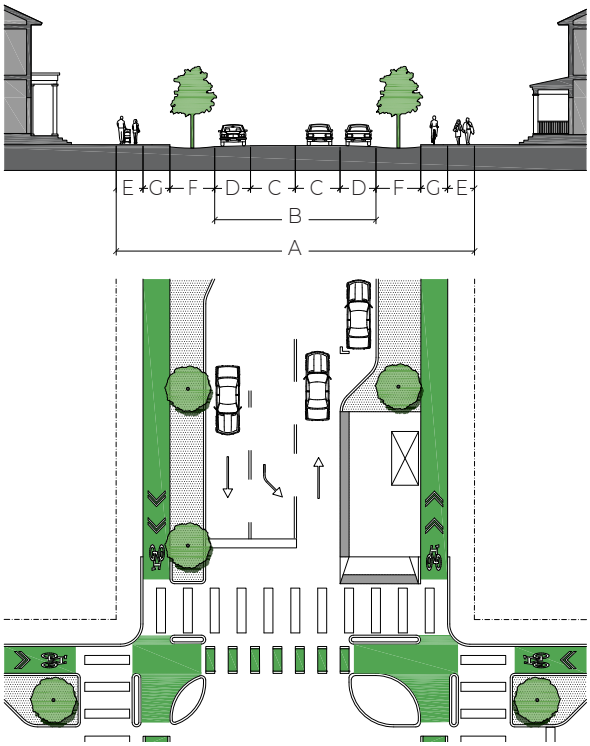
(preliminary draft for review)

B. Neighborhood Collector
Existing Street Segments



Thoroughfare Type	Neighborhood Collector Existing Street Segments	
Right-of-Way Width	80 feet	A
Pavement Width	44.5 feet	B
Traffic Lanes	Two - 10.5 foot drive lanes	C
Transit	Bus	
Bicycle / Micro-Mobility Facility	Two - 5' Protected Lanes 3 foot striped buffer	G
Parking Lanes/Curbside Flex Zone	One side @ 7.5 feet marked	D
Sidewalk: Clear & Frontage Zones	6 feet	E
Landscape Zone	12.75 foot continuous planter	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale	F

C. Neighborhood Collector



Thoroughfare Type	Neighborhood Collector	
Right-of-Way Width	80 feet	A
Pavement Width	36 feet	B
Traffic Lanes	Two - 10 foot drive lanes	C
Transit	Bus	
Bicycle / Micro-Mobility Facility	Two - 6' Protected Lanes	G
Parking Lanes/Curbside Flex Zone	Both sides @ 8 feet marked	D
Sidewalk: Clear & Frontage Zones	6 feet	E
Landscape Zone	10 foot continuous planter	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale	F

The Typical Intersections shown represent possible intersection concepts only and are not fully engineered designs nor do they represent the full range of intersection treatments that may be appropriate.

(preliminary draft for review)

GENERAL STANDARDS

A. On-Street Parking / Curbside Flex Zones

1. Curbside Flex Zones may replace on-street parking lanes within T4, T5 , and SD-W Transect Zones. The Curbside Flex Zones can vary along the length of the curb and/ or throughout the time of day or year. Permitted zones may include: parking, transit stops, rideshare passenger pick-up/ drop-off, delivery, vendors, and shared-mobility stations.
2. On-street parking lanes/ Curbside Flex Zones shall not be closer than 25 feet to intersections measured from the curb line.

B. Sidewalks

1. All streets shall have sidewalks which are a minimum width of 6 feet, and have a continuous unobstructed path of a width no less than 60 inches. This path shall be unobstructed by utility poles, fire hydrants, benches, street signs, or any other temporary or permanent structures. A shared-use path may take the place of a sidewalk.
2. At-grade pedestrian crossings should be used where possible, eliminating the need for curb ramps. Bollards should be used at such crossings for pedestrian and vehicle separation.

C. Intersection Design / Size

While intersection design shall accommodate larger vehicles, the safety of pedestrians and bicyclists shall be the highest priority.

1. The use of auxiliary turn lanes at intersections for traffic movement shall be carefully weighed against the impact to pedestrian and cyclist movement at the intersection, and the use of such lanes shall not be determined by traffic analysis alone. The final decision on whether an auxiliary turn lane is required shall be made by Approval Authority.
2. All Main Street and Urban Street Type typical sections and intersections in Sec. 6.7 can be modified by removing on-street parking to accommodate left turn lanes at intersections when needed.
3. Pedestrian and bike crossing infrastructure shall be provided across all intersection approaches, including high visibility crosswalks, sidewalk ramps, and detectable warnings.
4. Traffic signals shall be timed primarily for the convenience and safety of pedestrians and bicyclists.
5. To the extent possible, when traffic signals are present, pedestrian exposure to vehicles and crossing distances shall be reduced through the use of refuge islands, bump outs, and pedestrian signals.
6. Protected intersections are required where both approaches have protected Bicycle / Micro-Mobility Lanes unless there is not enough space to set back the bikeway from mixed traffic at the intersection in which case a dedicated intersection treatment shall be provided.
7. Along streets with protected Bicycle / Micro-Mobility Lanes, minor street crossing intersections shall have dedicated intersection treatments or raised crossings.

D. Curb Radius

Several walkability benefits can be gained by decreasing the radius of curbs at intersections. These benefits include the following: decreased crossing distances for pedestrians, greater visibility of pedestrians by motorists, traffic calming, and enhancing safety for pedestrians.

Corner curb radius designs fall into two distinct categories: corners with and without on-street parking.

1. Corners with on-street parking shall have curb radii of 15 feet maximum. The effective turning radius is larger than the curb radius when parking is present. Thus, the effective turning radius can be 30 plus feet when the curb radius is 15 feet.

(preliminary draft for review)

2. Corners without on-street parking require the curb radii to be similar to the turning radii, with the curb radius between 20 feet and 30 feet maximum.
3. Curb radii may be larger, up to 40 feet, within the SD-W Transect Zone at larger intersections to accommodate the more frequent movement of large trucks.
4. Curb radii may be smaller, 9 feet to 15 feet, for Rear Alleys and Lanes.

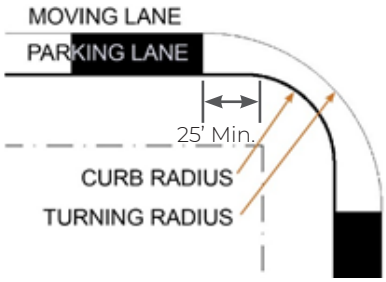


Figure 1: Curb radius and effective turn radius where on-street parking is present

E. Rear Alleys and Lanes

1. Alleys should meet streets with a mountable gutter pan, allowing the sidewalk to continue uninterrupted across the Alley pavement. The use of curb cuts, ramps, and marked crosswalks should be avoided for Alleys.

STREET TREES

A. Street trees shall consist of shade trees with a minimum 3-inch caliper at time of planting. Other accent plants and trees are permitted in addition to the required street trees.

B. Street trees shall be selected from the Approved Street Trees for Missoula document as prepared by the City of Missoula Parks and Recreation Department

C. Street trees shall be planted in vegetated Continuous planters or Tree Wells according to Street Types.

D. Properly designed tree box filters to accept stormwater runoff are encouraged for stormwater quantity and quality mitigation, and shall count towards the street tree requirement as long as adequate maintenance access is provided and the street tree planted meets the requirements of this standard. See the National Association of Transportation Officials (NACTO) *Urban Street Stormwater Guide* and the Light Imprint Handbook for more information.

E. Tree Planting

Trees must be properly planted for healthy growth and to achieve their full growth potential and associated environmental benefits. When planting street trees all surrounding infrastructure, utilities, and pavements shall be protected.

1. Suspended Pavement Systems (soil cells) shall be utilized for all street trees in planting areas less than 7 feet in width and 15 feet in length.
2. Root barriers or other root management system shall be utilized for all street trees.

(preliminary draft for review)

STREET LIGHTING

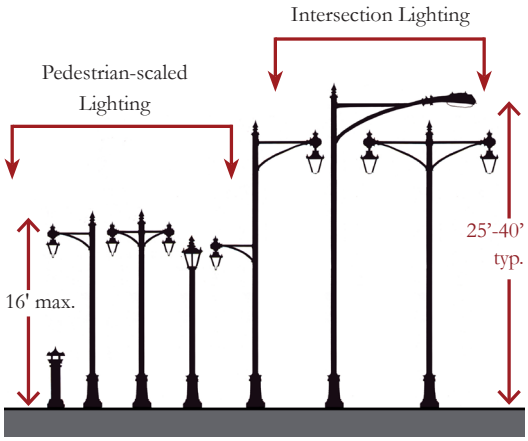
A. General Street Lighting Standards

1. A combination of pedestrian-scaled street light fixtures and intersection street light fixtures may be required to ensure a well-lit street and to establish a unifying element along the street. Pedestrian-scaled fixtures shall be used on all streets, except Alleys. Intersection-scaled lighting may be used in addition to pedestrian-scaled lights where necessary.
2. Street lights shall be aligned with street tree placement (generally between 2.5 feet and 4 feet from curb face). Placement of fixtures shall be coordinated with the organization of sidewalks, landscaping, street trees, building entries, curb cuts, signage, etc.
3. Light fixtures shall be closely spaced, generally not more than sixty (60) feet on center, to provide appropriate levels of illumination.
4. The height of light fixtures shall be kept low (generally not taller than 16 feet) to promote a pedestrian scale to the Public Realm and to minimize light spill to adjoining properties.
5. Light poles may include armature that allows for the hanging of banners or other amenities (e.g., hanging flower baskets, artwork, etc.).
6. All street lighting fixtures shall be full cutoff.

B. Lighting Types And Configurations

1. The configuration of street lighting fixtures shall be appropriately chosen for the Transect Zone within which they are located as outlined in Figure 2. Flexibility shall be permitted to vary from strict compliance with this table to achieve logical uniformity of fixtures within a given thoroughfare segment or Public Realm.
2. Any light pole or fixture to be maintained by Missoula County shall be approved by the County Engineer.

(preliminary draft for review)



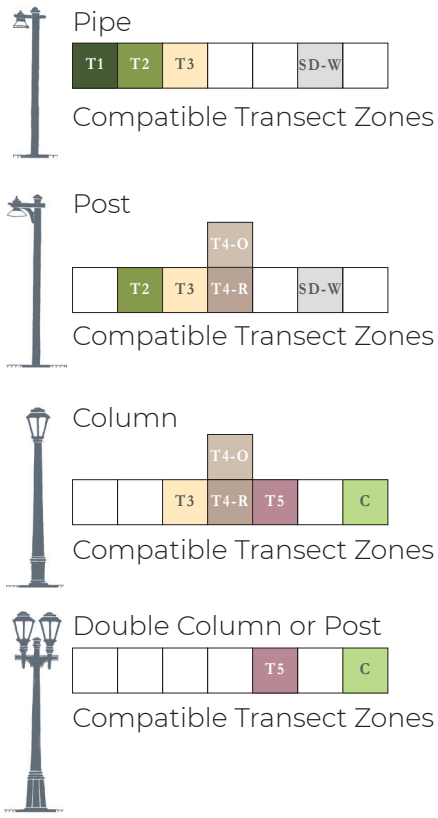


Figure 2: Diagrammatic Fixture Configurations

(preliminary draft for review)

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ATTACHMENT C

Traffic Memo 1 – Existing Conditions

EXISTING TRANSPORTATION CONDITIONS

Date: April 30, 2020 Project #: 24667
To: Shane Stack, PE, Missoula County Public Works Director
From: Bincy Koshy, Rachel Grosso, and Andy Daleiden, PE, Kittelson & Associates
CC: Donny Pfeifer, PE, DJ&A

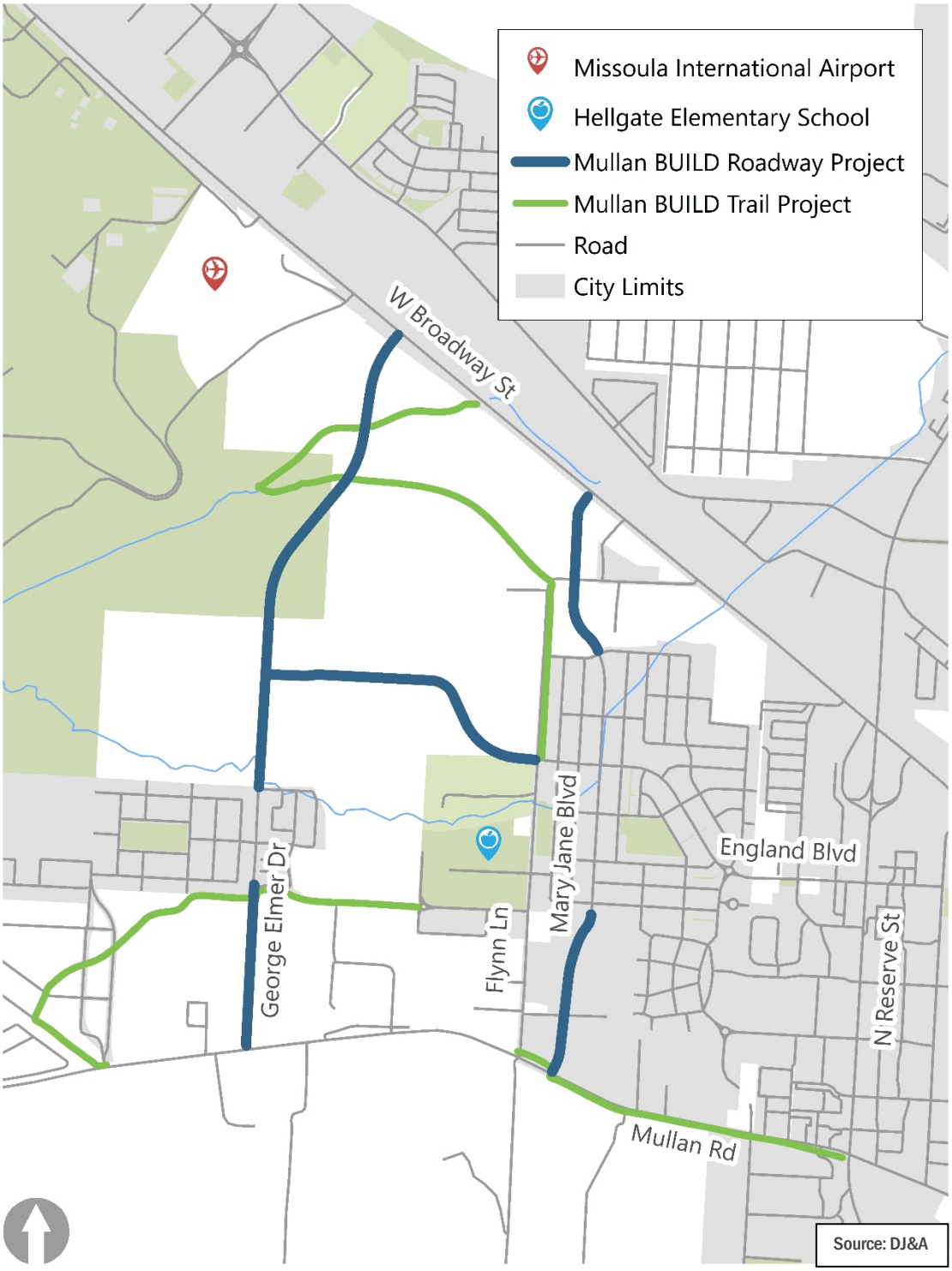
INTRODUCTION

In November 2019, Missoula County and the City of Missoula were jointly awarded a federal BUILD Grant for the development of infrastructure in the Mullan area of Missoula, with the vision of "Proactively and Collaboratively Building a Better Missoula" (Reference 1). Kittelson & Associates, Inc. (Kittelson) prepared this memorandum to summarize the existing transportation conditions for the Mullan–BUILD project, herein referred to as project. This assessment compiles the results of a range of tasks, including a review of existing plans and concurrent planning projects, multi-modal data collection and evaluation, including traffic volumes and crash data. The findings from these analyses, along with a forthcoming analysis of future conditions (2050), will form the basis for recommendations of roadway cross sections and intersection controls for this project. It is important to note that the traffic data collection effort for this project occurred between March 3rd – 4th, 2020, and therefore was not impacted by the Stay Home Order implemented by the state of Montana on March 20th, 2020 in response to COVID-19.

Project Area

The project is located in Missoula County, Montana, generally west of the Missoula city limits, and approximately five miles from downtown Missoula. The project area is bordered by W Broadway Street to the north, Mary Jane Boulevard to the east, Mullan Road to the south, and George Elmer Drive and Grant Creek to the west. Other key roadways include Flynn Lane and England Boulevard in the project area. Additional data was collected along N Reserve Street (east of Mary Jane Boulevard) to quantify future changes in the traffic and safety patterns with the project in place. Figure 1 shows the project area.

Figure 1 Project Area



Concurrent Planning Projects & Existing Plans

This section describes both on-going projects and adopted plans that are relevant to the project. Kittelson and the project team are coordinating with other current projects, such as the Mullan Area Master Plan and Missoula County Long Range Transportation Plan 2020 Update.

MULLAN AREA MASTER PLAN

In an effort led by Dover, Kohl, & Associates, "The Mullan Area Master Plan is an opportunity for the City and County to further evaluate and align land use planning and regulations, transportation elements, and plans for amenities in an area of the community currently receiving significant development pressure. The area of focus is located on the western edge of the city limits, between Mullan Road and West Broadway, west of N Reserve Street and east of the Missoula International Airport" (Reference 2).

MISSOULA LONG RANGE TRANSPORTATION PLAN UPDATE

The long-range transportation plan provides a framework for implementing community goals, improving transportation facilities and services in the Missoula metropolitan area, and addressing federal planning requirements. The 2020 Update will project and evaluate land use and transportation conditions in the horizon year of 2050. This project is currently underway by Nelson & Nygaard (Reference 3).

MISSOULA TRAVEL DEMAND MODEL UPDATE

The Missoula Metropolitan Planning Organization (MPO) is currently working with LSA Associates to update the Missoula MPO travel demand model. The model contains 4,059 internal zones and is structured identically to the 2010 Census Blocks (Reference 4). The model update will address any land use and multimodal changes since the last update, assess potential traffic analysis zone changes and extend the horizon year to 2050 for use in the Missoula Long Range Transportation Plan 2020 Update.

RELEVANT EXISTING PLANS

This section summarizes other plans relevant to the project. Table 1 highlights these plans.

Table 1 Relevant Existing Plans

DOCUMENT	DESCRIPTION	RELEVANT INFORMATION
Activate Missoula 2045	The Missoula MPO's long-range transportation plan from 2016 (Reference 5).	▶ Establishes performance measurement criteria ▶ Includes 6 prioritized projects within the Mullan Area.
Missoula Area Land Use Element	Amendment to the 2016 Missoula County Growth Policy from adopted in 2019 (Reference 6).	▶ Classifies Mullan Area as Community Mixed Use in the northern section, Agriculture in the central section, and Neighborhood Residential in the southern section
Bicycle Facilities Master Plan	Missoula MPO's comprehensive bicycling infrastructure improvement document adopted in 2017 (Reference 7).	▶ Recommends criteria for multimodal level of service ▶ Includes 13 prioritized projects within the Mullan Area
Pedestrian Facilities Master Plan	Missoula MPO's comprehensive walking infrastructure improvement document adopted in 2018 (Reference 8).	▶ Includes inventory of existing walking infrastructure (e.g. sidewalks, trails, and ADA-ramps) ▶ Includes intersection risk analysis and sidewalk needs analysis
Bicycle and Pedestrian Count Report	Annual report released by the Missoula MPO to describe biannual counts and automatic annual counter data (Reference 9).	▶ Trail system AADT is estimated at 24,000 trips ▶ Six temporary automatic counters available as of 2018
W Broadway St & Flynn Ln Traffic Signal Warrant Study	Traffic signal warrant analysis completed by MDT traffic operations engineering division using MUTCD 2009 (Reference 10)	▶ Intersection meets Warrant 1A & 1B, Warrant 2A & 2B. ▶ Recommends limiting Flynn Ln to Right-In Right-Out (RIRO) ▶ Recommends signal at future intersection of W Broadway St & Flynn Ln
Community Transportation Safety Plan	Missoula MPO's focus areas for crash prevention (Reference 11).	▶ Establishes three focus areas for Missoula County

TRANSPORTATION SYSTEM CHARACTERISTICS

This section summarizes the existing conditions of the transportation system in and near the project area. The project area includes three east-west roadways (W Broadway Street, England Boulevard and Mullan Road) and three north-south roadways (George Elmer Drive, Flynn Lane, and Mary Jane Boulevard). Additionally, N Reserve Street is located to the east of the project area and provides another major north-south route.

Roadway Network

Figure 2 displays the existing functional classification, posted speed, and intersection control for the project area. W Broadway Street and N Reserve Street are 5-lane principal arterial roads with signals at the major intersections. Mullan Road is classified as a minor arterial with two vehicular travel lanes and a mix of stop-controlled and signalized intersections. Flynn Lane is the only urban collector in the project area, and it has two vehicular travel lanes with stop-controlled intersections. Mary Jane Boulevard and George Elmer Drive are local collectors with two vehicular travel lanes and stop-controlled intersections. England Boulevard is classified as a local collector with three vehicular travel lanes and a mix of signals, stop-controls, and roundabouts at the major intersections.

Figure 2 Existing Functional Classification, Intersection Control, and Posted Speed Limit

TRAFFIC VOLUMES

The following section describes the turning movement and tube counts (Appendix A and B) that were collected on March 3rd and 4th, 2020 for the study roadways (24-hour tube counts) and study intersections during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak time periods.

Vehicular Volumes

Figures 3 through 6 summarize a mid-weekday, 24-hour profile of the daily traffic volumes collected in 2020. Figure 7 displays both the tube count data and baseline travel demand model volumes (Missoula MPO Regional Travel Demand Model). It is important to note that the traffic data collection effort for this project occurred between March 3rd – 4th, 2020, and therefore was not impacted by the Stay Home Order implemented by the state of Montana on March 20th, 2020 in response to COVID-19. Traffic volumes on arterial roadways range between 13,000 – 35,000, while volumes on collector roadways range between 2,500 – 5,000. Figure 8 displays the turning movement counts for the weekday AM and PM peak periods at project intersections.

Figure 3 shows the volume profile on Mullan Road, east of Flynn Lane. There is a distinct morning peak from 6:00 to 7:00 AM and a distinct evening peak from 4:00 to 5:00 PM. Eastbound traffic is the highest in the AM and westbound traffic is the highest in the PM.

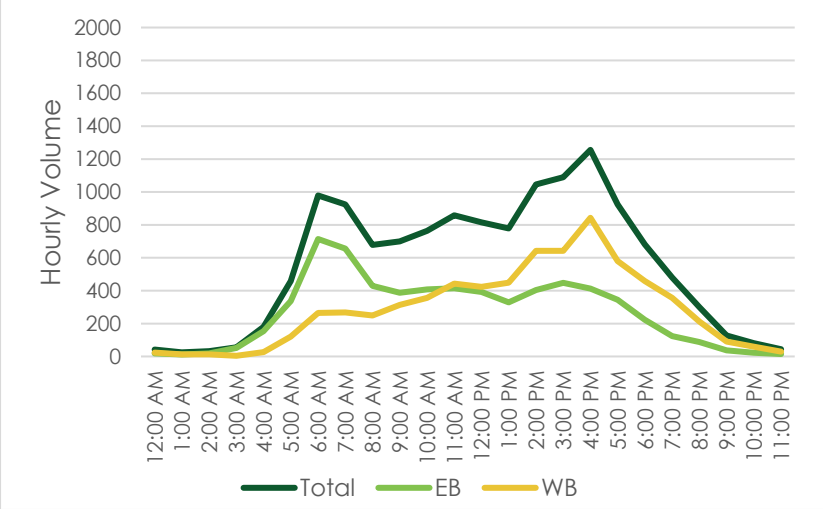


Figure 3 Hourly Traffic Volume Profile, Mullan Road – East of Flynn Lane

Figure 4 shows the volume profile on W Broadway Street, west of Flynn Lane. There is a distinct morning peak from 7:00 to 8:00 AM and a distinct evening peak between 3:00 to 4:00 PM. Eastbound traffic is the highest volume for most of the day, including both morning and evening peak hours.

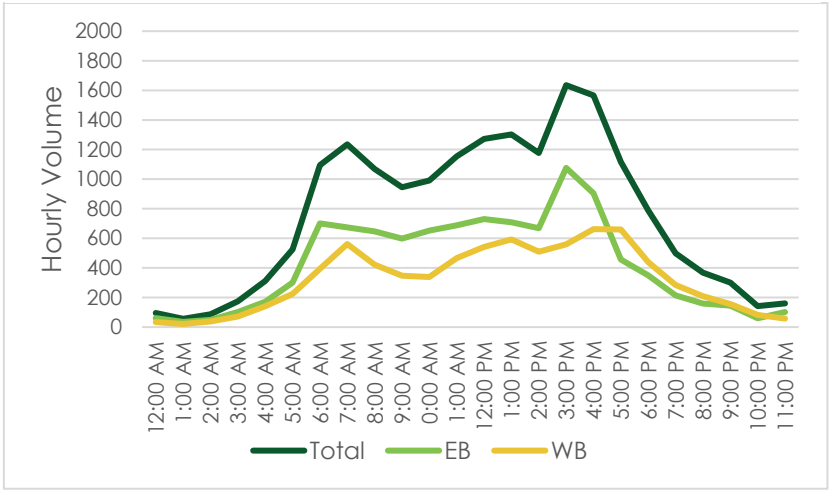


Figure 4 Hourly Traffic Volume Profile, W Broadway Street – West of Flynn Lane

Figure 5 shows the volume profile on Flynn Lane, north of Mullan Road. There is a distinct morning peak between 6:00 to 8:00 AM. Traffic on the northbound and southbound segments of the roadway have a peak time period from 2:00 PM to 5:00 PM, which is associated with the school traffic for Hellgate Elementary School and commuter traffic volumes using Flynn Lane. Kittelson estimated that school-related traffic accounts for 50% of AM peak period vehicular traffic (7 – 9 AM) and 30% of PM peak period vehicular traffic (4 – 6 PM) on Flynn Lane.

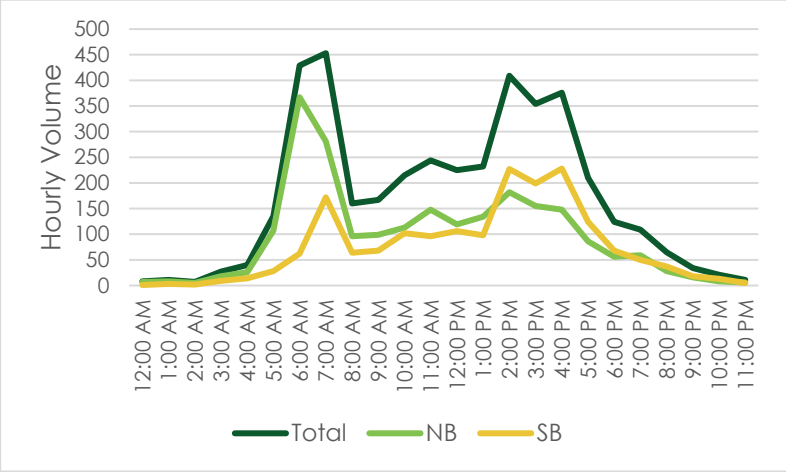


Figure 5 Hourly Traffic Volume Profile, Flynn Lane – North of Mullan Road

Figure 6 shows the volume profile on England Boulevard, west of Mary Jane Boulevard. There is a distinct morning peak between 7:00 to 8:00 AM and a distinct evening peak from 4:00 to 5:00 PM. Eastbound and westbound traffic volumes are similar throughout the day.

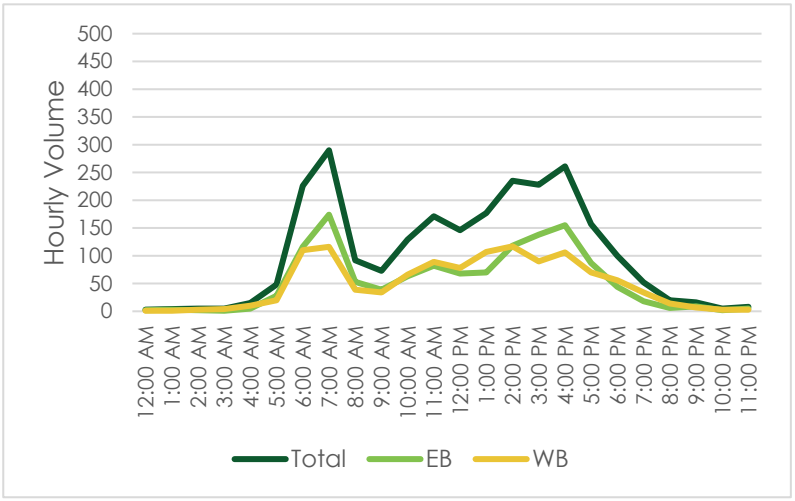
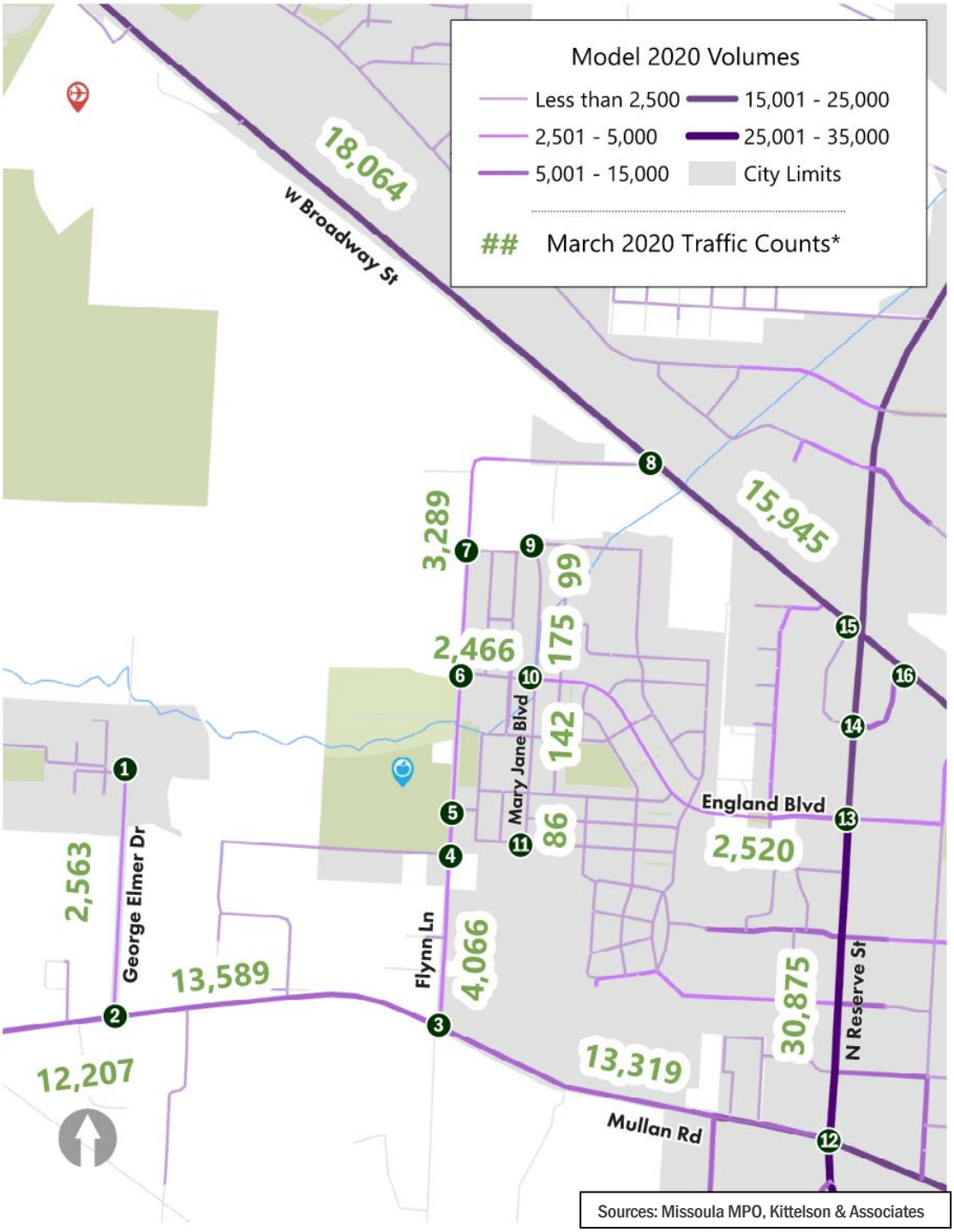


Figure 6 Hourly Traffic Volume Profile, England Boulevard – West of Mary Jane Boulevard

Freight Volumes

The Montana Department of Transportation (MDT) designates W Broadway St, Reserve St, and Mullan Road as freight routes on the National Highway System Non-Interstate System, Secondary System and Urban System, respectively (Reference 12). The City of Missoula has also designated the extents of W Broadway Street, N Reserve Street, and Mullan Road that fall within city limits as freight routes (Reference 13). Figure 9 depicts these freight routes and heavy vehicle percentages (HVP) at the major intersections and roadways (Appendix B). W Broadway Street displays the highest HVP, with 7.6 percent west of Flynn Lane. On N Reserve Street, approximately 5 percent of total traffic volumes are heavy vehicles. Mullan Road experiences lower HVP than other designated routes, at approximately 2 percent.

Figure 7 Daily Traffic Volumes (2020)



**It is important to note that the traffic data collection effort for this project occurred between March 3rd – 4th, 2020, and therefore was not impacted by the Stay Home Order implemented by the state of Montana on March 20th, 2020 in response to COVID-19.*

Figure 8 Intersection Turning Movement Counts (2020)

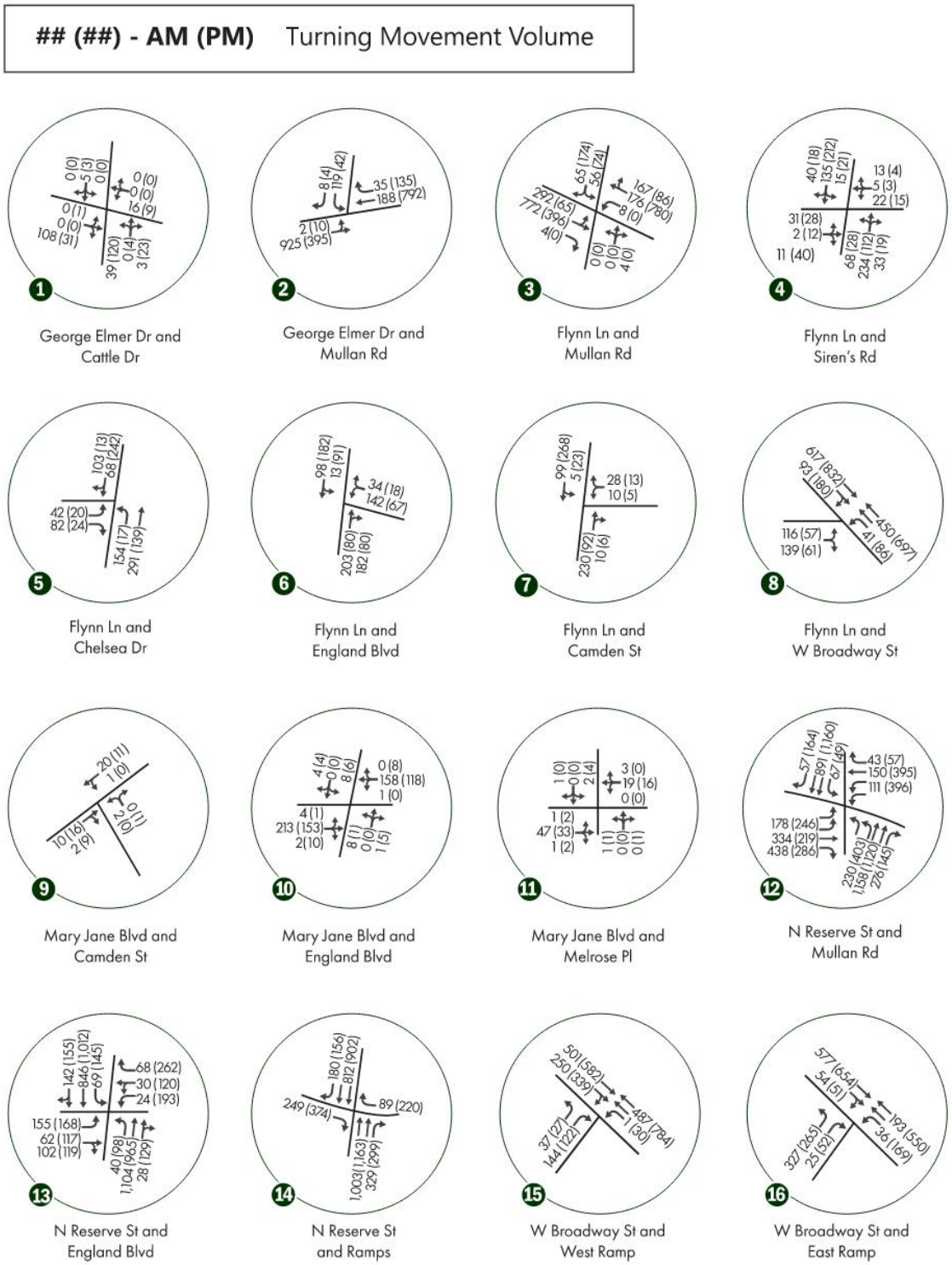
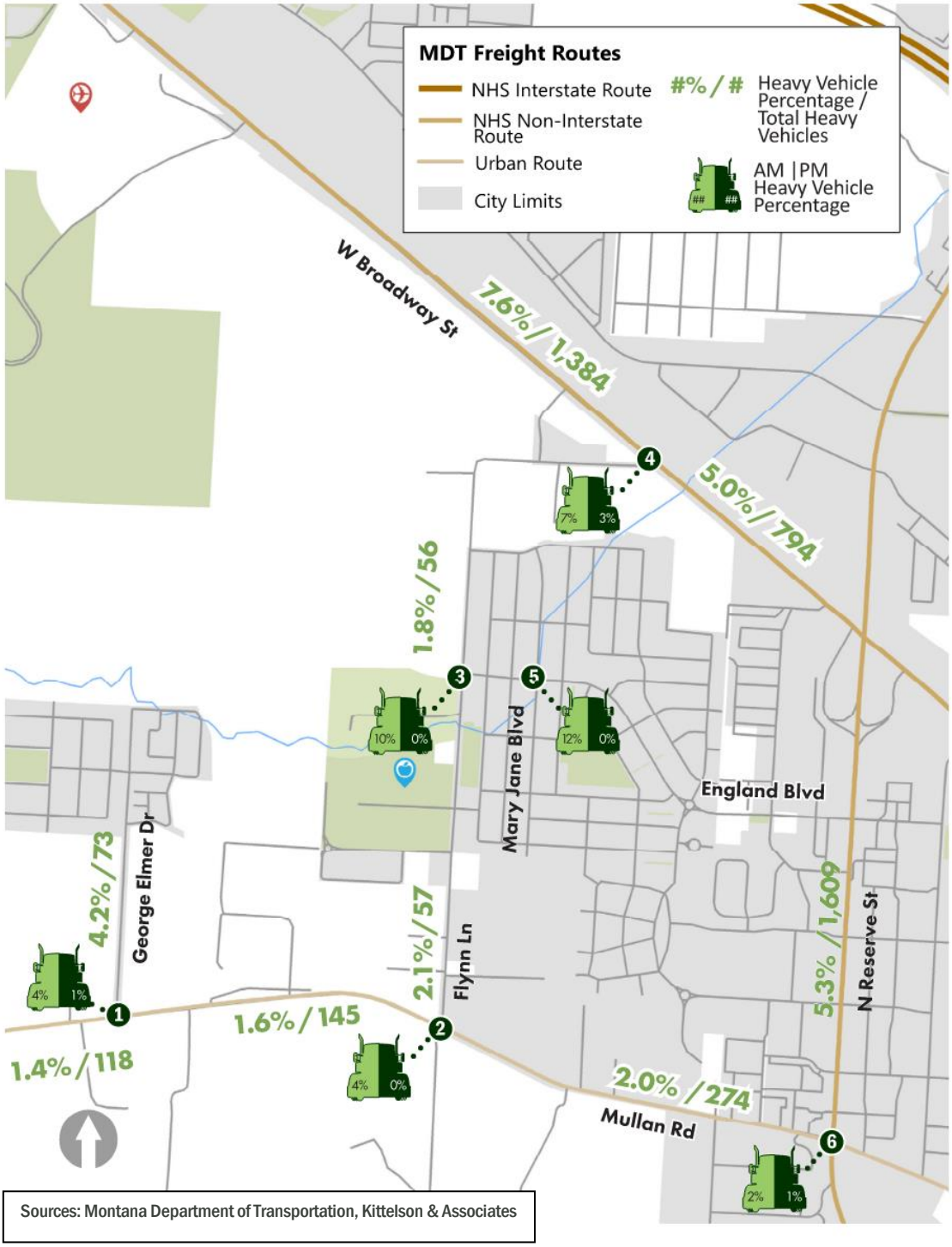


Figure 9 Designated Freight Routes & Roadway and Intersection Heavy Vehicle Percentages



Pedestrian Network

This section outlines the existing walking conditions in and near the project area. Figure 10 displays the current sidewalks, commuter trails and connector trails. Most of the project area is well connected by sidewalks except for Flynn Lane between Camden Street and W Broadway Street. Pedestrian volumes were collected at the project intersections on March 3rd, 2020 during the AM and PM peak periods. These volumes are also displayed in Figure 10. Pedestrian volumes are highest near Hellgate Elementary School and at the intersection of Mullan Road and N Reserve Street.

HELLGATE ELEMENTARY SCHOOL

This K-8 school, located along Flynn Lane between Siren's Road and Chelsea Drive, is an important community institution in the Mullan Area. The school is connected to the surrounding neighborhood by a detached paved asphalt trail and sidewalks on the west side of Flynn Lane between Mullan Road and Chelsea Drive. On the east side of Flynn Lane, there are detached sidewalks between Siren's Road and Camden Street. Additionally, at the southern approach of the Flynn Lane / Chelsea Drive intersection, a high visibility crosswalk with a school zone flasher and curb bulb-outs serves as the transition point from a posted speed limit of 35 mph to 25 mph. These features of the pedestrian network are also featured in Figure 10.

Bicycle Network

This section outlines the existing biking conditions in and near the project area. Figure 11 displays the current bicycle routes and bicycle lanes, in addition to commuter and connector trails. George Elmer Drive and segments of England Boulevard have striped bicycle lanes. The Mullan Trail runs parallel to Mullan Road on the north side and provides connectivity with N Reserve Street. Bicycle volumes were collected at the project intersections on March 3rd, 2020 during the AM and PM peak periods. These volumes are also displayed in Figure 11. Bicycle volumes are highest along N Reserve Street during both the AM and PM peak period.

Additionally, the MPO performs annual counts at two locations (e.g. N Reserve Street/England Boulevard and N Reserve Street/Mullan Road) within the project area. The MPO uses this data to estimate annual average daily pedestrian and bicyclist volumes. These is an estimated 249 and 533 average daily pedestrian and bicyclist volumes at the N Reserve Street/England Boulevard and N Reserve Street/Mullan Road intersections, respectively (Reference 9). This level of activity represents approximately 3 percent of the pedestrian and bicyclist volume estimated at the MPO's count locations.

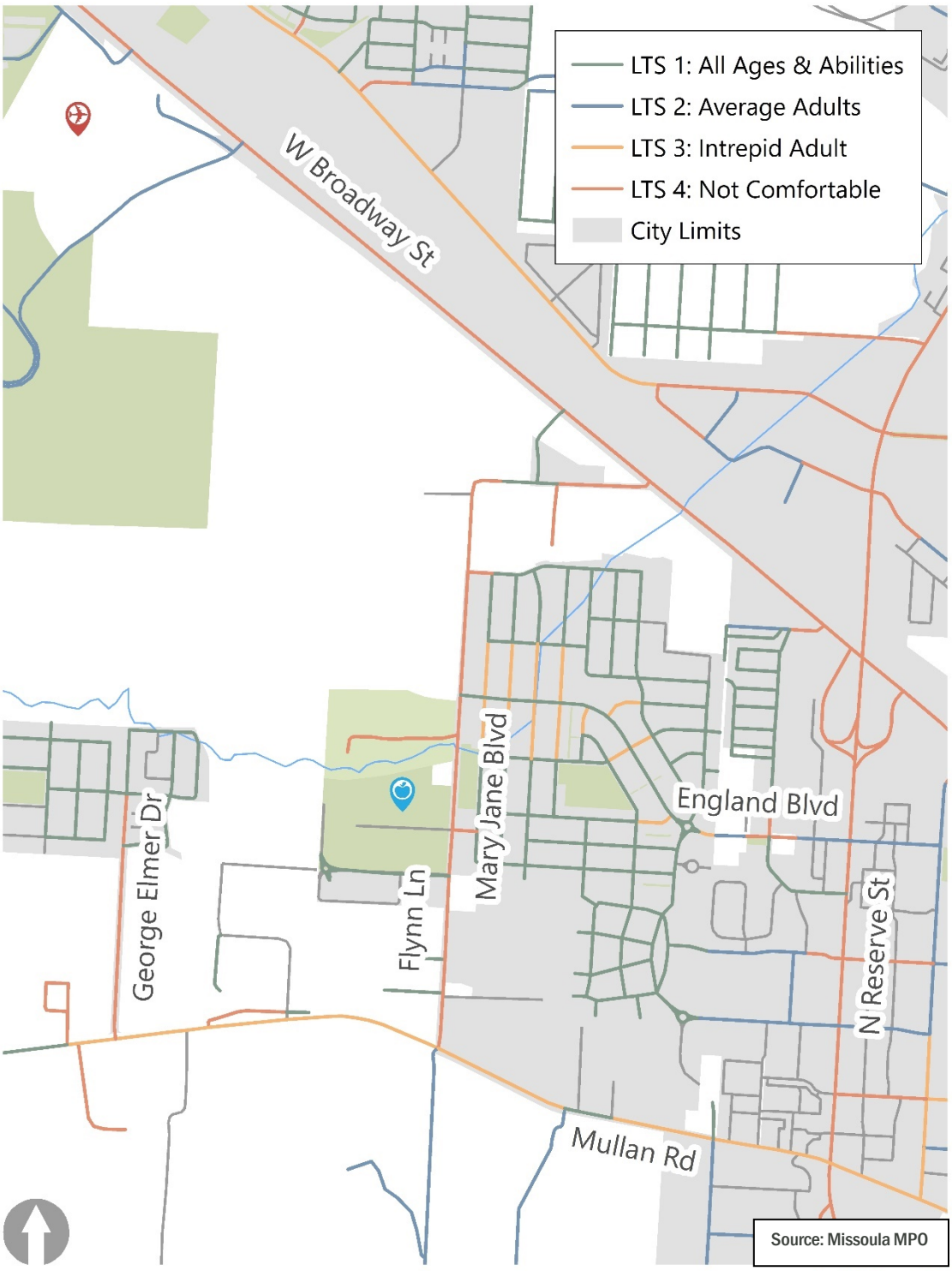
LEVEL OF TRAFFIC STRESS

In the Missoula MPO's 2017 Bicycle Facilities Master Plan, a level of traffic stress (LTS) analysis was performed to understand the areas of connectivity that currently exist for bicyclists. The LTS methodology incorporates conditions that affect a bicyclist's level of comfort such as vehicular volumes, posted speed, number of vehicular travel lanes, and the presence of bicycle infrastructure to assess the bicycle network ranging from lowest stress to highest stress on a scale of 1 – 4. Figure 12 displays the results of this analysis for the project area. Of note are the high stress level associated with George Elmer Drive, one of the only striped facilities in the project area, and also that of Flynn Lane, which connects with Hellgate Elementary School.

Figure 10 Existing Pedestrian Network & Peak Hour Volumes (2020)

Figure 11 Existing Bicycle Network & Peak Hour Volumes (2020)

Figure 12 Bicycle Level of Traffic Stress (2017)

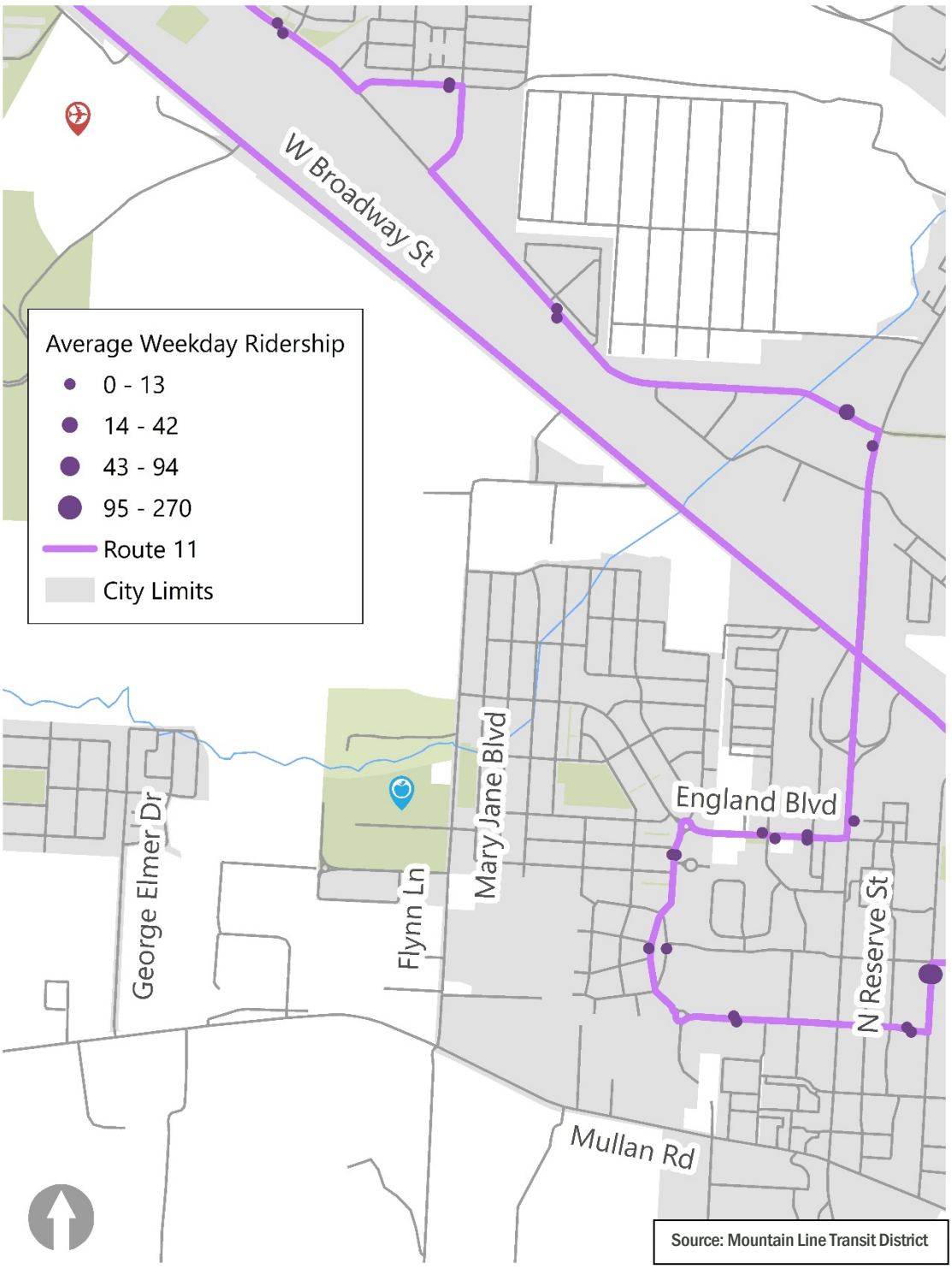


Transit Network

Missoula Urban Transportation District (MUTD) operates the transit service in Missoula, called Mountain Line. Offering both fixed route and paratransit services, Mountain Line operates within a Zero-Fare program, and has increased ridership annually since service improvements took effect in 2014. Mountain Line currently operates 12 routes on weekdays and 10 routes on Saturdays, with no Sunday service on any routes (Reference 14).

Figure 13 displays Route 11, which serves the Mullan Area, and also displays average ridership counts collected in 2019. Route 11 provides weekday service every 60 minutes from 6 AM to 9 AM, 12 PM to 2 PM, 3 PM to 5 PM and at 6 PM between the Downtown Transfer Center and Missoula International Airport. Route 11 has stops on the eastern boundary of the project area on England Boulevard and northern boundary of the project area on W Broadway Street. In 2019, Route 11 ridership accounted for 3 percent of all Mountain Line average annual rides, with an average of 203 riders per weekday.

Figure 13 Mountain Line Transit Network - Route 11



OPERATIONAL ANALYSIS

Kittelson performed an operational analysis on the roadway system under existing (Year 2020) conditions during the weekday AM and PM peak hours. The operational analysis establishes the base operational conditions to understand the existing network capacity and for comparison with future conditions.

Methodology

INTERSECTION

Kittelson used the software tool, Vistro 2020 and the Highway Capacity Manual (HCM) 6th Edition methodology to evaluate intersection operations (Reference 15). Level of service (LOS), delay in seconds per vehicle, and volume-to-capacity (V/C) ratios are reported for the study intersections. Key analysis assumptions include:

- The Montana Department of Transportation (MDT) provided signal timing and phasing (Appendix C).
- Peak hour factor used in the intersection analysis.
- A base saturation flow rate of 1,750 vehicles per hour per lane was used in the analysis based on field observations in Montana.

SEGMENT

Kittelson evaluated the project roadway segments to report segment LOS using planning-level daily traffic volume thresholds from the Florida Department of Transportation's Quality/Level of Service Handbook tables (Reference 16). These planning-level thresholds are based on Highway Capacity Manual methodology and are used nationally for estimating LOS (Reference 15).

Performance Measures

The City of Missoula and Missoula County do not have adopted LOS standards for signalized and unsignalized intersections. For analysis purposes, typically a LOS D is considered acceptable at a signalized intersection. A LOS D or E and a critical movement volume-to-capacity ratio of 0.90 is typically considered acceptable at an unsignalized intersection.

Guidance for roadway operations standards in the MDT Road Design Manual (Reference 17) identifies a target LOS B for level/rolling and LOS C for mountainous conditions for all principal arterials, such as W Broadway Street and N Reserve Street. The LOS B and LOS C criteria are more pertinent for freeways and two-lane highways versus the urban arterial conditions within the project area. In urban conditions, LOS D or E and a volume-to-capacity ratio of less than 1.0 are often acceptable. This guidance is consistent with MDT's Traffic Engineering Manual (Reference 18).

Kittelson plans to use LOS D and volume-to-capacity ratio of 0.90 for unsignalized and signalized intersections within the project area.

Operations Results

This section describes the results of the operational analysis performed at the segments and intersections under existing conditions.

INTERSECTION

The operational results for each project intersection are delineated in Table 2 (Appendix D and E) as well as in Figure 14. Most intersections operate at LOS D or better during both the AM and PM peak periods, except for the following intersections:

- W Broadway Street/Flynn Lane (LOS F – AM)
- Flynn Lane/Mullan Road (LOS F – AM & PM)
- George Elmer Drive/Mullan Road (LOS E – AM)
- N Reserve Street/Mullan Road (LOS E – PM)
- England Boulevard/N Reserve Street (LOS E – PM)

SEGMENT

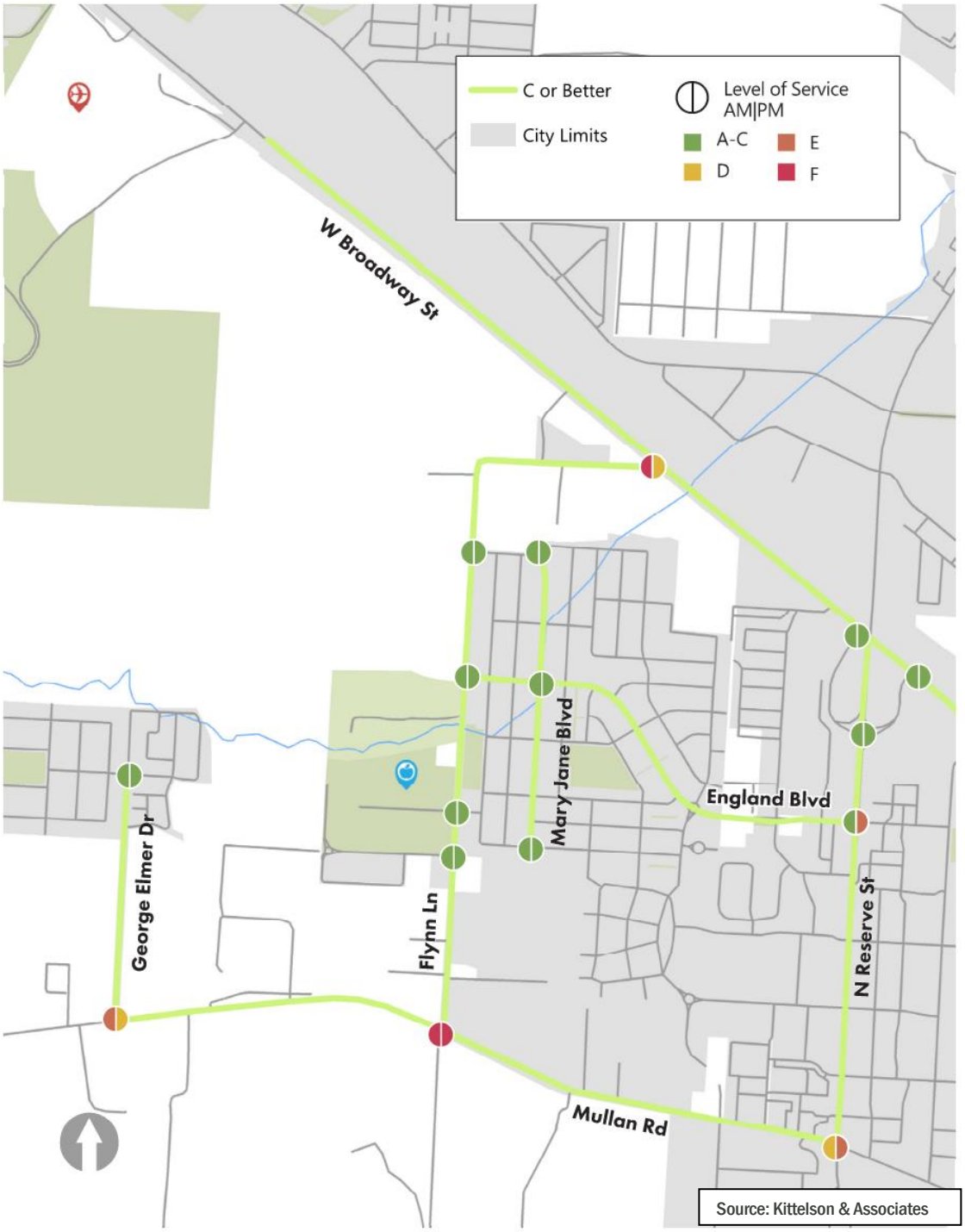
Under year 2020 existing conditions, all roadways operate at LOS C or better. These results, along with intersection operations, are depicted in Figure 14, and more information is available in Appendix F.

Table 2 Intersection Operations Results (2020)

INTERSECTION	CONTROL TYPE	AM PEAK HOUR					PM PEAK HOUR				
		CM[1]	V/C	DELAY	LOS	TEV[2]	CM[1]	V/C	DELAY	LOS	TEV[2]
George Elmer Dr / Cattle Dr	TWSC	WBL	0.02	10.3	B	171	WBL	0.02	12.1	B	191
George Elmer Dr / Mullan Rd	TWSC	SBL	0.61	46.6	E	1,277	SBL	0.27	34.3	D	1,378
Flynn Ln / Mullan Rd	TWSC	SBL	1.22	314.8	F	1,544	SBL	0.95	346.6	F	1,575
Flynn Ln / Siren Dr	TWSC	EBL	0.18	20.6	C	740	EBL	0.05	13.2	B	455
Flynn Ln / Chelsea Dr	TWSC	EBL	0.11	19.3	C	609	WBL	0.06	17.3	C	512
Flynn Ln / England Blvd	TWSC	WBL	0.33	16.4	C	672	WBL	0.18	15	C	518
Flynn Ln / Camden St	TWSC	WBL	0.02	11.4	B	382	WBL	0.01	11.8	B	407
W Broadway St / Flynn Ln	TWSC	NBL	0.53	54	F	1,456	NBL	0.30	31.8	D	1,913
Mary Jane Blvd / Camden St	TWSC	NBL	0.00	8.7	A	35	NBR	0.00	8.4	A	37
Mary Jane Blvd / England Blvd	TWSC	NBL	0.02	13.5	B	399	SBL	0.01	11	B	306
Mary Jane Blvd / Melrose Pl	TWSC	EBT	0.07	9.4	A	75	EBT	0.06	9.5	A	59
Reserve St / Mullan Rd	Signal	-	0.88	43.7	D	3,933	-	0.87	55	E	4,640
Reserve St / England Blvd	Signal	-	0.62	19.4	B	2,670	-	0.87	55.3	E	3,483
Reserve St / W Broadway Ramps	Signal	-	0.55	10.3	B	2,662	-	0.56	17.3	B	3,114
	TWSC	WBR	0.23	15.6	C	2,662	WBR	0.54	23.2	C	3,114
W Broadway St / US-93 West Ramp	Signal	-	0.52	6.6	A	1,420	-	0.47	4.1	A	1,884
W Broadway St / US-93 East Ramp	Signal	-	0.67	27.2	C	1,212	-	0.54	12.5	B	1,741

1 CM = Critical Movement
2 TEV = Total Entering Volume

Figure 14 Intersection & Roadway Level of Service (2020)



SAFETY ANALYSIS

MDT provided crash data for the most recent five-year period (2014 – 2018) for project area intersections. The crash data included type, severity, weather condition, and other factors. Table 3 summarizes the reported crashes in the project area by type and Table 4 delineates the crashes by severity. No crashes were reported at the intersections of Flynn Lane and Camden Street; Flynn Lane and Chelsea Drive; Mary Jane Boulevard and Melrose Place; Mary Jane Boulevard and Camden Street; and Flynn Lane and England Boulevard.

Table 3 Intersection Crash Types (2014 – 2018)

INTERSECTION	CRASH TYPES								TOTAL # OF CRASHES	CRASH RATE[3]
	ANGLE	REAR-END	TURNING	SIDE-SWIPE	FIXED OBJECT	BIKE	PED	HEAD-ON		
Flynn Ln / W Broadway St	10	5	3	2	3	-	-	-	23	0.66
Flynn Ln / Siren's Dr	-	1	-	1	-	1	-	-	3	0.36
W Broadway St / WB-Ramps	-	1	-	-	1	-	-	-	2	0.06
W Broadway St / EB-Ramps	1	6	2	-	1	-	-	-	10	0.31
Reserve St / W Broadway Ramps	-	52	1	7	1	1	-	-	62	1.09
Reserve St / England Blvd	11	67	5	14	2	3	-	5	107	1.68
Reserve St / Mullan Rd	7	144	3	28	1	5	3	2	193	2.28
Mullan Rd / Flynn Ln	2	2	-	1	-	-	-	-	5	0.17
George Elmer Dr / Mullan Rd	-	2	-	-	-	-	-	-	2	0.08
George Elmer Dr / Cattle Dr	-	2	-	-	-	-	-	-	2	0.57

[3] CRASH RATES WERE CALCULATED WITH THE FOLLOWING FORMULA:
CRASH RATE =(NC)/((TEV*365*NY)/(1.0E+6))
NC = NUMBER OF CRASHES
TEV = TOTAL ENTERING VOLUME
NY = NUMBER OF YEARS

Table 4 Intersection Crash Severity (2014 - 2018)

INTERSECTION	CRASH SEVERITY			TOTAL # OF CRASHES
	PDO[4]	INJURY	FATAL	
Flynn Ln / W Broadway St	12	10	1	23
Flynn Ln / Siren's Dr	3	-	-	3
W Broadway St / WB-Ramps		2	-	2
W Broadway St / EB-Ramps	10	-	-	10
Reserve St / I-90 Ramps	42	20	-	62
Reserve St / England Blvd	74	33	-	107
Reserve St / Mullan Rd	146	47	-	193
Mullan Rd / Flynn Ln	5	-	-	5
George Elmer Dr / Mullan Rd	1	1	-	2
George Elmer Dr / Cattle Dr	2	-	-	2

Key findings from the crash data analysis include:

- Rear-end crashes were the most common crash type at the intersections.
- The most common crash severity type was Property Damage Only (PDO).
- The intersection of Flynn Lane/W Broadway Street had the only reported fatality at a project area intersection.
- Ten angle crashes were reported at the intersection of Flynn Lane/W Broadway Street.
- There were five reported fatalities on all project roadway segments.
- The highest pedestrian (3) and bicyclist (5) crashes occured at the N Reserve Street and Mullan Road intersection.
- N Reserve St, Mullan Road, and England Boulevard experienced the highest number of crashes.
- Mullan Road experienced six wild animal related crashes.
- Bicyclist and pedestrian crashes were prevalent on N Reserve Street (18 bicyclist, 3 pedestrian); Mullan Road (6 bicyclist; 2 pedestrian); England Boulevard (3 bicyclist, 1 pedestrian); and Flynn Lane (1 bicyclist).

4 PROPERTY DAMAGE ONLY

SUMMARY OF FINDINGS

Based on the existing conditions analysis for 2020, key findings are summarized for volumes and facilities, operations, and safety in the project area.

Volumes & Facilities

VEHICULAR TRAFFIC VOLUMES & FACILITIES

- Daily traffic volumes on arterial roadways, such as N Reserve Street (five lanes), W Broadway Street (five lanes) and Mullan Road (two-three lanes) range between 15,000 and 35,000.
- Daily traffic volumes on local roadways such as Mary Jane Boulvard (two lanes) and collector roadways, such as England Boulevard (two – three lanes), George Elmer Drive (two lanes), and Flynn Lane (two lanes) range between 2,500 and 5,000.
- W Broadway Street displays the highest heavy vehicles, ranging between 5.0 and 7.6 percent. N Reserve Street has approximately 5.0 percent heavy vehicles. Mullan Road has approximately 2 percent heavy vehicles.
- School-related traffic accounts for an estimated 50% of AM peak period vehicular traffic (7 – 9 AM) and 30% of PM peak period vehicular traffic (4 – 6 PM) on Flynn Lane.

PEDESTRIAN VOLUMES & FACILITIES

- Pedestrian volumes in the project area are highest at the intersections on N Reserve Street (between 1-6 walkers per peak hour), where intersections are treated with enhanced pedestrian crossings, and at the intersection of Flynn Lane and Chelsea Drive, near Hellgate Elementary School. This intersection is treated with a high visibility crossing, including bulb-outs and school flashers.
- In terms of connectivity, most of the project area has sidewalk coverage, except for W Broadway Street, Mullan Road west of Flynn Lane, and George Elmer Drive.

BICYCLE VOLUMES & FACILITIES

- In terms of connectivity, striped bicycle lanes exist on N Reserve Street, England Boulevard, and George Elmer Drive. A shared use path exists along Flynn Lane between Mullan Road and Siren's Drive, and along Mullan Road, west of Flynn Lane.
- The bicycle level of traffic stress is low (1-2) on England Boulevard and Mary Jane Boulevard while level of stress is high (4) on Flynn Lane, George Elmer Drive, Mullan Road, N Reserve Street, and W Broadway Street.
- Bicyclist volumes range between one to six bicyclists per peak hour at the intersections on N Reserve Street and Mullan Road, between one to three bicyclists at the intersections on W Broadway Street, and between zero and three at intersections England Boulevard, Mary Jane Boulevard, Flynn Lane, and George Elmer Drive.

TRANSIT VOLUMES & FACILITIES

- Route 11 services the project area on weekdays, with stops along England Boulevard west of N Reserve Street.
- In 2019, Route 11 ridership accounted for 3 percent of all Mountain Line average annual rides, with an average of 203 riders per weekday.

Operations

INTERSECTIONS

- All intersections operate at LOS D or better, except for the following:
    - W Broadway Street and Flynn Lane
    - Mullan Road and Flynn Lane
    - Mullan Road and George Elmer Drive
    - Mullan Road and N Reserve Street
    - England Boulevard and N Reserve Street
- The Flynn Lane and Mullan Road intersection operates at LOS F due to a combination of Hellgate Elementary school related traffic and commuter bypass traffic from N Reserve Street.

SEGMENTS

- All segments operate at a LOS C or better.

Safety

- N Reserve Street, including the intersections on this arterial roadway, has high number of crashes with high crash rates at the intersections. At N Reserve Street and Mullan Road intersection, approximately 25 percent of total crashes are injury related crashes. Crash rate at this intersection is the highest (2.28).
- At Flynn Lane and W Broadway Street intersection, 1 fatality was reported in addition to ten reported angle crashes.
- Bicyclist and pedestrian crashes were prevalent on N Reserve Street (18 bicyclist, 3 pedestrian); Mullan Road (6 bicyclist; 2 pedestrian); England Boulevard (3 bicyclist, 1 pedestrian); and Flynn Lane (1 bicyclist). Pedestrian (3) and bicyclist (5) related crashes are the highest at N Reserve Street and Mullan Road intersection.
- Rear-end crashes were the most common crash type at the intersections and 'Property Damage Only' (PDO) was the most common crash severity type.
- Mullan Road experienced 6 wild animal related crashes.

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Appendix A – Turning Movement Counts

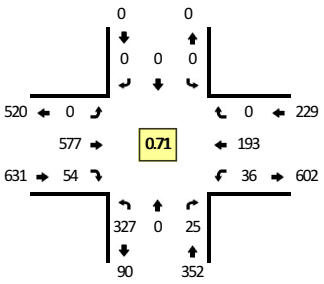
Type of peak hour being reported: Intersection Peak

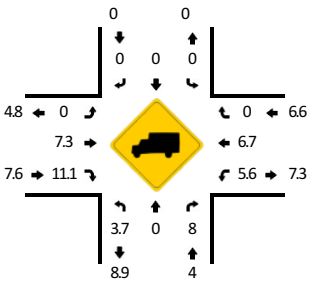
Method for determining peak hour: Total Entering Volume

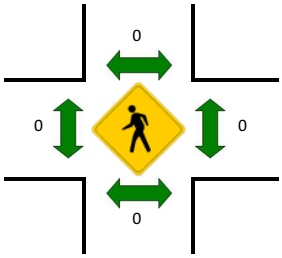
LOCATION: East Ramp -- W Broadway St
CITY/STATE: Missoula, MT

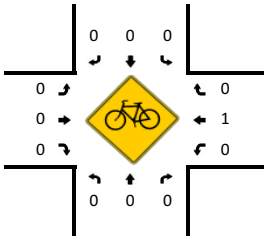
QC JOB #: 15183101
DATE: Tue, Mar 3 2020

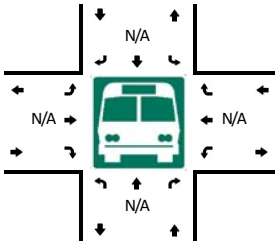
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

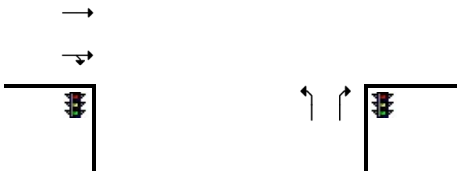


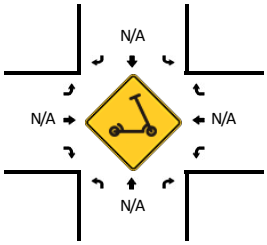












5-Min Count Period Beginning At	East Ramp (Northbound)				East Ramp (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	19	0	4	0	0	0	0	0	0	20	0	0	2	9	0	0	54	
7:05 AM	14	0	1	0	0	0	0	0	0	21	3	0	0	12	0	0	51	
7:10 AM	28	0	0	0	0	0	0	0	0	32	0	0	0	12	0	0	72	
7:15 AM	24	0	2	0	0	0	0	0	0	28	1	0	1	12	0	0	68	
7:20 AM	28	0	1	0	0	0	0	0	0	29	6	0	4	7	0	0	75	
7:25 AM	32	0	1	0	0	0	0	0	0	40	5	0	0	13	0	0	91	
7:30 AM	33	0	2	0	0	0	0	0	0	40	3	0	1	13	0	0	92	
7:35 AM	31	0	2	0	0	0	0	0	0	50	3	0	0	14	0	0	100	
7:40 AM	26	0	3	0	0	0	0	0	0	79	3	0	6	34	0	0	151	
7:45 AM	36	0	3	0	0	0	0	0	0	67	6	0	5	17	0	0	134	
7:50 AM	40	0	1	0	0	0	0	0	0	67	4	0	6	22	0	0	140	
7:55 AM	24	0	3	0	0	0	0	0	0	46	8	0	7	21	0	0	109	1137
8:00 AM	11	0	1	0	0	0	0	0	0	44	3	0	2	11	0	0	72	1155
8:05 AM	24	0	4	0	0	0	0	0	0	44	9	0	2	15	0	0	98	1202
8:10 AM	18	0	2	0	0	0	0	0	0	43	3	0	2	14	0	0	82	1212
8:15 AM	16	0	6	0	0	0	0	0	0	27	3	0	1	8	0	0	61	1205
8:20 AM	11	0	3	0	0	0	0	0	0	42	7	0	2	13	0	0	78	1208
8:25 AM	25	0	3	0	0	0	0	0	0	43	3	0	1	17	0	0	92	1209
8:30 AM	25	0	3	0	0	0	0	0	0	40	4	0	3	10	0	0	85	1202
8:35 AM	19	0	8	0	0	0	0	0	0	31	6	0	4	14	0	0	82	1184
8:40 AM	8	0	5	0	0	0	0	0	0	39	0	0	2	13	0	0	67	1100
8:45 AM	25	0	3	0	0	0	0	0	0	39	6	0	3	15	0	0	91	1057
8:50 AM	11	0	4	0	0	0	0	0	0	39	1	0	6	18	0	0	79	996
8:55 AM	19	0	5	0	0	0	0	0	0	29	1	0	4	12	0	0	70	957

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	408	0	28	0	0	0	0	0	0	852	52	0	68	292	0	0	1700
Heavy Trucks	12	0	0		0	0	0		0	92	4		0	8	0		116
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

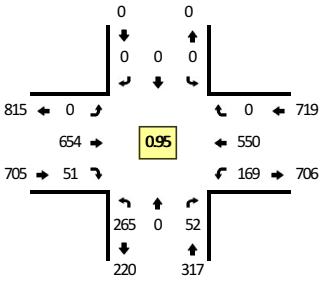
Type of peak hour being reported: Intersection Peak

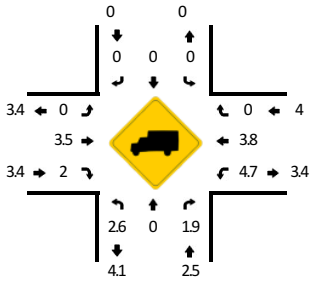
Method for determining peak hour: Total Entering Volume

LOCATION: East Ramp -- W Broadway St
CITY/STATE: Missoula, MT

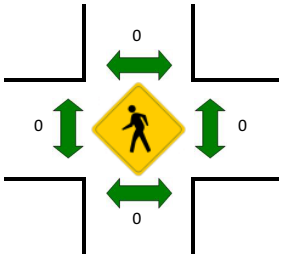
QC JOB #: 15183102
DATE: Tue, Mar 3 2020

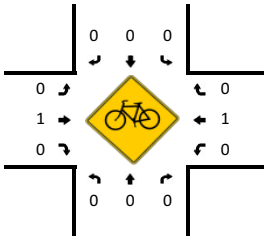
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

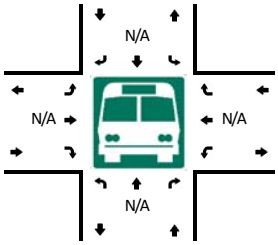


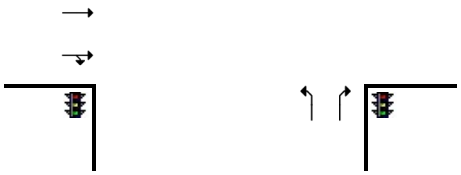


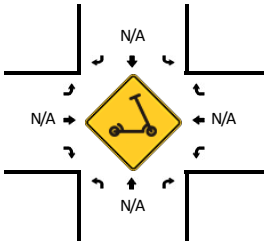
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	East Ramp (Northbound)				East Ramp (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	0	5	0	0	0	0	0	0	40	2	0	17	39	0	0	119	
4:05 PM	15	0	5	0	0	0	0	0	0	50	2	0	15	19	0	0	106	
4:10 PM	26	0	1	0	0	0	0	0	0	62	0	0	9	42	0	0	140	
4:15 PM	16	0	4	0	0	0	0	0	0	55	1	0	14	27	0	0	117	
4:20 PM	20	0	3	0	0	0	0	0	0	44	2	0	19	39	0	0	127	
4:25 PM	21	0	10	0	0	0	0	0	0	53	6	0	9	36	0	0	135	
4:30 PM	23	0	7	0	0	0	0	0	0	45	9	0	10	45	0	0	139	
4:35 PM	16	0	5	0	0	0	0	0	0	77	2	0	21	40	0	0	161	
4:40 PM	27	0	1	0	0	0	0	0	0	67	2	0	10	50	0	0	157	
4:45 PM	28	0	2	0	0	0	0	0	0	49	0	0	15	46	0	0	140	
4:50 PM	23	0	6	0	0	0	0	0	0	53	3	0	14	49	0	0	148	
4:55 PM	21	0	5	0	0	0	0	0	0	54	2	0	15	37	0	0	134	1623
5:00 PM	23	0	1	0	0	0	0	0	0	57	4	0	19	45	0	0	149	1653
5:05 PM	26	0	3	0	0	0	0	0	0	50	6	0	9	53	0	0	147	1694
5:10 PM	18	0	3	0	0	0	0	0	0	50	7	0	14	56	0	0	148	1702
5:15 PM	21	0	6	0	0	0	0	0	0	49	5	0	16	45	0	0	142	1727
5:20 PM	18	0	3	0	0	0	0	0	0	50	5	0	17	48	0	0	141	1741
5:25 PM	15	0	1	0	0	0	0	0	0	37	3	0	15	34	0	0	105	1711
5:30 PM	25	0	4	0	0	0	0	0	0	51	6	0	12	35	0	0	133	1705
5:35 PM	14	0	4	0	0	0	0	0	0	56	4	0	19	52	0	0	149	1693
5:40 PM	22	0	5	0	0	0	0	0	0	53	2	0	7	21	0	0	110	1646
5:45 PM	19	0	2	0	0	0	0	0	0	35	0	0	18	38	0	0	112	1618
5:50 PM	19	0	2	0	0	0	0	0	0	33	6	0	9	23	0	0	92	1562
5:55 PM	15	0	4	0	0	0	0	0	0	25	4	0	9	39	0	0	96	1524

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	284	0	32	0	0	0	0	0	0	772	16	0	184	544	0	0	1832
Heavy Trucks	0	0	0		0	0	0		0	32	4		0	32	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

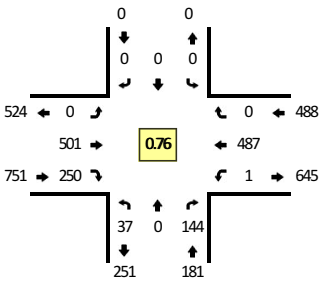
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

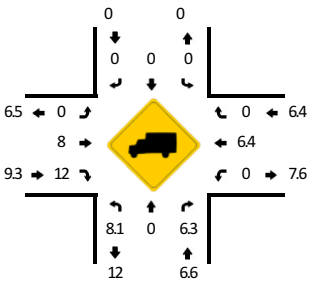
LOCATION: West Ramp -- W Broadway St
CITY/STATE: Missoula, MT

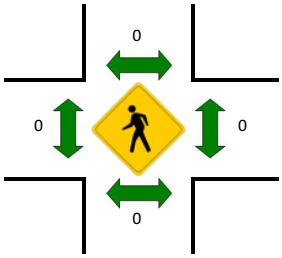
QC JOB #: 15183103
DATE: Tue, Mar 3 2020

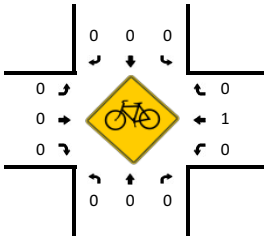
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

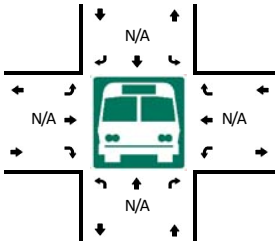


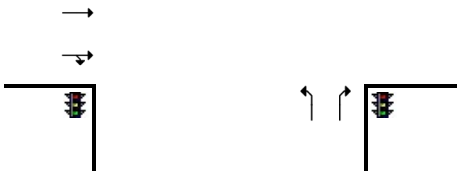
Quality Counts
DATA THAT DRIVES COMMUNITIES

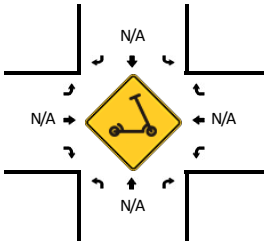












5-Min Count Period Beginning At	West Ramp (Northbound)				West Ramp (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	3	0	0	0	0	0	0	19	16	0	1	32	0	0	71	
7:05 AM	0	0	2	0	0	0	0	0	0	19	13	0	0	25	0	0	59	
7:10 AM	1	0	8	0	0	0	0	0	0	24	25	0	0	41	0	0	99	
7:15 AM	1	0	4	0	0	0	0	0	0	26	15	0	0	31	0	0	77	
7:20 AM	2	0	5	0	0	0	0	0	0	29	16	0	0	40	0	0	92	
7:25 AM	3	0	12	0	0	0	0	0	0	35	21	0	0	45	0	0	116	
7:30 AM	0	0	10	0	0	0	0	0	0	33	23	0	0	42	0	0	108	
7:35 AM	0	0	15	0	0	0	0	0	0	45	21	0	0	41	0	0	122	
7:40 AM	1	0	21	0	0	0	0	0	0	58	13	0	0	67	0	0	160	
7:45 AM	5	0	12	0	0	0	0	0	0	58	25	0	1	50	0	0	151	
7:50 AM	1	0	14	0	0	0	0	0	0	56	24	0	0	63	0	0	158	
7:55 AM	3	0	15	0	0	0	0	0	0	41	13	0	0	37	0	0	109	1322
8:00 AM	5	0	11	0	0	0	0	0	0	34	18	0	0	28	0	0	96	1347
8:05 AM	4	0	11	0	0	0	0	0	0	42	20	0	0	35	0	0	112	1400
8:10 AM	7	0	10	0	0	0	0	0	0	35	26	0	0	33	0	0	111	1412
8:15 AM	6	0	7	0	0	0	0	0	0	22	24	0	0	17	0	0	76	1411
8:20 AM	2	0	6	0	0	0	0	0	0	42	22	0	0	29	0	0	101	1420
8:25 AM	1	0	12	0	0	0	0	0	0	34	27	0	0	41	0	0	115	1419
8:30 AM	1	0	5	0	0	0	0	0	0	41	15	0	1	32	0	0	95	1406
8:35 AM	2	0	5	0	0	0	0	0	0	32	13	0	2	26	0	0	80	1364
8:40 AM	1	0	6	0	0	0	0	0	0	34	10	0	0	27	0	0	78	1282
8:45 AM	1	0	8	0	0	0	0	0	0	33	14	0	0	37	0	0	93	1224
8:50 AM	0	0	9	0	0	0	0	0	0	31	13	0	3	25	0	0	81	1147
8:55 AM	4	0	6	0	0	0	0	0	0	29	13	0	2	27	0	0	81	1119

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	0	188	0	0	0	0	0	0	688	248	0	4	720	0	0	1876
Heavy Trucks	4	0	12		0	0	0		0	76	32		0	24	0		148
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

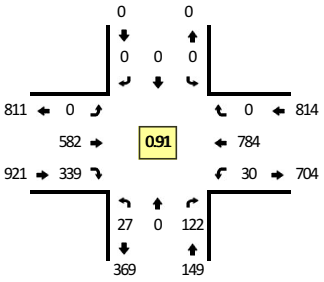
Type of peak hour being reported: Intersection Peak

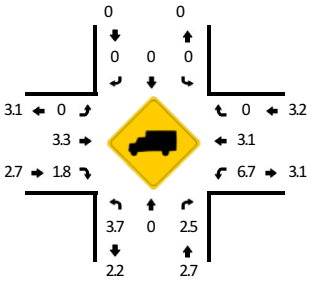
Method for determining peak hour: Total Entering Volume

LOCATION: West Ramp -- W Broadway St
CITY/STATE: Missoula, MT

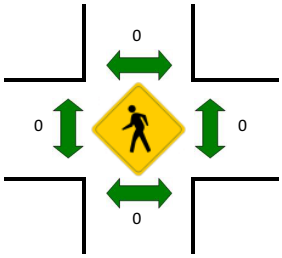
QC JOB #: 15183104
DATE: Tue, Mar 3 2020

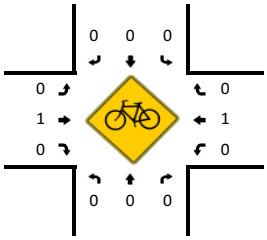
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

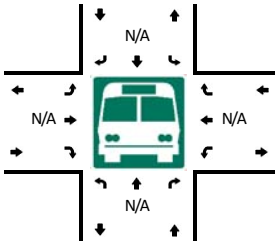


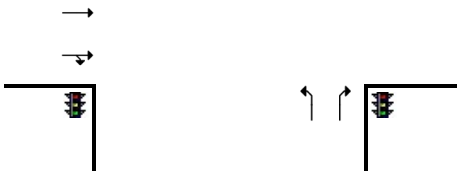


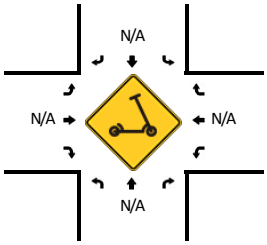
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	West Ramp (Northbound)				West Ramp (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	16	0	0	0	0	0	0	28	32	0	4	49	0	0	129	
4:05 PM	2	0	9	0	0	0	0	0	0	48	25	0	1	34	0	0	119	
4:10 PM	0	0	13	0	0	0	0	0	0	47	27	0	4	60	0	0	151	
4:15 PM	2	0	8	0	0	0	0	0	0	43	21	0	1	44	0	0	119	
4:20 PM	1	0	9	0	0	0	0	0	0	39	29	0	3	51	0	0	132	
4:25 PM	2	0	10	0	0	0	0	0	0	46	20	0	3	49	0	0	130	
4:30 PM	1	0	8	0	0	0	0	0	0	54	27	0	6	64	0	0	160	
4:35 PM	1	0	4	0	0	0	0	0	0	72	36	0	2	54	0	0	169	
4:40 PM	2	0	9	0	0	0	0	0	0	58	39	0	1	79	0	0	188	
4:45 PM	3	0	8	0	0	0	0	0	0	48	26	0	1	69	0	0	155	
4:50 PM	6	0	9	0	0	0	0	0	0	40	29	0	3	67	0	0	154	
4:55 PM	1	0	10	0	0	0	0	0	0	48	30	0	4	58	0	0	151	1757
5:00 PM	1	0	10	0	0	0	0	0	0	50	27	0	1	67	0	0	156	1784
5:05 PM	3	0	12	0	0	0	0	0	0	42	26	0	2	72	0	0	157	1822
5:10 PM	1	0	21	0	0	0	0	0	0	40	29	0	2	76	0	0	169	1840
5:15 PM	4	0	8	0	0	0	0	0	0	42	27	0	3	66	0	0	150	1871
5:20 PM	2	0	13	0	0	0	0	0	0	42	23	0	2	63	0	0	145	1884
5:25 PM	1	0	9	0	0	0	0	0	0	40	31	0	2	46	0	0	129	1883
5:30 PM	2	0	9	0	0	0	0	0	0	41	29	0	3	54	0	0	138	1861
5:35 PM	4	0	10	0	0	0	0	0	0	47	28	0	4	68	0	0	161	1853
5:40 PM	1	0	7	0	0	0	0	0	0	48	29	0	3	41	0	0	129	1794
5:45 PM	1	0	8	0	0	0	0	0	0	30	24	0	2	50	0	0	115	1754
5:50 PM	3	0	6	0	0	0	0	0	0	32	18	0	2	42	0	0	103	1703
5:55 PM	2	0	8	0	0	0	0	0	0	20	15	0	4	50	0	0	99	1651

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	84	0	0	0	0	0	0	736	408	0	36	788	0	0	2068
Heavy Trucks	0	0	4		0	0	0		0	40	4		4	40	0		92
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

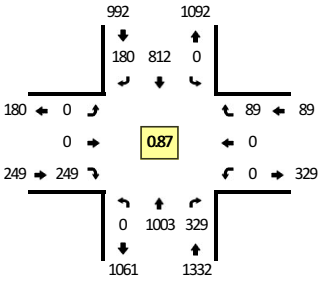
Type of peak hour being reported: Intersection Peak

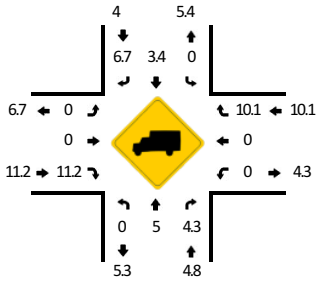
Method for determining peak hour: Total Entering Volume

LOCATION: N Reserve St -- East/West Ramps
CITY/STATE: Missoula, MT

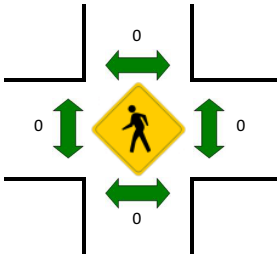
QC JOB #: 15183105
DATE: Tue, Mar 3 2020

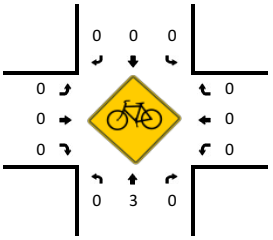
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

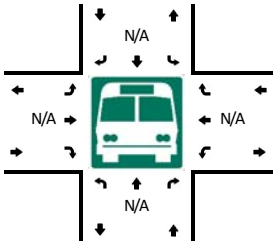


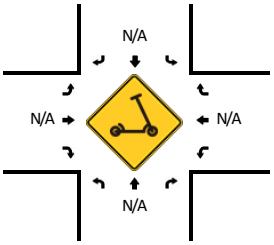


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				East/West Ramps (Eastbound)				East/West Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	66	23	0	0	55	3	0	0	0	17	0	0	0	2	0	166	
7:05 AM	0	49	16	0	0	55	4	0	0	0	16	0	0	0	2	0	142	
7:10 AM	0	55	26	0	0	54	7	0	0	0	21	0	0	0	1	0	164	
7:15 AM	0	74	35	0	0	50	5	0	0	0	18	0	0	0	2	0	184	
7:20 AM	0	78	30	0	0	51	8	0	0	0	15	0	0	0	9	0	191	
7:25 AM	0	89	32	0	0	54	14	0	0	0	19	0	0	0	4	0	212	
7:30 AM	0	70	32	0	0	83	13	0	0	0	25	0	0	0	5	0	228	
7:35 AM	0	87	39	0	0	68	12	0	0	0	19	0	0	0	3	0	228	
7:40 AM	0	101	34	0	0	72	23	0	0	0	16	0	0	0	7	0	253	
7:45 AM	0	95	31	0	0	71	18	0	0	0	25	0	0	0	11	0	251	
7:50 AM	0	104	35	0	0	72	13	0	0	0	25	0	0	0	12	0	261	
7:55 AM	0	81	23	0	0	78	20	0	0	0	15	0	0	0	14	0	231	2511
8:00 AM	0	76	25	0	0	58	14	0	0	0	11	0	0	0	7	0	191	2536
8:05 AM	0	79	17	0	0	58	18	0	0	0	24	0	0	0	11	0	207	2601
8:10 AM	0	60	17	0	0	62	16	0	0	0	27	0	0	0	5	0	187	2624
8:15 AM	0	79	27	0	0	77	11	0	0	0	21	0	0	0	3	0	218	2658
8:20 AM	0	82	17	0	0	59	8	0	0	0	22	0	0	0	7	0	195	2662
8:25 AM	0	80	21	0	0	59	14	0	0	0	27	0	0	0	5	0	206	2656
8:30 AM	0	79	32	0	0	49	7	0	0	0	18	0	0	0	7	0	192	2620
8:35 AM	0	94	23	0	0	54	5	0	0	0	16	0	0	0	10	0	202	2594
8:40 AM	0	75	20	0	0	57	7	0	0	0	17	0	0	0	2	0	178	2519
8:45 AM	0	80	26	0	0	63	9	0	0	0	14	0	0	0	9	0	201	2469
8:50 AM	0	98	13	0	0	63	9	0	0	0	14	0	0	0	7	0	204	2412
8:55 AM	0	79	22	0	0	42	14	0	0	0	16	0	0	0	5	0	178	2359

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1200	400	0	0	860	216	0	0	0	264	0	0	0	120	0	3060
Heavy Trucks	0	56	8		0	20	16		0	0	32		0	0	4		136
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

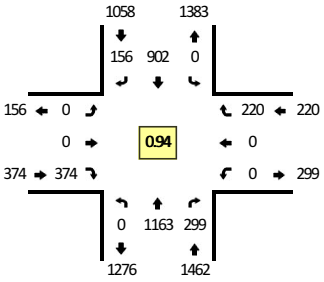
Type of peak hour being reported: Intersection Peak

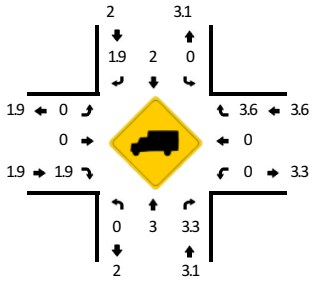
Method for determining peak hour: Total Entering Volume

LOCATION: N Reserve St -- East/West Ramps
CITY/STATE: Missoula, MT

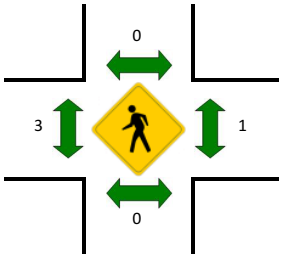
QC JOB #: 15183106
DATE: Tue, Mar 3 2020

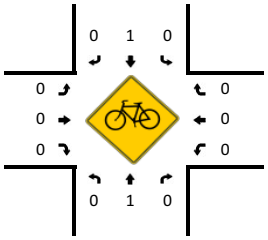
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

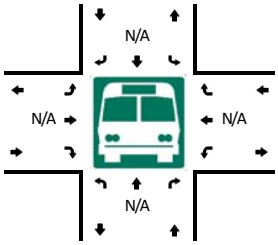


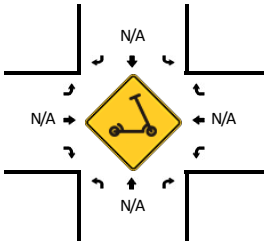


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				East/West Ramps (Eastbound)				East/West Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	92	22	0	0	101	16	0	0	0	35	0	0	0	19	0	285	
4:05 PM	0	70	25	0	0	92	11	0	0	0	32	0	0	0	16	0	246	
4:10 PM	0	85	24	0	0	85	13	0	0	0	23	0	0	0	10	0	240	
4:15 PM	0	98	20	0	0	75	13	0	0	0	29	0	0	0	13	0	248	
4:20 PM	0	111	25	0	0	58	11	0	0	0	33	0	0	0	18	0	256	
4:25 PM	0	74	25	0	0	83	9	0	0	0	20	0	0	0	18	0	229	
4:30 PM	0	85	29	0	0	79	9	0	0	0	35	0	0	0	19	0	256	
4:35 PM	0	90	29	0	0	60	9	0	0	0	35	0	0	0	19	0	242	
4:40 PM	0	86	23	0	0	90	8	0	0	0	35	0	0	0	17	0	259	
4:45 PM	0	97	35	0	0	92	13	0	0	0	34	0	0	0	15	0	286	
4:50 PM	0	99	26	0	0	59	15	0	0	0	29	0	0	0	13	0	241	
4:55 PM	0	78	21	0	0	74	10	0	0	0	32	0	0	0	17	0	232	3020
5:00 PM	0	110	30	0	0	82	17	0	0	0	31	0	0	0	23	0	293	3028
5:05 PM	0	117	25	0	0	81	9	0	0	0	27	0	0	0	15	0	274	3056
5:10 PM	0	96	20	0	0	72	22	0	0	0	31	0	0	0	24	0	265	3081
5:15 PM	0	90	28	0	0	80	14	0	0	0	19	0	0	0	20	0	251	3084
5:20 PM	0	88	22	0	0	65	12	0	0	0	37	0	0	0	20	0	244	3072
5:25 PM	0	79	13	0	0	65	10	0	0	0	31	0	0	0	18	0	216	3059
5:30 PM	0	111	32	0	0	67	10	0	0	0	33	0	0	0	20	0	273	3076
5:35 PM	0	112	24	0	0	75	16	0	0	0	35	0	0	0	18	0	280	3114
5:40 PM	0	94	18	0	0	61	8	0	0	0	34	0	0	0	13	0	228	3083
5:45 PM	0	108	22	0	0	79	8	0	0	0	25	0	0	0	19	0	261	3058
5:50 PM	0	109	21	0	0	70	10	0	0	0	21	0	0	0	16	0	247	3064
5:55 PM	0	67	18	0	0	75	9	0	0	0	19	0	0	0	11	0	199	3031

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1292	300	0	0	940	192	0	0	0	356	0	0	0	248	0	3328
Heavy Trucks	0	44	8		0	20	4		0	0	0		0	0	16		92
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

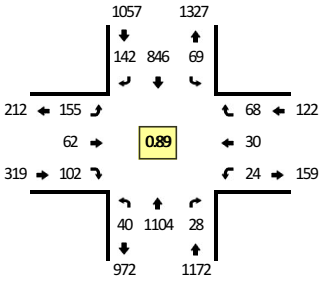
Type of peak hour being reported: Intersection Peak

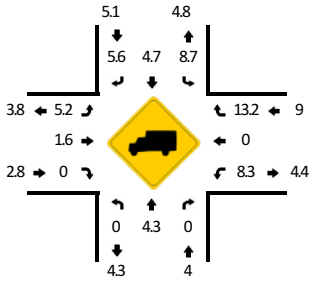
Method for determining peak hour: Total Entering Volume

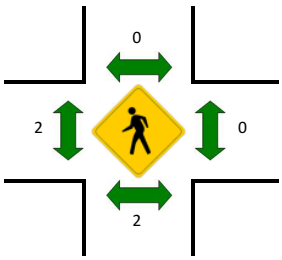
LOCATION: N Reserve St -- England Blvd
CITY/STATE: Missoula, MT

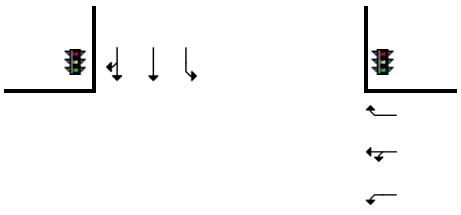
QC JOB #: 15183107
DATE: Tue, Mar 3 2020

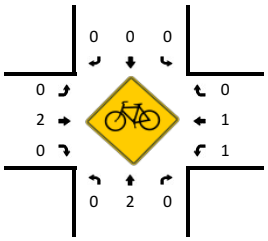
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

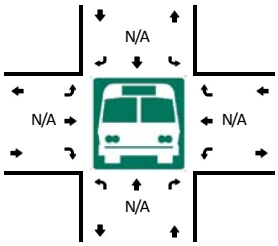


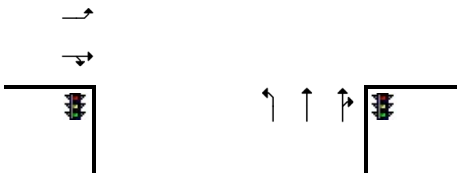


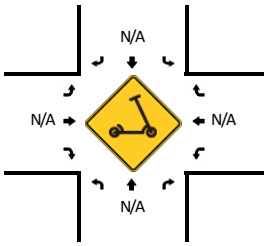












5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	67	2	0	3	48	3	0	10	1	6	0	0	1	5	0	151	
7:05 AM	2	55	1	0	4	55	3	0	7	3	3	0	2	2	5	0	142	
7:10 AM	1	69	3	0	4	62	7	0	8	4	3	0	2	0	6	0	169	
7:15 AM	2	89	3	0	4	56	11	0	8	2	8	0	2	2	8	0	195	
7:20 AM	2	95	2	0	3	60	5	0	10	2	8	0	2	1	8	0	198	
7:25 AM	6	108	1	0	4	60	3	0	8	2	8	0	1	1	4	0	206	
7:30 AM	2	85	2	0	4	94	9	0	15	1	12	0	0	2	5	0	231	
7:35 AM	0	103	5	0	5	80	11	0	17	8	8	0	0	1	3	0	241	
7:40 AM	3	116	1	0	5	73	6	0	16	3	4	0	3	4	6	0	240	
7:45 AM	2	106	5	0	5	76	17	0	13	4	6	0	3	4	9	0	250	
7:50 AM	3	114	4	0	3	74	17	0	13	9	7	0	3	2	7	0	256	
7:55 AM	4	87	4	0	8	71	13	0	10	9	7	0	1	4	5	0	223	2502
8:00 AM	3	90	1	0	11	46	11	0	10	7	10	0	2	1	1	0	193	2544
8:05 AM	4	78	0	0	3	60	17	0	10	6	9	0	6	2	7	0	202	2604
8:10 AM	4	53	1	0	6	70	16	0	17	4	12	0	0	1	9	0	193	2628
8:15 AM	2	85	2	0	8	79	13	0	9	5	11	0	2	4	7	0	227	2660
8:20 AM	7	79	2	0	7	63	9	0	17	4	8	0	3	4	5	0	208	2670
8:25 AM	1	79	4	0	7	73	9	0	14	3	5	0	1	3	4	0	203	2667
8:30 AM	1	88	2	0	7	52	5	0	10	2	5	0	4	0	12	0	188	2624
8:35 AM	1	101	5	0	4	58	5	0	14	4	7	0	5	3	7	0	214	2597
8:40 AM	7	76	4	0	9	59	7	0	9	3	3	0	5	2	7	0	191	2548
8:45 AM	9	88	0	0	8	66	5	0	8	4	3	0	3	1	9	0	204	2502
8:50 AM	2	95	0	0	7	63	8	0	11	3	8	0	5	4	7	0	213	2459
8:55 AM	3	83	0	0	2	45	8	0	7	1	7	0	3	2	6	0	167	2403

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	1344	40	0	52	892	160	0	168	64	68	0	36	40	88	0	2984
Heavy Trucks	0	48	0		0	36	4		0	0	0		0	0	8		96
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	8	0		4	0	0		12
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

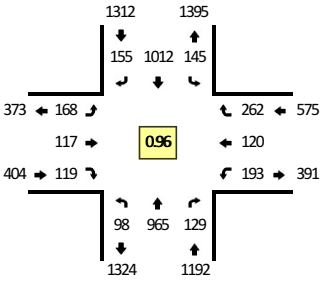
Type of peak hour being reported: Intersection Peak

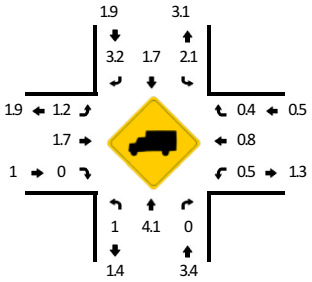
Method for determining peak hour: Total Entering Volume

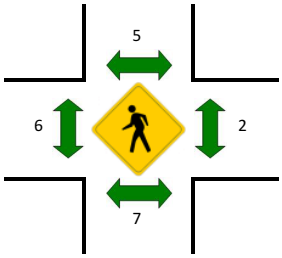
LOCATION: N Reserve St -- England Blvd
CITY/STATE: Missouri, MT

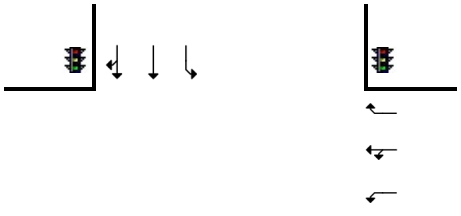
QC JOB #: 15183108
DATE: Tue, Mar 3 2020

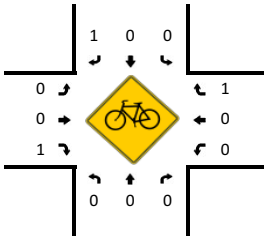
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

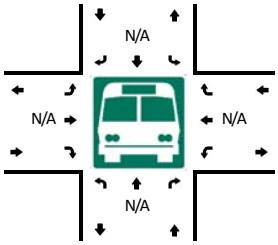


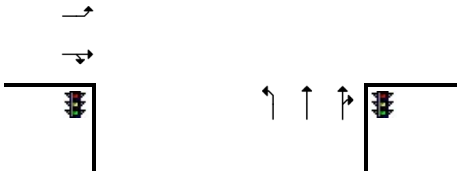


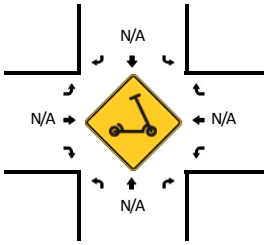












5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	75	5	0	10	92	13	0	14	5	16	0	16	5	14	0	271	
4:05 PM	6	84	14	0	19	122	19	0	6	6	11	0	13	9	9	0	318	
4:10 PM	15	59	12	0	11	67	9	0	28	12	9	0	20	11	27	0	280	
4:15 PM	6	78	20	0	12	88	13	0	15	14	12	0	15	11	22	0	306	
4:20 PM	7	112	12	0	15	77	15	0	7	7	7	0	13	9	18	0	299	
4:25 PM	4	59	7	0	12	70	9	0	21	10	13	0	18	15	23	0	261	
4:30 PM	10	67	12	0	7	75	13	0	13	10	9	0	22	10	25	0	273	
4:35 PM	6	97	13	0	14	99	18	0	7	6	10	0	12	7	20	0	309	
4:40 PM	10	74	8	0	8	81	17	0	14	6	15	0	14	13	24	0	284	
4:45 PM	1	81	6	0	12	89	11	0	19	8	5	0	29	9	18	0	288	
4:50 PM	13	104	8	0	11	91	12	0	5	8	8	0	10	8	22	0	300	
4:55 PM	17	62	10	0	12	73	10	0	15	13	9	0	17	9	27	0	274	3463
5:00 PM	3	88	7	0	12	80	9	0	18	17	11	0	10	9	27	0	291	3483
5:05 PM	10	106	9	0	7	101	18	0	16	8	3	0	12	4	21	0	315	3480
5:10 PM	16	75	8	0	13	60	7	0	25	9	16	0	17	14	20	0	280	3480
5:15 PM	5	70	8	0	6	70	12	0	23	9	8	0	15	16	16	0	258	3432
5:20 PM	15	91	6	0	17	98	19	0	6	6	5	0	9	4	13	0	289	3422
5:25 PM	14	52	8	0	12	57	8	0	19	10	11	0	25	19	21	0	256	3417
5:30 PM	8	99	14	0	7	86	14	0	18	10	12	0	17	9	20	0	314	3458
5:35 PM	7	108	12	0	7	100	16	0	11	5	8	0	17	11	22	0	324	3473
5:40 PM	11	73	2	0	16	64	11	0	17	6	11	0	23	12	28	0	274	3463
5:45 PM	11	91	4	0	12	78	6	0	21	8	9	0	10	7	13	0	270	3445
5:50 PM	11	103	7	0	14	83	16	0	14	8	4	0	10	11	13	0	294	3439
5:55 PM	8	63	7	0	4	58	11	0	13	10	15	0	16	13	13	0	231	3396

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	884	184	0	168	1108	164	0	196	128	128	0	192	124	232	0	3616
Heavy Trucks	4	36	0		0	24	8		4	4	0		4	4	0		88
Buses																	
Pedestrians		8				0				4				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

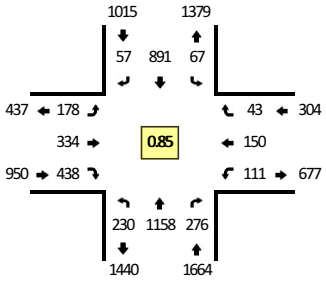
Type of peak hour being reported: Intersection Peak

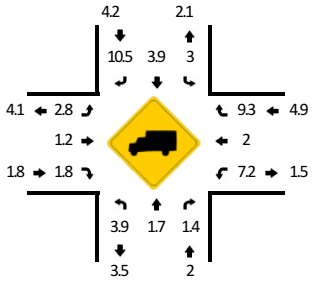
Method for determining peak hour: Total Entering Volume

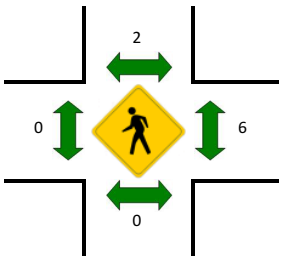
LOCATION: N Reserve St -- Mullan Rd
CITY/STATE: Missoula, MT

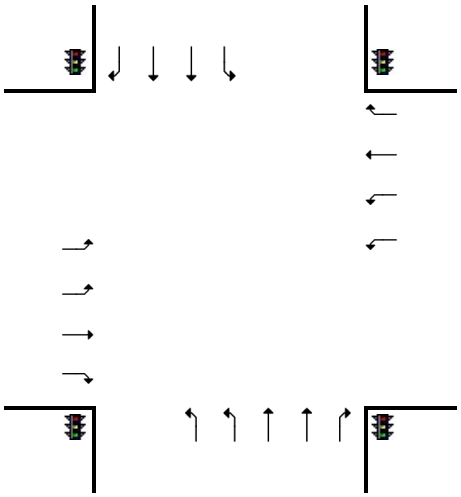
QC JOB #: 15183109
DATE: Tue, Mar 3 2020

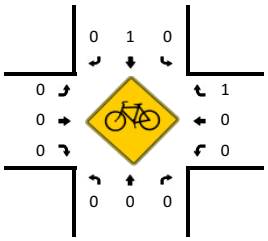
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

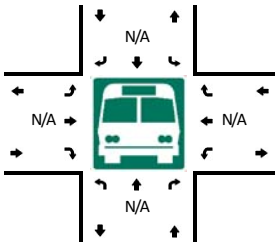


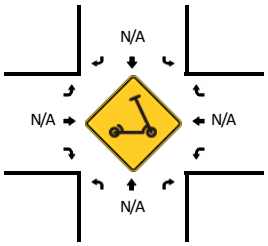












5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	66	14	0	3	33	3	0	10	18	27	0	5	9	0	0	198	
7:05 AM	20	50	13	0	5	45	4	0	10	16	23	0	8	2	1	0	197	
7:10 AM	17	73	6	0	2	52	4	0	13	16	32	0	3	4	3	0	225	
7:15 AM	18	78	15	0	5	70	0	0	9	24	34	0	8	10	3	0	274	
7:20 AM	25	80	12	0	5	64	3	0	13	19	54	0	14	3	2	0	294	
7:25 AM	24	101	28	0	5	62	7	0	14	24	46	0	3	9	4	0	327	
7:30 AM	13	90	18	0	7	78	6	0	17	22	37	0	8	12	2	0	310	
7:35 AM	20	109	19	0	8	99	3	0	16	29	53	0	12	5	2	0	375	
7:40 AM	19	122	27	0	5	94	2	0	17	36	44	0	11	11	3	0	391	
7:45 AM	25	115	26	0	11	84	3	0	16	32	50	0	14	16	4	0	396	
7:50 AM	22	102	30	0	6	70	5	0	10	35	39	0	7	15	8	0	349	
7:55 AM	24	120	20	0	3	80	3	0	17	41	31	0	9	12	2	0	362	3698
8:00 AM	17	75	24	0	6	47	4	0	17	20	24	0	7	18	2	0	261	3761
8:05 AM	17	88	20	0	3	73	6	0	13	20	38	0	9	10	6	0	303	3867
8:10 AM	22	63	24	0	2	65	6	0	12	20	26	0	6	19	3	0	268	3910
8:15 AM	12	85	18	0	8	71	8	0	10	29	24	0	9	16	6	0	296	3932
8:20 AM	15	88	22	0	3	68	4	0	19	26	26	0	16	7	1	0	295	3933
8:25 AM	18	88	28	0	4	70	8	0	12	23	35	0	9	8	4	0	307	3913
8:30 AM	18	104	16	0	6	65	4	0	17	28	30	0	13	12	2	0	315	3918
8:35 AM	13	80	22	0	10	74	7	0	13	23	28	0	19	10	4	0	303	3846
8:40 AM	24	93	22	0	2	44	8	0	19	25	34	0	16	13	7	0	307	3762
8:45 AM	12	91	17	0	9	57	13	0	13	17	26	0	11	11	3	0	280	3646
8:50 AM	23	103	22	0	3	53	5	0	14	23	27	0	18	12	7	0	310	3607
8:55 AM	15	89	23	0	4	51	2	0	14	15	16	0	17	8	2	0	256	3501

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	256	1384	288	0	96	1108	32	0	196	388	588	0	148	128	36	0	4648
Heavy Trucks	8	12	8		4	32	4		0	0	16		4	0	12		100
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

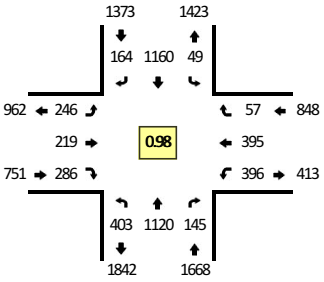
Type of peak hour being reported: Intersection Peak

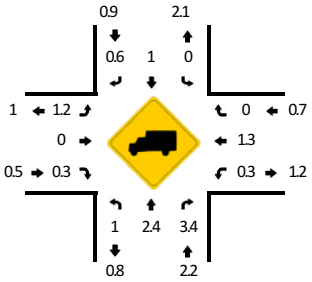
Method for determining peak hour: Total Entering Volume

LOCATION: N Reserve St -- Mullan Rd
CITY/STATE: Missoula, MT

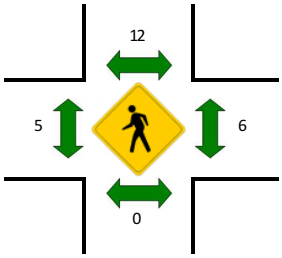
QC JOB #: 15183110
DATE: Tue, Mar 3 2020

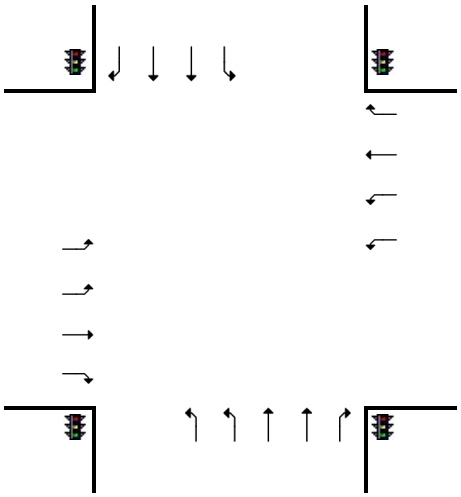
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

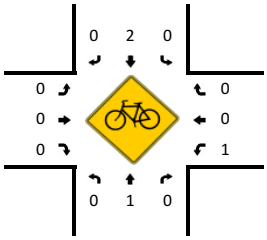


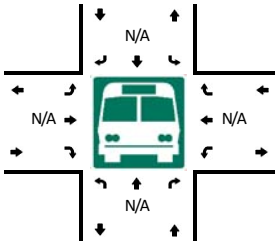


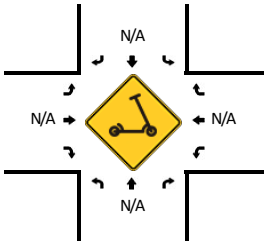
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	N Reserve St (Northbound)				N Reserve St (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	22	102	11	0	7	108	18	0	14	14	11	0	34	27	5	0	373	
4:05 PM	41	113	9	0	1	98	12	0	26	18	32	0	25	17	9	0	401	
4:10 PM	34	69	11	0	5	77	9	0	21	28	36	0	41	35	5	0	371	
4:15 PM	18	99	11	0	2	118	11	0	11	7	20	0	35	29	9	0	370	
4:20 PM	30	94	11	0	5	101	7	0	27	25	33	0	22	22	6	0	383	
4:25 PM	34	72	12	0	8	65	10	0	19	17	27	0	35	33	6	0	338	
4:30 PM	26	80	13	0	7	114	15	0	20	12	24	0	47	27	8	0	393	
4:35 PM	35	96	10	0	3	105	15	0	26	19	30	0	25	22	5	0	391	
4:40 PM	29	83	11	0	4	72	13	0	28	27	29	0	46	40	7	0	389	
4:45 PM	20	92	13	0	3	120	8	0	9	7	27	0	42	35	3	0	379	
4:50 PM	31	101	15	0	4	97	13	0	24	25	24	0	11	19	9	0	373	
4:55 PM	35	70	16	0	9	67	14	0	13	22	26	0	46	40	7	0	365	4526
5:00 PM	22	84	17	0	3	120	9	0	10	8	14	0	42	33	2	0	364	4517
5:05 PM	47	96	10	0	4	105	17	0	28	26	31	0	27	26	4	0	421	4537
5:10 PM	34	70	15	0	3	73	18	0	22	22	29	0	35	43	4	0	368	4534
5:15 PM	24	99	12	0	6	121	10	0	15	11	25	0	38	35	4	0	400	4564
5:20 PM	44	114	7	0	1	101	20	0	27	29	20	0	17	21	6	0	407	4588
5:25 PM	38	77	3	0	7	72	14	0	33	15	22	0	44	44	4	0	373	4623
5:30 PM	35	108	17	0	5	110	16	0	5	11	17	0	29	35	2	0	390	4620
5:35 PM	44	126	9	0	0	102	12	0	32	16	22	0	19	24	5	0	411	4640
5:40 PM	35	68	7	0	6	60	15	0	24	28	23	0	27	37	6	0	336	4587
5:45 PM	20	100	9	0	5	107	10	0	11	9	17	0	32	40	5	0	365	4573
5:50 PM	41	106	9	0	2	91	15	1	23	20	19	0	24	24	6	0	381	4581
5:55 PM	39	64	8	0	6	48	7	0	34	23	18	0	41	32	4	0	324	4540

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	420	1060	148	0	52	1196	180	0	260	236	340	0	400	416	48	0	4756
Heavy Trucks	4	24	8		0	12	0		4	0	0		4	4	0		60
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	8	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

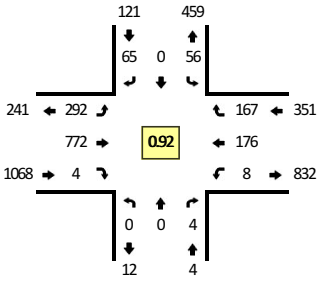
Type of peak hour being reported: Intersection Peak

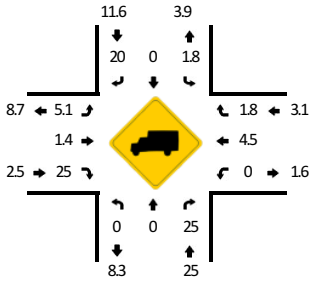
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Mullan Rd
CITY/STATE: Missoula, MT

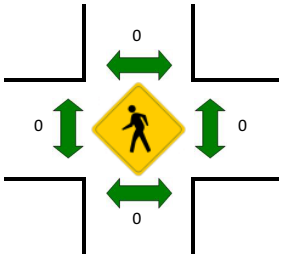
QC JOB #: 15183111
DATE: Tue, Mar 3 2020

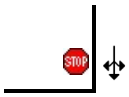
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

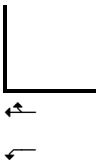


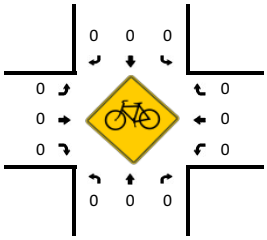


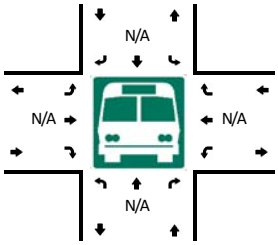
Quality Counts
DATA THAT DRIVES COMMUNITIES

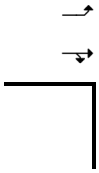


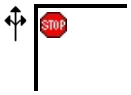


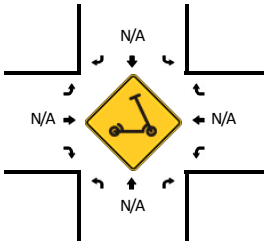












5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	1	0	10	40	0	0	0	12	8	0	73	
7:05 AM	0	0	0	0	0	0	0	0	7	45	0	0	0	11	5	0	68	
7:10 AM	0	0	1	0	1	0	2	0	12	48	0	0	2	12	6	0	84	
7:15 AM	0	0	0	0	2	0	3	0	8	64	0	0	0	9	5	0	91	
7:20 AM	0	0	0	0	5	0	3	0	14	76	1	0	2	12	12	0	125	
7:25 AM	0	0	0	0	1	0	6	0	20	69	0	0	1	11	11	0	119	
7:30 AM	0	0	0	0	3	0	4	0	19	71	0	0	2	6	19	0	124	
7:35 AM	0	0	1	0	4	0	2	0	20	95	1	0	0	11	14	0	148	
7:40 AM	0	0	0	0	4	0	3	0	28	70	0	0	0	9	13	0	127	
7:45 AM	0	0	3	0	6	0	6	0	25	74	0	0	0	13	19	0	146	
7:50 AM	0	0	0	0	4	0	7	0	29	59	1	0	0	22	19	0	141	
7:55 AM	0	0	0	0	3	0	8	0	31	62	0	0	2	14	11	0	131	1377
8:00 AM	0	0	0	0	3	0	5	0	27	41	0	0	0	13	21	0	110	1414
8:05 AM	0	0	0	0	3	0	9	0	33	45	1	0	1	19	6	0	117	1463
8:10 AM	0	0	0	0	11	0	5	0	21	59	0	0	0	26	13	0	135	1514
8:15 AM	0	0	0	0	9	0	7	0	25	51	0	0	0	20	9	0	121	1544
8:20 AM	0	0	1	0	16	0	15	0	17	44	1	0	1	16	7	0	118	1537
8:25 AM	0	0	0	0	12	0	5	0	6	44	0	0	1	14	4	0	86	1504
8:30 AM	0	0	0	0	6	0	8	0	5	57	0	0	0	16	5	0	97	1477
8:35 AM	0	0	0	0	7	0	7	0	7	48	0	0	0	20	5	0	94	1423
8:40 AM	0	0	0	0	3	0	5	0	8	53	0	0	0	12	5	0	86	1382
8:45 AM	0	0	0	0	5	0	2	0	8	55	0	0	1	21	3	0	95	1331
8:50 AM	0	0	0	0	2	0	7	0	6	39	0	0	0	13	5	0	72	1262
8:55 AM	0	0	1	0	3	0	4	0	6	37	0	0	0	13	4	0	68	1199

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	16	0	56	0	44	0	292	956	4	0	0	132	184	0	1684
Heavy Trucks	0	0	4		4	0	20		16	12	0		0	8	0		64
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

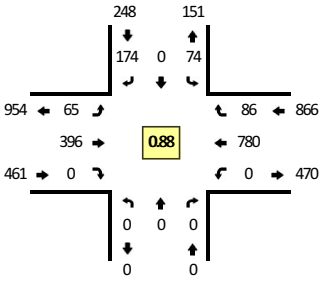
Type of peak hour being reported: Intersection Peak

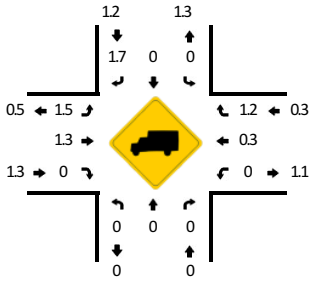
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Mullan Rd
CITY/STATE: Missoula, MT

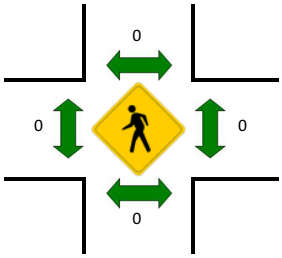
QC JOB #: 15183112
DATE: Tue, Mar 3 2020

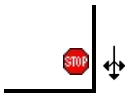
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

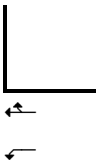


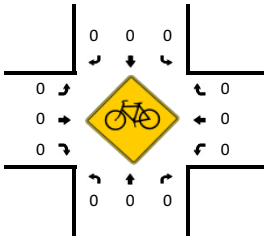


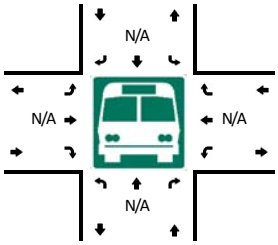
Quality Counts
DATA THAT DRIVES COMMUNITIES

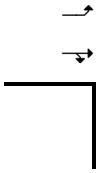


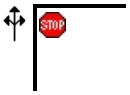


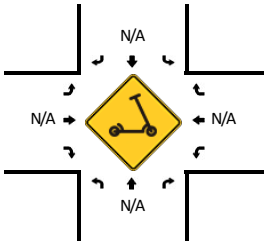












5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	2	0	13	0	8	0	7	27	0	0	0	56	9	0	122	
4:05 PM	0	0	1	0	11	1	14	0	8	30	0	0	0	42	8	0	115	
4:10 PM	0	0	0	0	8	0	10	0	9	25	0	0	0	46	5	0	103	
4:15 PM	0	0	1	0	9	0	10	0	6	45	0	0	1	54	7	0	133	
4:20 PM	0	0	0	0	7	0	15	0	9	28	0	0	0	48	8	0	115	
4:25 PM	0	0	1	0	4	0	13	0	6	41	0	0	0	44	5	0	114	
4:30 PM	0	0	0	0	6	1	11	0	6	41	0	0	0	47	4	0	116	
4:35 PM	0	0	0	0	11	0	8	0	6	37	0	0	0	49	4	0	115	
4:40 PM	0	0	0	0	5	0	7	0	3	40	0	0	0	54	9	0	118	
4:45 PM	0	0	1	0	5	0	7	0	6	30	0	0	0	55	8	0	112	
4:50 PM	1	0	2	0	10	0	12	0	9	16	0	0	0	51	6	0	107	
4:55 PM	0	0	0	0	10	0	11	0	8	21	0	0	0	47	6	0	103	1373
5:00 PM	0	0	0	0	5	0	10	0	8	37	0	0	0	78	7	0	145	1396
5:05 PM	0	0	0	0	8	0	11	0	10	43	0	0	0	70	9	0	151	1432
5:10 PM	0	0	0	0	15	0	20	0	6	33	0	0	0	64	7	0	145	1474
5:15 PM	0	0	0	0	7	0	19	0	3	36	0	0	0	78	6	0	149	1490
5:20 PM	0	0	0	0	9	0	19	0	5	34	0	0	0	64	5	0	136	1511
5:25 PM	0	0	0	0	8	0	22	0	5	21	0	0	0	73	9	0	138	1535
5:30 PM	0	0	0	0	5	0	15	0	1	34	0	0	0	70	5	0	130	1549
5:35 PM	0	0	0	0	5	0	15	0	5	30	0	0	0	63	9	0	127	1561
5:40 PM	0	0	0	0	1	0	13	0	4	27	0	0	0	53	8	0	106	1549
5:45 PM	0	0	0	0	2	0	12	0	3	35	0	0	0	66	2	0	120	1557
5:50 PM	0	0	0	0	3	0	5	0	7	34	0	0	0	57	11	0	117	1567
5:55 PM	0	0	0	0	6	0	13	0	8	32	0	0	0	44	8	0	111	1575

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	120	0	200	0	76	448	0	0	0	848	88	0	1780
Heavy Trucks	0	0	0		0	0	4		0	4	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

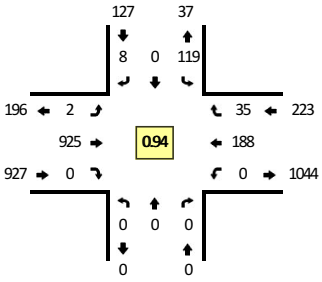
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

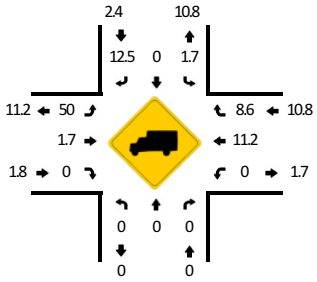
LOCATION: George Elmer Dr -- Mullan Rd
CITY/STATE: Missoula, MT

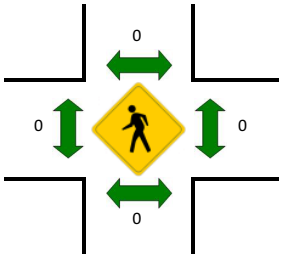
QC JOB #: 15183113
DATE: Tue, Mar 3 2020

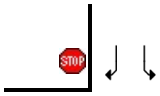
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

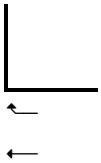


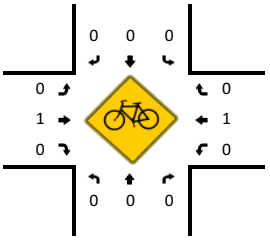
Quality Counts
DATA THAT DRIVES COMMUNITIES

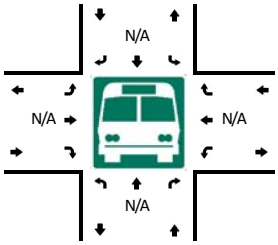


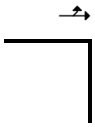


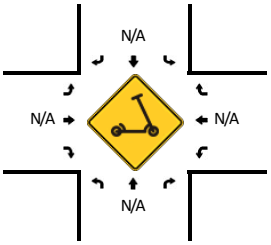












5-Min Count Period Beginning At	George Elmer Dr (Northbound)				George Elmer Dr (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	5	0	0	0	0	30	0	0	0	8	2	0	45	
7:05 AM	0	0	0	0	8	0	0	0	0	48	0	0	0	11	1	0	68	
7:10 AM	0	0	0	0	6	0	1	0	0	47	0	0	0	11	1	0	66	
7:15 AM	0	0	0	0	11	0	0	0	0	64	0	0	0	11	2	0	88	
7:20 AM	0	0	0	0	13	0	0	0	0	79	0	0	0	13	2	0	107	
7:25 AM	0	0	0	0	9	0	0	0	0	73	0	0	0	13	2	0	97	
7:30 AM	0	0	0	0	10	0	0	0	0	89	0	0	0	9	1	0	109	
7:35 AM	0	0	0	0	15	0	1	0	1	97	0	0	0	8	4	0	126	
7:40 AM	0	0	0	0	11	0	1	0	0	77	0	0	0	12	1	0	102	
7:45 AM	0	0	0	0	8	0	1	0	0	86	0	0	0	12	4	0	111	
7:50 AM	0	0	0	0	7	0	0	0	0	83	0	0	0	27	4	0	121	
7:55 AM	0	0	0	0	12	0	1	0	0	67	0	0	0	13	7	0	100	1140
8:00 AM	0	0	0	0	12	0	2	0	0	60	0	0	0	13	3	0	90	1185
8:05 AM	0	0	0	0	5	0	1	0	1	59	0	0	0	27	3	0	96	1213
8:10 AM	0	0	0	0	6	0	1	0	0	91	0	0	0	30	2	0	130	1277
8:15 AM	0	0	0	0	8	0	0	0	0	59	0	0	0	19	1	0	87	1276
8:20 AM	0	0	0	0	5	0	0	0	0	46	0	0	0	27	0	0	78	1247
8:25 AM	0	0	0	0	7	0	1	0	0	43	0	0	0	19	2	0	72	1222
8:30 AM	0	0	0	0	13	0	0	0	0	43	0	0	0	16	7	0	79	1192
8:35 AM	0	0	0	0	9	0	1	0	0	41	0	0	0	23	5	0	79	1145
8:40 AM	0	0	0	0	6	0	0	0	1	56	0	0	0	17	1	0	81	1124
8:45 AM	0	0	0	0	9	0	0	0	0	42	0	0	0	19	0	0	70	1083
8:50 AM	0	0	0	0	4	0	0	0	1	48	0	0	0	17	2	0	72	1034
8:55 AM	0	0	0	0	4	0	3	0	1	28	0	0	0	16	0	0	52	986

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	136	0	12	0	4	1040	0	0	0	128	36	0	1356
Heavy Trucks	0	0	0		4	0	4		4	12	0		0	16	8		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

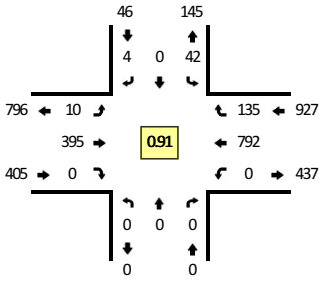
Type of peak hour being reported: Intersection Peak

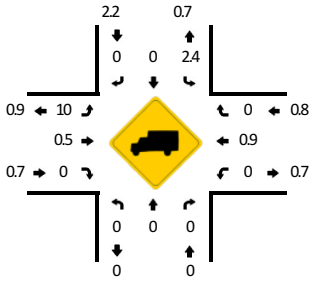
Method for determining peak hour: Total Entering Volume

LOCATION: George Elmer Dr -- Mullan Rd
CITY/STATE: Missoula, MT

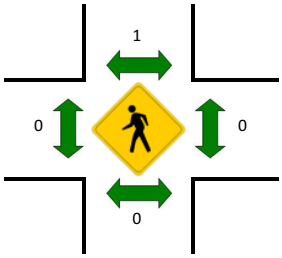
QC JOB #: 15183114
DATE: Tue, Mar 3 2020

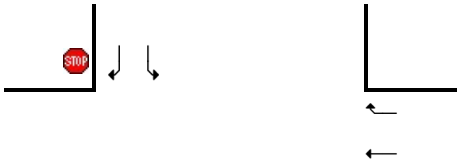
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

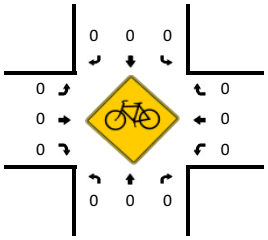


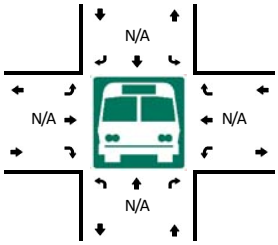


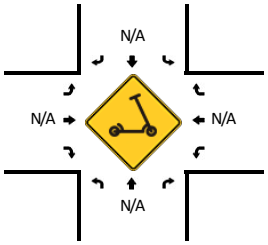
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	George Elmer Dr (Northbound)				George Elmer Dr (Southbound)				Mullan Rd (Eastbound)				Mullan Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	1	0	1	31	0	0	0	49	7	0	94	
4:05 PM	0	0	0	0	3	0	0	0	0	30	0	0	0	54	7	0	94	
4:10 PM	0	0	0	0	0	0	1	0	1	36	0	0	0	45	10	0	93	
4:15 PM	0	0	0	0	3	0	1	0	1	41	0	0	0	58	5	0	109	
4:20 PM	0	0	0	0	3	0	0	0	0	33	0	0	0	52	2	0	90	
4:25 PM	0	0	0	0	6	0	0	0	1	43	0	0	0	55	7	0	112	
4:30 PM	0	0	0	0	6	0	0	0	0	34	0	0	0	43	8	0	91	
4:35 PM	0	0	0	0	2	0	0	0	0	40	0	0	0	57	4	0	103	
4:40 PM	0	0	0	0	9	0	0	0	1	31	0	0	0	46	9	0	96	
4:45 PM	0	0	0	0	0	0	2	0	0	34	0	0	0	52	5	0	93	
4:50 PM	0	0	0	0	2	0	0	0	0	28	0	0	0	56	4	0	90	
4:55 PM	0	0	0	0	2	0	0	0	0	23	0	0	0	51	5	0	81	1146
5:00 PM	0	0	0	0	5	0	0	0	1	45	0	0	0	74	13	0	138	1190
5:05 PM	0	0	0	0	4	0	0	0	0	39	0	0	0	70	7	0	120	1216
5:10 PM	0	0	0	0	3	0	2	0	2	35	0	0	0	63	15	0	120	1243
5:15 PM	0	0	0	0	3	0	0	0	0	37	0	0	0	77	17	0	134	1268
5:20 PM	0	0	0	0	6	0	0	0	1	26	0	0	0	55	19	0	107	1285
5:25 PM	0	0	0	0	2	0	0	0	2	21	0	0	0	80	11	0	116	1289
5:30 PM	0	0	0	0	4	0	0	0	0	33	0	0	0	67	11	0	115	1313
5:35 PM	0	0	0	0	2	0	0	0	0	31	0	0	0	67	12	0	112	1322
5:40 PM	0	0	0	0	2	0	1	0	1	30	0	0	0	65	12	0	111	1337
5:45 PM	0	0	0	0	2	0	0	0	0	30	0	0	0	65	5	0	102	1346
5:50 PM	0	0	0	0	6	0	0	0	1	38	0	0	0	55	6	0	106	1362
5:55 PM	0	0	0	0	3	0	1	0	2	30	0	0	0	54	7	0	97	1378

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	48	0	8	0	12	476	0	0	0	828	140	0	1512
Heavy Trucks	0	0	0		0	0	0		4	0	0		0	12	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

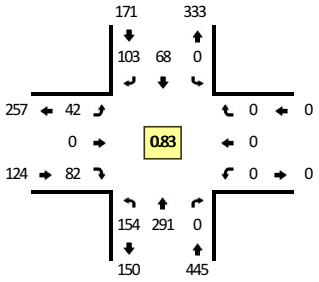
Type of peak hour being reported: Intersection Peak

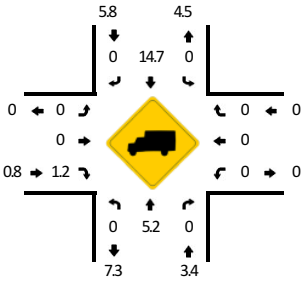
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Siren's Rd
CITY/STATE: Missoula, MT

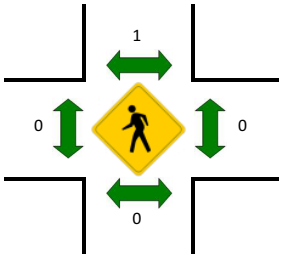
QC JOB #: 15183115
DATE: Tue, Mar 3 2020

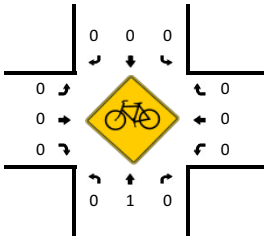
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

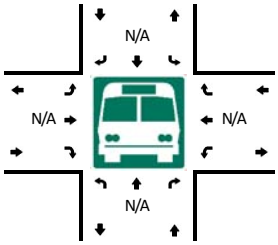


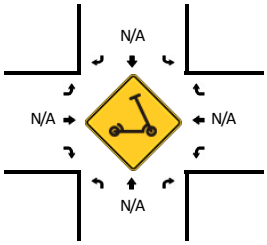


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Siren's Rd (Eastbound)				Siren's Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	19	0	0	0	1	1	0	0	0	1	0	0	0	0	0	27	
7:05 AM	2	9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	12	
7:10 AM	1	17	0	0	0	3	2	0	0	0	0	0	0	0	0	0	23	
7:15 AM	2	5	0	0	0	3	1	0	1	0	3	0	0	0	0	0	15	
7:20 AM	11	15	0	0	0	5	0	0	0	0	2	0	0	0	0	0	33	
7:25 AM	9	21	0	0	0	5	2	0	1	0	1	0	0	0	0	0	39	
7:30 AM	6	31	0	0	0	2	1	0	2	0	4	0	0	0	0	0	46	
7:35 AM	11	23	0	0	0	5	4	0	2	0	1	0	0	0	0	0	46	
7:40 AM	9	37	0	0	0	2	3	0	2	0	3	0	0	0	0	0	56	
7:45 AM	14	30	0	0	0	5	6	0	2	0	4	0	0	0	0	0	61	
7:50 AM	10	28	0	0	0	7	11	0	2	0	7	0	0	0	0	0	65	
7:55 AM	16	30	0	0	0	2	9	0	2	0	7	0	0	0	0	0	66	489
8:00 AM	16	32	0	0	0	7	9	0	3	0	3	0	0	0	0	0	70	532
8:05 AM	24	15	0	0	0	7	9	0	4	0	8	0	0	0	0	0	67	587
8:10 AM	18	18	0	0	0	8	13	0	5	0	8	0	0	0	0	0	70	634
8:15 AM	16	20	0	0	0	5	20	0	7	0	13	0	0	0	0	0	81	700
8:20 AM	8	20	0	0	0	12	12	0	3	0	16	0	0	0	0	0	71	738
8:25 AM	6	7	0	0	0	6	6	0	8	0	8	0	0	0	0	0	41	740
8:30 AM	2	7	0	0	0	7	1	0	7	0	8	0	0	0	0	0	32	726
8:35 AM	2	9	0	0	0	7	3	0	1	0	4	0	0	0	0	0	26	706
8:40 AM	2	12	0	0	0	7	1	0	2	0	1	0	0	0	0	0	25	675
8:45 AM	0	11	0	0	0	8	0	0	2	0	2	0	0	0	0	0	23	637
8:50 AM	4	5	0	0	0	6	1	0	0	0	1	0	0	0	0	0	17	589
8:55 AM	0	11	0	0	0	8	1	0	1	0	1	0	0	0	0	0	22	545

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	168	232	0	0	0	100	180	0	60	0	148	0	0	0	0	0	888
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

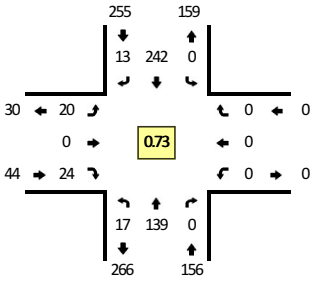
Type of peak hour being reported: Intersection Peak

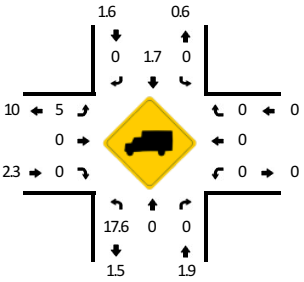
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Siren's Rd
CITY/STATE: Missoula, MT

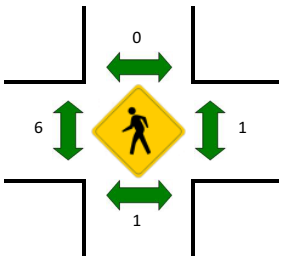
QC JOB #: 15183116
DATE: Tue, Mar 3 2020

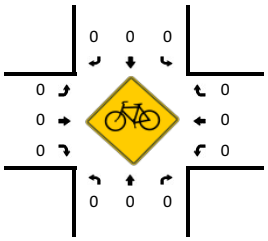
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

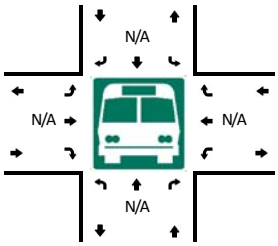


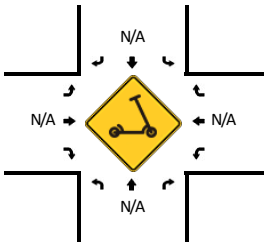


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Siren's Rd (Eastbound)				Siren's Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	17	0	0	0	22	0	0	3	0	3	0	0	0	0	0	46	
4:05 PM	2	14	0	0	0	18	0	0	1	0	4	0	0	0	0	0	39	
4:10 PM	2	11	0	0	0	17	0	0	1	0	4	0	0	0	0	0	35	
4:15 PM	2	12	0	0	0	16	0	0	1	0	6	0	0	0	0	0	37	
4:20 PM	5	12	0	0	0	17	1	0	0	0	0	0	0	0	0	0	35	
4:25 PM	0	11	0	0	0	15	0	0	1	0	1	0	0	0	0	0	28	
4:30 PM	1	9	0	0	0	16	1	0	1	0	2	0	0	0	0	0	30	
4:35 PM	0	9	0	0	0	14	0	0	0	0	3	0	0	0	0	0	26	
4:40 PM	3	10	0	0	0	16	1	0	0	0	0	0	0	0	0	0	30	
4:45 PM	1	7	0	0	0	17	0	0	3	0	0	0	0	0	0	0	28	
4:50 PM	1	17	0	0	0	18	1	0	0	0	2	0	0	0	0	0	39	
4:55 PM	1	14	0	0	0	19	1	0	0	0	0	0	0	0	0	0	35	408
5:00 PM	3	11	0	0	0	20	1	0	1	0	0	0	0	0	0	0	36	398
5:05 PM	1	16	0	0	0	31	0	0	2	0	3	0	0	0	0	0	53	412
5:10 PM	1	14	0	0	0	30	1	0	3	0	6	0	0	0	0	0	55	432
5:15 PM	4	7	0	0	0	25	1	0	5	0	6	0	0	0	0	0	48	443
5:20 PM	1	9	0	0	0	25	0	0	0	0	1	0	0	0	0	0	36	444
5:25 PM	2	10	0	0	0	16	2	0	4	0	3	0	0	0	0	0	37	453
5:30 PM	0	13	0	0	0	13	2	0	0	0	2	0	0	0	0	0	30	453
5:35 PM	0	10	0	0	0	13	1	0	2	0	0	0	0	0	0	0	26	453
5:40 PM	2	11	0	0	0	15	3	0	0	0	1	0	0	0	0	0	32	455
5:45 PM	0	8	0	0	0	11	0	0	2	0	2	0	0	0	0	0	23	450
5:50 PM	3	11	0	0	0	10	1	0	0	0	3	0	0	0	0	0	28	439
5:55 PM	5	14	0	0	0	15	1	0	1	0	0	0	0	0	0	0	36	440

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	148	0	0	0	344	8	0	40	0	60	0	0	0	0	0	624
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

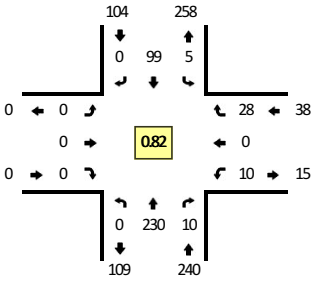
Type of peak hour being reported: Intersection Peak

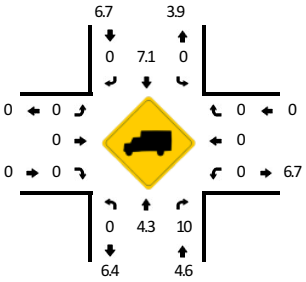
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Camden St
CITY/STATE: Missoula, MT

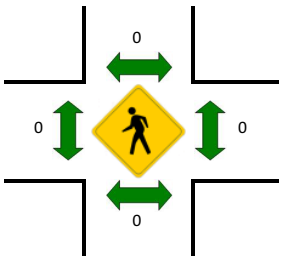
QC JOB #: 15183117
DATE: Tue, Mar 3 2020

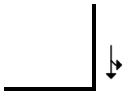
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

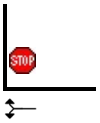


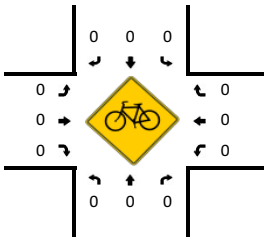


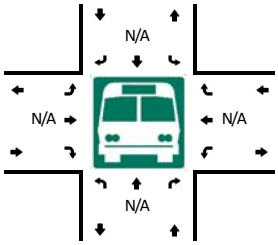
Quality Counts
DATA THAT DRIVES COMMUNITIES

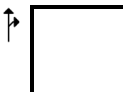


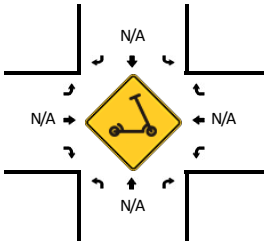












5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Camden St (Eastbound)				Camden St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	13	0	0	0	3	0	0	0	0	0	0	0	0	3	0	19	
7:05 AM	0	14	0	0	1	2	0	0	0	0	0	0	0	0	0	0	17	
7:10 AM	0	10	0	0	0	3	0	0	0	0	0	0	0	0	0	0	13	
7:15 AM	0	8	0	0	0	3	0	0	0	0	0	0	0	0	2	0	13	
7:20 AM	0	10	0	0	0	8	0	0	0	0	0	0	0	0	0	0	18	
7:25 AM	0	17	1	0	0	5	0	0	0	0	0	0	0	0	3	0	26	
7:30 AM	0	17	1	0	1	9	0	0	0	0	0	0	0	0	1	0	29	
7:35 AM	0	19	0	0	0	7	0	0	0	0	0	0	1	0	4	0	31	
7:40 AM	0	26	0	0	0	5	0	0	0	0	0	0	0	0	1	0	32	
7:45 AM	0	27	0	0	0	7	0	0	0	0	0	0	1	0	5	0	40	
7:50 AM	0	22	0	0	0	10	0	0	0	0	0	0	3	0	3	0	38	
7:55 AM	0	24	2	0	1	7	0	0	0	0	0	0	1	0	3	0	38	314
8:00 AM	0	15	0	0	1	16	0	0	0	0	0	0	0	0	2	0	34	329
8:05 AM	0	14	0	0	1	7	0	0	0	0	0	0	1	0	3	0	26	338
8:10 AM	0	13	2	0	0	15	0	0	0	0	0	0	2	0	0	0	32	357
8:15 AM	0	15	3	0	0	6	0	0	0	0	0	0	1	0	1	0	26	370
8:20 AM	0	21	1	0	1	5	0	0	0	0	0	0	0	0	2	0	30	382
8:25 AM	0	5	1	0	0	3	0	0	0	0	0	0	0	0	5	0	14	370
8:30 AM	0	12	0	0	0	4	0	0	0	0	0	0	0	0	3	0	19	360
8:35 AM	0	8	0	0	0	3	0	0	0	0	0	0	1	0	1	0	13	342
8:40 AM	0	9	0	0	0	4	0	0	0	0	0	0	1	0	2	0	16	326
8:45 AM	0	10	1	0	1	9	0	0	0	0	0	0	0	0	3	0	24	310
8:50 AM	0	6	0	0	1	3	0	0	0	0	0	0	0	0	2	0	12	284
8:55 AM	0	7	1	0	0	4	0	0	0	0	0	0	1	0	0	0	13	259

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	292	8	0	4	96	0	0	0	0	0	0	20	0	44	0	464
Heavy Trucks	0	4	4		0	8	0		0	0	0		0	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

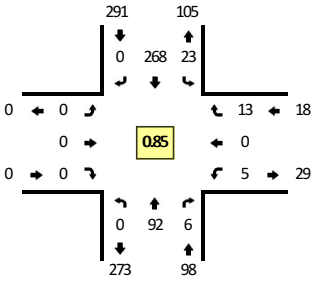
Type of peak hour being reported: Intersection Peak

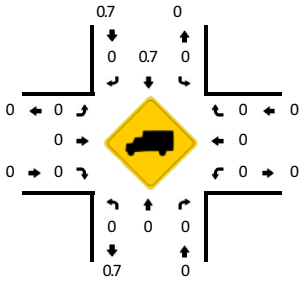
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- Camden St
CITY/STATE: Missoula, MT

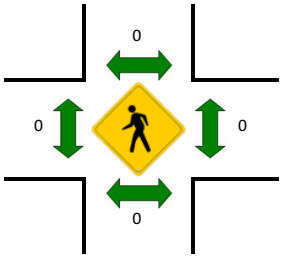
QC JOB #: 15183118
DATE: Tue, Mar 3 2020

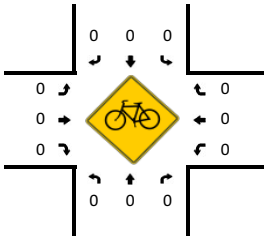
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

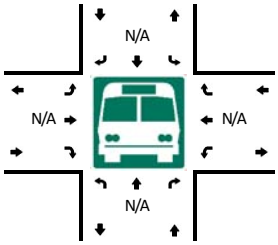


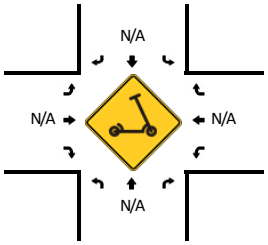


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Camden St (Eastbound)				Camden St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	13	0	0	2	16	0	0	0	0	0	0	0	0	0	0	31	
4:05 PM	0	6	1	0	1	18	0	0	0	0	0	0	0	0	1	0	27	
4:10 PM	0	4	0	0	0	14	0	0	0	0	0	0	0	0	0	0	18	
4:15 PM	0	7	1	0	3	13	0	0	0	0	0	0	0	0	0	0	24	
4:20 PM	0	9	0	0	0	15	0	0	0	0	0	0	0	0	0	0	24	
4:25 PM	0	8	0	0	2	10	0	0	0	0	0	0	0	0	0	0	20	
4:30 PM	0	9	1	0	0	18	0	0	0	0	0	0	0	0	1	0	29	
4:35 PM	0	9	0	0	1	20	0	0	0	0	0	0	0	0	0	0	30	
4:40 PM	0	6	1	0	1	25	0	0	0	0	0	0	0	0	1	0	34	
4:45 PM	0	5	0	0	0	24	0	0	0	0	0	0	0	0	2	0	31	
4:50 PM	0	6	1	0	5	18	0	0	0	0	0	0	0	0	2	0	32	
4:55 PM	0	10	1	0	0	21	0	0	0	0	0	0	2	0	0	0	34	334
5:00 PM	0	5	0	0	0	19	0	0	0	0	0	0	2	0	0	0	26	329
5:05 PM	0	11	1	0	0	21	0	0	0	0	0	0	0	0	1	0	34	336
5:10 PM	0	11	1	0	2	36	0	0	0	0	0	0	1	0	2	0	53	371
5:15 PM	0	5	0	0	3	22	0	0	0	0	0	0	0	0	1	0	31	378
5:20 PM	0	6	1	0	3	25	0	0	0	0	0	0	0	0	1	0	36	390
5:25 PM	0	9	0	0	2	20	0	0	0	0	0	0	0	0	2	0	33	403
5:30 PM	0	9	0	0	6	17	0	0	0	0	0	0	0	0	1	0	33	407
5:35 PM	0	8	0	0	2	16	0	0	0	0	0	0	0	0	1	0	27	404
5:40 PM	0	9	0	0	2	12	0	0	0	0	0	0	1	0	0	0	24	394
5:45 PM	0	8	1	0	2	17	0	0	0	0	0	0	0	0	1	0	29	392
5:50 PM	0	8	0	0	2	15	0	0	0	0	0	0	0	0	1	0	26	386
5:55 PM	0	6	1	0	2	9	0	0	0	0	0	0	0	0	0	0	18	370

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	88	8	0	32	332	0	0	0	0	0	0	4	0	16	0	480
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

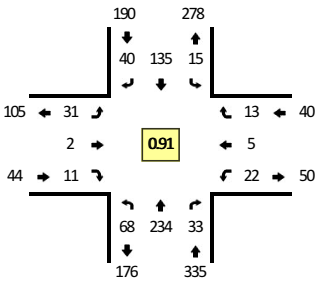
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

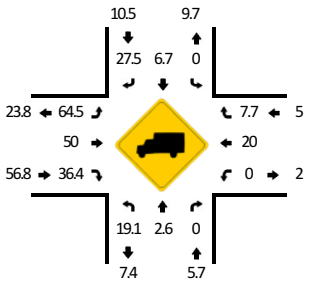
LOCATION: Flynn Ln -- Chelsea Dr
CITY/STATE: Missoula, MT

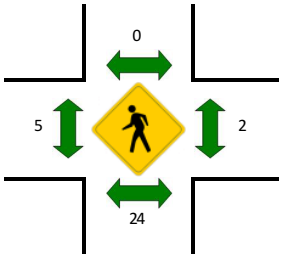
QC JOB #: 15183119
DATE: Tue, Mar 3 2020

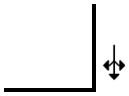
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

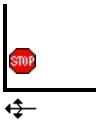


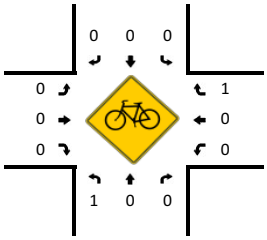
Quality Counts
DATA THAT DRIVES COMMUNITIES

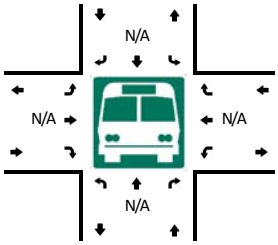


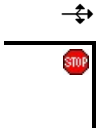


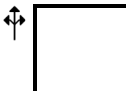


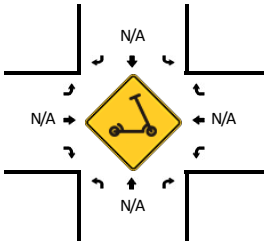












5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Chelsea Dr (Eastbound)				Chelsea Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	16	0	0	1	2	2	0	0	0	0	0	0	0	0	0	24	
7:05 AM	1	7	1	0	1	1	1	0	0	0	0	0	0	0	0	0	12	
7:10 AM	3	13	1	0	0	2	0	0	1	0	1	0	2	0	1	0	24	
7:15 AM	2	6	0	0	0	3	1	0	0	0	0	0	0	0	0	0	12	
7:20 AM	4	10	2	0	0	3	1	0	0	0	0	0	3	1	0	0	24	
7:25 AM	4	15	1	0	0	5	4	0	1	0	0	0	1	0	1	0	32	
7:30 AM	9	25	1	0	0	2	5	0	4	0	1	0	2	0	1	0	50	
7:35 AM	5	16	4	0	0	7	5	0	1	0	1	0	2	1	1	0	43	
7:40 AM	11	22	3	0	0	3	4	0	1	0	1	0	2	0	0	0	47	
7:45 AM	3	28	0	0	1	7	3	0	1	0	2	0	2	0	1	0	48	
7:50 AM	9	18	1	0	1	15	5	0	4	1	1	0	0	1	3	0	59	
7:55 AM	4	26	3	0	0	6	4	0	3	0	0	0	1	0	1	0	48	423
8:00 AM	7	23	0	1	3	19	3	0	2	0	0	0	0	0	1	0	59	458
8:05 AM	3	16	4	0	1	19	3	0	5	1	0	0	1	2	0	0	55	501
8:10 AM	2	11	4	2	3	19	2	0	5	0	2	0	2	1	1	0	54	531
8:15 AM	0	19	5	3	3	17	2	0	2	0	1	0	4	0	2	0	58	577
8:20 AM	3	15	7	2	3	16	0	0	2	0	2	0	5	0	1	0	56	609
8:25 AM	0	9	3	0	0	9	1	0	0	0	0	0	2	0	0	0	24	601
8:30 AM	1	13	1	0	0	7	0	0	0	0	1	0	1	0	1	0	25	576
8:35 AM	0	12	0	0	0	7	0	0	0	0	0	0	1	0	0	0	20	553
8:40 AM	1	11	1	0	1	6	0	0	0	0	0	0	1	0	0	0	21	527
8:45 AM	0	14	0	0	0	7	0	0	1	0	0	0	0	0	0	0	22	501
8:50 AM	0	4	1	0	0	7	0	0	0	0	0	0	0	0	1	0	13	455
8:55 AM	0	10	1	0	0	8	0	0	0	0	0	0	2	0	0	0	21	428

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	200	32	12	28	228	32	0	48	4	8	0	12	12	8	0	672
Heavy Trucks	20	8	0		0	16	20		40	0	0		0	4	0		108
Buses																	
Pedestrians		40				0				16				0			56
Bicycles	4	0	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

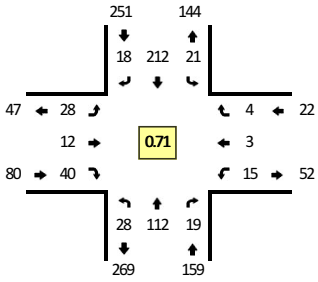
Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

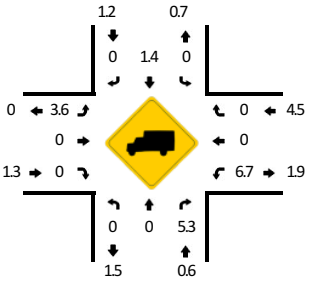
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

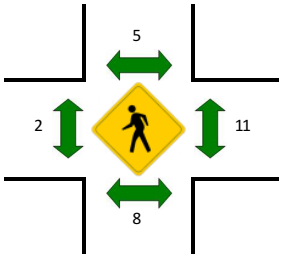
LOCATION: Flynn Ln -- Chelsea Dr | **QC JOB #:** 15183120
CITY/STATE: Missouri, MT | **DATE:** Tue, Mar 3 2020

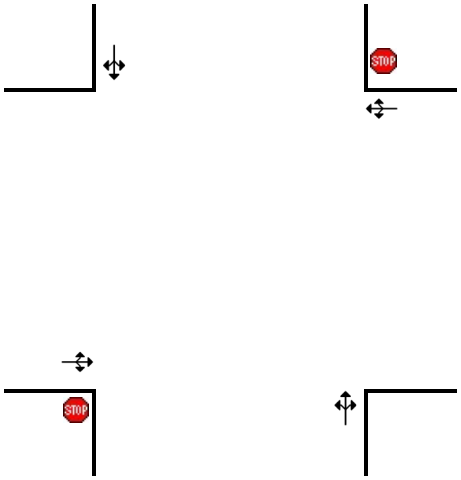
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

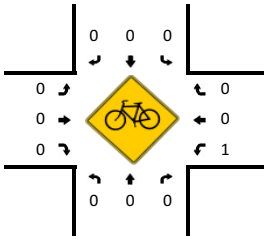


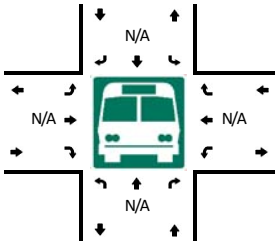
Quality Counts
DATA THAT DRIVES COMMUNITIES

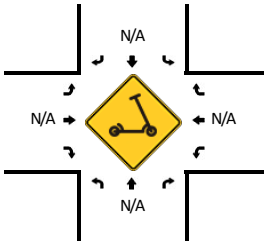












5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				Chelsea Dr (Eastbound)				Chelsea Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	15	4	0	1	11	4	0	5	3	0	0	0	1	0	0	46	
4:05 PM	0	12	2	0	0	16	4	0	4	0	2	0	1	1	0	0	42	
4:10 PM	2	8	3	0	3	12	0	0	2	1	3	0	3	0	0	0	37	
4:15 PM	3	6	4	1	1	11	2	0	0	1	2	0	0	0	0	0	31	
4:20 PM	1	8	2	0	0	16	0	0	3	2	3	0	0	0	0	0	35	
4:25 PM	2	10	0	0	0	11	1	0	1	1	3	0	0	0	0	0	29	
4:30 PM	1	7	1	0	0	14	1	0	3	0	1	0	1	0	0	0	29	
4:35 PM	1	9	1	0	2	15	0	0	0	0	1	0	0	1	0	0	30	
4:40 PM	0	10	0	0	3	15	1	0	0	0	0	0	2	0	1	0	32	
4:45 PM	0	8	2	0	0	16	2	0	1	0	1	0	0	0	0	0	30	
4:50 PM	2	15	0	0	0	16	1	0	1	0	4	0	0	0	1	0	40	
4:55 PM	2	12	0	0	2	17	1	0	1	0	0	0	3	0	0	0	38	419
5:00 PM	4	7	1	0	4	18	1	0	1	0	5	0	1	1	0	0	43	416
5:05 PM	3	12	2	1	1	24	4	0	4	0	11	0	2	0	0	0	64	438
5:10 PM	6	8	3	0	1	20	5	0	5	1	6	0	2	1	0	0	58	459
5:15 PM	5	4	5	0	4	16	2	0	8	3	9	0	2	0	1	0	59	487
5:20 PM	2	9	0	0	3	25	0	0	1	7	2	0	2	0	0	0	51	503
5:25 PM	0	11	4	1	1	16	0	0	3	1	0	0	0	0	1	0	38	512
5:30 PM	1	9	1	1	0	15	0	0	0	0	0	0	1	1	0	0	29	512
5:35 PM	0	13	0	0	2	8	0	0	0	1	0	0	2	0	0	0	26	508
5:40 PM	1	9	1	0	0	17	1	0	0	0	0	0	0	0	0	0	29	505
5:45 PM	2	6	0	1	1	10	2	0	1	0	2	0	1	0	0	0	26	501
5:50 PM	1	11	0	0	0	9	1	0	0	0	1	0	0	0	0	0	23	484
5:55 PM	1	12	3	0	0	13	3	0	1	0	1	0	2	0	0	0	36	482

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	96	40	4	24	240	44	0	68	16	104	0	24	4	4	0	724
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		12				0				0				8			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

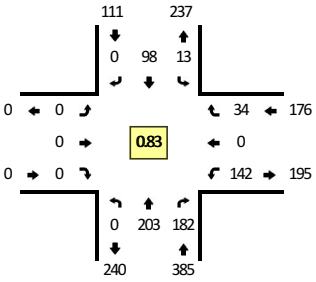
Type of peak hour being reported: Intersection Peak

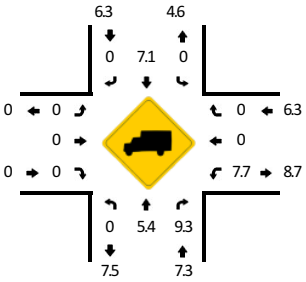
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- England Blvd
CITY/STATE: Missoula, MT

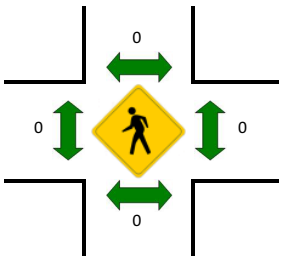
QC JOB #: 15183121
DATE: Tue, Mar 3 2020

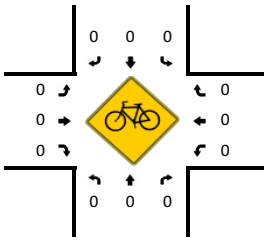
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

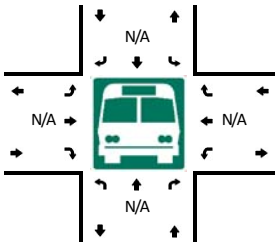


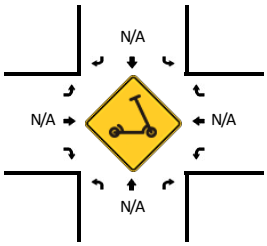


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	11	5	0	0	3	0	0	0	0	0	0	4	0	2	0	25	
7:05 AM	0	9	3	0	1	1	0	0	0	0	0	0	2	0	5	0	21	
7:10 AM	0	7	6	0	0	3	0	0	0	0	0	0	2	0	3	0	21	
7:15 AM	0	4	2	0	0	3	0	0	0	0	0	0	5	0	4	0	18	
7:20 AM	0	9	0	0	1	5	0	0	0	0	0	0	2	0	3	0	20	
7:25 AM	0	11	6	0	0	7	0	0	0	0	0	0	7	0	5	0	36	
7:30 AM	0	18	14	0	3	5	0	0	0	0	0	0	5	0	3	0	48	
7:35 AM	0	17	9	0	1	7	0	0	0	0	0	0	7	0	1	0	42	
7:40 AM	0	20	7	0	1	5	0	0	0	0	0	0	5	0	3	0	41	
7:45 AM	0	21	12	0	2	6	0	0	0	0	0	0	15	0	6	0	62	
7:50 AM	0	19	15	0	1	11	0	0	0	0	0	0	13	0	4	0	63	
7:55 AM	0	21	12	0	1	6	0	0	0	0	0	0	13	0	4	0	57	454
8:00 AM	0	14	19	0	2	14	0	0	0	0	0	0	23	0	2	0	74	503
8:05 AM	0	16	26	0	1	9	0	0	0	0	0	0	13	0	1	0	66	548
8:10 AM	0	10	17	0	1	15	0	0	0	0	0	0	18	0	1	0	62	589
8:15 AM	0	18	22	0	0	7	0	0	0	0	0	0	16	0	3	0	66	637
8:20 AM	0	18	23	0	0	6	0	0	0	0	0	0	7	0	1	0	55	672
8:25 AM	0	5	7	0	0	3	0	0	0	0	0	0	7	0	2	0	24	660
8:30 AM	0	9	8	0	0	3	0	0	0	0	0	0	3	0	3	0	26	638
8:35 AM	0	4	8	0	1	4	0	0	0	0	0	0	4	0	4	0	25	621
8:40 AM	0	7	4	0	1	4	0	0	0	0	0	0	2	0	4	0	22	602
8:45 AM	0	8	8	0	3	6	0	0	0	0	0	0	0	0	0	0	25	565
8:50 AM	0	6	1	0	0	3	0	0	0	0	0	0	3	0	0	0	13	515
8:55 AM	0	5	3	0	2	3	0	0	0	0	0	0	4	0	3	0	20	478

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	160	248	0	16	152	0	0	0	0	0	0	216	0	16	0	808
Heavy Trucks	0	8	40		0	12	0		0	0	0		20	0	0		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

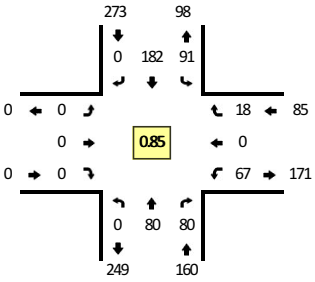
Type of peak hour being reported: Intersection Peak

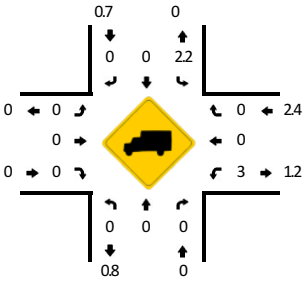
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- England Blvd
CITY/STATE: Missoula, MT

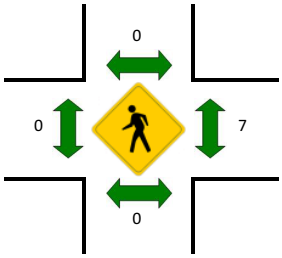
QC JOB #: 15183122
DATE: Tue, Mar 3 2020

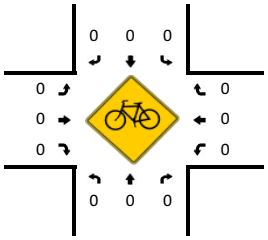
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

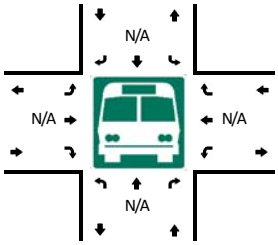


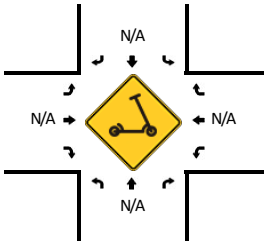


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	9	13	0	7	10	0	0	0	0	0	0	3	0	2	0	44	
4:05 PM	0	5	13	0	3	14	0	0	0	0	0	0	6	0	1	0	42	
4:10 PM	0	4	5	0	9	6	0	0	0	0	0	0	7	0	1	0	32	
4:15 PM	0	6	2	0	4	10	0	0	0	0	0	0	4	0	2	0	28	
4:20 PM	0	5	5	0	4	9	0	0	0	0	0	0	4	0	3	0	30	
4:25 PM	0	7	2	0	3	10	0	0	0	0	0	0	5	0	3	0	30	
4:30 PM	0	5	4	0	6	11	0	0	0	0	0	0	4	0	5	0	35	
4:35 PM	0	7	3	0	5	16	0	0	0	0	0	0	5	0	0	0	36	
4:40 PM	0	4	6	0	8	13	0	0	0	0	0	0	3	0	3	0	37	
4:45 PM	0	5	2	0	11	16	0	0	0	0	0	0	5	0	0	0	39	
4:50 PM	0	6	9	0	4	13	0	0	0	0	0	0	6	0	2	0	40	
4:55 PM	0	7	6	0	9	15	0	0	0	0	0	0	4	0	4	0	45	438
5:00 PM	0	2	5	0	4	18	0	0	0	0	0	0	5	0	3	0	37	431
5:05 PM	0	14	11	0	4	17	0	0	0	0	0	0	10	0	1	0	57	446
5:10 PM	0	7	4	0	13	23	0	0	0	0	0	0	4	0	2	0	53	467
5:15 PM	0	6	10	0	6	17	0	0	0	0	0	0	4	0	0	0	43	482
5:20 PM	0	6	12	0	10	14	0	0	0	0	0	0	9	0	0	0	51	503
5:25 PM	0	8	8	0	6	13	0	0	0	0	0	0	5	0	1	0	41	514
5:30 PM	0	8	4	0	11	7	0	0	0	0	0	0	7	0	2	0	39	518
5:35 PM	0	5	6	0	4	12	0	0	0	0	0	0	2	0	3	0	32	514
5:40 PM	0	6	2	0	3	10	0	0	0	0	0	0	6	0	3	0	30	507
5:45 PM	0	6	5	0	6	11	0	0	0	0	0	0	3	0	3	0	34	502
5:50 PM	0	7	5	0	7	9	0	0	0	0	0	0	6	0	1	0	35	497
5:55 PM	0	5	3	0	3	6	0	0	0	0	0	0	6	0	1	0	24	476

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	108	100	0	92	228	0	0	0	0	0	0	72	0	12	0	612
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

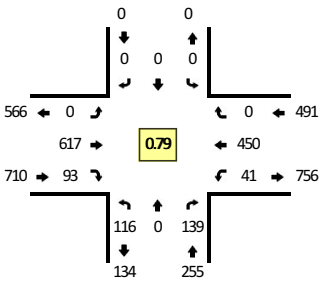
Type of peak hour being reported: Intersection Peak

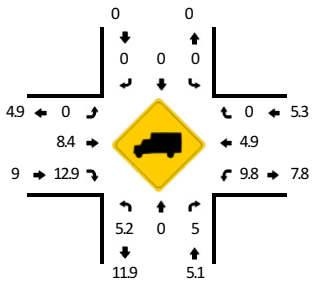
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- W Broadway St
CITY/STATE: Missoula, MT

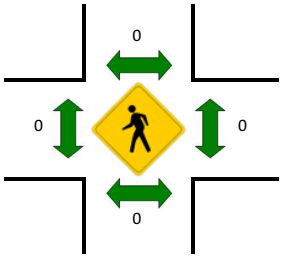
QC JOB #: 15183123
DATE: Tue, Mar 3 2020

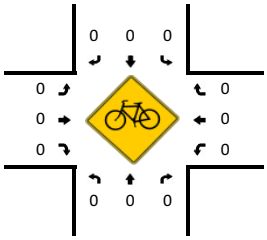
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

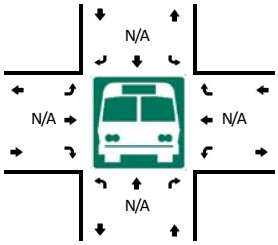


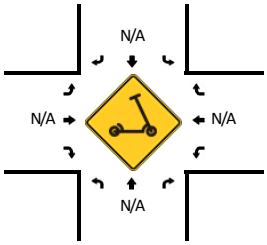


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	0	4	0	0	0	0	0	0	28	1	0	1	31	0	0	72	
7:05 AM	7	0	1	0	0	0	0	0	0	32	2	0	1	20	0	0	63	
7:10 AM	11	0	3	0	0	0	0	0	0	44	3	0	0	39	0	0	100	
7:15 AM	8	0	4	0	0	0	0	0	0	42	4	0	2	36	0	0	96	
7:20 AM	5	0	3	0	0	0	0	0	0	38	4	0	3	36	0	0	89	
7:25 AM	9	0	8	0	0	0	0	0	0	43	6	0	4	30	0	0	100	
7:30 AM	12	0	7	0	0	0	0	0	0	48	9	0	2	37	0	0	115	
7:35 AM	9	0	7	0	0	0	0	0	0	66	7	0	2	44	0	0	135	
7:40 AM	11	0	14	0	0	0	0	0	0	54	6	0	2	62	0	0	149	
7:45 AM	16	0	12	0	0	0	0	0	0	80	8	0	3	44	0	0	163	
7:50 AM	15	0	18	0	0	0	0	0	0	51	10	0	1	53	0	0	148	
7:55 AM	13	0	12	0	0	0	0	0	0	46	9	0	7	39	0	0	126	1356
8:00 AM	6	0	9	0	0	0	0	0	0	41	12	0	5	27	0	0	100	1384
8:05 AM	6	0	19	0	0	0	0	0	0	49	5	0	4	32	0	0	115	1436
8:10 AM	3	0	12	0	0	0	0	0	0	50	10	0	6	28	0	0	109	1445
8:15 AM	7	0	5	0	0	0	0	0	0	37	6	0	3	26	0	0	84	1433
8:20 AM	9	0	16	0	0	0	0	0	0	52	5	0	2	28	0	0	112	1456
8:25 AM	8	0	9	0	0	0	0	0	0	40	3	0	6	32	0	0	98	1454
8:30 AM	6	0	9	0	0	0	0	0	0	48	3	0	1	23	0	0	90	1429
8:35 AM	4	0	8	0	0	0	0	0	0	38	4	0	2	35	0	0	91	1385
8:40 AM	6	0	5	0	0	0	0	0	0	49	4	0	2	31	0	0	97	1333
8:45 AM	6	0	7	0	0	0	0	0	0	33	8	0	1	31	0	0	86	1256
8:50 AM	6	0	2	0	0	0	0	0	0	39	4	0	1	24	0	0	76	1184
8:55 AM	5	0	4	0	0	0	0	0	0	42	5	0	0	29	0	0	85	1143

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	168	0	176	0	0	0	0	0	0	740	96	0	24	636	0	0	1840
Heavy Trucks	0	0	12		0	0	0		0	80	12		0	20	0		124
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

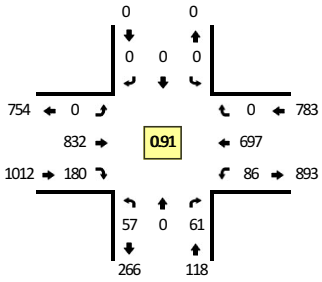
Type of peak hour being reported: Intersection Peak

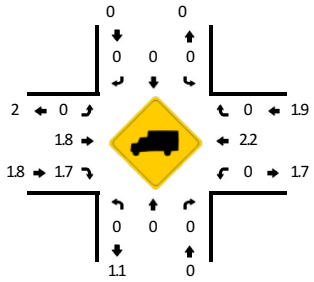
Method for determining peak hour: Total Entering Volume

LOCATION: Flynn Ln -- W Broadway St
CITY/STATE: Missoula, MT

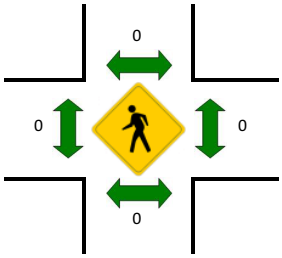
QC JOB #: 15183124
DATE: Tue, Mar 3 2020

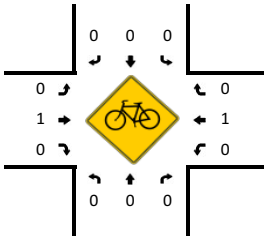
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

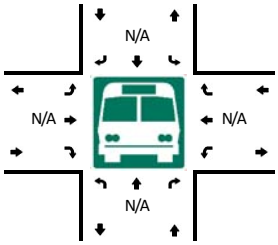


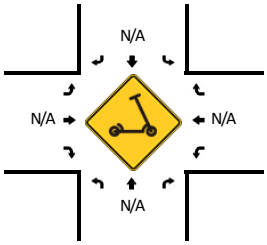


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Flynn Ln (Northbound)				Flynn Ln (Southbound)				W Broadway St (Eastbound)				W Broadway St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	0	9	0	0	0	0	0	0	46	12	0	7	39	0	0	121	
4:05 PM	7	0	8	0	0	0	0	0	0	64	11	0	3	35	0	0	128	
4:10 PM	5	0	5	0	0	0	0	0	0	68	14	0	1	62	0	0	155	
4:15 PM	7	0	4	0	0	0	0	0	0	60	7	0	5	38	0	0	121	
4:20 PM	4	0	5	0	0	0	0	0	0	65	14	0	5	43	0	0	136	
4:25 PM	9	0	7	0	0	0	0	0	0	48	9	0	6	48	0	0	127	
4:30 PM	4	0	9	0	0	0	0	0	0	79	11	0	4	59	0	0	166	
4:35 PM	4	0	5	0	0	0	0	0	0	88	20	0	3	58	0	0	178	
4:40 PM	6	0	0	0	0	0	0	0	0	96	14	0	7	59	0	0	182	
4:45 PM	6	0	3	0	0	0	0	0	0	54	14	0	6	67	0	0	150	
4:50 PM	3	0	6	0	0	0	0	0	0	67	11	0	12	61	0	0	160	
4:55 PM	3	0	4	0	0	0	0	0	0	71	17	0	6	50	0	0	151	1775
5:00 PM	6	0	7	0	0	0	0	0	0	65	9	0	4	53	0	0	144	1798
5:05 PM	6	0	8	0	0	0	0	0	0	57	15	0	9	75	0	0	170	1840
5:10 PM	10	0	6	0	0	0	0	0	0	61	21	0	11	65	0	0	174	1859
5:15 PM	3	0	3	0	0	0	0	0	0	63	18	0	10	54	0	0	151	1889
5:20 PM	4	0	4	0	0	0	0	0	0	55	16	0	10	55	0	0	144	1897
5:25 PM	2	0	6	0	0	0	0	0	0	76	14	0	4	41	0	0	143	1913
5:30 PM	8	0	7	0	0	0	0	0	0	58	12	1	12	49	0	0	147	1894
5:35 PM	4	0	3	0	0	0	0	0	0	66	7	0	10	56	0	0	146	1862
5:40 PM	8	0	3	0	0	0	0	0	0	72	10	0	5	41	0	0	139	1819
5:45 PM	2	0	2	0	0	0	0	0	0	52	7	0	9	39	0	0	111	1780
5:50 PM	5	0	6	0	0	0	0	0	0	43	12	0	6	40	0	0	112	1732
5:55 PM	6	0	3	0	0	0	0	0	0	27	9	0	1	47	0	0	93	1674

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	0	56	0	0	0	0	0	0	1052	180	0	56	704	0	0	2104
Heavy Trucks	0	0	0		0	0	0		0	24	0		0	32	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

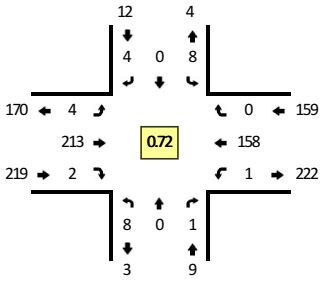
Type of peak hour being reported: Intersection Peak

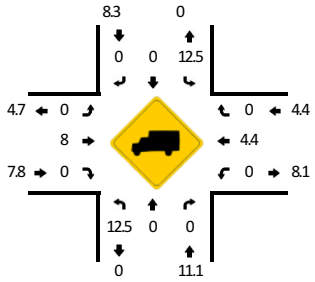
Method for determining peak hour: Total Entering Volume

LOCATION: Mary Jane Blvd -- England Blvd
CITY/STATE: Missoula, MT

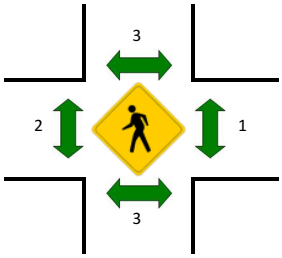
QC JOB #: 15183125
DATE: Tue, Mar 3 2020

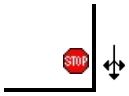
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

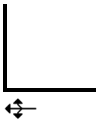


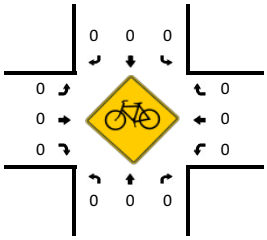


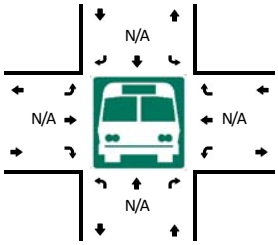
Quality Counts
DATA THAT DRIVES COMMUNITIES

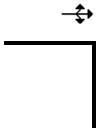


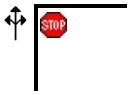


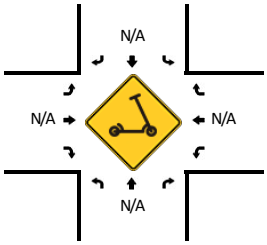












5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	12	
7:05 AM	1	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	10	
7:10 AM	1	0	0	0	2	1	0	0	1	4	0	0	0	3	0	0	12	
7:15 AM	0	3	1	0	0	0	0	0	0	8	0	0	0	8	0	0	20	
7:20 AM	0	0	1	0	0	1	0	0	0	4	1	0	0	4	0	0	11	
7:25 AM	0	0	0	0	1	0	0	0	0	7	0	0	0	10	0	0	18	
7:30 AM	0	0	0	0	1	0	0	0	0	17	0	0	0	9	0	0	27	
7:35 AM	0	0	0	0	1	0	1	0	0	13	0	0	0	6	0	0	21	
7:40 AM	0	0	1	0	0	0	0	0	1	15	0	0	0	10	0	0	27	
7:45 AM	1	0	0	0	0	0	1	0	0	13	0	0	0	16	0	0	31	
7:50 AM	0	0	0	0	1	0	0	0	0	19	0	0	0	17	0	0	37	
7:55 AM	2	0	0	0	0	0	0	0	0	9	0	0	0	12	0	0	23	249
8:00 AM	2	0	0	0	1	0	0	0	1	24	0	0	0	26	0	0	54	291
8:05 AM	0	0	0	0	0	0	0	0	0	22	1	0	0	12	0	0	35	316
8:10 AM	1	0	0	0	2	0	1	0	0	31	0	0	1	14	0	0	50	354
8:15 AM	2	0	0	0	1	0	0	0	2	19	0	0	0	14	0	0	38	372
8:20 AM	0	0	0	0	1	0	0	0	0	18	1	0	0	12	0	0	32	393
8:25 AM	0	0	0	0	0	0	1	0	0	13	0	0	0	10	0	0	24	399
8:30 AM	1	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	11	383
8:35 AM	0	0	0	0	0	0	0	0	0	13	0	0	0	6	0	0	19	381
8:40 AM	1	0	0	0	1	0	1	0	0	6	0	0	0	4	0	0	13	367
8:45 AM	0	0	0	0	2	0	0	0	0	11	0	0	1	1	0	0	15	351
8:50 AM	0	0	0	0	1	0	0	0	0	7	0	0	0	3	0	0	11	325
8:55 AM	0	0	0	0	0	0	1	0	0	5	0	0	0	2	0	0	8	310

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	0	0	0	12	0	4	0	4	308	4	0	4	208	0	0	556
Heavy Trucks	4	0	0		0	0	0		0	44	0		0	16	0		64
Buses																	
Pedestrians		12				8				8				4			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

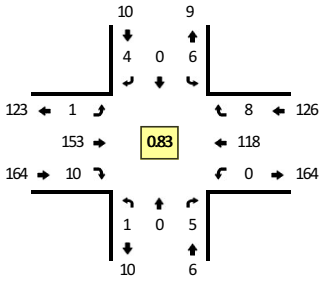
Type of peak hour being reported: Intersection Peak

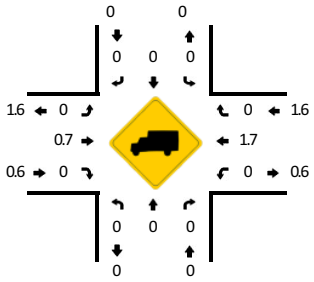
Method for determining peak hour: Total Entering Volume

LOCATION: Mary Jane Blvd -- England Blvd
CITY/STATE: Missoula, MT

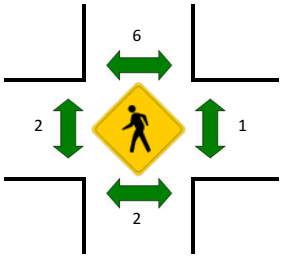
QC JOB #: 15183126
DATE: Tue, Mar 3 2020

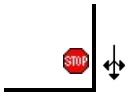
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

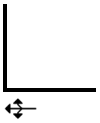


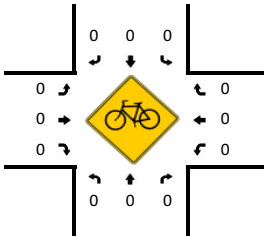


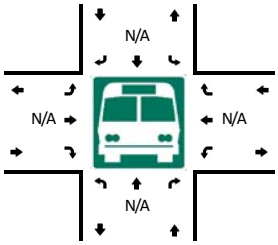
Quality Counts
DATA THAT DRIVES COMMUNITIES

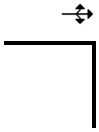


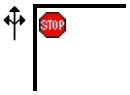


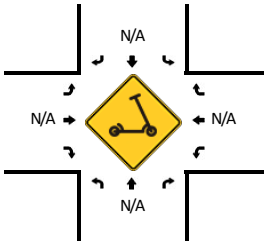












5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				England Blvd (Eastbound)				England Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	9	1	0	29	
4:05 PM	0	0	1	0	0	0	0	0	0	14	1	0	0	7	0	0	23	
4:10 PM	1	0	0	0	0	0	1	0	1	14	1	0	0	11	1	0	30	
4:15 PM	0	0	2	0	1	0	0	0	0	5	1	0	0	10	0	0	19	
4:20 PM	2	0	0	0	0	0	0	0	0	7	0	0	1	7	0	0	17	
4:25 PM	0	0	1	0	0	0	0	0	0	7	0	0	0	7	0	0	15	
4:30 PM	1	0	0	0	0	0	0	0	0	13	0	0	0	9	0	0	23	
4:35 PM	1	0	0	0	1	1	0	0	1	6	0	0	1	5	1	0	17	
4:40 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	8	1	0	18	
4:45 PM	0	0	0	0	0	0	0	0	0	11	2	0	0	6	0	0	19	
4:50 PM	0	0	0	0	1	0	1	0	1	9	0	0	0	7	1	0	20	
4:55 PM	0	0	0	0	1	0	1	0	0	17	0	0	0	12	1	0	32	262
5:00 PM	0	0	0	0	0	0	0	0	0	7	1	0	0	12	1	0	21	254
5:05 PM	0	0	1	0	1	0	0	0	0	16	0	0	0	12	1	0	31	262
5:10 PM	0	0	1	0	1	0	0	0	0	16	2	0	0	9	0	0	29	261
5:15 PM	0	0	0	0	1	0	0	0	0	18	0	0	0	6	1	0	26	268
5:20 PM	0	0	0	0	1	0	1	0	0	18	1	0	0	9	1	0	31	282
5:25 PM	0	0	0	0	1	0	0	0	0	17	0	0	0	14	1	0	33	300
5:30 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	12	2	0	28	305
5:35 PM	0	0	1	0	0	0	0	0	1	8	0	0	0	5	0	0	15	303
5:40 PM	0	0	0	0	0	0	1	0	0	5	1	0	0	12	0	0	19	304
5:45 PM	1	0	1	0	0	0	0	0	0	9	1	0	0	7	0	0	19	304
5:50 PM	0	0	1	0	0	0	1	0	0	8	4	0	0	8	0	0	22	306
5:55 PM	0	0	0	0	0	0	1	0	0	10	0	0	0	6	1	0	18	292

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	0	4	0	0	196	4	0	0	140	16	0	368
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				8				4				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

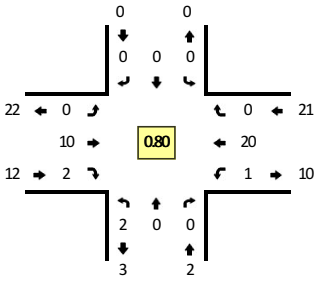
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

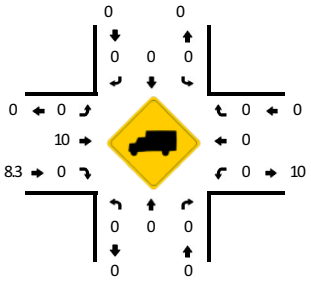
LOCATION: Mary Jane Blvd -- Camden St
CITY/STATE: Missoula, MT

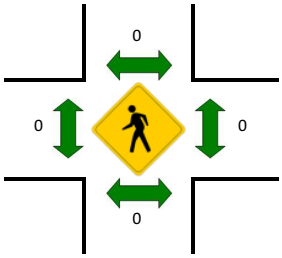
QC JOB #: 15183127
DATE: Tue, Mar 3 2020

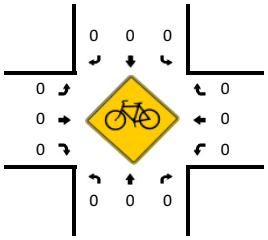
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

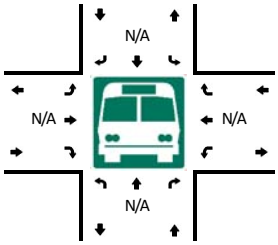


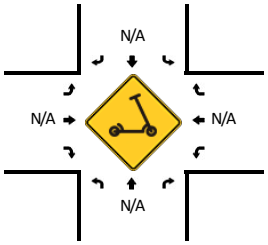
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				Camden St (Eastbound)				Camden St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:05 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
7:10 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:25 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3	
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	5	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
7:55 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	5	23
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	25
8:05 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3	27
8:10 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4	30
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	31
8:20 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	32
8:25 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	5	34
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	34
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	34
8:45 AM	0	0	0	0	0	0	0	0	0	1	1	0	1	3	0	0	6	35
8:50 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	34
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	16	4	0	0	24	0	0	44
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

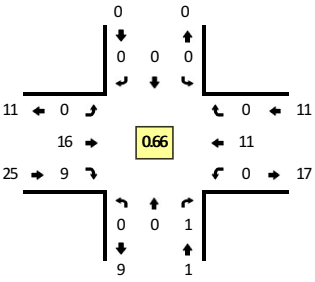
Type of peak hour being reported: Intersection Peak

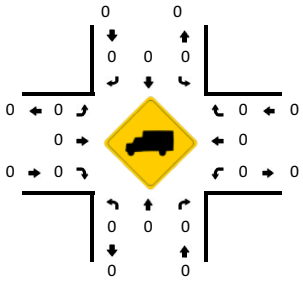
Method for determining peak hour: Total Entering Volume

LOCATION: Mary Jane Blvd -- Camden St
CITY/STATE: Missoula, MT

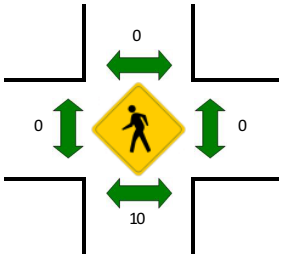
QC JOB #: 15183128
DATE: Tue, Mar 3 2020

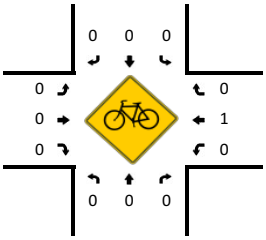
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

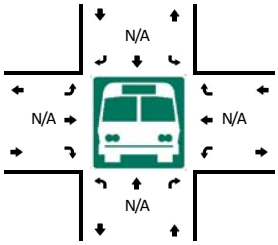


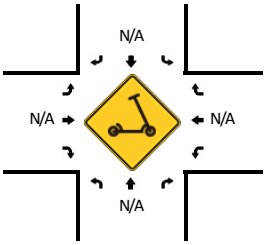


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				Camden St (Eastbound)				Camden St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3	
4:05 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	
4:10 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:35 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
4:50 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	1	0	0	5	
4:55 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3	24
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	23
5:05 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	23
5:10 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	24
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	22
5:20 PM	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	5	27
5:25 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	30
5:30 PM	0	0	0	0	0	0	0	0	0	3	2	0	0	1	0	0	6	35
5:35 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	36
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	35
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	3	37
5:50 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3	35
5:55 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3	35

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	28	20	0	0	8	0	0	56
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

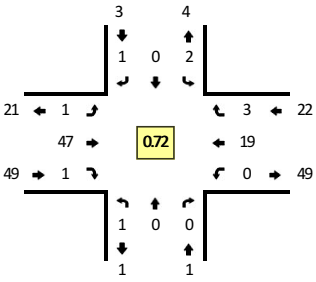
Type of peak hour being reported: Intersection Peak

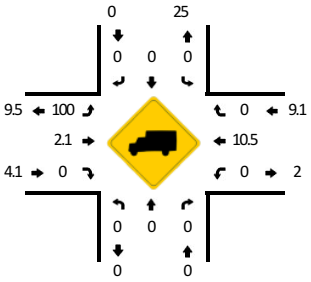
Method for determining peak hour: Total Entering Volume

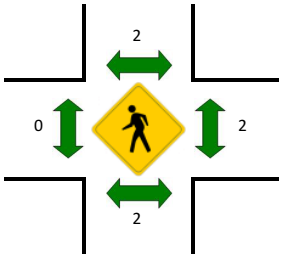
LOCATION: Mary Jane Blvd -- Melrose Pl
CITY/STATE: Missoula, MT

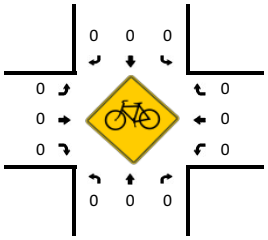
QC JOB #: 15183129
DATE: Tue, Mar 3 2020

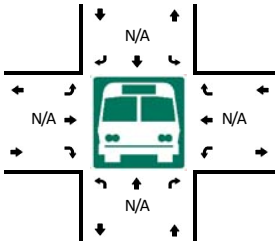
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

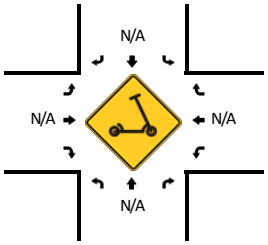












5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				Melrose Pl (Eastbound)				Melrose Pl (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:10 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	1	0	5	
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
7:20 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	3	
7:25 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3	
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3	
7:35 AM	0	0	0	0	1	0	1	0	0	5	0	0	0	1	0	0	8	
7:40 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4	
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	6	
7:50 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
7:55 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	2	0	0	5	44
8:00 AM	0	0	0	0	0	0	0	0	1	4	0	0	0	2	0	0	7	49
8:05 AM	0	0	0	0	1	0	0	0	0	4	0	0	0	3	0	0	8	56
8:10 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	59
8:15 AM	1	0	0	0	0	0	0	0	0	4	0	0	0	2	1	0	8	65
8:20 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	2	0	0	10	72
8:25 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	1	0	6	75
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
8:35 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	66
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	63
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	58
8:50 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	57
8:55 AM	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	4	56

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	0	0	0	0	0	80	0	0	0	16	4	0	104
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				4				0				8			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

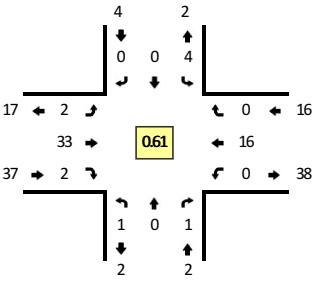
Type of peak hour being reported: Intersection Peak

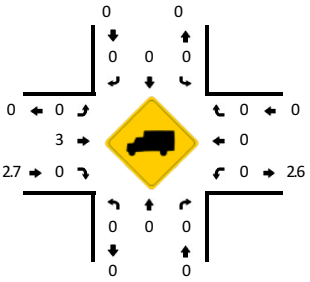
Method for determining peak hour: Total Entering Volume

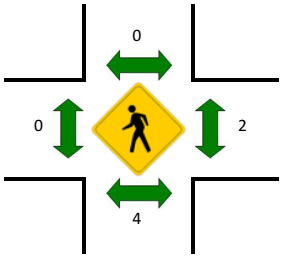
LOCATION: Mary Jane Blvd -- Melrose Pl
CITY/STATE: Missoula, MT

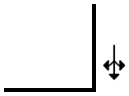
QC JOB #: 15183130
DATE: Tue, Mar 3 2020

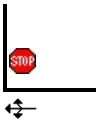
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

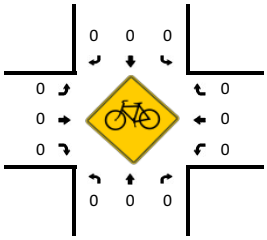


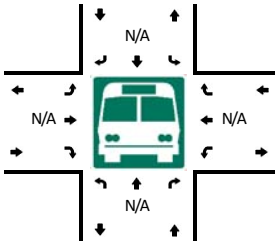


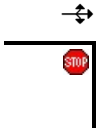


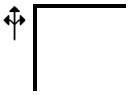


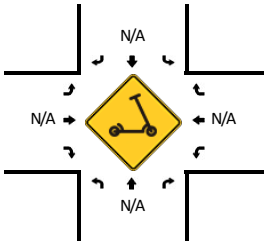












5-Min Count Period Beginning At	Mary Jane Blvd (Northbound)				Mary Jane Blvd (Southbound)				Melrose Pl (Eastbound)				Melrose Pl (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	7	
4:05 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0	4	
4:10 PM	0	0	0	0	2	0	0	0	0	5	0	0	0	1	1	0	9	
4:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6	
4:20 PM	0	0	1	0	0	0	0	0	0	3	1	0	0	0	0	0	5	
4:25 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
4:35 PM	1	0	0	0	1	0	0	0	0	3	1	0	0	1	0	0	7	
4:40 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	
4:45 PM	0	0	1	0	2	0	0	0	0	2	0	0	0	1	0	0	6	
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:55 PM	0	0	0	0	1	0	0	0	0	2	0	0	0	3	0	0	6	56
5:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	3	0	0	5	54
5:05 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5	55
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	47
5:15 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	2	0	0	11	52
5:20 PM	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	8	55
5:25 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5	58
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3	59
5:35 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	54
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	55
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	50
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	51
5:55 PM	1	0	0	0	0	0	0	0	0	1	1	0	0	3	0	0	6	51

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	4	80	0	0	0	12	0	0	96
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		8				0				0				4			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

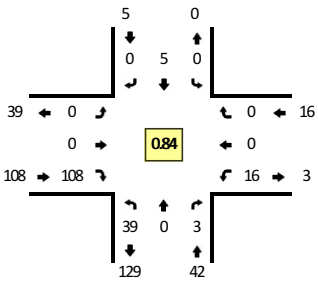
Report generated on 3/16/2020 1:14 PM

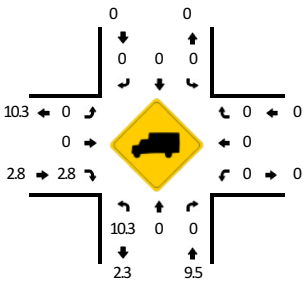
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

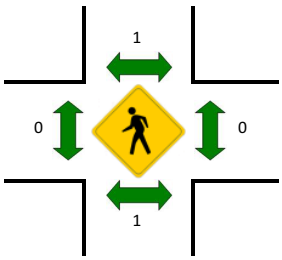
LOCATION: George Elmer Dr -- Cattle Dr | **QC JOB #:** 15183131
CITY/STATE: Missoula, MT | **DATE:** Tue, Mar 3 2020

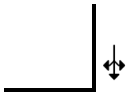
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

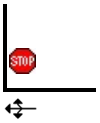


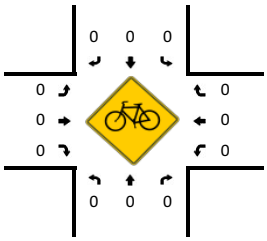


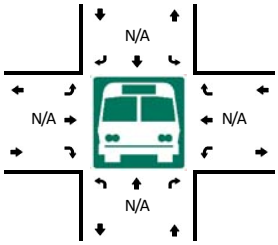
Quality Counts
DATA THAT DRIVES COMMUNITIES

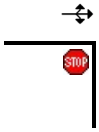


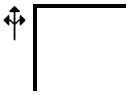


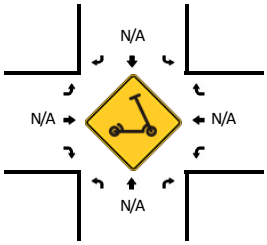












5-Min Count Period Beginning At	George Elmer Dr (Northbound)				George Elmer Dr (Southbound)				Cattle Dr (Eastbound)				Cattle Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	6	
7:05 AM	0	0	0	0	0	1	0	0	0	0	6	0	1	0	0	0	8	
7:10 AM	1	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	7	
7:15 AM	2	0	0	0	0	0	0	0	0	0	15	0	1	0	0	0	18	
7:20 AM	2	0	0	0	0	1	0	0	0	0	8	0	3	0	0	0	14	
7:25 AM	3	0	0	0	0	1	0	0	0	0	6	0	0	0	0	0	10	
7:30 AM	2	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	17	
7:35 AM	4	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	13	
7:40 AM	3	0	0	0	0	0	0	0	0	0	8	0	4	0	0	0	15	
7:45 AM	5	0	0	0	0	1	0	0	0	0	7	0	2	0	0	0	15	
7:50 AM	3	0	0	0	0	0	0	0	0	0	10	0	2	0	0	0	15	
7:55 AM	6	0	2	0	0	0	0	0	0	0	8	0	1	0	0	0	17	155
8:00 AM	3	0	1	0	0	0	0	0	0	0	13	0	2	0	0	0	19	168
8:05 AM	3	0	0	0	0	1	0	0	0	0	4	0	1	0	0	0	9	169
8:10 AM	3	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	9	171
8:15 AM	2	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	11	164
8:20 AM	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	5	155
8:25 AM	1	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	10	155
8:30 AM	5	0	0	0	0	0	0	0	0	0	10	0	2	0	0	0	17	155
8:35 AM	5	0	1	0	0	0	0	0	0	0	5	0	2	0	0	0	13	155
8:40 AM	1	1	0	0	0	0	0	0	0	0	3	0	2	0	0	0	7	147
8:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	140
8:50 AM	3	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	6	131
8:55 AM	1	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0	7	121

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	0	12	0	0	0	0	0	0	0	124	0	20	0	0	0	204
Heavy Trucks	4	0	0		0	0	0		0	0	4		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

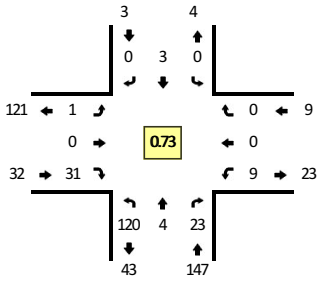
Type of peak hour being reported: Intersection Peak

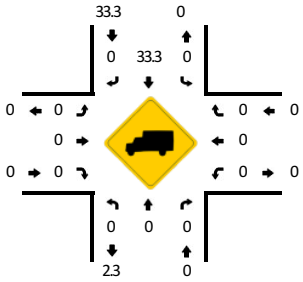
Method for determining peak hour: Total Entering Volume

LOCATION: George Elmer Dr -- Cattle Dr
CITY/STATE: Missoula, MT

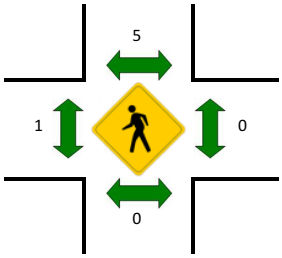
QC JOB #: 15183132
DATE: Tue, Mar 3 2020

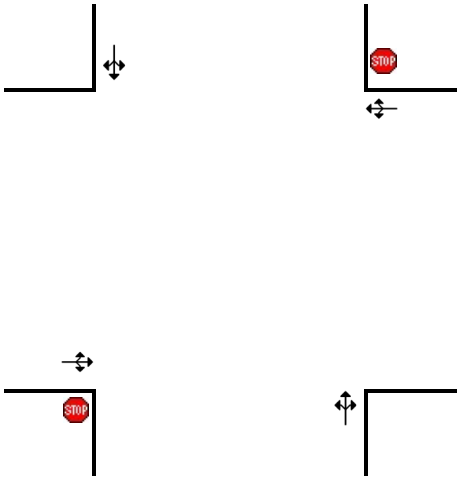
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

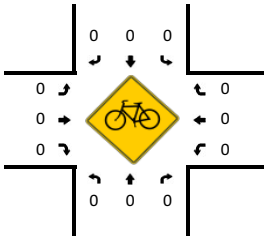


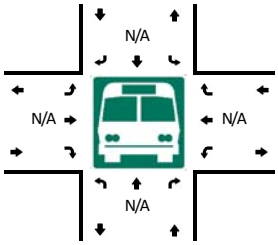


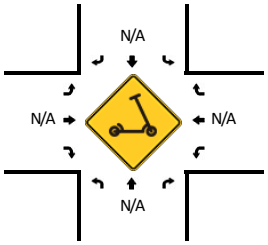
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	George Elmer Dr (Northbound)				George Elmer Dr (Southbound)				Cattle Dr (Eastbound)				Cattle Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	0	3	0	0	0	0	0	0	0	3	0	1	0	0	0	12	
4:05 PM	3	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	8	
4:10 PM	9	1	2	0	0	0	0	0	0	0	2	0	0	0	1	0	15	
4:15 PM	4	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	9	
4:20 PM	2	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	6	
4:25 PM	3	1	1	0	0	1	0	0	0	0	5	0	0	0	0	0	11	
4:30 PM	7	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	12	
4:35 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	
4:40 PM	11	0	0	0	0	1	0	0	0	0	5	0	2	0	0	0	19	
4:45 PM	5	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	7	
4:50 PM	4	0	1	0	0	0	0	0	0	1	4	0	0	0	0	0	10	
4:55 PM	5	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	9	122
5:00 PM	10	1	2	0	0	0	0	0	0	0	2	0	1	0	0	0	16	126
5:05 PM	8	0	1	0	0	0	0	0	0	0	2	1	2	0	0	0	14	132
5:10 PM	10	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	15	132
5:15 PM	15	0	4	0	0	1	0	0	0	0	2	0	2	0	0	0	24	147
5:20 PM	16	0	3	0	0	0	0	0	0	0	3	0	1	0	0	0	23	164
5:25 PM	10	1	3	0	0	0	0	0	0	0	3	0	1	0	0	0	18	171
5:30 PM	11	1	2	0	0	1	0	0	0	0	0	0	1	0	0	0	16	175
5:35 PM	12	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	17	188
5:40 PM	10	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	13	182
5:45 PM	6	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	12	187
5:50 PM	7	1	1	0	0	0	0	0	0	0	4	0	1	0	0	0	14	191
5:55 PM	6	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	9	191

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	164	4	40	0	0	4	0	0	0	0	32	0	16	0	0	0	260
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix B – Tube Counts

Type of report: Tube Count - Vehicle Classification Data

LOCATION: N Reserve St S of England Blvd
QC JOB #: 15183133
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	69	21	3	4	1	0	0	4	0	0	0	0	0	102
01:00 AM	0	55	17	1	13	0	0	0	2	1	0	0	0	0	89
02:00 AM	2	93	33	0	12	1	0	0	2	2	0	0	0	0	145
03:00 AM	1	165	71	5	22	1	1	5	7	1	0	0	2	0	281
04:00 AM	2	292	112	9	56	3	0	11	7	3	1	0	2	0	498
05:00 AM	5	561	268	19	138	2	0	17	18	2	9	**1**	3	0	1043
06:00 AM	6	1098	461	34	258	8	1	60	13	1	13	0	2	0	1955
07:00 AM	6	1020	475	21	244	10	1	55	15	3	**22**	0	2	0	1874
08:00 AM	**12**	897	470	25	**284**	8	0	53	18	3	10	0	**5**	0	1785
09:00 AM	7	978	504	28	246	**11**	**4**	**66**	**25**	**6**	10	0	3	0	1888
10:00 AM	12	1174	558	**38**	272	6	2	52	16	2	8	0	2	0	2142
11:00 AM	11	**1340**	**597**	32	261	8	0	47	14	3	22	0	2	0	**2337**
12:00 PM	**18**	1293	528	33	**258**	**7**	**3**	**70**	12	**5**	16	0	1	0	**2244**
01:00 PM	15	1272	521	22	258	5	2	54	**15**	2	19	0	2	0	2187
02:00 PM	14	**1308**	**553**	23	219	3	1	58	8	4	15	0	2	0	2208
03:00 PM	12	1271	498	**35**	231	3	0	56	4	2	13	0	1	0	2126
04:00 PM	8	1292	445	30	209	2	1	44	4	4	**26**	0	1	0	2066
05:00 PM	6	1231	439	10	205	1	0	49	7	2	7	**1**	**3**	0	1961
06:00 PM	7	949	330	7	145	3	0	9	7	3	7	0	0	0	1467
07:00 PM	3	668	214	3	102	3	0	6	7	0	4	0	1	0	1011
08:00 PM	1	442	128	4	48	2	0	3	3	0	1	0	0	0	632
09:00 PM	0	305	83	4	24	2	0	2	2	0	1	0	0	0	423
10:00 PM	0	153	55	1	18	0	0	0	3	0	0	0	0	0	230
11:00 PM	2	105	54	1	16	1	0	0	1	0	0	0	1	0	181
Day Total	150	18031	7435	388	3543	91	16	717	214	49	204	2	35	0	30875
Percent	0.5%	58.4%	24.1%	1.3%	11.5%	0.3%	0.1%	2.3%	0.7%	0.2%	0.7%	0%	0.1%	0%	
ADT 30875															
AM Peak	8:00 AM	11:00 AM	11:00 AM	10:00 AM	8:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	7:00 AM	5:00 AM	8:00 AM	12:00 AM	11:00 AM
Volume	12	1340	597	38	284	11	4	66	25	6	22	1	5	0	2337
PM Peak	12:00 PM	2:00 PM	2:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	4:00 PM	5:00 PM	5:00 PM	12:00 PM	12:00 PM
Volume	18	1308	553	35	258	7	3	70	15	5	26	1	3	0	2244

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: N Reserve St S of England Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183133
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	150	18031	7435	388	3543	91	16	717	214	49	204	2	35	0	30875
Percent	0.5%	58.4%	24.1%	1.3%	11.5%	0.3%	0.1%	2.3%	0.7%	0.2%	0.7%	0%	0.1%	0%	
ADT 30875															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: N Reserve St S of England Blvd | **QC JOB #:** 15183133

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Missoula, MT | **DATE:** Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		102				102			102	
01:00 AM		89				89			89	
02:00 AM		145				145			145	
03:00 AM		281				281			281	
04:00 AM		498				498			498	
05:00 AM		1043				1043			1043	
06:00 AM		1955				1955			1955	
07:00 AM		1874				1874			1874	
08:00 AM		1785				1785			1785	
09:00 AM		1888				1888			1888	
10:00 AM		2142				2142			2142	
11:00 AM		**2337**				**2337**			**2337**	
12:00 PM		**2244**				**2244**			**2244**	
01:00 PM		2187				2187			2187	
02:00 PM		2208				2208			2208	
03:00 PM		2126				2126			2126	
04:00 PM		2066				2066			2066	
05:00 PM		1961				1961			1961	
06:00 PM		1467				1467			1467	
07:00 PM		1011				1011			1011	
08:00 PM		632				632			632	
09:00 PM		423				423			423	
10:00 PM		230				230			230	
11:00 PM		181				181			181	
Day Total		30875				30875			30875	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		11:00 AM 2337				11:00 AM 2337			11:00 AM 2337	
PM Peak Volume		12:00 PM 2244				12:00 PM 2244			12:00 PM 2244	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: W Broadway St W of Flynn Ln
QC JOB #: 15183134
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	7	61	12	3	10	1	0	0	1	0	0	0	0	0	95
01:00 AM	2	33	7	3	10	0	0	0	1	0	0	0	0	0	56
02:00 AM	1	50	10	9	14	0	0	0	3	0	0	0	0	0	87
03:00 AM	11	100	24	12	23	1	0	2	0	0	1	0	0	0	174
04:00 AM	19	166	58	13	46	1	0	5	0	**1**	0	0	**3**	0	312
05:00 AM	20	281	118	23	73	2	0	4	2	1	0	0	1	0	525
06:00 AM	**49**	577	187	58	197	8	0	14	3	0	1	**1**	0	0	1095
07:00 AM	30	**649**	**250**	**83**	173	7	1	25	5	0	**10**	1	1	0	**1235**
08:00 AM	39	515	206	76	199	10	1	14	5	1	1	0	2	0	1069
09:00 AM	24	443	184	52	**207**	6	**2**	19	4	1	1	0	2	0	945
10:00 AM	28	447	229	75	157	**15**	2	21	8	1	8	0	0	0	991
11:00 AM	38	556	244	70	190	8	2	**26**	**15**	1	4	0	0	0	1154
12:00 PM	34	651	240	79	223	3	3	19	**12**	1	5	0	**2**	0	1272
01:00 PM	36	670	266	83	197	8	**5**	**24**	2	1	**8**	**1**	1	0	1302
02:00 PM	35	632	225	53	187	5	4	18	9	0	6	1	2	0	1177
03:00 PM	**66**	845	**282**	**98**	**292**	**12**	4	24	5	2	5	0	0	0	**1635**
04:00 PM	58	**897**	276	69	233	7	1	15	5	1	4	0	0	0	1566
05:00 PM	35	666	202	37	157	3	0	7	1	**3**	4	0	1	0	1116
06:00 PM	39	474	128	21	111	3	0	10	1	1	0	0	0	0	788
07:00 PM	21	317	82	11	61	2	0	2	1	0	0	0	2	0	499
08:00 PM	17	227	73	6	38	2	0	2	2	0	1	0	0	0	368
09:00 PM	9	198	49	8	34	0	0	1	2	0	0	0	0	0	301
10:00 PM	4	88	30	3	16	1	0	0	0	0	0	0	0	0	142
11:00 PM	14	87	32	3	22	0	0	1	1	0	0	0	0	0	160
Day Total	636	9630	3414	948	2870	105	25	253	88	15	59	4	17	0	18064
Percent	3.5%	53.3%	18.9%	5.2%	15.9%	0.6%	0.1%	1.4%	0.5%	0.1%	0.3%	0%	0.1%	0%	
ADT 18064															
AM Peak	6:00 AM	7:00 AM	7:00 AM	7:00 AM	9:00 AM	10:00 AM	9:00 AM	11:00 AM	11:00 AM	4:00 AM	7:00 AM	6:00 AM	4:00 AM	12:00 AM	7:00 AM
Volume	49	649	250	83	207	15	2	26	15	1	10	1	3	0	1235
PM Peak	3:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	3:00 PM	1:00 PM	1:00 PM	12:00 PM	5:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	66	897	282	98	292	12	5	24	12	3	8	1	2	0	1635

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: W Broadway St W of Flynn Ln
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183134
DIRECTION: EB, WB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	636	9630	3414	948	2870	105	25	253	88	15	59	4	17	0	18064
Percent	3.5%	53.3%	18.9%	5.2%	15.9%	0.6%	0.1%	1.4%	0.5%	0.1%	0.3%	0%	0.1%	0%	

ADT 18064

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: W Broadway St W of Flynn Ln
QC JOB #: 15183134
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		95				95			95	
01:00 AM		56				56			56	
02:00 AM		87				87			87	
03:00 AM		174				174			174	
04:00 AM		312				312			312	
05:00 AM		525				525			525	
06:00 AM		1095				1095			1095	
07:00 AM		**1235**				**1235**			**1235**	
08:00 AM		1069				1069			1069	
09:00 AM		945				945			945	
10:00 AM		991				991			991	
11:00 AM		1154				1154			1154	
12:00 PM		1272				1272			1272	
01:00 PM		1302				1302			1302	
02:00 PM		1177				1177			1177	
03:00 PM		**1635**				**1635**			**1635**	
04:00 PM		1566				1566			1566	
05:00 PM		1116				1116			1116	
06:00 PM		788				788			788	
07:00 PM		499				499			499	
08:00 PM		368				368			368	
09:00 PM		301				301			301	
10:00 PM		142				142			142	
11:00 PM		160				160			160	
Day Total		18064				18064			18064	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1235				7:00 AM 1235			7:00 AM 1235	
PM Peak Volume		3:00 PM 1635				3:00 PM 1635			3:00 PM 1635	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Flynn Ln N of Mullan Rd
QC JOB #: 15183135
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 4 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
01:00 AM															
02:00 AM															
03:00 AM															
04:00 AM															
05:00 AM															
06:00 AM															
07:00 AM															
08:00 AM															
09:00 AM	0	77	53	0	26	**8**	**2**	1	0	0	0	0	0	0	167
10:00 AM	**1**	111	60	0	**33**	8	2	0	0	0	0	0	0	0	215
11:00 AM	0	**139**	**76**	0	24	0	1	**3**	0	**1**	0	0	0	0	**244**
12:00 PM	0	128	57	1	31	0	0	**4**	**1**	**3**	0	0	0	0	225
01:00 PM	0	140	63	2	19	2	0	2	1	3	0	0	0	0	232
02:00 PM	0	233	**121**	**19**	32	**3**	0	1	0	0	0	0	0	0	**409**
03:00 PM	0	222	91	8	31	2	0	0	0	0	0	0	0	0	354
04:00 PM	0	**243**	93	0	**36**	0	0	4	0	0	0	0	0	0	376
05:00 PM	**1**	141	51	1	14	0	0	2	0	0	0	0	0	0	210
06:00 PM	0	84	30	0	10	0	0	0	0	0	0	0	0	0	124
07:00 PM	0	76	24	0	9	0	0	0	0	0	0	0	0	0	109
08:00 PM	0	49	13	0	3	0	0	0	0	0	0	0	0	0	65
09:00 PM	1	20	12	0	1	0	0	0	0	0	0	0	0	0	34
10:00 PM	0	16	5	0	0	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	5	5	0	1	0	0	0	0	0	0	0	0	0	11
Day Total	3	1684	754	31	270	23	5	17	2	7	0	0	0	0	2796
Percent	0.1%	60.2%	27%	1.1%	9.7%	0.8%	0.2%	0.6%	0.1%	0.3%	0%	0%	0%	0%	
ADT 2796															
AM Peak	10:00 AM	11:00 AM	11:00 AM	9:00 AM	10:00 AM	9:00 AM	9:00 AM	11:00 AM	9:00 AM	11:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	11:00 AM
Volume	1	139	76	0	33	8	2	3	0	1	0	0	0	0	244
PM Peak	5:00 PM	4:00 PM	2:00 PM	2:00 PM	4:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM
Volume	1	243	121	19	36	3	0	4	1	3	0	0	0	0	409

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Flynn Ln N of Mullan Rd
QC JOB #: 15183135
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 5 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	0	8
01:00 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
02:00 AM	0	4	1	0	2	0	0	0	0	0	0	0	0	0	7
03:00 AM	0	16	8	0	3	0	0	0	0	0	0	0	0	0	27
04:00 AM	0	20	14	0	5	1	0	0	0	0	0	0	0	0	40
05:00 AM	0	78	39	2	15	1	0	0	0	0	0	0	0	0	135
06:00 AM	0	263	101	**14**	44	**2**	**2**	1	**1**	**1**	0	0	0	0	429
07:00 AM	0	**276**	**109**	9	**54**	0	0	**5**	0	0	0	0	0	0	**453**
08:00 AM	0	86	40	4	25	1	0	3	1	0	0	0	0	0	160
09:00 AM															
10:00 AM															
11:00 AM															
12:00 PM															
01:00 PM															
02:00 PM															
03:00 PM															
04:00 PM															
05:00 PM															
06:00 PM															
07:00 PM															
08:00 PM															
09:00 PM															
10:00 PM															
11:00 PM															
Day Total	0	755	319	29	148	5	2	9	2	1	0	0	0	0	1270
Percent	0%	59.4%	25.1%	2.3%	11.7%	0.4%	0.2%	0.7%	0.2%	0.1%	0%	0%	0%	0%	
ADT 1270															
AM Peak	12:00 AM	7:00 AM	7:00 AM	6:00 AM	7:00 AM	6:00 AM	6:00 AM	7:00 AM	6:00 AM	6:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM
Volume	0	276	109	14	54	2	2	5	1	1	0	0	0	0	453
PM Peak Volume															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Flynn Ln N of Mullan Rd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183135
DIRECTION: NB, SB
DATE: Mar 4 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	3	2439	1073	60	418	28	7	26	4	8	0	0	0	0	4066
Percent	0.1%	60%	26.4%	1.5%	10.3%	0.7%	0.2%	0.6%	0.1%	0.2%	0%	0%	0%	0%	
ADT 2033															

Comments:

Report generated on 3/16/2020 1:14 PM

Type of report: Tube Count - Volume Data

LOCATION: Flynn Ln N of Mullan Rd
QC JOB #: 15183135
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 4 2020 - Mar 5 2020

Start Time	Mon	Tue	Wed 4 Mar 20	Thu 5 Mar 20	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				8		8			8	
01:00 AM				11		11			11	
02:00 AM				7		7			7	
03:00 AM				27		27			27	
04:00 AM				40		40			40	
05:00 AM				135		135			135	
06:00 AM				429		429			429	
07:00 AM				**453**		**453**			**453**	
08:00 AM				160		160			160	
09:00 AM			167			167			167	
10:00 AM			215			215			215	
11:00 AM			**244**			244			244	
12:00 PM			225			225			225	
01:00 PM			232			232			232	
02:00 PM			**409**			**409**			**409**	
03:00 PM			354			354			354	
04:00 PM			376			376			376	
05:00 PM			210			210			210	
06:00 PM			124			124			124	
07:00 PM			109			109			109	
08:00 PM			65			65			65	
09:00 PM			34			34			34	
10:00 PM			21			21			21	
11:00 PM			11			11			11	
Day Total			2796	1270		4066			4066	
% Weekday Average			68.8%	31.2%						
% Week Average			68.8%	31.2%		100%				
AM Peak Volume			11:00 AM 244	7:00 AM 453		7:00 AM 453			7:00 AM 453	
PM Peak Volume			2:00 PM 409	12:00 PM		2:00 PM 409			2:00 PM 409	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd E of Flynn Ln
QC JOB #: 15183136
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	32	9	0	1	0	0	0	0	0	0	0	0	0	42
01:00 AM	0	17	6	0	2	0	0	0	0	0	0	0	0	0	25
02:00 AM	0	21	6	0	5	0	0	0	0	0	0	0	0	0	32
03:00 AM	0	31	12	0	13	0	0	0	0	0	0	0	0	0	56
04:00 AM	0	97	50	1	32	0	0	0	0	0	0	0	0	0	180
05:00 AM	0	261	125	5	63	0	0	4	0	0	0	0	0	0	458
06:00 AM	0	**618**	222	**12**	**112**	4	0	8	1	2	0	0	0	0	**979**
07:00 AM	2	568	215	9	109	3	**3**	10	2	2	**1**	0	0	0	924
08:00 AM	2	395	185	6	72	**9**	1	5	1	2	0	0	0	0	678
09:00 AM	**3**	379	216	7	72	4	3	10	2	**4**	0	0	0	0	700
10:00 AM	0	454	202	7	87	1	0	9	2	2	0	0	0	0	764
11:00 AM	2	480	**244**	7	105	4	1	**11**	**3**	1	0	0	0	0	858
12:00 PM	3	490	224	7	80	3	**1**	5	**1**	**1**	0	0	0	0	815
01:00 PM	5	488	187	11	68	**6**	1	10	1	1	0	0	0	0	778
02:00 PM	**6**	641	261	**26**	98	0	0	**13**	1	0	0	0	0	0	1046
03:00 PM	1	693	273	14	95	2	0	11	0	0	0	0	**1**	0	1090
04:00 PM	1	**795**	**294**	7	**145**	5	0	8	0	1	0	0	0	0	**1256**
05:00 PM	0	594	221	3	102	1	0	3	0	0	0	0	0	0	924
06:00 PM	0	459	155	3	58	0	0	6	0	0	0	0	0	0	681
07:00 PM	0	332	116	0	31	0	0	0	1	0	0	0	0	0	480
08:00 PM	0	210	62	0	27	0	0	1	0	0	0	0	0	0	300
09:00 PM	0	92	29	0	6	0	0	0	1	0	0	0	0	0	128
10:00 PM	1	54	21	1	4	0	0	0	0	0	0	0	0	0	81
11:00 PM	0	30	12	0	2	0	0	0	0	0	0	0	0	0	44
Day Total	26	8231	3347	126	1389	42	10	114	16	16	1	0	1	0	13319
Percent	0.2%	61.8%	25.1%	0.9%	10.4%	0.3%	0.1%	0.9%	0.1%	0.1%	0%	0%	0%	0%	
ADT 13319															
AM Peak	9:00 AM	6:00 AM	11:00 AM	6:00 AM	6:00 AM	8:00 AM	7:00 AM	11:00 AM	11:00 AM	9:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM
Volume	3	618	244	12	112	9	3	11	3	4	1	0	0	0	979
PM Peak	2:00 PM	4:00 PM	4:00 PM	2:00 PM	4:00 PM	1:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	12:00 PM	4:00 PM
Volume	6	795	294	26	145	6	1	13	1	1	0	0	1	0	1256

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd E of Flynn Ln
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183136
DIRECTION: EB, WB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	26	8231	3347	126	1389	42	10	114	16	16	1	0	1	0	13319
Percent	0.2%	61.8%	25.1%	0.9%	10.4%	0.3%	0.1%	0.9%	0.1%	0.1%	0%	0%	0%	0%	
ADT 13319															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mullan Rd E of Flynn Ln
QC JOB #: 15183136
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		42				42			42	
01:00 AM		25				25			25	
02:00 AM		32				32			32	
03:00 AM		56				56			56	
04:00 AM		180				180			180	
05:00 AM		458				458			458	
06:00 AM		**979**				**979**			**979**	
07:00 AM		924				924			924	
08:00 AM		678				678			678	
09:00 AM		700				700			700	
10:00 AM		764				764			764	
11:00 AM		858				858			858	
12:00 PM		815				815			815	
01:00 PM		778				778			778	
02:00 PM		1046				1046			1046	
03:00 PM		1090				1090			1090	
04:00 PM		**1256**				**1256**			**1256**	
05:00 PM		924				924			924	
06:00 PM		681				681			681	
07:00 PM		480				480			480	
08:00 PM		300				300			300	
09:00 PM		128				128			128	
10:00 PM		81				81			81	
11:00 PM		44				44			44	
Day Total		13319				13319			13319	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		6:00 AM 979				6:00 AM 979			6:00 AM 979	
PM Peak Volume		4:00 PM 1256				4:00 PM 1256			4:00 PM 1256	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Flynn Ln N of England Blvd
QC JOB #: 15183137
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
01:00 AM	0	7	4	0	1	0	0	0	0	0	0	0	0	0	12
02:00 AM	0	11	2	0	2	0	0	0	0	0	0	0	0	0	15
03:00 AM	0	16	5	0	5	0	0	0	0	0	0	0	0	0	26
04:00 AM	0	23	19	0	4	0	0	0	**1**	0	0	0	0	0	47
05:00 AM	0	61	38	1	17	2	0	0	1	0	0	0	0	0	120
06:00 AM	0	**162**	**74**	**5**	**51**	0	0	3	1	0	0	0	0	0	**296**
07:00 AM	0	151	50	1	38	3	0	2	1	0	0	0	0	0	246
08:00 AM	0	57	33	3	21	**7**	**2**	**5**	0	0	0	0	0	0	128
09:00 AM	0	58	41	1	17	6	2	3	0	0	0	0	0	0	128
10:00 AM	0	95	43	1	27	4	2	3	0	0	0	0	0	0	175
11:00 AM	0	130	66	0	45	2	2	1	0	0	0	0	0	0	246
12:00 PM	**1**	135	66	2	36	**6**	**4**	1	0	0	0	0	0	0	251
01:00 PM	0	122	34	1	26	6	3	**3**	0	0	0	0	0	0	195
02:00 PM	1	167	61	**7**	33	1	0	1	**1**	0	0	0	0	0	272
03:00 PM	0	183	**95**	2	35	0	0	2	0	0	0	0	0	0	317
04:00 PM	0	**226**	92	1	**41**	0	0	2	0	0	0	0	0	0	**362**
05:00 PM	0	106	51	0	23	0	0	0	0	0	0	0	0	0	180
06:00 PM	0	62	27	0	14	0	0	0	0	0	0	0	0	0	103
07:00 PM	0	39	14	0	3	0	0	0	0	0	0	0	0	0	56
08:00 PM	0	24	10	0	2	0	0	0	0	0	0	0	0	0	36
09:00 PM	0	23	5	0	3	0	0	0	0	0	0	0	0	0	31
10:00 PM	0	12	3	0	1	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	18	3	0	1	0	0	0	0	0	0	0	0	0	22
Day Total	2	1895	838	25	446	37	15	26	5	0	0	0	0	0	3289
Percent	0.1%	57.6%	25.5%	0.8%	13.6%	1.1%	0.5%	0.8%	0.2%	0%	0%	0%	0%	0%	
ADT 3289															
AM Peak	12:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	8:00 AM	8:00 AM	8:00 AM	4:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM
Volume	0	162	74	5	51	7	2	5	1	0	0	0	0	0	296
PM Peak	12:00 PM	4:00 PM	3:00 PM	2:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	1	226	95	7	41	6	4	3	1	0	0	0	0	0	362

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Flynn Ln N of England Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183137
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	2	1895	838	25	446	37	15	26	5	0	0	0	0	0	3289
Percent	0.1%	57.6%	25.5%	0.8%	13.6%	1.1%	0.5%	0.8%	0.2%	0%	0%	0%	0%	0%	
ADT 3289															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Flynn Ln N of England Blvd
QC JOB #: 15183137
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		9				9			9	
01:00 AM		12				12			12	
02:00 AM		15				15			15	
03:00 AM		26				26			26	
04:00 AM		47				47			47	
05:00 AM		120				120			120	
06:00 AM		**296**				**296**			**296**	
07:00 AM		246				246			246	
08:00 AM		128				128			128	
09:00 AM		128				128			128	
10:00 AM		175				175			175	
11:00 AM		246				246			246	
12:00 PM		251				251			251	
01:00 PM		195				195			195	
02:00 PM		272				272			272	
03:00 PM		317				317			317	
04:00 PM		**362**				**362**			**362**	
05:00 PM		180				180			180	
06:00 PM		103				103			103	
07:00 PM		56				56			56	
08:00 PM		36				36			36	
09:00 PM		31				31			31	
10:00 PM		16				16			16	
11:00 PM		22				22			22	
Day Total		3289				3289			3289	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		6:00 AM 296				6:00 AM 296			6:00 AM 296	
PM Peak Volume		4:00 PM 362				4:00 PM 362			4:00 PM 362	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: England Blvd W of Mary Jane Blvd
QC JOB #: 15183138
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
02:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
03:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
04:00 AM	0	13	0	0	1	**1**	0	0	0	0	0	0	0	0	15
05:00 AM	0	22	15	3	8	0	0	0	0	0	0	0	0	0	48
06:00 AM	0	156	44	11	15	0	0	0	0	0	0	0	0	0	226
07:00 AM	0	**168**	**82**	**18**	**21**	0	0	**1**	0	0	0	0	0	0	**290**
08:00 AM	0	60	25	0	6	0	0	1	0	0	0	0	0	0	92
09:00 AM	0	44	19	0	9	1	0	0	0	0	0	0	0	0	73
10:00 AM	0	83	28	1	17	0	0	0	0	0	0	0	0	0	129
11:00 AM	0	108	46	0	17	0	0	0	0	0	0	0	0	0	171
12:00 PM	**1**	95	38	0	12	0	0	0	0	0	0	0	0	0	146
01:00 PM	0	113	42	11	10	0	0	1	0	0	0	0	0	0	177
02:00 PM	0	157	48	**18**	10	0	0	**2**	0	0	0	0	0	0	235
03:00 PM	0	150	53	12	12	0	0	1	0	0	0	0	0	0	228
04:00 PM	0	**176**	**66**	1	**17**	0	0	1	0	0	0	0	0	0	**261**
05:00 PM	0	110	32	2	12	0	0	1	0	0	0	0	0	0	157
06:00 PM	0	67	27	0	6	0	0	0	0	0	0	0	0	0	100
07:00 PM	0	36	13	0	3	0	0	0	0	0	0	0	0	0	52
08:00 PM	0	14	5	0	1	0	0	0	0	0	0	0	0	0	20
09:00 PM	0	10	3	0	2	0	0	1	0	0	0	0	0	0	16
10:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
Day Total	1	1605	592	77	180	2	0	9	0	0	0	0	0	0	2466
Percent	0%	65.1%	24%	3.1%	7.3%	0.1%	0%	0.4%	0%	0%	0%	0%	0%	0%	
ADT 2466															
AM Peak	12:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	4:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM
Volume	0	168	82	18	21	1	0	1	0	0	0	0	0	0	290
PM Peak	12:00 PM	4:00 PM	4:00 PM	2:00 PM	4:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	1	176	66	18	17	0	0	2	0	0	0	0	0	0	261

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: England Blvd W of Mary Jane Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183138
DIRECTION: EB, WB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	1	1605	592	77	180	2	0	9	0	0	0	0	0	0	2466
Percent	0%	65.1%	24%	3.1%	7.3%	0.1%	0%	0.4%	0%	0%	0%	0%	0%	0%	
ADT 2466															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: England Blvd W of Mary Jane Blvd
QC JOB #: 15183138
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		3				3			3	
01:00 AM		4				4			4	
02:00 AM		5				5			5	
03:00 AM		5				5			5	
04:00 AM		15				15			15	
05:00 AM		48				48			48	
06:00 AM		226				226			226	
07:00 AM		**290**				**290**			**290**	
08:00 AM		92				92			92	
09:00 AM		73				73			73	
10:00 AM		129				129			129	
11:00 AM		171				171			171	
12:00 PM		146				146			146	
01:00 PM		177				177			177	
02:00 PM		235				235			235	
03:00 PM		228				228			228	
04:00 PM		**261**				**261**			**261**	
05:00 PM		157				157			157	
06:00 PM		100				100			100	
07:00 PM		52				52			52	
08:00 PM		20				20			20	
09:00 PM		16				16			16	
10:00 PM		5				5			5	
11:00 PM		8				8			8	
Day Total		2466				2466			2466	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 290				7:00 AM 290			7:00 AM 290	
PM Peak Volume		4:00 PM 261				4:00 PM 261			4:00 PM 261	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: England Blvd E of Mary Jane Blvd
QC JOB #: 15183139
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
01:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
02:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
03:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
04:00 AM	0	13	2	0	0	**1**	0	0	0	0	0	0	0	0	16
05:00 AM	0	35	12	3	9	0	0	0	0	0	0	0	0	0	59
06:00 AM	0	**160**	46	12	15	0	0	1	0	0	0	0	0	0	234
07:00 AM	**2**	157	**73**	**17**	**21**	0	0	**3**	0	0	0	0	0	0	**273**
08:00 AM	0	60	22	0	10	0	0	0	0	0	0	0	0	0	92
09:00 AM	0	53	24	0	11	1	0	0	0	0	0	0	0	0	89
10:00 AM	0	89	29	1	15	0	0	0	0	0	0	0	0	0	134
11:00 AM	0	104	42	0	19	0	0	0	0	0	0	0	0	0	165
12:00 PM	0	100	36	0	16	0	0	0	0	0	0	0	0	0	152
01:00 PM	**1**	129	35	11	17	0	0	**2**	0	0	0	0	0	0	195
02:00 PM	0	152	51	**14**	13	0	0	2	0	0	0	0	0	0	232
03:00 PM	0	149	50	11	**29**	0	0	0	0	0	0	0	0	0	239
04:00 PM	0	**174**	**68**	0	17	0	0	2	0	0	0	0	0	0	**261**
05:00 PM	0	116	40	2	10	0	0	0	0	0	0	0	0	0	168
06:00 PM	0	61	24	0	10	0	0	1	0	0	0	0	0	0	96
07:00 PM	0	28	16	0	3	0	0	0	0	0	0	0	0	0	47
08:00 PM	0	19	4	0	1	0	0	0	0	0	0	0	0	0	24
09:00 PM	0	7	4	0	2	0	0	1	0	0	0	0	0	0	14
10:00 PM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
Day Total	3	1627	585	71	220	2	0	12	0	0	0	0	0	0	2520
Percent	0.1%	64.6%	23.2%	2.8%	8.7%	0.1%	0%	0.5%	0%	0%	0%	0%	0%	0%	
ADT 2520															
AM Peak	7:00 AM	6:00 AM	7:00 AM	7:00 AM	7:00 AM	4:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM
Volume	2	160	73	17	21	1	0	3	0	0	0	0	0	0	273
PM Peak	1:00 PM	4:00 PM	4:00 PM	2:00 PM	3:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	1	174	68	14	29	0	0	2	0	0	0	0	0	0	261

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: England Blvd E of Mary Jane Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183139
DIRECTION: EB, WB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	3	1627	585	71	220	2	0	12	0	0	0	0	0	0	2520
Percent	0.1%	64.6%	23.2%	2.8%	8.7%	0.1%	0%	0.5%	0%	0%	0%	0%	0%	0%	
ADT 2520															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: England Blvd E of Mary Jane Blvd
QC JOB #: 15183139
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		4				4			4	
01:00 AM		4				4			4	
02:00 AM		6				6			6	
03:00 AM		5				5			5	
04:00 AM		16				16			16	
05:00 AM		59				59			59	
06:00 AM		234				234			234	
07:00 AM		**273**				**273**			**273**	
08:00 AM		92				92			92	
09:00 AM		89				89			89	
10:00 AM		134				134			134	
11:00 AM		165				165			165	
12:00 PM		152				152			152	
01:00 PM		195				195			195	
02:00 PM		232				232			232	
03:00 PM		239				239			239	
04:00 PM		**261**				**261**			**261**	
05:00 PM		168				168			168	
06:00 PM		96				96			96	
07:00 PM		47				47			47	
08:00 PM		24				24			24	
09:00 PM		14				14			14	
10:00 PM		6				6			6	
11:00 PM		5				5			5	
Day Total		2520				2520			2520	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 273				7:00 AM 273			7:00 AM 273	
PM Peak Volume		4:00 PM 261				4:00 PM 261			4:00 PM 261	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd N of England Blvd
QC JOB #: 15183140
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
06:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	0	6
09:00 AM	0	**8**	4	0	1	0	0	0	0	0	0	0	0	0	13
10:00 AM	0	8	**5**	0	**8**	0	0	0	0	0	0	0	0	0	**21**
11:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
12:00 PM	0	6	5	0	2	0	0	0	0	0	0	0	0	0	13
01:00 PM	0	9	0	0	1	0	0	0	0	0	0	0	0	0	10
02:00 PM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:00 PM	0	4	5	0	**3**	0	0	0	0	0	0	0	0	0	12
04:00 PM	0	6	3	0	0	0	0	0	0	0	0	0	0	0	9
05:00 PM	0	5	3	**1**	1	0	0	0	0	0	0	0	0	0	10
06:00 PM	0	11	6	0	3	0	0	0	0	0	0	0	0	0	20
07:00 PM	0	**12**	**7**	0	2	0	0	0	0	0	0	0	0	0	**21**
08:00 PM	**1**	5	3	0	2	0	0	0	0	0	0	0	0	0	11
09:00 PM	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
10:00 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
11:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Day Total	1	97	50	1	26	0	0	0	0	0	0	0	0	0	175
Percent	0.6%	55.4%	28.6%	0.6%	14.9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
ADT 175															
AM Peak	12:00 AM	9:00 AM	10:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM
Volume	0	8	5	0	8	0	0	0	0	0	0	0	0	0	21
PM Peak	8:00 PM	7:00 PM	7:00 PM	5:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	7:00 PM
Volume	1	12	7	1	3	0	0	0	0	0	0	0	0	0	21

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd N of England Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183140
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	1	97	50	1	26	0	0	0	0	0	0	0	0	0	175
Percent	0.6%	55.4%	28.6%	0.6%	14.9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

ADT
175

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mary Jane Blvd N of England Blvd
QC JOB #: 15183140
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		2				2			2	
01:00 AM		1				1			1	
02:00 AM		0				0			0	
03:00 AM		0				0			0	
04:00 AM		0				0			0	
05:00 AM		2				2			2	
06:00 AM		1				1			1	
07:00 AM		0				0			0	
08:00 AM		6				6			6	
09:00 AM		13				13			13	
10:00 AM		**21**				**21**			**21**	
11:00 AM		6				6			6	
12:00 PM		13				13			13	
01:00 PM		10				10			10	
02:00 PM		6				6			6	
03:00 PM		12				12			12	
04:00 PM		9				9			9	
05:00 PM		10				10			10	
06:00 PM		20				20			20	
07:00 PM		**21**				**21**			**21**	
08:00 PM		11				11			11	
09:00 PM		6				6			6	
10:00 PM		3				3			3	
11:00 PM		2				2			2	
Day Total		175				175			175	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		10:00 AM 21				10:00 AM 21			10:00 AM 21	
PM Peak Volume		7:00 PM 21				7:00 PM 21			7:00 PM 21	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd S of England Blvd
QC JOB #: 15183141
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
06:00 AM	0	7	3	0	**2**	0	0	0	0	0	0	0	0	0	**12**
07:00 AM	0	6	2	**1**	0	0	0	0	0	0	0	0	0	0	9
08:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
09:00 AM	0	3	**4**	0	0	0	0	0	0	0	0	0	0	0	7
10:00 AM	0	7	1	0	1	0	0	0	0	0	0	0	0	0	9
11:00 AM	0	**8**	3	0	0	0	0	0	0	0	0	0	0	0	11
12:00 PM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	5
01:00 PM	0	6	1	0	5	0	0	0	0	0	0	0	0	0	12
02:00 PM	0	6	1	0	1	0	0	0	0	0	0	0	0	0	8
03:00 PM	0	**13**	**5**	0	1	0	0	0	0	0	0	0	0	0	**19**
04:00 PM	0	6	1	0	**6**	0	0	0	0	0	0	0	0	0	13
05:00 PM	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
06:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
07:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
08:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Day Total	0	95	28	1	18	0	0	0	0	0	0	0	0	0	142
Percent	0%	66.9%	19.7%	0.7%	12.7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
ADT 142															
AM Peak	12:00 AM	11:00 AM	9:00 AM	7:00 AM	6:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM
Volume	0	8	4	1	2	0	0	0	0	0	0	0	0	0	12
PM Peak	12:00 PM	3:00 PM	3:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	0	13	5	0	6	0	0	0	0	0	0	0	0	0	19

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd S of England Blvd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183141
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	0	95	28	1	18	0	0	0	0	0	0	0	0	0	142
Percent	0%	66.9%	19.7%	0.7%	12.7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

ADT
142

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mary Jane Blvd S of England Blvd | **QC JOB #:** 15183141

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Missoula, MT | **DATE:** Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		0				0			0	
01:00 AM		1				1			1	
02:00 AM		0				0			0	
03:00 AM		1				1			1	
04:00 AM		2				2			2	
05:00 AM		1				1			1	
06:00 AM		**12**				**12**			**12**	
07:00 AM		9				9			9	
08:00 AM		3				3			3	
09:00 AM		7				7			7	
10:00 AM		9				9			9	
11:00 AM		11				11			11	
12:00 PM		5				5			5	
01:00 PM		12				12			12	
02:00 PM		8				8			8	
03:00 PM		**19**				**19**			**19**	
04:00 PM		13				13			13	
05:00 PM		12				12			12	
06:00 PM		8				8			8	
07:00 PM		4				4			4	
08:00 PM		4				4			4	
09:00 PM		0				0			0	
10:00 PM		0				0			0	
11:00 PM		1				1			1	
Day Total		142				142			142	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		6:00 AM 12				6:00 AM 12			6:00 AM 12	
PM Peak Volume		3:00 PM 19				3:00 PM 19			3:00 PM 19	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd S of Camden St
QC JOB #: 15183142
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 AM	0	1	**2**	0	0	0	0	0	0	0	0	0	0	0	3
07:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
08:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00 AM	0	2	0	0	**1**	0	0	0	0	0	0	0	0	0	3
10:00 AM	0	**7**	0	0	0	0	0	0	0	0	0	0	0	0	**7**
11:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
12:00 PM	0	0	2	0	**2**	0	0	0	0	0	0	0	0	0	4
01:00 PM	0	0	**4**	0	2	0	0	0	0	0	0	0	0	0	6
02:00 PM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5
03:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
04:00 PM	0	5	0	0	2	0	0	0	0	0	0	0	0	0	7
05:00 PM	0	**7**	2	0	0	0	0	0	0	0	0	0	0	0	**9**
06:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
07:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
09:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Day Total	0	38	19	0	9	0	0	0	0	0	0	0	0	0	66
Percent	0%	57.6%	28.8%	0%	13.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
ADT 66															
AM Peak	12:00 AM	10:00 AM	6:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM
Volume	0	7	2	0	1	0	0	0	0	0	0	0	0	0	7
PM Peak	12:00 PM	5:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	5:00 PM
Volume	0	7	4	0	2	0	0	0	0	0	0	0	0	0	9

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd S of Camden St
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183142
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	0	38	19	0	9	0	0	0	0	0	0	0	0	0	66
Percent	0%	57.6%	28.8%	0%	13.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

ADT
66

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mary Jane Blvd S of Camden St | **QC JOB #:** 15183142

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Missoula, MT | **DATE:** Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		0				0			0	
01:00 AM		0				0			0	
02:00 AM		1				1			1	
03:00 AM		1				1			1	
04:00 AM		1				1			1	
05:00 AM		1				1			1	
06:00 AM		3				3			3	
07:00 AM		4				4			4	
08:00 AM		2				2			2	
09:00 AM		3				3			3	
10:00 AM		**7**				**7**			**7**	
11:00 AM		3				3			3	
12:00 PM		4				4			4	
01:00 PM		6				6			6	
02:00 PM		5				5			5	
03:00 PM		4				4			4	
04:00 PM		7				7			7	
05:00 PM		**9**				**9**			**9**	
06:00 PM		2				2			2	
07:00 PM		1				1			1	
08:00 PM		1				1			1	
09:00 PM		1				1			1	
10:00 PM		0				0			0	
11:00 PM		0				0			0	
Day Total		66				66			66	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		10:00 AM 7				10:00 AM 7			10:00 AM 7	
PM Peak Volume		5:00 PM 9				5:00 PM 9			5:00 PM 9	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd N of Melrose Pl
QC JOB #: 15183143
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 AM	0	2	**3**	0	0	0	0	0	0	0	0	0	0	0	5
07:00 AM	0	2	2	0	**1**	0	0	0	0	0	0	0	0	0	5
08:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
09:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
10:00 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	0	6
11:00 AM	0	**5**	2	0	0	0	0	0	0	0	0	0	0	0	**7**
12:00 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
01:00 PM	0	3	**5**	**1**	**4**	0	0	0	0	0	0	0	0	0	**13**
02:00 PM	0	3	3	1	1	0	0	0	0	0	0	0	0	0	8
03:00 PM	0	**6**	1	0	1	0	0	0	0	0	0	0	0	0	8
04:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
06:00 PM	0	5	3	0	0	0	0	0	0	0	0	0	0	0	8
07:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Day Total	0	47	28	2	9	0	0	0	0	0	0	0	0	0	86
Percent	0%	54.7%	32.6%	2.3%	10.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
ADT 86															
AM Peak	12:00 AM	11:00 AM	6:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	11:00 AM
Volume	0	5	3	0	1	0	0	0	0	0	0	0	0	0	7
PM Peak	12:00 PM	3:00 PM	1:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM
Volume	0	6	5	1	4	0	0	0	0	0	0	0	0	0	13

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mary Jane Blvd N of Melrose Pl
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183143
DIRECTION: NB, SB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	0	47	28	2	9	0	0	0	0	0	0	0	0	0	86
Percent	0%	54.7%	32.6%	2.3%	10.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

ADT
86

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mary Jane Blvd N of Melrose Pl | **QC JOB #:** 15183143

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Missoula, MT | **DATE:** Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		0				0			0	
01:00 AM		0				0			0	
02:00 AM		0				0			0	
03:00 AM		0				0			0	
04:00 AM		1				1			1	
05:00 AM		1				1			1	
06:00 AM		5				5			5	
07:00 AM		5				5			5	
08:00 AM		3				3			3	
09:00 AM		3				3			3	
10:00 AM		6				6			6	
11:00 AM		**7**				**7**			**7**	
12:00 PM		4				4			4	
01:00 PM		**13**				**13**			**13**	
02:00 PM		8				8			8	
03:00 PM		8				8			8	
04:00 PM		4				4			4	
05:00 PM		5				5			5	
06:00 PM		8				8			8	
07:00 PM		2				2			2	
08:00 PM		2				2			2	
09:00 PM		0				0			0	
10:00 PM		0				0			0	
11:00 PM		1				1			1	
Day Total		86				86			86	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		11:00 AM 7				11:00 AM 7			11:00 AM 7	
PM Peak Volume		1:00 PM 13				1:00 PM 13			1:00 PM 13	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd E of George Elmer Dr
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183144
DIRECTION: EB, WB
DATE: Mar 4 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
01:00 AM															
02:00 AM															
03:00 AM															
04:00 AM															
05:00 AM															
06:00 AM															
07:00 AM															
08:00 AM															
09:00 AM															
10:00 AM	0	**490**	206	**8**	**97**	**1**	**1**	9	0	0	0	0	0	0	**812**
11:00 AM	**1**	474	**208**	1	90	1	0	**11**	0	0	0	0	0	0	786
12:00 PM	1	527	211	4	78	0	0	5	2	0	0	0	0	0	828
01:00 PM	0	484	183	6	73	0	0	3	**3**	0	0	0	0	0	752
02:00 PM	1	613	236	**26**	83	2	0	4	0	0	0	0	0	0	965
03:00 PM	**3**	708	278	19	99	0	0	9	0	0	0	0	0	0	1116
04:00 PM	2	**795**	**326**	10	**106**	**4**	0	**11**	1	0	0	0	0	0	**1255**
05:00 PM	1	628	233	2	79	0	0	2	0	0	0	0	0	0	945
06:00 PM	1	434	157	2	57	1	0	2	0	**1**	0	0	0	0	655
07:00 PM	3	323	130	2	39	1	0	1	0	0	0	0	0	0	499
08:00 PM	0	214	63	0	18	0	0	0	0	0	0	0	0	0	295
09:00 PM	1	126	33	0	6	0	0	1	0	0	0	0	0	0	167
10:00 PM	0	70	27	0	1	0	0	0	0	0	0	0	0	0	98
11:00 PM	0	41	6	0	1	0	0	0	0	0	0	0	0	0	48
Day Total	14	5927	2297	80	827	10	1	58	6	1	0	0	0	0	9221
Percent	0.2%	64.3%	24.9%	0.9%	9%	0.1%	0%	0.6%	0.1%	0%	0%	0%	0%	0%	
ADT 9221															
AM Peak	11:00 AM	10:00 AM	11:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	11:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Volume	1	490	208	8	97	1	1	11	0	0	0	0	0	0	812
PM Peak	3:00 PM	4:00 PM	4:00 PM	2:00 PM	4:00 PM	4:00 PM	12:00 PM	4:00 PM	1:00 PM	6:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	3	795	326	26	106	4	0	11	3	1	0	0	0	0	1255

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd E of George Elmer Dr
QC JOB #: 15183144
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 5 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	34	8	0	1	0	0	0	0	0	0	0	0	0	43
01:00 AM	0	23	8	0	2	0	0	0	0	0	0	0	0	0	33
02:00 AM	0	27	7	0	2	0	0	0	0	0	0	0	0	0	36
03:00 AM	1	51	16	0	5	0	0	0	0	0	0	0	0	0	73
04:00 AM	0	107	50	1	17	1	0	2	0	0	0	0	0	0	178
05:00 AM	0	251	124	6	68	1	0	0	0	0	0	0	0	0	450
06:00 AM	0	**691**	**268**	**24**	111	2	0	5	0	0	0	0	0	0	**1101**
07:00 AM	0	630	259	10	**121**	5	0	7	0	**1**	0	0	0	0	1033
08:00 AM	**2**	422	186	10	79	6	0	**12**	0	0	0	0	0	0	717
09:00 AM	0	420	188	5	75	**7**	0	9	0	0	0	0	0	0	704
10:00 AM															
11:00 AM															
12:00 PM															
01:00 PM															
02:00 PM															
03:00 PM															
04:00 PM															
05:00 PM															
06:00 PM															
07:00 PM															
08:00 PM															
09:00 PM															
10:00 PM															
11:00 PM															
Day Total	3	2656	1114	56	481	22	0	35	0	1	0	0	0	0	4368
Percent	0.1%	60.8%	25.5%	1.3%	11%	0.5%	0%	0.8%	0%	0%	0%	0%	0%	0%	
ADT 4368															
AM Peak	8:00 AM	6:00 AM	6:00 AM	6:00 AM	7:00 AM	9:00 AM	12:00 AM	8:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM
Volume	2	691	268	24	121	7	0	12	0	1	0	0	0	0	1101
PM Peak Volume															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd E of George Elmer Dr
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183144
DIRECTION: EB, WB
DATE: Mar 4 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	17	8583	3411	136	1308	32	1	93	6	2	0	0	0	0	13589
Percent	0.1%	63.2%	25.1%	1%	9.6%	0.2%	0%	0.7%	0%	0%	0%	0%	0%	0%	

ADT
6794

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Mullan Rd E of George Elmer Dr
QC JOB #: 15183144
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 4 2020 - Mar 5 2020

Start Time	Mon	Tue	Wed 4 Mar 20	Thu 5 Mar 20	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				43		43			43	
01:00 AM				33		33			33	
02:00 AM				36		36			36	
03:00 AM				73		73			73	
04:00 AM				178		178			178	
05:00 AM				450		450			450	
06:00 AM				**1101**		**1101**			**1101**	
07:00 AM				1033		1033			1033	
08:00 AM				717		717			717	
09:00 AM				704		704			704	
10:00 AM			**812**			812			812	
11:00 AM			786			786			786	
12:00 PM			828			828			828	
01:00 PM			752			752			752	
02:00 PM			965			965			965	
03:00 PM			1116			1116			1116	
04:00 PM			**1255**			**1255**			**1255**	
05:00 PM			945			945			945	
06:00 PM			655			655			655	
07:00 PM			499			499			499	
08:00 PM			295			295			295	
09:00 PM			167			167			167	
10:00 PM			98			98			98	
11:00 PM			48			48			48	
Day Total			9221	4368		13589			13589	
% Weekday Average			67.9%	32.1%						
% Week Average			67.9%	32.1%		100%				
AM Peak Volume			10:00 AM 812	6:00 AM 1101		6:00 AM 1101			6:00 AM 1101	
PM Peak Volume			4:00 PM 1255	12:00 PM		4:00 PM 1255			4:00 PM 1255	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: George Elmer Dr N of Mullan Rd
QC JOB #: 15183145
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 4 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
01:00 AM															
02:00 AM															
03:00 AM															
04:00 AM															
05:00 AM															
06:00 AM															
07:00 AM															
08:00 AM															
09:00 AM															
10:00 AM															
11:00 AM	**1**	**69**	**15**	**5**	**46**	0	0	0	0	0	0	0	0	0	**136**
12:00 PM	2	84	10	8	50	0	0	0	0	0	0	0	0	0	154
01:00 PM	4	70	9	6	52	0	0	0	0	0	0	0	0	0	141
02:00 PM	9	96	12	7	71	0	0	0	0	0	0	0	0	0	195
03:00 PM	8	118	16	14	77	0	0	0	0	0	0	0	0	0	233
04:00 PM	**15**	**161**	**17**	**17**	**116**	0	0	**1**	0	0	0	0	0	0	**327**
05:00 PM	4	119	10	9	70	**1**	0	0	0	0	0	0	0	0	213
06:00 PM	5	62	3	3	49	0	0	0	0	0	0	0	0	0	122
07:00 PM	2	64	9	2	54	0	0	0	0	0	0	0	0	0	131
08:00 PM	5	25	1	0	26	0	0	0	0	0	0	0	0	0	57
09:00 PM	3	12	0	1	8	0	0	0	0	0	0	0	0	0	24
10:00 PM	0	13	1	0	9	0	0	0	0	0	0	0	0	0	23
11:00 PM	0	6	1	0	3	0	0	0	0	0	0	0	0	0	10
Day Total	58	899	104	72	631	1	0	1	0	0	0	0	0	0	1766
Percent	3.3%	50.9%	5.9%	4.1%	35.7%	0.1%	0%	0.1%	0%	0%	0%	0%	0%	0%	
ADT 1766															
AM Peak	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM
Volume	1	69	15	5	46	0	0	0	0	0	0	0	0	0	136
PM Peak	4:00 PM	4:00 PM	4:00 PM	4:00 PM	4:00 PM	5:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	15	161	17	17	116	1	0	1	0	0	0	0	0	0	327

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: George Elmer Dr N of Mullan Rd
QC JOB #: 15183145
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Missoula, MT
DATE: Mar 5 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	2	1	0	2	0	0	0	0	0	0	0	0	0	5
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
04:00 AM	0	12	6	0	6	0	0	0	0	0	0	0	0	0	24
05:00 AM	0	37	8	3	22	0	0	0	0	0	0	0	0	0	70
06:00 AM	**2**	103	22	**6**	30	0	0	0	0	0	0	0	0	0	163
07:00 AM	1	**106**	**26**	3	35	0	0	0	0	0	0	0	0	0	**171**
08:00 AM	0	55	11	3	23	0	0	0	0	0	0	0	0	0	92
09:00 AM	0	58	12	3	24	0	0	0	0	0	0	0	0	0	97
10:00 AM	2	83	15	6	**53**	0	0	**1**	0	0	0	0	0	0	160
11:00 AM															
12:00 PM															
01:00 PM															
02:00 PM															
03:00 PM															
04:00 PM															
05:00 PM															
06:00 PM															
07:00 PM															
08:00 PM															
09:00 PM															
10:00 PM															
11:00 PM															
Day Total	5	467	104	24	196	0	0	1	0	0	0	0	0	0	797
Percent	0.6%	58.6%	13%	3%	24.6%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	
ADT 797															
AM Peak	6:00 AM	7:00 AM	7:00 AM	6:00 AM	10:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM
Volume	2	106	26	6	53	0	0	1	0	0	0	0	0	0	171
PM Peak Volume															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: George Elmer Dr N of Mullan Rd
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183145
DIRECTION: NB, SB
DATE: Mar 4 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	63	1366	208	96	827	1	0	2	0	0	0	0	0	0	2563
Percent	2.5%	53.3%	8.1%	3.7%	32.3%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	
ADT 1281															

Comments:

Report generated on 3/16/2020 1:14 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: George Elmer Dr N of Mullan Rd | **QC JOB #:** 15183145

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Missoula, MT | **DATE:** Mar 4 2020 - Mar 5 2020

Start Time	Mon	Tue	Wed 4 Mar 20	Thu 5 Mar 20	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				5		5			5	
01:00 AM				5		5			5	
02:00 AM				0		0			0	
03:00 AM				10		10			10	
04:00 AM				24		24			24	
05:00 AM				70		70			70	
06:00 AM				163		163			163	
07:00 AM				**171**		**171**			**171**	
08:00 AM				92		92			92	
09:00 AM				97		97			97	
10:00 AM				160		160			160	
11:00 AM			**136**			136			136	
12:00 PM			154			154			154	
01:00 PM			141			141			141	
02:00 PM			195			195			195	
03:00 PM			233			233			233	
04:00 PM			**327**			**327**			**327**	
05:00 PM			213			213			213	
06:00 PM			122			122			122	
07:00 PM			131			131			131	
08:00 PM			57			57			57	
09:00 PM			24			24			24	
10:00 PM			23			23			23	
11:00 PM			10			10			10	
Day Total			1766	797		2563			2563	
% Weekday Average			68.9%	31.1%						
% Week Average			68.9%	31.1%		100%				
AM Peak Volume			11:00 AM 136	7:00 AM 171		7:00 AM 171			7:00 AM 171	
PM Peak Volume			4:00 PM 327	12:00 PM		4:00 PM 327			4:00 PM 327	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd W of George Elmer
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183146
DIRECTION: EB, WB
DATE: Mar 4 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM															
01:00 AM															
02:00 AM															
03:00 AM															
04:00 AM															
05:00 AM															
06:00 AM															
07:00 AM															
08:00 AM															
09:00 AM															
10:00 AM	1	413	205	6	74	2	0	5	0	0	0	0	0	0	706
11:00 AM	0	425	211	1	80	1	0	5	0	0	0	0	0	0	723
12:00 PM	1	448	191	3	64	0	0	6	1	0	0	0	0	0	714
01:00 PM	0	421	182	5	72	0	0	4	1	0	1	0	0	0	686
02:00 PM	1	535	247	27	72	1	0	4	0	0	0	0	0	0	887
03:00 PM	3	609	282	14	99	0	0	7	0	0	0	0	0	0	1014
04:00 PM	4	669	337	5	94	4	0	10	0	0	0	0	0	0	1123
05:00 PM	2	510	227	4	85	0	0	2	0	0	0	0	0	0	830
06:00 PM	0	363	154	2	45	0	0	0	1	0	0	0	0	0	565
07:00 PM	5	263	120	0	36	0	0	3	0	0	0	0	0	0	427
08:00 PM	1	174	67	0	14	0	0	1	0	0	0	0	0	0	257
09:00 PM	1	108	31	0	7	0	0	0	0	0	0	0	0	0	147
10:00 PM	0	54	29	0	1	0	0	0	0	0	0	0	0	0	84
11:00 PM	0	33	8	0	2	0	0	0	0	0	0	0	0	0	43
Day Total	19	5025	2291	67	745	8	0	47	3	0	1	0	0	0	8206
Percent	0.2%	61.2%	27.9%	0.8%	9.1%	0.1%	0%	0.6%	0%	0%	0%	0%	0%	0%	
ADT 8206															
AM Peak	10:00 AM	11:00 AM	11:00 AM	10:00 AM	11:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	11:00 AM
Volume	1	425	211	6	80	2	0	5	0	0	0	0	0	0	723
PM Peak	7:00 PM	4:00 PM	4:00 PM	2:00 PM	3:00 PM	4:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	5	669	337	27	99	4	0	10	1	0	1	0	0	0	1123

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd W of George Elmer
QC JOB #: 15183146
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 5 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	25	9	0	1	0	0	0	0	0	0	0	0	0	36
01:00 AM	0	23	5	1	1	0	0	0	0	0	0	0	0	0	30
02:00 AM	1	26	6	0	5	0	0	0	0	0	0	0	0	0	38
03:00 AM	0	40	25	0	5	0	0	0	0	0	0	0	0	0	70
04:00 AM	2	100	30	7	21	1	0	1	0	0	0	0	0	0	162
05:00 AM	8	240	115	11	72	1	0	0	0	0	0	0	0	0	447
06:00 AM	**11**	**638**	209	**31**	**132**	1	0	5	0	0	0	0	0	0	**1027**
07:00 AM	0	513	**234**	17	112	3	0	5	0	**1**	0	0	0	0	885
08:00 AM	3	374	188	10	71	**7**	0	**11**	0	0	0	0	0	0	664
09:00 AM	1	364	184	8	72	3	0	10	0	0	0	0	0	0	642
10:00 AM															
11:00 AM															
12:00 PM															
01:00 PM															
02:00 PM															
03:00 PM															
04:00 PM															
05:00 PM															
06:00 PM															
07:00 PM															
08:00 PM															
09:00 PM															
10:00 PM															
11:00 PM															
Day Total	27	2343	1005	85	492	16	0	32	0	1	0	0	0	0	4001
Percent	0.7%	58.6%	25.1%	2.1%	12.3%	0.4%	0%	0.8%	0%	0%	0%	0%	0%	0%	
ADT 4001															
AM Peak	6:00 AM	6:00 AM	7:00 AM	6:00 AM	6:00 AM	8:00 AM	12:00 AM	8:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM
Volume	11	638	234	31	132	7	0	11	0	1	0	0	0	0	1027
PM Peak Volume															

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Mullan Rd W of George Elmer
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183146
DIRECTION: EB, WB
DATE: Mar 4 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	46	7368	3296	152	1237	24	0	79	3	1	1	0	0	0	12207
Percent	0.4%	60.4%	27%	1.2%	10.1%	0.2%	0%	0.6%	0%	0%	0%	0%	0%	0%	
ADT 6103															

Comments:

Report generated on 3/16/2020 1:15 PM

Type of report: Tube Count - Volume Data

LOCATION: Mullan Rd W of George Elmer
QC JOB #: 15183146
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 4 2020 - Mar 5 2020

Start Time	Mon	Tue	Wed 4 Mar 20	Thu 5 Mar 20	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				36		36			36	
01:00 AM				30		30			30	
02:00 AM				38		38			38	
03:00 AM				70		70			70	
04:00 AM				162		162			162	
05:00 AM				447		447			447	
06:00 AM				**1027**		**1027**			**1027**	
07:00 AM				885		885			885	
08:00 AM				664		664			664	
09:00 AM				642		642			642	
10:00 AM			706			706			706	
11:00 AM			**723**			723			723	
12:00 PM			714			714			714	
01:00 PM			686			686			686	
02:00 PM			887			887			887	
03:00 PM			1014			1014			1014	
04:00 PM			**1123**			**1123**			**1123**	
05:00 PM			830			830			830	
06:00 PM			565			565			565	
07:00 PM			427			427			427	
08:00 PM			257			257			257	
09:00 PM			147			147			147	
10:00 PM			84			84			84	
11:00 PM			43			43			43	
Day Total			8206	4001		12207			12207	
% Weekday Average			67.2%	32.8%						
% Week Average			67.2%	32.8%		100%				
AM Peak Volume			11:00 AM 723	6:00 AM 1027		6:00 AM 1027			6:00 AM 1027	
PM Peak Volume			4:00 PM 1123	12:00 PM		4:00 PM 1123			4:00 PM 1123	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: W Broadway St E of Flynn Ln
QC JOB #: 15183147
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	46	11	1	2	0	0	0	2	0	0	0	0	0	62
01:00 AM	0	35	10	5	7	0	0	0	3	0	0	0	0	0	60
02:00 AM	1	58	21	1	14	0	0	0	2	2	0	0	0	0	99
03:00 AM	0	114	44	3	16	1	0	6	5	1	0	0	0	0	190
04:00 AM	3	185	94	5	34	1	0	3	7	2	0	0	**1**	0	335
05:00 AM	2	307	144	6	101	1	0	7	7	2	3	1	1	0	582
06:00 AM	5	**597**	282	11	161	3	**3**	28	10	2	8	1	0	0	**1111**
07:00 AM	2	471	266	10	168	7	1	26	13	**5**	5	0	1	0	975
08:00 AM	5	377	224	**16**	158	10	0	21	12	1	8	0	1	0	833
09:00 AM	2	402	242	11	142	7	1	34	11	5	5	0	0	0	862
10:00 AM	4	464	**298**	14	**174**	**11**	3	**38**	**15**	2	5	0	1	0	1029
11:00 AM	**6**	593	284	8	159	2	1	31	15	1	**9**	**2**	0	0	1111
12:00 PM	9	628	316	7	**191**	0	**2**	**33**	**14**	2	5	**1**	1	0	1209
01:00 PM	8	566	285	10	158	**10**	2	33	10	1	3	0	**2**	0	1088
02:00 PM	**11**	636	285	**20**	171	1	1	22	5	1	3	0	0	0	1156
03:00 PM	6	844	**366**	11	178	1	0	32	5	0	**13**	0	1	0	**1457**
04:00 PM	7	**890**	319	11	168	0	1	15	1	**3**	7	0	0	0	1422
05:00 PM	2	457	201	8	94	2	0	6	0	1	2	0	0	0	773
06:00 PM	4	340	128	4	60	1	0	7	2	2	1	0	1	0	550
07:00 PM	0	235	84	2	40	2	0	5	4	1	1	0	0	0	374
08:00 PM	1	185	63	0	12	0	0	2	2	0	1	0	0	0	266
09:00 PM	0	128	48	4	13	1	0	0	1	0	0	0	0	0	195
10:00 PM	1	54	30	0	7	0	0	0	1	0	0	0	0	0	93
11:00 PM	0	72	31	0	8	0	0	0	1	1	0	0	0	0	113
Day Total	79	8684	4076	168	2236	61	15	349	148	35	79	5	10	0	15945
Percent	0.5%	54.5%	25.6%	1.1%	14%	0.4%	0.1%	2.2%	0.9%	0.2%	0.5%	0%	0.1%	0%	
ADT 15945															
AM Peak	11:00 AM	6:00 AM	10:00 AM	8:00 AM	10:00 AM	10:00 AM	6:00 AM	10:00 AM	10:00 AM	7:00 AM	11:00 AM	11:00 AM	4:00 AM	12:00 AM	6:00 AM
Volume	6	597	298	16	174	11	3	38	15	5	9	2	1	0	1111
PM Peak	2:00 PM	4:00 PM	3:00 PM	2:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	3:00 PM	12:00 PM	1:00 PM	12:00 PM	3:00 PM
Volume	11	890	366	20	191	10	2	33	14	3	13	1	2	0	1457

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: W Broadway St E of Flynn Ln
SPECIFIC LOCATION:
CITY/STATE: Missoula, MT

QC JOB #: 15183147
DIRECTION: EB, WB
DATE: Mar 3 2020

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	79	8684	4076	168	2236	61	15	349	148	35	79	5	10	0	15945
Percent	0.5%	54.5%	25.6%	1.1%	14%	0.4%	0.1%	2.2%	0.9%	0.2%	0.5%	0%	0.1%	0%	
ADT 15945															

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: W Broadway St E of Flynn Ln
QC JOB #: 15183147
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Missoula, MT
DATE: Mar 3 2020 - Mar 3 2020

Start Time	Mon	Tue 3 Mar 20	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		62				62			62	
01:00 AM		60				60			60	
02:00 AM		99				99			99	
03:00 AM		190				190			190	
04:00 AM		335				335			335	
05:00 AM		582				582			582	
06:00 AM		**1111**				**1111**			**1111**	
07:00 AM		975				975			975	
08:00 AM		833				833			833	
09:00 AM		862				862			862	
10:00 AM		1029				1029			1029	
11:00 AM		1111				1111			1111	
12:00 PM		1209				1209			1209	
01:00 PM		1088				1088			1088	
02:00 PM		1156				1156			1156	
03:00 PM		**1457**				**1457**			**1457**	
04:00 PM		1422				1422			1422	
05:00 PM		773				773			773	
06:00 PM		550				550			550	
07:00 PM		374				374			374	
08:00 PM		266				266			266	
09:00 PM		195				195			195	
10:00 PM		93				93			93	
11:00 PM		113				113			113	
Day Total		15945				15945			15945	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		6:00 AM 1111				6:00 AM 1111			6:00 AM 1111	
PM Peak Volume		3:00 PM 1457				3:00 PM 1457			3:00 PM 1457	

Comments:

Report generated on 3/16/2020 1:15 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Appendix C – Signal Timing Worksheets

SEPAC ECOM All Data

3/19/2020
11:55:24AM

Intersection Name: **Broadway & NB Reserve (R1East)** Intersection Alias: **BdwR1-int051**

Access Data

1 :**1200 Baud**
3 :

Access Code: **9999** Channel: Address: **1**

Revision: **3.53** IP Address: **192.168.18.28**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	0-None	3-Yel	0-None	1-Inact	1-Inact	3-Yel	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank:	**1**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	5	3.0	18	18	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	17	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	31	0	0	No	0	Yes
7	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**2**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	5	3.0	18	18	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	17	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	31	0	0	No	0	Yes
7	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**3**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	5	3.0	18	18	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	17	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	31	0	0	No	0	Yes
7	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:			**4**																
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	5	3.0	18	18	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	17	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	31	0	0	No	0	Yes
7	6	4.0	24	24	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank:			**1**															
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**2**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**3**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**4**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:3	8	Veh	0	0.0	0
Veh Det:7	4	Veh	0	0.0	0

Default Data

Pedestrian Detector

Assign Phase	Mode	Switch Phase	Extend	Delay

Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Spc Det:2	2	Veh	0	0.0	0
Spc Det:3	8	Veh	0	0.0	0
Spc Det:4	4	Veh	0	0.0	0
Spc Det:5	5	Veh	0	0.0	0
Spc Det:6	6	Veh	0	0.0	0
Spc Det:7	4	Veh	0	0.0	3
Spc Det:8	7	Veh	0	0.0	0

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:

ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 2
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stop Grn/Yel Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
2	1	3
4	1	1
5	2	6
6	2	7
7	2	8

Phase(s)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Concurrent Phases	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40

Default Data

Signal Driver Ouput

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way
Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0
Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	80
1/2	80
1/3	80
1/4	80

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	56	1=Coordinate	4	24	0=Actuated	5	10	0=Actuated	6	46	1=Coordinate
7	24	0=Actuated									

Dial 1 / **Split** 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	56	1=Coordinate	4	24	0=Actuated	5	10	0=Actuated	6	46	1=Coordinate
7	24	0=Actuated									

Dial 1 / **Split** 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	57	1=Coordinate	4	23	0=Actuated	5	10	0=Actuated	6	47	1=Coordinate
7	23	0=Actuated									

Dial 1 / **Split** 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	56	1=Coordinate	4	24	0=Actuated	5	11	0=Actuated	6	45	1=Coordinate
7	24	0=Actuated									

Traffic Plan Data

Plan: 1/2/1	Offset Time: 3	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 1/3/1	Offset Time: 20	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	11:0	1/4/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	19:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	2	6:45	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	11:0	1/2/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	15:0	1/3/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	19:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

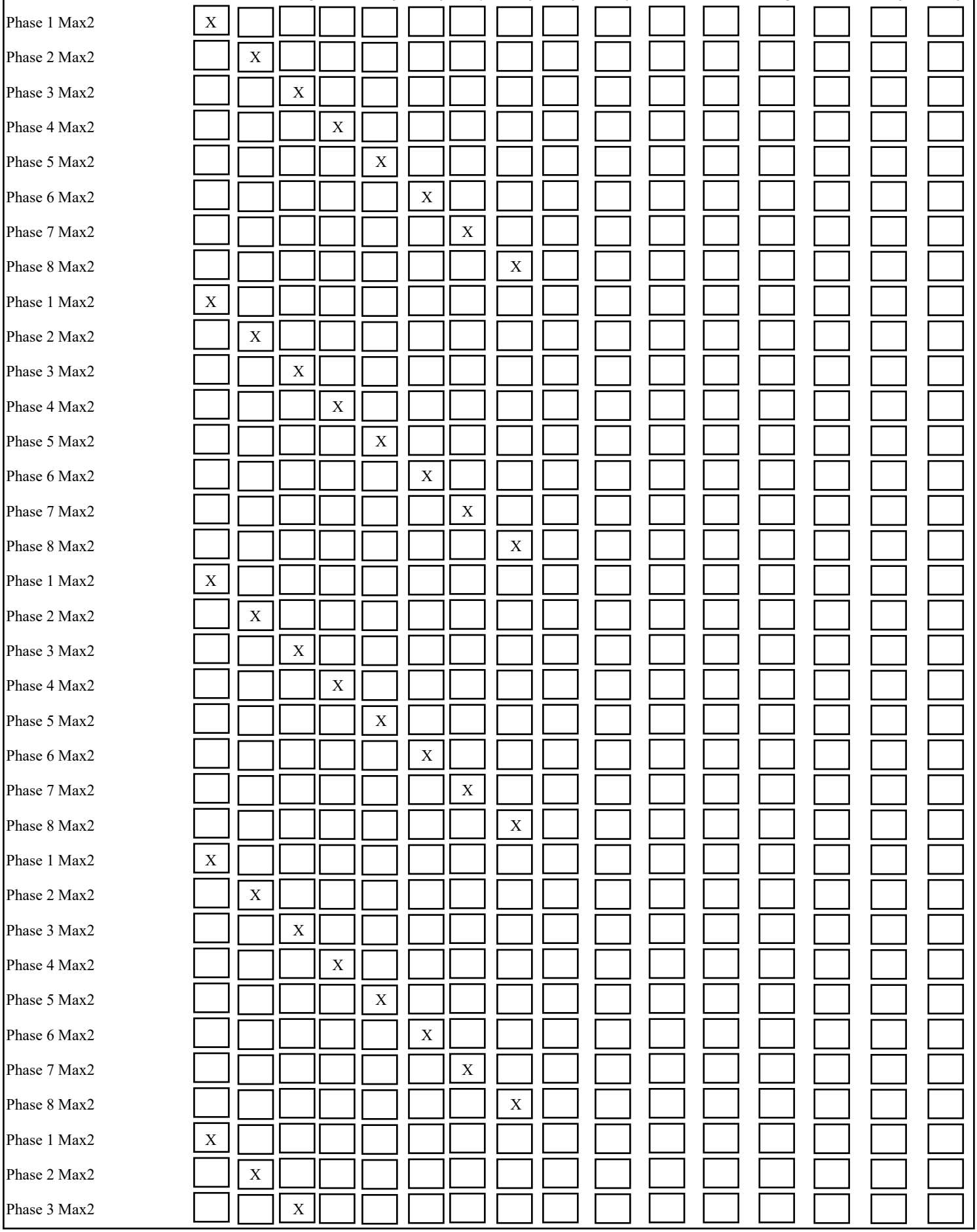
Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

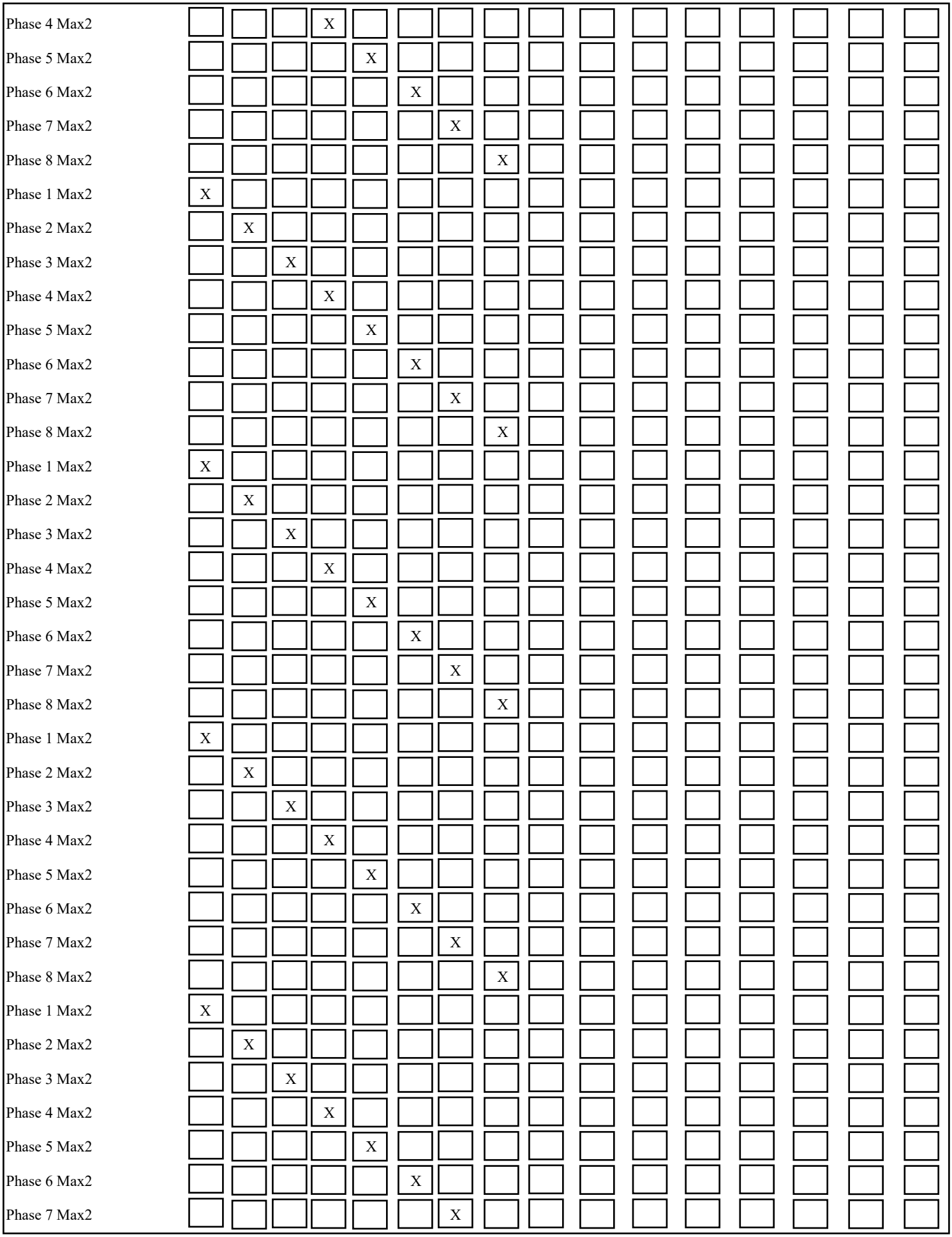
Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

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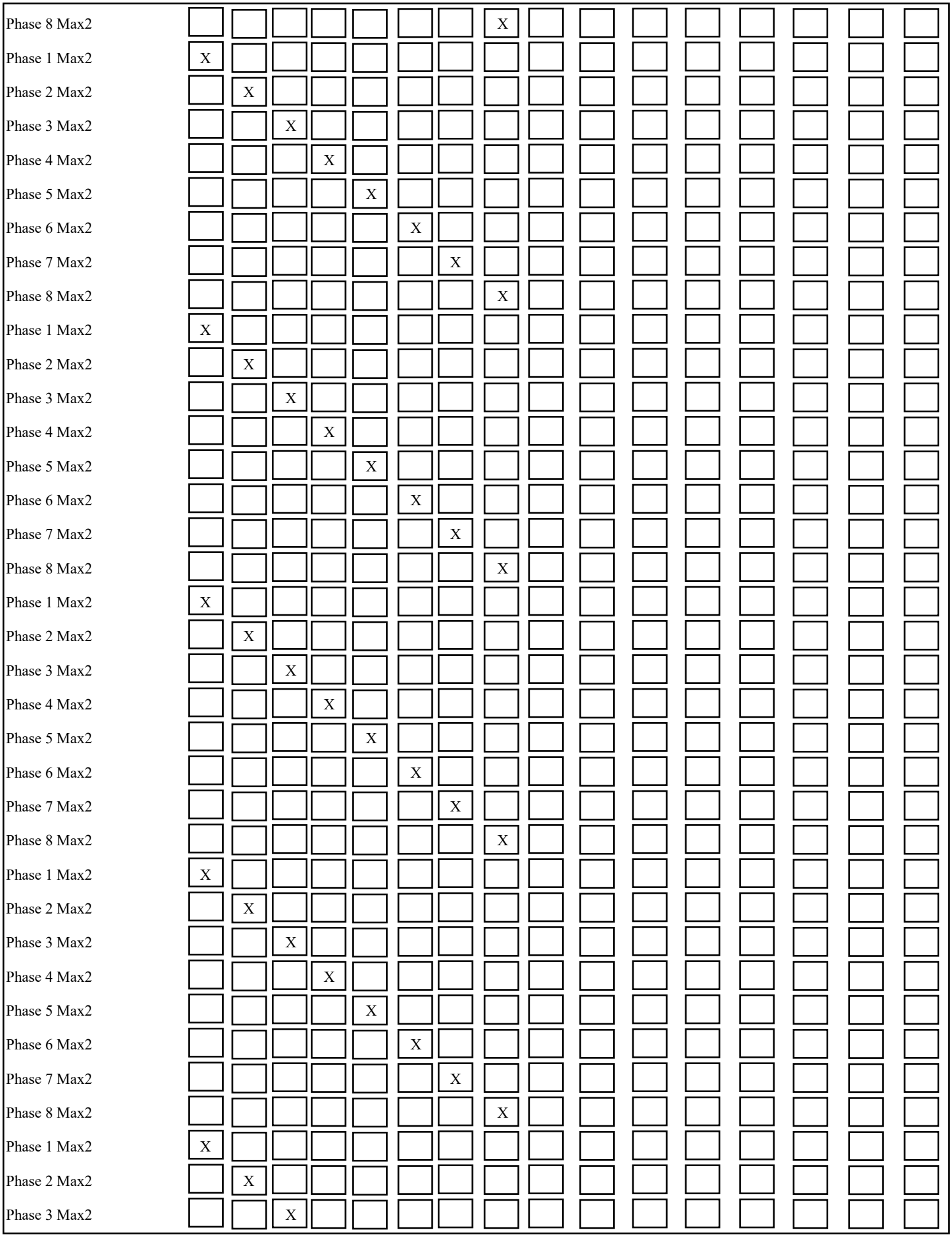
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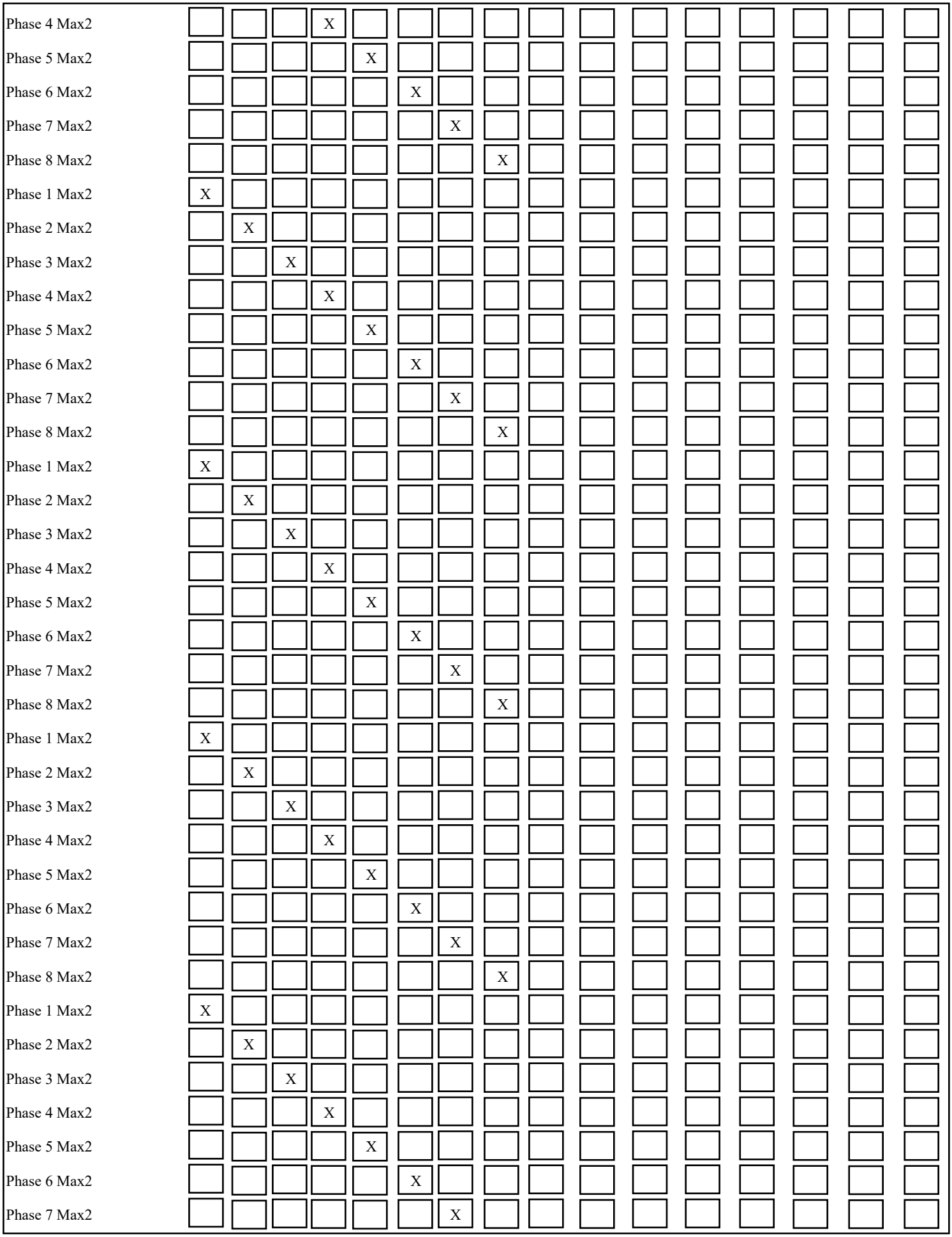
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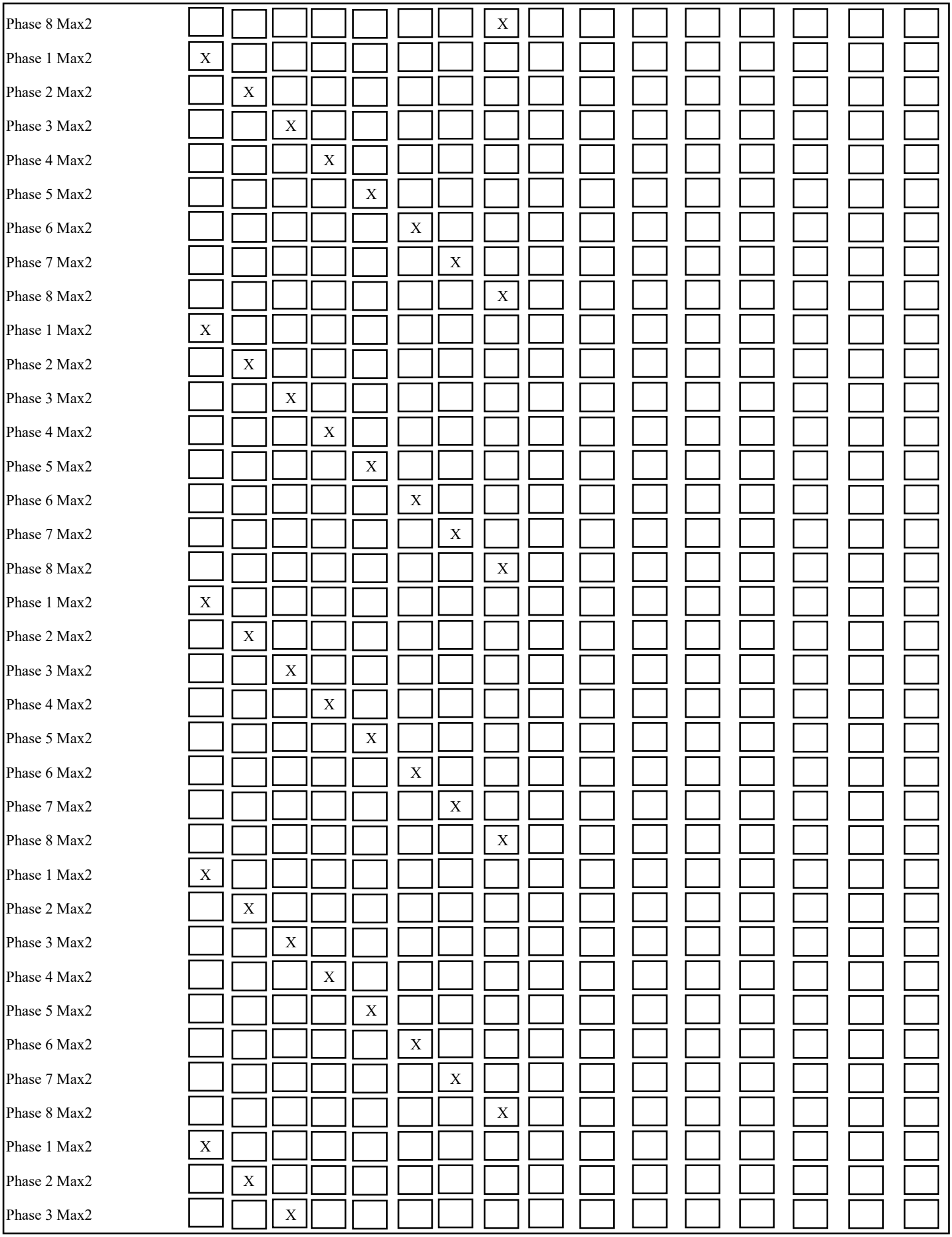
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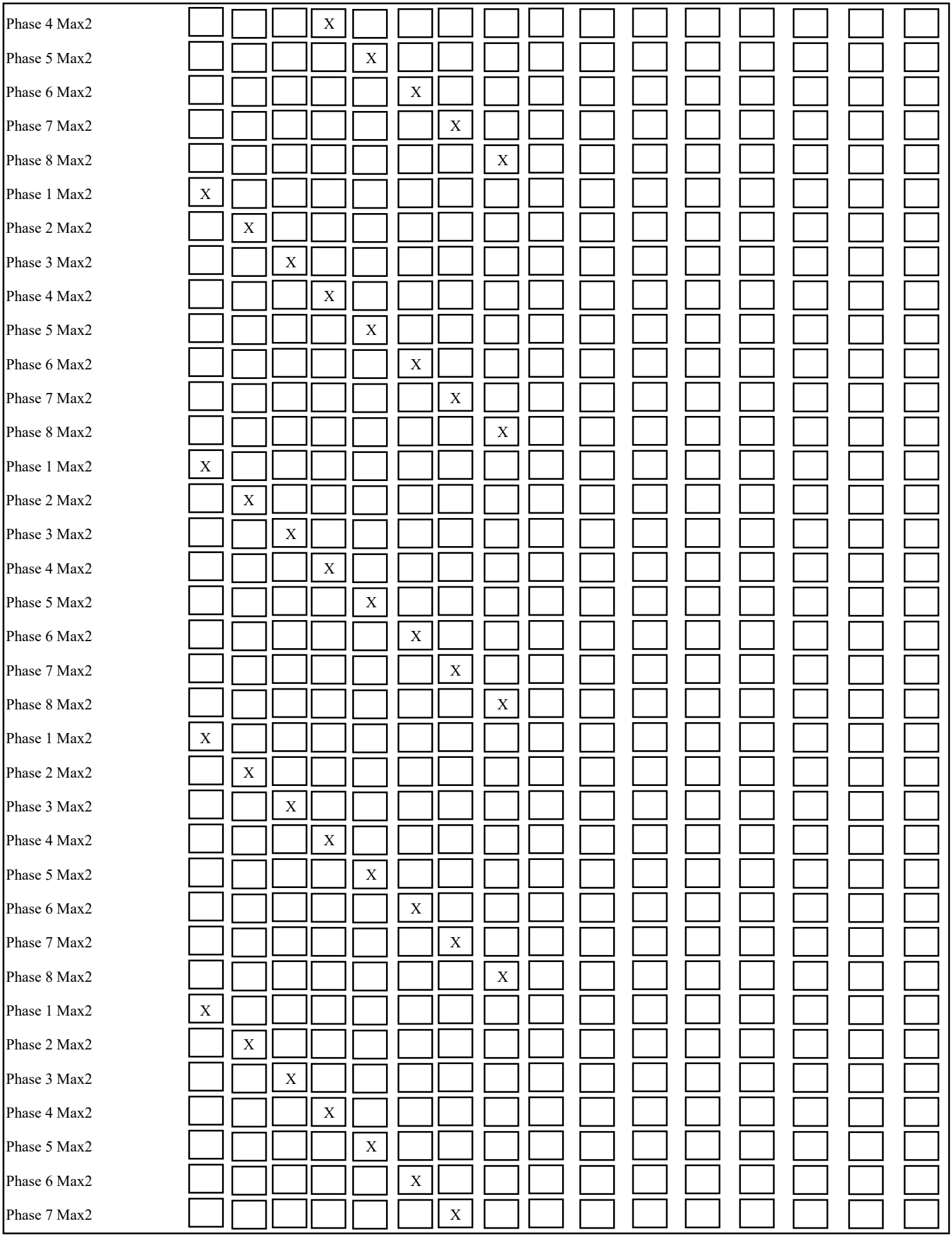
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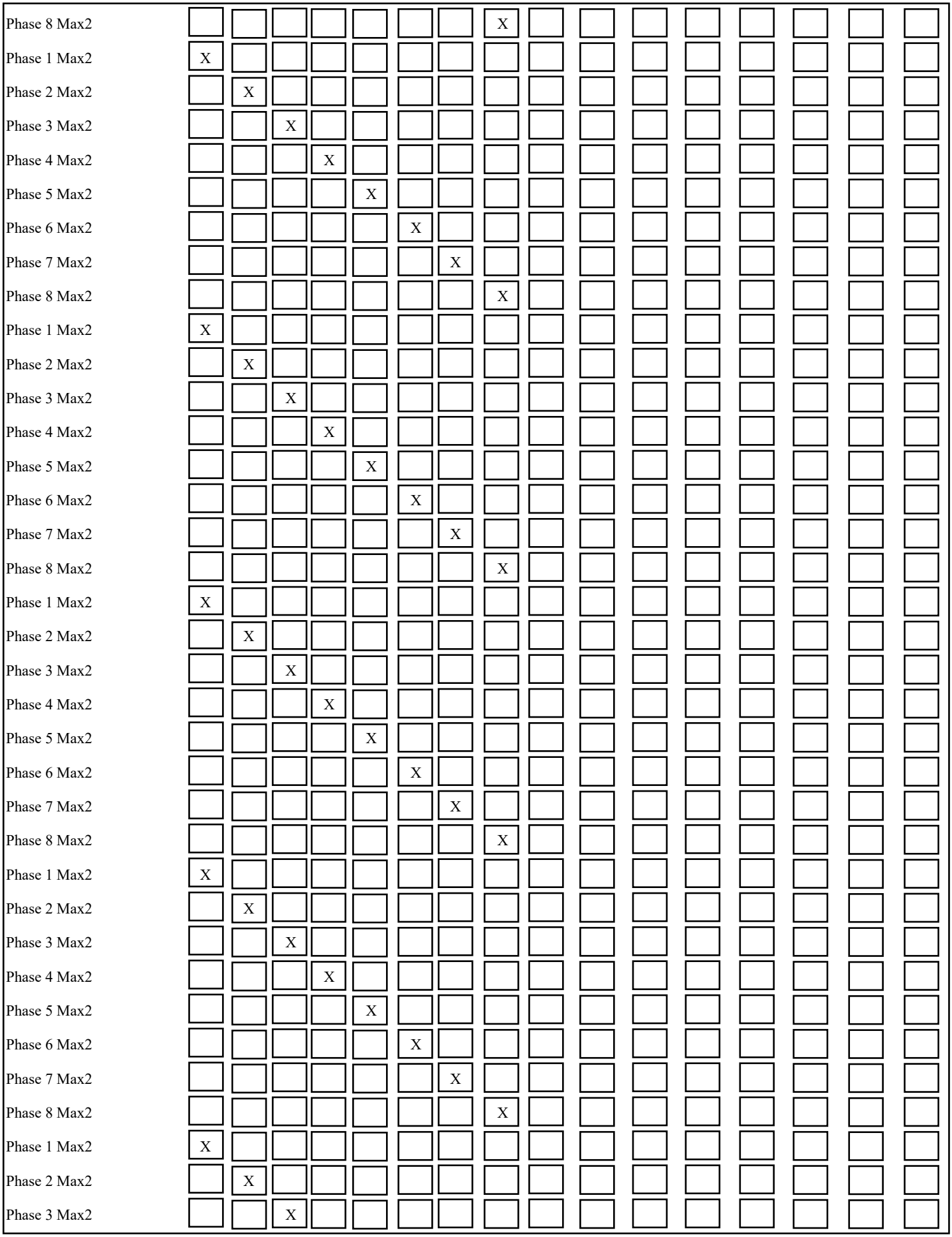
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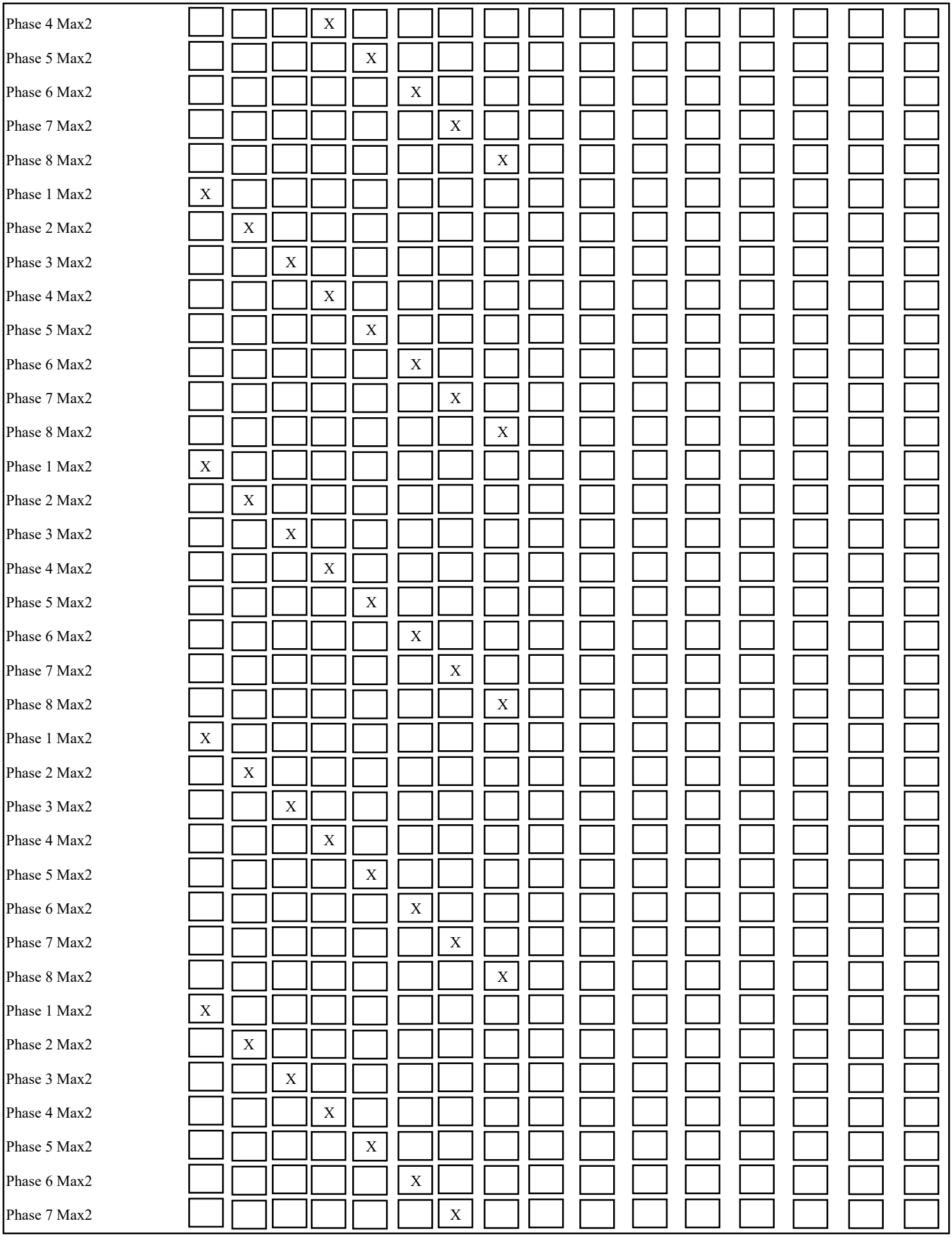
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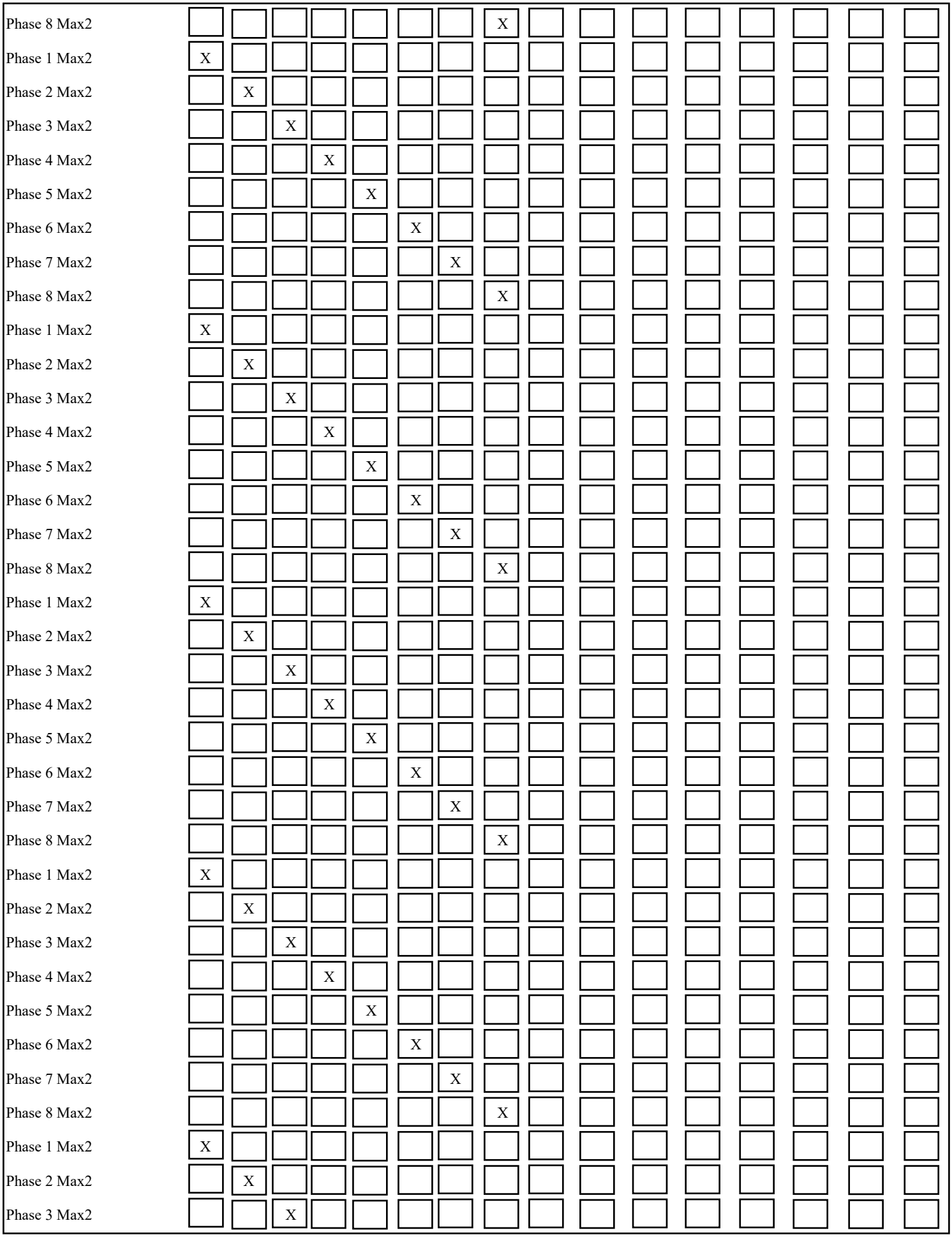
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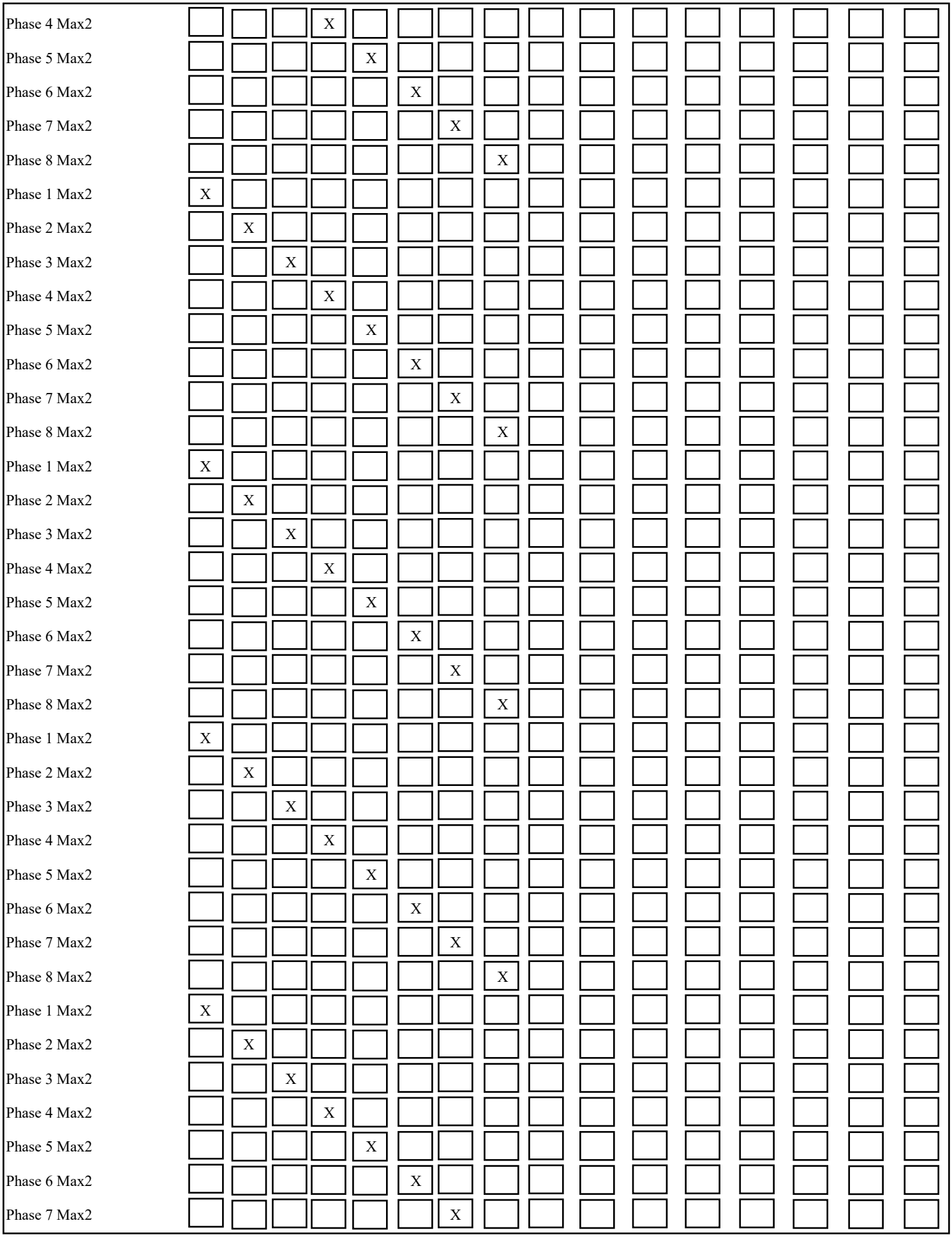
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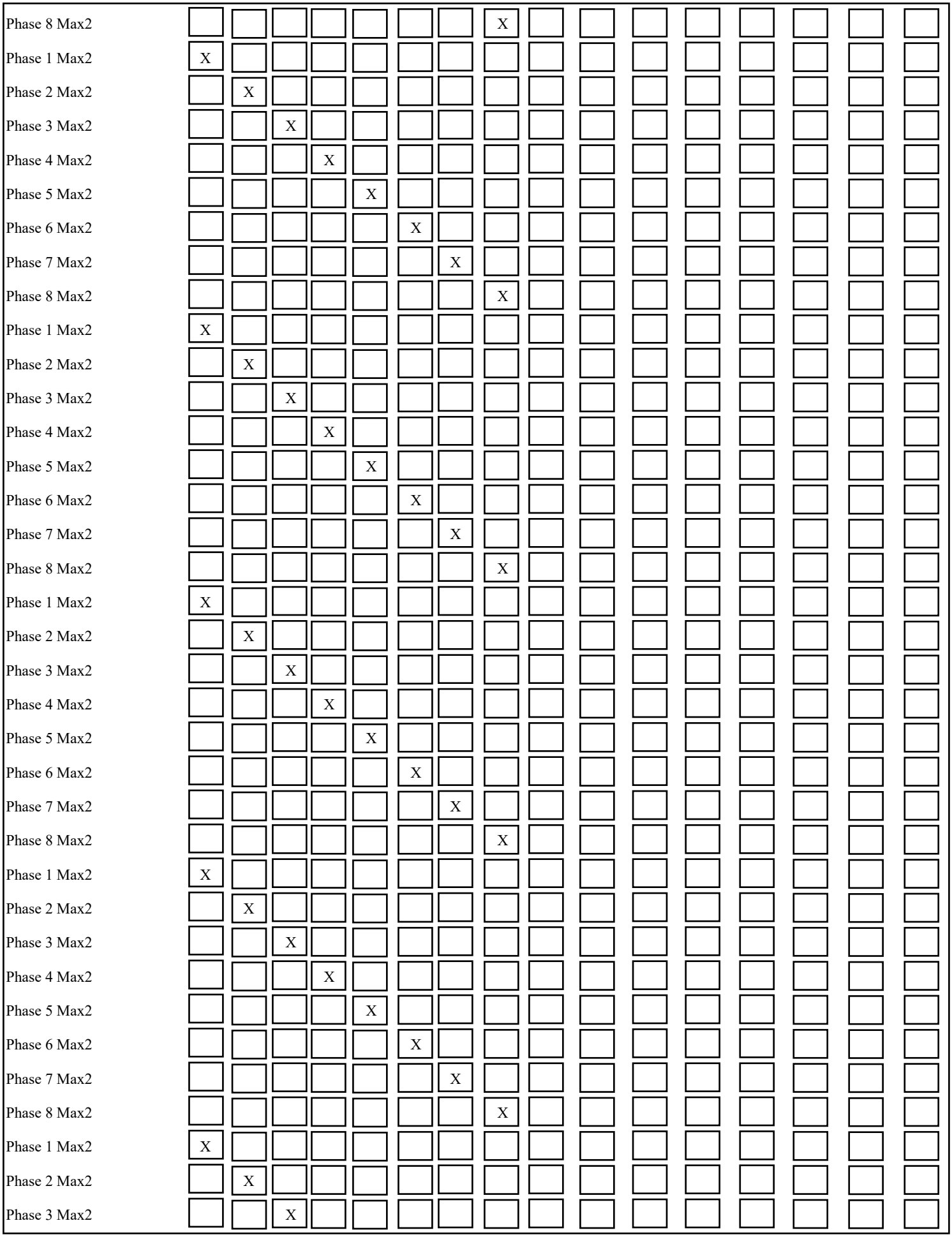
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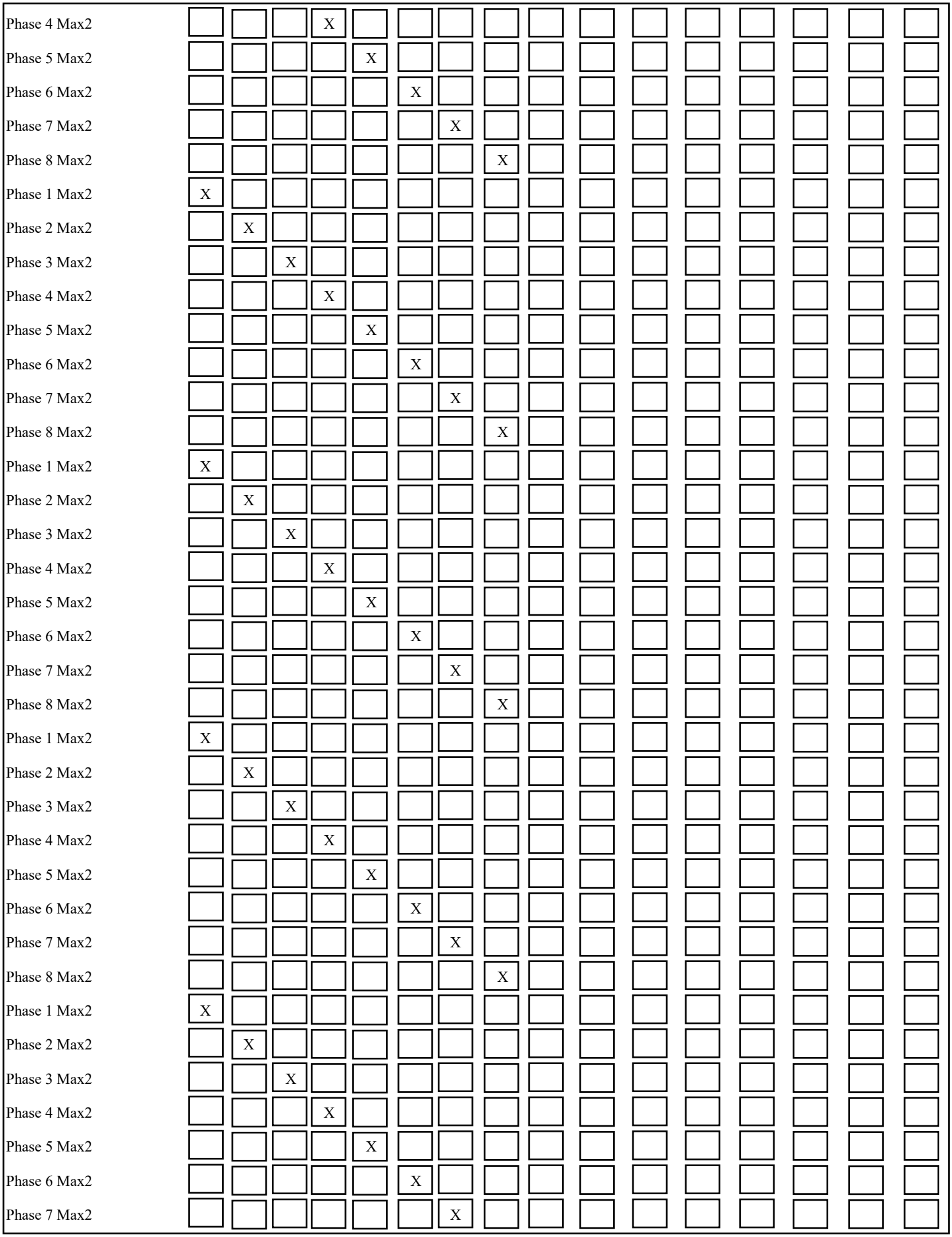
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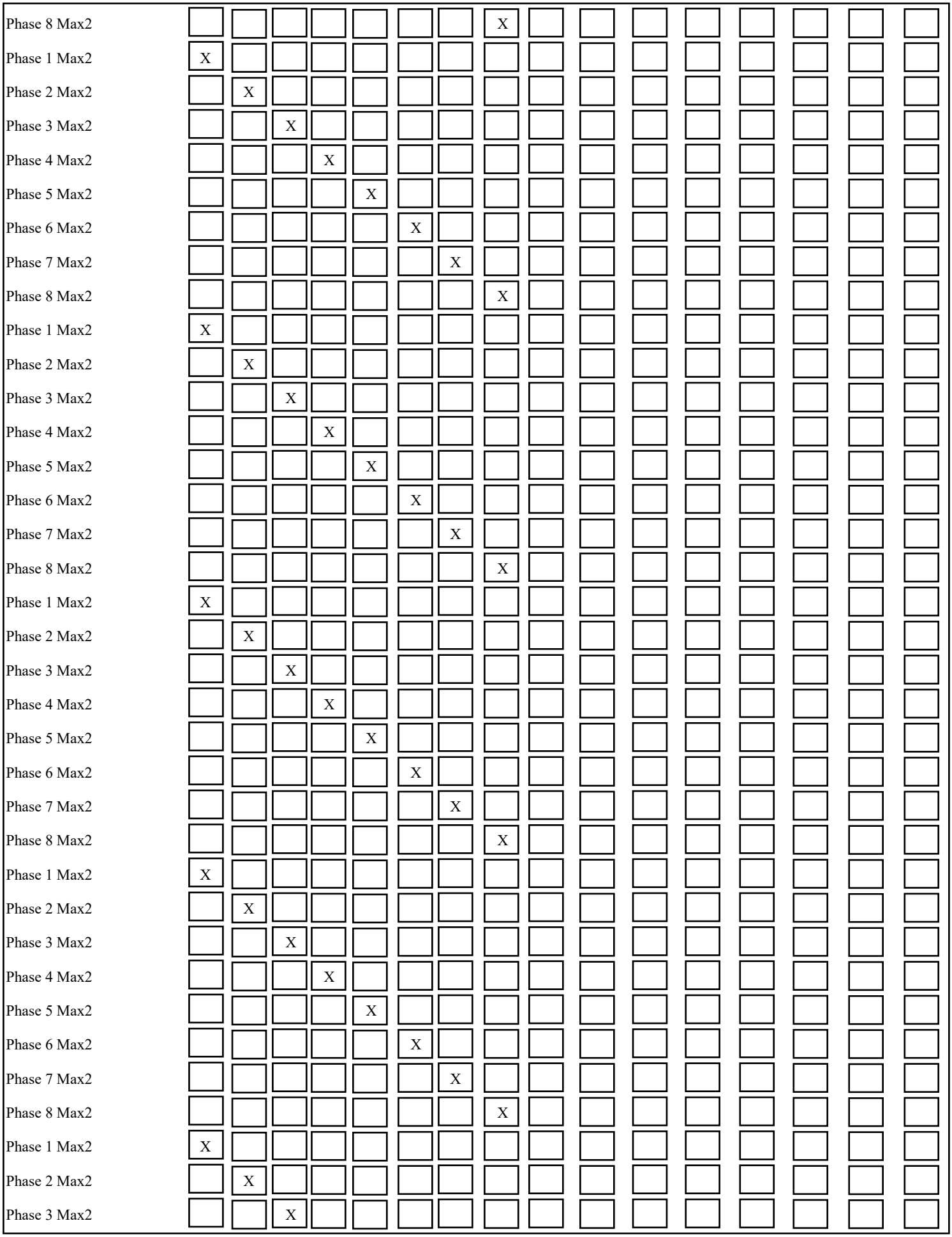
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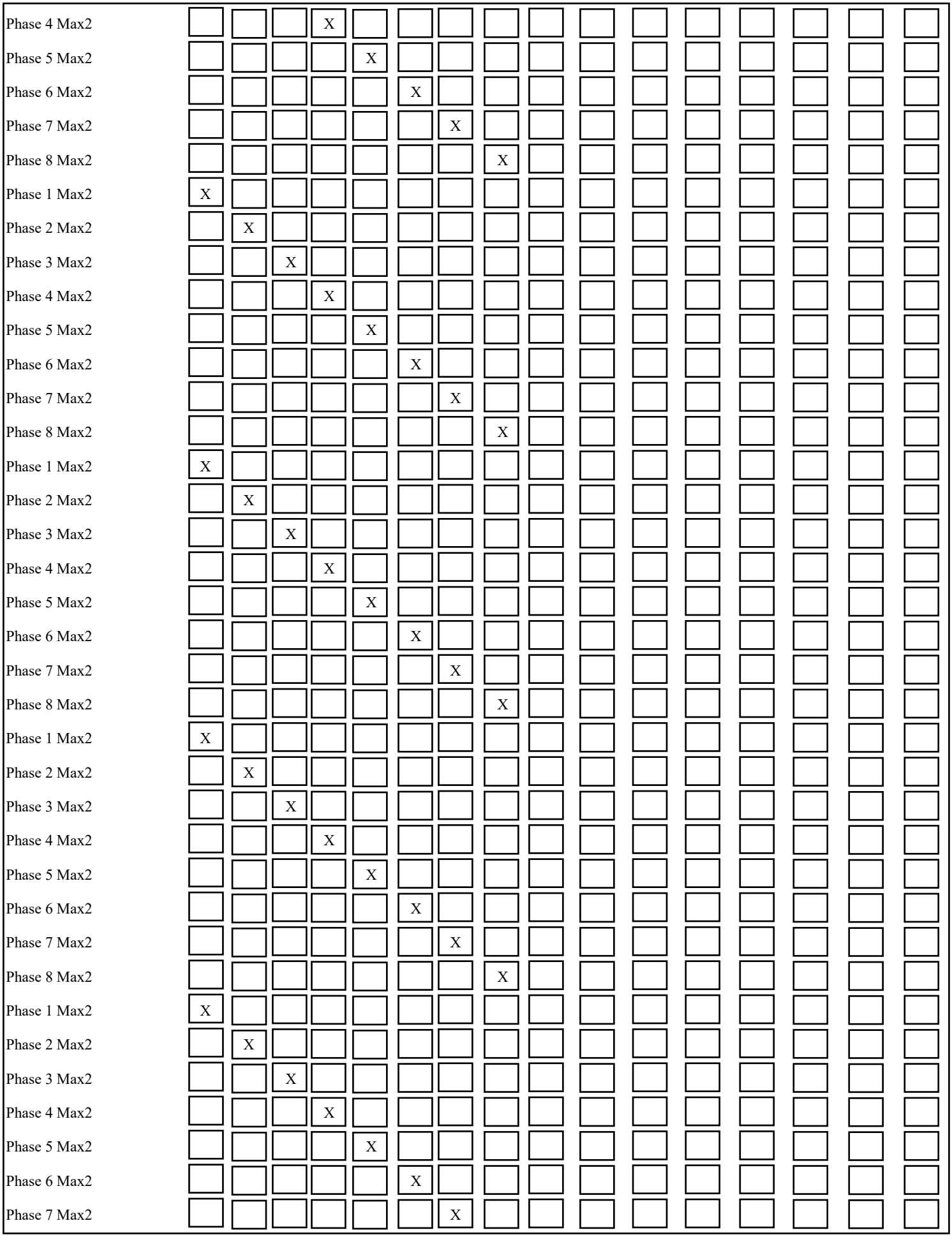
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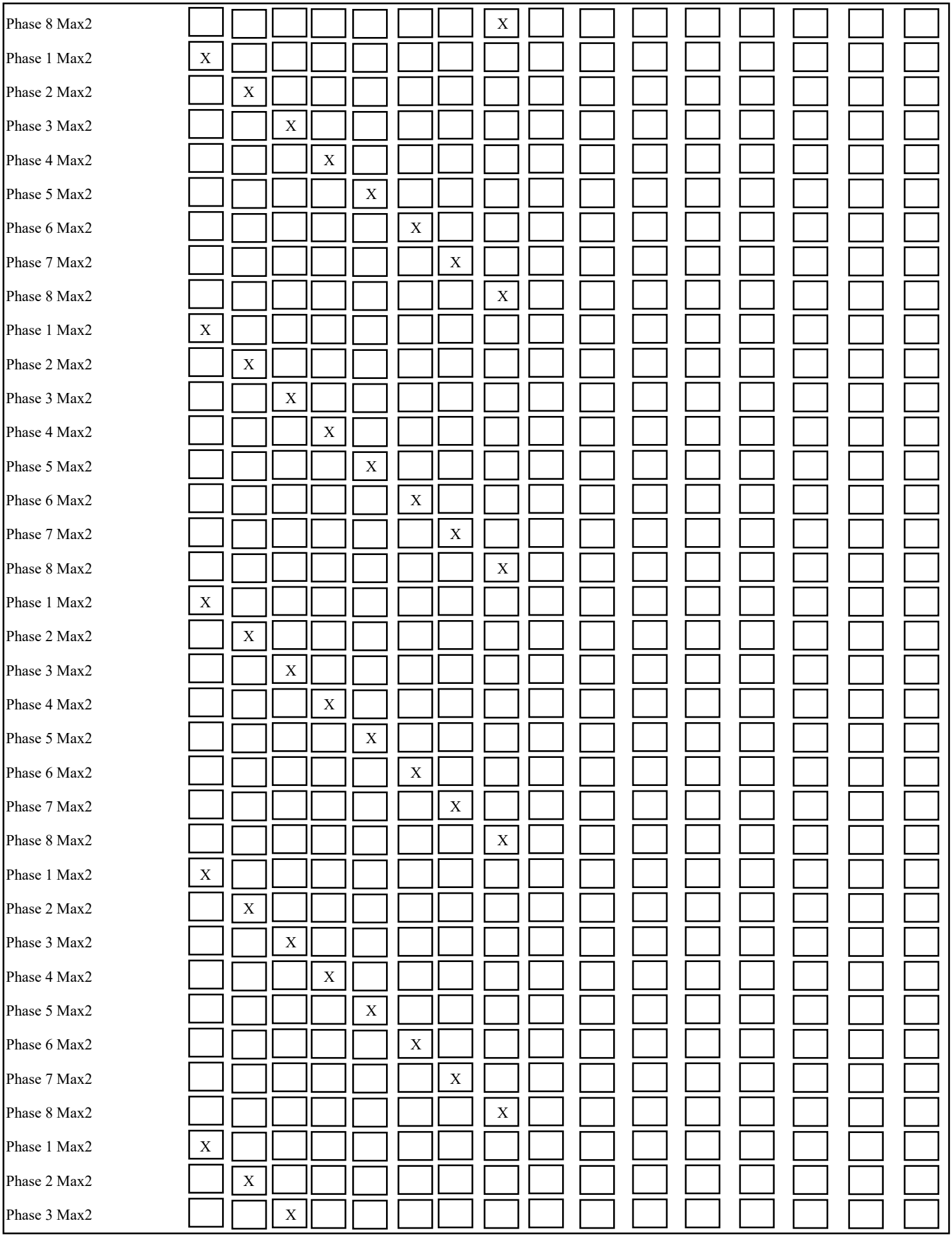
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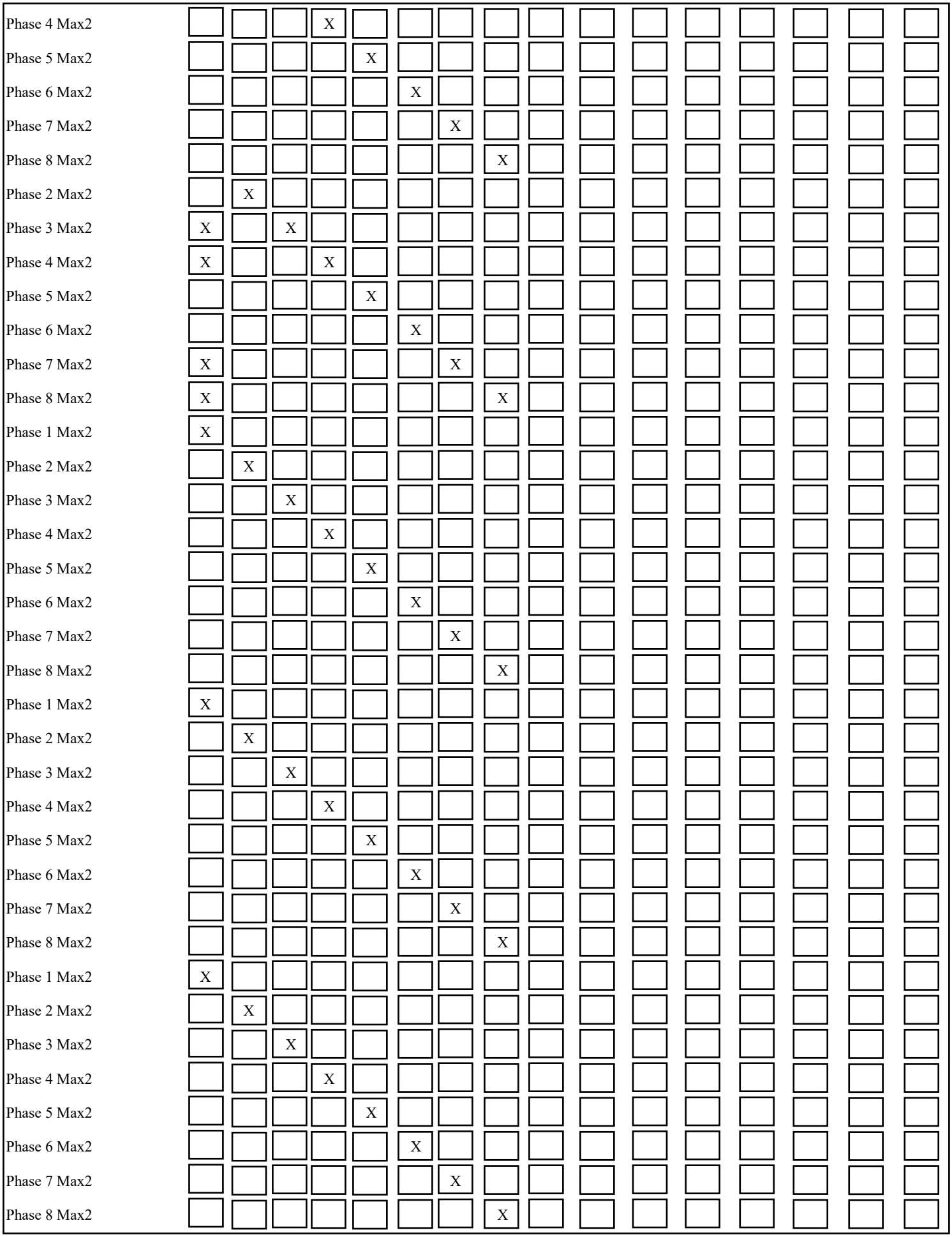
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Phase 8 Max2								X								

Phase Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
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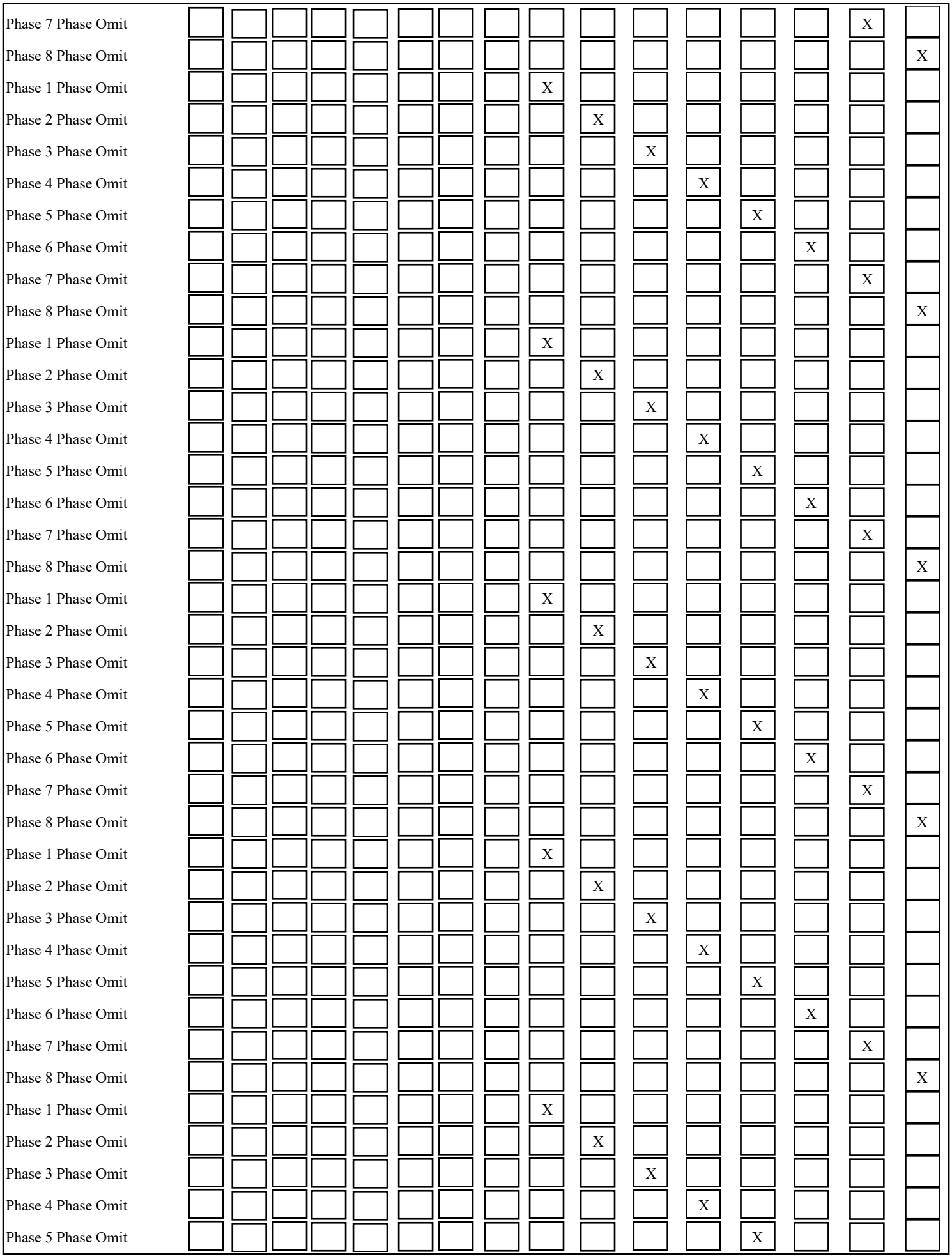
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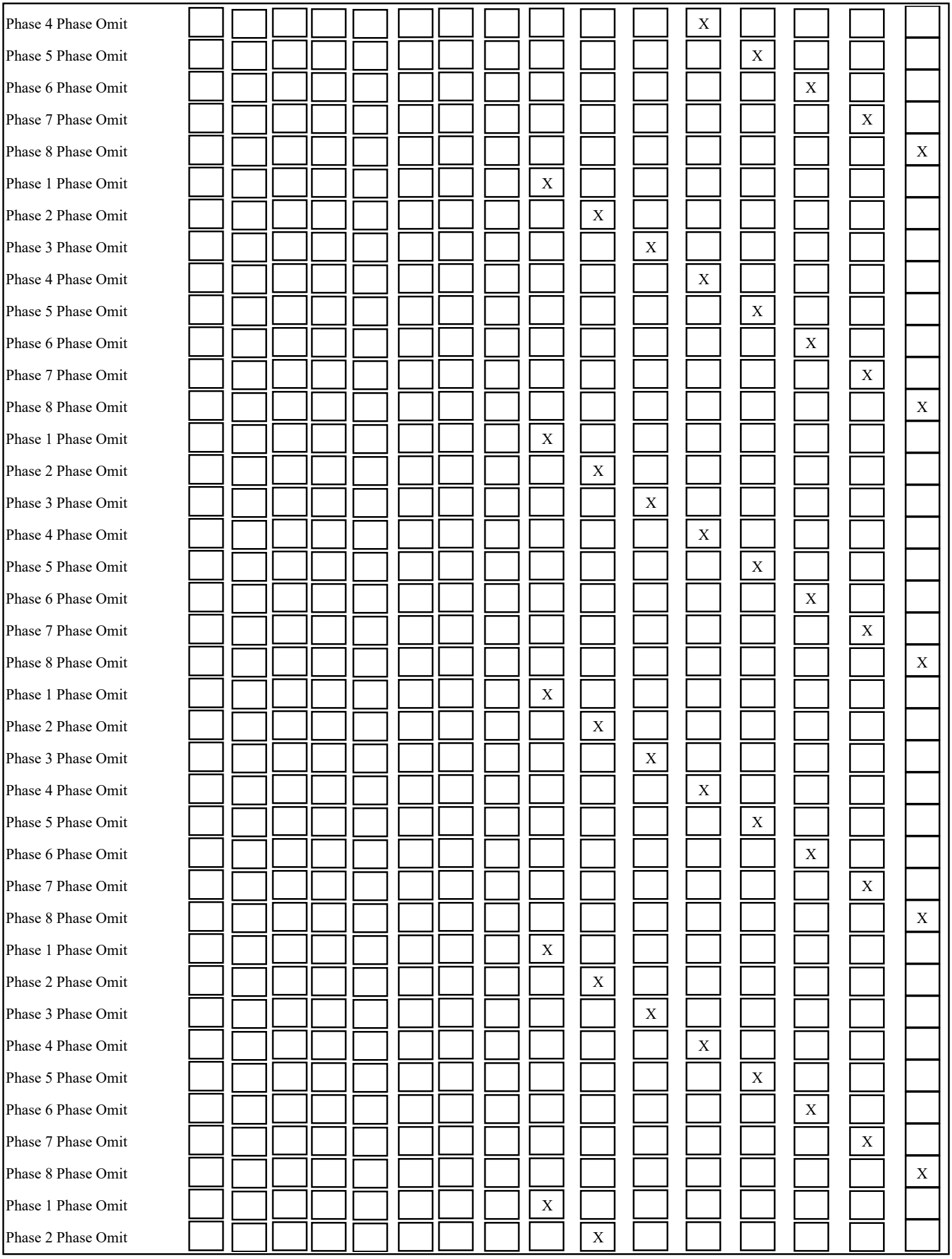
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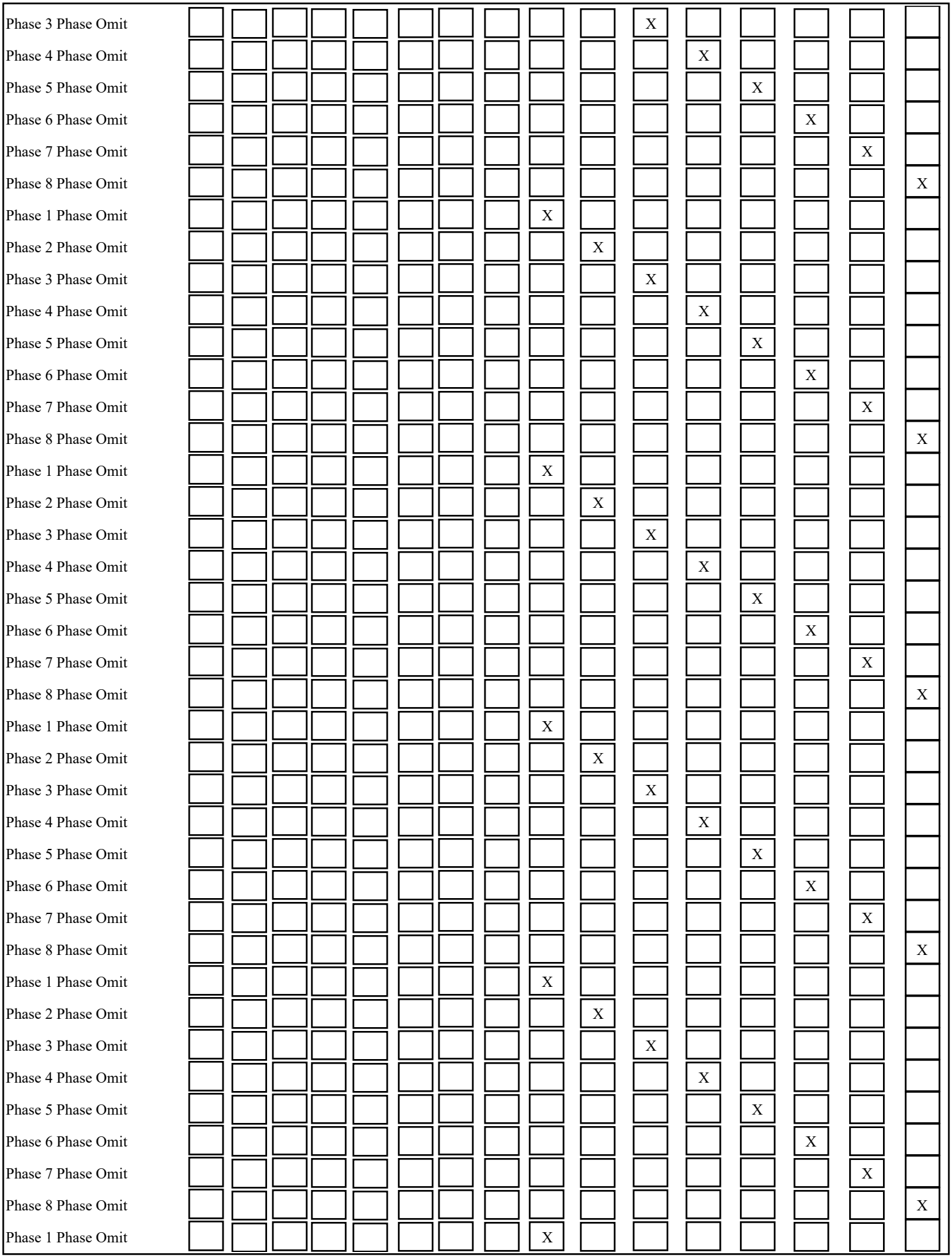
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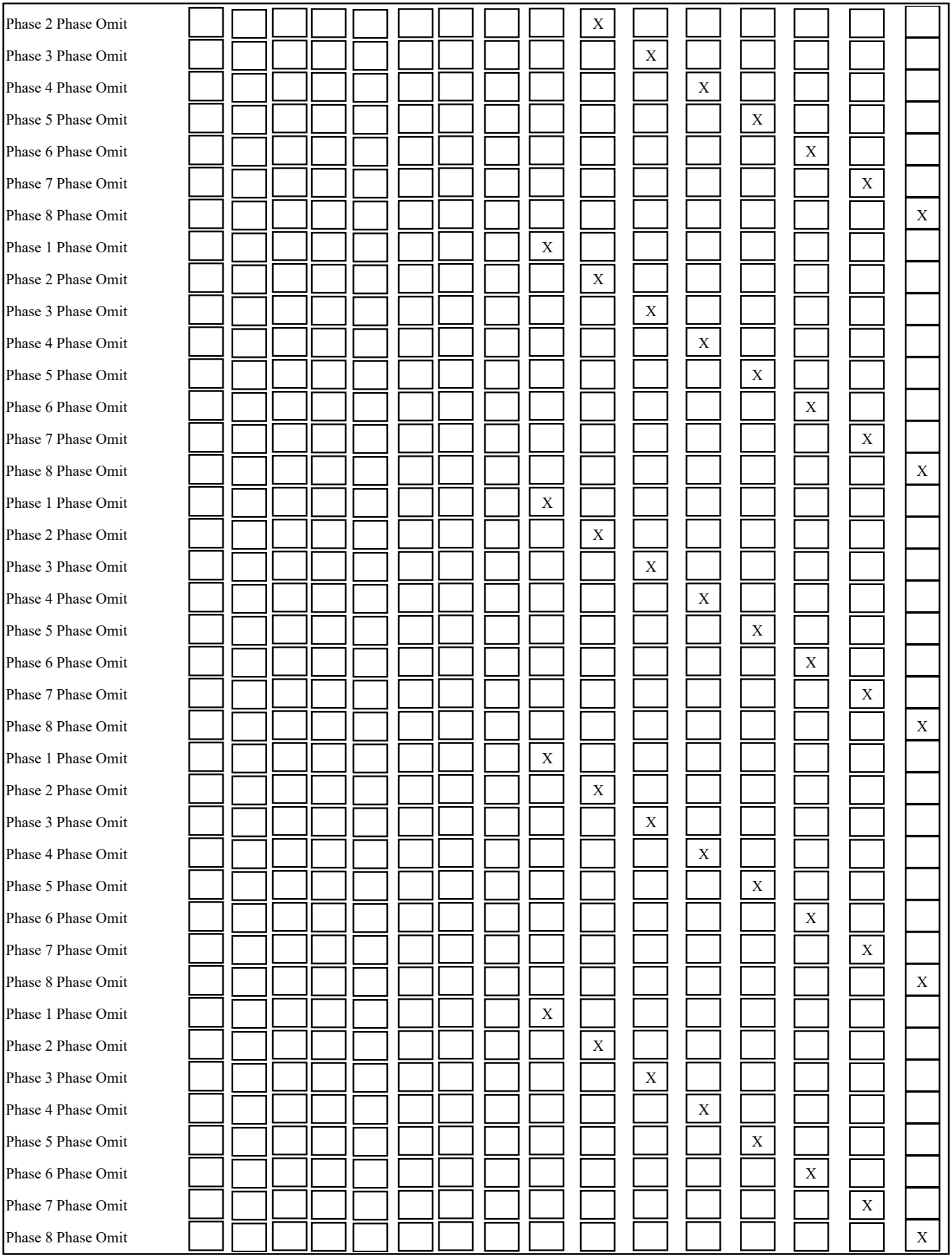
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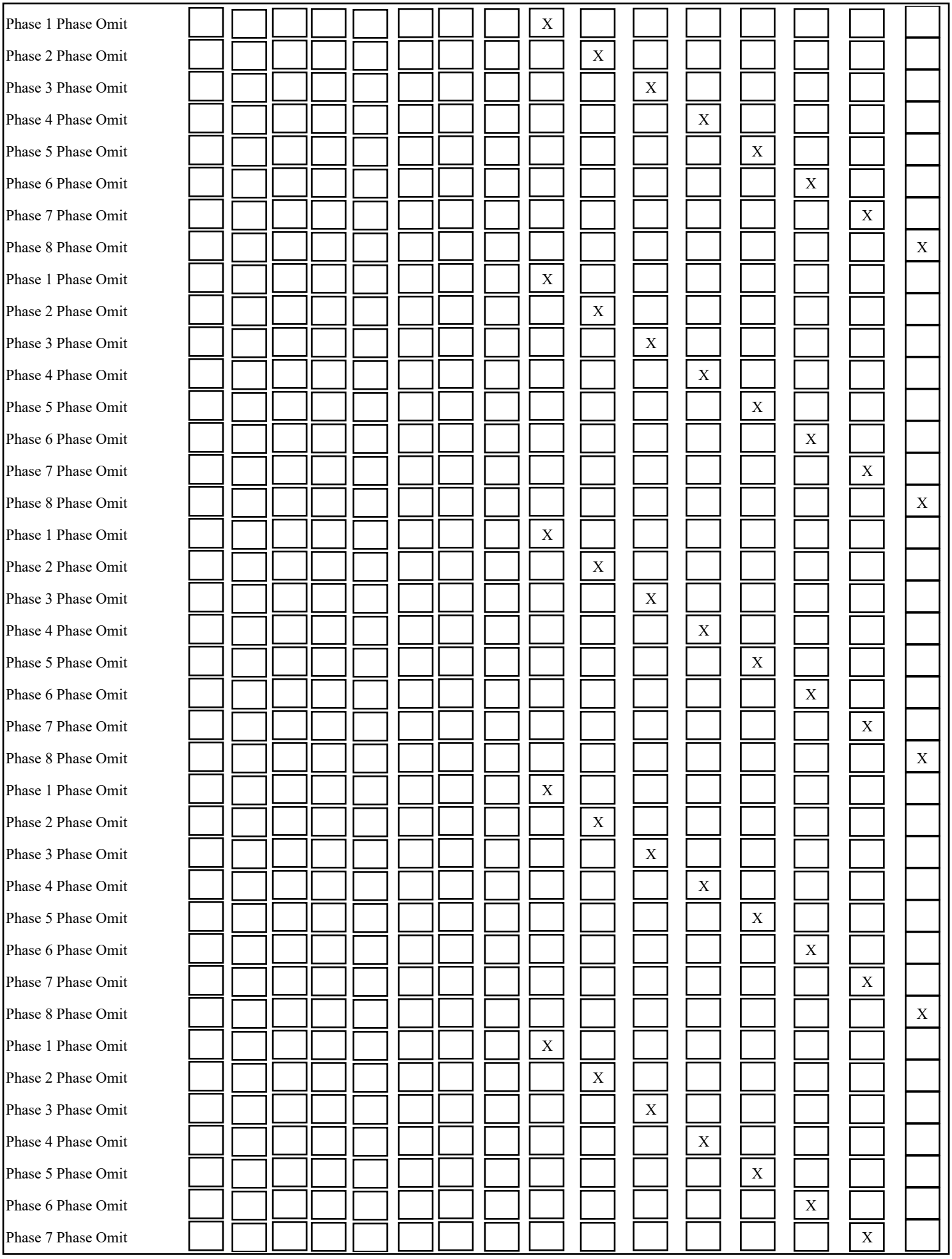
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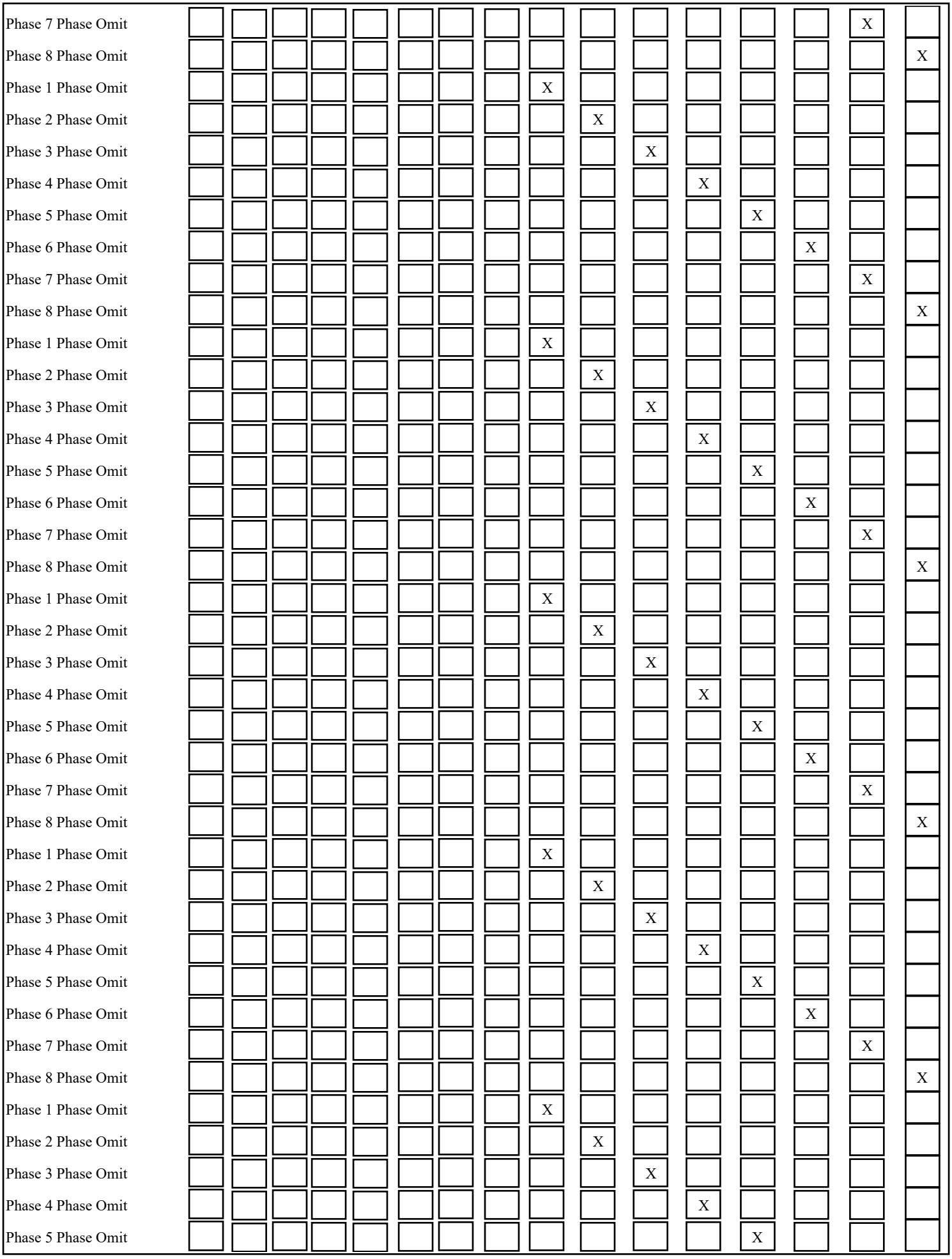
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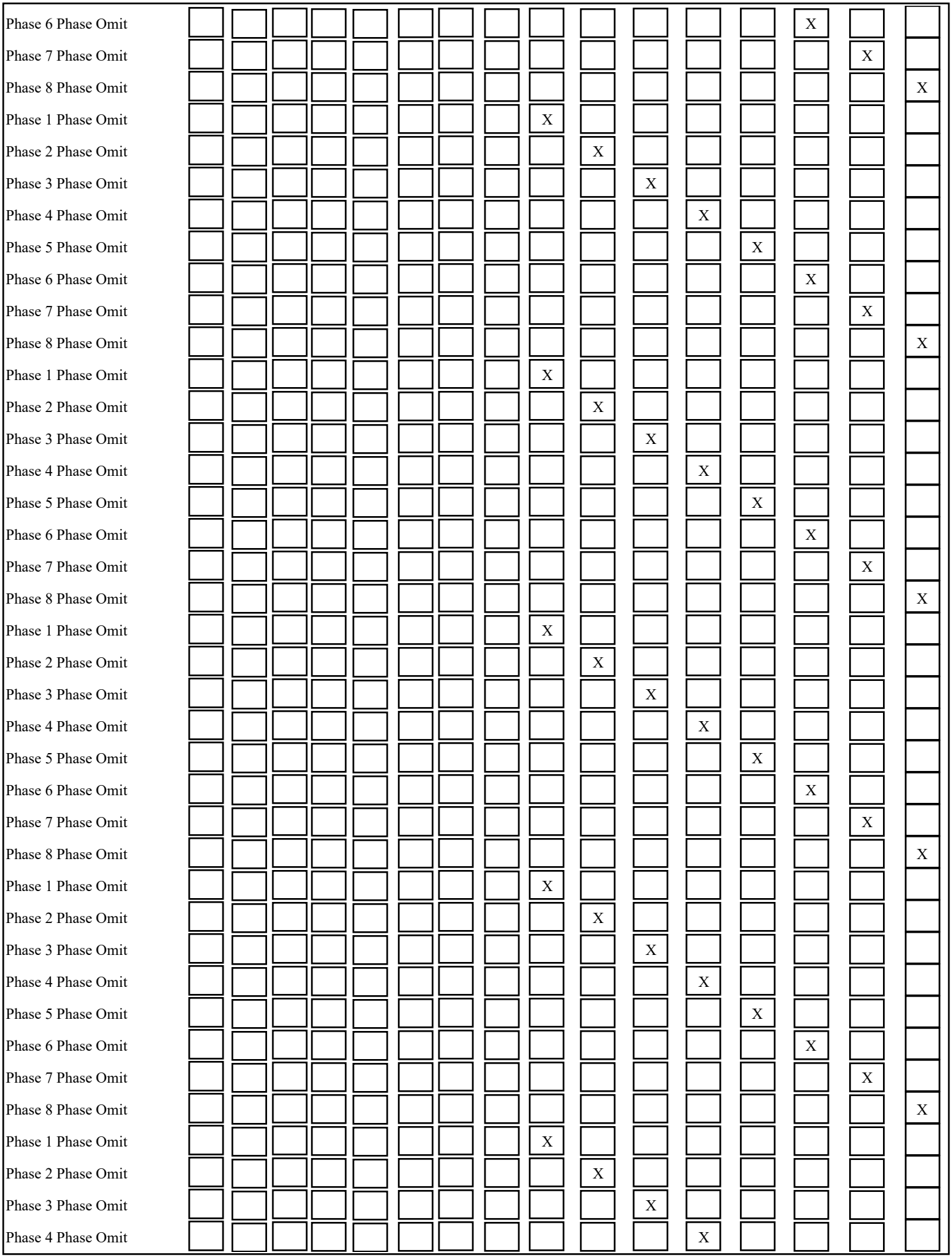
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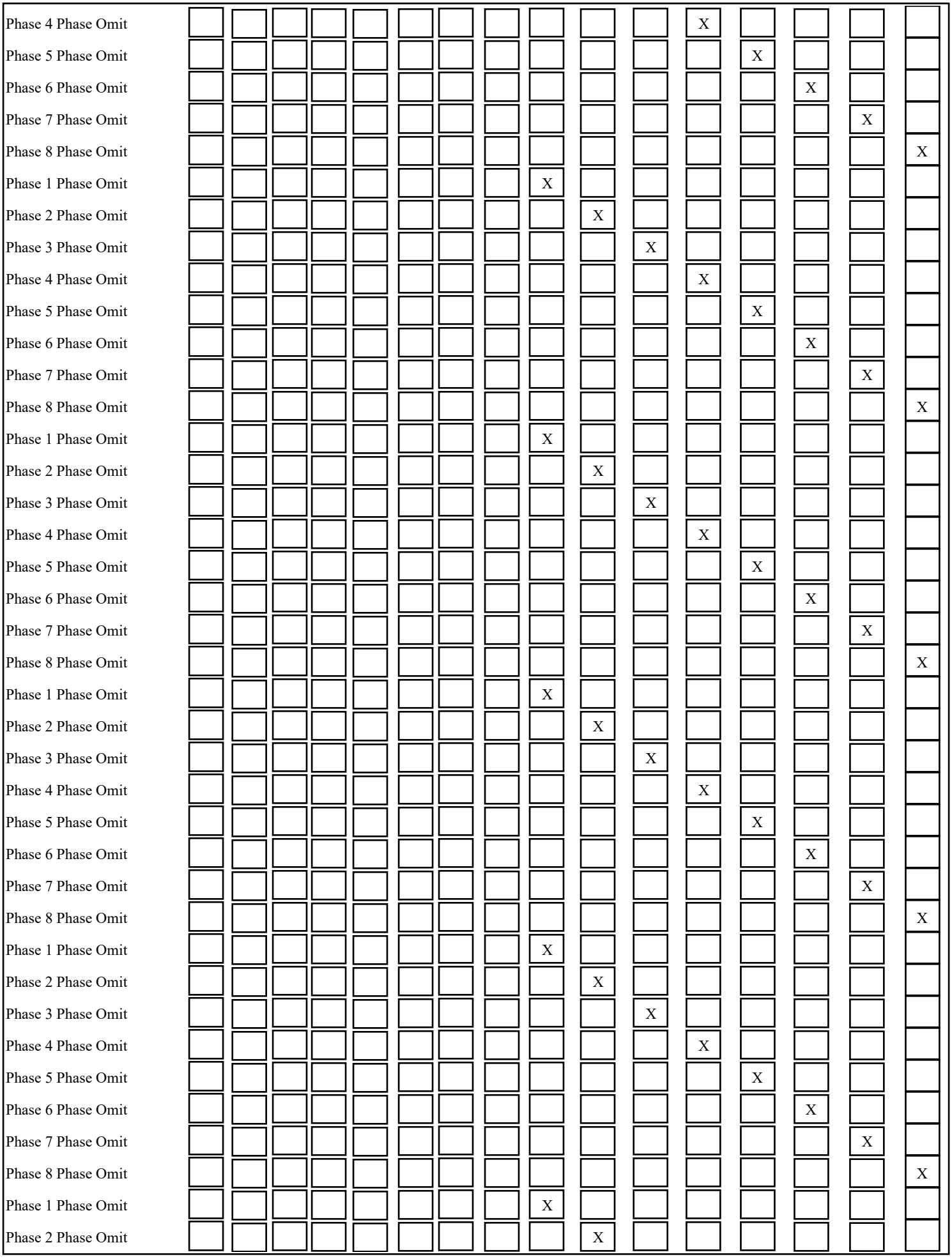
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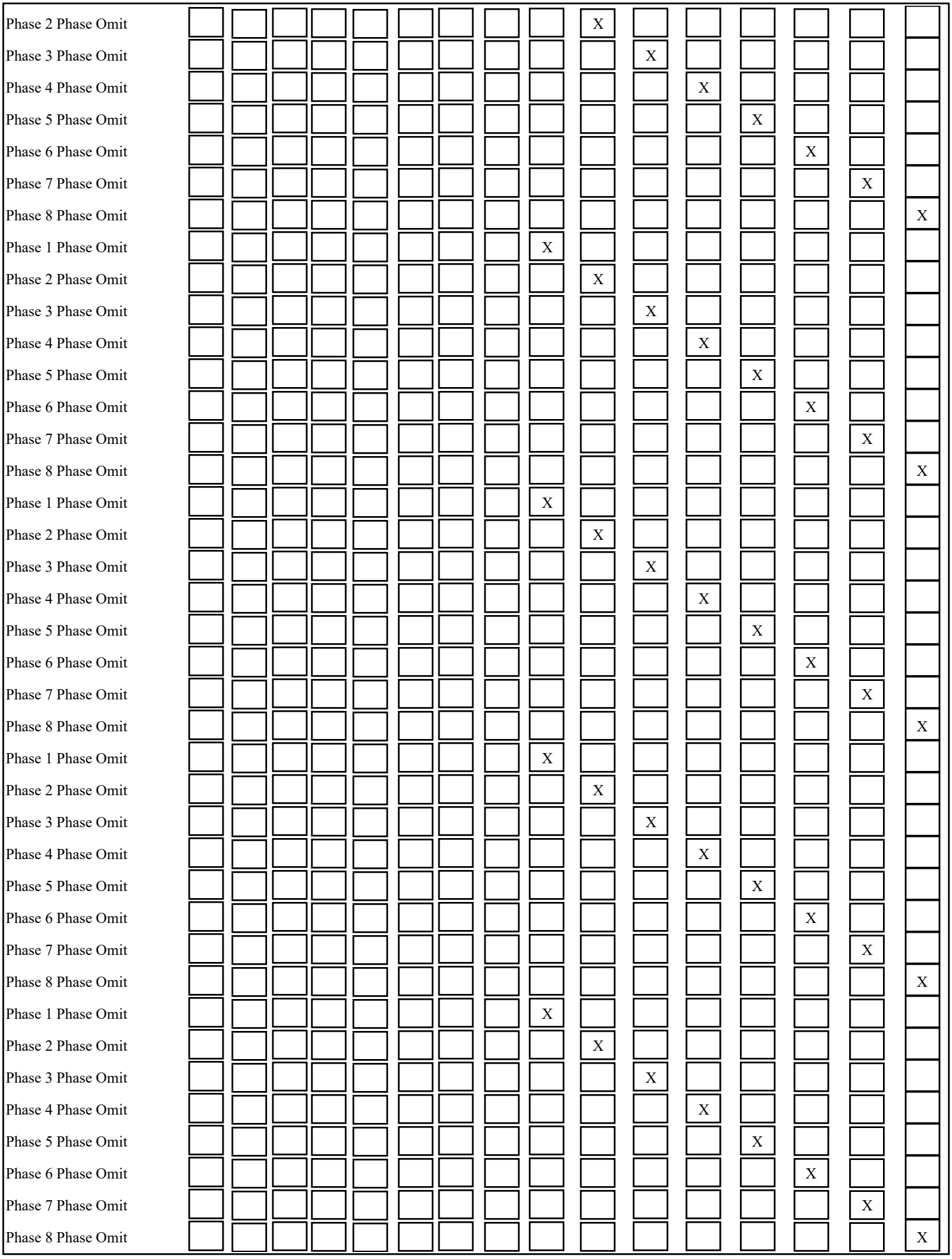
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Ped Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function Veh Det Switch Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 > Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	Lock-Out	De Bounce	Gate Ext	Min G | W	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red	Sel Ret Mode
1	N	0	0	0	0	0	0	0.0	0	0 | 0	16	4.3	2.2	20	0	4.3	2.2	6	0	3.0	1.0	F Aut
2	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
3	N	0	0	0	0	0	0	0.0	0	0 | 0	16	4.3	2.2	1	0	0.0	0.0	10	0	3.0	1.0	F Aut
4	N	0	0	0	0	0	0	0.0	0	0 | 0	16	4.3	2.2	1	0	0.0	0.0	10	0	4.3	2.2	F Aut
5	N	0	0	0	0	0	0	0.0	0	0 | 0	16	4.3	2.2	1	0	0.0	0.0	10	0	3.0	2.0	F Aut
6	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 6

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap Signal Type	Transit Overlap Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority **1**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **2**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **3**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **4**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **5**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **6**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 2

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 3

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 4

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 5

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Priority : 6

Bank 1							
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
Default Data								

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Green	Red	No
5	Green	Red	No
7	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle
Default Data			

Overlaps

Ovlp	Track	Dwell	Cycle	Trail Grn
Default Data				

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
Default Data			

Pedestrian Phases

Ph.	Track	Dwell	Cycle
Default Data			

Overlaps

Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				

Preempt 3

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
5	Red	Green	No									

Default Data **Default Data**

Preempt 4

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
6	Red	Green	No									

Default Data **Default Data**

Preempt 5

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
4	Red	Green	No									
7	Red	Green	No									

Default Data **Default Data**

Preempt 6

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data **Default Data** **Default Data**

Sample Interval: 0

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

Volume Detector Data

Report Interval 0

Volume Detector Number Controller Detector Channel

Default Data

SEPAC ECOM All Data

3/19/2020
11:56:47AM

Intersection Name: **Broadway & SB Reserve (R2West)** Intersection Alias: **BrdwyR2**

Access Data

1 :**1200 Baud**
3 :

Access Code: **9999** Channel: Address: **1**

Revision: **3.53** IP Address: **192.168.18.26**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	0-None	3-Yel	0-None	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Phase	Vehical Basic Timings: Min Green	Passage	Max1	Max2	Yellow	All Red	Misc Timings: Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Pedestrian Timings: Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank: 1																			
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	28	0	0	No	0	Yes
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	3.0	30	30	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 2																			
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	28	0	0	No	0	Yes
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	3.0	30	30	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank: 3																			
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	28	0	0	No	0	Yes

3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	3.0	30	30	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:			**4**																
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	40	40	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	28	0	0	No	0	Yes
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	6	3.0	30	30	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank:			**1**															
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**2**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**3**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**4**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:3	4	Veh	0	0.0	0

Default Data

Pedestrian Detector

	Assign Phase	Mode	Switch Phase	Extend	Delay

Default Data

Special Detector Phase Assignment

Default Data

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

I/O Modes:

ABC Input(Entry) Modes: 0
D Input(Entry) Modes: 2
ABC Output(O/STS) Modes: 0
D Output(O/STS) Modes: 0

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stop Grn/Yel Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
2	1	3
4	1	1

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40

Default Data

Signal Driver Ouput

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way
Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0
Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	80
1/2	80
1/3	80
1/4	80

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	56	1=Coordinate	4	24	0=Actuated						

Dial 1 / **Split** 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	57	1=Coordinate	4	23	0=Actuated						

Dial 1 / **Split** 3

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	56	1=Coordinate	4	24	0=Actuated						

Dial 1 / **Split** 4

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	60	1=Coordinate	4	20	0=Actuated						

Traffic Plan Data

Plan: 1/3/1	Offset Time: 28	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 1/4/1	Offset Time: 10	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	11:0	1/4/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	19:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	2	6:45	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	11:0	1/2/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	15:0	1/3/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	19:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

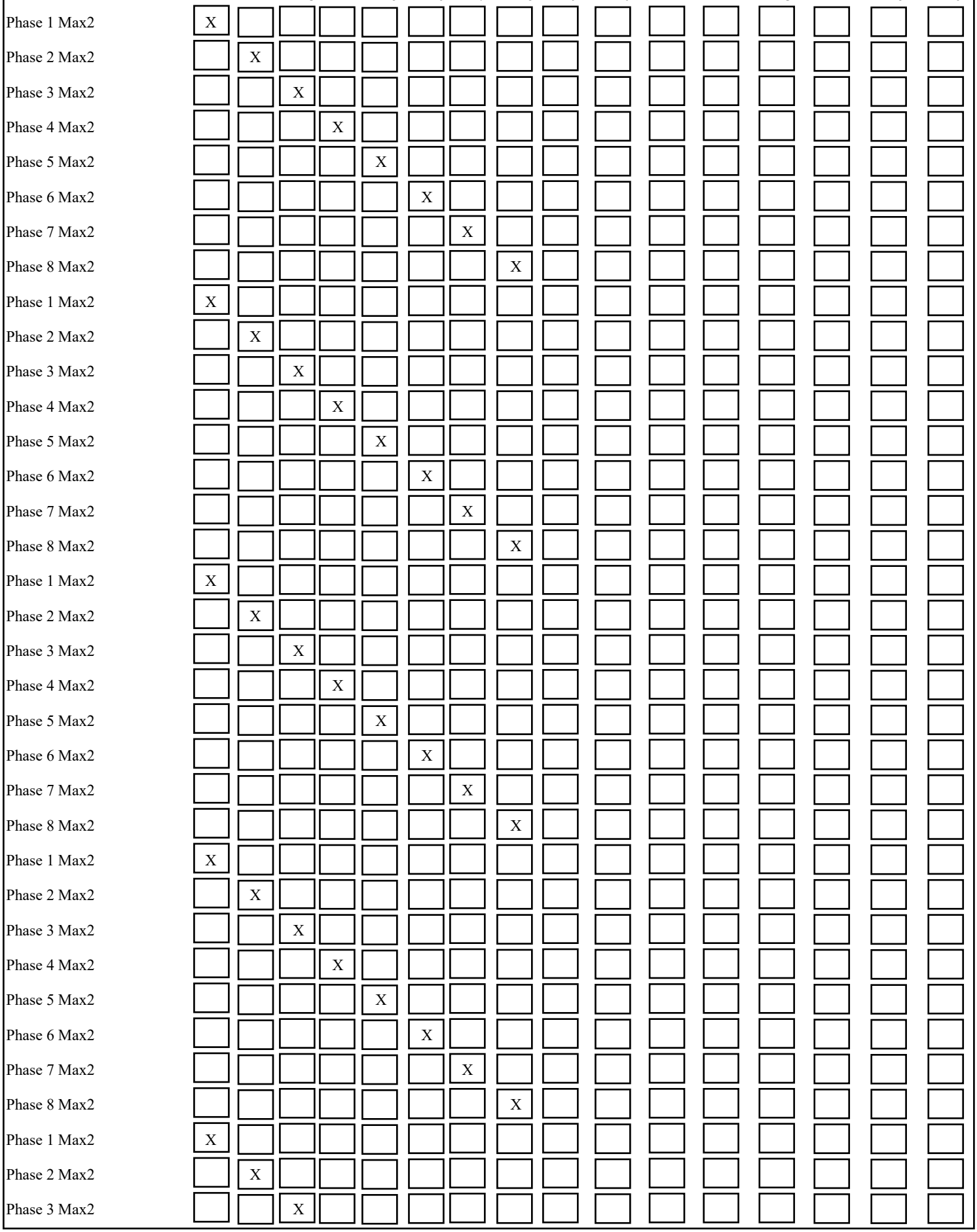
Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

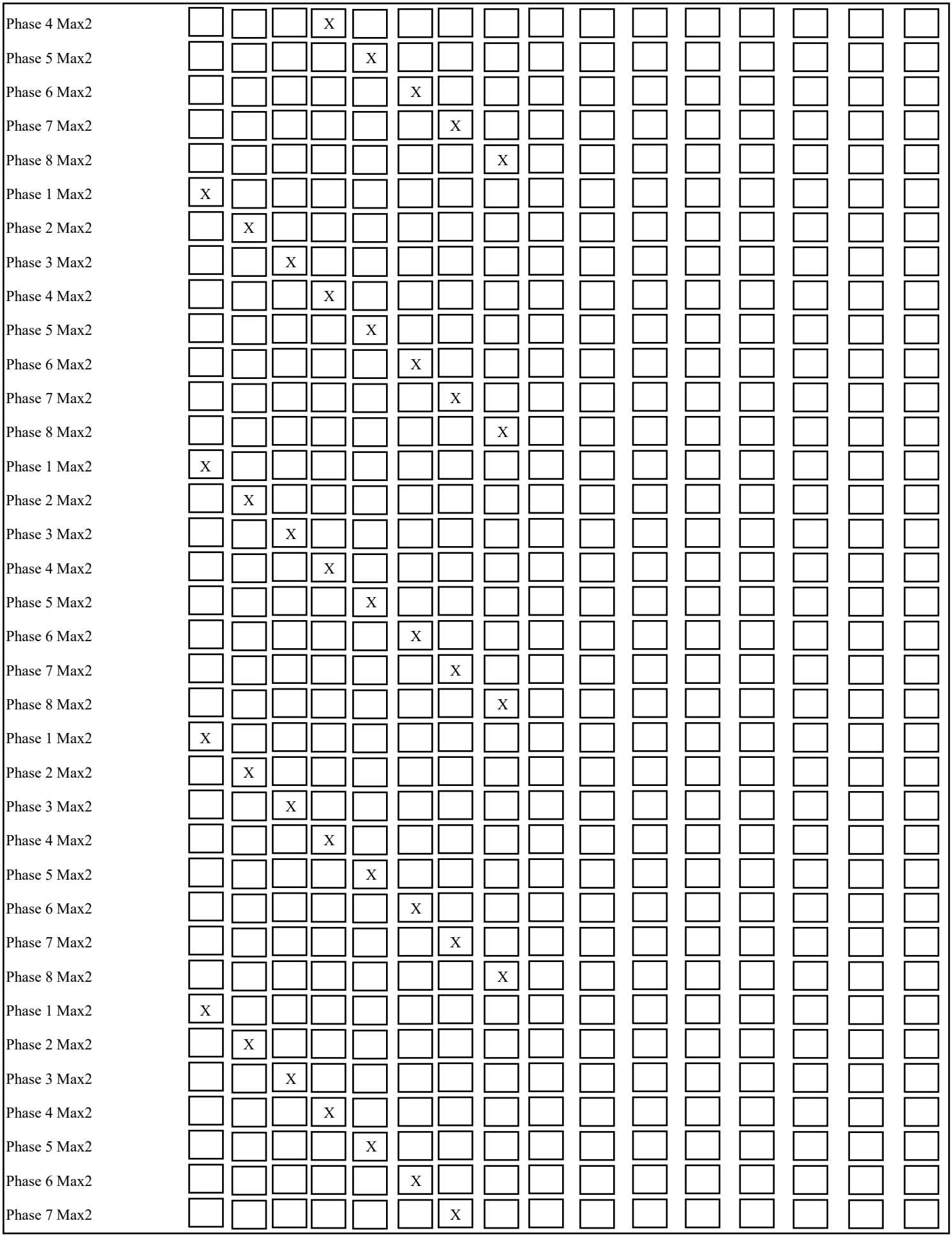
Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

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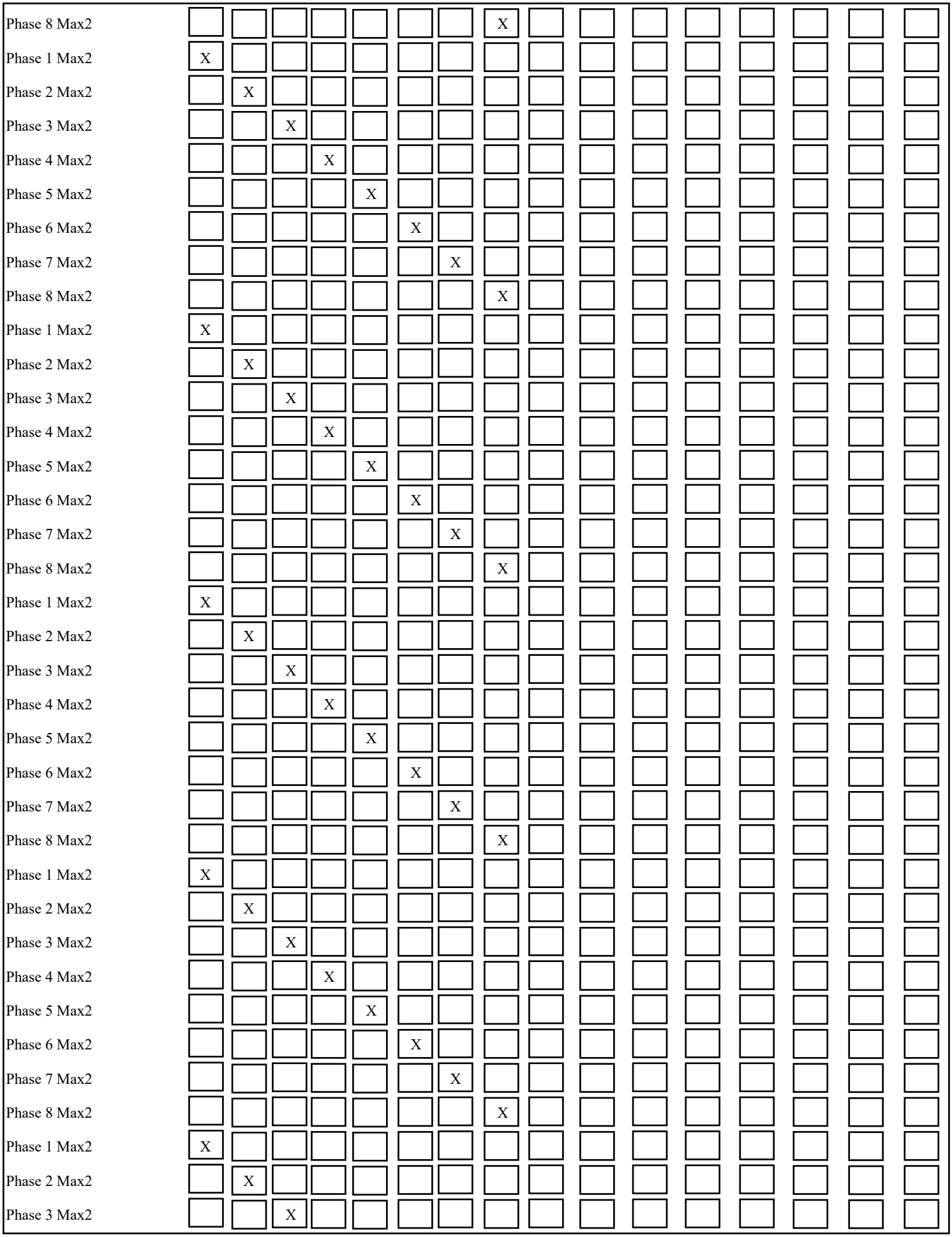
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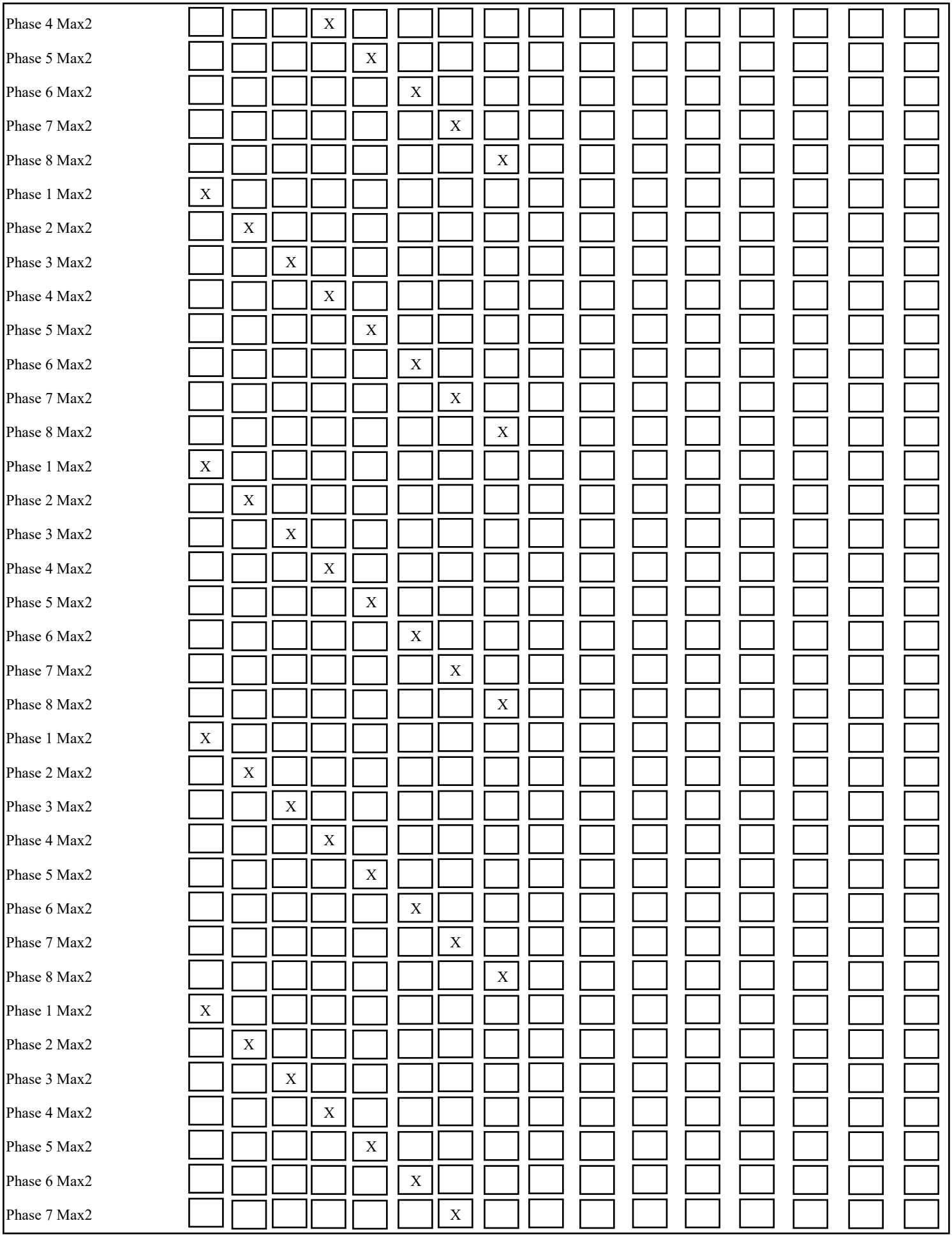
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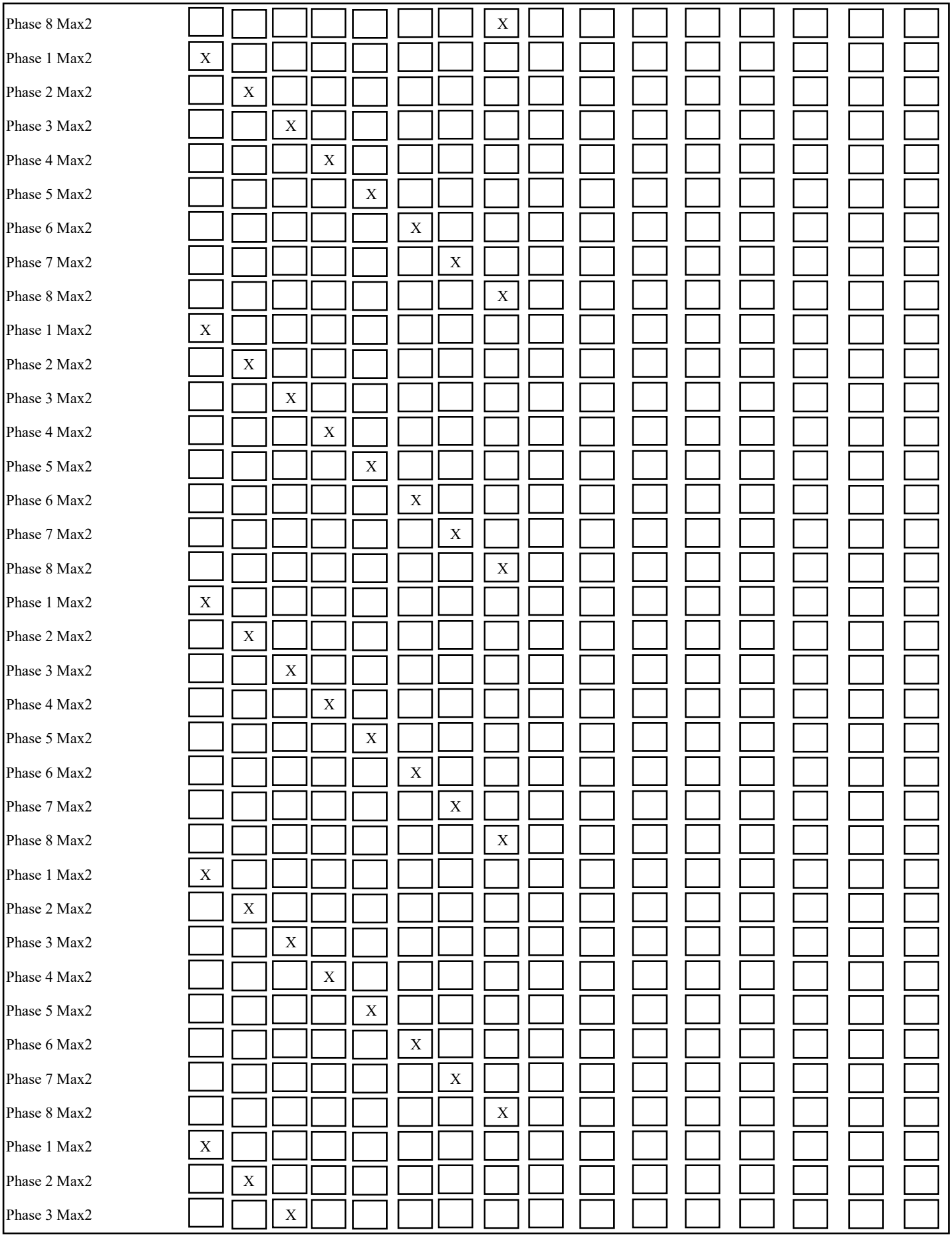
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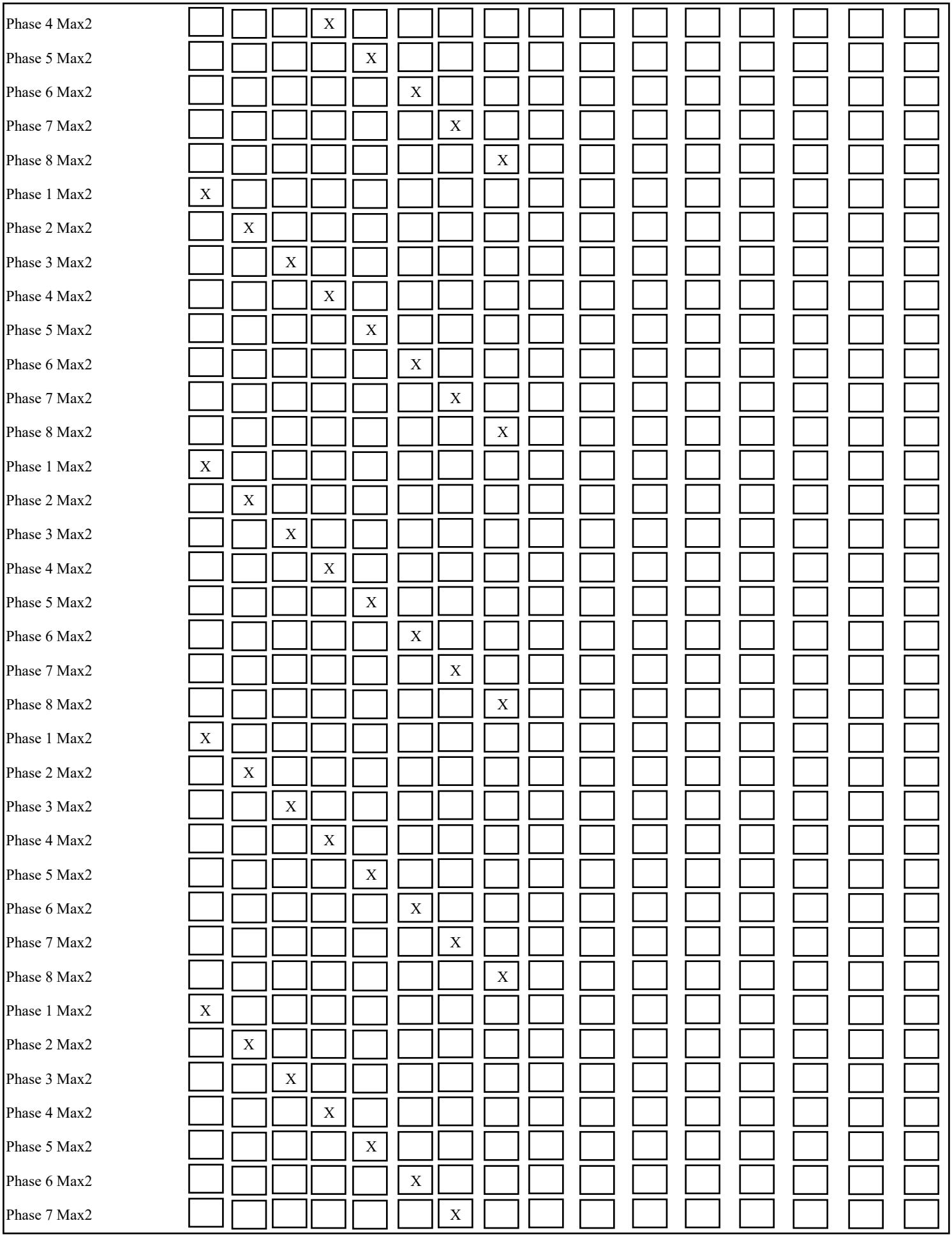
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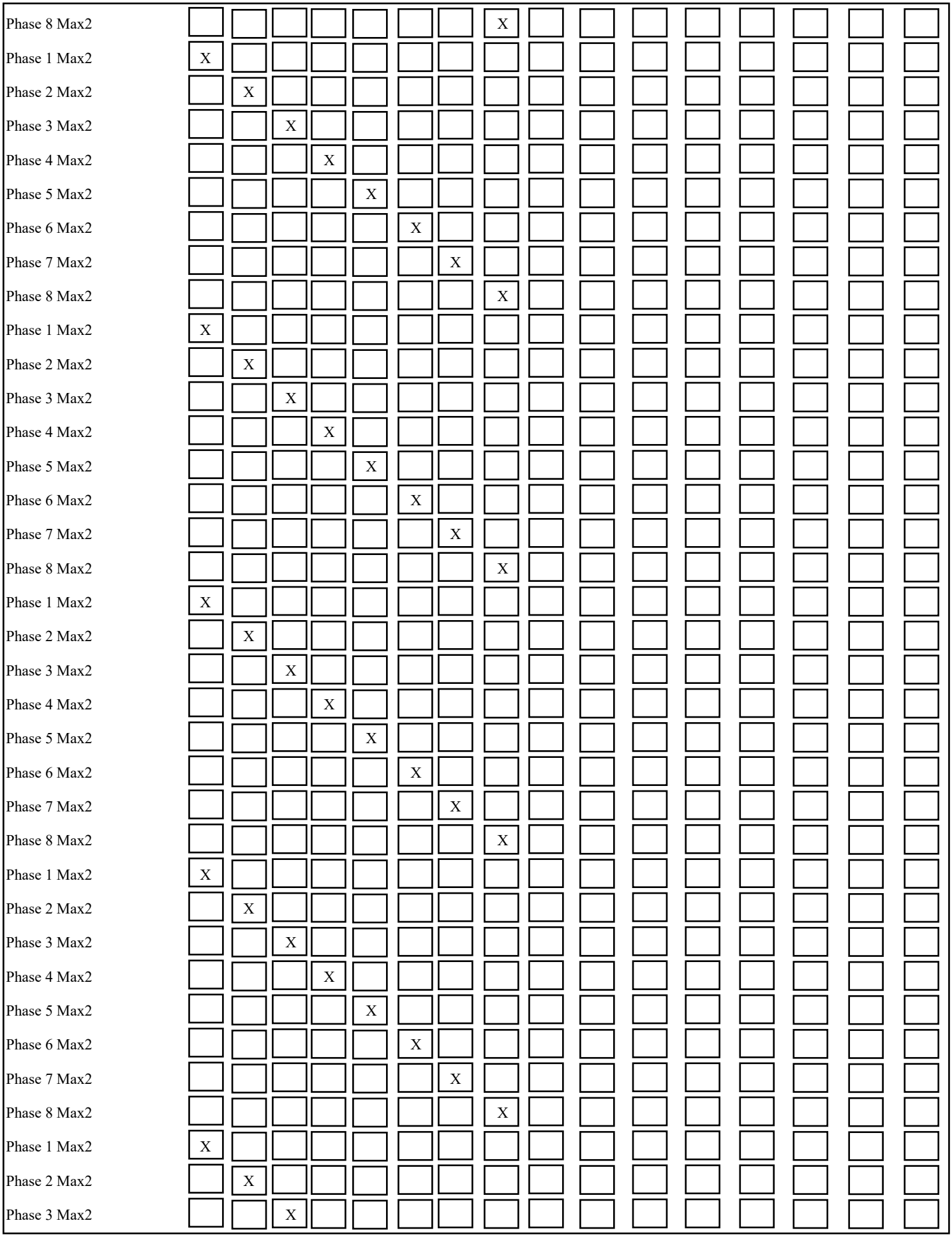
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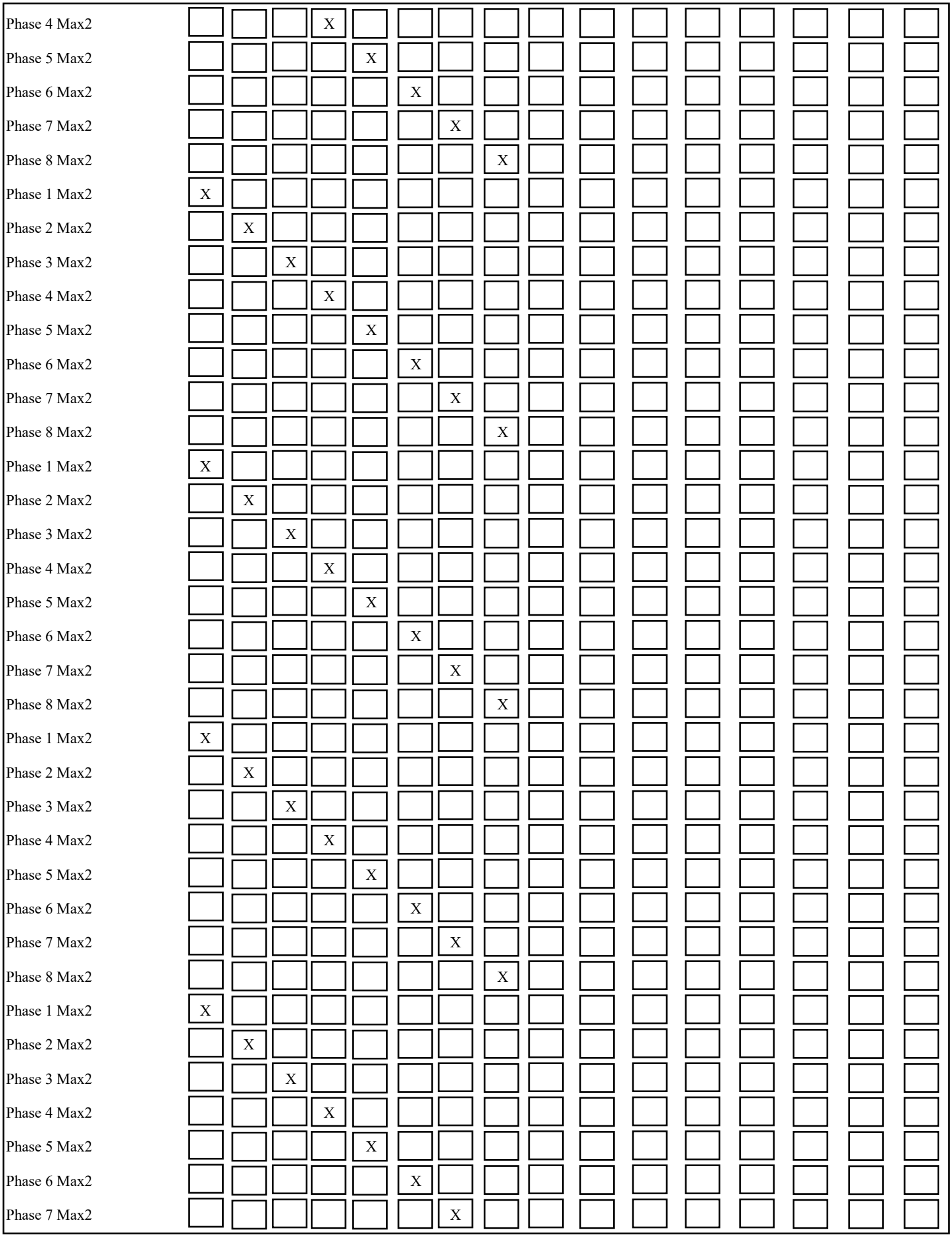
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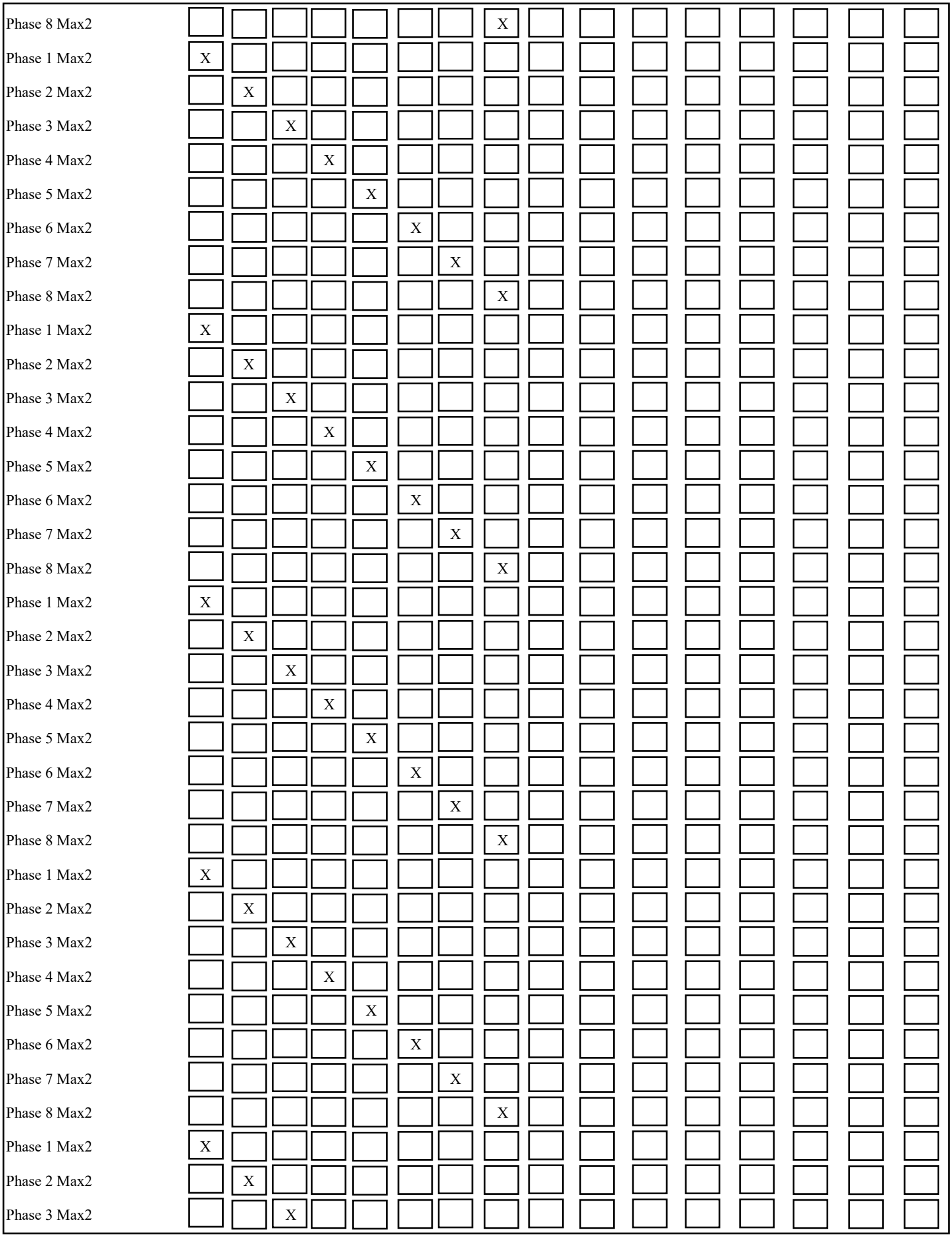
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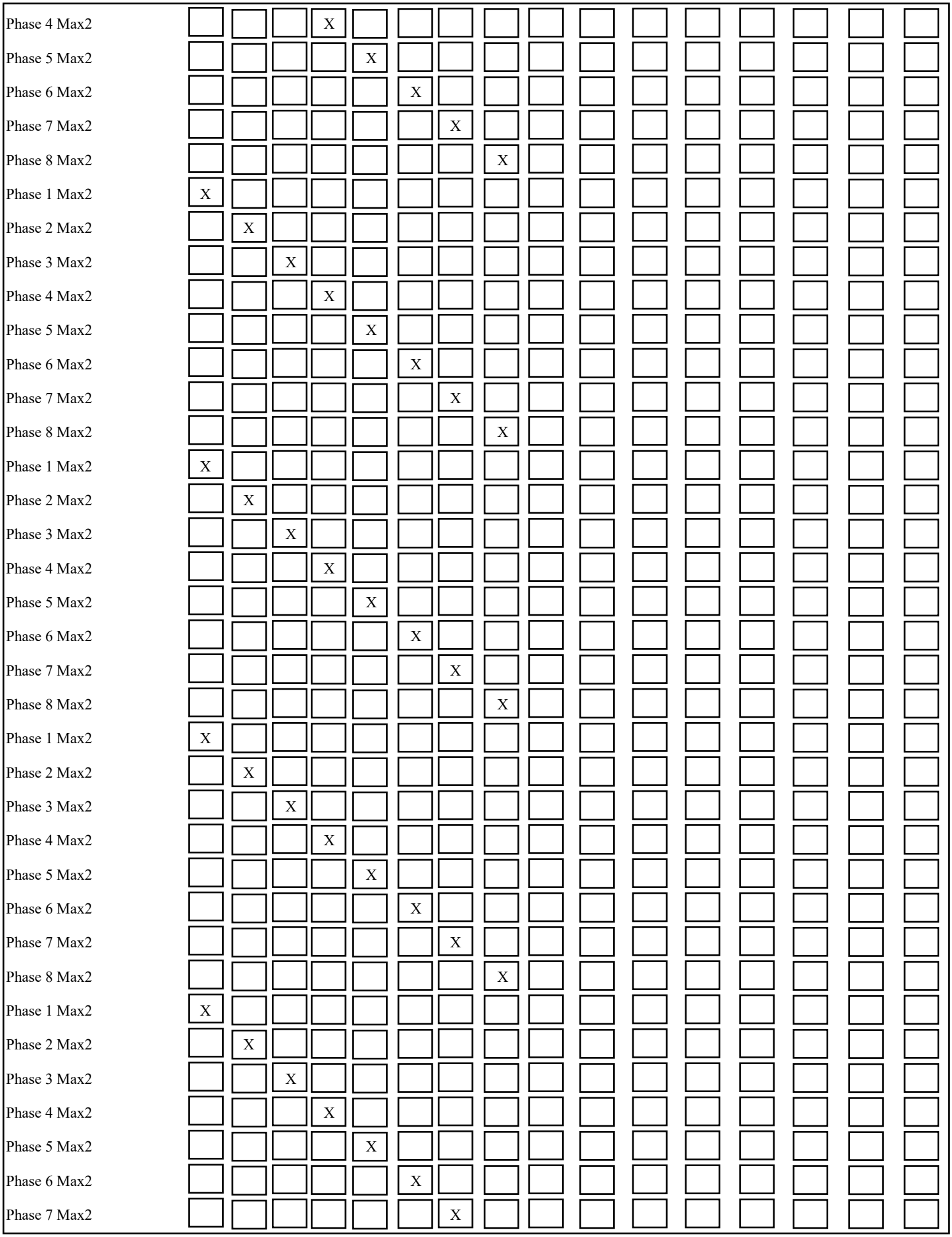
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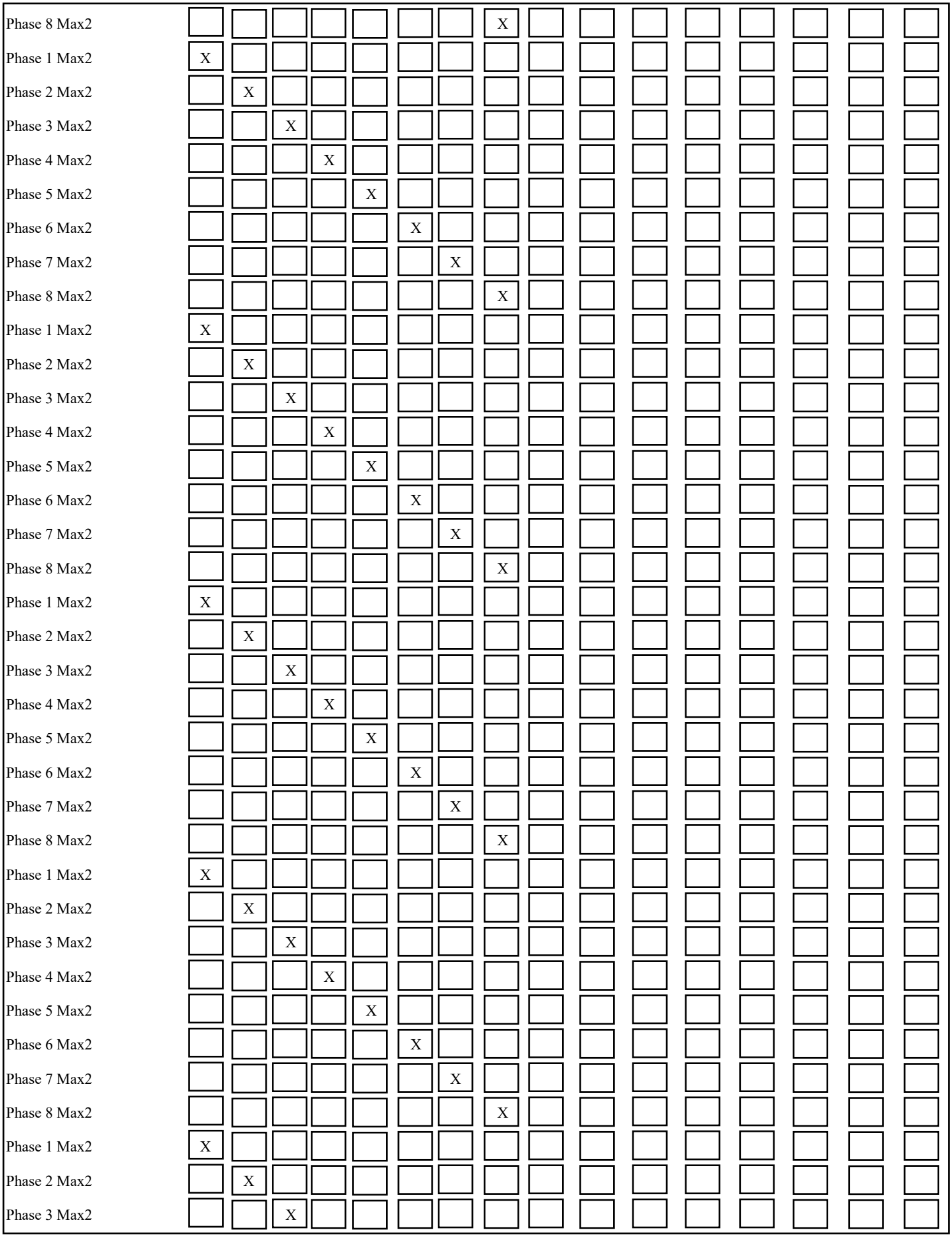
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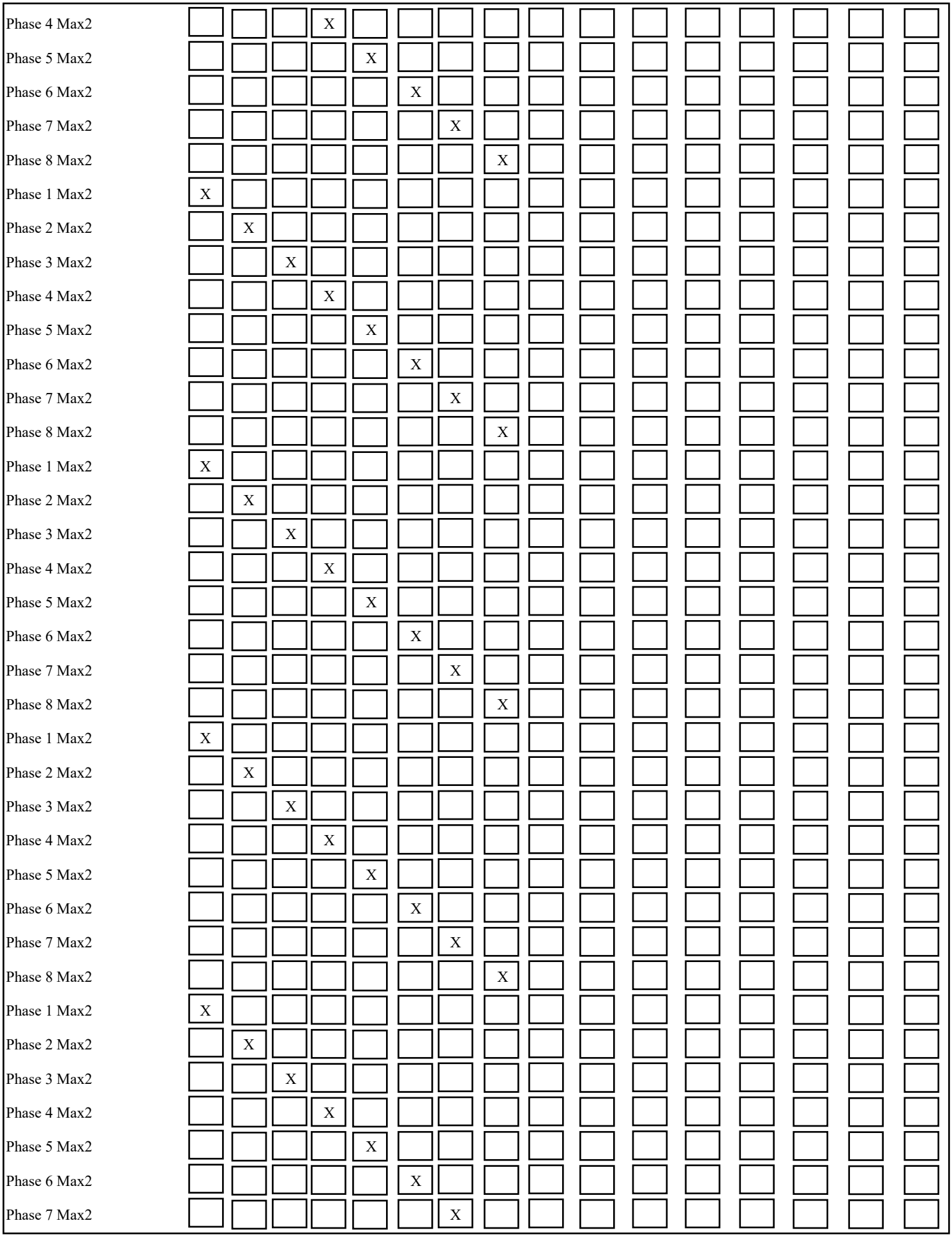
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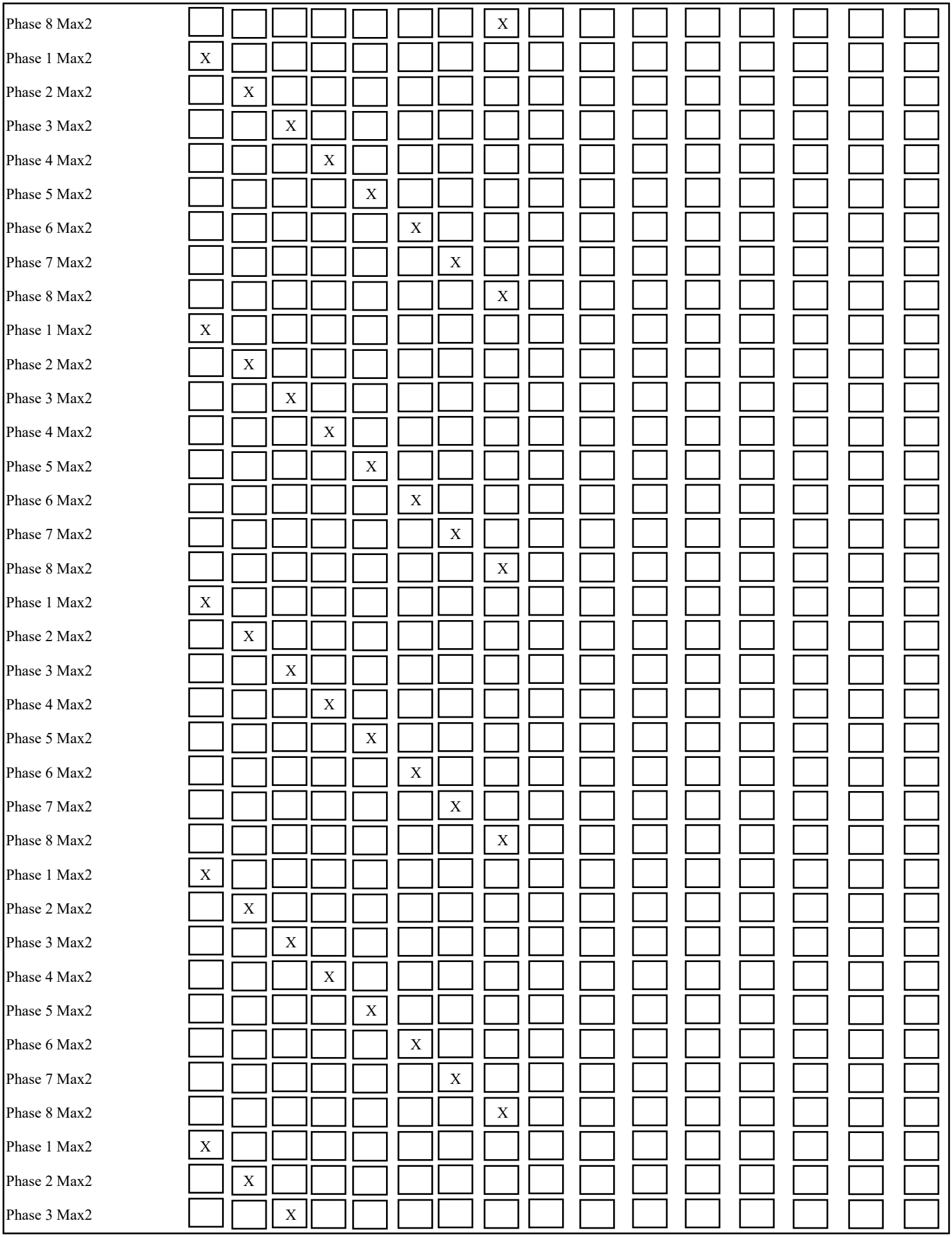
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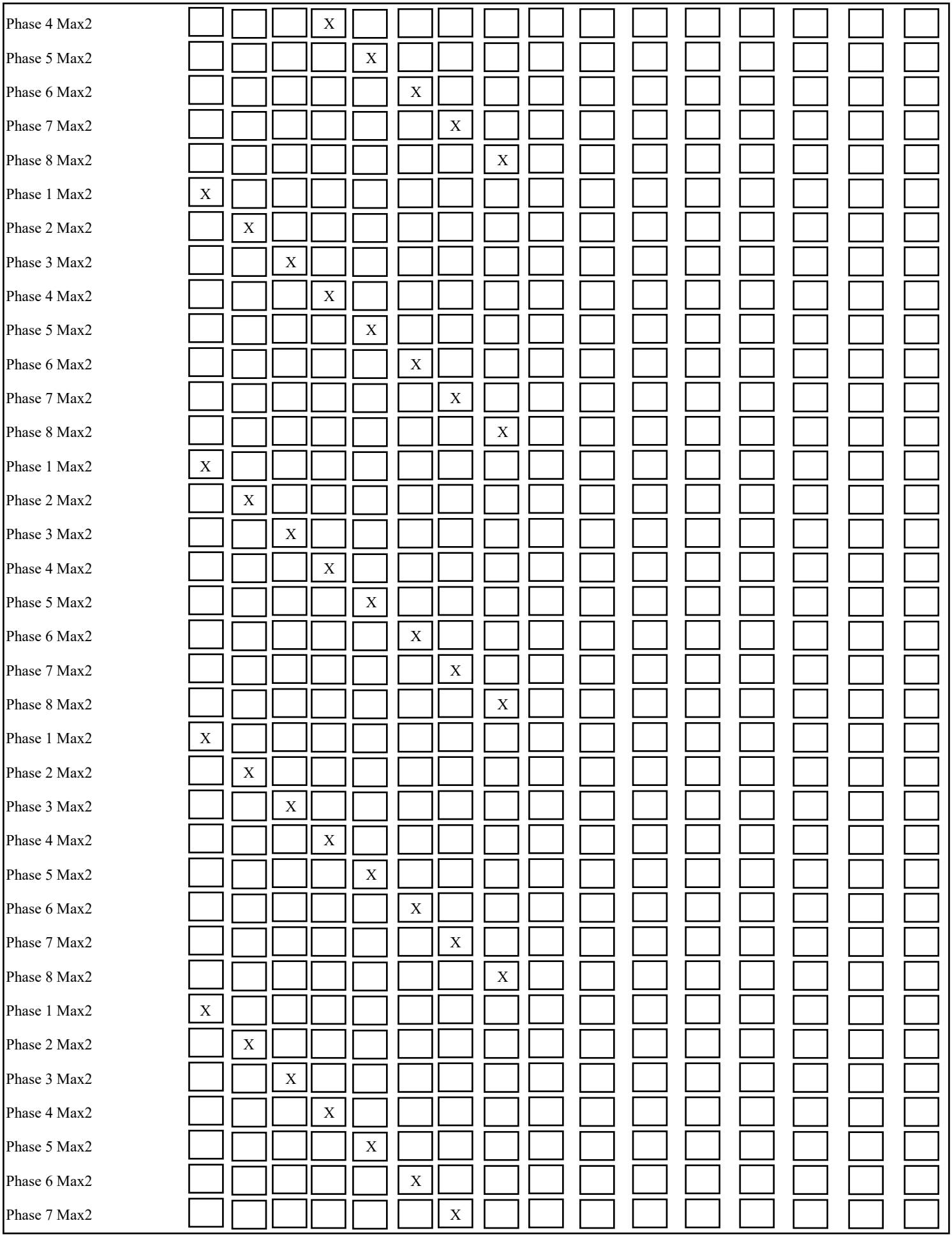
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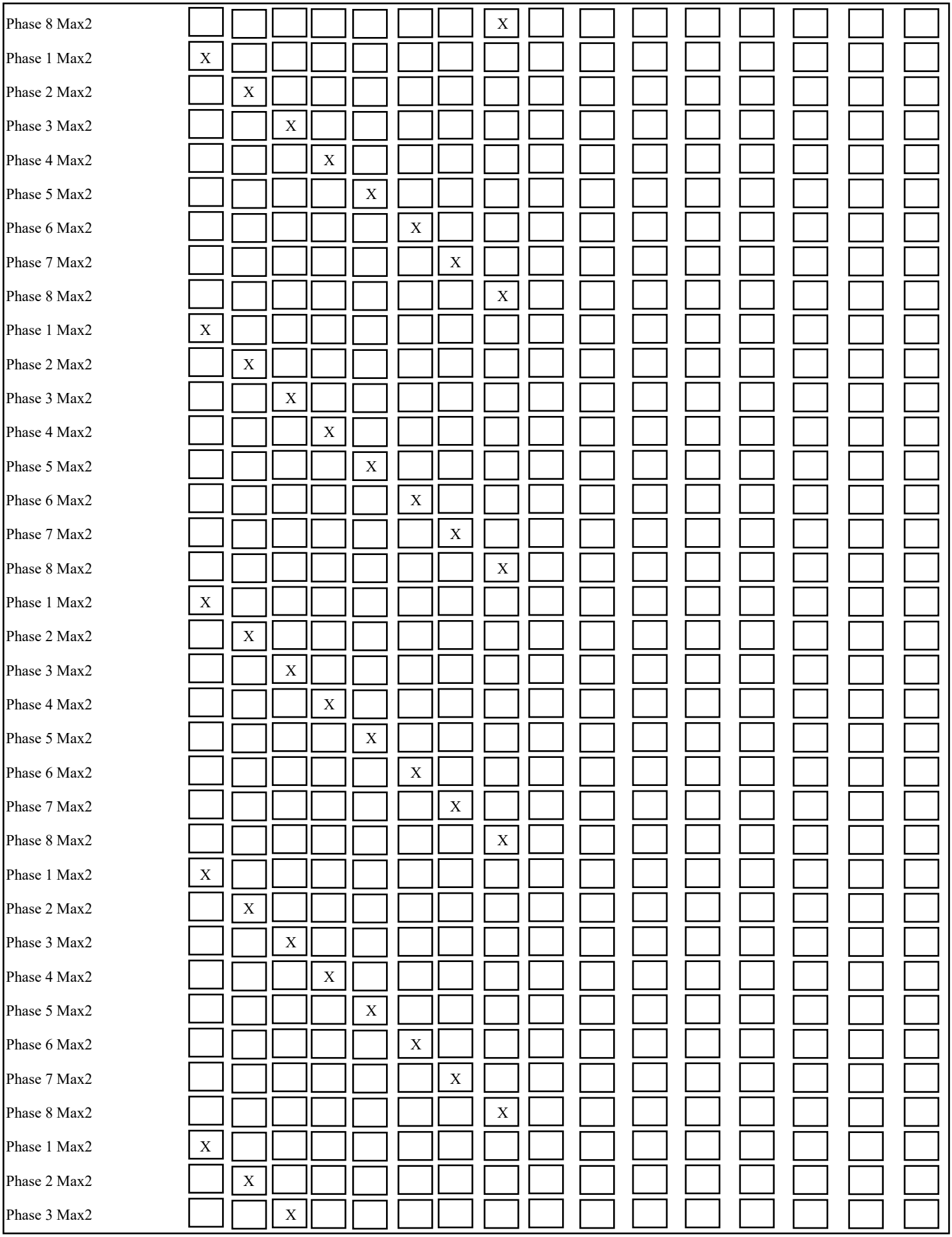
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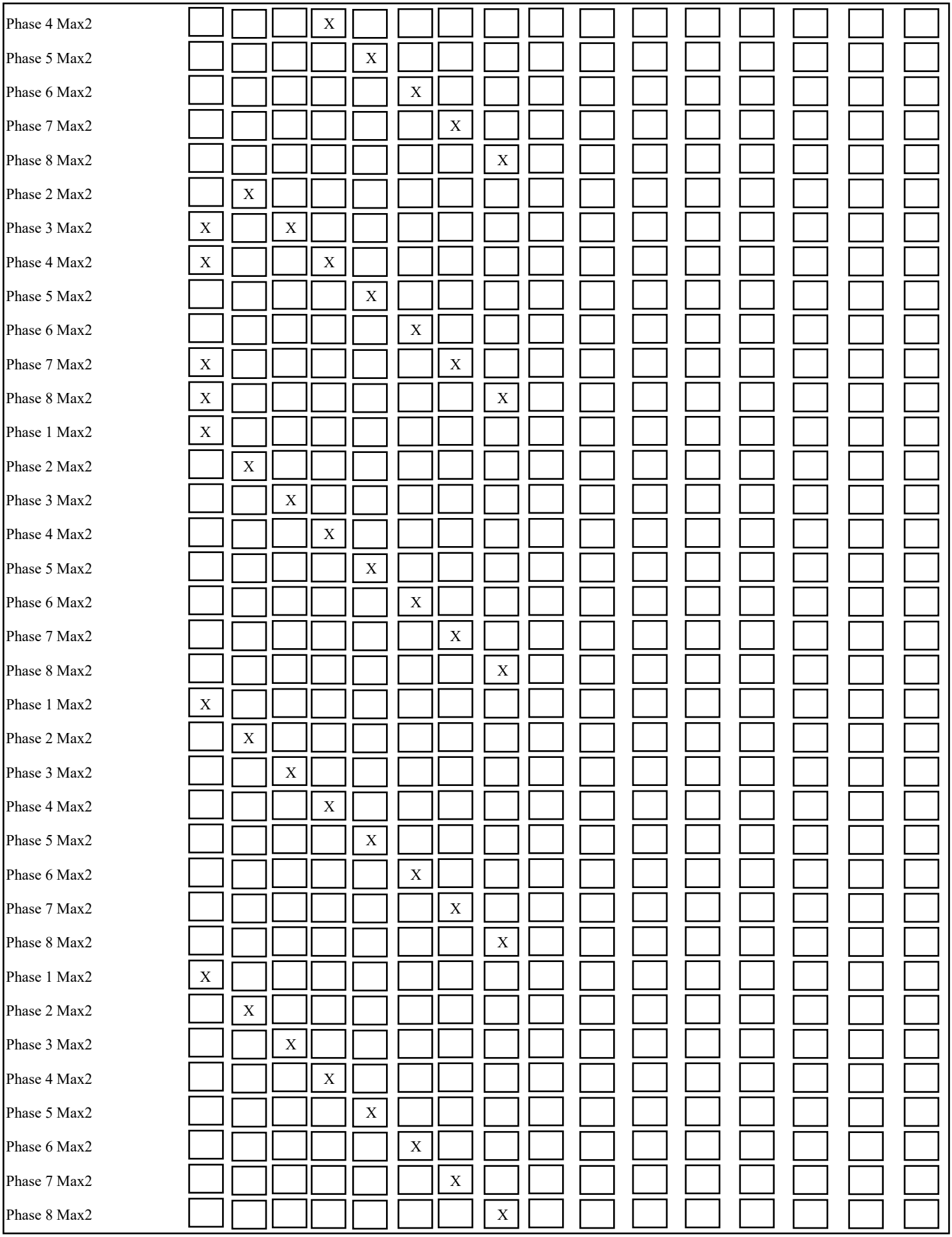
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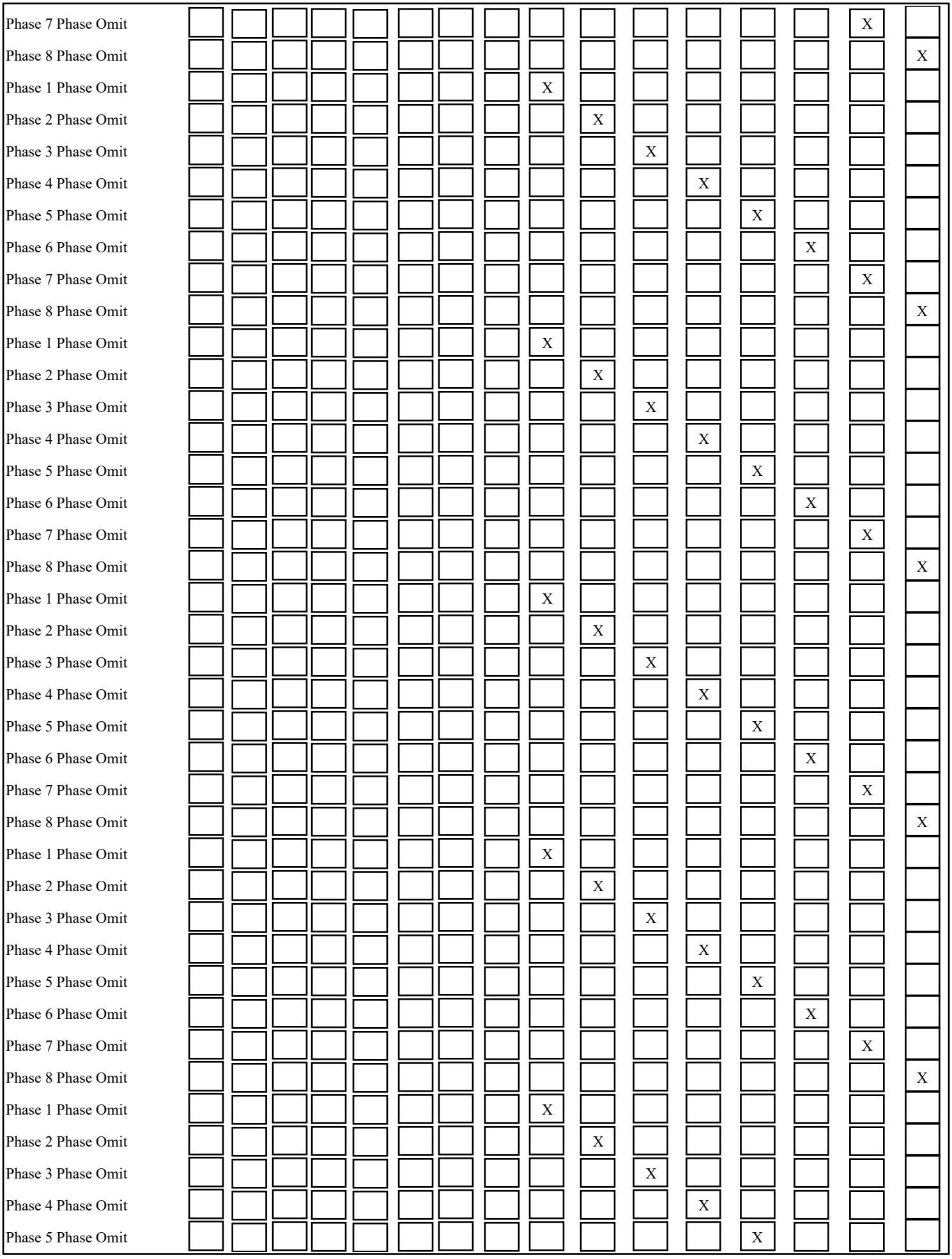
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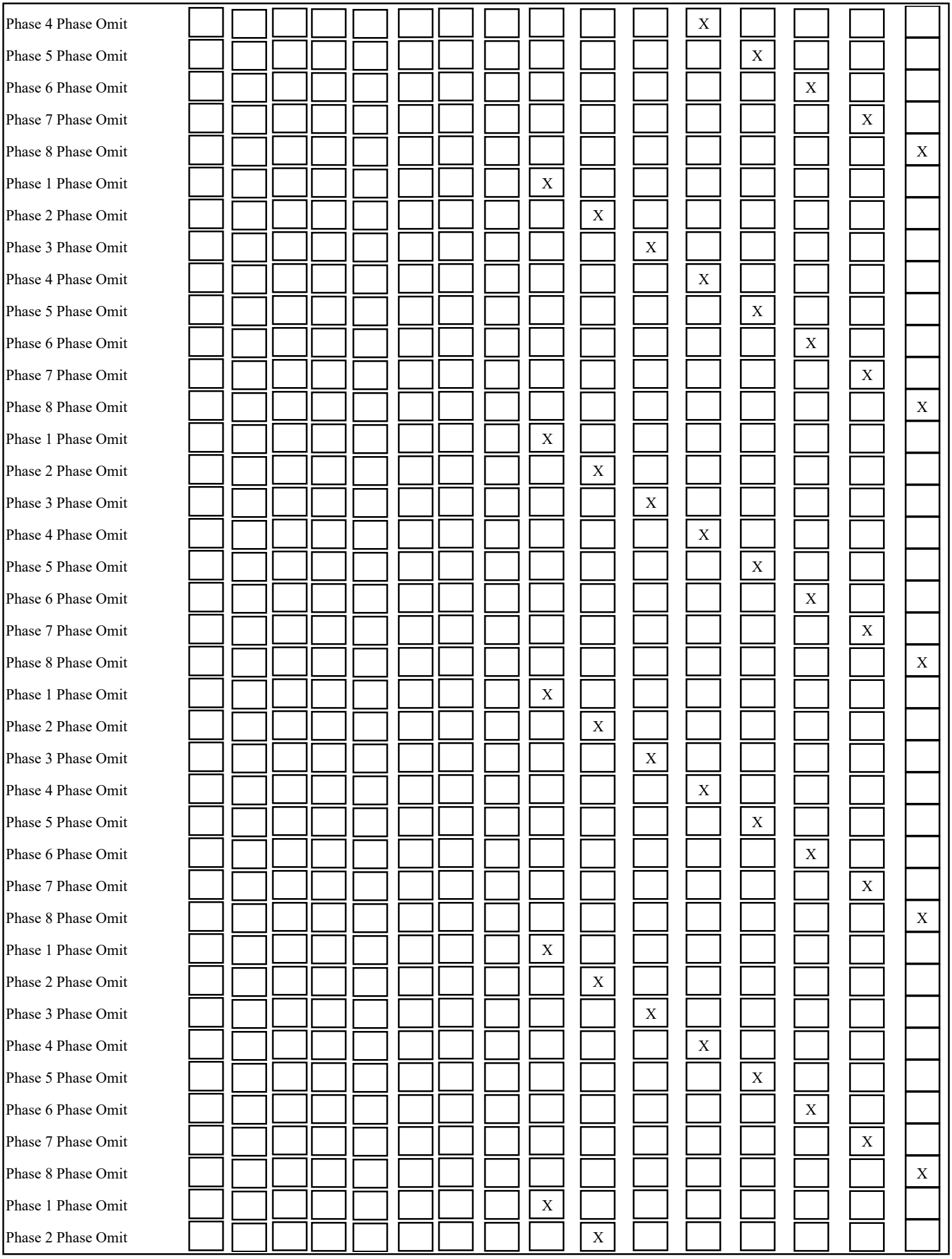
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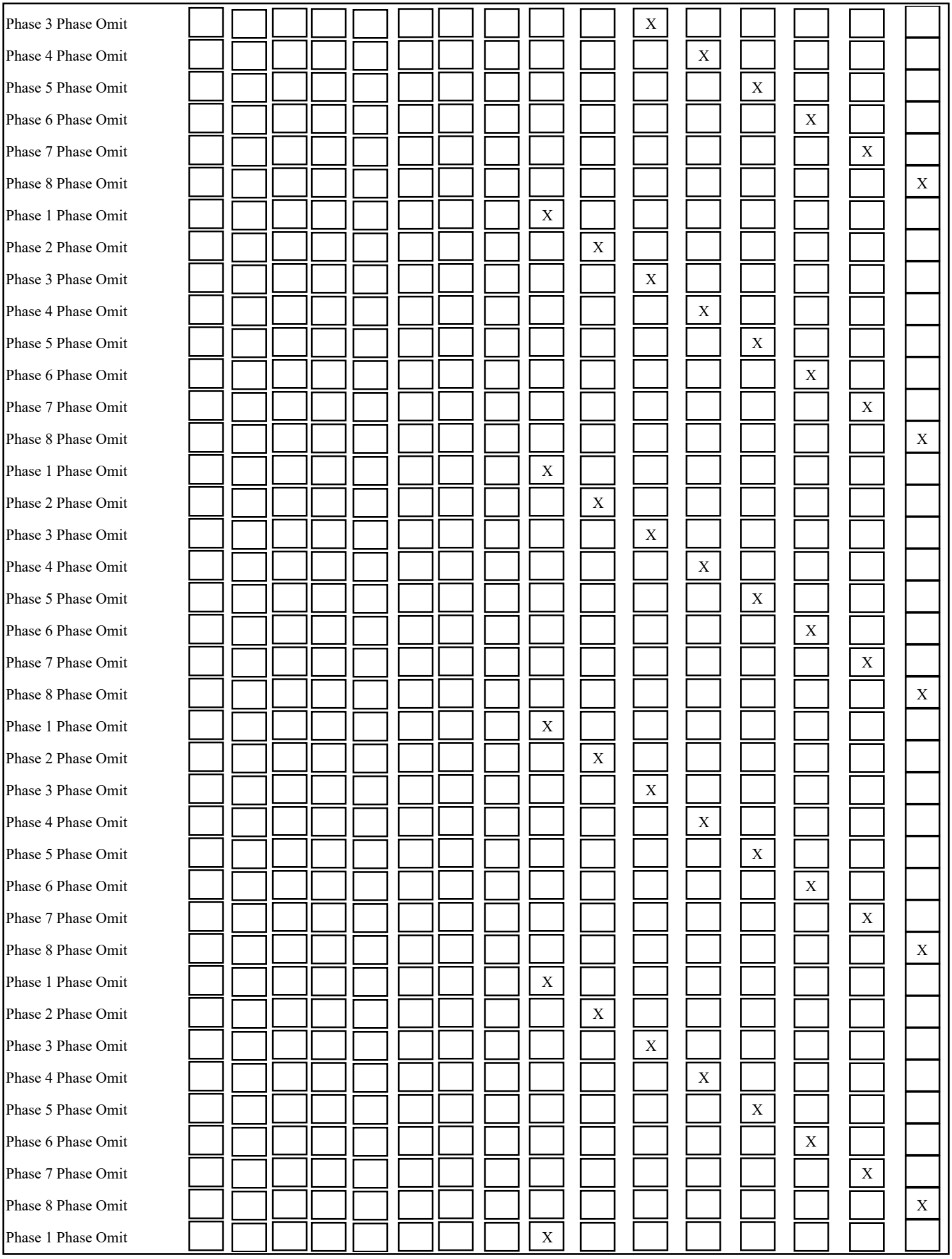
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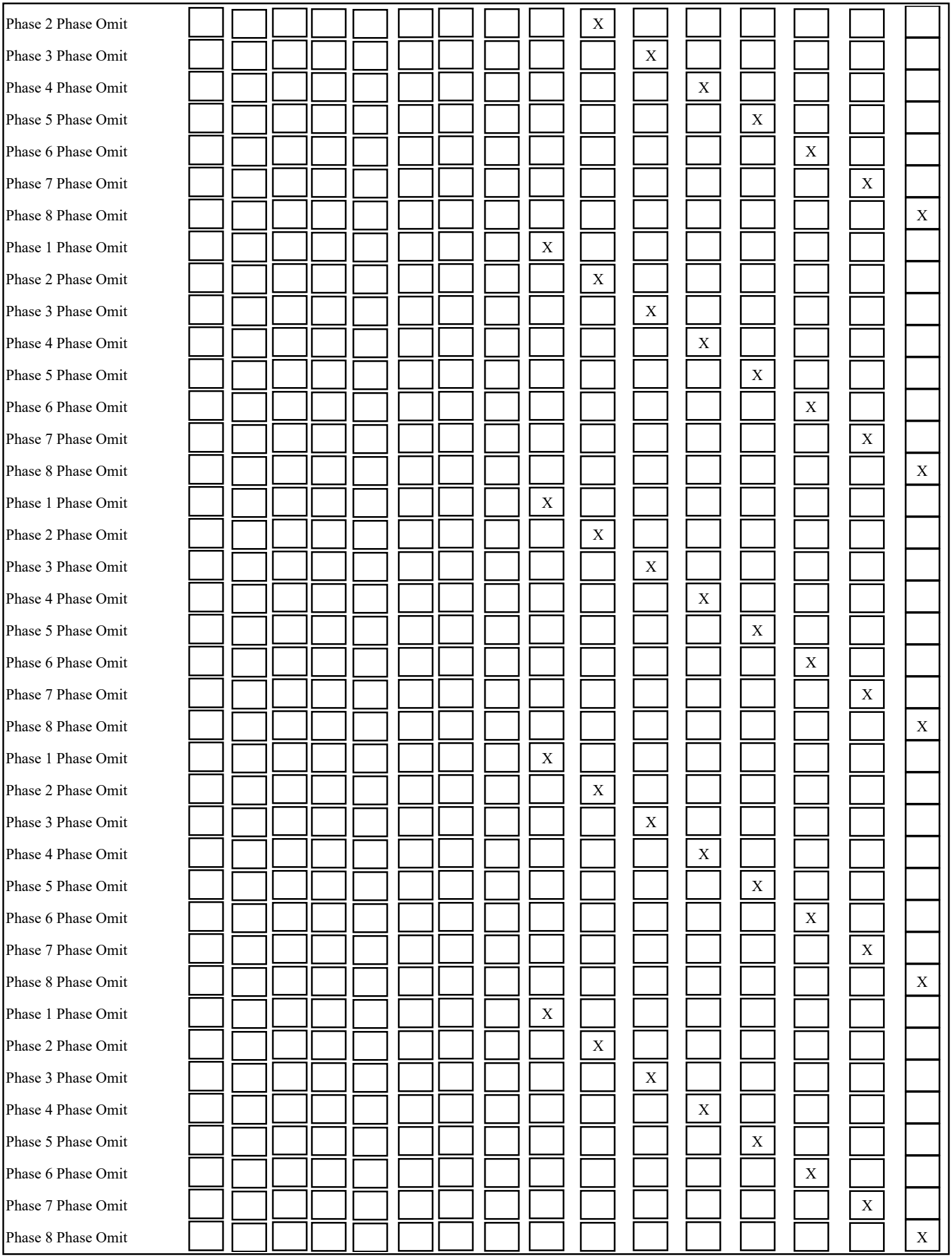
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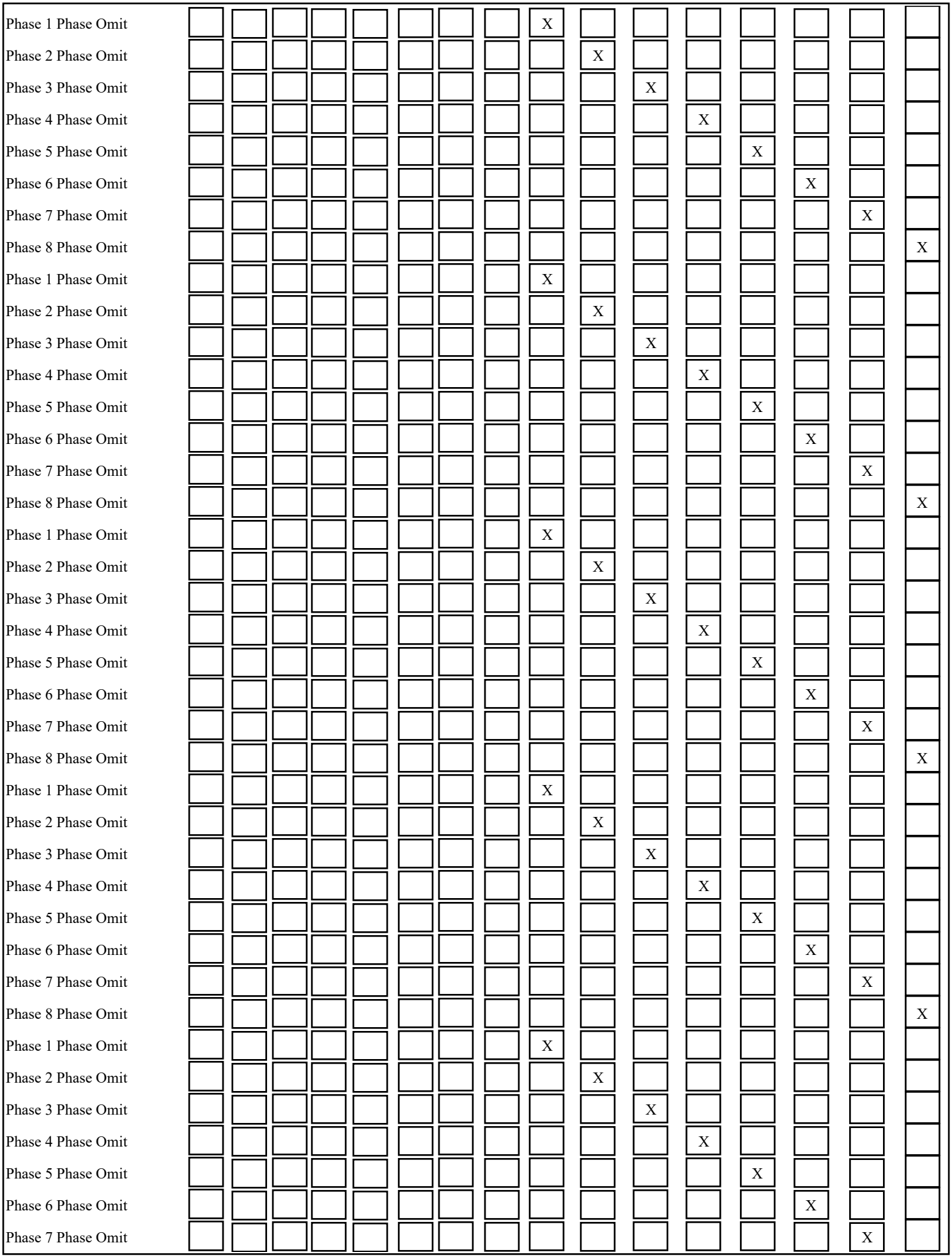
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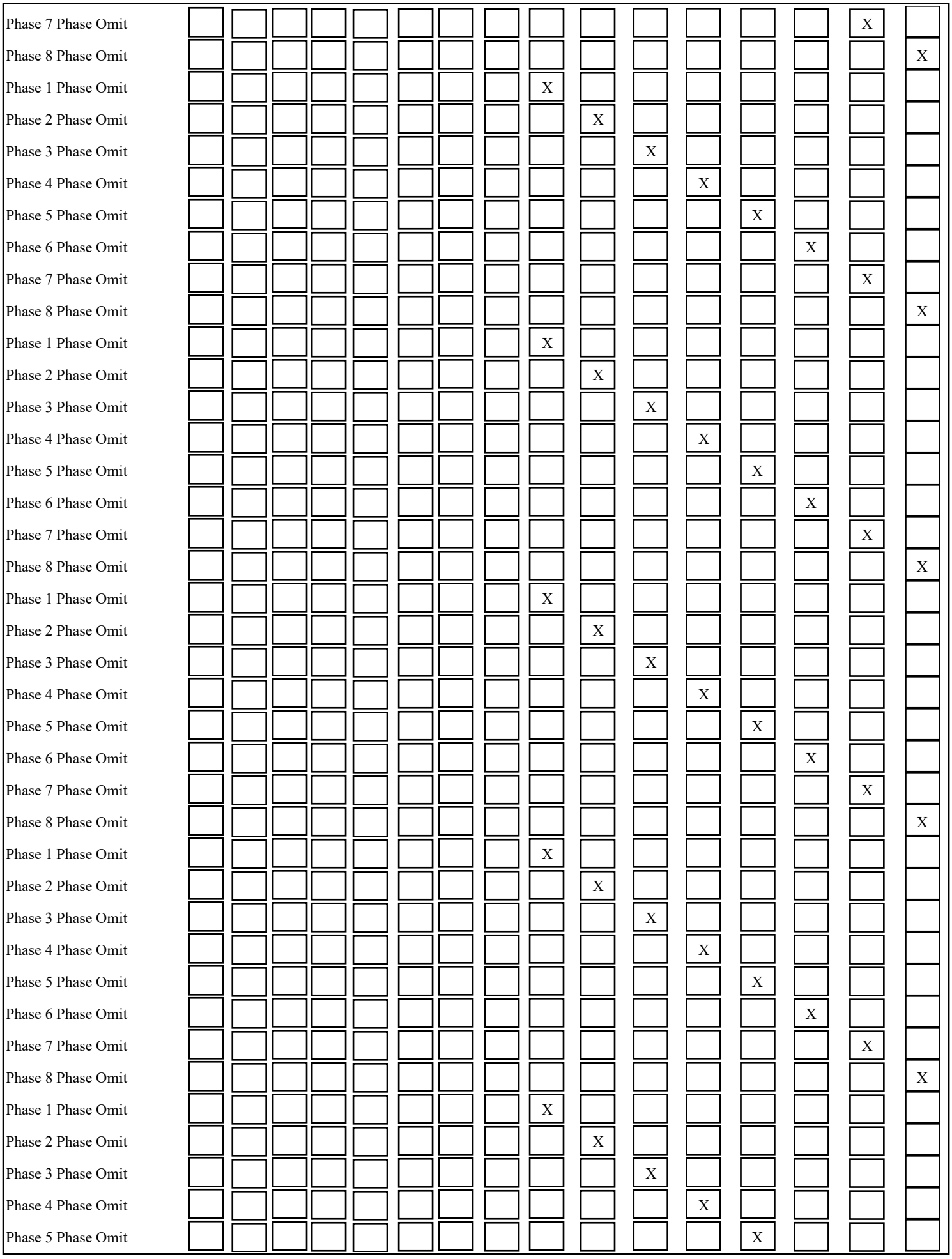
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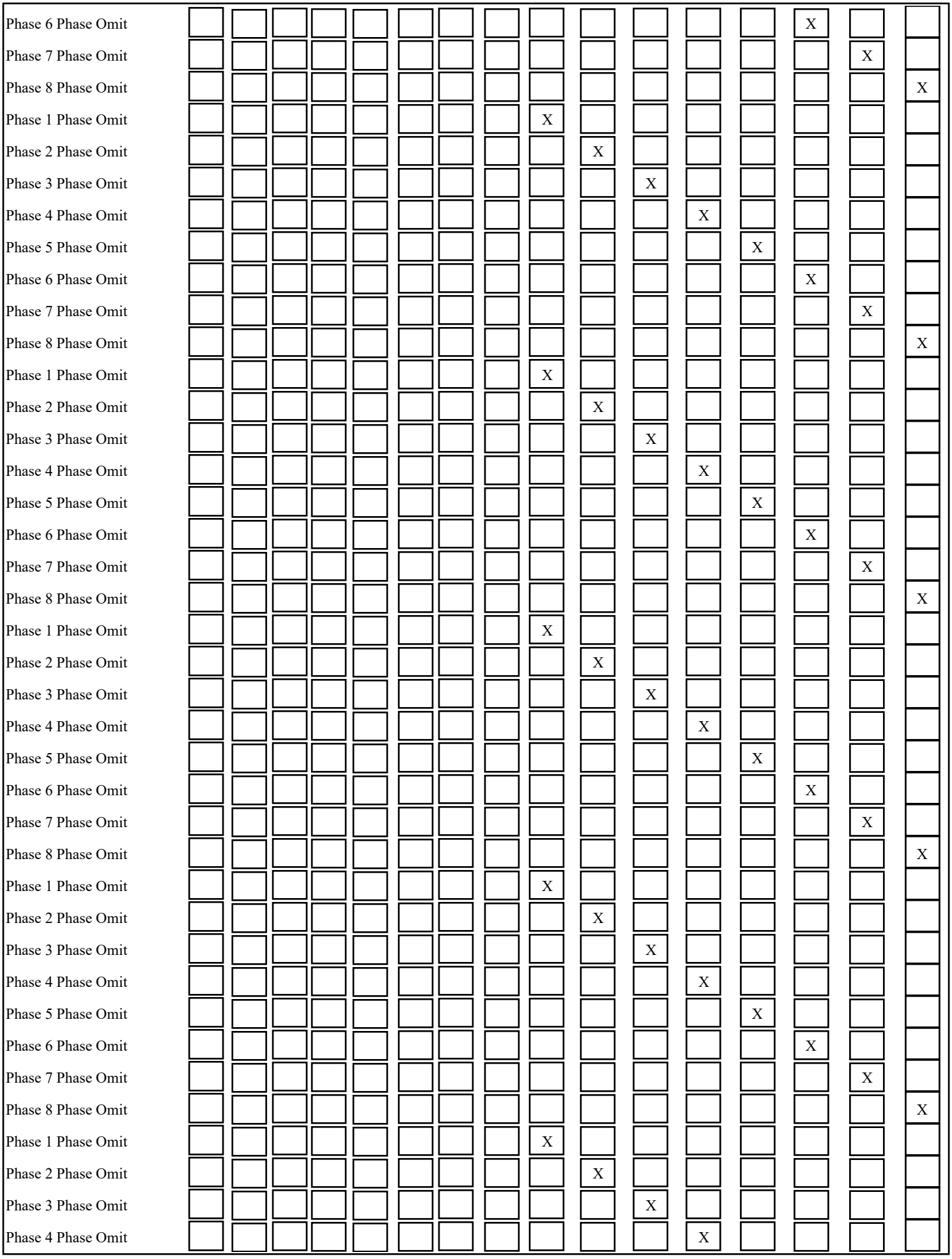
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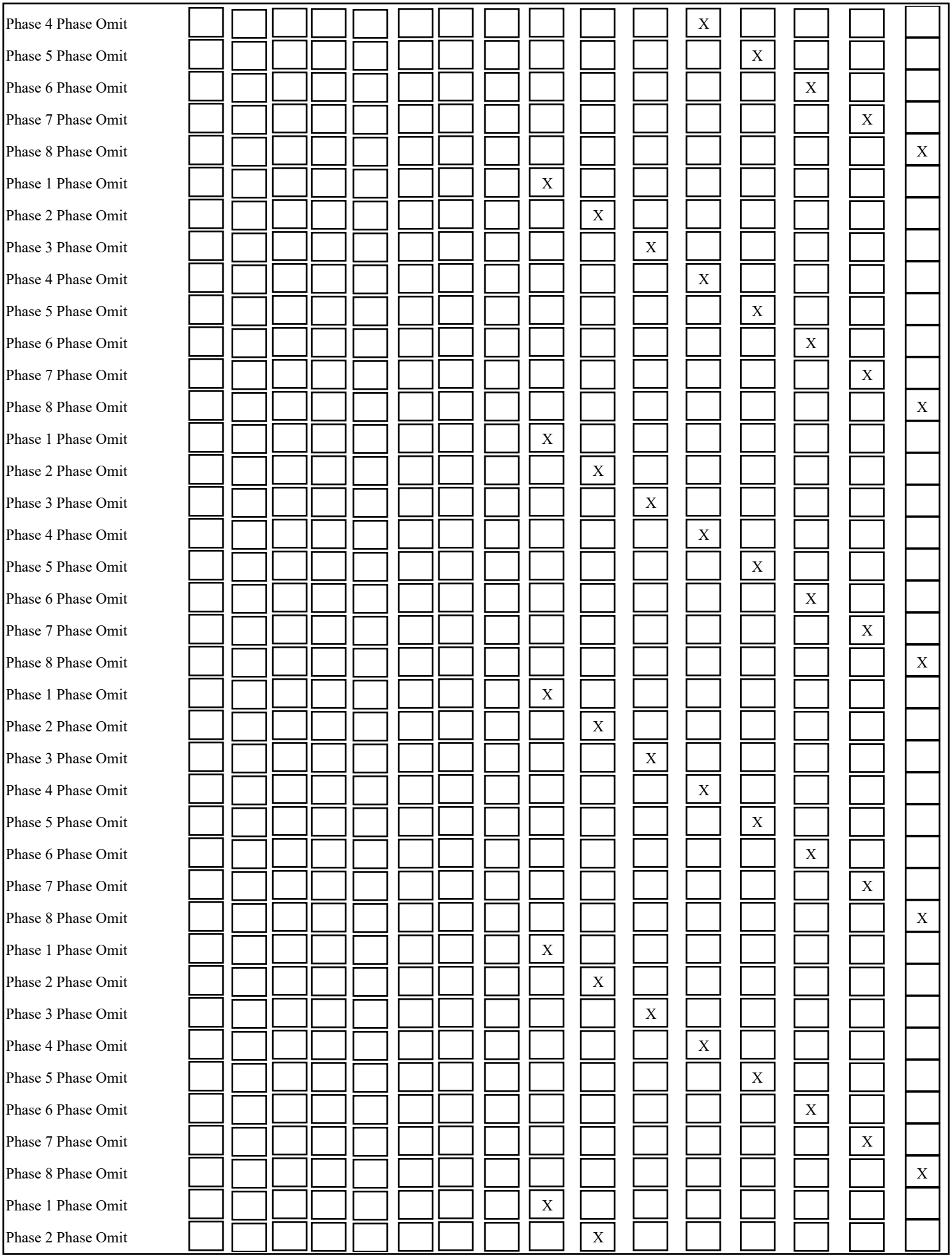
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						


Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
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Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
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Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
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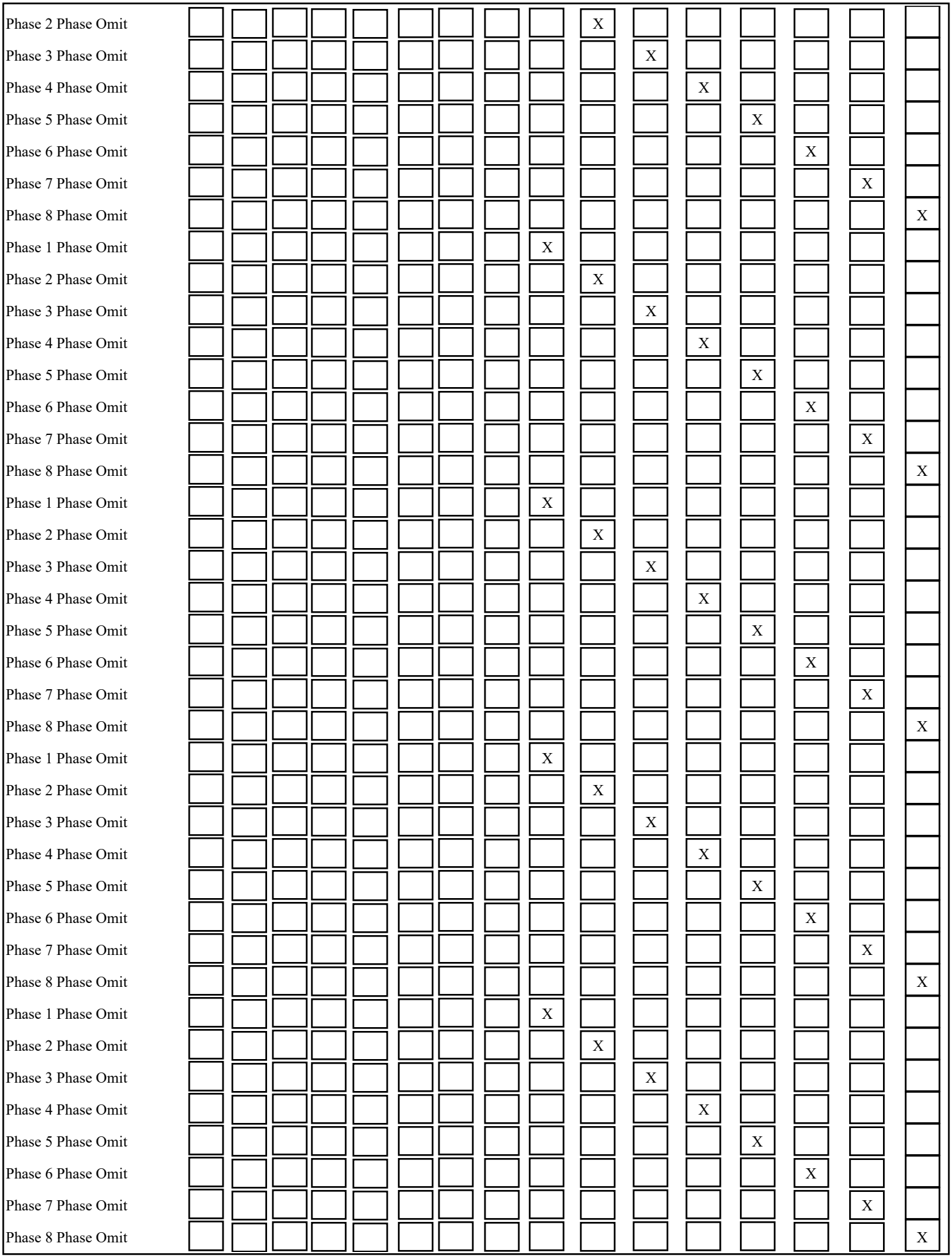
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit

Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								
Phase 2 Phase Omit									X							
Phase 3 Phase Omit										X						
Phase 4 Phase Omit											X					
Phase 5 Phase Omit												X				
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								


Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function Veh Det Switch Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 > Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	Lock-Out	De Bounce	Gate Ext	Min G | W	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red	Sel Ret Mode
1	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
2	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
3	N	0	0	0	0	0	0	0.0	0	0 | 0	14	4.3	2.2	0	0	0.0	0.0	10	0	4.3	2.2	F Aut
4	N	0	0	0	0	0	0	0.0	0	0 | 0	14	4.3	2.2	0	0	0.0	0.0	10	0	3.0	2.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
6	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
2	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
2	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap Signal Type	Transit Overlap Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority **1**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **2**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **3**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **4**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **5**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **6**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 2

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 3

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 4

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 5

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 6

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Preempt 1

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph	Track	Dwell	Cycle	Ovlp	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 2

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 3

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									

Default Data **Default Data**

Preempt 4

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
4	Red	Green	No									

Default Data **Default Data**

Preempt 5

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

Preempt 6

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn

Default Data **Default Data** **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data **Default Data** **Default Data**

Sample Interval: 0

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

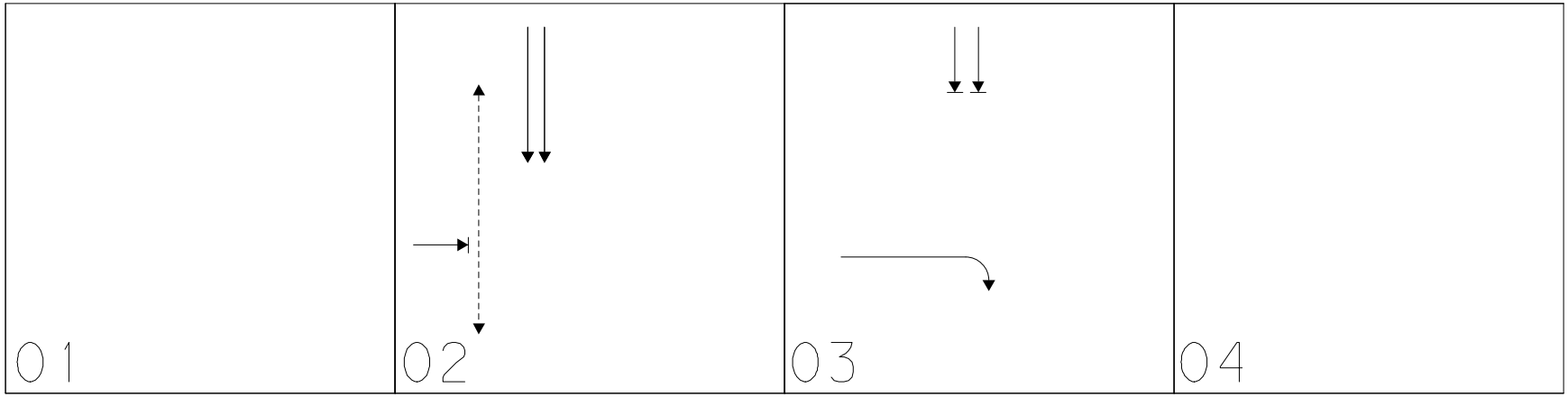
Volume Detector Data

Report Interval 0

Volume Detector Number Controller Detector Channel

Default Data

Reserve & Broadway Ramp



SEPAC ECOM All Data

3/19/2020
12:02:51PM

Intersection Name: **Reserve & England**

Intersection Alias: **ReserveEng**

Access Data

1 :**1200 Baud**
3 :

Access Code: **9999**
Channel:
Address: **1**
Revision: **3.55d**
IP Address: **192.168.18.32**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	1-Inact	3-Yel	0-None	1-Inact	1-Inact	3-Yel	0-None	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank:	**1**																		
1	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	30	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	7	3.0	35	35	3.6	1.9	0.0	0.0	0	0-Advance	0.0	0.0	7	22	0	0	No	0	No
5	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	30	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	7	3.0	35	35	3.6	1.9	0.0	0.0	0	0-Advance	0.0	0.0	7	25	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**2**																		
1	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	7	3.0	35	35	3.6	1.9	0.0	0.0	0	0-Advance	0.0	0.0	7	22	0	0	No	0	No
5	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	7	3.0	35	35	3.6	1.8	0.0	0.0	0	0-Advance	0.0	0.0	7	25	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**3**																		
1	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No

3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	7	3.0	35	35	3.6	1.9	0.0	0.0	0	0-Advance	0.0	0.0	7	22	0	0	No	0	No
5	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	7	3.0	35	35	3.6	1.8	0.0	0.0	0	0-Advance	0.0	0.0	7	25	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:			**4**																
1	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
3	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	7	3.0	35	35	3.6	1.9	0.0	0.0	0	0-Advance	0.0	0.0	7	22	0	0	No	0	No
5	5	3.0	15	15	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	7	3.0	35	30	4.3	1.7	0.0	0.0	0	0-Advance	0.0	0.0	7	24	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	7	3.0	35	35	3.6	1.8	0.0	0.0	0	0-Advance	0.0	0.0	7	25	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank:				**1**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	2	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**2**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	2	0	0
2	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**3**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	2	0	0
2	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**4**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	2	0	0
2	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	6	0	0
6	0.0	0	0	0	0	0.0	None	Max	None	0	Yes	Yes	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:1	1	Veh	0	0.0	0
Veh Det:2	2	Veh	0	0.0	0
Veh Det:3	4	Veh	0	0.0	3
Veh Det:4	4	Veh	0	0.0	3
Veh Det:5	5	Veh	0	0.0	0
Veh Det:6	6	Veh	0	0.0	0
Veh Det:7	8	Veh	0	0.0	3
Veh Det:8	8	Veh	0	0.0	3

Pedestrian Detector

Assign Phase	Mode	Switch Phase	Extend	Delay

Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Spc Det:1	1	Veh	0	0.0	0
Spc Det:3	4	Veh	0	0.0	3
Spc Det:4	4	Veh	0	0.0	3
Spc Det:5	5	Veh	0	0.0	0
Spc Det:7	8	Veh	0	0.0	3
Spc Det:8	8	Veh	0	0.0	3

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:

ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 2
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
4	1	7
5	2	6
6	2	5
8	1	1

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	7	8	9	10	11	12	13	14	15	16
	5	5			2	2										
	6	6			5	6										

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40

Default Data

Signal Driver Ouput

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way
Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0
Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	150
2/1	180

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	15	0=Actuated	2	62	1=Coordinate	4	35	0=Actuated	5	15	0=Actuated
6	62	1=Coordinate	8	38	0=Actuated						

Dial 2 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	28	0=Actuated	2	79	1=Coordinate	4	35	0=Actuated	5	28	0=Actuated
6	79	1=Coordinate	8	38	0=Actuated						

Traffic Plan Data

Plan: 1/1/1	Offset Time: 64	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 2/1/1	Offset Time: 161	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2
End of Daylight Saving Month: 11 Week: 1
Cycle Zero Reference Hours: 24 Min: 0

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	9:30	1/1/1																	
2	1	11:0	2/1/1																	
3	1	18:0	1/1/1																	
4	1	19:0	0/0/4																	
5	2	7:0	1/1/1																	
6	2	11:0	2/1/1																	
7	2	18:30	1/1/1																	
8	2	20:0	0/0/4																	

AUX. Events

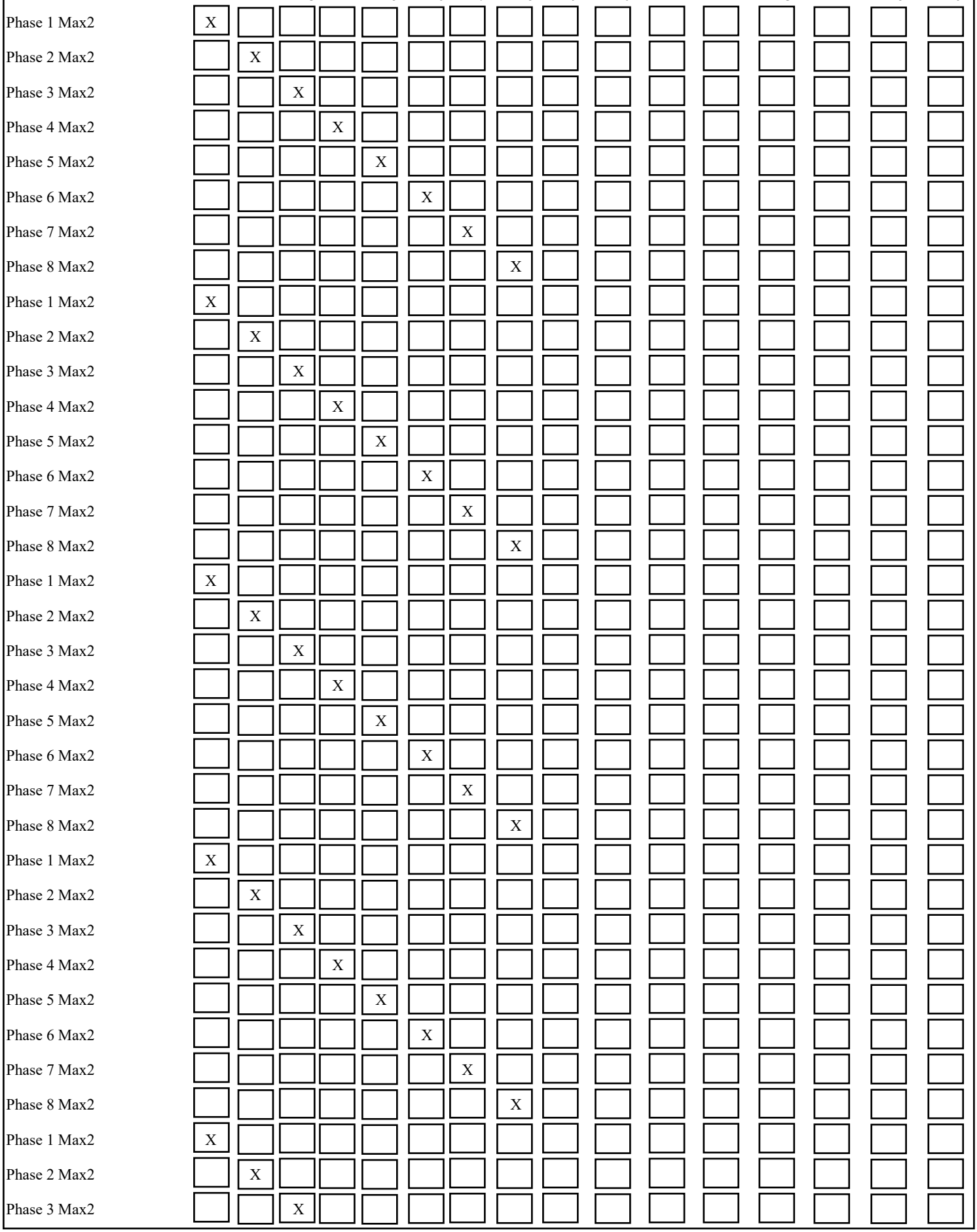
Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

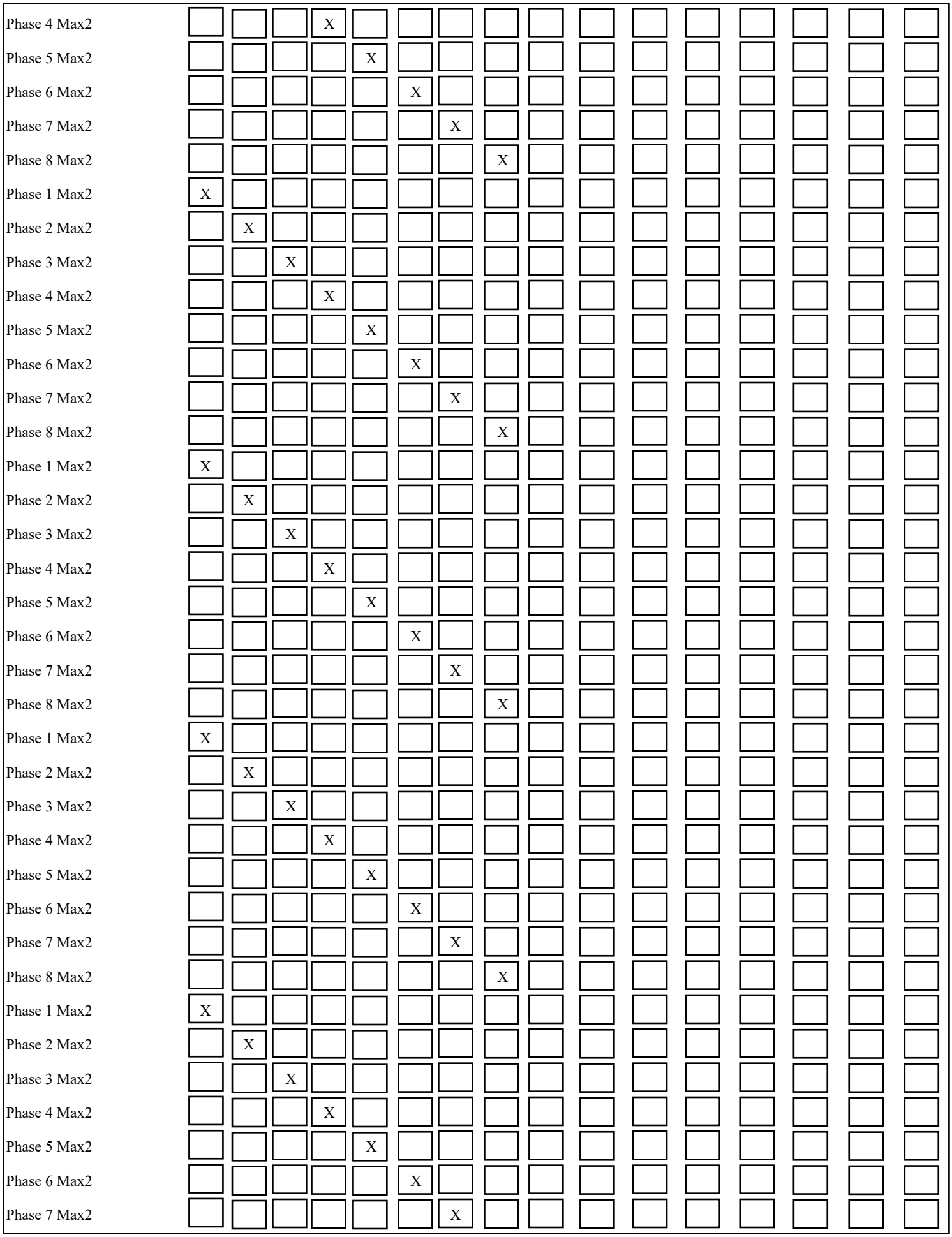
Default Data - No Special Day(s) or Week(s) Programmed

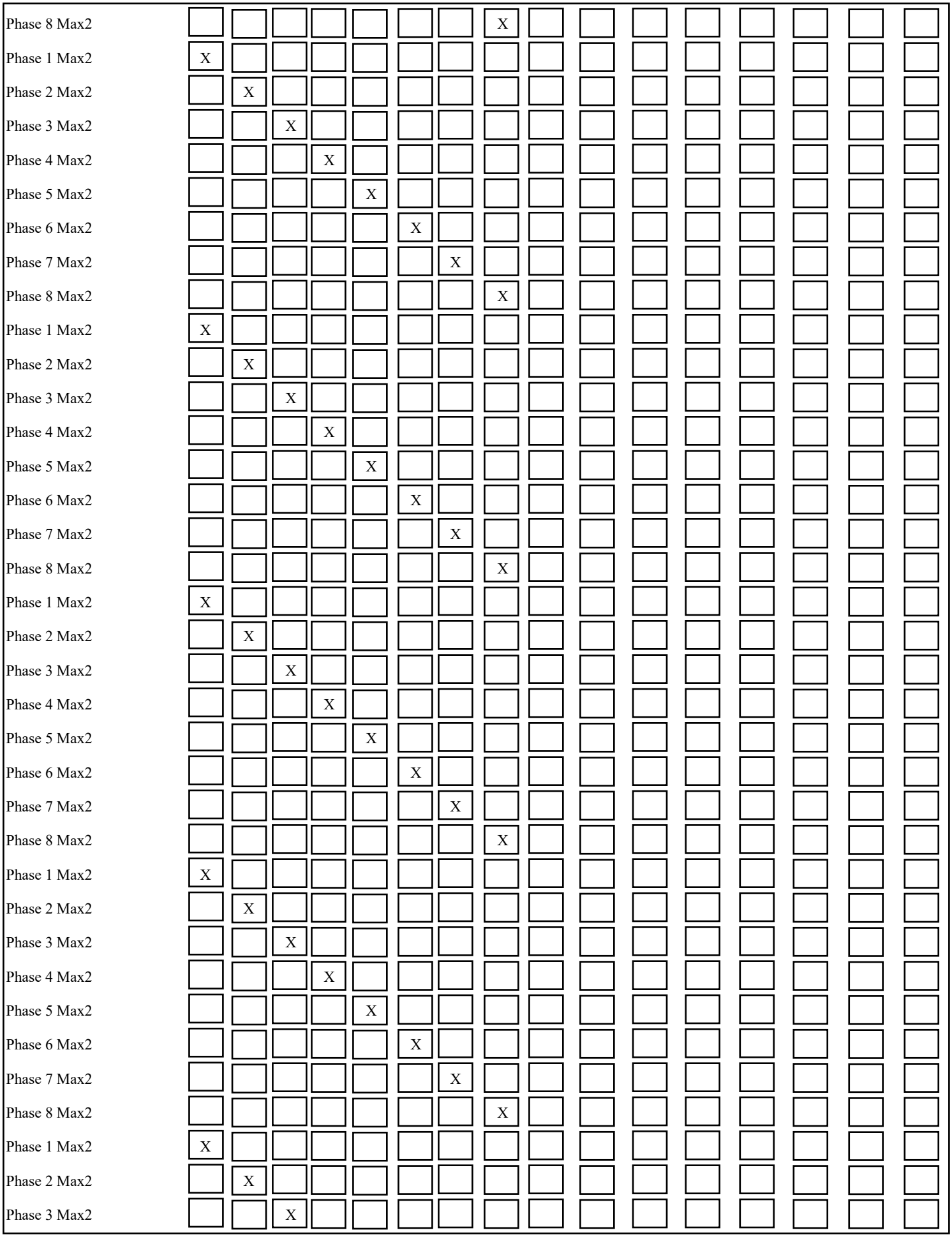
Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function




Phase 4 Max2
Phase 5 Max2
Phase 6 Max2
Phase 7 Max2
Phase 8 Max2
Phase 1 Max2
Phase 2 Max2
Phase 3 Max2
Phase 4 Max2
Phase 5 Max2
Phase 6 Max2
Phase 7 Max2
Phase 8 Max2
Phase 1 Max2
Phase 2 Max2
Phase 3 Max2
Phase 4 Max2
Phase 5 Max2
Phase 6 Max2
Phase 7 Max2
Phase 8 Max2
Phase 1 Max2
Phase 2 Max2
Phase 3 Max2
Phase 4 Max2
Phase 5 Max2
Phase 6 Max2
Phase 7 Max2
Phase 8 Max2
Phase 1 Max2
Phase 2 Max2
Phase 3 Max2
Phase 4 Max2
Phase 5 Max2
Phase 6 Max2
Phase 7 Max2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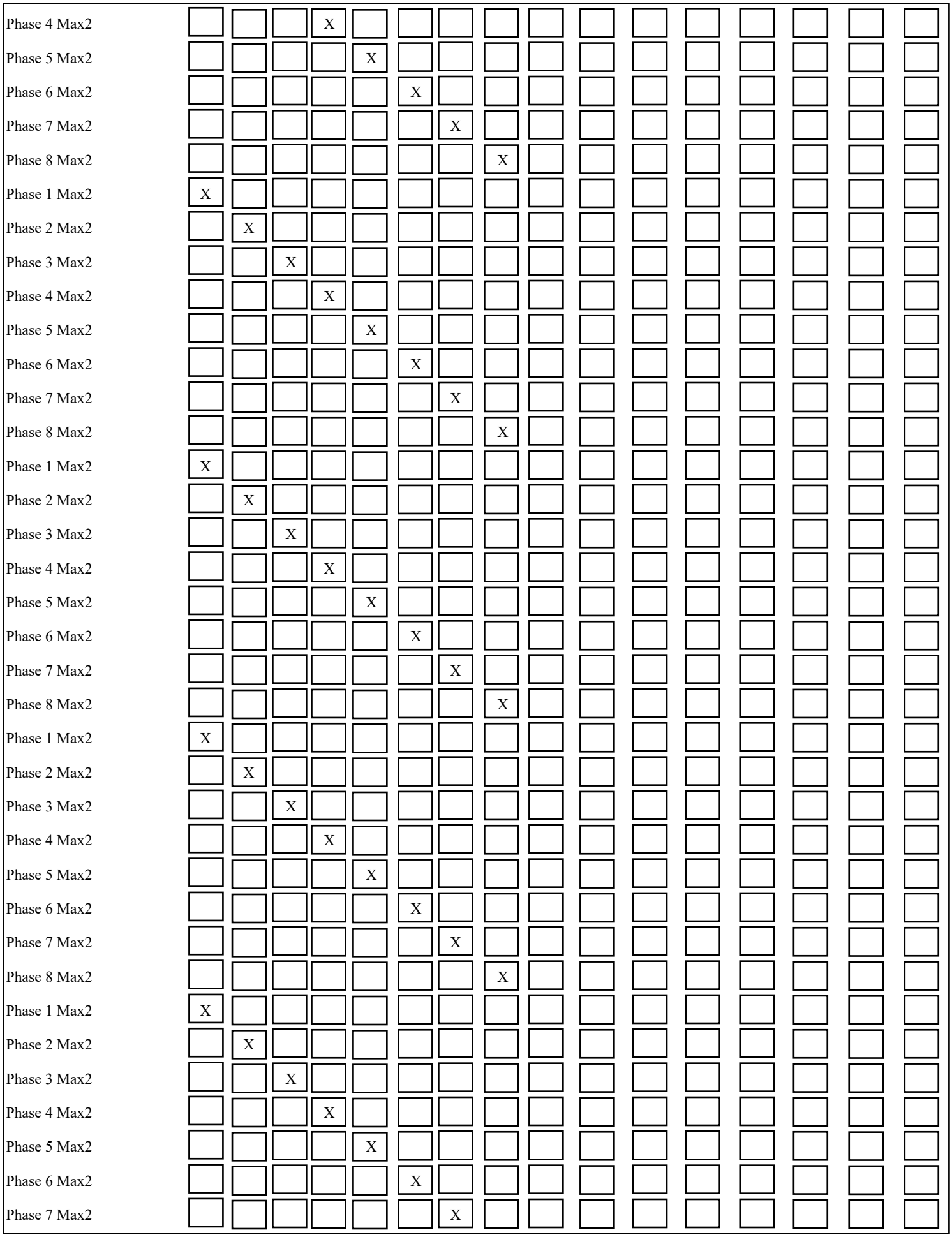
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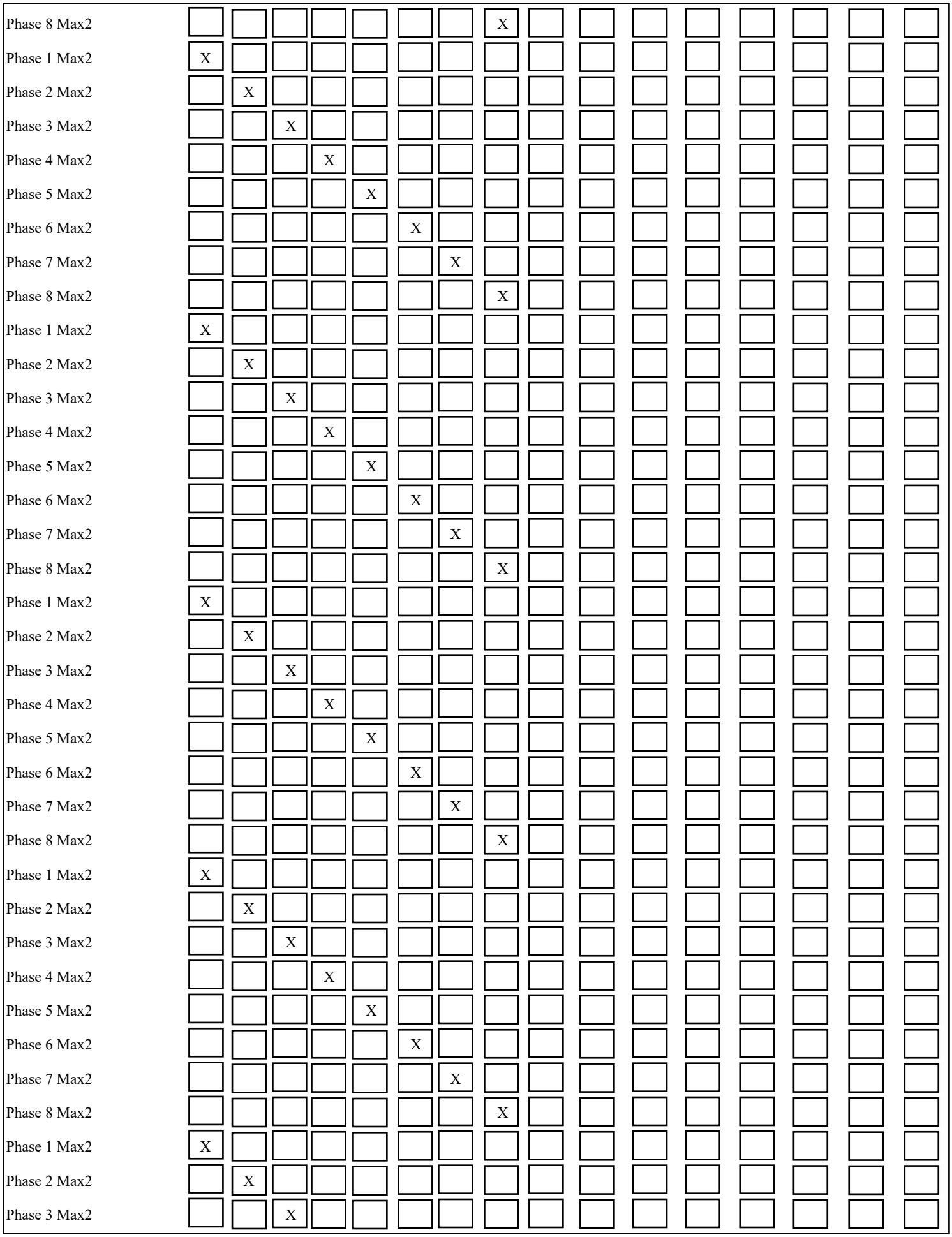
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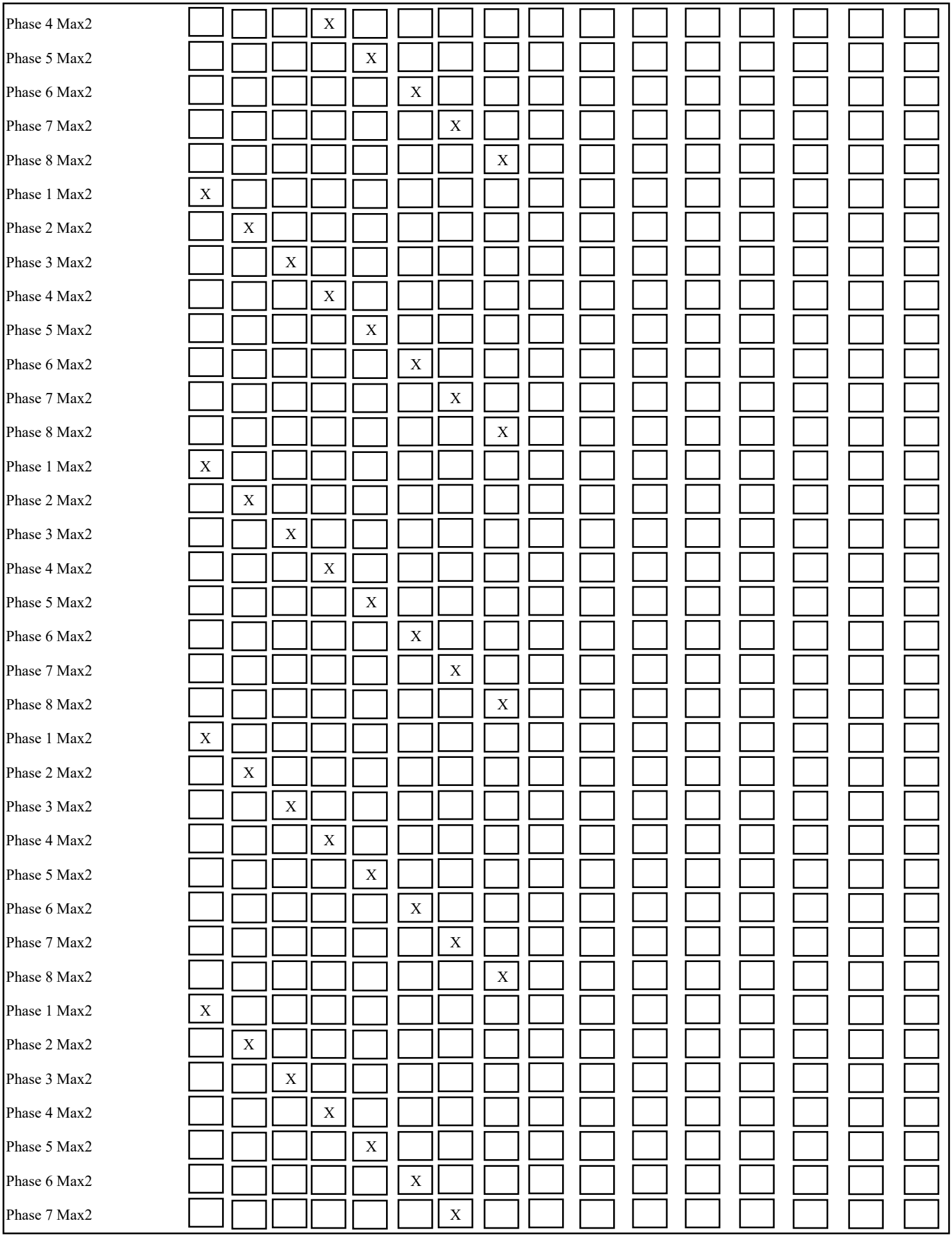
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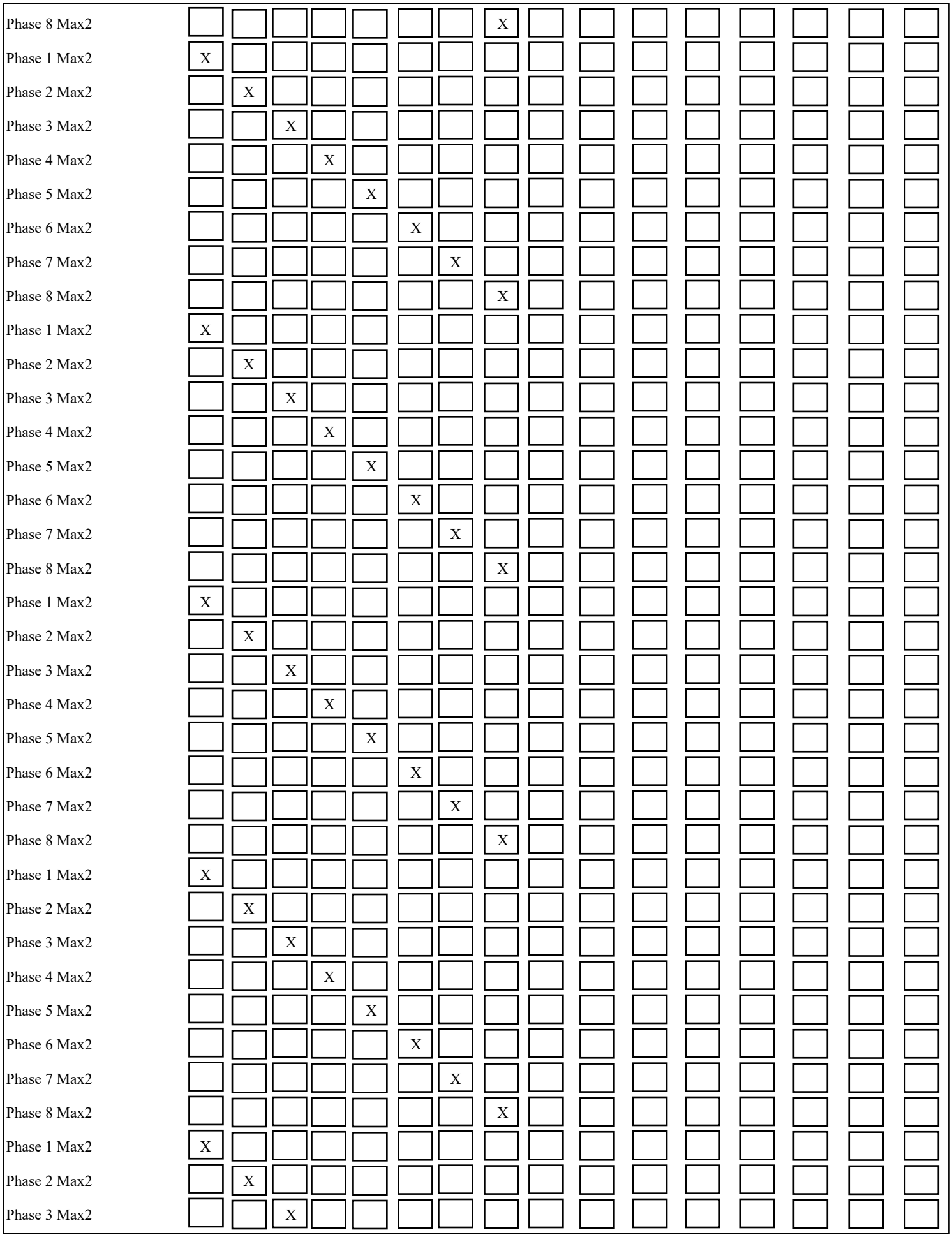
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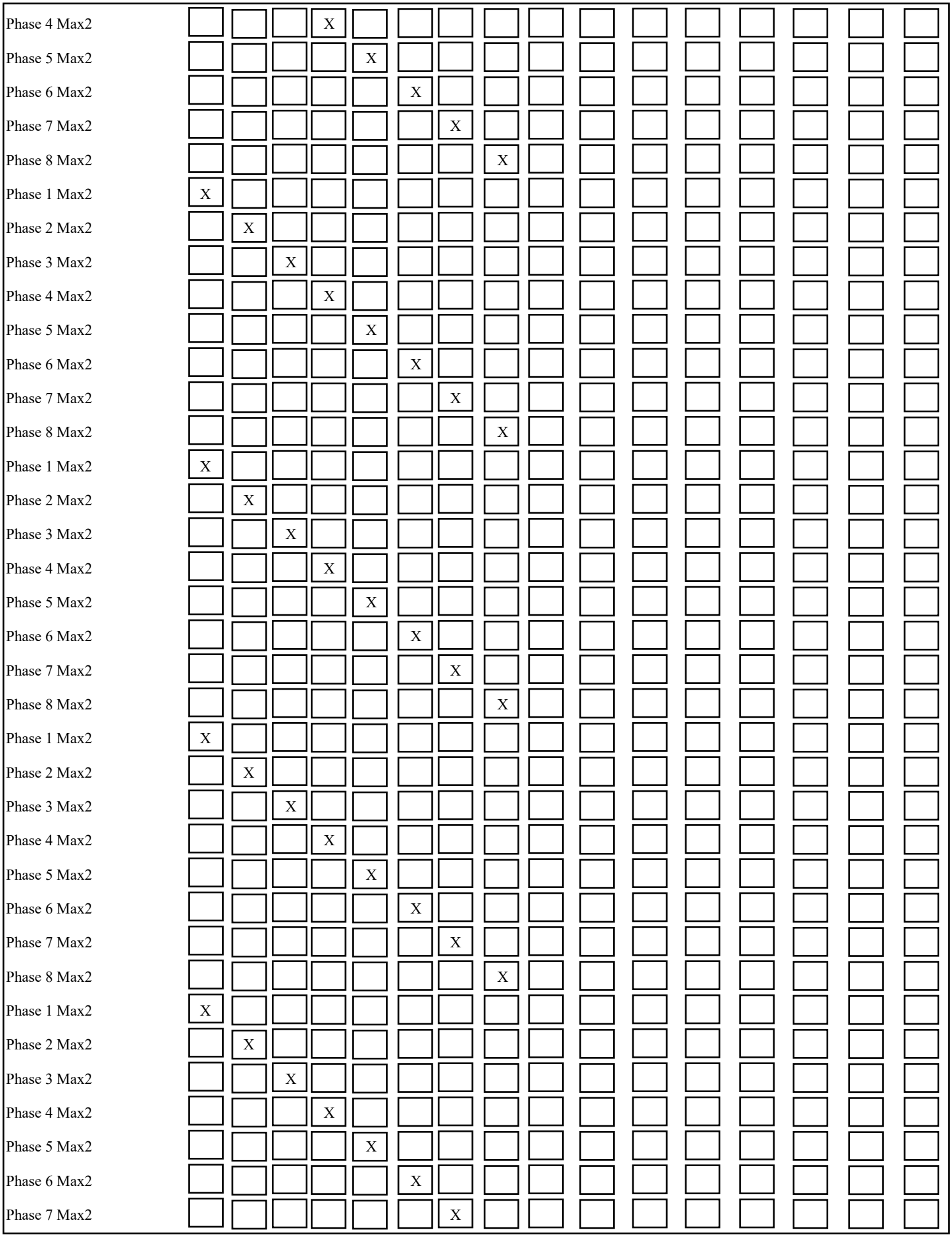
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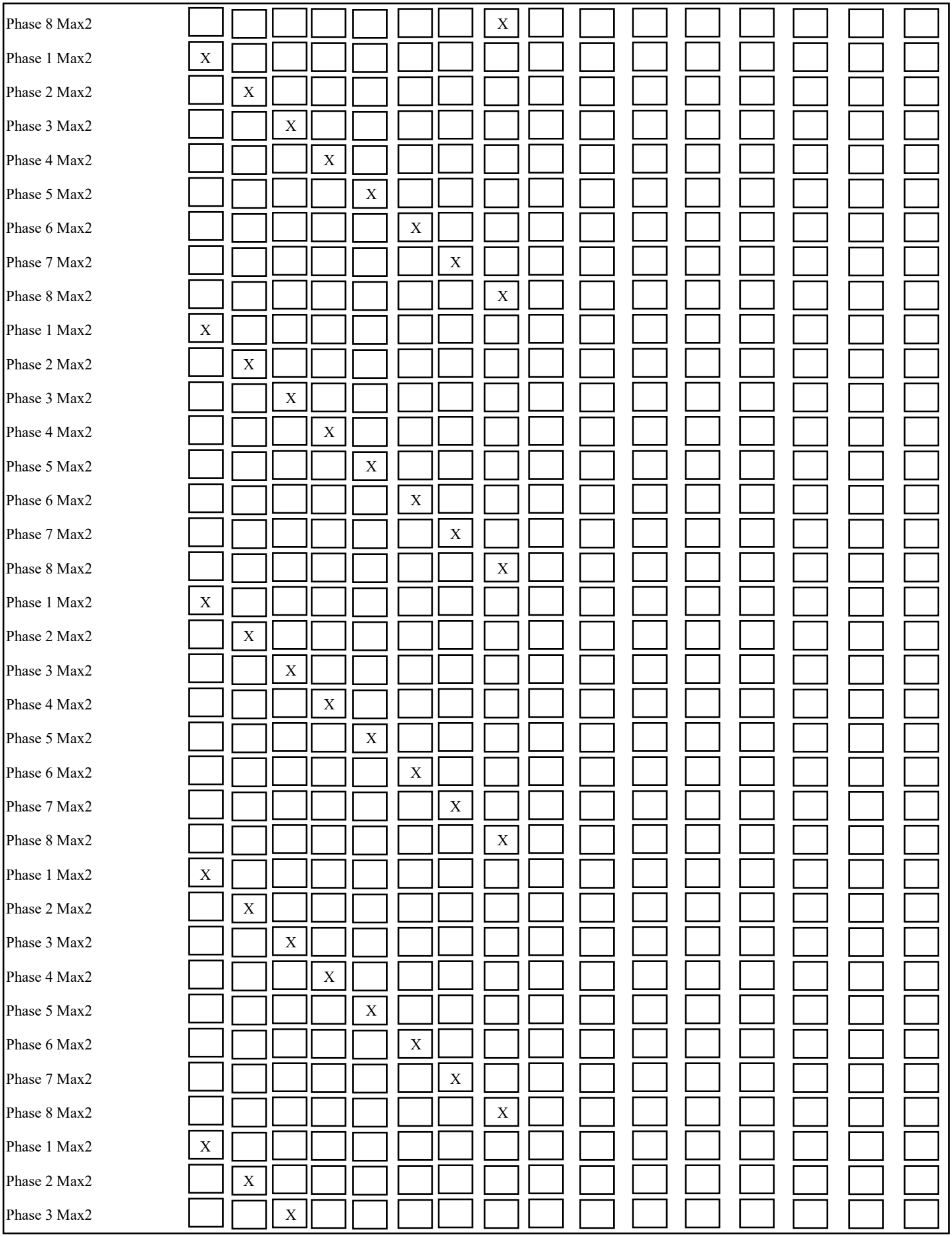
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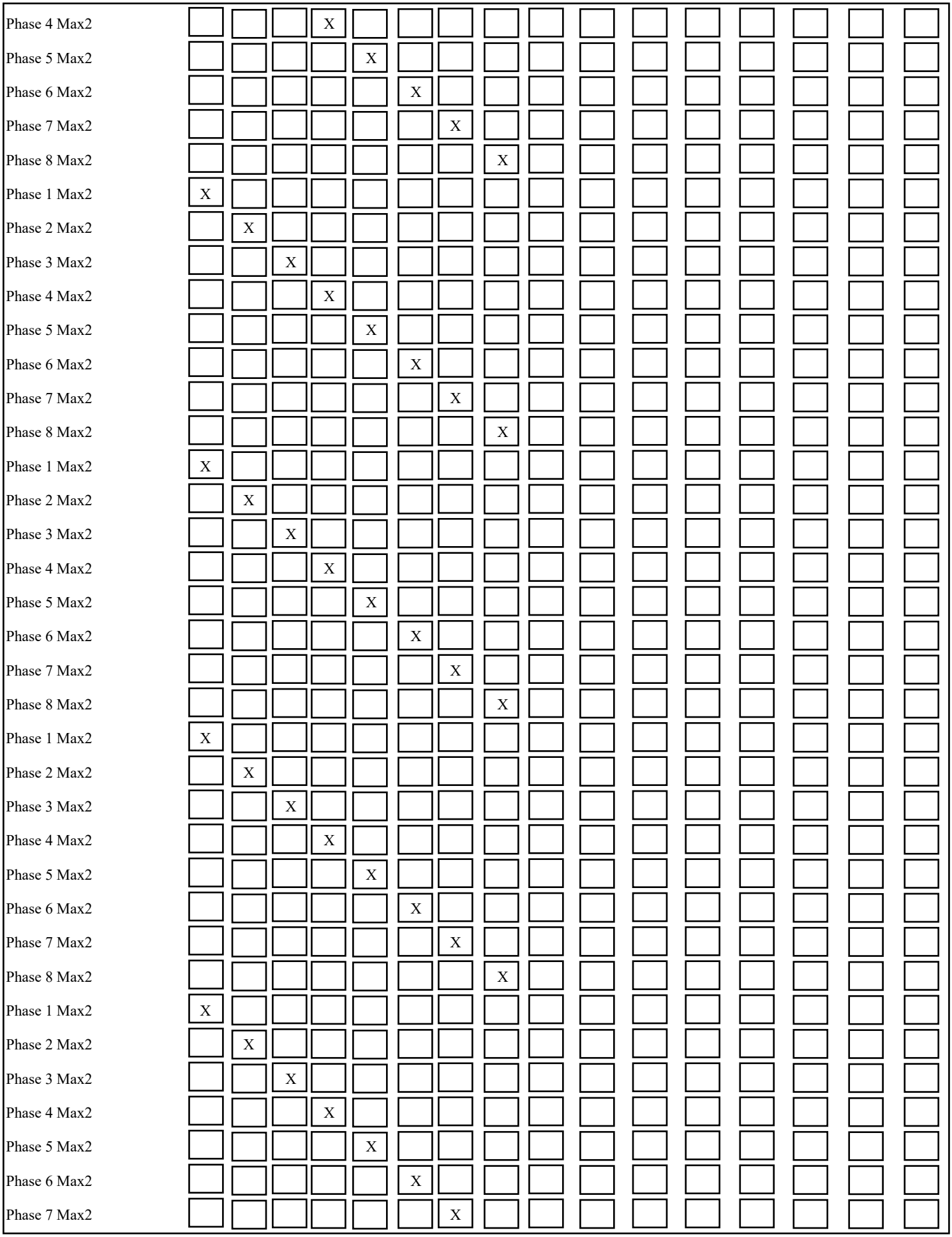
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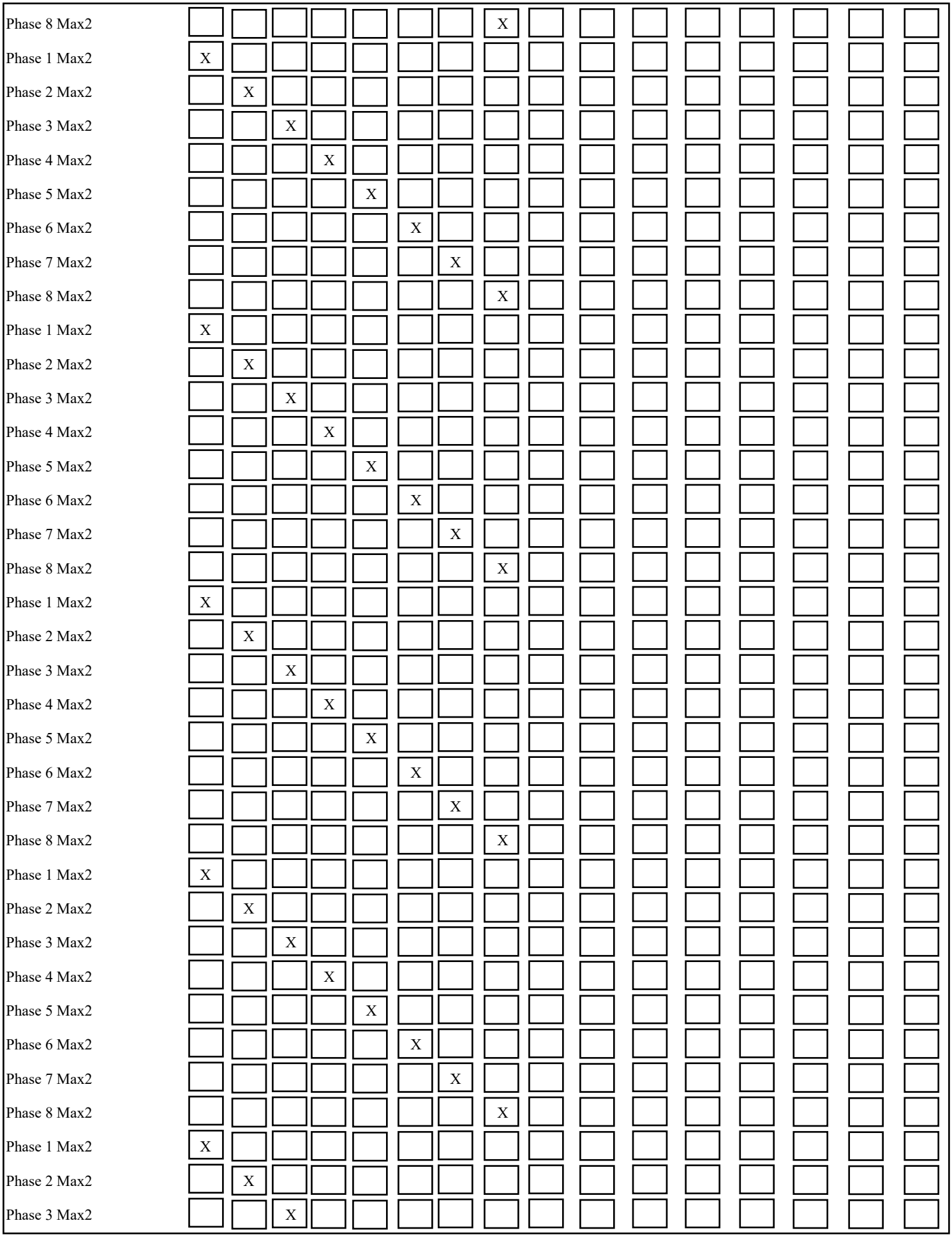
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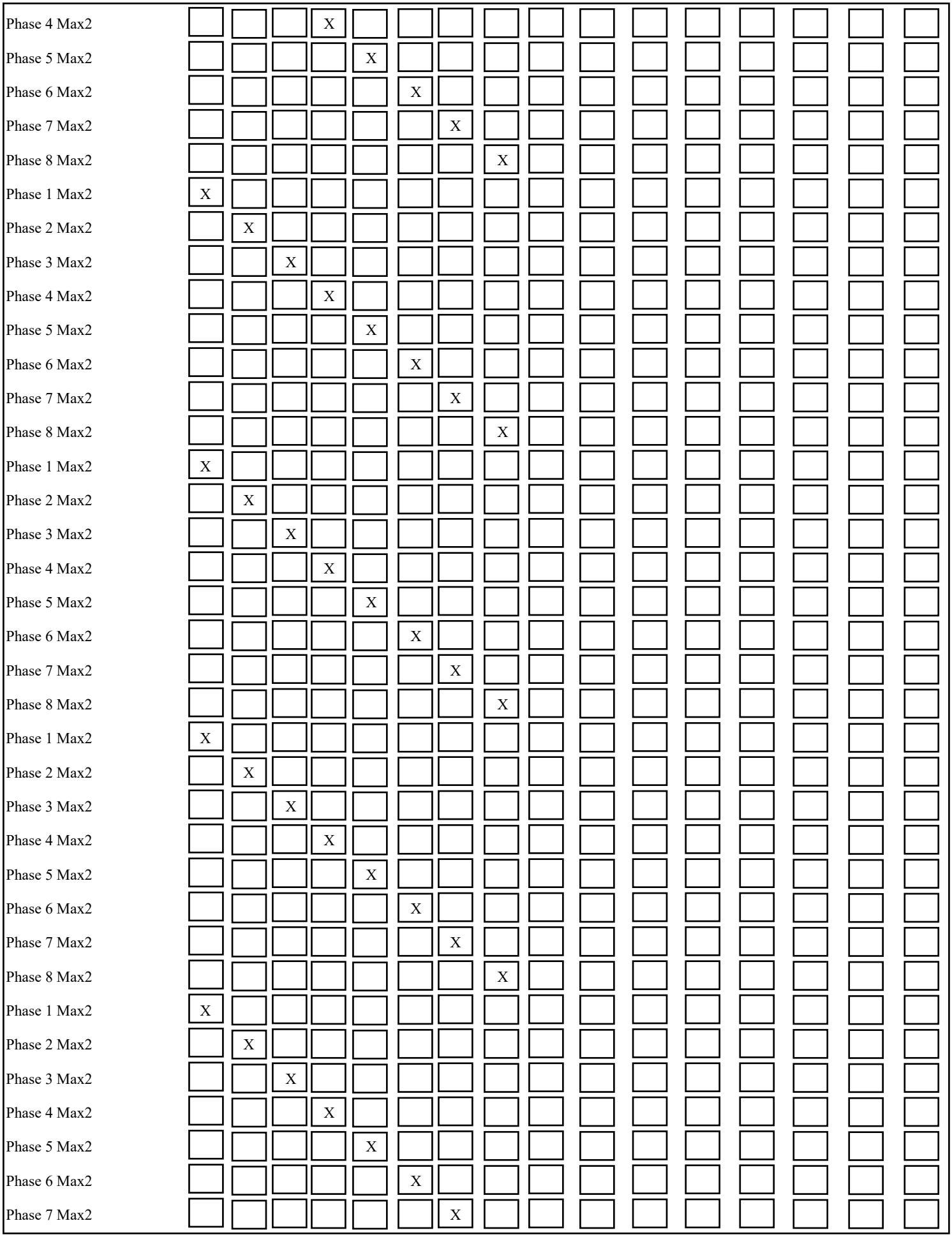
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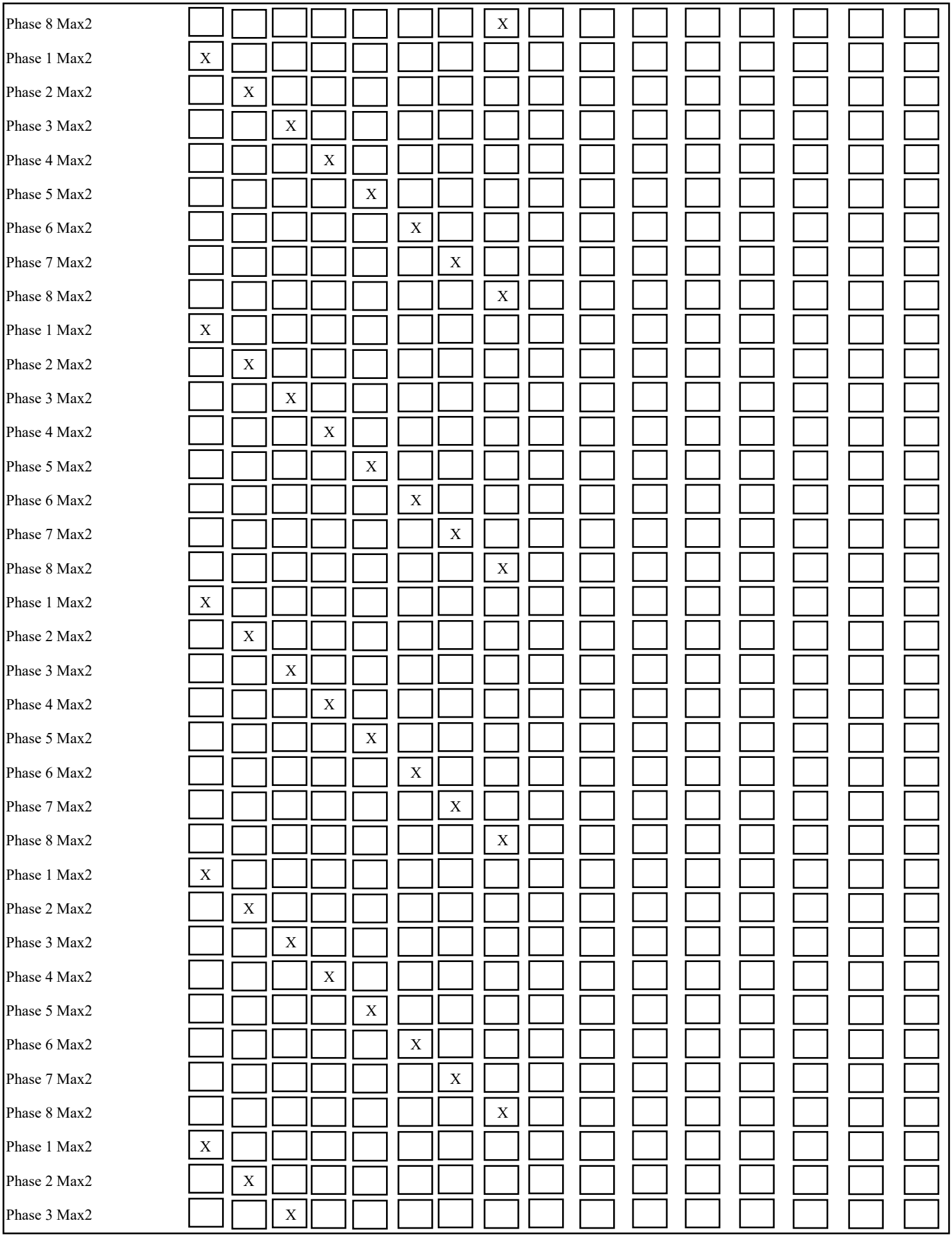
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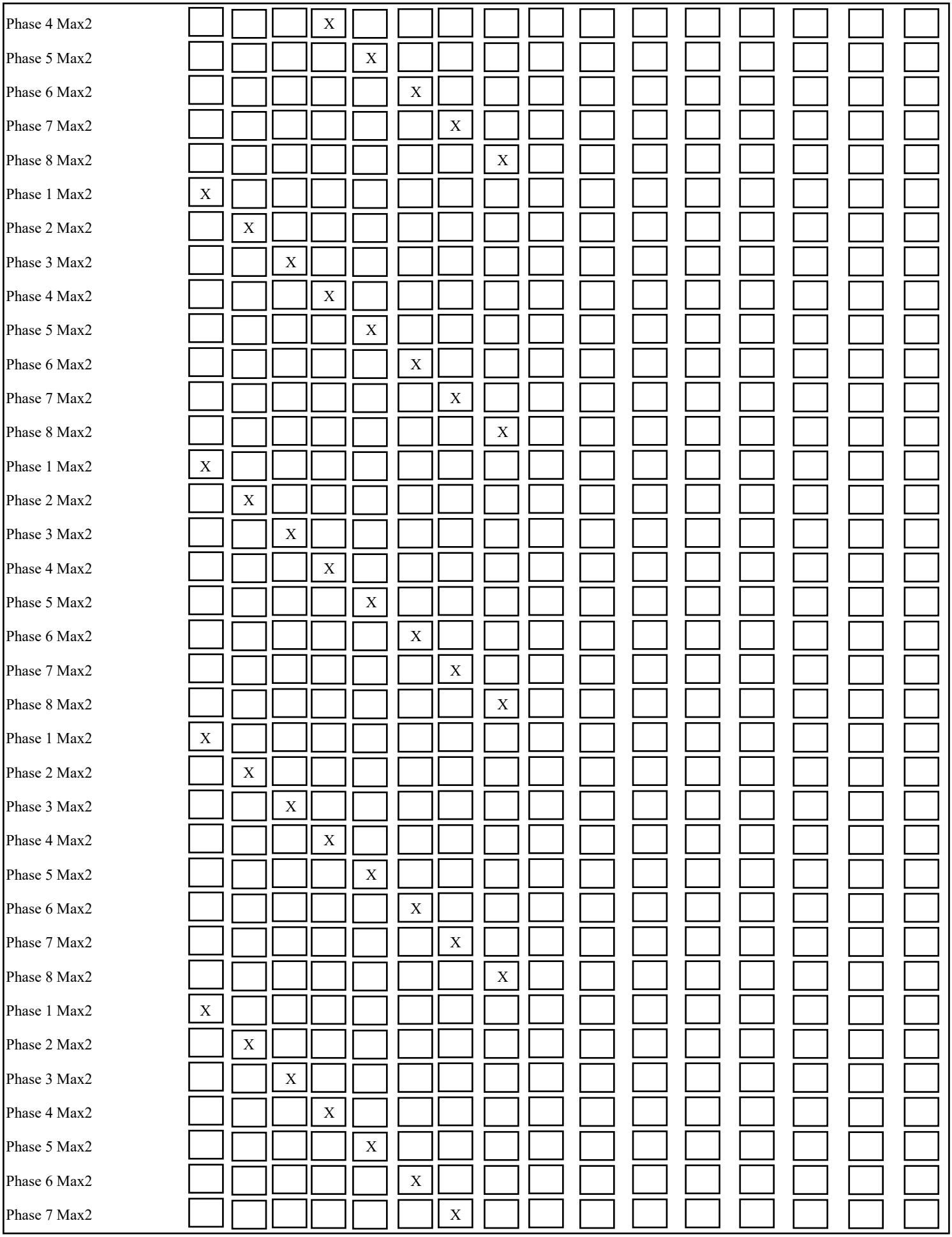
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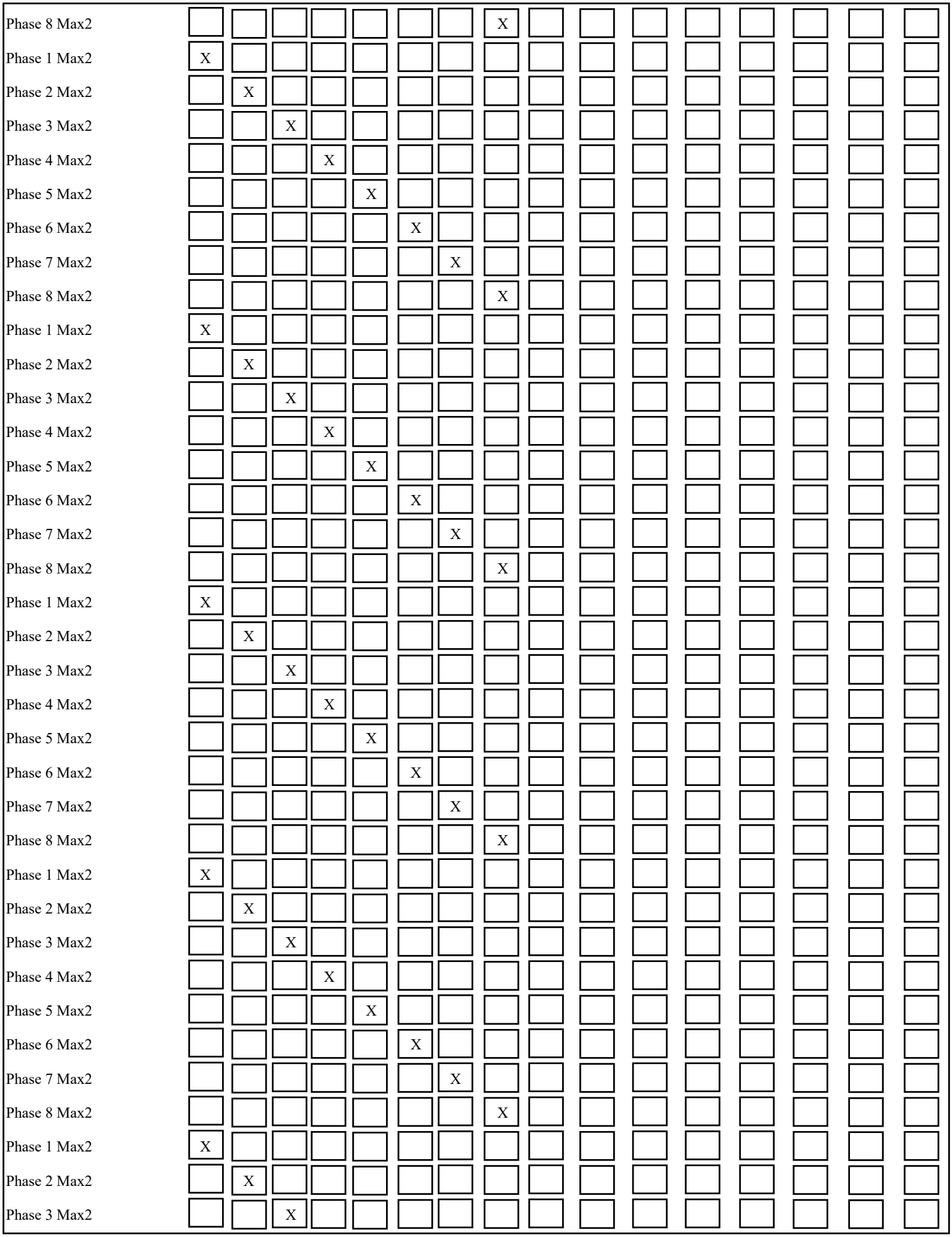
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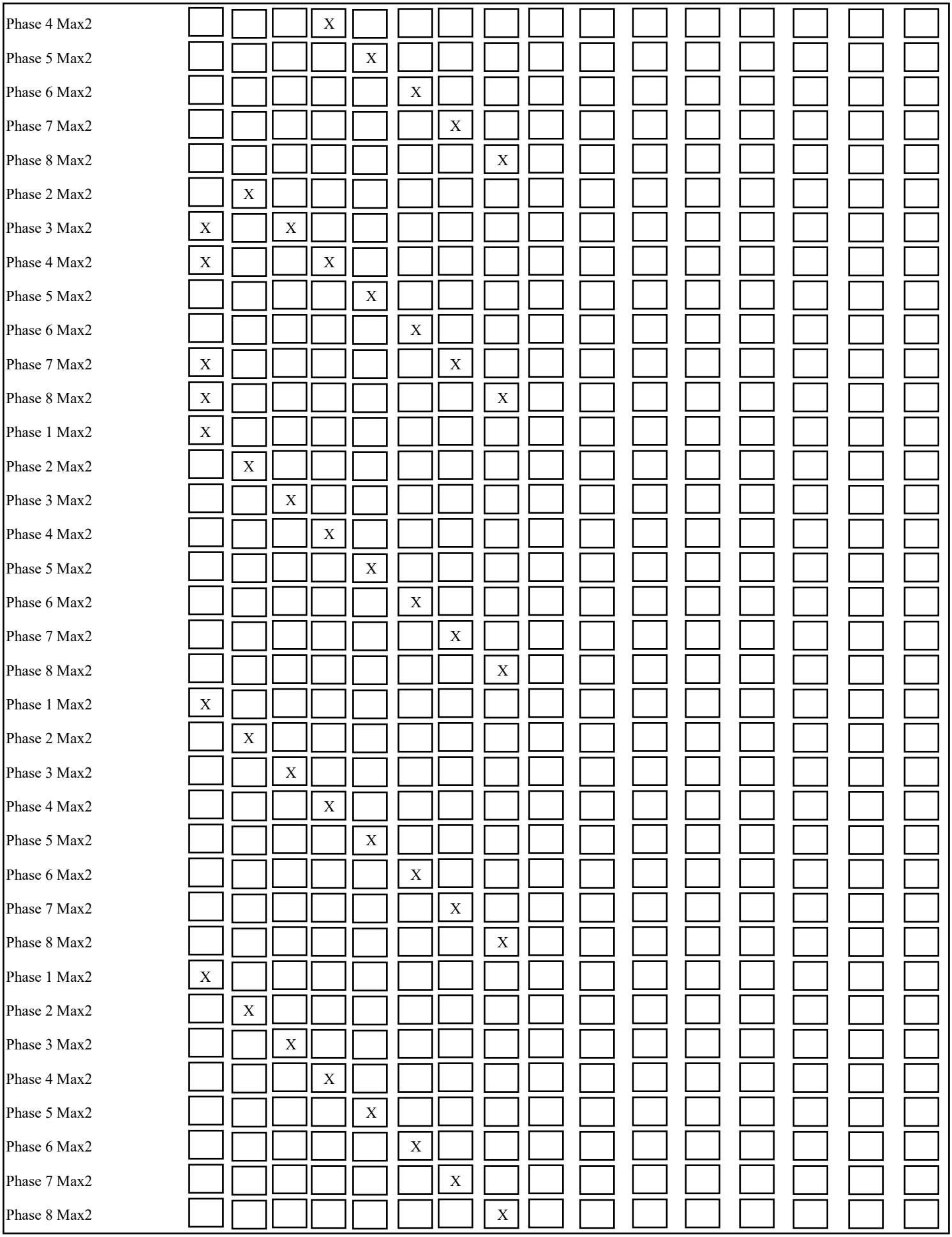
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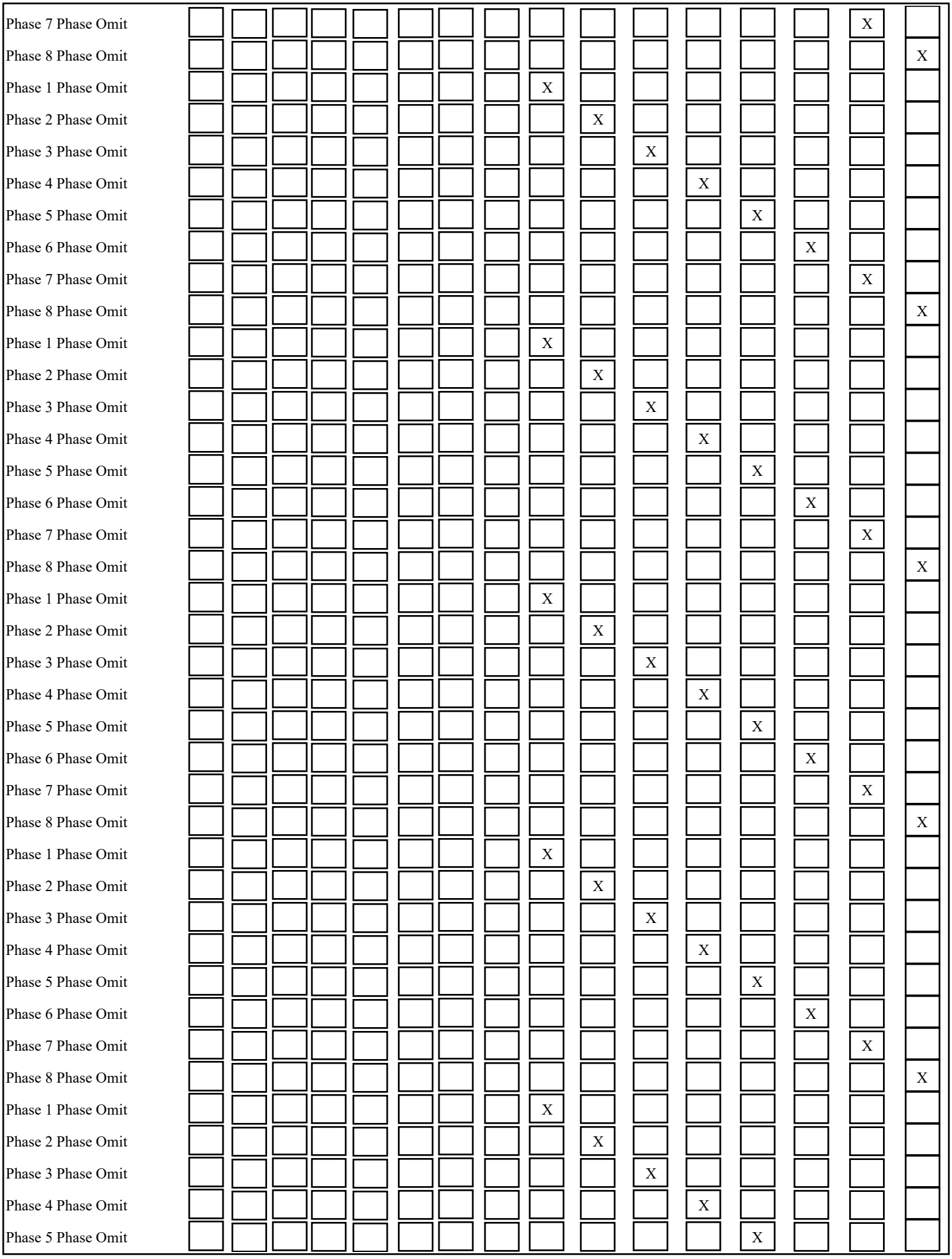
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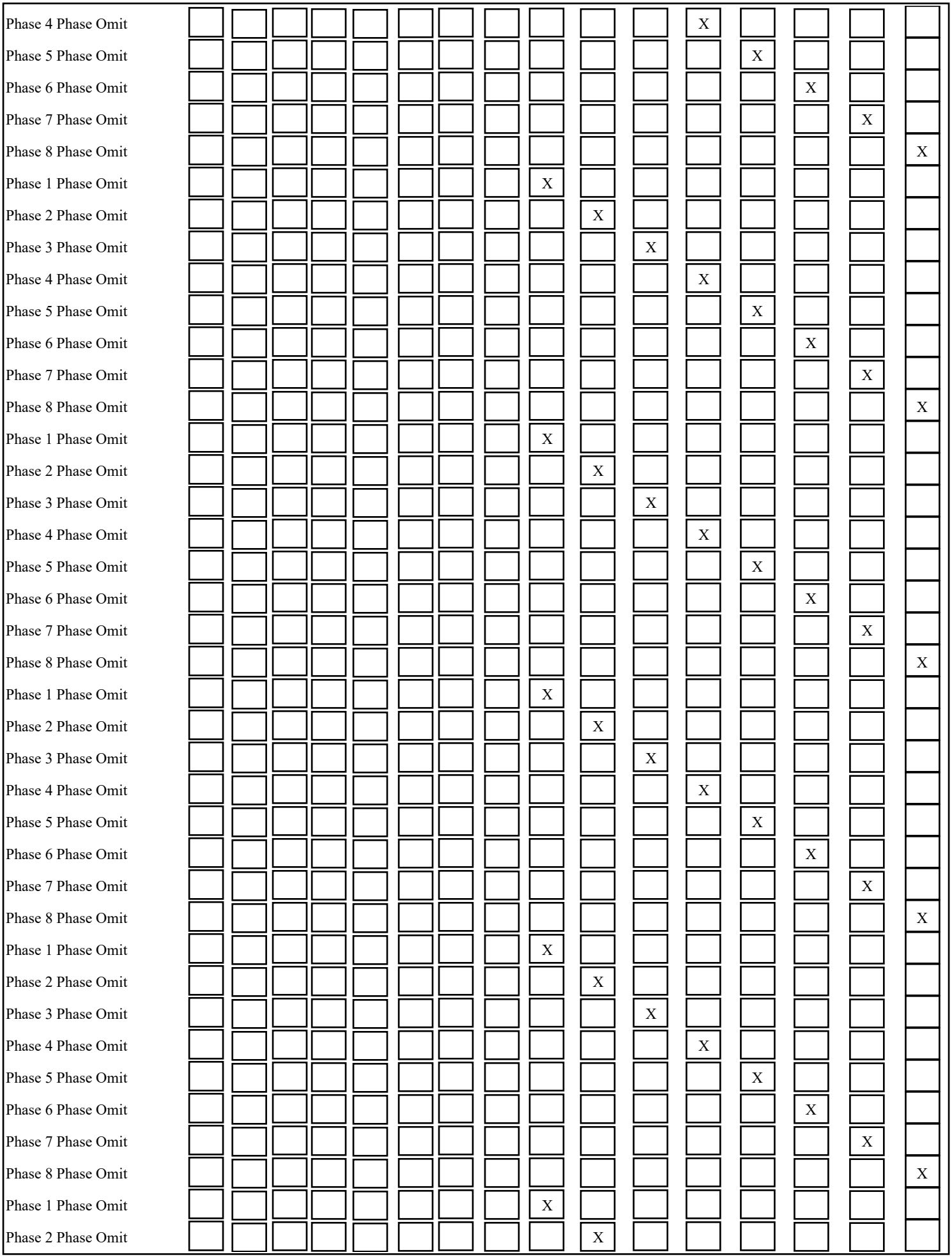
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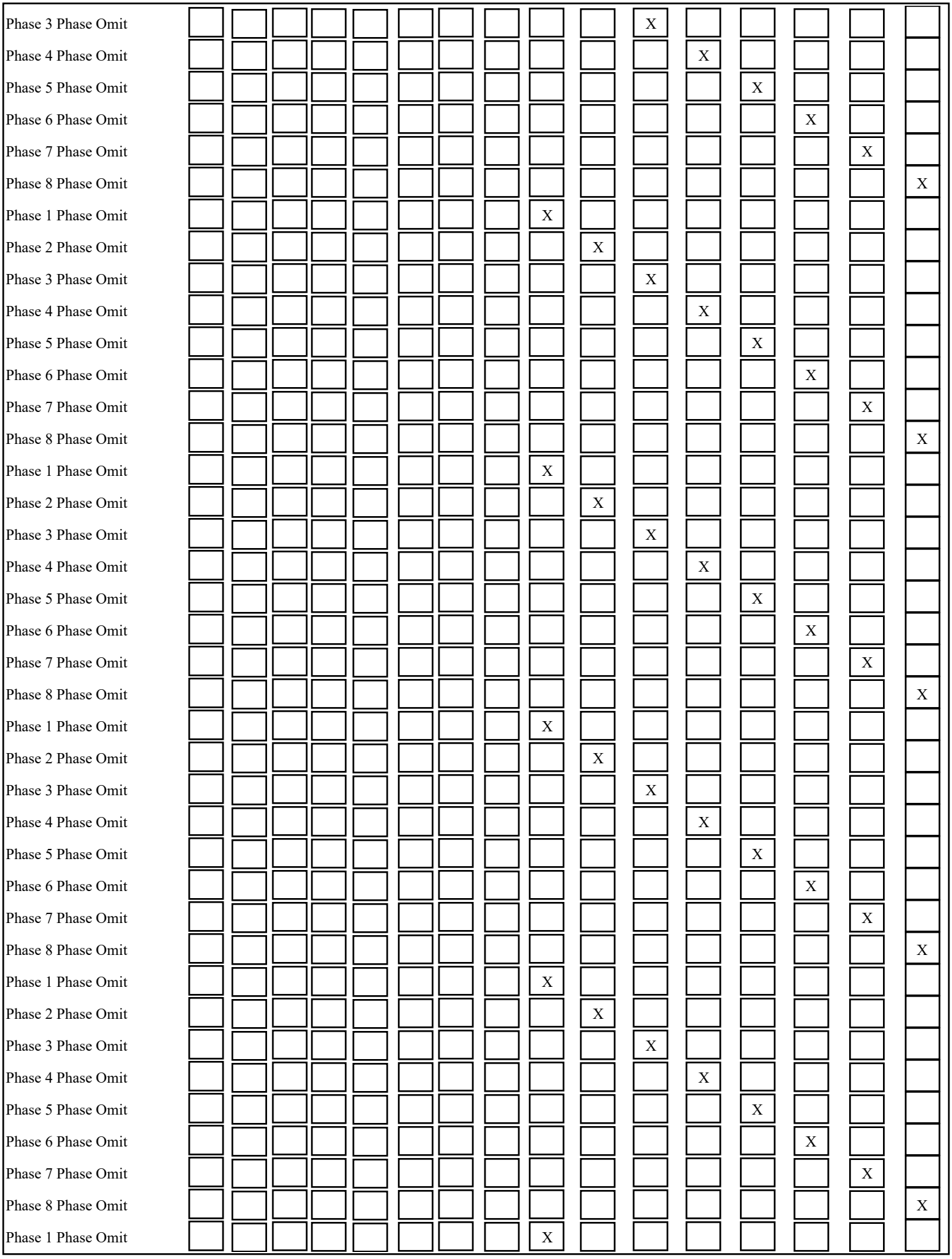
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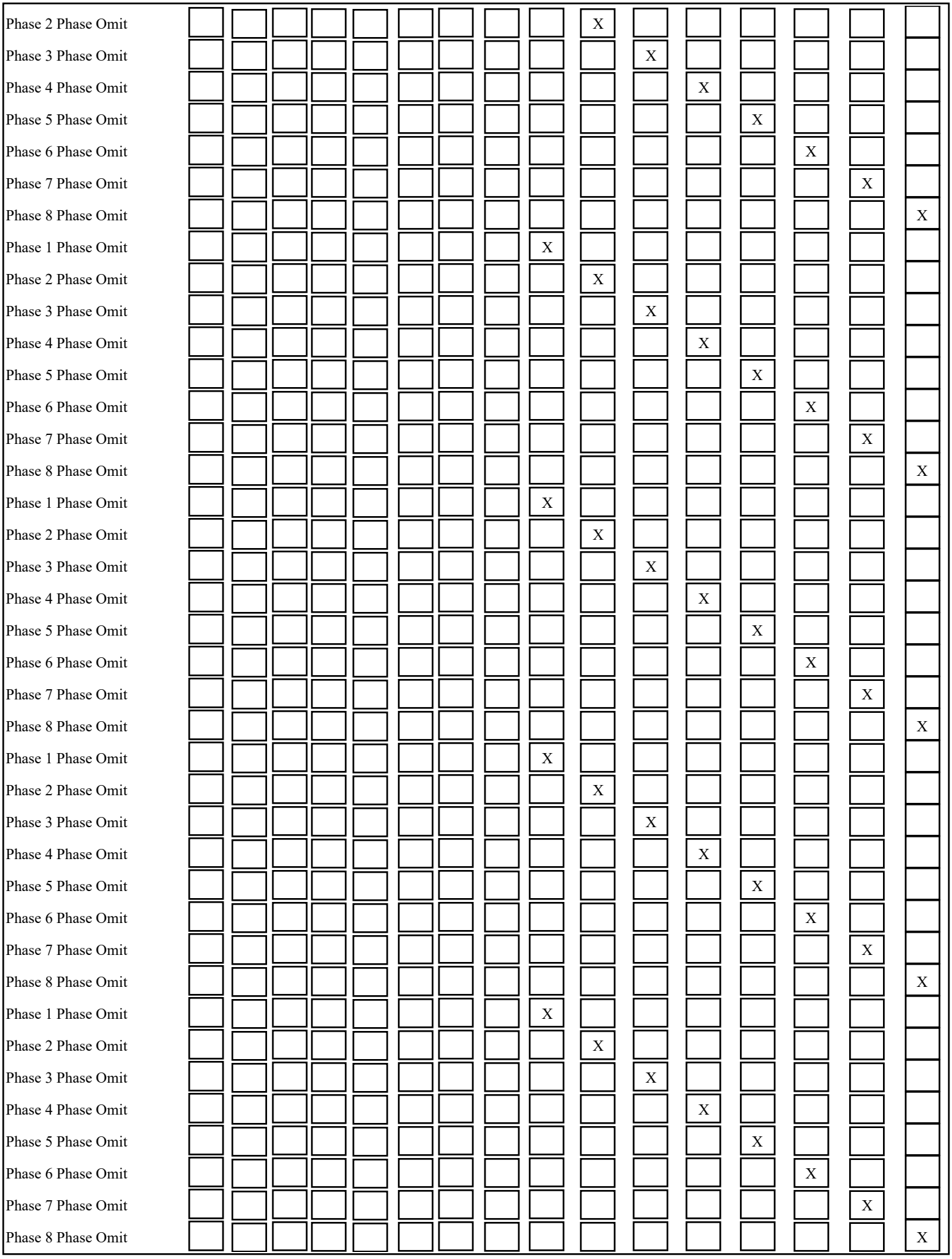
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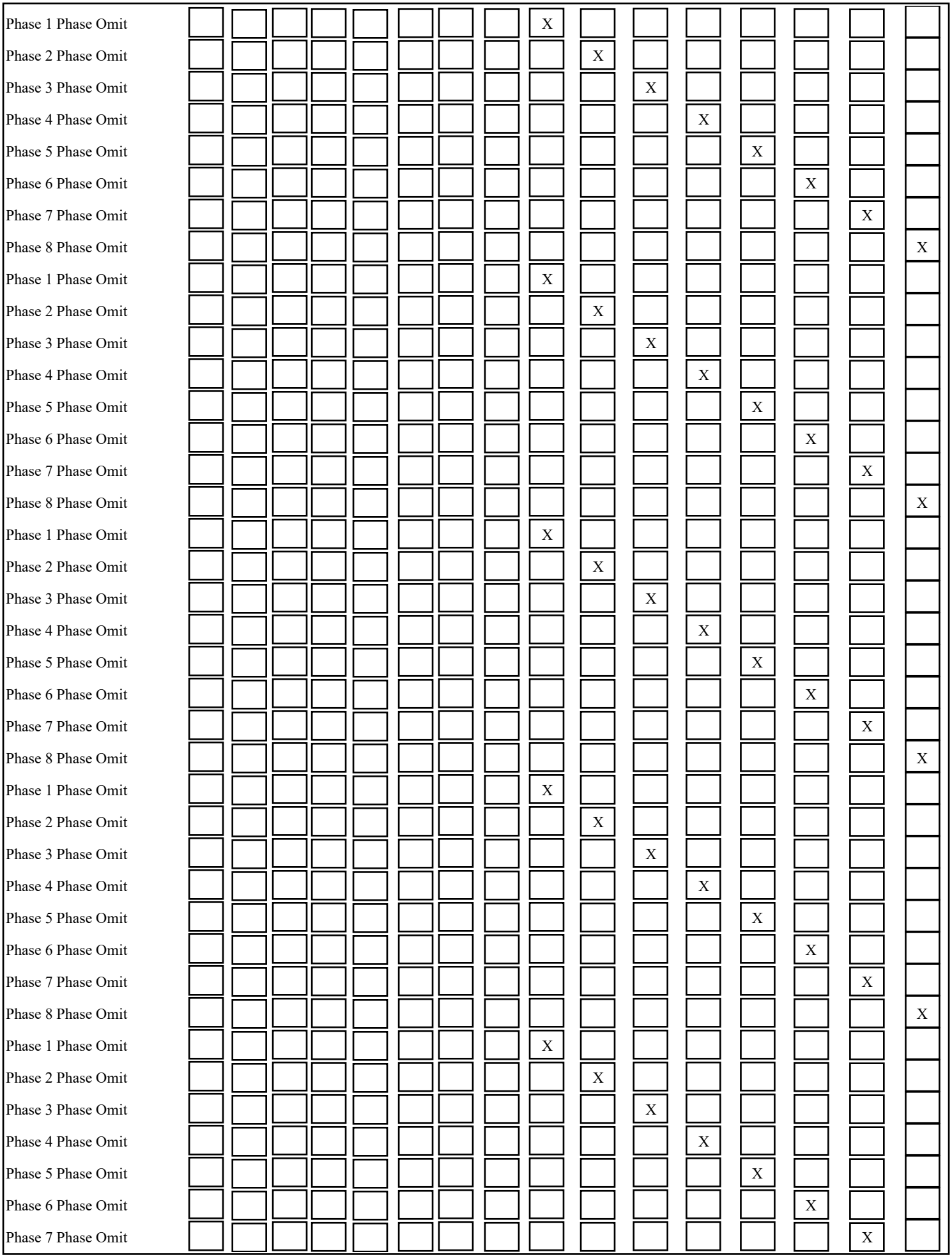
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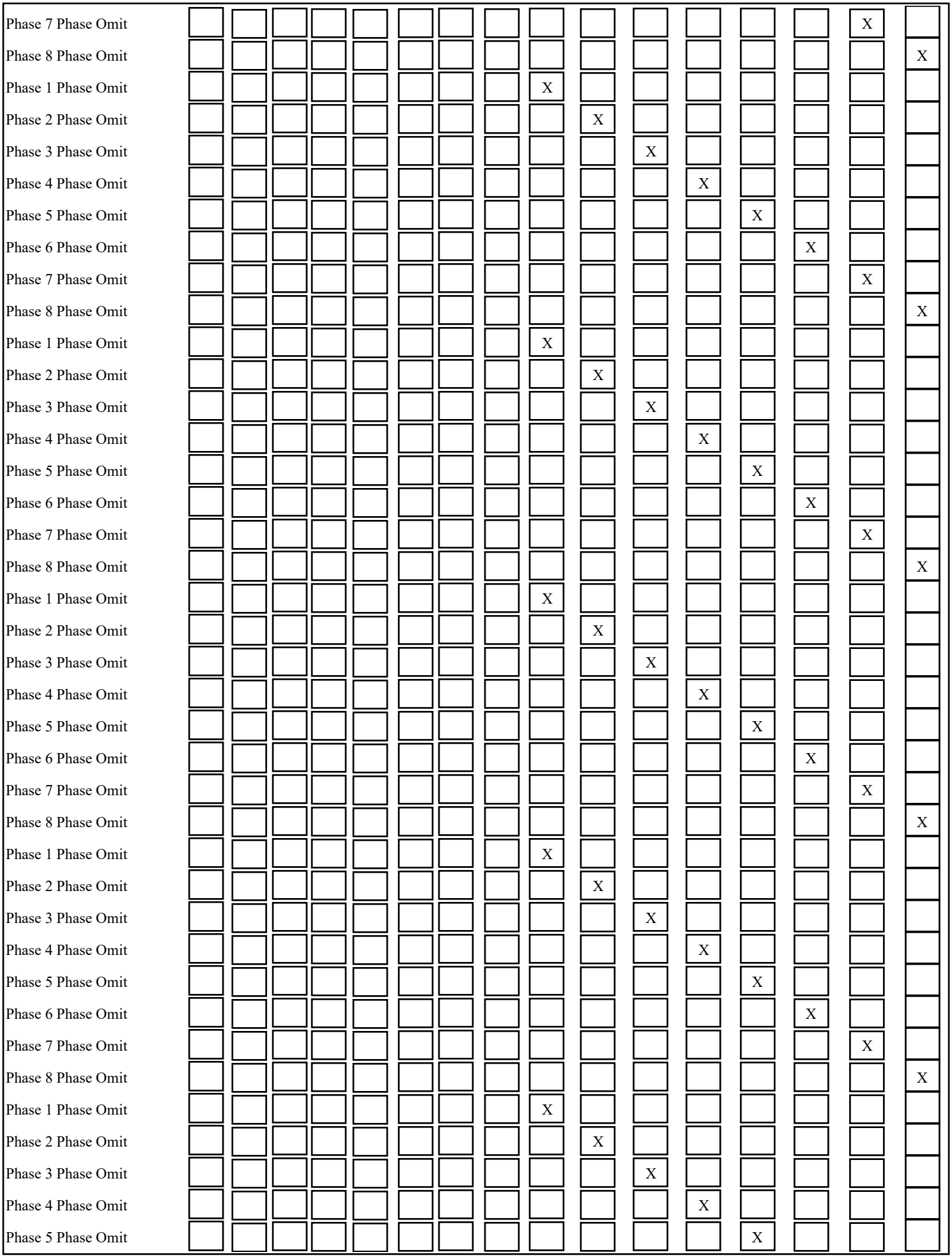
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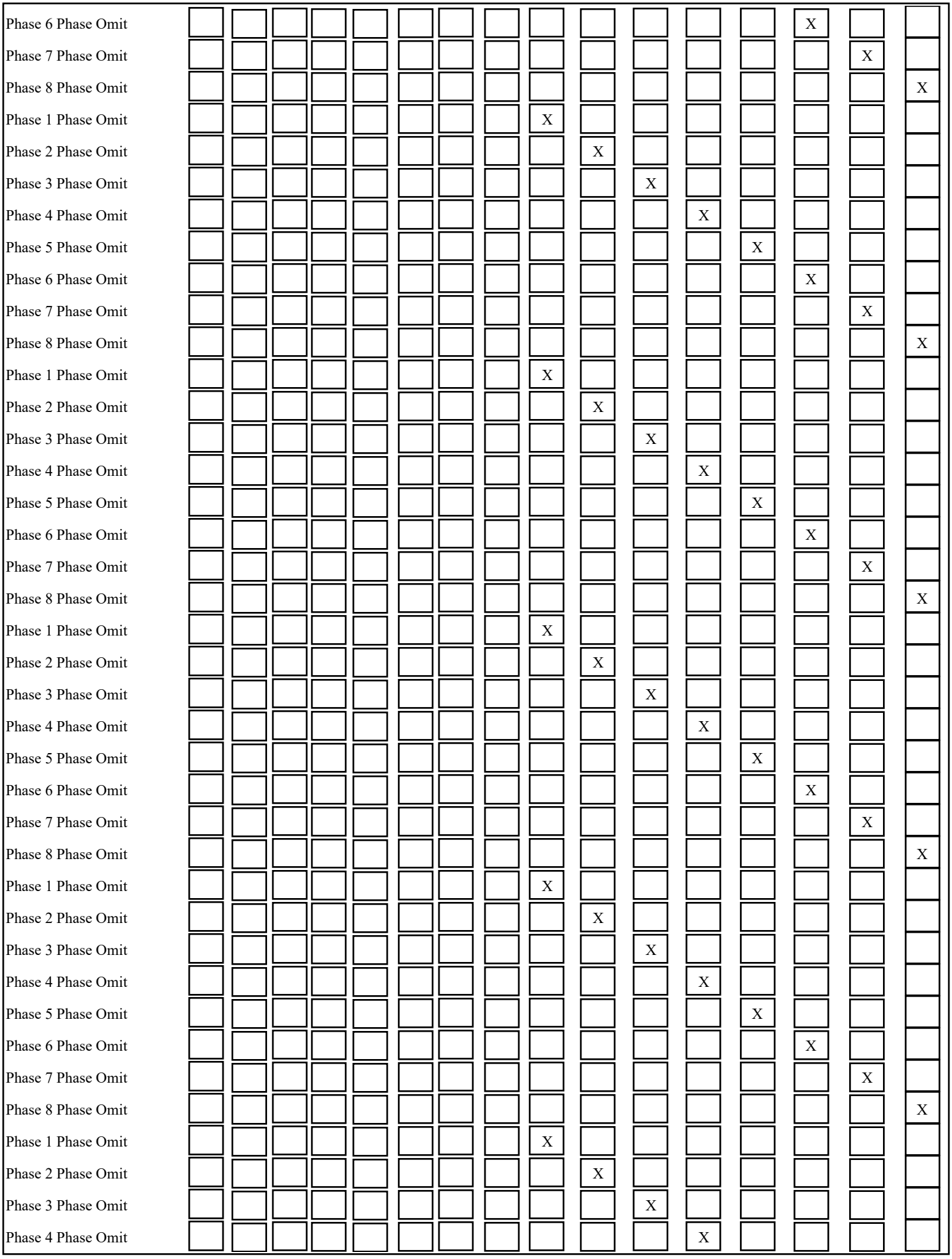
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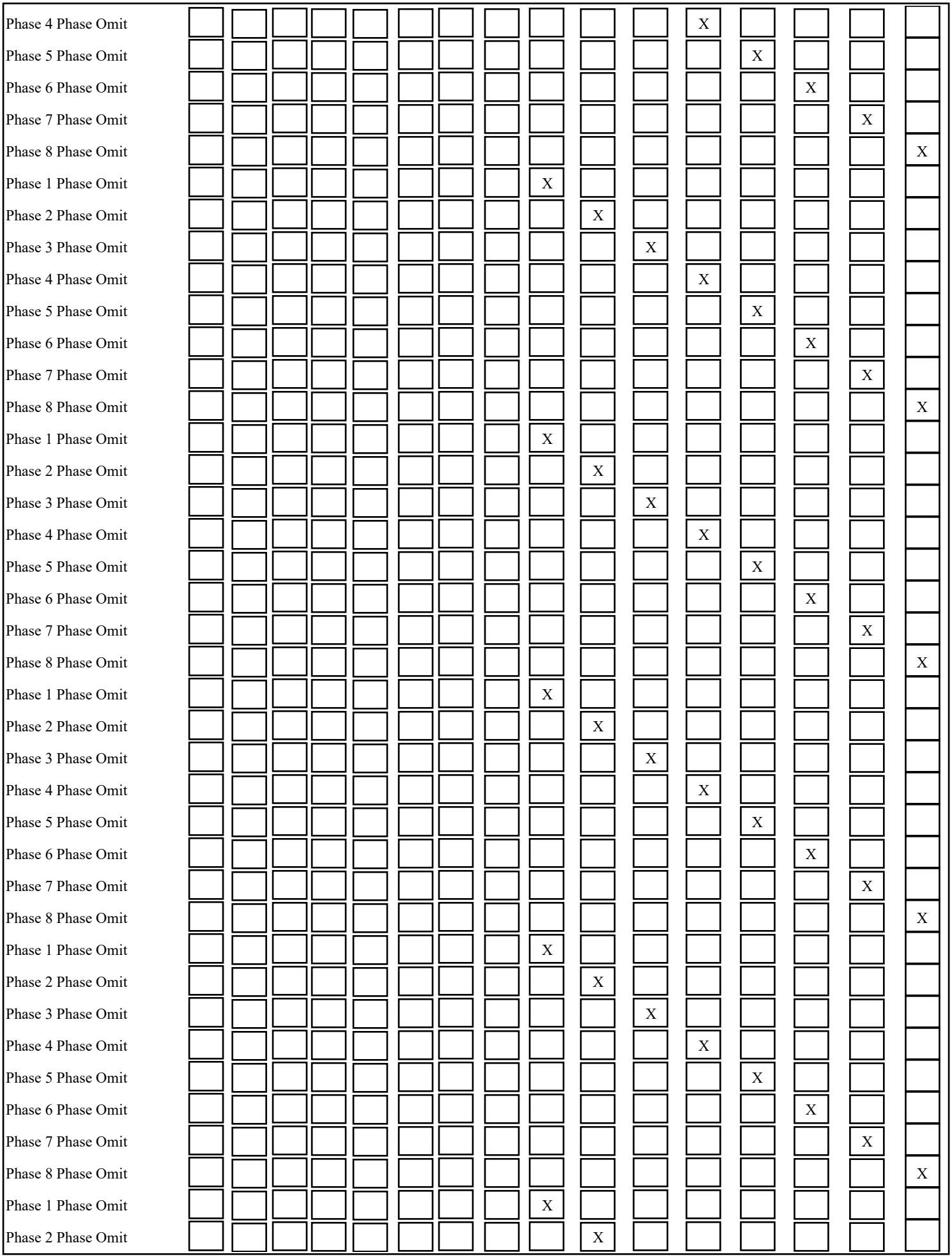
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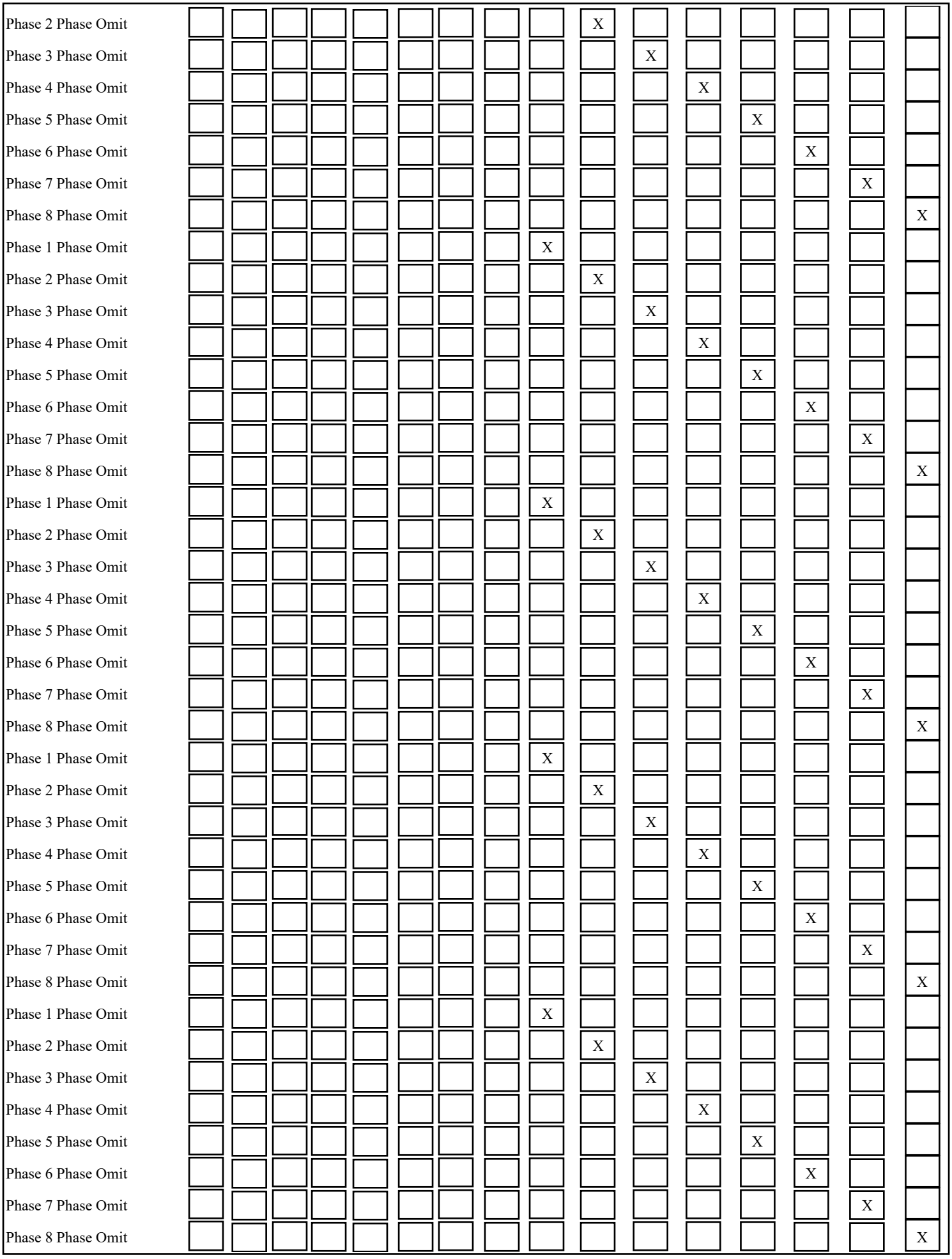
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	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
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Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function Veh Det Switch Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 > Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	Lock-Out	De Bounce	Gate Ext	Min G | W	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red	Sel Ret Mode
1	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
2	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
3	N	0	0	0	0	0	0	0.0	0	0 | 0	13	4.3	1.9	1	0	0.0	0.0	10	0	3.0	1.0	F Aut
4	N	0	0	0	0	0	0	0.0	0	0 | 0	13	4.3	1.9	1	0	0.0	0.0	10	0	3.0	1.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	0 | 0	13	4.3	1.9	1	0	0.0	0.0	10	0	3.6	1.9	F Aut
6	N	0	0	0	0	0	0	0.0	0	0 | 0	13	4.3	1.9	1	0	0.0	0.0	10	0	3.6	1.9	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
8	Yes	No

Preempt 6

Phase	Exit Phase	Exit Calls
4	Yes	No

Priority Timers

Priority	Non-Locking	Del ay	Ext end	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap Signal Type	Transit Overlap Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority **1**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **2**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **3**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **4**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **5**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **6**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 2

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 3

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 4

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 5

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 6

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Preempt 1

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph	Track	Dwell	Cycle	Ovlp	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 2

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 3

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
5	Red	Green	No									

Default Data **Default Data**

Preempt 4

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
1	Red	Green	No									
6	Red	Green	No									

Default Data **Default Data**

Preempt 5

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
4	Red	Green	No									

Default Data **Default Data**

Preempt 6

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
8	Red	Green	No									

Default Data **Default Data**

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15 1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No 2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval: 0

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

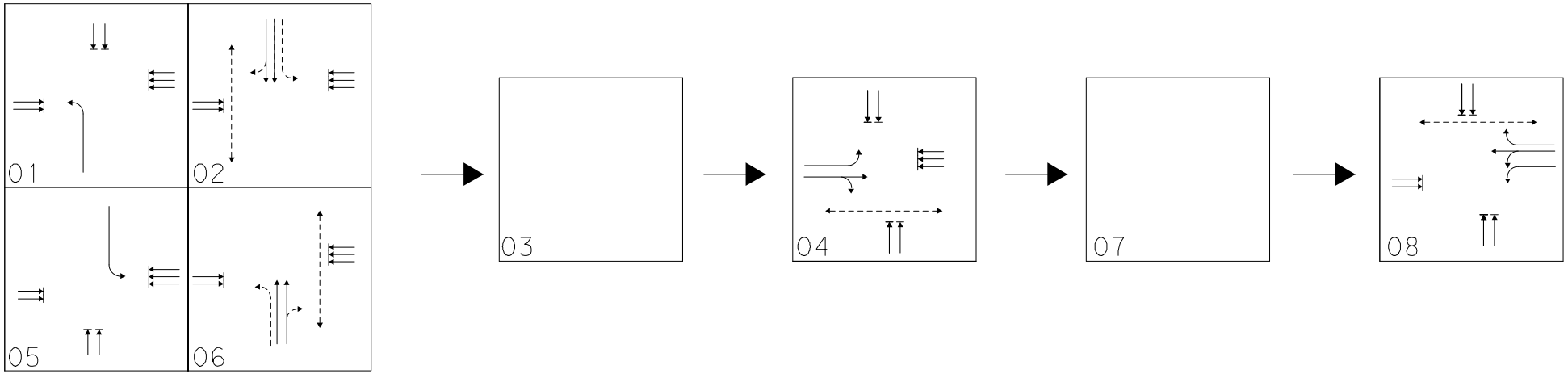
Volume Detector Data

Report Interval 0

Volume Detector Number Controller Detector Channel

Default Data

Reserve & England



SEPAC ECOM All Data

3/19/2020
12:05:10PM

Intersection Name: **Reserve & Mullan**

Intersection Alias: **ResrvMullan**

Access Data

1 :**1200 Baud**
3 :

Access Code: **9999**
Channel:
Address: **1**
Revision: **3.55d**
IP Address: **192.168.18.38**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	1-Inact	2-Red	1-Inact	1-Inact	2-Red	1-Inact	1-Inact	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Vehical Basic Timings							Misc Timings						Pedestrian Timings						
Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
Phase Data Bank:				**1**															
1	15	3.0	20	20	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	37	0	0	No	0	No
3	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	5	33	0	0	No	0	No
5	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	23	0	0	No	0	No
6	5	3.0	20	20	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	5	4.5	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	7	29	0	0	No	0	No
8	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:				**2**															
1	5	3.0	20	20	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	37	0	0	No	0	No
3	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	5	33	0	0	No	0	No
5	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	23	0	0	No	0	No
6	5	3.0	20	20	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	7	29	0	0	No	0	No
8	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:				**3**															
1	5	3.0	20	20	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	37	0	0	No	0	No

3	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	5	33	0	0	No	0	No
5	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	23	0	0	No	0	No
6	5	3.0	20	20	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	7	29	0	0	No	0	No
8	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:			**4**																
1	5	3.0	20	20	3.0	2.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	37	0	0	No	0	No
3	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	5	33	0	0	No	0	No
5	20	3.0	30	30	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	7	23	0	0	No	0	No
6	5	3.0	20	20	4.3	2.2	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	7	29	0	0	No	0	No
8	5	3.0	20	20	3.6	2.4	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank:				**1**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**2**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**3**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**4**														
1	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	Yes	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	Yes	Yes	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:1	1	Veh	0	0.0	0
Veh Det:2	2	Veh	0	0.0	0
Veh Det:3	3	Veh	0	0.0	0
Veh Det:4	4	Veh	0	4.0	0
Veh Det:5	5	Veh	0	0.0	0
Veh Det:6	6	Veh	0	0.0	0
Veh Det:7	7	Veh	0	0.0	0
Veh Det:8	8	Veh	0	0.0	0

Pedestrian Detector

Assign Phase	Mode	Switch Phase	Extend	Delay

Default Data

Special Detector Phase Assignment

Default Data

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:

ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 2
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)	3															
	5															

Start Green

Overlaps

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)																

Stop Green Yel

Overlaps

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)																

Minus PED

Overlaps

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
3	1	4
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Concurrent Phases	1	2	3	4	1	2	3	4	9	10	11	12	13	14	15	16
	5	5	7	7	2	6	4	8								
		6		8	5		7									

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40

Default Data

Signal Driver Ouput

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 0=Permissive

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 1=Cycle

Max Dwell Time: 0

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	150
2/1	180

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	24	0=Actuated	2	61	1=Coordinate	3	21	0=Actuated	4	44	0=Actuated
5	69	1=Coordinate	6	16	0=Actuated	7	42	0=Actuated	8	23	0=Actuated

Dial 2 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	28	2=Min Recall	2	74	1=Coordinate	3	34	2=Min Recall	4	44	0=Actuated
5	80	1=Coordinate	6	22	0=Actuated	7	52	0=Actuated	8	26	0=Actuated

Traffic Plan Data

Plan: 1/1/1	Offset Time: 126	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 2/1/1	Offset Time: 152	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	9:30	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	11:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	1	18:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	1	19:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	7:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	11:0	2/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	2	18:30	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	2	20:0	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

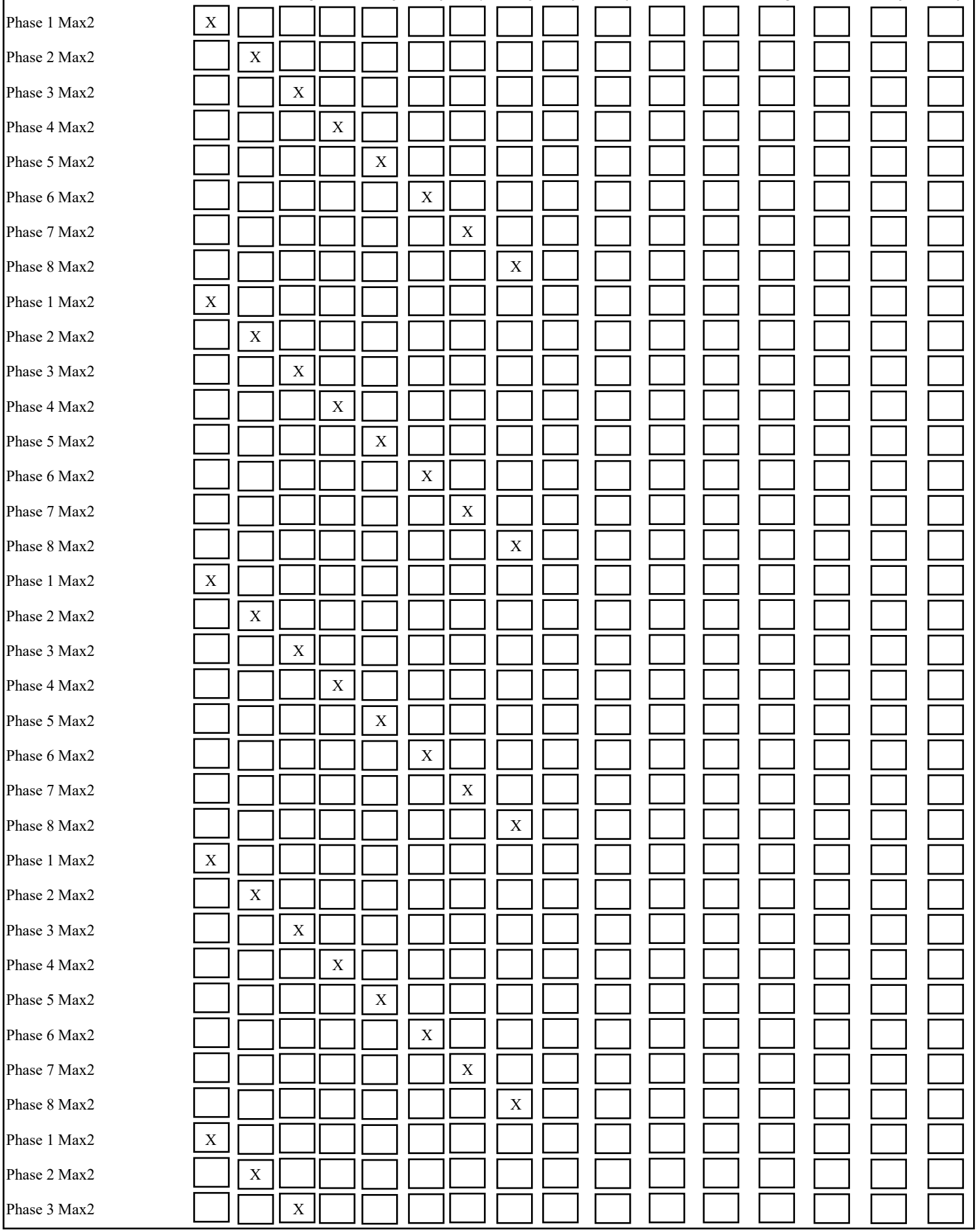
Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

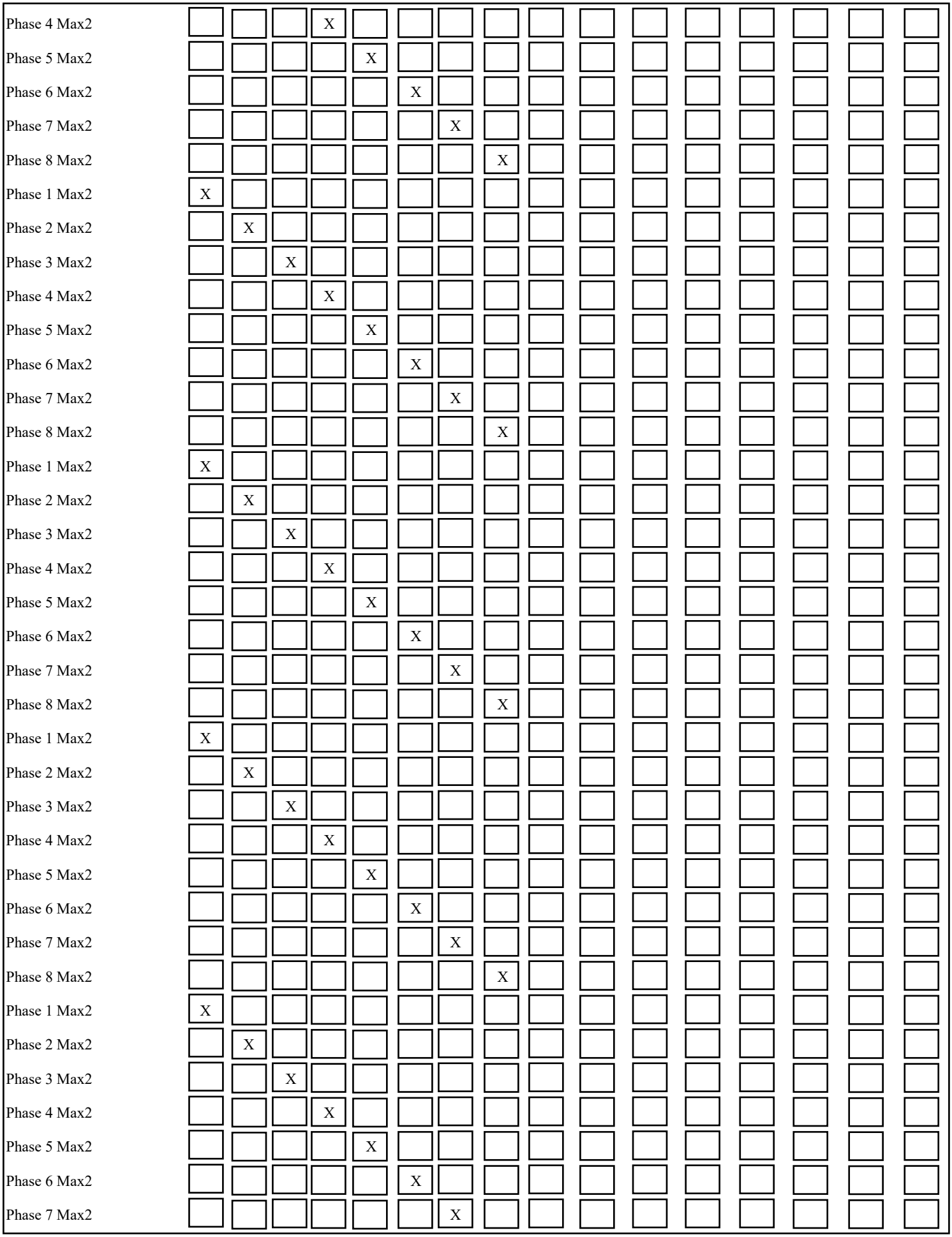
Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

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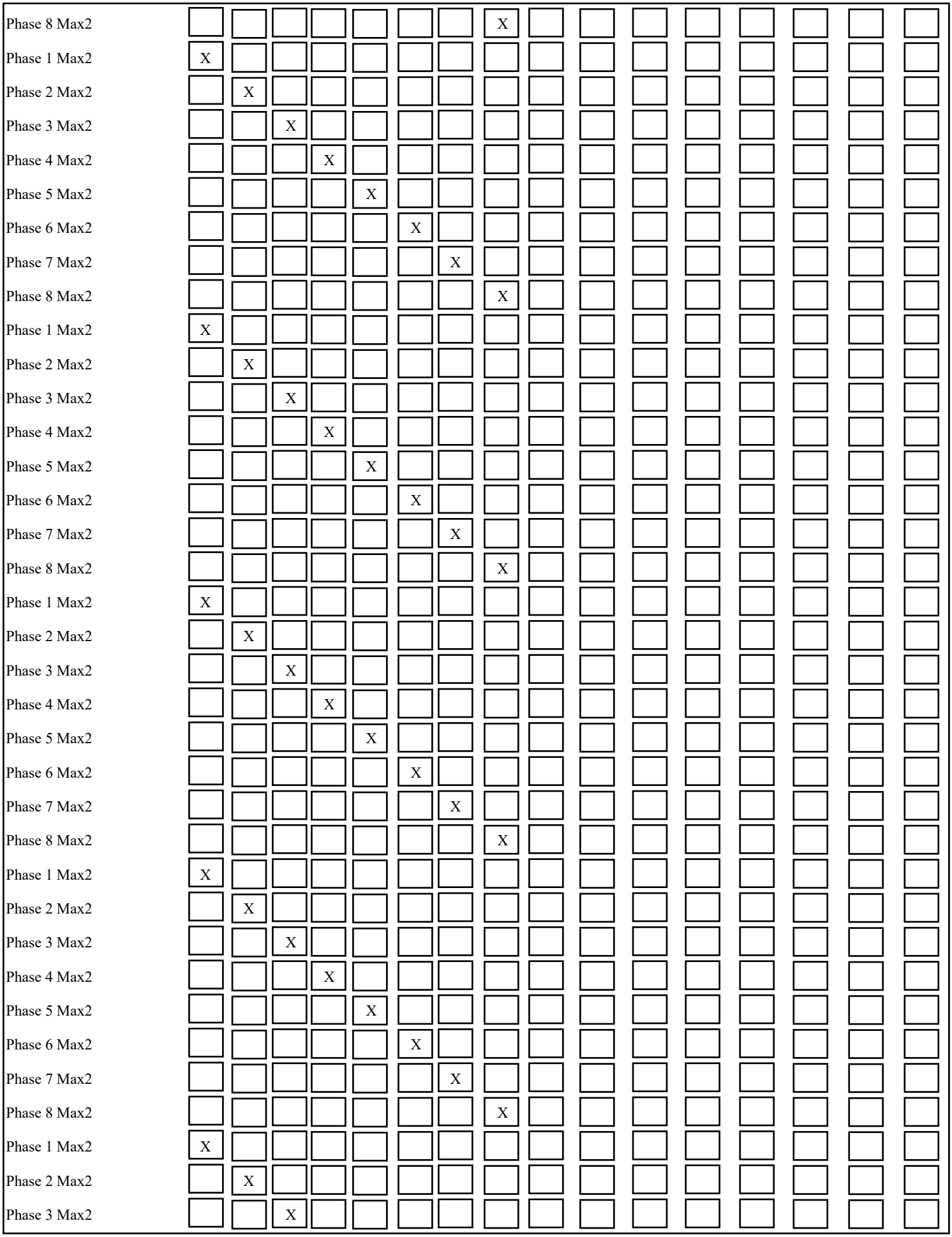
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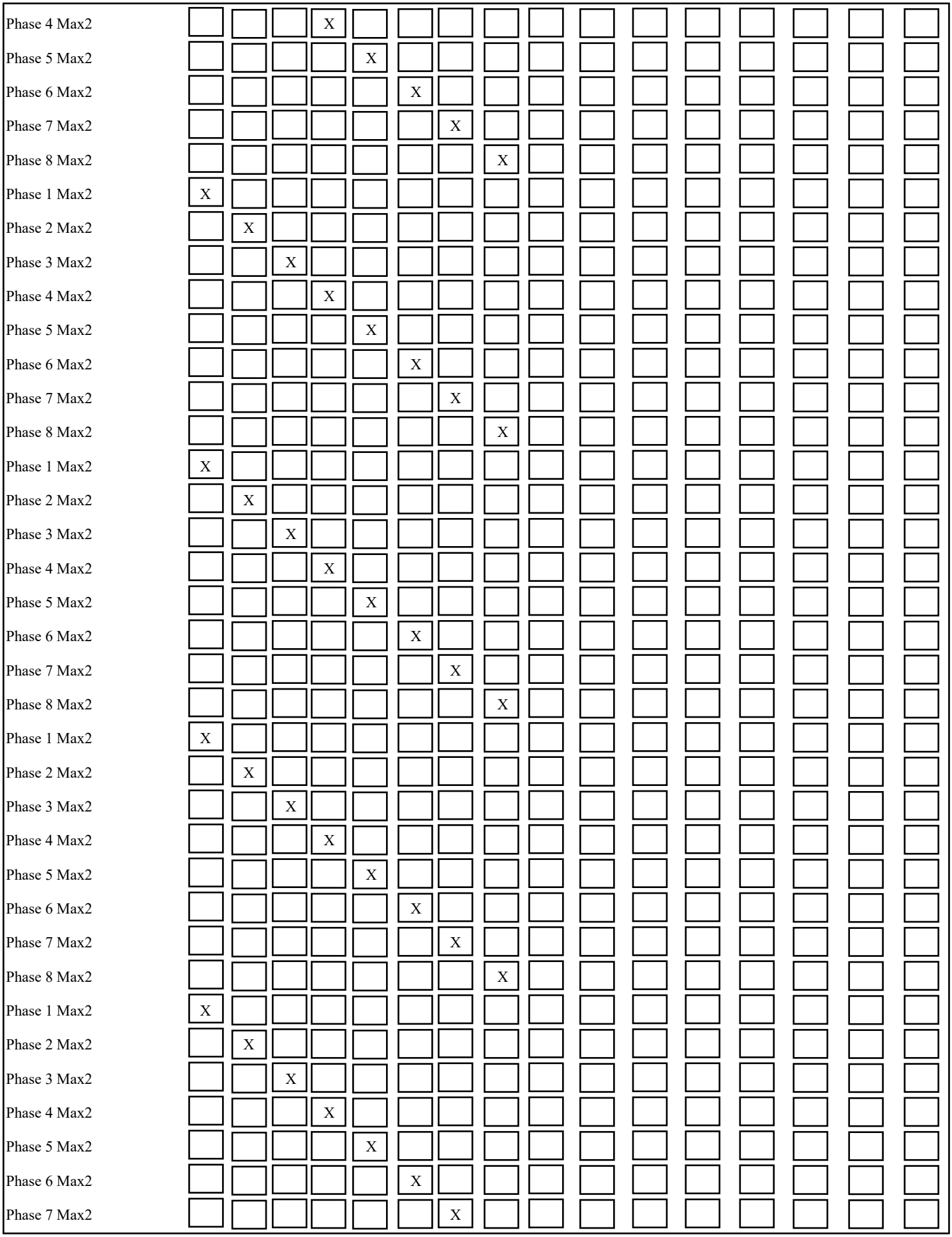
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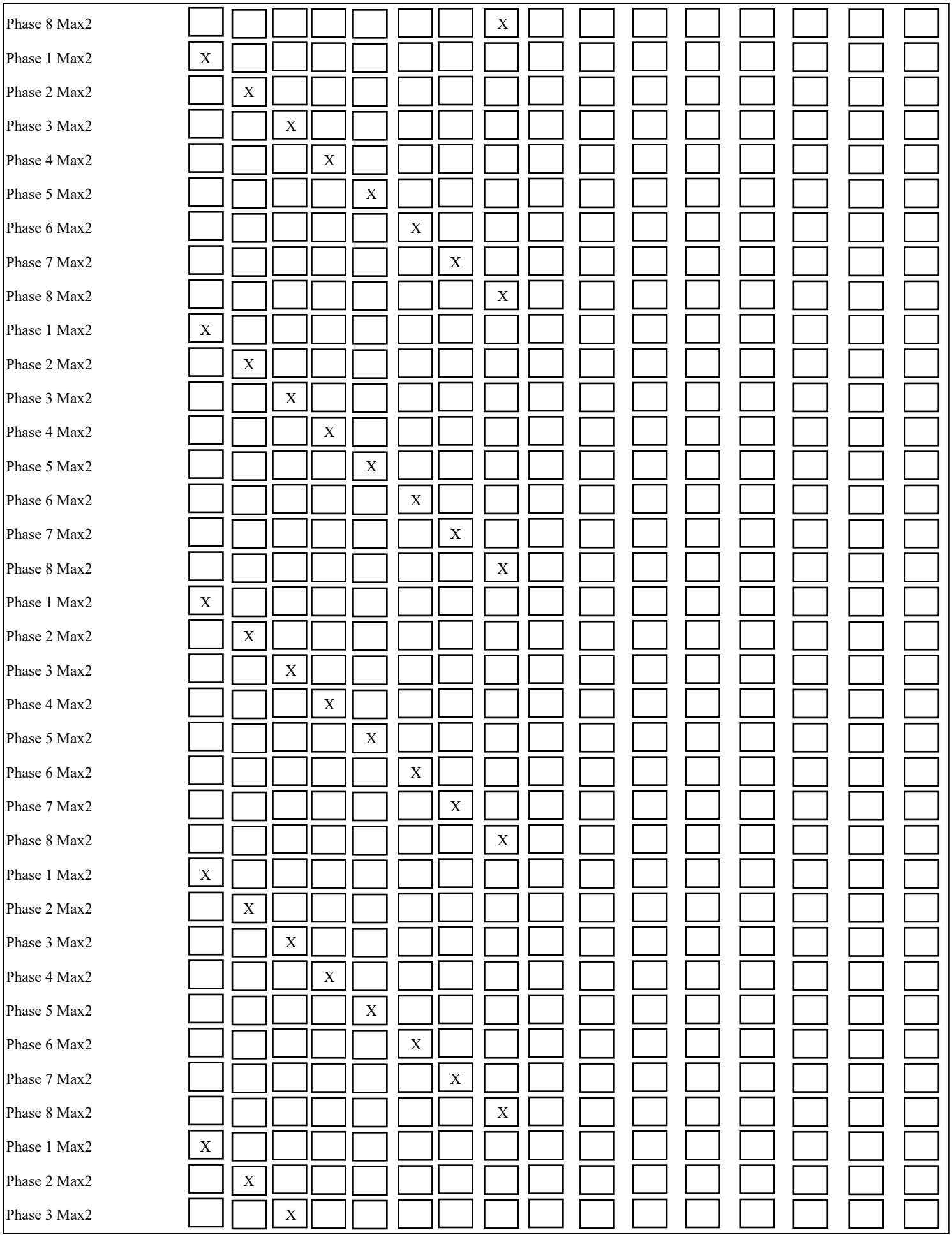
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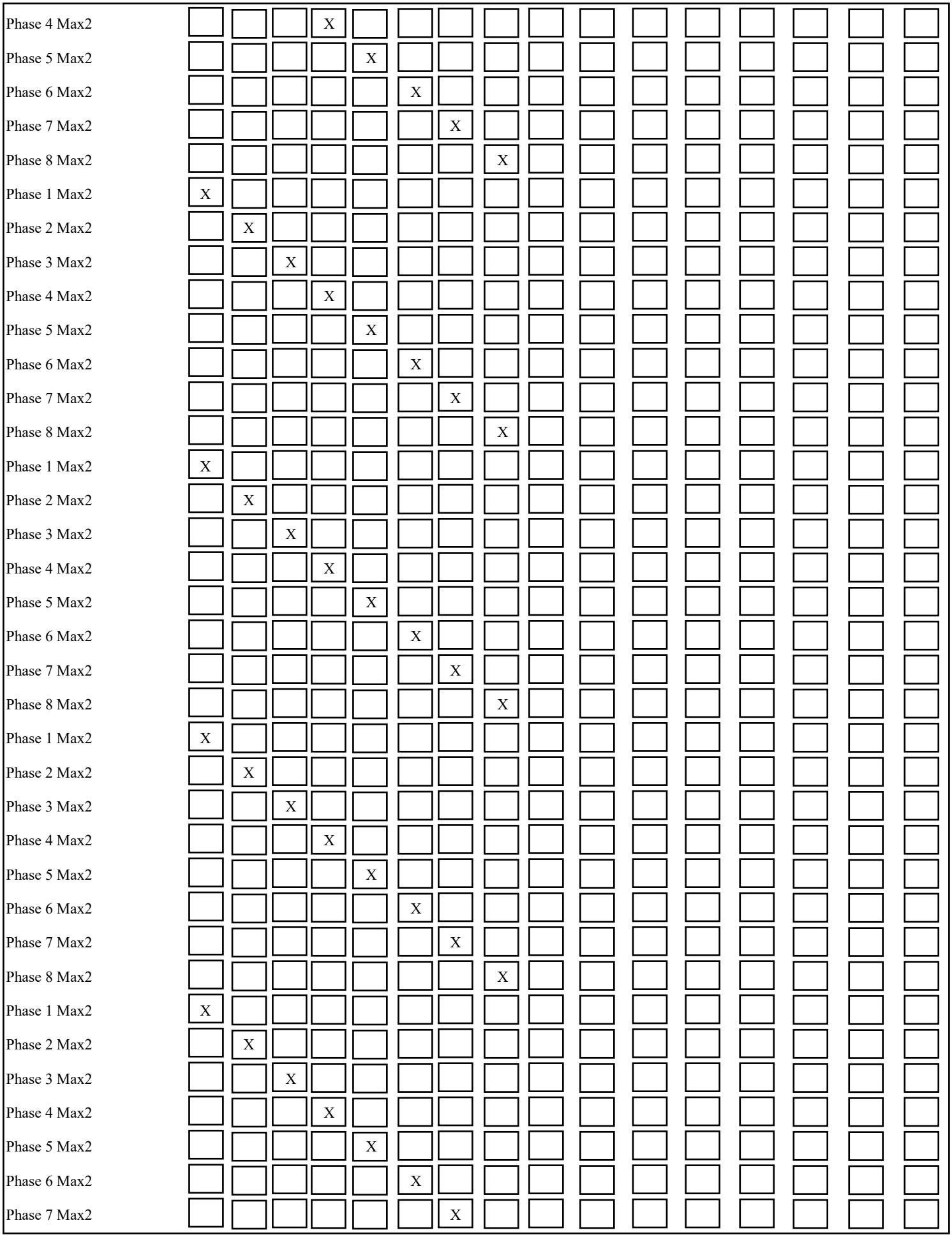
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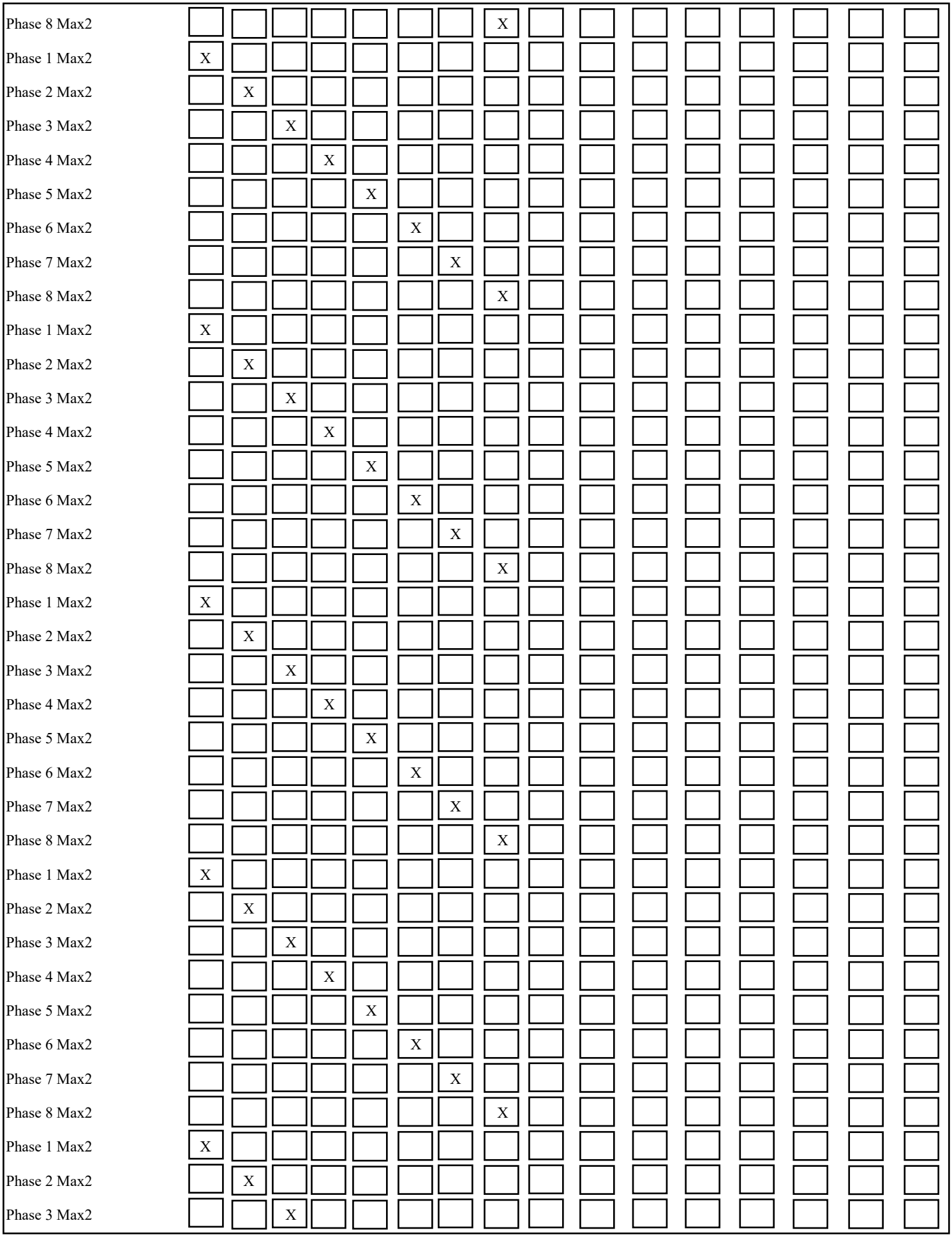
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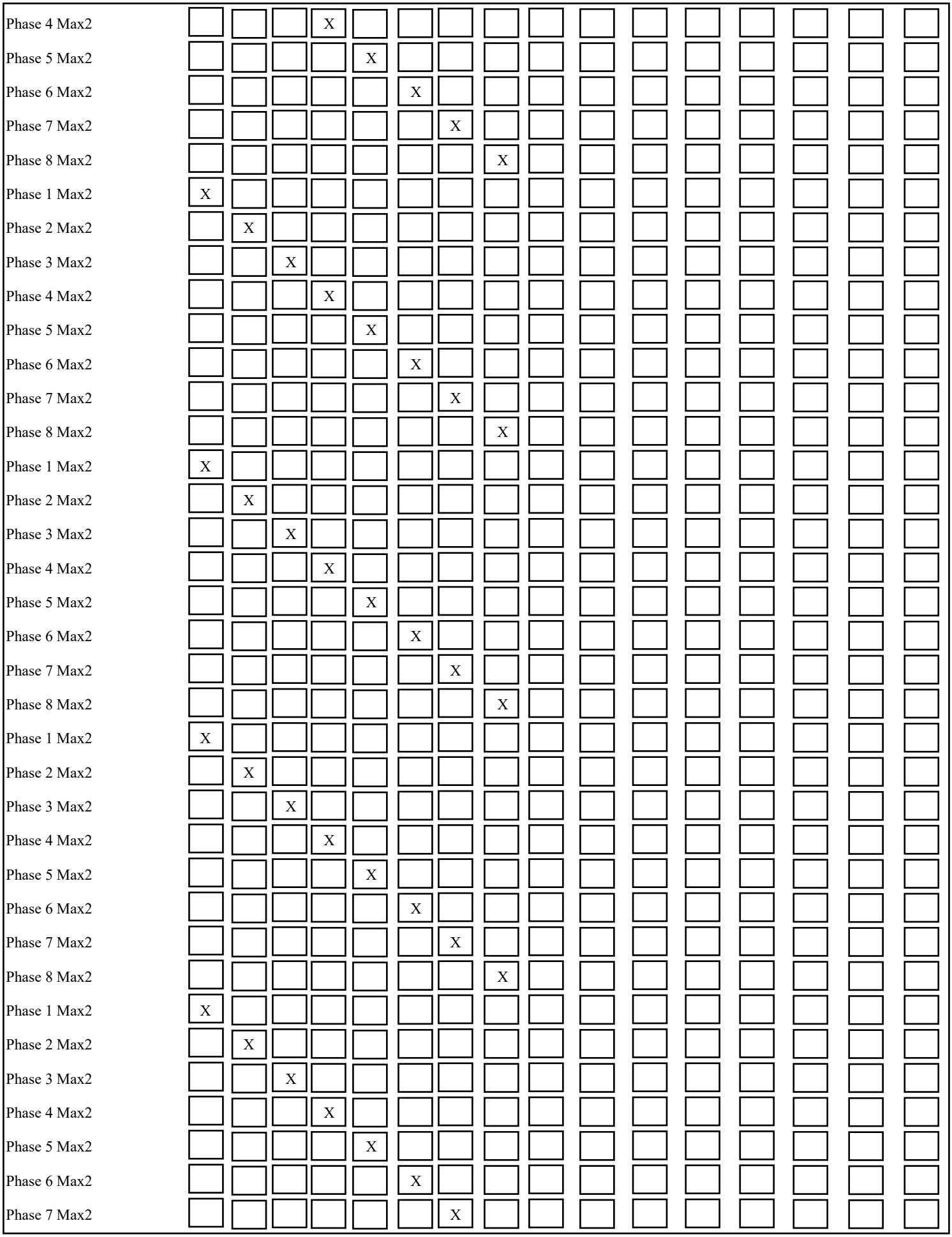
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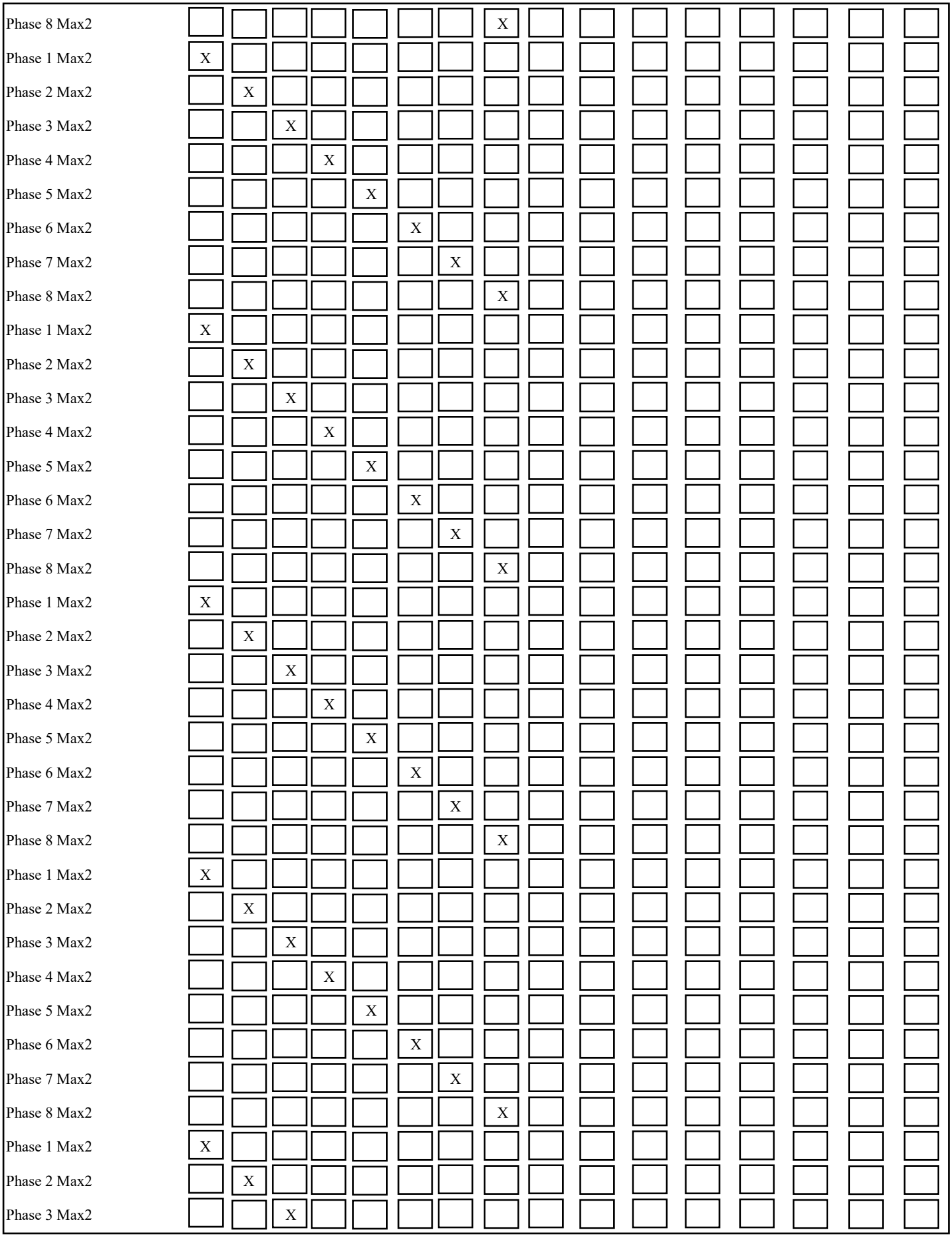
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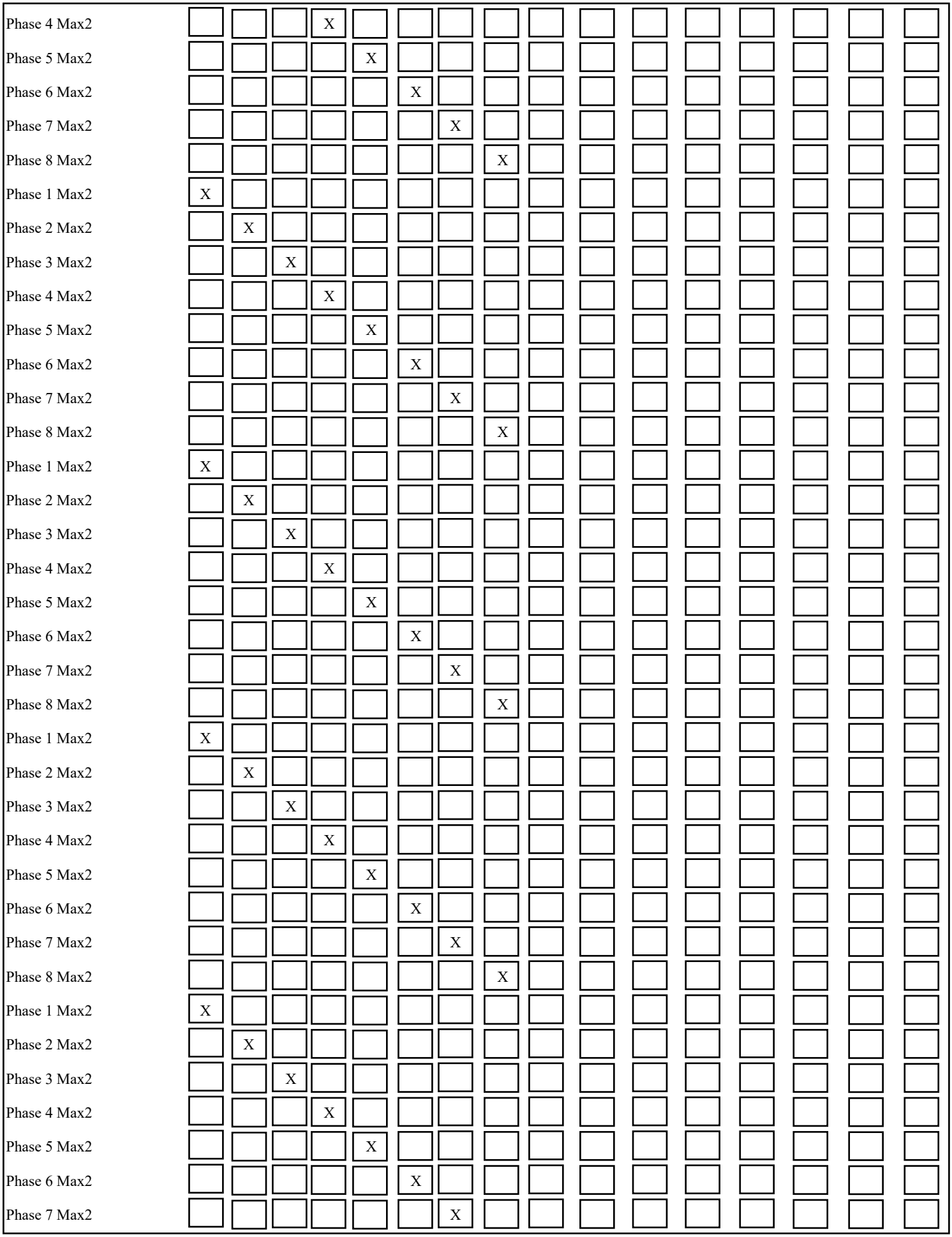
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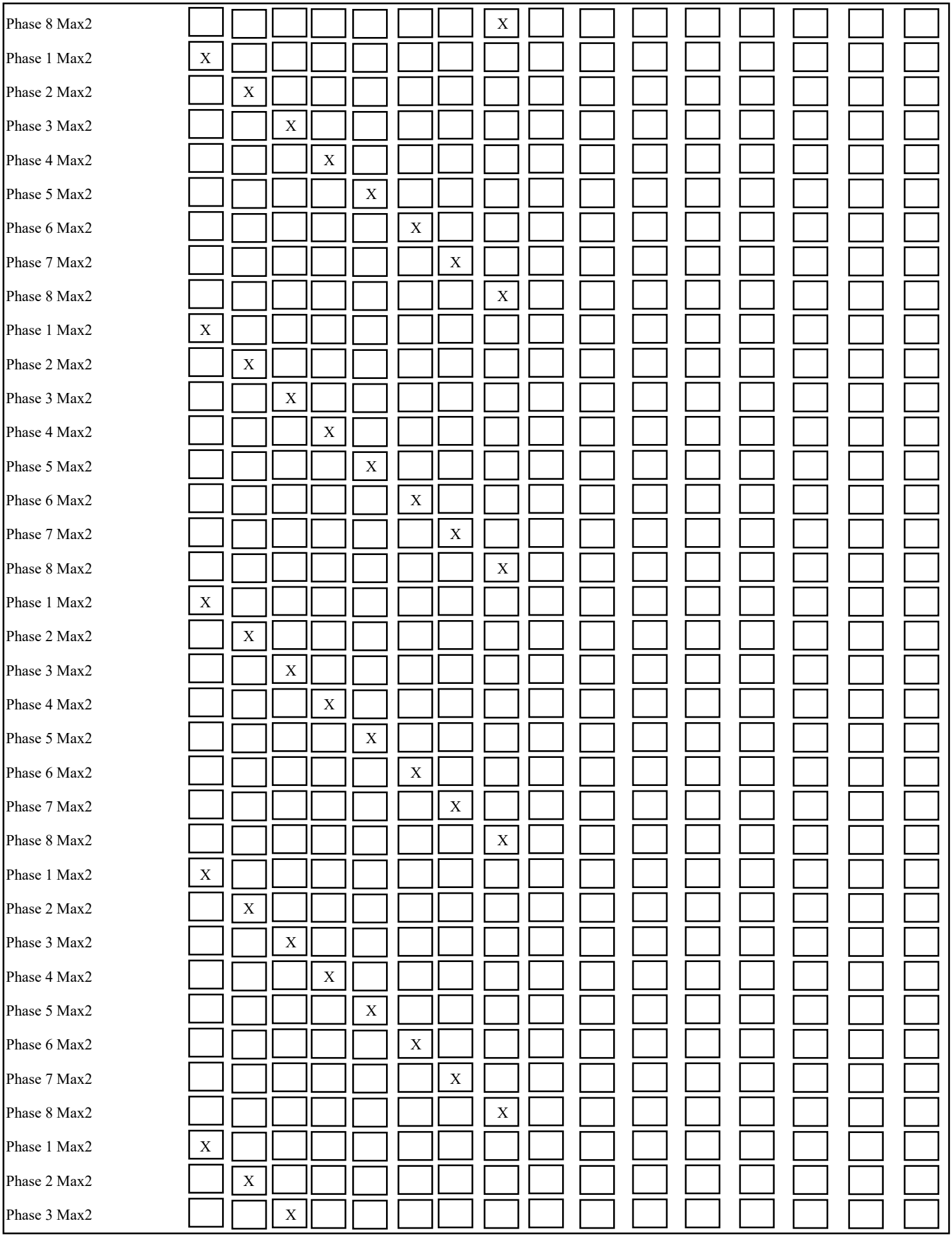
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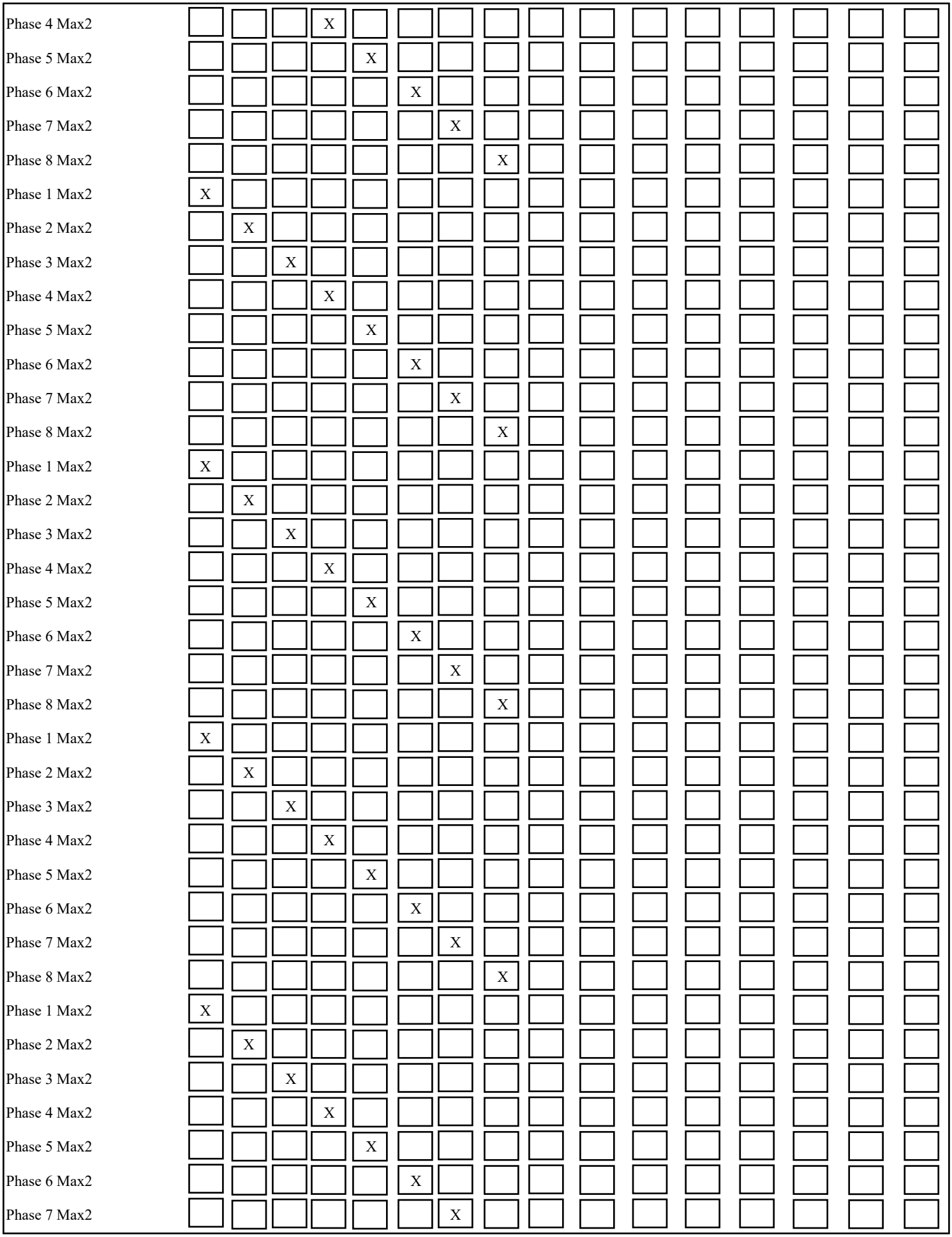
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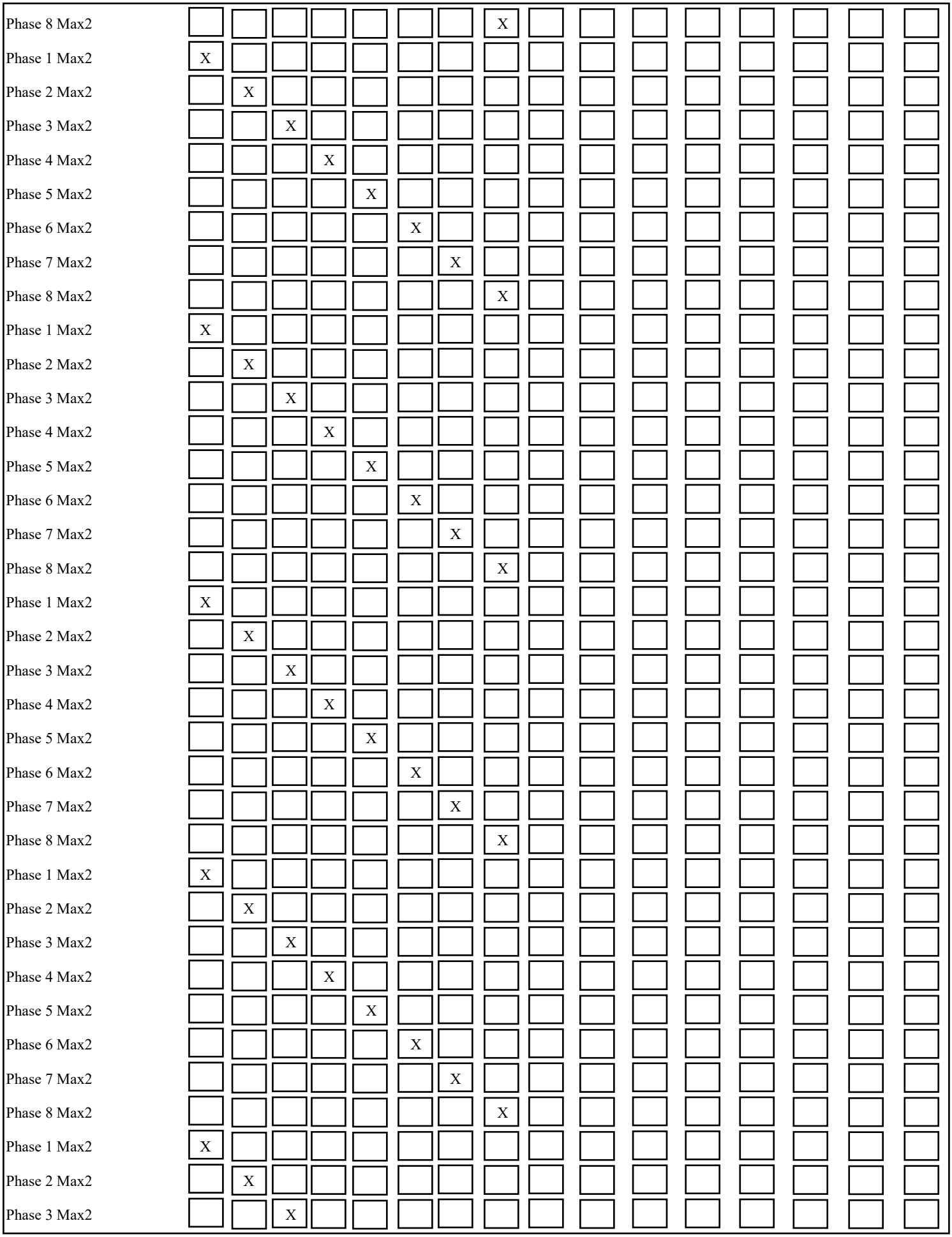
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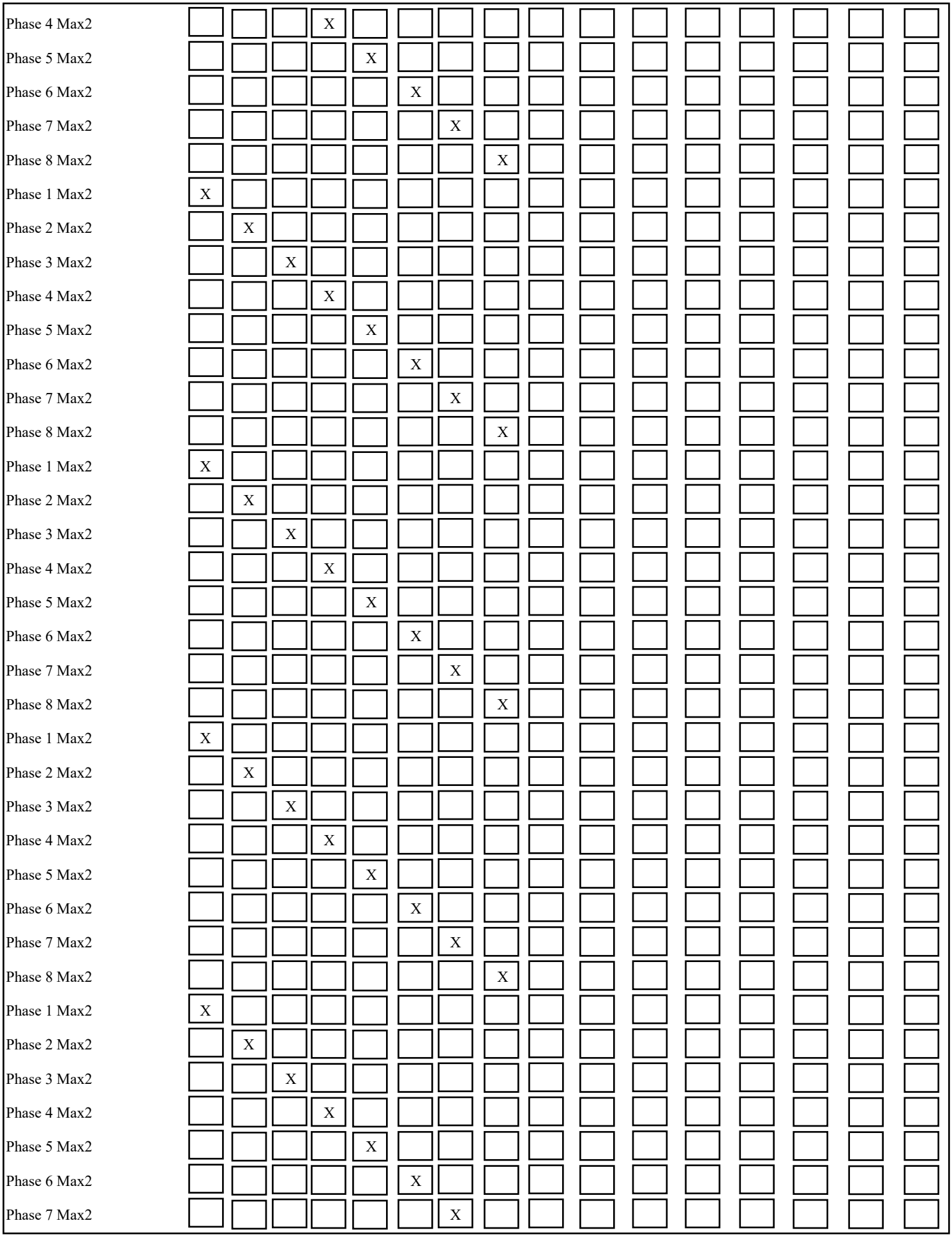
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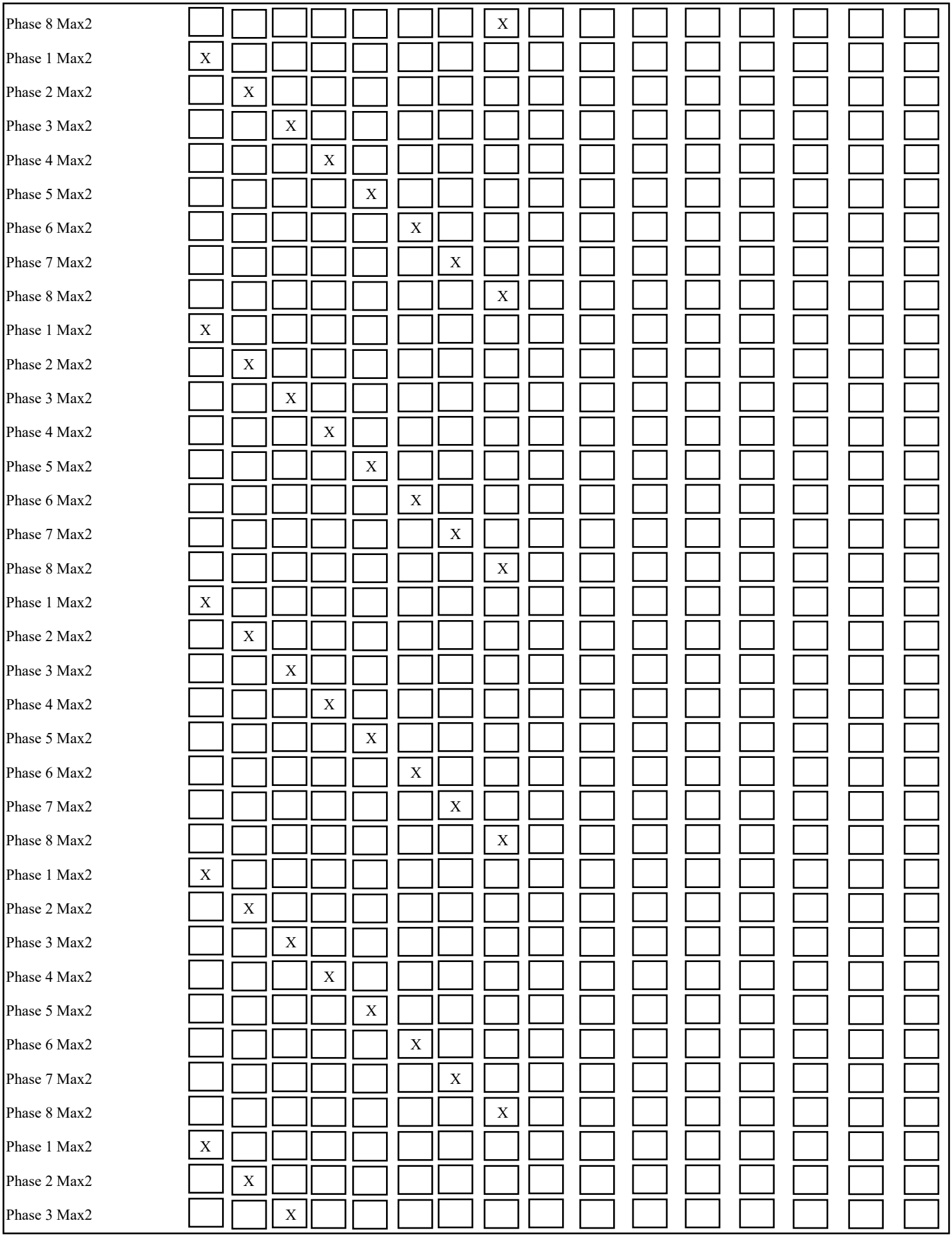
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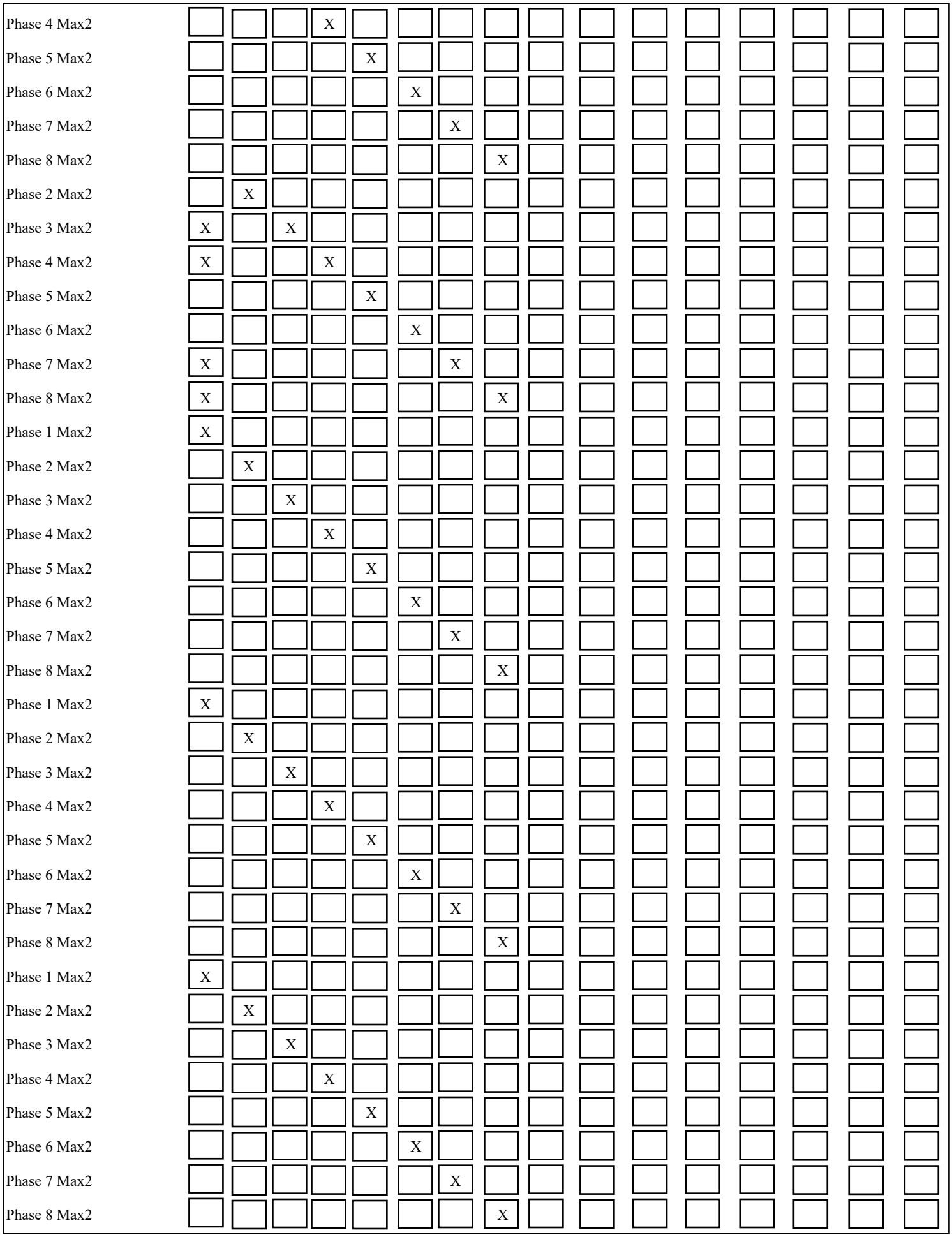
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Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
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Phase 7 Max2							X									
Phase 8 Max2								X								

Phase Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
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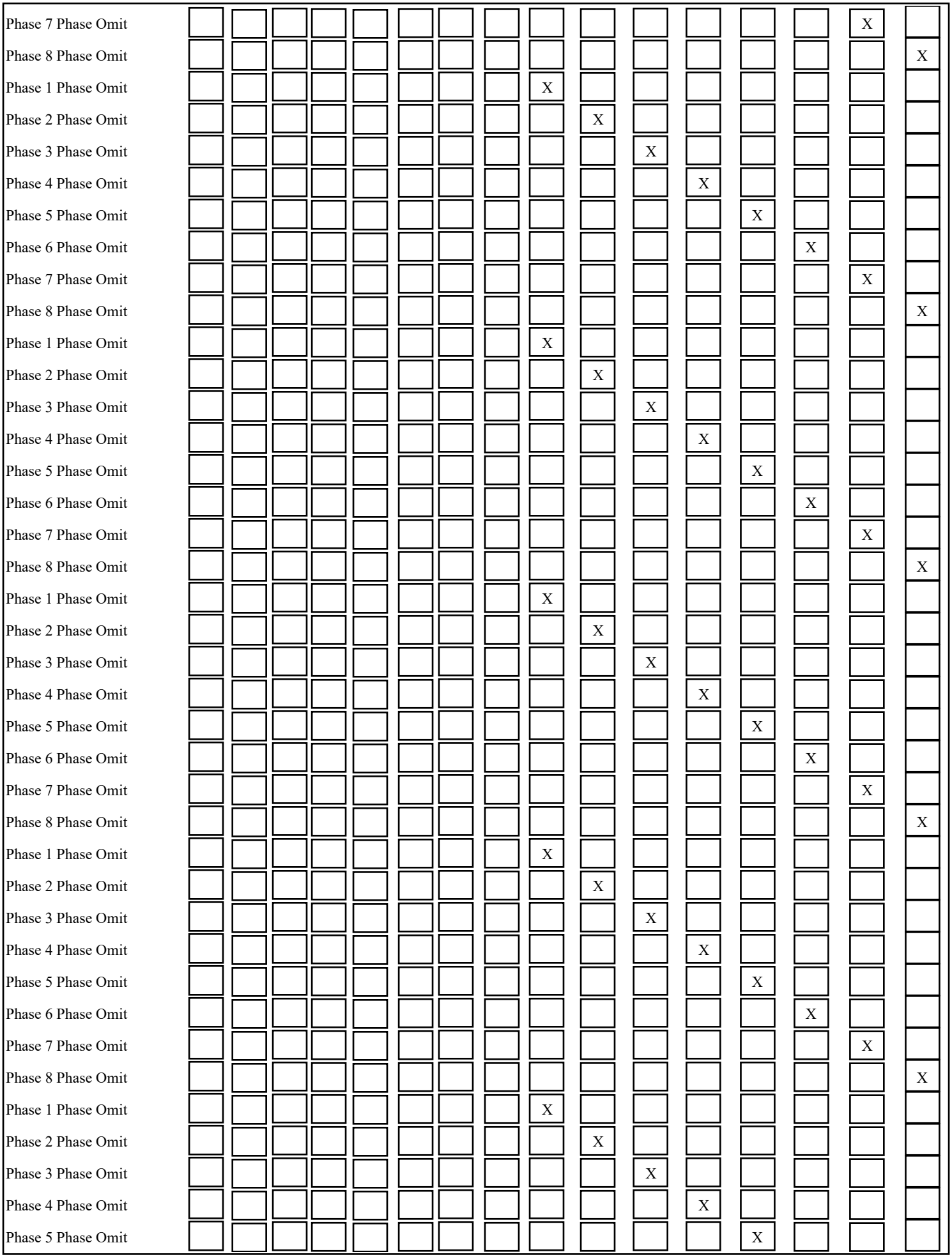
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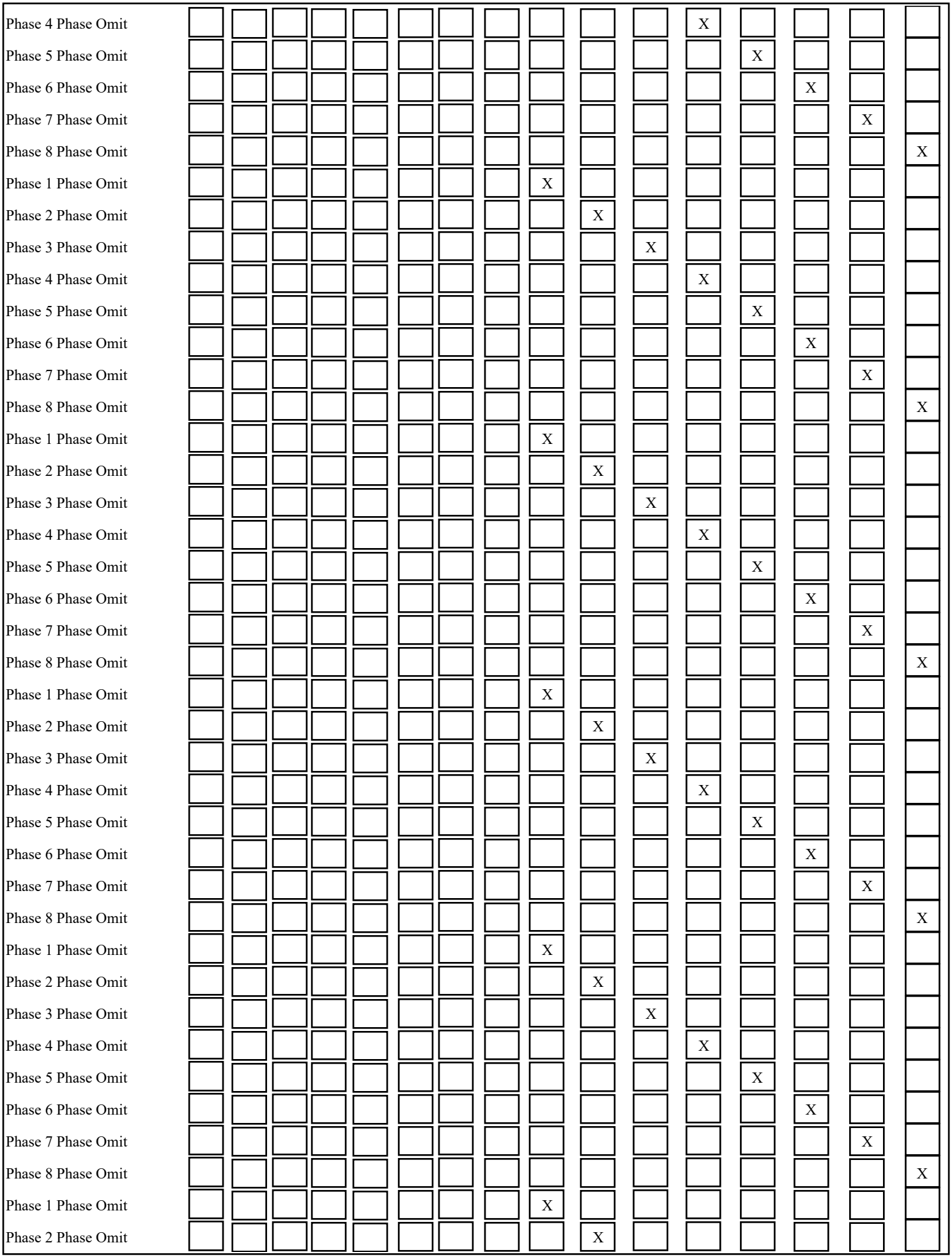
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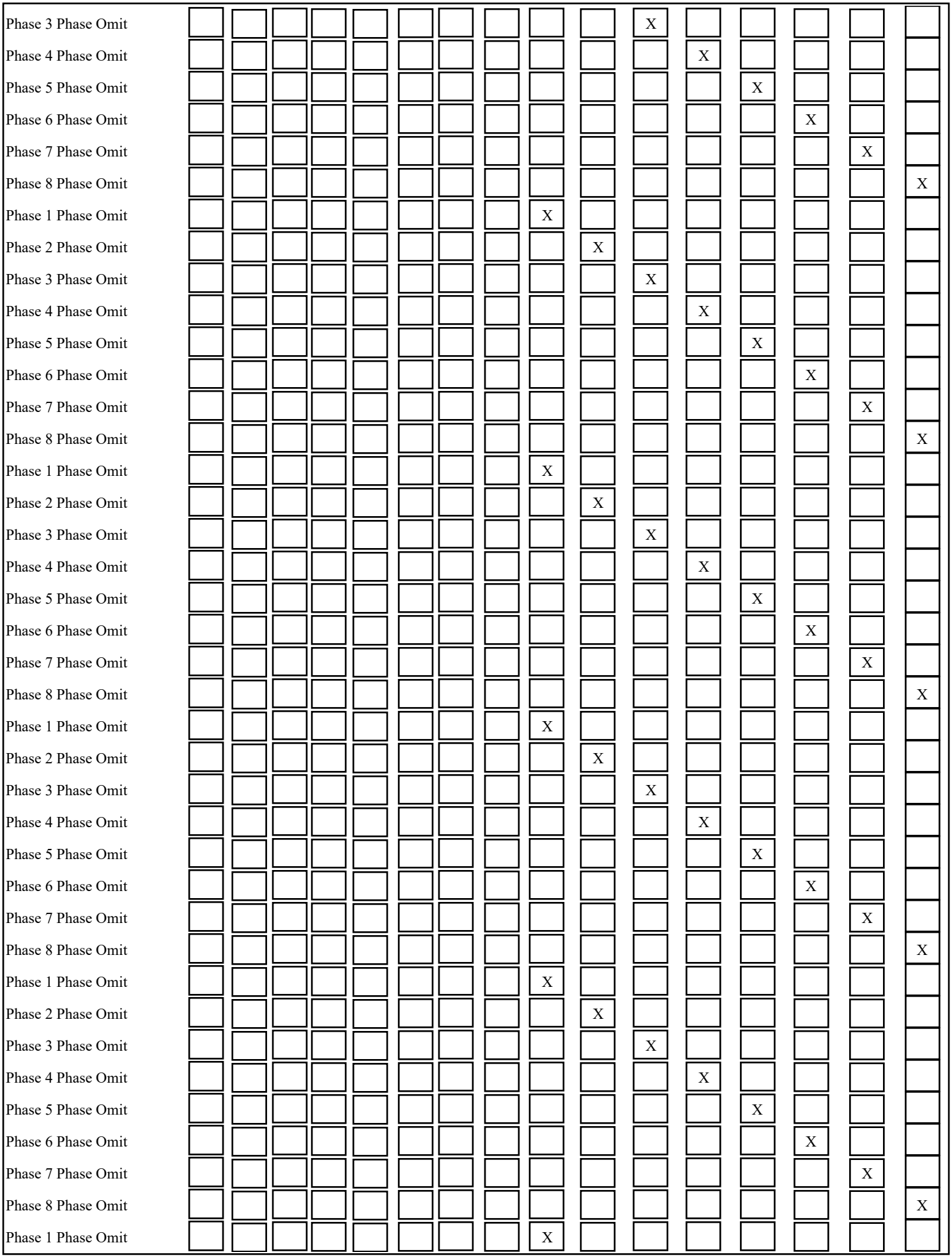
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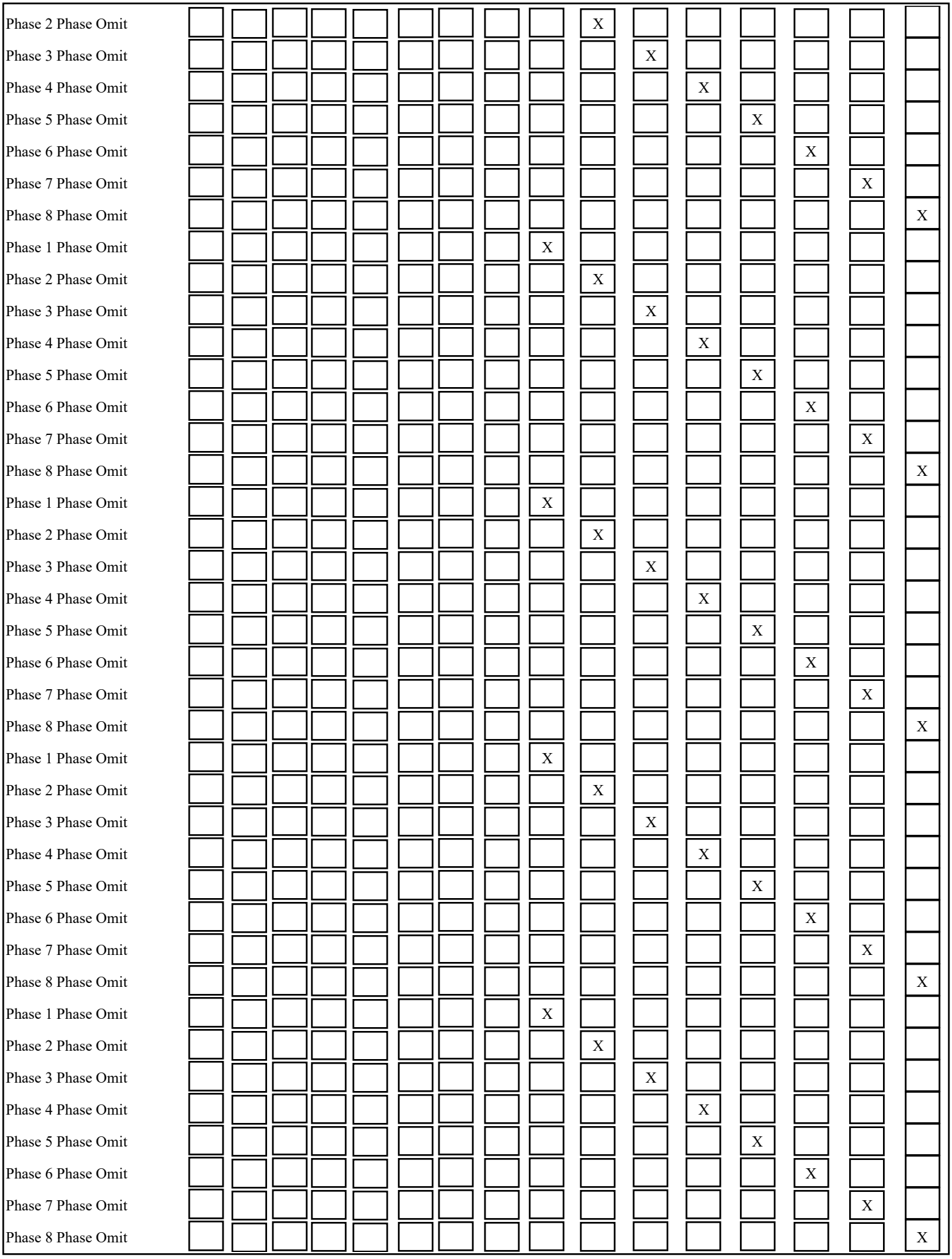
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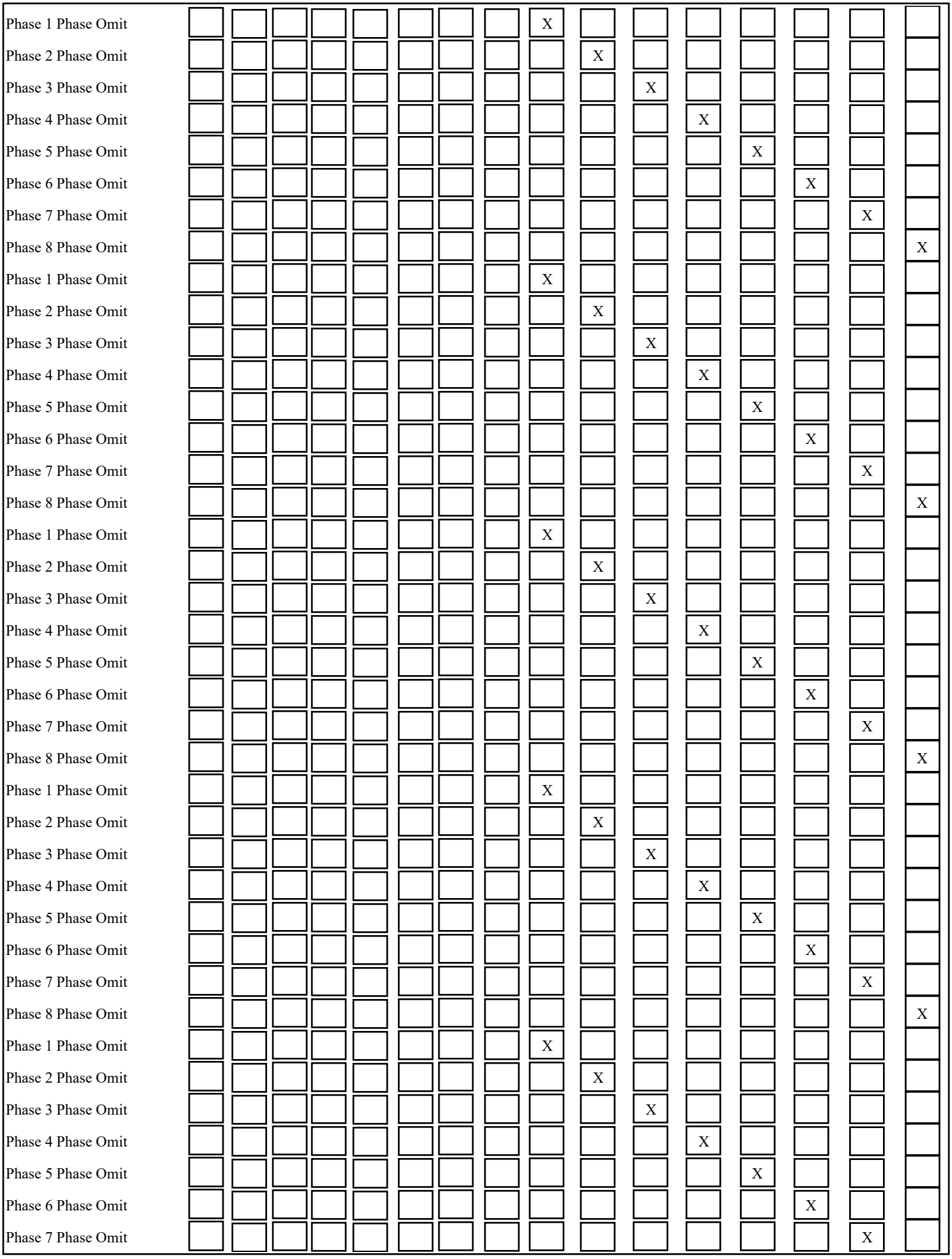
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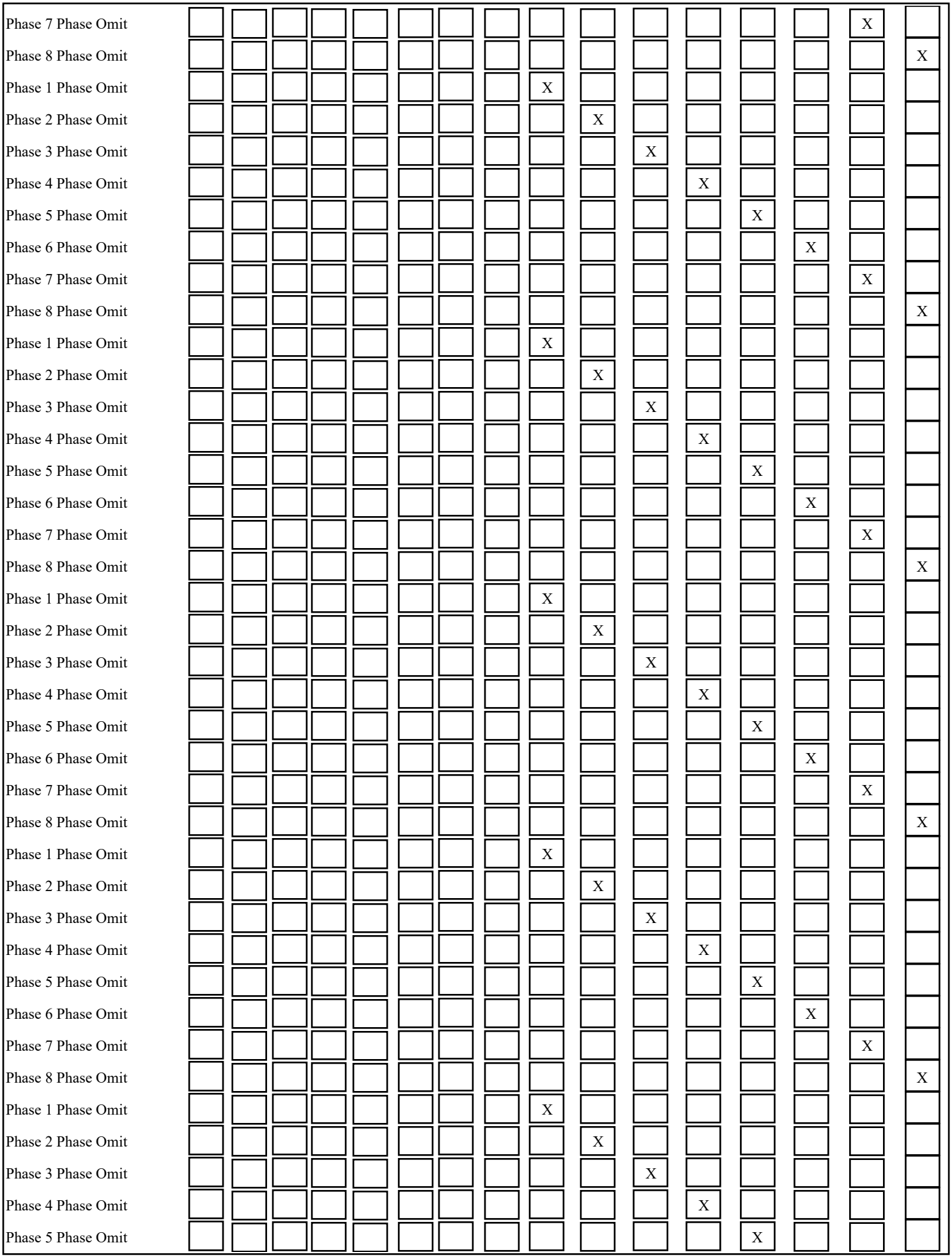
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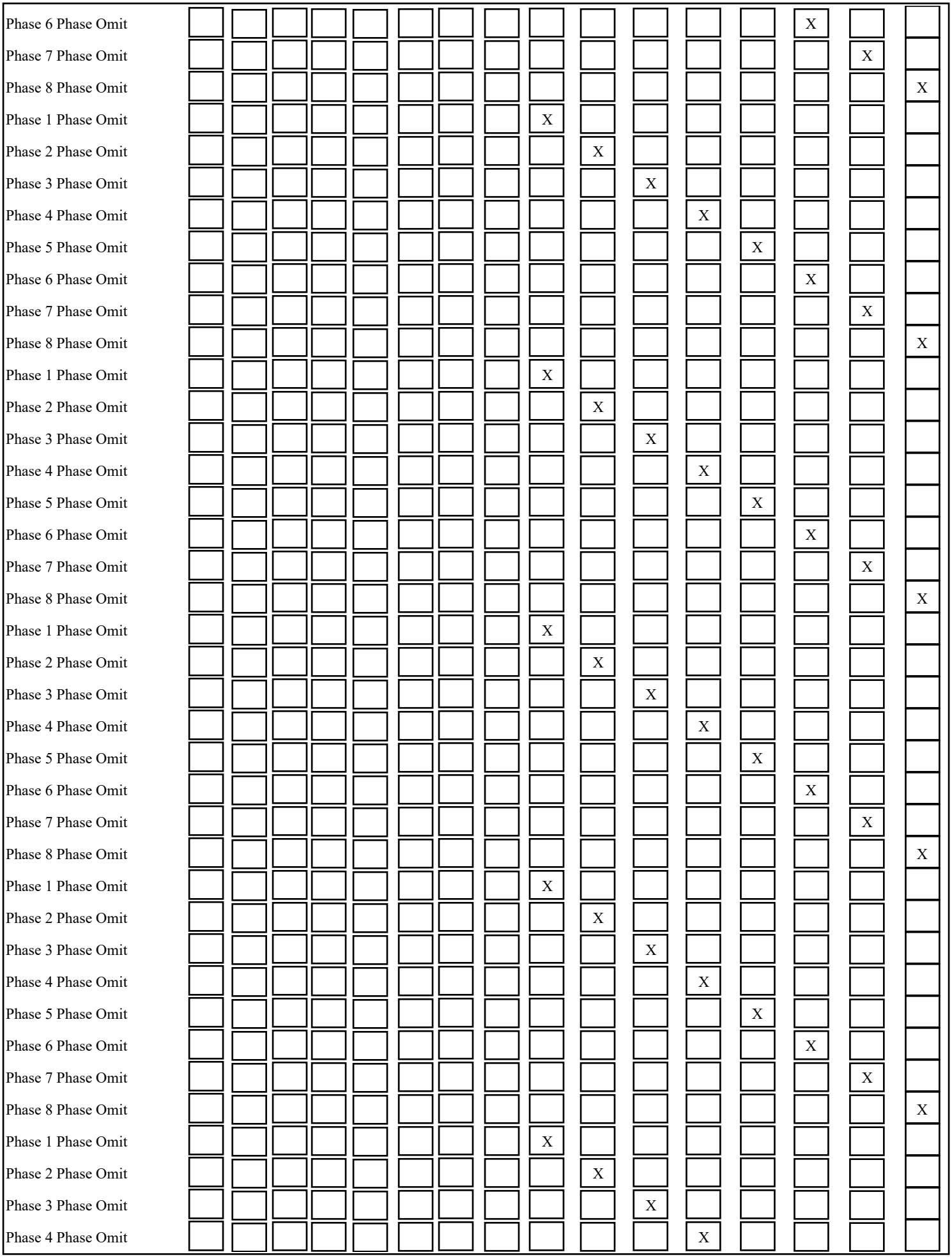
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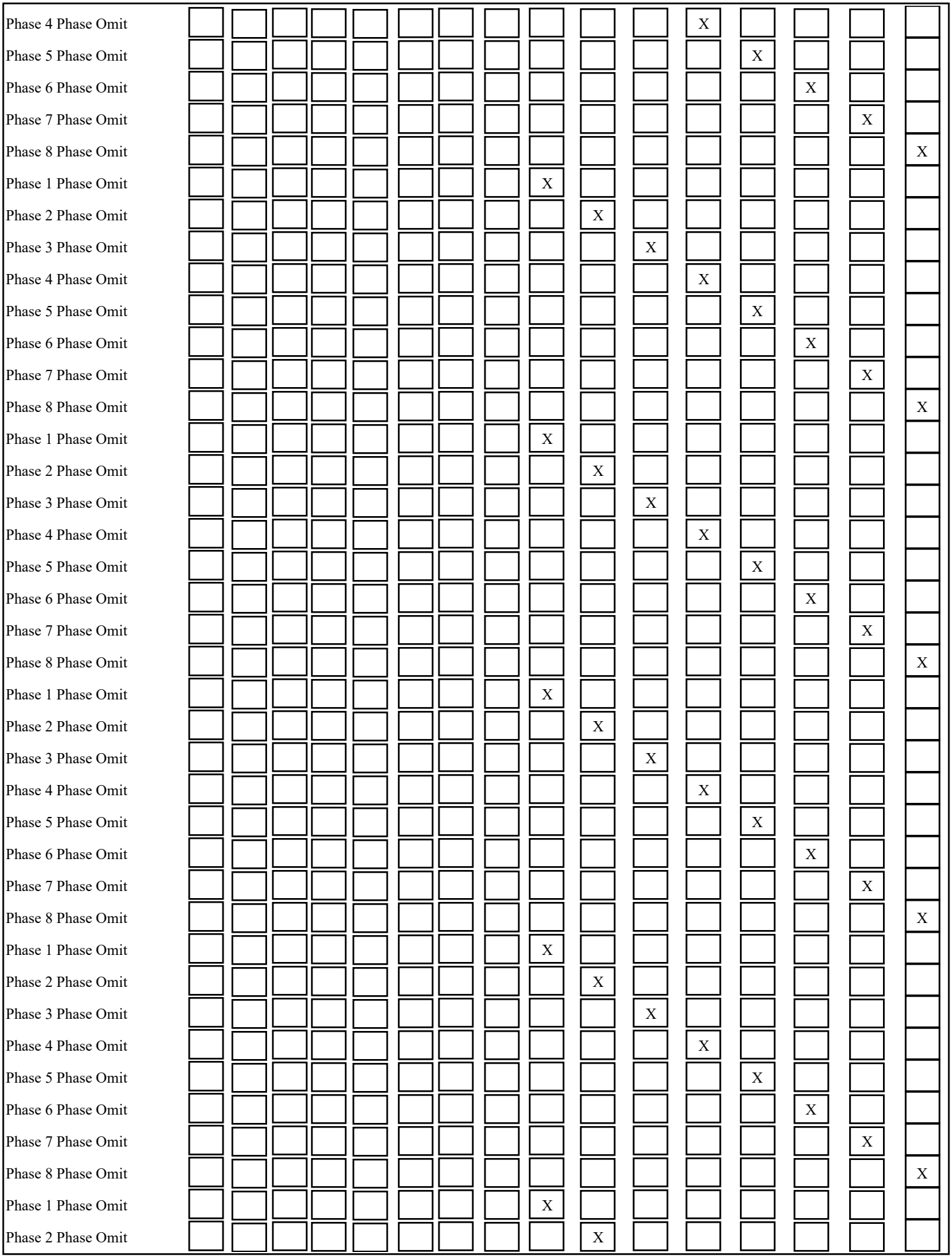
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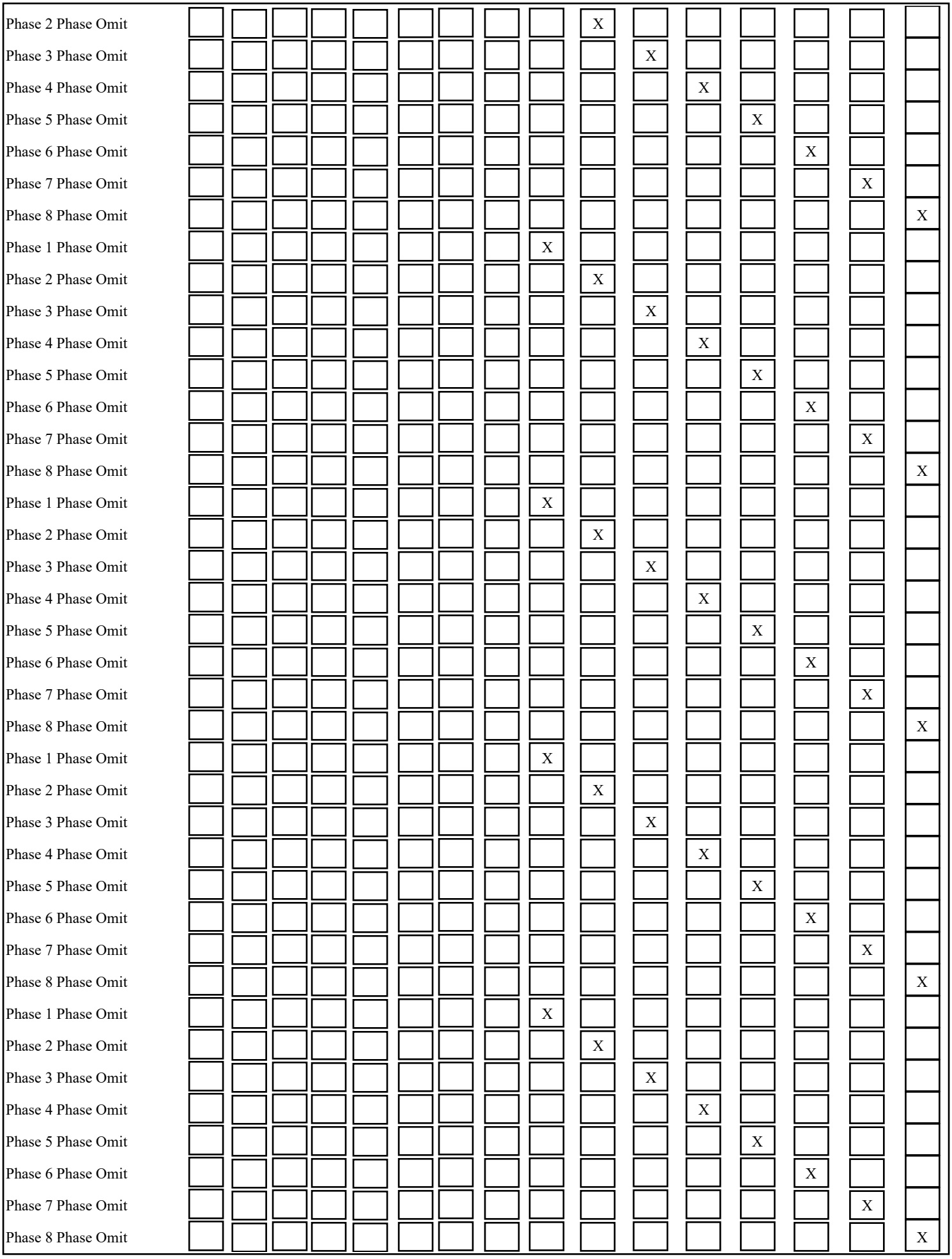
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Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function Veh Det Switch Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 > Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	Lock-Out	De Bounce	Gate Ext	Min G | W	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red	Sel Ret Mode
1	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
2	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
3	N	0	0	0	0	0	0	0.0	0	0 | 0	19	4.3	2.4	0	0	0.0	0.0	10	0	4.3	2.2	F Aut
4	N	0	0	0	0	0	0	0.0	0	0 | 0	19	4.3	2.4	0	0	0.0	0.0	10	0	3.0	2.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	0 | 0	19	4.3	2.4	0	0	0.0	0.0	10	0	3.6	2.4	F Aut
6	N	0	0	0	0	0	0	0.0	0	0 | 0	19	4.3	2.4	0	0	0.0	0.0	10	0	3.6	2.4	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
2	Yes	No
5	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
2	Yes	No
5	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
4	Yes	No
7	Yes	No

Preempt 6

Phase	Exit Phase	Exit Calls
4	Yes	No
7	Yes	No

Priority Timers

Priority	Non-Locking	Del ay	Ext end	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap Signal Type	Transit Overlap Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority **1**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **2**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **3**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **4**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **5**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **6**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 2

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 3

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 4

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 5

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 6

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Preempt 1

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph	Track	Dwell	Cycle	Ovlp	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 2

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 3

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
6	Red	Green	No	**Default Data**				**Default Data**				

Preempt 4

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
1	Red	Green	No					A	Red	Grn	No	No Trail
5	Red	Green	No	**Default Data**								

Preempt 5

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
4	Red	Green	No									
8	Red	Green	No	**Default Data**				**Default Data**				

Preempt 6

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
3	Red	Green	No									
7	Red	Green	No	**Default Data**				**Default Data**				

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15

1st Phone:

2nd Phone:

Local Free: No | Cycle Failure: No | Coord Failure: No | Conflict Flash: No | Remote Flash: No

Local Fash: No | Cycle Fault: No | Coord Fault: No | Premption: No | Voltage Monitor: No

Special Status 1: No | Special Status 2: No | Special Status 3: No | Special Status 4: No | Special Status 5: No | Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	Queue 1 System Detectors	Queue 1 Weight Factor	Queue 2 Detectors	Queue 2 System Detectors	Queue 2 Weight Factor

Default Data

Sample Interval: 0

Default Data

Queue: 1
Input Selection: 0=Average
Detector Failed Level : 0

Queue: 2
Input Selection: 0=Average
Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

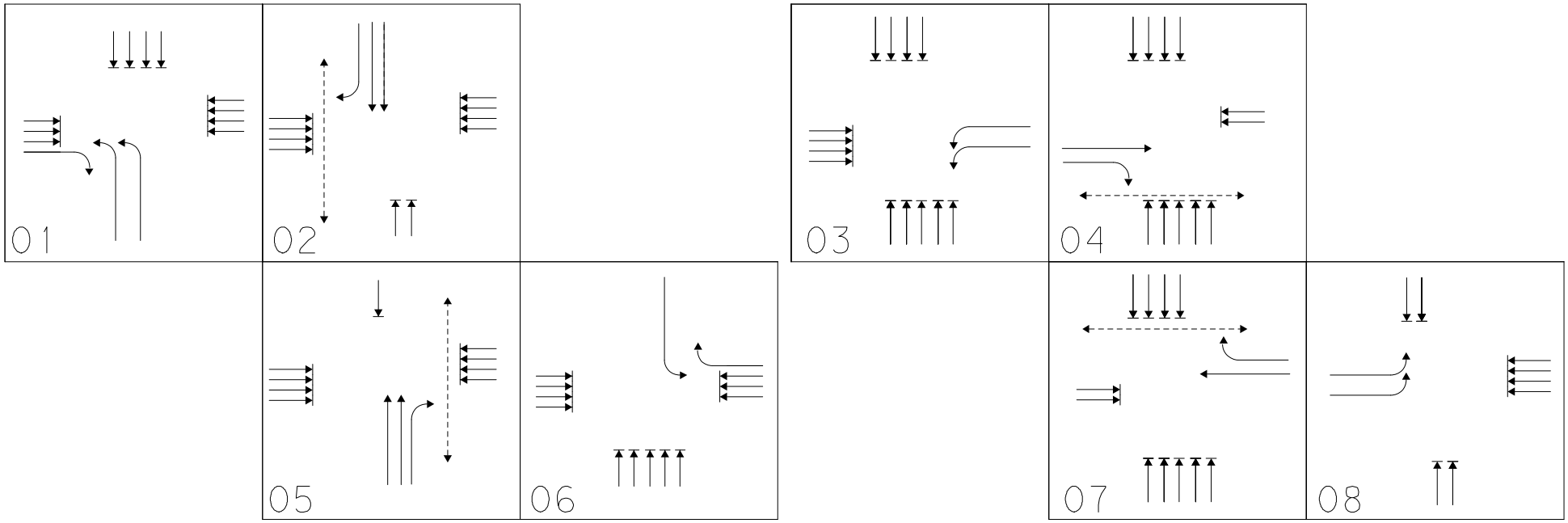
Volume Detector Data

Report Interval 0

Volume Detector Number Controller Detector Channel

Default Data

Reserve & Mullan



SEPAC ECOM All Data

3/19/2020
12:15:52PM

Intersection Name: **Reserve & R1/R2 (South)**

Intersection Alias: **ReserveR1R2**

Access Data

1 :**1200 Baud**
3 :

Access Code: **9999**

Channel:

Address: **1**

Revision: **3.55d**

IP Address: **192.168.18.30**

Phase Initialization Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Initial	0-None	3-Yel	1-Inact	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None	0-None

PHASE DATA

Phase	Min Green	Passage	Max1	Max2	Yellow	All Red	Green Delay	Yellow Delay	Walk Offset Time	Walk Offset Mode	Bike Green	Bike Psg	Walk	Ped Clr	Alt Walk	Alt Ped Clr	Flash Walk	Ext Ped Clr	Actuated Rest in Walk
	Vehical Basic Timings						Misc Timings						Pedestrian Timings						
Phase Data Bank:	**1**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	35	3.0	50	0	4.5	1.5	0.0	0.0	0	0-Advance	0.0	0.0	7	12	0	0	No	0	No
3	6	3.5	35	0	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**2**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	35	3.0	50	0	4.5	1.5	0.0	0.0	0	0-Advance	0.0	0.0	7	12	0	0	No	0	No
3	6	3.5	35	0	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:	**3**																		
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	35	3.0	50	0	4.5	1.5	0.0	0.0	0	0-Advance	0.0	0.0	7	12	0	0	No	0	No

3	6	3.5	35	0	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
Phase Data Bank:			**4**																
1	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
2	35	3.0	50	0	4.5	1.5	0.0	0.0	0	0-Advance	0.0	0.0	7	12	0	0	No	0	No
3	6	3.5	35	0	3.0	1.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
4	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
5	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
6	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
7	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
8	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
9	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
10	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
11	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
12	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
13	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
14	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
15	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No
16	0	0.0	0	0	3.0	0.0	0.0	0.0	0	0-Advance	0.0	0.0	0	0	0	0	No	0	No

	Vehicle Density Timings						General Control				Miscellaneous					Special Sequence		
Ph.	Added Initial	Max Initial	Time B4 Redu	Car B4 Redu	Time To Redu	Min Gap	Non-Act Response	Veh Recall	Ped Recall	Recall Delay	Non Lock	Dual Entry	Last Car Pass	Condit Service	No Simu Gap Out	Omit	Minus Yel	Omit Call
Phase Data Bank:				**1**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**2**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**3**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
Phase Data Bank:				**4**														
1	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
2	0.0	0	0	0	0	0.0	None	Min	None	0	Yes	No	No	No	No	0	0	0
3	0.0	0	0	0	0	0.0	None	None	None	0	Yes	No	No	No	No	0	0	0
4	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
5	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
6	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
7	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
8	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
9	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
10	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
11	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
12	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
13	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
14	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

15	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0
16	0.0	0	0	0	0	0.0	None	None	None	0	No	No	No	No	No	0	0	0

Vehical Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Veh Det:2	2	Veh	0	0.0	0
Veh Det:3	3	Veh	0	0.0	5

Pedestrian Detector

	Assign Phase	Mode	Switch Phase	Extend	Delay
Default Data					

Special Detector Phase Assignment

	Assign Phase	Mode	Switch Phase	Extend	Delay
Spc Det:3	3	Veh	0	0.0	5

Unit Data

General Control

Startup Time: 5 sec
Startup State: Flash
Red Revert: 4.0 sec
Auto Ped Clr: No
Stop T Reset: No
Alt Sequence: 0
Special Seq: 0-Standard

I/O Modes:

ABC Input(Entry) Modes: 0
ABC Output(O/STS) Modes: 0
D Input(Entry) Modes: 2
D Output(O/STS) Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Entry	Exit

Default Data
- No Flash

Default Data
- No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Start Green

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Stop Green Yel

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Minus PED

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TG Preempt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
2	1	3
3	1	4

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Basic Det	Message 40

Default Data

Signal Driver Ouput

Channel	Control	Hardware Pins
1	1 - Veh Phase 1	1 - Phase 1 RYG
2	2 - Veh Phase 2	2 - Phase 2 RYG
3	3 - Veh Phase 3	3 - Phase 3 RYG
4	4 - Veh Phase 4	4 - Phase 4 RYG
5	5 - Veh Phase 5	5 - Phase 5 RYG
6	6 - Veh Phase 6	6 - Phase 6 RYG
7	7 - Veh Phase 7	7 - Phase 7 RYG
8	8 - Veh Phase 8	8 - Phase 8 RYG
9	18 - Ped Phase 2	10 - Phase 2 DPW
10	20 - Ped Phase 4	12 - Phase 4 DPW
11	22 - Ped Phase 6	14 - Phase 6 DPW
12	24 - Ped Phase 8	16 - Phase 8 DPW
13	33 - Overlap A	17 - Overlap A RYG
14	34 - Overlap B	18 - Overlap B RYG
15	35 - Overlap C	19 - Overlap C RYG
16	36 - Overlap D	20 - Overlap D RYG
17	17 - Ped Phase 1	9 - Phase 1 DPW
18	19 - Ped Phase 3	11 - Phase 3 DPW
19	21 - Ped Phase 5	13 - Phase 5 DPW
20	23 - Ped Phase 7	15 - Phase 7 DPW

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way
Offset Mode: 0=Beg Grn
Force Mode: 1=Cycle
Max Dwell Time: 0
Yield Period: 0
Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	75
2/1	90

Split Times and Phase Modes

Dial 1 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	50	1=Coordinate	3	25	0=Actuated						

Dial 2 / **Split** 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	55	1=Coordinate	3	35	0=Actuated						

Traffic Plan Data

Plan: 1/1/1	Offset Time: 70	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		
Plan: 2/1/1	Offset Time: 54	Alternat Sequence: 0	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
	Mode: 0=Normal	Special Function: 0	Correction Mode: 0=No		

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2
End of Daylight Saving Month: 11 Week: 1
Cycle Zero Reference Hours: 24 Min: 0

Source Day	Equate Days 1	2	3	4	5	6	7
1	7	0	0	0	0	0	0
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	9:30	1/1/1																	
2	1	11:0	2/1/1																	
3	1	18:0	1/1/1																	
4	1	19:0	0/0/4																	
5	2	7:0	1/1/1																	
6	2	11:0	2/1/1																	
7	2	18:30	1/1/1																	
8	2	20:0	0/0/4																	

AUX. Events

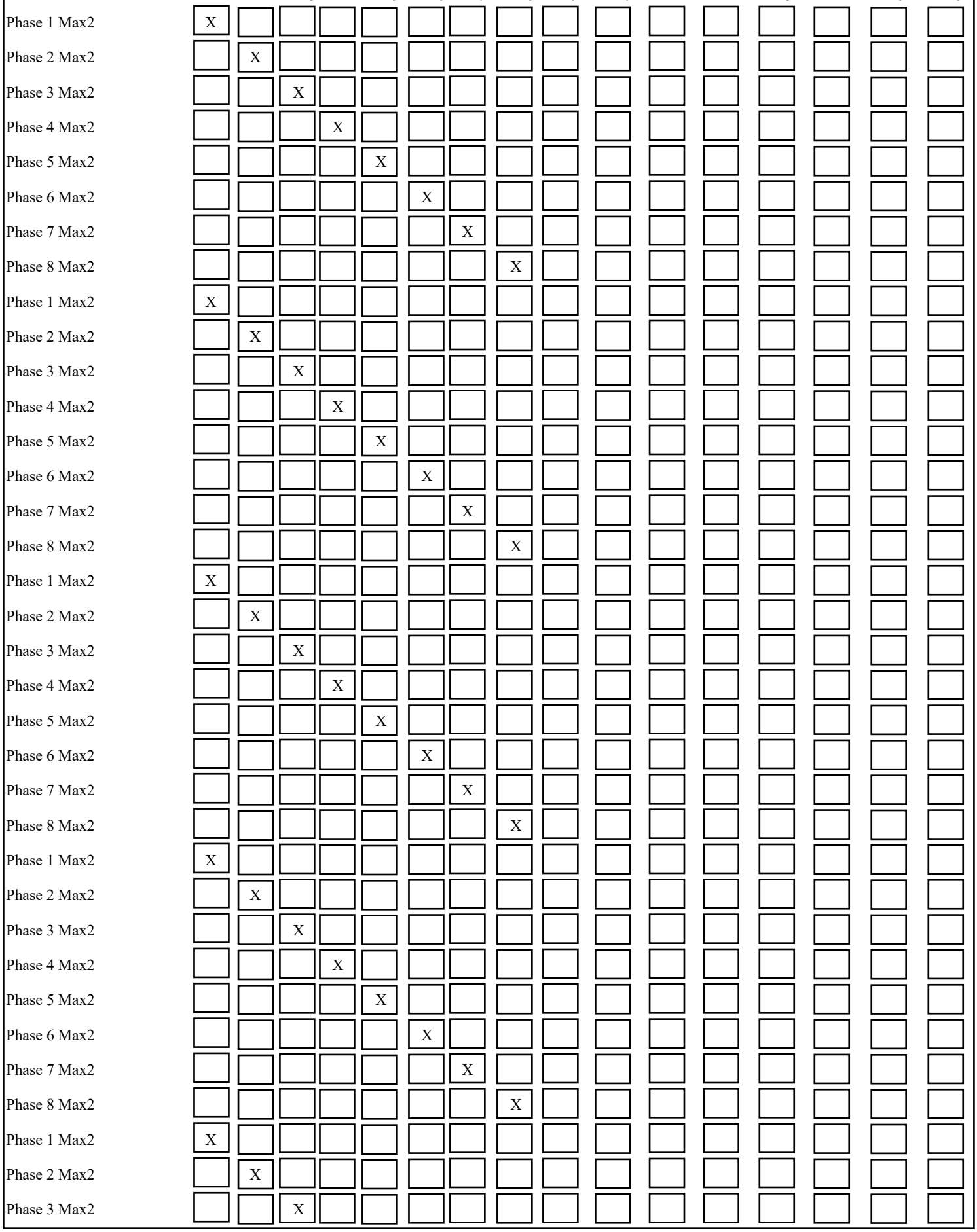
Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

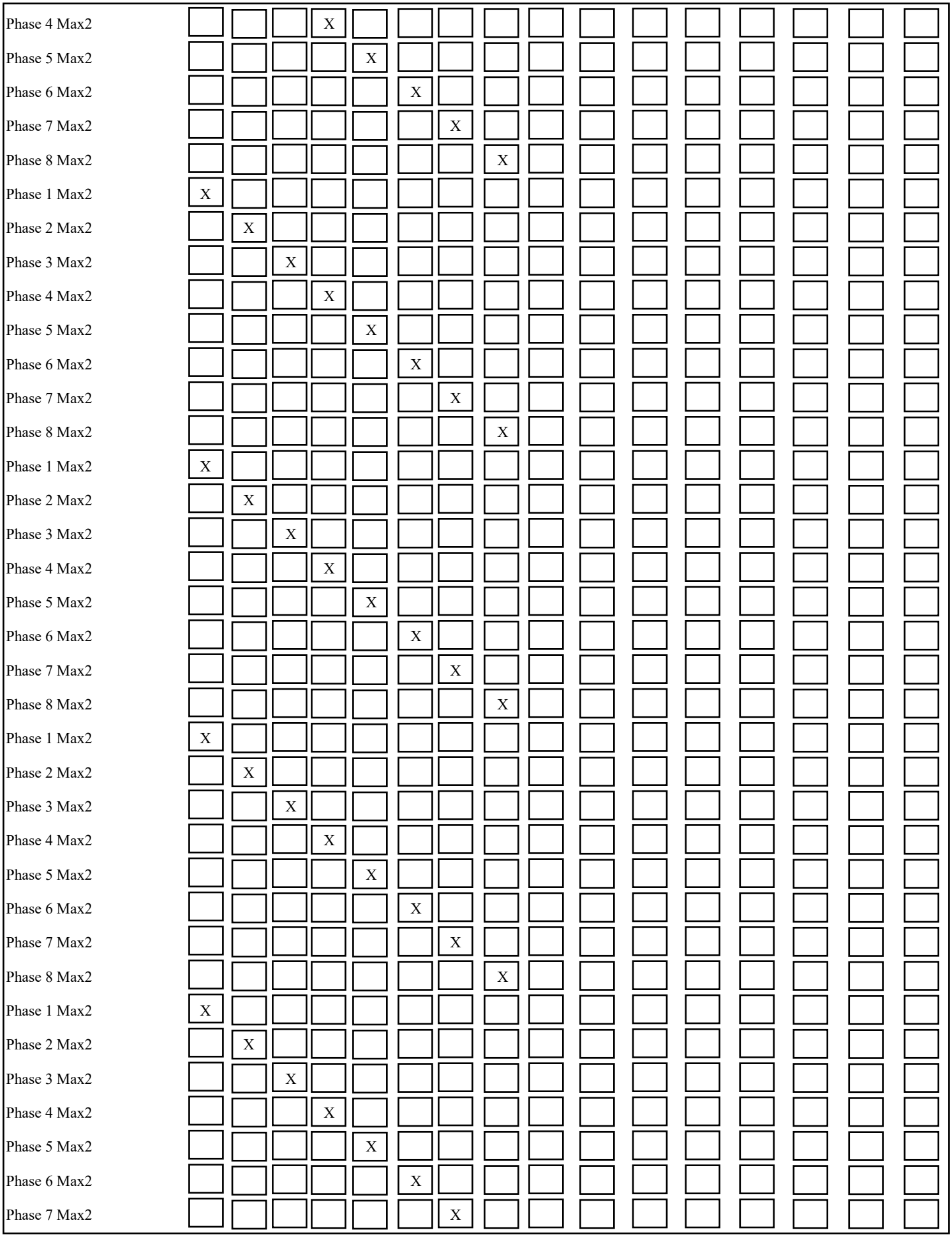
Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Special Function 1	X															
Special Function 2		X														
Special Function 3			X													
Special Function 4				X												
Special Function 5					X											
Special Function 6						X										
Special Function 7							X									
Special Function 8								X								

Phase Function

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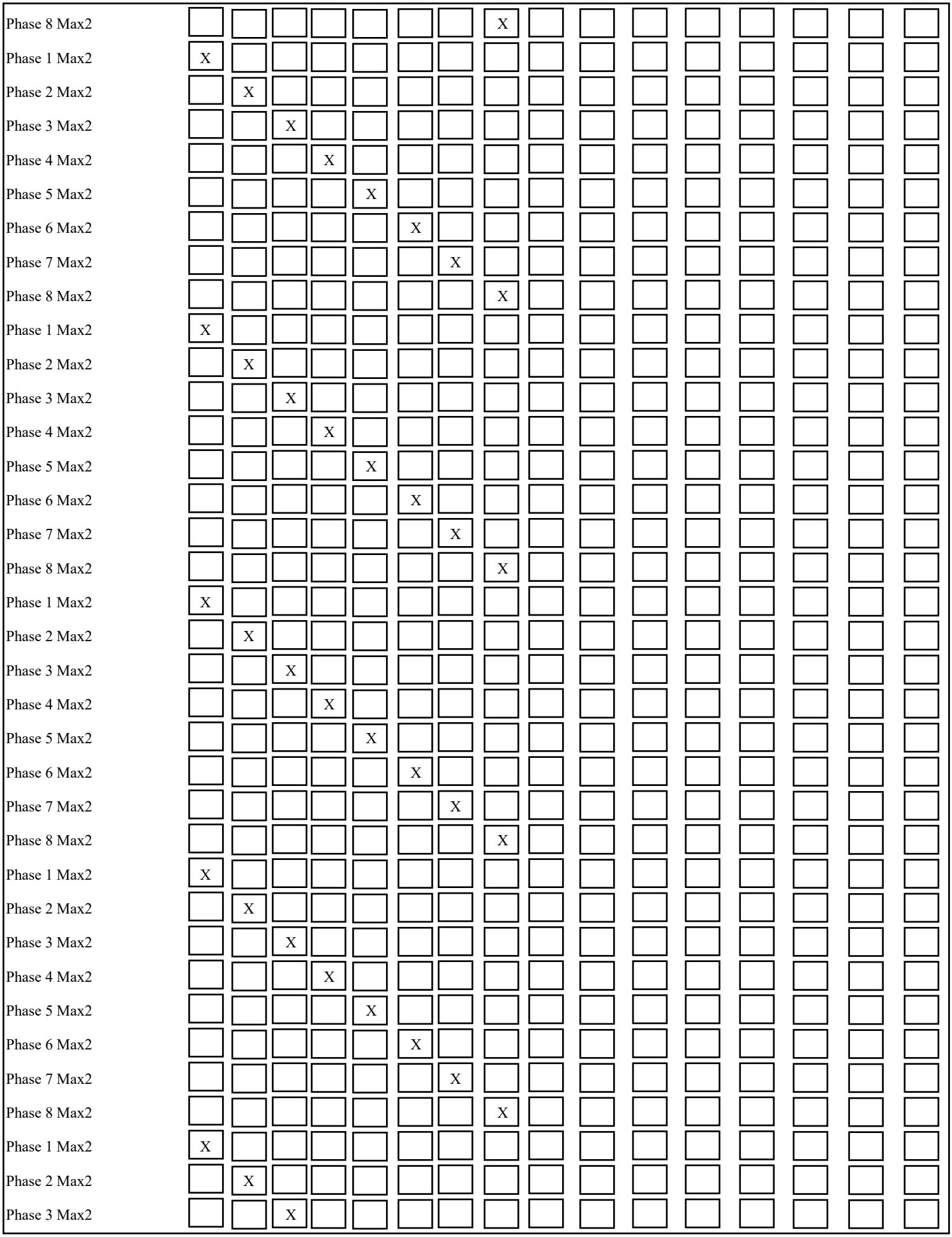
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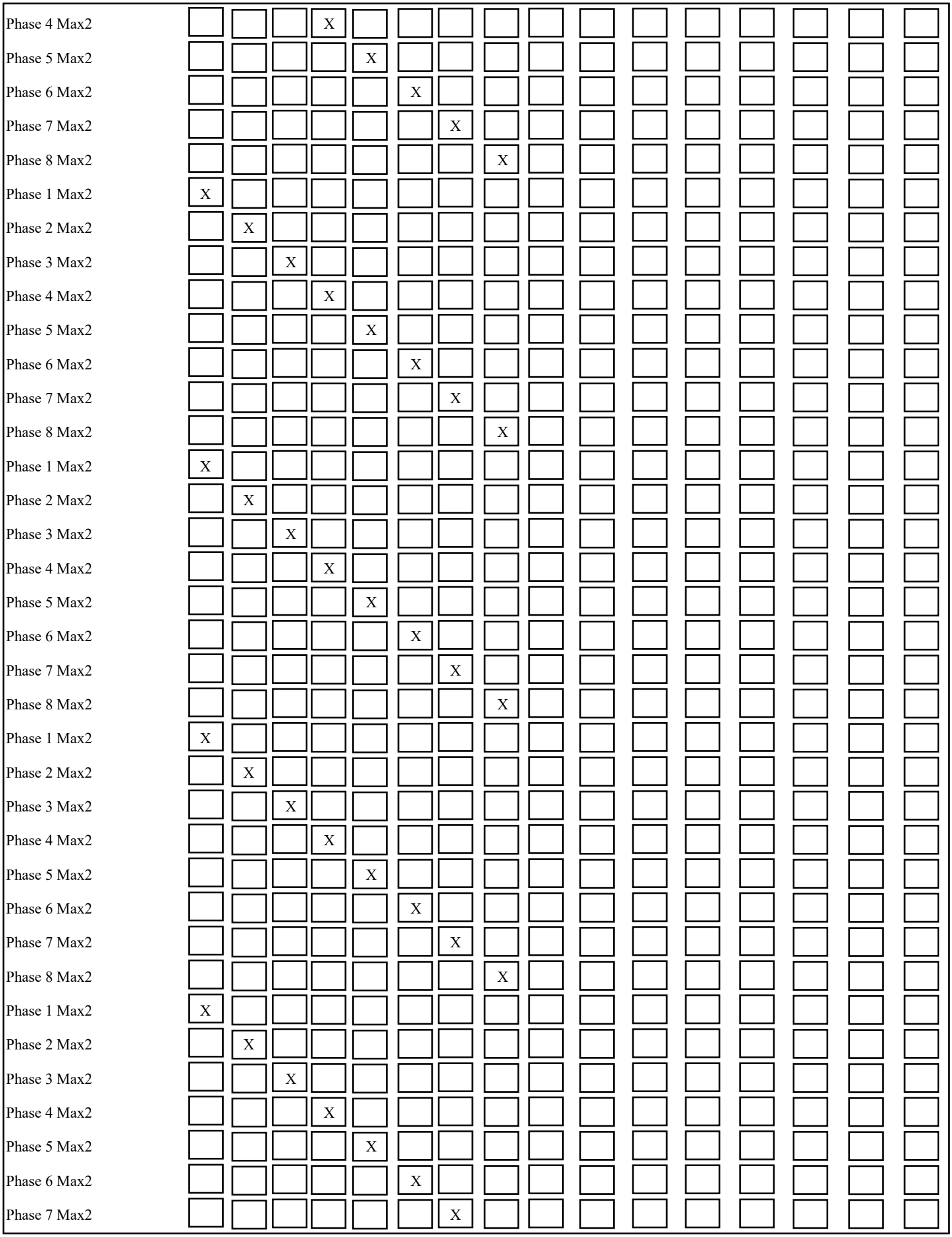
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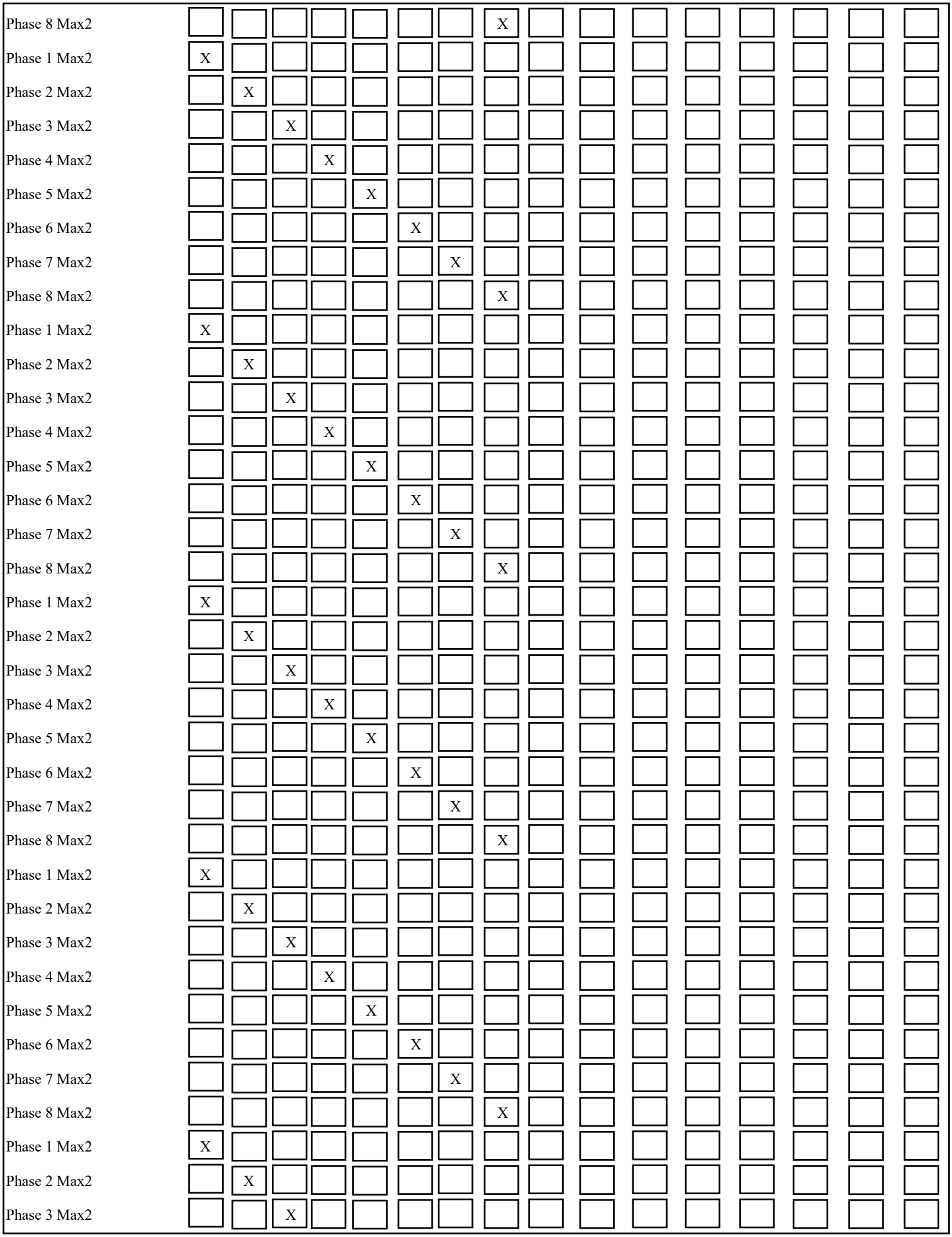
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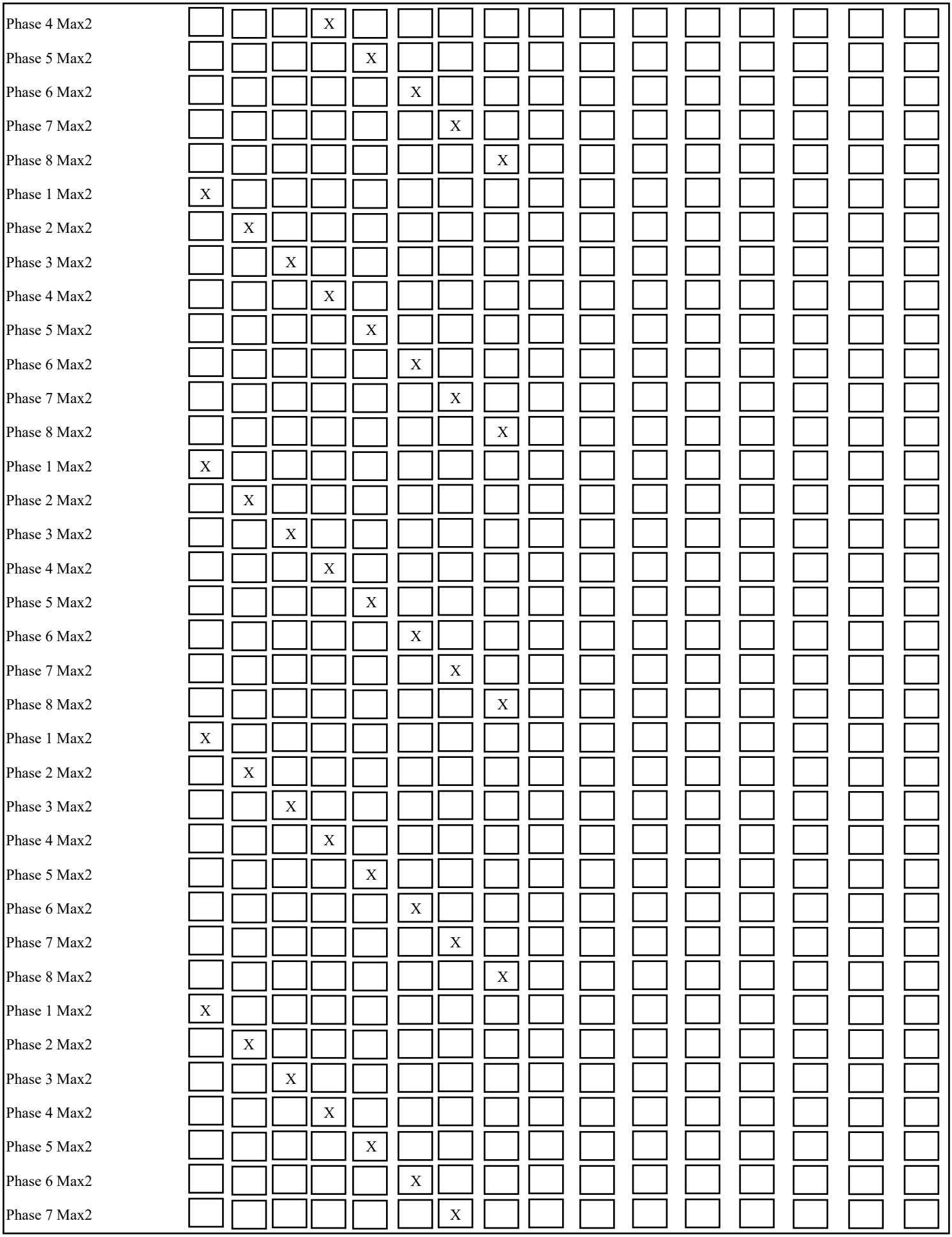
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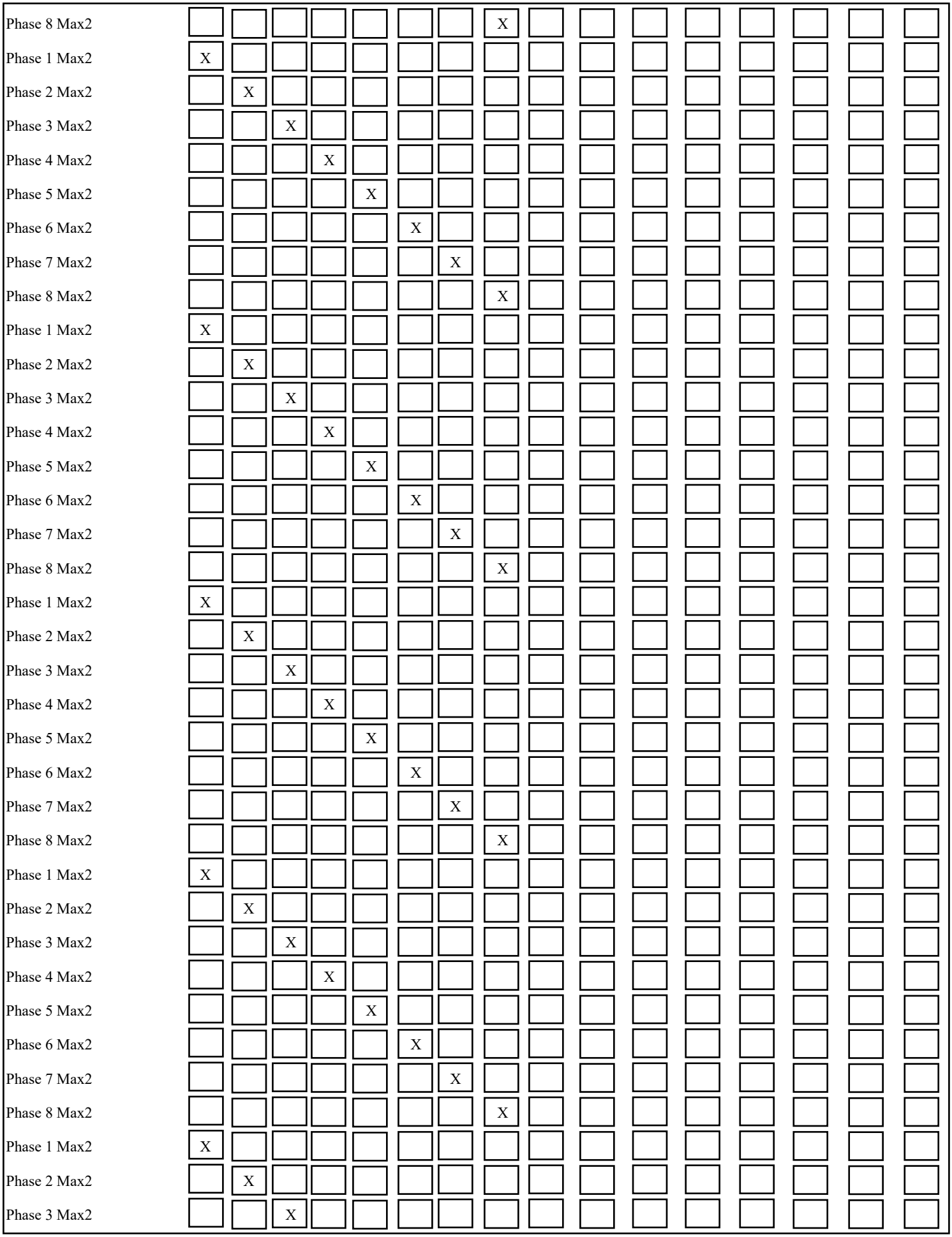
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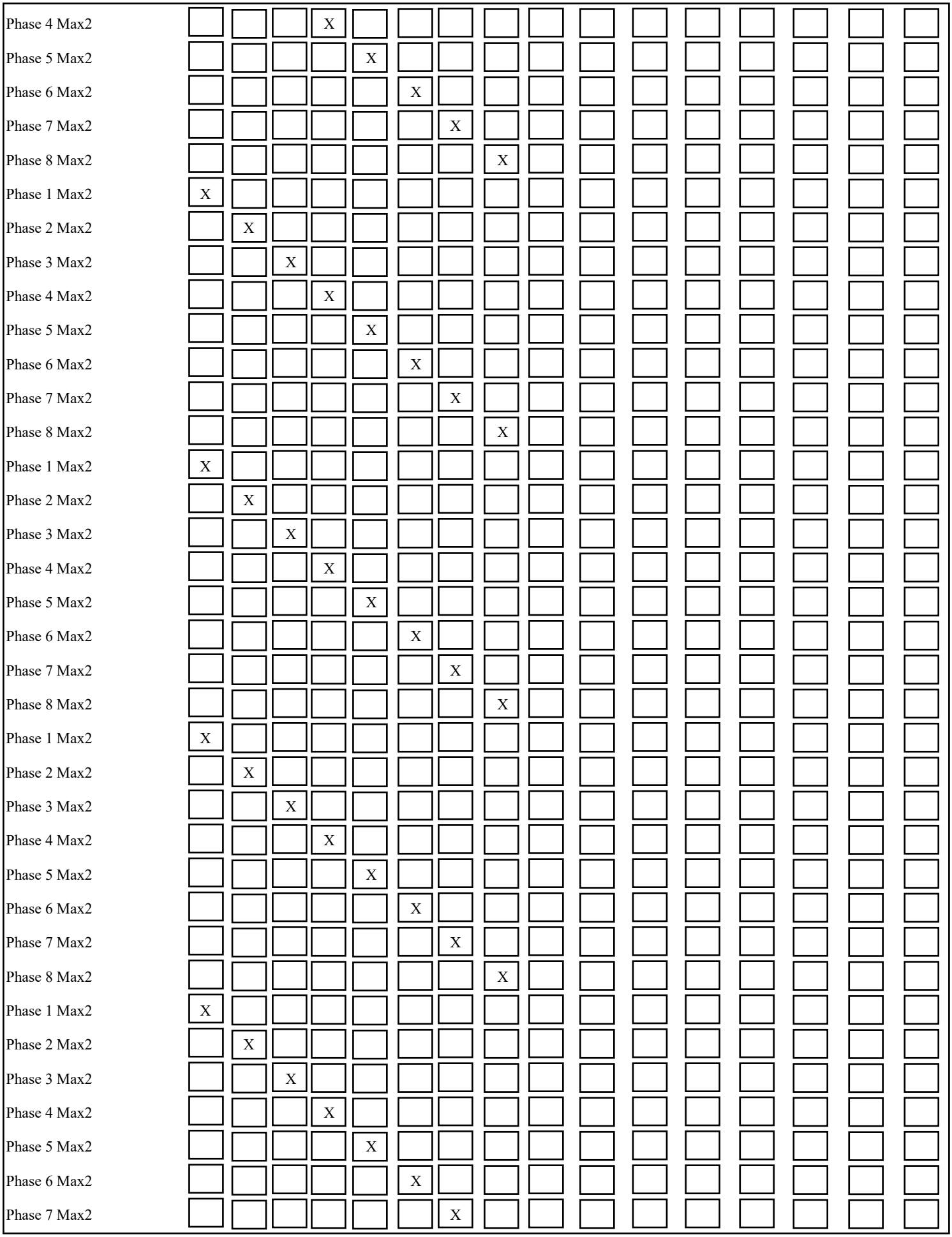
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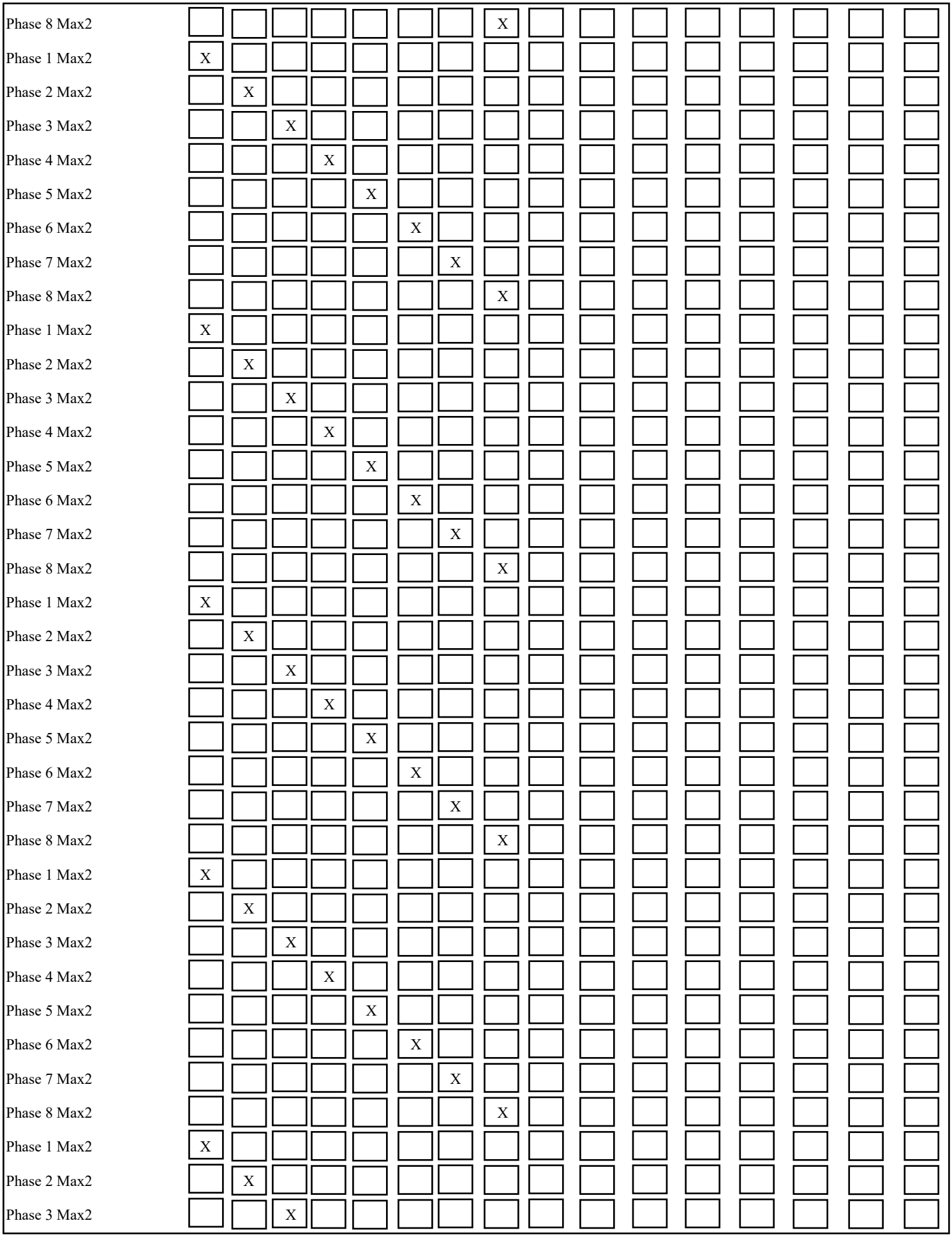
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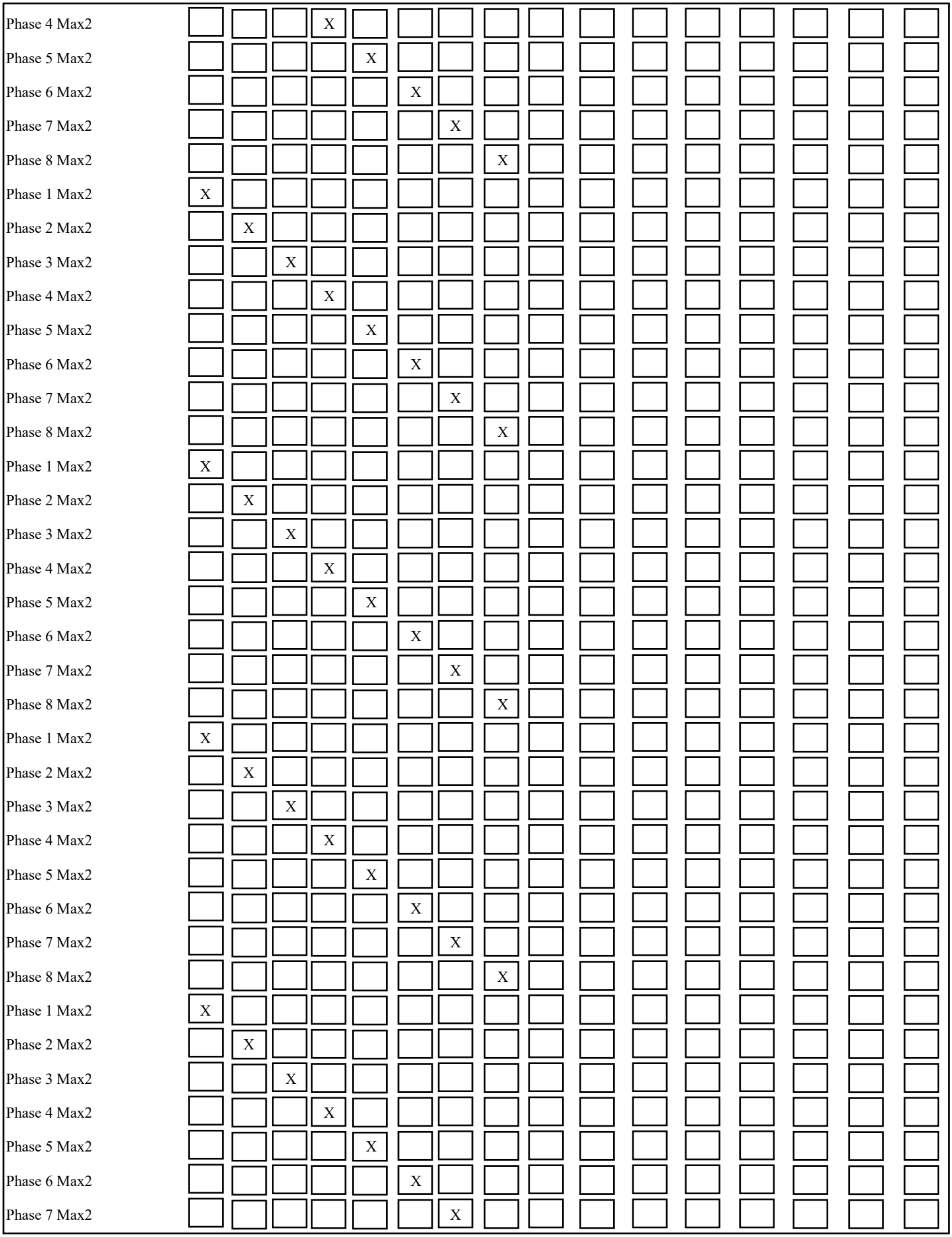
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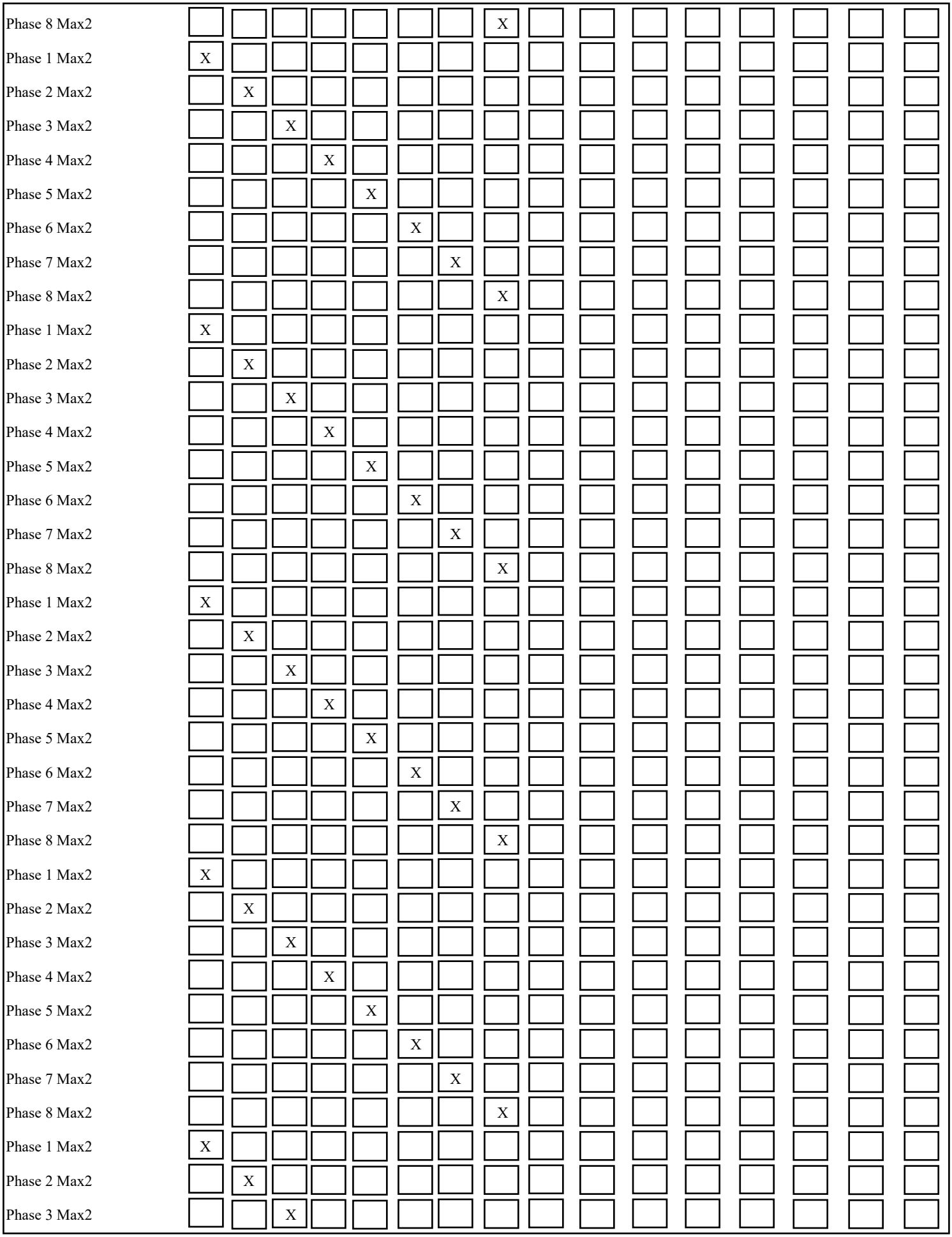
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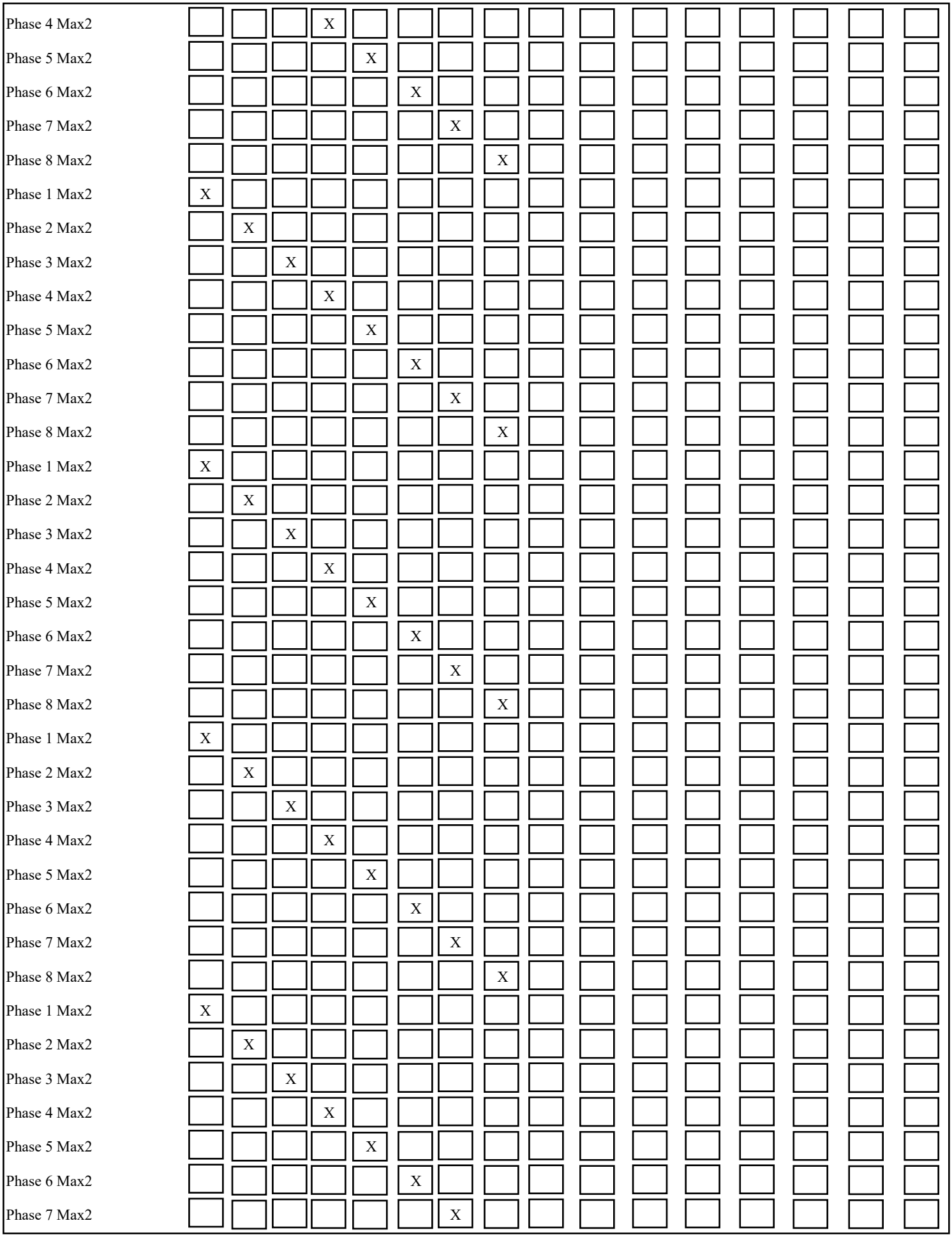
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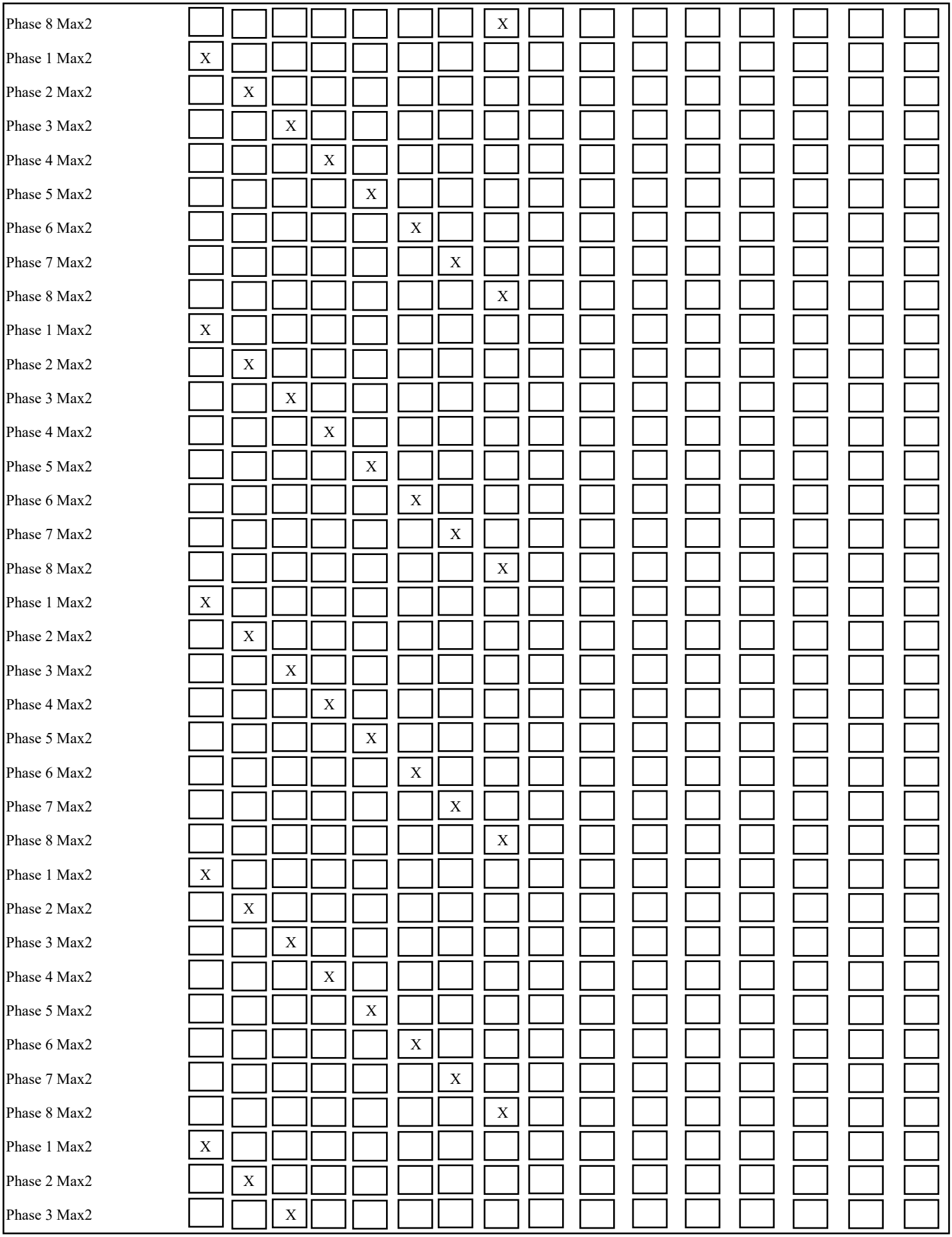
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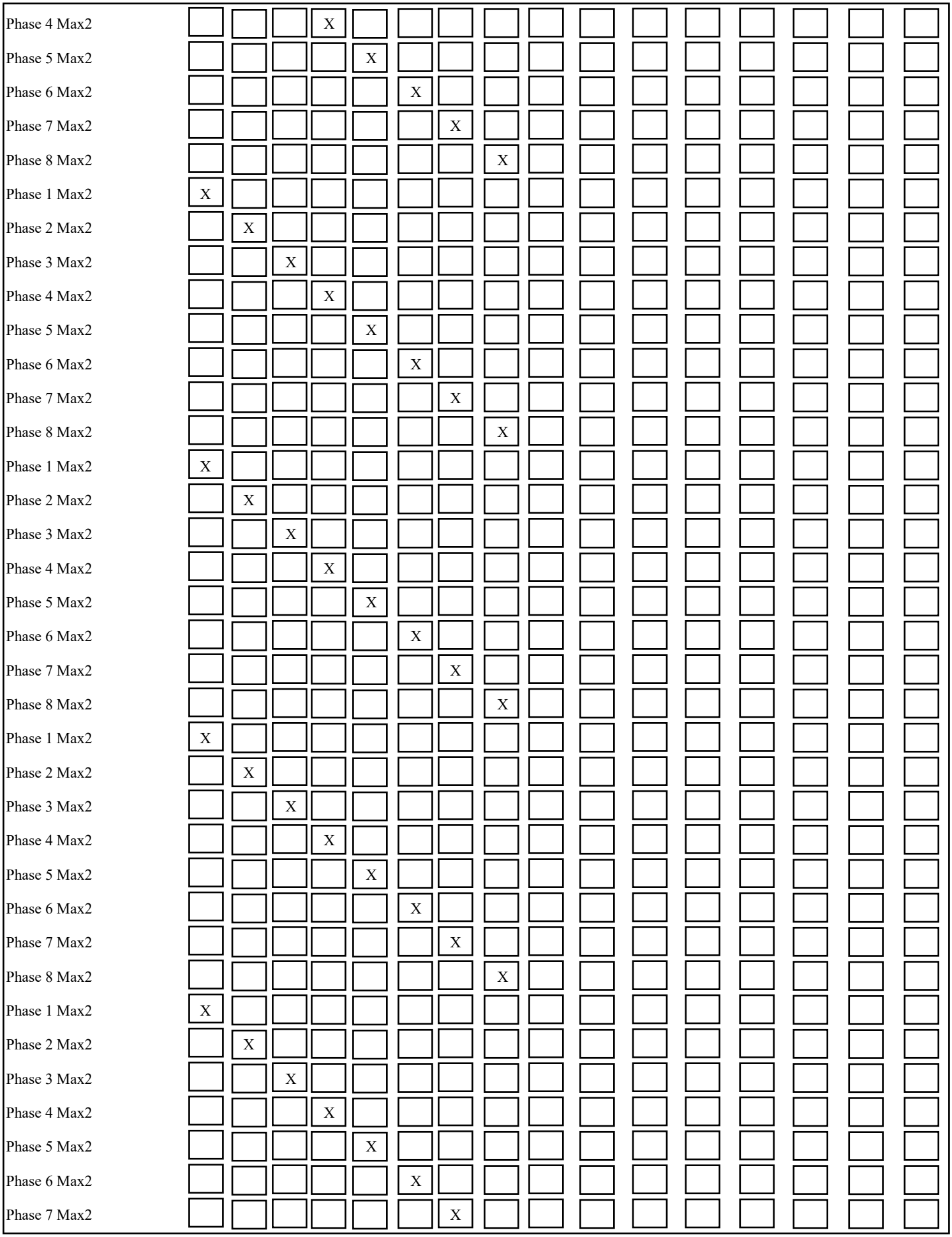
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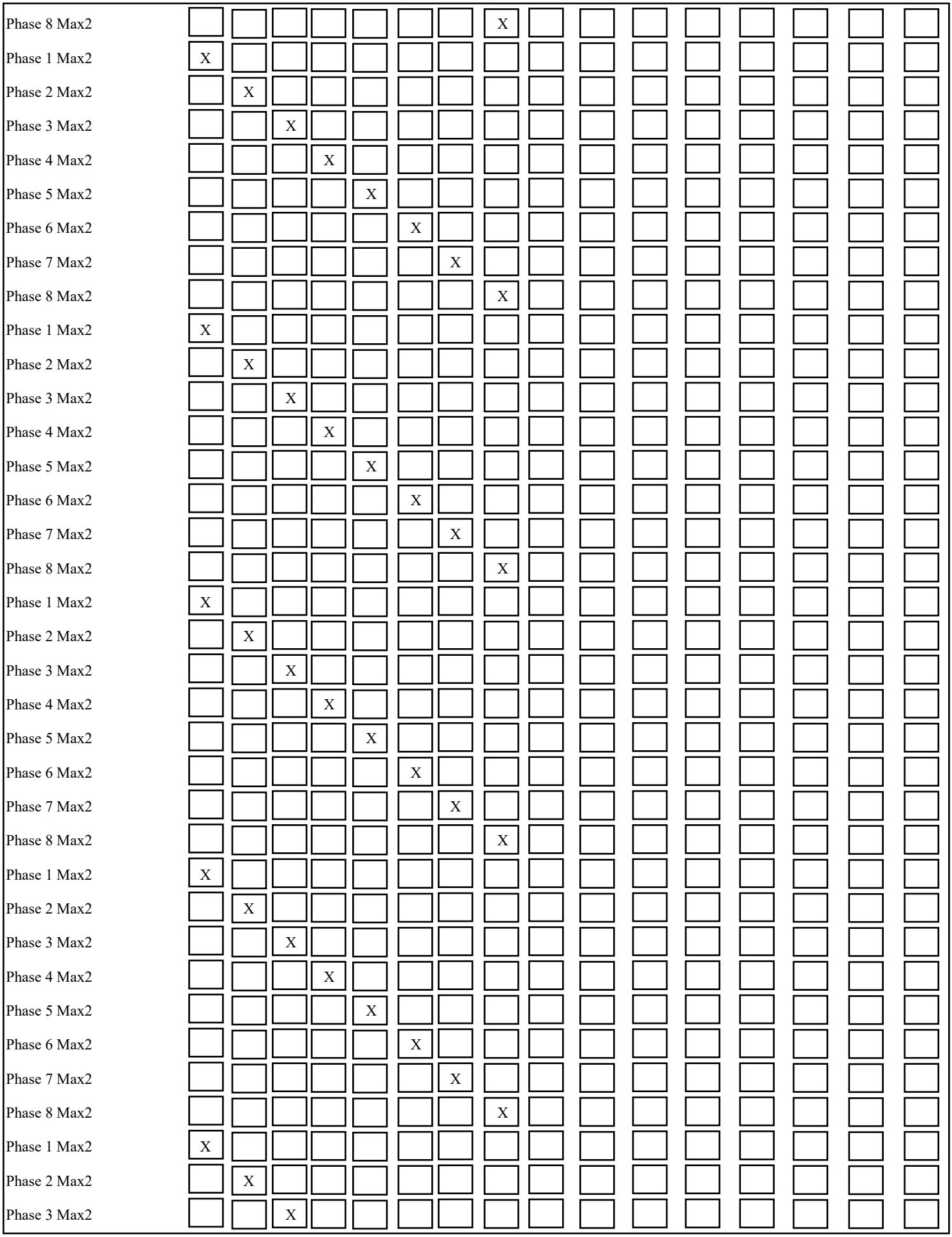
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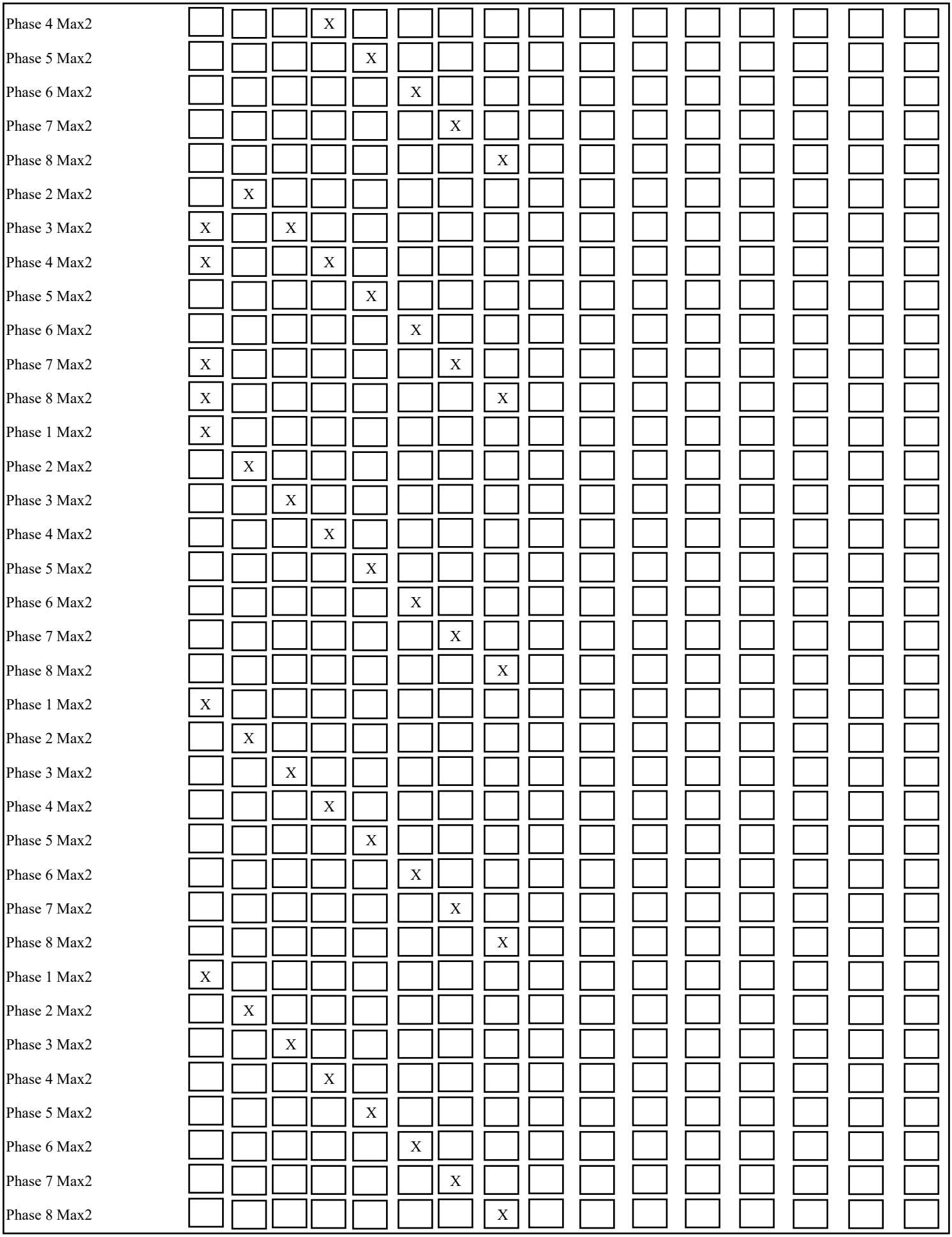
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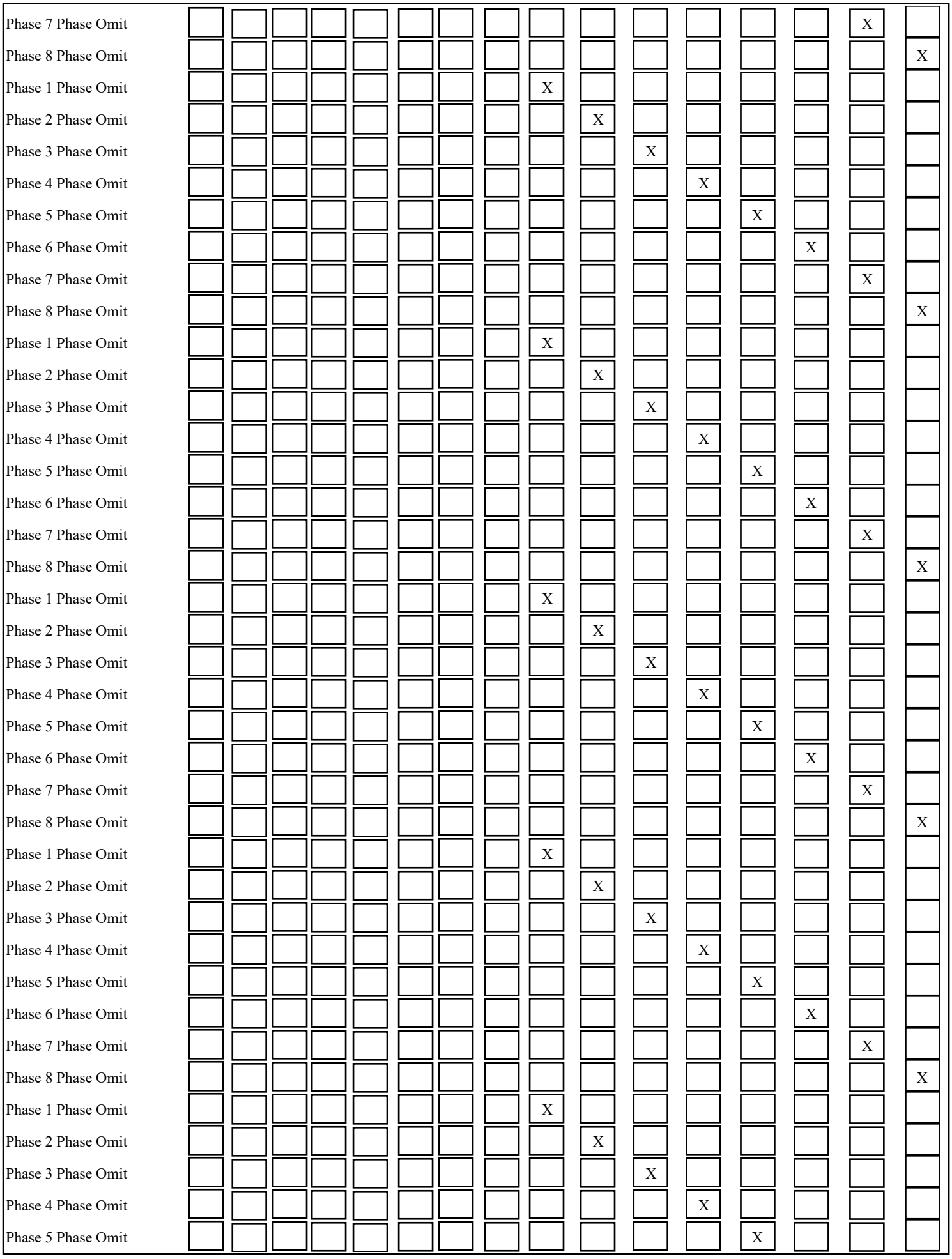
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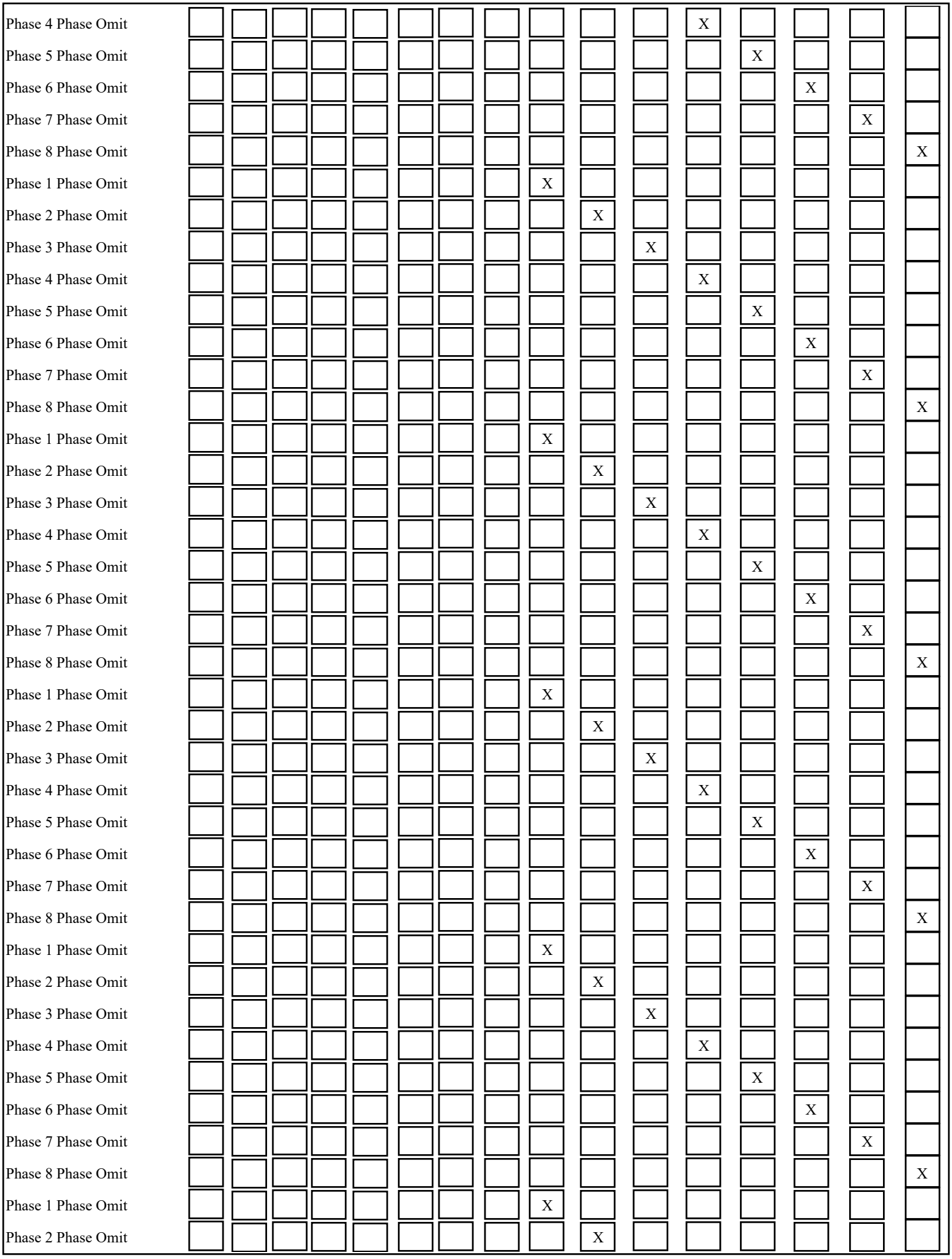
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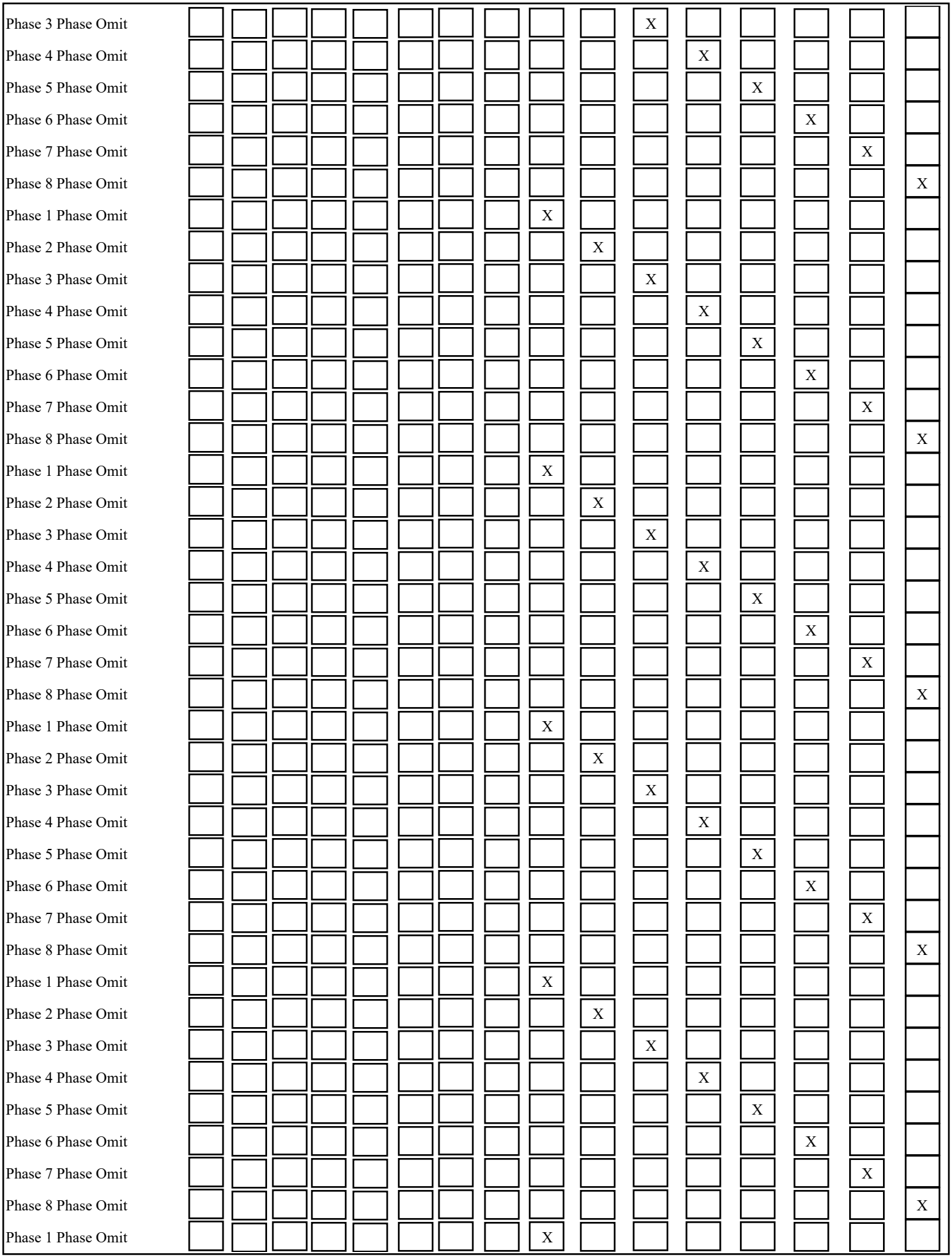
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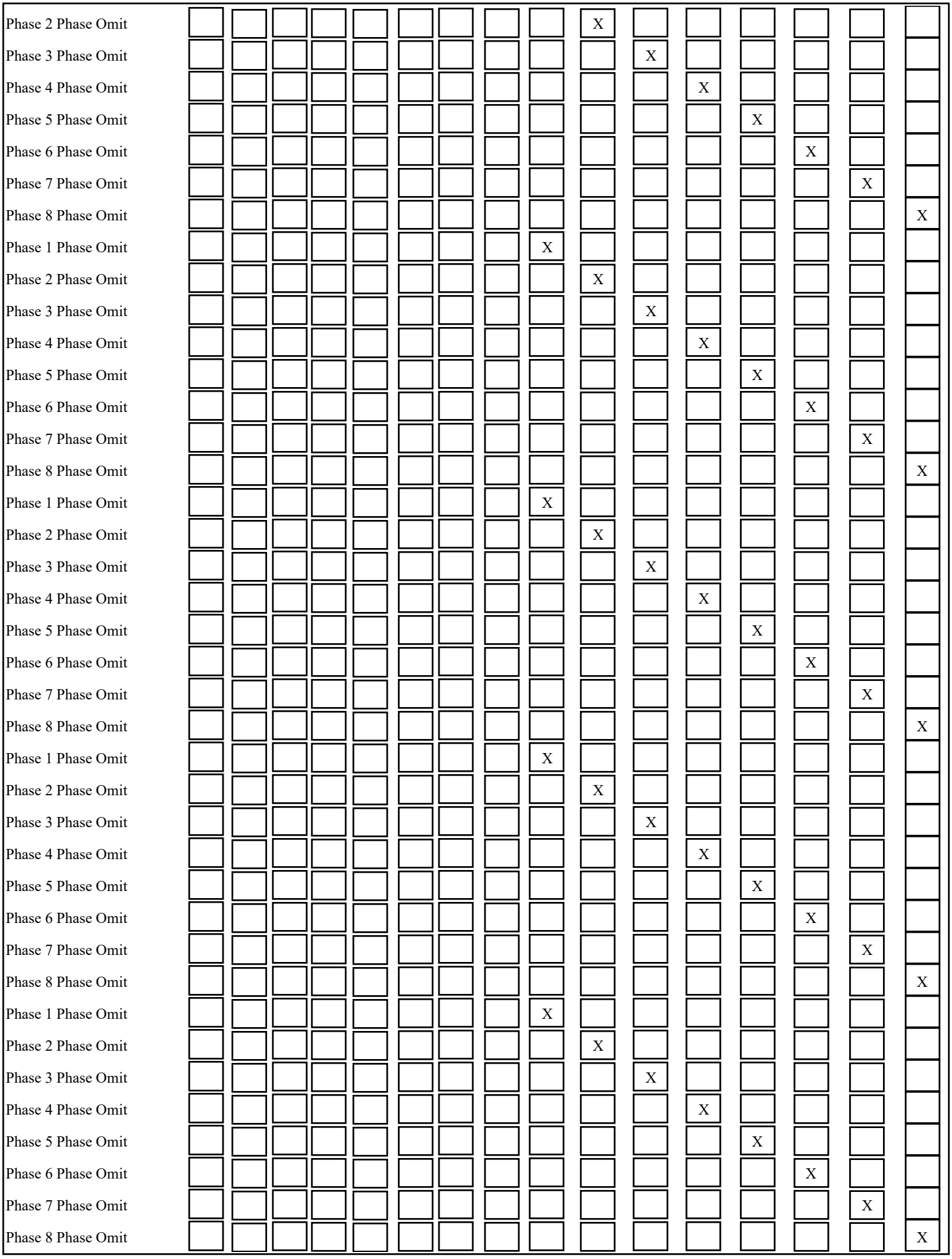
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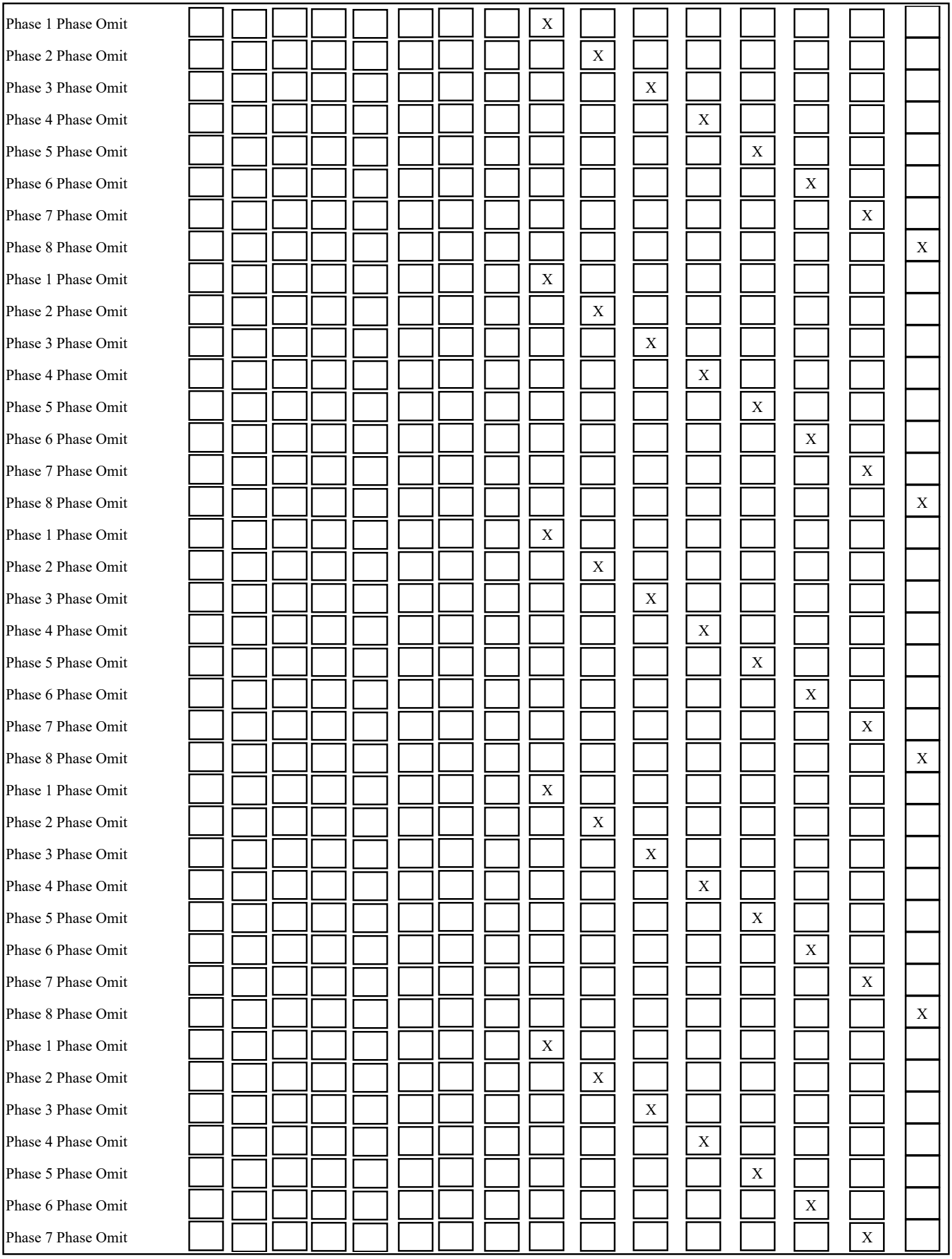
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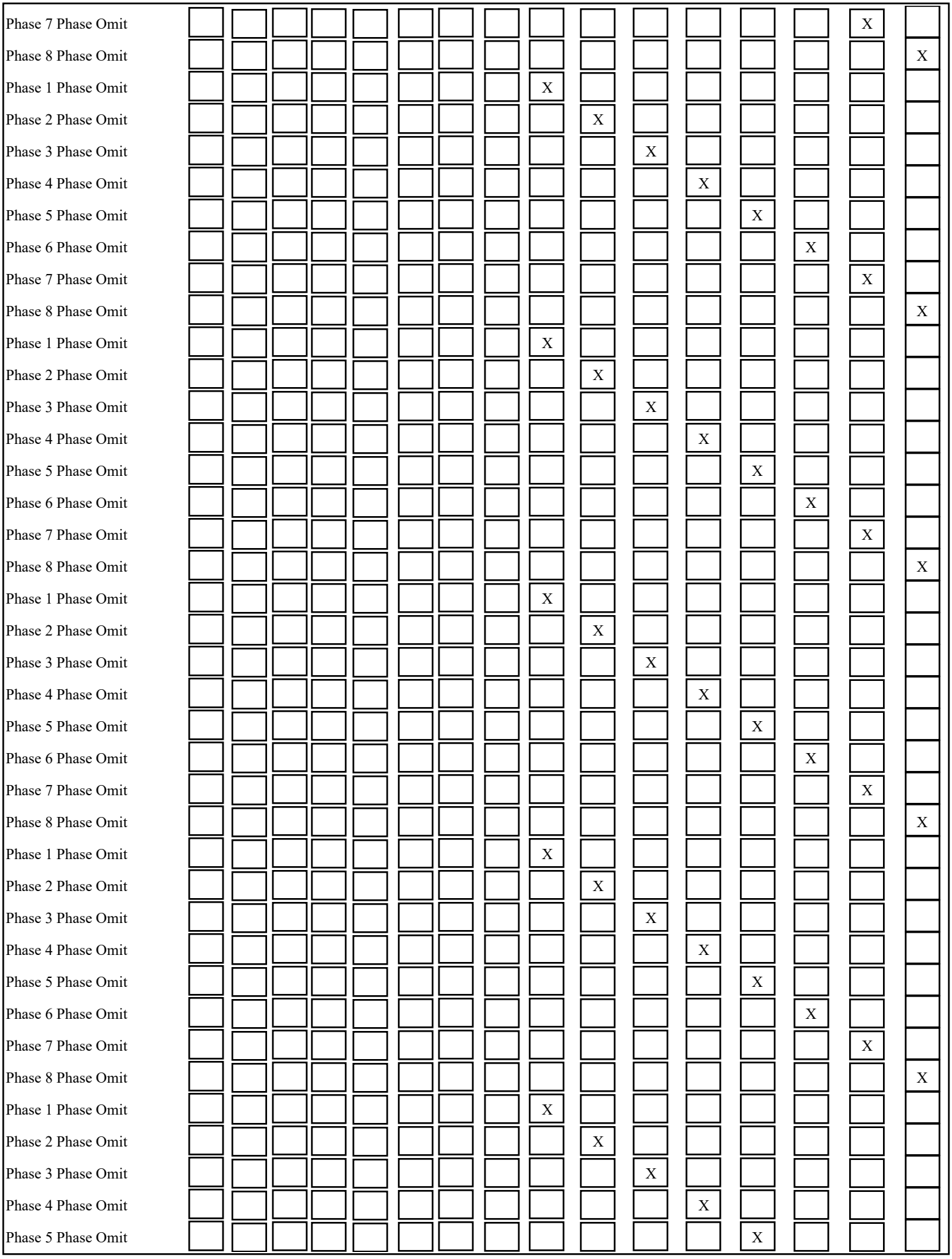
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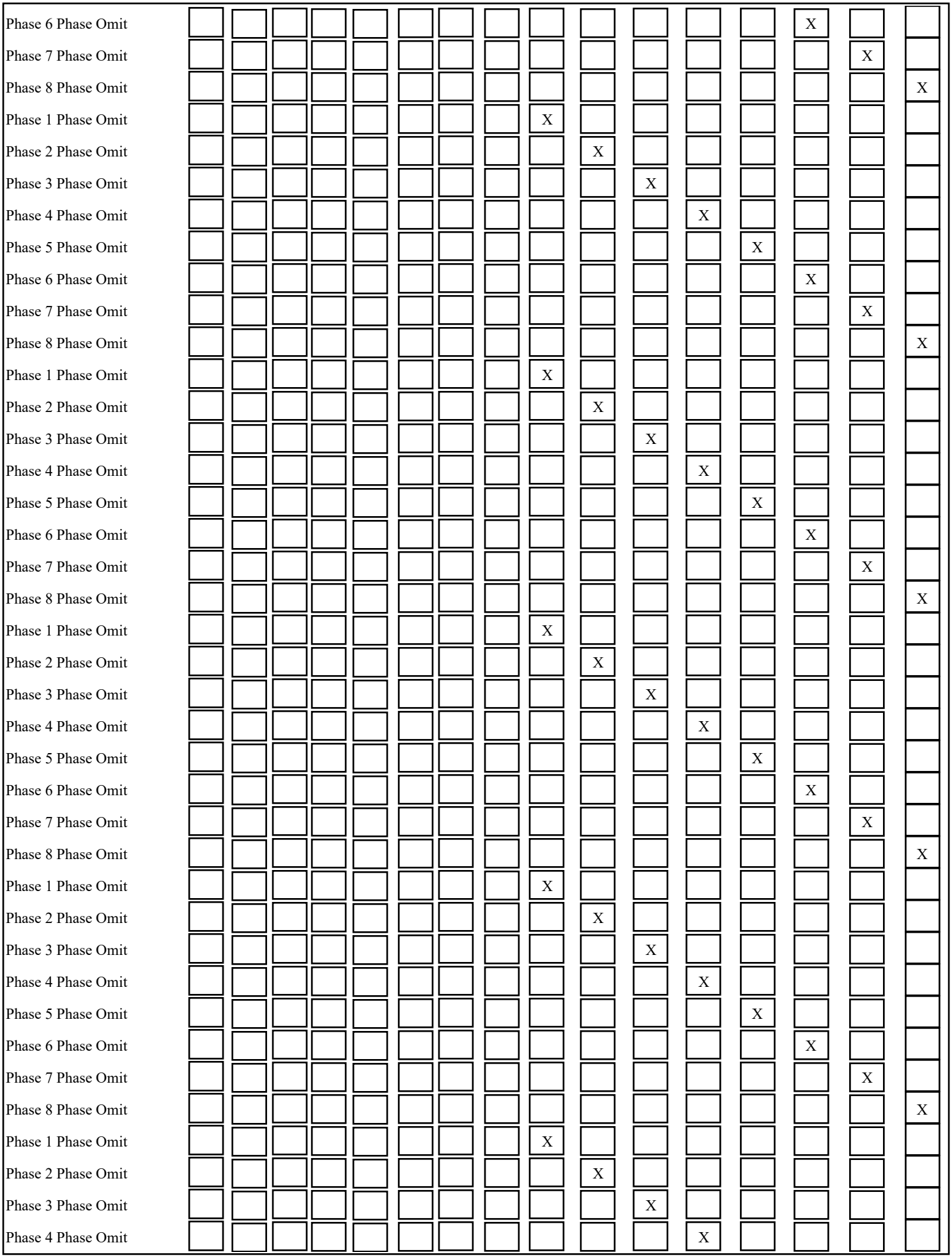
Phase 6 Phase Omit
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Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit

Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X
Phase 1 Phase Omit								X								
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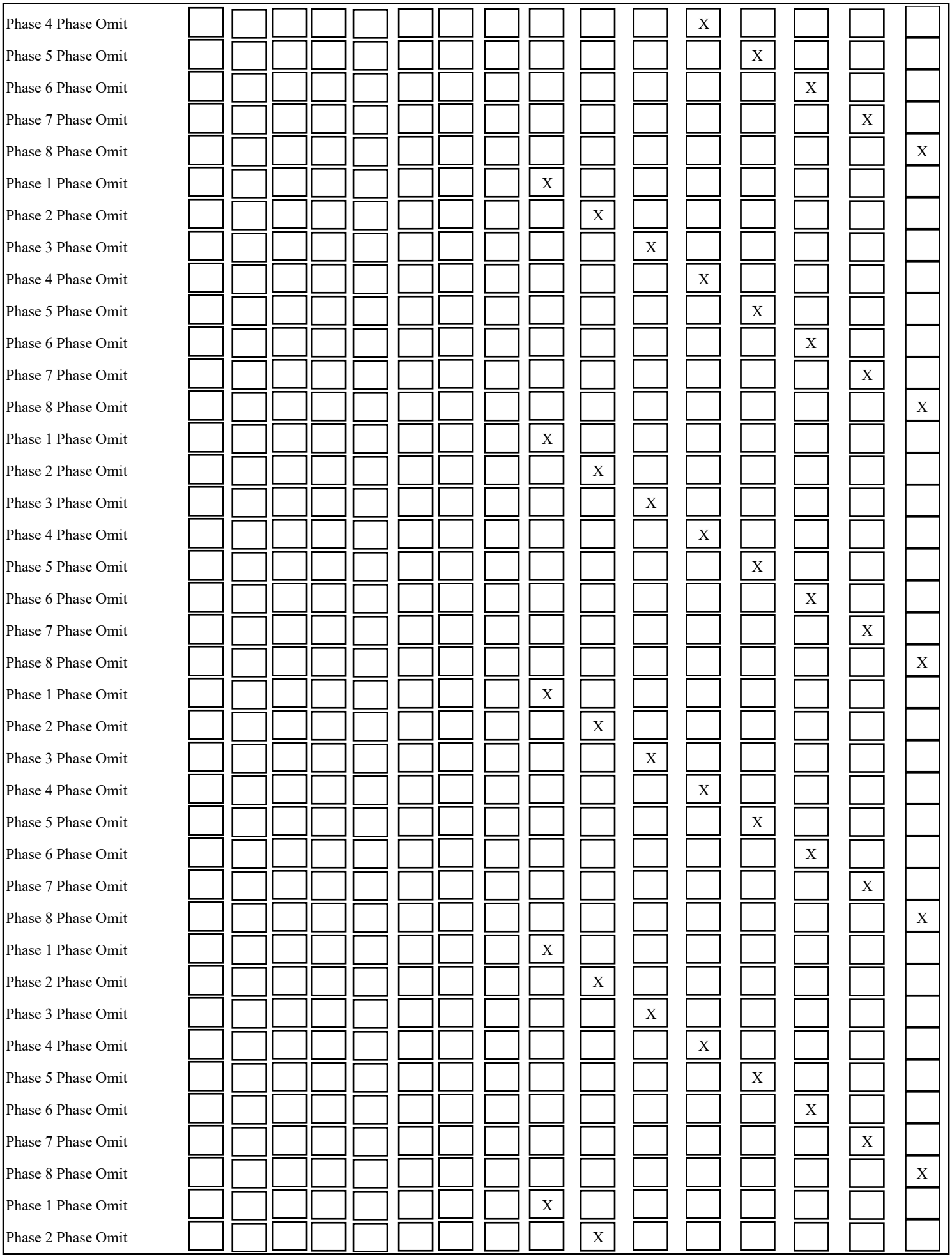
Phase 3 Phase Omit										X						


Phase 4 Phase Omit
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Phase 8 Phase Omit
Phase 1 Phase Omit
Phase 2 Phase Omit

Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
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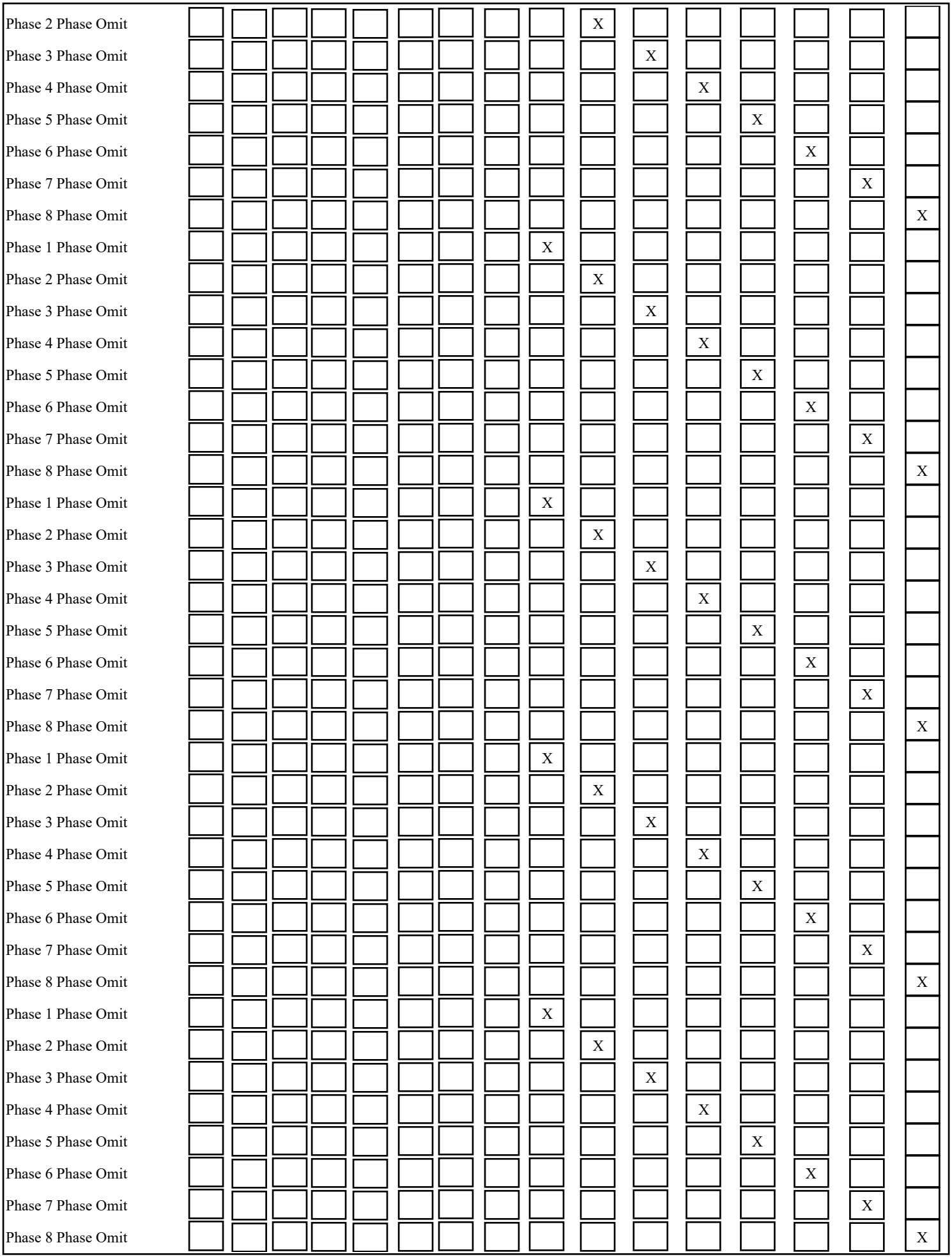
Phase 6 Phase Omit													X			
Phase 7 Phase Omit														X		
Phase 8 Phase Omit															X	
Phase 1 Phase Omit								X								


Phase 2 Phase Omit
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Phase 1 Phase Omit
Phase 2 Phase Omit
Phase 3 Phase Omit
Phase 4 Phase Omit
Phase 5 Phase Omit
Phase 6 Phase Omit
Phase 7 Phase Omit
Phase 8 Phase Omit

	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Ped Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Coord ReSvc	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Function Phase Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Phase Min Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Ped Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Bike Recall	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Vehicle Function Veh Det Switch Omit	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Now	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Veh Det Switch Also	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Overlap Function	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16

Dimming Data

Default Data - No Dimming Programmed

Lane Defination

Lanes	Name	Green Inbound	Yellow Inbound	Red Inbound	Green Outbound	Yellow Outbound

Default Data - Lane Defination

program_day	program_hour	program_minute	LanePhFun

Preemption Data

General Preemption Data

Flash > Preempt	Preempt 2 > Preempt 3	Preempt 4 = Preempt 5
Preempt 1 = Preempt 2	Preempt 3 = Preempt 4	Preempt 5 = Preempt 6

Preempt Timers

Preempt	NLock	Link to Pmpt	Del	Ext	Dur	Max Call	Lock-Out	De Bounce	Gate Ext	Min G | W	Select Ped Clear	Select Yel	Select Red	Track Grn	Track Ped	Track Yel	Track Red	Dwell Green	Return Ped Clear	Return Yel	Return Red	Sel Ret Mode
1	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
2	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
3	N	0	0	0	0	0	0	0.0	0	0 | 0	6	4.5	1.5	0	0	0.0	0.0	10	0	4.5	1.5	F Aut
4	N	0	0	0	0	0	0	0.0	0	0 | 0	6	4.5	1.5	0	0	0.0	0.0	10	0	3.0	1.0	F Aut
5	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut
6	N	0	0	0	0	0	0	0.0	0	0 | 0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0	F Aut

Preempt 1

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
2	Yes	No

Preempt 4

Phase	Exit Phase	Exit Calls
2	Yes	No

Preempt 5

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Free Dial	Free Split	Min Green	No Lock out	Lock out A	Lock out B	Max Green	Pre-Green	Recall	Excl-co Phase Svc.	Transit Overlap Signal Type	Transit Overlap Blankout
1	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
2	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
3	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
4	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
5	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output
6	No	0	0	4	4	0	0	0	0	1	0.0	0-None	No	0-None,0-No Output	0-None,0-No Output

Priority Detector Channels

Priority **1**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **2**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **3**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **4**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **5**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority **6**

Detector	1A	2A	3A	4A	5A	6A	B	C	X
Channel	0	0	0	0	0	0	0	0	0

Priority Fixed Phases

Priority 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Co-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
QJ-Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: 0 1
CO-PHASE FALSE TRUE
QJ-PHASE

Priority Bank

Priority 1

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 2

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 3

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 4

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 5

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority 6

Priority Bank : 1 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 2 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 3 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Priority Bank : 4 Level 0

Partial Priority		Full Priority		Recovery	
Alt Seq	0	Freq. Override	False	Method	0-Normal
Alt Seq Enabled	False	Ped skip	0	Return	0-Cycle
Min Walk	0	Force full Priority	False	PedWait	0
		Frequency	0	PedOverride	0
		Freq. Level	0-Min		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exit Call	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Codes: 0 FALSE X TRUE

Priority : 1

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 2

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 3

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 4

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 5

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 6

Priority Bank : 1
Queue Phase Detector Time
Default data

Priority Bank : 2
Queue Phase Detector Time
Default data

Priority Bank : 3
Queue Phase Detector Time
Default data

Priority Bank : 4
Queue Phase Detector Time
Default data

Priority : 1

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 2

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 3

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 4

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 5

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Priority : 6

Bank 1								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 2								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 3								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						
Bank 4								
Detector	PE	1A	2A	3A	4A	5A	6A	B
		Default Data						

Preempt 1

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph	Track	Dwell	Cycle	Ovlp	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 2

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 3

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
2	Red	Green	No									
		Default Data				**Default Data**				**Default Data**		

Preempt 4

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
3	Red	Green	No									
		Default Data				**Default Data**				**Default Data**		

Preempt 5

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

Preempt 6

Vehical Phases				Pedestrian Phases				Overlaps				
Ph.	Track	Dwell	Cycle	Ph.	Track	Dwell	Cycle	Ovlp.	Track	Dwell	Cycle	Trail Grn
Default Data				**Default Data**				**Default Data**				

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15

1st Phone:

2nd Phone:

Local Free: No | Cycle Failure: No | Coord Failure: No | Conflict Flash: No | Remote Flash: No

Local Fash: No | Cycle Fault: No | Coord Fault: No | Premption: No | Voltage Monitor: No

Special Status 1: No | Special Status 2: No | Special Status 3: No | Special Status 4: No | Special Status 5: No | Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Name	Veh/ Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval: 0

Default Data

Queue: 1
Input Selection: 0=Average
Detector Failed Level : 0

Queue: 2
Input Selection: 0=Average
Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Valu

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Dial/Split/Offset Speed Trap Low Treshold Speed Trap High Treshold

//

Default Data

Default Data

Volume Detector Data

Report Interval 0

Volume Detector Number Controller Detector Channel

Default Data

Appendix D – AM Vistro Reports

Existing Traffic Conditions

Vistro File: H:\...\24667_AM - v2.vistro
Report File: H:\...\Existing_AM_v4.pdf
Scenario: Base Scenario
4/20/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr / Cattle Dr	Two-way stop	HCM 6th Edition	WB Left	0.027	10.3	B
2	George Elmer Dr / Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	0.613	46.6	E
3	Flynn Ln / Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	1.227	314.8	F
4	Flynn Ln / Siren's Dr	Two-way stop	HCM 6th Edition	EB Left	0.181	20.6	C
5	Flynn Ln / Chelsea Dr	Two-way stop	HCM 6th Edition	EB Left	0.119	19.3	C
6	Flynn Ln / England Blvd	Two-way stop	HCM 6th Edition	WB Left	0.336	16.4	C
7	Flynn Ln / Camden St	Two-way stop	HCM 6th Edition	WB Left	0.020	11.4	B
8	W Broadway St / Flynn Ln	Two-way stop	HCM 6th Edition	NB Left	0.533	54.0	F
9	Mary Jane Blvd / Camden St	Two-way stop	HCM 6th Edition	NB Left	0.003	8.7	A
10	Mary Jane Blvd / England Blvd	Two-way stop	HCM 6th Edition	NB Left	0.025	13.5	B
11	Mary Jane Blvd / Melrose Pl	Two-way stop	HCM 6th Edition	EB Thru	0.074	9.4	A
12	Reserve St / Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.888	43.7	D
13	Reserve St / England Blvd	Signalized	HCM 6th Edition	WB Right	0.628	19.4	B
15	W Broadway St / US-93 West Ramp	Signalized	HCM 6th Edition	NB Right	0.522	6.6	A
16	W Broadway St / US-93 East Ramp	Signalized	HCM 6th Edition	NB Left	0.671	27.2	C
140	Reserve St / Ramps (W)	Signalized	HCM 6th Edition	EB Right	0.557	10.3	B
141	Reserve St / Ramps (E)	Two-way stop	HCM 6th Edition	WB Right	0.232	15.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr / Cattle Dr

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	39	0	3	0	5	0	0	0	108	16	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	0	3	0	5	0	0	0	108	16	0	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	1	0	1	0	0	0	32	5	0	0
Total Analysis Volume [veh/h]	46	0	4	0	6	0	0	0	129	19	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.37	0.00	0.00	7.21	0.00	0.00	9.61	10.14	8.81	10.35	9.82	8.46
Movement LOS	A	A	A	A	A	A	A	B	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.09	0.00	0.00	0.00	0.41	0.41	0.41	0.08	0.08	0.08
95th-Percentile Queue Length [ft/ln]	2.27	2.27	2.27	0.00	0.00	0.00	10.20	10.20	10.20	2.12	2.12	2.12
d_A, Approach Delay [s/veh]	6.78			0.00			8.81			10.35		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	8.20											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: George Elmer Dr / Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.613

Intersection Setup

Name	George Elmer Dr		Mullan road		Mullan road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	George Elmer Dr		Mullan road		Mullan road	
Base Volume Input [veh/h]	119	8	2	925	188	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	12.00	50.00	2.00	11.00	9.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	8	2	925	188	35
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	2	1	246	50	9
Total Analysis Volume [veh/h]	127	9	2	984	200	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.61	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	46.58	9.46	8.19	0.00	0.00	0.00
Movement LOS	E	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.52	0.03	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	87.98	0.84	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	44.12		0.02		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	4.43					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Flynn Ln / Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	314.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.227

Intersection Setup

Name	Flynn Lane			Flynn Lane			Mullan road			Mullan Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left2	Left	Right	Left	Right	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Flynn Lane			Flynn Lane			Mullan road			Mullan Road		
Base Volume Input [veh/h]	0	0	4	56	0	65	292	772	4	8	176	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	25.00	2.00	2.00	20.00	5.00	1.00	25.00	0.00	5.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	4	56	0	65	292	772	4	8	176	167
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	1	15	0	18	79	210	1	2	48	45
Total Analysis Volume [veh/h]	0	0	4	61	0	71	317	839	4	8	191	182
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	1.23	0.00	0.10	0.27	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	83.08	81.53	15.97	314.81	0.00	247.45	9.22	0.00	0.00	9.54	0.00	0.00
Movement LOS	F	F	C	F		F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	9.35	0.00	9.35	1.10	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.91	0.91	0.91	233.72	0.00	233.72	27.61	0.00	0.00	0.76	0.00	0.00
d_A, Approach Delay [s/veh]	15.97			278.58			2.52			0.20		
Approach LOS	C			F			A			A		
d_I, Intersection Delay [s/veh]	23.75											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 4: Flynn Ln / Siren's Dr

Control Type:	Two-way stop	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name	Flynn Lane		Flynn Lane		Siren's Road	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Flynn Lane		Flynn Lane		Siren's Road	
Base Volume Input [veh/h]	154	291	68	103	42	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.00	15.00	0.00	0.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	291	68	103	42	82
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	88	20	31	13	25
Total Analysis Volume [veh/h]	186	351	82	124	51	99
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.00	0.00	0.18	0.11
d_M, Delay for Movement [s/veh]	8.02	0.00	0.00	0.00	20.57	9.46
Movement LOS	A	A	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.47	0.00	0.00	0.00	0.65	0.37
95th-Percentile Queue Length [ft/ln]	11.67	0.00	0.00	0.00	16.20	9.17
d_A, Approach Delay [s/veh]	2.78		0.00		13.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.89					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 5: Flynn Ln / Chelsea Dr

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name	Flynn Lane			Flynn Lane			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Flynn Lane			Flynn Lane			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	68	234	33	15	135	40	31	2	11	22	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	19.00	3.00	0.00	0.00	7.00	28.00	65.00	50.00	36.00	0.00	20.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	234	33	15	135	40	31	2	11	22	5	13
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	64	9	4	37	11	9	1	3	6	1	4
Total Analysis Volume [veh/h]	75	257	36	16	148	44	34	2	12	24	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.01	0.00	0.00	0.12	0.01	0.02	0.07	0.01	0.02
d_M, Delay for Movement [s/veh]	7.97	0.00	0.00	7.85	0.00	0.00	19.32	18.44	11.26	15.86	16.64	10.73
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.19	0.04	0.04	0.04	0.48	0.48	0.48	0.33	0.33	0.33
95th-Percentile Queue Length [ft/ln]	4.64	4.64	4.64	0.95	0.95	0.95	12.12	12.12	12.12	8.26	8.26	8.26
d_A, Approach Delay [s/veh]	1.62			0.60			17.27			14.28		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	3.25											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Flynn Ln / England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.336

Intersection Setup

Name	Flynn Lane		Flynn Lane		England Boulevard	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		England Boulevard	
Base Volume Input [veh/h]	203	182	13	98	142	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	9.00	0.00	7.00	8.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	203	182	13	98	142	34
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	55	4	30	43	10
Total Analysis Volume [veh/h]	245	219	16	118	171	41
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.34	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	8.30	0.00	16.40	14.51
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.04	1.87	1.87
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.10	1.10	46.86	46.86
d_A, Approach Delay [s/veh]	0.00		0.99		16.03	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.36					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Flynn Ln / Camden St

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name	Flynn Lane		Flynn Lane		Camden Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		Camden Street	
Base Volume Input [veh/h]	230	10	5	99	10	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	10.00	0.00	7.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	10	5	99	10	28
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	3	2	30	3	9
Total Analysis Volume [veh/h]	280	12	6	121	12	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.82	0.00	11.44	10.11
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.35	0.35	5.21	5.21
d_A, Approach Delay [s/veh]	0.00		0.37		10.45	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.14					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: W Broadway St / Flynn Ln

Control Type:	Two-way stop	Delay (sec / veh):	54.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name	Flynn Lane		Flynn Lane		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		Broadway Street	
Base Volume Input [veh/h]	116	139	617	93	41	450
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	8.00	13.00	10.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	139	617	93	41	450
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	44	195	29	13	142
Total Analysis Volume [veh/h]	147	176	781	118	52	570
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.53	0.32	0.01	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	54.03	47.53	0.00	0.00	10.53	0.00
Movement LOS	F	E	A	A	B	A
95th-Percentile Queue Length [veh/ln]	8.08	8.08	0.00	0.00	0.24	0.00
95th-Percentile Queue Length [ft/ln]	202.06	202.06	0.00	0.00	5.97	0.00
d_A, Approach Delay [s/veh]	50.49		0.00		0.88	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	9.14					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 9: Mary Jane Blvd / Camden St

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Mary Jane Boulevard		Camden Street		Camden Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Boulevard		Camden Street		Camden Street	
Base Volume Input [veh/h]	2	0	10	2	1	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	10.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	10	2	1	20
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	1	0	6
Total Analysis Volume [veh/h]	3	0	13	3	1	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	8.37	0.00	0.00	7.23	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.23	0.23	0.00	0.00	0.05	0.05
d_A, Approach Delay [s/veh]	8.71		0.00		0.28	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.74					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Mary Jane Blvd / England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	Mary Jane Boulevard			Mary Jane Boulevard			England Boulevard			England Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mary Jane Boulevard			Mary Jane Boulevard			England Boulevard			England Boulevard		
Base Volume Input [veh/h]	8	0	1	8	0	4	4	213	2	1	158	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	0.00	0.00	12.00	0.00	0.00	0.00	8.00	0.00	0.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	1	8	0	4	4	213	2	1	158	0
Peak Hour Factor	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	0	3	0	1	1	74	1	0	55	0
Total Analysis Volume [veh/h]	11	0	1	11	0	6	6	296	3	1	219	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.46	13.14	10.04	13.39	13.17	9.59	7.65	0.00	0.00	7.83	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.10	0.10	0.10	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.04	2.04	2.04	2.49	2.49	2.49	0.33	0.33	0.33	0.06	0.06	0.06
d_A, Approach Delay [s/veh]	13.18			12.05			0.15			0.04		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.75											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Mary Jane Blvd / Melrose Pl

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.074

Intersection Setup

Name	Mary Jane Boulevard			Mary Jane Boulevard			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mary Jane Boulevard			Mary Jane Boulevard			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	1	0	0	2	0	1	1	47	1	0	19	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	11.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	2	0	1	1	47	1	0	19	3
Peak Hour Factor	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	0	0	16	0	0	7	1
Total Analysis Volume [veh/h]	1	0	0	3	0	1	1	65	1	0	26	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.20	0.00	0.00	7.20	0.00	0.00	9.06	9.40	8.63	9.10	9.30	8.44
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.24	0.24	0.24	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.05	0.14	0.14	0.14	6.11	6.11	6.11	2.61	2.61	2.61
d_A, Approach Delay [s/veh]	7.20			5.40			9.39			9.18		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.15											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 12: Reserve St / Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.888

Intersection Setup

Name	Reserve Street			Reserve Street			Mullan Road			Mullan Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	12.00	11.00	11.00	11.00	12.00	12.00	12.00	11.00	11.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	420.00	100.00	175.00	120.00	100.00	395.00	455.00	100.00	360.00	170.00	100.00	105.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Reserve Street			Reserve Street			Mullan Road			Mullan Road		
Base Volume Input [veh/h]	230	1158	276	67	891	57	178	334	438	111	150	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	1.00	3.00	4.00	11.00	3.00	1.00	2.00	7.00	2.00	9.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1158	276	67	891	57	178	334	438	111	150	43
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	341	81	20	262	17	52	98	129	33	44	13
Total Analysis Volume [veh/h]	271	1362	325	79	1048	67	209	393	515	131	176	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	126.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Overla	Protect	Permis	Overla
Signal Group	1	5	0	6	2	0	8	4	1	3	7	6
Auxiliary Signal Groups									1,4			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	15	20	0	5	20	0	5	5	15	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	30
Amber [s]	3.0	4.3	0.0	4.3	4.3	0.0	3.6	3.6	3.0	3.6	3.6	4.3
All red [s]	2.0	2.2	0.0	2.2	2.2	0.0	2.4	2.4	2.0	2.4	2.4	2.2
Split [s]	24	69	0	16	61	0	23	44	24	21	42	16
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	4.5	3.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	37	0	0	33	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
l2, Clearance Lost Time [s]	3.0	4.5	0.0	4.5	4.5	0.0	4.0	4.0	3.0	4.0	4.0	4.5
Minimum Recall	No	No		No	No		No	No	No	No	No	No
Maximum Recall	No	No		No	No		No	No	No	No	No	No
Pedestrian Recall	No	No		No	No		No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	6.50	6.50	6.50	6.50	6.50	6.00	6.00	5.00	6.00	6.00	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.50	4.50	4.50	4.50	4.50	4.00	4.00	0.00	4.00	4.00	0.00
g_i, Effective Green Time [s]	19	71	71	9	62	62	12	37	62	8	33	48
g / C, Green / Cycle	0.13	0.47	0.47	0.06	0.41	0.41	0.08	0.25	0.41	0.06	0.22	0.32
(v / s)_i Volume / Saturation Flow Rate	0.09	0.42	0.22	0.05	0.32	0.05	0.07	0.23	0.35	0.04	0.10	0.04
s, saturation flow rate [veh/h]	3134	3279	1476	1627	3227	1358	3160	1736	1464	3058	1722	1382
c, Capacity [veh/h]	397	1546	696	96	1335	562	253	428	605	173	384	445
d1, Uniform Delay [s]	59.47	24.36	17.96	68.31	28.37	20.52	67.94	55.06	39.84	69.74	50.47	35.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.26	0.50	0.11	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	7.56	2.25	15.61	4.70	0.43	6.65	17.17	14.08	6.64	1.47	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.88	0.47	0.82	0.79	0.12	0.82	0.92	0.85	0.76	0.46	0.11
d, Delay for Lane Group [s/veh]	61.54	31.93	20.21	83.92	33.07	20.95	74.59	72.23	53.92	76.38	51.94	35.93
Lane Group LOS	E	C	C	F	C	C	E	E	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.73	18.00	5.42	3.31	13.75	1.18	4.12	16.17	18.95	2.61	5.80	1.32
50th-Percentile Queue Length [ft/ln]	118.13	450.00	135.62	82.78	343.85	29.48	103.10	404.37	473.82	65.14	145.12	33.03
95th-Percentile Queue Length [veh/ln]	8.29	24.96	9.24	5.96	19.84	2.12	7.42	22.77	26.09	4.69	9.76	2.38
95th-Percentile Queue Length [ft/ln]	207.26	623.95	231.12	149.01	495.90	53.06	185.57	569.26	652.32	117.26	243.90	59.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.54	31.93	20.21	83.92	33.07	20.95	74.59	72.23	53.92	76.38	51.94	35.93
Movement LOS	E	C	C	F	C	C	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	34.08			35.75			64.23			58.60		
Approach LOS	C			D			E			E		
d_I, Intersection Delay [s/veh]	43.69											
Intersection LOS	D											
Intersection V/C	0.888											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	66.27	64.40	64.40	64.40
l_p,int, Pedestrian LOS Score for Intersection	3.225	3.164	2.875	2.662
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	727	507	480
d_b, Bicycle Delay [s]	25.52	30.40	41.81	43.32
l_b,int, Bicycle LOS Score for Intersection	1.889	1.258	3.403	0.864
Bicycle LOS	A	A	C	A

Sequence

Ring 1	1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 13: Reserve St / England Blvd

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name	Reserve Street			Reserve Street			England Boulevard			England Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	235.00	100.00	235.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00	0.00	110.00
Speed [mph]	45.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Reserve Street			Reserve Street			England Boulevard			England Boulevard		
Base Volume Input [veh/h]	40	1104	28	69	846	142	155	62	102	24	30	68
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	4.00	0.00	9.00	5.00	6.00	5.00	2.00	0.00	8.00	0.00	13.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1104	28	69	846	142	155	62	102	24	30	68
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	310	8	19	238	40	44	17	29	7	8	19
Total Analysis Volume [veh/h]	45	1240	31	78	951	160	174	70	115	27	34	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	4	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	30	0	5	30	0	7	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	0	30	0
Amber [s]	3.0	4.3	0.0	3.0	4.3	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.7	0.0	1.0	1.7	0.0	1.9	1.9	0.0	0.0	1.9	0.0
Split [s]	15	62	0	15	62	0	35	35	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	22	22	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	3.5	3.5	0.0	0.0	3.5	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.00	4.00	0.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	102	93	93	102	94	94	20	20	11	11	11
g / C, Green / Cycle	0.68	0.62	0.62	0.68	0.63	0.63	0.13	0.13	0.07	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.08	0.38	0.38	0.16	0.34	0.34	0.11	0.12	0.02	0.02	0.06
s, saturation flow rate [veh/h]	587	1695	1680	488	1681	1598	1601	1552	1561	1750	1335
c, Capacity [veh/h]	410	1052	1043	341	1050	998	216	209	112	125	96
d1, Uniform Delay [s]	3.77	6.57	6.58	5.06	5.99	6.00	62.97	63.72	65.77	65.92	68.54
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.13	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	2.60	2.62	1.56	2.01	2.12	6.95	13.92	1.11	1.15	13.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.61	0.61	0.23	0.54	0.54	0.81	0.88	0.24	0.27	0.80
d, Delay for Lane Group [s/veh]	3.89	9.17	9.20	6.62	8.00	8.12	69.92	77.65	66.88	67.07	82.32
Lane Group LOS	A	A	A	A	A	A	E	E	E	E	F
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	5.01	4.98	0.39	4.37	4.20	6.93	7.82	1.02	1.29	3.27
50th-Percentile Queue Length [ft/ln]	3.54	125.30	124.57	9.68	109.26	104.90	173.35	195.54	25.60	32.23	81.73
95th-Percentile Queue Length [veh/ln]	0.26	8.68	8.64	0.70	7.80	7.55	11.25	12.41	1.84	2.32	5.88
95th-Percentile Queue Length [ft/ln]	6.38	217.09	216.09	17.43	194.97	188.83	281.32	310.20	46.09	58.02	147.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.89	9.18	9.20	6.62	8.05	8.12	69.92	77.65	77.65	66.88	67.07	82.32
Movement LOS	A	A	A	A	A	A	E	E	E	E	E	F
d_A, Approach Delay [s/veh]	9.00			7.96			73.90			75.49		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	19.39											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	64.40	64.40
l_p,int, Pedestrian LOS Score for Intersection	3.029	2.847	2.181	2.614
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	747	747	393	433
d_b, Bicycle Delay [s]	29.45	29.45	48.40	46.02
l_b,int, Bicycle LOS Score for Intersection	1.145	1.040	2.152	1.786
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 15: W Broadway St / US-93 West Ramp

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name	WB Ramp		Broadway Street		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	135.00	100.00	100.00	0.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	WB Ramp		Broadway Street		Broadway Street	
Base Volume Input [veh/h]	37	144	501	250	1	487
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	6.00	8.00	12.00	0.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	144	501	250	1	487
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	47	165	82	0	160
Total Analysis Volume [veh/h]	49	189	659	329	1	641
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	4	4	2	0	0	2
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	6	6	30	0	0	30
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.0	3.0	4.3	0.0	0.0	4.3
All red [s]	2.0	2.0	2.2	0.0	0.0	2.2
Split [s]	24	24	56	0	0	56
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	28	0	0	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	4.5	0.0	0.0	4.5
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	6.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	13	13	56	56	56	56
g / C, Green / Cycle	0.16	0.16	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.30	0.34	0.00	0.20
s, saturation flow rate [veh/h]	1561	1417	1639	1467	579	3174
c, Capacity [veh/h]	248	225	1143	1023	442	2213
d1, Uniform Delay [s]	29.17	32.61	0.95	0.97	1.77	0.91
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	8.15	1.19	1.63	0.01	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.84	0.43	0.48	0.00	0.29
d, Delay for Lane Group [s/veh]	29.56	40.76	2.14	2.60	1.78	1.24
Lane Group LOS	C	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.83	3.96	0.76	0.85	0.00	0.34
50th-Percentile Queue Length [ft/ln]	20.65	98.92	19.06	21.27	0.06	8.62
95th-Percentile Queue Length [veh/ln]	1.49	7.12	1.37	1.53	0.00	0.62
95th-Percentile Queue Length [ft/ln]	37.18	178.06	34.31	38.29	0.10	15.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.56	40.76	2.26	2.60	1.78	1.24
Movement LOS	C	D	A	A	A	A
d_A, Approach Delay [s/veh]	38.46		2.37		1.24	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	6.58					
Intersection LOS	A					
Intersection V/C	0.522					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.120	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	1238	1238
d_b, Bicycle Delay [s]	23.26	5.81	5.81
I_b,int, Bicycle LOS Score for Intersection	1.560	2.375	2.089
Bicycle LOS	A	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: W Broadway St / US-93 East Ramp

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	EB Ramp		Broadway Street		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	335.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	EB Ramp		Broadway Street		Broadway Street	
Base Volume Input [veh/h]	327	25	577	54	36	193
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	8.00	7.00	11.00	6.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	327	25	577	54	36	193
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	115	9	203	19	13	68
Total Analysis Volume [veh/h]	461	35	813	76	51	272
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Protected	Permissive	Permissive	ProtPerm	Permissive
Signal Group	7	4	6	0	5	2
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	17	0	5	30
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	4.3	0.0	3.0	4.3
All red [s]	2.0	2.0	2.2	0.0	1.0	2.2
Split [s]	24	24	46	0	10	56
Vehicle Extension [s]	4.0	4.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	31	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
l2, Clearance Lost Time [s]	3.0	3.0	4.5	0.0	2.0	4.5
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	6.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.50	4.50	0.00	4.50
g_i, Effective Green Time [s]	22	22	39	39	47	43
g / C, Green / Cycle	0.28	0.28	0.49	0.49	0.58	0.54
(v / s)_i Volume / Saturation Flow Rate	0.29	0.03	0.27	0.28	0.09	0.09
s, saturation flow rate [veh/h]	1614	1393	1653	1605	553	3148
c, Capacity [veh/h]	444	383	806	783	384	1708
d1, Uniform Delay [s]	29.04	21.59	9.23	9.33	5.40	5.37
k, delay calibration	0.29	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.83	0.15	2.71	2.98	0.72	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.04	0.09	0.55	0.57	0.13	0.16
d, Delay for Lane Group [s/veh]	71.87	21.74	11.94	12.31	6.12	5.57
Lane Group LOS	F	C	B	B	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	13.39	0.49	3.34	3.40	0.22	0.58
50th-Percentile Queue Length [ft/ln]	334.63	12.27	83.44	84.94	5.59	14.48
95th-Percentile Queue Length [veh/ln]	19.82	0.88	6.01	6.12	0.40	1.04
95th-Percentile Queue Length [ft/ln]	495.60	22.08	150.20	152.89	10.07	26.06

Movement, Approach, & Intersection Results

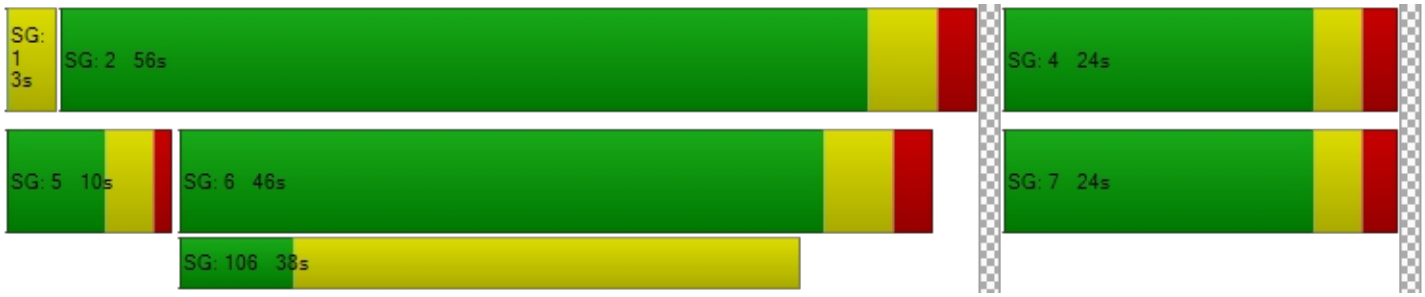
d_M, Delay for Movement [s/veh]	71.87	21.74	12.11	12.31	6.12	5.57
Movement LOS	F	C	B	B	A	A
d_A, Approach Delay [s/veh]	68.33		12.12		5.66	
Approach LOS	E		B		A	
d_I, Intersection Delay [s/veh]	27.22					
Intersection LOS	C					
Intersection V/C	0.671					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.186	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	988	1238
d_b, Bicycle Delay [s]	23.26	10.25	5.81
I_b,int, Bicycle LOS Score for Intersection	1.560	2.293	1.826
Bicycle LOS	A	B	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 140: Reserve St / Ramps (W)

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Reserve Street		Reserve Street		WB Ramp	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	465.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present			No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Reserve Street		Reserve Street		WB Ramp	
Base Volume Input [veh/h]	0	0	812	180	0	249
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	7.00	2.00	11.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	812	180	0	249
Peak Hour Factor	1.0000	1.0000	0.8700	0.8700	1.0000	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	233	52	0	72
Total Analysis Volume [veh/h]	0	0	933	207	0	286
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	0	2	0	0	3
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	0	35	0	0	6
Maximum Green [s]	0	0	30	0	0	30
Amber [s]	0.0	0.0	4.5	0.0	0.0	3.0
All red [s]	0.0	0.0	1.5	0.0	0.0	1.0
Split [s]	0	0	50	0	0	25
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.5
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	12	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	2.0
Minimum Recall			No			No
Maximum Recall			No			No
Pedestrian Recall			No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	R
C, Cycle Length [s]		75	75	75
L, Total Lost Time per Cycle [s]		6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00
l2, Clearance Lost Time [s]		4.00	4.00	2.00
g_i, Effective Green Time [s]		47	47	18
g / C, Green / Cycle		0.63	0.63	0.24
(v / s)_i Volume / Saturation Flow Rate		0.29	0.15	0.21
s, saturation flow rate [veh/h]		3253	1405	1358
c, Capacity [veh/h]		2054	887	319
d1, Uniform Delay [s]		2.62	2.36	27.76
k, delay calibration		0.50	0.50	0.13
I, Upstream Filtering Factor		1.00	1.00	1.00
d2, Incremental Delay [s]		0.73	0.62	10.33
d3, Initial Queue Delay [s]		0.00	0.00	0.00
Rp, platoon ratio		1.33	1.33	1.00
PF, progression factor		1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.45	0.23	0.90
d, Delay for Lane Group [s/veh]		3.35	2.97	38.09
Lane Group LOS		A	A	D
Critical Lane Group		Yes	No	Yes
50th-Percentile Queue Length [veh/ln]		1.30	0.61	5.64
50th-Percentile Queue Length [ft/ln]		32.47	15.13	141.06
95th-Percentile Queue Length [veh/ln]		2.34	1.09	9.54
95th-Percentile Queue Length [ft/ln]		58.44	27.23	238.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	3.35	2.97	0.00	38.09
Movement LOS			A	A		D
d_A, Approach Delay [s/veh]	0.00		3.28		38.09	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	10.26					
Intersection LOS	B					
Intersection V/C	0.557					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	27.31
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	1.945
Crosswalk LOS	F	F	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1173	560
d_b, Bicycle Delay [s]	37.50	6.41	19.44
l_b,int, Bicycle LOS Score for Intersection	4.132	2.500	1.560
Bicycle LOS	D	B	A

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 141: Reserve St / Ramps (E)

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.232

Intersection Setup

Name	Reserve Street		Reserve Street		EB Ramp	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	385.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Reserve Street		Reserve Street		EB Ramp	
Base Volume Input [veh/h]	1003	329	0	0	0	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	4.00	2.00	2.00	2.00	10.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1003	329	0	0	0	89
Peak Hour Factor	0.8700	0.8700	1.0000	1.0000	1.0000	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	288	95	0	0	0	26
Total Analysis Volume [veh/h]	1153	378	0	0	0	102
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

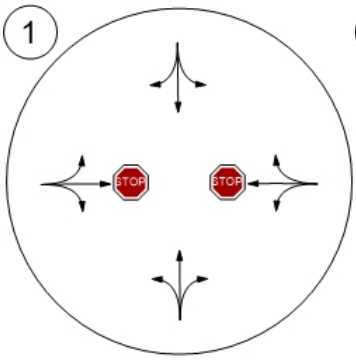
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.23
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.62
Movement LOS	A	A				C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.89
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	22.14
d_A, Approach Delay [s/veh]	0.00		0.00		15.62	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.98					
Intersection LOS	C					

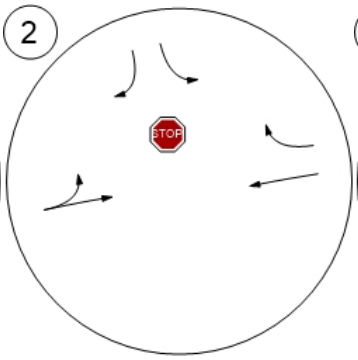
Study Intersections

Lane Configuration and Traffic Control

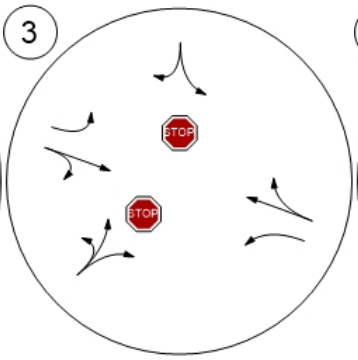
George Elmer Dr / Cattle Dr



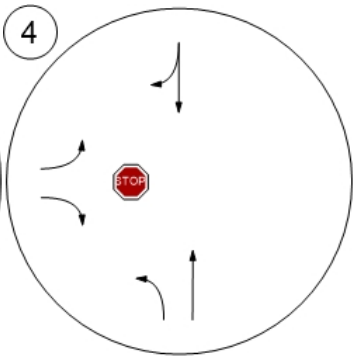
George Elmer Dr / Mullan Rd



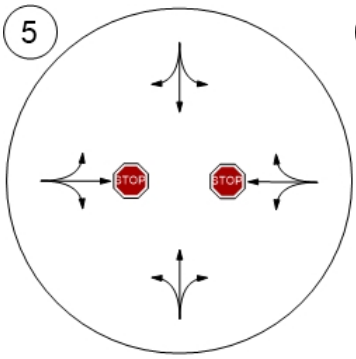
Flynn Ln / Mullan Rd



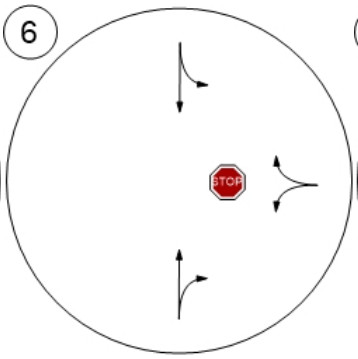
Flynn Ln / Siren's Dr



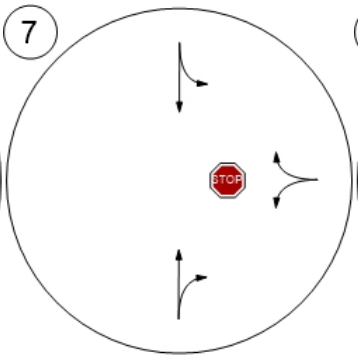
Flynn Ln / Chelsea Dr



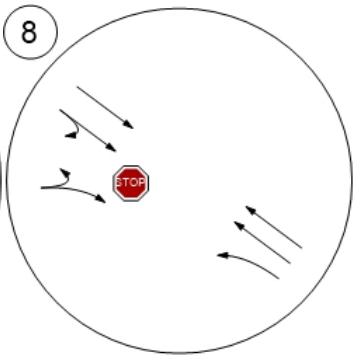
Flynn Ln / England Blvd



Flynn Ln / Camden St

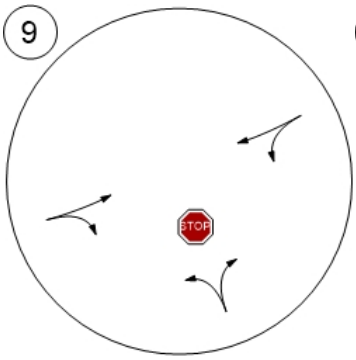


W Broadway St / Flynn Ln

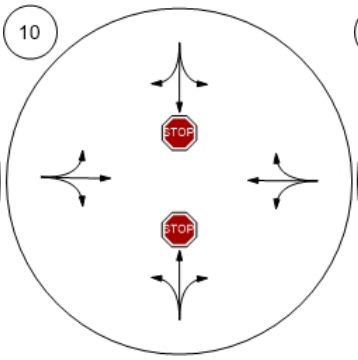


Lane Configuration and Traffic Control

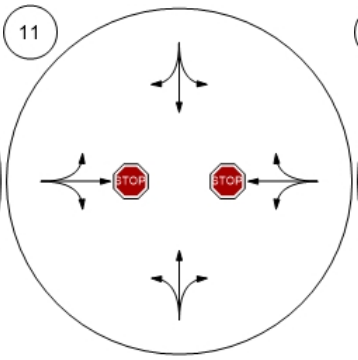
Mary Jane Blvd / Camden St



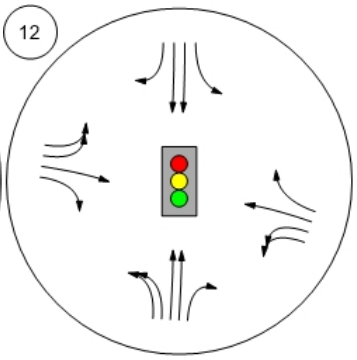
Mary Jane Blvd / England Blv



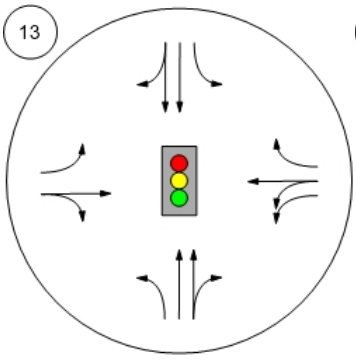
Mary Jane Blvd / Melrose Pl



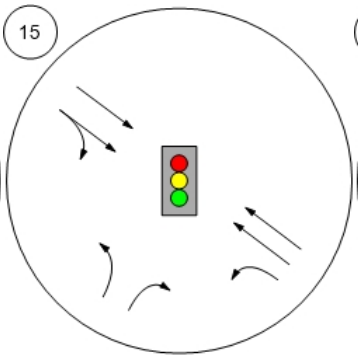
Reserve St / Mullan Rd



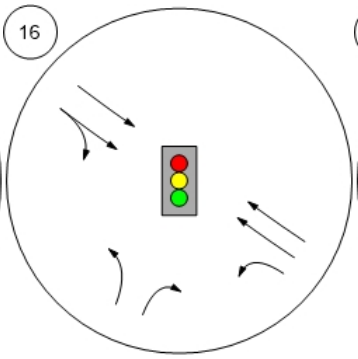
Reserve St / England Blvd



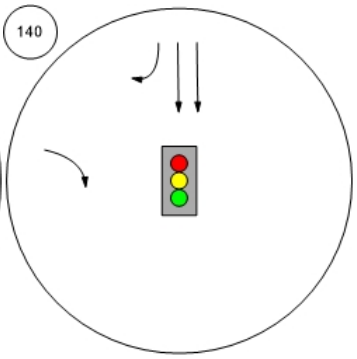
W Broadway St / US-93 West



W Broadway St / US-93 East

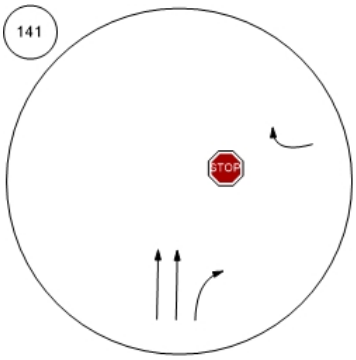


Reserve St / Ramps (W)



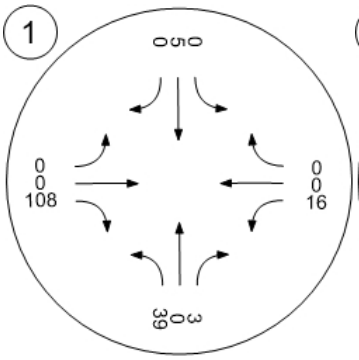
Lane Configuration and Traffic Control

Reserve St / Ramps (E)

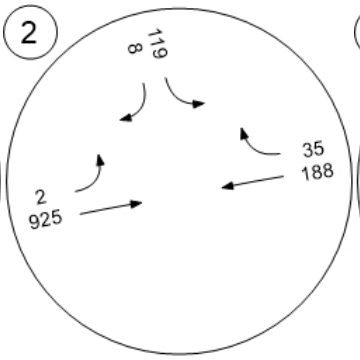


Traffic Volume - Base Volume

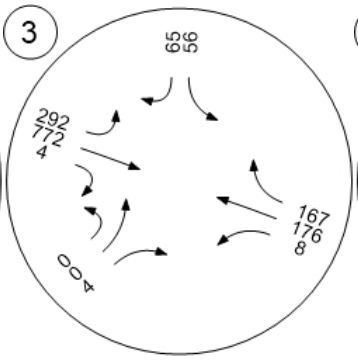
George Elmer Dr / Cattle Dr



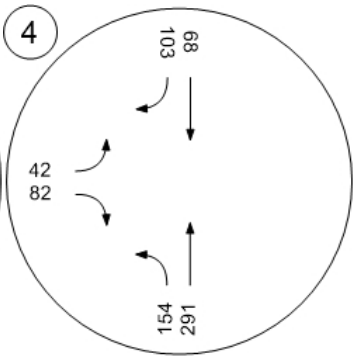
George Elmer Dr / Mullan Rd



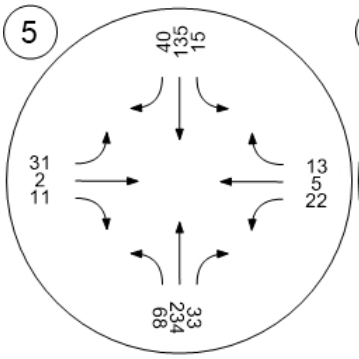
Flynn Ln / Mullan Rd



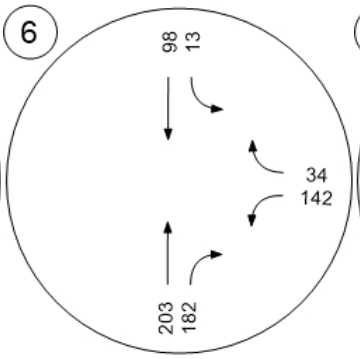
Flynn Ln / Siren's Dr



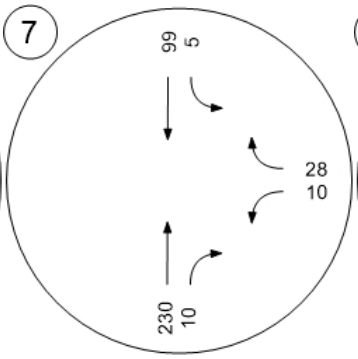
Flynn Ln / Chelsea Dr



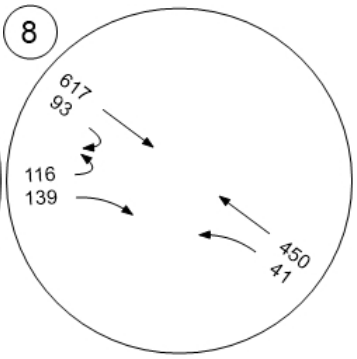
Flynn Ln / England Blvd



Flynn Ln / Camden St

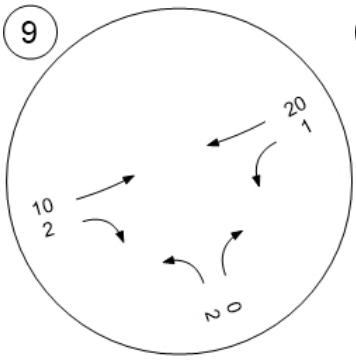


W Broadway St / Flynn Ln

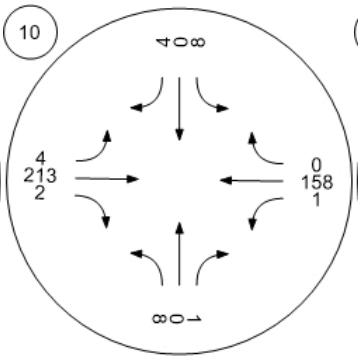


Traffic Volume - Base Volume

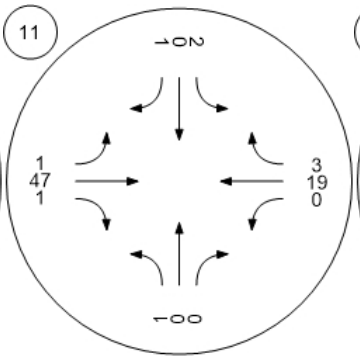
Mary Jane Blvd / Camden St



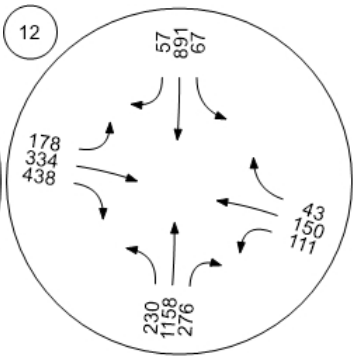
Mary Jane Blvd / England Blv



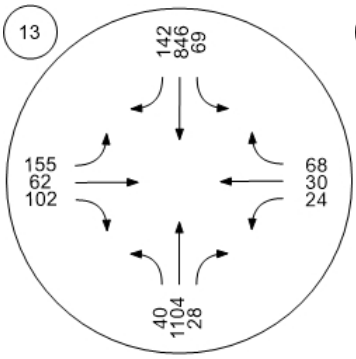
Mary Jane Blvd / Melrose Pl



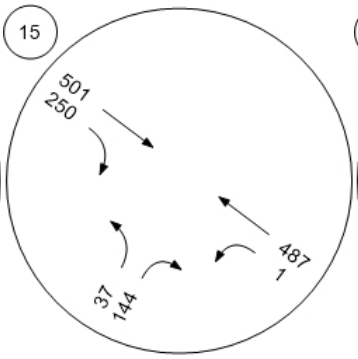
Reserve St / Mullan Rd



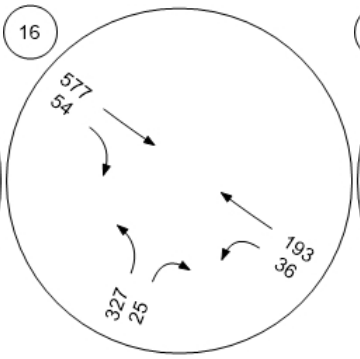
Reserve St / England Blvd



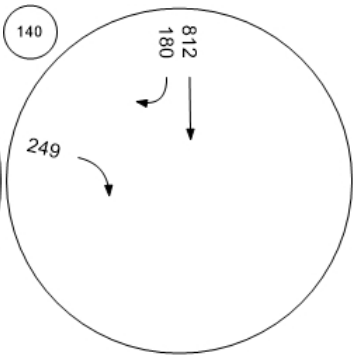
W Broadway St / US-93 West



W Broadway St / US-93 East

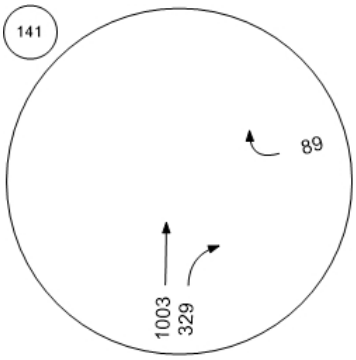


Reserve St / Ramps (W)



Traffic Volume - Base Volume

Reserve St / Ramps (E)



Appendix E – PM Vistro Reports

Existing Traffic Conditions

Vistro File: H:\...\24667_PM - v2.vistro
Report File: H:\...\Existing_PM_v4.pdf
Scenario: Base Scenario
4/20/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr / Cattle Dr	Two-way stop	HCM 6th Edition	WB Left	0.023	12.1	B
2	George Elmer Dr / Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	0.273	34.3	D
3	Flynn Ln / Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	0.950	346.6	F
4	Flynn Ln / Siren's Dr	Two-way stop	HCM 6th Edition	EB Left	0.058	13.2	B
5	Flynn Ln / Chelsea Dr	Two-way stop	HCM 6th Edition	WB Left	0.067	17.3	C
6	Flynn Ln / England Blvd	Two-way stop	HCM 6th Edition	WB Left	0.180	15.0	C
7	Flynn Ln / Camden St	Two-way stop	HCM 6th Edition	WB Left	0.011	11.8	B
8	W Broadway St / Flynn Ln	Two-way stop	HCM 6th Edition	NB Left	0.304	31.8	D
9	Mary Jane Blvd / Camden St	Two-way stop	HCM 6th Edition	NB Right	0.002	8.4	A
10	Mary Jane Blvd / England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.011	11.0	B
11	Mary Jane Blvd / Melrose Pl	Two-way stop	HCM 6th Edition	EB Thru	0.062	9.5	A
12	Reserve St / Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.874	55.0	D
13	Reserve St / England Blvd	Signalized	HCM 6th Edition	WB Right	0.879	55.3	E
15	W Broadway St / US-93 West Ramp	Signalized	HCM 6th Edition	NB Right	0.474	4.1	A
16	W Broadway St / US-93 East Ramp	Signalized	HCM 6th Edition	NB Left	0.546	12.5	B
140	Reserve St / Ramps (W)	Signalized	HCM 6th Edition	EB Right	0.565	17.3	B
141	Reserve St / Ramps (E)	Two-way stop	HCM 6th Edition	WB Right	0.548	23.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr / Cattle Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	120	4	23	0	3	0	1	0	31	9	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	4	23	0	3	0	1	0	31	9	0	0
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	1	8	0	1	0	0	0	11	3	0	0
Total Analysis Volume [veh/h]	164	5	32	0	4	0	1	0	42	12	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	7.27	0.00	0.00	11.60	12.27	8.46	12.09	12.14	8.55
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.33	0.33	0.33	0.00	0.00	0.00	0.13	0.13	0.13	0.07	0.07	0.07
95th-Percentile Queue Length [ft/ln]	8.37	8.37	8.37	0.00	0.00	0.00	3.16	3.16	3.16	1.77	1.77	1.77
d_A, Approach Delay [s/veh]	6.08			0.00			8.53			12.09		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.67											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 2: George Elmer Dr / Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.273

Intersection Setup

Name	George Elmer Dr		Mullan Road		Mullan Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	George Elmer Dr		Mullan Road		Mullan Road	
Base Volume Input [veh/h]	42	4	10	395	792	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	10.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	4	10	395	792	135
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	1	3	109	218	37
Total Analysis Volume [veh/h]	46	4	11	434	870	148
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.01	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	34.27	15.29	9.93	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.06	0.03	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	26.40	0.86	1.13	1.13	0.00	0.00
d_A, Approach Delay [s/veh]	32.75		0.25		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.15					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Flynn Ln / Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	346.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.950

Intersection Setup

Name	Flynn Lane			Flynn Lane			Mullan Road			Mullan Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left2	Left	Right	Left	Right	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Flynn Lane			Flynn Lane			Mullan Road			Mullan Road		
Base Volume Input [veh/h]	0	0	0	74	0	174	65	396	0	0	780	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00	2.00	1.00	0.00	0.00	0.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	74	0	174	65	396	0	0	780	86
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	1.0000	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	21	0	49	18	113	0	0	222	24
Total Analysis Volume [veh/h]	0	0	0	84	0	198	74	450	0	0	886	98
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.95	0.00	0.62	0.11	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	110.77	46.82	10.87	346.58	0.00	317.08	10.73	0.00	0.00	8.21	0.00	0.00
Movement LOS	F	E	B	F		F	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	18.45	0.00	18.45	0.35	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	461.33	0.00	461.33	8.80	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	56.15			325.86			1.52			0.00		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	51.78											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 4: Flynn Ln / Siren's Dr

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Flynn Lane		Flynn Lane		Siren's Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Flynn Lane		Flynn Lane		Siren's Dr	
Base Volume Input [veh/h]	17	139	242	13	20	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	18.00	0.00	2.00	0.00	5.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	139	242	13	20	24
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	48	83	4	7	8
Total Analysis Volume [veh/h]	23	190	332	18	27	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.06	0.05
d_M, Delay for Movement [s/veh]	8.27	0.00	0.00	0.00	13.24	10.35
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.18	0.15
95th-Percentile Queue Length [ft/ln]	1.56	0.00	0.00	0.00	4.62	3.67
d_A, Approach Delay [s/veh]	0.89		0.00		11.65	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Flynn Ln / Chelsea Dr

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name	Flynn Lane			Flynn Lane			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Flynn Lane			Flynn Lane			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	28	112	19	21	212	18	28	12	40	15	3	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	5.00	0.00	1.00	0.00	4.00	0.00	0.00	7.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	112	19	21	212	18	28	12	40	15	3	4
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	39	7	7	75	6	10	4	14	5	1	1
Total Analysis Volume [veh/h]	39	158	27	30	299	25	39	17	56	21	4	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.02	0.00	0.00	0.11	0.05	0.08	0.07	0.01	0.01
d_M, Delay for Movement [s/veh]	7.98	0.00	0.00	7.62	0.00	0.00	16.86	16.74	12.04	17.29	15.48	10.00
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.07	0.07	0.07	0.87	0.87	0.87	0.27	0.27	0.27
95th-Percentile Queue Length [ft/ln]	2.42	2.42	2.42	1.64	1.64	1.64	21.64	21.64	21.64	6.83	6.83	6.83
d_A, Approach Delay [s/veh]	1.39			0.65			14.43			15.65		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	3.66											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Flynn Ln / England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.180

Intersection Setup

Name	Flynn Lane		Flynn Lane		England Boulevard	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		England Boulevard	
Base Volume Input [veh/h]	80	80	91	182	67	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	80	91	182	67	18
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	24	27	54	20	5
Total Analysis Volume [veh/h]	94	94	107	214	79	21
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.08	0.00	0.18	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.81	0.00	15.03	10.79
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.25	0.25	0.75	0.75
95th-Percentile Queue Length [ft/ln]	0.00	0.00	6.26	6.26	18.78	18.78
d_A, Approach Delay [s/veh]	0.00		2.60		14.14	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.70					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Flynn Ln / Camden St

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Flynn Lane		Flynn Lane		Camden Street	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		Camden Street	
Base Volume Input [veh/h]	92	6	23	268	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	6	23	268	5	13
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	2	7	79	1	4
Total Analysis Volume [veh/h]	108	7	27	315	6	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.47	0.00	11.85	8.93
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.06	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.39	1.39	2.08	2.08
d_A, Approach Delay [s/veh]	0.00		0.59		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.85					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: W Broadway St / Flynn Ln

Control Type:	Two-way stop	Delay (sec / veh):	31.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.304

Intersection Setup

Name	Flynn Lane		Flynn Lane		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Lane		Flynn Lane		Broadway Street	
Base Volume Input [veh/h]	57	61	832	180	86	697
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	61	832	180	86	697
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	17	229	49	24	191
Total Analysis Volume [veh/h]	63	67	914	198	95	766
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.14	0.01	0.00	0.15	0.01
d_M, Delay for Movement [s/veh]	31.76	21.92	0.00	0.00	11.66	0.00
Movement LOS	D	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	2.16	2.16	0.00	0.00	0.52	0.00
95th-Percentile Queue Length [ft/ln]	53.99	53.99	0.00	0.00	13.08	0.00
d_A, Approach Delay [s/veh]	26.69		0.00		1.29	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	2.18					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Mary Jane Blvd / Camden St

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Mary Jane Boulevard		Camden Street		Camden Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Boulevard		Camden Street		Camden Street	
Base Volume Input [veh/h]	0	1	16	9	0	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1	16	9	0	11
Peak Hour Factor	0.6600	0.6600	0.6600	0.6600	0.6600	0.6600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	6	3	0	4
Total Analysis Volume [veh/h]	0	2	24	14	0	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.73	8.44	0.00	0.00	7.27	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.14	0.14	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.44		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Mary Jane Blvd / England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Mary Jane Boulevard			Mary Jane Boulevard			England Boulevard			England Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mary Jane Boulevard			Mary Jane Boulevard			England Boulevard			England Boulevard		
Base Volume Input [veh/h]	1	0	5	6	0	4	1	153	10	0	118	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	5	6	0	4	1	153	10	0	118	8
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	2	2	0	1	0	46	3	0	36	2
Total Analysis Volume [veh/h]	1	0	6	7	0	5	1	184	12	0	142	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.92	11.23	9.24	10.98	11.29	9.06	7.50	0.00	0.00	7.59	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.65	0.65	0.65	1.29	1.29	1.29	0.05	0.05	0.05	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.48			10.18			0.04			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.53											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Mary Jane Blvd / Melrose Pl

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Mary Jane Boulevard			Mary Jane Boulevard			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mary Jane Boulevard			Mary Jane Boulevard			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	1	0	1	4	0	0	2	33	2	0	16	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	1	4	0	0	2	33	2	0	16	0
Peak Hour Factor	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100	0.6100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	0	1	14	1	0	7	0
Total Analysis Volume [veh/h]	2	0	2	7	0	0	3	54	3	0	26	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	7.20	0.00	0.00	7.21	0.00	0.00	9.07	9.45	8.60	9.10	9.25	8.43
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.22	0.22	0.22	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.09	0.09	0.09	0.32	0.32	0.32	5.48	5.48	5.48	2.30	2.30	2.30
d_A, Approach Delay [s/veh]	3.60			7.21			9.39			9.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.96											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 12: Reserve St / Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	55.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name	Reserve Street			Reserve Street			Mullan Road			Mullan Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	12.00	11.00	11.00	11.00	12.00	12.00	12.00	11.00	11.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	420.00	100.00	175.00	120.00	100.00	395.00	455.00	100.00	360.00	170.00	100.00	105.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Reserve Street			Reserve Street			Mullan Road			Mullan Road		
Base Volume Input [veh/h]	403	1120	145	49	1160	164	246	219	286	396	395	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	2.00	3.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	403	1120	145	49	1160	164	246	219	286	396	395	57
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	286	37	13	296	42	63	56	73	101	101	15
Total Analysis Volume [veh/h]	411	1143	148	50	1184	167	251	223	292	404	403	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	180
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	152.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Overla	Protect	Permis	Overla
Signal Group	1	5	0	6	2	0	8	4	1	3	7	6
Auxiliary Signal Groups									1,4			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	15	20	0	5	20	0	5	5	15	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	30
Amber [s]	3.0	4.3	0.0	4.3	4.3	0.0	3.0	3.6	3.0	3.6	3.6	4.3
All red [s]	2.0	2.2	0.0	2.2	2.2	0.0	2.4	2.4	2.0	2.4	2.4	2.2
Split [s]	28	80	0	22	74	0	26	44	28	34	52	22
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	4.5	3.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	7	0
Pedestrian Clearance [s]	0	23	0	0	37	0	0	33	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	4.5	0.0	4.5	4.5	0.0	3.4	4.0	3.0	4.0	4.0	4.5
Minimum Recall	Yes	No		No	No		No	No	Yes	Yes	No	No
Maximum Recall	No	No		No	No		No	No	No	No	No	No
Pedestrian Recall	No	No		No	No		No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	180	180	180	180	180	180	180	180	180	180	180	180
L, Total Lost Time per Cycle [s]	5.00	6.50	6.50	6.50	6.50	6.50	5.40	6.00	5.00	6.00	6.00	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.50	4.50	4.50	4.50	4.50	3.40	4.00	0.00	4.00	4.00	0.00
g_i, Effective Green Time [s]	23	88	88	7	74	74	16	35	64	25	44	57
g / C, Green / Cycle	0.13	0.49	0.49	0.04	0.41	0.41	0.09	0.20	0.36	0.14	0.25	0.32
(v / s)_i Volume / Saturation Flow Rate	0.13	0.35	0.10	0.03	0.36	0.11	0.08	0.13	0.20	0.12	0.23	0.04
s, saturation flow rate [veh/h]	3211	3279	1452	1667	3306	1476	3211	1750	1488	3237	1736	1488
c, Capacity [veh/h]	411	1609	713	64	1353	604	288	342	531	442	427	472
d1, Uniform Delay [s]	74.62	22.85	17.11	84.67	36.88	26.62	80.85	66.71	46.30	76.62	66.65	43.64
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.50	0.11	0.35	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.81	2.69	0.66	18.87	8.15	1.14	7.96	2.16	4.06	7.74	25.24	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.71	0.21	0.79	0.88	0.28	0.87	0.65	0.55	0.91	0.94	0.12
d, Delay for Lane Group [s/veh]	95.43	25.53	17.77	103.54	45.03	27.76	88.80	68.88	50.37	84.36	91.89	43.76
Lane Group LOS	F	C	B	F	D	C	F	E	D	F	F	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.28	14.00	2.50	2.60	21.91	3.85	6.03	9.57	10.98	9.61	20.90	1.86
50th-Percentile Queue Length [ft/ln]	256.93	350.07	62.44	64.92	547.64	96.18	150.69	239.19	274.52	240.33	522.47	46.47
95th-Percentile Queue Length [veh/ln]	15.54	20.14	4.50	4.67	29.58	6.93	10.05	14.64	16.42	14.70	28.40	3.35
95th-Percentile Queue Length [ft/ln]	388.49	503.49	112.39	116.86	739.54	173.13	251.35	366.00	410.38	367.45	709.90	83.65

Movement, Approach, & Intersection Results

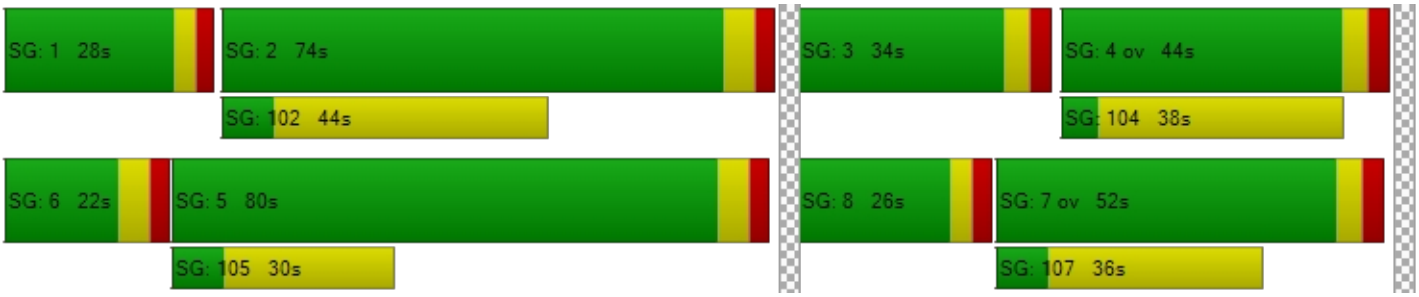
d_M, Delay for Movement [s/veh]	95.43	25.53	17.77	103.54	45.03	27.76	88.80	68.88	50.37	84.36	91.89	43.76
Movement LOS	F	C	B	F	D	C	F	E	D	F	F	D
d_A, Approach Delay [s/veh]	41.74			45.06			68.35			85.15		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	54.96											
Intersection LOS	D											
Intersection V/C	0.874											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	81.23	79.34	79.34	79.34
I_p,int, Pedestrian LOS Score for Intersection	3.225	3.181	2.911	2.709
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	817	750	422	511
d_b, Bicycle Delay [s]	31.51	35.16	56.01	49.88
I_b,int, Bicycle LOS Score for Intersection	1.677	1.429	2.824	1.700
Bicycle LOS	A	A	C	A

Sequence

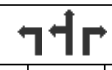
Ring 1	1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	5	6	-	7	8	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Reserve St / England Blvd

Control Type:	Signalized	Delay (sec / veh):	55.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name	Reserve Street			Reserve Street			England Boulevard			England Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	235.00	100.00	235.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00	0.00	110.00
Speed [mph]	45.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Reserve Street			Reserve Street			England Boulevard			England Boulevard		
Base Volume Input [veh/h]	98	965	129	145	1012	155	168	117	119	193	120	262
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	4.00	0.00	2.00	2.00	3.00	1.00	2.00	0.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	965	129	145	1012	155	168	117	119	193	120	262
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	251	34	38	264	40	44	30	31	50	31	68
Total Analysis Volume [veh/h]	102	1005	134	151	1054	161	175	122	124	201	125	273
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	180
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	161.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	30	0	5	30	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	4.3	0.0	3.0	4.3	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.7	0.0	1.0	1.7	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	28	79	0	28	79	0	0	35	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	22	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	180	180	180	180	180	180	180	180	180	180	180
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.00	4.00	0.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	101	89	89	101	91	91	30	30	32	32	32
g / C, Green / Cycle	0.56	0.50	0.50	0.56	0.51	0.51	0.16	0.16	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.20	0.38	0.38	0.28	0.40	0.40	0.12	0.17	0.11	0.11	0.20
s, saturation flow rate [veh/h]	498	1525	1463	544	1550	1480	1488	1423	1488	1544	1339
c, Capacity [veh/h]	216	756	725	242	787	751	244	233	269	279	242
d1, Uniform Delay [s]	24.99	23.36	23.41	26.63	22.36	22.49	71.26	75.21	67.69	67.68	73.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.44	0.14	0.14	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.21	7.35	7.73	11.63	7.83	8.43	7.47	70.40	2.68	2.56	97.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.77	0.77	0.63	0.79	0.79	0.72	1.05	0.60	0.59	1.13
d, Delay for Lane Group [s/veh]	32.20	30.71	31.14	38.26	30.18	30.91	78.72	145.62	70.37	70.24	170.84
Lane Group LOS	C	C	C	D	C	C	E	F	E	E	F
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.55	15.88	15.40	2.54	18.01	17.57	8.27	15.49	7.08	7.31	17.82
50th-Percentile Queue Length [ft/ln]	38.82	397.03	385.00	63.38	450.30	439.22	206.69	387.26	176.90	182.87	445.58
95th-Percentile Queue Length [veh/ln]	2.80	22.42	21.84	4.56	24.97	24.44	12.98	22.53	11.44	11.75	26.31
95th-Percentile Queue Length [ft/ln]	69.88	560.43	545.89	114.08	624.31	611.07	324.58	563.37	285.96	293.76	657.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.20	30.89	31.14	38.26	30.48	30.91	78.72	145.62	145.62	70.35	70.24	170.84
Movement LOS	C	C	C	D	C	C	E	F	F	E	E	F
d_A, Approach Delay [s/veh]	31.02			31.40			117.81			116.12		
Approach LOS	C			C			F			F		
d_I, Intersection Delay [s/veh]	55.29											
Intersection LOS	E											
Intersection V/C	0.879											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	79.34	79.34	79.34	79.34
l_p,int, Pedestrian LOS Score for Intersection	3.099	2.882	2.292	2.767
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	811	811	328	361
d_b, Bicycle Delay [s]	31.80	31.80	62.92	60.43
l_b,int, Bicycle LOS Score for Intersection	1.083	1.186	2.254	2.548
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 15: W Broadway St / US-93 West Ramp

Control Type:	Signalized	Delay (sec / veh):	4.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name	WB Ramp		Broadway Street		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	135.00	100.00	100.00	0.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	WB Ramp		Broadway Street		Broadway Street	
Base Volume Input [veh/h]	27	122	582	339	30	784
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	3.00	2.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	122	582	339	30	784
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	34	160	93	8	215
Total Analysis Volume [veh/h]	30	134	640	373	33	862
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	28.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	4	4	2	0	0	2
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	-	-
Minimum Green [s]	6	6	30	0	0	30
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.0	3.0	4.3	0.0	0.0	4.3
All red [s]	2.0	2.0	2.2	0.0	0.0	2.2
Split [s]	24	24	56	0	0	56
Vehicle Extension [s]	3.0	3.0	3.0	0.0	0.0	3.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	28	0	0	28
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	4.5	0.0	0.0	4.5
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	6.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	9	9	59	59	59	59
g / C, Green / Cycle	0.11	0.11	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.30	0.33	0.06	0.26
s, saturation flow rate [veh/h]	1614	1464	1709	1512	534	3253
c, Capacity [veh/h]	186	169	1266	1120	460	2410
d1, Uniform Delay [s]	31.88	34.44	0.13	0.13	0.31	0.13
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	8.21	0.94	1.32	0.30	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.79	0.40	0.45	0.07	0.36
d, Delay for Lane Group [s/veh]	32.29	42.65	1.07	1.45	0.61	0.54
Lane Group LOS	C	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.53	2.86	0.38	0.46	0.04	0.18
50th-Percentile Queue Length [ft/ln]	13.34	71.49	9.54	11.49	1.08	4.52
95th-Percentile Queue Length [veh/ln]	0.96	5.15	0.69	0.83	0.08	0.33
95th-Percentile Queue Length [ft/ln]	24.02	128.68	17.16	20.68	1.95	8.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.29	42.65	1.15	1.45	0.61	0.54
Movement LOS	C	D	A	A	A	A
d_A, Approach Delay [s/veh]	40.76		1.26		0.54	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	4.08					
Intersection LOS	A					
Intersection V/C	0.474					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.166	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	1238	1238
d_b, Bicycle Delay [s]	23.26	5.81	5.81
I_b,int, Bicycle LOS Score for Intersection	1.560	2.395	2.298
Bicycle LOS	A	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: W Broadway St / US-93 East Ramp

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	EB Ramp		Broadway Street		Broadway Street	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	335.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	EB Ramp		Broadway Street		Broadway Street	
Base Volume Input [veh/h]	265	52	654	51	169	550
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	4.00	2.00	5.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	265	52	654	51	169	550
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	14	172	13	44	145
Total Analysis Volume [veh/h]	279	55	688	54	178	579
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Protected	Permissive	Permissive	ProtPerm	Permissive
Signal Group	7	4	6	0	5	2
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	6	6	17	0	5	30
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	4.3	0.0	3.0	4.3
All red [s]	2.0	2.0	2.2	0.0	1.0	2.2
Split [s]	23	23	47	0	10	57
Vehicle Extension [s]	4.0	4.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	31	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
l2, Clearance Lost Time [s]	3.0	3.0	4.5	0.0	2.0	4.5
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	6.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	4.50	4.50	0.00	4.50
g_i, Effective Green Time [s]	17	17	42	42	51	48
g / C, Green / Cycle	0.22	0.22	0.53	0.53	0.64	0.60
(v / s)_i Volume / Saturation Flow Rate	0.19	0.04	0.24	0.25	0.29	0.20
s, saturation flow rate [veh/h]	1464	1318	1525	1487	622	2904
c, Capacity [veh/h]	316	284	806	786	465	1748
d1, Uniform Delay [s]	30.43	25.71	6.84	6.89	3.47	3.58
k, delay calibration	0.15	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.97	0.47	1.89	2.03	2.38	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.19	0.46	0.47	0.38	0.33
d, Delay for Lane Group [s/veh]	41.41	26.18	8.74	8.93	5.84	4.09
Lane Group LOS	D	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.98	0.87	2.19	2.22	0.61	0.89
50th-Percentile Queue Length [ft/ln]	149.57	21.82	54.70	55.41	15.19	22.17
95th-Percentile Queue Length [veh/ln]	9.99	1.57	3.94	3.99	1.09	1.60
95th-Percentile Queue Length [ft/ln]	249.86	39.28	98.45	99.73	27.34	39.91

Movement, Approach, & Intersection Results

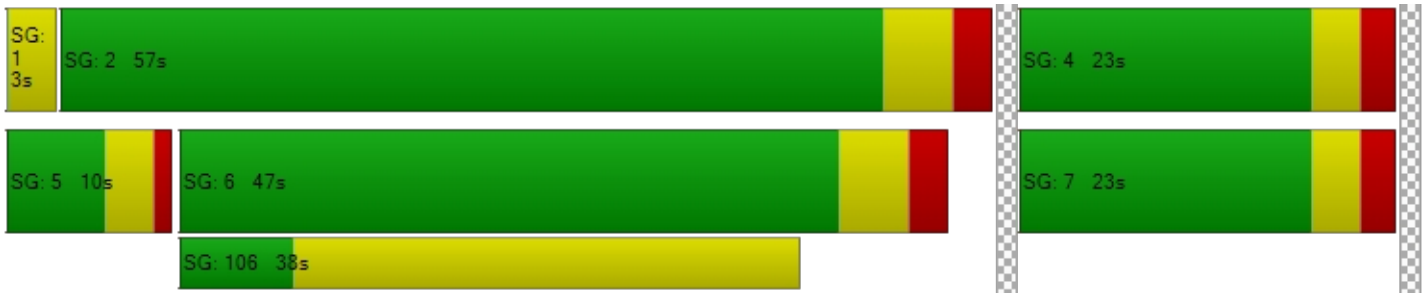
d_M, Delay for Movement [s/veh]	41.41	26.18	8.82	8.93	5.84	4.09
Movement LOS	D	C	A	A	A	A
d_A, Approach Delay [s/veh]	38.90		8.83		4.50	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	12.52					
Intersection LOS	B					
Intersection V/C	0.546					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.305	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	1013	1263
d_b, Bicycle Delay [s]	24.03	9.75	5.44
l_b,int, Bicycle LOS Score for Intersection	1.560	2.172	2.184
Bicycle LOS	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 140: Reserve St / Ramps (W)

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

Intersection Setup

Name	Reserve Street		Reserve Street		WB Ramp	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	465.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present			No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Reserve Street		Reserve Street		WB Ramp	
Base Volume Input [veh/h]	0	0	902	156	0	374
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	902	156	0	374
Peak Hour Factor	1.0000	1.0000	0.9400	0.9400	1.0000	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	240	41	0	99
Total Analysis Volume [veh/h]	0	0	960	166	0	398
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	54.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	0	2	0	0	3
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	0	35	0	0	6
Maximum Green [s]	0	0	30	0	0	30
Amber [s]	0.0	0.0	4.5	0.0	0.0	3.0
All red [s]	0.0	0.0	1.5	0.0	0.0	1.0
Split [s]	0	0	55	0	0	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.5
Walk [s]	0	0	7	0	0	5
Pedestrian Clearance [s]	0	0	12	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	2.0
Minimum Recall			No			No
Maximum Recall			No			No
Pedestrian Recall			No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	R
C, Cycle Length [s]		90	90	90
L, Total Lost Time per Cycle [s]		6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00
l2, Clearance Lost Time [s]		4.00	4.00	2.00
g_i, Effective Green Time [s]		54	54	26
g / C, Green / Cycle		0.60	0.60	0.29
(v / s)_i Volume / Saturation Flow Rate		0.29	0.11	0.27
s, saturation flow rate [veh/h]		3279	1464	1464
c, Capacity [veh/h]		1953	872	429
d1, Uniform Delay [s]		4.66	4.00	30.83
k, delay calibration		0.50	0.50	0.31
I, Upstream Filtering Factor		1.00	1.00	1.00
d2, Incremental Delay [s]		0.89	0.48	20.34
d3, Initial Queue Delay [s]		0.00	0.00	0.00
Rp, platoon ratio		1.33	1.33	1.00
PF, progression factor		1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.19	0.93
d, Delay for Lane Group [s/veh]		5.54	4.48	51.17
Lane Group LOS		A	A	D
Critical Lane Group		Yes	No	Yes
50th-Percentile Queue Length [veh/ln]		2.32	0.77	10.49
50th-Percentile Queue Length [ft/ln]		58.01	19.17	262.31
95th-Percentile Queue Length [veh/ln]		4.18	1.38	15.80
95th-Percentile Queue Length [ft/ln]		104.43	34.51	395.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	5.54	4.48	0.00	51.17
Movement LOS			A	A		D
d_A, Approach Delay [s/veh]	0.00		5.39		51.17	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	17.34					
Intersection LOS	B					
Intersection V/C	0.565					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	34.67
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	1.989
Crosswalk LOS	F	F	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1089	689
d_b, Bicycle Delay [s]	45.00	9.34	19.34
l_b,int, Bicycle LOS Score for Intersection	4.132	2.489	1.560
Bicycle LOS	D	B	A

Sequence

Ring 1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 141: Reserve St / Ramps (E)

Control Type:	Two-way stop	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name	Reserve Street		Reserve Street		EB Ramp	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	385.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Reserve Street		Reserve Street		EB Ramp	
Base Volume Input [veh/h]	1163	299	0	0	0	220
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	2.00	2.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1163	299	0	0	0	220
Peak Hour Factor	0.9400	0.9400	1.0000	1.0000	1.0000	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	309	80	0	0	0	59
Total Analysis Volume [veh/h]	1237	318	0	0	0	234
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

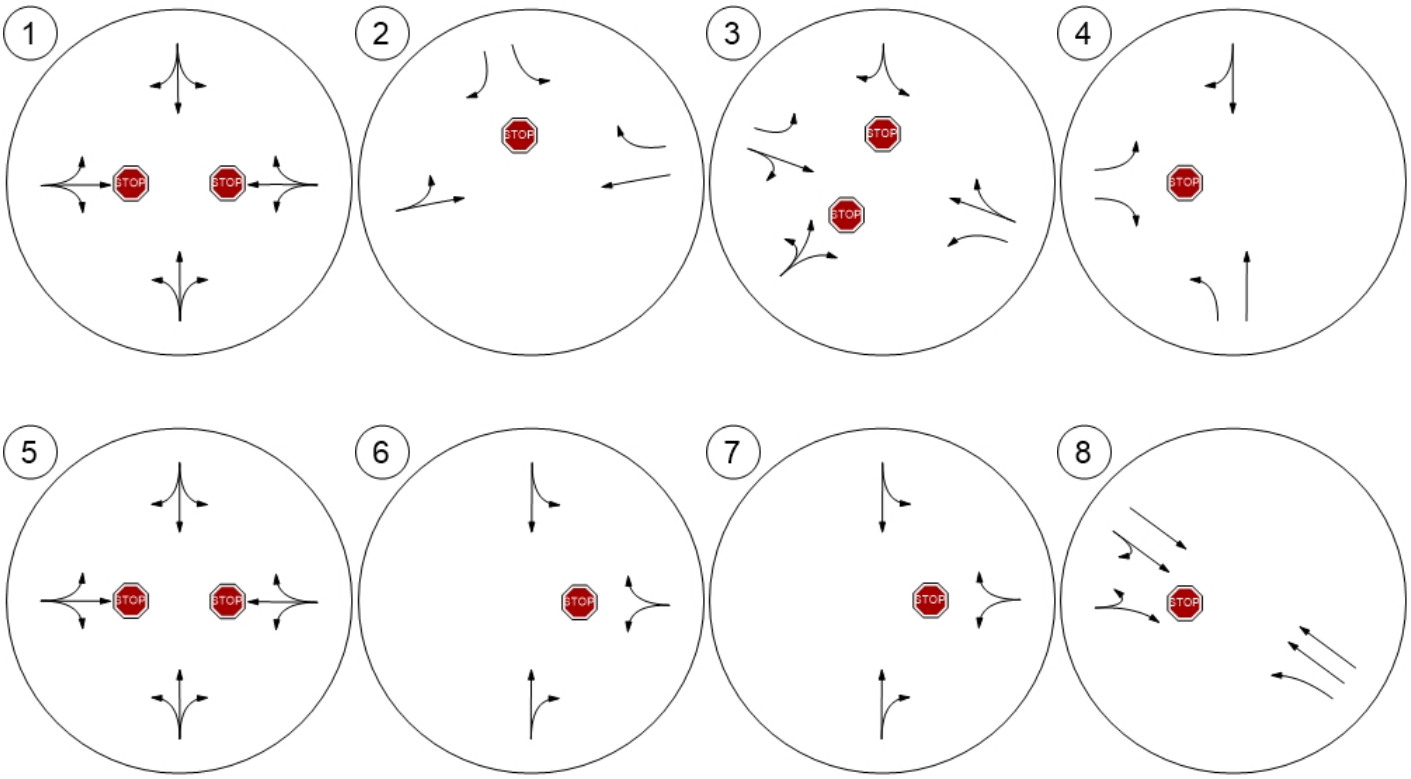
Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

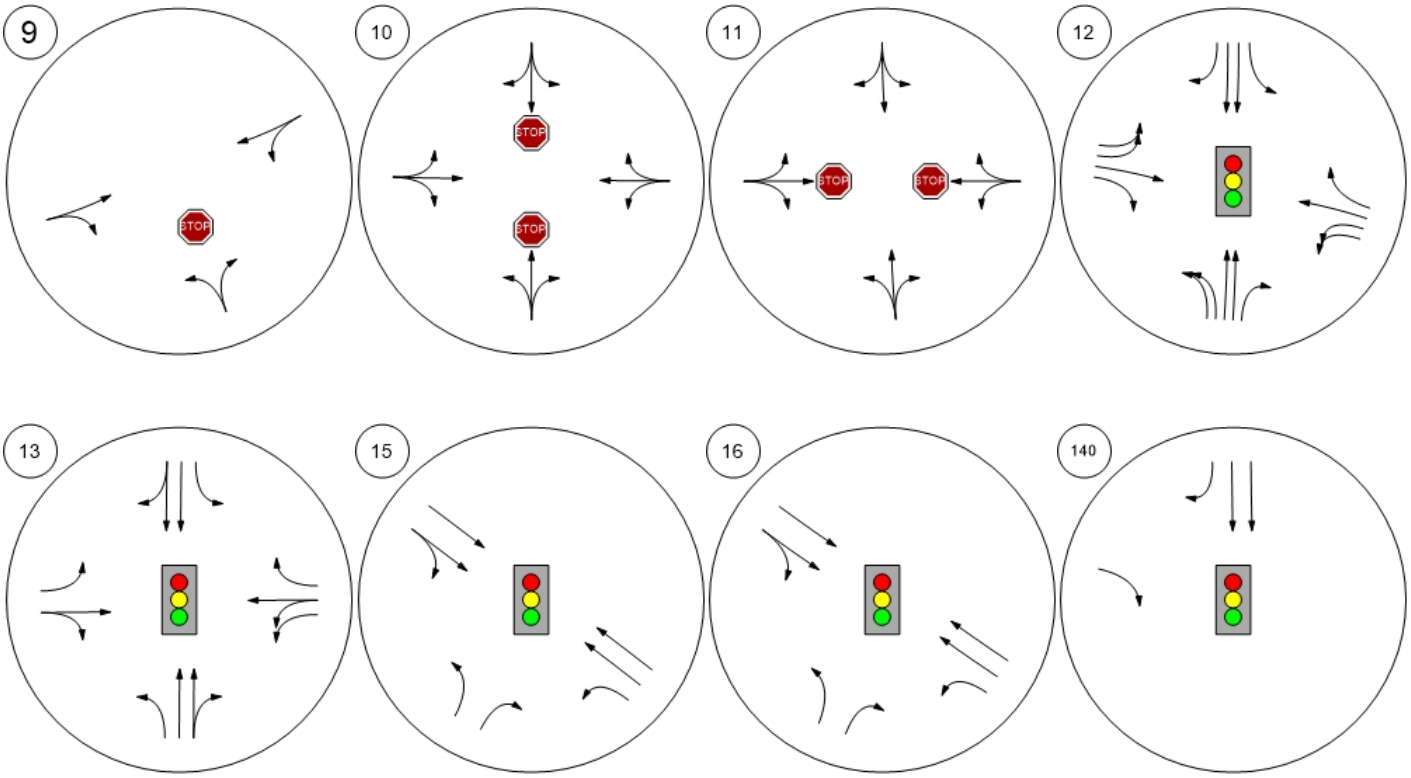
V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.55
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	23.19
Movement LOS	A	A				C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	3.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	80.26
d_A, Approach Delay [s/veh]	0.00		0.00		23.19	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.03					
Intersection LOS	C					

Study Intersections

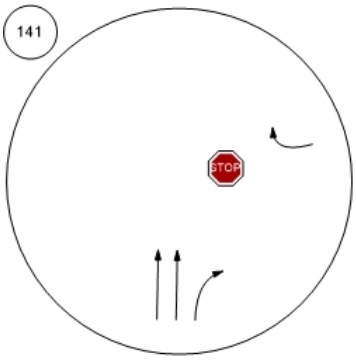
Lane Configuration and Traffic Control



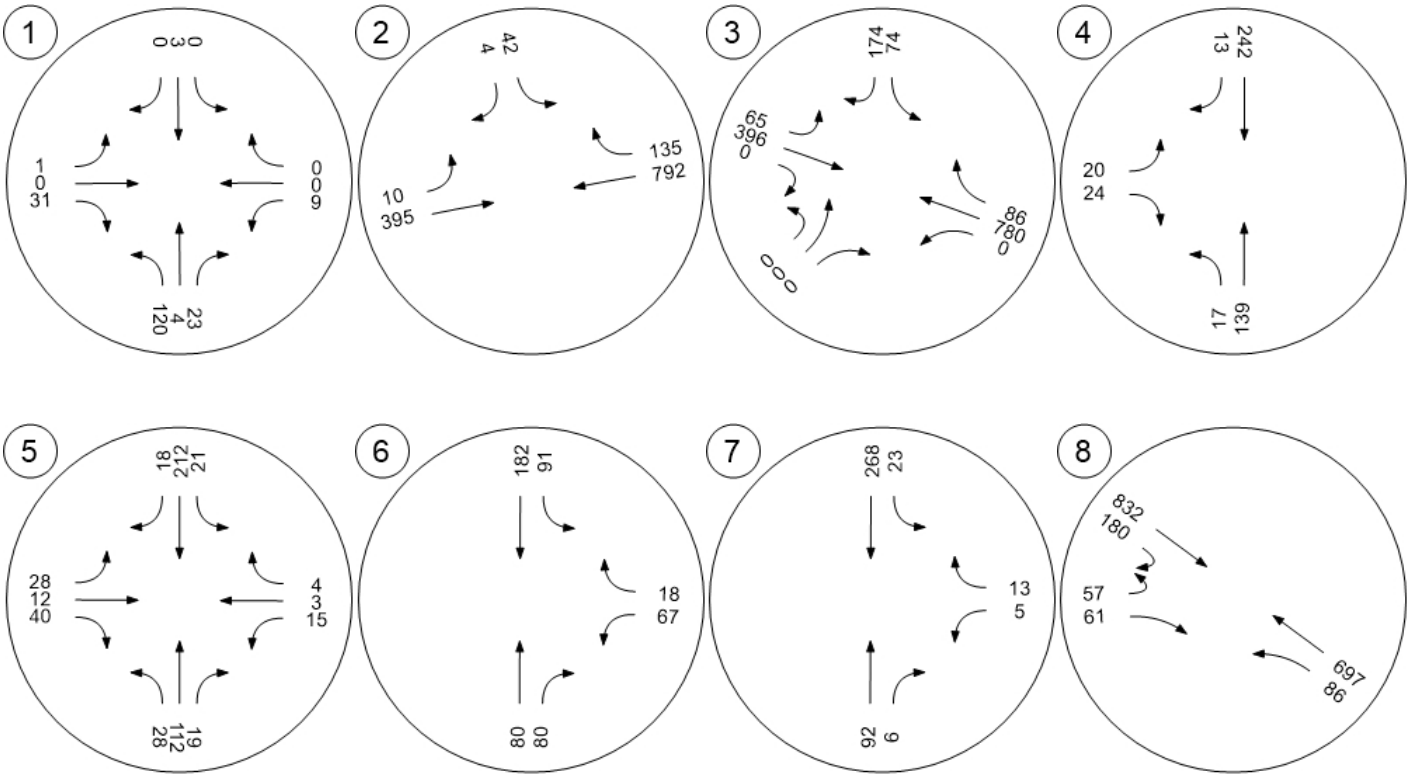
Lane Configuration and Traffic Control



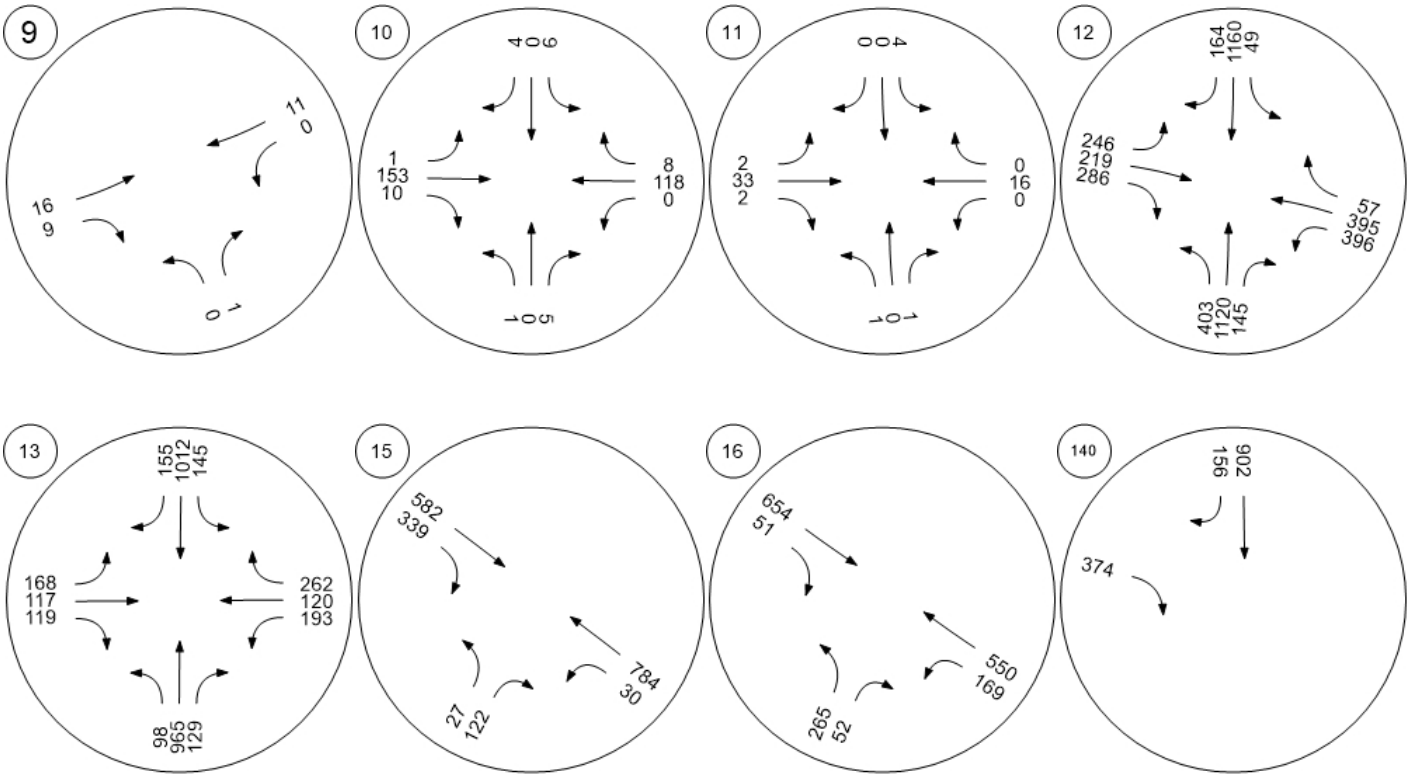
Lane Configuration and Traffic Control



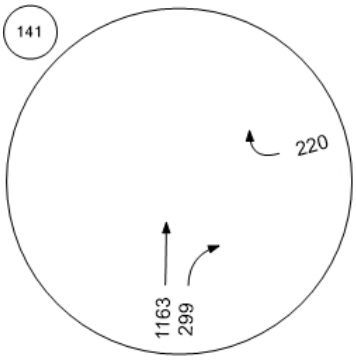
Traffic Volume - Base Volume



Traffic Volume - Base Volume



Traffic Volume - Base Volume



Appendix F – Roadway Segment Level of Service Worksheet

Roadway Segment Level of Service Planning Level Analysis						
Roadway	Extents	FunctionalClass	2020_CountVolumes	SpeedLimit	Lanes	Existing LOS
George Elmer Dr	Cattle Dr / Mullan Rd	Collector	2,563	35	2	**C**
England Blvd	Mary Jane Blvd / Reserve St	Collector	2,520	25	3	**C**
Mary Jane Blvd	Flynn Ln / England Blvd	Collector	137	25	2	**C**
Mary Jane Blvd	England Blvd / O'Leary St	Collector	114	25	2	**C**
Flynn Ln	Mullan Rd / England Blvd	Collector	4,066	25	2	**C**
Flynn Ln	England Blvd / Mary Jane Blvd	Collector	3,289	35	2	**C**
Mullan Rd	George Elmer Dr / Flynn Ln	Minor Arterial	13,589	45	2	**C**
Mullan Rd	Flynn Ln / Reserve St	Minor Arterial	13,319	45	2	**C**
Broadway St	Airport / Flynn Ln	Principal Arterial	18,064	55	5	**C**
Broadway St	Flynn Ln / Reserve St	Principal Arterial	15,945	45	5	**C**
Reserve St	England Blvd / Mullan Rd	Principal Arterial	30,875	45	5	**C**
Reserve St	Broadway St / England Blvd	Principal Arterial	33,000	45	5	**C**

USE THESE VALUES FOR URBANIZED AREAS OF MULLAN AREA

Methodology to Compute Level of Service (LOS) for Planning (FDOT Tables-AADT Volumes for Urbanized Areas)

Interrupted Flow Facilites

State Signalized Arterials (Class I - 40mph or higher)

Lanes	Median	B	C	D	E	
2	Undivided	*	16,800	17,700	**	
4	Divided	*	37,900	39,800	**	
5	Divided	*	55,480	56,905	**	Adjusted
6	Divided	*	58,400	59,900	**	
8	Divided	*	78,800	80,100	**	

State Signalized Arterials (Class II - 35 mph or lower)

Lanes	Median	B	C	D	E	
2	Undivided	*	7,300	14,800	15,600	
4	Divided	*	14,500	32,400	33,800	
6	Divided	*	23,300	50,000	50,900	
8	Divided	*	32,000	67,300	68,100	

Non-State Signalized Arterials (Class I - 40mph or higher)

Lanes	Median	B	C	D	E	
2	Undivided	*	15,120	15,930	**	
4	Divided	*	34,110	35,820	**	
5	Divided	*	49,932	51,215	**	Adjusted
6	Divided	*	52,560	53,910	**	

Non-State Signalized Arterials (Class II - 35mph or lower)

Lanes	Median	B	C	D	E	
2	Undivided	*	6,570	13,320	14,040	
3	Divided	*	13,703	30,618	**	Adjusted
4	Divided	*	13,050	29,160	30,420	
6	Divided	*	20,970	45,000	45,810	

Uninterrupted Flow Highways

Urbanized Areas

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive Left Lanes	Adjustment Factors
2	Divided	Yes	5%
Multi	Undivided	Yes	-5%
Multi	Undivided	N	-25%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
-	-	-	Yes	5%
One-Way facility Adjustment		0.6		

IF('Mullan Rd'!O2<'LOS Thresholds'!$I$54,"B",IF(O2<'LOS Thresholds'!$J$54,"C",IF(O2<'LOS Thresholds'!$K$54,"D",IF(O2<'LOS Thresholds'!$L$54,"E","F"))))

ATTACHMENT D

Traffic Memo 4 – 2050 Conditions Recommendations

2050 CONDITIONS & RECOMMENDATIONS

Date: July 23, 2020 Project #: 24667
To: Shane Stack, PE, Missoula County Public Works Director
From: Bincy Koshy, Rachel Grosso, Andy Daleiden, PE – Kittelson & Associates
cc: Donny Pfeifer, PE – DJ&A

INTRODUCTION

In November 2019, Missoula County and the City of Missoula were jointly awarded a federal BUILD Grant for the development of infrastructure in the Mullan Area of Missoula, with the vision of "Proactively and Collaboratively Building a Better Missoula" (Reference 1). Kittelson & Associates, Inc. (Kittelson) prepared this memorandum to summarize the projected 2050 transportation conditions for the Mullan–BUILD project, herein referred to as the project. This assessment compiles the results of a range of tasks, including analysis of 2050 travel demand model outputs, intersection control evaluations for each project intersection and a roadway network evaluation. The primary intent of this effort was to evaluate and identify intersection control types and roadway cross sections to inform the project at the 30% design-level. As the project progresses into final design, Kittelson will work with the project team to evaluate multimodal elements in detail for incorporating into the design of the intersections and roadways for this project.

Table of Contents

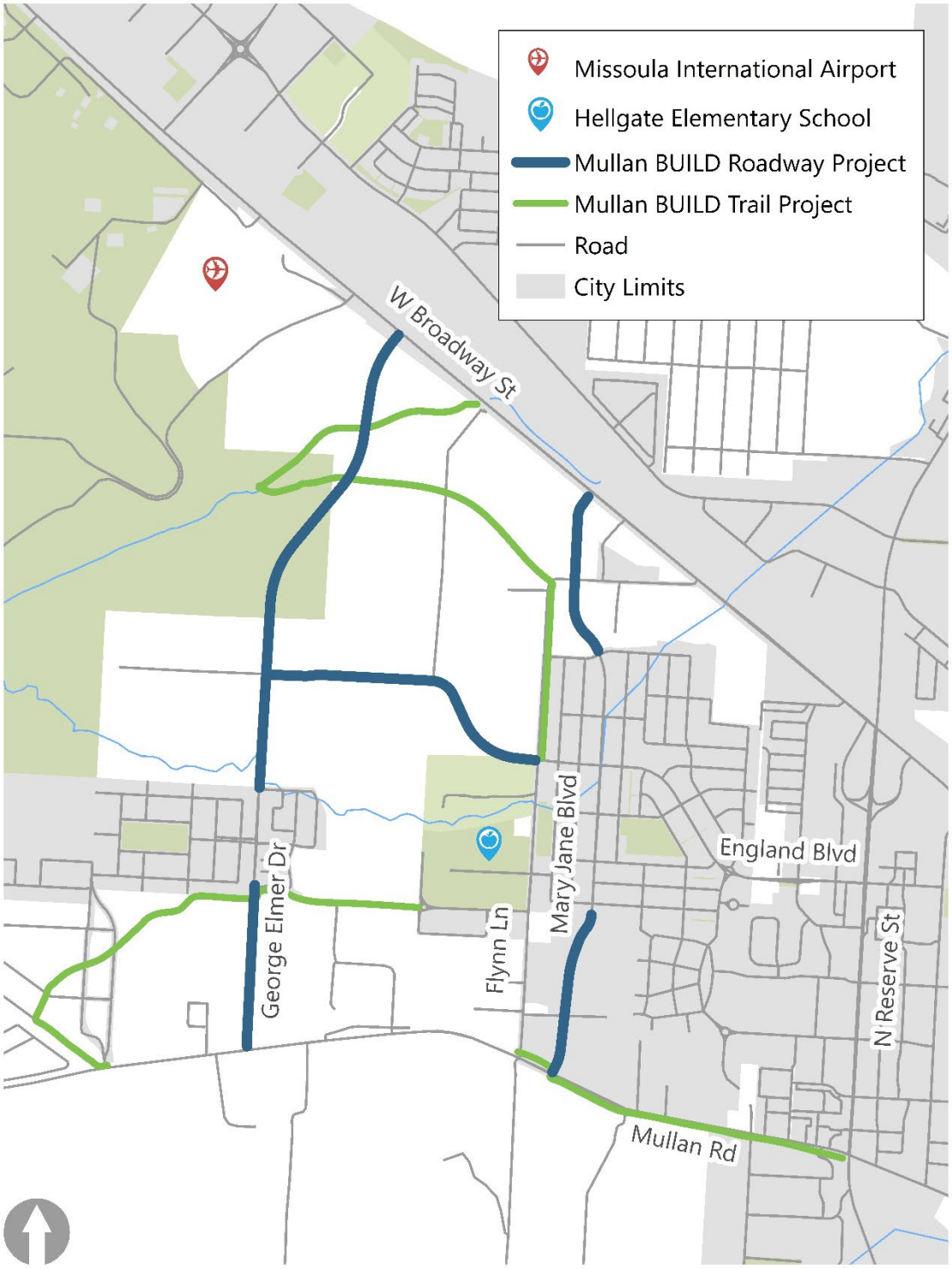
Project Area

The project is in Missoula County, Montana, generally west of the Missoula city limits, and approximately five miles from downtown Missoula. The project area is bordered by W Broadway Street to the north, Mary Jane Boulevard to the east, Mullan Road to the south and George Elmer Drive to the west. Other key roadways include Flynn Lane and England Boulevard in the project area. The project area, with BUILD facilities, is displayed in Figure 1.

The project area includes three major east-west roadways (W Broadway Street, England Boulevard and Mullan Road) and three major north-south roadways (George Elmer Drive, Flynn Lane and Mary Jane Boulevard). The project will construct:

- England Boulevard between Flynn Lane and George Elmer Drive,
- Mary Jane Boulevard between W Broadway Street and Camden Street, and Melrose Place and Mullan Road, and
- George Elmer Drive between Pius Way and W Broadway Street.

Figure 1 Project Area



PROJECTED TRANSPORTATION SYSTEM CHARACTERISTICS

This section summarizes the projected 2050 future conditions of the land uses and transportation system in the project area.

Population & Employment Growth

The comprehensive growth plans and land use policies applicable to the study area (detailed in *Technical Memorandum #1*: *Existing Transportation Conditions*) designate the general Mullan Area as nearly 1,500 acres of land for development with plans for light industrial, commercial, and workforce housing in the vicinity of the nearby airport (Reference 1). In the Missoula Metropolitan Planning Organization (MPO) travel demand model, the traffic analysis zones (TAZ) located in the Mullan Area were projected to grow by an additional 4,800 housing units as part of the Mullan Area Master Plan scenario planning (Reference 2). Further details on the travel demand model are available in A. These changes in housing development are reflected in Figure 2. Most notable is the increase in households south of the Flynn Lane & W Broadway Street intersection and northwest of the Mary Jane Boulevard & Flynn Lane intersection, as the increased density in these areas will affect traffic patterns on these roads. Additionally, changes in employment across all sectors is displayed in Figure 3, with an expected 4,100 jobs augmented by the Mullan BUILD project development.

Figure 2 Projected Population Growth (2015 - 2050) at TAZ Level

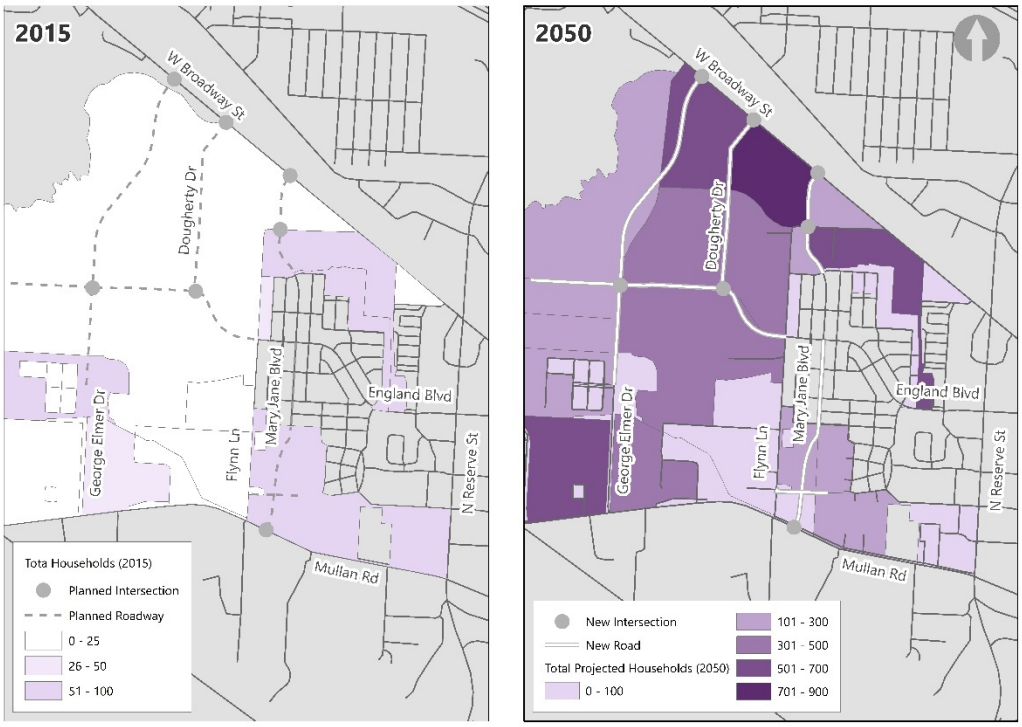
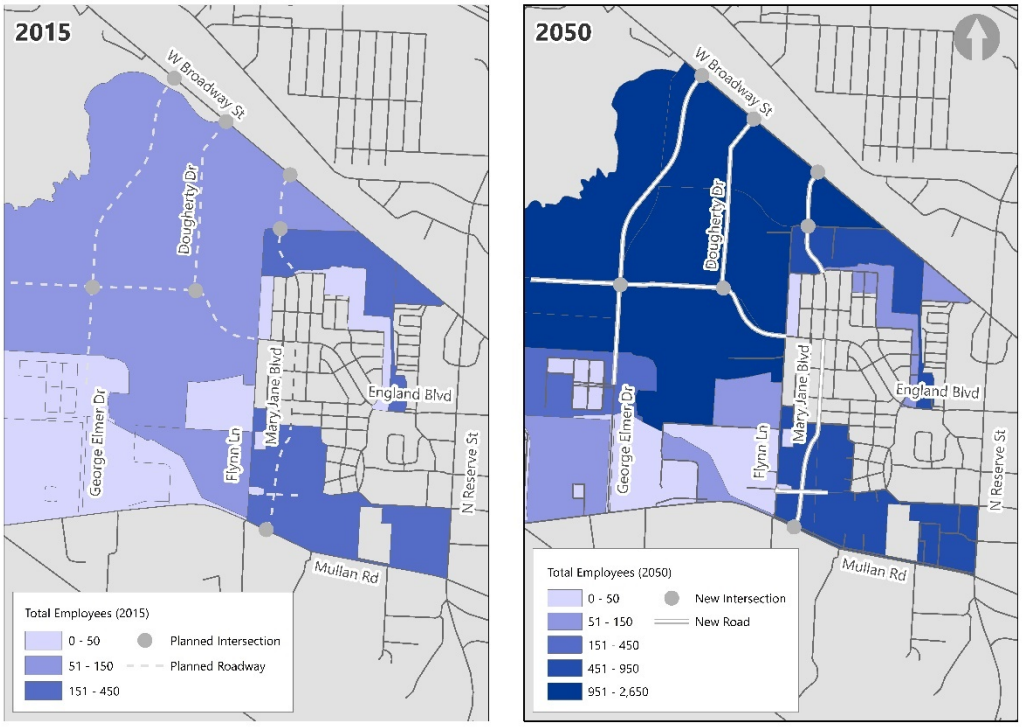


Figure 3 Projected Employment Growth (2015 - 2050) at TAZ Level



Roadway Network

Table 1 summarizes the roadway network characteristics for the project in comparison to current conditions.

Table 1 Roadway Network Characteristics

ROADWAY	EXTENTS	EXISTING CROSS-SECTION	PROPOSED FUNCTIONAL CLASSIFICATION & CROSS-SECTION	POSTED SPEED (MPH)
George Elmer Drive	W Broadway Street to England Boulevard	N/A	Two Lane Collector with Turn Lanes	30
	England Boulevard to Pius Way	N/A	Two Lane Collector with Turn Lanes	30
	Pius Way to Mullan Road	Two Lanes	Two Lane Collector with Turn Lanes	30
Flynn Lane	W Broadway Street to Mullan Road	Two Lanes	Two Lane Local	25
England Boulevard	George Elmer Drive to Flynn Lane	N/A	Two Lane Collector with Turn Lanes	30
Mary Jane Boulevard	W Broadway Street to Camden Street	N/A	Two Lane Collector with Turn Lanes	30

ROADWAY	EXTENTS	EXISTING CROSS-SECTION	PROPOSED FUNCTIONAL CLASSIFICATION & CROSS-SECTION	POSTED SPEED (MPH)
	Melrose Place to Mullan Road	N/A	Two Lane Collector with Turn Lanes	30
Mullan Road	George Elmer Drive to Mary Jane Boulevard	Two Lanes	Two Lane Arterial with Turn Lanes	45
	Mary Jane Boulevard to N Reserve Street	Two Lanes	Four Lane Arterial with Turn Lanes	45
W Broadway Street	Aviation Way to N Reserve Street	Five Lanes	No Change	55
N Reserve Street	W Broadway Street to Mullan Road	Five Lanes	No Change	45

Figure 4 displays the conditions of the 2050 model parameters, including functional classification and posted speed for the project area.

2050 Model Volumes

The Missoula MPO provided travel demand model daily, AM peak hour, and PM peak hour volumes for the year 2050. Figure 5 displays the projected daily volumes for 2050, and further information on the travel demand model is available in A. For each project intersection, Kittelson used the National Cooperative Highway Research Program (NCHRP) Report 765 (Reference 3) to estimate weekday AM and PM peak hour turning movement counts, derived from the 2050 model traffic volumes and existing traffic volumes collected in February 2020. This information can be found in B.

FREIGHT VOLUMES

The heavy vehicle percentages (HVP), calculated from the existing conditions data collection effort, were used where applicable in the new roadway network, but several HVPs were adjusted to reflect the higher classification roadways and additional connectivity of George Elmer Road and Mary Jane Boulevard over Flynn Lane. Further information on these approximate HVPs is available in C.

Figure 4 Roadway Network - Functional Classification & Posted Speed

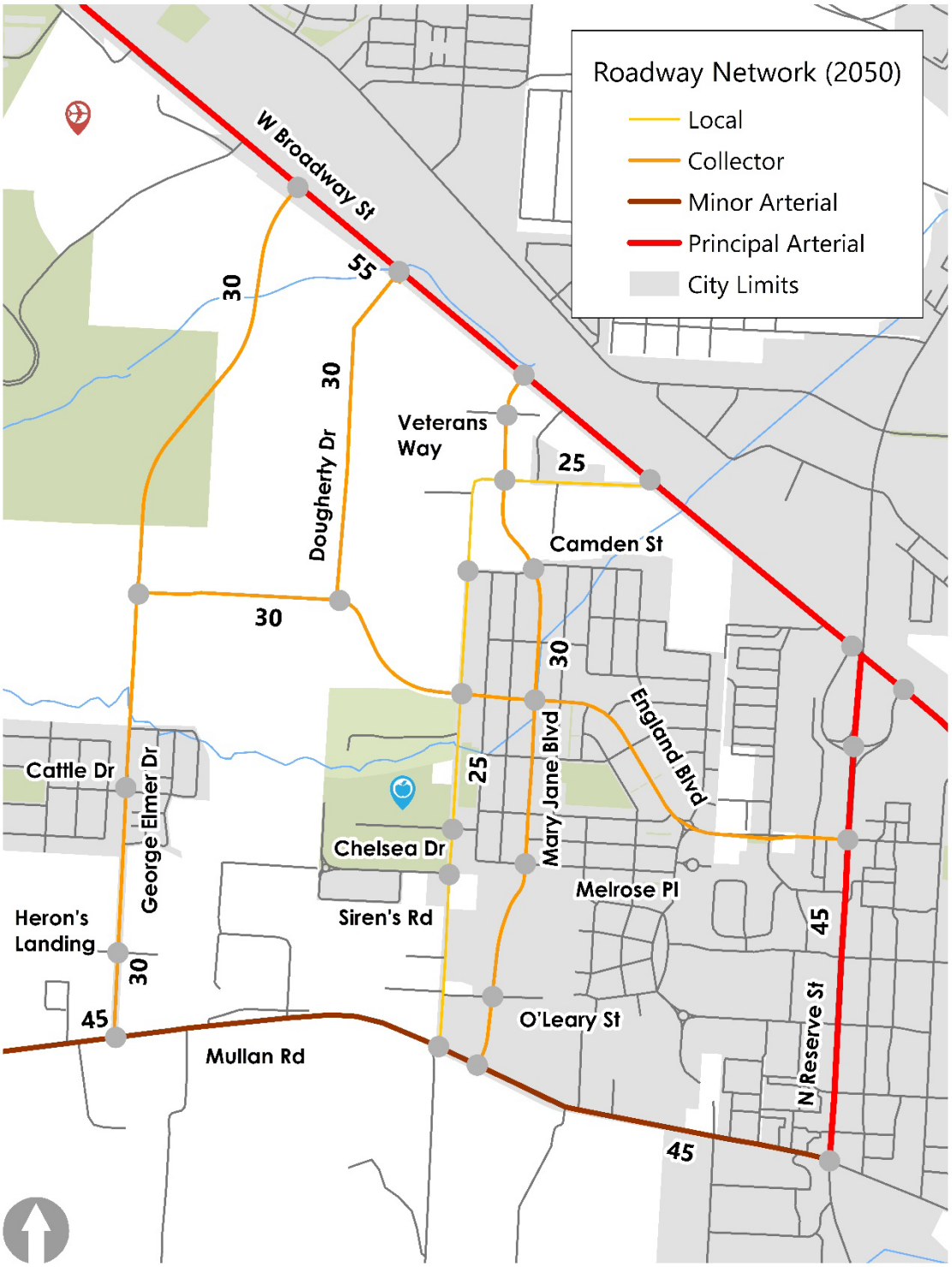
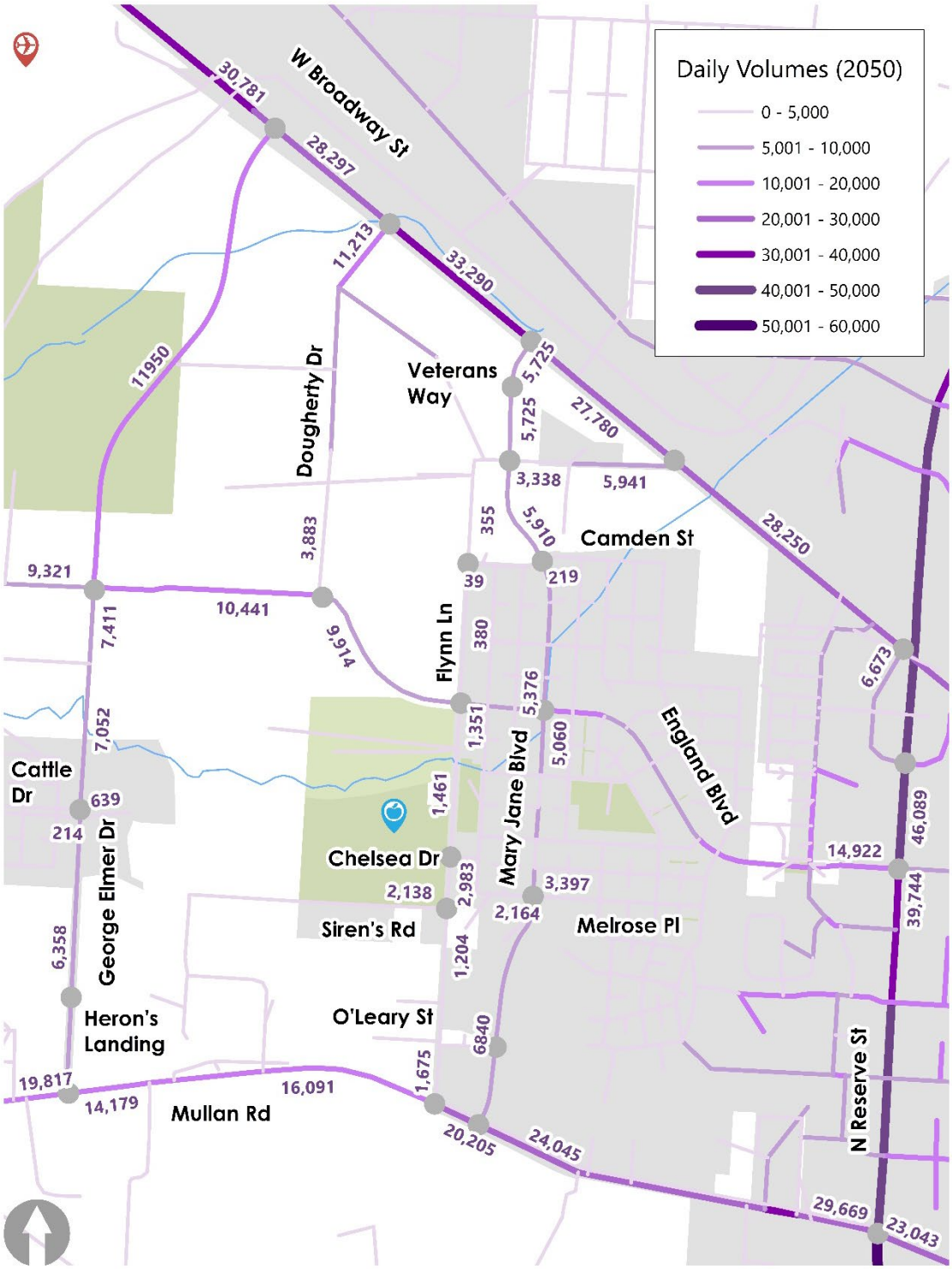


Figure 5 Daily Traffic Volumes (2050)



Multi-Modal Network

MULLAN AREA MASTER PLAN

The Mullan Area Master Plan (MAMP), a concurrent effort with the Mullan BUILD project, identifies typical sections for the planned roadways in the Mullan Area. While these sections are preliminary, not yet engineered, and flexible for implementation, they include details about how people walking, rolling, biking and driving will share the street space as its built (Reference 4). The roadway network is displayed in Figure 6, and typical sections are depicted in Figure 7 and Figure 8.

As shown in Figure 7 and Figure 8, the project roads of Mary Jane Boulevard, England Boulevard, Dougherty Drive, and George Elmer Drive, all fall within the Main Collector or Neighborhood Collector typical section categories. These sections indicate the need for standard or buffered 6' bicycle lanes, standard 6' sidewalks with landscaped buffers and accommodations for transit buses.

HELLGATE ELEMENTARY SCHOOL

This K-8 school, located along Flynn Lane between Siren's Drive and Chelsea Drive, is an important community institution in the Mullan Area. The school is connected to the surrounding neighborhood by a detached paved asphalt trail and sidewalks on the west side of Flynn Lane between Mullan Road and Chelsea Drive. On the east side of Flynn Lane, there are detached sidewalks between Siren's Drive and Camden Street. Additionally, at the southern approach of the Flynn Lane/Chelsea Drive intersection, a high visibility crosswalk with a school zone flasher and curb bulb-outs serves as the transition point from a posted speed limit of 35 mph to 25 mph.

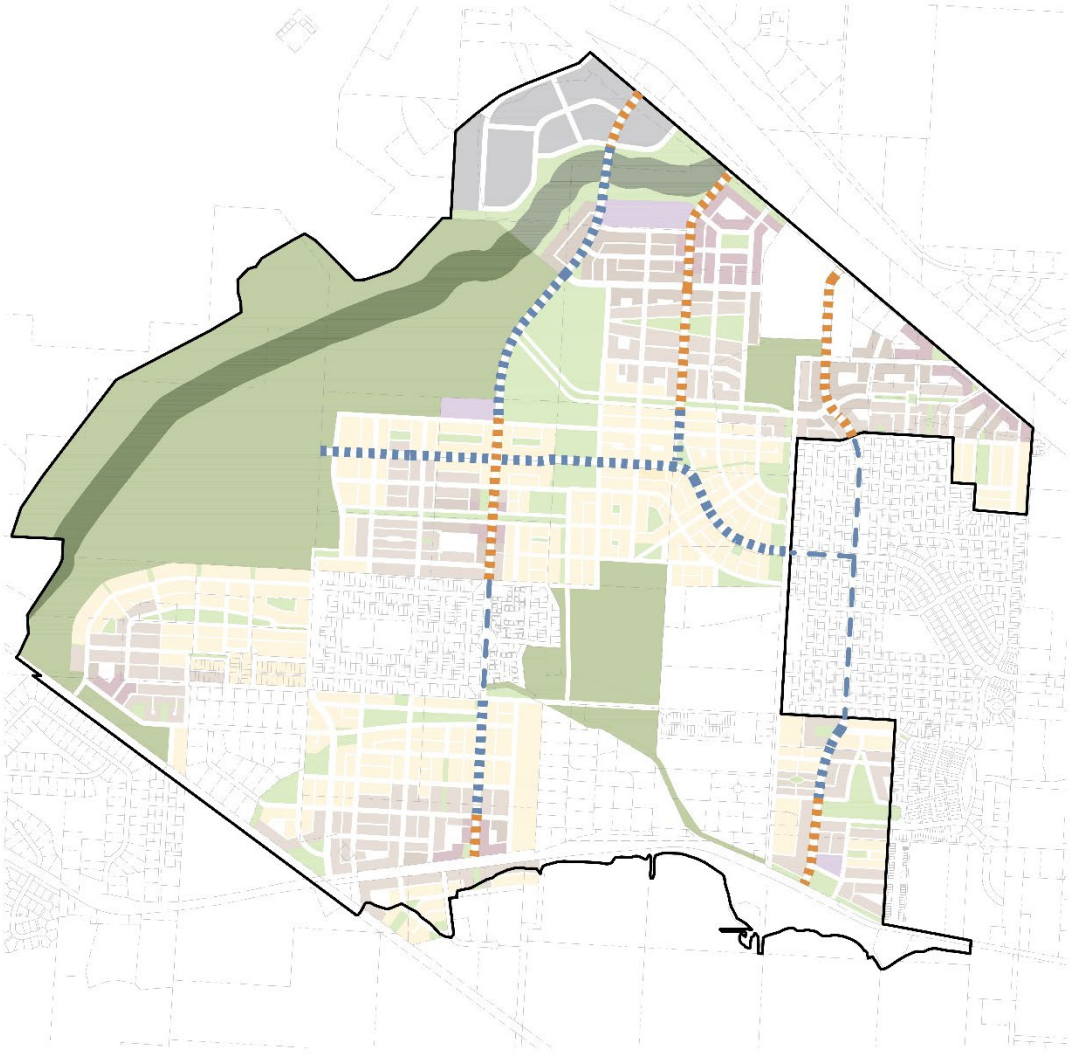
With the recommended intersection controls further described in subsequent sections, school bus routing will be altered due to the reconfiguration of the intersection of Flynn Lane and Mullan Road. To encourage the use of Mary Jane Boulevard as a primary north-south corridor in the eastern portion of the Mullan Area, the intersection of Flynn Lane & Mullan Road will be converted into an unsignalized right-in, right-out, left-in facility. This configuration will prevent southbound left turning traffic from Flynn Lane and redirect it to the intersection of Mary Jane Boulevard & Mullan Road over time. The objective of this configuration is both to redirect through traffic from Flynn Lane to Mary Jane Boulevard and to improve safety along this route due to the high volume of school-aged children using it. School bus routes that serve the areas east of Hellgate Elementary School and currently make a southbound left-turn at the intersection of Flynn Lane & Mullan Road, will require some alteration once these intersections are constructed.

Figure 6 Mullan Area Master Plan Street Atlas

MULLAN AREA MASTER PLAN
BUILD GRANT THOROUGHFARE STANDARDS

STREET ATLAS

Main Street Collector
Neighborhood Collector
Neighborhood Collector
Existing Street Segments



Mullan Area Master Plan - BUILD Grant Street Atlas

(preliminary draft for review)

Figure 7 Mullan Area Master Plan - Main Street Collector Typical Section

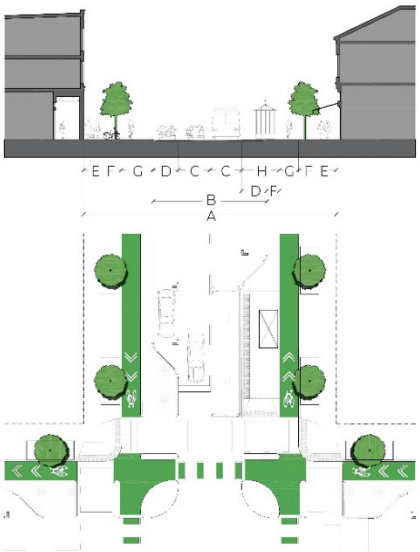
MULLAN AREA MASTER PLAN

BUILD GRANT THOROUGHFARE STANDARDS

STREET TYPES – TYPICAL SECTIONS AND INTERSECTIONS

The Typical Intersections shown represent possible intersection concepts only and are not fully engineered designs nor do they represent the full range of intersection treatments that may be appropriate.

A. Main Street Collector



Thoroughfare Type	Main Street Collector	
Right-of-Way Width	90 feet	A
Pavement Width	36 feet	B
Traffic Lanes	Two lanes - 10 feet wide	C
Transit	Bus	H
Bicycle / Micro-Mobility Facility	Two - 6' Protected Lanes 3 foot buffer	G
Parking Lanes/Curbside Flex Zone	Both sides @ 8 feet marked	D
Sidewalk: Clear & Frontage Zones	8 feet	E
Landscape Zone - Sidewalk	10' wide x 15' Tree Wells [1]	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale, Tree Box Filter	F

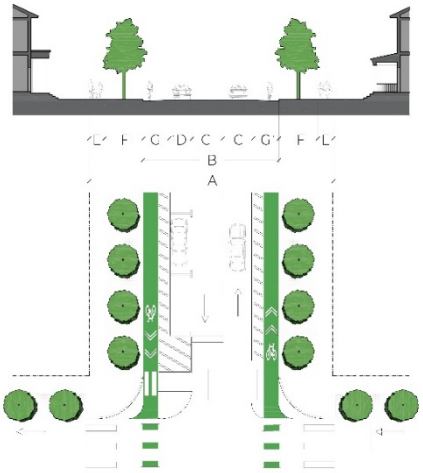
[1] Tree wells smaller than 7' wide by 15' are permitted if suspended pavement system is utilized.

(preliminary draft for review)

Figure 8 Mullan Area Master Plan - Neighborhood Collector Typical Section

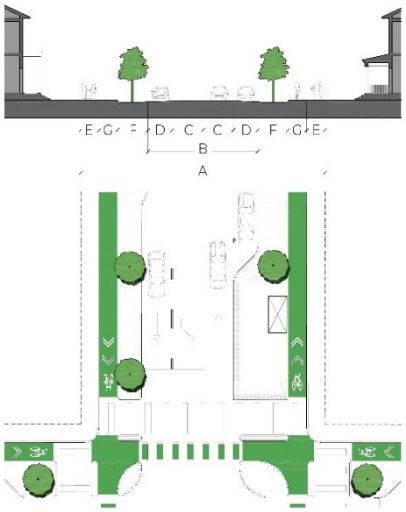
MULLAN AREA MASTER PLAN
BUILD GRANT THOROUGHFARE STANDARDS

B. Neighborhood Collector
Existing Street Segments



Thoroughfare Type	Neighborhood Collector Existing Street Segments	
Right-of-Way Width	80 feet	A
Pavement Width	44.5 feet	B
Traffic Lanes	Two - 10.5 foot drive lanes	C
Transit	Bus	
Bicycle / Micro-Mobility Facility	Two - 5' Protected Lanes 3 foot striped buffer	G
Parking Lanes/Curbside Flex Zone	One side @ 7.5 feet marked	D
Sidewalk: Clear & Frontage Zones	6 feet	E
Landscape Zone	12.75 foot continuous planter	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale	F

C. Neighborhood Collector



Thoroughfare Type	Neighborhood Collector	
Right-of-Way Width	90 feet	A
Pavement Width	36 feet	B
Traffic Lanes	Two - 10 foot drive lanes	C
Transit	Bus	
Bicycle / Micro-Mobility Facility	Two - 6' Protected Lanes	G
Parking Lanes/Curbside Flex Zone	Both sides @ 8 feet marked	D
Sidewalk: Clear & Frontage Zones	6 feet	E
Landscape Zone	10 to 15 foot continuous planter	F
Landscape Type	Trees @ 35' o.c. average	F
Road Edge Treatment	Curb	
Green Infrastructure	Bioswale	F

The Typical Intersections shown represent possible intersection concepts only and are not fully engineered designs nor do they represent the full range of intersection treatments that may be appropriate.

(preliminary draft for review)

TRAILS

In addition to the new roadways and intersections that will be designed and constructed as part of the project, 3.7 miles of new multi-use trails will also be included: the Grant Creek Trail, the Milwaukee Trail, the Tipperary Way Trail, the Flynn Lane Trail, and the Mullan Trail (Reference 1). These trails will include 10' asphalt paths with 1' shoulders. Major crossing locations, such as those at George Elmer Drive, Flynn Lane, and Mary Jane Boulevard are planned to include either rectangular rapid flashing beacons (RRFBs) or other crossing treatment to alert people driving of the presence of people walking, rolling, and biking (Reference 5). The trail components of the project are as follows:

- Grant Creek Trail
    - This trail extends south from W Broadway Street towards the Flynn Lane Trail.
    - This trail crosses George Elmer Drive just north of the creek.
- Milwaukee Trail
    - This trail connects the existing Mullan Trail northwest towards Grant Creek.
    - This trail will eventually provide a connection with the Grant Creek Trail.
- Tipperary Way Trail
    - This trail leads from Hellgate Elementary School towards Grant Creek along the Flynn Lowney Ditch, connecting with the Milwaukee Trail.
    - This trail crosses George Elmer Drive along the alignment of the Flynn Lowney Ditch, which is approximately 200 feet southeast of Filly Lane.
- Flynn Lane Trail
    - This trail extends north and west from its current terminus at Hellgate Elementary School, also connecting to the Grant Creek Trail.
    - As it traverses north, this trail crosses the new fourth leg of the Flynn Lane & England Boulevard intersection.
    - As the trail veers west after it reaches the bend of Flynn Lane, it crosses George Elmer Drive before crossing the creek and connecting with the Grant Creek Trail.
- Mullan Trail
    - This trail extends 0.75 miles from its current terminus to connect with the existing facilities along Reserve Street.
    - This trail is currently routed north of Mullan Road. Along the northern alignment, it crosses George Elmer Drive and crosses Flynn Lane towards Mary Jane Boulevard.
    - At the intersection of Mary Jane Boulevard with Mullan Road, the trail crosses and realigns south of Mullan Road towards Reserve Street.

TRANSIT NETWORK

Missoula Urban Transportation District (MUTD) operates the transit service in Missoula, called Mountain Line. Route 11 provides service every 60 minutes from 6 AM to 9 AM, 12 PM to 2 PM, 3 PM to 5 PM and at 6 PM between the Downtown Transfer Center and Missoula International Airport. Route 11 has stops on the eastern boundary of the project area on England Boulevard and northern boundary of the project area on W Broadway Street. In their long-range plan, MUTD identified the addition of route 15B to their service offerings, which will operate along England Boulevard, serving the expanded Mullan Area. This route is a part of MUTD's long term network, and as such, the expanded route and bus stop locations will be determined as funding becomes available and development occurs in the project area (Reference 6).

ANALYSIS METHODOLOGY

Kittelson analyzed future (2050) conditions to identify suitable options for intersection control and roadway segments in the project area. The purpose of the evaluation is to identify a preferred intersection control and the number of vehicular travel lanes for roadway segments based on 2050 traffic projections. Based on the study objectives, Kittelson used the safety performance and traffic operations results as primary drivers for selection of the recommended intersection control.

Intersection Methodology

Kittelson utilized the turning movement counts produced by the NCHRP 765 methodology to evaluate intersection control options based on 2050 AM and PM peak hour traffic volumes. Appendix B illustrates the process for developing 2050 AM and PM peak hour traffic volumes at the intersections.

TRAFFIC OPERATIONS

Working in PTV Vistro, four scenarios were developed for both the AM and PM peak HOURs, based on control type: Two Way Stop Control (TWSC), Signal, Roundabout (single-lane and multi-lane), and All Way Stop Control (AWSC). These scenarios were analyzed using the guidance of the 6th Edition of the Highway Capacity Manual (HCM) (Reference 7) as follows:

- All intersections were tested as TWSC. Intersections with failing movements and higher volume movements were evaluated for left-turn and right-turn lane warrants (Reference 8, Reference 9, and Reference 10).
- Intersections that met the Manual on Uniform Traffic Control Devices (MUTCD) signal warrants were evaluated as signalized intersections. MUTCD signal warrants #1, #2 and #3 were used in the evaluation (Reference 11).
- All intersections were tested as single-lane roundabouts with some being evaluated as multi-lane roundabouts to address any movement deficiencies.
- A few intersections were tested as AWSC due to an operational deficiency as a TWSC and not meeting MUTCD signal warrants.

SAFETY

In addition to the operational analysis, intersection safety analyses were performed by adapting the pedestrian risk score methodology developed by the Missoula MPO in their Pedestrian Facilities Master Plan (Reference 12). This analysis, utilizing the parameters of vehicular posted speed, vehicular daily traffic, and number of vehicular lanes, quantifies the level of risk that an unmitigated intersection poses for a person walking via a spreadsheet tool. The criteria, and associated risk scoring, are delineated in Table 2.

Table 2 Pedestrian Risk Scoring

SPEED (MPH)	POINTS	VOLUME (AADT)	POINTS	LANES	POINTS
25	1	<3,000	1	2	1
30	2	3,001 – 9,000	2	3	2
35	3	9,001 – 15,000	3	4	3
40	4	>15,001	4	5	4
45+	5	-	-	-	-

Additionally, Kittelson performed a safety analysis evaluating crash modification factors for total crashes and crash severity for the different intersection controls. This assessment is based on Highway Safety Manual methodology (Reference 13 and Reference 14) and the crash modification factor clearinghouse (Reference 14). Crash modification factors quantify the expected crash reduction associated with each intersection control are summarized in Table 3 (based on countermeasure scenario) and Table 4 (based on crash severity). In the case of a signalized intersection as a countermeasure, total number of crashes may be lower, however, crash severity will be generally low compared to a stop-controlled intersection. In the case of a roundabout at an intersection as a countermeasure, crash severity will be lower, compared to stop-controlled and signalized intersection. However, number of crashes are generally higher in case of a multi-lane roundabout when compared to a single-lane roundabout and traffic signal.

As needed for the project, Kittelson plans to prepare a separate memorandum to further analyze the safety component in detail at Flynn Lane and W Broadway Street, and Mary Jane Boulevard and W Broadway Street intersections after selection of intersection control type is determined. This memorandum will support the potential for securing funding associated with the Highway Safety Improvement Program (HSIP).

Table 3 Crash Modification Factors based on Intersection Control (All Crash Types)

COUNTERMEASURE	CMF	CRF[2]	QUALITY RATING[1]
Convert Intersection from Stop Control to Right-In/Right-Out	0.55	45	4 Stars
Convert an Open Median to a Left-In Only Median	0.95	5	3 Stars
Convert Intersection from Minor Road Stop Control to All Way Stop Control	0.319	68.1	4 Stars
Convert Intersection from Stop Control to Signal	0.56	44	5 Stars
Convert Intersection from Stop Control to Signal (major road 40 mph)	0.95	5	4 Stars
Convert Intersection from Stop Control to Single-Lane Roundabout	0.56	44	5 Stars
Convert Intersection from Stop Control to Multi-Lane Roundabout	0.88-0.95	12-5	3 Stars
Convert Intersection from Signal to Single-Lane Roundabout	0.74	26	4 Stars
Convert Intersection from Signal to Multi-Lane Roundabout	0.81	19	4 Stars

Source: CMF Clearinghouse

Table 4 Crash Modification Factors based on Intersection Control (Crash Severity)

COUNTERMEASURE	CMF	CRF[2]	QUALITY RATING[1]
Convert Intersection from Minor Road Stop Control to All Way Stop Control	0.23	77	4 Stars
Convert an Open Median to a Left-In Only Median	0.95	5	3 Stars
Install a Traffic Signal	0.782	21.8	4 Stars
Convert Intersection with Minor-Road Stop Control to Modern Roundabout (Single-Lane Roundabout)	0.22	78	4 Stars
Convert Intersection with Minor-Road Stop Control to Modern Roundabout (Multi-Lane Roundabout)	0.32	68	4 Stars
Convert Signalized Intersection into Single- or Multi-Lane Roundabout (Single-Lane Roundabout)	0.45	55	3 Stars
Convert Signalized Intersection into Single- or Multi-Lane Roundabout (Multi-Lane Roundabout)	0.29	71	4 Stars

Source: CMF Clearinghouse

Segment Methodology

Kittelson evaluated the project roadway segments based on 2050 daily traffic volumes using planning-level daily traffic volume thresholds from the Florida Department of Transportation's (FDOT) Quality/Level of Service Handbook tables (Reference 15). These planning-level thresholds are based on HCM methodology (Reference 7) and factor in roadway characteristics and land use-type considerations. These thresholds are used nationally as a reference guide for preliminary analysis of roadway cross-sections. Additionally, Kittelson used the intersection operations findings to assess consistency between the roadway segment analysis and lane arrangements identified at the study intersections.

[1] The star quality rating indicates the quality or confidence in the results of the study producing the CMF. The star rating is based on a scale of 1 to 5, with 5 indicating the highest or most reliable rating.
[2] The Crash Reduction Factor (CRF) indicates a decrease in crashes (%).

INTERSECTION AND ROADWAY CROSS-SECTION EVALUATION

This section describes the preliminary traffic control and cross-section options that can function at an acceptable LOS and under capacity at the intersections and on the segments under year 2050 traffic conditions. LOS D is used as the intersection LOS threshold. A volume-to-capacity ratio (V/C) of 0.90 is used as the movement V/C threshold for unsignalized and signalized intersections within the project area.

2050 Roadway Network Evaluation

The results of the level of service analysis are delineated in Table 5. All roadways are projected to operate at an acceptable level of service under year 2050 conditions with the proposed number of lanes.

Table 5 Roadway Level of Service (2050)

ROADWAY (LIMITS)	LANES	ADT (2050)	POSTED SPEED (MPH)	FUNCTIONAL CLASS	LEVEL OF SERVICE
West Broadway Street (Aviation Drive to Flynn Lane)	Four Lanes with Turn Lanes	30,780	55	Principal Arterial	C
George Elmer Drive (W Broadway Street to Pius Way)	Two Lanes with Turn Lanes	11,950	30	Collector	B
George Elmer Drive (Pius Way to Mullan Road)	Two Lanes with Turn Lanes	7,050	30	Collector	B
England Boulevard (George Elmer Drive to Flynn Lane)	Two Lanes with Turn Lanes	10,300	30	Collector	C
Mary Jane Boulevard (W Broadway Street to Camden Street)	Two Lanes with Turn Lanes	5,725	30	Collector	C
Mary Jane Boulevard (Camden Street to Melrose Place)	Two Lanes with Turn Lanes	5,910	30	Collector	C
Mary Jane Boulevard (Melrose Place to Mullan Road)	Two Lanes with Turn Lanes	6,840	30	Collector	C
Mullan Road (George Elmer Dr. to Mary Jane Blvd.)	Two Lanes with Turn Lanes	19,820	45	Minor Arterial	C
Mullan Road (Mary Jane Boulevard to Reserve St.)	Four Lanes with Turn Lanes	24,045	45	Minor Arterial	C

2050 Intersection Control Evaluation

This section outlines the evaluation of each project intersection by both congestion and safety performance measures, with the primary intent of selecting intersection control types for the project design effort. Kittelson evaluated control types at the following intersections:

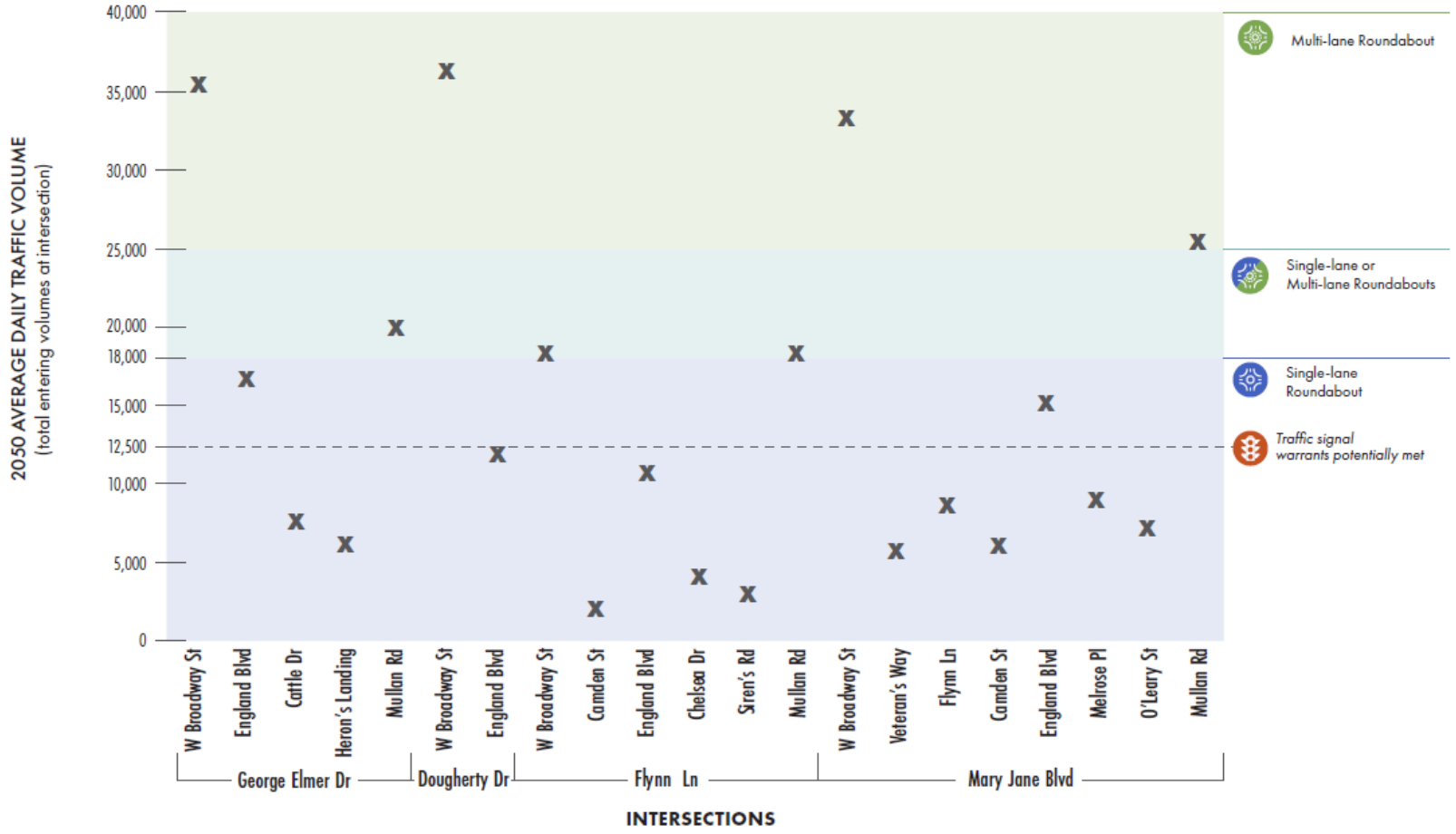
- #1 George Elmer Drive & W Broadway Street
- #2 George Elmer Drive & England Boulevard
- #3 George Elmer Drive & Cattle Drive
- #4 George Elmer Drive & Heron's Landing
- #5 George Elmer Drive & Mullan Road
- #6 Dougherty Drive & England Boulevard
- #7 Dougherty Drive & W Broadway Street
- #8 Flynn Lane & Camden Street
- #9 Flynn Lane & England Boulevard
- #10 Flynn Lane & Chelsea Drive
- #11 Flynn Lane & Siren's Road
- #12 Flynn Lane & Mullan Road
- #13 Mary Jane Boulevard & Mullan Road
- #14 Mary Jane Boulevard & O'Leary Street
- #15 Mary Jane Boulevard & Melrose Place
- #16 Mary Jane Boulevard & England Boulevard
- #17 Mary Jane Boulevard & Camden Street
- #18 Mary Jane Boulevard & Flynn Lane
- #19 Mary Jane Boulevard & Veteran's Way
- #20 Mary Jane Boulevard & W Broadway Street
- #21 Flynn Lane & W Broadway Street

On the next several pages (19 – 39), each intersection includes the following background and analysis results in tabular format:

- 2050 AM and PM peak hour traffic volumes
- MUTCD signal warrants #1, #2 and #3
- Left-turn lane and right-turn lane warrants
- Pedestrian risk score (Scores range between 3 – 13, with 13 being the riskiest)
- For each intersection control type:
    - Lane configurations
    - Traffic operations (LOS, delay, v/c ratio, 95th percentile queue in feet)
    - Safety assessment (crash modification factors and conflict points)
- Recommedation for intersection control type

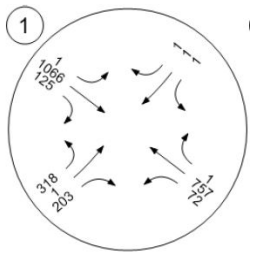
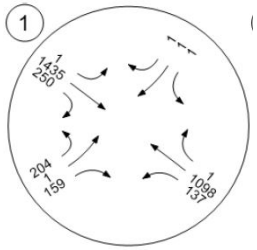
Figure 9 identifies the type of traffic control (e.g. roundabout and signal) anticipated based on year 2050 daily traffic volumes. Kittelson used this planning-level assessment to identify preliminary recommendations for intersection control at the study intersection.

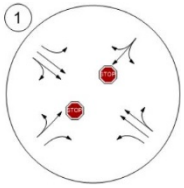
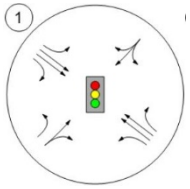
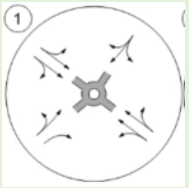
Figure 9 Planning Level Roundabout Capacity and Signal Warrant Thresholds



Note: Shaded areas correspond to volume thresholds for roundabout control
Source: Manual on Uniform Traffic Control Devices (MUTCD)
NCHRP Report 765 and NCHRP Report 825
Missoula MPO Travel Demand Model

#1 GEORGE ELMER DRIVE & WEST BROADWAY STREET

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
N 		#1, #2, #3		**MULTI-LANE ROUNDABOUT**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		Yes	Yes	
		PEDESTRIAN RISK SCORE		
		13[3]		

TWO WAY STOP CONTROL							SIGNAL							ROUNDABOUT							
NBL[4]	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
1,303 / 746	1,030 / 746	78 / 98		0 / 0	0 / 0	0 / 0	477 / 301	-/-	214 / 194		0 / 0	504 / 658	101 / 186	202 / 134	-/-	62 / 64		-/-	72 / 161	90 / 232
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
5 / 21	5 / 21	5 / 21		13 / 56	0 / 0	0 / 0	2 / 2	2 / 2	2 / 2		43 / 85	305 / 368	0 / 0	0 / 0	0 / 0	0 / 0		64 / 89	82 / 117	-/-

LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)[5]	V/C
F / F	>50 / >50	>1 (NBTL)/ >1 (NBL)	C / C	34 / 28	0.71 (NBL) / 0.75 (NBL)	B / C	14 / 15	0.85 (NBL) / 0.8 (EBR)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY[6] (CRF)		
3 / 3 / 3 (9) ; N/A	3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)	2 / 4 / 3 (9) ; ↓ total crashes (5-12%), ↓ crash severity (68%)

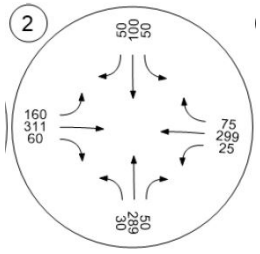
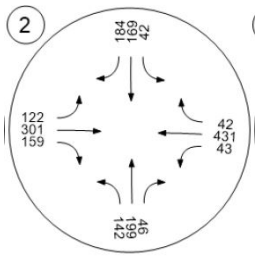
[3] Possible Pedestrian Risk Scores range between 3 – 13, with 13 being the riskiest.

[4] Queue length for approach (feet).

[5] Intersection delay is reported for roundabouts.

[6] Compared to two way stop control; color variation of arrows refers to level of change between intersection control types (↓ , ↓ , ↓)

#2 GEORGE ELMER DRIVE & ENGLAND BOULEVARD

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
N 		#3 LEFT-TURN LANE WARRANTED ON MAJOR STREET: Yes RIGHT-TURN LANE WARRANTED ON MAJOR STREET: No PEDESTRIAN RISK SCORE: 7	**SINGLE-LANE ROUNDABOUT**

TWO WAY STOP CONTROL

NBL	NBT	NBR		EBL	EBT	EBR
58 / 547	719 / 465	719 / 465	2	0 / 0	0 / 0	1 / 0
SBL	SBT	SBR		WBL	WBT	WBR
225 / 198	133 / 674	13 / 674		0 / 56	0 / 0	0 / 0

LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	>1 (NBTR)/ >1(NBTR)

ALL WAY STOP CONTROL

NBL	NBT	NBR		EBL	EBT	EBR
6 / 50	213 / 121	213 / 121	2	51 / 38	258 / 502	258 / 502
SBL	SBT	SBR		WBL	WBT	WBR
12 / 10	48 / 258	48 / 258		5 / 10	260 / 559	260 / 559

LOS	DELAY (SEC.)	V/C
E / F	41 / >50	0.92 (WBT)/ >1 (WBT)

SIGNAL

NBL	NBT	NBR		EBL	EBT	EBR
27 / 165	310 / 188	310 / 188	2	123 / 124	199 / 306	199 / 306
SBL	SBT	SBR		WBL	WBT	WBR
56 / 36	124 / 282	124 / 282		15 / 38	200 / 310	200 / 310

LOS	DELAY (SEC.)[2]	V/C
C / C	21 / 24	0.52 (SBL) / 0.6 (NBL)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)

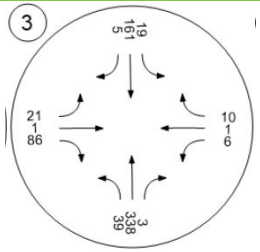
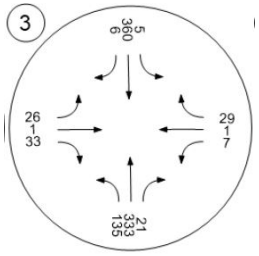
TWO WAY STOP CONTROL	ALL WAY STOP CONTROL	SIGNAL
8 / 8 / 16 (32) ; N/A	8 / 8 / 16 (32) ; ↓ total crashes (68.1%), ↓ crash severity(77%)	8 / 8 / 16 (32) ; ↓ total crashes (44%), ↓ crash severity (21.8%)

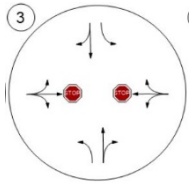
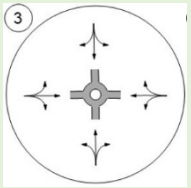
ROUNDABOUT

NBL	NBT	NBR		EBL	EBT	EBR
85 / 78	85 / 78	85 / 78	2	83 / 114	83 / 114	83 / 114
SBL	SBT	SBR		WBL	WBT	WBR
23 / 115	23 / 115	23 / 115		89 / 147	89 / 147	89 / 147

LOS	DELAY (SEC.)	V/C	CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)
B / B	11 / 14	0.56 (WBLTR) / 0.7 (WBLTR)	4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)

#3 GEORGE ELMER DRIVE & CATTLE DRIVE

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
N 		No		**SINGLE-LANE ROUNDABOUT[7]**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		Yes	No	
		PEDESTRIAN RISK SCORE		
		6		

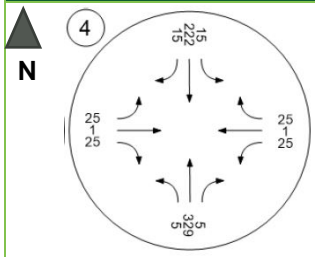
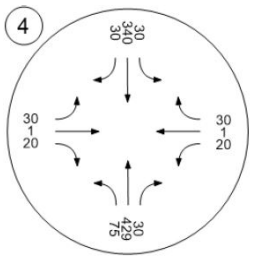
TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
2 / 10	0 / 0	0 / 0		15 / 21	15 / 21	15 / 21	35 / 51	35 / 51	35 / 51		8 / 5	8 / 5	8/ 5
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
1 / 0	0 / 0	0 / 0		3 / 8	3 / 8	3 / 8	14 / 40	14 / 40	14 / 40		1 / 4	1 / 4	1 / 4

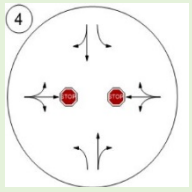
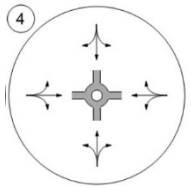
LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)	V/C
C / D	17 / 30	0.02 (WBL) / 0.17 (EBL)	A / A	5 / 6	0.32 (NBLTR) / 0.41 (NBLTR)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	
8 / 8 / 16 (32) ; N/A	4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)

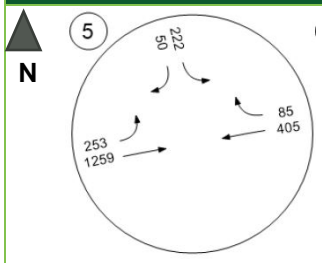
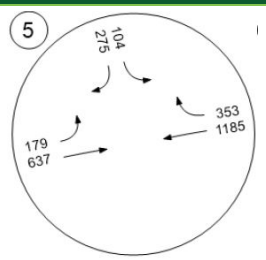
[7] A single-lane roundabout has been planned at this intersection as part of a past development approval.

#4 GEORGE ELMER DRIVE & HERON'S LANDING

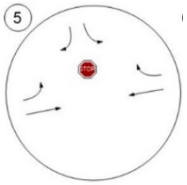
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		TWO WAY STOP CONTROL WITH NORTHBOUND & SOUTHBOUND LEFT-TURN LANES
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		Yes	No	
		PEDESTRIAN RISK SCORE		
		6		

TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
0 / 5	0 / 0	0 / 0		9 / 23	9 / 23	9 / 23	30 / 63	30 / 63	30 / 63		4 / 5	4 / 5	4 / 5
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
1 / 2	0 / 0	0 / 0		10 / 17	10 / 17	10 / 17	20 / 41	20 / 41	20 / 41		4 / 6	4 / 6	4 / 6
LOS		DELAY (SEC.)		V/C			LOS		DELAY (SEC.)		V/C			
C / D		16 / 32		0.08 (WBL) / 0.21 (EBL)			A / A		4 / 6		0.29 (NBLTR) / 0.46 (NBLTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)							

#5 GEORGE ELMER DRIVE & MULLAN ROAD

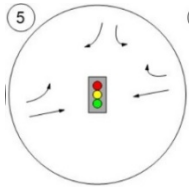
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		#1, #2, #3 LEFT-TURN LANE WARRANTED ON MAJOR STREET: Yes RIGHT-TURN LANE WARRANTED ON MAJOR STREET: Yes PEDESTRIAN RISK SCORE: 12	**INTERIM:** SINGLE-LANE ROUNDABOUT WITH EASTBOUND LEFT-TURN LANE AND WESTBOUND RIGHT-TURN LANE **ULTIMATE:** MULTI-LANE ROUNDABOUT WITH TWO EASTBOUND AND WESTBOUND THROUGH LANES

TWO WAY STOP CONTROL

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		24 / 41	0 / 0	-/-
SBL	SBT	SBR		WBL	WBT	WBR
741 / 352	-/-	7 / 460		- / -	0 / 0	0 / 0

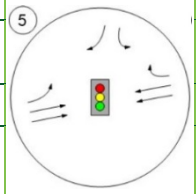
LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	>1 (SBL)/ >1(SBL)

INTERIM SIGNAL

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		786 / 410	135 / 16	-/-
SBL	SBT	SBR		WBL	WBT	WBR
837 / 365	-/-	0 / 0		-/-	41 / 346	6 / 37

LOS	DELAY (SEC.)	V/C
F / D	>80 / 43	0.91 (SBL) / 0.84 (SBL)

ULTIMATE SIGNAL

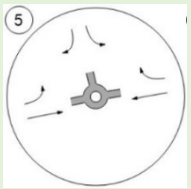
NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		92 / 106	276 / 144	-/-
SBL	SBT	SBR		WBL	WBT	WBR
314 / 128	-/-	64 / 406		-/-	83 / 370	83 / 214

LOS	DELAY (SEC.)[2]	V/C
B / C	14 / 20	0.64 (SBL) / 0.66 (SBR)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)

TWO WAY STOP CONTROL	INTERIM SIGNAL	ULTIMATE SIGNAL
3 / 3 / 3 (9) ; N/A	3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)	3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)

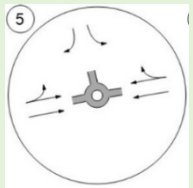
INTERIM ROUNDABOUT (ACCEPTABLE LIFESPAN OF 15-21 YEARS)

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		5 / 13	1233 / 88	-/-
SBL	SBT	SBR		WBL	WBT	WBR
27 / 29	-/-	4 / 115		-/-	54 / 785	7 / 37

LOS	DELAY (SEC.)	V/C
F / E	>50 / 40	>1 (EBT) / >1 (WBT)

CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	2 / 4 / 3 (9) ; ↓ total crashes (44%), ↓ crash severity (78%)

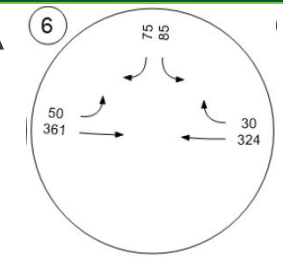
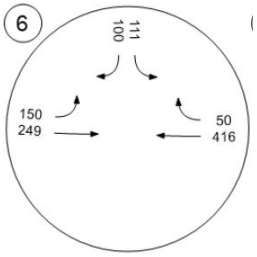
ULTIMATE ROUNDABOUT

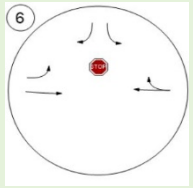
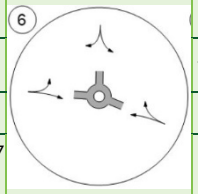
NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		160 / 37	194 / 43	-/-
SBL	SBT	SBR		WBL	WBT	WBR
28 / 28	-/-	5 / 113		-/-	28 / 141	33 / 200

LOS	DELAY (SEC.)	V/C
B / B	12 / 13	0.76 (EBT) / 0.77 (WBR)

CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	2 / 4 / 3 (9) ; ↓ total crashes (5-12%), ↓ crash severity (68%)

#6 DOUGHERTY DRIVE & ENGLAND BOULEVARD

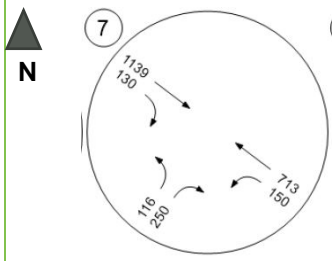
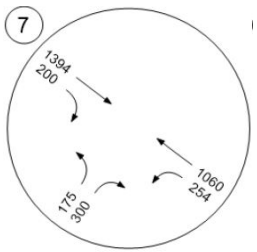
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**INTERIM:** TWO WAY STOP CONTROL WITH EASTBOUND LEFT-TURN LANE **ULTIMATE:** SINGLE-LANE ROUNDABOUT
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		Yes	No	
		PEDESTRIAN RISK SCORE		
		7		

TWO WAY STOP CONTROL (ACCEPTABLE LIFESPAN OF 26-30 YEARS)							ROUNDABOUT						
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
- / -	- / -	- / -		3 / 13	0 / 0	- / -	-/-	-/-	-/-		45 / 42	45 / 42	-/-
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
30 / 82	- / -	10 / 16		- / -	0 / 0	0 / 0	17 / 27	-/-	17 / 27		-/-	32 / 57	32 / 57

LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)	V/C
C / E	21 / 45	0.30 (SBL)/ 0.59 (SBL)	A / A	6 / 7	0.38 (EBLT) / 0.44 (WBTR)

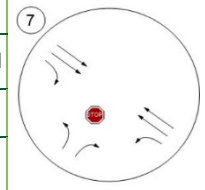
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	
3 / 3 / 3 (9) ; N/A	2 / 2/ 0 (4) ; ↓ total crashes (44%), ↓ crash severity (78%)

#7 DOUGHERTY DRIVE & WEST BROADWAY STREET

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		Yes LEFT-TURN LANE WARRANTED ON MAJOR STREET: Yes RIGHT-TURN LANE WARRANTED ON MAJOR STREET: Yes PEDESTRIAN RISK SCORE: 13	RIGHT-IN/RIGHT-OUT/LEFT-IN OR MULTI-LANE ROUNDABOUT

TWO WAY STOP CONTROL

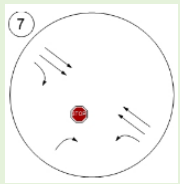
NBL	NBT	NBR	EBL	EBT	EBR
154 / 540	- /-	105 / 241	-/-	0 / 0	0 / 0
SBL	SBT	SBR	WBL	WBT	WBR
-/-	-/-	-/-	35 / 154	0 / 0	-/-



LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	0.92 (NBL)/ >1(NBL)

RIGHT-IN, RIGHT-OUT, LEFT-IN

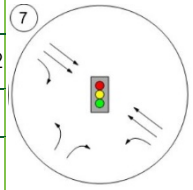
NBL	NBT	NBR	EBL	EBT	EBR
-/-	-/-	258 / 693	-/-	0 / 0	0 / 0
SBL	SBT	SBR	WBL	WBT	WBR
-/-	-/-	-/-	35 / 154	0 / 0	-/-



LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	0.92 (NBR) / >1(NBR)

SIGNAL

NBL	NBT	NBR	EBL	EBT	EBR
147/ 212	-/-	337 / 392	-/-	379 / 637	69 / 145
SBL	SBT	SBR	WBL	WBT	WBR
-/-	-/-	-/-	67 / 204	153 / 280	-/-



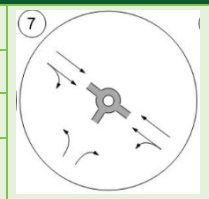
LOS	DELAY (SEC.)[2]	V/C
B / C	19 / 29	0.68 (NBR) / 0.84 (WBL)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)

TWO WAY STOP CONTROL	RIGHT-IN, RIGHT-OUT, LEFT-IN	SIGNAL
3 / 3 / 3 (9) ; N/A	2 /2/1(5); ↓ total crashes (5-45%), ↓ crash severity (5%)	3 / 3 / 3 (9) ; ↓ total crashes (5%) ↓ crash severity (21.8%)

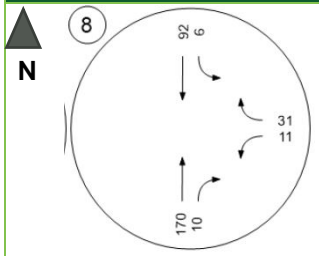
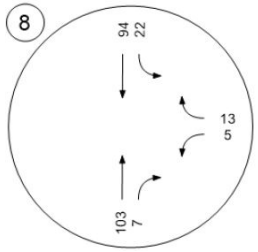
ROUNDABOUT

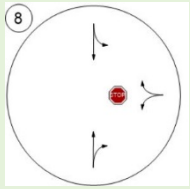
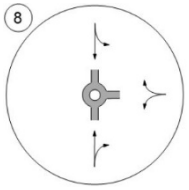
NBL	NBT	NBR	EBL	EBT	EBR
34 / 90	-/-	98 / 211	-/-	94 / 188	123 / 277
SBL	SBT	SBR	WBL	WBT	WBR
-/-	-/--	-/-	47 / 95	60 / 125	-/-



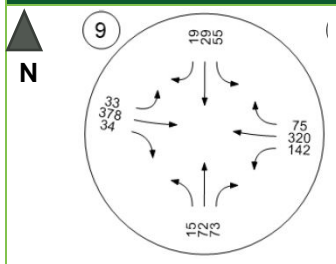
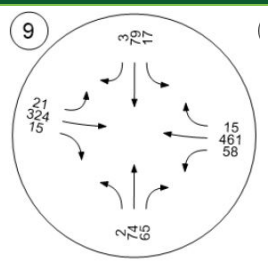
LOS	DELAY (SEC.)	V/C	CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)
B / C	11 / 20	0.64 (EBR) / 0.87 (NBR)	2 / 4 / 2 (8) ; ↓ total crashes (5-12%), ↓ crash severity (68%)

#8 FLYNN LANE & CAMDEN STREET

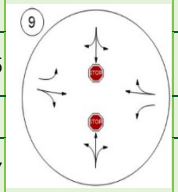
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**RETAIN TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		No	No	
		PEDESTRIAN RISK SCORE		
		7		

TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	
-/-	0 / 0	0 / 0		-/-	-/-	-/-	-/-	12 / 7	12 / 7		-/-	-/-	-/-	
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	
0 / 1	0 / 1	-/-		4 / 1	-/-	4 / 1	6 / 7	6 / 7	-/-		3 / 1	-/-	3 / 1	
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**			
B / B		10 / 10		0.02 (WBL)/ 0.01 (WBL)			A / A		3 / 3		0.15 (NBTR) / 0.09 (NBTR, SBTL)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
3 / 3 / 3 (9) ; N/A							3 / 3 / 0 (6) ; ↓ total crashes (44%), ↓ crash severity (78%)							

#9 FLYNN LANE & ENGLAND BOULEVARD

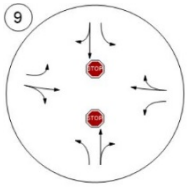
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		#3 LEFT-TURN LANE WARRANTED ON MAJOR STREET: Yes RIGHT-TURN LANE WARRANTED ON MAJOR STREET: No PEDESTRIAN RISK SCORE: 6	**INTERIM:** TWO WAY STOP CONTROL WITH EASTBOUND AND WESTBOUND LEFT-TURN LANES **ULTIMATE:** ALL WAY STOP CONTROL OR SINGLE-LANE ROUNDABOUT

INTERIM TWO WAY STOP CONTROL (ACCEPTABLE LIFESPAN OF 14 – 22 YEARS)

NBL	NBT	NBR		EBL	EBT	EBR
146 / 65	146 / 65	146 / 65		2 / 1	0 / 0	0 / 0
SBL	SBT	SBR		WBL	WBT	WBR
191 / 77	191 / 77	191 / 77		12 / 4	0 / 0	0 / 0

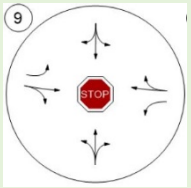
LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	0.94 (SBL)/ 0.16 (SBL)

TWO WAY STOP CONTROL

NBL	NBT	NBR		EBL	EBT	EBR
12 / 1	106 / 62	106 / 62		2 / 1	0 / 0	0 / 0
SBL	SBT	SBR		WBL	WBT	WBR
114 / 13	23 / 47	23 / 47		12 / 4	0 / 0	0 / 0

LOS	DELAY (SEC.)	V/C
F / E	>50 / 43	0.95 (SBL) / 0.16 (SBL)

ALL WAY STOP CONTROL

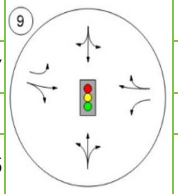
NBL	NBT	NBR		EBL	EBT	EBR
35 / 28	35 / 28	35 / 28		5 / 3	200 / 113	200 / 113
SBL	SBT	SBR		WBL	WBT	WBR
21 / 19	21 / 19	21 / 19		30 / 9	163 / 244	163 / 244

LOS	DELAY (SEC.)[2]	V/C
C / C	22 / 24	0.81 (EBT) / 0.86 (WBT)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)

INTERIM TWO WAY STOP CONTROL	TWO WAY STOP CONTROL	ALL WAY STOP CONTROL
8 / 8 / 16 (32) ; N/A	8 / 8 / 16 (32) ; N/A	8/8 / 16 (32) ; ↓ total crashes (68.1%), ↓ crash severity (77%)

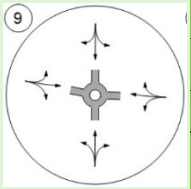
SIGNAL

NBL	NBT	NBR		EBL	EBT	EBR
177/157	177/157	177/157		7/4	201/141	201/141
SBL	SBT	SBR		WBL	WBT	WBR
113/105	113/105	113/105		29/10	177/203	177/203

LOS	DELAY (SEC.)	V/C
B / B	14 / 20	0.48 (NBR) /0.46 (NBT)

CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	8 / 8 / 16 (32) ; ↓ total crashes (44%), ↓ crash severity (21.8%)

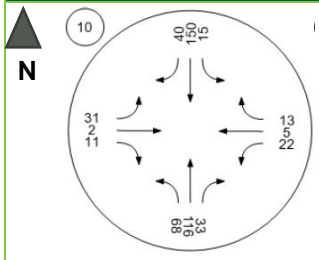
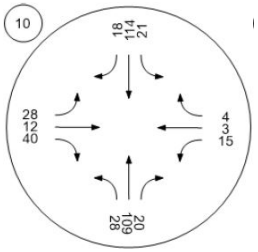
ROUNDABOUT

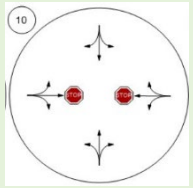
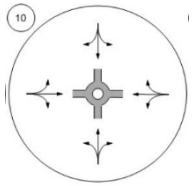
NBL	NBT	NBR		EBL	EBT	EBR
21/15	21/15	21/15		67 / 38	67 / 38	67 / 38
SBL	SBT	SBR		WBL	WBT	WBR
12/12	12/12	12/12		72 / 66	72 / 66	72 / 66

LOS	DELAY (SEC.)	V/C
A / A	8 / 7	0.50 (WBT) / 0.48 (WBT)

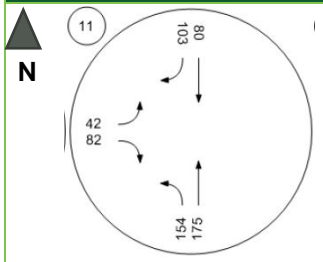
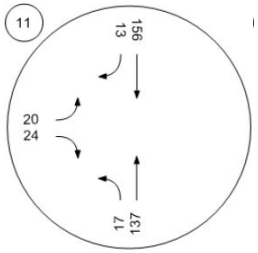
CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)

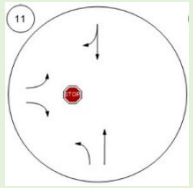
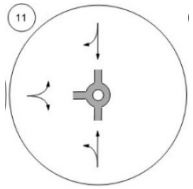
#10 FLYNN LANE & CHELSEA DRIVE

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**RETAIN TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		No	No	
		PEDESTRIAN RISK SCORE		
		3		

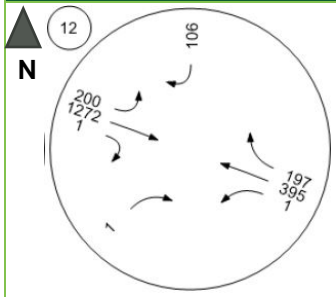
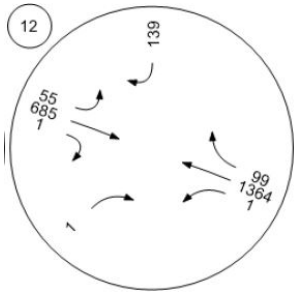
TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
4 / 1	4 / 1	4 / 1		8 / 10	8 / 10	8 / 10	17 / 11	17 / 11	17 / 11		3 / 6	3 / 6	3 / 6
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
0 / 1	0 / 1	0 / 1		6 / 3	6 / 3	6 / 3	18 / 11	18 / 11	18 / 11		3 / 1	3 / 1	3 / 1
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**			
C / B		3 / 3		0.01 (EBT)/ 0.02 (EBT)			A / A		4 / 3		0.20 (SBLTR) / 0.14 (NBLTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)							

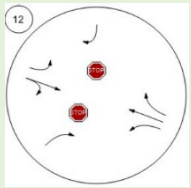
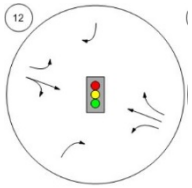
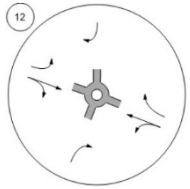
#11 FLYNN LANE & SIREN'S DRIVE

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**RETAIN TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		No	No	
		PEDESTRIAN RISK SCORE		
		4		

TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	
10 / 1	0 / 0	- /-		10 / 2	-/-	8 / 2	29 / 11	29 / 11	-/-		9 / 3	-/-	9 / 3	
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	
-/-	0 / 0	0 / 0		-/-	-/-	-/-	-/-	17 / 12	17 / 12		-/-	-/-	-/-	
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**			
C / B		16 / 11		0.12 (EBL)/ 0.04 (EBL)			A / A		4 / 3		0.20 (NBLT) / 0.14 (SBTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
3 / 3 / 3 (9); N/A							3 / 3 / 0 (6) ; ↓ total crashes (44%), ↓ crash severity (78%)							

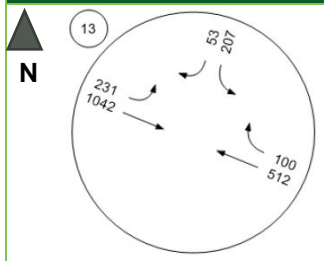
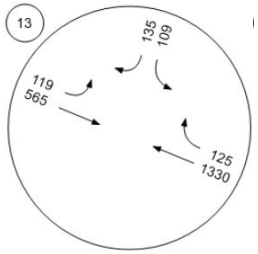
#12 FLYNN LANE & MULLAN ROAD[8]

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		#1, #2, #3 LEFT-TURN LANE WARRANTED ON MAJOR STREET: Yes RIGHT-TURN LANE WARRANTED ON MAJOR STREET: Yes PEDESTRIAN RISK SCORE: 9	**STOP-CONTROLLED RIGHT-IN, RIGHT-OUT, LEFT-IN**

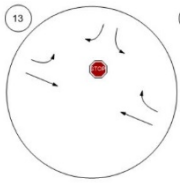
TWO WAY STOP CONTROL (ACCEPTABLE LIFESPAN OF 18-30 YEARS)							SIGNAL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	0/0		22 / 12	0 / 0	0 / 0	-/-	-/-	1 / 1		6 / 4	146 / 18	146 / 18	-/-	-/-	0 / 0		13 / 3	667 / 83	667 / 83
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
-/-	-/-	16/18 4		0 / 0	0 / 0	0 / 0	-/-	-/-	175 / 219		0 / 0	86 / 1,513	37 / 21	-/-	-/-	11 / 70		48 / 906	17 / 6	17 / 6
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)[2]**		**V/C**		
D / F		25 / >50		0.01 (NBR)/ 0.98 (SBR)			A / D		9 / 46		0.89 (SBR) / >1 (WBT)			D / F		34 / >50		>1 (EBTR) / >1 (WBTL)		
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)																					
4 / 4 / 2 (10) ; ↓ total crashes (5-45%), ↓ crash severity (5%)							4 / 4 / 2 (10) ; ↓ total crashes (5%), ↓ crash severity (21.8%)							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)							

[8] With the extension of Mary Jane Boulevard to Mullan Road, the Flynn Lane and Mullan Road intersection is expected to be restricted to a right-in / right-out / left-in configuration to improve safety performance at the intersection.

#13 MARY JANE BOULEVARD & MULLAN ROAD

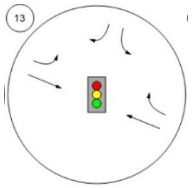
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		#1, #2, #3 **LEFT-TURN LANE WARRANTED ON MAJOR STREET**: Yes **RIGHT-TURN LANE WARRANTED ON MAJOR STREET**: Yes **PEDESTRIAN RISK SCORE**: 13	**INTERIM: SINGLE-LANE ROUNDABOUT WITH EASTBOUND LEFT-TURN LANE AND WESTBOUND RIGHT-TURN LANE** **ULTIMATE: MULTI-LANE ROUNDABOUT WITH TWO EASTBOUND AND WESTBOUND THROUGH LANES**

TWO WAY STOP CONTROL

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		27 / 32	0 / 0	-/-
SBL	SBT	SBR		WBL	WBT	WBR
671 / 356	-/-	9 / 164		-/-	0 / 0	0 / 0

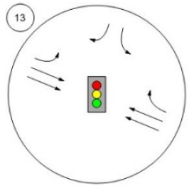
LOS	DELAY (SEC.)	V/C
F / F	>50 / >50	>1 (SBL)/ >1(SBL)

INTERIM SIGNAL

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		671 / 130	56 / 13	-/-
SBL	SBT	SBR		WBL	WBT	WBR
779 / 384	-/-	0 / 0		-/-	58 / 624	8 / 10

LOS	DELAY (SEC.)	V/C
F / D	>80 / 43	0.76 (SBL) / 0.93 (SBL)

ULTIMATE SIGNAL

NBL	NBT	NBR		EBL	EBT	EBR
-/ -	-/-	-/-		78 / 35	204 / 67	-/-
SBL	SBT	SBR		WBL	WBT	WBR
293 / 158	-/-	70 / 210		-/-	140 / 355	50 / 49

LOS	DELAY (SEC.)[2]	V/C
B / B	13 / 14	0.5 (SBL) / 0.6 (SBR)

CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)

TWO WAY STOP CONTROL	INTERIM SIGNAL	ULTIMATE SIGNAL
3 / 3 / 3 (9) ; N/A	3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)	3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)

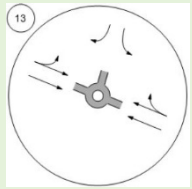
INTERIM ROUNDABOUT (ACCEPTABLE LIFESPAN OF 18-23 YEARS)

NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/--	-/-		21 / 8	618 / 70	-/-
SBL	SBT	SBR		WBL	WBT	WBR
29 / 34	-/-	5 / 47		-/-	80 / 998	8 / 9

LOS	DELAY (SEC.)	V/C
D / F	34 / 60	>1 (EBT) / >1(WBT)

CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)

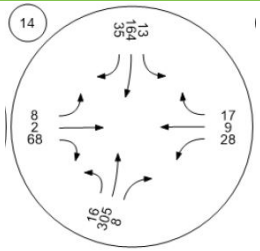
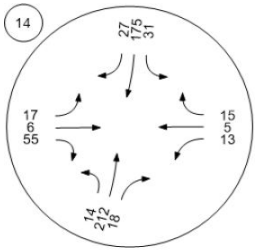
ULTIMATE ROUNDABOUT

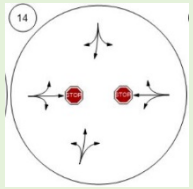
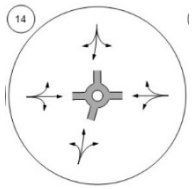
NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	-/-		95 / 28	123 / 33	-/-
SBL	SBT	SBR		WBL	WBT	WBR
30 / 39	-/-	6 / 44		-/-	30 / 114	36 / 153

LOS	DELAY (SEC.)	V/C
A / B	9 / 10	0.64 (EBT) / 0.7 (WBR)

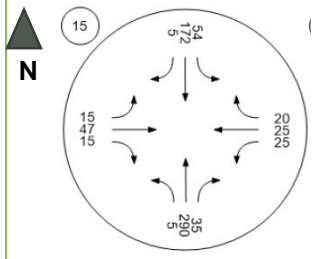
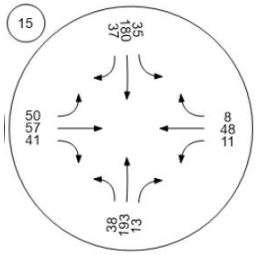
CONFLICT POINTS ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)	2 / 4 / 3 (9) ; ↓ total crashes (5-12%), ↓ crash severity (68%)

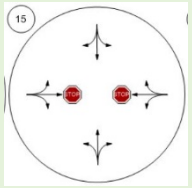
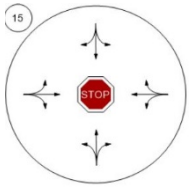
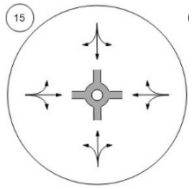
#14 MARY JANE BOULEVARD & O'LEARY STREET

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
N 		No		**TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		No	No	
		PEDESTRIAN RISK SCORE		
		5		

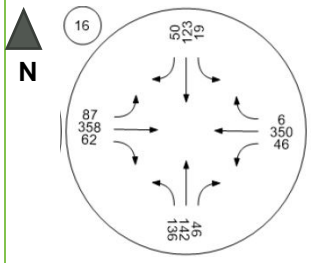
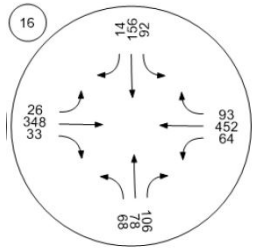
TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
0 / 0	0 / 0	0 / 0		9 / 11	9 / 11	9 / 11	28 / 19	28 / 19	28 / 19		6 / 6	6 / 6	6 / 6
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
0 / 1	0 / 1	0 / 1		11 / 5	11 / 5	11 / 5	16 / 17	16 / 17	16 / 17		4 / 2	4 / 2	4 / 2
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**		
C / B		16 / 15		0.09 (WBL)/ 0.04 (WBL)			A / A		4 / 4		0.27 (NBLTR) / 0.14 (NBLTR)		
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)													
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)						

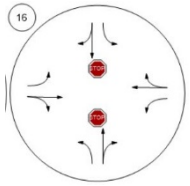
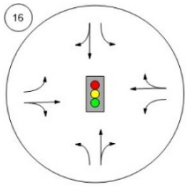
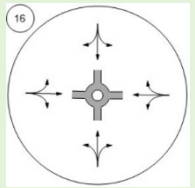
#15 MARY JANE BOULEVARD & MELROSE PLACE

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		No	No	
		PEDESTRIAN RISK SCORE		
		5		

TWO WAY STOP CONTROL						ALL WAY STOP CONTROL						ROUNDABOUT					
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
0 / 2	0 / 2	0 / 2		19 / 42	19 / 42	19 / 42	61 / 41	61 / 41	61 / 41		10 / 23	10 / 23	10 / 23	32 / 22	32 / 22	32 / 22		6 / 13	6 / 13	6 / 13
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
3 / 2	3 / 2	3 / 2		17 / 16	17 / 16	17 / 16	37 / 43	37 / 43	37 / 43		9 / 9	9 / 9	9 / 9	18 / 21	18 / 21	18 / 21		6 / 5	6 / 5	6 / 5
LOS		**DELAY (SEC.)**	**V/C**				**LOS**		**DELAY (SEC.)**	**V/C**				**LOS**		**DELAY (SEC.)[2]**	**V/C**			
C / C		19 / 20	0.09 (WBL)/ 0.16 (EBL)				B / B		10 / 10	0.46 (NBT) / 0.37 (NBT)				A / A		5 / 4	0.3 (NBLTR) / 0.23 (NBLTR, SBLTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)																				
8 / 8 / 16 (32) ; N/A							8 / 8 / 16 (32) ; ↓ total crashes (68.1%), ↓ crash severity (77%)							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)						

#16 MARY JANE BOULEVARD & ENGLAND BOULEVARD

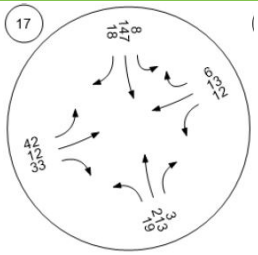
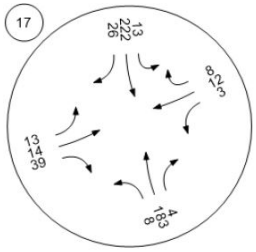
2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		#3		**SINGLE-LANE ROUNDABOUT**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		Yes	No	
		PEDESTRIAN RISK SCORE		
		6		

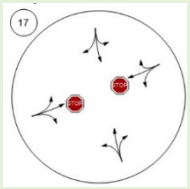
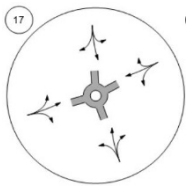
TWO WAY STOP CONTROL						SIGNAL						ROUNDABOUT					
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
385 / 232	189 / 111	189 / 111		6 / 2	0 / 0	0 / 0	146 / 69	167 / 167	167 / 167		54 / 17	214 / 182	214 / 182	59 / 38	59 / 38	59 / 38	79 / 9	79 / 9	79 / 9
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR	WBL	WBT	WBR
44 / 201	159 / 199	159 / 199		3 / 4	0 / 0	0 / 0	18 / 99	152 / 151	152 / 151		30 / 37	172 / 280	172 / 280	29 / 10	29 / 10	29 / 10	70 / 10	70 / 10	70 / 10

LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)	V/C	LOS	DELAY (SEC.)[2]	V/C
F / F	>50 / >50	>1 (NBL)/ >1(NBL)	B / B	18 / 18	0.4 (NBL) / 0.5 (SBL)	B / B	10 / 10	0.53 (EBLTR) / 0.59 (WBLTR)

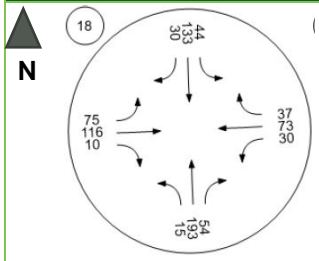
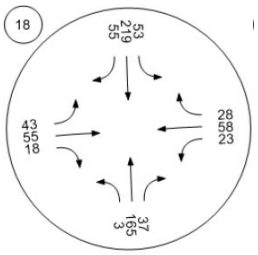
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)		
8 / 8 / 16 (32) ; N/A	8 / 8 / 16 (32) ; ↓ total crashes (44%), ↓ crash severity (21.8%)	4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)

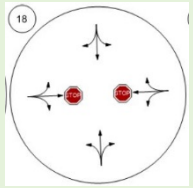
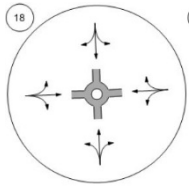
#17 MARY JANE BOULEVARD & CAMDEN STREET

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
N 		No		TWO WAY STOP CONTROL
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		No	No	
		PEDESTRIAN RISK SCORE		
		5		

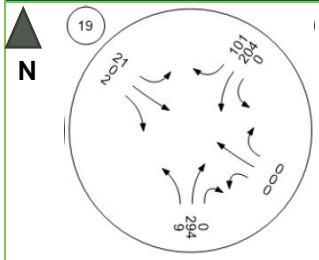
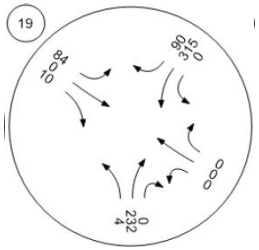
TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
1 / 0	1 / 0	1 / 0		14 / 9	14 / 9	14 / 9	19 / 14	19 / 14	19 / 14		6 / 5	6 / 5	6 / 5
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
0 / 0	0 / 0	0 / 0		5 / 3	5 / 3	5 / 3	12 / 20	12 / 20	12 / 20		2 / 1	2 / 1	2 / 1
LOS			DELAY (SEC.)	V/C			LOS			DELAY (SEC.)	V/C			
B / B			13 / 13	0.10 (EBL) / 0.01 (WBL)			A / A			4 / 4	0.20 (NBLTR) / 0.21 (SBLTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)							

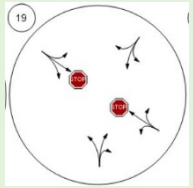
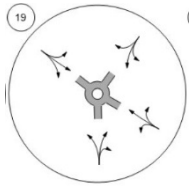
#18 MARY JANE BOULEVARD & FLYNN LANE

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		**TWO WAY STOP CONTROL**
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	**RIGHT-TURN LANE WARRANTED ON MAJOR STREET**	
		No	No	
		PEDESTRIAN RISK SCORE		
		6		

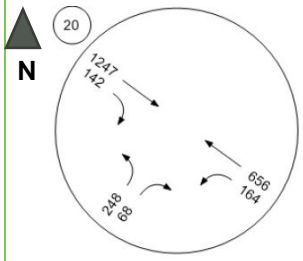
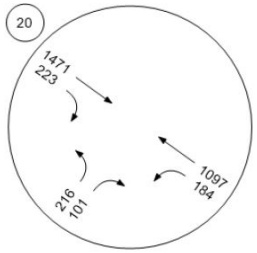
TWO WAY STOP CONTROL							ROUNDABOUT						
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
0 / 0	0 / 0	0 / 0		84 / 35	84 / 35	84 / 35	28 / 18	28 / 18	28 / 18		19 / 11	19 / 11	19 / 11
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
2 / 3	2 / 3	2 / 3		38 / 27	38 / 27	38 / 27	17 / 30	17 / 30	17 / 30		13 / 9	13 / 9	13 / 9
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**		
D / C		27 / 20		0.25 (EBL)/ 0.15 (EBL)			A / A		5 / 5		0.28 (NBLTR) / 0.29 (SBLTR)		
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)													
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)						

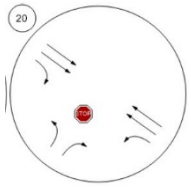
#19 MARY JANE BOULEVARD & VETERAN'S WAY

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		No		TWO WAY STOP CONTROL
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		No	No	
		PEDESTRIAN RISK SCORE		
		5		

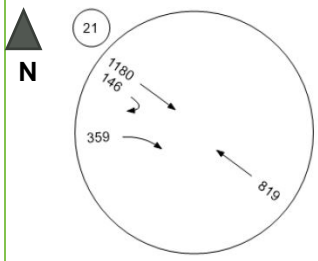
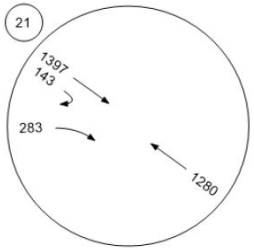
TWO WAY STOP CONTROL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	
0 / 0	0 / 0	0 / 0		5 / 27	5 / 27	5 / 27	25 / 20	25 / 20	25 / 20		2 / 10	2 / 10	2 / 10	
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	
0 / 0	0 / 0	0 / 0		0 / 0	0 / 0	0 / 0	24 / 37	24 / 37	24 / 37		0 / 0	0 / 0	0 / 0	
LOS			DELAY (SEC.)	V/C			LOS			DELAY (SEC.)	V/C			
C / C			15 / 18	0.06 (EBL)/ 0.26 (EBL)			A / A			4 / 5	0.25 (NBLTR, SBLTR) / 0.33 (SBLTR)			
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)														
8 / 8 / 16 (32) ; N/A							4 / 4 / 0 (8) ; ↓ total crashes (44%), ↓ crash severity (78%)							

#20 MARY JANE BOULEVARD & WEST BROADWAY STREET

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)		RECOMMENDATION
		#1, #2, #3		MULTI-LANE ROUNDABOUT
		LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET	
		Yes	Yes	
		PEDESTRIAN RISK SCORE		
		13		

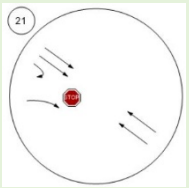
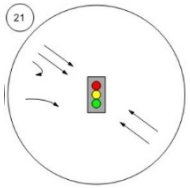
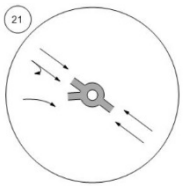
TWO WAY STOP CONTROL							SIGNAL							ROUNDABOUT							
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
586 / 622	-/-	17 / 36		-/-	0 / 0	0 / 0	335 / 300	-/-	86 /137		-/-	405 / 497	71 / 116	163 / 161	-/-	16 / 33		-/-	120 / 186	161 / 275
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
-/-	-/-	-/-		49 / 97	0 / 0	-/-	-/-	-/-	-/-		72 / 84	122 / 207	-/-	-/-	-/-	-/-		54 / 99	69 / 131	-/-
LOS			DELAY (SEC.)	V/C			LOS			DELAY (SEC.)	V/C			LOS			DELAY (SEC.)[2]	V/C		
F / F			>50 / >50	>1 (NBL)/ >1(NBL)			B / B			18 / 18	0.71 (NBL) / 0.75 (SBL)			C / C			15 / 18	0.79 (NBL) / 0.85 (EBTR)		
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)																					
3 / 3 / 3 (9) ; N/A							3 / 3 / 3 (9) ; ↓ total crashes (5%), ↓ crash severity (21.8%)							2 / 4 / 3 (9) ; ↓ total crashes (5-12%), ↓ crash severity (68%)							

#21 FLYNN LANE & WEST BROADWAY STREET[9]

2050 TRAFFIC VOLUMES (WEEKDAY AM PEAK HOUR)	2050 TRAFFIC VOLUMES (WEEKDAY PM PEAK HOUR)	SIGNAL WARRANTED (MUTCD)	RECOMMENDATION
		#1, #2, #3	**UNSIGNALIZED RIGHT-IN, RIGHT-OUT**

LEFT-TURN LANE WARRANTED ON MAJOR STREET	RIGHT-TURN LANE WARRANTED ON MAJOR STREET
Yes	Yes

PEDESTRIAN RISK SCORE
13

TWO WAY STOP CONTROL							SIGNAL							ROUNDABOUT						
NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR	NBL	NBT	NBR		EBL	EBT	EBR
-/-	-/-	262 / 212		-/-	0/0	0/0	-/-	-/-	187 / 154		-/-	157 / 162	25 / 19	-/-	-/-	237 / 43		-/-	76 / 92	97 / 122
SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR	SBL	SBT	SBR		WBL	WBT	WBR
-/-	-/-	-/-		-/-	0/0	-/-	-/-	-/-	-/-		-/-	72 / 135	-/-	-/-	-/-	-/-		37 / 64	45 / 81	-/-
LOS		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)**		**V/C**			**LOS**		**DELAY (SEC.)[2]**		**V/C**		
F / F		>50 / >50		0.94 (NBR)/ 0.88 (NBR)			B / B		11 / 11		0.75 (NBT) / 0.84 (SBT)			B / B		14 / 11		0.89 (NBT) / 0.81 (NBT)		
CONFLICT POINTS [DIVERGING/MERGING/CROSSING (TOTAL)] ; TOTAL CRASHES (CRF), CRASH SEVERITY (CRF)																				
1 / 1 / 0 (2) ; ↓ total crashes (45%), crash severity (N/A)							1 / 1 / 0 (2) ; ↓ total crashes (5%), ↓ crash severity (21.8%)							1 / 1 / 0 (2) ; ↓ total crashes (5-12%), ↓ crash severity (68%)						

[9] With the extension of Mary Jane Boulevard to W Broadway Street, the Flynn Lane and W Broadway Street intersection is expected to be restricted to a right-in / right-out configuration to improve safety performance at the intersection.

RECOMMENDATIONS

Kittelson identified the following recommendations based on year 2050 traffic conditions and evaluation results including in this memorandum. Table 6 delineates the recommended roadway cross-sections. Table 7 summarizes the recommended intersection controls. Figure 10 displays these recommendations on a project area map.

Table 6 Roadway Cross-Section Recommendations

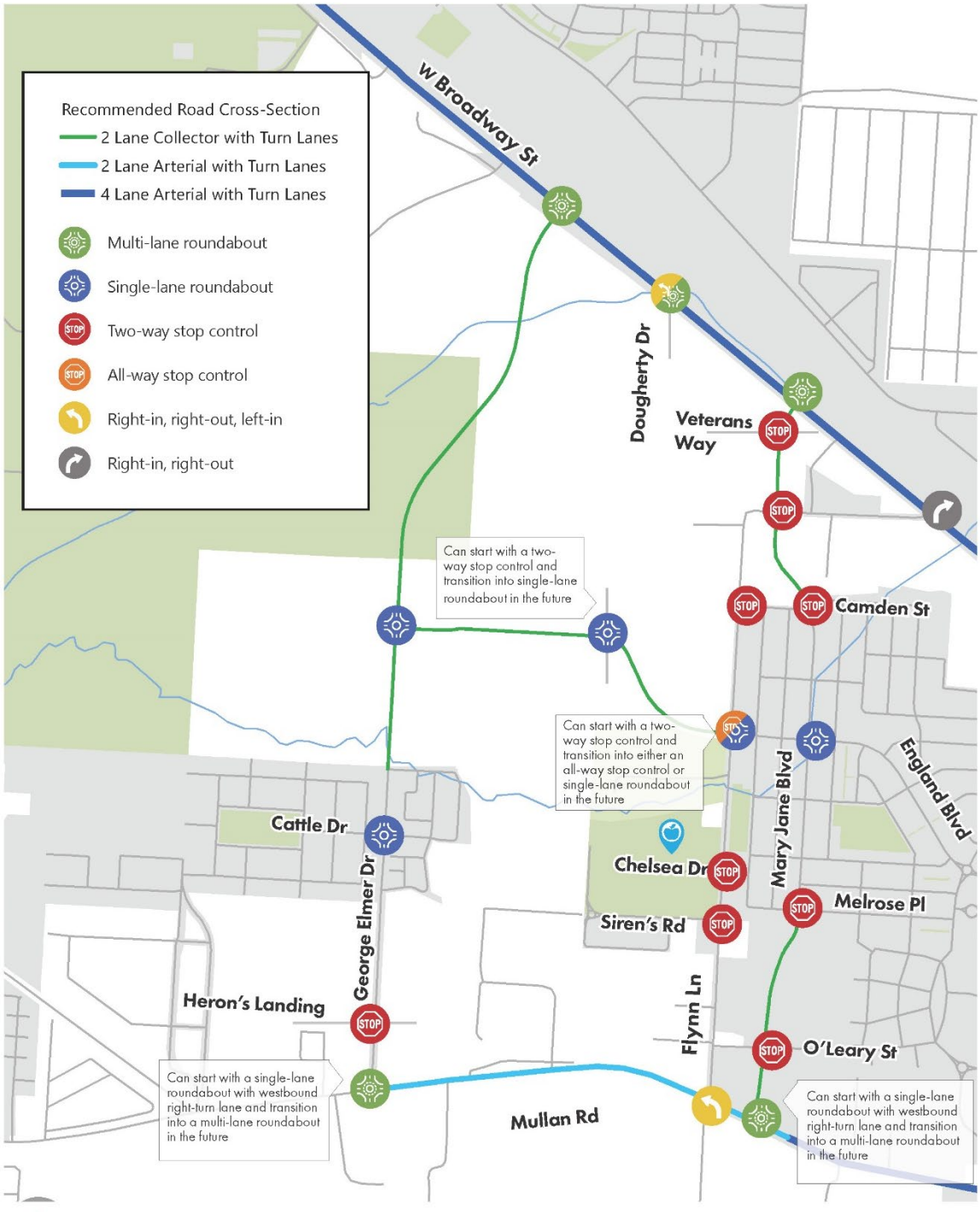
ROADWAY	EXTENTS	FUNCTIONAL CLASSIFICATION & CROSS-SECTION	POSTED SPEED (MPH)
George Elmer Drive	West Broadway Street to England Boulevard	Two Lane Collector with Turn Lanes	30
	England Boulevard to Pius Way	Two Lane Collector with Turn Lanes	30
England Boulevard	George Elmer Drive to Flynn Lane	Two Lane Collector with Turn Lanes	30
Flynn Ln	W Broadway Street to Mullan Rd	Two Lane Local	25
Mary Jane Boulevard	West Broadway Street to Camden Street	Two Lane Collector with Turn Lanes	30
	Melrose Place to Mullan Road	Two Lane Collector with Turn Lanes	30
Mullan Road	George Elmer Drive to Mary Jane Boulevard	Two Lane Arterial with Turn Lanes	45
	Mary Jane Boulevard to Reserve Street	Four Lane Arterial with Turn Lanes	45
West Broadway Street	Aviation Drive to Flynn Lane	Four Lane Arterial with Turn Lanes	55

Table 7 Intersection Control Recommendations

INTERSECTION NUMBER	INTERSECTION	CONTROL RECOMMENDATION
1	George Elmer Drive / W Broadway Street	Multi-lane roundabout
2	George Elmer Drive / England Boulevard	Single-lane roundabout
3	George Elmer Drive / Cattle Drive	Single-lane roundabout
4	George Elmer Drive / Heron's Landing	TWSC[10] with NB & SB left-turn lanes
5	George Elmer Drive / Mullan Rd	Interim: Single-lane roundabout with EB left-turn & WB right-turn lanes *(Lifespan = 15 – 21 years)* Ultimate: Multi-lane Roundabout with two EB and WB through lanes
6	England Boulevard / Dougherty Drive	Interim: TWSC *(Lifespan = 26 – 30 years)* Ultimate: Single-lane roundabout
7	W Broadway Street / Dougherty Drive	Multi-lane roundabout
8	Flynn Ln / Camden Street	Retain TWSC
9	Flynn Ln / England Boulevard	Interim: TWSC *(Lifespan = 14 – 22 years)* Ultimate: AWSC[11] or Single-lane roundabout
10	Flynn Ln / Chelsea Drive	Retain TWSC
11	Flynn Ln / Siren Drive	Retain TWSC
12	Flynn Ln / Mullan Rd	Stop-controlled right-In, right-out, left-In *(Lifespan = 18 – 30 years)*
13	Mary Jane Boulevard / Mullan Rd	Interim: Single-lane roundabout with EB left-turn & WB right-turn lanes *(Lifespan = 18 – 23 years)* Ultimate: Multi-lane roundabout with two EB and WB through lanes
14	Mary Jane Boulevard / O'Leary Street	TWSC
15	Mary Jane Boulevard / Melrose Pl	TWSC
16	Mary Jane Boulevard / England Boulevard	Single-lane roundabout
17	Mary Jane Boulevard / Camden Street	TWSC
18	Mary Jane Boulevard / Flynn Ln	TWSC
19	Mary Jane Boulevard / Veteran's Way	TWSC
20	Mary Jane Boulevard / W Broadway Street	Multi-lane roundabout
21	W Broadway Street / Flynn Ln	Unsignalized right-In, right-out

[10] Two Way Stop Control
[11] All Way Stop Control

Figure 10 Intersection Control & Roadway Cross-Section Recommendations (2050)



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APPENDICES

A. Travel Demand Model Volumes (2050)

B. 2050 Turning Movement Counts

C. 2050 Operational Analysis AM and PM

D. Roadway Level of Service

E. Pedestrian Intersection Risk Analysis

A. Travel Demand Model Volumes (2050)

Status	Roadway	From	To	2020 ADT (Counts)	2020 ADT (Model)	BUILD 2045 ADT	BUILD 2050 ADT
Existing	Broadway St	Flynn Ln	Reserve St	15,945	17,600	18,260	29,460
Existing	Broadway St	Aviation	Flynn Ln	18,064	18,160	18,230	30,780
Future	Doughtery Dr	George Elmer Dr	W Broadway St	-	-	0	11,956
Future	England Blvd	George Elmer Dr	Mary Jane Blvd	-	-	14,500	10,300
Existing	England Blvd	Mary Jane Blvd	Reserve St	2,520	5,000	14,800	14,920
Existing	Flynn Ln	Mullan Rd	England Blvd	4,066	4,000	2,400	1,675
Existing	Flynn Ln	England Blvd	W Broadway St	3,289	4,000	2,540	3,340
Existing	George Elmer Dr	Mullan Rd	Cattle Dr	2,563	1,000	9,000	7,050
Future	George Elmer Dr	England Blvd	Broadway St	-	-	10,400	11,950
Future	George Elmer Dr	Cattle Dr	England Blvd	-	-	12,500	7,050
Existing	Mary Jane Blvd	England Blvd	Camden St	137	200	6,000	5,910
Future	Mary Jane Blvd	Camden St	W Broadway St	-	-	6,000	5,725
Existing	Mary Jane Blvd	Melrose Pl	England Blvd	114	200	7,400	5,375
Future	Mary Jane Blvd	Mullan Rd	Melrose Pl	-	-	7,450	6,840
Existing	Mullan Rd	George Elmer Dr	Mary Jane Blvd	13,589	13,000	15,835	19,820
Existing	Mullan Rd	Mary Jane Blvd	Reserve St	13,319	15,000	21,100	24,045
Existing	Reserve St	Broadway St	England Blvd	33,000	28,940	43,570	47,760
Existing	Reserve St	England Blvd	Mullan Rd	30,875	39,640	44,330	57,015

MULLAN BUILD VOLUME LAYER DOCUMENTATION

2045_BUILD_MULLAN_DATA_2045_SCEN4_BUILD_HU3000_CONNECTOR_ADJUST_VOL

This layer includes 2045 forecast travel demand volumes associated with the 2019 BUILD Grant. The layer includes new roads to be constructed through the BUILD Grant that include Mary Jane Boulevard, George Elmer Boulevard and the extension of England Boulevard from Flynn Lane to George Elmer Boulevard. Flynn Lane has been reclassified as a local street with the assumption that Mary Jane Boulevard will become the primary collector in the area and signalized at Mullan Road.

New road configurations:

- George Elmer Boulevard north of England Boulevard: Minor Arterial, 35 mph
- George Elmer Boulevard south of England Boulevard: Collector, 35 mph
- England Boulevard: Collector, 25 mph
- Mary Jane Boulevard: Collector, 30 mph

2045 Traffic Analysis Zone (TAZ) Household Assumptions:

- 2045 TAZ ADJUSTMENT (492) TO 585 FOR MARY JANE EXTENSION FROM BROADWAY TO MULLAN AND (440) TO 3000 HU (518) TO 81 HU (520) TO 244 HU

Model Scenario Description:

- 2045 EXISTING NETWORK PLUS COMPLETED AND COMMITTED. COMPLETED ALTS: 3,125,128,133,137,138,209,212,1027,1034,2021,3008. COMMITTED ALTS: 1,2,132,135,204,208,217,1038,2026,2027. SCENARIO 4 ALTS, PLUS ALTS 211, 222. NETWORK - 2040NB, DATA - 2045MJ, ROUTES - MissoulaRoutes2015_w_Ph3_Stps. WYE 2018 BUILD ALTS: 200, 211, 778, 779, 782. INCREASED HU IN TAZ 440 TO 3,000, TAZ 492 TO 585, TAZ 518 TO 81, TAZ 520 TO 244

2045_SCEN4_BUILD_VOL

This layer includes 2045 forecast travel demand volumes associated with the 2019 BUILD Grant. The layer includes new roads to be constructed through the BUILD Grant that include Mary Jane Boulevard, George Elmer Boulevard and the extension of England Boulevard from Flynn Lane to George Elmer Boulevard. Flynn Lane has **NOT** been reclassified as a local street with the assumption that Mary Jane Boulevard will become the primary collector in the area and signalized at Mullan Road.

New road configurations:

- George Elmer Boulevard north of England Boulevard: Minor Arterial, 35 mph
- George Elmer Boulevard south of England Boulevard: Collector, 35 mph
- England Boulevard: Collector, 25 mph
- Mary Jane Boulevard: Collector, 30 mph

2045 Traffic Analysis Zone (TAZ) Household Assumptions:

- NO ADDITIONAL HOUSEHOLD ASSUMPTIONS OTHER THAN STRAIGHT HOUSEHOLD GROWTH IN THE TRAVEL DEMAND MODEL

Model Scenario Description:

2045 EXISTING NETWORK PLUS COMPLETED AND COMMITTED. COMPLETED ALTS: 3,125,128,133,137,138,209,212,1027,1034,2021,3008. COMMITTED ALTS: 1,2,132,135,204,208,217,1038,2026,2027. SCENARIO 4 ALTS. NETWORK - 2040NB, DATA - 2045I, ROUTES - MissoulaRoutes2015_w_Ph3_Stps. WYE 2018 BUILD ALTS: 200, 211, 778, 779, 782

2045_SCEN4_VOL

This layer includes 2045 forecast travel demand volumes based on current conditions. The layer **DOES NOT** includes any new roads to be constructed through the BUILD Grant that includes Mary Jane Boulevard, George Elmer Boulevard and the extension of England Boulevard from Flynn Lane to George Elmer Boulevard. Flynn Lane has **NOT** been reclassified as a local street with the assumption that Mary Jane Boulevard will become the primary collector in the area and signalized at Mullan Road.

New road configurations:

- NONE

2045 Traffic Analysis Zone (TAZ) Household Assumptions:

- NO ADDITIONAL HOUSEHOLD ASSUMPTIONS OTHER THAN STRAIGHT HOUSEHOLD GROWTH IN THE TRAVEL DEMAND MODEL

Model Scenario Description:

2045 EXISTING NETWORK PLUS COMPLETED AND COMMITTED. COMPLETED ALTS: 3,125,128,133,137,138,209,212,1027,1034,2021,3008. COMMITTED ALTS: 1,2,132,135,204,208,217,1038,2026,2027. SCENARIO 4 ALTS. NETWORK - 2040NB, DATA - 2045I, ROUTES - MissoulaRoutes2015_w_Ph3_Stps.

Missoula_Network_2020

This layer contains the updated road alignments associated with the BUILD Grant that will be incorporated into the 2020 travel demand model.

2015_2045_TC7_TAZ

This layer contains the Traffic Analysis Zones (TAZs) used to associate the socioeconomic data in the travel demand model to the road and transit networks that was used to generate the BUILD Grand related volume layers. The layer contains 2015 and 2045 household and employment information. No BUILD household adjustments are reflected in this layer.

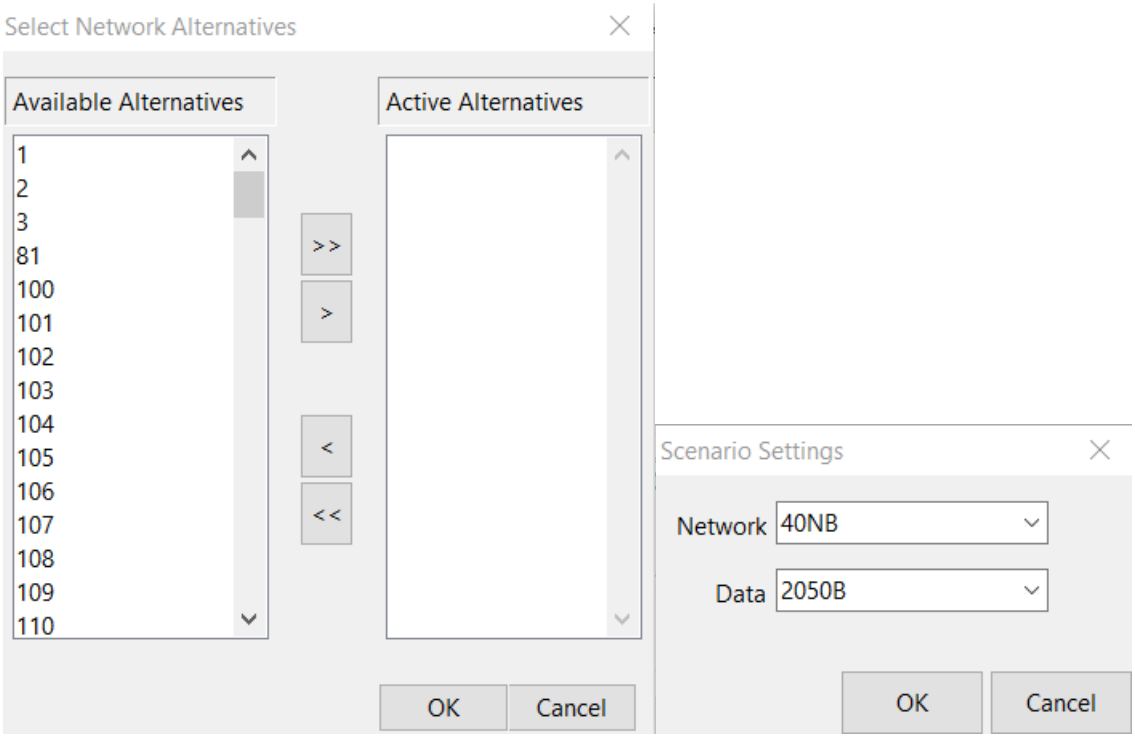
Missoula_TAZ_2020

This layer contains the Traffic Analysis Zones (TAZs) that will be incorporated into the 2020 travel demand model based on improvements resulting from the BUILD Grant. No socioeconomic data has been included.

MODEL RUN ASSESSMENT: 06/05/2020 BUILD GRANT & MAP

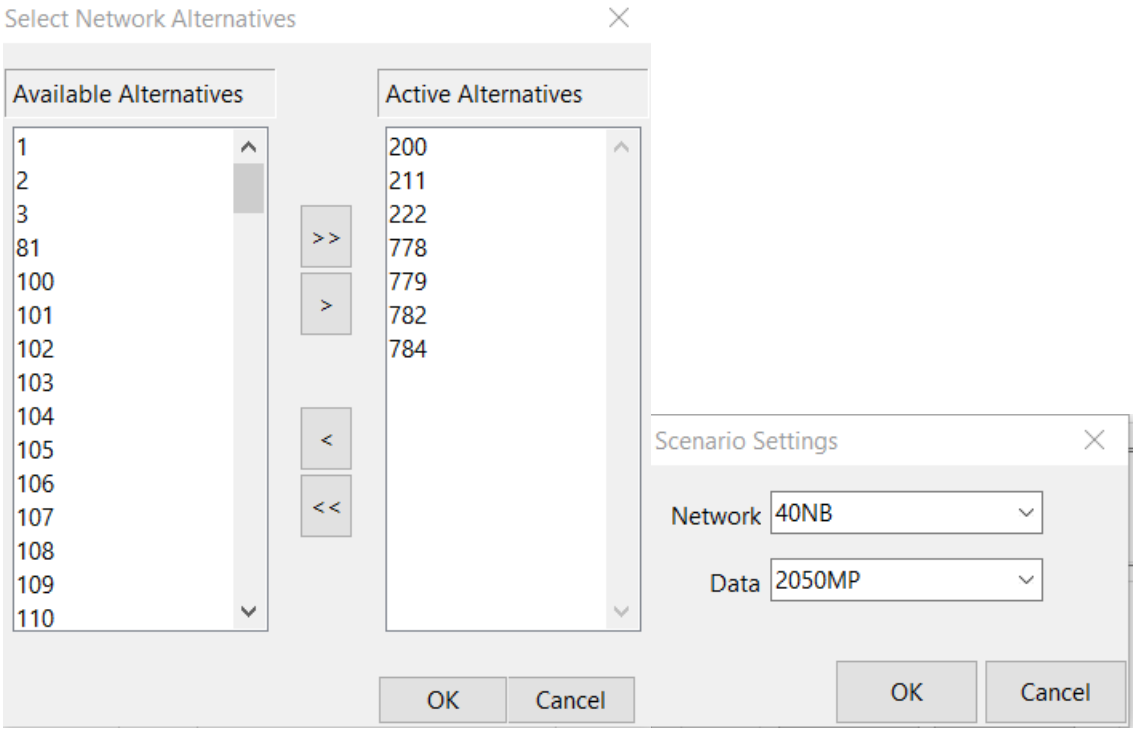
Base_2050 – Update

2040NB Network, 2050 Socio, 2043TransitNetwork



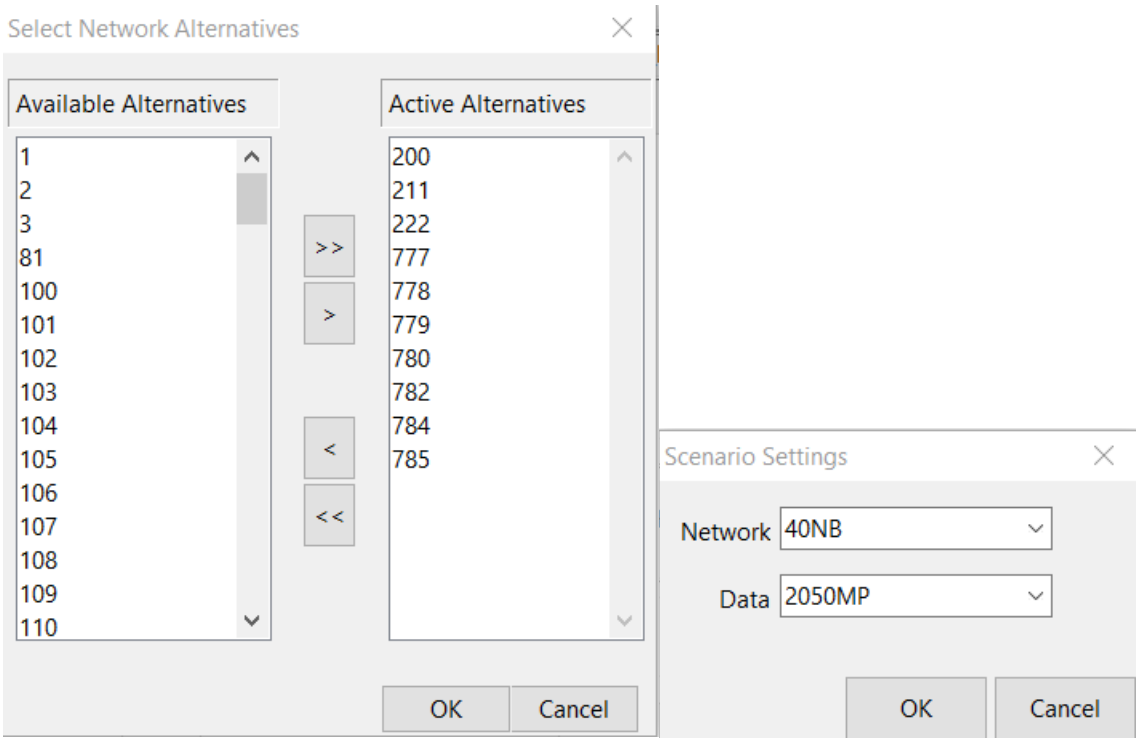
Base_2050 - Update BUILD 051420 - TPEN_BUILD MAP

2040NB Network, 2050MP Socio, 2043TransitNetwork . ALTS: 200, 211, 222, 778, 779, 782. ALT 222 RECLASSIFIES FLYNN LN. AND DECREASES SPEED ASSOCIATED WITH MARY JANE BLVD IMPROVMENTS. ALT 784 INCREASES ENGLAND TO FT=3 FROM FLYNN TO RESERVE. LEFT TURN PROHIBITION FROM FLYNN TO BROADWAY



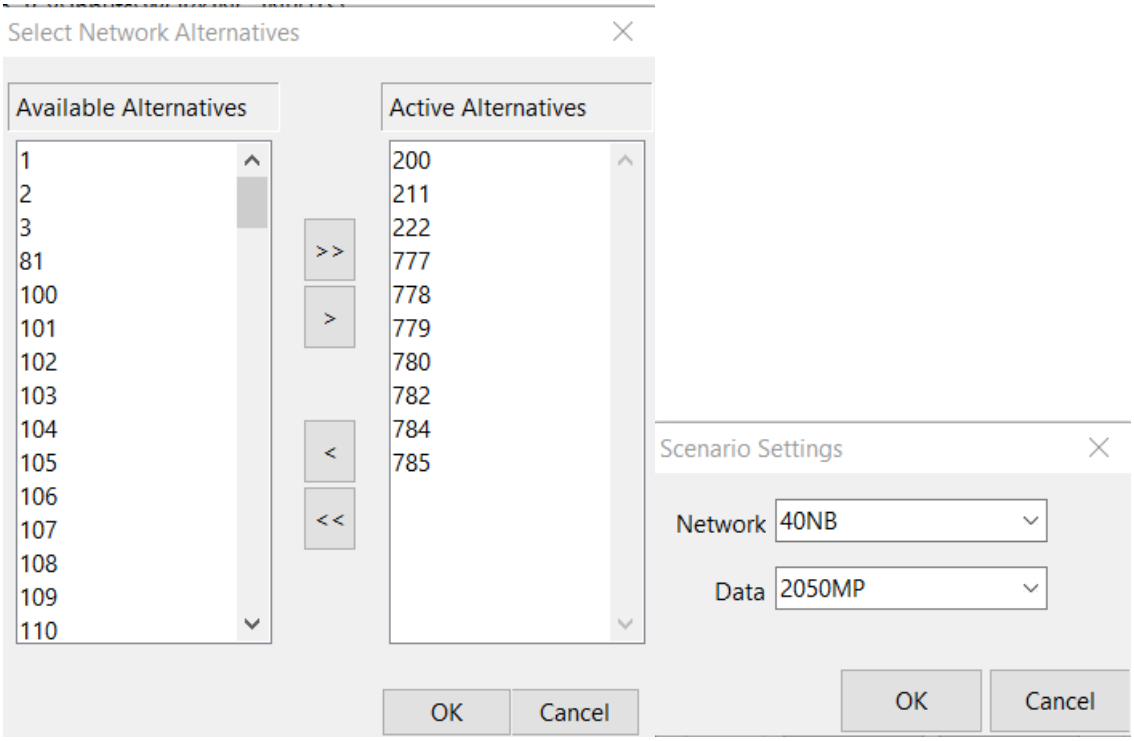
Base_2050 - Update BUILD 051420 - TPEN_BUILD MAP EXPANDED:

STANDARD INPUT FILES UPDATED TO INCLUDE EXPANDED ROAD NETWORK ALTERNATIVES. 2040NB Network, 2050MP Socio, 2043TransitNetwork . ALTS: 200, 211, 222, 778, 779, 782. ALT 222 RECLASSIFIES FLYNN LN. AND DECREASES SPEED ASSOCIATED WITH MARY JANE BLVD IMPROVMENTS. ALT 784 INCREASES ENGLAND TO FT=3 FROM FLYNN TO RESERVE. LEFT TURN PROHIBITION FROM FLYNN TO BROADWAY. EXPANDED TO INCLUDE DOUGHERTY DRIVE AND ENGLAND BLVD TO ROUNDUP. ALL ROADS MINOR ARTERIALS. ALTS 777, 780, 785

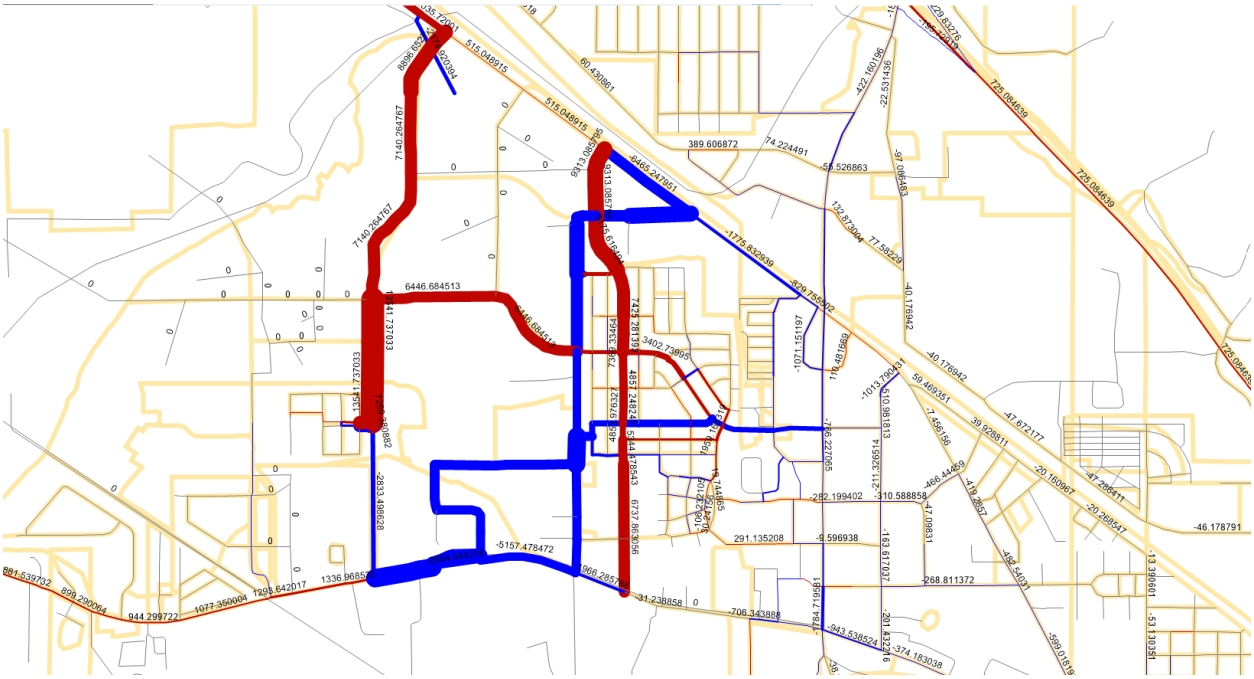


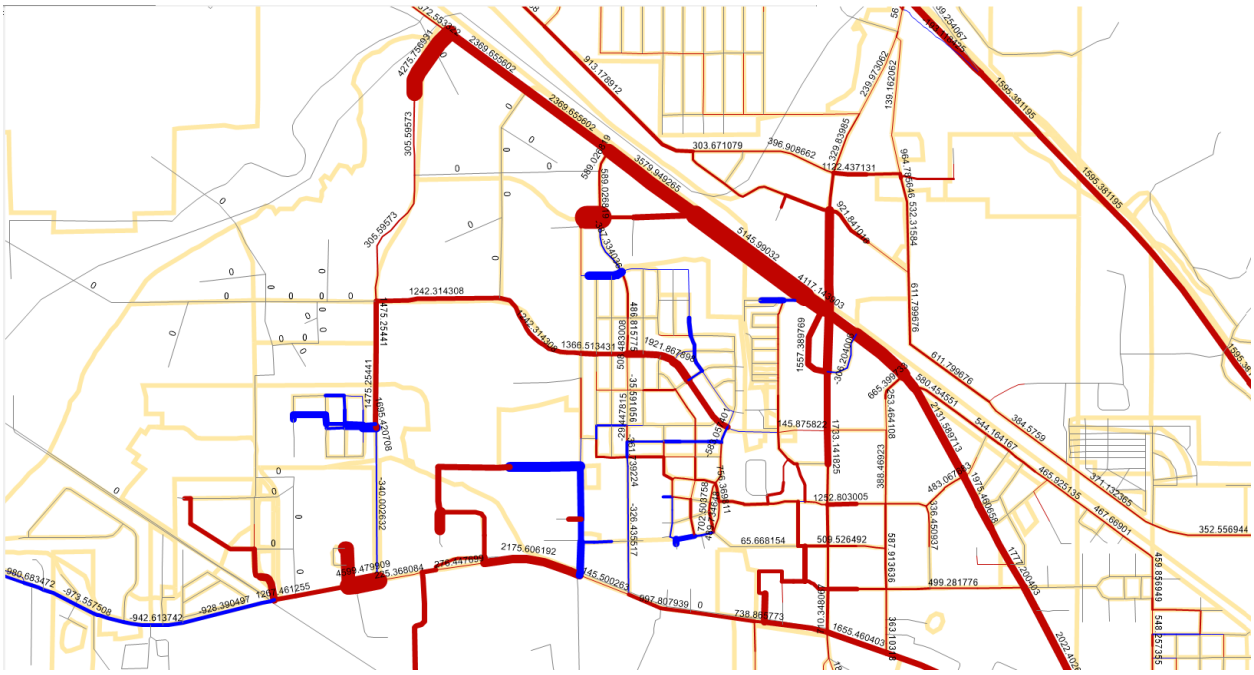
Base_2050 - Update BUILD 051420 - TPEN_BUILD MAP EXPANDED – COLLECTOR:

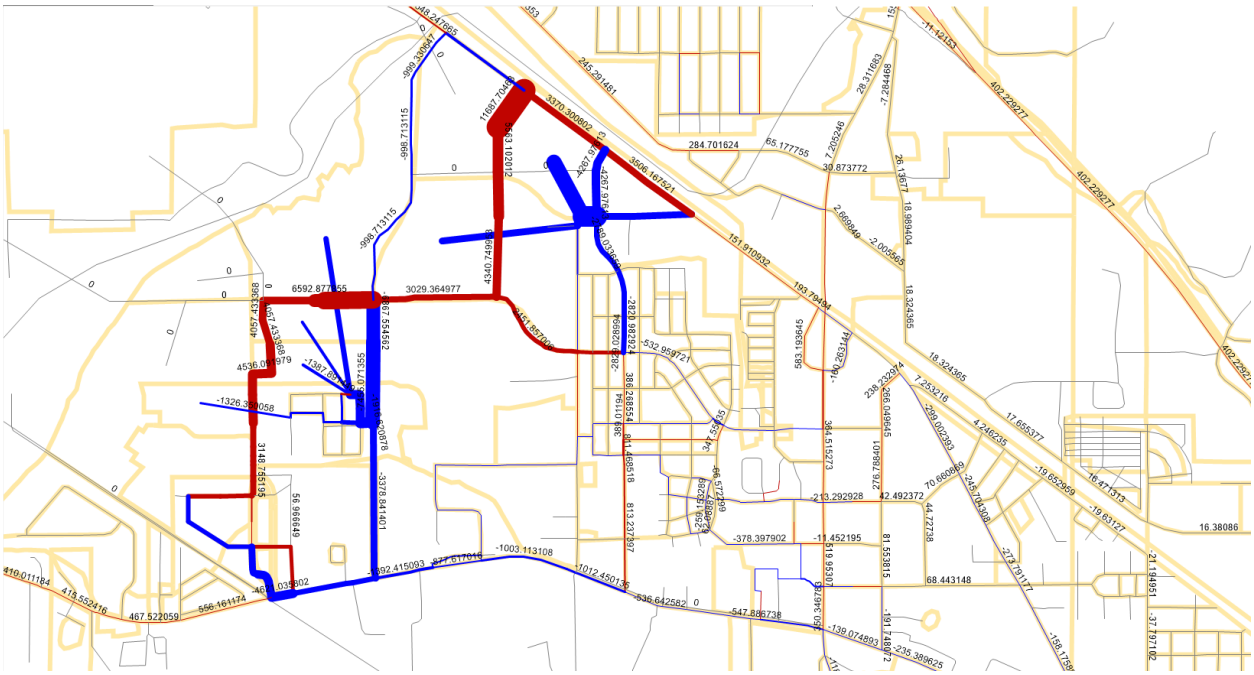
WORKING INPUT FILES UPDATED TO INCLUDE EXPANDED ROAD NETWORK ALTERNATIVES. 2040NB Network, 2050MP Socio, 2043TransitNetwork . ALTS: 200, 211, 222, 778, 779, 782. ALT 222 RECLASSIFIES FLYNN LN. AND DECREASES SPEED ASSOCIATED WITH MARY JANE BLVD IMPROVMENTS. ALT 784 **DECREASES** ENGLAND TO **FT=4** FROM FLYNN TO RESERVE. LEFT TURN PROHIBITION FROM FLYNN TO BROADWAY. EXPANDED TO INCLUDE DOUGHERTY DRIVE AND ENGLAND BLVD TO ROUNDUP. ALL ROADS COLLECTORS. ALTS 777, 780, 785

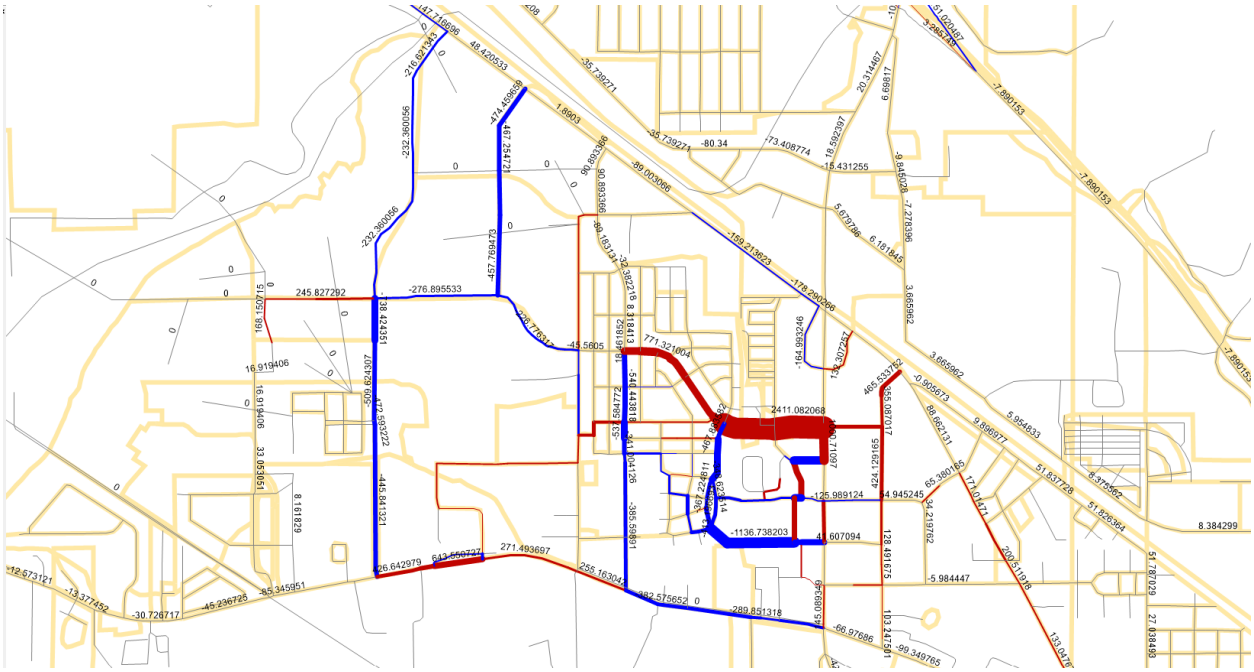


COMPARISON WITH 2050 EXISTING: 2050 BUILD, 2050 BUILD PLUS MAP, 2050 BUILD PLUS MAP, 2050 BUILD PLUS MAP EXPANDED (ARTERIALS), 2050 BUILD PLUS MAP EXPANDED (COLLECTORS):

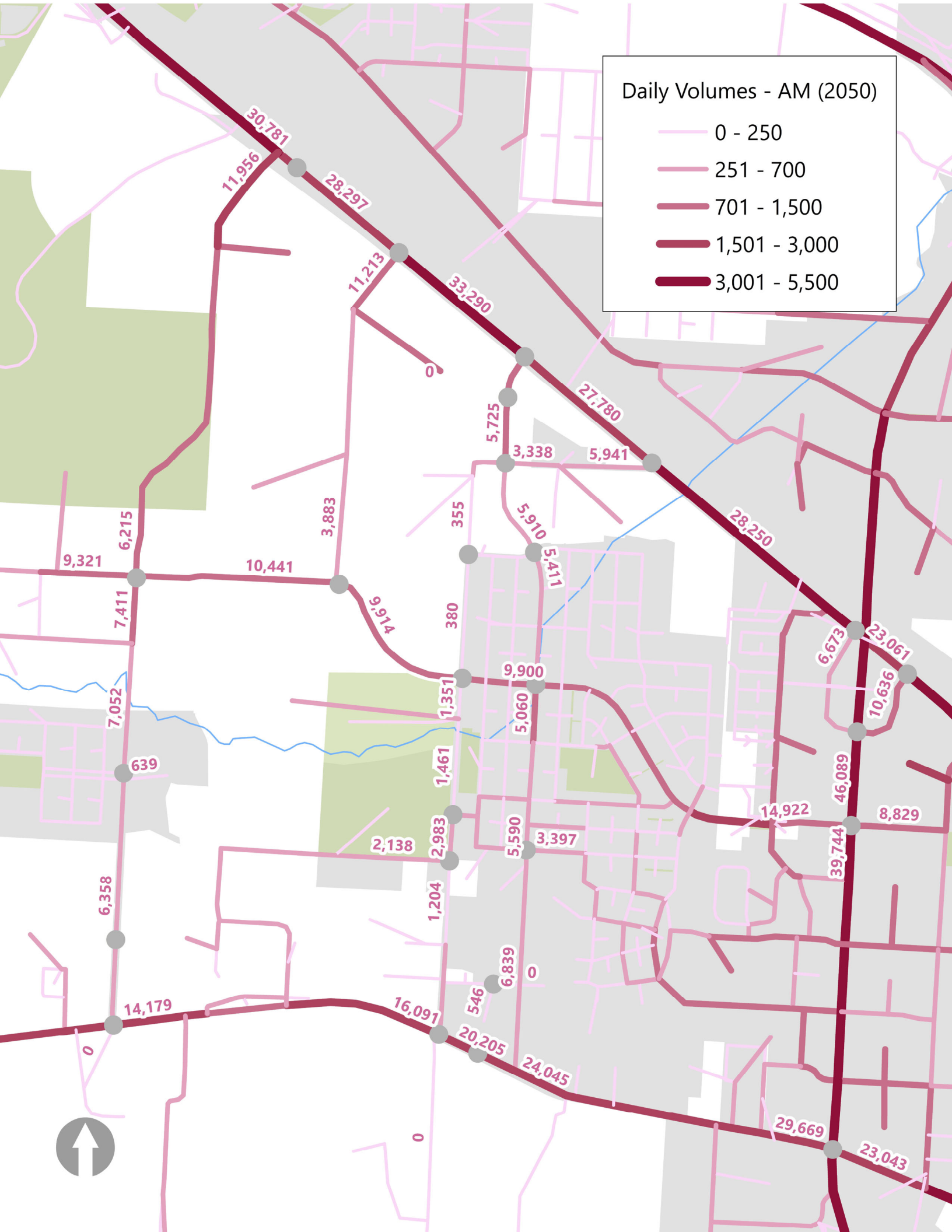


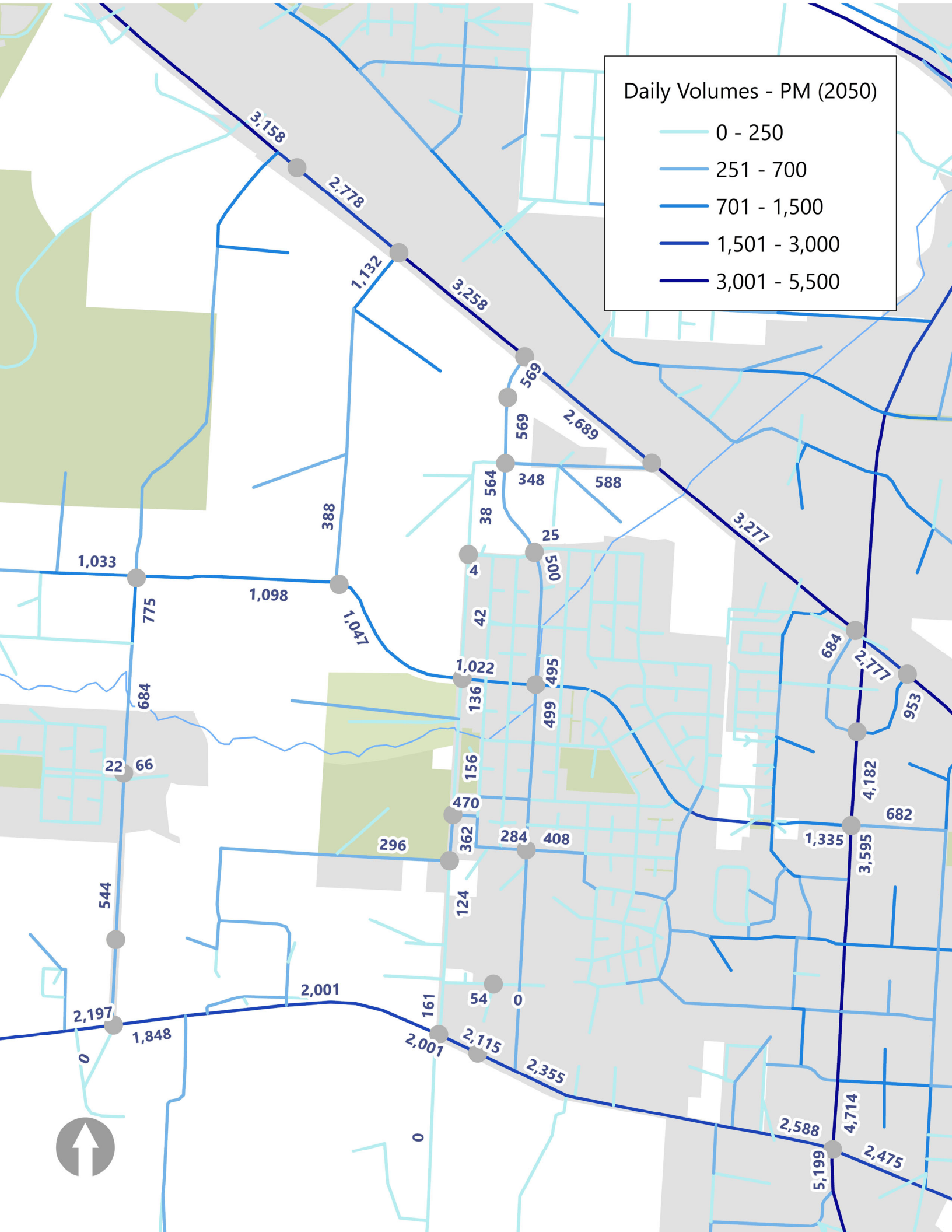






B. 2050 Turning Movement Counts


Daily Volumes - AM (2050)
0 - 250
251 - 700
701 - 1,500
1,501 - 3,000
3,001 - 5,500
30,781
28,297
11,956
11,213
33,290
27,780
5,725
3,338
5,941
28,250
355
5,910
5,411
3,883
6,215
9,321
10,441
7,411
9,914
380
6,673
23,061
10,636
9,900
1,351
5,060
7,052
639
1,461
46,089
14,922
8,829
2,138
2,983
5,590
3,397
39,744
6,358
1,204
6,839
546
14,179
16,091
20,205
24,045
29,669
23,043
0


Daily Volumes - PM (2050)
0 - 250
251 - 700
701 - 1,500
1,501 - 3,000
3,001 - 5,500
3,158
2,778
1,132
3,258
569
569
2,689
564
348
588
38
388
3,277
25
4
500
1,033
1,098
775
1,047
42
684
2,777
953
1,022
495
136
499
684
156
22
66
4,182
470
682
362
284
408
296
1,335
3,595
544
124
54
0
2,001
161
2,197
1,848
2,001
2,115
2,355
0
0
2,588
4,714
5,199
2,475

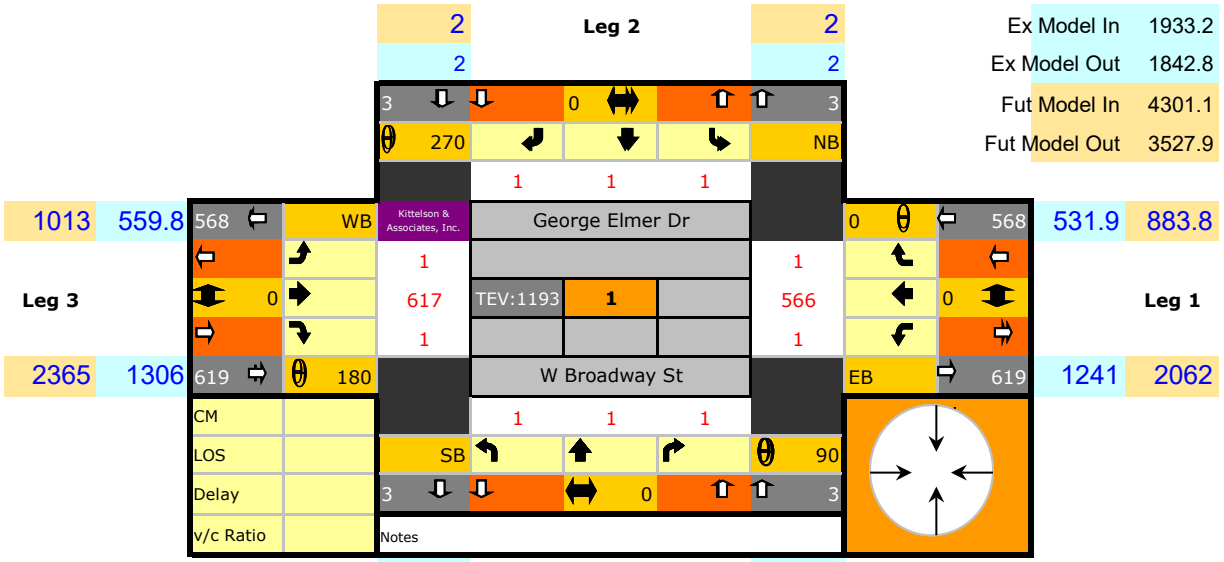
NCHRP 255 Post Processing Inputs (AM)

Blue Text - required input

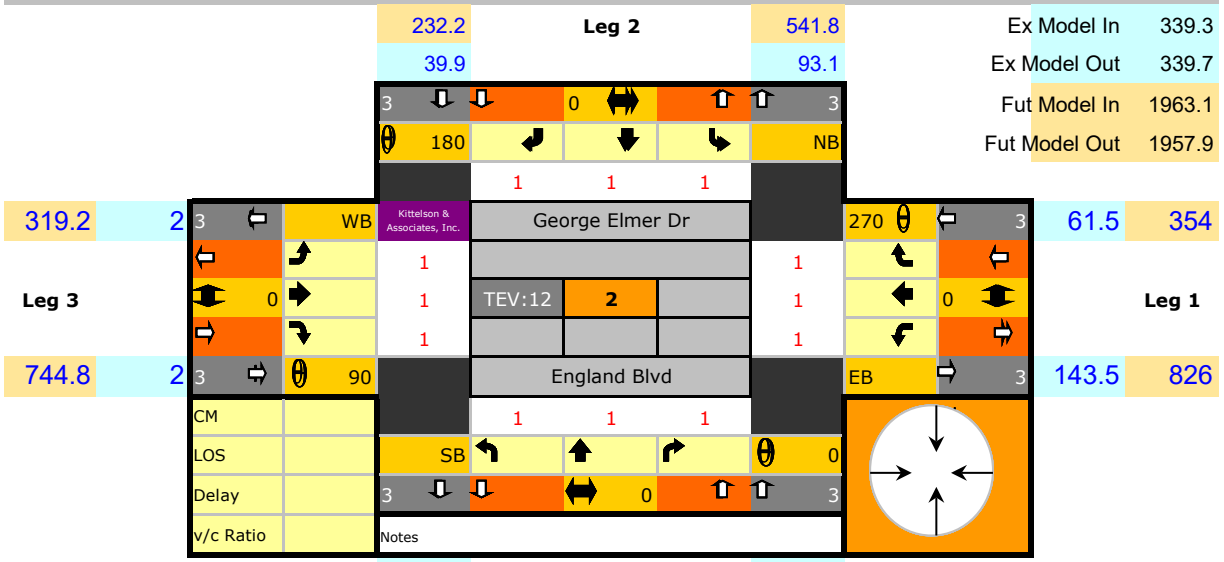
Red and Black Text - 2020 Turning Movement Counts for existng intersections

(Turning movement counts at future intersections, except for through movements at some intersections are assumed to be 1)

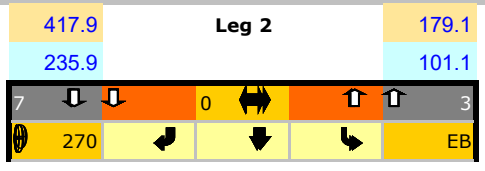
Step 1 - Insert Volume Block and Model Link Volumes



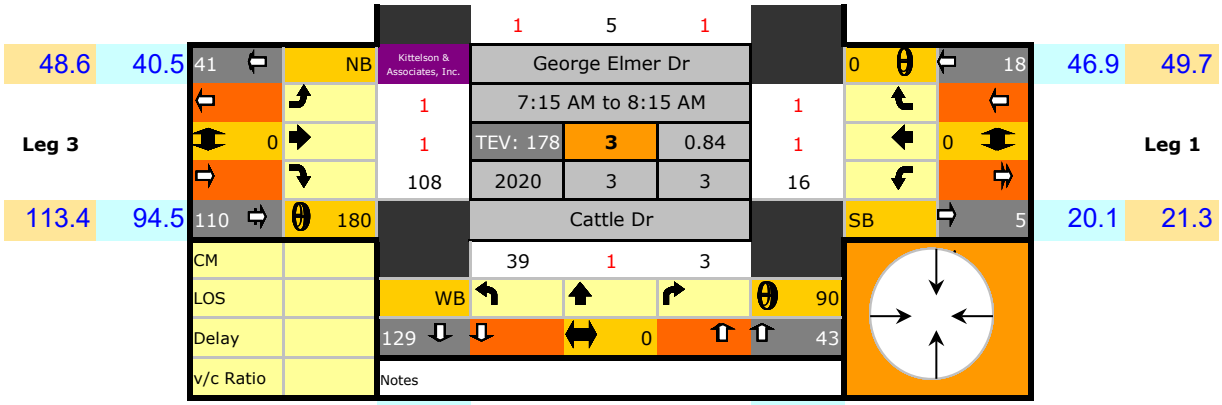
Ex Model In	1933.2
Ex Model Out	1842.8
Fut Model In	4301.1
Fut Model Out	3527.9

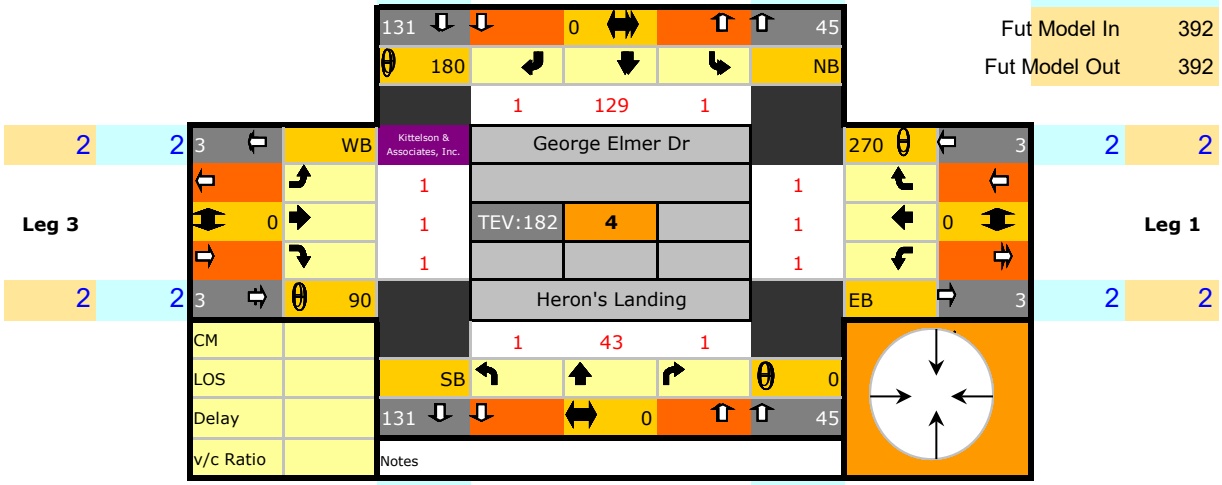


Ex Model In	339.3
Ex Model Out	339.7
Fut Model In	1963.1
Fut Model Out	1957.9

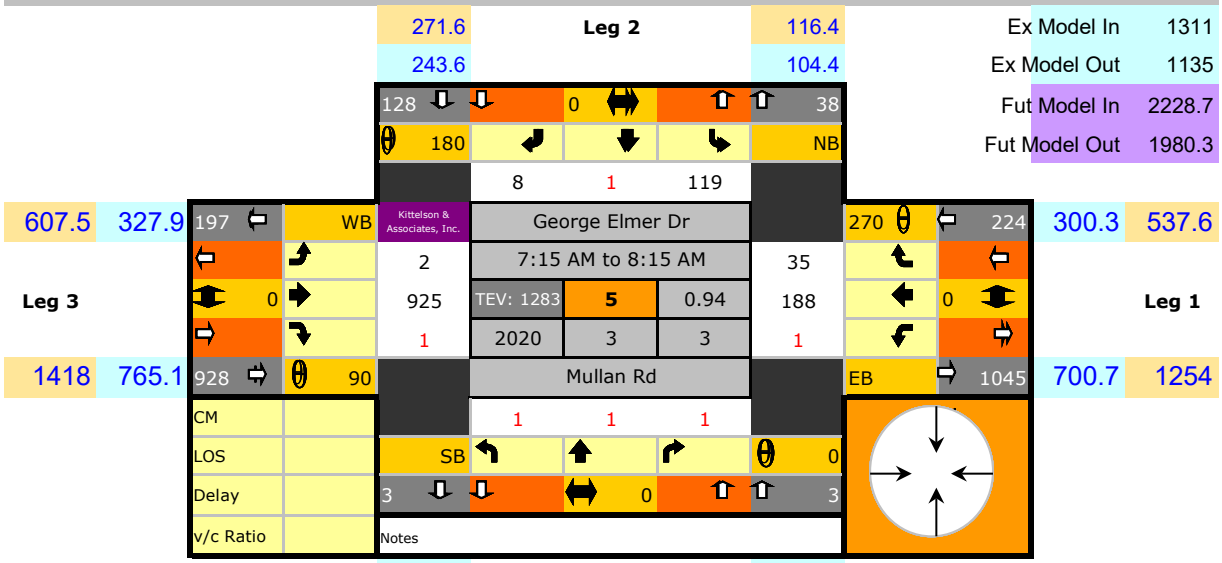


Ex Model In	481.7
Ex Model Out	405.3
Fut Model In	697.4
Fut Model Out	520.6

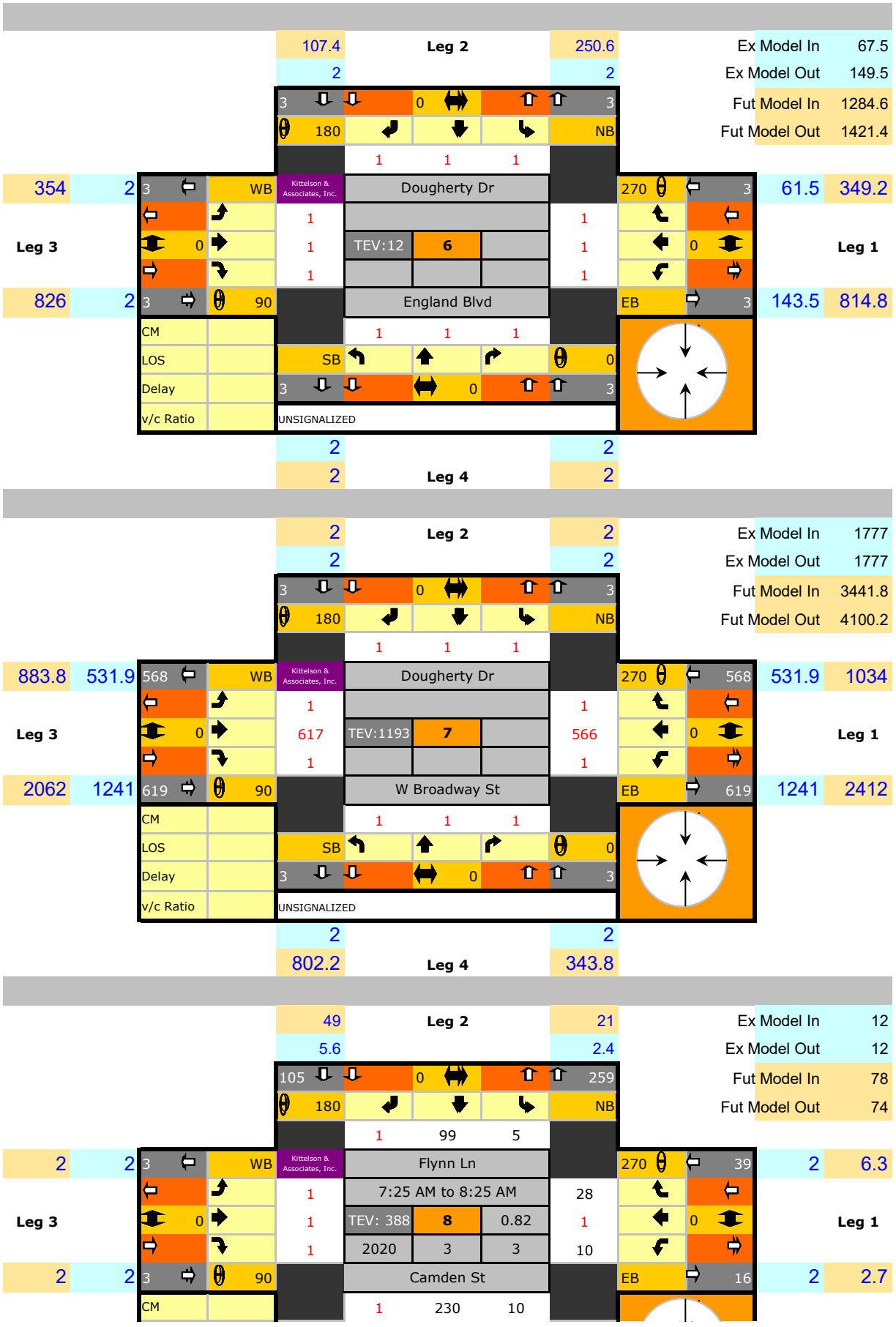


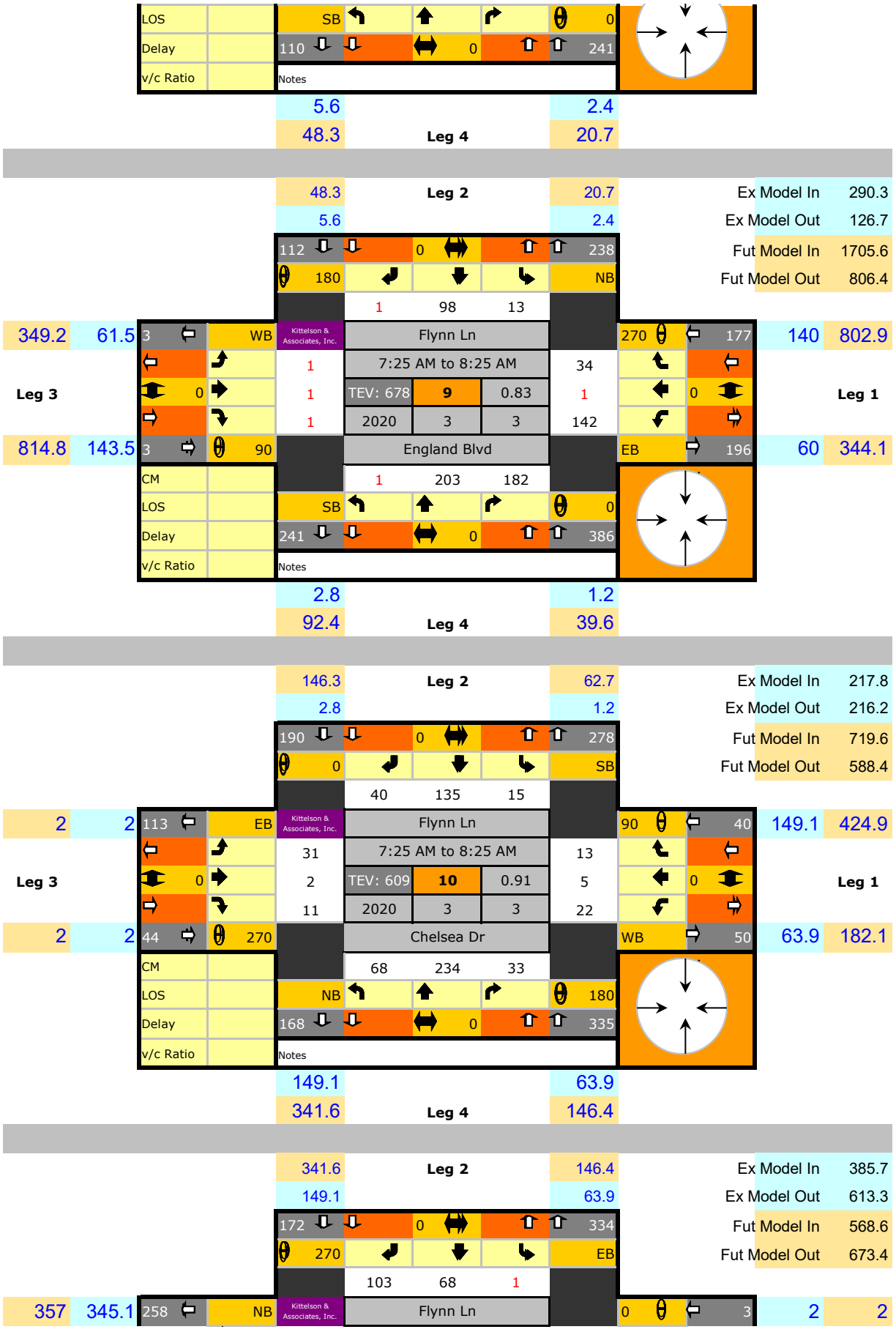


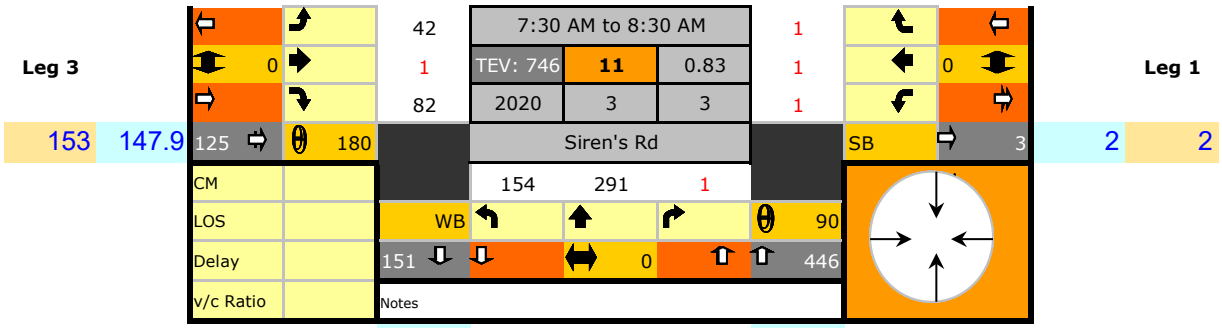
Ex Model In 352
Ex Model Out 352
Fut Model In 392
Fut Model Out 392



Ex Model In 1311
Ex Model Out 1135
Fut Model In 2228.7
Fut Model Out 1980.3


Leg 2
Leg 3
Leg 1
Leg 4
Kittelson & Associates, Inc.
Dougherty Dr
England Blvd
TEV:12
6
WB
NB
EB
SB
90
180
270
CM
LOS
Delay
v/c Ratio
UNSIGNALIZED
Ex Model In 67.5
Ex Model Out 149.5
Fut Model In 1284.6
Fut Model Out 1421.4
Leg 2
Leg 3
Leg 1
Leg 4
Kittelson & Associates, Inc.
Dougherty Dr
W Broadway St
TEV:1193
7
WB
NB
EB
SB
90
180
270
CM
LOS
Delay
v/c Ratio
UNSIGNALIZED
Ex Model In 1777
Ex Model Out 1777
Fut Model In 3441.8
Fut Model Out 4100.2
Leg 2
Leg 3
Leg 1
Leg 4
Kittelson & Associates, Inc.
Flynn Ln
Camden St
7:25 AM to 8:25 AM
TEV: 388
8
0.82
2020
3
3
WB
NB
EB
90
180
270
CM
Ex Model In 12
Ex Model Out 12
Fut Model In 78
Fut Model Out 74


LOS
Delay
v/c Ratio
SB
110
0
241
Notes
5.6
2.4
48.3
Leg 4
20.7
48.3
Leg 2
20.7
Ex Model In 290.3
5.6
2.4
Ex Model Out 126.7
112
0
238
Fut Model In 1705.6
180
NB
Fut Model Out 806.4
1
98
13
349.2
61.5
3
WB
Kittelson & Associates, Inc.
Flynn Ln
270
177
140
802.9
1
7:25 AM to 8:25 AM
34
Leg 3
0
1
TEV: 678
9
0.83
1
0
Leg 1
1
2020
3
3
142
814.8
143.5
3
90
England Blvd
EB
196
60
344.1
CM
1
203
182
LOS
SB
0
Delay
241
0
386
v/c Ratio
Notes
2.8
1.2
92.4
Leg 4
39.6
146.3
Leg 2
62.7
Ex Model In 217.8
2.8
1.2
Ex Model Out 216.2
190
0
278
Fut Model In 719.6
0
SB
Fut Model Out 588.4
40
135
15
2
2
113
EB
Kittelson & Associates, Inc.
Flynn Ln
90
40
149.1
424.9
31
7:25 AM to 8:25 AM
13
Leg 3
0
2
TEV: 609
10
0.91
5
0
Leg 1
11
2020
3
3
22
2
2
44
270
Chelsea Dr
WB
50
63.9
182.1
CM
68
234
33
LOS
NB
180
Delay
168
0
335
v/c Ratio
Notes
149.1
63.9
341.6
Leg 4
146.4
341.6
Leg 2
146.4
Ex Model In 385.7
149.1
63.9
Ex Model Out 613.3
172
0
334
Fut Model In 568.6
270
EB
Fut Model Out 673.4
103
68
1
357
345.1
258
NB
Kittelson & Associates, Inc.
Flynn Ln
0
3
2
2

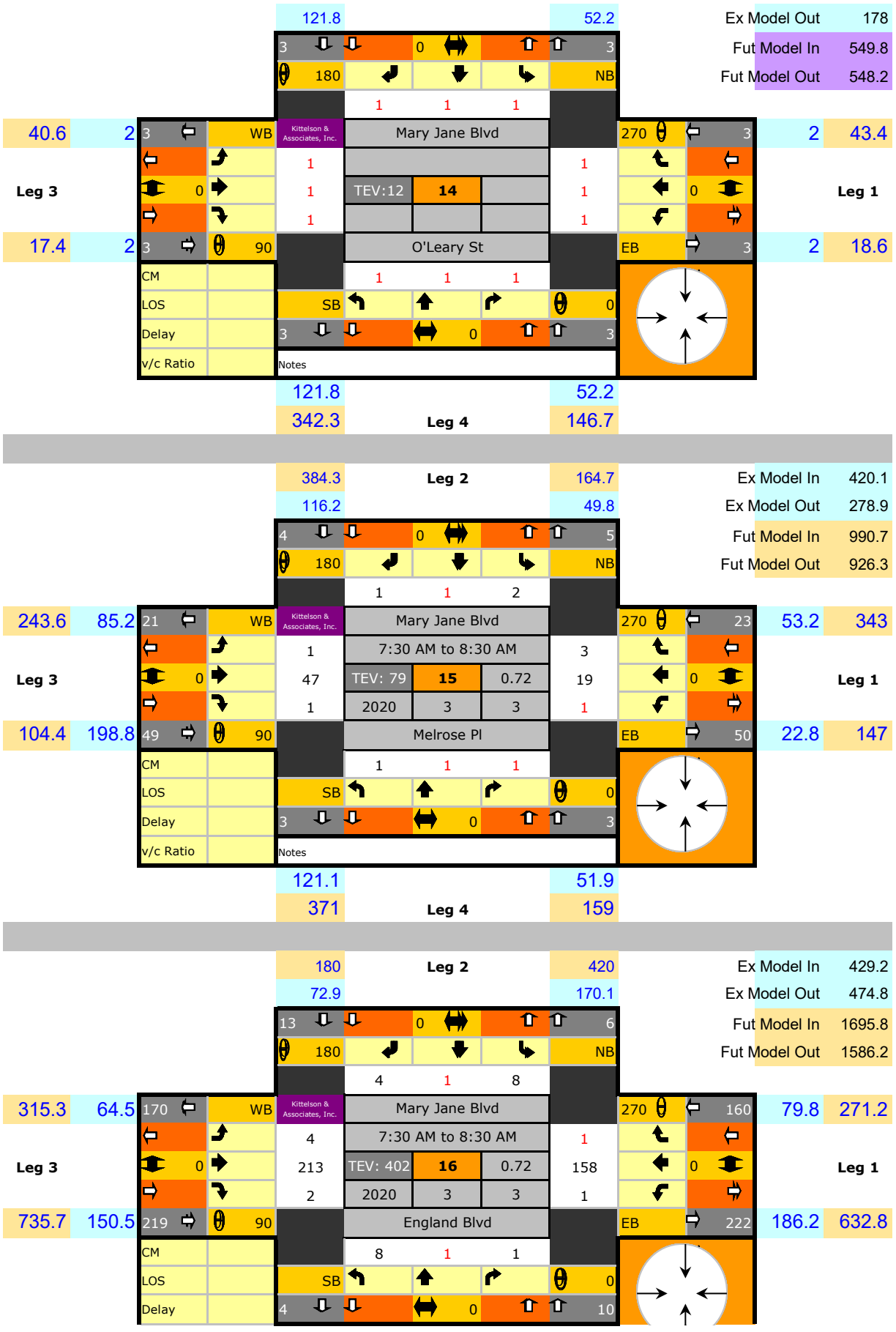


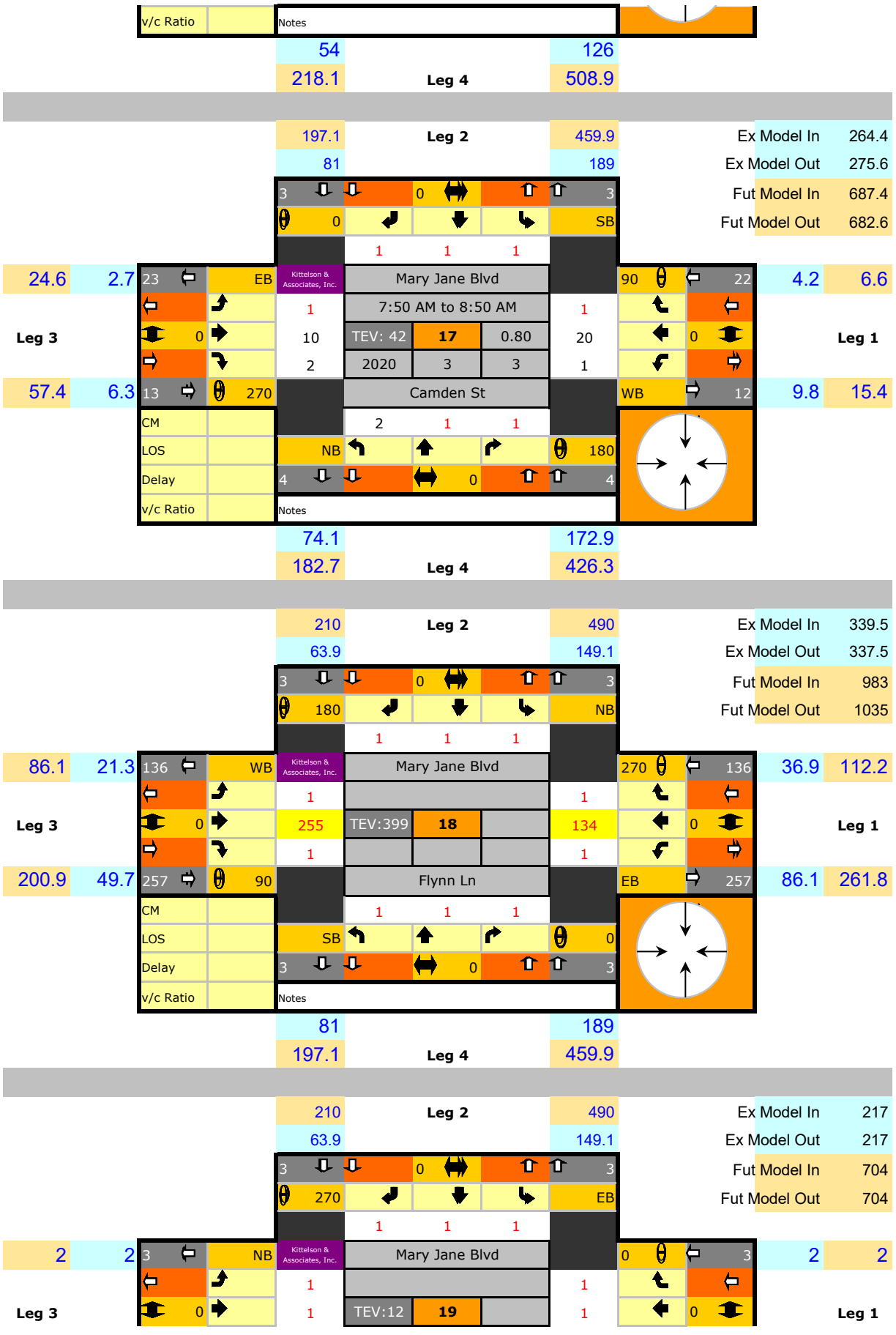
				42		1						
Leg 3			0	1		1	0		Leg 1			
				82		1						
153	147.9	125	180		Siren's Rd		SB	3	2	2		
				154	291	1						
				WB			90					
				151	0		446					
				Notes								
				202.3			86.7					
				168	Leg 4		72					

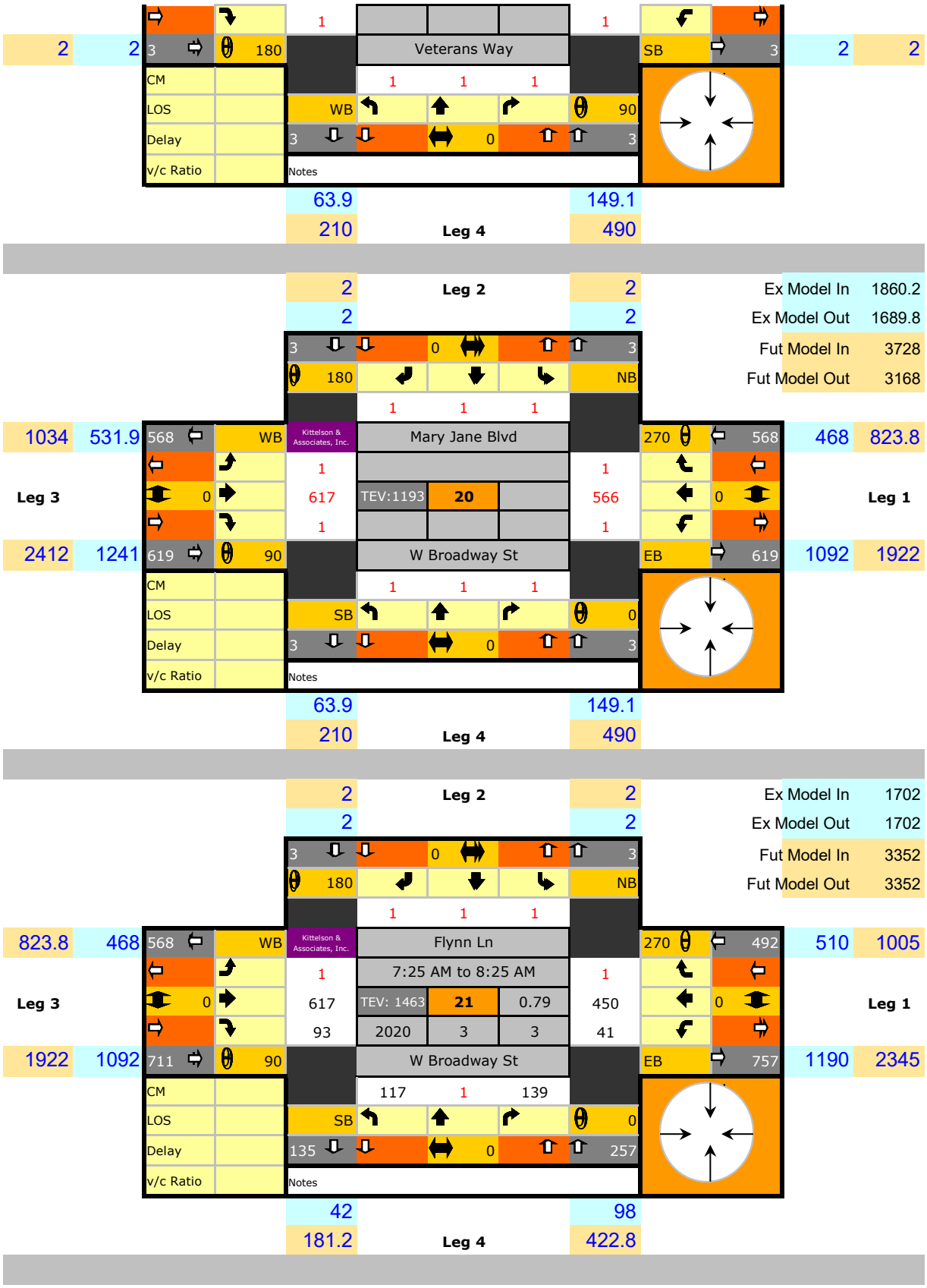
				86.7	Leg 2		202.3				Ex Model In	814.5
				87.9			205.1				Ex Model Out	520.5
				122	0		460				Fut Model In	1370.4
				180			NB				Fut Model Out	829.6
					65	1	56					
531.9	309.6	242	WB	Kittelson & Associates, Inc.	Flynn Ln		270	351	1.2	39.6		
				292	7:20 AM to 8:20 AM		167					
Leg 3			0	772	TEV: 1547	12	0.92	176	0	Leg 1		
				4	2020	3	3	8				
1241	722.4	1068	90		Mullan Rd		EB	832	2.8	92.4		
				1	1	4						
				SB			0					
				13	0		6					
				Notes								
				3			3					
				3	Leg 4		3					

				342.3	Leg 2		146.7				Ex Model In	1471.7
				121.8			52.2				Ex Model Out	1435.3
				3	0		3				Fut Model In	2426.1
				180			NB				Fut Model Out	2336.9
					1	1	1					
600.6	396.9	353	WB	Kittelson & Associates, Inc.	Mary Jane Blvd		270	353	421.8	680.4		
				1			1					
Leg 3			0	832	TEV:1193	13	351		0	Leg 1		
				1			1					
1401	926.1	834	90		Mullan Rd		EB	834	984.2	1588		
				1	1	1						
				SB			0					
				3	0		3					
				Notes								
				2			2					
				2	Leg 4		2					

				342.3	Leg 2		146.7				Ex Model In	178


Ex Model Out 178
Fut Model In 549.8
Fut Model Out 548.2
Kittelson & Associates, Inc.
Mary Jane Blvd
O'Leary St
WB
NB
EB
SB
TEV:12
14
Leg 3
Leg 1
Leg 4
CM
LOS
Delay
v/c Ratio
Notes
Ex Model In 420.1
Ex Model Out 278.9
Fut Model In 990.7
Fut Model Out 926.3
7:30 AM to 8:30 AM
TEV: 79
15
0.72
2020
Melrose Pl
Ex Model In 429.2
Ex Model Out 474.8
Fut Model In 1695.8
Fut Model Out 1586.2
TEV: 402
16
England Blvd


v/c Ratio
Notes
54
126
218.1
Leg 4
508.9
197.1
Leg 2
459.9
Ex Model In 264.4
81
189
Ex Model Out 275.6
3 0 3
Fut Model In 687.4
0 SB
Fut Model Out 682.6
1 1 1
24.6 2.7 23 EB
Kittelson & Associates, Inc.
Mary Jane Blvd
90 22 4.2 6.6
1
7:50 AM to 8:50 AM
1
Leg 3
0
10
TEV: 42
17
0.80
20
0
Leg 1
2
2020
3
3
1
57.4 6.3 13 270
Camden St
WB 12 9.8 15.4
CM
2 1 1
LOS
NB
180
Delay
4 0 4
v/c Ratio
Notes
74.1
172.9
182.7
Leg 4
426.3
210
Leg 2
490
Ex Model In 339.5
63.9
149.1
Ex Model Out 337.5
3 0 3
Fut Model In 983
180 NB
Fut Model Out 1035
1 1 1
86.1 21.3 136 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 136 36.9 112.2
1
1
Leg 3
0
255
TEV:399
18
134
0
Leg 1
1
1
200.9 49.7 257 90
Flynn Ln
EB 257 86.1 261.8
CM
1 1 1
LOS
SB
0
Delay
3 0 3
v/c Ratio
Notes
81
189
197.1
Leg 4
459.9
210
Leg 2
490
Ex Model In 217
63.9
149.1
Ex Model Out 217
3 0 3
Fut Model In 704
270 EB
Fut Model Out 704
1 1 1
2 2 3 NB
Kittelson & Associates, Inc.
Mary Jane Blvd
0 3 2 2
1
1
Leg 3
0
1
TEV:12
19
1
0
Leg 1

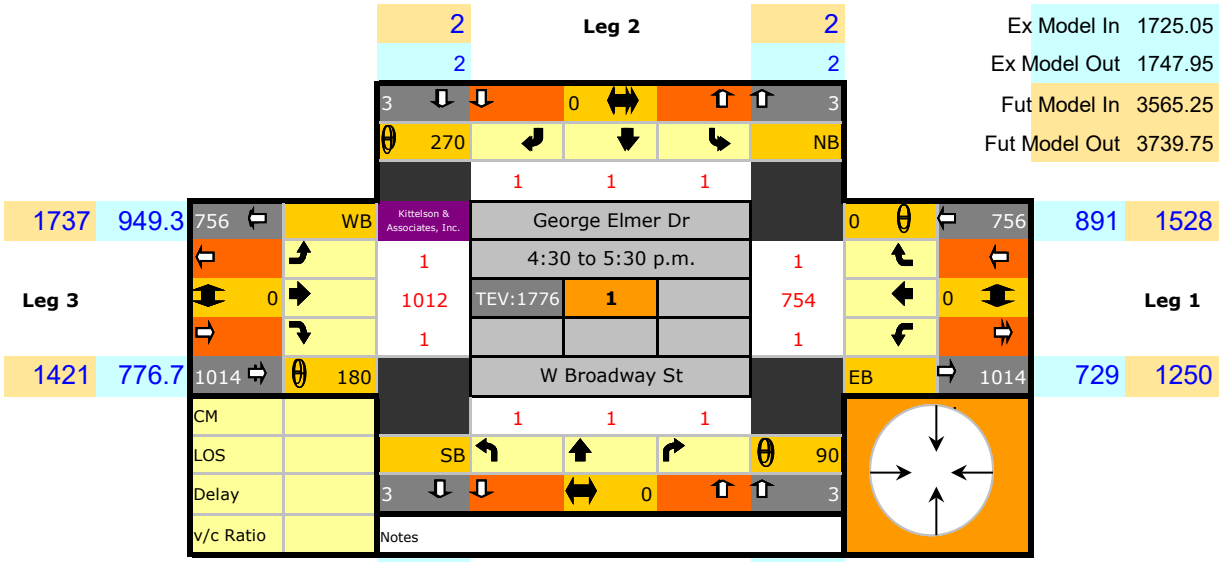

Veterans Way
SB
WB
NB
EB
Mary Jane Blvd
W Broadway St
Flynn Ln
Kittelson & Associates, Inc.
CM
LOS
Delay
v/c Ratio
Notes
Leg 1
Leg 2
Leg 3
Leg 4
TEV:1193
7:25 AM to 8:25 AM
TEV: 1463
Ex Model In 1860.2
Ex Model Out 1689.8
Fut Model In 3728
Fut Model Out 3168
Ex Model In 1702
Ex Model Out 1702
Fut Model In 3352
Fut Model Out 3352

NCHRP 255 Post Processing Inputs (PM)

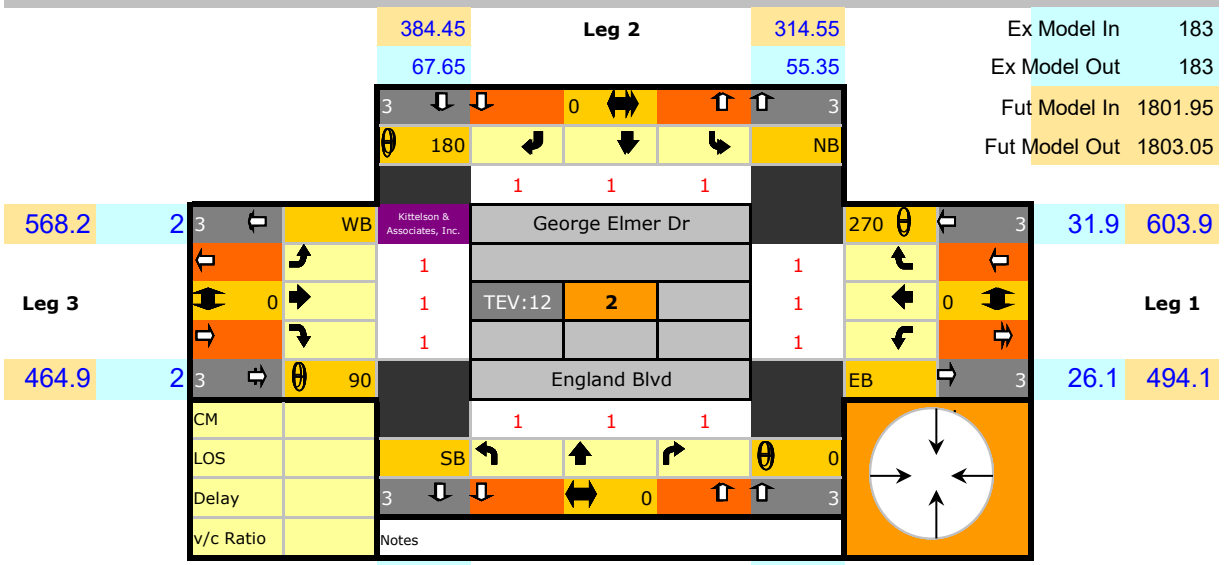
Blue Text - required input

Red and Black Text - 2020 Turning Movement Counts for existng intersections (Turning movement counts at future intersections, except for through movements at some intersections are assumed to be 1)

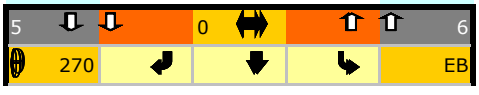
Step 1 - Insert Volume Block and Model Link Volumes



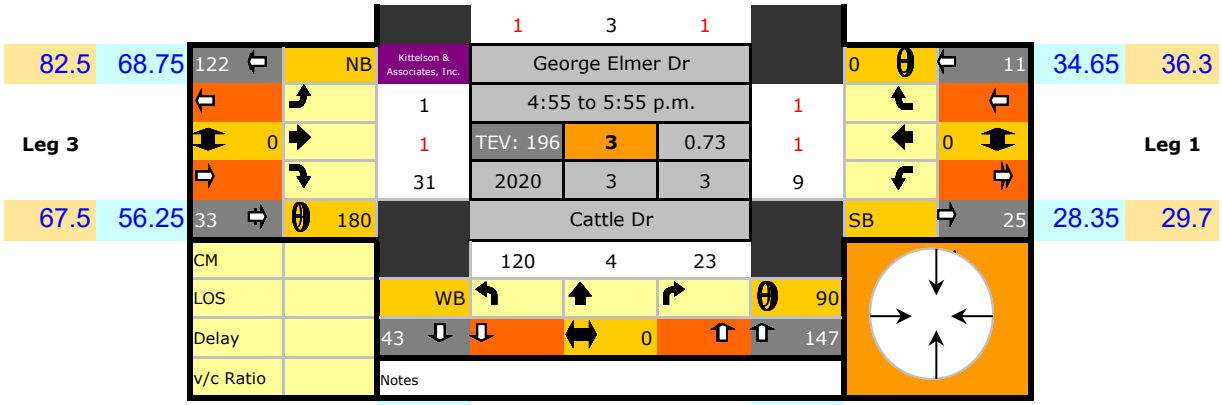
			2	Leg 2	2			Ex Model In	1725.05		
			2		2			Ex Model Out	1747.95		
			3	0	3			Fut Model In	3565.25		
			270		NB			Fut Model Out	3739.75		
			1	1	1						
1737	949.3	756 WB	1		1	0	756	891	1528		
Leg 3		0	1012		754	0			Leg 1		
			1		1						
1421	776.7	1014	180		EB	1014		729	1250		
		CM		1	1	1					
		LOS		SB			90				
		Delay		3	0	3					
		v/c Ratio		Notes							
			67.65		55.35						
			750.8	Leg 4	614.3						

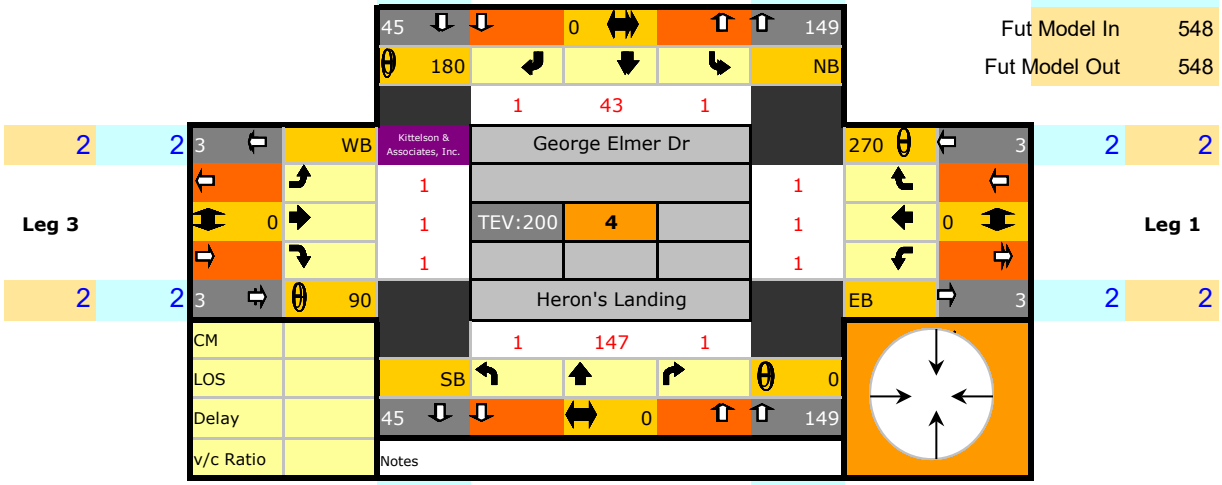


			384.45	Leg 2	314.55			Ex Model In	183		
			67.65		55.35			Ex Model Out	183		
			3	0	3			Fut Model In	1801.95		
			180		NB			Fut Model Out	1803.05		
			1	1	1						
568.2	2	3 WB	1		1	270	3	31.9	603.9		
Leg 3		0	1		1	0			Leg 1		
			1		1						
464.9	2	3	90		EB	3		26.1	494.1		
		CM		1	1	1					
		LOS		SB			0				
		Delay		3	0	3					
		v/c Ratio		Notes							
			99.55		81.45						
			426.3	Leg 4	348.8						

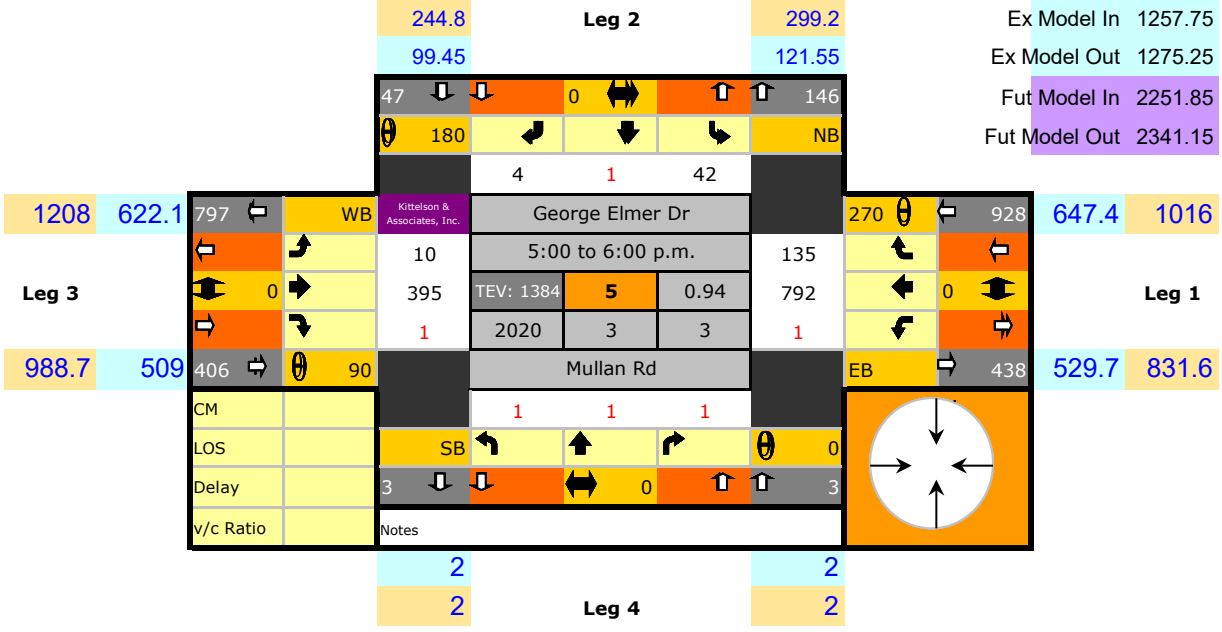


			307.8	Leg 2	376.2			Ex Model In	293.9		
			81.45		99.55			Ex Model Out	296.1		
			5	0	6			Fut Model In	710.8		
			270		EB			Fut Model Out	733.2		

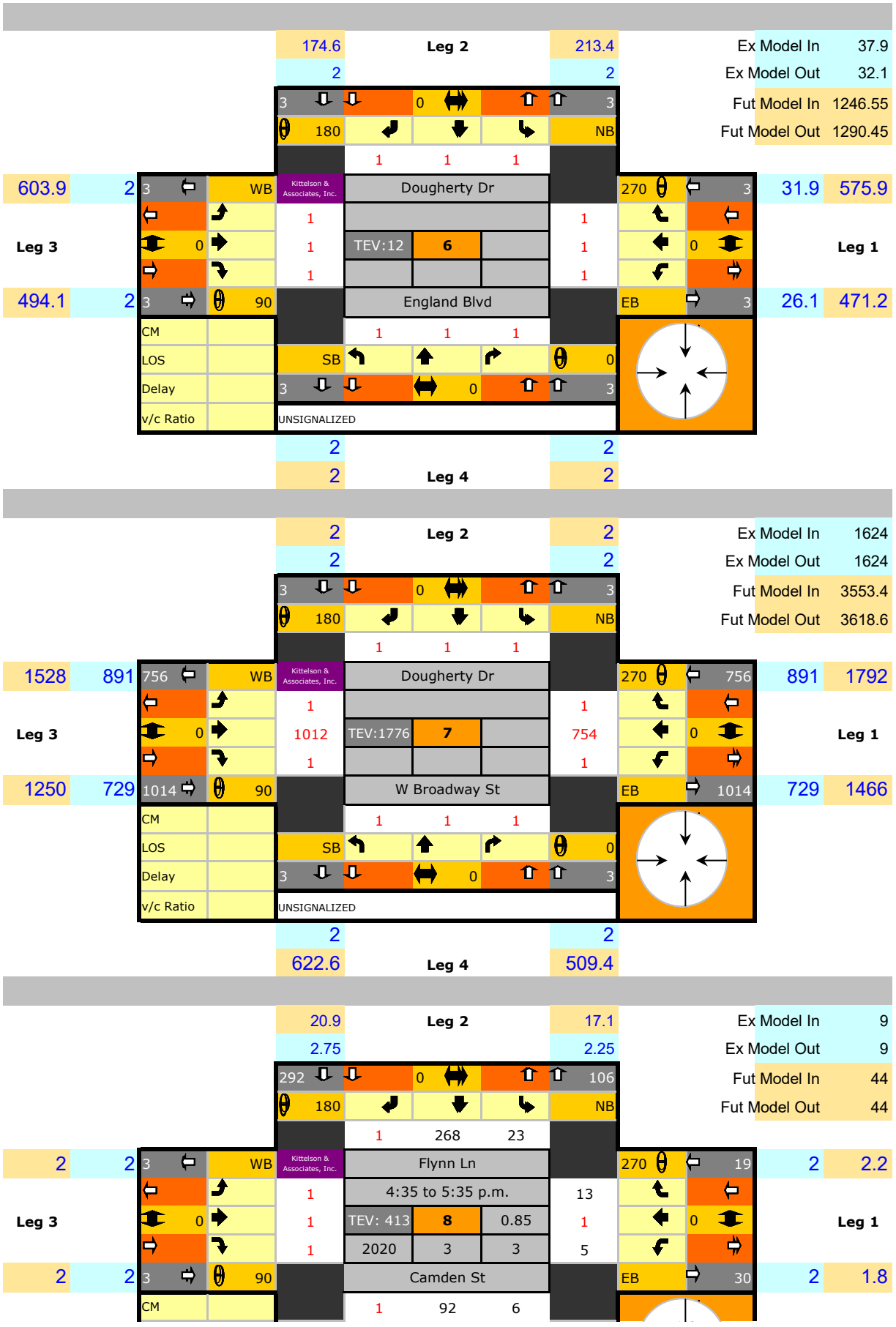


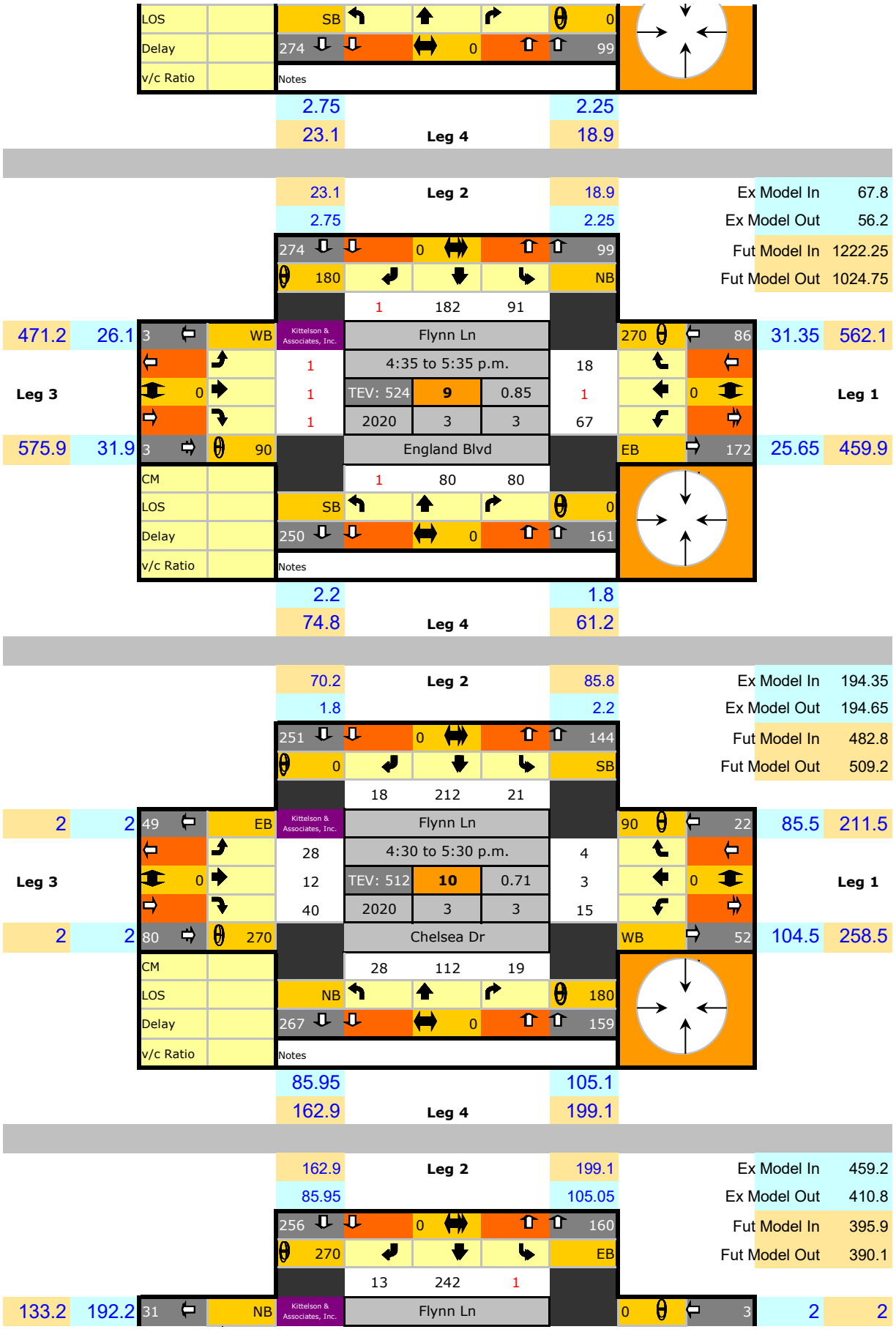


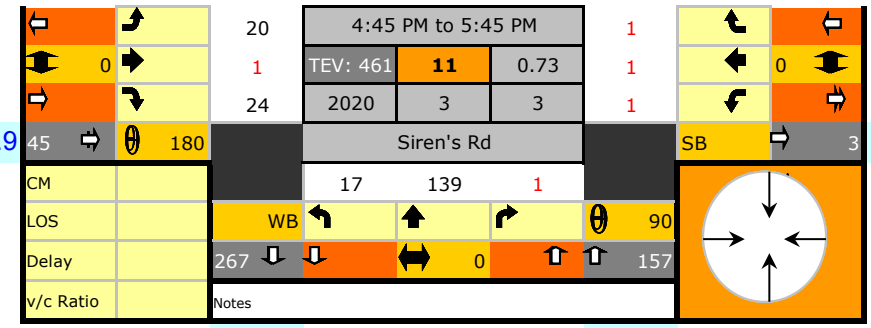
Ex Model In 225
Ex Model Out 225
Fut Model In 548
Fut Model Out 548



Ex Model In 1257.75
Ex Model Out 1275.25
Fut Model In 2251.85
Fut Model Out 2341.15


Leg 2
Leg 3
Leg 1
Leg 4
Kittelson & Associates, Inc.
Dougherty Dr
England Blvd
TEV:12
WB
NB
EB
SB
CM
LOS
Delay
v/c Ratio
UNSIGNALIZED
Ex Model In 37.9
Ex Model Out 32.1
Fut Model In 1246.55
Fut Model Out 1290.45
Ex Model In 1624
Ex Model Out 1624
Fut Model In 3553.4
Fut Model Out 3618.6
W Broadway St
TEV:1776
Ex Model In 9
Ex Model Out 9
Fut Model In 44
Fut Model Out 44
Flynn Ln
4:35 to 5:35 p.m.
TEV: 413
Camden St


LOS
Delay
v/c Ratio
SB
274
0
99
Notes
2.75
23.1
Leg 4
2.25
18.9
Leg 2
Ex Model In 67.8
Ex Model Out 56.2
Fut Model In 1222.25
Fut Model Out 1024.75
180
NB
1 182 91
471.2 26.1
3
WB
Kittelson & Associates, Inc.
Flynn Ln
270
86
31.35 562.1
1
4:35 to 5:35 p.m.
18
Leg 3
0
1
TEV: 524
9
0.85
1
0
Leg 1
1
2020
3
3
67
575.9 31.9
3
90
England Blvd
EB
172
25.65 459.9
CM
1 80 80
LOS
SB
0
Delay
250
0
161
v/c Ratio
Notes
2.2
74.8
Leg 4
1.8
61.2
Leg 2
Ex Model In 194.35
Ex Model Out 194.65
Fut Model In 482.8
Fut Model Out 509.2
251
0
144
SB
18 212 21
2 2
49
EB
Flynn Ln
90
22
85.5 211.5
28
4:30 to 5:30 p.m.
4
Leg 3
0
12
TEV: 512
10
0.71
3
0
Leg 1
40
2020
3
3
15
2 2
80
270
Chelsea Dr
WB
52
104.5 258.5
CM
28 112 19
LOS
NB
180
Delay
267
0
159
v/c Ratio
Notes
85.95
162.9
Leg 4
105.1
199.1
Leg 2
Ex Model In 459.2
Ex Model Out 410.8
Fut Model In 395.9
Fut Model Out 390.1
256
0
160
270
EB
13 242 1
133.2 192.2
31
NB
Flynn Ln
0
3
2 2



				20		1					
Leg 3			0	1		1	0		Leg 1		
				24		1					
162.8	234.9	45	180				SB	3	2	2	
				17	139	1					
				267	0	157					
					111.6	136.4					
					55.8	68.2					

Leg 4

					72.45	88.55					
					113.85	139.15					
				249	0	152					
				180		NB					
				174	1	74					
1101	666.1	955	WB				270	867	2.2	74.8	
				65		86					
Leg 3			0	396		780	0		Leg 1		
				1		1					
900.5	545	462	90				EB	471	1.8	61.2	
				1	1	1					
				3	0	3					
					2	2					
					2	2					

Leg 4

					231.3	282.7					
					112.95	138.05					
				3	0	3					
				180		NB					
				1	1	1					
1163	801.9	869	WB				270	869	794.2	1295	
				1		1					
Leg 3			0	471		867	0		Leg 1		
				1		1					
951.8	656.1	473	90				EB	473	649.8	1060	
				1	1	1					
				3	0	3					
					2	2					
					2	2					

Leg 4

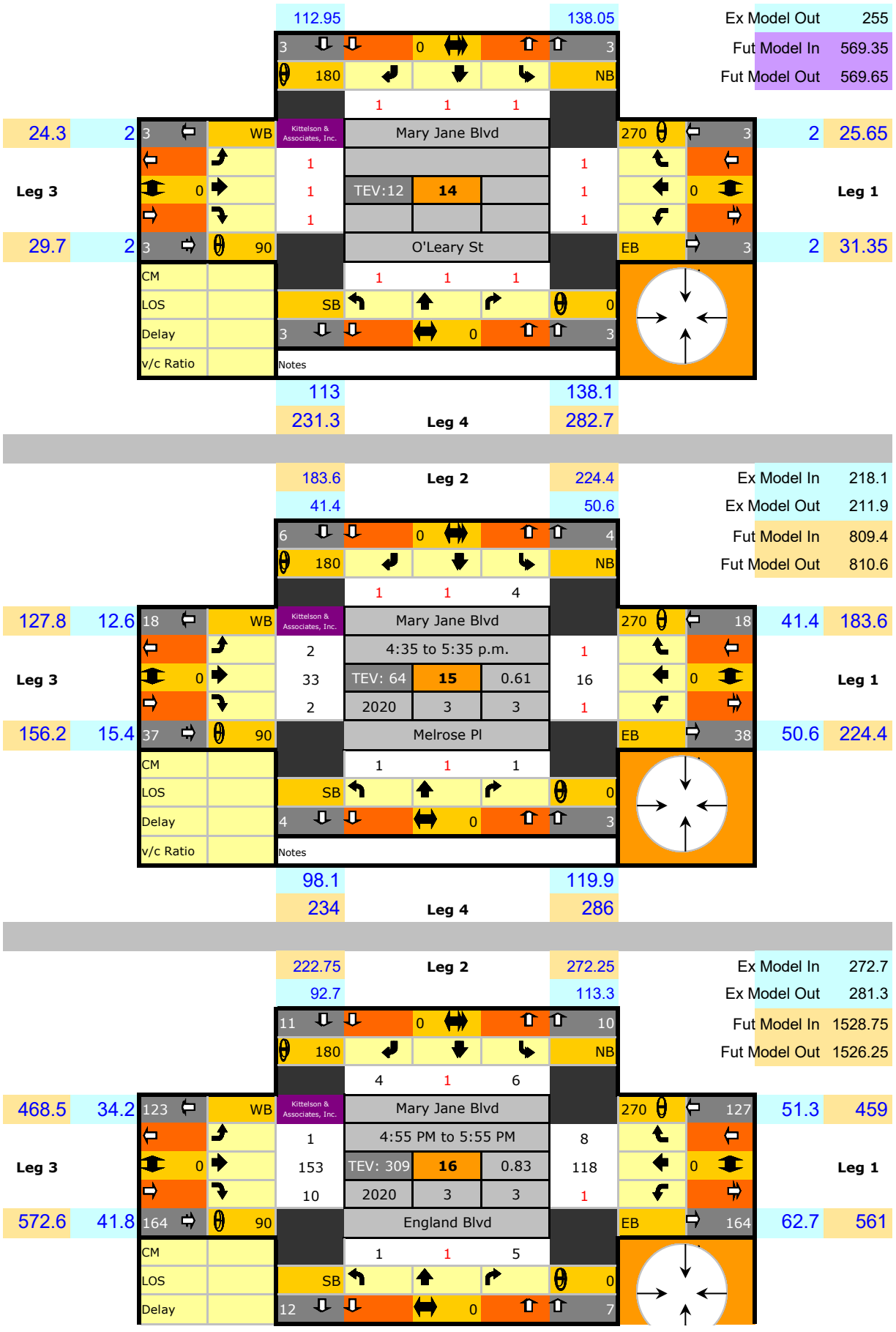
					231.3	282.7					

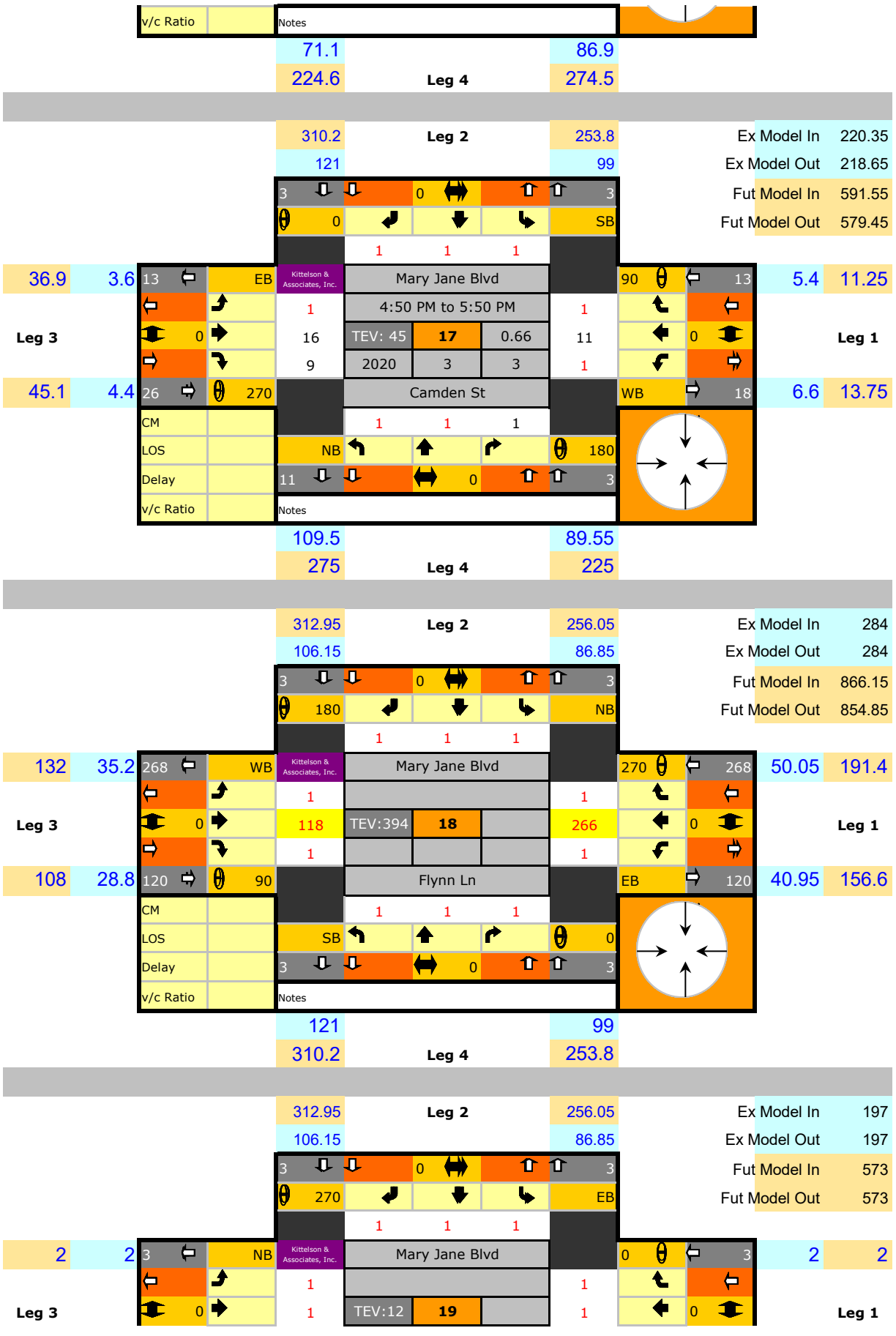
Leg 2

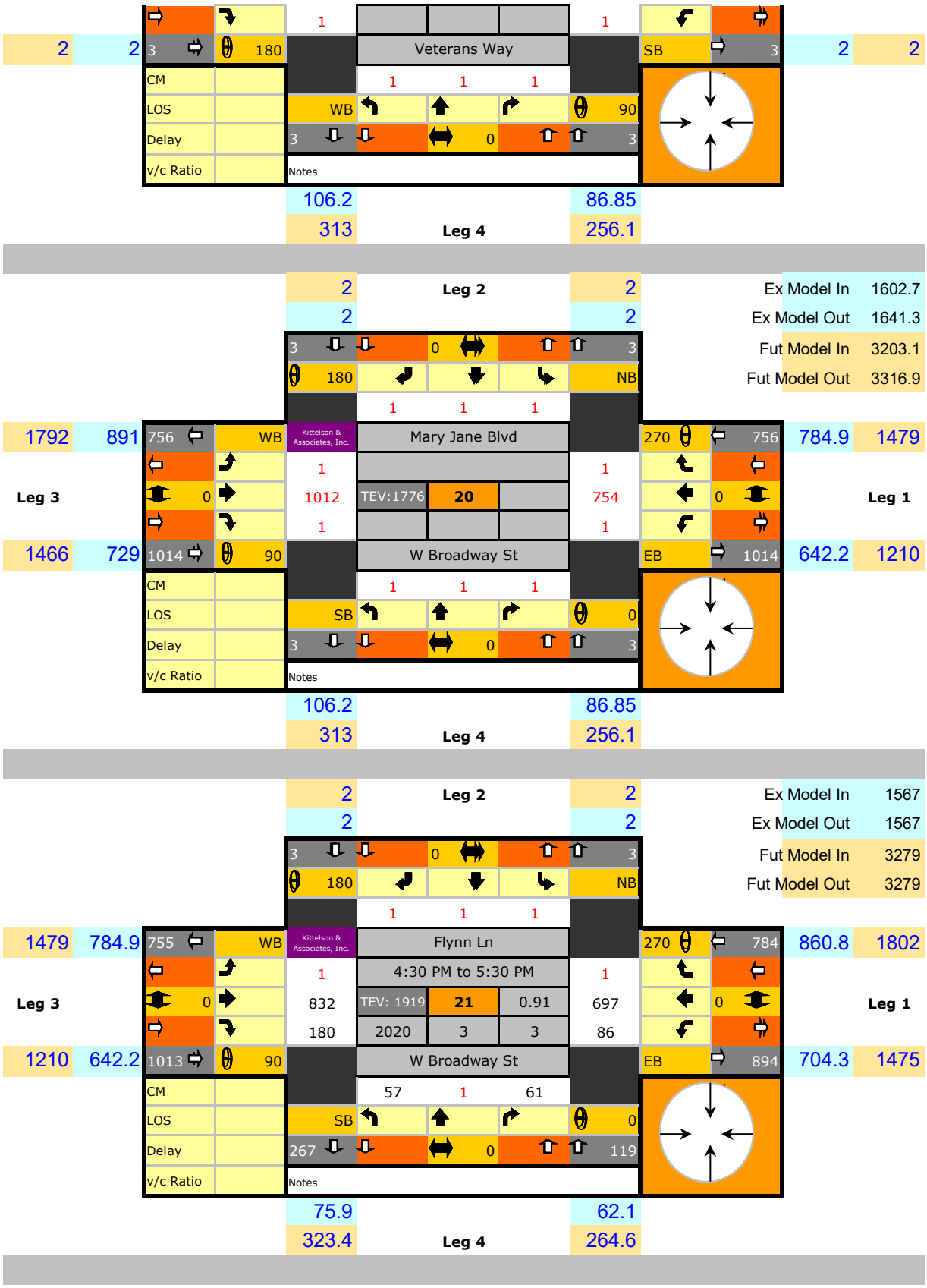
Ex Model In 663
Ex Model Out 809
Fut Model In 1049.7
Fut Model Out 1252.3

Ex Model In 1565.25
Ex Model Out 1591.75
Fut Model In 2480.3
Fut Model Out 2507.7

Ex Model In 255

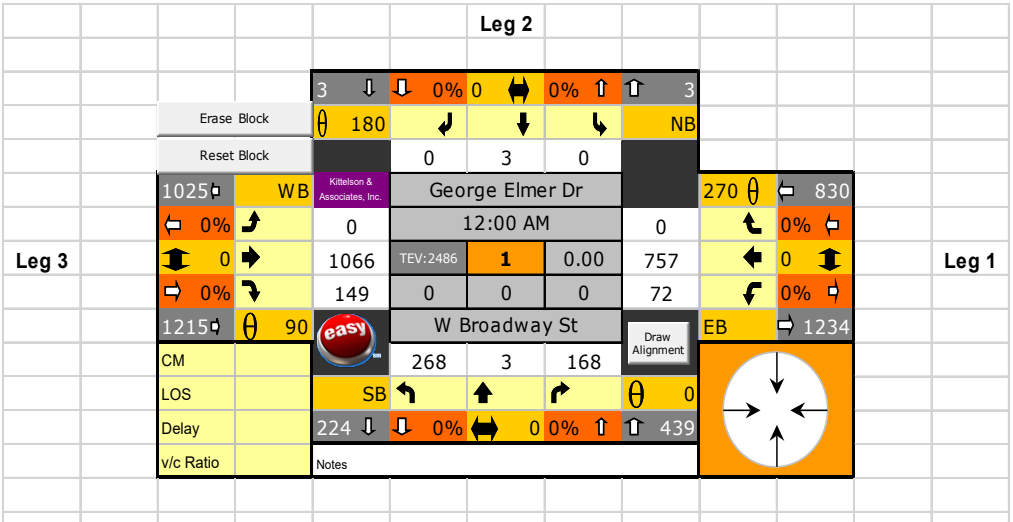

112.95
138.05
Ex Model Out 255
Fut Model In 569.35
Fut Model Out 569.65
NB
WB
EB
SB
Kittelson & Associates, Inc.
Mary Jane Blvd
O'Leary St
TEV:12
14
Leg 3
Leg 1
Leg 4
CM
LOS
Delay
v/c Ratio
Notes
24.3
2
29.7
2
25.65
31.35
113
138.1
231.3
282.7
183.6
224.4
41.4
50.6
Ex Model In 218.1
Ex Model Out 211.9
Fut Model In 809.4
Fut Model Out 810.6
Melrose Pl
4:35 to 5:35 p.m.
TEV: 64
15
0.61
2020
127.8
12.6
156.2
15.4
41.4
183.6
50.6
224.4
98.1
119.9
234
286
222.75
272.25
92.7
113.3
Ex Model In 272.7
Ex Model Out 281.3
Fut Model In 1528.75
Fut Model Out 1526.25
4:55 PM to 5:55 PM
TEV: 309
16
0.83
England Blvd
468.5
34.2
572.6
41.8
51.3
459
62.7
561

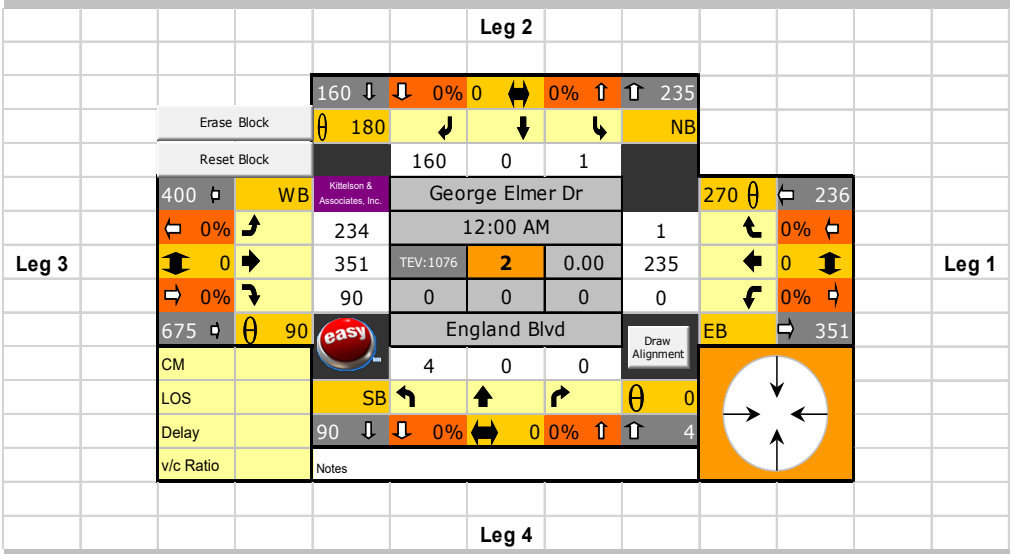

v/c Ratio
Notes
71.1
224.6
Leg 4
86.9
274.5
310.2
Leg 2
253.8
121
99
Ex Model In 220.35
Ex Model Out 218.65
Fut Model In 591.55
Fut Model Out 579.45
3 0 3
0 SB
1 1 1
36.9 3.6 13 EB
Kittelson & Associates, Inc.
Mary Jane Blvd
90 13 5.4 11.25
1
4:50 PM to 5:50 PM
1
Leg 3
0
16
TEV: 45 17 0.66
11
0
Leg 1
9
2020 3 3
1
45.1 4.4 26 270
Camden St
WB 18 6.6 13.75
CM
1 1 1
LOS
NB
180
Delay
11 0 3
v/c Ratio
Notes
109.5
275
Leg 4
89.55
225
312.95
Leg 2
256.05
106.15
86.85
Ex Model In 284
Ex Model Out 284
Fut Model In 866.15
Fut Model Out 854.85
3 0 3
180 NB
1 1 1
132 35.2 268 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 268 50.05 191.4
1
1
Leg 3
0
118
TEV:394 18
266
0
Leg 1
1
1
108 28.8 120 90
Flynn Ln
EB 120 40.95 156.6
CM
1 1 1
LOS
SB
0
Delay
3 0 3
v/c Ratio
Notes
121
310.2
Leg 4
99
253.8
312.95
Leg 2
256.05
106.15
86.85
Ex Model In 197
Ex Model Out 197
Fut Model In 573
Fut Model Out 573
3 0 3
270 EB
1 1 1
2 2 3 NB
Kittelson & Associates, Inc.
Mary Jane Blvd
0 3 2 2
1
1
Leg 3
0
1
TEV:12 19
1
0
Leg 1

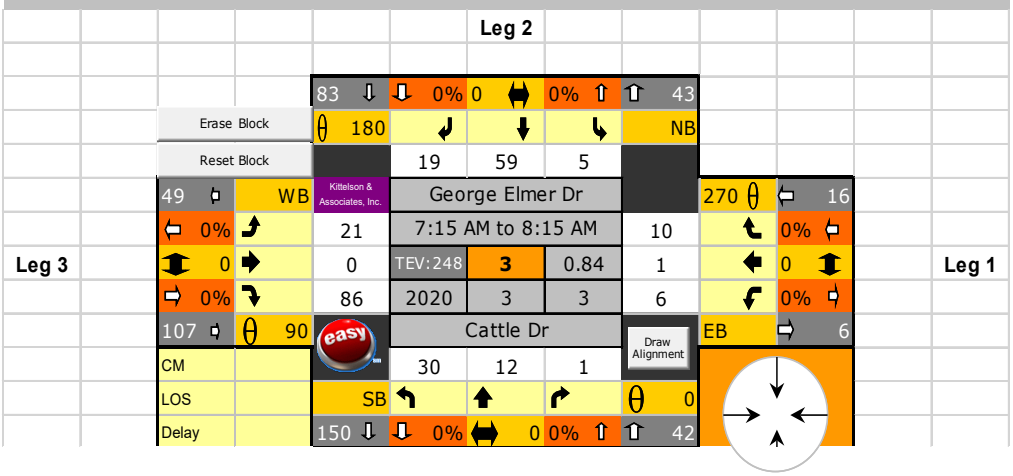

Veterans Way
SB
WB
NB
EB
Leg 4
Leg 2
Leg 3
Leg 1
Ex Model In 1602.7
Ex Model Out 1641.3
Fut Model In 3203.1
Fut Model Out 3316.9
Kittelson & Associates, Inc.
Mary Jane Blvd
W Broadway St
TEV:1776
20
Ex Model In 1567
Ex Model Out 1567
Fut Model In 3279
Fut Model Out 3279
Flynn Ln
4:30 PM to 5:30 PM
TEV: 1919
21
0.91
CM
LOS
Delay
v/c Ratio
Notes

NCHRP 255 Post Processing Output (AM)

Step 2 - Analyze Output







		v/c Ratio		Notes									
						Leg 4							

						Leg 2							
				153	0%	0	0%	54					
		Erase Block		180				NB					
		Reset Block			1	150	1						
		3	WB	Kittelson & Associates, Inc.	George Elmer Dr			270	3				
		0%		1	12:00 AM		1		0%				
Leg 3		0		1	TEV:212	4	0.00	1		0		Leg 1	
		0%		1	0	0	0	1		0%			
		3	90	easy	Heron's Landing			EB	3				
		CM			1	51	1	Draw Alignment					
		LOS		SB				0					
		Delay		153	0%	0	0%	54					
		v/c Ratio		Notes									
						Leg 4							

						Leg 2							
				146	0%	0	0%	46					
		Erase Block		180				NB					
		Reset Block			15	1	131						
		421	WB	Kittelson & Associates, Inc.	George Elmer Dr			270	448				
		0%		3	7:15 AM to 8:15 AM		42		0%				
Leg 3		0		1603	TEV:2205	5	0.94	405		0		Leg 1	
		0%		1	2020	3	3	1		0%			
		1607	90	easy	Mullan Rd			EB	1735				
		CM			1	1	1	Draw Alignment					
		LOS		SB				0					
		Delay		3	0%	0	0%	3					
		v/c Ratio		Notes									
						Leg 4							

						Leg 2							
				205	0%	0	0%	314					
		Erase Block		180				NB					
		Reset Block			205	0	0						
		443	WB	Kittelson & Associates, Inc.	Dougherty Dr			270	234				
		0%		313	12:00 AM		0		0%				
Leg 3		0		345	TEV:1105	6	0.00	234		0		Leg 1	
		0%		3	0	0	0	0		0%			
		662	90	easy	England Blvd			EB	346				
		CM			5	0	0	Draw Alignment					
		LOS		SB				0					
		Delay		3	0%	0	0%	5					
		v/c Ratio		UNSIGNALIZED									
						Leg 4							

Leg 4

Leg 2

			4	0%	0	0%	3					
		Erase Block	180				NB					
		Reset Block		0	4	0						
		932 WB	Kittelson & Associates, Inc.	Dougherty Dr				270	1350			
		0%	0	12:00 AM			0		0%			
Leg 3		0	1139	TEV:3435	7	0.00	755		0		Leg 1	
		0%	405	0	0	0	594		0%			
		1544 90	easy	W Broadway St			Draw Alignment	EB	1497			
		CM		176	3	358						
		LOS	SB				0					
		Delay	1003	0%	0	0%	537					
		v/c Ratio	UNSIGNALIZED									

Leg 4

Leg 2

			148	0%	0	0%	278					
		Erase Block	180				NB					
		Reset Block		1	140	6						
		3 WB	Kittelson & Associates, Inc.	Flynn Ln				270	43			
		0%	1	7:25 AM to 8:25 AM			31		0%			
Leg 3		0	1	TEV:450	8	0.82	1		0		Leg 1	
		0%	1	2020	3	3	11		0%			
		3 90	easy	Camden St			Draw Alignment	EB	17			
		CM		1	246	10						
		LOS	SB				0					
		Delay	153	0%	0	0%	257					
		v/c Ratio	Notes									

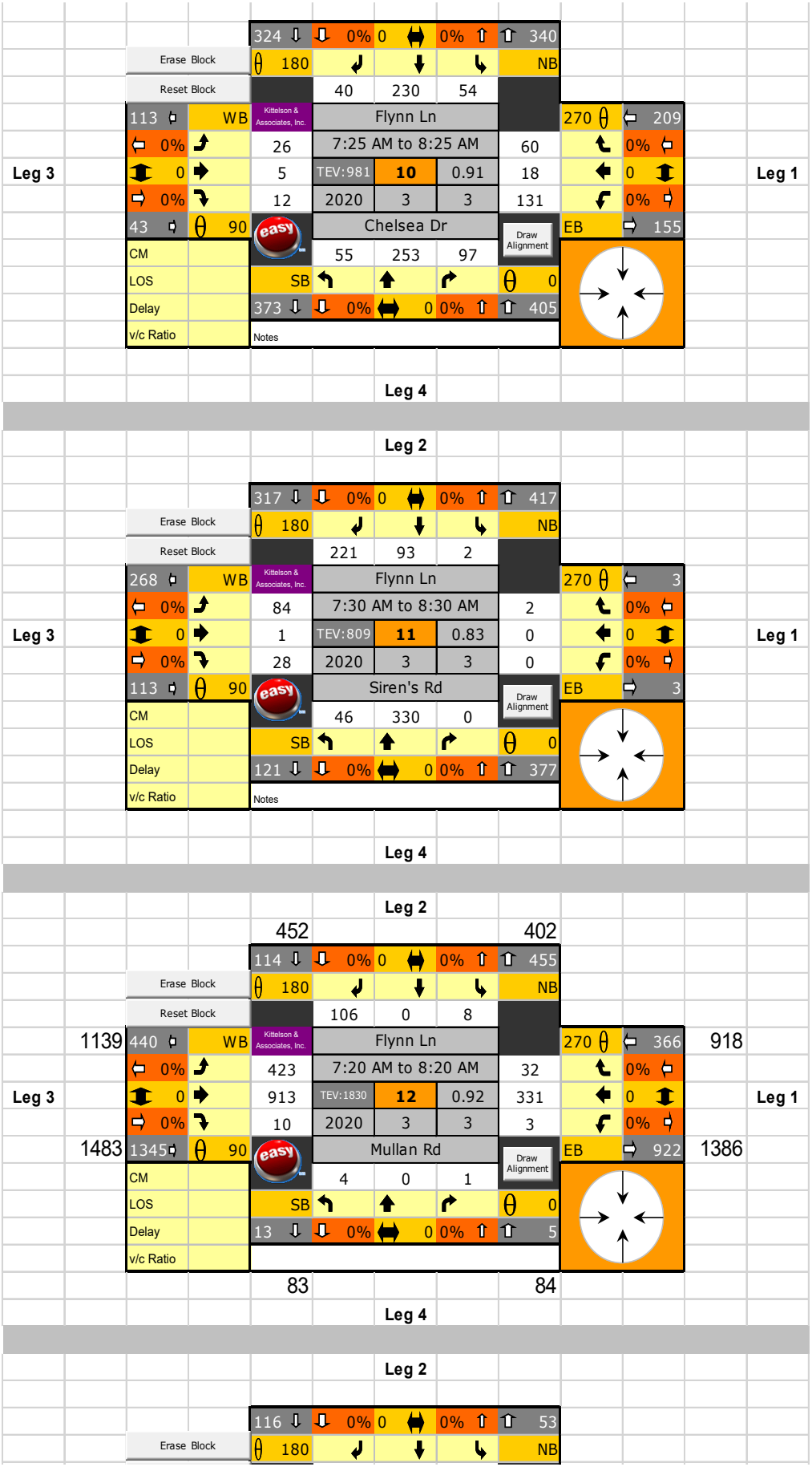
Leg 4

Leg 2

			103	0%	0	0%	256					
		Erase Block	180				NB					
		Reset Block		19	29	55						
		154 WB	Kittelson & Associates, Inc.	Flynn Ln				270	595			
		0%	33	7:25 AM to 8:25 AM			177		0%			
Leg 3		0	188	TEV:1221	9	0.83	129		0		Leg 1	
		0%	13	2020	3	3	289		0%			
		235 90	easy	England Blvd			Draw Alignment	EB	480			
		CM		6	46	236						
		LOS	SB				0					
		Delay	331	0%	0	0%	289					
		v/c Ratio	Notes									

Leg 4

Leg 2


Erase Block
Reset Block
Kittelson & Associates, Inc.
Flynn Ln
7:25 AM to 8:25 AM
TEV:981
10
Chelsea Dr
Draw Alignment
WB
EB
NB
SB
CM
LOS
Delay
v/c Ratio
Notes
Leg 1
Leg 2
Leg 3
Leg 4
Erase Block
Reset Block
Kittelson & Associates, Inc.
Flynn Ln
7:30 AM to 8:30 AM
TEV:809
11
Siren's Rd
Draw Alignment
WB
EB
NB
SB
CM
LOS
Delay
v/c Ratio
Notes
Leg 1
Leg 2
Leg 3
Leg 4
Erase Block
Reset Block
Kittelson & Associates, Inc.
Flynn Ln
7:20 AM to 8:20 AM
TEV:1830
12
Mullan Rd
Draw Alignment
WB
EB
NB
SB
CM
LOS
Delay
v/c Ratio
Leg 1
Leg 2
Leg 3
Leg 4
Erase Block

Reset Block | 33 | 3 | 80

545 | WB | Kittelson & Associates, Inc. | Mary Jane Blvd | 270 | 547

0% | 16 | 12:00 AM | 35 | 0%

Leg 3 | 0 | 1311 | TEV:1993 | 13 | 0.00 | 512 | 0 | Leg 1

0% | 0 | 0 | 0 | 0 | 0%

1327 | 90 | Mullan Rd | EB | 1391

CM | 0 | 3 | 0 | Draw Alignment

LOS | SB | 0

Delay | 3 | 0% | 0 | 0% | 3

v/c Ratio | Notes

Leg 4

Leg 2

115 | 0% | 0 | 0% | 53

Erase Block | 180 | NB

Reset Block | 26 | 76 | 13

51 | WB | Kittelson & Associates, Inc. | Mary Jane Blvd | 270 | 54

0% | 8 | 12:00 AM | 17 | 0%

Leg 3 | 0 | 2 | TEV:244 | 14 | 0.00 | 9 | 0 | Leg 1

0% | 12 | 0 | 0 | 0 | 28 | 0%

22 | 90 | O'Leary St | EB | 24

CM | 16 | 28 | 8 | Draw Alignment

LOS | SB | 0

Delay | 116 | 0% | 0 | 0% | 53

v/c Ratio | Notes

Leg 4

Leg 2

185 | 0% | 0 | 0% | 68

Erase Block | 180 | NB

Reset Block | 2 | 37 | 146

120 | WB | Kittelson & Associates, Inc. | Mary Jane Blvd | 270 | 270

0% | 0 | 7:30 AM to 8:30 AM | 61 | 0%

Leg 3 | 0 | 34 | TEV:567 | 15 | 0.72 | 115 | 0 | Leg 1

0% | 0 | 2020 | 3 | 3 | 94 | 0%

34 | 90 | Melrose Pl | EB | 248

CM | 2 | 7 | 68 | Draw Alignment

LOS | SB | 0

Delay | 131 | 0% | 0 | 0% | 78

v/c Ratio | Notes

Leg 4

Leg 2

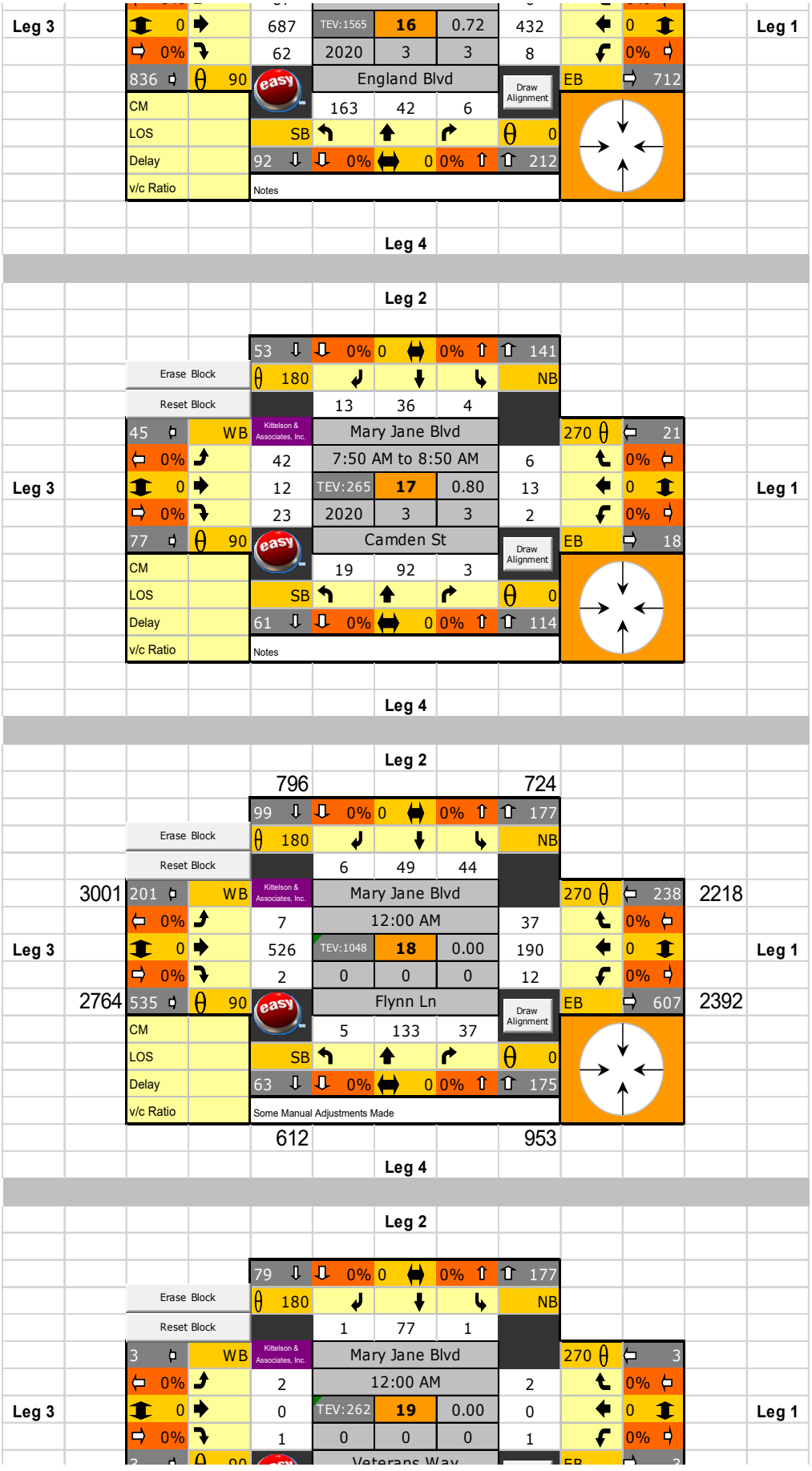
71 | 0% | 0 | 0% | 135

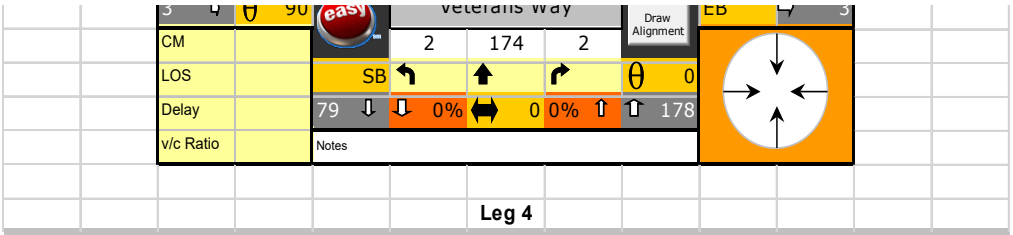
Erase Block | 180 | NB

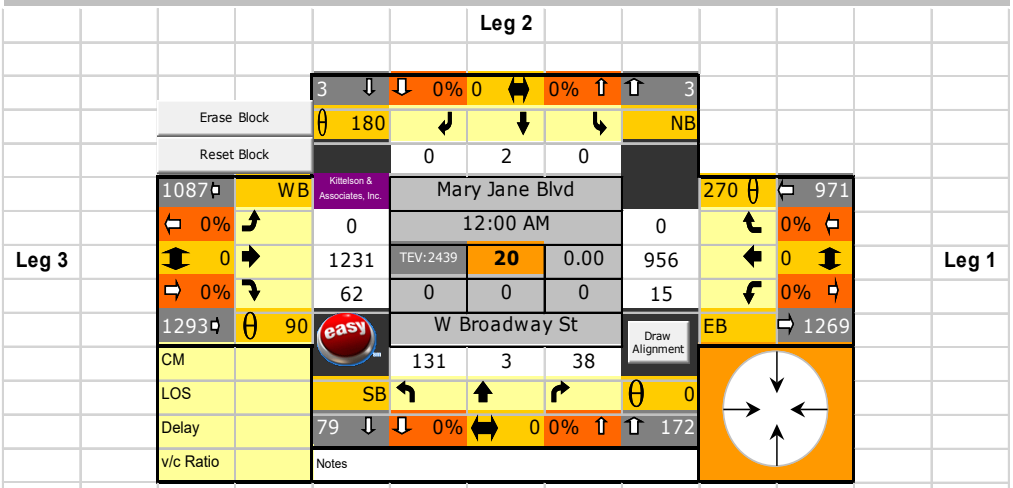
Reset Block | 30 | 22 | 19

626 | WB | Kittelson & Associates, Inc. | Mary Jane Blvd | 270 | 446

0% | 87 | 7:30 AM to 8:30 AM | 6 | 0%

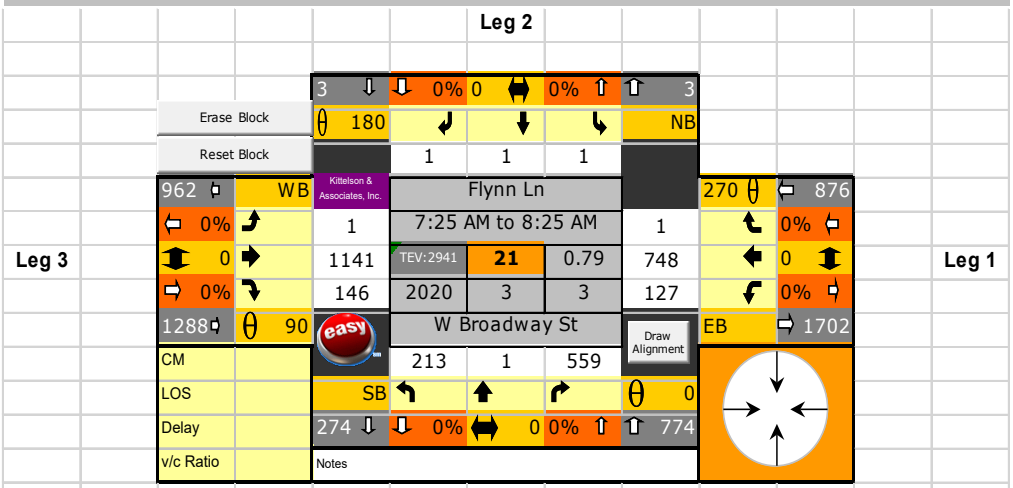

Leg 3
Leg 1
Leg 4
Leg 2
TEV:1565
16
0.72
687
432
62
2020
3
3
8
836
90
easy
England Blvd
Draw Alignment
EB
712
CM
163
42
6
LOS
SB
0
Delay
92
0%
0
0%
212
v/c Ratio
Notes
53
0%
0
0%
141
Erase Block
180
NB
Reset Block
13
36
4
45
WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270
21
42
7:50 AM to 8:50 AM
6
0%
12
TEV:265
17
0.80
13
0
23
2020
3
3
2
77
90
Camden St
EB
18
19
92
3
61
114
796
724
99
177
6
49
44
3001
201
WB
270
238
2218
7
12:00 AM
37
526
TEV:1048
18
0.00
190
2
0
0
0
12
2764
535
90
Flynn Ln
EB
607
2392
5
133
37
63
175
Some Manual Adjustments Made
612
953
79
177
1
77
1
3
WB
270
3
2
12:00 AM
2
0
TEV:262
19
0.00
0
1
0
0
0
1
Veterans Way





Leg 3

Leg 1

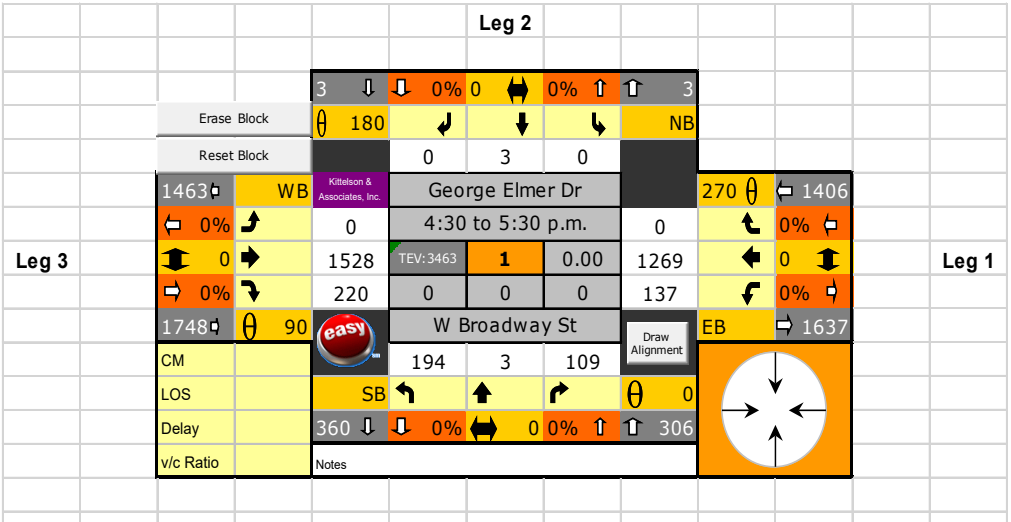


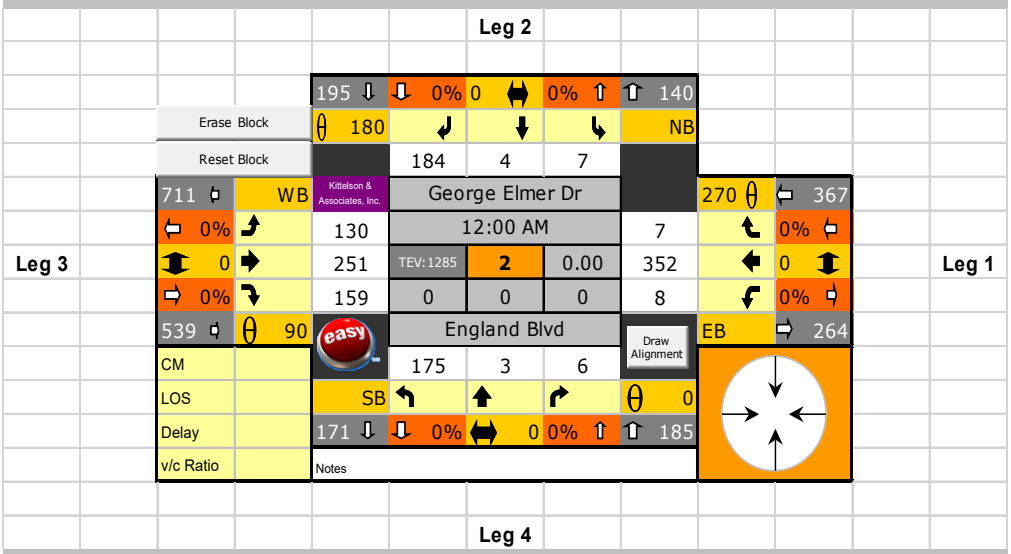
Leg 3

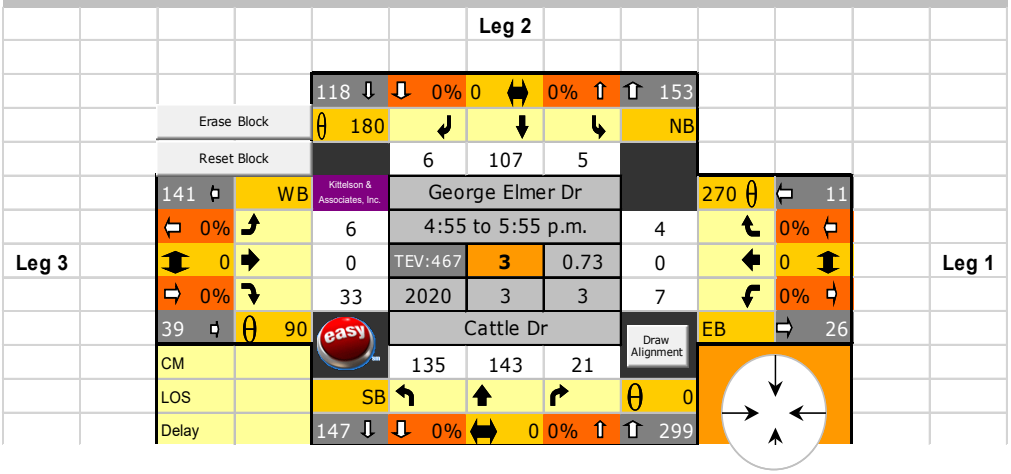
Leg 1

NCHRP 255 Post Processing Output (PM)

Step 2 - Analyze Output







v/c Ratio | Notes

Leg 4

Leg 2

			151	0%	0	0%	347					
	Erase Block		180				NB					
	Reset Block			1	148	1						
	3	WB	Kittelson & Associates, Inc.	George Elmer Dr			270	3				
	0%		1	12:00 AM		1		0%				
Leg 3	0		1	TEV:503	4	0.00	1	0	Leg 1			
	0%		1	0	0	0	1	0%				
	3	90	easy	Heron's Landing		Draw Alignment	EB	3				
	CM			1	344	1						
	LOS		SB				0					
	Delay		151	0%	0	0%	346					
	v/c Ratio		Notes									

Leg 4

Leg 2

			157	0%	0	0%	342					
	Erase Block		180				NB					
	Reset Block			79	2	77						
	1466	WB	Kittelson & Associates, Inc.	George Elmer Dr			270	1582				
	0%		144	5:00 to 6:00 p.m.		196		0%				
Leg 3	0		637	TEV:2524	5	0.94	1385	0	Leg 1			
	0%		1	2020	3	3	0	0%				
	782	90	easy	Mullan Rd		Draw Alignment	EB	714				
	CM			2	1	0						
	LOS		SB				0					
	Delay		3	0%	0	0%	3					
	v/c Ratio		Notes									

Leg 4

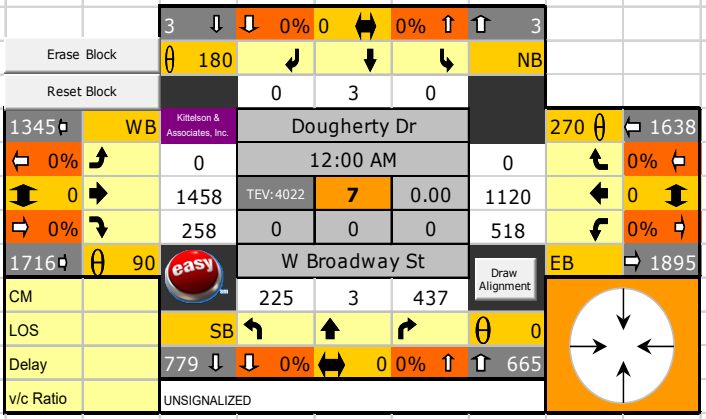
Leg 2

			319	0%	0	0%	267					
	Erase Block		180				NB					
	Reset Block			317	0	2						
	755	WB	Kittelson & Associates, Inc.	Dougherty Dr			270	438				
	0%		264	12:00 AM		3		0%				
Leg 3	0		249	TEV:1277	6	0.00	435	0	Leg 1			
	0%		3	0	0	0	0	0%				
	516	90	easy	England Blvd		Draw Alignment	EB	251				
	CM			4	0	0						
	LOS		SB				0					
	Delay		3	0%	0	0%	4					
	v/c Ratio		UNSIGNALIZED									

Leg 4

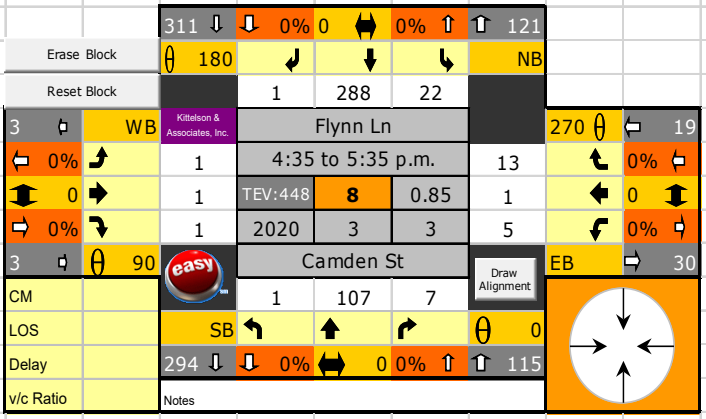
Leg 4

Leg 2



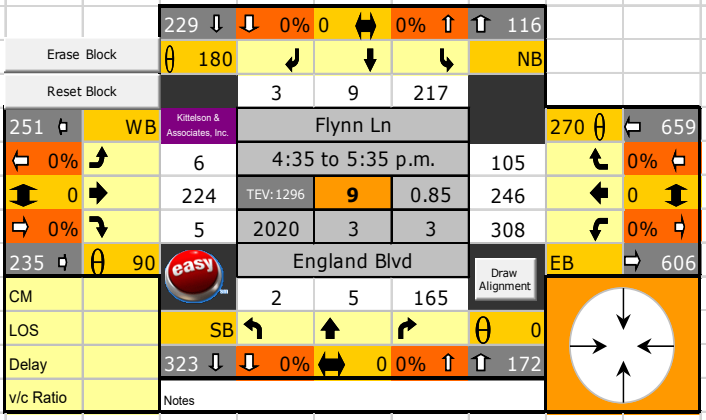
Leg 4

Leg 2



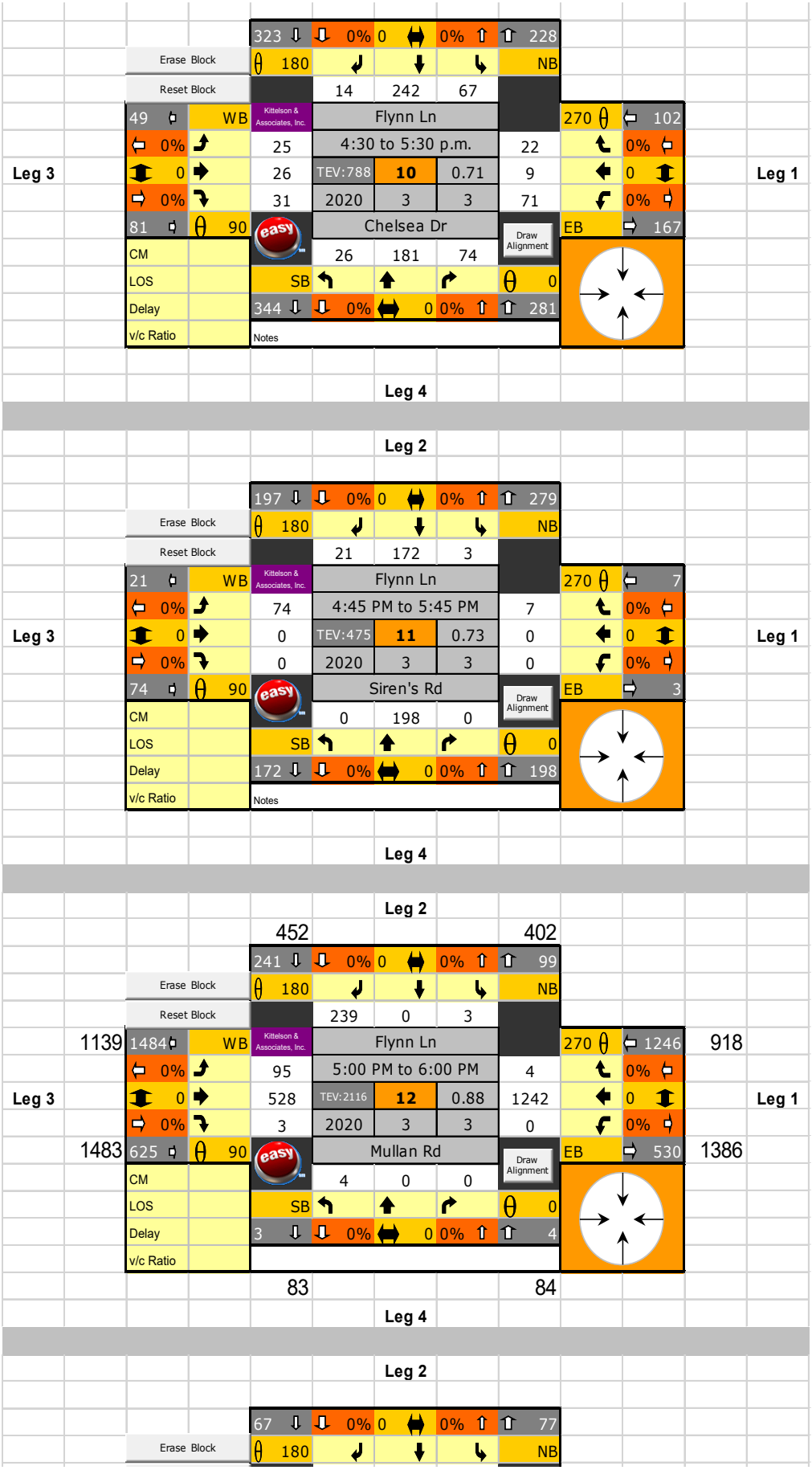
Leg 4

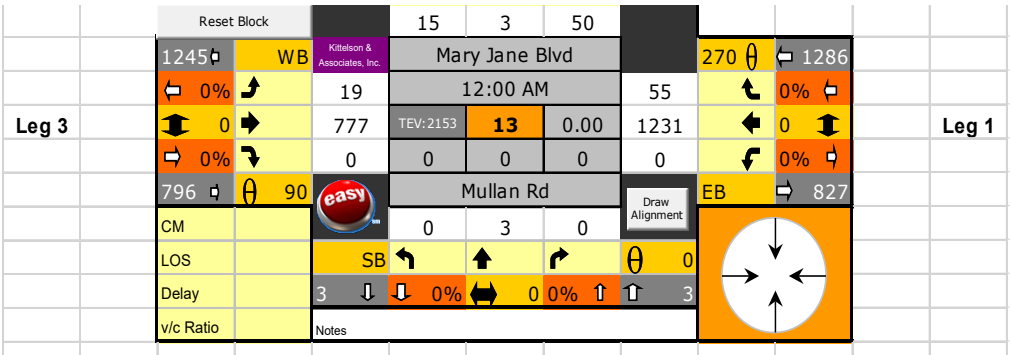
Leg 2

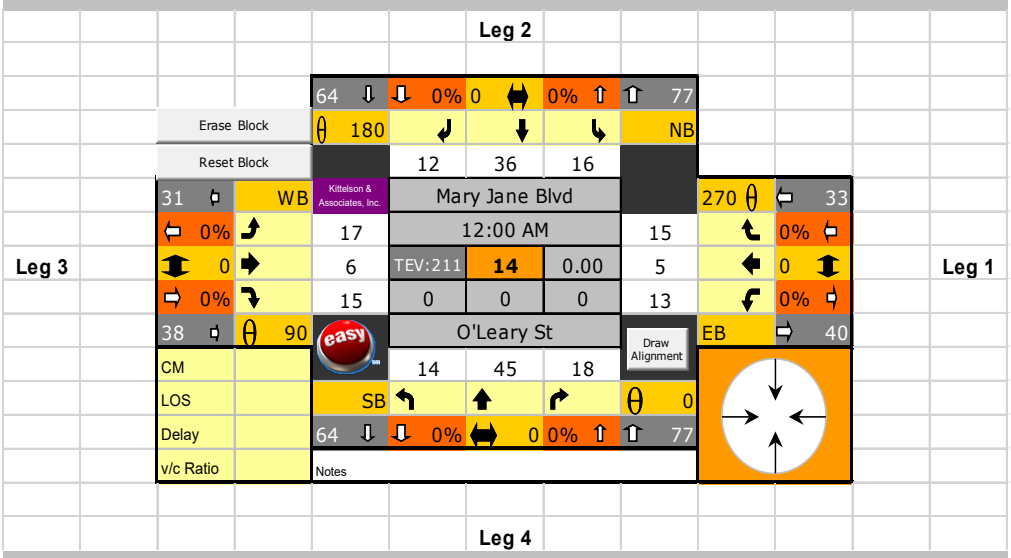


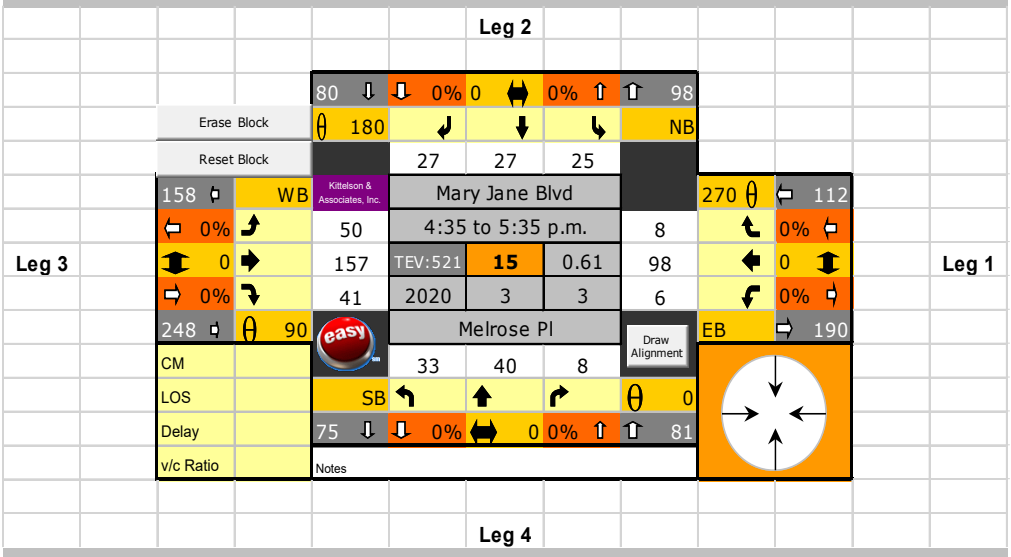
Leg 4

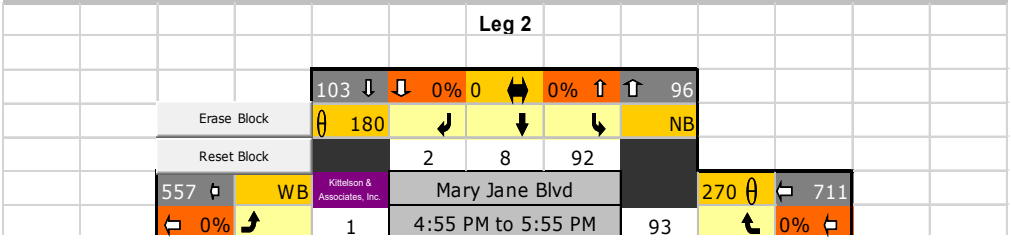
Leg 2

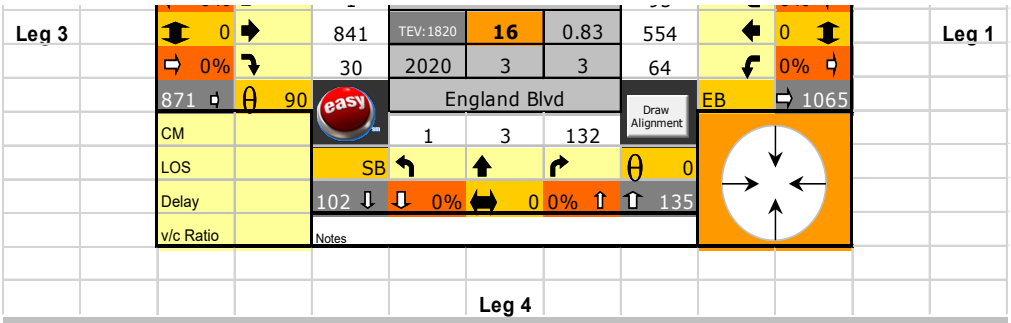

323 0% 0 0% 228
Erase Block
180
NB
Reset Block
14 242 67
49 WB
Kittelson & Associates, Inc.
Flynn Ln
270 102
0% 25 4:30 to 5:30 p.m. 22 0%
Leg 3 0 26 TEV:788 10 0.71 9 0 Leg 1
0% 31 2020 3 3 71 0%
81 90
easy
Chelsea Dr
Draw Alignment
EB 167
CM 26 181 74
LOS SB 0
Delay 344 0% 0 0% 281
v/c Ratio
Notes
Leg 4
Leg 2
197 0% 0 0% 279
Erase Block
180
NB
Reset Block
21 172 3
21 WB
Kittelson & Associates, Inc.
Flynn Ln
270 7
0% 74 4:45 PM to 5:45 PM 7 0%
Leg 3 0 0 TEV:475 11 0.73 0 0 Leg 1
0% 0 2020 3 3 0 0%
74 90
easy
Siren's Rd
Draw Alignment
EB 3
CM 0 198 0
LOS SB 0
Delay 172 0% 0 0% 198
v/c Ratio
Notes
Leg 4
Leg 2
452 402
241 0% 0 0% 99
Erase Block
180
NB
Reset Block
239 0 3
1139 1484 WB
Kittelson & Associates, Inc.
Flynn Ln
270 1246 918
0% 95 5:00 PM to 6:00 PM 4 0%
Leg 3 0 528 TEV:2116 12 0.88 1242 0 Leg 1
0% 3 2020 3 3 0 0%
1483 625 90
easy
Mullan Rd
Draw Alignment
EB 530 1386
CM 4 0 0
LOS SB 0
Delay 3 0% 0 0% 4
v/c Ratio
83 84
Leg 4
Leg 2
67 0% 0 0% 77
Erase Block
180
NB

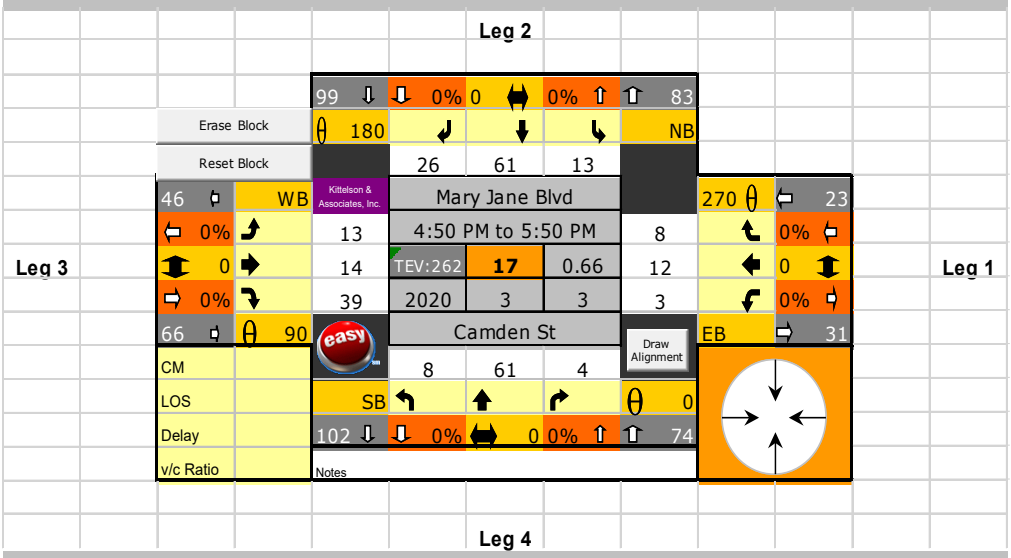

Reset Block
15 3 50
1245 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 1286
0% 19 12:00 AM 55 0%
Leg 3 0 777 TEV:2153 13 0.00 1231 0 Leg 1
0% 0 0 0 0 0%
796 90
easy
Mullan Rd
Draw Alignment
EB 827
CM 0 3 0
LOS SB 0
Delay 3 0% 0 0% 3
v/c Ratio
Notes
Leg 4

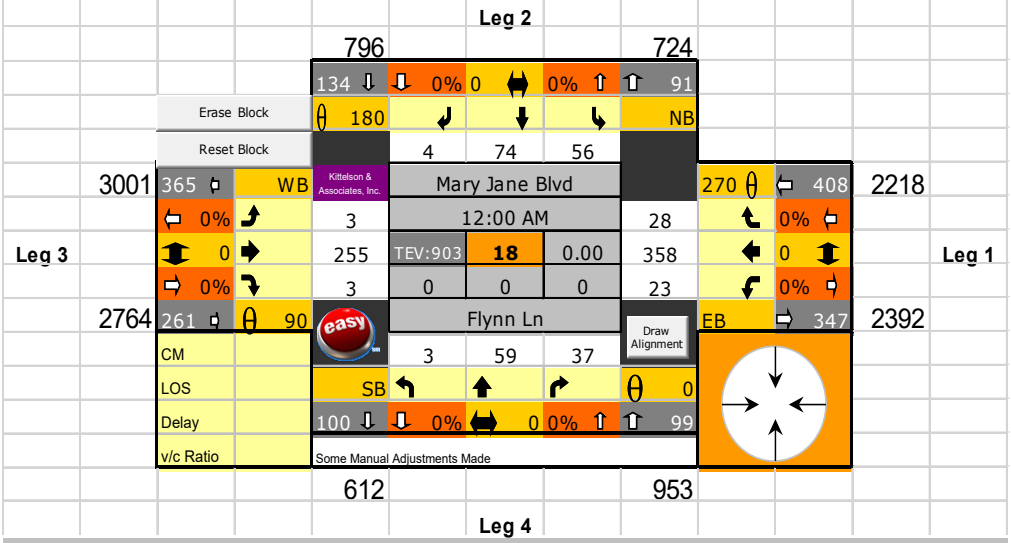

Leg 2
64 0% 0 0% 77
Erase Block 180 NB
Reset Block
12 36 16
31 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 33
0% 17 12:00 AM 15 0%
Leg 3 0 6 TEV:211 14 0.00 5 0 Leg 1
0% 15 0 0 0 13 0%
38 90
easy
O'Leary St
Draw Alignment
EB 40
CM 14 45 18
LOS SB 0
Delay 64 0% 0 0% 77
v/c Ratio
Notes
Leg 4

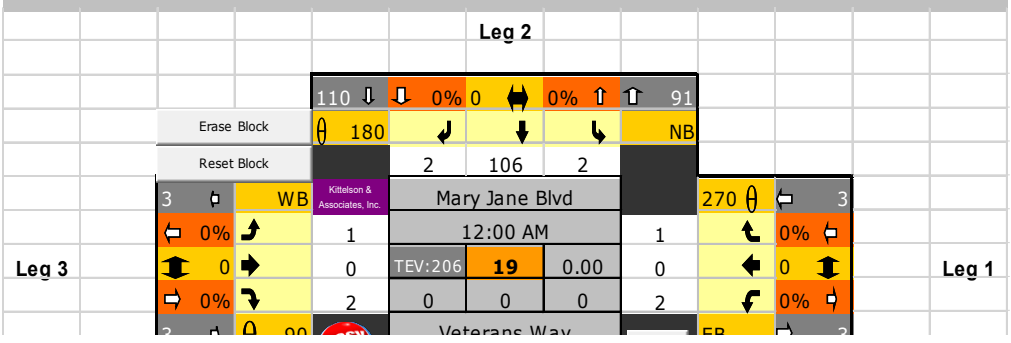

Leg 2
80 0% 0 0% 98
Erase Block 180 NB
Reset Block
27 27 25
158 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 112
0% 50 4:35 to 5:35 p.m. 8 0%
Leg 3 0 157 TEV:521 15 0.61 98 0 Leg 1
0% 41 2020 3 3 6 0%
248 90
easy
Melrose Pl
Draw Alignment
EB 190
CM 33 40 8
LOS SB 0
Delay 75 0% 0 0% 81
v/c Ratio
Notes
Leg 4

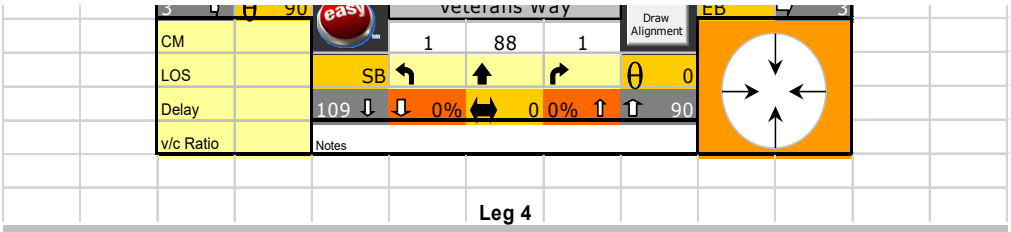

Leg 2
103 0% 0 0% 96
Erase Block 180 NB
Reset Block
2 8 92
557 WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270 711
0% 1 4:55 PM to 5:55 PM 93 0%

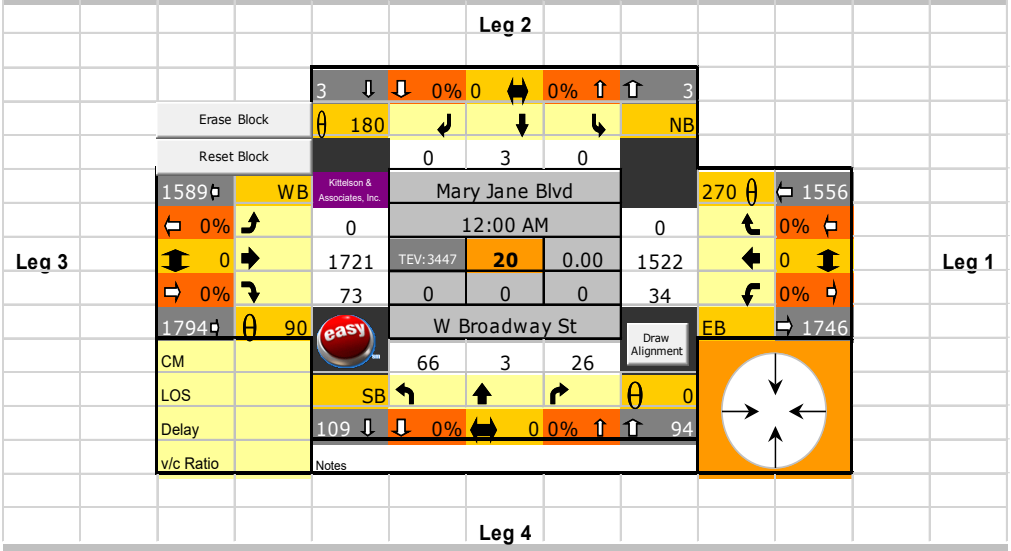

Leg 3
Leg 1
Leg 4
841
TEV:1820
16
0.83
554
30
2020
3
3
64
871
90
easy
England Blvd
Draw Alignment
EB
1065
CM
1
3
132
LOS
SB
0
Delay
102
0%
0
0%
135
v/c Ratio
Notes

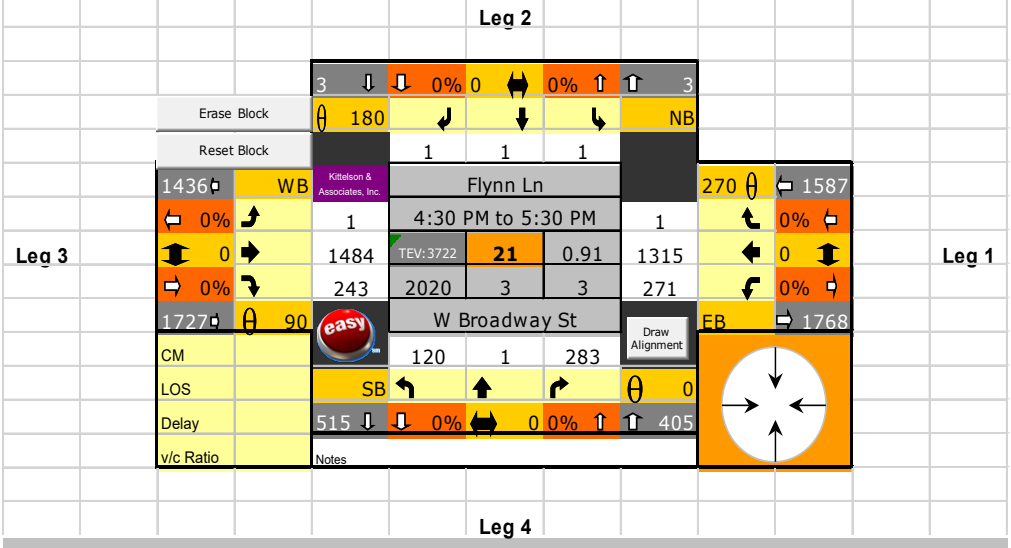

Leg 2
Leg 3
Leg 1
Leg 4
99
0%
0
0%
83
Erase Block
180
NB
Reset Block
26
61
13
46
WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270
23
13
4:50 PM to 5:50 PM
8
14
TEV:262
17
0.66
12
39
2020
3
3
66
90
easy
Camden St
Draw Alignment
EB
31
CM
8
61
4
LOS
SB
0
Delay
102
0%
0
0%
74
v/c Ratio
Notes


Leg 2
796
724
134
0%
0
0%
91
Erase Block
180
NB
Reset Block
4
74
56
3001
365
WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270
408
2218
3
12:00 AM
28
Leg 3
255
TEV:903
18
0.00
358
Leg 1
3
0
0
0
23
2764
261
90
easy
Flynn Ln
Draw Alignment
EB
347
2392
CM
3
59
37
LOS
SB
0
Delay
100
0%
0
0%
99
v/c Ratio
Some Manual Adjustments Made
612
953
Leg 4


Leg 2
110
0%
0
0%
91
Erase Block
180
NB
Reset Block
2
106
2
3
WB
Kittelson & Associates, Inc.
Mary Jane Blvd
270
3
1
12:00 AM
1
Leg 3
0
TEV:206
19
0.00
0
Leg 1
2
0
0
0
2
Veterans Way
EB

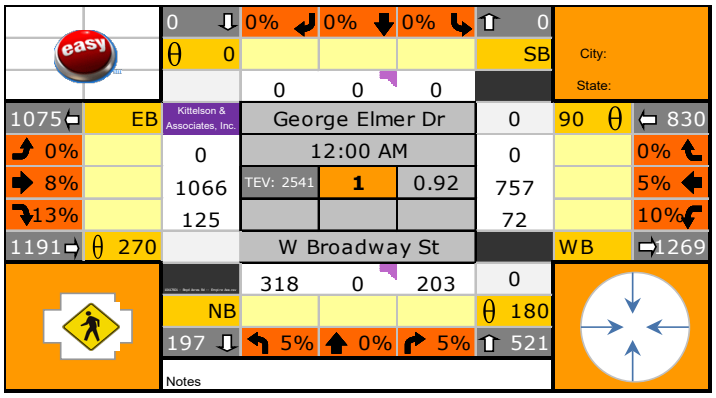

Veterans Way
Draw Alignment
EB
CM
LOS
Delay
v/c Ratio
SB
Notes
Leg 4

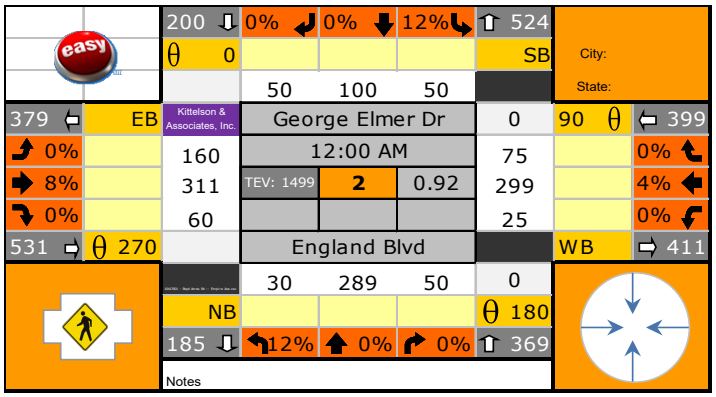

Leg 2
Erase Block
Reset Block
Kittelson & Associates, Inc.
Mary Jane Blvd
12:00 AM
TEV: 3447
20
0.00
W Broadway St
Draw Alignment
EB
WB
NB
CM
LOS
Delay
v/c Ratio
SB
Notes
Leg 3
Leg 1
Leg 4

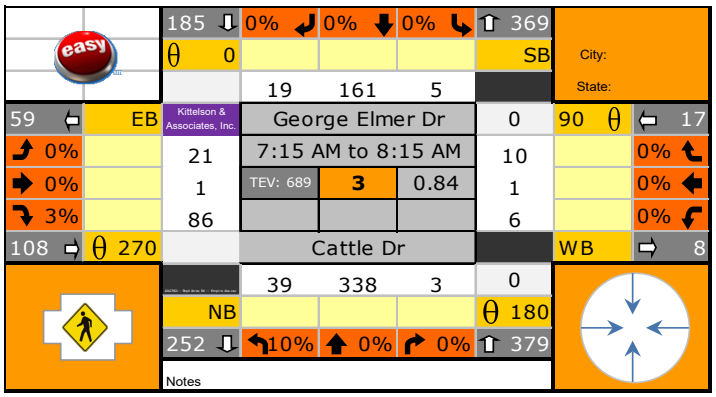

Leg 2
Erase Block
Reset Block
Kittelson & Associates, Inc.
Flynn Ln
4:30 PM to 5:30 PM
TEV: 3722
21
0.91
W Broadway St
Draw Alignment
EB
WB
NB
CM
LOS
Delay
v/c Ratio
SB
Notes
Leg 3
Leg 1
Leg 4

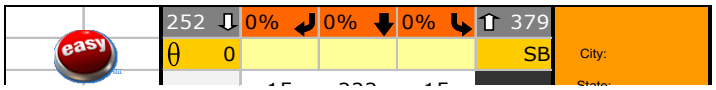
2050 Balanced Turning Movement Counts From NCHRP 255 Post Processing Output (AM)

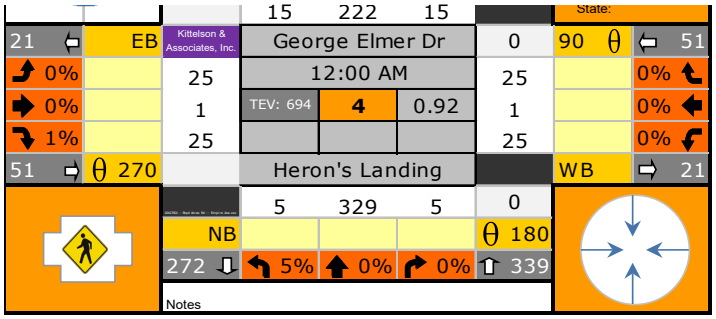
Step 3 - Balance Volumes

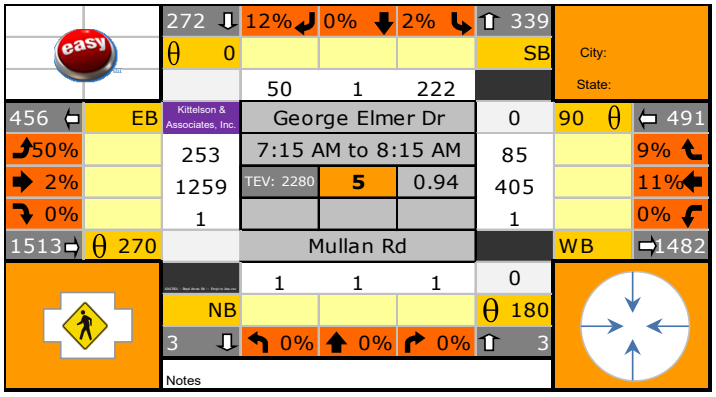


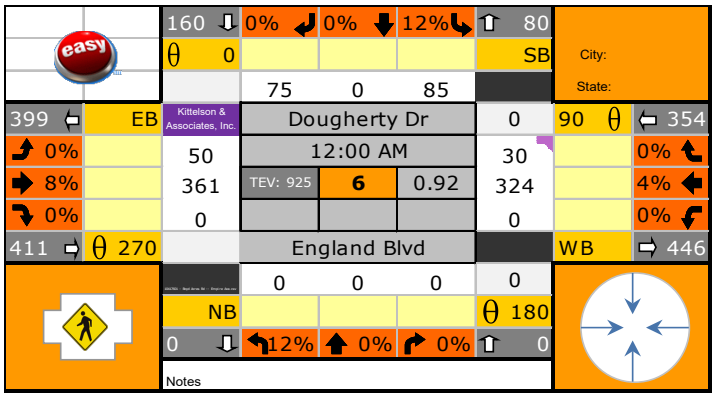


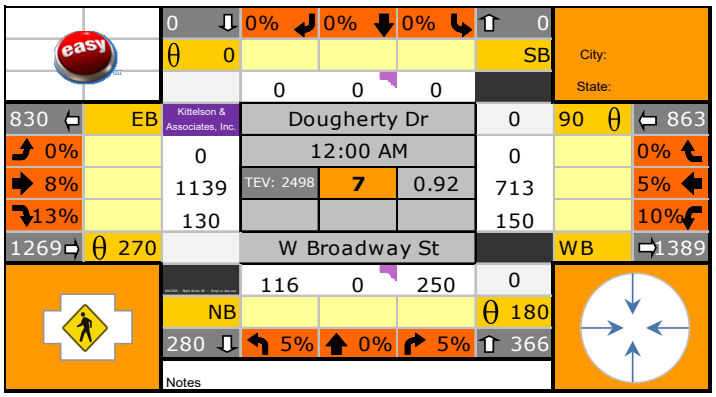


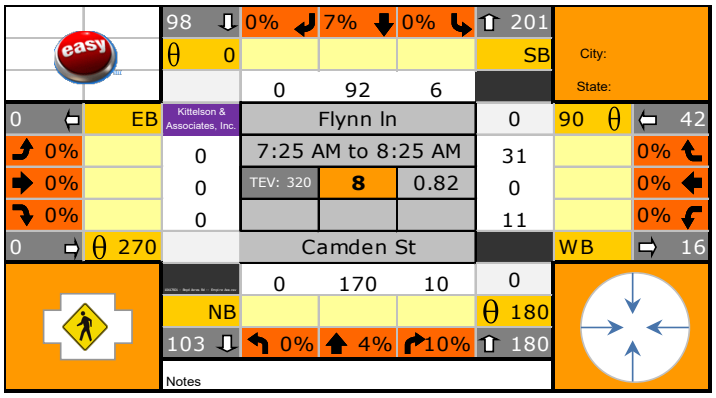


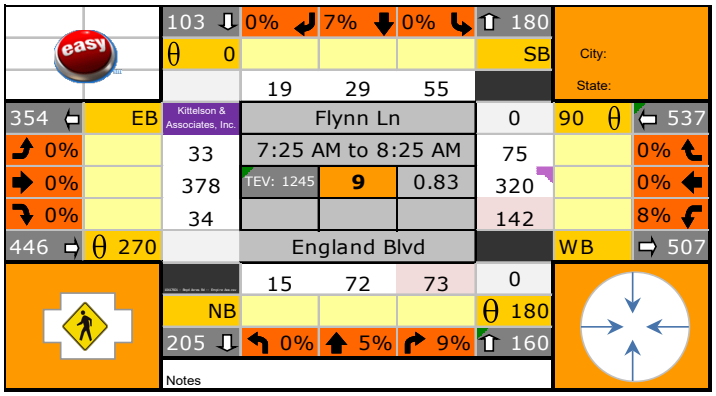

15 222 15
State:
21 EB
Kittelson & Associates, Inc.
George Elmer Dr
0
90 51
0% 25 12:00 AM 25 0%
0% 1 TEV: 694 4 0.92 1 0%
1% 25 25 0%
51 270
Heron's Landing
WB 21
5 329 5
0
NB
180
272 5% 0% 0% 339
Notes

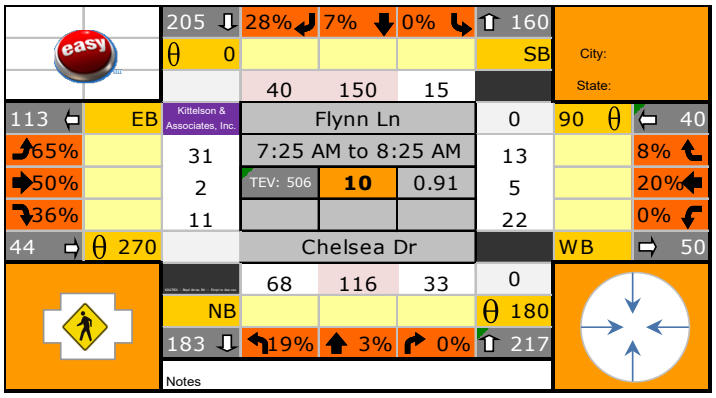

272 12% 0% 2% 339
0
SB
City:
State:
50 1 222
456 EB
Kittelson & Associates, Inc.
George Elmer Dr
0
90 491
50% 253 7:15 AM to 8:15 AM 85 9%
2% 1259 TEV: 2280 5 0.94 405 11%
0% 1 1 0%
1513 270
Mullan Rd
WB 1482
1 1 1
0
NB
180
3 0% 0% 0% 3
Notes

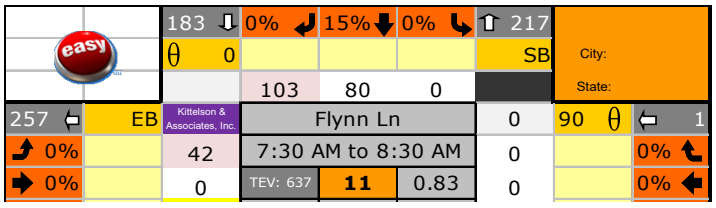

160 0% 0% 12% 80
0
SB
City:
State:
75 0 85
399 EB
Kittelson & Associates, Inc.
Dougherty Dr
0
90 354
0% 50 12:00 AM 30 0%
8% 361 TEV: 925 6 0.92 324 4%
0% 0 0 0%
411 270
England Blvd
WB 446
0 0 0
0
NB
180
0 12% 0% 0% 0
Notes

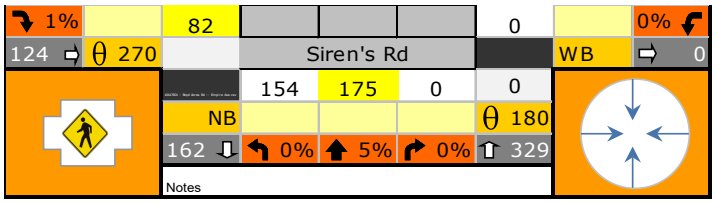

0 0% 0% 0% 0
0
SB
City:
State:
0 0 0
830 EB
Kittelson & Associates, Inc.
Dougherty Dr
0
90 863
0% 0 12:00 AM 0 0%
8% 1139 TEV: 2498 7 0.92 713 5%
13% 130 150 10%
1269 270
W Broadway St
WB 1389
116 0 250
0
NB
180
280 5% 0% 5% 366
Notes

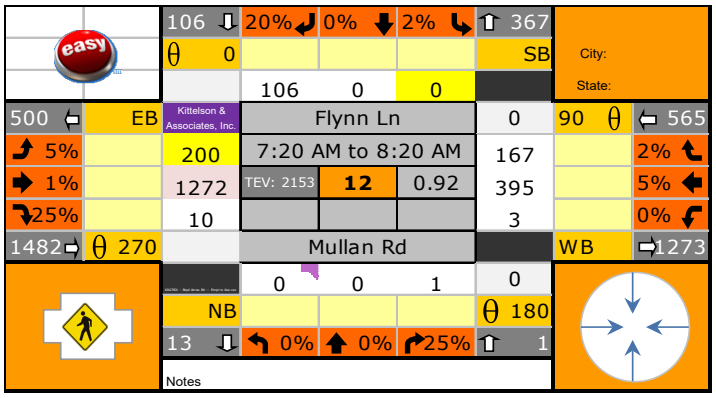

easy
98 0% 7% 0% 201
θ 0 SB
City:
State:
0 92 6
0 EB Kittelson & Associates, Inc. Flynn ln 0 90 θ 42
0% 0 7:25 AM to 8:25 AM 31 0%
0% 0 TEV: 320 8 0.82 0 0%
0% 0 11 0%
0 θ 270 Camden St WB 16
0 170 10 0
NB θ 180
103 0% 4% 10% 180
Notes

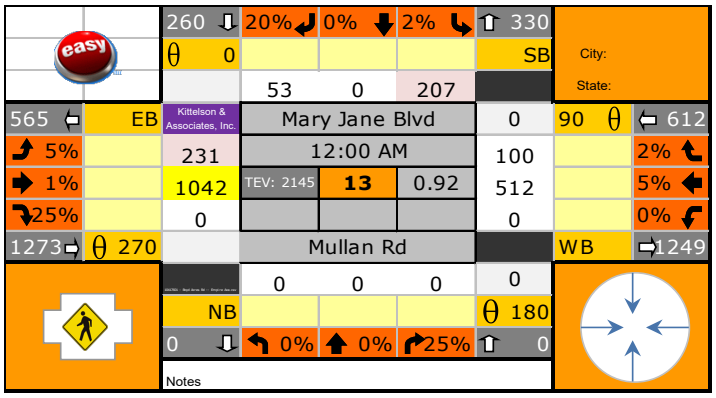

easy
103 0% 7% 0% 180
θ 0 SB
City:
State:
19 29 55
354 EB Kittelson & Associates, Inc. Flynn Ln 0 90 θ 537
0% 33 7:25 AM to 8:25 AM 75 0%
0% 378 TEV: 1245 9 0.83 320 0%
0% 34 142 8%
446 θ 270 England Blvd WB 507
15 72 73 0
NB θ 180
205 0% 5% 9% 160
Notes

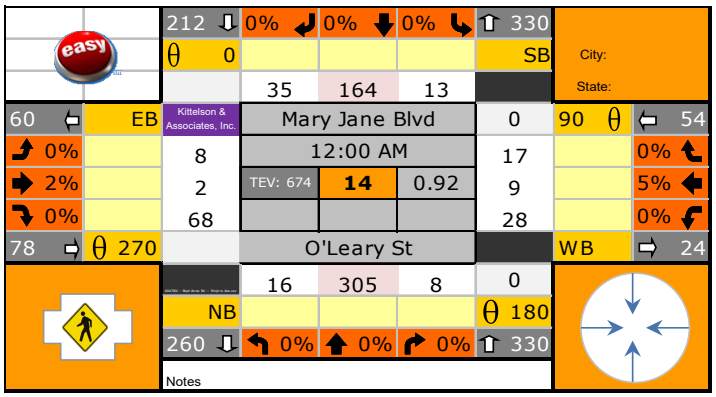

easy
205 28% 7% 0% 160
θ 0 SB
City:
State:
40 150 15
113 EB Kittelson & Associates, Inc. Flynn Ln 0 90 θ 40
65% 31 7:25 AM to 8:25 AM 13 8%
50% 2 TEV: 506 10 0.91 5 20%
36% 11 22 0%
44 θ 270 Chelsea Dr WB 50
68 116 33 0
NB θ 180
183 19% 3% 0% 217
Notes

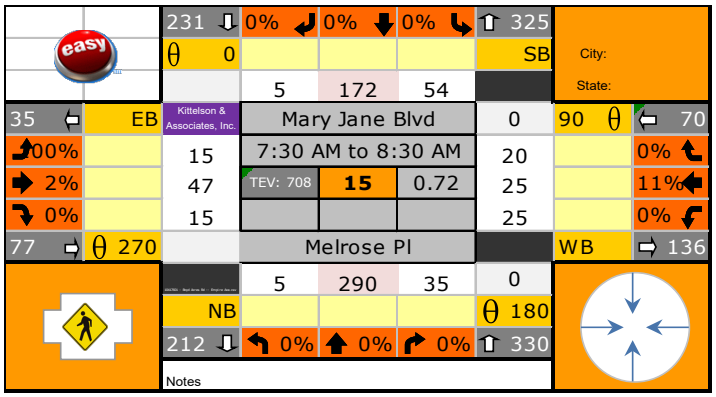

easy
183 0% 15% 0% 217
θ 0 SB
City:
State:
103 80 0
257 EB Kittelson & Associates, Inc. Flynn Ln 0 90 θ 1
0% 42 7:30 AM to 8:30 AM 0 0%
0% 0 TEV: 637 11 0.83 0 0%

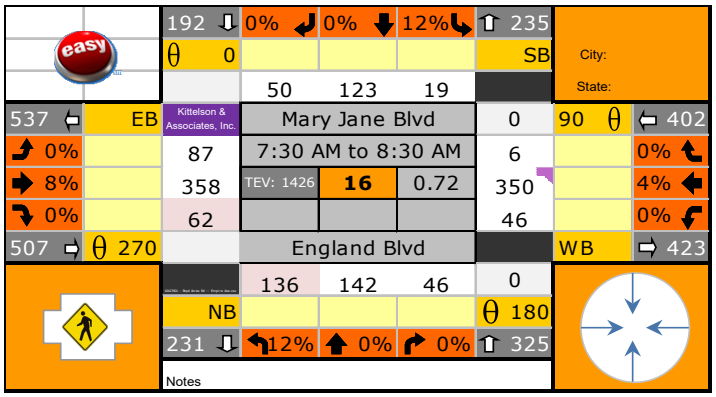

1%
82
0
0%
124
270
Siren's Rd
WB
0
154
175
0
0
NB
180
162
0%
5%
0%
329
Notes

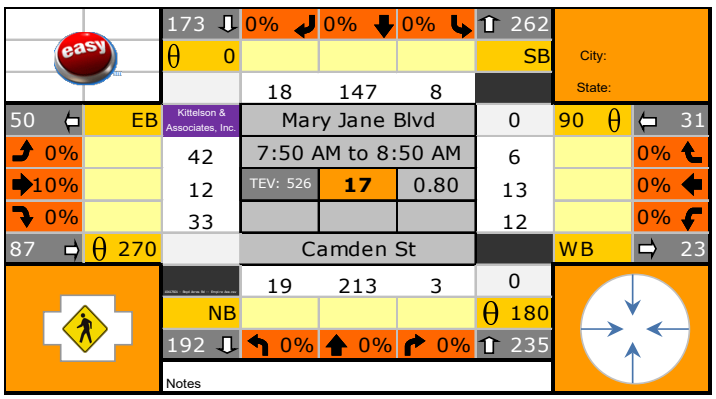

106
20%
0%
2%
367
0
SB
City:
State:
106
0
0
500
EB
Kittelson & Associates, Inc.
Flynn Ln
0
90
565
5%
200
7:20 AM to 8:20 AM
167
2%
1%
1272
TEV: 2153
12
0.92
395
5%
25%
10
3
0%
1482
270
Mullan Rd
WB
1273
0
0
1
0
NB
180
13
0%
0%
25%
1
Notes

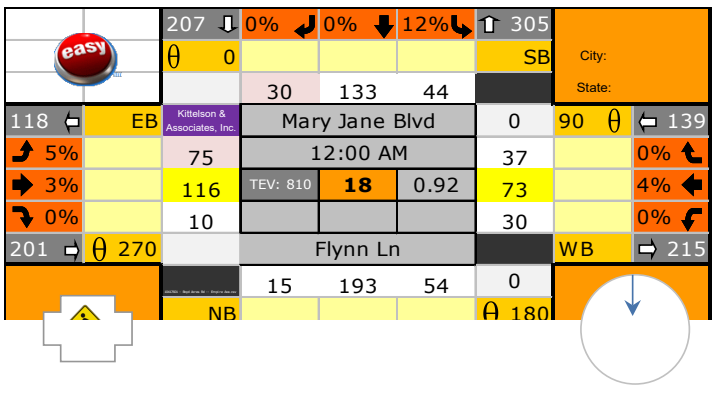

260
20%
0%
2%
330
0
SB
City:
State:
53
0
207
565
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
612
5%
231
12:00 AM
100
2%
1%
1042
TEV: 2145
13
0.92
512
5%
25%
0
0
0%
1273
270
Mullan Rd
WB
1249
0
0
0
0
NB
180
0
0%
0%
25%
0
Notes

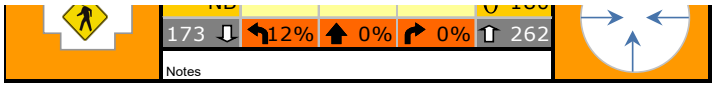

212
0%
0%
0%
330
0
SB
City:
State:
35
164
13
60
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
54
0%
8
12:00 AM
17
0%
2%
2
TEV: 674
14
0.92
9
5%
0%
68
28
0%
78
270
O'Leary St
WB
24
16
305
8
0
NB
180
260
0%
0%
0%
330
Notes

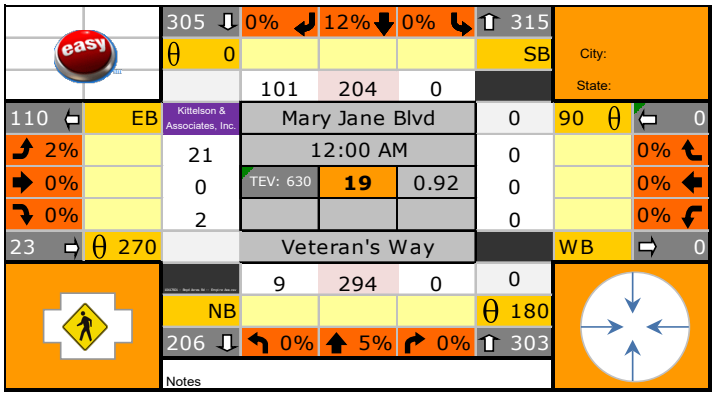

231 0% 0% 0% 325
θ 0
SB
City:
State:
5 172 54
35 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 θ 70
00% 15 7:30 AM to 8:30 AM 20 0%
2% 47 TEV: 708 15 0.72 25 11%
0% 15 25 0%
77 θ 270 Melrose Pl WB 136
5 290 35 0
NB θ 180
212 0% 0% 0% 330
Notes

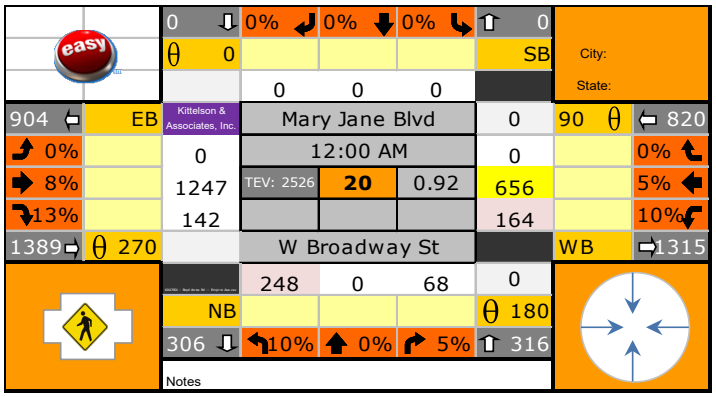

192 0% 0% 12% 235
θ 0
SB
City:
State:
50 123 19
537 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 θ 402
0% 87 7:30 AM to 8:30 AM 6 0%
8% 358 TEV: 1426 16 0.72 350 4%
0% 62 46 0%
507 θ 270 England Blvd WB 423
136 142 46 0
NB θ 180
231 12% 0% 0% 325
Notes

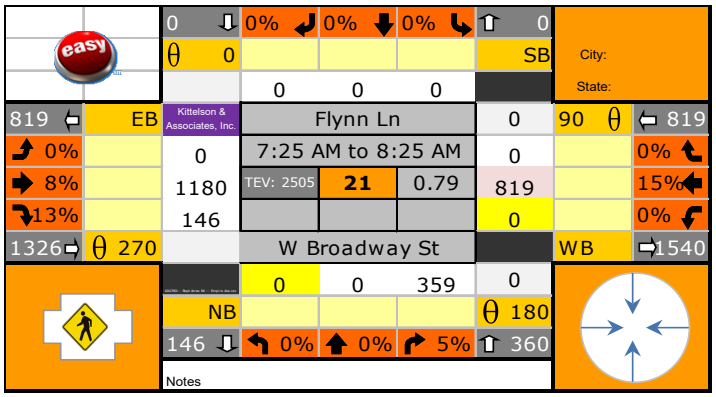

173 0% 0% 0% 262
θ 0
SB
City:
State:
18 147 8
50 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 θ 31
0% 42 7:50 AM to 8:50 AM 6 0%
10% 12 TEV: 526 17 0.80 13 0%
0% 33 12 0%
87 θ 270 Camden St WB 23
19 213 3 0
NB θ 180
192 0% 0% 0% 235
Notes


207 0% 0% 12% 305
θ 0
SB
City:
State:
30 133 44
118 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 θ 139
5% 75 12:00 AM 37 0%
3% 116 TEV: 810 18 0.92 73 4%
0% 10 30 0%
201 θ 270 Flynn Ln WB 215
15 193 54 0
NB θ 180


173
12%
0%
0%
262
Notes

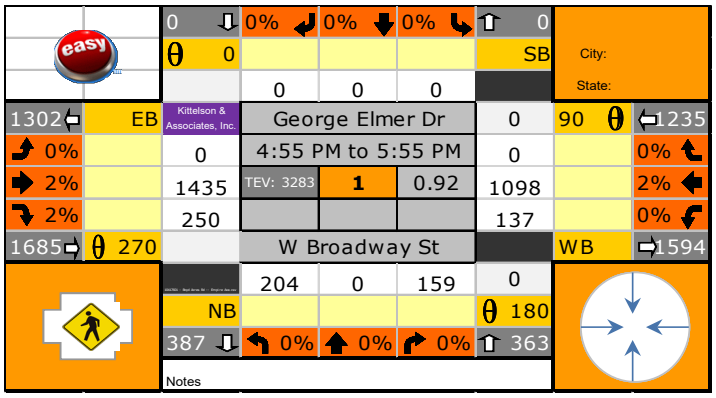

305
0%
12%
0%
315
0
SB
City:
State:
101
204
0
110
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
0
2%
21
12:00 AM
0
0%
0%
0
TEV: 630
19
0.92
0
0%
0%
2
0
0%
23
270
Veteran's Way
WB
0
9
294
0
0
NB
180
206
0%
5%
0%
303
Notes

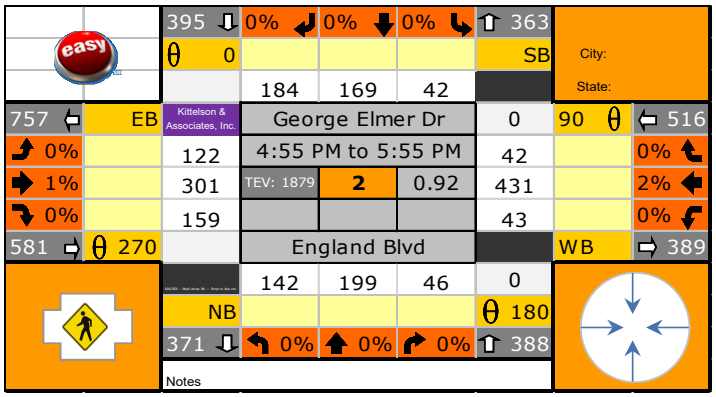

0
0%
0%
0%
0
0
SB
City:
State:
0
0
0
904
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
820
0%
0
12:00 AM
0
0%
8%
1247
TEV: 2526
20
0.92
656
5%
13%
142
164
10%
1389
270
W Broadway St
WB
1315
248
0
68
0
NB
180
306
10%
0%
5%
316
Notes

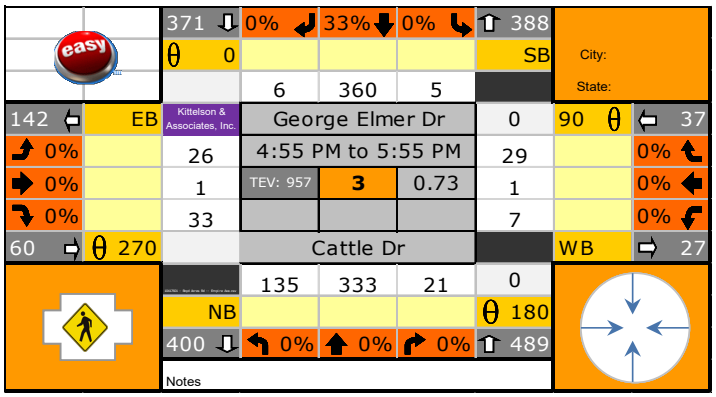

0
0%
0%
0%
0
0
SB
City:
State:
0
0
0
819
EB
Kittelson & Associates, Inc.
Flynn Ln
0
90
819
0%
0
7:25 AM to 8:25 AM
0
0%
8%
1180
TEV: 2505
21
0.79
819
15%
13%
146
0
0%
1326
270
W Broadway St
WB
1540
0
0
359
0
NB
180
146
0%
0%
5%
360
Notes

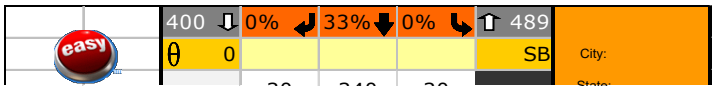
2050 Balanced Turning Movement Counts From NCHRP 255 Post Processing Output (PM)

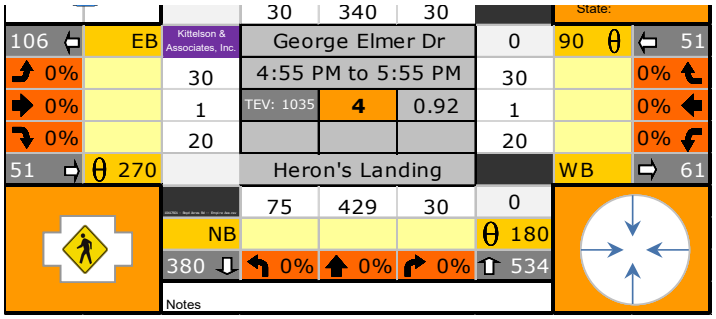
Step 3 - Balance Volumes

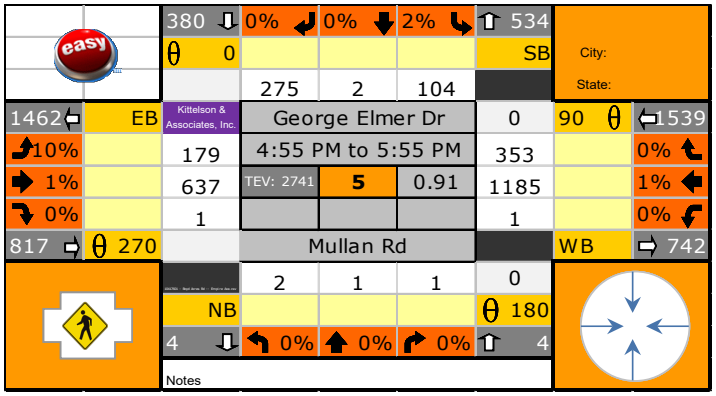


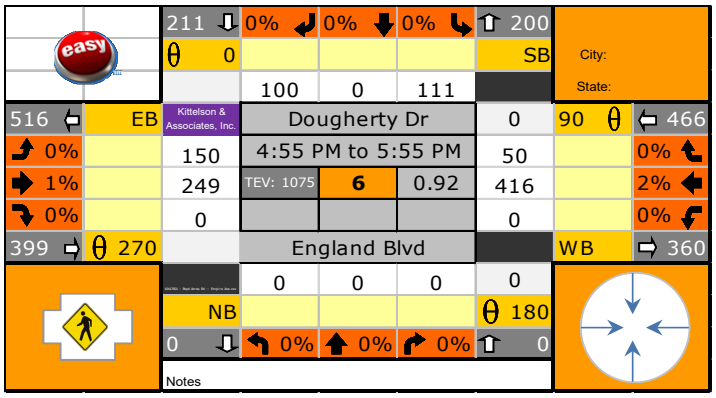


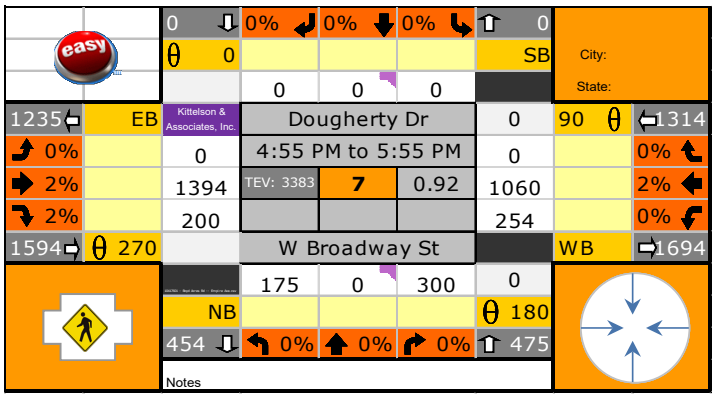


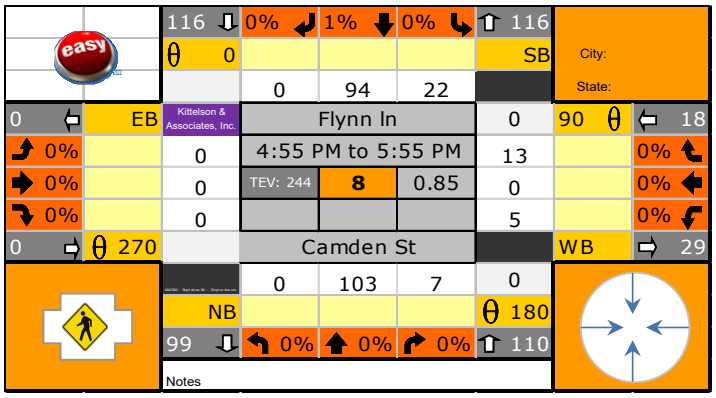


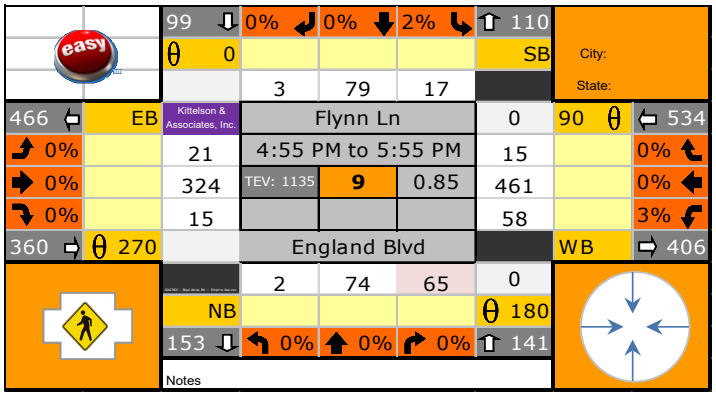

30 340 30
State:
106 EB
Kittelson & Associates, Inc.
George Elmer Dr
0
90 51
0% 30 4:55 PM to 5:55 PM 30 0%
0% 1 TEV: 1035 4 0.92 1 0%
0% 20 20 0%
51 270
Heron's Landing
WB 61
75 429 30 0
NB 180
380 0% 0% 0% 534
Notes

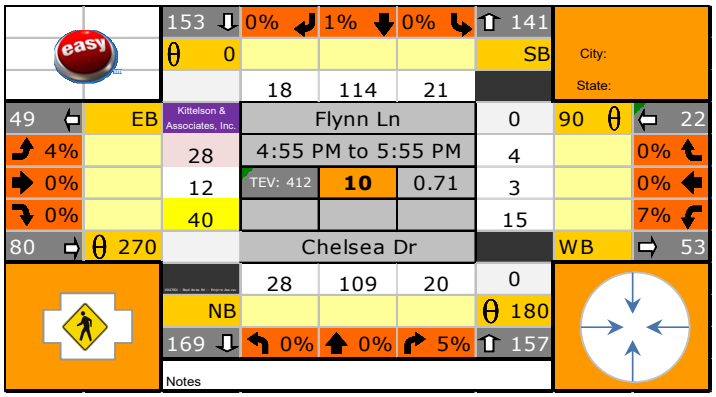

380 0% 0% 2% 534
0 SB
City:
State:
275 2 104
1462 EB
Kittelson & Associates, Inc.
George Elmer Dr
0
90 1539
10% 179 4:55 PM to 5:55 PM 353 0%
1% 637 TEV: 2741 5 0.91 1185 1%
0% 1 1 0%
817 270
Mullan Rd
WB 742
2 1 1 0
NB 180
4 0% 0% 0% 4
Notes

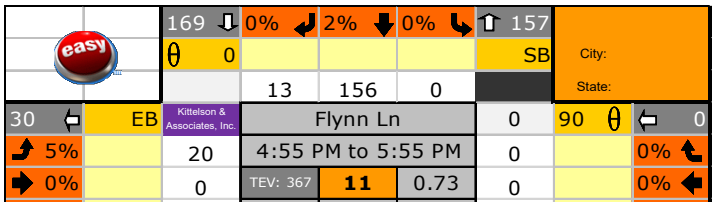

211 0% 0% 0% 200
0 SB
City:
State:
100 0 111
516 EB
Kittelson & Associates, Inc.
Dougherty Dr
0
90 466
0% 150 4:55 PM to 5:55 PM 50 0%
1% 249 TEV: 1075 6 0.92 416 2%
0% 0 0 0%
399 270
England Blvd
WB 360
0 0 0 0
NB 180
0 0% 0% 0% 0
Notes

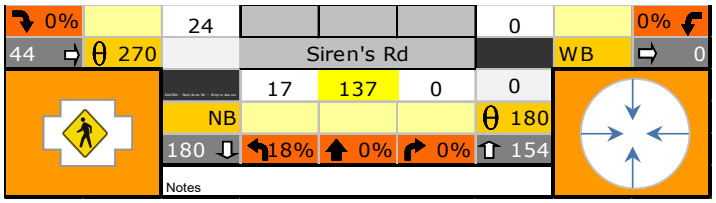

0 0% 0% 0% 0
0 SB
City:
State:
0 0 0
1235 EB
Kittelson & Associates, Inc.
Dougherty Dr
0
90 1314
0% 0 4:55 PM to 5:55 PM 0 0%
2% 1394 TEV: 3383 7 0.92 1060 2%
2% 200 254 0%
1594 270
W Broadway St
WB 1694
175 0 300 0
NB 180
454 0% 0% 0% 475
Notes

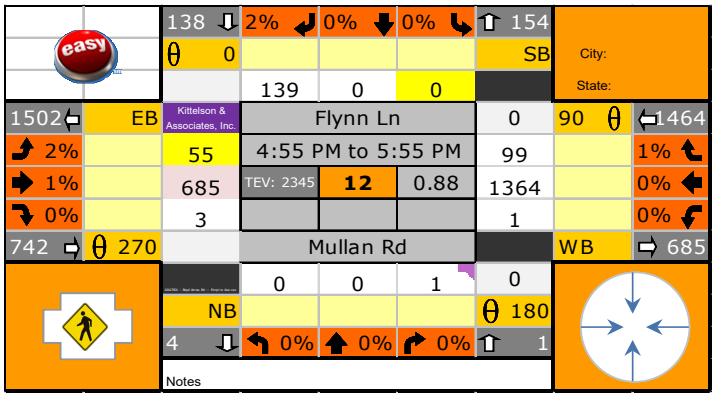

116 0% 1% 0% 116
0 SB
City:
State:
0 94 22
0 EB Kittelson & Associates, Inc. Flynn ln 0 90 18
0% 0 4:55 PM to 5:55 PM 13 0%
0% 0 TEV: 244 8 0.85 0 0%
0% 0 5 0%
0 270 Camden St WB 29
0 103 7 0
NB 180
99 0% 0% 0% 110
Notes

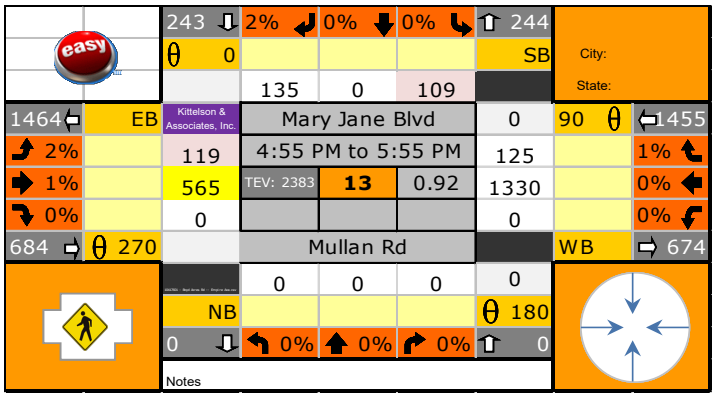

99 0% 0% 2% 110
0 SB
City:
State:
3 79 17
466 EB Kittelson & Associates, Inc. Flynn Ln 0 90 534
0% 21 4:55 PM to 5:55 PM 15 0%
0% 324 TEV: 1135 9 0.85 461 0%
0% 15 58 3%
360 270 England Blvd WB 406
2 74 65 0
NB 180
153 0% 0% 0% 141
Notes

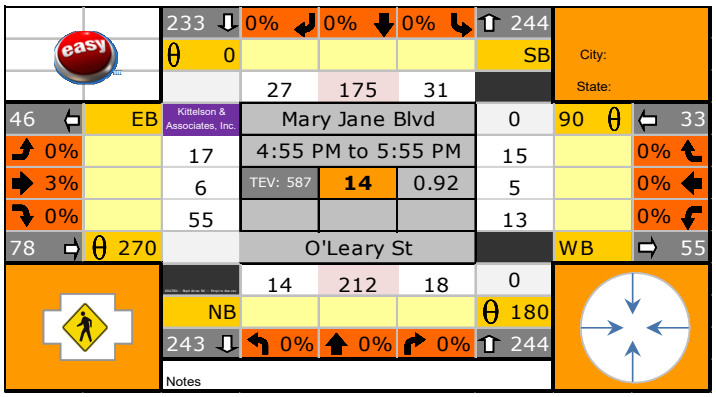

153 0% 1% 0% 141
0 SB
City:
State:
18 114 21
49 EB Kittelson & Associates, Inc. Flynn Ln 0 90 22
4% 28 4:55 PM to 5:55 PM 4 0%
0% 12 TEV: 412 10 0.71 3 0%
0% 40 15 7%
80 270 Chelsea Dr WB 53
28 109 20 0
NB 180
169 0% 0% 5% 157
Notes

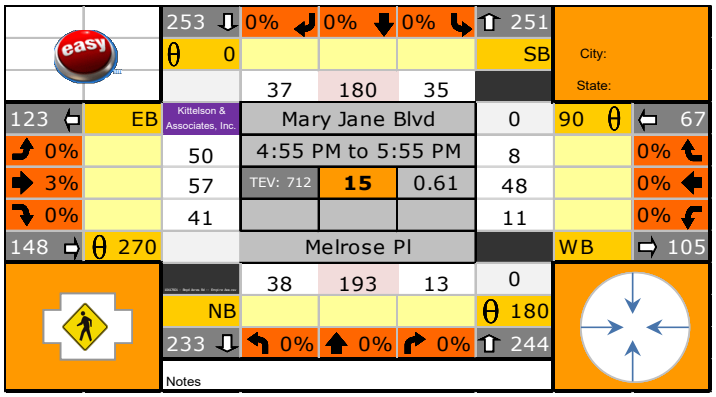

169 0% 2% 0% 157
0 SB
City:
State:
13 156 0
30 EB Kittelson & Associates, Inc. Flynn Ln 0 90 0
5% 20 4:55 PM to 5:55 PM 0 0%
0% 0 TEV: 367 11 0.73 0 0%

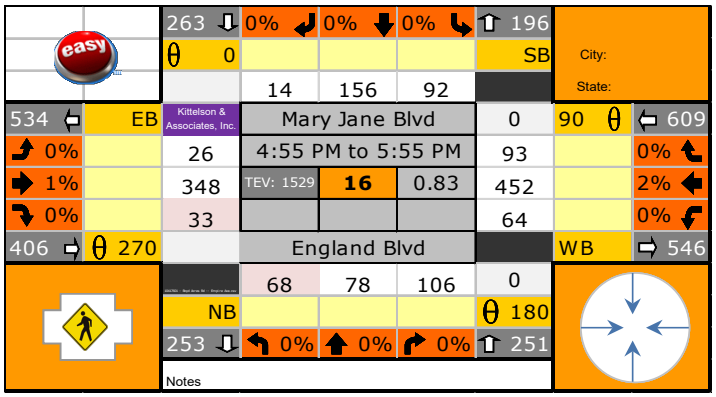

0%
24
0
0%
44
270
Siren's Rd
WB
0
17
137
0
0
NB
180
180
18%
0%
0%
154
Notes

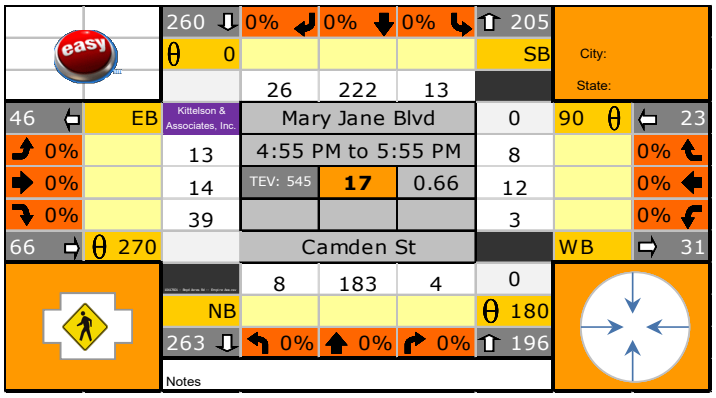

138
2%
0%
0%
154
0
SB
City:
State:
139
0
0
1502
EB
Kittelson & Associates, Inc.
Flynn Ln
0
90
1464
2%
55
4:55 PM to 5:55 PM
99
1%
1%
685
TEV: 2345
12
0.88
1364
0%
0%
3
1
0%
742
270
Mullan Rd
WB
685
0
0
1
0
NB
180
4
0%
0%
0%
1
Notes

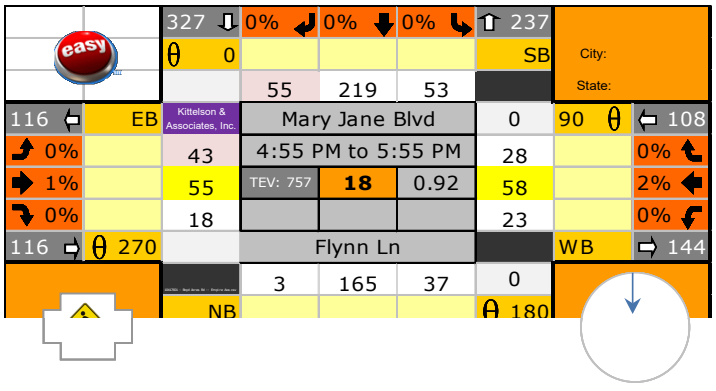

243
2%
0%
0%
244
0
SB
City:
State:
135
0
109
1464
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
1455
2%
119
4:55 PM to 5:55 PM
125
1%
1%
565
TEV: 2383
13
0.92
1330
0%
0%
0
0
0%
684
270
Mullan Rd
WB
674
0
0
0
0
NB
180
0
0%
0%
0%
0
Notes

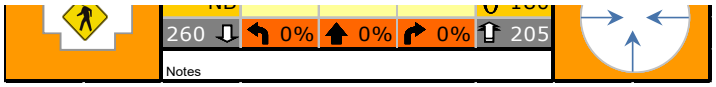

233
0%
0%
0%
244
0
SB
City:
State:
27
175
31
46
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
33
0%
17
4:55 PM to 5:55 PM
15
0%
3%
6
TEV: 587
14
0.92
5
0%
0%
55
13
0%
78
270
O'Leary St
WB
55
14
212
18
0
NB
180
243
0%
0%
0%
244
Notes

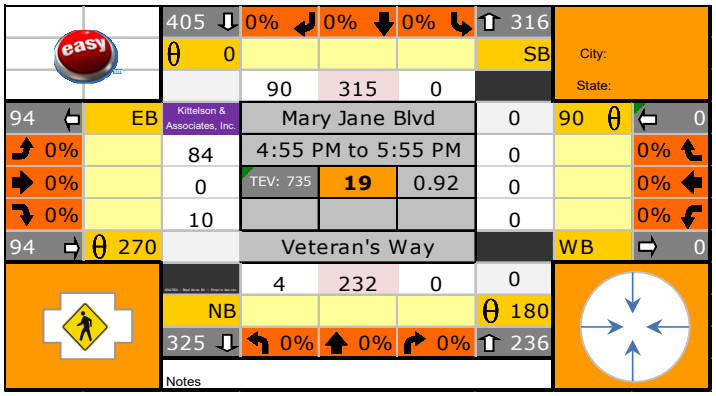

253 0% 0% 0% 251
0 SB
City:
State:
37 180 35
123 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 67
0% 50 4:55 PM to 5:55 PM 8 0%
3% 57 TEV: 712 15 0.61 48 0%
0% 41 11 0%
148 270 Melrose Pl WB 105
38 193 13 0
NB 180
233 0% 0% 0% 244
Notes

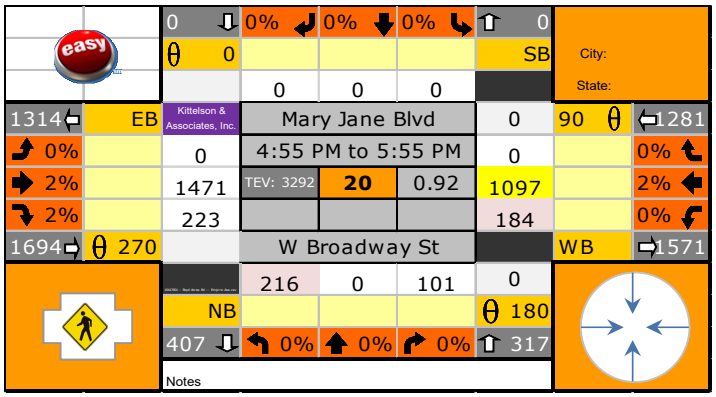

263 0% 0% 0% 196
0 SB
City:
State:
14 156 92
534 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 609
0% 26 4:55 PM to 5:55 PM 93 0%
1% 348 TEV: 1529 16 0.83 452 2%
0% 33 64 0%
406 270 England Blvd WB 546
68 78 106 0
NB 180
253 0% 0% 0% 251
Notes

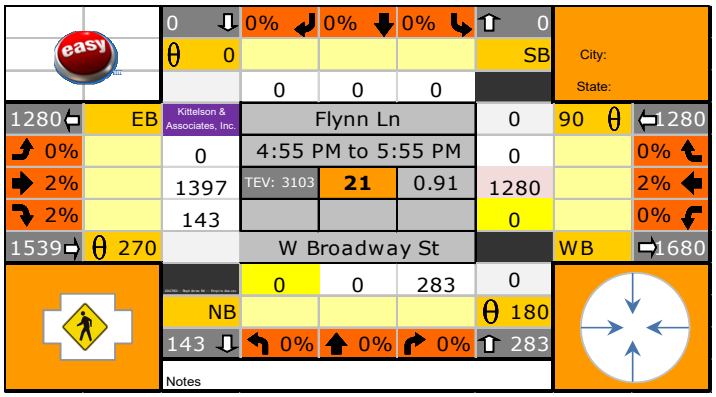

260 0% 0% 0% 205
0 SB
City:
State:
26 222 13
46 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 23
0% 13 4:55 PM to 5:55 PM 8 0%
0% 14 TEV: 545 17 0.66 12 0%
0% 39 3 0%
66 270 Camden St WB 31
8 183 4 0
NB 180
263 0% 0% 0% 196
Notes


327 0% 0% 0% 237
0 SB
City:
State:
55 219 53
116 EB Kittelson & Associates, Inc. Mary Jane Blvd 0 90 108
0% 43 4:55 PM to 5:55 PM 28 0%
1% 55 TEV: 757 18 0.92 58 2%
0% 18 23 0%
116 270 Flynn Ln WB 144
3 165 37 0
NB 180


260
0%
0%
0%
205
Notes


405
0%
0%
0%
316
0
SB
City:
State:
90
315
0
94
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
0
0%
84
4:55 PM to 5:55 PM
0
0%
0%
0
TEV: 735
19
0.92
0
0%
0%
10
0
0%
94
270
Veteran's Way
WB
0
4
232
0
0
NB
180
325
0%
0%
0%
236
Notes


0
0%
0%
0%
0
0
SB
City:
State:
0
0
0
1314
EB
Kittelson & Associates, Inc.
Mary Jane Blvd
0
90
1281
0%
0
4:55 PM to 5:55 PM
0
0%
2%
1471
TEV: 3292
20
0.92
1097
2%
2%
223
184
0%
1694
270
W Broadway St
WB
1571
216
0
101
0
NB
180
407
0%
0%
0%
317
Notes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0
SB
City:
State:
0
0
0
1280
EB
Kittelson & Associates, Inc.
Flynn Ln
0
90
1280
0%
0
4:55 PM to 5:55 PM
0
0%
2%
1397
TEV: 3103
21
0.91
1280
2%
2%
143
0
0%
1539
270
W Broadway St
WB
1680
0
0
283
0
NB
180
143
0%
0%
0%
283
Notes

C. 2050 Operational Analysis AM and PM

OPERATIONAL ANALYSIS DOCUMENTATION

SCENARIOS

Scenario 1: Existing Conditions (2020)

Existing roads and intersection controls, as well as turning movement counts.

Scenario 2: Future Conditions (2050)

- Manually entered TMCs from 2050 Network Tool for QC
- All intersections set to 'Unknown'
    - Except for Reserve St – signals retained
- Used as baseline scenario for control scenarios below
- Table 1 summarizes the posted speed limits for project roadways, Table 2 delineates the heavy vehicle percentages used for the AM analyses, and Table 3 summarizes the heavy vehicle percentages used for the PM analyses.

Table 1 Posted Speed Limit Parameter

ROADWAY	SPEED LIMIT
W Broadway St	55 mph
Mullan Rd	45 mph
George Elmer Dr	30 mph
Cattle Dr	25 mph
Heron's Landing	25 mph
England Blvd	30 mph
Dougherty Dr	30 mph
Flynn Ln	25 mph
Chelsea Dr	25 mph
Siren's Rd	25 mph
Mary Jane Blvd	30 mph
O'Leary St	25 mph
Melrose Pl	25 mph
Veteran's Way	25 mph
Camden St	25 mph

Table 2 AM Heavy Vehicle Percentages

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	4	2	4	2	2	2	4	8	2	4	15	2
2	2	4	2	2	4	2	2	8	2	2	4	2
3	2	4	2	2	4	2	2	2	2	2	2	2
4	2	4	2	2	4	2	2	2	2	2	2	2
5	0	0	0	4	0	4	4	7	0	0	7	4
6	0	0	0	2	0	2	2	8	0	0	4	2
7	2	0	2	0	0	0	0	8	2	2	15	0
8	0	2	2	2	2	0	0	0	0	2	2	2
9	2	2	2	2	2	2	2	8	2	2	4	2
10	19	2	2	2	7	28	2	50	2	2	20	8
11	2	5	0	0	2	15	2	0	2	0	0	0
12	0	0	2	0	0	2	2	7	2	2	7	2
13	0	0	0	4	0	4	3	7	0	0	7	3
14	2	3	2	2	3	2	2	2	2	2	2	2
15	3	2	2	2	3	2	2	2	2	2	2	2
16	2	3	2	2	3	2	2	8	2	2	4	2
17	2	3	2	2	3	2	2	2	2	2	2	2
18	2	3	2	2	3	2	2	3	2	2	4	2
19	2	3	2	2	3	2	20	2	20	2	2	2
20	3	0	3	0	0	0	0	8	3	3	15	0
21	0	0	2	0	0	0	0	8	2	0	15	2

Table 3 PM Heavy Vehicle Percentages

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	3	2	3	2	2	2	2	2	2	2	2	2
2	2	3	2	2	3	2	2	2	2	2	2	2
3	2	3	2	2	3	2	2	2	2	2	2	2
4	2	3	2	2	3	2	2	2	2	2	2	2
5	0	0	0	2	0	2	3	2	0	0	2	3
6	0	0	0	2	10	2	2	2	0	0	2	2
7	2	0	2	2	0	2	0	2	2	2	2	0
8	0	2	2	2	2	0	0	0	0	2	0	2
9	2	2	2	2	3	2	2	2	2	2	2	2
10	2	2	5	2	3	2	4	2	2	7	2	2
11	18	2	2	2	2	2	5	2	2	0	0	0
12	0	0	2	0	0	2	2	2	0	0	2	2
13	0	0	0	2	0	2	2	2	0	0	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	3	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2	2
19	2	5	2	2	5	2	20	2	20	2	2	2
20	3	0	3	0	0	0	0	2	3	3	2	0
21	0	0	2	0	0	0	0	2	2	0	2	0

Scenario 3: Two Way Stop Control (2050)

- All intersections tested as Two Way Stop Control (TWSC)
- Turn Lane Warrants performed for intersections with failing movements, delineated in Table 2

Table 4 Turn Lane Warrants & Results

NUMBER	INTERSECTION	AGENCY	WARRANT	RESULT
1	George Elmer Dr & W Broadway St	MDT	Left Turn Lane	Yes
		MDT	Right Turn Lane	Yes
2	George Elmer Dr & England Blvd	ACHD	Left Turn Lane	Yes
3	George Elmer Dr & Cattle Dr	ACHD	Left Turn Lane	Yes
4	George Elmer Dr & Heron's Landing	ACHD	Left Turn Lane	Yes
5	George Elmer Dr & Mullan Rd	MDT	Left Turn Lane	Yes
6	Dougherty Dr & England Blvd	ACHD	Left Turn Lane	Yes
		ACHD	Right Turn Lane	No
7	Dougherty Dr & W Broadway St	MDT	Left Turn Lane	Yes
		MDT	Right Turn Lane	Yes
9	Flynn Ln & England Blvd	ACHD	Left Turn Lane	Yes
		ACHD	Right Turn Lane	No
15	Mary Jane Blvd & Melrose Pl	ACHD	Left Turn Lane	No
		ACHD	Right Turn Lane	No
16	Mary Jane Blvd & England Blvd	ACHD	Left Turn Lane	Yes
		ACHD	Right Turn Lane	No
20	Mary Jane Blvd & W Broadway St	MDT	Left Turn Lane	Yes
		MDT	Right Turn Lane	Yes
21	Flynn Ln & W Broadway St	MDT	Right Turn Lane	Yes

Table 5 TWSC Queue Lengths (ft) - AM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	1,303	1,030	78	5	5	5	0	0	0	13	0	0
2	58	719	719	225	133	13	0	0	1	0	0	0
3	2	0	0	1	0	0	15	15	15	3	3	3
4	0	0	0	1	0	0	9	9	9	10	10	10
5	741	-	7	-	-	-	24	0	-	-	0	0
6	-	-	-	30	-	10	3	0	-	-	0	0
7	154	-	105	-	-	-	-	0	0	35	0	-
8	-	0	0	0	0	-	-	-	-	4	-	4
9	146	146	146	191	191	191	2	0	0	12	0	0
9M	12	106	106	114	23	23	2	0	0	12	0	0
10	4	4	4	0	0	0	8	8	8	6	6	6
11	10	0	-	-	0	0	10	-	8	-	-	-
12	-	-	0	-	-	16	22	0	0	0	0	0
13	-	-	-	671	-	9	27	0	-	-	0	0
14	0	0	0	0	0	0	9	9	9	11	11	11
15	0	0	0	3	3	3	19	19	19	17	17	17
16	385	189	189	44	159	159	6	0	0	3	0	0
17	1	1	1	0	0	0	14	14	14	5	5	5
18	0	0	0	2	2	2	84	84	84	38	38	38
19	0	0	0	0	0	0	5	5	5	0	0	0
20	586	-	17	-	-	-	-	0	0	49	0	-
21	-	-	262	-	-	-	-	0	0	-	0	-

Table 6 TWSC Queue Lengths (ft) - PM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	746	746	98	21	21	21	0	0	0	56	0	0
2	547	465	465	198	674	674	10	0	0	3	0	0
3	10	0	0	0	0	0	21	21	21	8	8	8
4	5	0	0	2	0	0	23	23	23	17	17	17
5	352	-	460	-	-	-	41	0	-	-	0	0
6	-	-	-	82	-	16	13	0	-	-	0	0
7	540	-	241	-	-	-	-	0	0	154	0	-
8	-	0	0	1	1	-	-	-	-	1	-	1
9	65	65	65	77	77	77	1	0	0	4	0	0
9M	1	62	62	13	47	47	1	0	0	4	0	0
10	1	1	1	1	1	1	10	10	10	3	3	3
11	1	0	-	-	0	0	2	-	2	-	-	-
12	-	-	0	-	-	184	12	0	0	0	0	0
13	-	-	-	356	-	164	32	0	-	-	0	0
14	0	0	0	1	1	1	11	11	11	5	5	5
15	2	2	2	2	2	2	42	42	42	16	16	16
16	232	111	111	201	199	199	2	0	0	4	0	0
17	0	0	0	0	0	0	9	9	9	3	3	3
18	0	0	0	3	3	3	35	35	35	27	27	27
19	0	0	0	0	0	0	27	27	27	0	0	0
20	622	-	36	-	-	-	-	0	0	97	0	-
21	-	-	212	-	-	-	-	0	0	-	0	-

MITIGATIONS

- #9 Flynn Ln & England Blvd: NB and SB Left Turn Lanes (not warranted)

Scenario 4: Signal (2050)

- All intersections that met signal warrants from Scenario 3 tested as signals, delineated in Table 2.

Table 7 Intersections Analyzed & Signal Warrants Met

NUMBER	INTERSECTION	WARRANT #1	WARRANT #2	WARRANT #3
1	**George Elmer Dr & W Broadway St**	**Yes**	**Yes**	**Yes**
2	**George Elmer Dr & England Blvd**	No	No	**Yes**
3	George Elmer Dr & Cattle Dr	No	No	No
4	George Elmer Dr & Heron's Landing	No	No	No
5	**George Elmer Dr & Mullan Rd**	**Yes**	**Yes**	**Yes**
6	Dougherty Dr & England Blvd	No	No	No
7	**Dougherty Dr & W Broadway St**	**Yes**	**Yes**	**Yes**
8	Flynn Ln & Camden Ln	No	No	No
9	**Flynn Ln & England Blvd**	No	No	**Yes**
10	Flynn Ln & Chelsea Dr	No	No	No
11	Flynn Ln & Siren's Dr	No	No	No
12	**Flynn Ln & Mullan Rd**	**Yes**	**Yes**	**Yes**
13	**Mary Jane Blvd & Mullan Rd**	**Yes**	**Yes**	**Yes**
14	Mary Jane Blvd & O'Leary St	No	No	No
15	Mary Jane Blvd & Melrose Pl	No	No	No
16	**Mary Jane Blvd & England Blvd**	No	No	**Yes**
17	Mary Jane Blvd & Camden St	No	No	No
18	Mary Jane Blvd & Flynn Ln	No	No	No
19	Mary Jane Blvd & Veteran's Way	No	No	No
20	**Mary Jane Blvd & W Broadway St**	**Yes**	**Yes**	**Yes**
21	**Flynn Ln & W Broadway St**	**Yes**	**Yes**	**Yes**

Signal Groups:

- Controller ID 1:
  - George Elmer Dr & Mullan Rd
  - Flynn Ln & Mullan Rd
  - Mary Jane Blvd & Mullan Rd
- Controller 2:
  - George Elmer Dr & England Blvd
  - Mary Jane Blvd & England Blvd

- Controller ID 6:
    - Flynn Ln & W Broadway St
- Controller ID 7:
    - Dougherty Dr & W Broadway St
    - Mary Jane Blvd & W Broadway St
- Controller ID 8:
    - Flynn Ln & England Blvd
- Controller ID 9:
    - George Elmer Dr & W Broadway St

Table 8 Signal Queue Lengths (ft) - AM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	477	-	214	2	2	2	0	504	101	43	305	0
2	27	310	310	56	124	124	123	199	199	15	200	200
5	837	-	0	-	-	-	786	135	-	-	41	6
5M	314	-	64	-	-	-	92	276	-	-	83	33
7	147	-	337	-	-	-	-	379	69	67	153	-
9	177	177	177	113	113	113	7	201	201	29	177	177
12	-	-	1	-	-	175	6	146	146	0	86	37
13	-	-	-	779	-	0	671	56	-	-	58	8
13M	-	-	-	293	-	70	78	204	-	-	140	50
16	146	167	167	18	152	152	54	214	214	30	172	172
20	335	-	86	-	-	-	-	405	71	72	122	-
21	-	-	187	-	-	-	-	157	25	-	72	-

Table 9 Signal Queue Lengths (ft) - PM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	301	-	194	2	2	2	0	658	186	85	368	0
2	165	188	188	36	282	282	124	306	306	38	310	310
5	365	-	0	-	-	-	410	16	-	-	346	37
5M	128	-	406	-	-	-	106	144	-	-	370	214
7	212	-	392	-	-	-	-	637	145	204	280	-
9	157	157	157	105	105	105	4	141	141	10	203	203
12	-	-	1	-	-	219	4	18	18	0	1,513	21
13	-	-	-	384	-	0	130	13	-	-	624	10
13M	-	-	-	158	-	210	35	67	-	-	355	49
16	69	167	167	99	151	151	17	182	182	37	280	280
20	300	-	137	-	-	-	-	497	116	84	207	-
21	-	-	154	-	-	-	-	162	19	-	135	-

MITIGATIONS

- #5 George Elmer Dr & Mullan Rd: Dual through lanes on WB & EB approaches
- #13 Mary Jane Blvd & Mullan Rd: Dual through lanes on WB & EB approaches

Scenario 5: Roundabout (2050)

- All intersections tested as single lane roundabout
    - ICD 120'
    - Entry width 14'
    - Circulatory width 16'
    - Splitter island length at least 50' (longer if approach roadway speed is higher)
    - Circulatory speed 18 mph
- Minor street intersections were then downgraded to mini-roundabouts
    - ICD 90'
    - Entry width 13'
    - Circulatory width 15'
    - Splitter island length 25'
    - Circulatory speed 15 mph
    - All approaches have posted speed less than 30 mph
- Intersections operating at LOS D or worse were upgraded to multilane roundabouts
    - ICD 165'
    - Entry width 15'
    - Circulatory width 30'
    - Splitter island length at least 150'
    - Circulatory speed 25 mph

Table 10 Roundabout Queue Lengths (ft) - AM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	202	-	62	0	0	0	-	72	90	64	82	-
2	85	85	85	23	23	23	83	83	83	89	89	89
3	35	35	35	14	14	14	8	8	8	1	1	1
4	30	30	30	20	20	20	4	4	4	4	4	4
5	27	-	4	-	-	-	25	1,233	-	-	54	7
5M	28	-	5	-	-	-	160	194	-	-	28	33
6	-	-	-	17	-	17	45	45	-	-	32	32
7	34	-	98	-	-	-	-	94	123	47	60	-
8	-	12	12	6	6	-	-	-	-	3	-	3
9	21	21	21	12	12	12	67	67	67	72	72	72
10	17	17	17	18	18	18	3	3	3	3	3	3
11	29	29	-	-	17	17	9	-	9	-	-	-
12	-	-	0	-	-	11	13	667	667	48	17	17
12M	-	-	0	-	-	11	92	123	123	28	33	33
13	-	-	-	29	-	5	21	618	-	-	80	8
13M	-	-	-	30	-	6	95	123	-	-	30	36
14	28	28	28	16	16	16	6	6	6	4	4	4
15	32	32	32	18	18	18	6	6	6	6	6	6
16	59	59	59	29	29	29	79	79	79	70	70	70
17	19	19	19	12	12	12	6	6	6	2	2	2
18	28	28	28	17	17	17	19	19	19	13	13	13
19	25	25	25	24	24	24	2	2	2	0	0	0
20	163	-	16	-	-	-	-	120	161	54	69	-
21	-	-	237	-	-	-	-	76	97	37	45	-

Table 11 Roundabout Queue Lengths (ft) - PM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
1	134	-	64	0	0	0	-	161	232	89	117	-
2	78	78	78	115	115	115	114	114	114	147	147	147
3	51	51	51	40	40	40	5	5	5	4	4	4
4	63	63	63	41	41	41	5	5	5	6	6	6
5	29	-	115	-	-	-	13	88	-	-	785	37
5M	28	-	113	-	-	-	37	43	-	-	141	200
6	-	-	-	27	-	27	42	42	-	-	57	57
7	90	-	211	-	-	-	-	188	277	95	125	-
8	-	7	7	7	7	-	-	-	-	1	-	1
9	15	15	15	12	12	12	38	38	38	66	66	66
10	11	11	11	11	11	11	6	6	6	1	1	1
11	11	11	-	-	12	12	3	-	3	-	-	-
12	-	-	0	-	-	70	3	83	83	906	6	6
12M	-	-	0	-	-	70	27	32	32	93	123	123
13	-	-	-	34	-	47	8	70	-	-	998	9
13M	-	-	-	39	-	44	28	33	-	-	114	153
14	19	19	19	17	17	17	6	6	6	2	2	2
15	22	22	22	21	21	21	13	13	13	5	5	5
16	38	38	38	10	10	10	9	9	9	10	10	10
17	14	14	14	20	20	20	5	5	5	1	1	1
18	18	18	18	30	30	30	11	11	11	9	9	9
19	20	20	20	37	37	37	10	10	10	0	0	0
20	161	-	33	-	-	-	-	186	275	99	131	-
21	-	-	43	-	-	-	-	92	122	64	81	-

MITIGATIONS

- #5 George Elmer Dr & Mullan Rd: WB dual approach with through + through/right lanes and EB dual approach with through + through/left lanes
    - Two conflicting circulatory lanes for SB approach, one conflicting circulatory lane for WB/EB approaches
- #12 Flynn Ln & Mullan Rd: WB dual approach with through + through/right lanes and EB dual approach with through + through/left lanes
    - Two conflicting circulatory lanes for SB approach, one conflicting circulatory lane for WB/EB approaches

- #13 Mary Jane Blvd & Mullan Rd: WB dual approach with through + through/right lanes and EB dual approach with through + through/left lanes
    - Two conflicting circulatory lanes for SB approach, one conflicting circulatory lane for WB/EB approaches

Scenario 6: All Way Stop Control (2050)

All Way Stop Controls were tested at three intersections:

- #2 George Elmer Dr & England Blvd
- #9 Flynn Ln & England Blvd
- #15 Mary Jane Blvd & Melrose Pl

These intersections had failing movements where signal warrants were not met.

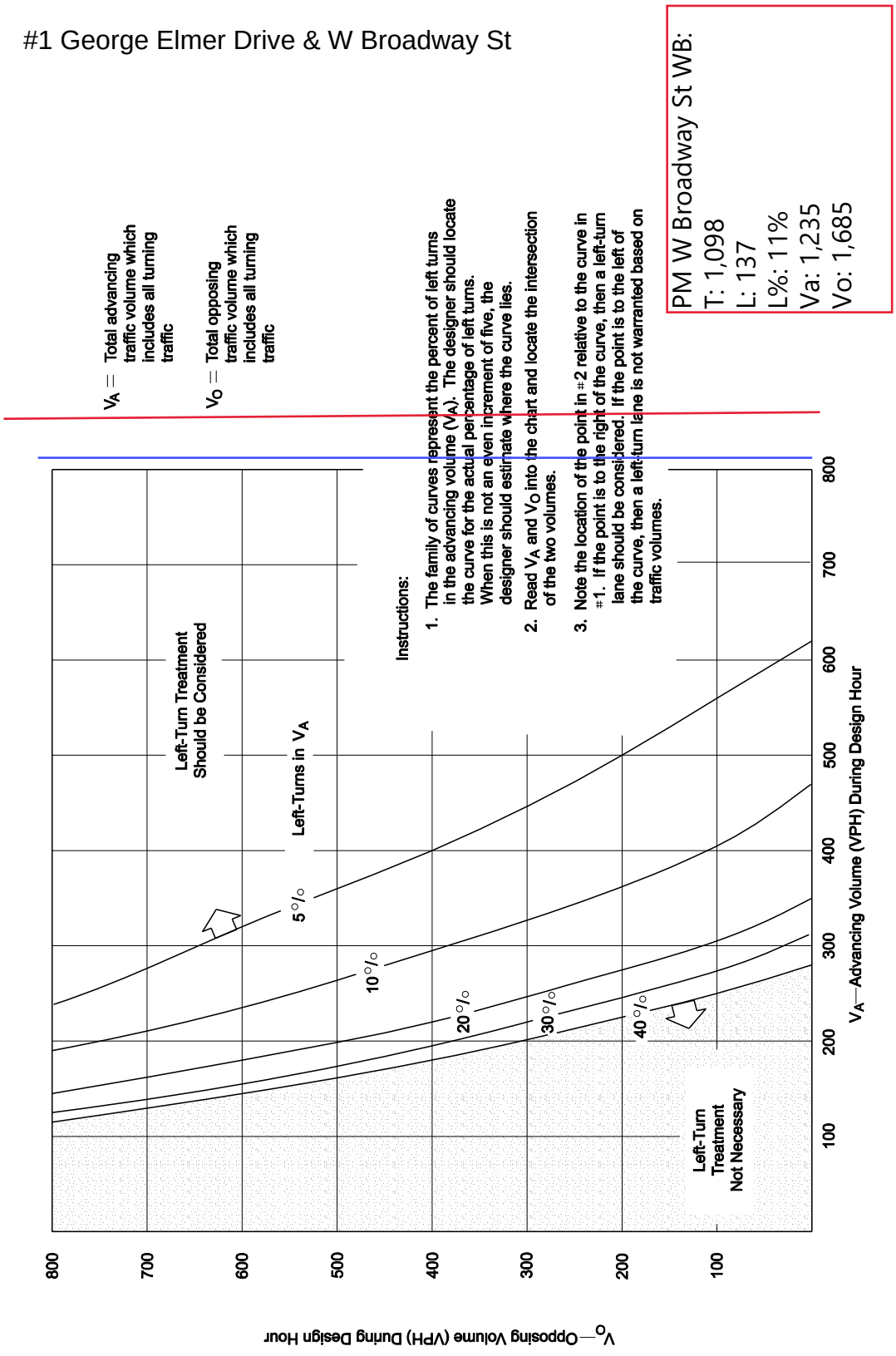
Table 12 AWSC Queue Lengths (ft) - AM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
2	6	213	213	12	48	48	51	258	258	5	260	260
9	35	35	35	21	21	21	5	200	200	30	163	163
15	61	61	61	37	37	37	10	10	10	9	9	9

Table 13 AWSC Queue Lengths (ft) - PM Peak Period

#	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
2	50	121	121	10	258	258	38	502	502	10	559	559
9	28	28	28	19	19	19	3	113	113	9	244	244
15	41	41	41	43	43	43	23	23	23	9	9	9

#1 George Elmer Drive & W Broadway St



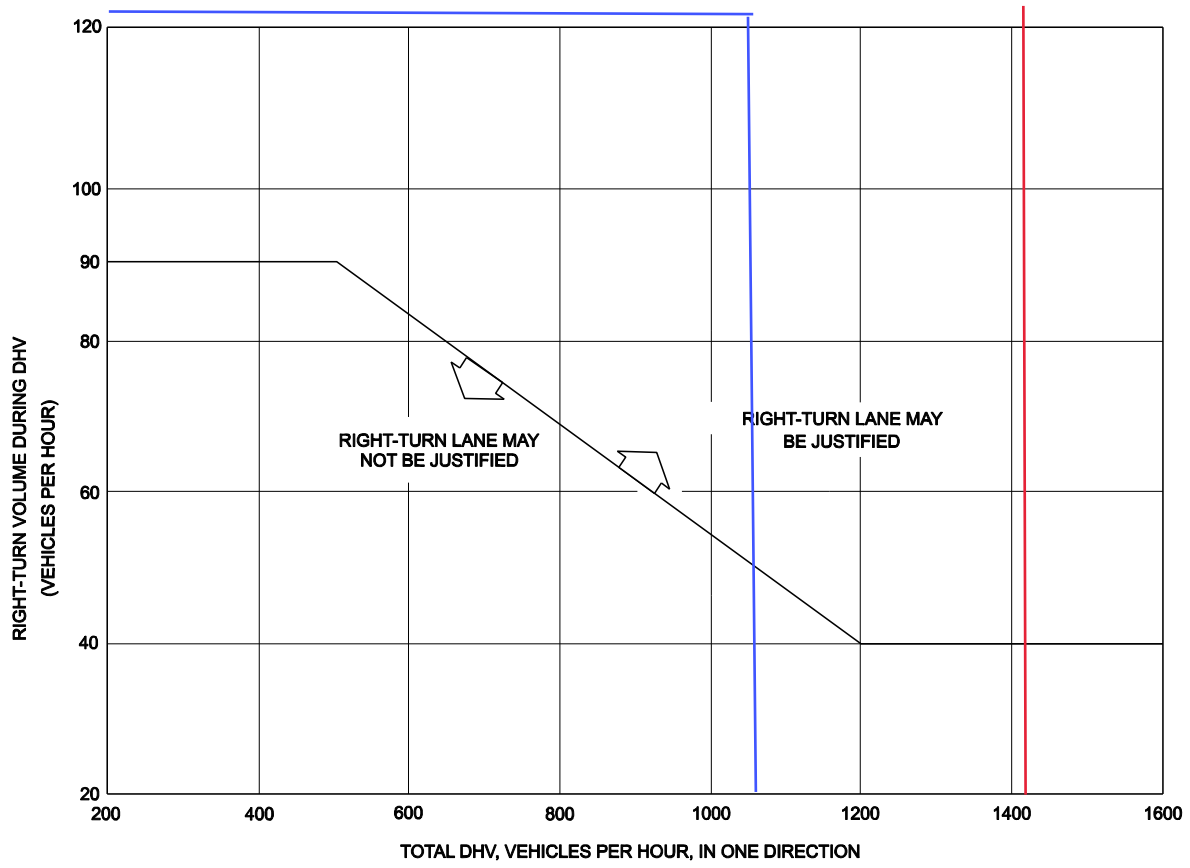
PM W Broadway St WB:
T: 1,098
L: 137
L%: 11%
Va: 1,235
Vo: 1,685

AM W Broadway St WB:
T: 757
L: 72
L%: 9%
Va: 829
Vo: 1,191

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (55 MPH)
(US Customary)

Figure 28.4D

#1 George Elmer Drive & W Broadway Street



Note: Figure is only applicable on highways with a design speed of 50 mph (80 km/h) or greater.

W Broadway St EB:
T: 1,435
R: 250

AM W Broadway St EB:
T: 1,066
R: 125

PM George Elmer Dr NB:
L: 142
T/R: 245
%L: 37%
Va: 387
Vo: 395

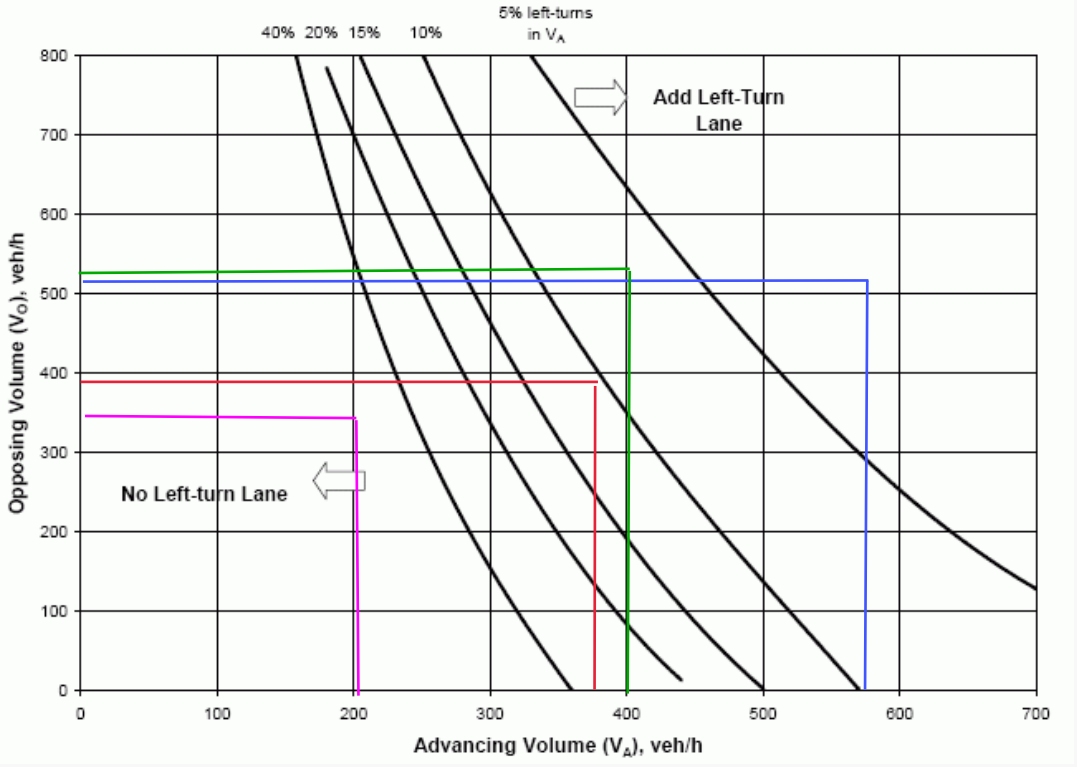
AM George Elmer Dr SB:
L: 50
T/R: 150
%L: 25%
Va: 200
Vo: 369

PM England Blvd EB:
L: 122
T/R: 460
%L: 21%
Va: 582
Vo: 516

AM England Blvd WB:
L: 75
T/R: 324
%L: 23%
Va: 399
Vo: 531

#2 George Elmer Drive & England Boulevard

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

PM Cattle Dr EB:
L: 26
T/R: 34
Va: 60
Vo: 37
L%: 43%

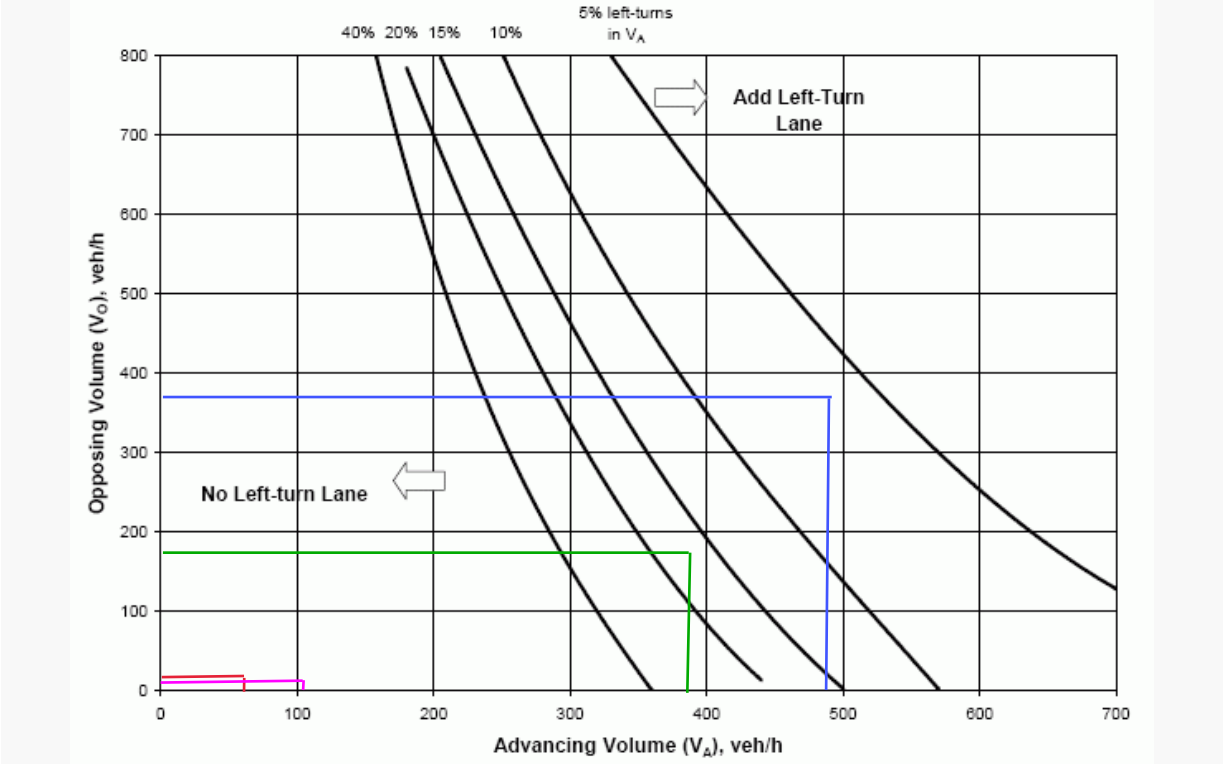
AM Cattle Dr EB:
L: 21
T/R: 87
Va: 108
Vo: 26
L%: 19%

PM George Elmer Dr NB:
L: 135
T/R: 354
Va: 489
Vo: 371
L%: 28%

AM George Elmer Dr NB:
L: 39
T/R: 342
Va: 381
Vo: 185
L%: 10%

#3 George Elmer Drive & Cattle Drive

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

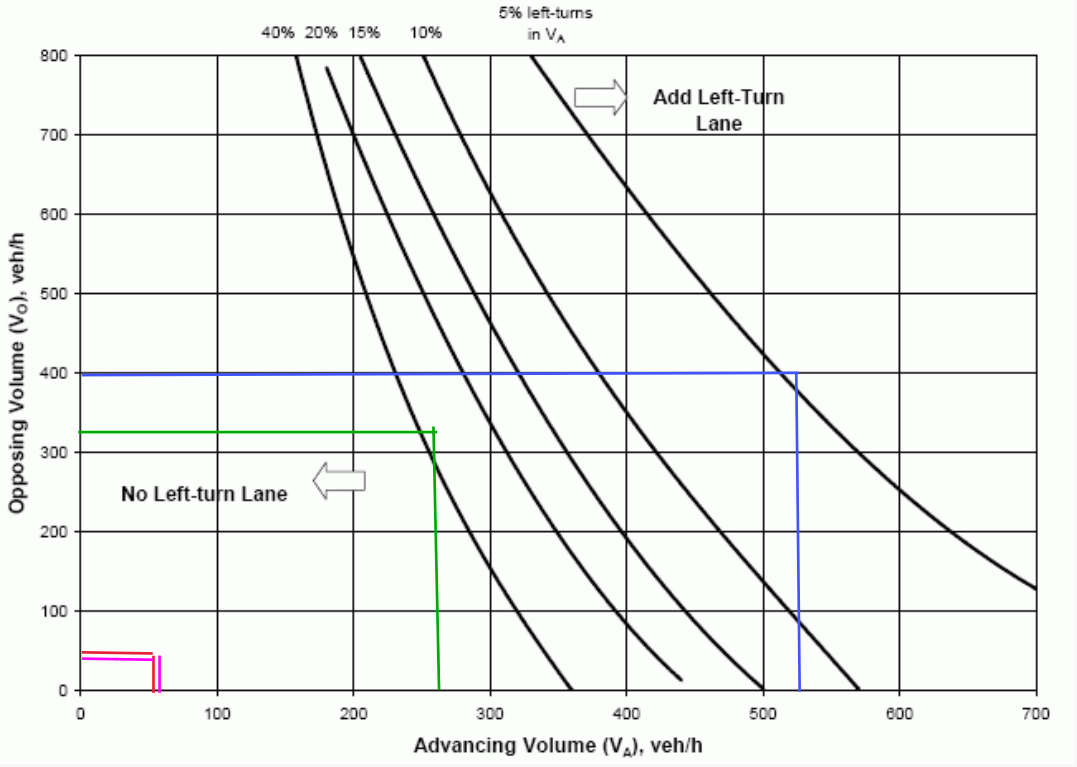
PM Heron's Landing EB:
L: 30
T/R: 21
Va: 51
Vo: 51
L%: 58%

AM Heron's Landing EB:
L: 25
T/R: 26
Va: 51
Vo: 51
L%: 49%

PM George Elmer Dr NB:
L: 75
T/R: 459
Va: 534
Vo: 400
L%: 16%

AM George Elmer Dr SB:
L: 15
T/R: 252
Va: 267
Vo: 339
L%: 6%

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required: #4 George Elmer Drive & Heron's Landing

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

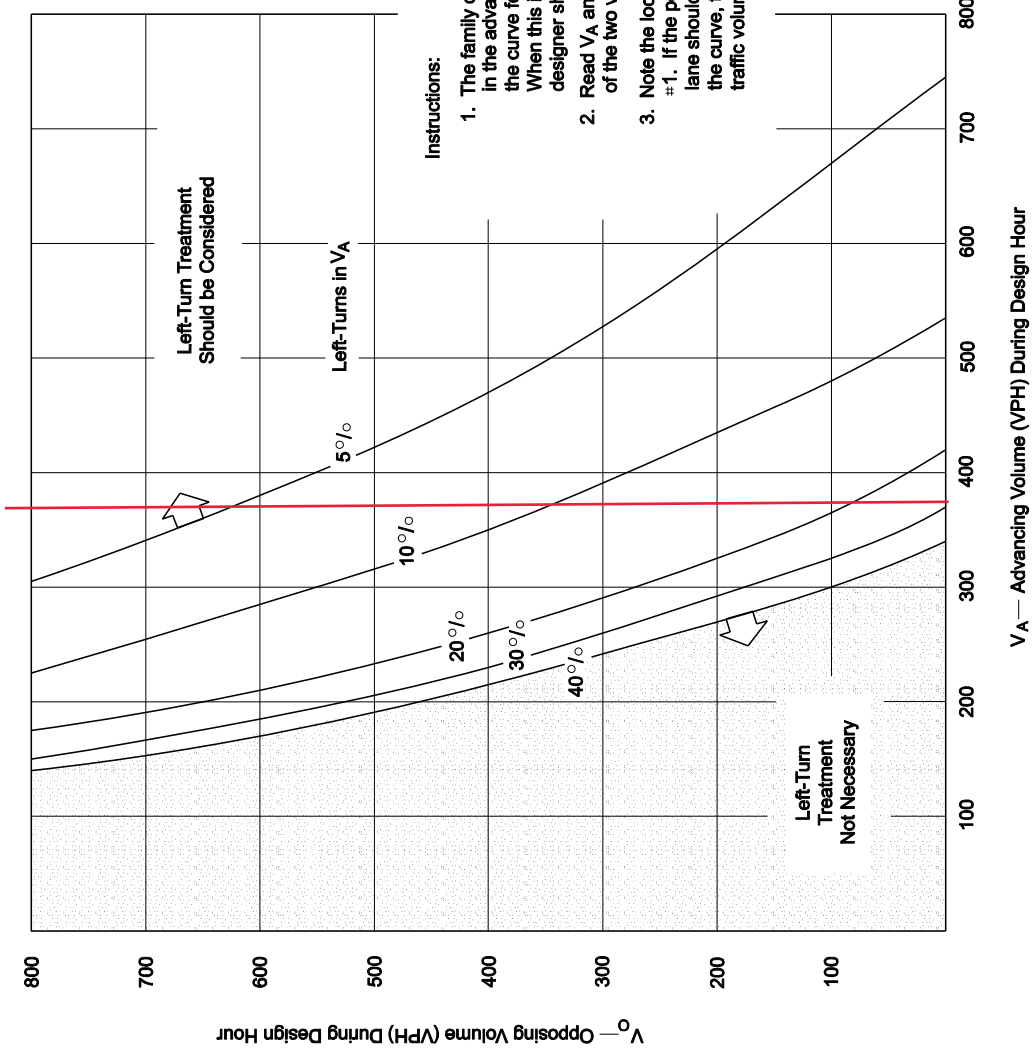
The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#5 George Elmer Drive & Mullan Road

PM Mullan Rd EB:
L: 104
T: 275
Va: 379
Vo: 1,538
L%: 27%

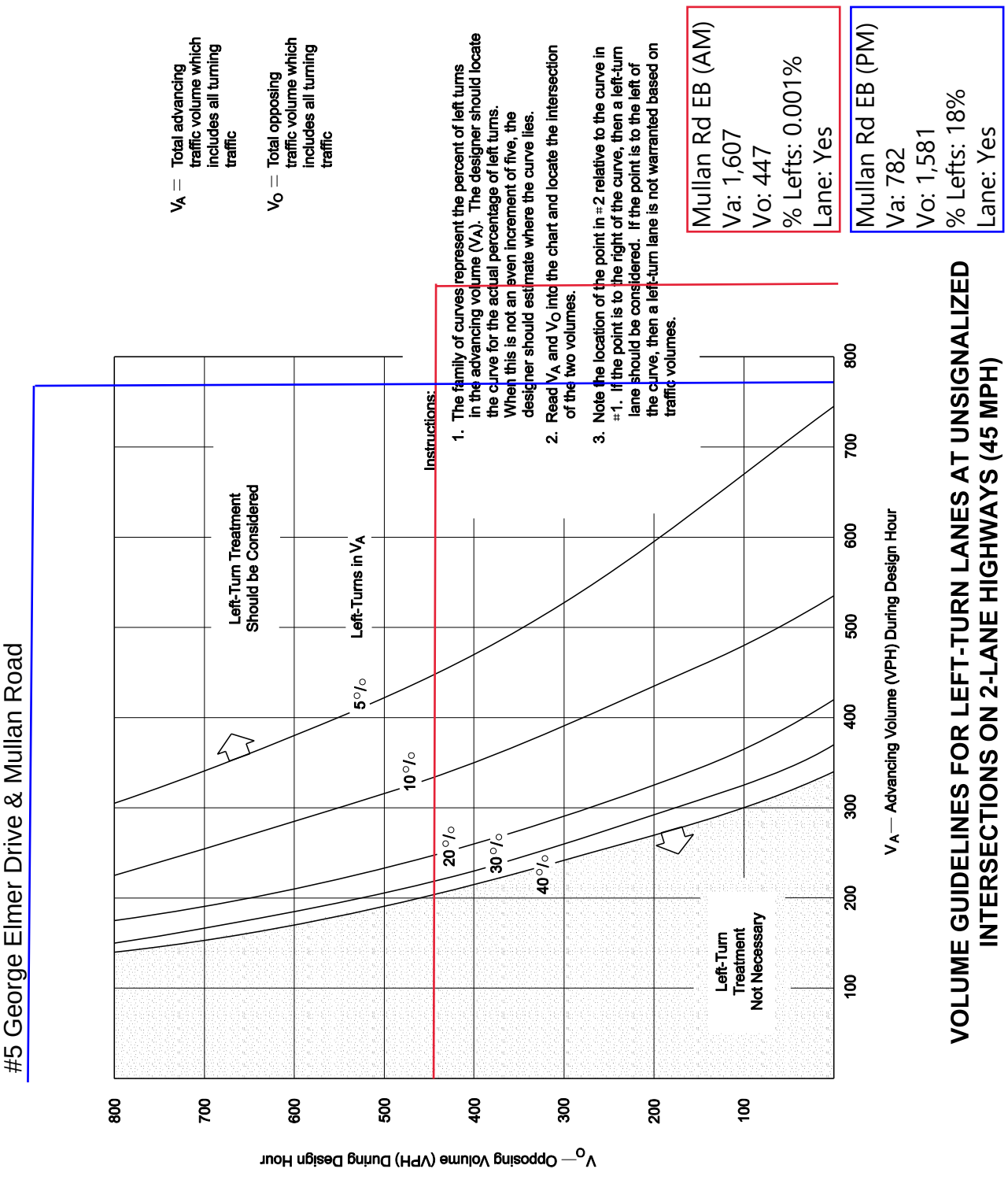
AM Mullan Rd EB:
L: 253
T: 1,259
Va: 1,512
Vo: 490
L%: 17%



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH) (US Customary)

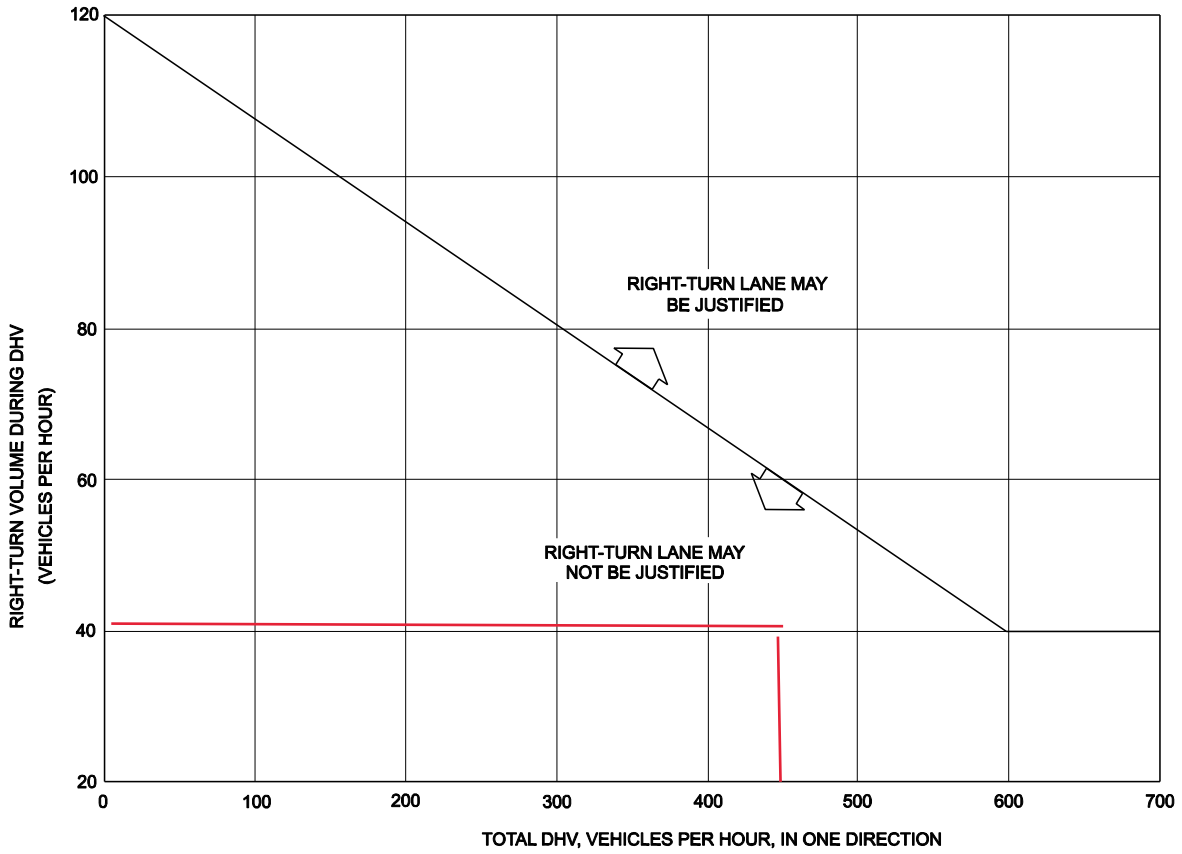
Figure 28.4F

#5 George Elmer Drive & Mullan Road



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH) (US Customary)

Figure 28.4F



Note: For highways with a design speed below 50 mph (80 km/h) with a DHV < 300 and where right turns are > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given: Design Speed = 35 mph (60 km/h)
DHV = 250 vph
Right Turns = 100 vph

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS

Figure 28.4A

WB Mullan Rd (AM)
DHV: 447
Design Speed: 45 mph
Right Turns: 42
Turn Lane: No

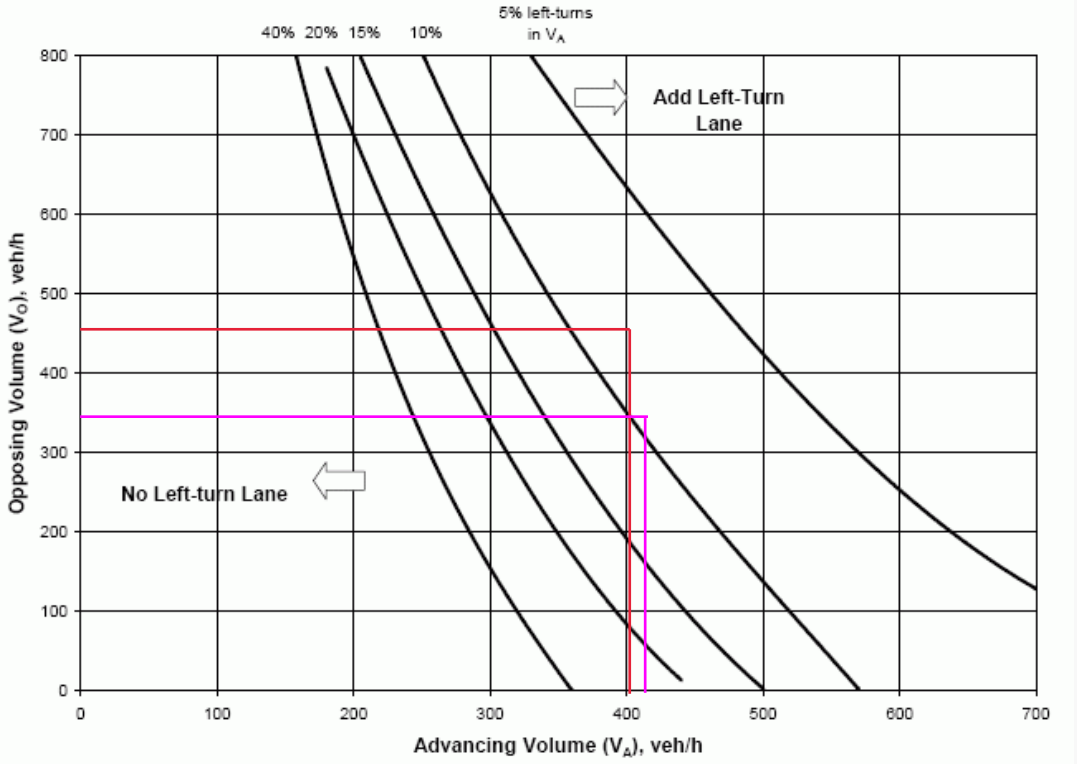
WB Mullan Rd (PM)
DHV: 1,385
Design Speed: 45 mph
Right Turns: 196
Turn Lane: Yes

#6 Dougherty Drive &
England Boulevard

AM England Blvd EB:
L: 50
T: 361
Va: 411
Vo: 354
L%: 12%

PM England Blvd EB:
L: 150
T: 249
Va: 399
Vo: 466
L%: 38%

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

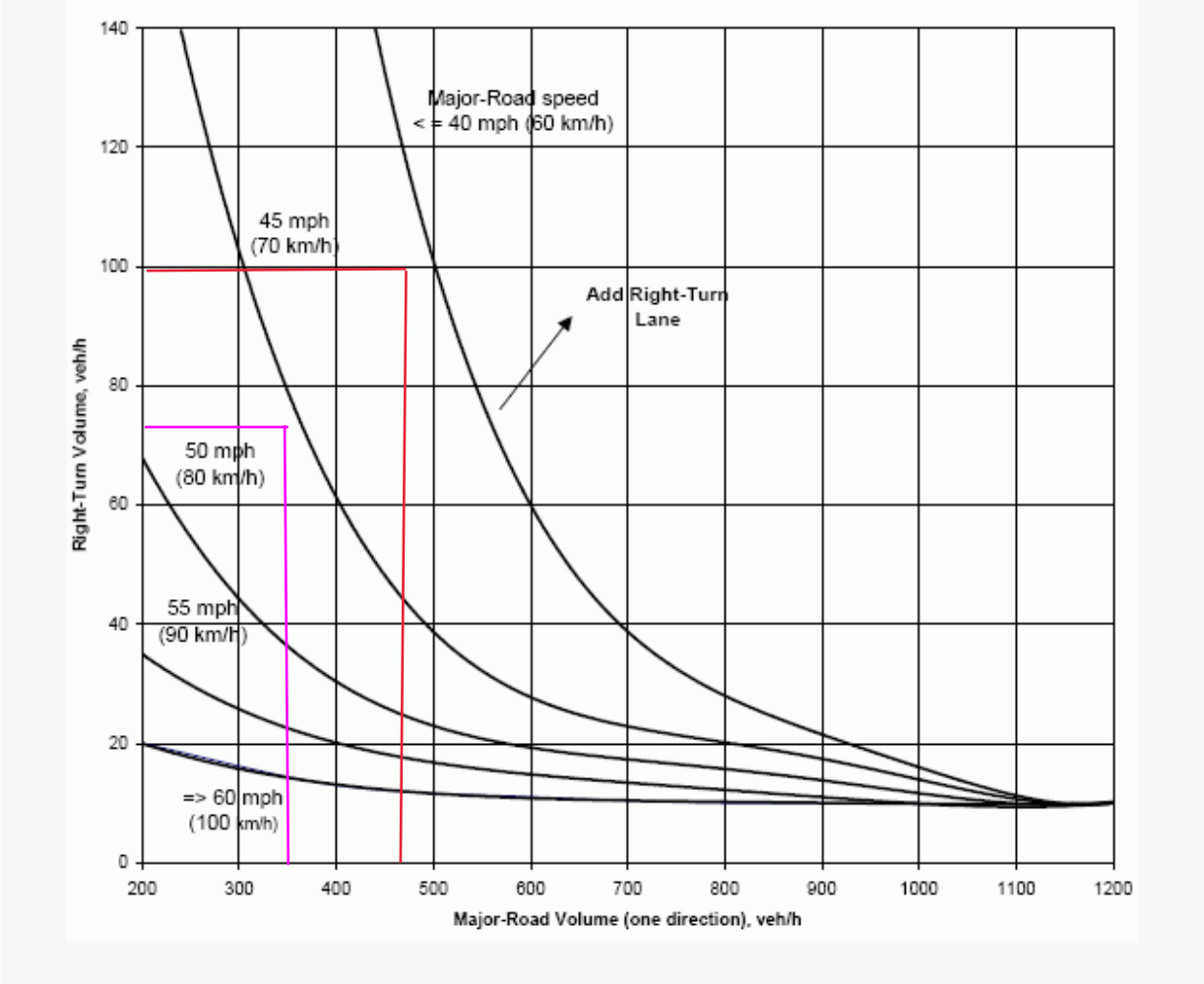
Source: NCHRP Report 279 and 457

#6 Dougherty Drive & England Boulevard

AM Dougherty Dr SB:
R: 75
Speed: 30 mph
England Blvd: 354

PM Dougherty Dr SB:
R: 100
Speed: 30 mph
England Blvd: 466

Figure 6 – Right-Turn Lane Guidelines for Two-Lane Roadways



The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right-turning vehicle.

2. Right-Turning Volume (veh/hr) - The right-turning volume is the number of advancing vehicles turning right.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right-turn lane is not needed for right-turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right-turn lane.

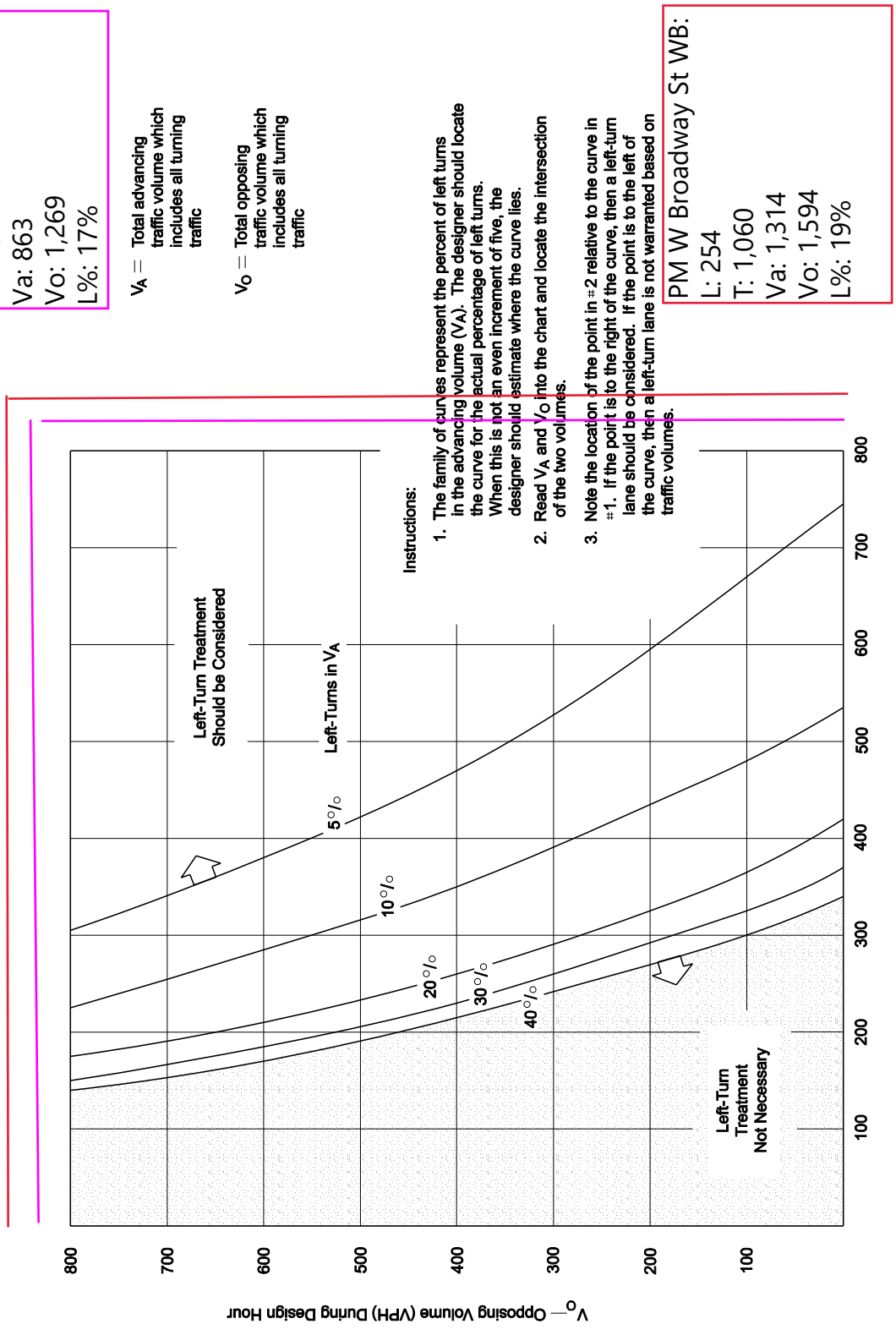
If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding to the major road operating speed, then a right-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#7 Dougherty Drive & W Broadway Street

AM W Broadway St WB:
L: 150
T: 713
Va: 863
Vo: 1,269
L%: 17%

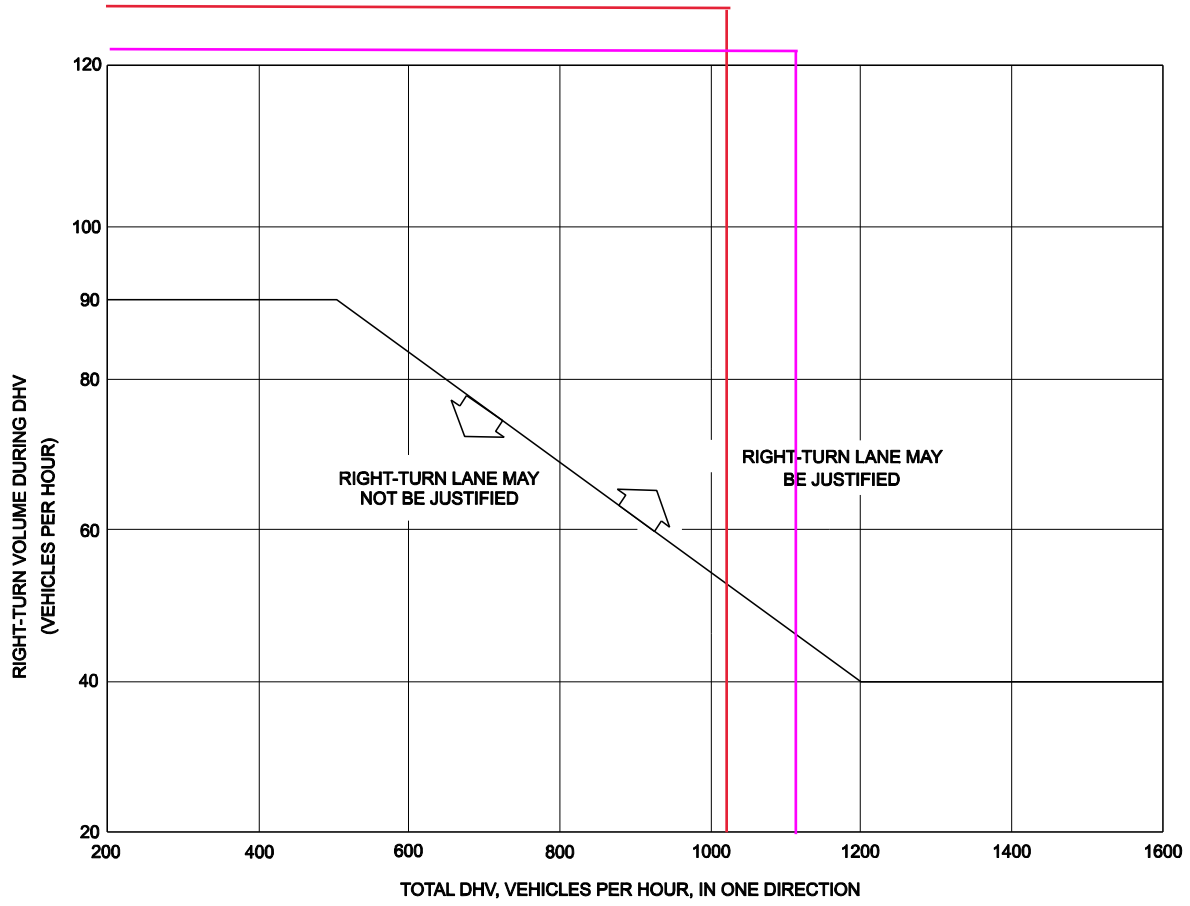
PM W Broadway St WB:
L: 254
T: 1,060
Va: 1,314
Vo: 1,594
L%: 19%



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH) (US Customary)

Figure 28.4F

#7 Dougherty Drive & W Broadway Street



Note: Figure is only applicable on highways with a design speed of 50 mph (80 km/h) or greater.

AM W Broadway St EB:
R: 130
Vo: 1,139

PM W Broadway St EB:
R: 200
Vo: 1,060

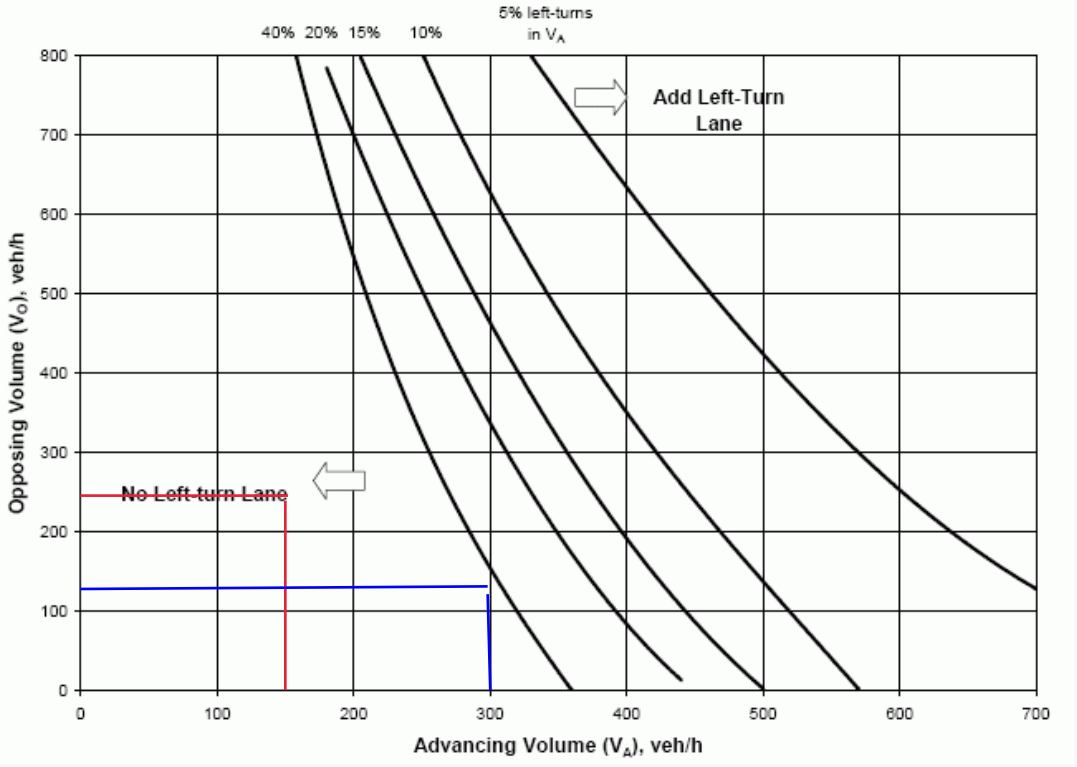
GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 4-LANE HIGHWAYS

Figure 28.4B

#8 Flynn Lane & Camden Street

Flynn Ln SB (AM) Va: 146 Vo: 257 %Lefts: 0.04% Turn Lane: No	Flynn Ln SB (AM) Va: 301 Vo: 114 %Lefts: 0.07% Turn Lane: No

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

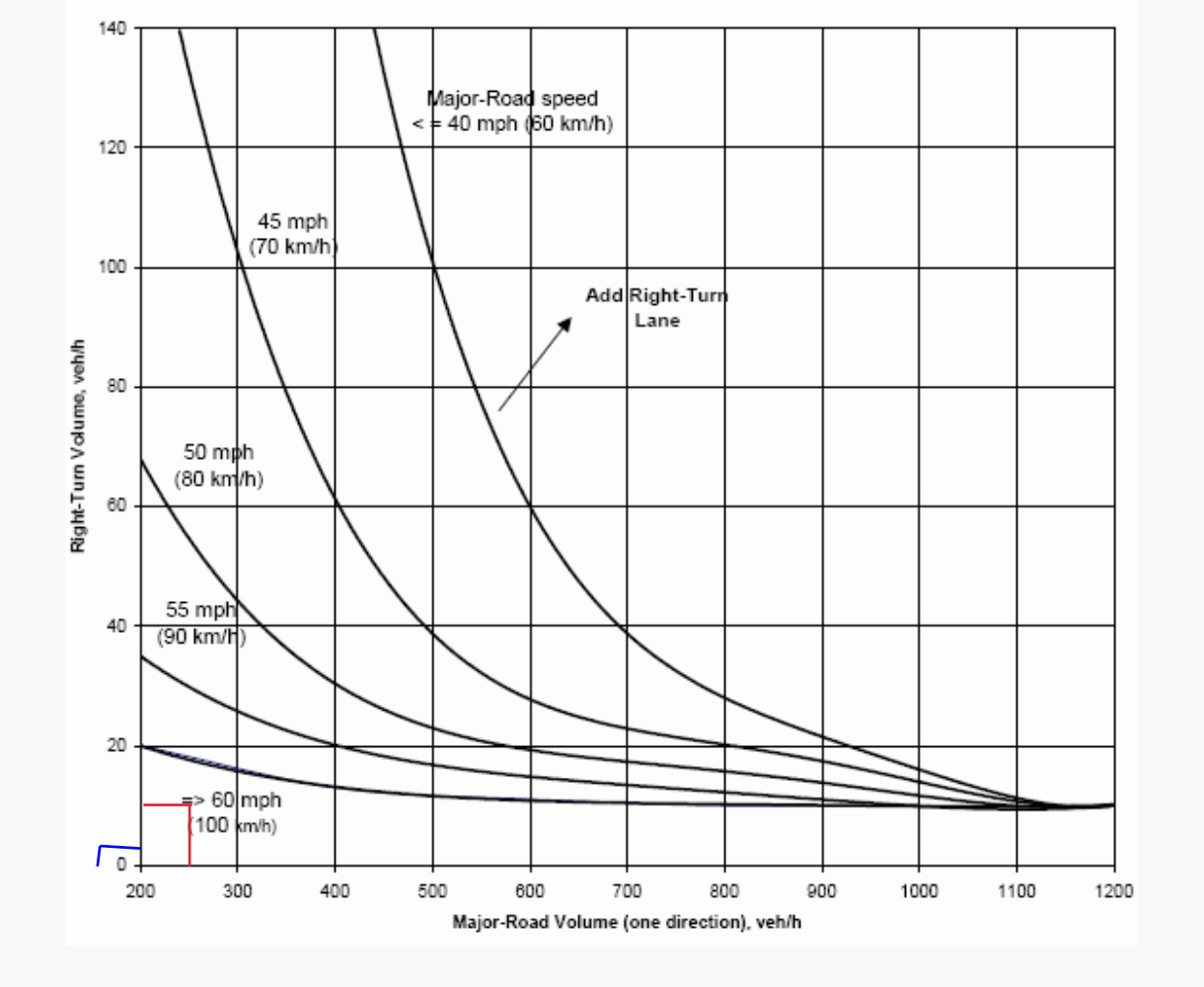
The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#8 Flynn Lane & Camden Street

Flynn Lane NB (AM)	Flynn Lane NB (PM)
Volume: 256	Volume: 114
Right Turn Volume: 10	Right Turn Volume: 7
Speed: 25 mph	Speed: 25 mph
Turn Lane: No	Turn Lane: No

Figure 6 – Right-Turn Lane Guidelines for Two-Lane Roadways



The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right-turning vehicle.

2. Right-Turning Volume (veh/hr) - The right-turning volume is the number of advancing vehicles turning right.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right-turn lane is not needed for right-turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right-turn lane.

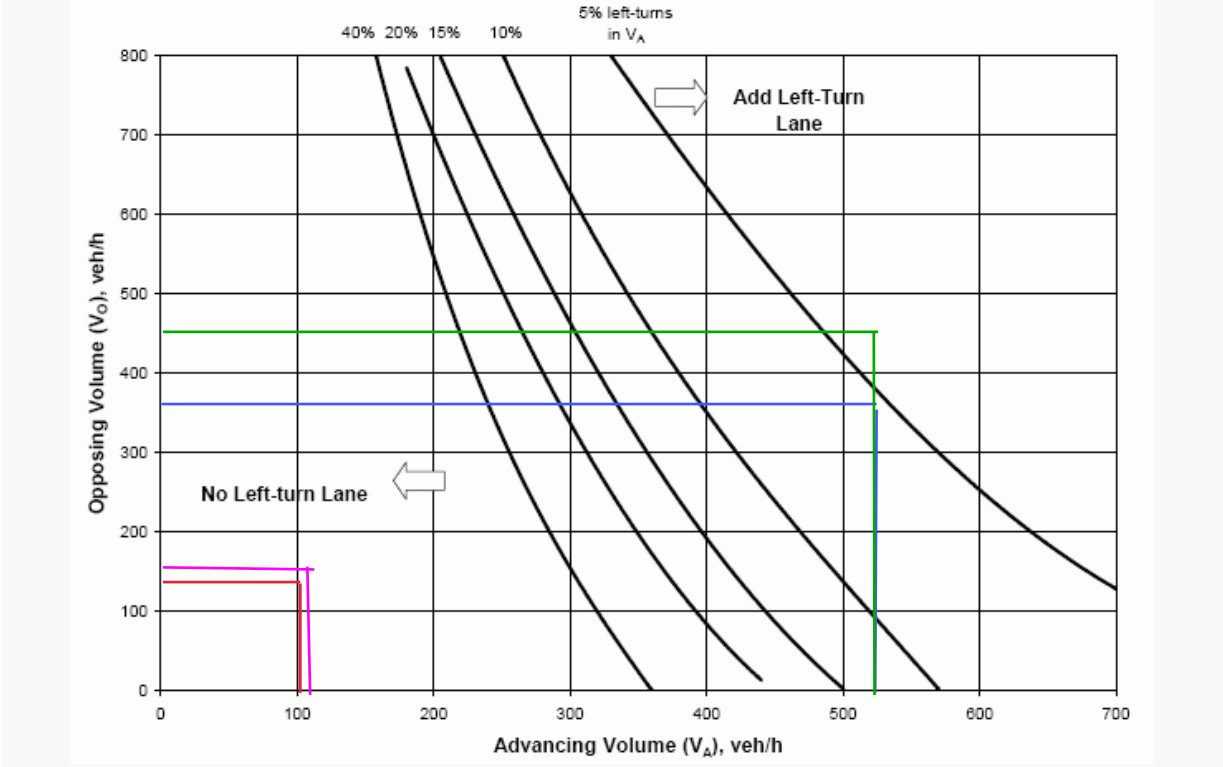
If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding to the major road operating speed, then a right-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#9 Flynn Lane & England Boulevard

AM Flynn Ln SB:	PM Flynn Ln SB:	AM England Blvd WB:	PM England Blvd WB:
L: 55	L: 17	L: 142	L: 58
T/R: 48	T/R: 82	T/R: 395	T/R: 476
Va: 103	Va: 99	Va: 537	Va: 534
Vo: 160	Vo: 141	Vo: 445	Vo: 360
L%: 53%	L%: 17%	L%: 26%	L%: 11%

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

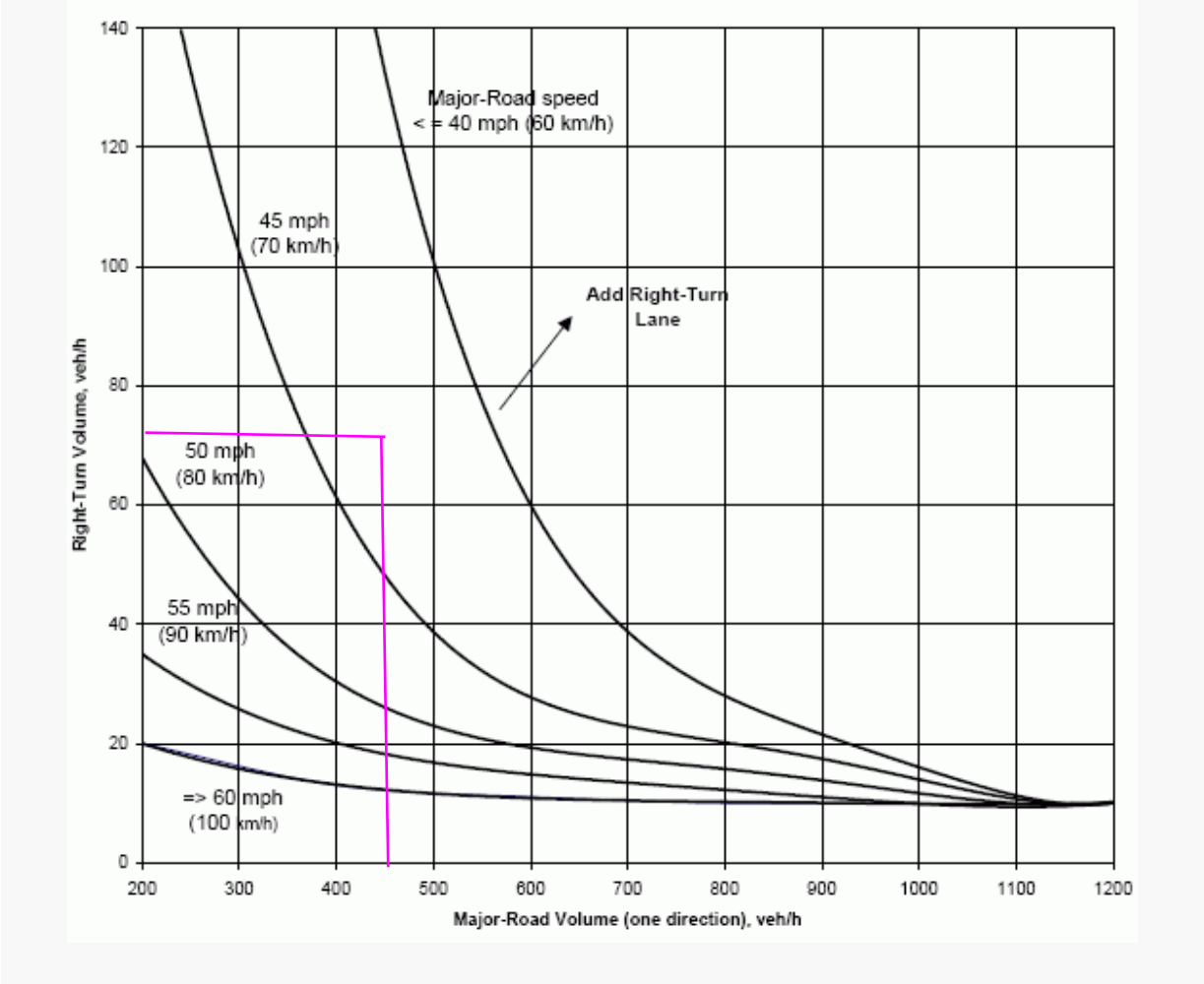
The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

AM Flynn Ln NB:
R: 73
Speed: 30 mph
England Blvd: 445

#9 Flynn Lane & England Boulevard

Figure 6 – Right-Turn Lane Guidelines for Two-Lane Roadways



The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right-turning vehicle.

2. Right-Turning Volume (veh/hr) - The right-turning volume is the number of advancing vehicles turning right.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right-turn lane is not needed for right-turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right-turn lane.

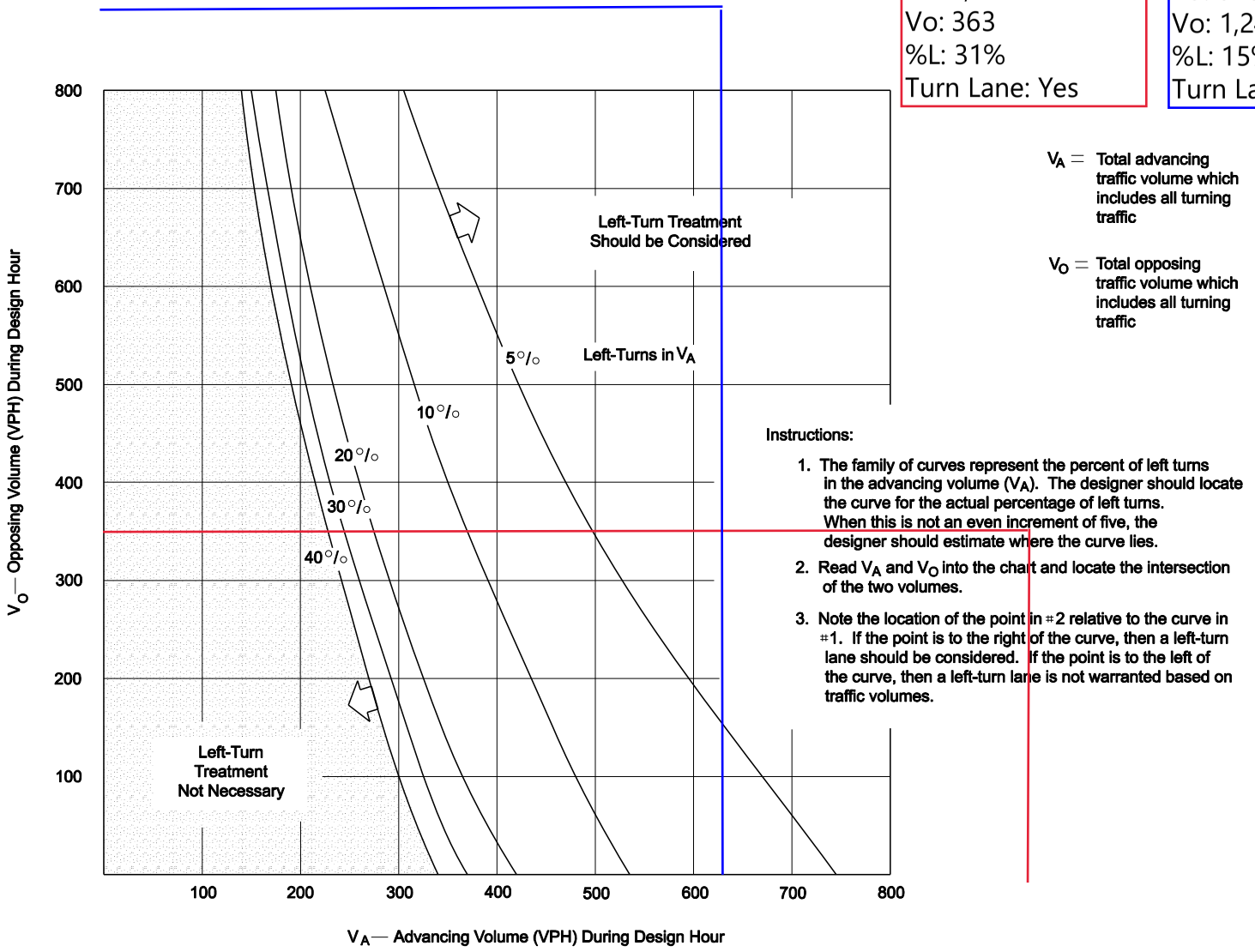
If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding to the major road operating speed, then a right-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#12 Flynn Lane & Mullan Road

Mullan Rd EB (AM)
Va: 1,346
Vo: 363
%L: 31%
Turn Lane: Yes

Mullan Rd EB (PM)
Va: 626
Vo: 1,246
%L: 15%
Turn Lane: Yes



V_A = Total advancing traffic volume which includes all turning traffic

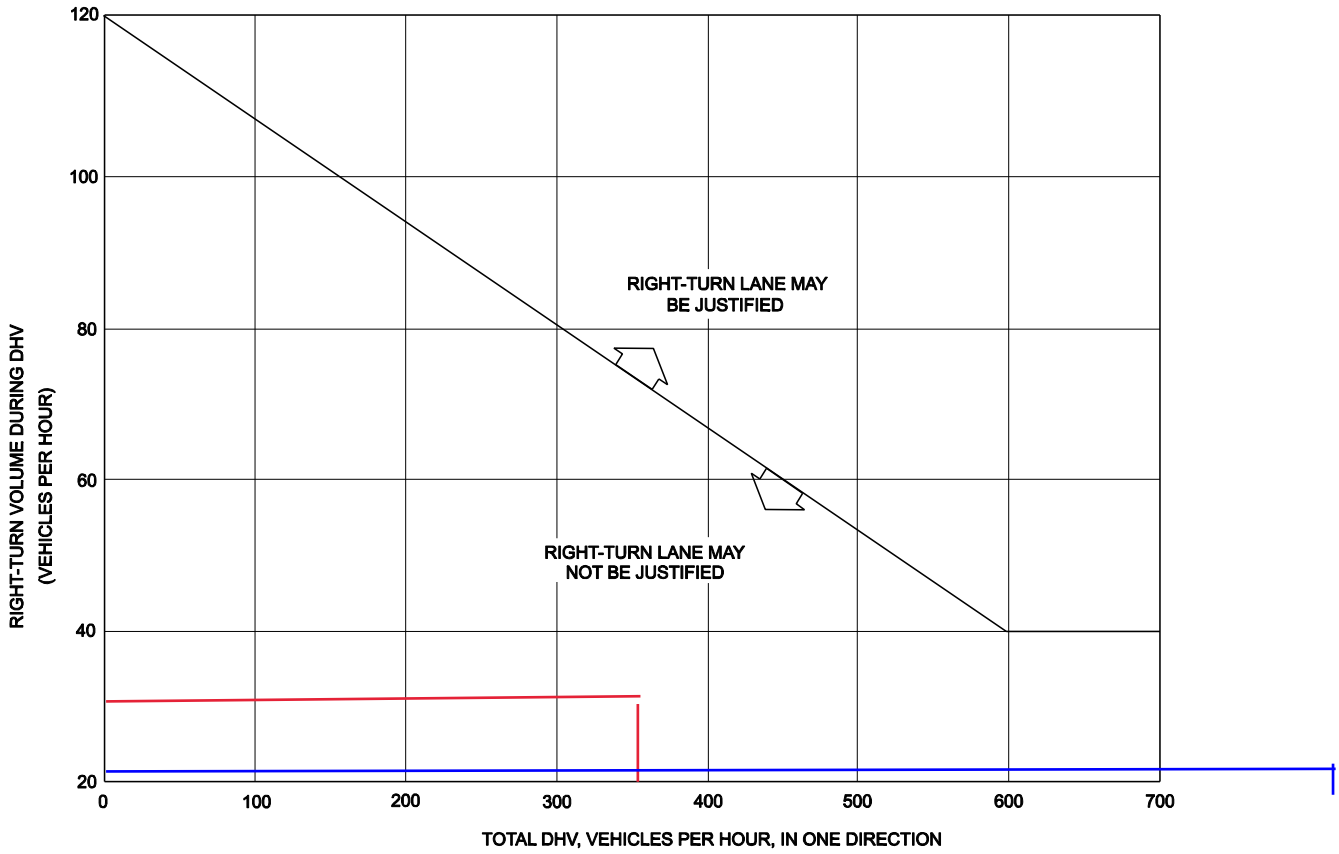
V_O = Total opposing traffic volume which includes all turning traffic

Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of five, the designer should estimate where the curve lies.
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the curve in #1. If the point is to the right of the curve, then a left-turn lane should be considered. If the point is to the left of the curve, then a left-turn lane is not warranted based on traffic volumes.

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH)
(US Customary)

Figure 28.4F



Note: For highways with a design speed below 50 mph (80 km/h) with a DHV < 300 and where right turns are > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:
Design Speed	=	35 mph (60 km/h)
DHV	=	250 vph
Right Turns	=	100 vph

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS

Figure 28.4A

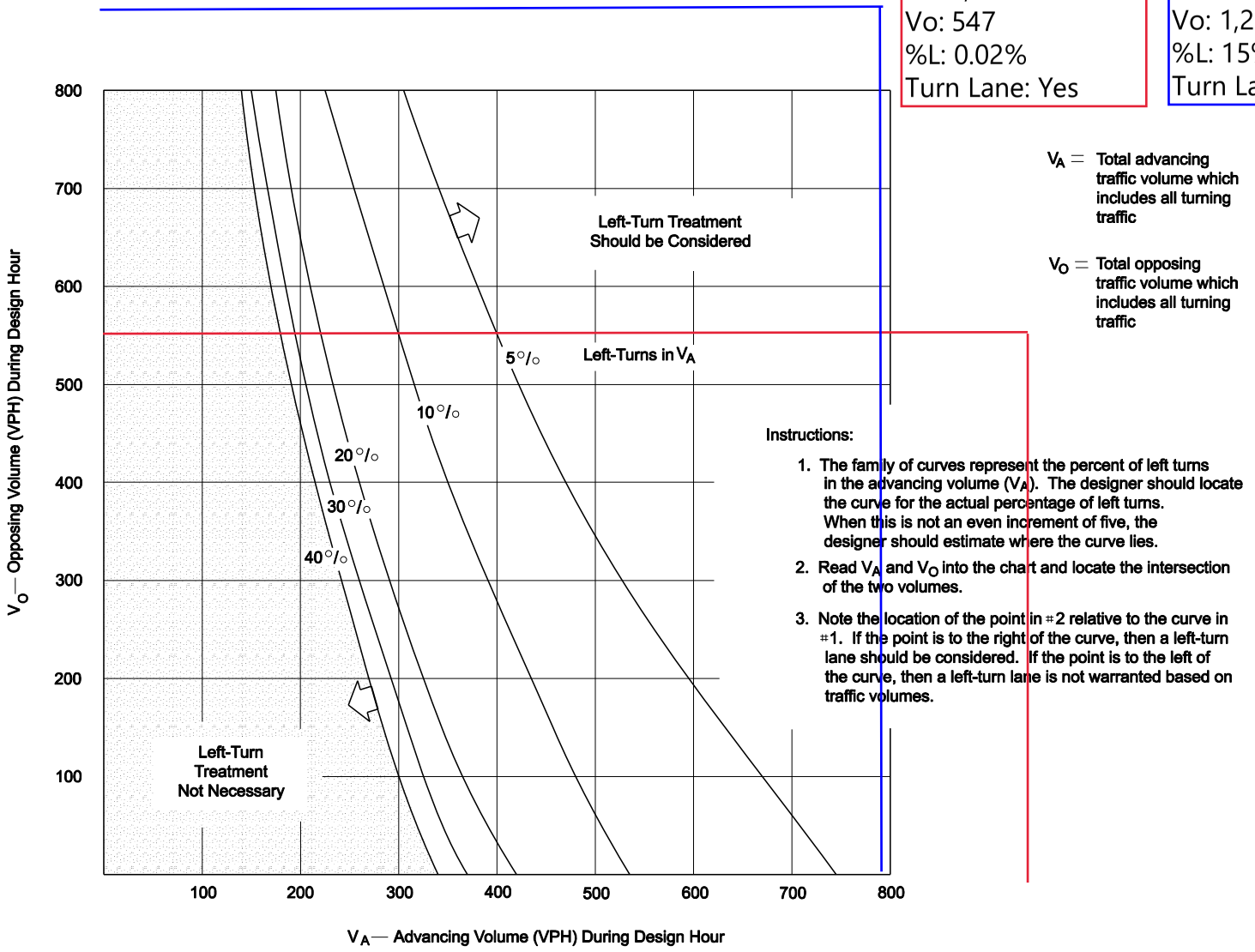
Mullan Rd WB (AM)
DHV: 363
Right Turns: 32
Speed: 45 mph
Turn Lane: No

Mullan Rd WB (PM)
DHV: 1,246
Right Turns: 4
Speed: 45 mph
Turn Lane: Yes

#13 Mary Jane Boulevard & Mullan Road

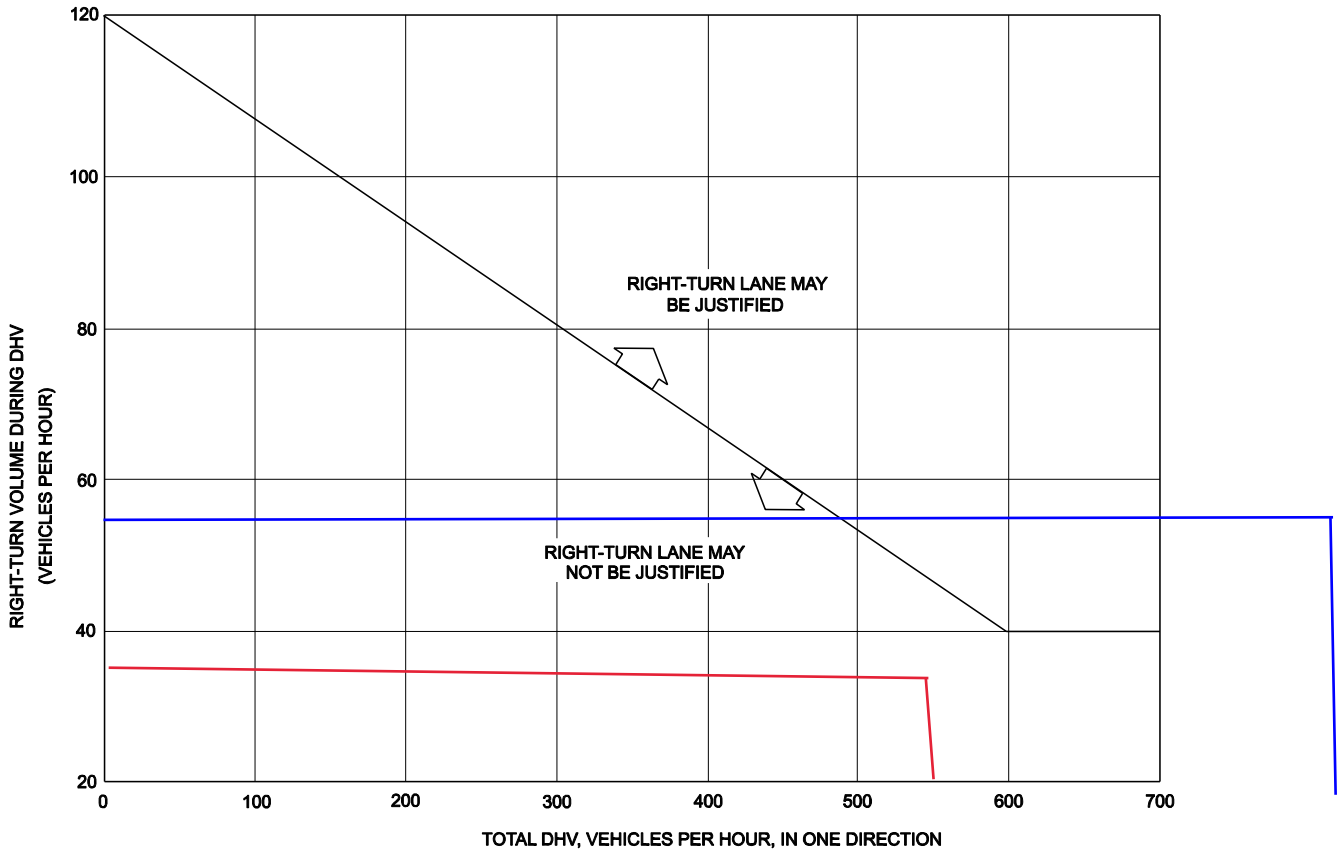
Mullan Rd EB (AM)
Va: 1,327
Vo: 547
%L: 0.02%
Turn Lane: Yes

Mullan Rd EB (PM)
Va: 796
Vo: 1,286
%L: 15%
Turn Lane: Yes



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH)
(US Customary)

Figure 28.4F



Note: For highways with a design speed below 50 mph (80 km/h) with a DHV < 300 and where right turns are > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 mph (60 km/h)
	DHV	=	250 vph
	Right Turns	=	100 vph

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS

Figure 28.4A

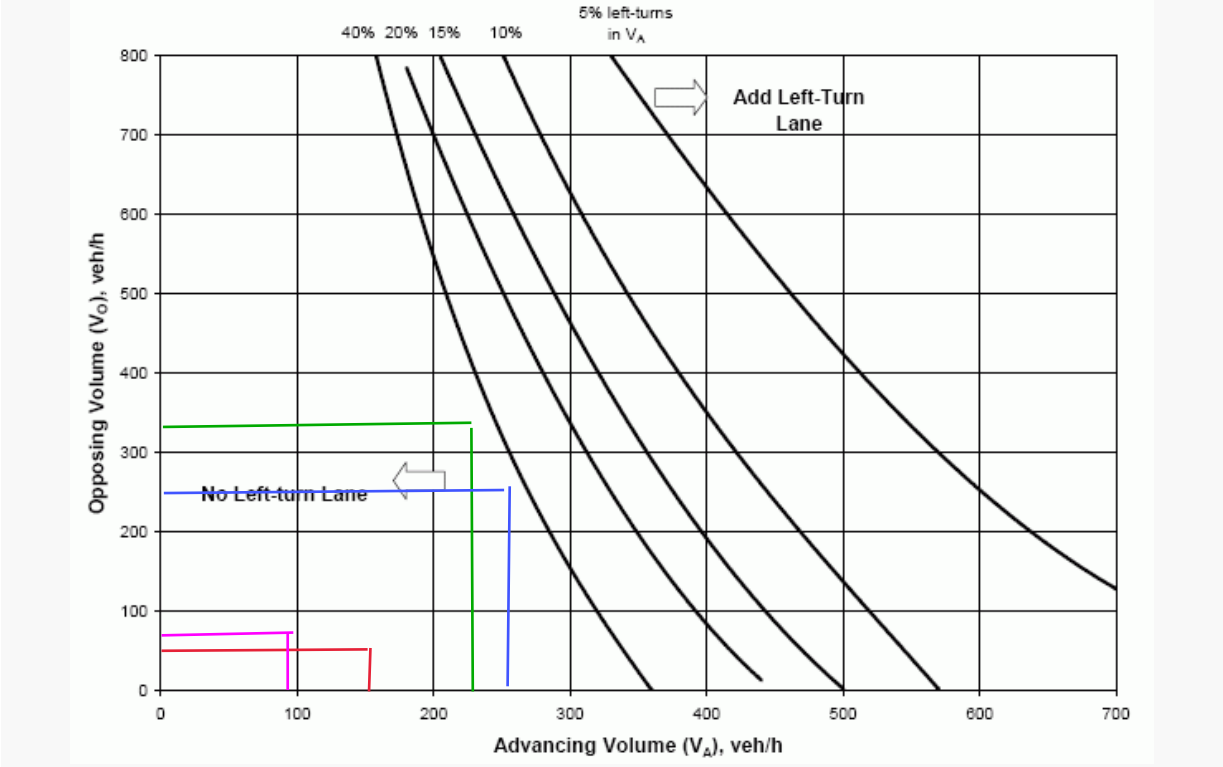
Mullan Rd WB (AM)
DHV: 547
Right Turns: 35
Speed: 45 mph
Turn Lane: No

Mullan Rd WB (PM)
DHV: 1,286
Right Turns: 55
Speed: 45 mph
Turn Lane: Yes

#15 Mary Jane Boulevard & Melrose Place

AM Melrose Pl WB:	PM Melrose Pl EB:	AM Mary Jane Blvd SB:	PM Mary Jane Blvd SB:
L: 25	L: 50	L: 54	L: 38
T/R: 70	T/R: 98	T/R: 177	T/R: 206
Va: 95	Va: 148	Va: 231	Va: 244
Vo: 77	Vo: 67	Vo: 330	Vo: 252
L%: 36%	L%: 34%	L%: 23%	L%: 16%

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

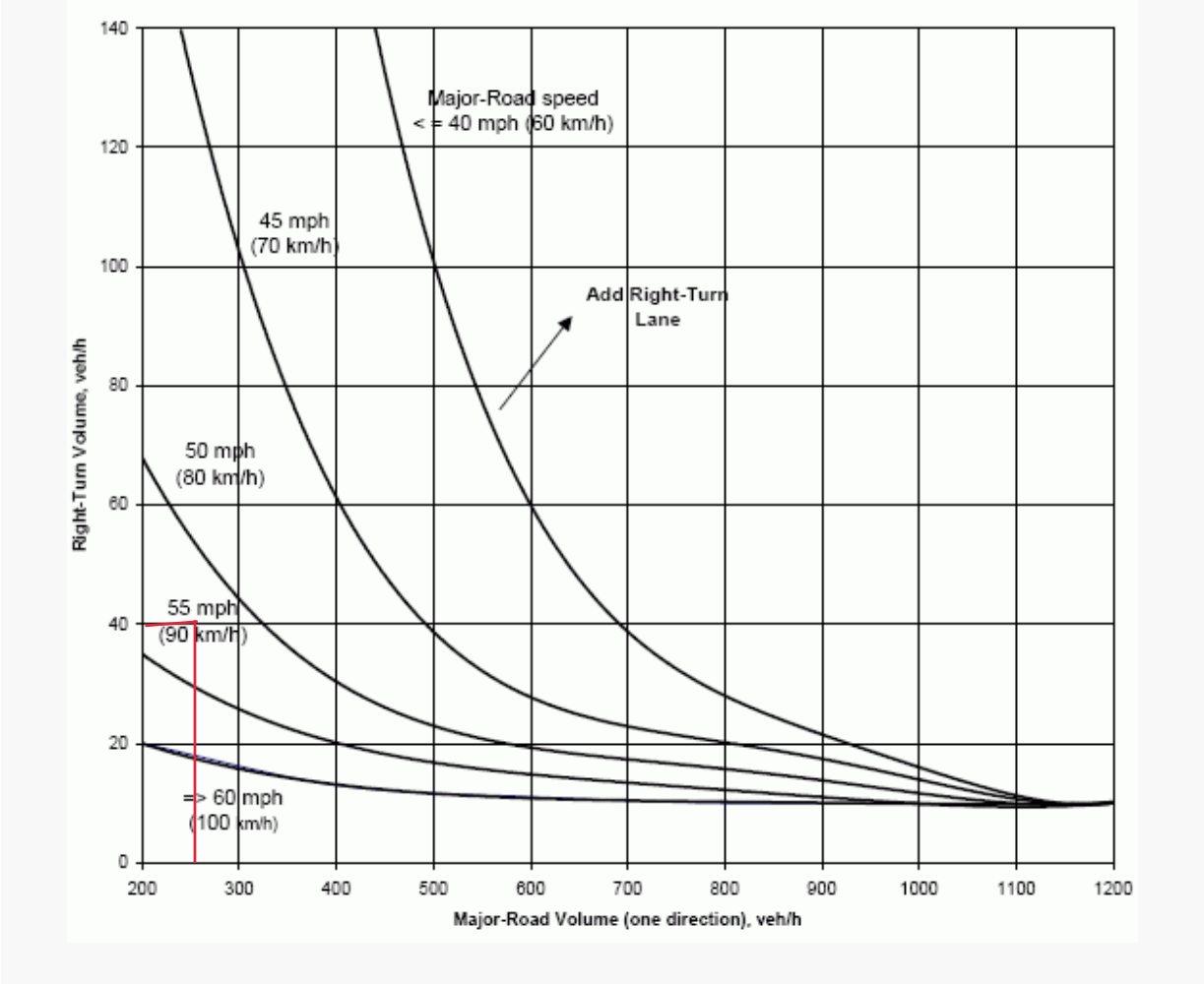
The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

PM Melrose Pl EB:
R: 41
Mary Jane Blvd: 252
Speed: 30 mph

#15 Mary Jane Boulevard & Melrose Place

Figure 6 – Right-Turn Lane Guidelines for Two-Lane Roadways



The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right-turning vehicle.

2. Right-Turning Volume (veh/hr) - The right-turning volume is the number of advancing vehicles turning right.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right-turn lane is not needed for right-turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right-turn lane.

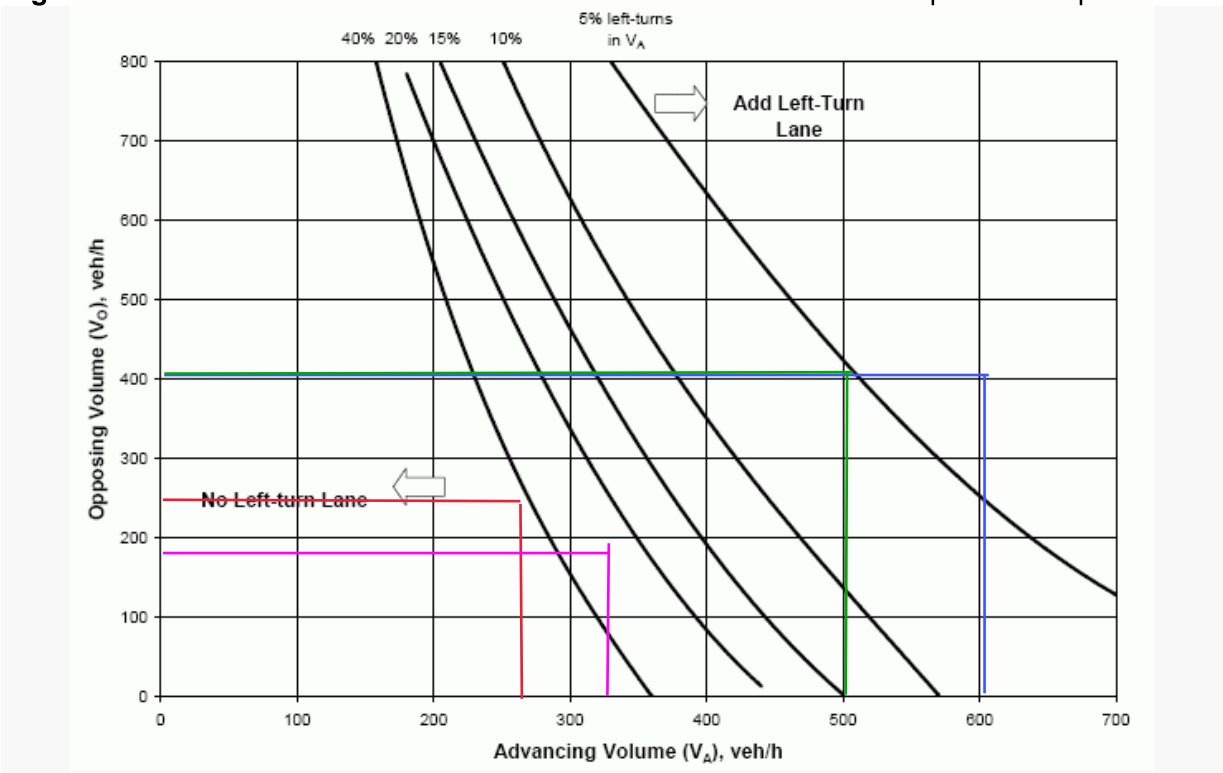
If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding to the major road operating speed, then a right-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#16 Mary Jane Boulevard & England Boulevard

AM Mary Jane Blvd NB:	PM Mary Jane Blvd SB:	AM England Blvd EB:	PM England Blvd WB:
L: 136	L: 92	L: 87	L: 64
T/R: 188	T/R: 170	T/R: 420	T/R: 545
Va: 324	Va: 262	Va: 507	Va: 609
Vo: 192	Vo: 252	Vo: 402	Vo: 407
L%: 42%	L%: 35%	L%: 17%	L%: 11%

Figure 1 – Left-Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph



The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left- turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left-turn lane.

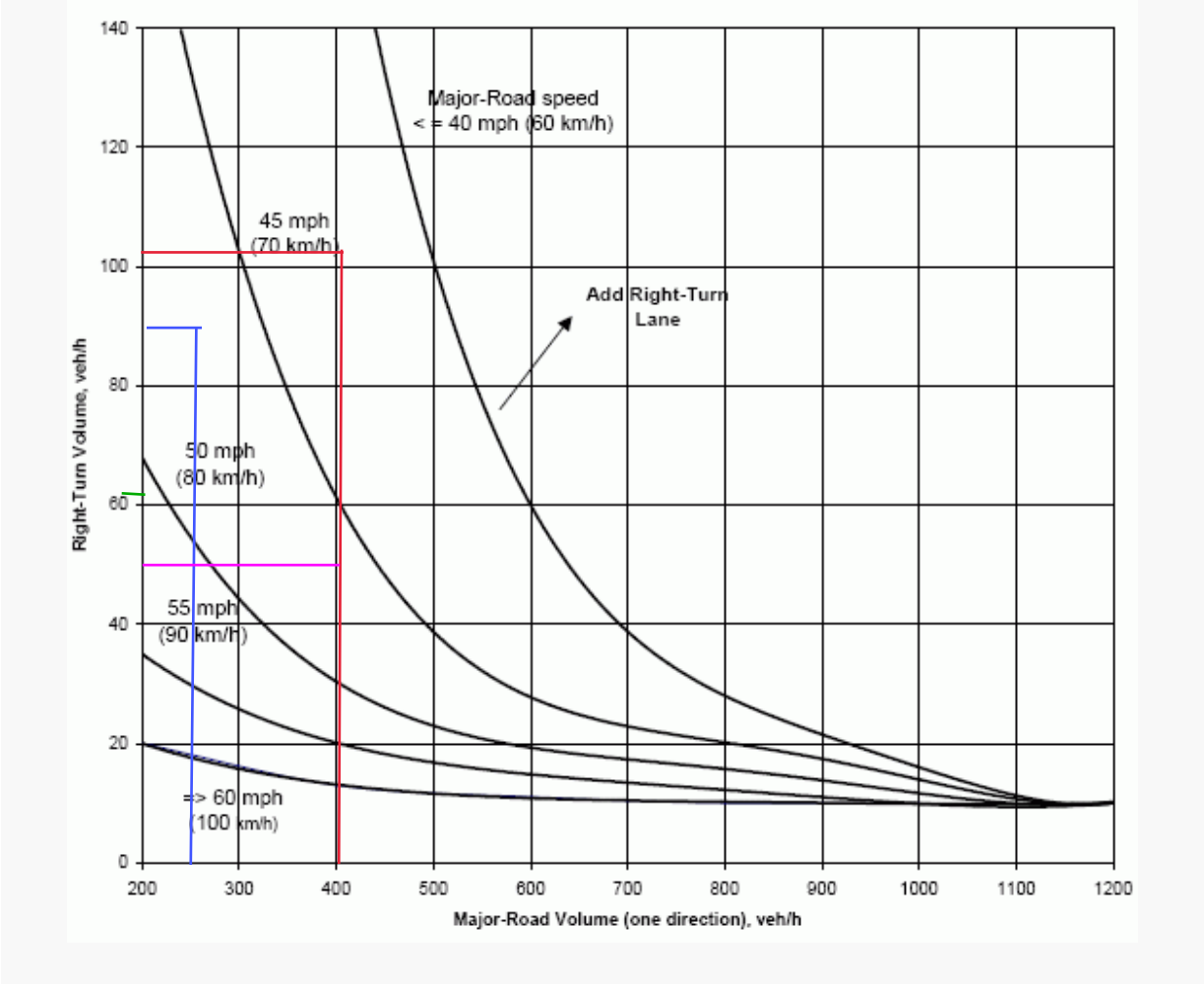
The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#16 Mary Jane Boulevard & England Boulevard

AM Mary Jane Blvd SB: R: 50 Speed: 30 mph England: 402	PM Mary Jane Blvd NB: R: 106 Speed: 30 mph England: 407	AM England Blvd EB: R: 62 Speed: 30 mph Mary Jane Blvd: 192	PM England Blvd WB: R: 93 Speed: 30 mph Mary Jane Blvd: 252

Figure 6 – Right-Turn Lane Guidelines for Two-Lane Roadways



The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right-turning vehicle.

2. Right-Turning Volume (veh/hr) - The right-turning volume is the number of advancing vehicles turning right.

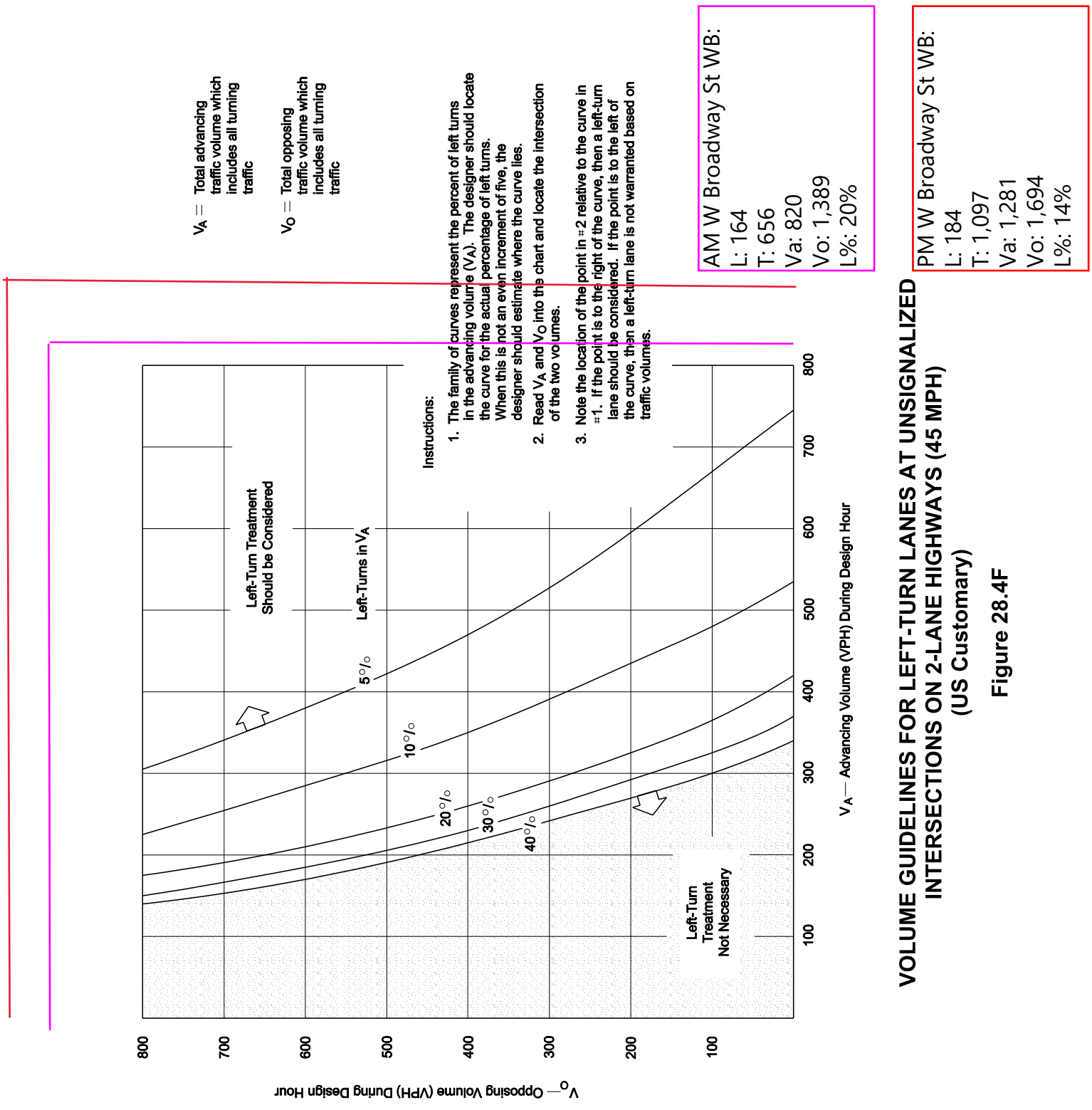
3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right-turn lane is not needed for right-turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right-turn lane.

If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding to the major road operating speed, then a right-turn lane is appropriate.

Source: NCHRP Report 279 and 457

#20 Mary Jane Boulevard & W Broadway Street



AM W Broadway St WB:
L: 164
T: 656
Va: 820
Vo: 1,389
L%: 20%

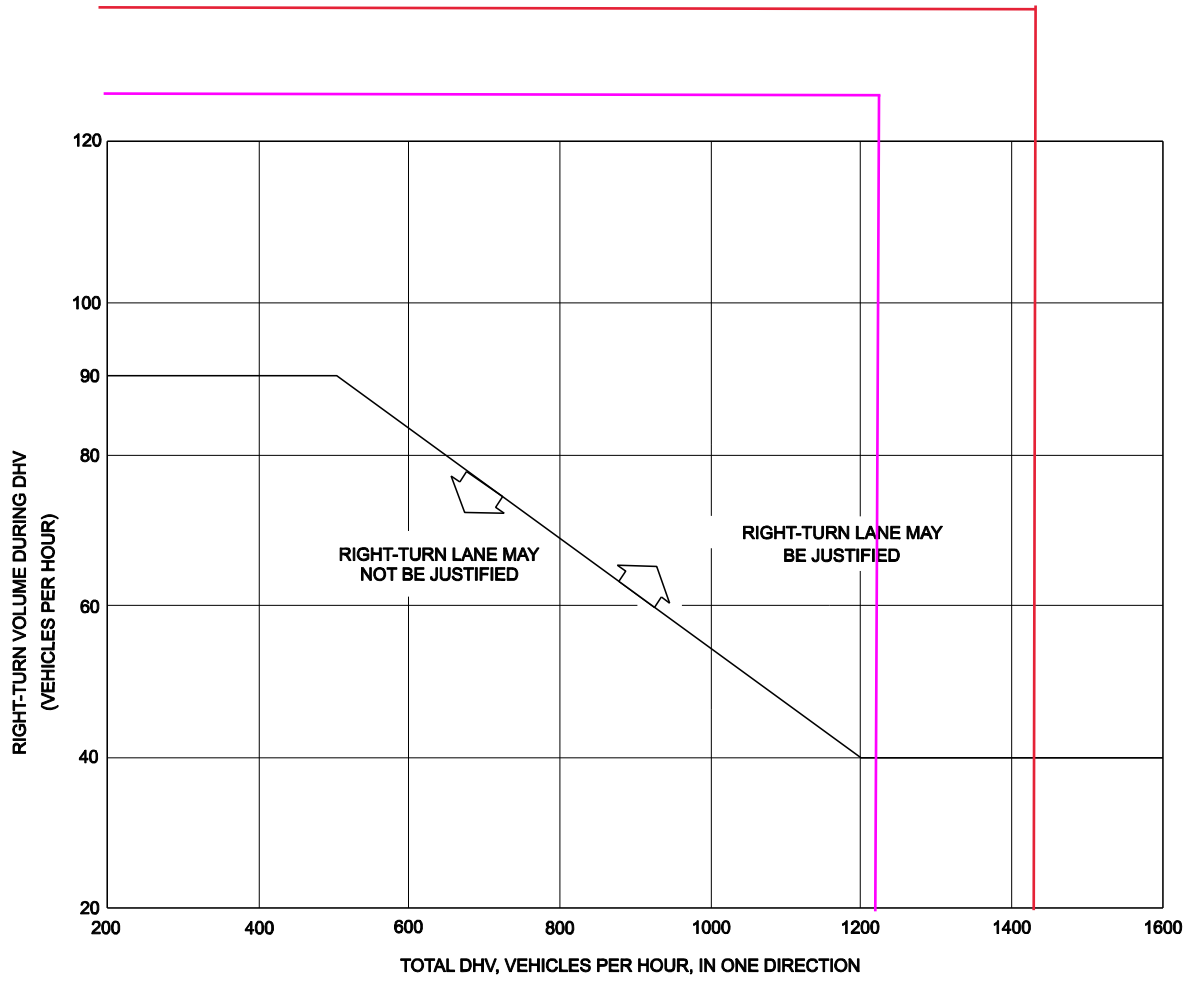
PM W Broadway St WB:
L: 184
T: 1,097
Va: 1,281
Vo: 1,694
L%: 14%

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 2-LANE HIGHWAYS (45 MPH) (US Customary)

Figure 28.4F

#20 Mary Jane Boulevard & W Broadway Street

AM W Broadway St EB:	PM W Broadway St EB:
R: 142	R: 223
T: 1,247	T: 1,471



Note: Figure is only applicable on highways with a design speed of 50 mph (80 km/h) or greater.

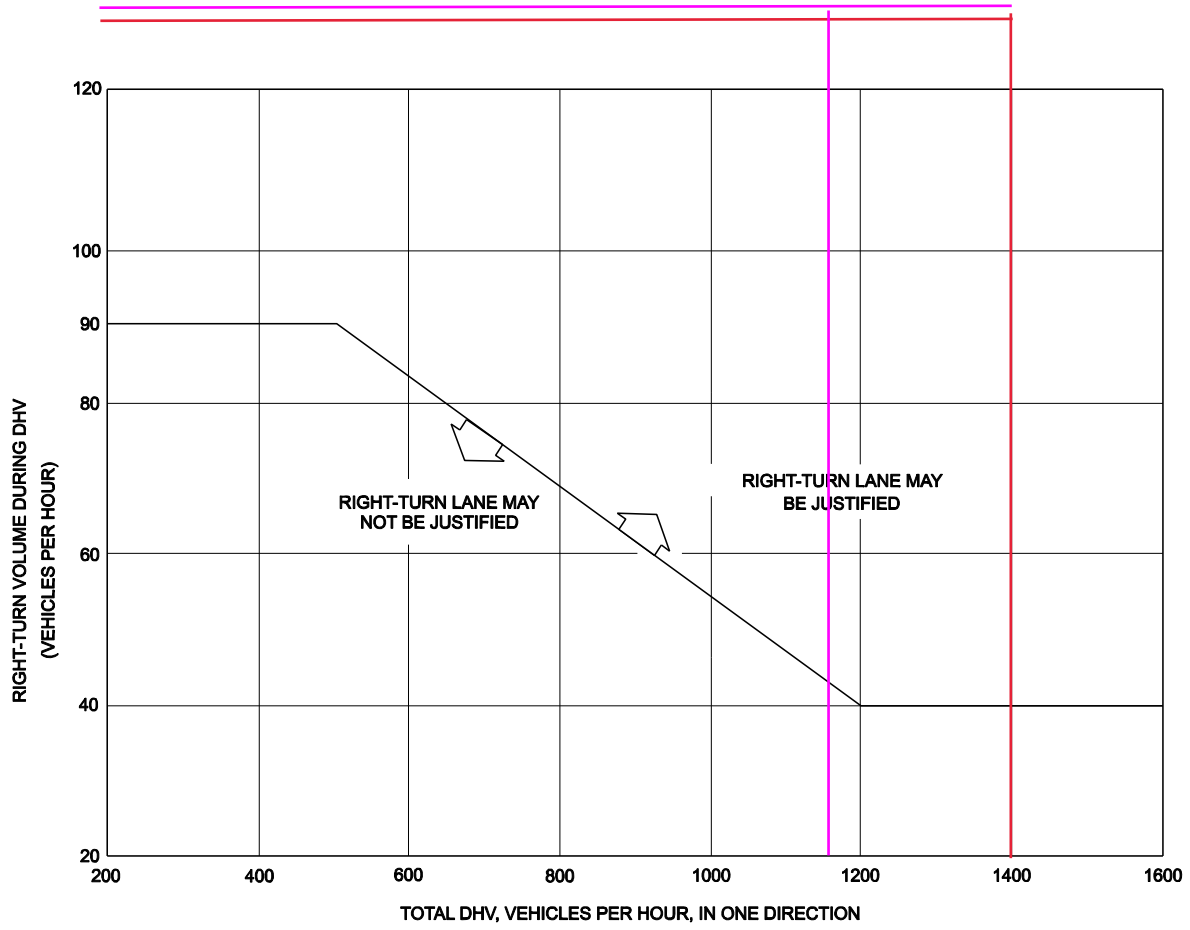
GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 4-LANE HIGHWAYS

Figure 28.4B

AM W Broadway St EB:
R: 146
T: 1,180

PM W Broadway St EB:
R: 143
T: 1,397

#21 Flynn Lane & W Broadway Street



Note: Figure is only applicable on highways with a design speed of 50 mph (80 km/h) or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON 4-LANE HIGHWAYS

Figure 28.4B

		Scenario 3: Two Way Stop Control (2050)													
		AM								PM					
Intersection	Number	LOS	DELAY	VC	CRITICAL	SIGNAL WARRANT	GUIDANCE	LTL	RTL	LOS	DELAY	VC	CRITICAL	SIGNAL WARRANT	
GEORGE ELMER DR / W BROADWAY ST	1	**F**	**3148**	**0.027**	**NBT**	**ALL**	**MDT 28.4D; 28.4(4**	**WBL**	**EBR**	**F**	**10000**	**33.82**	**NBL**	**ALL**	
GEORGE ELMER DR / ENGLAND BLVD	2	**F**	**10000**	**0**	**SBL**	**#3**	**ACHD FIG 1**	**WBL, NBL**	**-**	**F**	**10000**	**0**	**NBL**	**ALL**	
GEORGE ELMER DR / CATTLE DR	3	**F**	**17**	**0.024**	**WBL**	**NO**	**ACHD FIG 1**	**-**	**-**	**D**	**30**	**0.17**	**EBL**	**NO**	
GEORGE ELMER DR / HERON'S LANDING	4	C	16	0.076	WBL	NO	ACHD FIG 1	-	-	**D**	**32**	**0.206**	**EBL**	**NO**	
GEORGE ELMER DR / MULLAN RD	5	**F**	**3693**	**8.602**	**SBL**	**ALL**	**MDT 28.4F**	**EBL**	**-**	**F**	**1957**	**4.632**	**SBL**	**ALL**	
DOUGHERTY DR / ENGLAND BLVD	6	C	21	0.299	SBL	NO	ACHD FIG 1	EBL	-	**E**	**45**	**0.589**	**SBL**	**NO**	
DOUGHERTY DR / W BROADWAY ST	7	**F**	**118**	**0.917**	**NBL**	**ALL**	**MDT 28.4F, 28.4(4**	**WBL**	**EBR**	**F**	**1704**	**4.369**	**NBL**	**ALL**	
FLYNN LN / CAMDEN ST	8	B	10	0.018	WBL	NO	-	-	-	B	10	0.007	WBL	NO	
FLYNN LN / ENGLAND BLVD	9	**F**	**248**	**0.935**	**SBL**	**#3**	**ACHD FIG 1**	**WBL**	**-**	**F**	**61**	**0.163**	**SBL**	**NO**	
FLYNN LN / CHELSEA DR	10	**F**	**15**	**0.005**	**EBT**	**NO**	**-**	**-**	**-**	B	12	0.025	EBT	NO	
FLYNN LN / SIREN'S RD	11	C	16	0.124	EBL	NO	-	-	-	B	11	0.035	EBL	NO	
FLYNN LN / MULLAN RD	12	**D**	**25**	**0.006**	**NBR**	**ALL**	**-**	**-**	**-**	**F**	**126**	**0.984**	**SBR**	**ALL**	
MARY JANE BLVD / MULLAN RD	13	**F**	**2633**	**6.359**	**SBL**	**ALL**	**-**	**-**	**-**	**F**	**1689**	**4.13**	**SBL**	**ALL**	
MARY JANE BLVD / O'LEARY ST	14	C	16	0.086	WBL	NO	-	-	-	B	15	0.037	WBL	NO	
MARY JANE BLVD / MELROSE PL	15	C	19	0.089	WBL	NO	-	-	-	C	20	0.161	EBL	NO	
MARY JANE BLVD / ENGLAND BLVD	16	**F**	**964**	**2.773**	**NBL**	**#3**	**ACHD FIG 1**	**NBL, EBL**	**-**	**F**	**1324**	**3.171**	**NBL**	**#3**	
MARY JANE BLVD / CAMDEN ST	17	B	13	0.097	EBL	NO	-	-	-	B	14	0.007	WBL	NO	
MARY JANE BLVD / FLYNN LN	18	**D**	**27**	**0.25**	**EBL**	**NO**	-	-	-	C	21	0.149	EBL	NO	
MARY JANE BLVD / VETERAN'S WAY	19	C	15	0.061	EBL	NO	-	-	-	C	18	0.255	EBL	NO	
MARY JANE BLVD / W BROADWAY ST	20	**F**	**676**	**2.313**	**NBL**	**ALL**	**MDT 28.4F, 28.4(4**	**WBL**	**EBR**	**F**	**1331**	**3.662**	**NBL**	**ALL**	
FLYNN LN / W BROADWAY ST	21	**F**	**61**	**0.935**	**NBT**	**ALL**	**MDT 28.4(4)**	**-**	**EBR**	**F**	**58**	**0.882**	**NBT**	**ALL**	

			Scenario 4: Signal (2050)									Scenario 5: Roundabouts (2050)					
			AM				PM						AM			PM	
LTL	RTL	Number	LOS	DELAY	VC	CRITICAL	LOS	DELAY	VC	CRITICAL	Number	Roundabout Type	LOS	DELAY	CRITICAL	LOS	DELAY
-		1	C	34	0.717	NBL	C	28	0.75	NBL	1	MULTILANE	B	14	NBL	C	15
NBL, EBL	**-**	2	C	21	0.522	SBL	C	24	0.607	NBL	2	SINGLE	B	11	NBT	B	14
NBL	**-**	3	-	-	-	-	-	-	-	-	3	SINGLE	A	5	NBT	A	6
NBL	**-**	4	-	-	-	-	-	-	-	-	4	SINGLE	A	5	NBT	A	7
EBL	**-**	5	**F**	**207**	**0.919**	**SBL**	**D**	**42**	**0.841**	**SBL**	5	**SINGLE**	**F**	**88**	**EBT**	**E**	**40**
EBL	**-**	6	-	-	-	-	-	-	-	-	6	SINGLE	A	6	EBT	A	7
WBL	**EBR**	7	B	19	0.689	NBR	C	29	0.847	WBL	7	MULTILANE	B	11	NBR	C	20
-	-	8	-	-	-	-	-	-	-	-	8	MINI	A	3	NBT	A	3
WBL	**-**	9	B	15	0.481	NBR	B	15	0.464	NBT	9	SINGLE	A	8	EBT	A	7
-	-	10	-	-	-	-	-	-	-	-	10	MINI	A	4	SBT	A	3
-	-	11	-	-	-	-	-	-	-	-	11	MINI	A	5	NBT	A	3
-	**-**	12	A	9	0.897	SBR	**D**	**46**	**1.033**	WBT	12	SINGLE	**D**	**34**	**EBT**	**F**	**52**
-	**-**	13	**F**	**180**	**0.762**	**SBL**	**D**	**44**	**0.939**	SBL	13	SINGLE	**D**	**34**	**EBT**	**F**	**60**
-	-	14	-	-	-	-	-	-	-	-	14	MINI	A	4	NBT	A	4
-	-	15	-	-	-	-	-	-	-	-	15	MINI	A	5	NBT	A	5
WBL	**-**	16	B	18	0.45	NBL	B	18	0.529	SBL	16	SINGLE	B	10	NBT	B	10
-	-	17	-	-	-	-	-	-	-	-	17	MINI	A	4	NBT	A	4
-	-	18	-	-	-	-	-	-	-	-	18	SINGLE	A	5	NBT	A	5
-	-	19	-	-	-	-	-	-	-	-	19	MINI	A	4	NBT	A	5
WBL	**EBR**	20	B	18	0.711	NBL	B	18	0.751	NBL	20	MULTILANE	C	15	NBL	C	18
-	**EBR**	21	B	11	0.758	NBT	B	11	0.843	NBT	21	MULTILANE	B	14	NBT	B	11

		Scenario 6: All Way Stop Control									Mitigations: Two Way Stop Control (2050)								
		AM				PM					AM					PM			
CRITICAL	Number	LOS	DELAY	VC	CRITICAL	LOS	DELAY	VC	CRITICAL	Number	LOS	DELAY	VC	CRITICAL	MITIGATION	LOS	DELAY	VC	CRITICAL
NBL	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
WBT	2	**E**	**41**	**0.924**	**WBT**	**F**	**94**	**1.273**	**WBT**	2	-	-	-	-	-	-	-	-	-
NBT	3	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
NBT	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
WBT	5	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
WBT	6	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
NBR	7	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-
NBT	8	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-
WBT	9	C	22	0.812	EBT	C	24	0.866	WBT	9	**F**	**17**	**0.95**	**SBL**	**ALL APPROAC**	**E**	**6**	**0.16**	**SBL**
NBT	10	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
SBT	11	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-
WBT	12	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
WBT	13	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-
NBT	14	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-
NBT	15	B	10	0.461	NBT	B	10	0.373	NBT	15	-	-	-	-	-	-	-	-	-
WBT	16	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-
SBT	17	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-
SBT	18	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-
EBL	19	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-
NBL	20	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
NBT	21	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	-	-	-

		Mitigations: Signal (2050)											Mitigations: Roundabouts (2050)						
		AM					PM							AM			PM		
MITIGATION	Number	LOS	DELAY	VC	CRITICAL	MITIGATION	LOS	DELAY	VC	CRITICAL	MITIGATION	Number	Roundabout Type	LOS	DELAY	CRITICAL	LOS	DELAY	CRITICAL
-	1	-	-	-	-	-	-	-	-	-	-	1	MULTILANE	-	-	-	-	-	-
-	2	-	-	-	-	-	-	-	-	-	-	2	SINGLE	-	-	-	-	-	-
-	3	-	-	-	-	-	-	-	-	-	-	3	SINGLE	-	-	-	-	-	-
-	4	-	-	-	-	-	-	-	-	-	-	4	SINGLE	-	-	-	-	-	-
-	5	B	14	0.649	SBR	EB DUAL THRO	C	20	0.663	SBR	EB DUAL THRO	5	MULTILANE	B	12	EBT	B	13	SBR
-	6	-	-	-	-	-	-	-	-		-	6	SINGLE	-	-	-	-	-	-
-	7	-	-	-	-	-	-	-	-	-	-	7	MULTILANE	-	-	-	-	-	-
-	8	-	-	-	-	-	-	-	-	-	-	8	MINI	-	-	-	-	-	-
ALL APPROAC	9	-	-	-	-	-	-	-	-	-	-	9	SINGLE	-	-	-	-	-	-
-	10	-	-	-	-	-	-	-	-	-	-	10	MINI	-	-	-	-	-	-
-	11	-	-	-	-	-	-	-	-	-	-	11	MINI	-	-	-	-	-	-
-	12	-	-	-	-	-	-	-	-	-	-	12	SINGLE	A	8	NBR	**A**	**9**	**SBR**
-	13	B	13	0.555	SBL	EB DUAL THRO	B	14	0.627	SBR	EB DUAL THRO	13	SINGLE	A	9	EBT	B	10	SBL
-	14	-	-	-	-	-	-	-	-	-	-	14	MINI	-	-	-	-	-	-
-	15	-	-	-	-	-	-	-	-	-	-	15	MINI	-	-	-	-	-	-
-	16	-	-	-	-	-	-	-	-	-	-	16	SINGLE	-	-	-	-	-	-
-	17	-	-	-	-	-	-	-	-	-	-	17	MINI	-	-	-	-	-	-
-	18	-	-	-	-	-	-	-	-	-	-	18	SINGLE	-	-	-	-	-	-
-	19	-	-	-	-	-	-	-	-	-	-	19	MINI	-	-	-	-	-	-
-	20	-	-	-	-	-	-	-	-	-	-	20	MULTILANE	-	-	-	-	-	-
-	21	-	-	-	-	-	-	-	-	-	-	21	MULTILANE	-	-	-	-	-	-

Number	Recommendation (Interim)	Recommendation (2050)	Options
1	ML RBT	ML RBT	SIGNAL/ML RBT
2	SL RBT	SL RBT	SIGNAL/SL RBT
3	SL RBT	SL RBT	SL RBT
4	TWSC	SL RBT	TWSC/SL RBT
5	SL RBT	ML RBT	SIGNAL/RBT
6	TWSC	SL RBT	TWSC/SL RBT
7	ML RBT	ML RBT	SIGNAL/ML RBT
8	TWSC	TWSC	TWSC/MINI RBT
9	AWSC	SL RBT	AWSC/SIGNAL/SL RBT
10	TWSC	TWSC	TWSC/MINI RBT
11	TWSC	TWSC	TWSC/MINI RBT
12	RIROLI (SC)	RIROLI (SC)	SIGNAL/RBT
13	SL RBT	SL RBT W MIT	SIGNAL W/ MIT / SL RBT W/ MIT
14	TWSC	TWSC	TWSC/MINI RBT
15	TWSC	AWSC	TWSC/MINI RBT
16	SL RBT	SL RBT	SIGNAL/SL RBT
17	TWSC	TWSC	TWSC/MINI RBT
18	TWSC	SL RBT	TWSC/SL RBT
19	TWSC	TWSC	TWSC/MINI RBT
20	ML RBT	ML RBT	SIGNAL/ML RBT
21	RIRO (SC)	RIRO (SC)	SIGNAL/ML RBT

Mullan BUILD - 2050 AM

Vistro File: H:\...\24667_AM2050.vistro
Report File: H:\...\24667_AM2050_TWSC.pdf

Scenario 3 Two Way Stop Control (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Thru	0.027	3,418.8	F
2	George Elmer Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.000	10,000.0	F
3	George Elmer Dr & Cattle Dr	Two-way stop	HCM 6th Edition	WB Left	0.024	17.6	C
4	George Elmer Dr & Heron's Landing	Two-way stop	HCM 6th Edition	WB Left	0.076	16.2	C
5	George Elmer Dr & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	8.602	3,693.9	F
6	Dougherty Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.299	21.6	C
7	Doughtery Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	0.917	118.0	F
8	Flynn Ln & Camden St	Two-way stop	HCM 6th Edition	WB Left	0.018	10.5	B
9	Flynn Ln & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.935	248.4	F
10	Flynn Ln & Chelsea Dr	Two-way stop	HCM 6th Edition	EB Thru	0.005	15.7	C
11	Flynn Ln & Siren's Dr	Two-way stop	HCM 6th Edition	EB Left	0.124	16.0	C
12	Flynn Ln & Mullan Rd	Two-way stop	HCM 6th Edition	NB Right	0.006	25.6	D
13	Mary Jane Blvd & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	6.359	2,633.6	F
14	Mary Jane Blvd & O'Leary St	Two-way stop	HCM 6th Edition	WB Left	0.086	16.7	C
15	Mary Jane Blvd & Melrose Pl	Two-way stop	HCM 6th Edition	WB Left	0.089	19.1	C
16	Mary Jane Blvd & England Blvd	Two-way stop	HCM 6th Edition	NB Left	2.773	964.6	F
17	Mary Jane Blvd & Camden St	Two-way stop	HCM 6th Edition	EB Left	0.097	13.8	B
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Two-way stop	HCM 6th Edition	EB Left	0.250	27.6	D
19	Mary Jane Blvd & Veteran's Way	Two-way stop	HCM 6th Edition	EB Left	0.061	15.2	C
20	Mary Jane Blvd & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	2.313	676.8	F
21	Flynn Ln & W Broadway St	Two-way stop	HCM 6th Edition	NB Thru	0.935	61.0	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	3,418.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	4.00	2.00	2.00	2.00	4.00	8.00	2.00	4.00	15.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	55	0	0	0	0	290	34	20	206	0
Total Analysis Volume [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	8.13	0.03	0.54	0.03	0.03	0.00	0.00	0.01	0.00	0.15	0.01	0.00
d_M, Delay for Movement [s/veh]	3406.2	3418.7	23.72	129.73	117.60	16.41	9.57	0.00	0.00	13.13	0.00	0.00
Movement LOS	F	F	C	F	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	41.22	41.22	3.12	0.20	0.20	0.20	0.00	0.00	0.00	0.52	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1030.4	1030.4	77.99	5.00	5.00	5.00	0.10	0.00	0.00	13.10	0.00	0.00
d_A, Approach Delay [s/veh]	2090.18			87.92			0.01			1.14		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	429.22											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.58	2.01	0.08	0.00	0.69	0.08	0.15	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	133.64	553.77	536.09	10000.	68.25	50.80	8.68	0.00	0.00	8.19	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.33	28.76	28.76	9.00	5.33	5.33	0.53	0.00	0.00	0.07	0.00	0.00
95th-Percentile Queue Length [ft/ln]	58.29	719.00	719.00	225.00	133.17	133.17	13.29	0.00	0.00	1.79	0.00	0.00
d_A, Approach Delay [s/veh]	516.81			2535.40			2.62			0.51		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	466.03											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Two-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	92	1	5	44	1	6	0	23	2	0	3
Total Analysis Volume [veh/h]	42	367	3	21	175	5	23	1	93	7	1	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.02	0.00	0.00	0.07	0.00	0.11	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	8.08	0.00	0.00	16.55	16.20	10.32	17.56	15.41	10.68
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.05	0.00	0.00	0.64	0.64	0.64	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	2.33	0.00	0.00	1.35	0.00	0.00	15.94	15.94	15.94	3.34	3.34	3.34
d_A, Approach Delay [s/veh]	0.78			0.84			11.60			13.47		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.81											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Two-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	89	1	4	60	4	7	0	7	7	0	7
Total Analysis Volume [veh/h]	5	358	5	16	241	16	27	1	27	27	1	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.08	0.00	0.03	0.08	0.00	0.04
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	8.05	0.00	0.00	16.14	15.43	10.50	16.17	15.59	11.30
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.00	0.04	0.00	0.00	0.38	0.38	0.38	0.40	0.40	0.40
95th-Percentile Queue Length [ft/ln]	0.29	0.00	0.00	1.02	0.00	0.00	9.52	9.52	9.52	9.97	9.97	9.97
d_A, Approach Delay [s/veh]	0.11			0.47			13.36			13.77		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.21											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	3,693.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	8.602

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	50	253	1259	405	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	14	69	342	110	23
Total Analysis Volume [veh/h]	241	54	275	1368	440	92
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	8.60	0.09	0.25	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	3693.94	11.44	9.31	0.00	0.00	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	29.67	0.29	0.98	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	741.72	7.22	24.49	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	3019.85		1.56		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	361.71					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.299

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	85	75	50	361	324	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	8.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	75	50	361	324	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	20	14	98	88	8
Total Analysis Volume [veh/h]	92	82	54	392	352	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.12	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	21.61	11.05	8.22	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.22	0.41	0.14	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	30.59	10.28	3.61	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.63		0.99		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	118.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.917

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	250	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	250	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	310	35	41	194
Total Analysis Volume [veh/h]	126	272	1238	141	163	775
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.92	0.63	0.01	0.00	0.33	0.01
d_M, Delay for Movement [s/veh]	118.01	26.52	0.00	0.00	15.87	0.00
Movement LOS	F	D	A	A	C	A
95th-Percentile Queue Length [veh/ln]	6.19	4.22	0.00	0.00	1.43	0.00
95th-Percentile Queue Length [ft/ln]	154.85	105.54	0.00	0.00	35.80	0.00
d_A, Approach Delay [s/veh]	55.49		0.00		2.76	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	9.09					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	170	10	6	92	11	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	10	6	92	11	31
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	3	2	25	3	8
Total Analysis Volume [veh/h]	185	11	7	100	12	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.02	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.63	0.00	10.54	9.50
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.18	0.18
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.38	0.38	4.57	4.57
d_A, Approach Delay [s/veh]	0.00		0.50		9.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.44					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	248.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.53	0.13	0.94	0.21	0.03	0.03	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	83.01	75.08	56.20	248.36	216.11	197.70	8.29	0.00	0.00	8.76	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	5.85	5.85	5.85	7.67	7.67	7.67	0.10	0.00	0.00	0.48	0.00	0.00
95th-Percentile Queue Length [ft/ln]	146.15	146.15	146.15	191.80	191.80	191.80	2.47	0.00	0.00	12.00	0.00	0.00
d_A, Approach Delay [s/veh]	67.19			229.81			0.62			2.31		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	28.98											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Two-way stop	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	19.00	2.00	2.00	2.00	7.00	28.00	2.00	50.00	2.00	2.00	20.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	32	9	4	41	11	8	1	3	6	1	4
Total Analysis Volume [veh/h]	74	126	36	16	163	43	34	2	12	24	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.01	0.00	0.00	0.08	0.01	0.01	0.06	0.01	0.02
d_M, Delay for Movement [s/veh]	8.01	0.00	0.00	7.57	0.00	0.00	14.18	15.66	10.00	13.92	14.70	9.69
Movement LOS	A	A	A	A	A	A	B	C	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.19	0.03	0.03	0.03	0.33	0.33	0.33	0.27	0.27	0.27
95th-Percentile Queue Length [ft/ln]	4.63	4.63	4.63	0.86	0.86	0.86	8.15	8.15	8.15	6.81	6.81	6.81
d_A, Approach Delay [s/veh]	2.51			0.55			13.20			12.64		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.44											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	154	175	80	103	42	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	15.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	175	80	103	42	82
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	48	22	28	11	22
Total Analysis Volume [veh/h]	167	190	87	112	46	89
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.00	0.00	0.12	0.10
d_M, Delay for Movement [s/veh]	7.98	0.00	0.00	0.00	16.03	9.41
Movement LOS	A	A	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.41	0.00	0.00	0.00	0.42	0.33
95th-Percentile Queue Length [ft/ln]	10.35	0.00	0.00	0.00	10.46	8.16
d_A, Approach Delay [s/veh]	3.73		0.00		11.67	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.18	0.23	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	25.59	0.00	0.00	12.04	9.96	0.00	0.00	12.29	0.00	0.00
Movement LOS			D			B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.00	0.67	0.89	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.43	0.00	0.00	16.70	22.24	0.00	0.00	0.15	0.00	0.00
d_A, Approach Delay [s/veh]	25.59			12.04			1.35			0.02		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	1.52											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	2,633.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	6.359

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	53	231	1042	512	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	14	63	283	139	27
Total Analysis Volume [veh/h]	225	58	251	1133	557	109
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	6.36	0.11	0.27	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	2633.59	12.69	10.39	0.00	0.00	0.00
Movement LOS	F	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	26.85	0.37	1.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	671.13	9.24	27.82	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	2096.44		1.88		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	255.42					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	83	2	4	45	10	2	1	18	8	2	5
Total Analysis Volume [veh/h]	17	332	9	14	178	38	9	2	74	30	10	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.09	0.09	0.03	0.03
d_M, Delay for Movement [s/veh]	7.69	0.00	0.00	7.99	0.00	0.00	15.11	14.58	9.91	16.67	15.45	11.44
Movement LOS	A	A	A	A	A	A	C	B	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.03	0.03	0.03	0.39	0.39	0.39	0.47	0.47	0.47
95th-Percentile Queue Length [ft/ln]	0.95	0.95	0.95	0.87	0.87	0.87	9.82	9.82	9.82	11.77	11.77	11.77
d_A, Approach Delay [s/veh]	0.37			0.49			10.57			14.84		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.74											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.089

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	79	10	15	47	1	4	13	4	7	7	5
Total Analysis Volume [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.14	0.02	0.09	0.07	0.03
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	8.14	0.00	0.00	18.69	17.59	11.68	19.12	17.12	12.30
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.15	0.15	0.15	0.79	0.79	0.79	0.71	0.71	0.71
95th-Percentile Queue Length [ft/ln]	0.27	0.27	0.27	3.85	3.85	3.85	19.79	19.79	19.79	17.81	17.81	17.81
d_A, Approach Delay [s/veh]	0.11			1.91			16.66			16.44		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	4.10											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	964.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.773

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	39	13	5	33	14	24	97	17	13	95	2
Total Analysis Volume [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.77	0.83	0.08	0.50	0.75	0.08	0.08	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	964.65	87.57	73.87	156.64	73.81	59.01	8.34	0.00	0.00	8.41	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	15.43	7.57	7.57	1.78	6.38	6.38	0.26	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	385.66	189.18	189.18	44.59	159.41	159.41	6.61	0.00	0.00	3.55	0.00	0.00
d_A, Approach Delay [s/veh]	454.40			78.31			1.44			0.96		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	114.61											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.097

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	58	1	2	40	5	11	3	9	3	4	2
Total Analysis Volume [veh/h]	21	232	3	9	160	20	46	13	36	13	14	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.00	0.10	0.03	0.04	0.03	0.03	0.01
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	7.72	0.00	0.00	13.79	13.69	10.35	13.48	13.05	9.97
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.02	0.02	0.02	0.59	0.59	0.59	0.21	0.21	0.21
95th-Percentile Queue Length [ft/ln]	1.15	1.15	1.15	0.51	0.51	0.51	14.65	14.65	14.65	5.35	5.35	5.35
d_A, Approach Delay [s/veh]	0.63			0.37			12.47			12.58		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.21											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Two-way stop	Delay (sec / veh):	27.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.250

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	52	15	12	36	8	20	32	3	8	20	10
Total Analysis Volume [veh/h]	16	210	59	48	145	33	82	126	11	33	79	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.04	0.00	0.00	0.25	0.31	0.01	0.11	0.19	0.05
d_M, Delay for Movement [s/veh]	7.61	0.00	0.00	7.89	0.00	0.00	27.58	25.31	20.66	21.34	17.96	13.86
Movement LOS	A	A	A	A	A	A	D	D	C	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.12	0.12	0.12	3.39	3.39	3.39	1.54	1.54	1.54
95th-Percentile Queue Length [ft/ln]	0.87	0.87	0.87	2.89	2.89	2.89	84.81	84.81	84.81	38.48	38.48	38.48
d_A, Approach Delay [s/veh]	0.43			1.68			25.93			17.61		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	10.04											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	80	0	0	55	27	6	0	1	0	0	0
Total Analysis Volume [veh/h]	10	320	0	0	222	110	23	0	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.96	0.00	0.00	7.90	0.00	0.00	15.24	14.60	10.63	14.06	14.64	9.99
Movement LOS	A	A	A	A	A	A	C	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.00	0.00	0.00	0.20	0.20	0.20	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.62	0.62	0.62	0.00	0.00	0.00	5.12	5.12	5.12	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.24			0.00			14.87			12.90		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	676.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.313

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	248	68	1247	142	164	656
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	8.00	3.00	3.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	248	68	1247	142	164	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	18	339	39	45	178
Total Analysis Volume [veh/h]	270	74	1355	154	178	713
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.31	0.19	0.01	0.00	0.41	0.01
d_M, Delay for Movement [s/veh]	676.77	16.29	0.00	0.00	18.92	0.00
Movement LOS	F	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	23.47	0.68	0.00	0.00	1.96	0.00
95th-Percentile Queue Length [ft/ln]	586.80	17.12	0.00	0.00	49.05	0.00
d_A, Approach Delay [s/veh]	534.69		0.00		3.78	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	68.26					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	61.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.935

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	359	1180	146	0	819
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	8.00	2.00	0.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	359	1180	146	0	819
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	98	321	40	0	223
Total Analysis Volume [veh/h]	0	390	1283	159	0	890
Pedestrian Volume [ped/h]	0		0		0	

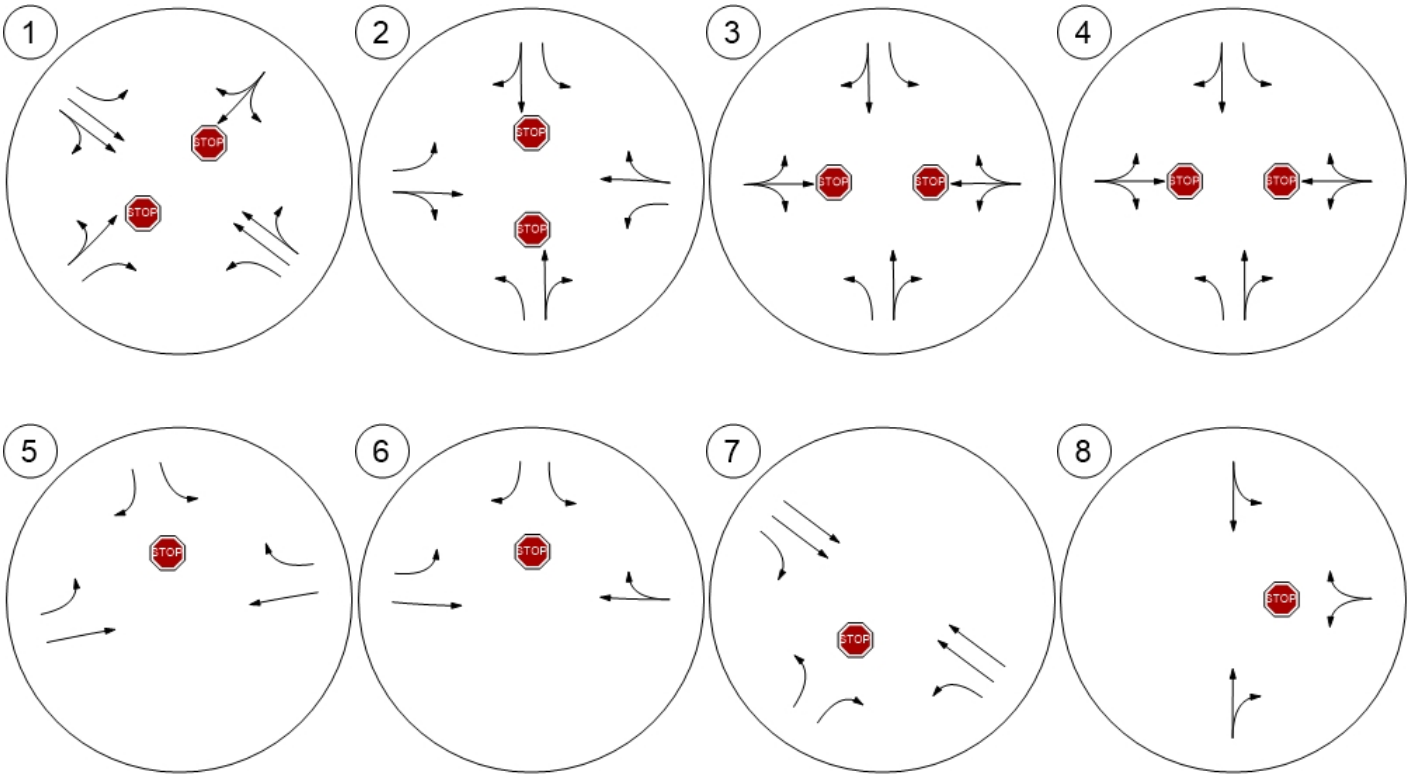
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

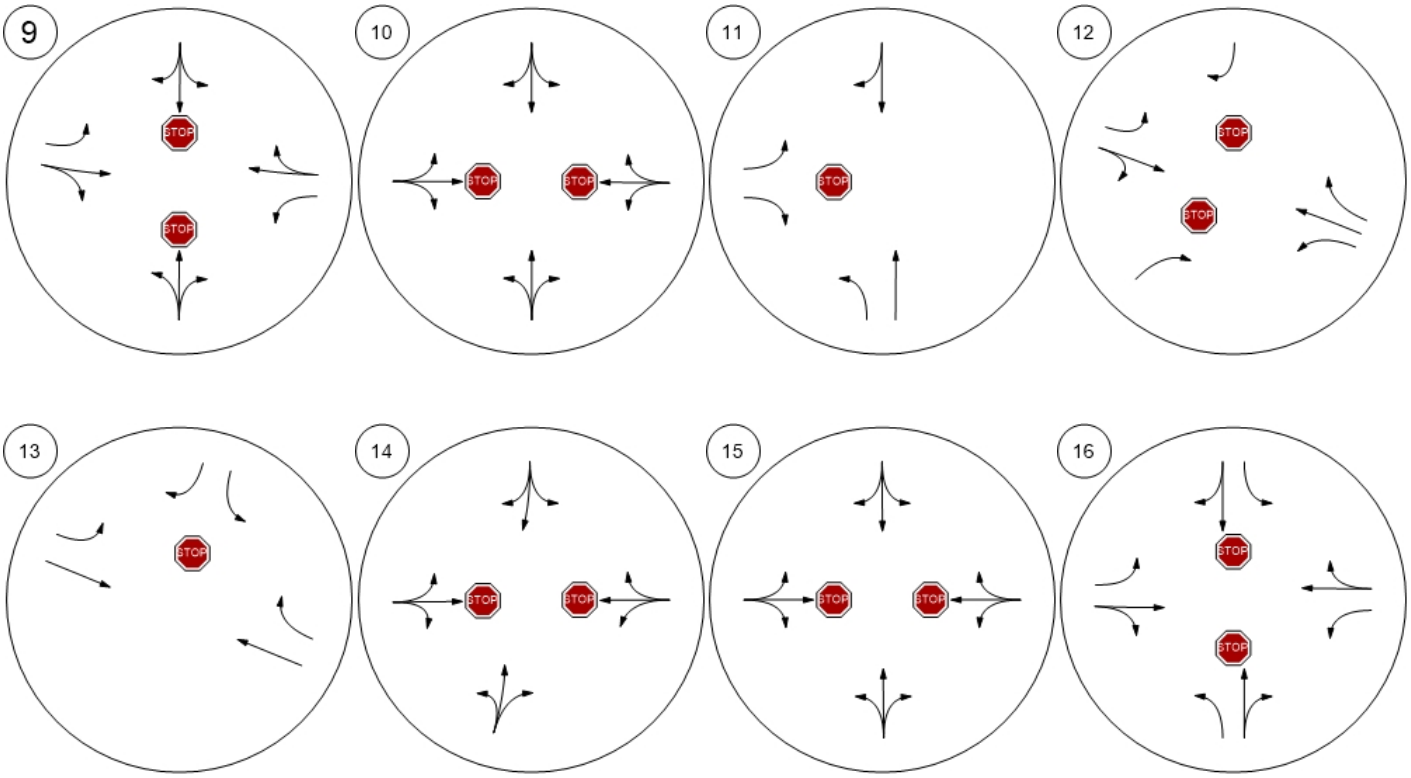
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.94	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	61.02	0.00	0.00	0.00	0.00
Movement LOS		F	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	10.52	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	262.95	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	61.02		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	8.74					
Intersection LOS	F					

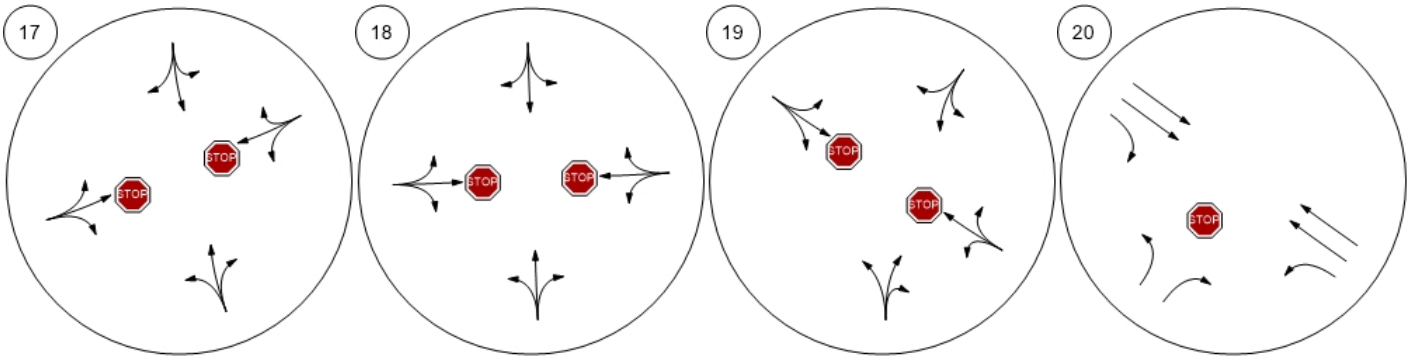
Lane Configuration and Traffic Control

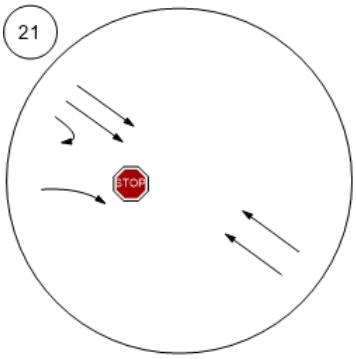


Lane Configuration and Traffic Control



Lane Configuration and Traffic Control





Mullan BUILD - 2050 AM

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Scenario 3 Two Way Stop Control (2050)
7/22/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
7	Doughtery Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Right	0.922	57.2	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	57.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.922

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	366	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	366	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	99	310	35	41	194
Total Analysis Volume [veh/h]	126	398	1238	141	163	775
Pedestrian Volume [ped/h]	0		0		0	

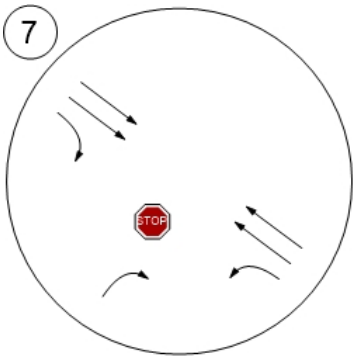
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.92	0.01	0.00	0.33	0.01
d_M, Delay for Movement [s/veh]	0.00	57.25	0.00	0.00	15.87	0.00
Movement LOS		F	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.00	10.30	0.00	0.00	1.43	0.00
95th-Percentile Queue Length [ft/ln]	0.00	257.50	0.00	0.00	35.80	0.00
d_A, Approach Delay [s/veh]	57.25		0.00		2.76	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	9.34					
Intersection LOS	F					

Lane Configuration and Traffic Control



Option 1: NB/SB Left Turn Lane

Number	9											
Intersection	Flynn Ln & England Blvd											
Control Type	Two-way stop											
Analysis Method	HCM 6th Edition											
Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	4	3	2	4	3	2	2	1	1	2	1	1
v_c, Conflicting Flow Rate	1225	1240	430	1277	1217	389	430	0	0	448	0	0
v_c, Stage 1	502	502	430	697	697	389	430	0	0	448	0	0
v_c, Stage 2	724	738	0	580	520	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	156	173	611	143	177	659	1129	0	0	1081	0	0
c_p,x, Stage 1 [veh/h]	552	537	1280	431	435	1288	1843	0	0	1801	0	0
c_p,x, Stage 2 [veh/h]	417	420	1065	500	524	1085	1623	0	0	1585	0	0
c_m,x, Movement Capacity [veh/h]	110	144	611	63	147	659	1129	100000	100000	1081	100000	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	110	144	611	63	147	659	1129	100000	100000	1081	100000	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.54	0.13	0.95	0.22	0.03	0.03	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	43.37	56.89	37.70	209.25	35.08	16.02	8.29	0.00	0.00	8.88	0.00	0.00
Movement LOS	E	F	E	F	E	C	A	A	A	A	A	A
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.49	4.26	4.26	4.57	0.95	0.95	0.10	0.00	0.00	0.50	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.30	106.55	106.55	114.21	23.84	23.84	2.47	0.00	0.00	12.40	0.00	0.00
d_A, Approach Delay [s/veh]	46.88			124.02			0.62			2.34		
Approach LOS	E			F			A			A		
V/C_I, Worst Movement V/C Ratio	0.95											
d_I, Worst Movement Control Delay [s/veh]	209.25											
d_I, Intersection Delay [s/veh]	17.57											
Intersection LOS	F											

Mullan BUILD - 2050 AM

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Report File: H:\...\24667_AM2050_AWSC.pdf

Scenario 6 All Way Stop Control (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	George Elmer Dr & England Blvd	All-way stop	HCM 6th Edition	WB Thru	0.924	41.7	E
9	Flynn Ln & England Blvd	All-way stop	HCM 6th Edition	EB Thru	0.812	22.9	C
15	Mary Jane Blvd & Melrose Pl	All-way stop	HCM 6th Edition	NB Thru	0.461	10.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	41.7
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.924

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	401	429	369	398	410	437	410	441
Degree of Utilization, x	0.08	0.86	0.15	0.41	0.42	0.92	0.07	0.92

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.27	8.55	0.51	1.95	2.06	10.33	0.21	10.43
95th-Percentile Queue Length [ft]	6.69	213.86	12.71	48.65	51.60	258.21	5.27	260.78
Approach Delay [s/veh]	41.89		16.91		43.26		51.83	
Approach LOS	E		C		E		F	
Intersection Delay [s/veh]	41.69							
Intersection LOS	E							

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	530	497	514	552	523	574
Degree of Utilization, x	0.33	0.23	0.07	0.81	0.29	0.75

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.41	0.87	0.22	8.01	1.22	6.56
95th-Percentile Queue Length [ft]	35.18	21.71	5.62	200.32	30.51	163.92
Approach Delay [s/veh]	13.03	12.38	29.96		21.90	
Approach LOS	B	B	D		C	
Intersection Delay [s/veh]	22.85					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	All-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	79	10	15	47	1	4	13	4	7	7	5
Total Analysis Volume [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

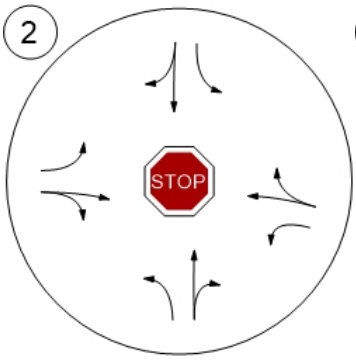
Capacity per Entry Lane [veh/h]	776	741	662	664
Degree of Utilization, x	0.46	0.34	0.13	0.11

Movement, Approach, & Intersection Results

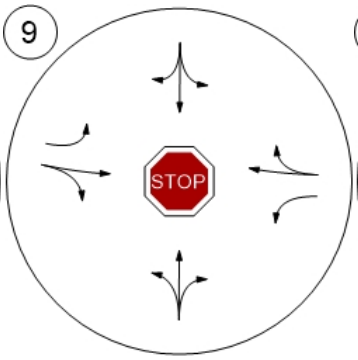
95th-Percentile Queue Length [veh]	2.45	1.50	0.43	0.39
95th-Percentile Queue Length [ft]	61.31	37.53	10.69	9.65
Approach Delay [s/veh]	11.54	10.33	9.21	9.13
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.66			
Intersection LOS	B			

Lane Configuration and Traffic Control

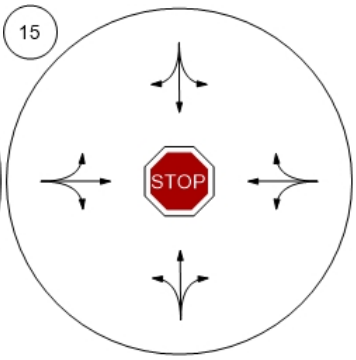
George Elmer Dr & England



Flynn Ln & England Blvd



Mary Jane Blvd & Melrose Pl



Mullan BUID - 2050 AM

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Scenario 5 Roundabout (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Left		14.8	B
2	George Elmer Dr & England Blvd	Roundabout	HCM 6th Edition	NB Thru		11.3	B
3	George Elmer Dr & Cattle Dr	Roundabout	HCM 6th Edition	NB Thru		5.1	A
4	George Elmer Dr & Heron's Landing	Roundabout	HCM 6th Edition	NB Thru		5.0	A
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		88.7	F
6	Dougherty Dr & England Blvd	Roundabout	HCM 6th Edition	EB Thru		6.2	A
7	Doughtery Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Right		11.3	B
8	Flynn Ln & Camden St	Roundabout	HCM 6th Edition	NB Thru		3.7	A
9	Flynn Ln & England Blvd	Roundabout	HCM 6th Edition	EB Thru		8.5	A
10	Flynn Ln & Chelsea Dr	Roundabout	HCM 6th Edition	SB Thru		4.7	A
11	Flynn Ln & Siren's Dr	Roundabout	HCM 6th Edition	NB Thru		5.0	A
12	Flynn Ln & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		34.4	D
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		34.6	D
14	Mary Jane Blvd & O'Leary St	Roundabout	HCM 6th Edition	NB Thru		4.7	A
15	Mary Jane Blvd & Melrose Pl	Roundabout	HCM 6th Edition	NB Thru		5.1	A
16	Mary Jane Blvd & England Blvd	Roundabout	HCM 6th Edition	NB Thru		10.0	B
17	Mary Jane Blvd & Camden St	Roundabout	HCM 6th Edition	NB Thru		4.3	A
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Roundabout	HCM 6th Edition	NB Thru		5.4	A
19	Mary Jane Blvd & Veteran's Way	Roundabout	HCM 6th Edition	NB Thru		4.9	A
20	Mary Jane Blvd & W Broadway St	Roundabout	HCM 6th Edition	NB Left		15.0	C
21	Flynn Ln & W Broadway St	Roundabout	HCM 6th Edition	NB Thru		14.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	4.00	2.00	2.00	2.00	4.00	8.00	2.00	4.00	15.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	55	0	0	0	0	290	34	20	206	0
Total Analysis Volume [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	2			1			1			1		
Circulating Flow Rate [veh/h]	1254			1387			83			362		
Exiting Flow Rate [veh/h]	221			3			1307			1483		
Demand Flow Rate [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Adjusted Demand Flow Rate [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.98	0.93	0.93	0.88	0.87
Entry Flow Rate [veh/h]	361	230	4	658	738	484	550
Capacity of Entry and Bypass Lanes [veh/h]	426	490	336	1317	1317	1022	1022
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	410	471	329	1220	1227	897	889
X, volume / capacity	0.85	0.47	0.01	0.50	0.56	0.47	0.54

Movement, Approach, & Intersection Results

Lane LOS	E	C	B	A	A	A	B
95th-Percentile Queue Length [veh]	8.15	2.46	0.03	2.89	3.62	2.58	3.28
95th-Percentile Queue Length [ft]	203.66	61.60	0.69	72.17	90.60	64.47	82.11
Approach Delay [s/veh]	34.54		11.10	8.91		10.69	
Approach LOS	D		B	A		B	
Intersection Delay [s/veh]	14.75						
Intersection LOS	B						

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	598			399			196			538		
Exiting Flow Rate [veh/h]	207			588			427			475		
Demand Flow Rate [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Adjusted Demand Flow Rate [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.95	0.97
Entry Flow Rate [veh/h]	416	224	609	450
Capacity of Entry and Bypass Lanes [veh/h]	751	919	1130	798
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	725	892	1072	771
X, volume / capacity	0.55	0.24	0.54	0.56

Movement, Approach, & Intersection Results

Lane LOS	B	A	A	B
95th-Percentile Queue Length [veh]	3.43	0.95	3.32	3.57
95th-Percentile Queue Length [ft]	85.73	23.85	83.01	89.17
Approach Delay [s/veh]	13.72	6.55	9.90	13.34
Approach LOS	B	A	A	B
Intersection Delay [s/veh]	11.31			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	92	1	5	44	1	6	0	23	2	0	3
Total Analysis Volume [veh/h]	42	367	3	21	175	5	23	1	93	7	1	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	46			51			211			448		
Exiting Flow Rate [veh/h]	284			416			49			26		
Demand Flow Rate [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Adjusted Demand Flow Rate [veh/h]	42	367	3	21	175	5	23	1	93	7	1	11

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.96	0.96	0.98	0.98
Entry Flow Rate [veh/h]	428	209	120	20
Capacity of Entry and Bypass Lanes [veh/h]	1317	1311	1114	874
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1269	1263	1092	857
X, volume / capacity	0.32	0.16	0.11	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.42	0.57	0.36	0.07
95th-Percentile Queue Length [ft]	35.58	14.14	8.98	1.70
Approach Delay [s/veh]	5.82	4.19	4.23	4.41
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.10			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	89	1	4	60	4	7	0	7	7	0	7
Total Analysis Volume [veh/h]	5	358	5	16	241	16	27	1	27	27	1	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	45			34			295			405		
Exiting Flow Rate [veh/h]	306			427			22			22		
Demand Flow Rate [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Adjusted Demand Flow Rate [veh/h]	5	358	5	16	241	16	27	1	27	27	1	27

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.96	0.96	0.98	0.98
Entry Flow Rate [veh/h]	383	284	57	57
Capacity of Entry and Bypass Lanes [veh/h]	1319	1334	1022	914
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1269	1286	1002	896
X, volume / capacity	0.29	0.21	0.05	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.21	0.80	0.17	0.20
95th-Percentile Queue Length [ft]	30.33	20.10	4.35	4.90
Approach Delay [s/veh]	5.45	4.62	4.08	4.59
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.98			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	88.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	50	253	1259	405	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	14	69	342	110	23
Total Analysis Volume [veh/h]	241	54	275	1368	440	92
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	471		251		286	
Exiting Flow Rate [veh/h]	382		527		1714	
Demand Flow Rate [veh/h]	222	50	253	1259	405	85
Adjusted Demand Flow Rate [veh/h]	241	54	275	1368	440	92

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.96	0.93	0.93	0.96
Entry Flow Rate [veh/h]	251	57	286	1464	471	96
Capacity of Entry and Bypass Lanes [veh/h]	926	926	1131	1131	1095	1095
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	890	890	1087	1057	1023	1053
X, volume / capacity	0.27	0.06	0.25	1.29	0.43	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	F	A	A
95th-Percentile Queue Length [veh]	1.10	0.19	1.01	49.34	2.20	0.29
95th-Percentile Queue Length [ft]	27.50	4.84	25.15	1233.52	54.95	7.17
Approach Delay [s/veh]	6.48		129.75		7.59	
Approach LOS	A		F		A	
Intersection Delay [s/veh]	88.72					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	85	75	50	361	324	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	8.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	75	50	361	324	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	20	14	98	88	8
Total Analysis Volume [veh/h]	92	82	54	392	352	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	366		94		55	
Exiting Flow Rate [veh/h]	89		450		517	
Demand Flow Rate [veh/h]	85	75	50	361	324	30
Adjusted Demand Flow Rate [veh/h]	92	82	54	392	352	33

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.93	0.96
Entry Flow Rate [veh/h]	178	479	400
Capacity of Entry and Bypass Lanes [veh/h]	950	1255	1305
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	932	1170	1257
X, volume / capacity	0.19	0.38	0.31

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.68	1.81	1.31
95th-Percentile Queue Length [ft]	17.11	45.33	32.74
Approach Delay [s/veh]	5.69	6.87	5.66
Approach LOS	A	A	A
Intersection Delay [s/veh]	6.20		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	250	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	250	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	310	35	41	194
Total Analysis Volume [veh/h]	126	272	1238	141	163	775
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1337		166		129	
Exiting Flow Rate [veh/h]	310		1020		1614	
Demand Flow Rate [veh/h]	116	250	1139	130	150	713
Adjusted Demand Flow Rate [veh/h]	126	272	1238	141	163	775

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.93	0.93	0.89	0.87
Entry Flow Rate [veh/h]	129	278	700	785	497	572
Capacity of Entry and Bypass Lanes [veh/h]	395	456	1221	1221	1264	1264
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	387	447	1131	1138	1123	1099
X, volume / capacity	0.33	0.61	0.57	0.64	0.39	0.45

Movement, Approach, & Intersection Results

Lane LOS	C	C	B	B	A	A
95th-Percentile Queue Length [veh]	1.39	3.95	3.79	4.92	1.90	2.40
95th-Percentile Queue Length [ft]	34.75	98.82	94.86	123.04	47.43	60.08
Approach Delay [s/veh]	20.48		11.12		7.75	
Approach LOS	C		B		A	
Intersection Delay [s/veh]	11.33					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Roundabout	Delay (sec / veh):	3.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	170	10	6	92	11	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	10	6	92	11	31
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	3	2	25	3	8
Total Analysis Volume [veh/h]	185	11	7	100	12	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	7		12		189	
Exiting Flow Rate [veh/h]	114		223		18	
Demand Flow Rate [veh/h]	170	10	6	92	11	31
Adjusted Demand Flow Rate [veh/h]	185	11	7	100	12	34

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	200	110	47
Capacity of Entry and Bypass Lanes [veh/h]	1370	1363	1139
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1344	1337	1117
X, volume / capacity	0.15	0.08	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.51	0.26	0.13
95th-Percentile Queue Length [ft]	12.77	6.52	3.22
Approach Delay [s/veh]	3.87	3.33	3.57
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.66		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	542			535			251			133		
Exiting Flow Rate [veh/h]	227			200			400			586		
Demand Flow Rate [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Adjusted Demand Flow Rate [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.93	0.97
Entry Flow Rate [veh/h]	177	116	519	603
Capacity of Entry and Bypass Lanes [veh/h]	795	800	1069	1206
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	779	784	999	1169
X, volume / capacity	0.22	0.14	0.48	0.50

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.85	0.50	2.71	2.88
95th-Percentile Queue Length [ft]	21.19	12.56	67.76	72.12
Approach Delay [s/veh]	7.05	6.09	9.38	8.62
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.48			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	19.00	2.00	2.00	2.00	7.00	28.00	2.00	50.00	2.00	2.00	20.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	32	9	4	41	11	8	1	3	6	1	4
Total Analysis Volume [veh/h]	74	126	36	16	163	43	34	2	12	24	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	54			119			215			251		
Exiting Flow Rate [veh/h]	211			178			149			56		
Demand Flow Rate [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Adjusted Demand Flow Rate [veh/h]	74	126	36	16	163	43	34	2	12	24	5	14

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.94	0.91	0.97	0.94
Entry Flow Rate [veh/h]	253	245	50	46
Capacity of Entry and Bypass Lanes [veh/h]	1307	1223	1109	1069
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1224	1111	1071	1009
X, volume / capacity	0.19	0.20	0.04	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.71	0.74	0.14	0.13
95th-Percentile Queue Length [ft]	17.83	18.62	3.52	3.34
Approach Delay [s/veh]	4.61	5.05	3.74	3.94
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	154	175	80	103	42	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	15.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	175	80	103	42	82
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	48	22	28	11	22
Total Analysis Volume [veh/h]	167	190	87	112	46	89
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	47		170		89	
Exiting Flow Rate [veh/h]	180		246		299	
Demand Flow Rate [veh/h]	154	175	80	103	42	82
Adjusted Demand Flow Rate [veh/h]	167	190	87	112	46	89

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.92	0.98
Entry Flow Rate [veh/h]	370	217	138
Capacity of Entry and Bypass Lanes [veh/h]	1316	1160	1261
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1271	1065	1236
X, volume / capacity	0.28	0.19	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	1.16	0.69	0.37
95th-Percentile Queue Length [ft]	29.03	17.13	9.17
Approach Delay [s/veh]	5.34	5.09	3.82
Approach LOS	A	A	A
Intersection Delay [s/veh]	4.97		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	34.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes		

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	1701			460			1			221		
Exiting Flow Rate [veh/h]	2			440			576			1481		
Demand Flow Rate [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.93	0.93	0.98
Entry Flow Rate [veh/h]	2	118	222	1481	461	219
Capacity of Entry and Bypass Lanes [veh/h]	244	864	1419	1419	1161	1161
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	239	847	1391	1326	1086	1139
X, volume / capacity	0.00	0.14	0.16	1.04	0.40	0.19

Movement, Approach, & Intersection Results

Lane LOS	C	A	A	F	A	A
95th-Percentile Queue Length [veh]	0.01	0.47	0.55	26.70	1.92	0.69
95th-Percentile Queue Length [ft]	0.32	11.74	13.81	667.47	48.10	17.26
Approach Delay [s/veh]	15.17	5.60	47.74		6.59	
Approach LOS	C	A	E		A	
Intersection Delay [s/veh]	34.45					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	34.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	53	231	1042	512	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	14	63	283	139	27
Total Analysis Volume [veh/h]	225	58	251	1133	557	109
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	596		234		259	
Exiting Flow Rate [veh/h]	371		656		1446	
Demand Flow Rate [veh/h]	207	53	231	1042	512	100
Adjusted Demand Flow Rate [veh/h]	225	58	251	1133	557	109

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.97	0.93	0.93	0.97
Entry Flow Rate [veh/h]	234	61	259	1213	596	113
Capacity of Entry and Bypass Lanes [veh/h]	826	826	1148	1148	1123	1123
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	794	794	1115	1073	1049	1090
X, volume / capacity	0.28	0.07	0.23	1.06	0.53	0.10

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	F	A	A
95th-Percentile Queue Length [veh]	1.17	0.24	0.87	24.73	3.23	0.33
95th-Percentile Queue Length [ft]	29.19	5.90	21.63	618.31	80.69	8.31
Approach Delay [s/veh]	7.23		52.49		8.97	
Approach LOS	A		F		A	
Intersection Delay [s/veh]	34.57					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	83	2	4	45	10	2	1	18	8	2	5
Total Analysis Volume [veh/h]	17	332	9	14	178	38	9	2	74	30	10	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	26			58			228			368		
Exiting Flow Rate [veh/h]	289			370			66			26		
Demand Flow Rate [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Adjusted Demand Flow Rate [veh/h]	17	332	9	14	178	38	9	2	74	30	10	18

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	369	237	87	60
Capacity of Entry and Bypass Lanes [veh/h]	1345	1301	1094	948
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1307	1266	1072	930
X, volume / capacity	0.27	0.18	0.08	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.12	0.66	0.26	0.20
95th-Percentile Queue Length [ft]	28.05	16.57	6.45	4.98
Approach Delay [s/veh]	5.16	4.38	4.04	4.44
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.73			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	79	10	15	47	1	4	13	4	7	7	5
Total Analysis Volume [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	129			60			280			343		
Exiting Flow Rate [veh/h]	236			360			38			151		
Demand Flow Rate [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Adjusted Demand Flow Rate [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.98	0.98
Entry Flow Rate [veh/h]	366	258	85	78
Capacity of Entry and Bypass Lanes [veh/h]	1211	1298	1037	973
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1187	1264	1017	954
X, volume / capacity	0.30	0.20	0.08	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.28	0.74	0.27	0.26
95th-Percentile Queue Length [ft]	32.01	18.49	6.65	6.48
Approach Delay [s/veh]	5.85	4.55	4.26	4.50
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.12			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	39	13	5	33	14	24	97	17	13	95	2
Total Analysis Volume [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	538			597			210			406		
Exiting Flow Rate [veh/h]	257			263			601			493		
Demand Flow Rate [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Adjusted Demand Flow Rate [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.94	0.96
Entry Flow Rate [veh/h]	361	215	585	454
Capacity of Entry and Bypass Lanes [veh/h]	797	751	1114	912
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	778	732	1049	879
X, volume / capacity	0.45	0.29	0.53	0.50

Movement, Approach, & Intersection Results

Lane LOS	B	A	A	B
95th-Percentile Queue Length [veh]	2.37	1.18	3.16	2.82
95th-Percentile Queue Length [ft]	59.34	29.48	79.01	70.58
Approach Delay [s/veh]	10.66	8.31	9.79	10.57
Approach LOS	B	A	A	B
Intersection Delay [s/veh]	10.01			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Roundabout	Delay (sec / veh):	4.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	58	1	2	40	5	11	3	9	3	4	2
Total Analysis Volume [veh/h]	21	232	3	9	160	20	46	13	36	13	14	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	69			49			187			307		
Exiting Flow Rate [veh/h]	215			293			56			26		
Demand Flow Rate [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Adjusted Demand Flow Rate [veh/h]	21	232	3	9	160	20	46	13	36	13	14	7

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	264	195	97	35
Capacity of Entry and Bypass Lanes [veh/h]	1286	1313	1141	1009
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1250	1277	1118	989
X, volume / capacity	0.20	0.15	0.08	0.03

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.77	0.52	0.28	0.11
95th-Percentile Queue Length [ft]	19.21	12.99	6.95	2.67
Approach Delay [s/veh]	4.65	4.05	3.94	3.94
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.29			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Roundabout	Delay (sec / veh):	5.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	52	15	12	36	8	20	32	3	8	20	10
Total Analysis Volume [veh/h]	16	210	59	48	145	33	82	126	11	33	79	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	262			132			232			316		
Exiting Flow Rate [veh/h]	194			341			132			239		
Demand Flow Rate [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Adjusted Demand Flow Rate [veh/h]	16	210	59	48	145	33	82	126	11	33	79	40

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.97	0.97
Entry Flow Rate [veh/h]	293	232	225	157
Capacity of Entry and Bypass Lanes [veh/h]	1056	1206	1090	1000
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1028	1175	1062	971
X, volume / capacity	0.28	0.19	0.21	0.16

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.14	0.71	0.77	0.55
95th-Percentile Queue Length [ft]	28.43	17.76	19.34	13.86
Approach Delay [s/veh]	6.23	4.75	5.30	5.18
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.44			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	80	0	0	55	27	6	0	1	0	0	0
Total Analysis Volume [veh/h]	10	320	0	0	222	110	23	0	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	28			10			229			367		
Exiting Flow Rate [veh/h]	231			357			122			0		
Demand Flow Rate [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Adjusted Demand Flow Rate [veh/h]	10	320	0	0	222	110	23	0	2	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.83	0.98
Entry Flow Rate [veh/h]	340	341	30	0
Capacity of Entry and Bypass Lanes [veh/h]	1342	1366	1093	949
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1303	1331	911	931
X, volume / capacity	0.25	0.25	0.03	0.00

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.01	0.99	0.08	0.00
95th-Percentile Queue Length [ft]	25.23	24.75	2.12	0.00
Approach Delay [s/veh]	4.96	4.85	4.20	3.87
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.88			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	248	68	1247	142	164	656
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	8.00	3.00	3.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	248	68	1247	142	164	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	18	339	39	45	178
Total Analysis Volume [veh/h]	270	74	1355	154	178	713
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1463		183		278	
Exiting Flow Rate [veh/h]	342		1098		1540	
Demand Flow Rate [veh/h]	248	68	1247	142	164	656
Adjusted Demand Flow Rate [veh/h]	270	74	1355	154	178	713

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.93	0.93	0.89	0.87
Entry Flow Rate [veh/h]	279	77	766	860	471	544
Capacity of Entry and Bypass Lanes [veh/h]	352	410	1202	1202	1103	1103
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	342	398	1113	1119	982	959
X, volume / capacity	0.79	0.19	0.64	0.72	0.43	0.49

Movement, Approach, & Intersection Results

Lane LOS	E	B	B	B	A	A
95th-Percentile Queue Length [veh]	6.56	0.68	4.81	6.48	2.17	2.78
95th-Percentile Queue Length [ft]	163.97	16.88	120.33	161.96	54.19	69.62
Approach Delay [s/veh]	37.78		13.25		9.20	
Approach LOS	E		B		A	
Intersection Delay [s/veh]	15.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	890.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	359	1180	146	0	819
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	8.00	2.00	0.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	359	1180	146	0	819
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	98	321	40	0	223
Total Analysis Volume [veh/h]	0	390	1283	159	0	890
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1386		0		0	
Exiting Flow Rate [veh/h]	162		1023		1776	
Demand Flow Rate [veh/h]	0	359	1180	146	0	819
Adjusted Demand Flow Rate [veh/h]	0	390	1283	159	0	890

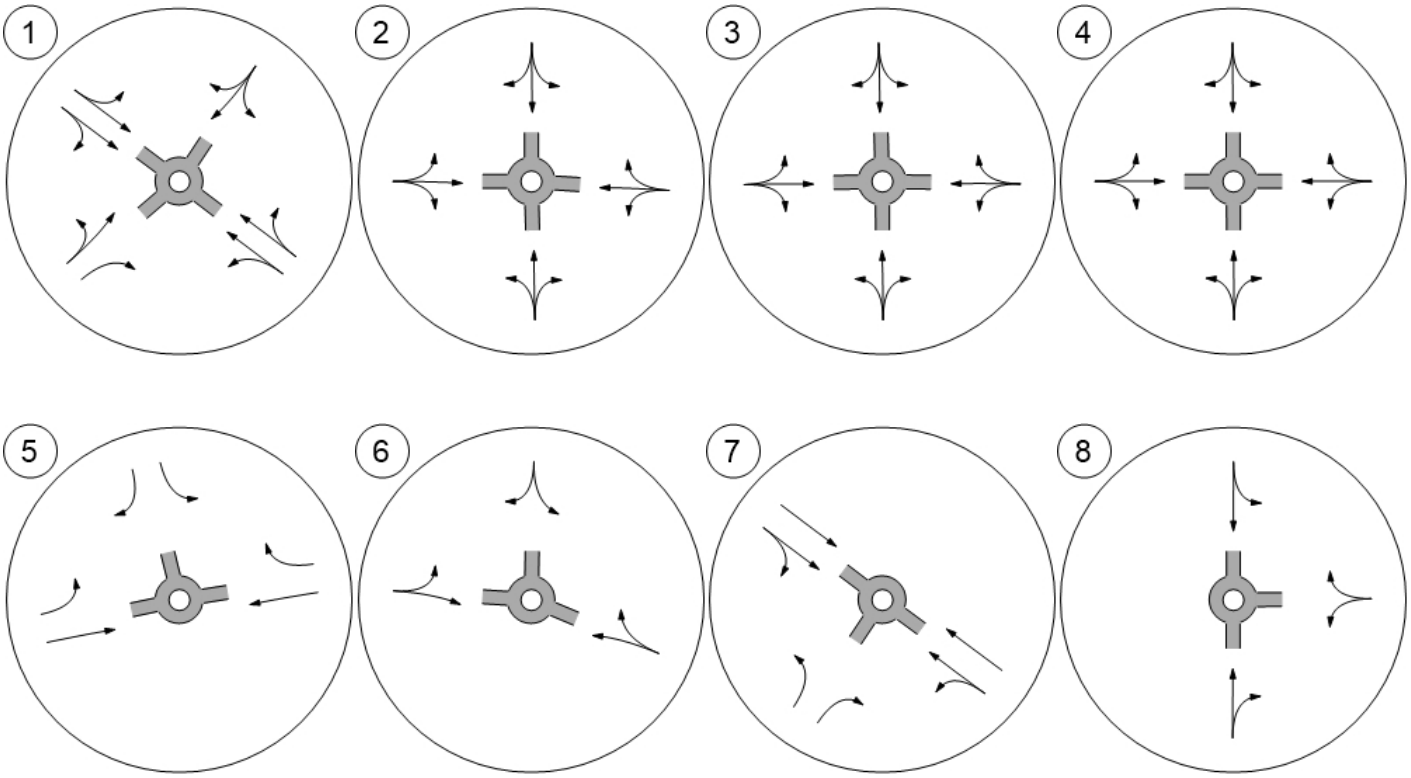
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	0.93	0.93	0.87	0.87
Entry Flow Rate [veh/h]	390	732	821	482	543
Capacity of Entry and Bypass Lanes [veh/h]	438	1420	1420	1420	1420
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	438	1315	1324	1235	1235
X, volume / capacity	0.89	0.52	0.58	0.34	0.38

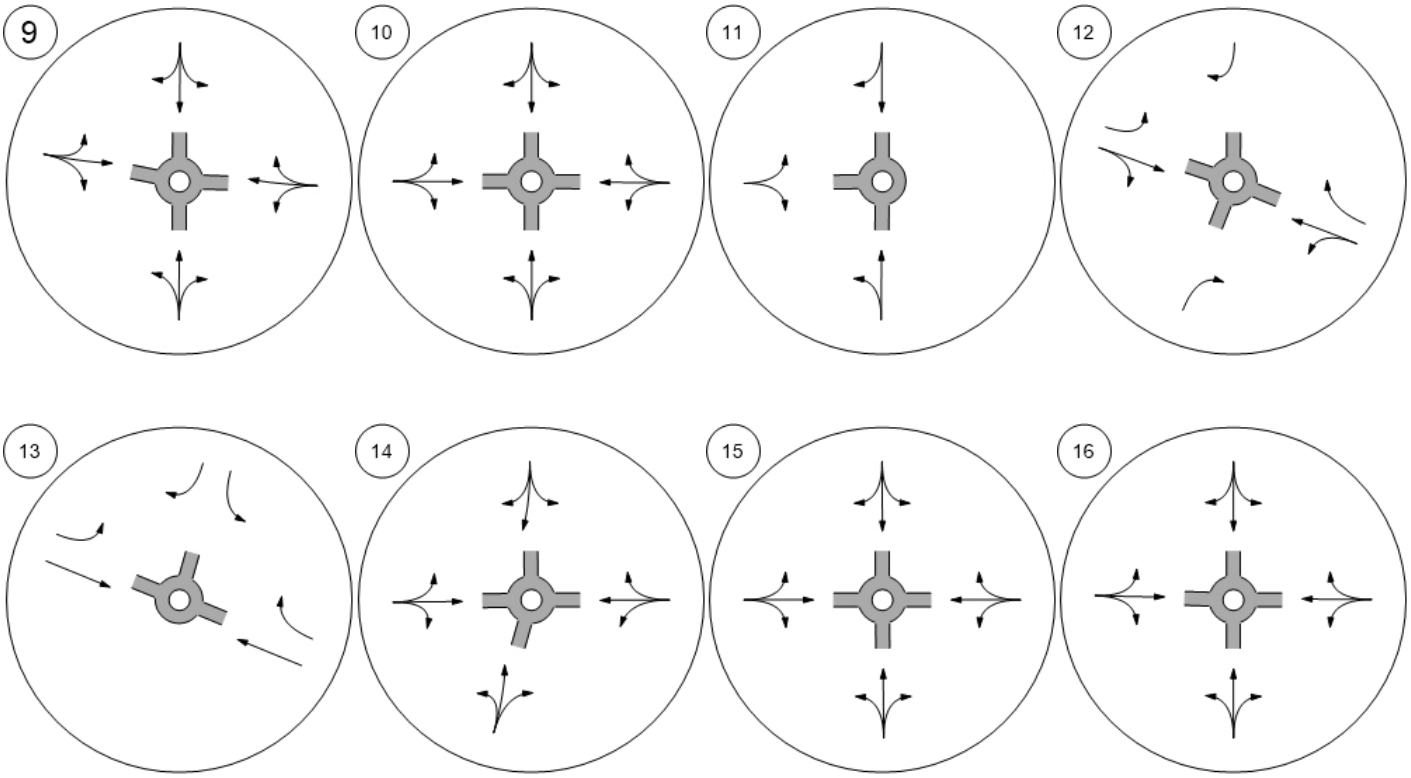
Movement, Approach, & Intersection Results

Lane LOS	F	A	A	A	A
95th-Percentile Queue Length [veh]	9.49	3.07	3.89	1.51	1.82
95th-Percentile Queue Length [ft]	237.33	76.82	97.13	37.86	45.49
Approach Delay [s/veh]	50.77	8.76		6.37	
Approach LOS	F	A		A	
Intersection Delay [s/veh]	14.00				
Intersection LOS	B				

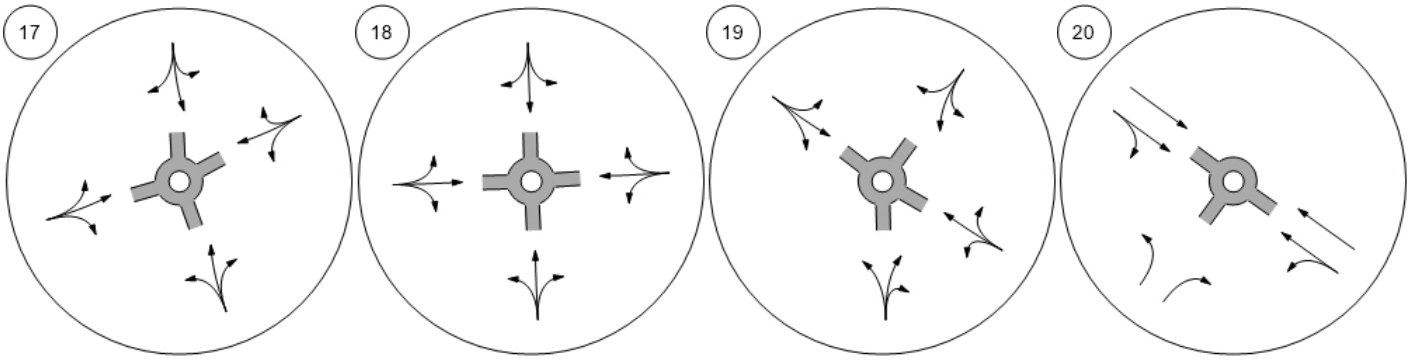
Lane Configuration and Traffic Control

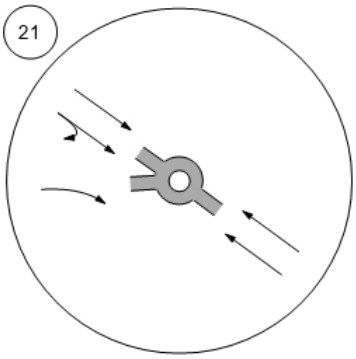


Lane Configuration and Traffic Control



Lane Configuration and Traffic Control





Option 1: WB T/L & EB T/R

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	222	50	253	1259	405	85
Total Analysis Volume [veh/h]	236	53	269	1339	431	90

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	478		241		404	
Exiting Flow Rate [veh/h]	502		538		1607	
Demand Flow Rate [veh/h]	222	50	253	1259	405	85
Adjusted Demand Flow Rate [veh/h]	236	53	269	1339	431	90

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.89	0.93	0.98	0.90	0.90
Entry Flow Rate [veh/h]	241	60	815	870	272	306
Capacity of Entry and Bypass Lanes [veh/h]	870	946	1141	1141	984	984
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	853	845	1059	1119	887	889
X, volume / capacity	0.28	0.06	0.71	0.76	0.28	0.31

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	7.22	4.86	14.97	16.50	6.99	7.42
Lane LOS	A	A	B	C	A	A
95th-Percentile Queue Length [veh]	1.13	0.20	6.41	7.79	1.13	1.33
95th-Percentile Queue Length [ft]	28.30	5.01	160.16	194.67	28.24	33.22
Approach Delay [s/veh]	6.79		15.78		7.22	
Approach LOS	A		C		A	
Intersection Delay [s/veh]	12.86					
Intersection LOS	B					

Option 1: Dual Through Lanes WB & EB

Number	12											
Intersection	Flynn Ln & Mullan Rd											
Control Type	Roundabout											
Analysis Method	HCM 6th Edition											
Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	1701			460			1			221		
Exiting Flow Rate [veh/h]	2			440			576			1481		
Demand Flow Rate [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.94	0.93	0.93	0.95
Entry Flow Rate [veh/h]	2	118	800	908	324	360
Capacity of Entry and Bypass Lanes [veh/h]	244	864	1419	1419	1161	1161
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	239	847	1335	1326	1086	1103
X, volume / capacity	0.00	0.14	0.56	0.64	0.28	0.31

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	15.17	5.60	8.94	10.60	5.99	6.27
Lane LOS	C	A	A	B	A	A
95th-Percentile Queue Length [veh]	0.01	0.47	3.69	4.93	1.15	1.33
95th-Percentile Queue Length [ft]	0.32	11.74	92.25	123.14	28.68	33.16
Approach Delay [s/veh]	15.17	5.60	9.82		6.14	
Approach LOS	C	A	A		A	
Intersection Delay [s/veh]	8.61					
Intersection LOS	A					

Option 1: WB T/R & EB T/L

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	207	53	231	1042	512	100
Total Analysis Volume [veh/h]	225	58	251	1133	557	109

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	585		230		264	
Exiting Flow Rate [veh/h]	375		654		1374	
Demand Flow Rate [veh/h]	207	53	231	1042	512	100
Adjusted Demand Flow Rate [veh/h]	225	58	251	1133	557	109

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.83	0.98	0.99	0.95	0.96
Entry Flow Rate [veh/h]	230	70	662	741	329	369
Capacity of Entry and Bypass Lanes [veh/h]	789	864	1153	1153	1118	1118
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	773	720	1134	1141	1065	1070
X, volume / capacity	0.29	0.08	0.57	0.64	0.29	0.33

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	8.02	5.84	10.24	11.86	6.26	6.67
Lane LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh]	1.21	0.26	3.80	4.92	1.23	1.46
95th-Percentile Queue Length [ft]	30.27	6.55	95.10	123.12	30.86	36.38
Approach Delay [s/veh]	7.57		11.10		6.48	
Approach LOS	A		B		A	
Intersection Delay [s/veh]	9.35					
Intersection LOS	A					

Mullan BUILD - 2050 AM

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Report File: H:\...\24667_AM2050_SIGNAL.pdf

Scenario 4 Signal (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.717	34.3	C
2	George Elmer Dr & England Blvd	Signalized	HCM 6th Edition	SB Left	0.522	21.1	C
5	George Elmer Dr & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.919	207.1	F
7	Doughtery Dr & W Broadway St	Signalized	HCM 6th Edition	NB Right	0.689	19.5	B
9	Flynn Ln & England Blvd	Signalized	HCM 6th Edition	NB Right	0.481	15.8	B
12	Flynn Ln & Mullan Rd	Signalized	HCM 6th Edition	SB Right	0.897	9.2	A
13	Mary Jane Blvd & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.762	180.2	F
16	Mary Jane Blvd & England Blvd	Signalized	HCM 6th Edition	NB Left	0.450	18.9	B
20	Mary Jane Blvd & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.711	18.9	B
21	Flynn Ln & W Broadway St	Signalized	HCM 6th Edition	NB Thru	0.758	11.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	4.00	2.00	2.00	2.00	4.00	8.00	2.00	4.00	15.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	55	0	0	0	0	290	34	20	206	0
Total Analysis Volume [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	54	0	0	54	0	11	33	0	33	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	5	7	0	7	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	10	20	0	20	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	43	43	43	65	55	55	65	59	59
g / C, Green / Cycle	0.36	0.36	0.36	0.54	0.46	0.46	0.54	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.25	0.15	0.00	0.00	0.37	0.09	0.12	0.28	0.00
s, saturation flow rate [veh/h]	1392	1465	1028	715	3121	1464	627	2937	1464
c, Capacity [veh/h]	338	519	404	351	1428	670	278	1453	724
d1, Uniform Delay [s]	42.19	29.51	25.70	14.62	28.10	19.47	20.18	21.29	15.34
k, delay calibration	0.17	0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.06	0.56	0.01	0.01	5.13	0.68	0.54	1.61	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.02	0.43	0.01	0.00	0.81	0.20	0.28	0.57	0.00
d, Delay for Lane Group [s/veh]	76.25	30.07	25.71	14.64	33.22	20.16	20.72	22.90	15.34
Lane Group LOS	F	C	C	B	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	12.93	4.94	0.06	0.01	14.04	2.24	0.96	7.69	0.01
50th-Percentile Queue Length [ft/ln]	323.26	123.61	1.42	0.32	350.91	56.12	23.94	192.26	0.34
95th-Percentile Queue Length [veh/ln]	19.10	8.59	0.10	0.02	20.18	4.04	1.72	12.24	0.02
95th-Percentile Queue Length [ft/ln]	477.60	214.78	2.55	0.57	504.52	101.02	43.10	305.96	0.61

Movement, Approach, & Intersection Results

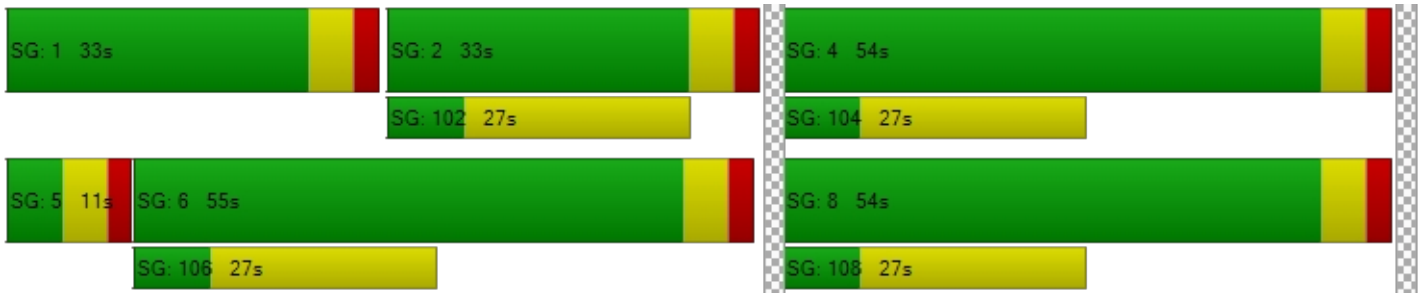
d_M, Delay for Movement [s/veh]	76.25	30.07	30.07	25.71	25.71	25.71	14.64	33.22	20.16	20.72	22.90	15.34
Movement LOS	F	C	C	C	C	C	B	C	C	C	C	B
d_A, Approach Delay [s/veh]	58.20			25.71			31.84			22.70		
Approach LOS	E			C			C			C		
d_I, Intersection Delay [s/veh]	34.26											
Intersection LOS	C											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.261	1.732	3.693	3.192
Crosswalk LOS	B	A	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	450	817
d_b, Bicycle Delay [s]	21.60	21.60	36.04	21.00
l_b,int, Bicycle LOS Score for Intersection	2.497	1.565	2.629	2.304
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	32	0	96	32	0	96	58	0	96	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	7	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	15	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	26	26	26	26	52	52	52	52
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.05	0.10	0.18	0.25	0.03	0.25
s, saturation flow rate [veh/h]	1223	1652	1014	1601	978	1594	982	1637
c, Capacity [veh/h]	301	475	139	460	490	923	489	948
d1, Uniform Delay [s]	30.99	29.36	42.14	25.40	18.44	10.65	15.75	10.59
k, delay calibration	0.11	0.24	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	5.91	1.78	0.46	2.01	1.50	0.22	1.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.78	0.39	0.35	0.36	0.44	0.06	0.43
d, Delay for Lane Group [s/veh]	31.15	35.27	43.92	25.87	20.45	12.15	15.97	12.01
Lane Group LOS	C	D	D	C	C	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	7.83	1.25	2.76	2.74	4.51	0.35	4.52
50th-Percentile Queue Length [ft/ln]	15.22	195.84	31.13	69.07	68.43	112.73	8.86	112.91
95th-Percentile Queue Length [veh/ln]	1.10	12.42	2.24	4.97	4.93	7.99	0.64	8.00
95th-Percentile Queue Length [ft/ln]	27.40	310.59	56.03	124.33	123.17	199.79	15.95	200.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.15	35.27	35.27	43.92	25.87	25.87	20.45	12.15	12.15	15.97	12.01	12.01
Movement LOS	C	D	D	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	34.93			30.36			14.66			12.26		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	21.10											
Intersection LOS	C											
Intersection V/C	0.522											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.174	2.443	2.308	2.303
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	1156	1156
d_b, Bicycle Delay [s]	22.76	22.76	8.02	8.02
I_b,int, Bicycle LOS Score for Intersection	2.221	1.918	2.512	2.276
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	207.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.919

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	50	253	1259	405	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	14	69	342	110	23
Total Analysis Volume [veh/h]	241	54	275	1368	440	92
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	113	113	87	120	33	33
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.94	0.04	0.51	0.83	0.27	0.06
s, saturation flow rate [veh/h]	256	1440	544	1653	1653	1440
c, Capacity [veh/h]	60	0	128	1570	1418	1236
d1, Uniform Delay [s]	59.95	0.00	0.31	0.87	1.65	1.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1394.90	0.00	541.89	6.92	0.57	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	4.01	10000.00	2.15	0.87	0.31	0.07
d, Delay for Lane Group [s/veh]	1454.85	0.00	542.21	7.79	2.22	1.41
Lane Group LOS	F	F	F	A	A	A
Critical Lane Group	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	25.27	0.00	19.27	3.02	0.92	0.15
50th-Percentile Queue Length [ft/ln]	631.68	0.00	481.68	75.45	23.06	3.86
95th-Percentile Queue Length [veh/ln]	33.51	0.00	31.45	5.43	1.66	0.28
95th-Percentile Queue Length [ft/ln]	837.78	0.00	786.28	135.81	41.50	6.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1454.85	0.00	542.21	7.79	2.22	1.41
Movement LOS	F	A	F	A	A	A
d_A, Approach Delay [s/veh]	1188.54		97.24		2.08	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	207.08					
Intersection LOS	F					
Intersection V/C	0.919					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.189	2.996	3.341
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	450
d_b, Bicycle Delay [s]	60.00	0.15	36.04
I_b,int, Bicycle LOS Score for Intersection	1.560	4.271	2.437
Bicycle LOS	A	E	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	250	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	250	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	310	35	41	194
Total Analysis Volume [veh/h]	126	272	1238	141	163	775
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	78	78	31	31	11	42
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	25	25	72	72	83	83
g / C, Green / Cycle	0.21	0.21	0.60	0.60	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.08	0.19	0.40	0.10	0.28	0.26
s, saturation flow rate [veh/h]	1640	1464	3121	1464	580	2937
c, Capacity [veh/h]	339	302	1876	880	369	2037
d1, Uniform Delay [s]	40.92	46.39	15.82	10.56	13.03	7.65
k, delay calibration	0.11	0.11	0.50	0.50	0.49	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	9.56	1.84	0.39	3.76	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.90	0.66	0.16	0.44	0.38
d, Delay for Lane Group [s/veh]	41.59	55.95	17.66	10.95	16.79	8.19
Lane Group LOS	D	E	B	B	B	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.28	8.67	9.98	1.54	1.51	3.41
50th-Percentile Queue Length [ft/ln]	81.98	216.83	249.61	38.52	37.66	85.37
95th-Percentile Queue Length [veh/ln]	5.90	13.50	15.17	2.77	2.71	6.15
95th-Percentile Queue Length [ft/ln]	147.57	337.57	379.16	69.34	67.80	153.67

Movement, Approach, & Intersection Results

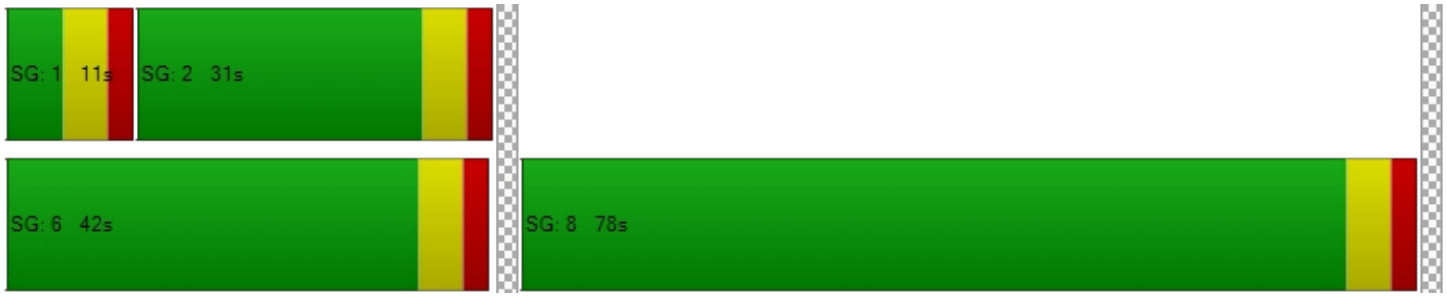
d_M, Delay for Movement [s/veh]	41.59	55.95	17.66	10.95	16.79	8.19
Movement LOS	D	E	B	B	B	A
d_A, Approach Delay [s/veh]	51.41		16.98		9.69	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	19.51					
Intersection LOS	B					
Intersection V/C	0.689					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	417	600
d_b, Bicycle Delay [s]	9.60	37.60	29.40
l_b,int, Bicycle LOS Score for Intersection	1.560	2.697	2.333
Bicycle LOS	A	B	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	33	0	0	33	0	17	80	0	7	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	12	12	67	56	67	57
g / C, Green / Cycle	0.13	0.13	0.74	0.62	0.74	0.64
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.04	0.28	0.15	0.26
s, saturation flow rate [veh/h]	1629	1118	821	1616	1036	1640
c, Capacity [veh/h]	253	205	697	996	734	1045
d1, Uniform Delay [s]	38.32	37.60	4.10	9.18	4.72	8.03
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.25	2.31	0.14	1.47	0.14	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.55	0.05	0.45	0.21	0.41
d, Delay for Lane Group [s/veh]	41.56	39.91	4.24	10.65	4.86	9.22
Lane Group LOS	D	D	A	B	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.93	2.53	0.16	4.55	0.65	3.94
50th-Percentile Queue Length [ft/ln]	98.37	63.26	4.04	113.86	16.23	98.45
95th-Percentile Queue Length [veh/ln]	7.08	4.55	0.29	8.05	1.17	7.09
95th-Percentile Queue Length [ft/ln]	177.06	113.87	7.27	201.36	29.22	177.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.56	41.56	41.56	39.91	39.91	39.91	4.24	10.65	10.65	4.86	9.22	9.22
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	41.56			39.91			10.17			8.07		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.76											
Intersection LOS	B											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.015	1.874	2.245	2.394
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1644	1422
d_b, Bicycle Delay [s]	22.05	22.05	1.42	3.76
I_b,int, Bicycle LOS Score for Intersection	1.845	1.746	2.358	2.523
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street [		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street [		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Overla	Split	Permis	Overla	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	5	0	0	5	0	2	0	0	6	6
Auxiliary Signal Groups			5			5						
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	5	0	0	5	0	5	0	0	5	5
Maximum Green [s]	0	0	30	0	0	30	0	30	0	0	30	30
Amber [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
All red [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Split [s]	0	0	87	0	0	87	0	120	0	0	33	33
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	0	0	0	20	0	0	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No		No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
Minimum Recall			No			No		No			No	
Maximum Recall			No			No		No			No	
Pedestrian Recall			No			No		No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	R	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	11	114	114	97	97	97
g / C, Green / Cycle	0.09	0.09	0.95	0.95	0.81	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.21	0.84	0.00	0.26	0.15
s, saturation flow rate [veh/h]	1464	1464	1050	1653	391	1653	1464
c, Capacity [veh/h]	138	138	1016	1570	266	1332	1179
d1, Uniform Delay [s]	49.22	53.38	0.58	0.92	13.40	3.06	2.65
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	12.13	0.48	7.47	0.03	0.64	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.83	0.21	0.88	0.00	0.32	0.18
d, Delay for Lane Group [s/veh]	49.24	65.50	1.06	8.39	13.43	3.70	2.99
Lane Group LOS	D	E	A	A	B	A	A
Critical Lane Group	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.03	3.90	0.14	3.26	0.01	1.92	0.84
50th-Percentile Queue Length [ft/ln]	0.70	97.48	3.39	81.46	0.35	48.11	21.02
95th-Percentile Queue Length [veh/ln]	0.05	7.02	0.24	5.87	0.03	3.46	1.51
95th-Percentile Queue Length [ft/ln]	1.26	175.46	6.11	146.63	0.63	86.60	37.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	49.24	0.00	0.00	65.50	1.06	8.39	8.39	13.43	3.70	2.99
Movement LOS			D			E	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	49.24			65.50			7.40			3.48		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	9.18											
Intersection LOS	A											
Intersection V/C	0.897											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	81.0	81.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	6.34	6.34
l_p,int, Pedestrian LOS Score for Intersection	1.732	2.204	2.917	2.804
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1350	1350	1900	450
d_b, Bicycle Delay [s]	6.34	6.34	0.15	36.04
l_b,int, Bicycle LOS Score for Intersection	1.560	1.560	4.201	2.622
Bicycle LOS	A	A	D	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	180.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	53	231	1042	512	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	14	63	283	139	27
Total Analysis Volume [veh/h]	225	58	251	1133	557	109
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	113	113	87	120	33	33
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.79	0.04	0.46	0.69	0.34	0.08
s, saturation flow rate [veh/h]	287	1440	548	1653	1653	1452
c, Capacity [veh/h]	60	0	129	1570	1418	1246
d1, Uniform Delay [s]	59.95	0.00	0.31	0.48	1.83	1.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1275.80	0.00	455.69	2.90	0.82	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	3.75	10000.00	1.95	0.72	0.39	0.09
d, Delay for Lane Group [s/veh]	1335.75	0.00	456.00	3.38	2.65	1.45
Lane Group LOS	F	F	F	A	A	A
Critical Lane Group	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	23.28	0.00	16.27	1.27	1.30	0.19
50th-Percentile Queue Length [ft/ln]	582.02	0.00	406.78	31.64	32.50	4.63
95th-Percentile Queue Length [veh/ln]	31.19	0.00	26.87	2.28	2.34	0.33
95th-Percentile Queue Length [ft/ln]	779.84	0.00	671.77	56.95	58.49	8.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1335.75	0.00	456.00	3.38	2.65	1.45
Movement LOS	F	A	F	A	A	A
d_A, Approach Delay [s/veh]	1062.00		85.46		2.45	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	180.22					
Intersection LOS	F					
Intersection V/C	0.762					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.181	2.928	3.261
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	450
d_b, Bicycle Delay [s]	60.00	0.15	36.04
l_b,int, Bicycle LOS Score for Intersection	1.560	3.843	2.659
Bicycle LOS	A	D	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	39	13	5	33	14	24	97	17	13	95	2
Total Analysis Volume [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	32	0	96	32	0	96	58	0	96	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	7	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	15	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	24	24	24	24	54	54	54	54
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.02	0.12	0.10	0.29	0.05	0.23
s, saturation flow rate [veh/h]	1195	1638	1178	1626	996	1598	935	1689
c, Capacity [veh/h]	255	432	243	429	539	964	473	1019
d1, Uniform Delay [s]	37.39	27.87	34.02	27.59	14.47	9.92	16.00	9.20
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	0.80	0.15	0.71	0.71	1.67	0.45	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.47	0.09	0.44	0.18	0.47	0.11	0.38
d, Delay for Lane Group [s/veh]	39.47	28.68	34.18	28.30	15.18	11.59	16.45	10.28
Lane Group LOS	D	C	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.27	3.72	0.41	3.39	1.22	4.93	0.67	3.83
50th-Percentile Queue Length [ft/ln]	81.63	92.92	10.24	84.67	30.46	123.27	16.80	95.83
95th-Percentile Queue Length [veh/ln]	5.88	6.69	0.74	6.10	2.19	8.57	1.21	6.90
95th-Percentile Queue Length [ft/ln]	146.94	167.25	18.42	152.40	54.83	214.31	30.25	172.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.47	28.68	28.68	34.18	28.30	28.30	15.18	11.59	11.59	16.45	10.28	10.28
Movement LOS	D	C	C	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	33.21			28.89			12.21			10.98		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.89											
Intersection LOS	B											
Intersection V/C	0.450											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.207	2.226	2.518	2.261
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	1156	1156
d_b, Bicycle Delay [s]	22.76	22.76	8.02	8.02
l_b,int, Bicycle LOS Score for Intersection	2.140	1.904	2.469	2.281
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	248	68	1247	142	164	656
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	8.00	3.00	3.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	248	68	1247	142	164	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	18	339	39	45	178
Total Analysis Volume [veh/h]	270	74	1355	154	178	713
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	78	78	31	31	11	42
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	22	22	75	75	86	86
g / C, Green / Cycle	0.19	0.19	0.62	0.62	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.17	0.05	0.43	0.11	0.34	0.24
s, saturation flow rate [veh/h]	1627	1452	3121	1452	529	2937
c, Capacity [veh/h]	302	269	1941	903	347	2098
d1, Uniform Delay [s]	47.70	41.92	15.15	9.59	15.05	6.46
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.15	0.55	2.11	0.41	5.34	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.27	0.70	0.17	0.51	0.34
d, Delay for Lane Group [s/veh]	56.85	42.47	17.26	10.00	20.39	6.90
Lane Group LOS	E	D	B	A	C	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.62	1.93	10.83	1.58	1.61	2.72
50th-Percentile Queue Length [ft/ln]	215.48	48.30	270.68	39.47	40.35	67.94
95th-Percentile Queue Length [veh/ln]	13.43	3.48	16.22	2.84	2.90	4.89
95th-Percentile Queue Length [ft/ln]	335.85	86.95	405.59	71.04	72.62	122.29

Movement, Approach, & Intersection Results

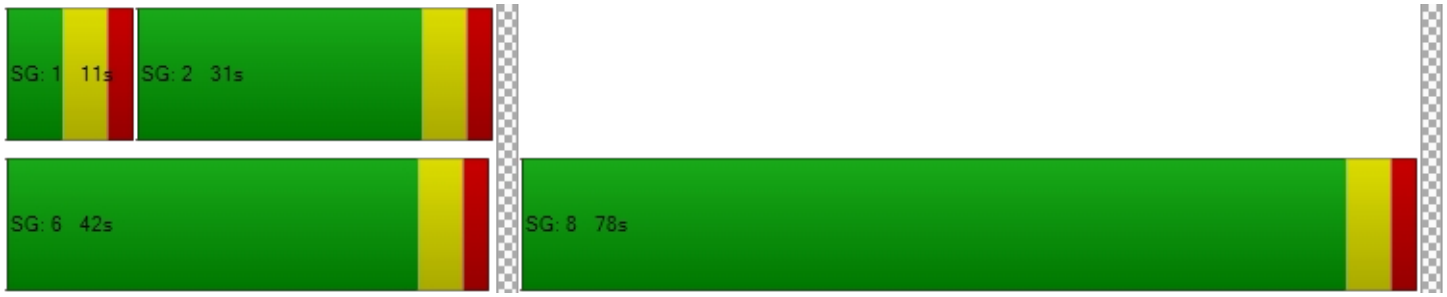
d_M, Delay for Movement [s/veh]	56.85	42.47	17.26	10.00	20.39	6.90
Movement LOS	E	D	B	A	C	A
d_A, Approach Delay [s/veh]	53.76		16.52		9.59	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	18.94					
Intersection LOS	B					
Intersection V/C	0.711					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	417	600
d_b, Bicycle Delay [s]	9.60	37.60	29.40
l_b,int, Bicycle LOS Score for Intersection	1.560	2.805	2.295
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	359	1180	146	0	819
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	8.00	2.00	0.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	359	1180	146	0	819
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	98	321	40	0	223
Total Analysis Volume [veh/h]	0	390	1283	159	0	890
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	0	8	2	2	0	6
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	5	5	5	0	5
Maximum Green [s]	0	30	30	30	0	30
Amber [s]	0.0	4.0	4.0	4.0	0.0	3.0
All red [s]	0.0	2.0	2.0	2.0	0.0	1.0
Split [s]	0	30	90	90	0	90
Vehicle Extension [s]	0.0	3.0	3.0	3.0	0.0	3.0
Walk [s]	0	0	0	0	0	5
Pedestrian Clearance [s]	0	0	0	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			No
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	4.0	4.0	4.0	0.0	2.0
Minimum Recall		No	No			No
Maximum Recall		No	No			No
Pedestrian Recall		No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C
C, Cycle Length [s]	49	49	49	49
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	2.00
g_i, Effective Green Time [s]	13	24	24	26
g / C, Green / Cycle	0.27	0.49	0.49	0.53
(v / s)_i Volume / Saturation Flow Rate	0.22	0.41	0.11	0.30
s, saturation flow rate [veh/h]	1750	3121	1464	2937
c, Capacity [veh/h]	470	1519	713	1550
d1, Uniform Delay [s]	16.88	10.97	7.25	7.85
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	1.36	0.16	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.84	0.22	0.57
d, Delay for Lane Group [s/veh]	20.73	12.33	7.40	8.19
Lane Group LOS	C	B	A	A
Critical Lane Group	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.16	3.51	0.56	1.61
50th-Percentile Queue Length [ft/ln]	103.97	87.70	13.96	40.14
95th-Percentile Queue Length [veh/ln]	7.49	6.31	1.01	2.89
95th-Percentile Queue Length [ft/ln]	187.15	157.85	25.13	72.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	20.73	12.33	7.40	0.00	8.19
Movement LOS		C	B	A		A
d_A, Approach Delay [s/veh]	20.73		11.79		8.19	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.89					
Intersection LOS	B					
Intersection V/C	0.758					

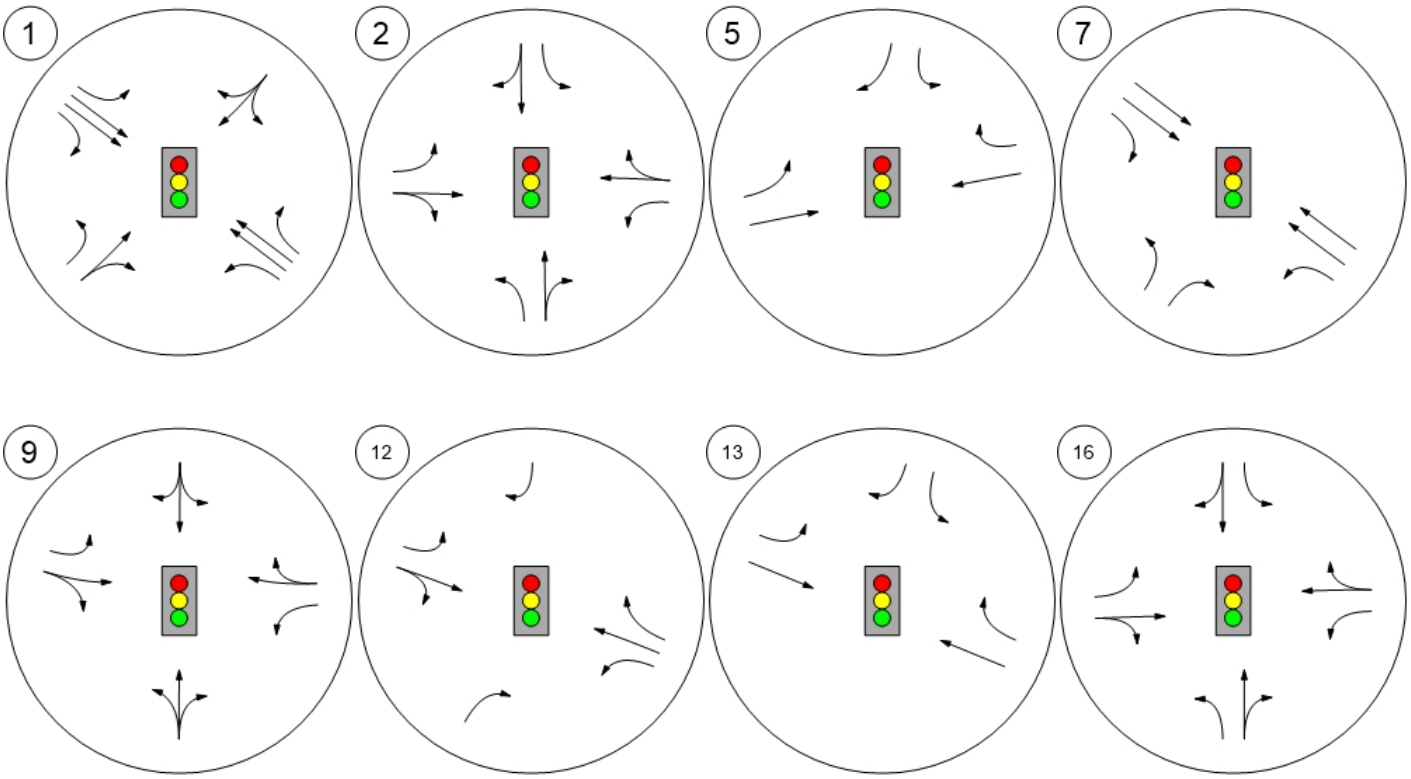
Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1400	1433
d_b, Bicycle Delay [s]	38.40	5.40	4.82
l_b,int, Bicycle LOS Score for Intersection	2.203	2.749	2.294
Bicycle LOS	B	B	B

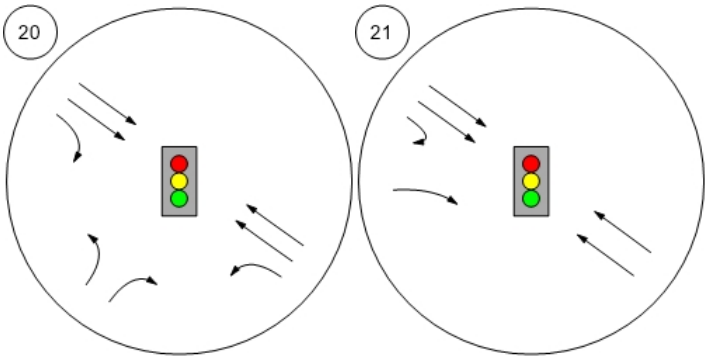
Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lane Configuration and Traffic Control



Lane Configuration and Traffic Control



Option 1: Dual Through Lanes EB & WB

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	222	50	253	1259	405	85
Total Analysis Volume [veh/h]	241	54	275	1368	440	92

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	8	8	0	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	30
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0
Split [s]	33	33	0	87	33	33
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.17	0.17	0.73	0.73	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.28	0.43	0.14	0.06
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1614	1440	966	3148	3148	1440
c, Capacity [veh/h]	269	240	740	2309	2148	983
X, volume / capacity	0.90	0.23	0.37	0.59	0.20	0.09
d, Delay for Lane Group [s/veh]	60.95	43.76	7.99	8.66	7.24	6.65
Lane Group LOS	E	D	A	A	A	A

Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.95	1.43	2.06	6.79	1.85	0.74
50th-Percentile Queue Length [ft/ln]	198.63	35.70	51.43	169.87	46.37	18.49
95th-Percentile Queue Length [veh/ln]	12.57	2.57	3.70	11.07	3.34	1.33
95th-Percentile Queue Length [ft/ln]	314.19	64.26	92.57	276.75	83.47	33.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.95	43.76	7.99	8.66	7.24	6.65
Movement LOS	E	D	A	A	A	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	57.80		8.55		7.14	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	14.13					
Intersection LOS	B					
Intersection V/C	0.649					

Option 1: Dual Through Lanes EB & WB

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	207	53	231	1042	512	100
Total Analysis Volume [veh/h]	225	58	251	1133	557	109

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	33	33	54	87	33	33
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.14	0.04	0.26	0.36	0.18	0.08
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1614	1440	953	3148	3148	1452
c, Capacity [veh/h]	253	226	721	2339	1964	906
X, volume / capacity	0.89	0.26	0.35	0.48	0.28	0.12
d, Delay for Lane Group [s/veh]	59.72	45.02	6.68	6.91	10.67	9.45
Lane Group LOS	E	D	A	A	B	A

Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.31	1.56	1.75	4.66	3.13	1.12
50th-Percentile Queue Length [ft/ln]	182.70	39.02	43.73	116.45	78.23	28.09
95th-Percentile Queue Length [veh/ln]	11.74	2.81	3.15	8.20	5.63	2.02
95th-Percentile Queue Length [ft/ln]	293.53	70.24	78.72	204.93	140.81	50.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.72	45.02	6.68	6.91	10.67	9.45
Movement LOS	E	D	A	A	B	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	56.71		6.86		10.47	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	13.94					
Intersection LOS	B					
Intersection V/C	0.555					

Mullan BUILD - 2050 PM

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Scenario 3 Two Way Stop Control (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	33.820	10,000.0	F
2	George Elmer Dr & England Blvd	Two-way stop	HCM 6th Edition	NB Left	0.000	10,000.0	F
3	George Elmer Dr & Cattle Dr	Two-way stop	HCM 6th Edition	EB Left	0.170	30.6	D
4	George Elmer Dr & Heron's Landing	Two-way stop	HCM 6th Edition	EB Left	0.206	32.4	D
5	George Elmer Dr & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	4.632	1,957.5	F
6	Dougherty Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.589	44.9	E
7	Doughtery Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	4.369	1,704.3	F
8	Flynn Ln & Camden St	Two-way stop	HCM 6th Edition	WB Left	0.007	10.2	B
9	Flynn Ln & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.163	61.2	F
10	Flynn Ln & Chelsea Dr	Two-way stop	HCM 6th Edition	EB Thru	0.025	12.5	B
11	Flynn Ln & Siren's Dr	Two-way stop	HCM 6th Edition	EB Left	0.035	11.0	B
12	Flynn Ln & Mullan Rd	Two-way stop	HCM 6th Edition	SB Right	0.984	126.7	F
13	Mary Jane Blvd & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	4.130	1,689.6	F
14	Mary Jane Blvd & O'Leary St	Two-way stop	HCM 6th Edition	WB Left	0.037	15.0	B
15	Mary Jane Blvd & Melrose Pl	Two-way stop	HCM 6th Edition	EB Left	0.161	20.7	C
16	Mary Jane Blvd & England Blvd	Two-way stop	HCM 6th Edition	NB Left	3.171	1,324.9	F
17	Mary Jane Blvd & Camden St	Two-way stop	HCM 6th Edition	WB Left	0.007	14.0	B
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Two-way stop	HCM 6th Edition	EB Left	0.149	20.9	C
19	Mary Jane Blvd & Veteran's Way	Two-way stop	HCM 6th Edition	EB Left	0.255	18.7	C
20	Mary Jane Blvd & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	3.662	1,331.9	F
21	Flynn Ln & W Broadway St	Two-way stop	HCM 6th Edition	NB Thru	0.882	58.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	33.820

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	33.82	0.18	0.63	0.22	0.23	0.00	0.00	0.02	0.00	0.45	0.01	0.00
d_M, Delay for Movement [s/veh]	10000.	10000.	38.56	1040.6	1048.5	243.76	11.21	0.00	0.00	24.67	0.00	0.00
Movement LOS	F	F	E	F	F	F	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	29.86	29.86	3.95	0.86	0.86	0.86	0.01	0.00	0.00	2.25	0.00	0.00
95th-Percentile Queue Length [ft/ln]	746.40	746.40	98.75	21.43	21.43	21.43	0.13	0.00	0.00	56.37	0.00	0.00
d_A, Approach Delay [s/veh]	5648.16			777.65			0.01			2.74		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	627.33											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.58	0.08	0.00	1.47	0.35	0.13	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	10000.	378.23	357.46	10000.	437.65	415.04	8.92	0.00	0.00	8.54	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	21.89	18.61	18.61	7.93	26.97	26.97	0.43	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	547.21	465.33	465.33	198.16	674.28	674.28	10.82	0.00	0.00	3.46	0.00	0.00
d_A, Approach Delay [s/veh]	3903.74			1450.08			1.87			0.72		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	1107.97											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Two-way stop	Delay (sec / veh):	30.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	90	6	1	98	2	7	0	9	2	0	8
Total Analysis Volume [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.00	0.00	0.17	0.01	0.05	0.05	0.01	0.05
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	8.08	0.00	0.00	30.60	27.84	14.27	28.09	24.88	11.36
Movement LOS	A	A	A	A	A	A	D	D	B	D	C	B
95th-Percentile Queue Length [veh/ln]	0.43	0.00	0.00	0.01	0.00	0.00	0.87	0.87	0.87	0.34	0.34	0.34
95th-Percentile Queue Length [ft/ln]	10.84	0.00	0.00	0.32	0.00	0.00	21.72	21.72	21.72	8.44	8.44	8.44
d_A, Approach Delay [s/veh]	2.36			0.10			21.51			14.96		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	3.18											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Two-way stop	Delay (sec / veh):	32.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.206

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	117	8	8	92	8	8	0	5	5	0	8
Total Analysis Volume [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.03	0.00	0.00	0.21	0.01	0.03	0.13	0.01	0.06
d_M, Delay for Movement [s/veh]	8.35	0.00	0.00	8.49	0.00	0.00	32.43	29.25	15.44	29.70	27.24	14.16
Movement LOS	A	A	A	A	A	A	D	D	C	D	D	B
95th-Percentile Queue Length [veh/ln]	0.23	0.00	0.00	0.10	0.00	0.00	0.93	0.93	0.93	0.71	0.71	0.71
95th-Percentile Queue Length [ft/ln]	5.72	0.00	0.00	2.40	0.00	0.00	23.24	23.24	23.24	17.68	17.68	17.68
d_A, Approach Delay [s/veh]	1.18			0.64			25.70			20.50		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	3.15											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,957.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.632

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.63	1.49	0.36	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	1957.46	290.18	15.53	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	14.08	18.43	1.66	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	352.11	460.75	41.39	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	747.47		3.42		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	104.67					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	44.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	111	100	150	249	416	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	100	150	249	416	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	27	41	68	113	14
Total Analysis Volume [veh/h]	121	109	163	271	452	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.59	0.19	0.15	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	44.95	12.53	9.02	0.00	0.00	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.28	0.68	0.54	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	82.03	16.92	13.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	29.59		3.39		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	7.07					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	1,704.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.369

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.37	0.93	0.02	0.00	0.77	0.01
d_M, Delay for Movement [s/veh]	1704.33	67.41	0.00	0.00	41.25	0.00
Movement LOS	F	F	A	A	E	A
95th-Percentile Queue Length [veh/ln]	21.61	9.67	0.00	0.00	6.20	0.00
95th-Percentile Queue Length [ft/ln]	540.26	241.67	0.00	0.00	154.89	0.00
d_A, Approach Delay [s/veh]	670.16		0.00		7.97	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	97.17					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	103	7	22	94	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	7	22	94	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	2	6	26	1	4
Total Analysis Volume [veh/h]	112	8	24	102	5	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.49	0.00	10.16	8.94
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.25	1.25	1.69	1.69
d_A, Approach Delay [s/veh]	0.00		1.43		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.34					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	61.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.38	0.10	0.16	0.41	0.01	0.02	0.00	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	45.11	33.26	21.43	61.25	45.84	35.06	8.51	0.00	0.00	8.19	0.00	0.00
Movement LOS	E	D	C	F	E	E	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.63	2.63	2.63	3.12	3.12	3.12	0.07	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	65.81	65.81	65.81	77.88	77.88	77.88	1.68	0.00	0.00	4.19	0.00	0.00
d_A, Approach Delay [s/veh]	27.93			48.13			0.50			0.89		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	8.23											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	3.00	2.00	4.00	2.00	2.00	7.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	30	5	6	31	5	8	3	11	4	1	1
Total Analysis Volume [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.00	0.05	0.02	0.05	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	7.53	0.00	0.00	12.20	12.54	9.68	12.45	12.06	9.19
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.05	0.05	0.05	0.43	0.43	0.43	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	1.60	1.60	1.60	1.21	1.21	1.21	10.68	10.68	10.68	3.27	3.27	3.27
d_A, Approach Delay [s/veh]	1.33			1.04			10.99			11.83		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.63											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	17	137	156	13	20	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	18.00	2.00	2.00	2.00	5.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	137	156	13	20	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	37	42	4	5	7
Total Analysis Volume [veh/h]	18	149	170	14	22	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.81	0.00	0.00	0.00	11.00	9.29
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.11	0.09
95th-Percentile Queue Length [ft/ln]	1.05	0.00	0.00	0.00	2.74	2.32
d_A, Approach Delay [s/veh]	0.84		0.00		10.07	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.56					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	126.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.98	0.15	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.72	0.00	0.00	126.72	15.21	0.00	0.00	9.18	0.00	0.00
Movement LOS			B			F	C	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.00	7.37	0.51	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.00	0.00	184.24	12.63	0.00	0.00	0.09	0.00	0.00
d_A, Approach Delay [s/veh]	13.72			126.72			1.13			0.01		
Approach LOS	B			F			A			A		
d_I, Intersection Delay [s/veh]	7.87											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,689.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.130

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.13	0.91	0.31	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	1689.62	104.79	17.51	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	14.28	6.57	1.30	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	356.94	164.36	32.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	810.49		3.04		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	83.80					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	58	5	8	48	7	5	2	15	4	1	4
Total Analysis Volume [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.04	0.02	0.07	0.04	0.01	0.02
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.81	0.00	0.00	14.47	14.36	10.15	15.00	14.09	10.03
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	B
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.08	0.08	0.08	0.45	0.45	0.45	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.84	0.84	0.84	1.99	1.99	1.99	11.28	11.28	11.28	5.52	5.52	5.52
d_A, Approach Delay [s/veh]	0.44			1.05			11.41			12.60		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.81											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.161

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.03	0.00	0.00	0.16	0.16	0.05	0.04	0.14	0.01
d_M, Delay for Movement [s/veh]	7.79	0.00	0.00	7.75	0.00	0.00	20.68	19.27	14.33	18.96	16.54	11.48
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.09	0.09	0.09	1.72	1.72	1.72	0.68	0.68	0.68
95th-Percentile Queue Length [ft/ln]	2.38	2.38	2.38	2.18	2.18	2.18	42.92	42.92	42.92	16.94	16.94	16.94
d_A, Approach Delay [s/veh]	1.21			1.08			18.36			16.31		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.16											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,324.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.171

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.17	0.49	0.18	1.37	0.94	0.03	0.03	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	1324.9	47.13	31.77	332.58	109.27	95.97	8.77	0.00	0.00	8.35	0.00	0.00
Movement LOS	F	E	D	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	9.31	4.45	4.45	8.06	7.98	7.98	0.09	0.00	0.00	0.20	0.00	0.00
95th-Percentile Queue Length [ft/ln]	232.82	111.34	111.34	201.40	199.52	199.52	2.20	0.00	0.00	4.88	0.00	0.00
d_A, Approach Delay [s/veh]	385.79			186.92			0.56			0.88		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	96.10											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	50	1	4	60	7	4	4	11	1	3	2
Total Analysis Volume [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.03	0.03	0.05	0.01	0.03	0.01
d_M, Delay for Movement [s/veh]	7.80	0.00	0.00	7.66	0.00	0.00	13.80	13.60	10.38	13.95	13.26	9.61
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.40	0.40	0.40	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.52	0.77	0.77	0.77	9.91	9.91	9.91	3.65	3.65	3.65
d_A, Approach Delay [s/veh]	0.33			0.38			11.74			12.03		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.22											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	45	10	14	60	15	12	15	5	6	16	8
Total Analysis Volume [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.15	0.03	0.08	0.16	0.04
d_M, Delay for Movement [s/veh]	7.86	0.00	0.00	7.79	0.00	0.00	20.92	18.82	14.20	19.29	17.63	12.49
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.13	0.13	0.13	1.41	1.41	1.41	1.12	1.12	1.12
95th-Percentile Queue Length [ft/ln]	0.18	0.18	0.18	3.36	3.36	3.36	35.32	35.32	35.32	27.96	27.96	27.96
d_A, Approach Delay [s/veh]	0.11			1.27			18.87			16.67		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.88											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.255

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	2.00	5.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	63	0	0	86	24	23	0	3	0	0	0
Total Analysis Volume [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.23	0.00	0.00	7.74	0.00	0.00	18.67	17.90	14.38	14.72	14.95	9.58
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	1.09	1.09	1.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.27	0.27	0.27	0.00	0.00	0.00	27.27	27.27	27.27	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.13			0.00			18.21			13.08		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	2.37											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	1,331.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.662

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.66	0.34	0.02	0.00	0.62	0.01
d_M, Delay for Movement [s/veh]	1331.86	21.56	0.00	0.00	32.79	0.00
Movement LOS	F	C	A	A	D	A
95th-Percentile Queue Length [veh/ln]	24.89	1.45	0.00	0.00	3.90	0.00
95th-Percentile Queue Length [ft/ln]	622.35	36.24	0.00	0.00	97.61	0.00
d_A, Approach Delay [s/veh]	914.08		0.00		4.71	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	89.97					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	58.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.882

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Pedestrian Volume [ped/h]	0		0		0	

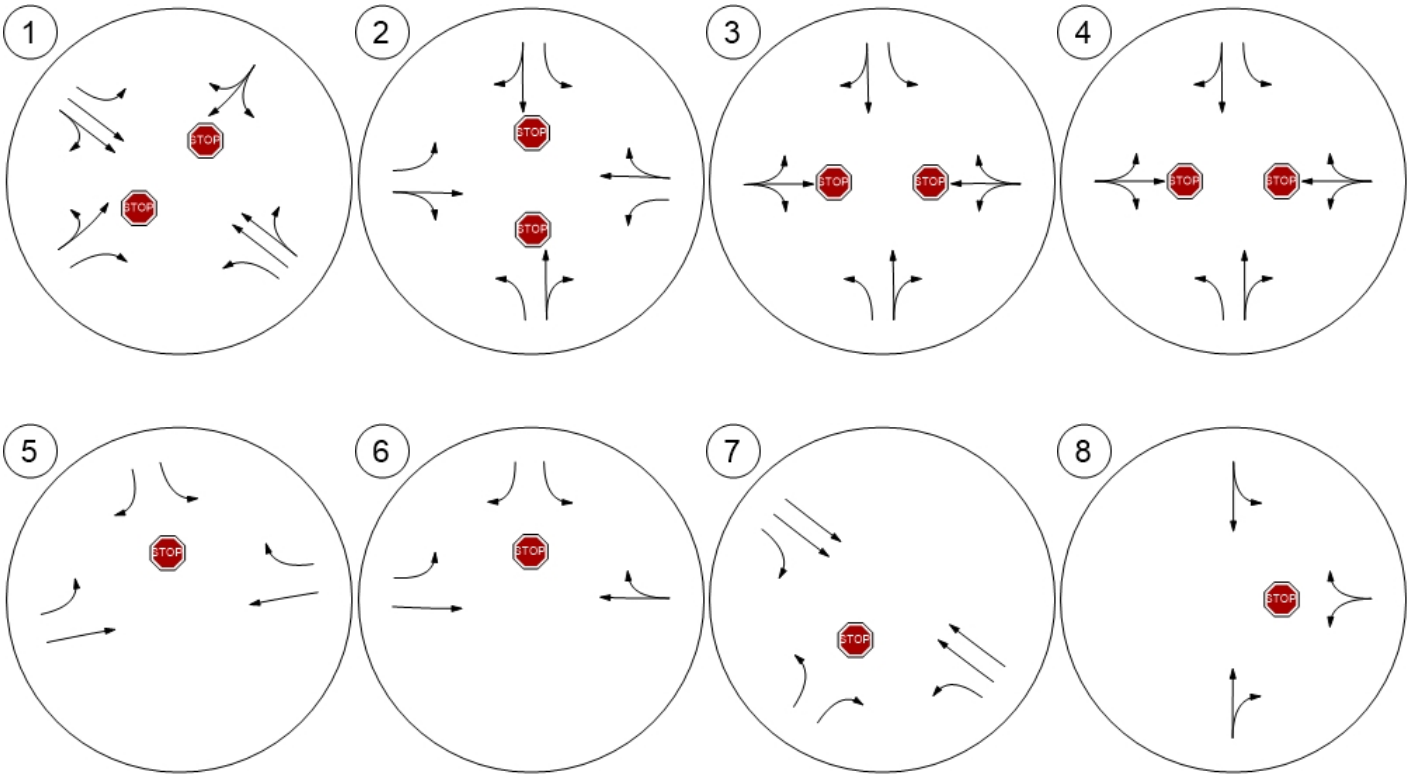
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

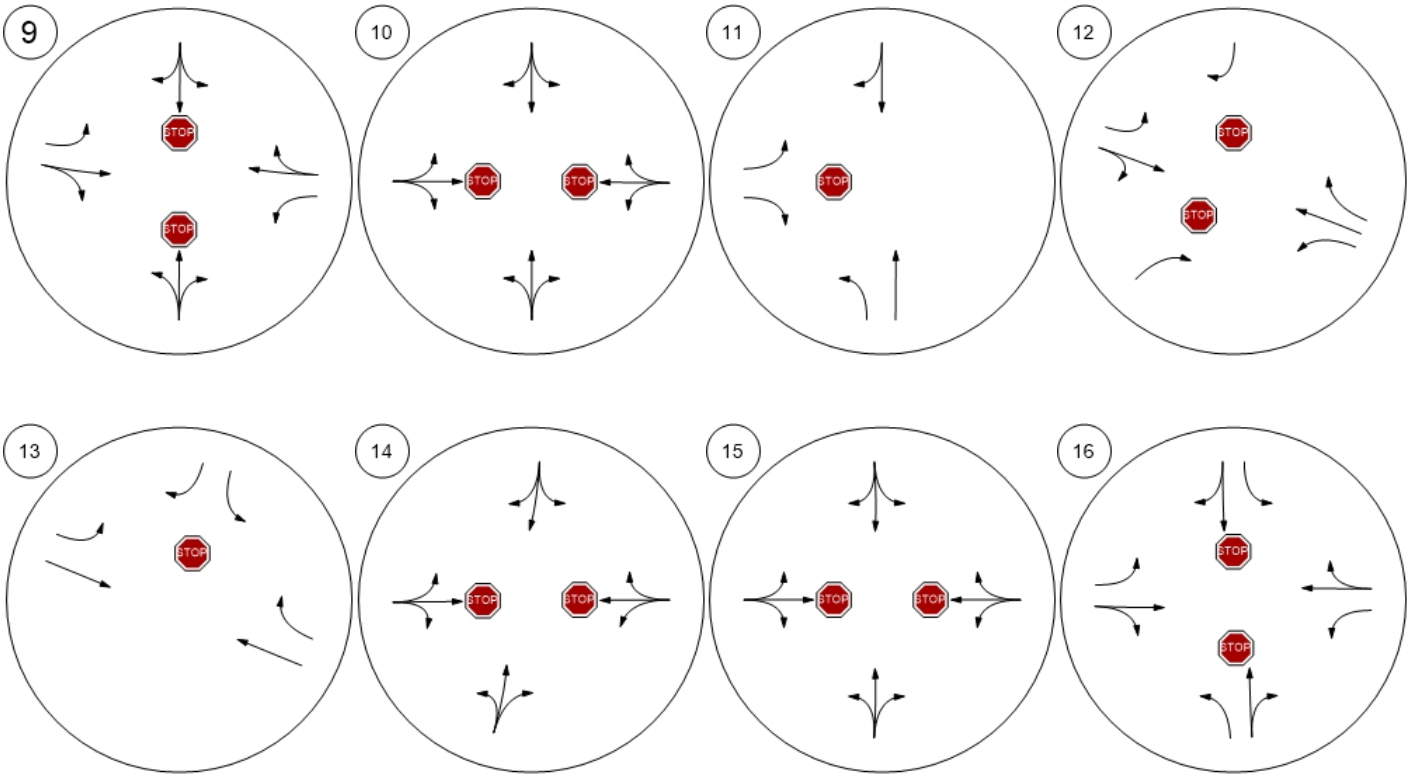
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.88	0.02	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	58.11	0.00	0.00	0.00	0.00
Movement LOS		F	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	8.48	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	212.10	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	58.11		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	5.31					
Intersection LOS	F					

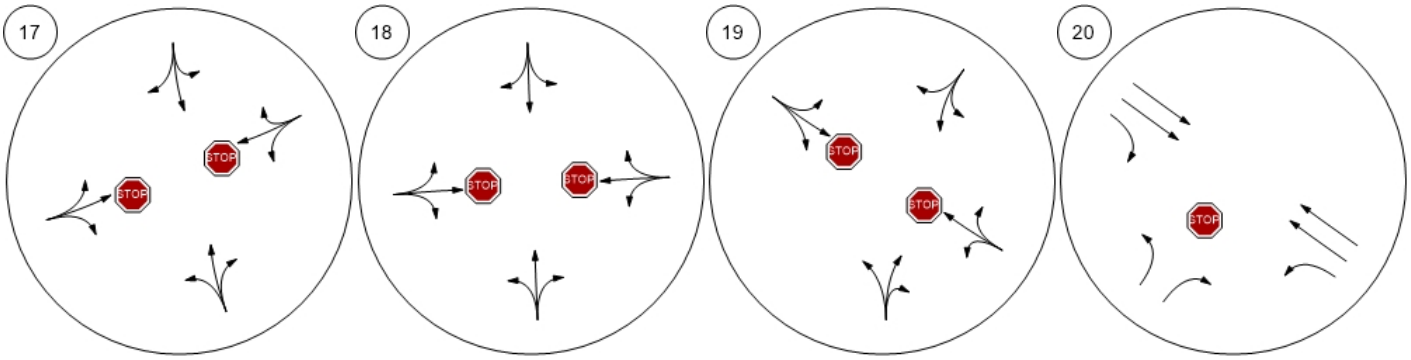
Lane Configuration and Traffic Control

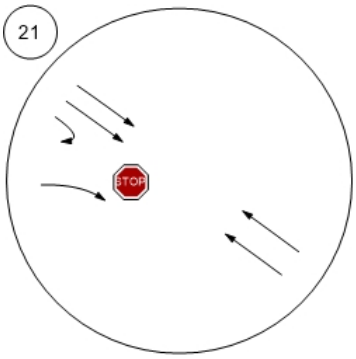


Lane Configuration and Traffic Control



Lane Configuration and Traffic Control





Mullan BUILD - 2050 PM

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Report File: H:\...\24667_PM2050_RIROLI_7.pdf

Scenario 3 Two Way Stop Control (2050)
7/22/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
7	Doughtery Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Right	1.475	257.3	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	257.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.475

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	475	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	475	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	129	379	54	69	288
Total Analysis Volume [veh/h]	190	516	1515	217	276	1152
Pedestrian Volume [ped/h]	0		0		0	

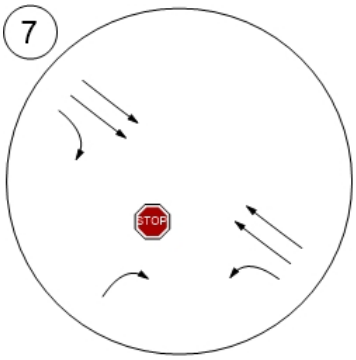
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.47	0.02	0.00	0.77	0.01
d_M, Delay for Movement [s/veh]	0.00	257.25	0.00	0.00	41.25	0.00
Movement LOS		F	A	A	E	A
95th-Percentile Queue Length [veh/ln]	0.00	27.74	0.00	0.00	6.20	0.00
95th-Percentile Queue Length [ft/ln]	0.00	693.61	0.00	0.00	154.89	0.00
d_A, Approach Delay [s/veh]	257.25		0.00		7.97	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	39.21					
Intersection LOS	F					

Lane Configuration and Traffic Control



Option 1: NB/SB Left Turn Lane

Number	9											
Intersection	Flynn Ln & England Blvd											
Control Type	Two-way stop											
Analysis Method	HCM 6th Edition											
Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	4	3	2	4	3	2	2	1	1	2	1	1
v_c, Conflicting Flow Rate	1086	1049	360	1117	1049	509	517	0	0	368	0	0
v_c, Stage 1	406	406	360	635	635	509	517	0	0	368	0	0
v_c, Stage 2	680	643	0	482	414	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	194	227	684	185	227	564	1049	0	0	1185	0	0
c_p,x, Stage 1 [veh/h]	622	598	1272	467	472	1355	1890	0	0	1802	0	0
c_p,x, Stage 2 [veh/h]	441	468	1085	566	593	1085	1623	0	0	1617	0	0
c_m,x, Movement Capacity [veh/h]	125	211	684	111	211	564	1049	100000	100000	1185	100000	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	125	211	684	111	211	564	1049	100000	100000	1185	100000	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.38	0.10	0.16	0.41	0.01	0.02	0.00	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	34.35	32.42	20.59	43.81	33.40	22.70	8.51	0.00	0.00	8.21	0.00	0.00
Movement LOS	D	D	C	E	D	C	A	A	A	A	A	A
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.05	2.50	2.50	0.56	1.89	1.89	0.07	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.22	62.47	62.47	13.92	47.24	47.24	1.68	0.00	0.00	4.21	0.00	0.00
d_A, Approach Delay [s/veh]	26.96			34.86			0.50			0.89		
Approach LOS	D			D			A			A		
V/C_I, Worst Movement V/C Ratio	0.16											
d_I, Worst Movement Control Delay [s/veh]	43.81											
d_I, Intersection Delay [s/veh]	6.96											
Intersection LOS	E											

Mullan BUILD - 2050 PM

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Scenario 6 All Way Stop Control (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	George Elmer Dr & England Blvd	All-way stop	HCM 6th Edition	WB Thru	1.273	94.6	F
9	Flynn Ln & England Blvd	All-way stop	HCM 6th Edition	WB Thru	0.866	24.0	C
15	Mary Jane Blvd & Melrose Pl	All-way stop	HCM 6th Edition	NB Thru	0.373	10.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	94.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.273

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	368	392	377	413	382	500	381	514
Degree of Utilization, x	0.42	0.68	0.12	0.93	0.35	1.21	0.12	1.27

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.01	4.85	0.41	10.33	1.53	20.10	0.42	22.38
95th-Percentile Queue Length [ft]	50.21	121.17	10.31	258.26	38.18	502.45	10.47	559.61
Approach Delay [s/veh]	25.60		53.35		115.31		154.34	
Approach LOS	D		F		F		F	
Intersection Delay [s/veh]	94.55							
Intersection LOS	F							

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	548	513	529	574	549	597
Degree of Utilization, x	0.28	0.21	0.04	0.64	0.11	0.87

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.14	0.78	0.14	4.55	0.39	9.78
95th-Percentile Queue Length [ft]	28.40	19.48	3.40	113.76	9.66	244.58
Approach Delay [s/veh]	12.09	11.87	18.91		32.83	
Approach LOS	B	B	C		D	
Intersection Delay [s/veh]	24.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	725	735	677	651
Degree of Utilization, x	0.37	0.37	0.24	0.11

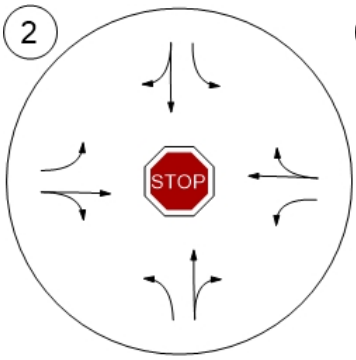
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.68	1.73	0.92	0.38
95th-Percentile Queue Length [ft]	41.98	43.29	23.08	9.43
Approach Delay [s/veh]	10.80	10.78	9.97	9.23
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.47			
Intersection LOS	B			

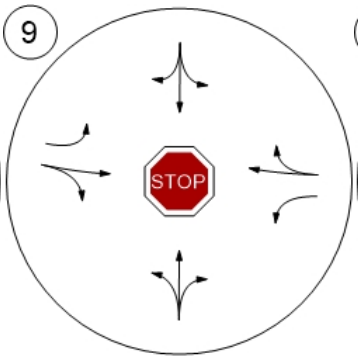
Study Intersections

Lane Configuration and Traffic Control

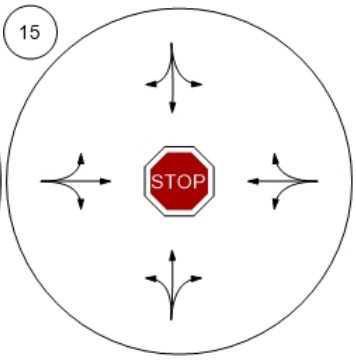
George Elmer Dr & England



Flynn Ln & England Blvd

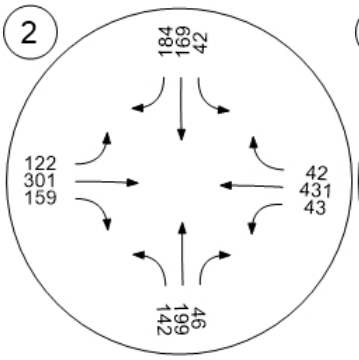


Mary Jane Blvd & Melrose Pl

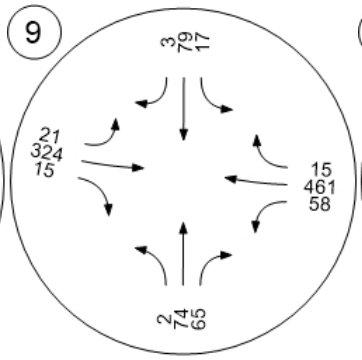


Traffic Volume - Base Volume

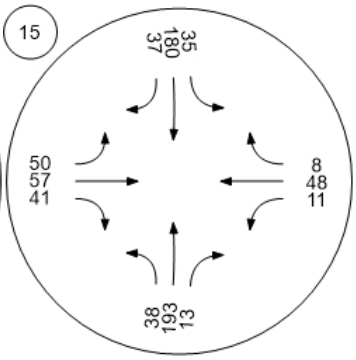
George Elmer Dr & England



Flynn Ln & England Blvd



Mary Jane Blvd & Melrose Pl



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Scenario 5 Roundabout (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Left		15.9	C
2	George Elmer Dr & England Blvd	Roundabout	HCM 6th Edition	WB Thru		14.9	B
3	George Elmer Dr & Cattle Dr	Roundabout	HCM 6th Edition	NB Thru		6.5	A
4	George Elmer Dr & Heron's Landing	Roundabout	HCM 6th Edition	NB Thru		7.0	A
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		40.8	E
6	Dougherty Dr & England Blvd	Roundabout	HCM 6th Edition	WB Thru		7.2	A
7	Doughtery Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Right		20.0	C
8	Flynn Ln & Camden St	Roundabout	HCM 6th Edition	NB Thru		3.4	A
9	Flynn Ln & England Blvd	Roundabout	HCM 6th Edition	WB Thru		7.1	A
10	Flynn Ln & Chelsea Dr	Roundabout	HCM 6th Edition	NB Thru		3.9	A
11	Flynn Ln & Siren's Dr	Roundabout	HCM 6th Edition	SB Thru		3.8	A
12	Flynn Ln & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		52.7	F
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		60.6	F
14	Mary Jane Blvd & O'Leary St	Roundabout	HCM 6th Edition	NB Thru		4.4	A
15	Mary Jane Blvd & Melrose Pl	Roundabout	HCM 6th Edition	NB Thru		5.0	A
16	Mary Jane Blvd & England Blvd	Roundabout	HCM 6th Edition	WB Thru		10.0	B
17	Mary Jane Blvd & Camden St	Roundabout	HCM 6th Edition	SB Thru		4.3	A
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Roundabout	HCM 6th Edition	SB Thru		5.1	A
19	Mary Jane Blvd & Veteran's Way	Roundabout	HCM 6th Edition	EB Left		5.5	A
20	Mary Jane Blvd & W Broadway St	Roundabout	HCM 6th Edition	NB Left		18.1	C
21	Flynn Ln & W Broadway St	Roundabout	HCM 6th Edition	NB Thru		11.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			Commerical Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commerical Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	2			1			1			1		
Circulating Flow Rate [veh/h]	1593			1598			154			231		
Exiting Flow Rate [veh/h]	430			3			1447			1770		
Demand Flow Rate [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Adjusted Demand Flow Rate [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	230	179	4	879	991	644	727
Capacity of Entry and Bypass Lanes [veh/h]	312	367	271	1235	1235	1152	1152
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	303	356	266	1211	1211	1129	1129
X, volume / capacity	0.74	0.49	0.01	0.71	0.80	0.56	0.63

Movement, Approach, & Intersection Results

Lane LOS	E	C	B	B	C	A	B
95th-Percentile Queue Length [veh]	5.43	2.55	0.03	6.46	9.31	3.60	4.70
95th-Percentile Queue Length [ft]	135.85	63.82	0.86	161.44	232.73	89.98	117.50
Approach Delay [s/veh]	33.54		13.79	15.78		10.84	
Approach LOS	D		B	C		B	
Intersection Delay [s/veh]	15.89						
Intersection LOS	C						

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	516			682			284			515		
Exiting Flow Rate [veh/h]	414			405			838			431		
Demand Flow Rate [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Adjusted Demand Flow Rate [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	431	441	646	573
Capacity of Entry and Bypass Lanes [veh/h]	816	689	1033	816
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	796	672	1013	800
X, volume / capacity	0.53	0.64	0.63	0.70

Movement, Approach, & Intersection Results

Lane LOS	B	C	B	C
95th-Percentile Queue Length [veh]	3.15	4.63	4.57	5.88
95th-Percentile Queue Length [ft]	78.68	115.70	114.17	147.12
Approach Delay [s/veh]	12.12	17.59	12.42	17.85
Approach LOS	B	C	B	C
Intersection Delay [s/veh]	14.94			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Roundabout	Delay (sec / veh):	6.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	90	6	1	98	2	7	0	9	2	0	8
Total Analysis Volume [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	35			159			416			551		
Exiting Flow Rate [veh/h]	448			434			158			30		
Demand Flow Rate [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Adjusted Demand Flow Rate [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	547	415	67	42
Capacity of Entry and Bypass Lanes [veh/h]	1333	1174	903	787
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1298	1140	886	771
X, volume / capacity	0.41	0.35	0.07	0.05

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	2.04	1.61	0.24	0.17
95th-Percentile Queue Length [ft]	51.05	40.34	5.93	4.20
Approach Delay [s/veh]	6.74	6.65	4.76	5.20
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.52			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Roundabout	Delay (sec / veh):	7.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	117	8	8	92	8	8	0	5	5	0	8
Total Analysis Volume [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	68			107			437			597		
Exiting Flow Rate [veh/h]	426			547			118			68		
Demand Flow Rate [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Adjusted Demand Flow Rate [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	598	449	58	58
Capacity of Entry and Bypass Lanes [veh/h]	1288	1238	884	751
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1253	1203	867	736
X, volume / capacity	0.46	0.36	0.06	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	2.52	1.68	0.21	0.25
95th-Percentile Queue Length [ft]	63.04	41.91	5.17	6.16
Approach Delay [s/veh]	7.66	6.50	4.77	5.68
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.97			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	40.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1314		115		201	
Exiting Flow Rate [veh/h]	596		1619		821	
Demand Flow Rate [veh/h]	104	275	179	637	1185	353
Adjusted Demand Flow Rate [veh/h]	113	299	195	692	1288	384

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.97	0.98	0.98	0.97
Entry Flow Rate [veh/h]	116	305	201	706	1314	396
Capacity of Entry and Bypass Lanes [veh/h]	404	465	1279	1279	1183	1183
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	396	456	1242	1254	1160	1149
X, volume / capacity	0.29	0.66	0.16	0.55	1.11	0.33

Movement, Approach, & Intersection Results

Lane LOS	B	D	A	A	F	A
95th-Percentile Queue Length [veh]	1.16	4.63	0.56	3.52	31.42	1.48
95th-Percentile Queue Length [ft]	29.07	115.73	13.92	88.01	785.53	37.10
Approach Delay [s/veh]	22.03		8.04		62.80	
Approach LOS	C		A		F	
Intersection Delay [s/veh]	40.80					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	7.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	111	100	150	249	416	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	100	150	249	416	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	27	41	68	113	14
Total Analysis Volume [veh/h]	121	109	163	271	452	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	461		123		166	
Exiting Flow Rate [veh/h]	221		572		400	
Demand Flow Rate [veh/h]	111	100	150	249	416	50
Adjusted Demand Flow Rate [veh/h]	121	109	163	271	452	54

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	235	443	517
Capacity of Entry and Bypass Lanes [veh/h]	863	1217	1165
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	846	1193	1142
X, volume / capacity	0.27	0.36	0.44

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	1.11	1.69	2.32
95th-Percentile Queue Length [ft]	27.63	42.14	57.99
Approach Delay [s/veh]	7.20	6.55	7.85
Approach LOS	A	A	A
Intersection Delay [s/veh]	7.24		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1545		282		194	
Exiting Flow Rate [veh/h]	503		1369		1878	
Demand Flow Rate [veh/h]	175	300	1394	200	254	1060
Adjusted Demand Flow Rate [veh/h]	190	326	1515	217	276	1152

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	194	333	831	937	685	772
Capacity of Entry and Bypass Lanes [veh/h]	326	382	1100	1100	1191	1191
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	320	375	1078	1078	1168	1168
X, volume / capacity	0.59	0.87	0.76	0.85	0.58	0.65

Movement, Approach, & Intersection Results

Lane LOS	D	F	C	C	B	B
95th-Percentile Queue Length [veh]	3.60	8.44	7.54	11.09	3.82	5.04
95th-Percentile Queue Length [ft]	90.07	211.05	188.54	277.28	95.61	125.99
Approach Delay [s/veh]	44.26		20.10		10.99	
Approach LOS	E		C		B	
Intersection Delay [s/veh]	19.95					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	103	7	22	94	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	7	22	94	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	2	6	26	1	4
Total Analysis Volume [veh/h]	112	8	24	102	5	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	24		5		114	
Exiting Flow Rate [veh/h]	109		129		33	
Demand Flow Rate [veh/h]	103	7	22	94	5	13
Adjusted Demand Flow Rate [veh/h]	112	8	24	102	5	14

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	123	129	20
Capacity of Entry and Bypass Lanes [veh/h]	1346	1373	1229
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1320	1346	1205
X, volume / capacity	0.09	0.09	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.30	0.31	0.05
95th-Percentile Queue Length [ft]	7.49	7.73	1.20
Approach Delay [s/veh]	3.46	3.42	3.12
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.41		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	7.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	401			577			171			107		
Exiting Flow Rate [veh/h]	169			121			516			450		
Demand Flow Rate [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Adjusted Demand Flow Rate [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.98	0.98
Entry Flow Rate [veh/h]	157	110	399	592
Capacity of Entry and Bypass Lanes [veh/h]	917	766	1159	1238
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	899	746	1137	1213
X, volume / capacity	0.17	0.14	0.34	0.48

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.61	0.50	1.55	2.66
95th-Percentile Queue Length [ft]	15.28	12.50	38.71	66.49
Approach Delay [s/veh]	5.68	6.36	6.54	8.05
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.13			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Roundabout	Delay (sec / veh):	3.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	3.00	2.00	4.00	2.00	2.00	7.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	30	5	6	31	5	8	3	11	4	1	1
Total Analysis Volume [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	68			51			168			182		
Exiting Flow Rate [veh/h]	189			156			54			60		
Demand Flow Rate [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Adjusted Demand Flow Rate [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.97	0.95
Entry Flow Rate [veh/h]	175	172	89	25
Capacity of Entry and Bypass Lanes [veh/h]	1288	1311	1163	1147
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1258	1276	1132	1088
X, volume / capacity	0.14	0.13	0.08	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.47	0.45	0.25	0.06
95th-Percentile Queue Length [ft]	11.68	11.26	6.16	1.62
Approach Delay [s/veh]	3.98	3.90	3.82	3.49
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.90			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Roundabout	Delay (sec / veh):	3.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	17	137	156	13	20	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	18.00	2.00	2.00	2.00	5.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	137	156	13	20	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	37	42	4	5	7
Total Analysis Volume [veh/h]	18	149	170	14	22	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	23		21		173	
Exiting Flow Rate [veh/h]	200		175		36	
Demand Flow Rate [veh/h]	17	137	156	13	20	24
Adjusted Demand Flow Rate [veh/h]	18	149	170	14	22	26

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.98	0.97
Entry Flow Rate [veh/h]	173	188	50
Capacity of Entry and Bypass Lanes [veh/h]	1348	1351	1157
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1302	1324	1119
X, volume / capacity	0.13	0.14	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.44	0.48	0.13
95th-Percentile Queue Length [ft]	11.00	12.06	3.36
Approach Delay [s/veh]	3.81	3.85	3.58
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.80		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	52.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	821			1514			1			61		
Exiting Flow Rate [veh/h]	2			171			1667			761		
Demand Flow Rate [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	2	155	62	761	1514	111
Capacity of Entry and Bypass Lanes [veh/h]	598	295	1419	1419	1344	1344
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	586	289	1391	1391	1317	1317
X, volume / capacity	0.00	0.52	0.04	0.54	1.13	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	D	A	A	F	A
95th-Percentile Queue Length [veh]	0.01	2.82	0.14	3.33	36.26	0.27
95th-Percentile Queue Length [ft]	0.13	70.57	3.38	83.32	906.40	6.69
Approach Delay [s/veh]	6.17	27.95	7.83		77.84	
Approach LOS	A	D	A		F	
Intersection Delay [s/veh]	52.73					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	60.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	1	0	1
Exit Pocket Length [ft]	0.00	100.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	1475		120		132	
Exiting Flow Rate [veh/h]	270		1625		747	
Demand Flow Rate [veh/h]	109	135	119	565	1330	125
Adjusted Demand Flow Rate [veh/h]	118	147	129	614	1446	136

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	121	150	132	627	1475	139
Capacity of Entry and Bypass Lanes [veh/h]	372	372	1273	1273	1260	1260
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	364	364	1248	1248	1236	1236
X, volume / capacity	0.32	0.40	0.10	0.49	1.17	0.11

Movement, Approach, & Intersection Results

Lane LOS	C	C	A	A	F	A
95th-Percentile Queue Length [veh]	1.38	1.90	0.35	2.81	39.94	0.37
95th-Percentile Queue Length [ft]	34.47	47.53	8.63	70.18	998.59	9.26
Approach Delay [s/veh]	17.46		7.35		92.86	
Approach LOS	C		A		F	
Intersection Delay [s/veh]	60.61					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Roundabout	Delay (sec / veh):	4.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	58	5	8	48	7	5	2	15	4	1	4
Total Analysis Volume [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	60			35			243			268		
Exiting Flow Rate [veh/h]	269			269			50			62		
Demand Flow Rate [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Adjusted Demand Flow Rate [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	271	259	87	36
Capacity of Entry and Bypass Lanes [veh/h]	1298	1333	1078	1050
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1273	1306	1057	1030
X, volume / capacity	0.21	0.19	0.08	0.03

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.78	0.72	0.26	0.11
95th-Percentile Queue Length [ft]	19.61	17.92	6.55	2.64
Approach Delay [s/veh]	4.61	4.39	4.11	3.79
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.41			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	158			107			251			311		
Exiting Flow Rate [veh/h]	258			278			136			117		
Demand Flow Rate [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Adjusted Demand Flow Rate [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	271	280	165	75
Capacity of Entry and Bypass Lanes [veh/h]	1175	1238	1069	1005
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1152	1213	1044	986
X, volume / capacity	0.23	0.23	0.15	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.89	0.87	0.54	0.24
95th-Percentile Queue Length [ft]	22.23	21.73	13.62	5.99
Approach Delay [s/veh]	5.21	4.96	4.85	4.32
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.96			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	516			648			347			191		
Exiting Flow Rate [veh/h]	282			218			592			605		
Demand Flow Rate [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Adjusted Demand Flow Rate [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	280	291	451	676
Capacity of Entry and Bypass Lanes [veh/h]	816	713	969	1137
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	800	699	950	1114
X, volume / capacity	0.34	0.41	0.47	0.59

Movement, Approach, & Intersection Results

Lane LOS	A	B	A	B
95th-Percentile Queue Length [veh]	1.53	1.99	2.51	4.10
95th-Percentile Queue Length [ft]	38.24	49.74	62.79	102.47
Approach Delay [s/veh]	8.55	10.69	9.37	10.82
Approach LOS	A	B	A	B
Intersection Delay [s/veh]	10.04			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Roundabout	Delay (sec / veh):	4.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	50	1	4	60	7	4	4	11	1	3	2
Total Analysis Volume [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	44			26			263			226		
Exiting Flow Rate [veh/h]	292			226			51			34		
Demand Flow Rate [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Adjusted Demand Flow Rate [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	217	289	73	26
Capacity of Entry and Bypass Lanes [veh/h]	1320	1345	1056	1096
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1294	1319	1035	1074
X, volume / capacity	0.16	0.21	0.07	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.59	0.81	0.22	0.07
95th-Percentile Queue Length [ft]	14.64	20.37	5.52	1.79
Approach Delay [s/veh]	4.15	4.55	4.08	3.55
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.31			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	45	10	14	60	15	12	15	5	6	16	8
Total Analysis Volume [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	168			93			327			234		
Exiting Flow Rate [veh/h]	289			261			129			161		
Demand Flow Rate [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Adjusted Demand Flow Rate [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	227	364	130	121
Capacity of Entry and Bypass Lanes [veh/h]	1163	1256	989	1088
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1140	1231	969	1067
X, volume / capacity	0.19	0.29	0.13	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.72	1.21	0.45	0.37
95th-Percentile Queue Length [ft]	18.03	30.19	11.27	9.31
Approach Delay [s/veh]	4.90	5.56	4.93	4.35
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.11			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	2.00	5.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	63	0	0	86	24	23	0	3	0	0	0
Total Analysis Volume [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	109			4			359			378		
Exiting Flow Rate [veh/h]	372			374			104			0		
Demand Flow Rate [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Adjusted Demand Flow Rate [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.95	0.96	0.83	0.98
Entry Flow Rate [veh/h]	269	459	123	0
Capacity of Entry and Bypass Lanes [veh/h]	1235	1375	957	939
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1177	1318	798	921
X, volume / capacity	0.22	0.33	0.13	0.00

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.83	1.48	0.44	0.00
95th-Percentile Queue Length [ft]	20.71	37.11	10.95	0.00
Approach Delay [s/veh]	5.00	5.77	5.82	3.91
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.53			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1631		206		242	
Exiting Flow Rate [veh/h]	455		1458		1744	
Demand Flow Rate [veh/h]	216	101	1471	223	184	1097
Adjusted Demand Flow Rate [veh/h]	235	110	1599	242	200	1192

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	243	114	883	997	669	753
Capacity of Entry and Bypass Lanes [veh/h]	302	355	1178	1178	1140	1140
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	293	345	1155	1153	1116	1117
X, volume / capacity	0.80	0.32	0.75	0.85	0.59	0.66

Movement, Approach, & Intersection Results

Lane LOS	F	C	C	C	B	B
95th-Percentile Queue Length [veh]	6.47	1.34	7.45	11.04	3.98	5.25
95th-Percentile Queue Length [ft]	161.65	33.62	186.21	275.88	99.53	131.36
Approach Delay [s/veh]	40.96		18.77		11.65	
Approach LOS	E		C		B	
Intersection Delay [s/veh]	18.14					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	890.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1548		0		0	
Exiting Flow Rate [veh/h]	158		1419		1856	
Demand Flow Rate [veh/h]	0	283	1397	143	0	1280
Adjusted Demand Flow Rate [veh/h]	0	308	1518	155	0	1391

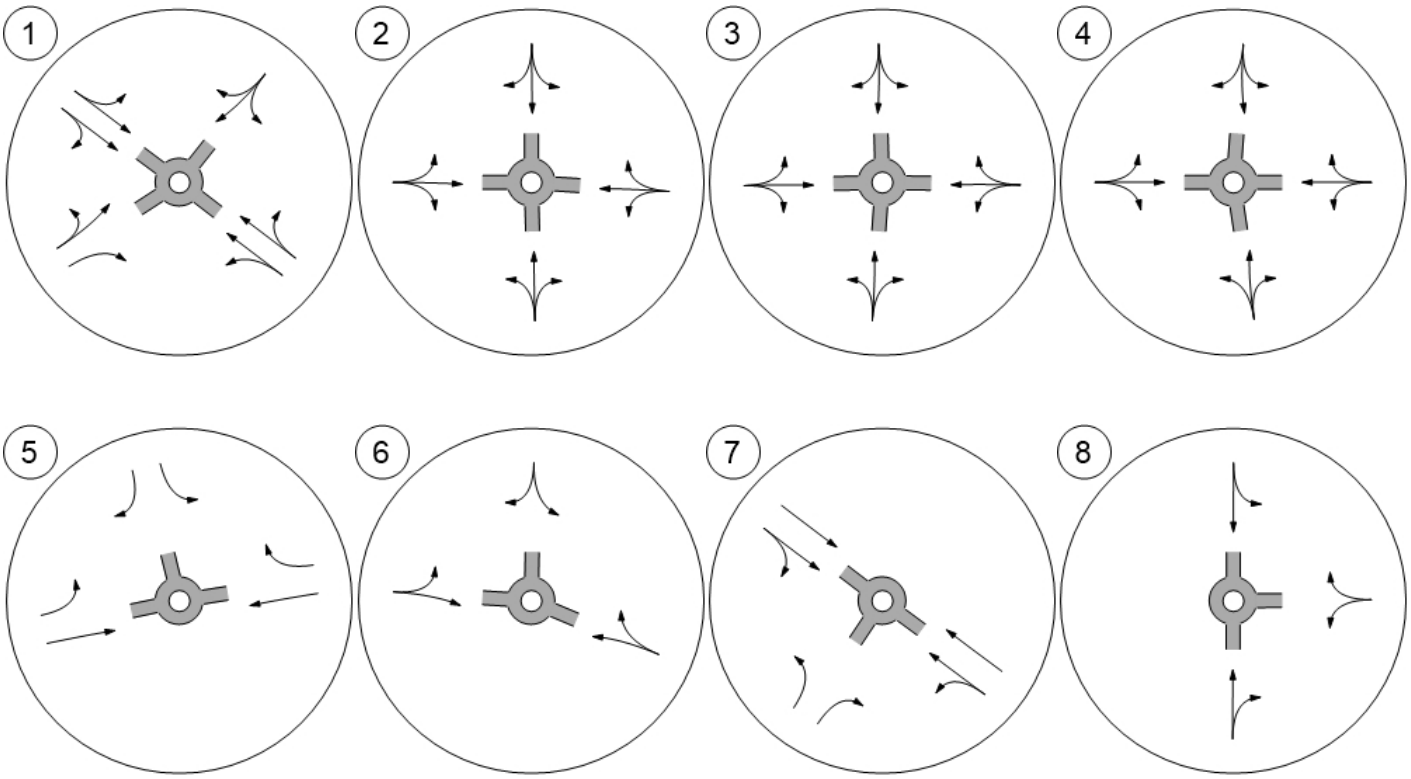
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	308	803	905	667	752
Capacity of Entry and Bypass Lanes [veh/h]	381	1420	1420	1420	1420
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	381	1393	1393	1393	1393
X, volume / capacity	0.81	0.56	0.64	0.47	0.53

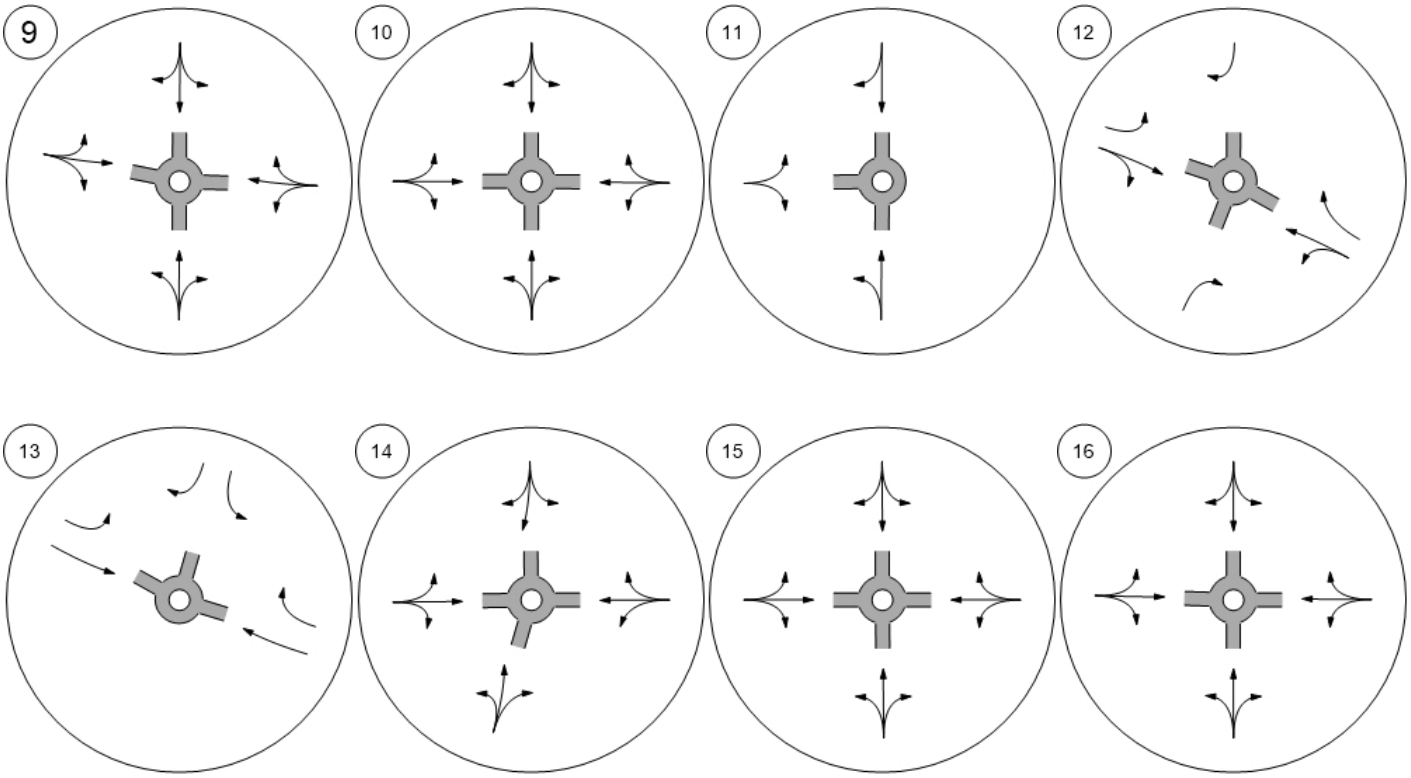
Movement, Approach, & Intersection Results

Lane LOS	E	A	B	A	A
95th-Percentile Queue Length [veh]	7.12	3.71	4.88	2.58	3.25
95th-Percentile Queue Length [ft]	178.00	92.79	122.12	64.60	81.20
Approach Delay [s/veh]	43.22	9.49		7.68	
Approach LOS	E	A		A	
Intersection Delay [s/veh]	11.83				
Intersection LOS	B				

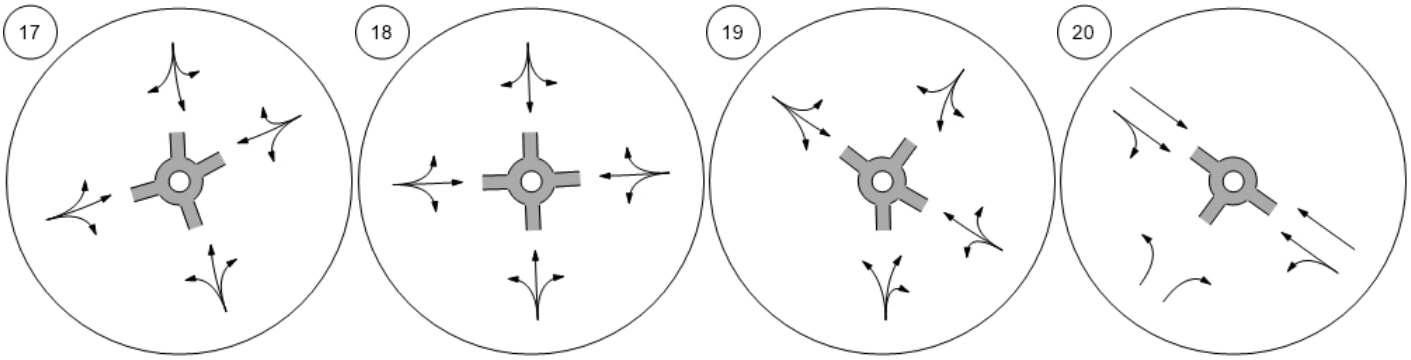
Lane Configuration and Traffic Control

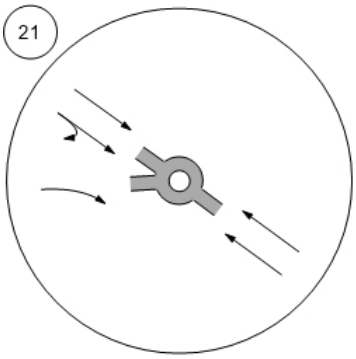


Lane Configuration and Traffic Control



Lane Configuration and Traffic Control





Option 1: WB T/L & EB T/R

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	104	275	179	637	1185	353
Total Analysis Volume [veh/h]	113	299	195	692	1288	384

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1301		115		215	
Exiting Flow Rate [veh/h]	606		1606		814	
Demand Flow Rate [veh/h]	104	275	179	637	1185	353
Adjusted Demand Flow Rate [veh/h]	113	299	195	692	1288	384

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.97	0.99	0.99	0.99
Entry Flow Rate [veh/h]	116	305	429	475	794	898
Capacity of Entry and Bypass Lanes [veh/h]	408	470	1279	1279	1169	1169
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	400	461	1244	1266	1157	1155
X, volume / capacity	0.28	0.65	0.34	0.37	0.68	0.77

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	13.92	24.38	6.03	6.37	12.83	16.42
Lane LOS	B	C	A	A	B	C
95th-Percentile Queue Length [veh]	1.14	4.53	1.49	1.74	5.67	8.01
95th-Percentile Queue Length [ft]	28.62	113.26	37.30	43.54	141.64	200.22
Approach Delay [s/veh]	21.51		6.21		14.73	
Approach LOS	C		A		B	
Intersection Delay [s/veh]	13.13					
Intersection LOS	B					

Option 1: Dual Through Lanes WB & EB

Number	12											
Intersection	Flynn Ln & Mullan Rd											
Control Type	Roundabout											
Analysis Method	HCM 6th Edition											
Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	821			1514			1			61		
Exiting Flow Rate [veh/h]	2			171			1667			761		
Demand Flow Rate [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	2	155	387	436	764	861
Capacity of Entry and Bypass Lanes [veh/h]	598	295	1419	1419	1344	1344
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	586	289	1391	1391	1317	1317
X, volume / capacity	0.00	0.52	0.27	0.31	0.57	0.64

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.17	27.95	4.92	5.27	9.11	10.68
Lane LOS	A	D	A	A	A	B
95th-Percentile Queue Length [veh]	0.01	2.82	1.11	1.32	3.75	4.94
95th-Percentile Queue Length [ft]	0.13	70.57	27.83	32.89	93.76	123.48
Approach Delay [s/veh]	6.17	27.95	5.10		9.94	
Approach LOS	A	D	A		A	
Intersection Delay [s/veh]	9.48					
Intersection LOS	A					

Option 1: WB T/R & EB T/L

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	109	135	119	565	1330	125
Total Analysis Volume [veh/h]	118	147	129	614	1446	136

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1518		120		135	
Exiting Flow Rate [veh/h]	274		1668		741	
Demand Flow Rate [veh/h]	109	135	119	565	1330	125
Adjusted Demand Flow Rate [veh/h]	118	147	129	614	1446	136

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.99	0.95	0.95
Entry Flow Rate [veh/h]	121	150	356	398	781	879
Capacity of Entry and Bypass Lanes [veh/h]	334	391	1273	1273	1256	1256
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	328	384	1252	1261	1196	1199
X, volume / capacity	0.36	0.38	0.28	0.31	0.62	0.70

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	18.87	17.05	5.38	5.71	10.94	13.17
Lane LOS	C	C	A	A	B	B
95th-Percentile Queue Length [veh]	1.59	1.76	1.15	1.35	4.57	6.15
95th-Percentile Queue Length [ft]	39.84	44.08	28.73	33.67	114.15	153.65
Approach Delay [s/veh]	17.86		5.56		12.12	
Approach LOS	C		A		B	
Intersection Delay [s/veh]	10.82					
Intersection LOS	B					

Mullan BUILD - 2050 PM

Vistro File: H:\...\24667_PM2050.vistro
Report File: H:\...\24667_PM2050_SIGNAL.pdf

Scenario 4 Signal (2050)
7/21/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.750	28.8	C
2	George Elmer Dr & England Blvd	Signalized	HCM 6th Edition	NB Left	0.607	24.2	C
5	George Elmer Dr & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.841	42.9	D
7	Doughtery Dr & W Broadway St	Signalized	HCM 6th Edition	WB Left	0.847	29.4	C
9	Flynn Ln & England Blvd	Signalized	HCM 6th Edition	NB Thru	0.464	15.2	B
12	Flynn Ln & Mullan Rd	Signalized	HCM 6th Edition	WB Thru	1.033	46.4	D
13	Mary Jane Blvd & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.939	44.0	D
16	Mary Jane Blvd & England Blvd	Signalized	HCM 6th Edition	SB Left	0.529	18.8	B
20	Mary Jane Blvd & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.751	18.6	B
21	Flynn Ln & W Broadway St	Signalized	HCM 6th Edition	NB Thru	0.843	11.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	54	0	0	54	0	11	33	0	33	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	20	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	32	32	32	76	64	64	76	70	70
g / C, Green / Cycle	0.26	0.26	0.26	0.64	0.53	0.53	0.64	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.16	0.12	0.00	0.00	0.48	0.19	0.29	0.36	0.00
s, saturation flow rate [veh/h]	1403	1465	998	533	3279	1464	512	3279	1464
c, Capacity [veh/h]	235	388	305	316	1739	776	274	1914	854
d1, Uniform Delay [s]	46.17	36.77	32.90	11.28	25.25	16.26	24.57	16.36	10.41
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.77	0.81	0.01	0.02	7.73	1.25	7.56	1.54	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.45	0.01	0.00	0.90	0.35	0.54	0.62	0.00
d, Delay for Lane Group [s/veh]	62.94	37.58	32.91	11.30	32.99	17.51	32.13	17.90	10.42
Lane Group LOS	E	D	C	B	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.55	4.36	0.07	0.01	19.16	4.15	1.91	9.63	0.01
50th-Percentile Queue Length [ft/ln]	188.77	108.98	1.65	0.24	478.93	103.77	47.68	240.86	0.26
95th-Percentile Queue Length [veh/ln]	12.06	7.78	0.12	0.02	26.34	7.47	3.43	14.72	0.02
95th-Percentile Queue Length [ft/ln]	301.43	194.58	2.97	0.44	658.38	186.79	85.82	368.12	0.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.94	37.58	37.58	32.91	32.91	32.91	11.30	32.99	17.51	32.13	17.90	10.42
Movement LOS	E	D	D	C	C	C	B	C	B	C	B	B
d_A, Approach Delay [s/veh]	51.80			32.91			30.68			19.47		
Approach LOS	D			C			C			B		
d_I, Intersection Delay [s/veh]	28.81											
Intersection LOS	C											
Intersection V/C	0.750											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	450	817
d_b, Bicycle Delay [s]	21.60	21.60	36.04	21.00
l_b,int, Bicycle LOS Score for Intersection	2.213	1.565	3.072	2.668
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	39	0	96	39	0	96	51	0	96	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	5	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	10	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	33	33	33	33	45	45	45	45
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.04	0.25	0.15	0.31	0.05	0.30
s, saturation flow rate [veh/h]	999	1654	1113	1565	886	1623	898	1696
c, Capacity [veh/h]	212	604	322	572	316	813	315	850
d1, Uniform Delay [s]	39.85	21.58	28.72	24.00	28.48	16.18	25.89	16.07
k, delay calibration	0.11	0.11	0.11	0.18	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.65	0.50	0.20	2.33	4.07	3.46	1.00	3.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.44	0.14	0.67	0.42	0.61	0.15	0.60
d, Delay for Lane Group [s/veh]	44.50	22.09	28.92	26.33	32.55	19.64	26.89	19.25
Lane Group LOS	D	C	C	C	C	B	C	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.68	4.19	0.82	6.97	2.78	7.72	0.86	7.83
50th-Percentile Queue Length [ft/ln]	91.98	104.83	20.43	174.13	69.43	192.95	21.51	195.81
95th-Percentile Queue Length [veh/ln]	6.62	7.55	1.47	11.29	5.00	12.27	1.55	12.42
95th-Percentile Queue Length [ft/ln]	165.57	188.69	36.77	282.34	124.97	306.86	38.73	310.56

Movement, Approach, & Intersection Results

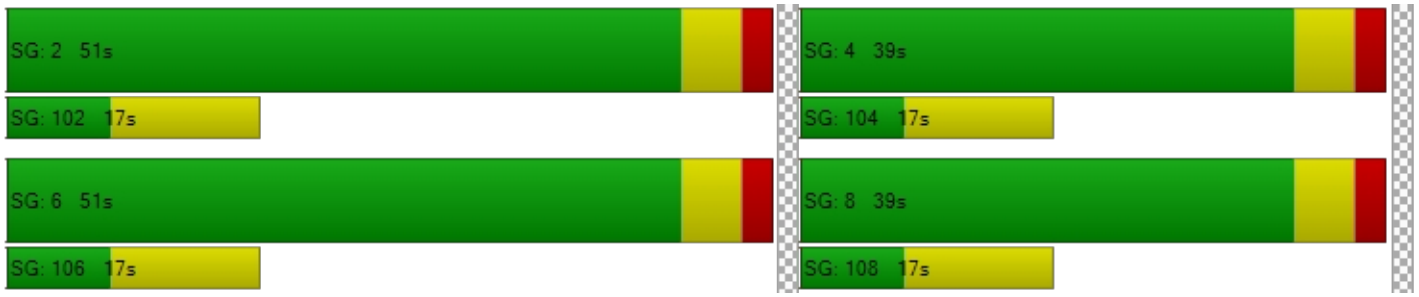
d_M, Delay for Movement [s/veh]	44.50	22.09	22.09	28.92	26.33	26.33	32.55	19.64	19.64	26.89	19.25	19.25
Movement LOS	D	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	30.31			26.60			22.35			19.89		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.21											
Intersection LOS	C											
Intersection V/C	0.607											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.274	2.397	2.632	2.325
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	18.05	18.05	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	2.253	2.269	2.604	2.485
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.841

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	61	61	30	120	90	90
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.51	0.20	0.36	0.40	0.75	0.26
s, saturation flow rate [veh/h]	220	1464	548	1722	1722	1452
c, Capacity [veh/h]	60	0	129	1636	1477	1246
d1, Uniform Delay [s]	59.95	0.00	0.31	0.25	4.81	1.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	452.89	0.00	268.08	0.80	7.35	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.88	10000.00	1.52	0.42	0.87	0.31
d, Delay for Lane Group [s/veh]	512.84	0.00	268.39	1.05	12.15	2.29
Lane Group LOS	F	F	F	A	B	A
Critical Lane Group	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.55	0.00	9.58	0.37	8.96	0.83
50th-Percentile Queue Length [ft/ln]	238.87	0.00	239.38	9.13	223.90	20.74
95th-Percentile Queue Length [veh/ln]	14.62	0.00	16.42	0.66	13.86	1.49
95th-Percentile Queue Length [ft/ln]	365.61	0.00	410.60	16.44	346.59	37.33

Movement, Approach, & Intersection Results

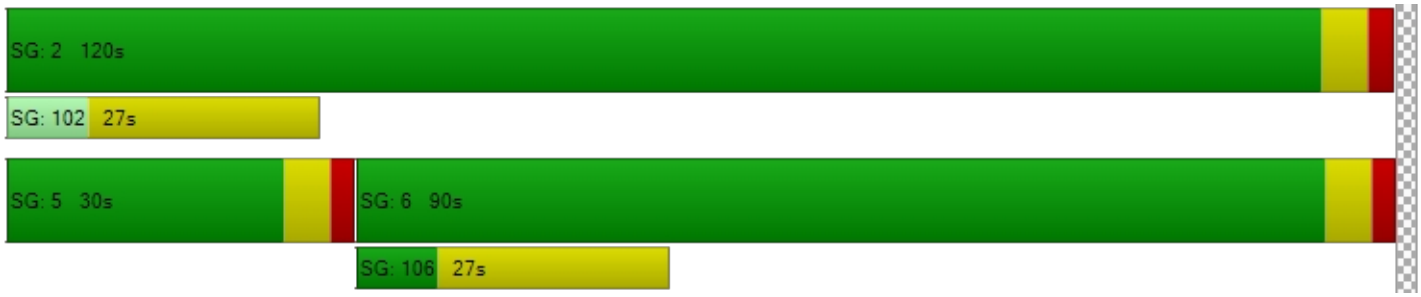
d_M, Delay for Movement [s/veh]	512.84	0.00	268.39	1.05	12.15	2.29
Movement LOS	F	A	F	A	B	A
d_A, Approach Delay [s/veh]	140.66		59.83		9.89	
Approach LOS	F		E		A	
d_I, Intersection Delay [s/veh]	42.93					
Intersection LOS	D					
Intersection V/C	0.841					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.290	3.160	3.322
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	1400
d_b, Bicycle Delay [s]	60.00	0.15	5.40
l_b,int, Bicycle LOS Score for Intersection	1.560	3.023	4.318
Bicycle LOS	A	C	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	53	53	51	51	16	67
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	29	29	63	63	79	79
g / C, Green / Cycle	0.24	0.24	0.52	0.52	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.12	0.22	0.46	0.15	0.48	0.35
s, saturation flow rate [veh/h]	1640	1464	3279	1464	577	3279
c, Capacity [veh/h]	400	357	1712	764	323	2151
d1, Uniform Delay [s]	38.77	44.10	25.48	16.09	33.38	10.94
k, delay calibration	0.11	0.13	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.88	10.52	7.12	0.93	24.11	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.91	0.89	0.28	0.86	0.54
d, Delay for Lane Group [s/veh]	39.65	54.62	32.60	17.02	57.48	11.90
Lane Group LOS	D	D	C	B	E	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.89	10.40	18.45	3.23	4.63	6.90
50th-Percentile Queue Length [ft/ln]	122.27	259.98	461.32	80.76	115.80	172.51
95th-Percentile Queue Length [veh/ln]	8.52	15.69	25.50	5.81	8.16	11.21
95th-Percentile Queue Length [ft/ln]	212.94	392.19	637.44	145.36	204.04	280.21

Movement, Approach, & Intersection Results

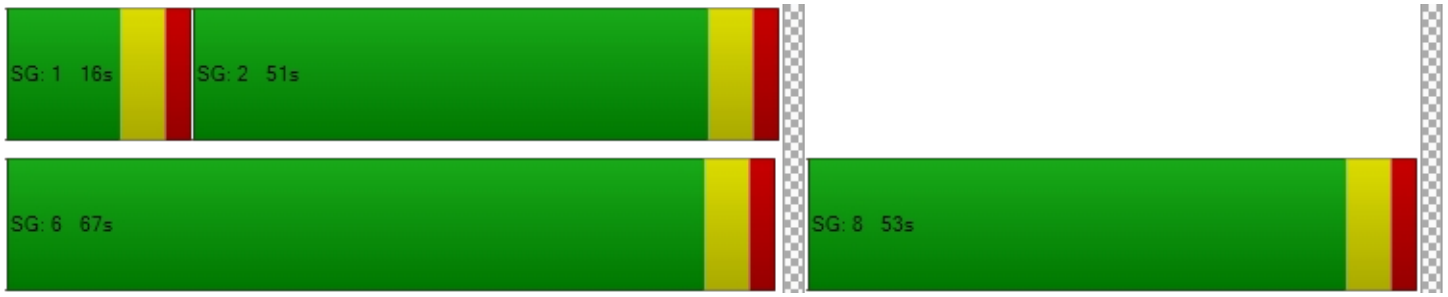
d_M, Delay for Movement [s/veh]	39.65	54.62	32.60	17.02	57.48	11.90
Movement LOS	D	D	C	B	E	B
d_A, Approach Delay [s/veh]	49.11		30.65		20.71	
Approach LOS	D		C		C	
d_I, Intersection Delay [s/veh]	29.38					
Intersection LOS	C					
Intersection V/C	0.847					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	783	750	1017
d_b, Bicycle Delay [s]	22.20	23.44	14.50
I_b,int, Bicycle LOS Score for Intersection	1.560	2.989	2.738
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	33	0	0	33	0	24	46	0	11	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	4.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	11	11	68	57	68	59
g / C, Green / Cycle	0.12	0.12	0.75	0.64	0.75	0.66
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.02	0.22	0.06	0.30
s, saturation flow rate [veh/h]	1593	1611	955	1709	1089	1713
c, Capacity [veh/h]	227	236	691	1090	824	1126
d1, Uniform Delay [s]	38.83	37.46	4.04	7.53	3.49	7.57
k, delay calibration	0.11	0.15	0.50	0.50	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.45	1.94	0.09	0.84	0.01	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.45	0.03	0.34	0.08	0.46
d, Delay for Lane Group [s/veh]	42.27	39.41	4.13	8.37	3.50	8.92
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.51	2.35	0.10	3.14	0.22	4.62
50th-Percentile Queue Length [ft/ln]	87.64	58.67	2.40	78.54	5.61	115.41
95th-Percentile Queue Length [veh/ln]	6.31	4.22	0.17	5.65	0.40	8.14
95th-Percentile Queue Length [ft/ln]	157.74	105.61	4.32	141.37	10.10	203.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.27	42.27	42.27	39.41	39.41	39.41	4.13	8.37	8.37	3.50	8.92	8.92
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	42.27			39.41			8.12			8.33		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	15.19											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.903	1.828	2.234	2.297
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	889	600
d_b, Bicycle Delay [s]	22.05	22.05	13.89	22.05
I_b,int, Bicycle LOS Score for Intersection	1.812	1.736	2.205	2.517
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	46.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.033

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Overla	Permis	Permis	Overla	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	5	0	0	5	0	2	0	0	6	6
Auxiliary Signal Groups			5			5						
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	5	0	0	5	0	5	0	0	5	5
Maximum Green [s]	0	0	30	0	0	30	0	30	0	0	30	30
Amber [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
All red [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Split [s]	0	0	30	0	0	30	0	120	0	0	90	90
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	0	0	0	20	0	0	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No		No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
Minimum Recall			No			No		No			No	
Maximum Recall			No			No		No			No	
Pedestrian Recall			No			No		No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	R	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	14	14	114	114	94	94	94
g / C, Green / Cycle	0.12	0.12	0.95	0.95	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.11	0.43	0.00	0.86	0.07
s, saturation flow rate [veh/h]	1464	1464	562	1722	715	1722	1464
c, Capacity [veh/h]	174	174	344	1636	577	1345	1143
d1, Uniform Delay [s]	46.57	51.89	38.16	0.26	4.60	13.13	3.11
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	12.12	1.10	0.92	0.01	57.65	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.87	0.17	0.46	0.00	1.10	0.09
d, Delay for Lane Group [s/veh]	46.58	64.01	39.26	1.18	4.61	70.78	3.27
Lane Group LOS	D	E	D	A	A	F	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.03	5.08	0.11	0.42	0.01	44.48	0.49
50th-Percentile Queue Length [ft/ln]	0.68	127.01	2.63	10.44	0.16	1112.1	12.19
95th-Percentile Queue Length [veh/ln]	0.05	8.78	0.19	0.75	0.01	60.56	0.88
95th-Percentile Queue Length [ft/ln]	1.22	219.43	4.74	18.79	0.29	1513.9	21.95

Movement, Approach, & Intersection Results

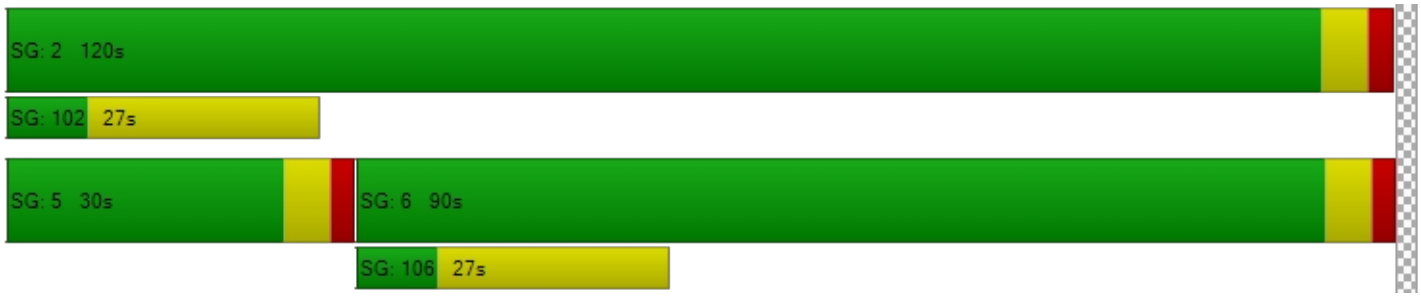
d_M, Delay for Movement [s/veh]	0.00	0.00	46.58	0.00	0.00	64.01	39.26	1.18	1.18	4.61	70.78	3.27
Movement LOS			D			E	D	A	A	A	F	A
d_A, Approach Delay [s/veh]	46.58			64.01			4.02			66.16		
Approach LOS	D			E			A			E		
d_I, Intersection Delay [s/veh]	46.38											
Intersection LOS	D											
Intersection V/C	1.033											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	24.0	24.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	38.40	38.40
I_p,int, Pedestrian LOS Score for Intersection	1.732	1.926	3.133	2.990
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1900	1400
d_b, Bicycle Delay [s]	38.40	38.40	0.15	5.40
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	2.890	4.186
Bicycle LOS	A	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	44.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.939

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	61	61	30	120	90	90
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.07	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.58	0.10	0.24	0.36	0.84	0.09
s, saturation flow rate [veh/h]	203	1464	544	1722	1722	1464
c, Capacity [veh/h]	60	0	128	1636	1478	1257
d1, Uniform Delay [s]	59.95	0.00	0.31	0.23	7.49	1.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	488.57	0.00	81.23	0.66	18.73	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.97	10000.00	1.01	0.38	0.98	0.11
d, Delay for Lane Group [s/veh]	548.52	0.00	81.54	0.89	26.22	1.50
Lane Group LOS	F	F	F	A	C	A
Critical Lane Group	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.15	0.00	2.89	0.30	18.01	0.23
50th-Percentile Queue Length [ft/ln]	253.75	0.00	72.30	7.49	450.25	5.81
95th-Percentile Queue Length [veh/ln]	15.37	0.00	5.21	0.54	24.97	0.42
95th-Percentile Queue Length [ft/ln]	384.37	0.00	130.13	13.48	624.24	10.45

Movement, Approach, & Intersection Results

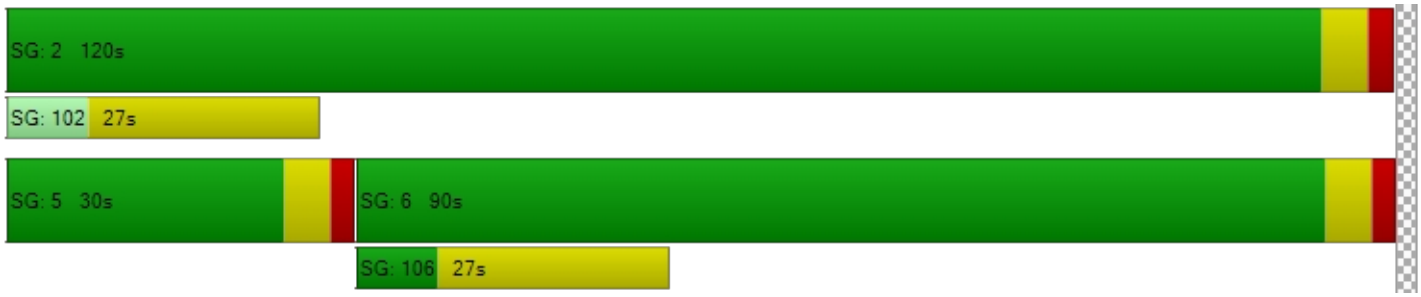
d_M, Delay for Movement [s/veh]	548.52	0.00	81.54	0.89	26.22	1.50
Movement LOS	F	A	F	A	C	A
d_A, Approach Delay [s/veh]	244.25		14.89		24.10	
Approach LOS	F		B		C	
d_I, Intersection Delay [s/veh]	43.98					
Intersection LOS	D					
Intersection V/C	0.939					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.135	3.093	3.250
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	1400
d_b, Bicycle Delay [s]	60.00	0.15	5.40
l_b,int, Bicycle LOS Score for Intersection	1.560	2.786	4.170
Bicycle LOS	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	39	0	96	39	0	96	51	0	96	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	5	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	10	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	23	23	23	23	55	55	55	55
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.08	0.11	0.03	0.24	0.07	0.35
s, saturation flow rate [veh/h]	1198	1564	1182	1698	825	1696	972	1672
c, Capacity [veh/h]	236	398	212	432	406	1039	545	1024
d1, Uniform Delay [s]	36.26	28.68	38.77	28.07	17.05	8.95	13.20	10.47
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.98	1.62	0.67	0.33	1.14	0.49	2.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.50	0.47	0.43	0.07	0.40	0.13	0.58
d, Delay for Lane Group [s/veh]	37.01	29.66	40.40	28.74	17.38	10.09	13.68	12.86
Lane Group LOS	D	C	D	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.54	3.73	2.21	3.36	0.39	4.05	0.84	6.90
50th-Percentile Queue Length [ft/ln]	38.45	93.17	55.21	83.91	9.78	101.15	20.95	172.39
95th-Percentile Queue Length [veh/ln]	2.77	6.71	3.98	6.04	0.70	7.28	1.51	11.20
95th-Percentile Queue Length [ft/ln]	69.21	167.71	99.39	151.04	17.60	182.07	37.71	280.06

Movement, Approach, & Intersection Results

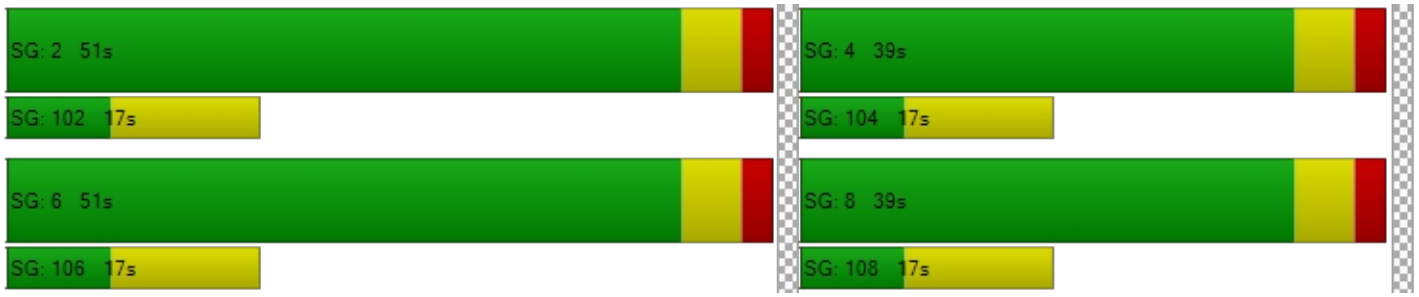
d_M, Delay for Movement [s/veh]	37.01	29.66	29.66	40.40	28.74	28.74	17.38	10.09	10.09	13.68	12.86	12.86
Movement LOS	D	C	C	D	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	31.65			32.83			10.56			12.94		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.80											
Intersection LOS	B											
Intersection V/C	0.529											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.218	2.142	2.377	2.490
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	18.05	18.05	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	2.012	2.030	2.289	2.652
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	53	53	51	51	16	67
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	20	20	76	76	88	88
g / C, Green / Cycle	0.16	0.16	0.63	0.63	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.14	0.08	0.49	0.17	0.42	0.36
s, saturation flow rate [veh/h]	1627	1452	3279	1452	475	3279
c, Capacity [veh/h]	268	239	2064	914	322	2412
d1, Uniform Delay [s]	48.93	45.29	16.07	9.88	22.17	6.60
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.94	1.38	2.91	0.71	8.71	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.46	0.77	0.26	0.62	0.49
d, Delay for Lane Group [s/veh]	57.87	46.67	18.98	10.59	30.88	7.33
Lane Group LOS	E	D	B	B	C	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.52	3.06	13.80	2.59	1.87	4.74
50th-Percentile Queue Length [ft/ln]	188.00	76.55	345.10	64.83	46.85	118.47
95th-Percentile Queue Length [veh/ln]	12.02	5.51	19.90	4.67	3.37	8.31
95th-Percentile Queue Length [ft/ln]	300.44	137.79	497.43	116.70	84.33	207.72

Movement, Approach, & Intersection Results

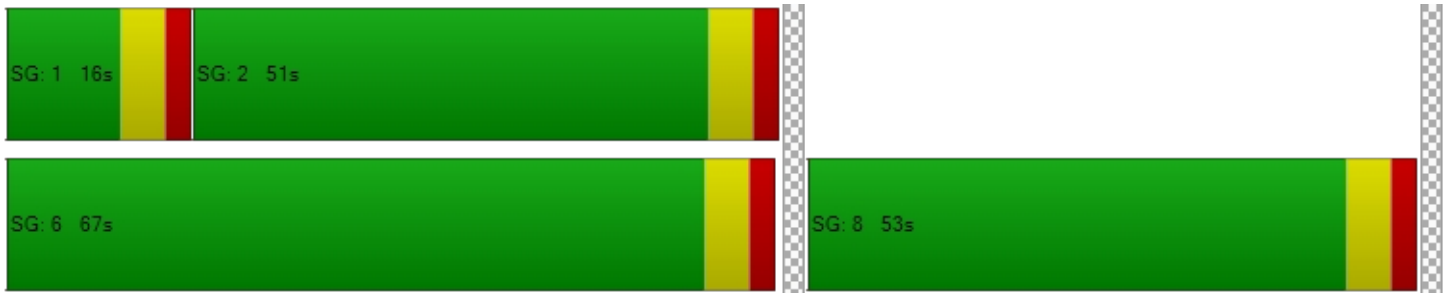
d_M, Delay for Movement [s/veh]	57.87	46.67	18.98	10.59	30.88	7.33
Movement LOS	E	D	B	B	C	A
d_A, Approach Delay [s/veh]	54.30		17.88		10.71	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	18.60					
Intersection LOS	B					
Intersection V/C	0.751					

Other Modes

g_Walk,mi, Effective Walk Time [s]	45.0	47.0	47.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.44	22.20	22.20
l_p,int, Pedestrian LOS Score for Intersection	2.364	3.450	3.390
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	783	750	1017
d_b, Bicycle Delay [s]	22.20	23.44	14.50
l_b,int, Bicycle LOS Score for Intersection	1.560	3.078	2.708
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.843

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	0	8	2	2	0	6
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	5	5	5	0	5
Maximum Green [s]	0	30	30	30	0	30
Amber [s]	0.0	4.0	4.0	4.0	0.0	4.0
All red [s]	0.0	2.0	2.0	2.0	0.0	2.0
Split [s]	0	30	90	90	0	90
Vehicle Extension [s]	0.0	3.0	3.0	3.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			No
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	4.0	4.0	4.0	0.0	4.0
Minimum Recall		No	No			No
Maximum Recall		No	No			No
Pedestrian Recall		No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C
C, Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	27	27	27
g / C, Green / Cycle	0.22	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.18	0.46	0.11	0.42
s, saturation flow rate [veh/h]	1750	3279	1464	3279
c, Capacity [veh/h]	384	1768	789	1768
d1, Uniform Delay [s]	18.38	9.83	5.91	9.17
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.92	1.31	0.12	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.86	0.20	0.79
d, Delay for Lane Group [s/veh]	22.30	11.14	6.03	9.98
Lane Group LOS	C	B	A	A
Critical Lane Group	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.44	3.61	0.43	3.01
50th-Percentile Queue Length [ft/ln]	86.09	90.20	10.74	75.17
95th-Percentile Queue Length [veh/ln]	6.20	6.49	0.77	5.41
95th-Percentile Queue Length [ft/ln]	154.96	162.37	19.33	135.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	22.30	11.14	6.03	0.00	9.98
Movement LOS		C	B	A		A
d_A, Approach Delay [s/veh]	22.30		10.67		9.98	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.44					
Intersection LOS	B					
Intersection V/C	0.843					

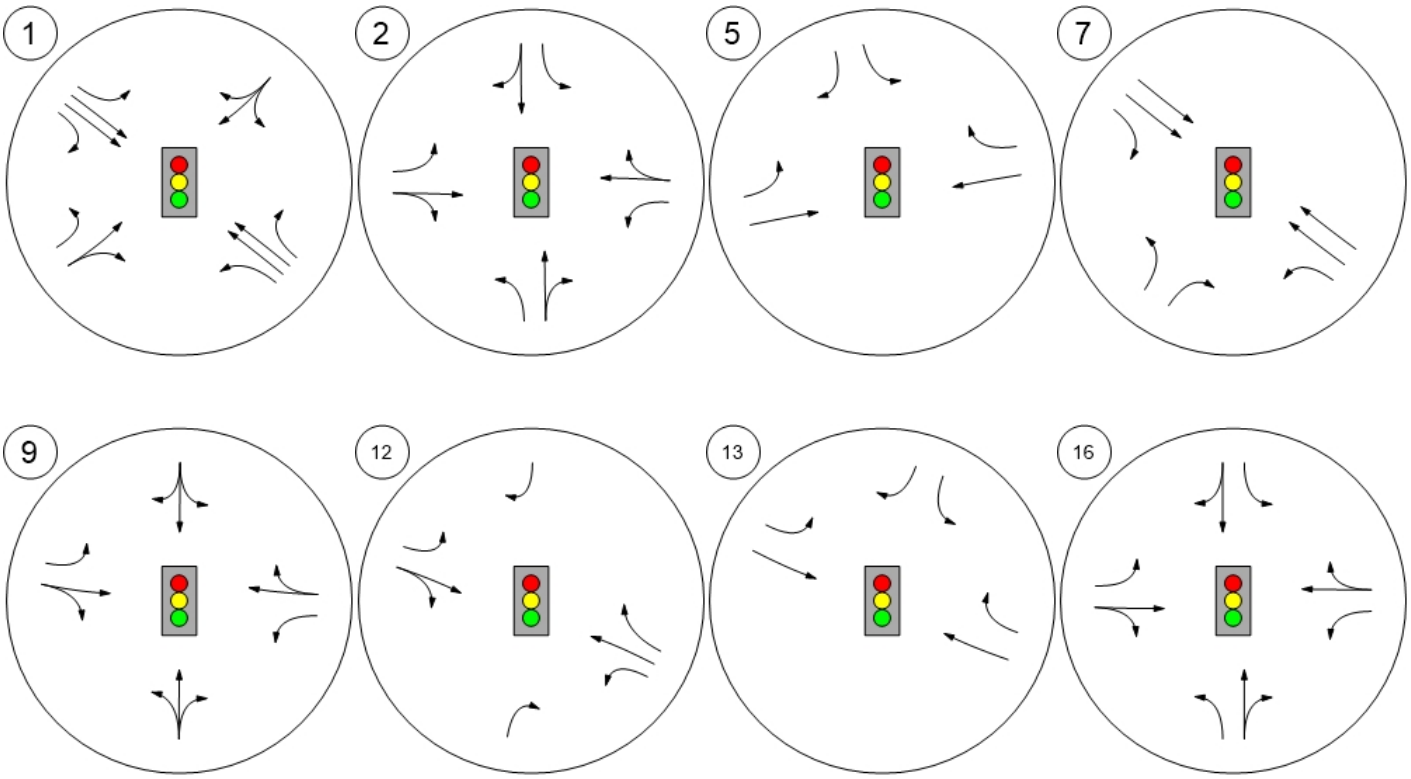
Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1400	1400
d_b, Bicycle Delay [s]	38.40	5.40	5.40
I_b,int, Bicycle LOS Score for Intersection	2.068	2.940	2.707
Bicycle LOS	B	C	B

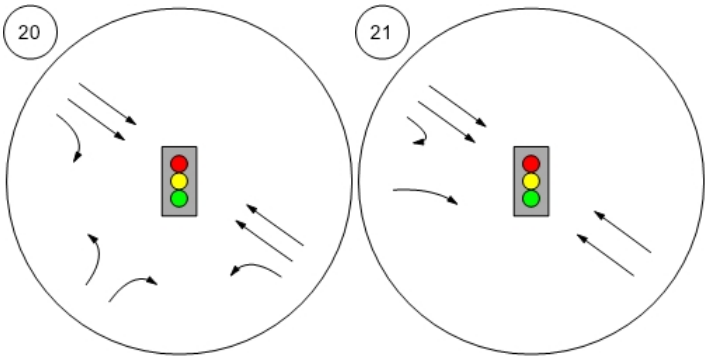
Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lane Configuration and Traffic Control



Lane Configuration and Traffic Control



Option 1: Dual Through Lanes EB & WB

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	104	275	179	637	1185	353
Total Analysis Volume [veh/h]	113	299	195	692	1288	384

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	8	8	0	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	30
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0
Split [s]	34	34	0	86	53	53
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.22	0.22	0.68	0.68	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.07	0.20	0.40	0.21	0.39	0.26
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1640	1464	486	3279	3279	1452
c, Capacity [veh/h]	359	321	312	2233	2066	915
X, volume / capacity	0.31	0.93	0.62	0.31	0.62	0.42
d, Delay for Lane Group [s/veh]	39.78	70.18	26.77	8.10	14.96	12.58
Lane Group LOS	D	E	C	A	B	B

Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.86	10.85	2.36	3.21	9.70	4.93
50th-Percentile Queue Length [ft/ln]	71.44	271.28	58.90	80.34	242.38	123.25
95th-Percentile Queue Length [veh/ln]	5.14	16.25	4.24	5.78	14.80	8.57
95th-Percentile Queue Length [ft/ln]	128.59	406.34	106.03	144.60	370.05	214.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.78	70.18	26.77	8.10	14.96	12.58
Movement LOS	D	E	C	A	B	B
Critical Movement	No	Yes	No	No	No	No
d_A, Approach Delay [s/veh]	61.84		12.21		14.41	
Approach LOS	E		B		B	
d_I, Intersection Delay [s/veh]	20.33					
Intersection LOS	C					
Intersection V/C	0.663					

Option 1: Dual Through Lanes EB & WB

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	109	135	119	565	1330	125
Total Analysis Volume [veh/h]	118	147	129	614	1446	136

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	33	33	33	87	54	54
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.12	0.12	0.78	0.78	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.26	0.19	0.44	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1640	1464	491	3279	3279	1464
c, Capacity [veh/h]	196	175	376	2560	2258	1008
X, volume / capacity	0.60	0.84	0.34	0.24	0.64	0.13
d, Delay for Lane Group [s/veh]	53.06	61.95	11.75	3.78	11.81	6.69
Lane Group LOS	D	E	B	A	B	A

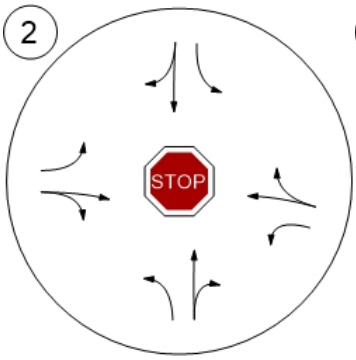
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.53	4.82	0.78	1.49	9.23	1.10
50th-Percentile Queue Length [ft/ln]	88.14	120.56	19.60	37.36	230.84	27.43
95th-Percentile Queue Length [veh/ln]	6.35	8.42	1.41	2.69	14.22	1.97
95th-Percentile Queue Length [ft/ln]	158.65	210.60	35.28	67.25	355.43	49.37

Movement, Approach, & Intersection Results

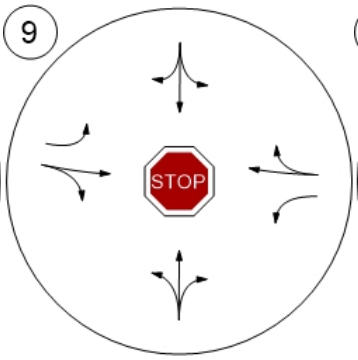
d_M, Delay for Movement [s/veh]	53.06	61.95	11.75	3.78	11.81	6.69
Movement LOS	D	E	B	A	B	A
Critical Movement	No	Yes	No	No	No	No
d_A, Approach Delay [s/veh]	57.99		5.16		11.37	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	14.36					
Intersection LOS	B					
Intersection V/C	0.627					

Lane Configuration and Traffic Control

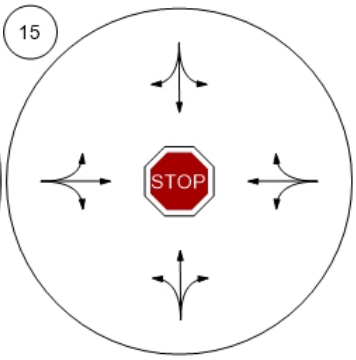
George Elmer Dr & England



Flynn Ln & England Blvd



Mary Jane Blvd & Melrose Pl



Mullan BUILD - 2050 AM

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Report File: H:\...\24667_AM2050_RBT.pdf

Scenario 5 Roundabout (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Left		14.7	B
2	George Elmer Dr & England Blvd	Roundabout	HCM 6th Edition	NB Thru		11.3	B
3	George Elmer Dr & Cattle Dr	Roundabout	HCM 6th Edition	NB Thru		5.1	A
4	George Elmer Dr & Heron's Landing	Roundabout	HCM 6th Edition	NB Thru		5.0	A
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		88.7	F
6	Dougherty Dr & England Blvd	Roundabout	HCM 6th Edition	EB Thru		6.2	A
7	Doughtery Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Right		11.3	B
8	Flynn Ln & Camden St	Roundabout	HCM 6th Edition	NB Thru		3.7	A
9	Flynn Ln & England Blvd	Roundabout	HCM 6th Edition	EB Thru		8.5	A
10	Flynn Ln & Chelsea Dr	Roundabout	HCM 6th Edition	SB Thru		4.7	A
11	Flynn Ln & Siren's Dr	Roundabout	HCM 6th Edition	NB Thru		5.0	A
12	Flynn Ln & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		34.4	D
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		34.6	D
14	Mary Jane Blvd & O'Leary St	Roundabout	HCM 6th Edition	NB Thru		4.7	A
15	Mary Jane Blvd & Melrose Pl	Roundabout	HCM 6th Edition	NB Thru		5.1	A
16	Mary Jane Blvd & England Blvd	Roundabout	HCM 6th Edition	NB Thru		10.0	B
17	Mary Jane Blvd & Camden St	Roundabout	HCM 6th Edition	NB Thru		4.3	A
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Roundabout	HCM 6th Edition	NB Thru		5.4	A
19	Mary Jane Blvd & Veteran's Way	Roundabout	HCM 6th Edition	NB Thru		4.9	A
20	Mary Jane Blvd & W Broadway St	Roundabout	HCM 6th Edition	NB Left		15.0	C
21	Flynn Ln & W Broadway St	Roundabout	HCM 6th Edition	NB Thru		14.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	4.00	2.00	2.00	2.00	4.00	8.00	2.00	4.00	15.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	55	0	0	0	0	290	34	20	206	0
Total Analysis Volume [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	2			1			1			1		
Circulating Flow Rate [veh/h]	1254			1387			83			362		
Exiting Flow Rate [veh/h]	221			3			1307			1483		
Demand Flow Rate [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Adjusted Demand Flow Rate [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.98	0.93	0.93	0.88	0.87
Entry Flow Rate [veh/h]	360	231	4	658	738	484	550
Capacity of Entry and Bypass Lanes [veh/h]	426	490	336	1317	1317	1022	1022
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	410	471	329	1220	1227	897	889
X, volume / capacity	0.84	0.47	0.01	0.50	0.56	0.47	0.54

Movement, Approach, & Intersection Results

Lane LOS	E	C	B	A	A	A	B
95th-Percentile Queue Length [veh]	8.09	2.48	0.03	2.89	3.62	2.58	3.28
95th-Percentile Queue Length [ft]	202.24	62.07	0.69	72.17	90.60	64.47	82.11
Approach Delay [s/veh]	34.30		11.10	8.91		10.69	
Approach LOS	D		B	A		B	
Intersection Delay [s/veh]	14.70						
Intersection LOS	B						

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	598			399			196			538		
Exiting Flow Rate [veh/h]	207			588			427			475		
Demand Flow Rate [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Adjusted Demand Flow Rate [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.95	0.97
Entry Flow Rate [veh/h]	416	224	609	450
Capacity of Entry and Bypass Lanes [veh/h]	751	919	1130	798
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	725	892	1072	771
X, volume / capacity	0.55	0.24	0.54	0.56

Movement, Approach, & Intersection Results

Lane LOS	B	A	A	B
95th-Percentile Queue Length [veh]	3.43	0.95	3.32	3.57
95th-Percentile Queue Length [ft]	85.73	23.85	83.01	89.17
Approach Delay [s/veh]	13.72	6.55	9.90	13.34
Approach LOS	B	A	A	B
Intersection Delay [s/veh]	11.31			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	92	1	5	44	1	6	0	23	2	0	3
Total Analysis Volume [veh/h]	42	367	3	21	175	5	23	1	93	7	1	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	46			51			211			448		
Exiting Flow Rate [veh/h]	284			416			49			26		
Demand Flow Rate [veh/h]	39	338	3	19	161	5	21	1	86	6	1	10
Adjusted Demand Flow Rate [veh/h]	42	367	3	21	175	5	23	1	93	7	1	11

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.96	0.96	0.98	0.98
Entry Flow Rate [veh/h]	428	209	120	20
Capacity of Entry and Bypass Lanes [veh/h]	1317	1311	1114	874
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1269	1263	1092	857
X, volume / capacity	0.32	0.16	0.11	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.42	0.57	0.36	0.07
95th-Percentile Queue Length [ft]	35.58	14.14	8.98	1.70
Approach Delay [s/veh]	5.82	4.19	4.23	4.41
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.10			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	89	1	4	60	4	7	0	7	7	0	7
Total Analysis Volume [veh/h]	5	358	5	16	241	16	27	1	27	27	1	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	45			34			295			405		
Exiting Flow Rate [veh/h]	306			427			22			22		
Demand Flow Rate [veh/h]	5	329	5	15	222	15	25	1	25	25	1	25
Adjusted Demand Flow Rate [veh/h]	5	358	5	16	241	16	27	1	27	27	1	27

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.96	0.96	0.98	0.98
Entry Flow Rate [veh/h]	383	284	57	57
Capacity of Entry and Bypass Lanes [veh/h]	1319	1334	1022	914
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1269	1286	1002	896
X, volume / capacity	0.29	0.21	0.05	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.21	0.80	0.17	0.20
95th-Percentile Queue Length [ft]	30.33	20.10	4.35	4.90
Approach Delay [s/veh]	5.45	4.62	4.08	4.59
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.98			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	88.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	50	253	1259	405	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	14	69	342	110	23
Total Analysis Volume [veh/h]	241	54	275	1368	440	92
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	471		251		286	
Exiting Flow Rate [veh/h]	382		527		1714	
Demand Flow Rate [veh/h]	222	50	253	1259	405	85
Adjusted Demand Flow Rate [veh/h]	241	54	275	1368	440	92

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.96	0.93	0.93	0.96
Entry Flow Rate [veh/h]	251	57	286	1464	471	96
Capacity of Entry and Bypass Lanes [veh/h]	926	926	1131	1131	1095	1095
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	890	890	1087	1057	1023	1053
X, volume / capacity	0.27	0.06	0.25	1.29	0.43	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	F	A	A
95th-Percentile Queue Length [veh]	1.10	0.19	1.01	49.34	2.20	0.29
95th-Percentile Queue Length [ft]	27.50	4.84	25.15	1233.52	54.95	7.17
Approach Delay [s/veh]	6.48		129.75		7.59	
Approach LOS	A		F		A	
Intersection Delay [s/veh]	88.72					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	85	75	50	361	324	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	8.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	75	50	361	324	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	20	14	98	88	8
Total Analysis Volume [veh/h]	92	82	54	392	352	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	366		94		55	
Exiting Flow Rate [veh/h]	89		450		517	
Demand Flow Rate [veh/h]	85	75	50	361	324	30
Adjusted Demand Flow Rate [veh/h]	92	82	54	392	352	33

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.93	0.96
Entry Flow Rate [veh/h]	178	479	400
Capacity of Entry and Bypass Lanes [veh/h]	950	1255	1305
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	932	1170	1257
X, volume / capacity	0.19	0.38	0.31

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.68	1.81	1.31
95th-Percentile Queue Length [ft]	17.11	45.33	32.74
Approach Delay [s/veh]	5.69	6.87	5.66
Approach LOS	A	A	A
Intersection Delay [s/veh]	6.20		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	250	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	250	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	310	35	41	194
Total Analysis Volume [veh/h]	126	272	1238	141	163	775
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1337		166		129	
Exiting Flow Rate [veh/h]	310		1020		1614	
Demand Flow Rate [veh/h]	116	250	1139	130	150	713
Adjusted Demand Flow Rate [veh/h]	126	272	1238	141	163	775

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.93	0.93	0.89	0.87
Entry Flow Rate [veh/h]	129	278	700	785	497	572
Capacity of Entry and Bypass Lanes [veh/h]	395	456	1221	1221	1264	1264
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	387	447	1131	1138	1123	1099
X, volume / capacity	0.33	0.61	0.57	0.64	0.39	0.45

Movement, Approach, & Intersection Results

Lane LOS	C	C	B	B	A	A
95th-Percentile Queue Length [veh]	1.39	3.95	3.79	4.92	1.90	2.40
95th-Percentile Queue Length [ft]	34.75	98.82	94.86	123.04	47.43	60.08
Approach Delay [s/veh]	20.48		11.12		7.75	
Approach LOS	C		B		A	
Intersection Delay [s/veh]	11.33					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Roundabout	Delay (sec / veh):	3.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	170	10	6	92	11	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	10	6	92	11	31
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	3	2	25	3	8
Total Analysis Volume [veh/h]	185	11	7	100	12	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	7		12		189	
Exiting Flow Rate [veh/h]	114		223		18	
Demand Flow Rate [veh/h]	170	10	6	92	11	31
Adjusted Demand Flow Rate [veh/h]	185	11	7	100	12	34

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	200	110	47
Capacity of Entry and Bypass Lanes [veh/h]	1370	1363	1139
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1344	1337	1117
X, volume / capacity	0.15	0.08	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.51	0.26	0.13
95th-Percentile Queue Length [ft]	12.77	6.52	3.22
Approach Delay [s/veh]	3.87	3.33	3.57
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.66		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	542			535			251			133		
Exiting Flow Rate [veh/h]	227			200			400			586		
Demand Flow Rate [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Adjusted Demand Flow Rate [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.93	0.97
Entry Flow Rate [veh/h]	177	116	519	603
Capacity of Entry and Bypass Lanes [veh/h]	795	800	1069	1206
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	779	784	999	1169
X, volume / capacity	0.22	0.14	0.48	0.50

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.85	0.50	2.71	2.88
95th-Percentile Queue Length [ft]	21.19	12.56	67.76	72.12
Approach Delay [s/veh]	7.05	6.09	9.38	8.62
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.48			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	19.00	2.00	2.00	2.00	7.00	28.00	2.00	50.00	2.00	2.00	20.00	8.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	32	9	4	41	11	8	1	3	6	1	4
Total Analysis Volume [veh/h]	74	126	36	16	163	43	34	2	12	24	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	54			119			215			251		
Exiting Flow Rate [veh/h]	211			178			149			56		
Demand Flow Rate [veh/h]	68	116	33	15	150	40	31	2	11	22	5	13
Adjusted Demand Flow Rate [veh/h]	74	126	36	16	163	43	34	2	12	24	5	14

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.94	0.91	0.97	0.94
Entry Flow Rate [veh/h]	253	245	50	46
Capacity of Entry and Bypass Lanes [veh/h]	1307	1223	1109	1069
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1224	1111	1071	1009
X, volume / capacity	0.19	0.20	0.04	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.71	0.74	0.14	0.13
95th-Percentile Queue Length [ft]	17.83	18.62	3.52	3.34
Approach Delay [s/veh]	4.61	5.05	3.74	3.94
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	154	175	80	103	42	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	15.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	175	80	103	42	82
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	48	22	28	11	22
Total Analysis Volume [veh/h]	167	190	87	112	46	89
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	47		170		89	
Exiting Flow Rate [veh/h]	180		246		299	
Demand Flow Rate [veh/h]	154	175	80	103	42	82
Adjusted Demand Flow Rate [veh/h]	167	190	87	112	46	89

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.92	0.98
Entry Flow Rate [veh/h]	370	217	138
Capacity of Entry and Bypass Lanes [veh/h]	1316	1160	1261
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1271	1065	1236
X, volume / capacity	0.28	0.19	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	1.16	0.69	0.37
95th-Percentile Queue Length [ft]	29.03	17.13	9.17
Approach Delay [s/veh]	5.34	5.09	3.82
Approach LOS	A	A	A
Intersection Delay [s/veh]	4.97		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	34.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes		

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	1701			460			1			221		
Exiting Flow Rate [veh/h]	2			440			576			1481		
Demand Flow Rate [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.93	0.93	0.98
Entry Flow Rate [veh/h]	2	118	222	1481	461	219
Capacity of Entry and Bypass Lanes [veh/h]	244	864	1419	1419	1161	1161
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	239	847	1391	1326	1086	1139
X, volume / capacity	0.00	0.14	0.16	1.04	0.40	0.19

Movement, Approach, & Intersection Results

Lane LOS	C	A	A	F	A	A
95th-Percentile Queue Length [veh]	0.01	0.47	0.55	26.70	1.92	0.69
95th-Percentile Queue Length [ft]	0.32	11.74	13.81	667.47	48.10	17.26
Approach Delay [s/veh]	15.17	5.60	47.74		6.59	
Approach LOS	C	A	E		A	
Intersection Delay [s/veh]	34.45					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	34.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	53	231	1042	512	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	14	63	283	139	27
Total Analysis Volume [veh/h]	225	58	251	1133	557	109
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	596		234		259	
Exiting Flow Rate [veh/h]	371		656		1446	
Demand Flow Rate [veh/h]	207	53	231	1042	512	100
Adjusted Demand Flow Rate [veh/h]	225	58	251	1133	557	109

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.97	0.93	0.93	0.97
Entry Flow Rate [veh/h]	234	61	259	1213	596	113
Capacity of Entry and Bypass Lanes [veh/h]	826	826	1148	1148	1123	1123
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	794	794	1115	1073	1049	1090
X, volume / capacity	0.28	0.07	0.23	1.06	0.53	0.10

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	F	A	A
95th-Percentile Queue Length [veh]	1.17	0.24	0.87	24.73	3.23	0.33
95th-Percentile Queue Length [ft]	29.19	5.90	21.63	618.31	80.69	8.31
Approach Delay [s/veh]	7.23		52.49		8.97	
Approach LOS	A		F		A	
Intersection Delay [s/veh]	34.57					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	83	2	4	45	10	2	1	18	8	2	5
Total Analysis Volume [veh/h]	17	332	9	14	178	38	9	2	74	30	10	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	26			58			228			368		
Exiting Flow Rate [veh/h]	289			370			66			26		
Demand Flow Rate [veh/h]	16	305	8	13	164	35	8	2	68	28	9	17
Adjusted Demand Flow Rate [veh/h]	17	332	9	14	178	38	9	2	74	30	10	18

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	369	237	87	60
Capacity of Entry and Bypass Lanes [veh/h]	1345	1301	1094	948
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1307	1266	1072	930
X, volume / capacity	0.27	0.18	0.08	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.12	0.66	0.26	0.20
95th-Percentile Queue Length [ft]	28.05	16.57	6.45	4.98
Approach Delay [s/veh]	5.16	4.38	4.04	4.44
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.73			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	79	10	15	47	1	4	13	4	7	7	5
Total Analysis Volume [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	129			60			280			343		
Exiting Flow Rate [veh/h]	236			360			38			151		
Demand Flow Rate [veh/h]	5	290	35	54	172	5	15	47	15	25	25	20
Adjusted Demand Flow Rate [veh/h]	5	315	38	59	187	5	16	51	16	27	27	22

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.98	0.98
Entry Flow Rate [veh/h]	366	258	85	78
Capacity of Entry and Bypass Lanes [veh/h]	1211	1298	1037	973
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1187	1264	1017	954
X, volume / capacity	0.30	0.20	0.08	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.28	0.74	0.27	0.26
95th-Percentile Queue Length [ft]	32.01	18.49	6.65	6.48
Approach Delay [s/veh]	5.85	4.55	4.26	4.50
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.12			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	39	13	5	33	14	24	97	17	13	95	2
Total Analysis Volume [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	538			597			210			406		
Exiting Flow Rate [veh/h]	257			263			601			493		
Demand Flow Rate [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Adjusted Demand Flow Rate [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.94	0.96
Entry Flow Rate [veh/h]	361	215	585	454
Capacity of Entry and Bypass Lanes [veh/h]	797	751	1114	912
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	778	732	1049	879
X, volume / capacity	0.45	0.29	0.53	0.50

Movement, Approach, & Intersection Results

Lane LOS	B	A	A	B
95th-Percentile Queue Length [veh]	2.37	1.18	3.16	2.82
95th-Percentile Queue Length [ft]	59.34	29.48	79.01	70.58
Approach Delay [s/veh]	10.66	8.31	9.79	10.57
Approach LOS	B	A	A	B
Intersection Delay [s/veh]	10.01			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Roundabout	Delay (sec / veh):	4.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	58	1	2	40	5	11	3	9	3	4	2
Total Analysis Volume [veh/h]	21	232	3	9	160	20	46	13	36	13	14	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	69			49			187			307		
Exiting Flow Rate [veh/h]	215			293			56			26		
Demand Flow Rate [veh/h]	19	213	3	8	147	18	42	12	33	12	13	6
Adjusted Demand Flow Rate [veh/h]	21	232	3	9	160	20	46	13	36	13	14	7

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	264	195	97	35
Capacity of Entry and Bypass Lanes [veh/h]	1286	1313	1141	1009
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1250	1277	1118	989
X, volume / capacity	0.20	0.15	0.08	0.03

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.77	0.52	0.28	0.11
95th-Percentile Queue Length [ft]	19.21	12.99	6.95	2.67
Approach Delay [s/veh]	4.65	4.05	3.94	3.94
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.29			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Roundabout	Delay (sec / veh):	5.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	52	15	12	36	8	20	32	3	8	20	10
Total Analysis Volume [veh/h]	16	210	59	48	145	33	82	126	11	33	79	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	262			132			232			316		
Exiting Flow Rate [veh/h]	194			341			132			239		
Demand Flow Rate [veh/h]	15	193	54	44	133	30	75	116	10	30	73	37
Adjusted Demand Flow Rate [veh/h]	16	210	59	48	145	33	82	126	11	33	79	40

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.97	0.97
Entry Flow Rate [veh/h]	293	232	225	157
Capacity of Entry and Bypass Lanes [veh/h]	1056	1206	1090	1000
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1028	1175	1062	971
X, volume / capacity	0.28	0.19	0.21	0.16

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.14	0.71	0.77	0.55
95th-Percentile Queue Length [ft]	28.43	17.76	19.34	13.86
Approach Delay [s/veh]	6.23	4.75	5.30	5.18
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.44			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	80	0	0	55	27	6	0	1	0	0	0
Total Analysis Volume [veh/h]	10	320	0	0	222	110	23	0	2	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	28			10			229			367		
Exiting Flow Rate [veh/h]	231			357			122			0		
Demand Flow Rate [veh/h]	9	294	0	0	204	101	21	0	2	0	0	0
Adjusted Demand Flow Rate [veh/h]	10	320	0	0	222	110	23	0	2	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.83	0.98
Entry Flow Rate [veh/h]	340	341	30	0
Capacity of Entry and Bypass Lanes [veh/h]	1342	1366	1093	949
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1303	1331	911	931
X, volume / capacity	0.25	0.25	0.03	0.00

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.01	0.99	0.08	0.00
95th-Percentile Queue Length [ft]	25.23	24.75	2.12	0.00
Approach Delay [s/veh]	4.96	4.85	4.20	3.87
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.88			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	248	68	1247	142	164	656
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	8.00	3.00	3.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	248	68	1247	142	164	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	18	339	39	45	178
Total Analysis Volume [veh/h]	270	74	1355	154	178	713
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1463		183		278	
Exiting Flow Rate [veh/h]	342		1098		1540	
Demand Flow Rate [veh/h]	248	68	1247	142	164	656
Adjusted Demand Flow Rate [veh/h]	270	74	1355	154	178	713

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.93	0.93	0.89	0.87
Entry Flow Rate [veh/h]	279	77	766	860	471	544
Capacity of Entry and Bypass Lanes [veh/h]	352	410	1202	1202	1103	1103
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	342	398	1113	1119	982	959
X, volume / capacity	0.79	0.19	0.64	0.72	0.43	0.49

Movement, Approach, & Intersection Results

Lane LOS	E	B	B	B	A	A
95th-Percentile Queue Length [veh]	6.56	0.68	4.81	6.48	2.17	2.78
95th-Percentile Queue Length [ft]	163.97	16.88	120.33	161.96	54.19	69.62
Approach Delay [s/veh]	37.78		13.25		9.20	
Approach LOS	E		B		A	
Intersection Delay [s/veh]	15.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	890.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	359	1180	146	0	819
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	8.00	2.00	0.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	359	1180	146	0	819
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	98	321	40	0	223
Total Analysis Volume [veh/h]	0	390	1283	159	0	890
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1386		0		0	
Exiting Flow Rate [veh/h]	162		1023		1776	
Demand Flow Rate [veh/h]	0	359	1180	146	0	819
Adjusted Demand Flow Rate [veh/h]	0	390	1283	159	0	890

Lanes

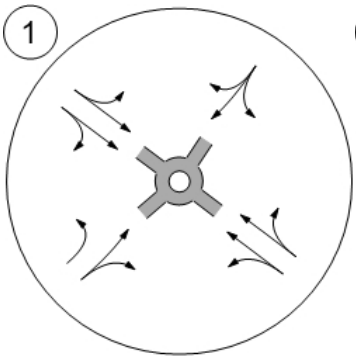
Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	0.93	0.93	0.87	0.87
Entry Flow Rate [veh/h]	390	732	821	482	543
Capacity of Entry and Bypass Lanes [veh/h]	438	1420	1420	1420	1420
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	438	1315	1324	1235	1235
X, volume / capacity	0.89	0.52	0.58	0.34	0.38

Movement, Approach, & Intersection Results

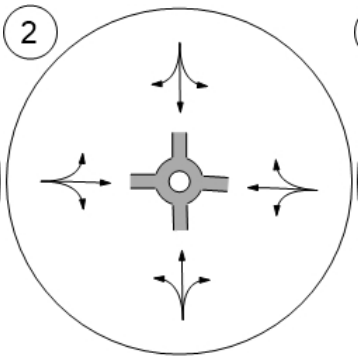
Lane LOS	F	A	A	A	A
95th-Percentile Queue Length [veh]	9.49	3.07	3.89	1.51	1.82
95th-Percentile Queue Length [ft]	237.33	76.82	97.13	37.86	45.49
Approach Delay [s/veh]	50.77	8.76		6.37	
Approach LOS	F	A		A	
Intersection Delay [s/veh]	14.00				
Intersection LOS	B				

Lane Configuration and Traffic Control

George Elmer Dr & W Broad



George Elmer Dr & England



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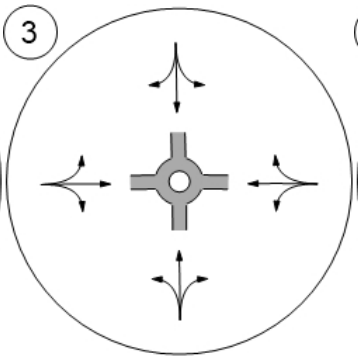

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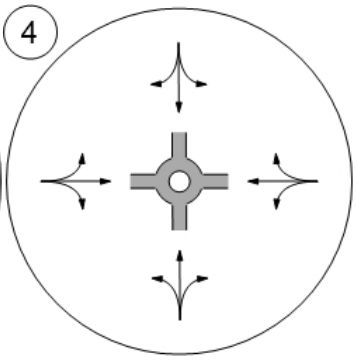

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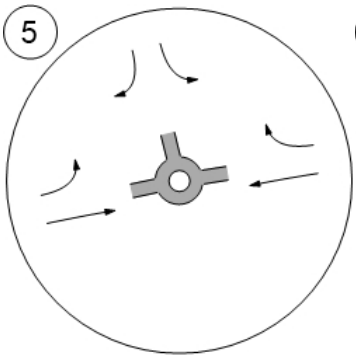

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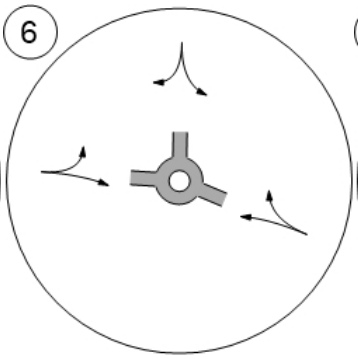

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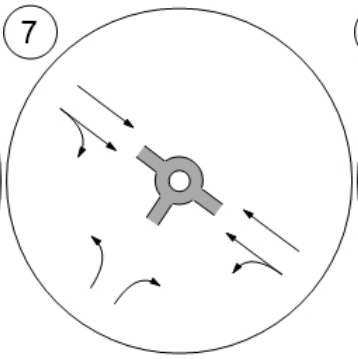
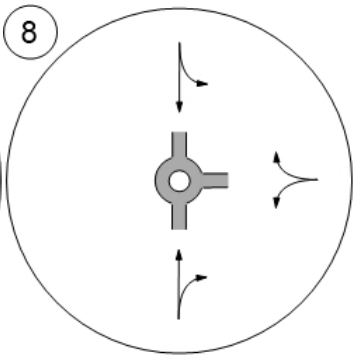
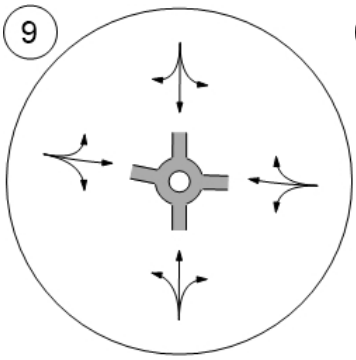


Flynn Ln & Camden St



Lane Configuration and Traffic Control

Flynn Ln & England Blvd



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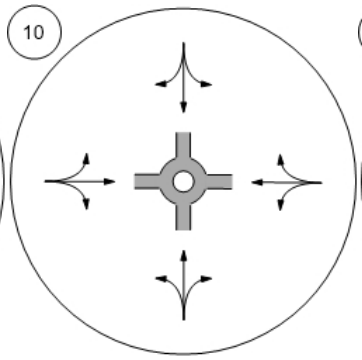

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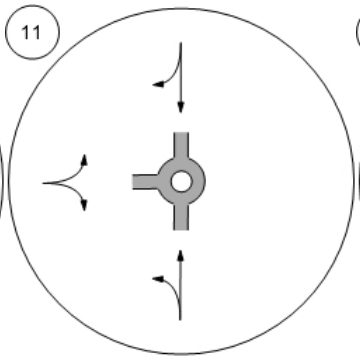
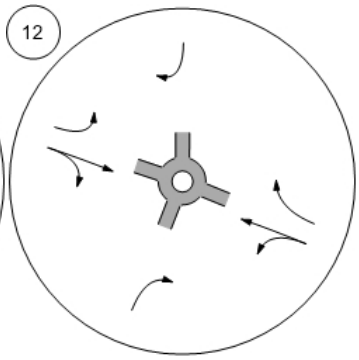
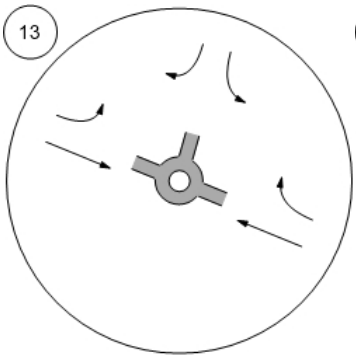


Flynn Ln & Mullan Rd



Mary Jane Blvd & Mullan Rd



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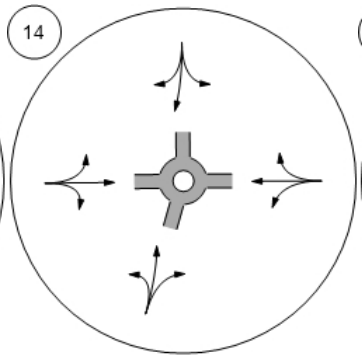

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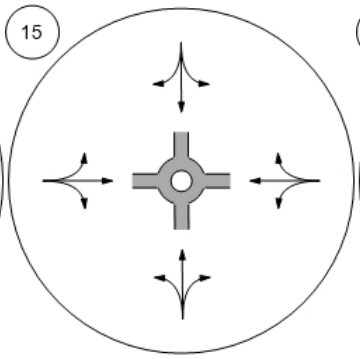

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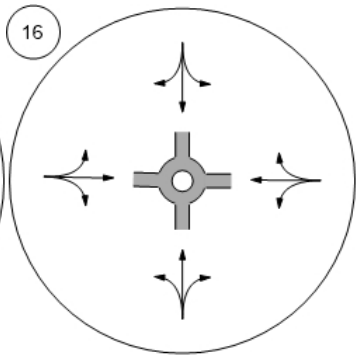
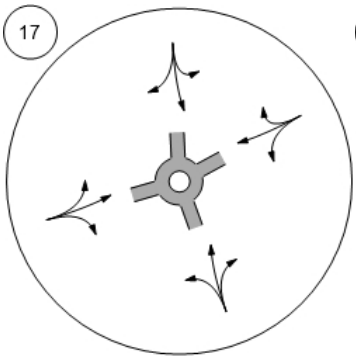
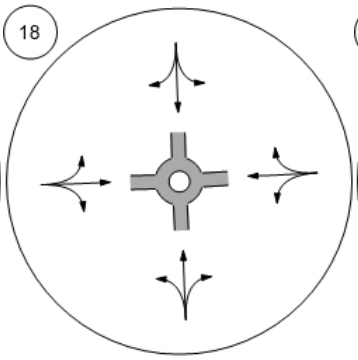


Lane Configuration and Traffic Control

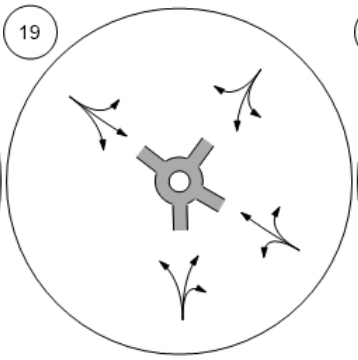
Mary Jane Blvd & Camden St



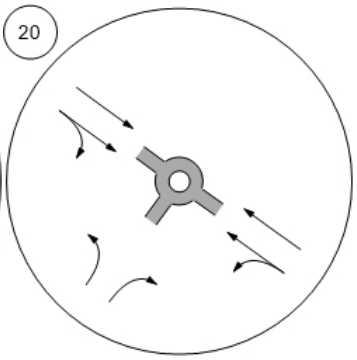
Mary Jane Blvd & Flynn Ln



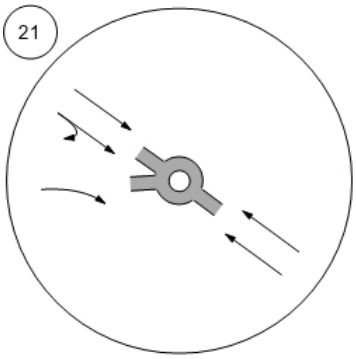
Mary Jane Blvd & Veteran's



Mary Jane Blvd & W Broadw



Flynn Ln & W Broadway St



Option 1: WB T/L & EB T/R

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	222	50	253	1259	405	85
Total Analysis Volume [veh/h]	236	53	269	1339	431	90

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	478		241		404	
Exiting Flow Rate [veh/h]	502		538		1607	
Demand Flow Rate [veh/h]	222	50	253	1259	405	85
Adjusted Demand Flow Rate [veh/h]	236	53	269	1339	431	90

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.89	0.93	0.98	0.90	0.90
Entry Flow Rate [veh/h]	241	60	815	870	272	306
Capacity of Entry and Bypass Lanes [veh/h]	870	946	1141	1141	984	984
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	853	845	1059	1119	887	889
X, volume / capacity	0.28	0.06	0.71	0.76	0.28	0.31

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	7.22	4.86	14.97	16.50	6.99	7.42
Lane LOS	A	A	B	C	A	A
95th-Percentile Queue Length [veh]	1.13	0.20	6.41	7.79	1.13	1.33
95th-Percentile Queue Length [ft]	28.30	5.01	160.16	194.67	28.24	33.22
Approach Delay [s/veh]	6.79		15.78		7.22	
Approach LOS	A		C		A	
Intersection Delay [s/veh]	12.86					
Intersection LOS	B					

Option 1: Dual Through Lanes WB & EB

Number	12											
Intersection	Flynn Ln & Mullan Rd											
Control Type	Roundabout											
Analysis Method	HCM 6th Edition											
Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	1701			460			1			221		
Exiting Flow Rate [veh/h]	2			440			576			1481		
Demand Flow Rate [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.94	0.93	0.93	0.95
Entry Flow Rate [veh/h]	2	118	800	908	324	360
Capacity of Entry and Bypass Lanes [veh/h]	244	864	1419	1419	1161	1161
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	239	847	1335	1326	1086	1103
X, volume / capacity	0.00	0.14	0.56	0.64	0.28	0.31

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	15.17	5.60	8.94	10.60	5.99	6.27
Lane LOS	C	A	A	B	A	A
95th-Percentile Queue Length [veh]	0.01	0.47	3.69	4.93	1.15	1.33
95th-Percentile Queue Length [ft]	0.32	11.74	92.25	123.14	28.68	33.16
Approach Delay [s/veh]	15.17	5.60	9.82		6.14	
Approach LOS	C	A	A		A	
Intersection Delay [s/veh]	8.61					
Intersection LOS	A					

Option 1: WB T/R & EB T/L

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	207	53	231	1042	512	100
Total Analysis Volume [veh/h]	225	58	251	1133	557	109

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	585		230		264	
Exiting Flow Rate [veh/h]	375		654		1374	
Demand Flow Rate [veh/h]	207	53	231	1042	512	100
Adjusted Demand Flow Rate [veh/h]	225	58	251	1133	557	109

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.83	0.98	0.99	0.95	0.96
Entry Flow Rate [veh/h]	230	70	662	741	329	369
Capacity of Entry and Bypass Lanes [veh/h]	789	864	1153	1153	1118	1118
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	773	720	1134	1141	1065	1070
X, volume / capacity	0.29	0.08	0.57	0.64	0.29	0.33

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	8.02	5.84	10.24	11.86	6.26	6.67
Lane LOS	A	A	B	B	A	A
95th-Percentile Queue Length [veh]	1.21	0.26	3.80	4.92	1.23	1.46
95th-Percentile Queue Length [ft]	30.27	6.55	95.10	123.12	30.86	36.38
Approach Delay [s/veh]	7.57		11.10		6.48	
Approach LOS	A		B		A	
Intersection Delay [s/veh]	9.35					
Intersection LOS	A					

Mullan BUILD - 2050 AM

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Report File: H:\...\24667_AM2050_SIGNAL.pdf

Scenario 4 Signal (2050)
7/16/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.717	34.3	C
2	George Elmer Dr & England Blvd	Signalized	HCM 6th Edition	SB Left	0.522	21.1	C
5	George Elmer Dr & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.919	207.1	F
7	Doughtery Dr & W Broadway St	Signalized	HCM 6th Edition	NB Right	0.689	19.5	B
9	Flynn Ln & England Blvd	Signalized	HCM 6th Edition	NB Right	0.481	15.8	B
12	Flynn Ln & Mullan Rd	Signalized	HCM 6th Edition	SB Right	0.897	9.2	A
13	Mary Jane Blvd & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.762	180.2	F
16	Mary Jane Blvd & England Blvd	Signalized	HCM 6th Edition	NB Left	0.450	18.9	B
20	Mary Jane Blvd & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.711	18.9	B
21	Flynn Ln & W Broadway St	Signalized	HCM 6th Edition	NB Thru	0.758	11.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	2.00	4.00	2.00	2.00	2.00	4.00	8.00	2.00	4.00	15.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	318	1	203	1	1	1	1	1066	125	72	757	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	55	0	0	0	0	290	34	20	206	0
Total Analysis Volume [veh/h]	346	1	221	1	1	1	1	1159	136	78	823	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	54	0	0	54	0	11	33	0	33	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	5	7	0	7	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	10	20	0	20	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	43	43	43	65	55	55	65	59	59
g / C, Green / Cycle	0.36	0.36	0.36	0.54	0.46	0.46	0.54	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.25	0.15	0.00	0.00	0.37	0.09	0.12	0.28	0.00
s, saturation flow rate [veh/h]	1392	1465	1028	715	3121	1464	627	2937	1464
c, Capacity [veh/h]	338	519	404	351	1428	670	278	1453	724
d1, Uniform Delay [s]	42.19	29.51	25.70	14.62	28.10	19.47	20.18	21.29	15.34
k, delay calibration	0.17	0.11	0.11	0.50	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.06	0.56	0.01	0.01	5.13	0.68	0.54	1.61	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.02	0.43	0.01	0.00	0.81	0.20	0.28	0.57	0.00
d, Delay for Lane Group [s/veh]	76.25	30.07	25.71	14.64	33.22	20.16	20.72	22.90	15.34
Lane Group LOS	F	C	C	B	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	12.93	4.94	0.06	0.01	14.04	2.24	0.96	7.69	0.01
50th-Percentile Queue Length [ft/ln]	323.26	123.61	1.42	0.32	350.91	56.12	23.94	192.26	0.34
95th-Percentile Queue Length [veh/ln]	19.10	8.59	0.10	0.02	20.18	4.04	1.72	12.24	0.02
95th-Percentile Queue Length [ft/ln]	477.60	214.78	2.55	0.57	504.52	101.02	43.10	305.96	0.61

Movement, Approach, & Intersection Results

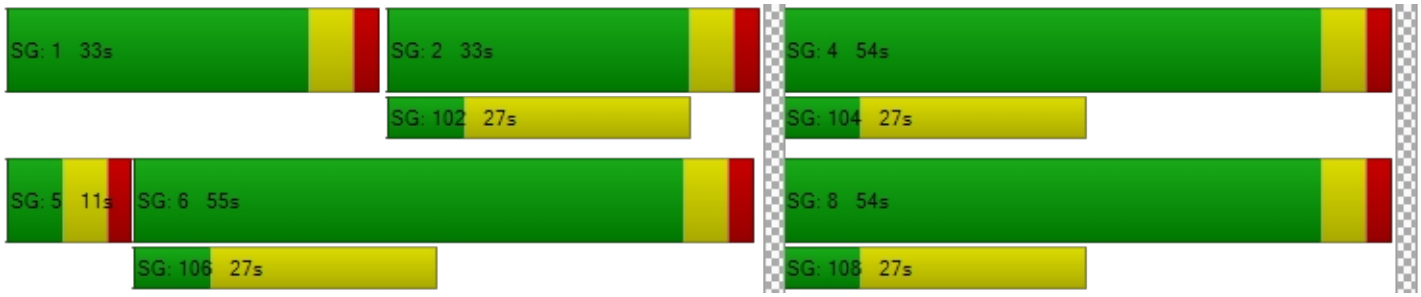
d_M, Delay for Movement [s/veh]	76.25	30.07	30.07	25.71	25.71	25.71	14.64	33.22	20.16	20.72	22.90	15.34
Movement LOS	F	C	C	C	C	C	B	C	C	C	C	B
d_A, Approach Delay [s/veh]	58.20			25.71			31.84			22.70		
Approach LOS	E			C			C			C		
d_I, Intersection Delay [s/veh]	34.26											
Intersection LOS	C											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.261	1.732	3.693	3.192
Crosswalk LOS	B	A	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	450	817
d_b, Bicycle Delay [s]	21.60	21.60	36.04	21.00
l_b,int, Bicycle LOS Score for Intersection	2.497	1.565	2.629	2.304
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00	2.00	2.00	4.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	289	50	50	100	50	160	311	60	25	299	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	79	14	14	27	14	43	85	16	7	81	20
Total Analysis Volume [veh/h]	33	314	54	54	109	54	174	338	65	27	325	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	32	0	96	32	0	96	58	0	96	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	7	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	15	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	26	26	26	26	52	52	52	52
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.05	0.10	0.18	0.25	0.03	0.25
s, saturation flow rate [veh/h]	1223	1652	1014	1601	978	1594	982	1637
c, Capacity [veh/h]	301	475	139	460	490	923	489	948
d1, Uniform Delay [s]	30.99	29.36	42.14	25.40	18.44	10.65	15.75	10.59
k, delay calibration	0.11	0.24	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	5.91	1.78	0.46	2.01	1.50	0.22	1.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.78	0.39	0.35	0.36	0.44	0.06	0.43
d, Delay for Lane Group [s/veh]	31.15	35.27	43.92	25.87	20.45	12.15	15.97	12.01
Lane Group LOS	C	D	D	C	C	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	7.83	1.25	2.76	2.74	4.51	0.35	4.52
50th-Percentile Queue Length [ft/ln]	15.22	195.84	31.13	69.07	68.43	112.73	8.86	112.91
95th-Percentile Queue Length [veh/ln]	1.10	12.42	2.24	4.97	4.93	7.99	0.64	8.00
95th-Percentile Queue Length [ft/ln]	27.40	310.59	56.03	124.33	123.17	199.79	15.95	200.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.15	35.27	35.27	43.92	25.87	25.87	20.45	12.15	12.15	15.97	12.01	12.01
Movement LOS	C	D	D	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	34.93			30.36			14.66			12.26		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	21.10											
Intersection LOS	C											
Intersection V/C	0.522											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.174	2.443	2.308	2.303
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	1156	1156
d_b, Bicycle Delay [s]	22.76	22.76	8.02	8.02
l_b,int, Bicycle LOS Score for Intersection	2.221	1.918	2.512	2.276
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	207.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.919

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	50	253	1259	405	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	14	69	342	110	23
Total Analysis Volume [veh/h]	241	54	275	1368	440	92
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	113	113	87	120	33	33
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.94	0.04	0.51	0.83	0.27	0.06
s, saturation flow rate [veh/h]	256	1440	544	1653	1653	1440
c, Capacity [veh/h]	60	0	128	1570	1418	1236
d1, Uniform Delay [s]	59.95	0.00	0.31	0.87	1.65	1.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1394.90	0.00	541.89	6.92	0.57	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	4.01	10000.00	2.15	0.87	0.31	0.07
d, Delay for Lane Group [s/veh]	1454.85	0.00	542.21	7.79	2.22	1.41
Lane Group LOS	F	F	F	A	A	A
Critical Lane Group	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	25.27	0.00	19.27	3.02	0.92	0.15
50th-Percentile Queue Length [ft/ln]	631.68	0.00	481.68	75.45	23.06	3.86
95th-Percentile Queue Length [veh/ln]	33.51	0.00	31.45	5.43	1.66	0.28
95th-Percentile Queue Length [ft/ln]	837.78	0.00	786.28	135.81	41.50	6.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1454.85	0.00	542.21	7.79	2.22	1.41
Movement LOS	F	A	F	A	A	A
d_A, Approach Delay [s/veh]	1188.54		97.24		2.08	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	207.08					
Intersection LOS	F					
Intersection V/C	0.919					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.189	2.996	3.341
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	450
d_b, Bicycle Delay [s]	60.00	0.15	36.04
l_b,int, Bicycle LOS Score for Intersection	1.560	4.271	2.437
Bicycle LOS	A	E	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	116	250	1139	130	150	713
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	8.00	2.00	2.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	250	1139	130	150	713
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	310	35	41	194
Total Analysis Volume [veh/h]	126	272	1238	141	163	775
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	78	78	31	31	11	42
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	25	25	72	72	83	83
g / C, Green / Cycle	0.21	0.21	0.60	0.60	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.08	0.19	0.40	0.10	0.28	0.26
s, saturation flow rate [veh/h]	1640	1464	3121	1464	580	2937
c, Capacity [veh/h]	339	302	1876	880	369	2037
d1, Uniform Delay [s]	40.92	46.39	15.82	10.56	13.03	7.65
k, delay calibration	0.11	0.11	0.50	0.50	0.49	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	9.56	1.84	0.39	3.76	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.90	0.66	0.16	0.44	0.38
d, Delay for Lane Group [s/veh]	41.59	55.95	17.66	10.95	16.79	8.19
Lane Group LOS	D	E	B	B	B	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.28	8.67	9.98	1.54	1.51	3.41
50th-Percentile Queue Length [ft/ln]	81.98	216.83	249.61	38.52	37.66	85.37
95th-Percentile Queue Length [veh/ln]	5.90	13.50	15.17	2.77	2.71	6.15
95th-Percentile Queue Length [ft/ln]	147.57	337.57	379.16	69.34	67.80	153.67

Movement, Approach, & Intersection Results

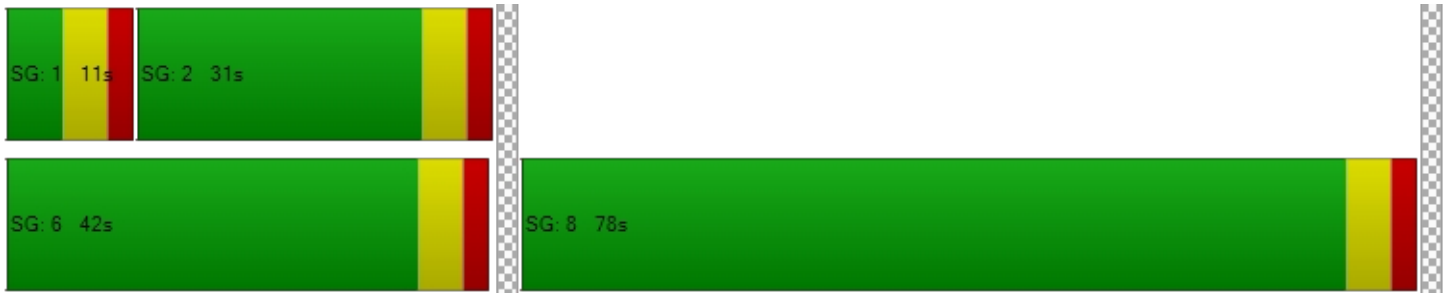
d_M, Delay for Movement [s/veh]	41.59	55.95	17.66	10.95	16.79	8.19
Movement LOS	D	E	B	B	B	A
d_A, Approach Delay [s/veh]	51.41		16.98		9.69	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	19.51					
Intersection LOS	B					
Intersection V/C	0.689					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	417	600
d_b, Bicycle Delay [s]	9.60	37.60	29.40
I_b,int, Bicycle LOS Score for Intersection	1.560	2.697	2.333
Bicycle LOS	A	B	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	20	15	8	5	9	103	9	39	87	20
Total Analysis Volume [veh/h]	16	78	79	60	32	21	36	411	37	154	348	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	33	0	0	33	0	17	80	0	7	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	12	12	67	56	67	57
g / C, Green / Cycle	0.13	0.13	0.74	0.62	0.74	0.64
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.04	0.28	0.15	0.26
s, saturation flow rate [veh/h]	1629	1118	821	1616	1036	1640
c, Capacity [veh/h]	253	205	697	996	734	1045
d1, Uniform Delay [s]	38.32	37.60	4.10	9.18	4.72	8.03
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.25	2.31	0.14	1.47	0.14	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.55	0.05	0.45	0.21	0.41
d, Delay for Lane Group [s/veh]	41.56	39.91	4.24	10.65	4.86	9.22
Lane Group LOS	D	D	A	B	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.93	2.53	0.16	4.55	0.65	3.94
50th-Percentile Queue Length [ft/ln]	98.37	63.26	4.04	113.86	16.23	98.45
95th-Percentile Queue Length [veh/ln]	7.08	4.55	0.29	8.05	1.17	7.09
95th-Percentile Queue Length [ft/ln]	177.06	113.87	7.27	201.36	29.22	177.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.56	41.56	41.56	39.91	39.91	39.91	4.24	10.65	10.65	4.86	9.22	9.22
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	41.56			39.91			10.17			8.07		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.76											
Intersection LOS	B											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.015	1.874	2.245	2.394
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1644	1422
d_b, Bicycle Delay [s]	22.05	22.05	1.42	3.76
I_b,int, Bicycle LOS Score for Intersection	1.845	1.746	2.358	2.523
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Overla	Split	Permis	Overla	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	5	0	0	5	0	2	0	0	6	6
Auxiliary Signal Groups			5			5						
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	5	0	0	5	0	5	0	0	5	5
Maximum Green [s]	0	0	30	0	0	30	0	30	0	0	30	30
Amber [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
All red [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Split [s]	0	0	87	0	0	87	0	120	0	0	33	33
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	0	0	0	20	0	0	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No		No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
Minimum Recall			No			No		No			No	
Maximum Recall			No			No		No			No	
Pedestrian Recall			No			No		No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	R	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	11	114	114	97	97	97
g / C, Green / Cycle	0.09	0.09	0.95	0.95	0.81	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.21	0.84	0.00	0.26	0.15
s, saturation flow rate [veh/h]	1464	1464	1050	1653	391	1653	1464
c, Capacity [veh/h]	138	138	1016	1570	266	1332	1179
d1, Uniform Delay [s]	49.22	53.38	0.58	0.92	13.40	3.06	2.65
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	12.13	0.48	7.47	0.03	0.64	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.83	0.21	0.88	0.00	0.32	0.18
d, Delay for Lane Group [s/veh]	49.24	65.50	1.06	8.39	13.43	3.70	2.99
Lane Group LOS	D	E	A	A	B	A	A
Critical Lane Group	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.03	3.90	0.14	3.26	0.01	1.92	0.84
50th-Percentile Queue Length [ft/ln]	0.70	97.48	3.39	81.46	0.35	48.11	21.02
95th-Percentile Queue Length [veh/ln]	0.05	7.02	0.24	5.87	0.03	3.46	1.51
95th-Percentile Queue Length [ft/ln]	1.26	175.46	6.11	146.63	0.63	86.60	37.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	49.24	0.00	0.00	65.50	1.06	8.39	8.39	13.43	3.70	2.99
Movement LOS			D			E	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	49.24			65.50			7.40			3.48		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	9.18											
Intersection LOS	A											
Intersection V/C	0.897											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	81.0	81.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	6.34	6.34
I_p,int, Pedestrian LOS Score for Intersection	1.732	2.204	2.917	2.804
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1350	1350	1900	450
d_b, Bicycle Delay [s]	6.34	6.34	0.15	36.04
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	4.201	2.622
Bicycle LOS	A	A	D	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	180.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	53	231	1042	512	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	14	63	283	139	27
Total Analysis Volume [veh/h]	225	58	251	1133	557	109
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	113	113	87	120	33	33
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.79	0.04	0.46	0.69	0.34	0.08
s, saturation flow rate [veh/h]	287	1440	548	1653	1653	1452
c, Capacity [veh/h]	60	0	129	1570	1418	1246
d1, Uniform Delay [s]	59.95	0.00	0.31	0.48	1.83	1.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1275.80	0.00	455.69	2.90	0.82	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	3.75	10000.00	1.95	0.72	0.39	0.09
d, Delay for Lane Group [s/veh]	1335.75	0.00	456.00	3.38	2.65	1.45
Lane Group LOS	F	F	F	A	A	A
Critical Lane Group	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	23.28	0.00	16.27	1.27	1.30	0.19
50th-Percentile Queue Length [ft/ln]	582.02	0.00	406.78	31.64	32.50	4.63
95th-Percentile Queue Length [veh/ln]	31.19	0.00	26.87	2.28	2.34	0.33
95th-Percentile Queue Length [ft/ln]	779.84	0.00	671.77	56.95	58.49	8.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1335.75	0.00	456.00	3.38	2.65	1.45
Movement LOS	F	A	F	A	A	A
d_A, Approach Delay [s/veh]	1062.00		85.46		2.45	
Approach LOS	F		F		A	
d_I, Intersection Delay [s/veh]	180.22					
Intersection LOS	F					
Intersection V/C	0.762					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.181	2.928	3.261
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	450
d_b, Bicycle Delay [s]	60.00	0.15	36.04
l_b,int, Bicycle LOS Score for Intersection	1.560	3.843	2.659
Bicycle LOS	A	D	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	142	46	19	123	50	87	358	62	46	350	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	39	13	5	33	14	24	97	17	13	95	2
Total Analysis Volume [veh/h]	148	154	50	21	134	54	95	389	67	50	380	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	32	0	96	32	0	96	58	0	96	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	7	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	15	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	24	24	24	24	54	54	54	54
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.02	0.12	0.10	0.29	0.05	0.23
s, saturation flow rate [veh/h]	1195	1638	1178	1626	996	1598	935	1689
c, Capacity [veh/h]	255	432	243	429	539	964	473	1019
d1, Uniform Delay [s]	37.39	27.87	34.02	27.59	14.47	9.92	16.00	9.20
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	0.80	0.15	0.71	0.71	1.67	0.45	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.47	0.09	0.44	0.18	0.47	0.11	0.38
d, Delay for Lane Group [s/veh]	39.47	28.68	34.18	28.30	15.18	11.59	16.45	10.28
Lane Group LOS	D	C	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.27	3.72	0.41	3.39	1.22	4.93	0.67	3.83
50th-Percentile Queue Length [ft/ln]	81.63	92.92	10.24	84.67	30.46	123.27	16.80	95.83
95th-Percentile Queue Length [veh/ln]	5.88	6.69	0.74	6.10	2.19	8.57	1.21	6.90
95th-Percentile Queue Length [ft/ln]	146.94	167.25	18.42	152.40	54.83	214.31	30.25	172.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.47	28.68	28.68	34.18	28.30	28.30	15.18	11.59	11.59	16.45	10.28	10.28
Movement LOS	D	C	C	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	33.21			28.89			12.21			10.98		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.89											
Intersection LOS	B											
Intersection V/C	0.450											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.207	2.226	2.518	2.261
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	1156	1156
d_b, Bicycle Delay [s]	22.76	22.76	8.02	8.02
l_b,int, Bicycle LOS Score for Intersection	2.140	1.904	2.469	2.281
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	248	68	1247	142	164	656
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	8.00	3.00	3.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	248	68	1247	142	164	656
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	18	339	39	45	178
Total Analysis Volume [veh/h]	270	74	1355	154	178	713
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	78	78	31	31	11	42
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	22	22	75	75	86	86
g / C, Green / Cycle	0.19	0.19	0.62	0.62	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.17	0.05	0.43	0.11	0.34	0.24
s, saturation flow rate [veh/h]	1627	1452	3121	1452	529	2937
c, Capacity [veh/h]	302	269	1941	903	347	2098
d1, Uniform Delay [s]	47.70	41.92	15.15	9.59	15.05	6.46
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.15	0.55	2.11	0.41	5.34	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.27	0.70	0.17	0.51	0.34
d, Delay for Lane Group [s/veh]	56.85	42.47	17.26	10.00	20.39	6.90
Lane Group LOS	E	D	B	A	C	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.62	1.93	10.83	1.58	1.61	2.72
50th-Percentile Queue Length [ft/ln]	215.48	48.30	270.68	39.47	40.35	67.94
95th-Percentile Queue Length [veh/ln]	13.43	3.48	16.22	2.84	2.90	4.89
95th-Percentile Queue Length [ft/ln]	335.85	86.95	405.59	71.04	72.62	122.29

Movement, Approach, & Intersection Results

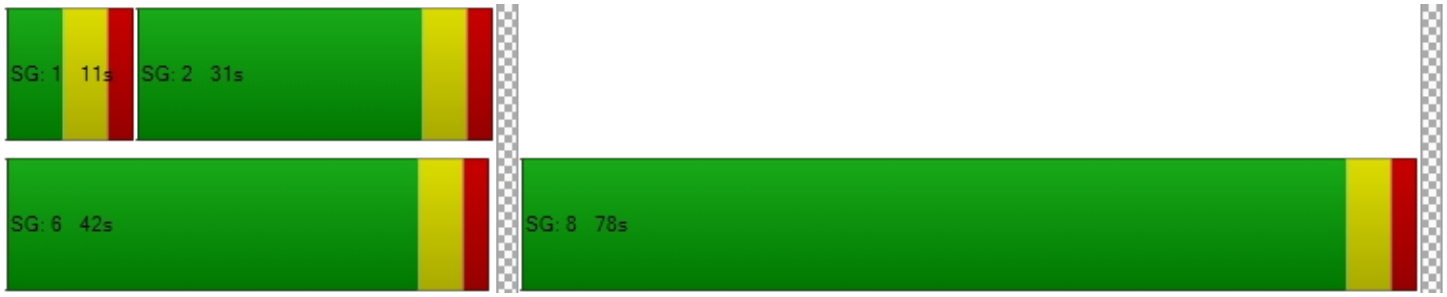
d_M, Delay for Movement [s/veh]	56.85	42.47	17.26	10.00	20.39	6.90
Movement LOS	E	D	B	A	C	A
d_A, Approach Delay [s/veh]	53.76		16.52		9.59	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	18.94					
Intersection LOS	B					
Intersection V/C	0.711					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	417	600
d_b, Bicycle Delay [s]	9.60	37.60	29.40
I_b,int, Bicycle LOS Score for Intersection	1.560	2.805	2.295
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	359	1180	146	0	819
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	8.00	2.00	0.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	359	1180	146	0	819
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	98	321	40	0	223
Total Analysis Volume [veh/h]	0	390	1283	159	0	890
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	0	8	2	2	0	6
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	5	5	5	0	5
Maximum Green [s]	0	30	30	30	0	30
Amber [s]	0.0	4.0	4.0	4.0	0.0	3.0
All red [s]	0.0	2.0	2.0	2.0	0.0	1.0
Split [s]	0	30	90	90	0	90
Vehicle Extension [s]	0.0	3.0	3.0	3.0	0.0	3.0
Walk [s]	0	0	0	0	0	5
Pedestrian Clearance [s]	0	0	0	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			No
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	4.0	4.0	4.0	0.0	2.0
Minimum Recall		No	No			No
Maximum Recall		No	No			No
Pedestrian Recall		No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C
C, Cycle Length [s]	49	49	49	49
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	2.00
g_i, Effective Green Time [s]	13	24	24	26
g / C, Green / Cycle	0.27	0.49	0.49	0.53
(v / s)_i Volume / Saturation Flow Rate	0.22	0.41	0.11	0.30
s, saturation flow rate [veh/h]	1750	3121	1464	2937
c, Capacity [veh/h]	470	1519	713	1550
d1, Uniform Delay [s]	16.88	10.97	7.25	7.85
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.84	1.36	0.16	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.84	0.22	0.57
d, Delay for Lane Group [s/veh]	20.73	12.33	7.40	8.19
Lane Group LOS	C	B	A	A
Critical Lane Group	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.16	3.51	0.56	1.61
50th-Percentile Queue Length [ft/ln]	103.97	87.70	13.96	40.14
95th-Percentile Queue Length [veh/ln]	7.49	6.31	1.01	2.89
95th-Percentile Queue Length [ft/ln]	187.15	157.85	25.13	72.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	20.73	12.33	7.40	0.00	8.19
Movement LOS		C	B	A		A
d_A, Approach Delay [s/veh]	20.73		11.79		8.19	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.89					
Intersection LOS	B					
Intersection V/C	0.758					

Other Modes

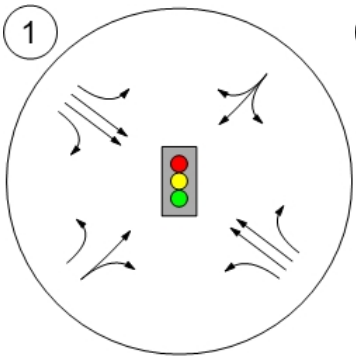
g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1400	1433
d_b, Bicycle Delay [s]	38.40	5.40	4.82
l_b,int, Bicycle LOS Score for Intersection	2.203	2.749	2.294
Bicycle LOS	B	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lane Configuration and Traffic Control

George Elmer Dr & W Broad



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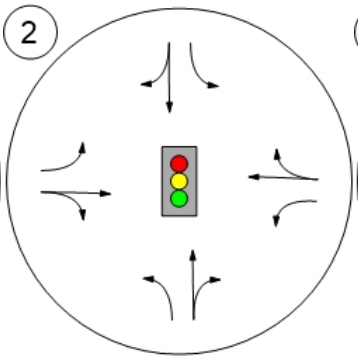
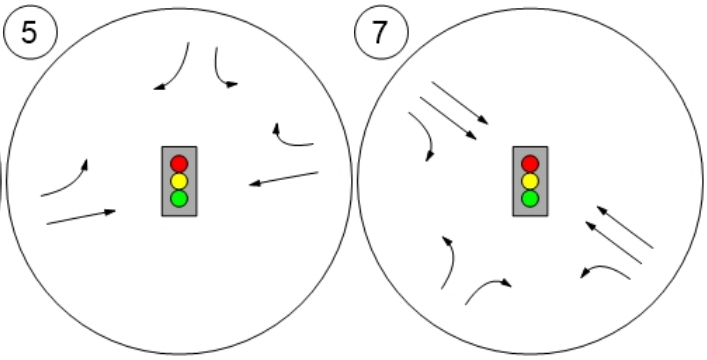
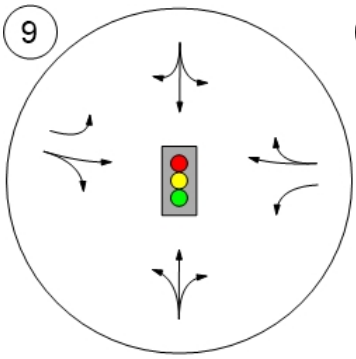


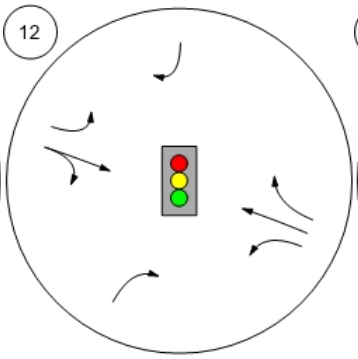
George Elmer Dr & Mullan R Doughtery Dr & W Broadway



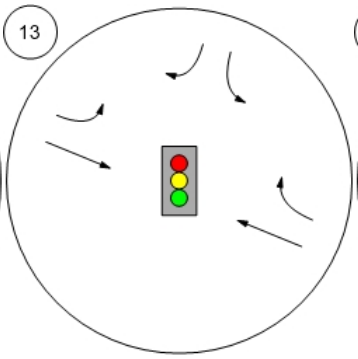
Flynn Ln & England Blvd



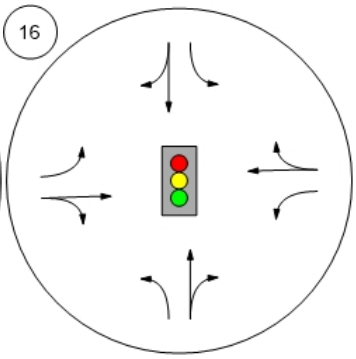
Flynn Ln & Mullan Rd



Mary Jane Blvd & Mullan Rd

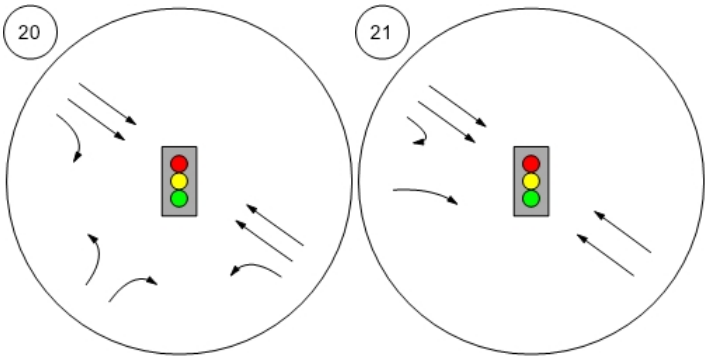


Mary Jane Blvd & England Bl



Lane Configuration and Traffic Control

Mary Jane Blvd & W Broadw



Flynn Ln & W Broadway St

Option 1: Dual Through Lanes EB & WB

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	222	50	253	1259	405	85
Total Analysis Volume [veh/h]	241	54	275	1368	440	92

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	8	8	0	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	30
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0
Split [s]	33	33	0	87	33	33
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.17	0.17	0.73	0.73	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.28	0.43	0.14	0.06
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1614	1440	966	3148	3148	1440
c, Capacity [veh/h]	269	240	740	2309	2148	983
X, volume / capacity	0.90	0.23	0.37	0.59	0.20	0.09
d, Delay for Lane Group [s/veh]	60.95	43.76	7.99	8.66	7.24	6.65
Lane Group LOS	E	D	A	A	A	A

Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.95	1.43	2.06	6.79	1.85	0.74
50th-Percentile Queue Length [ft/ln]	198.63	35.70	51.43	169.87	46.37	18.49
95th-Percentile Queue Length [veh/ln]	12.57	2.57	3.70	11.07	3.34	1.33
95th-Percentile Queue Length [ft/ln]	314.19	64.26	92.57	276.75	83.47	33.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.95	43.76	7.99	8.66	7.24	6.65
Movement LOS	E	D	A	A	A	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	57.80		8.55		7.14	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	14.13					
Intersection LOS	B					
Intersection V/C	0.649					

Option 1: Dual Through Lanes EB & WB

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	207	53	231	1042	512	100
Total Analysis Volume [veh/h]	225	58	251	1133	557	109

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	33	33	54	87	33	33
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.14	0.04	0.26	0.36	0.18	0.08
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1614	1440	953	3148	3148	1452
c, Capacity [veh/h]	253	226	721	2339	1964	906
X, volume / capacity	0.89	0.26	0.35	0.48	0.28	0.12
d, Delay for Lane Group [s/veh]	59.72	45.02	6.68	6.91	10.67	9.45
Lane Group LOS	E	D	A	A	B	A

Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.31	1.56	1.75	4.66	3.13	1.12
50th-Percentile Queue Length [ft/ln]	182.70	39.02	43.73	116.45	78.23	28.09
95th-Percentile Queue Length [veh/ln]	11.74	2.81	3.15	8.20	5.63	2.02
95th-Percentile Queue Length [ft/ln]	293.53	70.24	78.72	204.93	140.81	50.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.72	45.02	6.68	6.91	10.67	9.45
Movement LOS	E	D	A	A	B	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	56.71		6.86		10.47	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	13.94					
Intersection LOS	B					
Intersection V/C	0.555					

Mullan BUILD - 2050 AM

Vistro File: H:\...\24667_PM2050.vistro
Report File: H:\...\24667_PM2050_TWSC.pdf

Scenario 3 Two Way Stop Control (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	33.820	10,000.0	F
2	George Elmer Dr & England Blvd	Two-way stop	HCM 6th Edition	NB Left	0.000	10,000.0	F
3	George Elmer Dr & Cattle Dr	Two-way stop	HCM 6th Edition	EB Left	0.170	30.6	D
4	George Elmer Dr & Heron's Landing	Two-way stop	HCM 6th Edition	EB Left	0.206	32.4	D
5	George Elmer Dr & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	4.632	1,957.5	F
6	Dougherty Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.589	44.9	E
7	Doughtery Dr & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	4.369	1,704.3	F
8	Flynn Ln & Camden St	Two-way stop	HCM 6th Edition	WB Left	0.007	10.2	B
9	Flynn Ln & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.163	61.2	F
10	Flynn Ln & Chelsea Dr	Two-way stop	HCM 6th Edition	EB Thru	0.025	12.5	B
11	Flynn Ln & Siren's Dr	Two-way stop	HCM 6th Edition	EB Left	0.035	11.0	B
12	Flynn Ln & Mullan Rd	Two-way stop	HCM 6th Edition	SB Right	0.984	126.7	F
13	Mary Jane Blvd & Mullan Rd	Two-way stop	HCM 6th Edition	SB Left	4.130	1,689.6	F
14	Mary Jane Blvd & O'Leary St	Two-way stop	HCM 6th Edition	WB Left	0.037	15.0	B
15	Mary Jane Blvd & Melrose Pl	Two-way stop	HCM 6th Edition	EB Left	0.161	20.7	C
16	Mary Jane Blvd & England Blvd	Two-way stop	HCM 6th Edition	NB Left	3.171	1,324.9	F
17	Mary Jane Blvd & Camden St	Two-way stop	HCM 6th Edition	WB Left	0.007	14.0	B
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Two-way stop	HCM 6th Edition	EB Left	0.149	20.9	C
19	Mary Jane Blvd & Veteran's Way	Two-way stop	HCM 6th Edition	EB Left	0.255	18.7	C
20	Mary Jane Blvd & W Broadway St	Two-way stop	HCM 6th Edition	NB Left	3.662	1,331.9	F
21	Flynn Ln & W Broadway St	Two-way stop	HCM 6th Edition	NB Thru	0.882	58.1	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	33.820

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane				No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	33.82	0.18	0.63	0.22	0.23	0.00	0.00	0.02	0.00	0.45	0.01	0.00
d_M, Delay for Movement [s/veh]	10000.	10000.	38.56	1040.6	1048.5	243.76	11.21	0.00	0.00	24.67	0.00	0.00
Movement LOS	F	F	E	F	F	F	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	29.86	29.86	3.95	0.86	0.86	0.86	0.01	0.00	0.00	2.25	0.00	0.00
95th-Percentile Queue Length [ft/ln]	746.40	746.40	98.75	21.43	21.43	21.43	0.13	0.00	0.00	56.37	0.00	0.00
d_A, Approach Delay [s/veh]	5648.16			777.65			0.01			2.74		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	627.33											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.58	0.08	0.00	1.47	0.35	0.13	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	10000.	378.23	357.46	10000.	437.65	415.04	8.92	0.00	0.00	8.54	0.00	0.00
Movement LOS	F	F	F	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	21.89	18.61	18.61	7.93	26.97	26.97	0.43	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	547.21	465.33	465.33	198.16	674.28	674.28	10.82	0.00	0.00	3.46	0.00	0.00
d_A, Approach Delay [s/veh]	3903.74			1450.08			1.87			0.72		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	1107.97											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Two-way stop	Delay (sec / veh):	30.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	90	6	1	98	2	7	0	9	2	0	8
Total Analysis Volume [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.00	0.00	0.17	0.01	0.05	0.05	0.01	0.05
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	8.08	0.00	0.00	30.60	27.84	14.27	28.09	24.88	11.36
Movement LOS	A	A	A	A	A	A	D	D	B	D	C	B
95th-Percentile Queue Length [veh/ln]	0.43	0.00	0.00	0.01	0.00	0.00	0.87	0.87	0.87	0.34	0.34	0.34
95th-Percentile Queue Length [ft/ln]	10.84	0.00	0.00	0.32	0.00	0.00	21.72	21.72	21.72	8.44	8.44	8.44
d_A, Approach Delay [s/veh]	2.36			0.10			21.51			14.96		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	3.18											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Two-way stop	Delay (sec / veh):	32.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.206

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	117	8	8	92	8	8	0	5	5	0	8
Total Analysis Volume [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.03	0.00	0.00	0.21	0.01	0.03	0.13	0.01	0.06
d_M, Delay for Movement [s/veh]	8.35	0.00	0.00	8.49	0.00	0.00	32.43	29.25	15.44	29.70	27.24	14.16
Movement LOS	A	A	A	A	A	A	D	D	C	D	D	B
95th-Percentile Queue Length [veh/ln]	0.23	0.00	0.00	0.10	0.00	0.00	0.93	0.93	0.93	0.71	0.71	0.71
95th-Percentile Queue Length [ft/ln]	5.72	0.00	0.00	2.40	0.00	0.00	23.24	23.24	23.24	17.68	17.68	17.68
d_A, Approach Delay [s/veh]	1.18			0.64			25.70			20.50		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	3.15											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,957.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.632

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.63	1.49	0.36	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	1957.46	290.18	15.53	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	14.08	18.43	1.66	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	352.11	460.75	41.39	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	747.47		3.42		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	104.67					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	44.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	111	100	150	249	416	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	100	150	249	416	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	27	41	68	113	14
Total Analysis Volume [veh/h]	121	109	163	271	452	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.59	0.19	0.15	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	44.95	12.53	9.02	0.00	0.00	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.28	0.68	0.54	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	82.03	16.92	13.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	29.59		3.39		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	7.07					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	1,704.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.369

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.37	0.93	0.02	0.00	0.77	0.01
d_M, Delay for Movement [s/veh]	1704.33	67.41	0.00	0.00	41.25	0.00
Movement LOS	F	F	A	A	E	A
95th-Percentile Queue Length [veh/ln]	21.61	9.67	0.00	0.00	6.20	0.00
95th-Percentile Queue Length [ft/ln]	540.26	241.67	0.00	0.00	154.89	0.00
d_A, Approach Delay [s/veh]	670.16		0.00		7.97	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	97.17					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	103	7	22	94	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	7	22	94	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	2	6	26	1	4
Total Analysis Volume [veh/h]	112	8	24	102	5	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.49	0.00	10.16	8.94
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.25	1.25	1.69	1.69
d_A, Approach Delay [s/veh]	0.00		1.43		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.34					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	61.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.38	0.10	0.16	0.41	0.01	0.02	0.00	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	45.11	33.26	21.43	61.25	45.84	35.06	8.51	0.00	0.00	8.19	0.00	0.00
Movement LOS	E	D	C	F	E	E	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.63	2.63	2.63	3.12	3.12	3.12	0.07	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	65.81	65.81	65.81	77.88	77.88	77.88	1.68	0.00	0.00	4.19	0.00	0.00
d_A, Approach Delay [s/veh]	27.93			48.13			0.50			0.89		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	8.23											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	3.00	2.00	4.00	2.00	2.00	7.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	30	5	6	31	5	8	3	11	4	1	1
Total Analysis Volume [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.00	0.00	0.05	0.02	0.05	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	7.53	0.00	0.00	12.20	12.54	9.68	12.45	12.06	9.19
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.05	0.05	0.05	0.43	0.43	0.43	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	1.60	1.60	1.60	1.21	1.21	1.21	10.68	10.68	10.68	3.27	3.27	3.27
d_A, Approach Delay [s/veh]	1.33			1.04			10.99			11.83		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.63											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	17	137	156	13	20	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	18.00	2.00	2.00	2.00	5.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	137	156	13	20	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	37	42	4	5	7
Total Analysis Volume [veh/h]	18	149	170	14	22	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.03
d_M, Delay for Movement [s/veh]	7.81	0.00	0.00	0.00	11.00	9.29
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.00	0.11	0.09
95th-Percentile Queue Length [ft/ln]	1.05	0.00	0.00	0.00	2.74	2.32
d_A, Approach Delay [s/veh]	0.84		0.00		10.07	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.56					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	126.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.98	0.15	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.72	0.00	0.00	126.72	15.21	0.00	0.00	9.18	0.00	0.00
Movement LOS			B			F	C	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.00	7.37	0.51	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.00	0.00	184.24	12.63	0.00	0.00	0.09	0.00	0.00
d_A, Approach Delay [s/veh]	13.72			126.72			1.13			0.01		
Approach LOS	B			F			A			A		
d_I, Intersection Delay [s/veh]	7.87											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	1,689.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.130

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.13	0.91	0.31	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	1689.62	104.79	17.51	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	14.28	6.57	1.30	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	356.94	164.36	32.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	810.49		3.04		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	83.80					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	58	5	8	48	7	5	2	15	4	1	4
Total Analysis Volume [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.04	0.02	0.07	0.04	0.01	0.02
d_M, Delay for Movement [s/veh]	7.70	0.00	0.00	7.81	0.00	0.00	14.47	14.36	10.15	15.00	14.09	10.03
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	B
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.08	0.08	0.08	0.45	0.45	0.45	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.84	0.84	0.84	1.99	1.99	1.99	11.28	11.28	11.28	5.52	5.52	5.52
d_A, Approach Delay [s/veh]	0.44			1.05			11.41			12.60		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.81											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.161

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.03	0.00	0.00	0.16	0.16	0.05	0.04	0.14	0.01
d_M, Delay for Movement [s/veh]	7.79	0.00	0.00	7.75	0.00	0.00	20.68	19.27	14.33	18.96	16.54	11.48
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.09	0.09	0.09	1.72	1.72	1.72	0.68	0.68	0.68
95th-Percentile Queue Length [ft/ln]	2.38	2.38	2.38	2.18	2.18	2.18	42.92	42.92	42.92	16.94	16.94	16.94
d_A, Approach Delay [s/veh]	1.21			1.08			18.36			16.31		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.16											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,324.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.171

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.17	0.49	0.18	1.37	0.94	0.03	0.03	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	1324.9	47.13	31.77	332.58	109.27	95.97	8.77	0.00	0.00	8.35	0.00	0.00
Movement LOS	F	E	D	F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	9.31	4.45	4.45	8.06	7.98	7.98	0.09	0.00	0.00	0.20	0.00	0.00
95th-Percentile Queue Length [ft/ln]	232.82	111.34	111.34	201.40	199.52	199.52	2.20	0.00	0.00	4.88	0.00	0.00
d_A, Approach Delay [s/veh]	385.79			186.92			0.56			0.88		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	96.10											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	50	1	4	60	7	4	4	11	1	3	2
Total Analysis Volume [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.03	0.03	0.05	0.01	0.03	0.01
d_M, Delay for Movement [s/veh]	7.80	0.00	0.00	7.66	0.00	0.00	13.80	13.60	10.38	13.95	13.26	9.61
Movement LOS	A	A	A	A	A	A	B	B	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.40	0.40	0.40	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.52	0.77	0.77	0.77	9.91	9.91	9.91	3.65	3.65	3.65
d_A, Approach Delay [s/veh]	0.33			0.38			11.74			12.03		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.22											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	45	10	14	60	15	12	15	5	6	16	8
Total Analysis Volume [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.15	0.03	0.08	0.16	0.04
d_M, Delay for Movement [s/veh]	7.86	0.00	0.00	7.79	0.00	0.00	20.92	18.82	14.20	19.29	17.63	12.49
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.13	0.13	0.13	1.41	1.41	1.41	1.12	1.12	1.12
95th-Percentile Queue Length [ft/ln]	0.18	0.18	0.18	3.36	3.36	3.36	35.32	35.32	35.32	27.96	27.96	27.96
d_A, Approach Delay [s/veh]	0.11			1.27			18.87			16.67		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	5.88											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.255

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	2.00	5.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	63	0	0	86	24	23	0	3	0	0	0
Total Analysis Volume [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.23	0.00	0.00	7.74	0.00	0.00	18.67	17.90	14.38	14.72	14.95	9.58
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00	1.09	1.09	1.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.27	0.27	0.27	0.00	0.00	0.00	27.27	27.27	27.27	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.13			0.00			18.21			13.08		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	2.37											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	1,331.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	3.662

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	3.66	0.34	0.02	0.00	0.62	0.01
d_M, Delay for Movement [s/veh]	1331.86	21.56	0.00	0.00	32.79	0.00
Movement LOS	F	C	A	A	D	A
95th-Percentile Queue Length [veh/ln]	24.89	1.45	0.00	0.00	3.90	0.00
95th-Percentile Queue Length [ft/ln]	622.35	36.24	0.00	0.00	97.61	0.00
d_A, Approach Delay [s/veh]	914.08		0.00		4.71	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	89.97					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Two-way stop	Delay (sec / veh):	58.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.882

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.88	0.02	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	58.11	0.00	0.00	0.00	0.00
Movement LOS		F	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	8.48	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	212.10	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	58.11		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	5.31					
Intersection LOS	F					

Signal Warrants Report For Intersection 1: George Elmer Dr & W Broadway St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	1236	1686	3	364
2	1187	1619	3	349
3	1162	1585	3	342
4	989	1349	2	291
5	939	1281	2	277
6	840	1146	2	248
7	779	1062	2	229
8	742	1012	2	218
9	593	809	1	175
10	556	759	1	164
11	556	759	1	164
12	531	725	1	157
13	482	658	1	142
14	445	607	1	131
15	445	607	1	131
16	433	590	1	127
17	247	337	1	73
18	136	185	0	40
19	124	169	0	36
20	49	67	0	15
21	37	51	0	11
22	37	51	0	11
23	25	34	0	7
24	25	34	0	7

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2922	3	367	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	2806	3	352	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	2747	3	345	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	2338	3	293	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	2220	3	279	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	1986	3	250	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	6	1841	3	231	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	6	1754	3	220	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	6	1402	3	176	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	6	1315	3	165	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	6	1315	3	165	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	6	1256	3	158	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	6	1140	3	143	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	6	1052	3	132	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
15	6	1052	3	132	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
16	6	1023	3	128	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
17	6	584	3	74	No	No	No	No	No	No	No	Yes	No	No
18	6	321	3	40	No	No	No	No	No	No	No	No	No	No
19	6	293	3	36	No	No	No	No	No	No	No	No	No	No
20	6	116	3	15	No	No	No	No	No	No	No	No	No	No
21	6	88	3	11	No	No	No	No	No	No	No	No	No	No
22	6	88	3	11	No	No	No	No	No	No	No	No	No	No
23	6	59	3	7	No	No	No	No	No	No	No	No	No	No
24	6	59	3	7	No	No	No	No	No	No	No	No	No	No
Hours Met					8	11	13	16	16	16	16	17	16	13

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	777.7	5648.2
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:38	571:05
Delay Condition Met	No	Yes
Volume on Minor Street Approach During Same Hour	3	364
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	3289	3289
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 2: George Elmer Dr & England Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	516	582	387	395
2	495	559	372	379
3	485	547	364	371
4	413	466	310	316
5	392	442	294	300
6	351	396	263	269
7	325	367	244	249
8	310	349	232	237
9	248	279	186	190
10	232	262	174	178
11	232	262	174	178
12	222	250	166	170
13	201	227	151	154
14	186	210	139	142
15	186	210	139	142
16	181	204	135	138
17	103	116	77	79
18	57	64	43	43
19	52	58	39	40
20	21	23	15	16
21	15	17	12	12
22	15	17	12	12
23	10	12	8	8
24	10	12	8	8

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1098	4	782	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	1054	4	751	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	1032	4	735	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	879	4	626	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
5	4	834	4	594	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
6	4	747	4	532	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
7	4	692	4	493	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
8	4	659	4	469	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
9	4	527	4	376	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	4	494	4	352	No	Yes	Yes	Yes	No	No	No	No	No	No
11	4	494	4	352	No	Yes	Yes	Yes	No	No	No	No	No	No
12	4	472	4	336	No	No	Yes	Yes	No	No	No	No	No	No
13	4	428	4	305	No	No	Yes	Yes	No	No	No	No	No	No
14	4	396	4	281	No	No	No	Yes	No	No	No	No	No	No
15	4	396	4	281	No	No	No	Yes	No	No	No	No	No	No
16	4	385	4	273	No	No	No	Yes	No	No	No	No	No	No
17	4	219	4	156	No	No	No	No	No	No	No	No	No	No
18	4	121	4	86	No	No	No	No	No	No	No	No	No	No
19	4	110	4	79	No	No	No	No	No	No	No	No	No	No
20	4	44	4	31	No	No	No	No	No	No	No	No	No	No
21	4	32	4	24	No	No	No	No	No	No	No	No	No	No
22	4	32	4	24	No	No	No	No	No	No	No	No	No	No
23	4	22	4	16	No	No	No	No	No	No	No	No	No	No
24	4	22	4	16	No	No	No	No	No	No	No	No	No	No
Hours Met					8	11	13	16	3	6	8	9	5	3

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	3903.7	1450.1
Number of Lanes on Minor Street Approach	2	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	419:39	159:06
Delay Condition Met	Yes	Yes
Volume on Minor Street Approach During Same Hour	387	395
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1880	1880
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 3: George Elmer Dr & Cattle Dr

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	489	371	37	60
2	469	356	36	58
3	460	349	35	56
4	391	297	30	48
5	372	282	28	46
6	333	252	25	41
7	308	234	23	38
8	293	223	22	36
9	235	178	18	29
10	220	167	17	27
11	220	167	17	27
12	210	160	16	26
13	191	145	14	23
14	176	134	13	22
15	176	134	13	22
16	171	130	13	21
17	98	74	7	12
18	54	41	4	7
19	49	37	4	6
20	20	15	1	2
21	15	11	1	2
22	15	11	1	2
23	10	7	1	1
24	10	7	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	860	2	97	No	No	No	No	No	Yes	Yes	Yes	No	No
2	4	825	2	94	No	No	No	No	No	No	Yes	Yes	No	No
3	4	809	2	91	No	No	No	No	No	No	Yes	Yes	No	No
4	4	688	2	78	No	No	No	No	No	No	No	Yes	No	No
5	4	654	2	74	No	No	No	No	No	No	No	Yes	No	No
6	4	585	2	66	No	No	No	No	No	No	No	No	No	No
7	4	542	2	61	No	No	No	No	No	No	No	No	No	No
8	4	516	2	58	No	No	No	No	No	No	No	No	No	No
9	4	413	2	47	No	No	No	No	No	No	No	No	No	No
10	4	387	2	44	No	No	No	No	No	No	No	No	No	No
11	4	387	2	44	No	No	No	No	No	No	No	No	No	No
12	4	370	2	42	No	No	No	No	No	No	No	No	No	No
13	4	336	2	37	No	No	No	No	No	No	No	No	No	No
14	4	310	2	35	No	No	No	No	No	No	No	No	No	No
15	4	310	2	35	No	No	No	No	No	No	No	No	No	No
16	4	301	2	34	No	No	No	No	No	No	No	No	No	No
17	4	172	2	19	No	No	No	No	No	No	No	No	No	No
18	4	95	2	11	No	No	No	No	No	No	No	No	No	No
19	4	86	2	10	No	No	No	No	No	No	No	No	No	No
20	4	35	2	3	No	No	No	No	No	No	No	No	No	No
21	4	26	2	3	No	No	No	No	No	No	No	No	No	No
22	4	26	2	3	No	No	No	No	No	No	No	No	No	No
23	4	17	2	2	No	No	No	No	No	No	No	No	No	No
24	4	17	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	1	3	5	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15	21.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09	0:21
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	37	60
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	957	957
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 4: George Elmer Dr & Heron's Landing

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	534	400	51	51
2	513	384	49	49
3	502	376	48	48
4	427	320	41	41
5	406	304	39	39
6	363	272	35	35
7	336	252	32	32
8	320	240	31	31
9	256	192	24	24
10	240	180	23	23
11	240	180	23	23
12	230	172	22	22
13	208	156	20	20
14	192	144	18	18
15	192	144	18	18
16	187	140	18	18
17	107	80	10	10
18	59	44	6	6
19	53	40	5	5
20	21	16	2	2
21	16	12	2	2
22	16	12	2	2
23	11	8	1	1
24	11	8	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	934	2	102	No	No	No	No	No	No	No	Yes	No	No
2	4	897	2	98	No	No	No	No	No	No	No	Yes	No	No
3	4	878	2	96	No	No	No	No	No	No	No	Yes	No	No
4	4	747	2	82	No	No	No	No	No	No	No	No	No	No
5	4	710	2	78	No	No	No	No	No	No	No	No	No	No
6	4	635	2	70	No	No	No	No	No	No	No	No	No	No
7	4	588	2	64	No	No	No	No	No	No	No	No	No	No
8	4	560	2	62	No	No	No	No	No	No	No	No	No	No
9	4	448	2	48	No	No	No	No	No	No	No	No	No	No
10	4	420	2	46	No	No	No	No	No	No	No	No	No	No
11	4	420	2	46	No	No	No	No	No	No	No	No	No	No
12	4	402	2	44	No	No	No	No	No	No	No	No	No	No
13	4	364	2	40	No	No	No	No	No	No	No	No	No	No
14	4	336	2	36	No	No	No	No	No	No	No	No	No	No
15	4	336	2	36	No	No	No	No	No	No	No	No	No	No
16	4	327	2	36	No	No	No	No	No	No	No	No	No	No
17	4	187	2	20	No	No	No	No	No	No	No	No	No	No
18	4	103	2	12	No	No	No	No	No	No	No	No	No	No
19	4	93	2	10	No	No	No	No	No	No	No	No	No	No
20	4	37	2	4	No	No	No	No	No	No	No	No	No	No
21	4	28	2	4	No	No	No	No	No	No	No	No	No	No
22	4	28	2	4	No	No	No	No	No	No	No	No	No	No
23	4	19	2	2	No	No	No	No	No	No	No	No	No	No
24	4	19	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	3	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.5	25.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:17	0:21
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	51	51
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1036	1036
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 5: George Elmer Dr & Mullan Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	1538	816	379
2	1476	783	364
3	1446	767	356
4	1230	653	303
5	1169	620	288
6	1046	555	258
7	969	514	239
8	923	490	227
9	738	392	182
10	692	367	171
11	692	367	171
12	661	351	163
13	600	318	148
14	554	294	136
15	554	294	136
16	538	286	133
17	308	163	76
18	169	90	42
19	154	82	38
20	62	33	15
21	46	24	11
22	46	24	11
23	31	16	8
24	31	16	8

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	2354	2	379	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	2259	2	364	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	2213	2	356	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1883	2	303	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1789	2	288	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1601	2	258	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1483	2	239	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1413	2	227	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	1130	2	182	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	4	1059	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	4	1059	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	4	1012	2	163	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	4	918	2	148	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
14	4	848	2	136	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
15	4	848	2	136	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
16	4	824	2	133	No	No	No	Yes	No	Yes	Yes	Yes	Yes	No
17	4	471	2	76	No	No	No	No	No	No	No	No	No	No
18	4	259	2	42	No	No	No	No	No	No	No	No	No	No
19	4	236	2	38	No	No	No	No	No	No	No	No	No	No
20	4	95	2	15	No	No	No	No	No	No	No	No	No	No
21	4	70	2	11	No	No	No	No	No	No	No	No	No	No
22	4	70	2	11	No	No	No	No	No	No	No	No	No	No
23	4	47	2	8	No	No	No	No	No	No	No	No	No	No
24	4	47	2	8	No	No	No	No	No	No	No	No	No	No
Hours Met					8	12	13	16	13	16	16	16	16	12

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	747.5
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	78:41
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	379
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2733
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 6: Dougherty Dr & England Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	466	399	211
2	447	383	203
3	438	375	198
4	373	319	169
5	354	303	160
6	317	271	143
7	294	251	133
8	280	239	127
9	224	192	101
10	210	180	95
11	210	180	95
12	200	172	91
13	182	156	82
14	168	144	76
15	168	144	76
16	163	140	74
17	93	80	42
18	51	44	23
19	47	40	21
20	19	16	8
21	14	12	6
22	14	12	6
23	9	8	4
24	9	8	4

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	865	2	211	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	830	2	203	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	813	2	198	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	692	2	169	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
5	3	657	2	160	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
6	3	588	2	143	No	No	Yes	Yes	No	No	No	Yes	No	No
7	3	545	2	133	No	No	No	Yes	No	No	No	Yes	No	No
8	3	519	2	127	No	No	No	Yes	No	No	No	Yes	No	No
9	3	416	2	101	No	No	No	No	No	No	No	No	No	No
10	3	390	2	95	No	No	No	No	No	No	No	No	No	No
11	3	390	2	95	No	No	No	No	No	No	No	No	No	No
12	3	372	2	91	No	No	No	No	No	No	No	No	No	No
13	3	338	2	82	No	No	No	No	No	No	No	No	No	No
14	3	312	2	76	No	No	No	No	No	No	No	No	No	No
15	3	312	2	76	No	No	No	No	No	No	No	No	No	No
16	3	303	2	74	No	No	No	No	No	No	No	No	No	No
17	3	173	2	42	No	No	No	No	No	No	No	No	No	No
18	3	95	2	23	No	No	No	No	No	No	No	No	No	No
19	3	87	2	21	No	No	No	No	No	No	No	No	No	No
20	3	35	2	8	No	No	No	No	No	No	No	No	No	No
21	3	26	2	6	No	No	No	No	No	No	No	No	No	No
22	3	26	2	6	No	No	No	No	No	No	No	No	No	No
23	3	17	2	4	No	No	No	No	No	No	No	No	No	No
24	3	17	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					2	5	6	8	0	3	5	8	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	29.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:44
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	211
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1076
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Doughtery Dr & W Broadway St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	1314	1594	475
2	1261	1530	456
3	1235	1498	447
4	1051	1275	380
5	999	1211	361
6	894	1084	323
7	828	1004	299
8	788	956	285
9	631	765	228
10	591	717	214
11	591	717	214
12	565	685	204
13	512	622	185
14	473	574	171
15	473	574	171
16	460	558	166
17	263	319	95
18	145	175	52
19	131	159	48
20	53	64	19
21	39	48	14
22	39	48	14
23	26	32	10
24	26	32	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2908	2	475	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	2791	2	456	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	2733	2	447	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	2326	2	380	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	2210	2	361	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	1978	2	323	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	6	1832	2	299	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	6	1744	2	285	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	6	1396	2	228	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	6	1308	2	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	6	1308	2	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	6	1250	2	204	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	6	1134	2	185	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	6	1047	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	6	1047	2	171	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	6	1018	2	166	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	6	582	2	95	No	No	No	No	No	No	No	Yes	No	No
18	6	320	2	52	No	No	No	No	No	No	No	No	No	No
19	6	290	2	48	No	No	No	No	No	No	No	No	No	No
20	6	117	2	19	No	No	No	No	No	No	No	No	No	No
21	6	87	2	14	No	No	No	No	No	No	No	No	No	No
22	6	87	2	14	No	No	No	No	No	No	No	No	No	No
23	6	58	2	10	No	No	No	No	No	No	No	No	No	No
24	6	58	2	10	No	No	No	No	No	No	No	No	No	No
Hours Met					12	16	16	16	16	16	16	17	16	16

Warrant 3 Condition A

Orientation	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	670.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	88:25
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	475
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	3383
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 8: Flynn Ln & Camden St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	116	110	18
2	111	106	17
3	109	103	17
4	93	88	14
5	88	84	14
6	79	75	12
7	73	69	11
8	70	66	11
9	56	53	9
10	52	50	8
11	52	50	8
12	50	47	8
13	45	43	7
14	42	40	6
15	42	40	6
16	41	39	6
17	23	22	4
18	13	12	2
19	12	11	2
20	5	4	1
21	3	3	1
22	3	3	1
23	2	2	0
24	2	2	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	226	1	18	No	No	No	No	No	No	No	No	No	No
2	2	217	1	17	No	No	No	No	No	No	No	No	No	No
3	2	212	1	17	No	No	No	No	No	No	No	No	No	No
4	2	181	1	14	No	No	No	No	No	No	No	No	No	No
5	2	172	1	14	No	No	No	No	No	No	No	No	No	No
6	2	154	1	12	No	No	No	No	No	No	No	No	No	No
7	2	142	1	11	No	No	No	No	No	No	No	No	No	No
8	2	136	1	11	No	No	No	No	No	No	No	No	No	No
9	2	109	1	9	No	No	No	No	No	No	No	No	No	No
10	2	102	1	8	No	No	No	No	No	No	No	No	No	No
11	2	102	1	8	No	No	No	No	No	No	No	No	No	No
12	2	97	1	8	No	No	No	No	No	No	No	No	No	No
13	2	88	1	7	No	No	No	No	No	No	No	No	No	No
14	2	82	1	6	No	No	No	No	No	No	No	No	No	No
15	2	82	1	6	No	No	No	No	No	No	No	No	No	No
16	2	80	1	6	No	No	No	No	No	No	No	No	No	No
17	2	45	1	4	No	No	No	No	No	No	No	No	No	No
18	2	25	1	2	No	No	No	No	No	No	No	No	No	No
19	2	23	1	2	No	No	No	No	No	No	No	No	No	No
20	2	9	1	1	No	No	No	No	No	No	No	No	No	No
21	2	6	1	1	No	No	No	No	No	No	No	No	No	No
22	2	6	1	1	No	No	No	No	No	No	No	No	No	No
23	2	4	1	0	No	No	No	No	No	No	No	No	No	No
24	2	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	18
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	244
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 9: Flynn Ln & England Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	534	360	99	141
2	513	346	95	135
3	502	338	93	133
4	427	288	79	113
5	406	274	75	107
6	363	245	67	96
7	336	227	62	89
8	320	216	59	85
9	256	173	48	68
10	240	162	45	63
11	240	162	45	63
12	230	155	43	61
13	208	140	39	55
14	192	130	36	51
15	192	130	36	51
16	187	126	35	49
17	107	72	20	28
18	59	40	11	16
19	53	36	10	14
20	21	14	4	6
21	16	11	3	4
22	16	11	3	4
23	11	7	2	3
24	11	7	2	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	894	2	240	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	4	859	2	230	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	4	840	2	226	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	4	715	2	192	No	No	Yes	Yes	No	No	Yes	Yes	No	No
5	4	680	2	182	No	No	Yes	Yes	No	No	Yes	Yes	No	No
6	4	608	2	163	No	No	No	Yes	No	No	No	Yes	No	No
7	4	563	2	151	No	No	No	Yes	No	No	No	Yes	No	No
8	4	536	2	144	No	No	No	Yes	No	No	No	Yes	No	No
9	4	429	2	116	No	No	No	No	No	No	No	No	No	No
10	4	402	2	108	No	No	No	No	No	No	No	No	No	No
11	4	402	2	108	No	No	No	No	No	No	No	No	No	No
12	4	385	2	104	No	No	No	No	No	No	No	No	No	No
13	4	348	2	94	No	No	No	No	No	No	No	No	No	No
14	4	322	2	87	No	No	No	No	No	No	No	No	No	No
15	4	322	2	87	No	No	No	No	No	No	No	No	No	No
16	4	313	2	84	No	No	No	No	No	No	No	No	No	No
17	4	179	2	48	No	No	No	No	No	No	No	No	No	No
18	4	99	2	27	No	No	No	No	No	No	No	No	No	No
19	4	89	2	24	No	No	No	No	No	No	No	No	No	No
20	4	35	2	10	No	No	No	No	No	No	No	No	No	No
21	4	27	2	7	No	No	No	No	No	No	No	No	No	No
22	4	27	2	7	No	No	No	No	No	No	No	No	No	No
23	4	18	2	5	No	No	No	No	No	No	No	No	No	No
24	4	18	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	5	8	0	3	5	8	0	0

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	48.1	27.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:19	1:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	99	141
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1134	1134
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 10: Flynn Ln & Chelsea Dr

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	157	153	22	80
2	151	147	21	77
3	148	144	21	75
4	126	122	18	64
5	119	116	17	61
6	107	104	15	54
7	99	96	14	50
8	94	92	13	48
9	75	73	11	38
10	71	69	10	36
11	71	69	10	36
12	68	66	9	34
13	61	60	9	31
14	57	55	8	29
15	57	55	8	29
16	55	54	8	28
17	31	31	4	16
18	17	17	2	9
19	16	15	2	8
20	6	6	1	3
21	5	5	1	2
22	5	5	1	2
23	3	3	0	2
24	3	3	0	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	310	2	102	No	No	No	No	No	No	No	No	No	No
2	2	298	2	98	No	No	No	No	No	No	No	No	No	No
3	2	292	2	96	No	No	No	No	No	No	No	No	No	No
4	2	248	2	82	No	No	No	No	No	No	No	No	No	No
5	2	235	2	78	No	No	No	No	No	No	No	No	No	No
6	2	211	2	69	No	No	No	No	No	No	No	No	No	No
7	2	195	2	64	No	No	No	No	No	No	No	No	No	No
8	2	186	2	61	No	No	No	No	No	No	No	No	No	No
9	2	148	2	49	No	No	No	No	No	No	No	No	No	No
10	2	140	2	46	No	No	No	No	No	No	No	No	No	No
11	2	140	2	46	No	No	No	No	No	No	No	No	No	No
12	2	134	2	43	No	No	No	No	No	No	No	No	No	No
13	2	121	2	40	No	No	No	No	No	No	No	No	No	No
14	2	112	2	37	No	No	No	No	No	No	No	No	No	No
15	2	112	2	37	No	No	No	No	No	No	No	No	No	No
16	2	109	2	36	No	No	No	No	No	No	No	No	No	No
17	2	62	2	20	No	No	No	No	No	No	No	No	No	No
18	2	34	2	11	No	No	No	No	No	No	No	No	No	No
19	2	31	2	10	No	No	No	No	No	No	No	No	No	No
20	2	12	2	4	No	No	No	No	No	No	No	No	No	No
21	2	10	2	3	No	No	No	No	No	No	No	No	No	No
22	2	10	2	3	No	No	No	No	No	No	No	No	No	No
23	2	6	2	2	No	No	No	No	No	No	No	No	No	No
24	2	6	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.8	11
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:14
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	22	80
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	412	412
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 11: Flynn Ln & Siren's Dr

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	169	154	44
2	162	148	42
3	159	145	41
4	135	123	35
5	128	117	33
6	115	105	30
7	106	97	28
8	101	92	26
9	81	74	21
10	76	69	20
11	76	69	20
12	73	66	19
13	66	60	17
14	61	55	16
15	61	55	16
16	59	54	15
17	34	31	9
18	19	17	5
19	17	15	4
20	7	6	2
21	5	5	1
22	5	5	1
23	3	3	1
24	3	3	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	323	2	44	No	No	No	No	No	No	No	No	No	No
2	3	310	2	42	No	No	No	No	No	No	No	No	No	No
3	3	304	2	41	No	No	No	No	No	No	No	No	No	No
4	3	258	2	35	No	No	No	No	No	No	No	No	No	No
5	3	245	2	33	No	No	No	No	No	No	No	No	No	No
6	3	220	2	30	No	No	No	No	No	No	No	No	No	No
7	3	203	2	28	No	No	No	No	No	No	No	No	No	No
8	3	193	2	26	No	No	No	No	No	No	No	No	No	No
9	3	155	2	21	No	No	No	No	No	No	No	No	No	No
10	3	145	2	20	No	No	No	No	No	No	No	No	No	No
11	3	145	2	20	No	No	No	No	No	No	No	No	No	No
12	3	139	2	19	No	No	No	No	No	No	No	No	No	No
13	3	126	2	17	No	No	No	No	No	No	No	No	No	No
14	3	116	2	16	No	No	No	No	No	No	No	No	No	No
15	3	116	2	16	No	No	No	No	No	No	No	No	No	No
16	3	113	2	15	No	No	No	No	No	No	No	No	No	No
17	3	65	2	9	No	No	No	No	No	No	No	No	No	No
18	3	36	2	5	No	No	No	No	No	No	No	No	No	No
19	3	32	2	4	No	No	No	No	No	No	No	No	No	No
20	3	13	2	2	No	No	No	No	No	No	No	No	No	No
21	3	10	2	1	No	No	No	No	No	No	No	No	No	No
22	3	10	2	1	No	No	No	No	No	No	No	No	No	No
23	3	6	2	1	No	No	No	No	No	No	No	No	No	No
24	3	6	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.1
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	44
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	367
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 12: Flynn Ln & Mullan Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N, S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	N	S
1	1464	741	139	1
2	1405	711	133	1
3	1376	697	131	1
4	1171	593	111	1
5	1113	563	106	1
6	996	504	95	1
7	922	467	88	1
8	878	445	83	1
9	703	356	67	0
10	659	333	63	0
11	659	333	63	0
12	630	319	60	0
13	571	289	54	0
14	527	267	50	0
15	527	267	50	0
16	512	259	49	0
17	293	148	28	0
18	161	82	15	0
19	146	74	14	0
20	59	30	6	0
21	44	22	4	0
22	44	22	4	0
23	29	15	3	0
24	29	15	3	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2205	2	140	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	2116	2	134	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	2073	2	132	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	1764	2	112	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	1676	2	107	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1500	2	96	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1389	2	89	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1323	2	84	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
9	5	1059	2	67	No	No	No	No	No	Yes	Yes	Yes	Yes	No
10	5	992	2	63	No	No	No	No	No	Yes	Yes	Yes	Yes	No
11	5	992	2	63	No	No	No	No	No	Yes	Yes	Yes	Yes	No
12	5	949	2	60	No	No	No	No	No	Yes	Yes	Yes	No	No
13	5	860	2	54	No	No	No	No	No	No	Yes	Yes	No	No
14	5	794	2	50	No	No	No	No	No	No	No	Yes	No	No
15	5	794	2	50	No	No	No	No	No	No	No	Yes	No	No
16	5	771	2	49	No	No	No	No	No	No	No	Yes	No	No
17	5	441	2	28	No	No	No	No	No	No	No	No	No	No
18	5	243	2	15	No	No	No	No	No	No	No	No	No	No
19	5	220	2	14	No	No	No	No	No	No	No	No	No	No
20	5	89	2	6	No	No	No	No	No	No	No	No	No	No
21	5	66	2	4	No	No	No	No	No	No	No	No	No	No
22	5	66	2	4	No	No	No	No	No	No	No	No	No	No
23	5	44	2	3	No	No	No	No	No	No	No	No	No	No
24	5	44	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	5	7	8	12	13	16	11	8

Warrant 3 Condition A

Orientation	N	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	126.7	13.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	4:53	0:00
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	139	1
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	2345	2345
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 13: Mary Jane Blvd & Mullan Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	1455	684	244
2	1397	657	234
3	1368	643	229
4	1164	547	195
5	1106	520	185
6	989	465	166
7	917	431	154
8	873	410	146
9	698	328	117
10	655	308	110
11	655	308	110
12	626	294	105
13	567	267	95
14	524	246	88
15	524	246	88
16	509	239	85
17	291	137	49
18	160	75	27
19	146	68	24
20	58	27	10
21	44	21	7
22	44	21	7
23	29	14	5
24	29	14	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	2139	2	244	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	4	2054	2	234	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	4	2011	2	229	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	4	1711	2	195	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	4	1626	2	185	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	4	1454	2	166	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	4	1348	2	154	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	4	1283	2	146	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	4	1026	2	117	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
10	4	963	2	110	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
11	4	963	2	110	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
12	4	920	2	105	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
13	4	834	2	95	No	No	No	No	No	Yes	Yes	Yes	No	No
14	4	770	2	88	No	No	No	No	No	Yes	Yes	Yes	No	No
15	4	770	2	88	No	No	No	No	No	Yes	Yes	Yes	No	No
16	4	748	2	85	No	No	No	No	No	Yes	Yes	Yes	No	No
17	4	428	2	49	No	No	No	No	No	No	No	No	No	No
18	4	235	2	27	No	No	No	No	No	No	No	No	No	No
19	4	214	2	24	No	No	No	No	No	No	No	No	No	No
20	4	85	2	10	No	No	No	No	No	No	No	No	No	No
21	4	65	2	7	No	No	No	No	No	No	No	No	No	No
22	4	65	2	7	No	No	No	No	No	No	No	No	No	No
23	4	43	2	5	No	No	No	No	No	No	No	No	No	No
24	4	43	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					3	6	8	9	12	16	16	16	12	8

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	810.5
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	54:55
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	244
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2383
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 14: Mary Jane Blvd & O'Leary St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	233	244	33	78
2	224	234	32	75
3	219	229	31	73
4	186	195	26	62
5	177	185	25	59
6	158	166	22	53
7	147	154	21	49
8	140	146	20	47
9	112	117	16	37
10	105	110	15	35
11	105	110	15	35
12	100	105	14	34
13	91	95	13	30
14	84	88	12	28
15	84	88	12	28
16	82	85	12	27
17	47	49	7	16
18	26	27	4	9
19	23	24	3	8
20	9	10	1	3
21	7	7	1	2
22	7	7	1	2
23	5	5	1	2
24	5	5	1	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	477	2	111	No	No	No	No	No	No	No	No	No	No
2	2	458	2	107	No	No	No	No	No	No	No	No	No	No
3	2	448	2	104	No	No	No	No	No	No	No	No	No	No
4	2	381	2	88	No	No	No	No	No	No	No	No	No	No
5	2	362	2	84	No	No	No	No	No	No	No	No	No	No
6	2	324	2	75	No	No	No	No	No	No	No	No	No	No
7	2	301	2	70	No	No	No	No	No	No	No	No	No	No
8	2	286	2	67	No	No	No	No	No	No	No	No	No	No
9	2	229	2	53	No	No	No	No	No	No	No	No	No	No
10	2	215	2	50	No	No	No	No	No	No	No	No	No	No
11	2	215	2	50	No	No	No	No	No	No	No	No	No	No
12	2	205	2	48	No	No	No	No	No	No	No	No	No	No
13	2	186	2	43	No	No	No	No	No	No	No	No	No	No
14	2	172	2	40	No	No	No	No	No	No	No	No	No	No
15	2	172	2	40	No	No	No	No	No	No	No	No	No	No
16	2	167	2	39	No	No	No	No	No	No	No	No	No	No
17	2	96	2	23	No	No	No	No	No	No	No	No	No	No
18	2	53	2	13	No	No	No	No	No	No	No	No	No	No
19	2	47	2	11	No	No	No	No	No	No	No	No	No	No
20	2	19	2	4	No	No	No	No	No	No	No	No	No	No
21	2	14	2	3	No	No	No	No	No	No	No	No	No	No
22	2	14	2	3	No	No	No	No	No	No	No	No	No	No
23	2	10	2	3	No	No	No	No	No	No	No	No	No	No
24	2	10	2	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.6	11.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:14
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	33	78
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	588	588
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 15: Mary Jane Blvd & Melrose Pl

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	252	244	67	148
2	242	234	64	142
3	237	229	63	139
4	202	195	54	118
5	192	185	51	112
6	171	166	46	101
7	159	154	42	93
8	151	146	40	89
9	121	117	32	71
10	113	110	30	67
11	113	110	30	67
12	108	105	29	64
13	98	95	26	58
14	91	88	24	53
15	91	88	24	53
16	88	85	23	52
17	50	49	13	30
18	28	27	7	16
19	25	24	7	15
20	10	10	3	6
21	8	7	2	4
22	8	7	2	4
23	5	5	1	3
24	5	5	1	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	496	2	215	No	Yes	Yes	Yes	No	No	No	No	No	No
2	2	476	2	206	No	No	Yes	Yes	No	No	No	No	No	No
3	2	466	2	202	No	No	Yes	Yes	No	No	No	No	No	No
4	2	397	2	172	No	No	No	Yes	No	No	No	No	No	No
5	2	377	2	163	No	No	No	Yes	No	No	No	No	No	No
6	2	337	2	147	No	No	No	Yes	No	No	No	No	No	No
7	2	313	2	135	No	No	No	No	No	No	No	No	No	No
8	2	297	2	129	No	No	No	No	No	No	No	No	No	No
9	2	238	2	103	No	No	No	No	No	No	No	No	No	No
10	2	223	2	97	No	No	No	No	No	No	No	No	No	No
11	2	223	2	97	No	No	No	No	No	No	No	No	No	No
12	2	213	2	93	No	No	No	No	No	No	No	No	No	No
13	2	193	2	84	No	No	No	No	No	No	No	No	No	No
14	2	179	2	77	No	No	No	No	No	No	No	No	No	No
15	2	179	2	77	No	No	No	No	No	No	No	No	No	No
16	2	173	2	75	No	No	No	No	No	No	No	No	No	No
17	2	99	2	43	No	No	No	No	No	No	No	No	No	No
18	2	55	2	23	No	No	No	No	No	No	No	No	No	No
19	2	49	2	22	No	No	No	No	No	No	No	No	No	No
20	2	20	2	9	No	No	No	No	No	No	No	No	No	No
21	2	15	2	6	No	No	No	No	No	No	No	No	No	No
22	2	15	2	6	No	No	No	No	No	No	No	No	No	No
23	2	10	2	4	No	No	No	No	No	No	No	No	No	No
24	2	10	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					0	1	3	6	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.3	18.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:18	0:45
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	67	148
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	711	711
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 16: Mary Jane Blvd & England Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	609	407	252	262
2	585	391	242	252
3	572	383	237	246
4	487	326	202	210
5	463	309	192	199
6	414	277	171	178
7	384	256	159	165
8	365	244	151	157
9	292	195	121	126
10	274	183	113	118
11	274	183	113	118
12	262	175	108	113
13	238	159	98	102
14	219	147	91	94
15	219	147	91	94
16	213	142	88	92
17	122	81	50	52
18	67	45	28	29
19	61	41	25	26
20	24	16	10	10
21	18	12	8	8
22	18	12	8	8
23	12	8	5	5
24	12	8	5	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	1016	4	514	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
2	4	976	4	494	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3	4	955	4	483	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
4	4	813	4	412	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
5	4	772	4	391	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
6	4	691	4	349	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
7	4	640	4	324	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
8	4	609	4	308	No	No	Yes	Yes	No	No	No	Yes	No	No
9	4	487	4	247	No	No	No	Yes	No	No	No	No	No	No
10	4	457	4	231	No	No	No	Yes	No	No	No	No	No	No
11	4	457	4	231	No	No	No	Yes	No	No	No	No	No	No
12	4	437	4	221	No	No	No	Yes	No	No	No	No	No	No
13	4	397	4	200	No	No	No	No	No	No	No	No	No	No
14	4	366	4	185	No	No	No	No	No	No	No	No	No	No
15	4	366	4	185	No	No	No	No	No	No	No	No	No	No
16	4	355	4	180	No	No	No	No	No	No	No	No	No	No
17	4	203	4	102	No	No	No	No	No	No	No	No	No	No
18	4	112	4	57	No	No	No	No	No	No	No	No	No	No
19	4	102	4	51	No	No	No	No	No	No	No	No	No	No
20	4	40	4	20	No	No	No	No	No	No	No	No	No	No
21	4	30	4	16	No	No	No	No	No	No	No	No	No	No
22	4	30	4	16	No	No	No	No	No	No	No	No	No	No
23	4	20	4	10	No	No	No	No	No	No	No	No	No	No
24	4	20	4	10	No	No	No	No	No	No	No	No	No	No
Hours Met					4	7	8	12	3	5	7	8	3	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	385.8	186.9
Number of Lanes on Minor Street Approach	2	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	27:00	13:36
Delay Condition Met	Yes	Yes
Volume on Minor Street Approach During Same Hour	252	262
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1530	1530
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	Yes
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 17: Mary Jane Blvd & Camden St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	195	261	23	66
2	187	251	22	63
3	183	245	22	62
4	156	209	18	53
5	148	198	17	50
6	133	177	16	45
7	123	164	14	42
8	117	157	14	40
9	94	125	11	32
10	88	117	10	30
11	88	117	10	30
12	84	112	10	28
13	76	102	9	26
14	70	94	8	24
15	70	94	8	24
16	68	91	8	23
17	39	52	5	13
18	21	29	3	7
19	20	26	2	7
20	8	10	1	3
21	6	8	1	2
22	6	8	1	2
23	4	5	0	1
24	4	5	0	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	456	2	89	No	No	No	No	No	No	No	No	No	No
2	2	438	2	85	No	No	No	No	No	No	No	No	No	No
3	2	428	2	84	No	No	No	No	No	No	No	No	No	No
4	2	365	2	71	No	No	No	No	No	No	No	No	No	No
5	2	346	2	67	No	No	No	No	No	No	No	No	No	No
6	2	310	2	61	No	No	No	No	No	No	No	No	No	No
7	2	287	2	56	No	No	No	No	No	No	No	No	No	No
8	2	274	2	54	No	No	No	No	No	No	No	No	No	No
9	2	219	2	43	No	No	No	No	No	No	No	No	No	No
10	2	205	2	40	No	No	No	No	No	No	No	No	No	No
11	2	205	2	40	No	No	No	No	No	No	No	No	No	No
12	2	196	2	38	No	No	No	No	No	No	No	No	No	No
13	2	178	2	35	No	No	No	No	No	No	No	No	No	No
14	2	164	2	32	No	No	No	No	No	No	No	No	No	No
15	2	164	2	32	No	No	No	No	No	No	No	No	No	No
16	2	159	2	31	No	No	No	No	No	No	No	No	No	No
17	2	91	2	18	No	No	No	No	No	No	No	No	No	No
18	2	50	2	10	No	No	No	No	No	No	No	No	No	No
19	2	46	2	9	No	No	No	No	No	No	No	No	No	No
20	2	18	2	4	No	No	No	No	No	No	No	No	No	No
21	2	14	2	3	No	No	No	No	No	No	No	No	No	No
22	2	14	2	3	No	No	No	No	No	No	No	No	No	No
23	2	9	2	1	No	No	No	No	No	No	No	No	No	No
24	2	9	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12	11.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:12
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	23	66
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	545	545
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 18: Mary Jane Blvd & Flynn Ln

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	205	327	109	116
2	197	314	105	111
3	193	307	102	109
4	164	262	87	93
5	156	249	83	88
6	139	222	74	79
7	129	206	69	73
8	123	196	65	70
9	98	157	52	56
10	92	147	49	52
11	92	147	49	52
12	88	141	47	50
13	80	128	43	45
14	74	118	39	42
15	74	118	39	42
16	72	114	38	41
17	41	65	22	23
18	23	36	12	13
19	21	33	11	12
20	8	13	4	5
21	6	10	3	3
22	6	10	3	3
23	4	7	2	2
24	4	7	2	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	532	2	225	No	No	Yes	Yes	No	No	No	Yes	No	No
2	2	511	2	216	No	No	Yes	Yes	No	No	No	Yes	No	No
3	2	500	2	211	No	No	Yes	Yes	No	No	No	No	No	No
4	2	426	2	180	No	No	No	Yes	No	No	No	No	No	No
5	2	405	2	171	No	No	No	Yes	No	No	No	No	No	No
6	2	361	2	153	No	No	No	No	No	No	No	No	No	No
7	2	335	2	142	No	No	No	No	No	No	No	No	No	No
8	2	319	2	135	No	No	No	No	No	No	No	No	No	No
9	2	255	2	108	No	No	No	No	No	No	No	No	No	No
10	2	239	2	101	No	No	No	No	No	No	No	No	No	No
11	2	239	2	101	No	No	No	No	No	No	No	No	No	No
12	2	229	2	97	No	No	No	No	No	No	No	No	No	No
13	2	208	2	88	No	No	No	No	No	No	No	No	No	No
14	2	192	2	81	No	No	No	No	No	No	No	No	No	No
15	2	192	2	81	No	No	No	No	No	No	No	No	No	No
16	2	186	2	79	No	No	No	No	No	No	No	No	No	No
17	2	106	2	45	No	No	No	No	No	No	No	No	No	No
18	2	59	2	25	No	No	No	No	No	No	No	No	No	No
19	2	54	2	23	No	No	No	No	No	No	No	No	No	No
20	2	21	2	9	No	No	No	No	No	No	No	No	No	No
21	2	16	2	6	No	No	No	No	No	No	No	No	No	No
22	2	16	2	6	No	No	No	No	No	No	No	No	No	No
23	2	11	2	4	No	No	No	No	No	No	No	No	No	No
24	2	11	2	4	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	5	0	0	0	2	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.7	18.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:30	0:36
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	109	116
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	757	757
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 19: Mary Jane Blvd & Veteran's Way

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	236	405	0	94
2	227	389	0	90
3	222	381	0	88
4	189	324	0	75
5	179	308	0	71
6	160	275	0	64
7	149	255	0	59
8	142	243	0	56
9	113	194	0	45
10	106	182	0	42
11	106	182	0	42
12	101	174	0	40
13	92	158	0	37
14	85	146	0	34
15	85	146	0	34
16	83	142	0	33
17	47	81	0	19
18	26	45	0	10
19	24	41	0	9
20	9	16	0	4
21	7	12	0	3
22	7	12	0	3
23	5	8	0	2
24	5	8	0	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	641	2	94	No	No	No	Yes	No	No	Yes	Yes	No	No
2	2	616	2	90	No	No	No	Yes	No	No	No	Yes	No	No
3	2	603	2	88	No	No	No	Yes	No	No	No	Yes	No	No
4	2	513	2	75	No	No	No	No	No	No	No	Yes	No	No
5	2	487	2	71	No	No	No	No	No	No	No	No	No	No
6	2	435	2	64	No	No	No	No	No	No	No	No	No	No
7	2	404	2	59	No	No	No	No	No	No	No	No	No	No
8	2	385	2	56	No	No	No	No	No	No	No	No	No	No
9	2	307	2	45	No	No	No	No	No	No	No	No	No	No
10	2	288	2	42	No	No	No	No	No	No	No	No	No	No
11	2	288	2	42	No	No	No	No	No	No	No	No	No	No
12	2	275	2	40	No	No	No	No	No	No	No	No	No	No
13	2	250	2	37	No	No	No	No	No	No	No	No	No	No
14	2	231	2	34	No	No	No	No	No	No	No	No	No	No
15	2	231	2	34	No	No	No	No	No	No	No	No	No	No
16	2	225	2	33	No	No	No	No	No	No	No	No	No	No
17	2	128	2	19	No	No	No	No	No	No	No	No	No	No
18	2	71	2	10	No	No	No	No	No	No	No	No	No	No
19	2	65	2	9	No	No	No	No	No	No	No	No	No	No
20	2	25	2	4	No	No	No	No	No	No	No	No	No	No
21	2	19	2	3	No	No	No	No	No	No	No	No	No	No
22	2	19	2	3	No	No	No	No	No	No	No	No	No	No
23	2	13	2	2	No	No	No	No	No	No	No	No	No	No
24	2	13	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	1	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.1	18.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:28
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	0	94
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	735	735
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 20: Mary Jane Blvd & W Broadway St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	1281	1694	317
2	1230	1626	304
3	1204	1592	298
4	1025	1355	254
5	974	1287	241
6	871	1152	216
7	807	1067	200
8	769	1016	190
9	615	813	152
10	576	762	143
11	576	762	143
12	551	728	136
13	500	661	124
14	461	610	114
15	461	610	114
16	448	593	111
17	256	339	63
18	141	186	35
19	128	169	32
20	51	68	13
21	38	51	10
22	38	51	10
23	26	34	6
24	26	34	6

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2975	2	317	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	6	2856	2	304	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	6	2796	2	298	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	6	2380	2	254	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	6	2261	2	241	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	6	2023	2	216	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	6	1874	2	200	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	6	1785	2	190	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	6	1428	2	152	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	6	1338	2	143	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	6	1338	2	143	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	6	1279	2	136	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	6	1161	2	124	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	6	1071	2	114	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
15	6	1071	2	114	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
16	6	1041	2	111	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No
17	6	595	2	63	No	No	No	No	No	No	No	Yes	No	No
18	6	327	2	35	No	No	No	No	No	No	No	No	No	No
19	6	297	2	32	No	No	No	No	No	No	No	No	No	No
20	6	119	2	13	No	No	No	No	No	No	No	No	No	No
21	6	89	2	10	No	No	No	No	No	No	No	No	No	No
22	6	89	2	10	No	No	No	No	No	No	No	No	No	No
23	6	60	2	6	No	No	No	No	No	No	No	No	No	No
24	6	60	2	6	No	No	No	No	No	No	No	No	No	No
Hours Met					7	8	11	15	16	16	16	17	16	13

Warrant 3 Condition A

Orientation	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	914.1
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	80:29
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	317
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	3292
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 21: Flynn Ln & W Broadway St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	1280	1540	283
2	1229	1478	272
3	1203	1448	266
4	1024	1232	226
5	973	1170	215
6	870	1047	192
7	806	970	178
8	768	924	170
9	614	739	136
10	576	693	127
11	576	693	127
12	550	662	122
13	499	601	110
14	461	554	102
15	461	554	102
16	448	539	99
17	256	308	57
18	141	169	31
19	128	154	28
20	51	62	11
21	38	46	8
22	38	46	8
23	26	31	6
24	26	31	6

Warrant Analysis by Hour

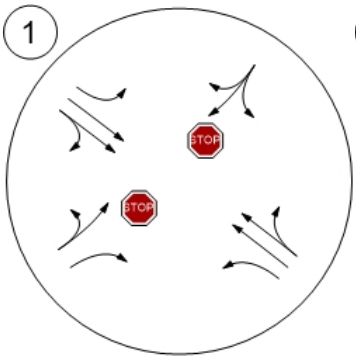
Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	5	2820	1	283	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	5	2707	1	272	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	5	2651	1	266	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	5	2256	1	226	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	5	2143	1	215	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	5	1917	1	192	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	5	1776	1	178	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	5	1692	1	170	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	5	1353	1	136	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	5	1269	1	127	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	5	1269	1	127	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	5	1212	1	122	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	5	1100	1	110	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	5	1015	1	102	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
15	5	1015	1	102	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
16	5	987	1	99	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
17	5	564	1	57	No	No	No	No	No	No	No	Yes	No	No
18	5	310	1	31	No	No	No	No	No	No	No	No	No	No
19	5	282	1	28	No	No	No	No	No	No	No	No	No	No
20	5	113	1	11	No	No	No	No	No	No	No	No	No	No
21	5	84	1	8	No	No	No	No	No	No	No	No	No	No
22	5	84	1	8	No	No	No	No	No	No	No	No	No	No
23	5	57	1	6	No	No	No	No	No	No	No	No	No	No
24	5	57	1	6	No	No	No	No	No	No	No	No	No	No
Hours Met					8	12	13	16	16	16	16	17	16	13

Warrant 3 Condition A

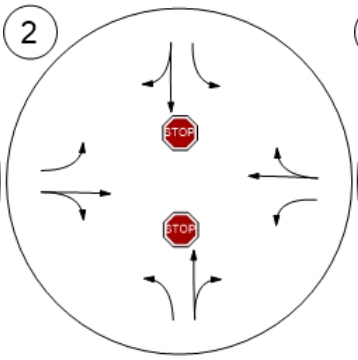
Orientation	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	58.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	4:34
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	283
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	3103
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Lane Configuration and Traffic Control

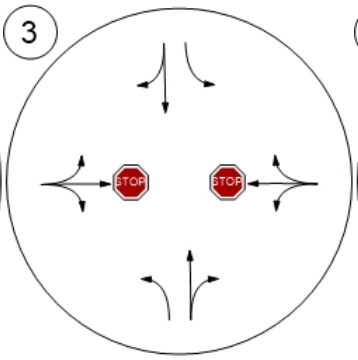
George Elmer Dr & W Broad



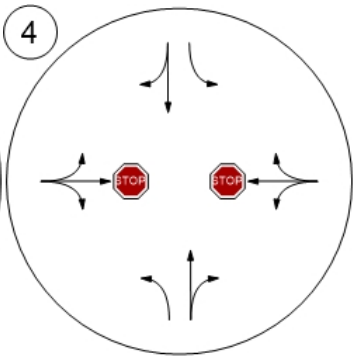
George Elmer Dr & England



George Elmer Dr & Cattle Dr



George Elmer Dr & Heron's L



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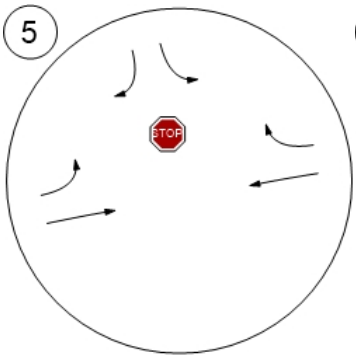
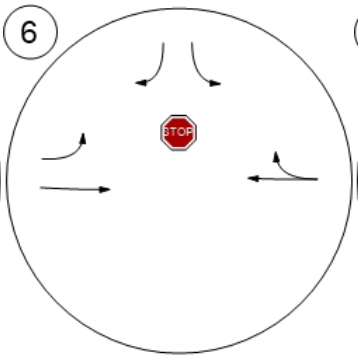


Dougherty Dr & England Blvd



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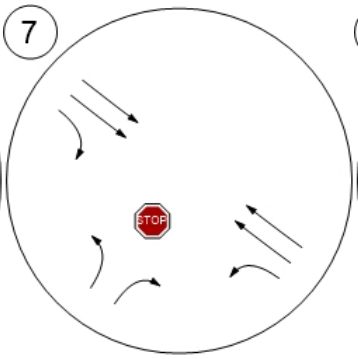

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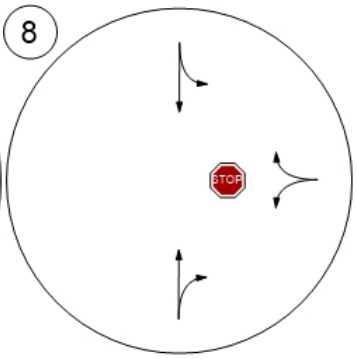
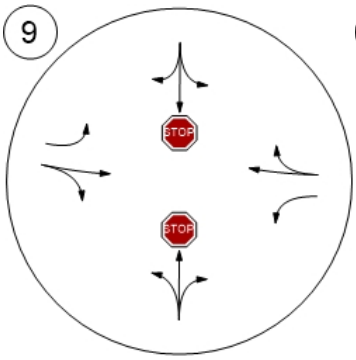


Lane Configuration and Traffic Control

Flynn Ln & England Blvd



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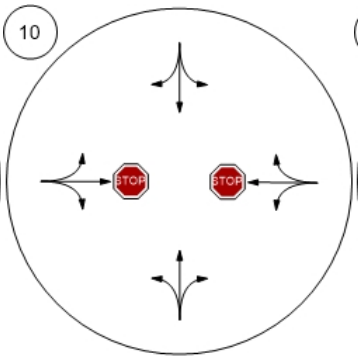

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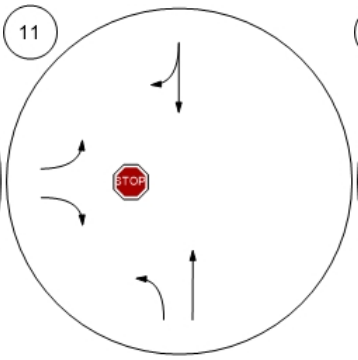
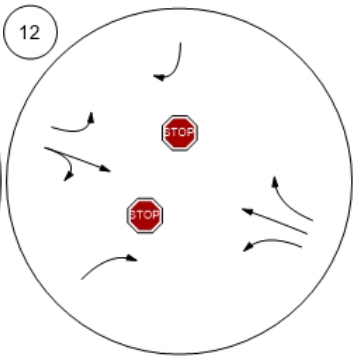


Flynn Ln & Mullan Rd



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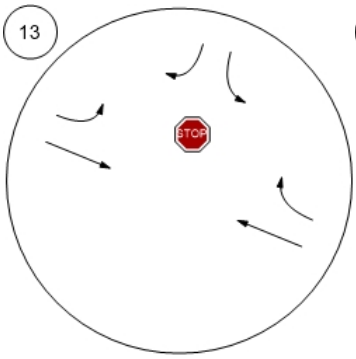

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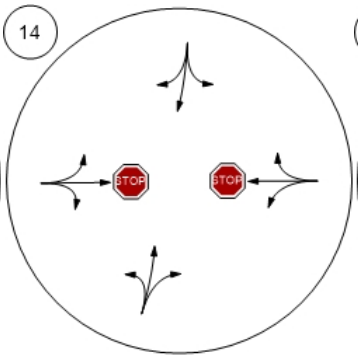

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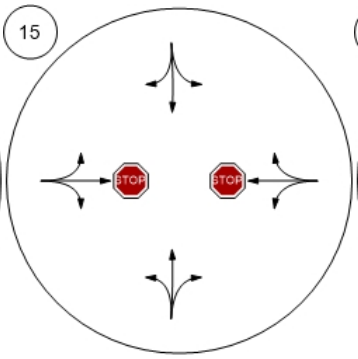

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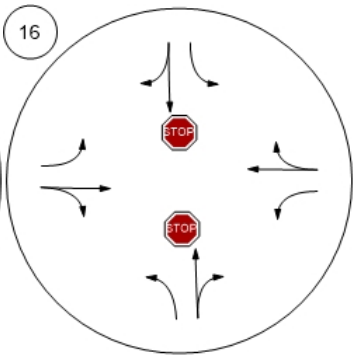
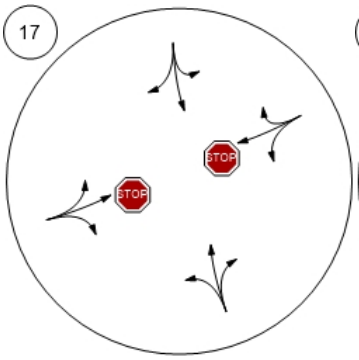
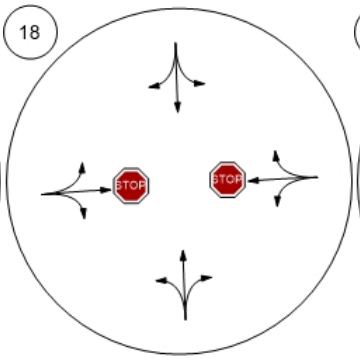


Lane Configuration and Traffic Control

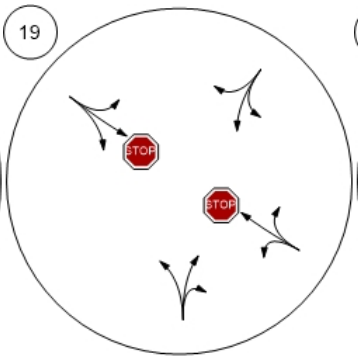
Mary Jane Blvd & Camden St



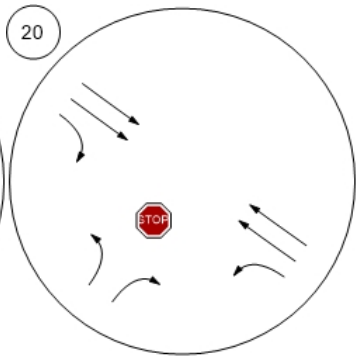
Mary Jane Blvd & Flynn Ln



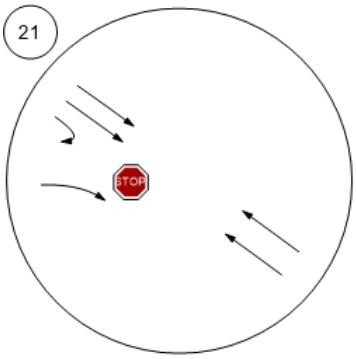
Mary Jane Blvd & Veteran's



Mary Jane Blvd & W Broadw

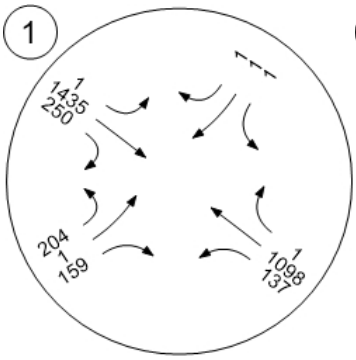


Flynn Ln & W Broadway St

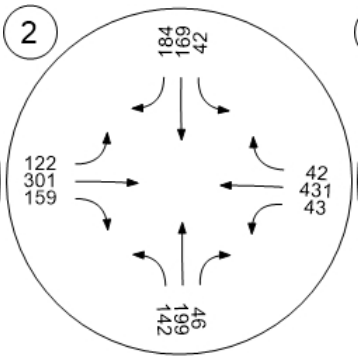


Traffic Volume - Future Total Volume

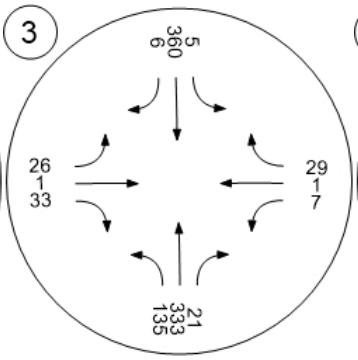
George Elmer Dr & W Broad



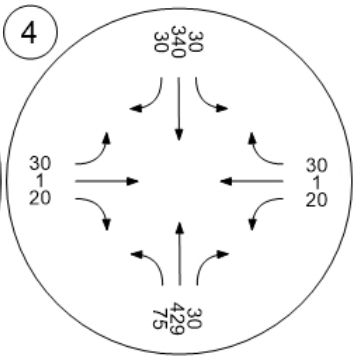
George Elmer Dr & England



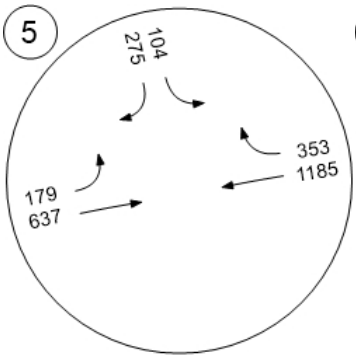
George Elmer Dr & Cattle Dr



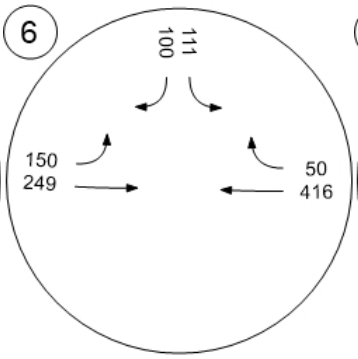
George Elmer Dr & Heron's L



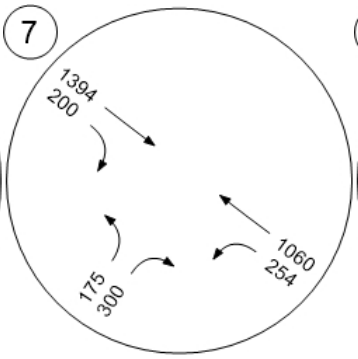
George Elmer Dr & Mullan R



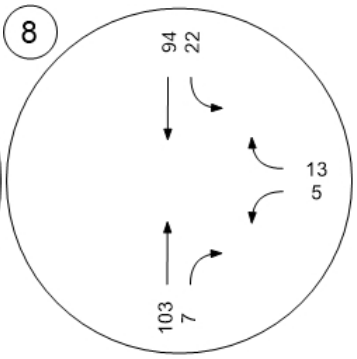
Dougherty Dr & England Blvd



Doughtery Dr & W Broadway

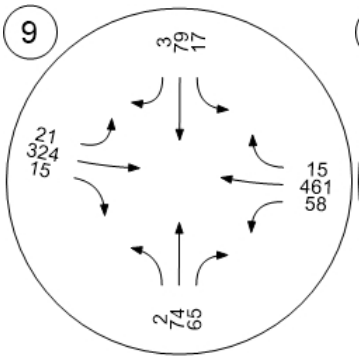


Flynn Ln & Camden St

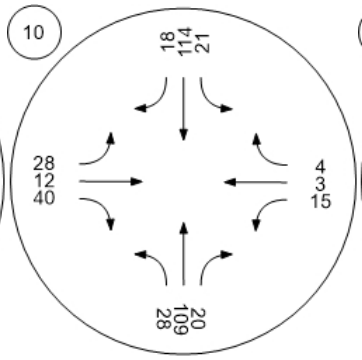


Traffic Volume - Future Total Volume

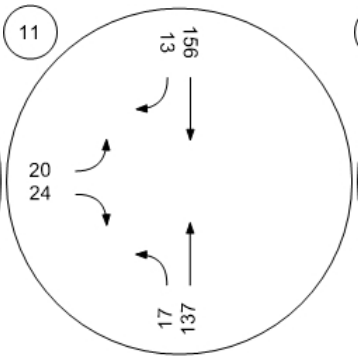
Flynn Ln & England Blvd



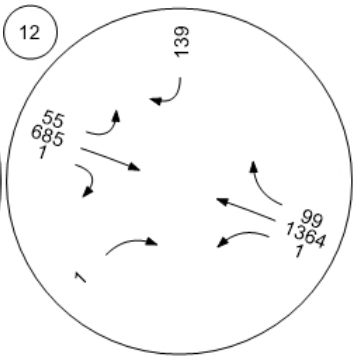
Flynn Ln & Chelsea Dr



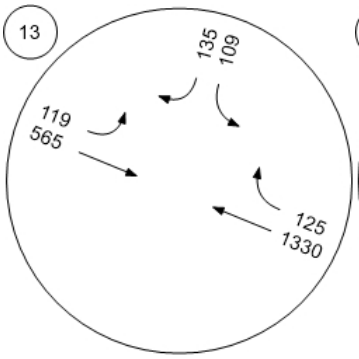
Flynn Ln & Siren's Dr



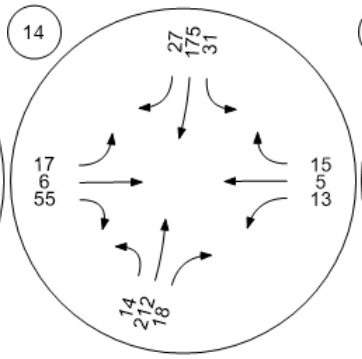
Flynn Ln & Mullan Rd



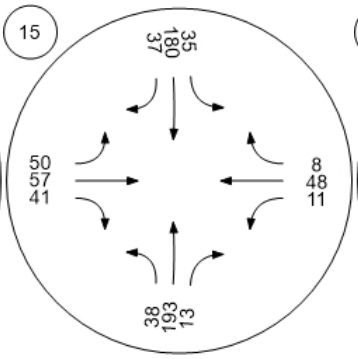
Mary Jane Blvd & Mullan Rd



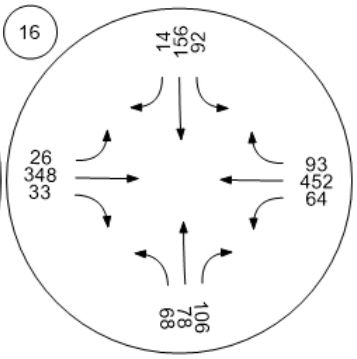
Mary Jane Blvd & O'Leary St



Mary Jane Blvd & Melrose Pl

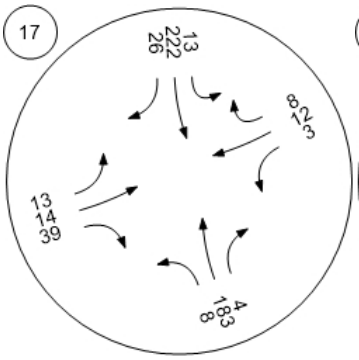


Mary Jane Blvd & England Bl

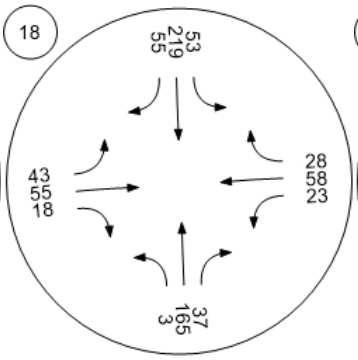


Traffic Volume - Future Total Volume

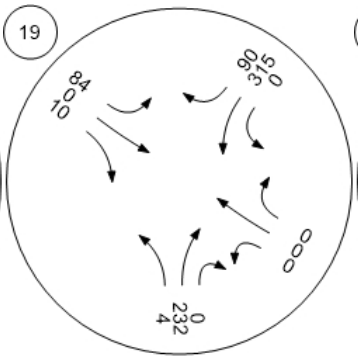
Mary Jane Blvd & Camden St



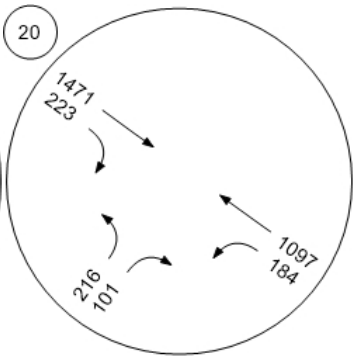
Mary Jane Blvd & Flynn Ln



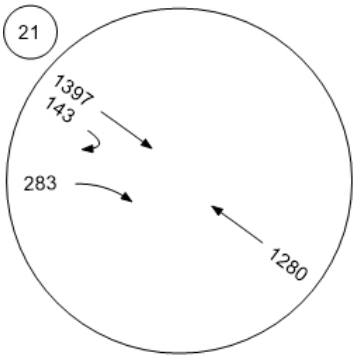
Mary Jane Blvd & Veteran's



Mary Jane Blvd & W Broadw



Flynn Ln & W Broadway St



Option 1: NB/SB Left Turn Lane

Number	9											
Intersection	Flynn Ln & England Blvd											
Control Type	Two-way stop											
Analysis Method	HCM 6th Edition											
Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Capacity Analysis

Calculated Rank	4	3	2	4	3	2	2	1	1	2	1	1
v_c, Conflicting Flow Rate	1086	1049	360	1117	1049	509	517	0	0	368	0	0
v_c, Stage 1	406	406	360	635	635	509	517	0	0	368	0	0
v_c, Stage 2	680	643	0	482	414	0	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	194	227	684	185	227	564	1049	0	0	1185	0	0
c_p,x, Stage 1 [veh/h]	622	598	1272	467	472	1355	1890	0	0	1802	0	0
c_p,x, Stage 2 [veh/h]	441	468	1085	566	593	1085	1623	0	0	1617	0	0
c_m,x, Movement Capacity [veh/h]	125	211	684	111	211	564	1049	100000	100000	1185	100000	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	125	211	684	111	211	564	1049	100000	100000	1185	100000	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.38	0.10	0.16	0.41	0.01	0.02	0.00	0.00	0.05	0.01	0.00
d_M, Delay for Movement [s/veh]	34.35	32.42	20.59	43.81	33.40	22.70	8.51	0.00	0.00	8.21	0.00	0.00
Movement LOS	D	D	C	E	D	C	A	A	A	A	A	A
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.05	2.50	2.50	0.56	1.89	1.89	0.07	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.22	62.47	62.47	13.92	47.24	47.24	1.68	0.00	0.00	4.21	0.00	0.00
d_A, Approach Delay [s/veh]	26.96			34.86			0.50			0.89		
Approach LOS	D			D			A			A		
V/C_I, Worst Movement V/C Ratio	0.16											
d_I, Worst Movement Control Delay [s/veh]	43.81											
d_I, Intersection Delay [s/veh]	6.96											
Intersection LOS	E											

Mullan BUILD - 2050 PM

Vistro File: H:\...\24667_PM2050.vistro
Report File: H:\...\24667_PM2050_AWSC.pdf

Scenario 6 All Way Stop Control (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	George Elmer Dr & England Blvd	All-way stop	HCM 6th Edition	WB Thru	1.273	94.6	F
9	Flynn Ln & England Blvd	All-way stop	HCM 6th Edition	WB Thru	0.866	24.0	C
15	Mary Jane Blvd & Melrose Pl	All-way stop	HCM 6th Edition	NB Thru	0.373	10.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	94.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.273

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	368	392	377	413	382	500	381	514
Degree of Utilization, x	0.42	0.68	0.12	0.93	0.35	1.21	0.12	1.27

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.01	4.85	0.41	10.33	1.53	20.10	0.42	22.38
95th-Percentile Queue Length [ft]	50.21	121.17	10.31	258.26	38.18	502.45	10.47	559.61
Approach Delay [s/veh]	25.60		53.35		115.31		154.34	
Approach LOS	D		F		F		F	
Intersection Delay [s/veh]	94.55							
Intersection LOS	F							

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	All-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	548	513	529	574	549	597
Degree of Utilization, x	0.28	0.21	0.04	0.64	0.11	0.87

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.14	0.78	0.14	4.55	0.39	9.78
95th-Percentile Queue Length [ft]	28.40	19.48	3.40	113.76	9.66	244.58
Approach Delay [s/veh]	12.09	11.87	18.91		32.83	
Approach LOS	B	B	C		D	
Intersection Delay [s/veh]	24.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	725	735	677	651
Degree of Utilization, x	0.37	0.37	0.24	0.11

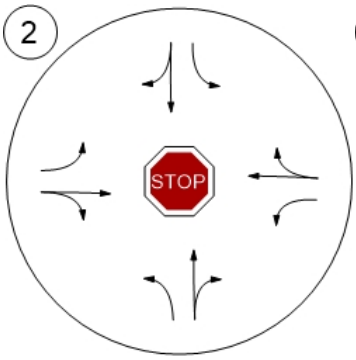
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.68	1.73	0.92	0.38
95th-Percentile Queue Length [ft]	41.98	43.29	23.08	9.43
Approach Delay [s/veh]	10.80	10.78	9.97	9.23
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.47			
Intersection LOS	B			

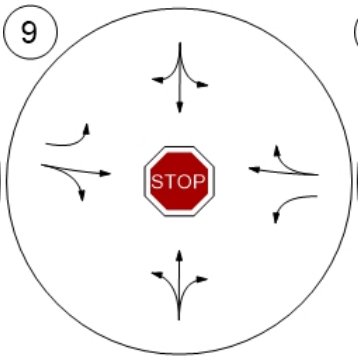
Study Intersections

Lane Configuration and Traffic Control

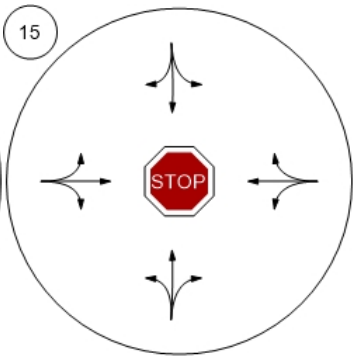
George Elmer Dr & England



Flynn Ln & England Blvd

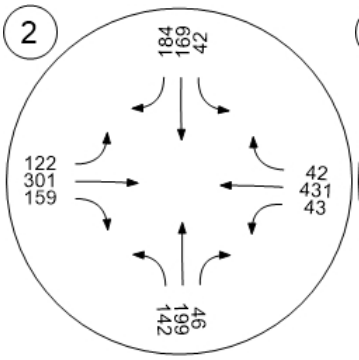


Mary Jane Blvd & Melrose Pl



Traffic Volume - Base Volume

George Elmer Dr & England



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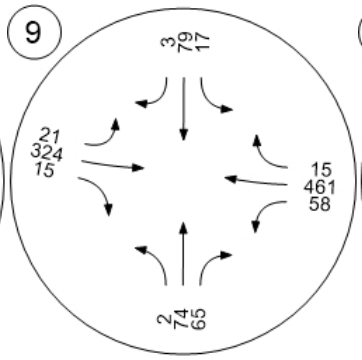
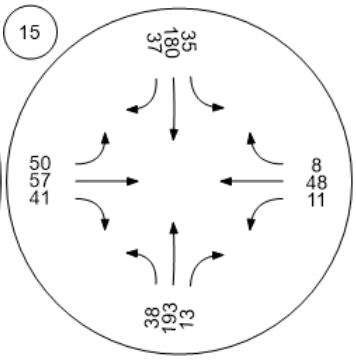


Mary Jane Blvd & Melrose Pl



Mullan BUILD - 2050 PM

Vistro File: H:\...\24667_PM2050.vistro
Report File: H:\...\24667_PM2050_RBT.pdf

Scenario 5 Roundabout (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Left		15.9	C
2	George Elmer Dr & England Blvd	Roundabout	HCM 6th Edition	WB Thru		14.9	B
3	George Elmer Dr & Cattle Dr	Roundabout	HCM 6th Edition	NB Thru		6.5	A
4	George Elmer Dr & Heron's Landing	Roundabout	HCM 6th Edition	NB Thru		7.0	A
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		40.8	E
6	Dougherty Dr & England Blvd	Roundabout	HCM 6th Edition	WB Thru		7.2	A
7	Doughtery Dr & W Broadway St	Roundabout	HCM 6th Edition	NB Right		20.0	C
8	Flynn Ln & Camden St	Roundabout	HCM 6th Edition	NB Thru		3.4	A
9	Flynn Ln & England Blvd	Roundabout	HCM 6th Edition	WB Thru		7.1	A
10	Flynn Ln & Chelsea Dr	Roundabout	HCM 6th Edition	NB Thru		3.9	A
11	Flynn Ln & Siren's Dr	Roundabout	HCM 6th Edition	SB Thru		3.8	A
12	Flynn Ln & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		52.7	F
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		60.6	F
14	Mary Jane Blvd & O'Leary St	Roundabout	HCM 6th Edition	NB Thru		4.4	A
15	Mary Jane Blvd & Melrose Pl	Roundabout	HCM 6th Edition	NB Thru		5.0	A
16	Mary Jane Blvd & England Blvd	Roundabout	HCM 6th Edition	WB Thru		10.0	B
17	Mary Jane Blvd & Camden St	Roundabout	HCM 6th Edition	SB Thru		4.3	A
			HCM 6th				

18	Mary Jane Blvd & Flynn Ln	Roundabout	HCM 6th Edition	SB Thru		5.1	A
19	Mary Jane Blvd & Veteran's Way	Roundabout	HCM 6th Edition	EB Left		5.5	A
20	Mary Jane Blvd & W Broadway St	Roundabout	HCM 6th Edition	NB Left		18.1	C
21	Flynn Ln & W Broadway St	Roundabout	HCM 6th Edition	NB Thru		11.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			Commerical Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commerical Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	2			1			1			1		
Circulating Flow Rate [veh/h]	1593			1598			154			231		
Exiting Flow Rate [veh/h]	430			3			1447			1770		
Demand Flow Rate [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Adjusted Demand Flow Rate [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	229	180	4	879	991	644	727
Capacity of Entry and Bypass Lanes [veh/h]	312	367	271	1235	1235	1152	1152
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	303	356	266	1211	1211	1129	1129
X, volume / capacity	0.73	0.49	0.01	0.71	0.80	0.56	0.63

Movement, Approach, & Intersection Results

Lane LOS	E	C	B	B	C	A	B
95th-Percentile Queue Length [veh]	5.38	2.58	0.03	6.46	9.31	3.60	4.70
95th-Percentile Queue Length [ft]	134.60	64.44	0.86	161.44	232.73	89.98	117.50
Approach Delay [s/veh]	33.34		13.79	15.78		10.84	
Approach LOS	D		B	C		B	
Intersection Delay [s/veh]	15.87						
Intersection LOS	C						

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	516			682			284			515		
Exiting Flow Rate [veh/h]	414			405			838			431		
Demand Flow Rate [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Adjusted Demand Flow Rate [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	431	441	646	573
Capacity of Entry and Bypass Lanes [veh/h]	816	689	1033	816
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	796	672	1013	800
X, volume / capacity	0.53	0.64	0.63	0.70

Movement, Approach, & Intersection Results

Lane LOS	B	C	B	C
95th-Percentile Queue Length [veh]	3.15	4.63	4.57	5.88
95th-Percentile Queue Length [ft]	78.68	115.70	114.17	147.12
Approach Delay [s/veh]	12.12	17.59	12.42	17.85
Approach LOS	B	C	B	C
Intersection Delay [s/veh]	14.94			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 3: George Elmer Dr & Cattle Dr

Control Type:	Roundabout	Delay (sec / veh):	6.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Cattle Dr			Cattle Dr		
Base Volume Input [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	90	6	1	98	2	7	0	9	2	0	8
Total Analysis Volume [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	35			159			416			551		
Exiting Flow Rate [veh/h]	448			434			158			30		
Demand Flow Rate [veh/h]	135	333	21	5	360	6	26	1	33	7	1	29
Adjusted Demand Flow Rate [veh/h]	147	362	23	5	391	7	28	1	36	8	1	32

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	547	415	67	42
Capacity of Entry and Bypass Lanes [veh/h]	1333	1174	903	787
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1298	1140	886	771
X, volume / capacity	0.41	0.35	0.07	0.05

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	2.04	1.61	0.24	0.17
95th-Percentile Queue Length [ft]	51.05	40.34	5.93	4.20
Approach Delay [s/veh]	6.74	6.65	4.76	5.20
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.52			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: George Elmer Dr & Heron's Landing

Control Type:	Roundabout	Delay (sec / veh):	7.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			Heron's Landing			Heron's Landing		
Base Volume Input [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	117	8	8	92	8	8	0	5	5	0	8
Total Analysis Volume [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	68			107			437			597		
Exiting Flow Rate [veh/h]	426			547			118			68		
Demand Flow Rate [veh/h]	75	429	30	30	340	30	30	1	20	20	1	30
Adjusted Demand Flow Rate [veh/h]	82	466	33	33	370	33	33	1	22	22	1	33

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.97	0.98	0.98
Entry Flow Rate [veh/h]	598	449	58	58
Capacity of Entry and Bypass Lanes [veh/h]	1288	1238	884	751
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1253	1203	867	736
X, volume / capacity	0.46	0.36	0.06	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	2.52	1.68	0.21	0.25
95th-Percentile Queue Length [ft]	63.04	41.91	5.17	6.16
Approach Delay [s/veh]	7.66	6.50	4.77	5.68
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.97			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	40.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1314		115		201	
Exiting Flow Rate [veh/h]	596		1619		821	
Demand Flow Rate [veh/h]	104	275	179	637	1185	353
Adjusted Demand Flow Rate [veh/h]	113	299	195	692	1288	384

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.97	0.98	0.98	0.97
Entry Flow Rate [veh/h]	116	305	201	706	1314	396
Capacity of Entry and Bypass Lanes [veh/h]	404	465	1279	1279	1183	1183
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	396	456	1242	1254	1160	1149
X, volume / capacity	0.29	0.66	0.16	0.55	1.11	0.33

Movement, Approach, & Intersection Results

Lane LOS	B	D	A	A	F	A
95th-Percentile Queue Length [veh]	1.16	4.63	0.56	3.52	31.42	1.48
95th-Percentile Queue Length [ft]	29.07	115.73	13.92	88.01	785.53	37.10
Approach Delay [s/veh]	22.03		8.04		62.80	
Approach LOS	C		A		F	
Intersection Delay [s/veh]	40.80					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	7.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	111	100	150	249	416	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	100	150	249	416	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	27	41	68	113	14
Total Analysis Volume [veh/h]	121	109	163	271	452	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	461		123		166	
Exiting Flow Rate [veh/h]	221		572		400	
Demand Flow Rate [veh/h]	111	100	150	249	416	50
Adjusted Demand Flow Rate [veh/h]	121	109	163	271	452	54

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	235	443	517
Capacity of Entry and Bypass Lanes [veh/h]	863	1217	1165
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	846	1193	1142
X, volume / capacity	0.27	0.36	0.44

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	1.11	1.69	2.32
95th-Percentile Queue Length [ft]	27.63	42.14	57.99
Approach Delay [s/veh]	7.20	6.55	7.85
Approach LOS	A	A	A
Intersection Delay [s/veh]	7.24		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1545		282		194	
Exiting Flow Rate [veh/h]	503		1369		1878	
Demand Flow Rate [veh/h]	175	300	1394	200	254	1060
Adjusted Demand Flow Rate [veh/h]	190	326	1515	217	276	1152

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	194	333	831	937	685	772
Capacity of Entry and Bypass Lanes [veh/h]	326	382	1100	1100	1191	1191
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	320	375	1078	1078	1168	1168
X, volume / capacity	0.59	0.87	0.76	0.85	0.58	0.65

Movement, Approach, & Intersection Results

Lane LOS	D	F	C	C	B	B
95th-Percentile Queue Length [veh]	3.60	8.44	7.54	11.09	3.82	5.04
95th-Percentile Queue Length [ft]	90.07	211.05	188.54	277.28	95.61	125.99
Approach Delay [s/veh]	44.26		20.10		10.99	
Approach LOS	E		C		B	
Intersection Delay [s/veh]	19.95					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Flynn Ln & Camden St

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Camden St	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Camden St	
Base Volume Input [veh/h]	103	7	22	94	5	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	7	22	94	5	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	2	6	26	1	4
Total Analysis Volume [veh/h]	112	8	24	102	5	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	24		5		114	
Exiting Flow Rate [veh/h]	109		129		33	
Demand Flow Rate [veh/h]	103	7	22	94	5	13
Adjusted Demand Flow Rate [veh/h]	112	8	24	102	5	14

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98
Entry Flow Rate [veh/h]	123	129	20
Capacity of Entry and Bypass Lanes [veh/h]	1346	1373	1229
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1320	1346	1205
X, volume / capacity	0.09	0.09	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.30	0.31	0.05
95th-Percentile Queue Length [ft]	7.49	7.73	1.20
Approach Delay [s/veh]	3.46	3.42	3.12
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.41		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	7.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	401			577			171			107		
Exiting Flow Rate [veh/h]	169			121			516			450		
Demand Flow Rate [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Adjusted Demand Flow Rate [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.98	0.98
Entry Flow Rate [veh/h]	157	110	399	592
Capacity of Entry and Bypass Lanes [veh/h]	917	766	1159	1238
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	899	746	1137	1213
X, volume / capacity	0.17	0.14	0.34	0.48

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.61	0.50	1.55	2.66
95th-Percentile Queue Length [ft]	15.28	12.50	38.71	66.49
Approach Delay [s/veh]	5.68	6.36	6.54	8.05
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.13			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 10: Flynn Ln & Chelsea Dr

Control Type:	Roundabout	Delay (sec / veh):	3.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			Chelsea Dr			Chelsea Dr		
Base Volume Input [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	3.00	2.00	4.00	2.00	2.00	7.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	30	5	6	31	5	8	3	11	4	1	1
Total Analysis Volume [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	68			51			168			182		
Exiting Flow Rate [veh/h]	189			156			54			60		
Demand Flow Rate [veh/h]	28	109	20	21	114	18	28	12	40	15	3	4
Adjusted Demand Flow Rate [veh/h]	30	118	22	23	124	20	30	13	43	16	3	4

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.97	0.97	0.95
Entry Flow Rate [veh/h]	175	172	89	25
Capacity of Entry and Bypass Lanes [veh/h]	1288	1311	1163	1147
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1258	1276	1132	1088
X, volume / capacity	0.14	0.13	0.08	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.47	0.45	0.25	0.06
95th-Percentile Queue Length [ft]	11.68	11.26	6.16	1.62
Approach Delay [s/veh]	3.98	3.90	3.82	3.49
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.90			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 11: Flynn Ln & Siren's Dr

Control Type:	Roundabout	Delay (sec / veh):	3.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Flynn Ln		Flynn Ln		Siren's Rd	
Base Volume Input [veh/h]	17	137	156	13	20	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	18.00	2.00	2.00	2.00	5.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	137	156	13	20	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	37	42	4	5	7
Total Analysis Volume [veh/h]	18	149	170	14	22	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	23		21		173	
Exiting Flow Rate [veh/h]	200		175		36	
Demand Flow Rate [veh/h]	17	137	156	13	20	24
Adjusted Demand Flow Rate [veh/h]	18	149	170	14	22	26

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.97	0.98	0.97
Entry Flow Rate [veh/h]	173	188	50
Capacity of Entry and Bypass Lanes [veh/h]	1348	1351	1157
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1302	1324	1119
X, volume / capacity	0.13	0.14	0.04

Movement, Approach, & Intersection Results

Lane LOS	A	A	A
95th-Percentile Queue Length [veh]	0.44	0.48	0.13
95th-Percentile Queue Length [ft]	11.00	12.06	3.36
Approach Delay [s/veh]	3.81	3.85	3.58
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.80		
Intersection LOS	A		

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	52.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	821			1514			1			61		
Exiting Flow Rate [veh/h]	2			171			1667			761		
Demand Flow Rate [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	2	155	62	761	1514	111
Capacity of Entry and Bypass Lanes [veh/h]	598	295	1419	1419	1344	1344
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	586	289	1391	1391	1317	1317
X, volume / capacity	0.00	0.52	0.04	0.54	1.13	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	D	A	A	F	A
95th-Percentile Queue Length [veh]	0.01	2.82	0.14	3.33	36.26	0.27
95th-Percentile Queue Length [ft]	0.13	70.57	3.38	83.32	906.40	6.69
Approach Delay [s/veh]	6.17	27.95	7.83		77.84	
Approach LOS	A	D	A		F	
Intersection Delay [s/veh]	52.73					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	60.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	1	0	1
Exit Pocket Length [ft]	0.00	100.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	1475		120		132	
Exiting Flow Rate [veh/h]	270		1625		747	
Demand Flow Rate [veh/h]	109	135	119	565	1330	125
Adjusted Demand Flow Rate [veh/h]	118	147	129	614	1446	136

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	121	150	132	627	1475	139
Capacity of Entry and Bypass Lanes [veh/h]	372	372	1273	1273	1260	1260
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	364	364	1248	1248	1236	1236
X, volume / capacity	0.32	0.40	0.10	0.49	1.17	0.11

Movement, Approach, & Intersection Results

Lane LOS	C	C	A	A	F	A
95th-Percentile Queue Length [veh]	1.38	1.90	0.35	2.81	39.94	0.37
95th-Percentile Queue Length [ft]	34.47	47.53	8.63	70.18	998.59	9.26
Approach Delay [s/veh]	17.46		7.35		92.86	
Approach LOS	C		A		F	
Intersection Delay [s/veh]	60.61					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 14: Mary Jane Blvd & O'Leary St

Control Type:	Roundabout	Delay (sec / veh):	4.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			O'Leary St			O'Leary St		
Base Volume Input [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	58	5	8	48	7	5	2	15	4	1	4
Total Analysis Volume [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	60			35			243			268		
Exiting Flow Rate [veh/h]	269			269			50			62		
Demand Flow Rate [veh/h]	14	212	18	31	175	27	17	6	55	13	5	15
Adjusted Demand Flow Rate [veh/h]	15	230	20	34	190	29	18	7	60	14	5	16

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	271	259	87	36
Capacity of Entry and Bypass Lanes [veh/h]	1298	1333	1078	1050
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1273	1306	1057	1030
X, volume / capacity	0.21	0.19	0.08	0.03

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.78	0.72	0.26	0.11
95th-Percentile Queue Length [ft]	19.61	17.92	6.55	2.64
Approach Delay [s/veh]	4.61	4.39	4.11	3.79
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.41			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 15: Mary Jane Blvd & Melrose Pl

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Melrose Pl			Melrose Pl		
Base Volume Input [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	52	4	10	49	10	14	15	11	3	13	2
Total Analysis Volume [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	158			107			251			311		
Exiting Flow Rate [veh/h]	258			278			136			117		
Demand Flow Rate [veh/h]	38	193	13	35	180	37	50	57	41	11	48	8
Adjusted Demand Flow Rate [veh/h]	41	210	14	38	196	40	54	62	45	12	52	9

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	271	280	165	75
Capacity of Entry and Bypass Lanes [veh/h]	1175	1238	1069	1005
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1152	1213	1044	986
X, volume / capacity	0.23	0.23	0.15	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.89	0.87	0.54	0.24
95th-Percentile Queue Length [ft]	22.23	21.73	13.62	5.99
Approach Delay [s/veh]	5.21	4.96	4.85	4.32
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.96			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Roundabout	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	516			648			347			191		
Exiting Flow Rate [veh/h]	282			218			592			605		
Demand Flow Rate [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Adjusted Demand Flow Rate [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	280	291	451	676
Capacity of Entry and Bypass Lanes [veh/h]	816	713	969	1137
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	800	699	950	1114
X, volume / capacity	0.34	0.41	0.47	0.59

Movement, Approach, & Intersection Results

Lane LOS	A	B	A	B
95th-Percentile Queue Length [veh]	1.53	1.99	2.51	4.10
95th-Percentile Queue Length [ft]	38.24	49.74	62.79	102.47
Approach Delay [s/veh]	8.55	10.69	9.37	10.82
Approach LOS	A	B	A	B
Intersection Delay [s/veh]	10.04			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 17: Mary Jane Blvd & Camden St

Control Type:	Roundabout	Delay (sec / veh):	4.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Camden St			Camden St		
Base Volume Input [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	50	1	4	60	7	4	4	11	1	3	2
Total Analysis Volume [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	44			26			263			226		
Exiting Flow Rate [veh/h]	292			226			51			34		
Demand Flow Rate [veh/h]	8	183	4	13	222	26	13	14	39	3	12	8
Adjusted Demand Flow Rate [veh/h]	9	199	4	14	241	28	14	15	42	3	13	9

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	217	289	73	26
Capacity of Entry and Bypass Lanes [veh/h]	1320	1345	1056	1096
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1294	1319	1035	1074
X, volume / capacity	0.16	0.21	0.07	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.59	0.81	0.22	0.07
95th-Percentile Queue Length [ft]	14.64	20.37	5.52	1.79
Approach Delay [s/veh]	4.15	4.55	4.08	3.55
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.31			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 18: Mary Jane Blvd & Flynn Ln

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Flynn Ln			Flynn Ln		
Base Volume Input [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	45	10	14	60	15	12	15	5	6	16	8
Total Analysis Volume [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	168			93			327			234		
Exiting Flow Rate [veh/h]	289			261			129			161		
Demand Flow Rate [veh/h]	3	165	37	53	219	55	43	55	18	23	58	28
Adjusted Demand Flow Rate [veh/h]	3	179	40	58	238	60	47	60	20	25	63	30

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	227	364	130	121
Capacity of Entry and Bypass Lanes [veh/h]	1163	1256	989	1088
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1140	1231	969	1067
X, volume / capacity	0.19	0.29	0.13	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.72	1.21	0.45	0.37
95th-Percentile Queue Length [ft]	18.03	30.19	11.27	9.31
Approach Delay [s/veh]	4.90	5.56	4.93	4.35
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.11			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 19: Mary Jane Blvd & Veteran's Way

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			Veteran's Way			Veteran's Way		
Base Volume Input [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	2.00	2.00	5.00	2.00	20.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	63	0	0	86	24	23	0	3	0	0	0
Total Analysis Volume [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	109			4			359			378		
Exiting Flow Rate [veh/h]	372			374			104			0		
Demand Flow Rate [veh/h]	4	232	0	0	315	90	84	0	10	0	0	0
Adjusted Demand Flow Rate [veh/h]	4	252	0	0	342	98	91	0	11	0	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.95	0.96	0.83	0.98
Entry Flow Rate [veh/h]	269	459	123	0
Capacity of Entry and Bypass Lanes [veh/h]	1235	1375	957	939
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1177	1318	798	921
X, volume / capacity	0.22	0.33	0.13	0.00

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.83	1.48	0.44	0.00
95th-Percentile Queue Length [ft]	20.71	37.11	10.95	0.00
Approach Delay [s/veh]	5.00	5.77	5.82	3.91
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.53			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1631		206		242	
Exiting Flow Rate [veh/h]	455		1458		1744	
Demand Flow Rate [veh/h]	216	101	1471	223	184	1097
Adjusted Demand Flow Rate [veh/h]	235	110	1599	242	200	1192

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.97	0.97	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	243	114	883	997	669	753
Capacity of Entry and Bypass Lanes [veh/h]	302	355	1178	1178	1140	1140
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	293	345	1155	1153	1116	1117
X, volume / capacity	0.80	0.32	0.75	0.85	0.59	0.66

Movement, Approach, & Intersection Results

Lane LOS	F	C	C	C	B	B
95th-Percentile Queue Length [veh]	6.47	1.34	7.45	11.04	3.98	5.25
95th-Percentile Queue Length [ft]	161.65	33.62	186.21	275.88	99.53	131.36
Approach Delay [s/veh]	40.96		18.77		11.65	
Approach LOS	E		C		B	
Intersection Delay [s/veh]	18.14					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Roundabout	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes		

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	890.00	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1548		0		0	
Exiting Flow Rate [veh/h]	158		1419		1856	
Demand Flow Rate [veh/h]	0	283	1397	143	0	1280
Adjusted Demand Flow Rate [veh/h]	0	308	1518	155	0	1391

Lanes

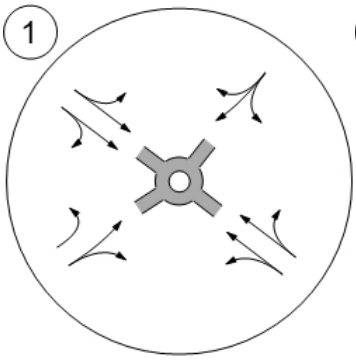
Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	308	803	905	667	752
Capacity of Entry and Bypass Lanes [veh/h]	381	1420	1420	1420	1420
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	381	1393	1393	1393	1393
X, volume / capacity	0.81	0.56	0.64	0.47	0.53

Movement, Approach, & Intersection Results

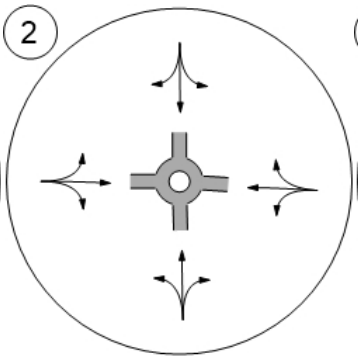
Lane LOS	E	A	B	A	A
95th-Percentile Queue Length [veh]	7.12	3.71	4.88	2.58	3.25
95th-Percentile Queue Length [ft]	178.00	92.79	122.12	64.60	81.20
Approach Delay [s/veh]	43.22	9.49		7.68	
Approach LOS	E	A		A	
Intersection Delay [s/veh]	11.83				
Intersection LOS	B				

Lane Configuration and Traffic Control

George Elmer Dr & W Broad



George Elmer Dr & England



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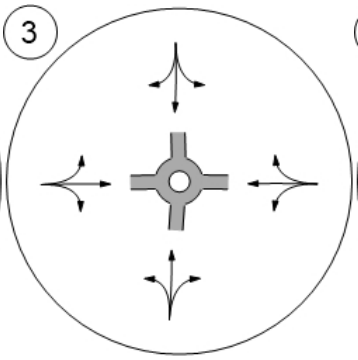
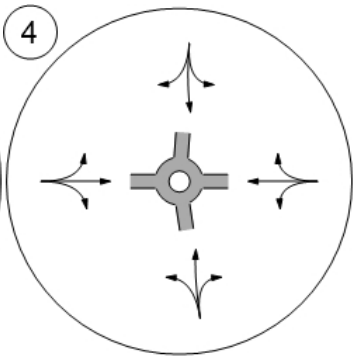
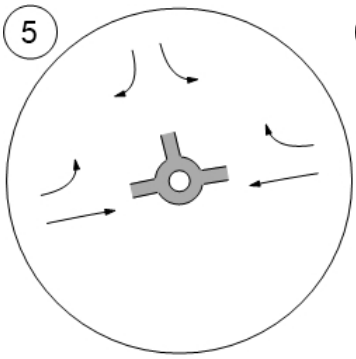


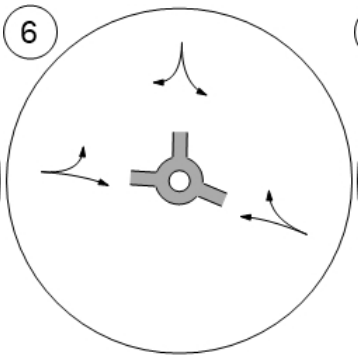
George Elmer Dr & Heron's L



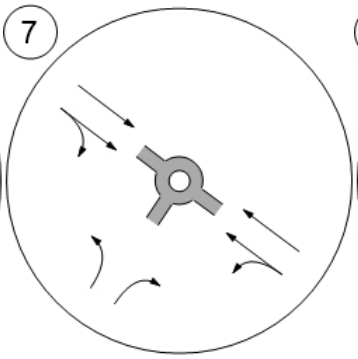
George Elmer Dr & Mullan R



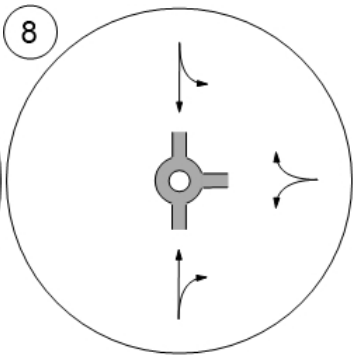
Dougherty Dr & England Blvd



Doughtery Dr & W Broadway

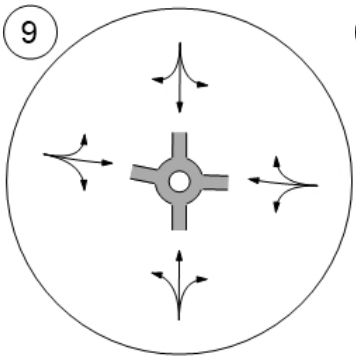


Flynn Ln & Camden St



Lane Configuration and Traffic Control

Flynn Ln & England Blvd



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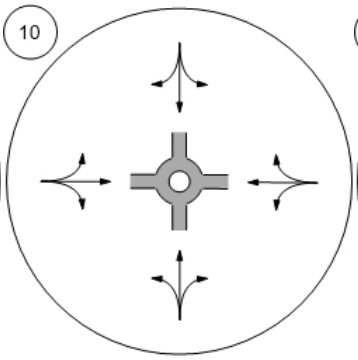

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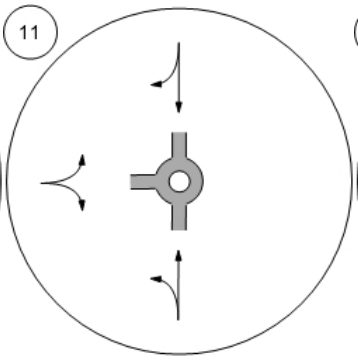
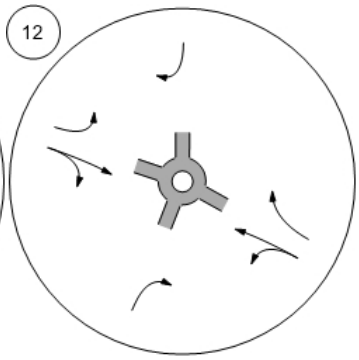
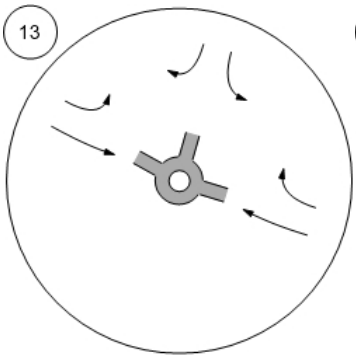


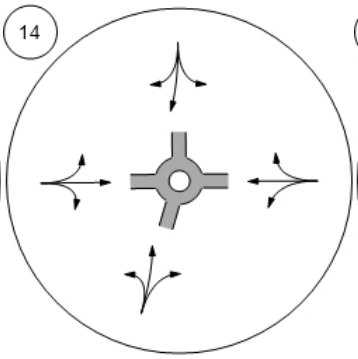
Flynn Ln & Mullan Rd



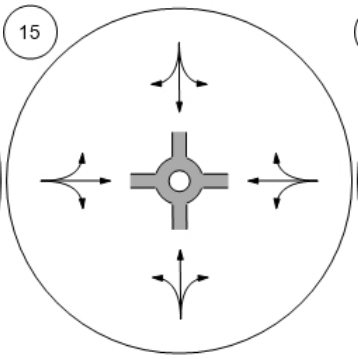
Mary Jane Blvd & Mullan Rd



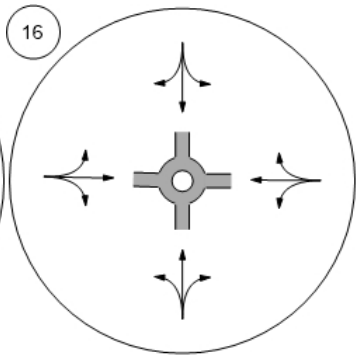
Mary Jane Blvd & O'Leary St



Mary Jane Blvd & Melrose Pl

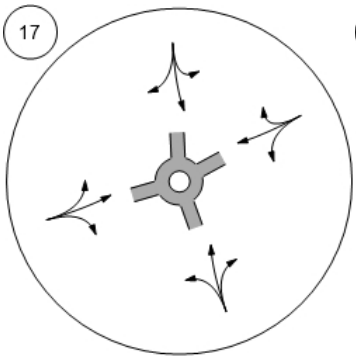


Mary Jane Blvd & England Bl

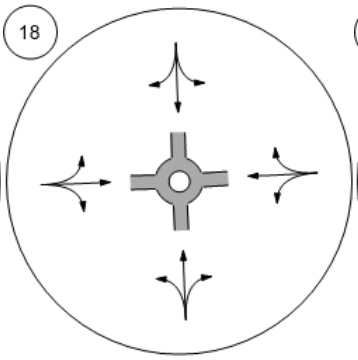


Lane Configuration and Traffic Control

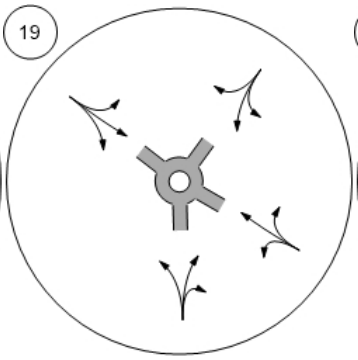
Mary Jane Blvd & Camden St



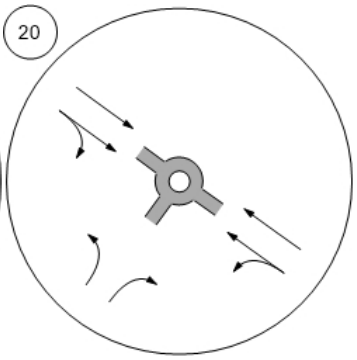
Mary Jane Blvd & Flynn Ln



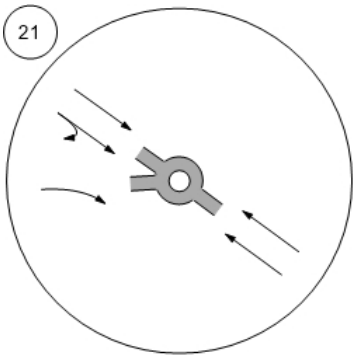
Mary Jane Blvd & Veteran's



Mary Jane Blvd & W Broadw



Flynn Ln & W Broadway St



Option 1: WB T/L & EB T/R

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	104	275	179	637	1185	353
Total Analysis Volume [veh/h]	113	299	195	692	1288	384

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1301		115		215	
Exiting Flow Rate [veh/h]	606		1606		814	
Demand Flow Rate [veh/h]	104	275	179	637	1185	353
Adjusted Demand Flow Rate [veh/h]	113	299	195	692	1288	384

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.97	0.99	0.99	0.99
Entry Flow Rate [veh/h]	116	305	429	475	794	898
Capacity of Entry and Bypass Lanes [veh/h]	408	470	1279	1279	1169	1169
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	400	461	1244	1266	1157	1155
X, volume / capacity	0.28	0.65	0.34	0.37	0.68	0.77

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	13.92	24.38	6.03	6.37	12.83	16.42
Lane LOS	B	C	A	A	B	C
95th-Percentile Queue Length [veh]	1.14	4.53	1.49	1.74	5.67	8.01
95th-Percentile Queue Length [ft]	28.62	113.26	37.30	43.54	141.64	200.22
Approach Delay [s/veh]	21.51		6.21		14.73	
Approach LOS	C		A		B	
Intersection Delay [s/veh]	13.13					
Intersection LOS	B					

Option 1: Dual Through Lanes WB & EB

Number	12											
Intersection	Flynn Ln & Mullan Rd											
Control Type	Roundabout											
Analysis Method	HCM 6th Edition											
Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	821			1514			1			61		
Exiting Flow Rate [veh/h]	2			171			1667			761		
Demand Flow Rate [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Adjusted Demand Flow Rate [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	2	155	387	436	764	861
Capacity of Entry and Bypass Lanes [veh/h]	598	295	1419	1419	1344	1344
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	586	289	1391	1391	1317	1317
X, volume / capacity	0.00	0.52	0.27	0.31	0.57	0.64

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.17	27.95	4.92	5.27	9.11	10.68
Lane LOS	A	D	A	A	A	B
95th-Percentile Queue Length [veh]	0.01	2.82	1.11	1.32	3.75	4.94
95th-Percentile Queue Length [ft]	0.13	70.57	27.83	32.89	93.76	123.48
Approach Delay [s/veh]	6.17	27.95	5.10		9.94	
Approach LOS	A	D	A		A	
Intersection Delay [s/veh]	9.48					
Intersection LOS	A					

Option 1: WB T/R & EB T/L

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Roundabout					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	109	135	119	565	1330	125
Total Analysis Volume [veh/h]	118	147	129	614	1446	136

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1518		120		135	
Exiting Flow Rate [veh/h]	274		1668		741	
Demand Flow Rate [veh/h]	109	135	119	565	1330	125
Adjusted Demand Flow Rate [veh/h]	118	147	129	614	1446	136

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.99	0.95	0.95
Entry Flow Rate [veh/h]	121	150	356	398	781	879
Capacity of Entry and Bypass Lanes [veh/h]	334	391	1273	1273	1256	1256
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	328	384	1252	1261	1196	1199
X, volume / capacity	0.36	0.38	0.28	0.31	0.62	0.70

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	18.87	17.05	5.38	5.71	10.94	13.17
Lane LOS	C	C	A	A	B	B
95th-Percentile Queue Length [veh]	1.59	1.76	1.15	1.35	4.57	6.15
95th-Percentile Queue Length [ft]	39.84	44.08	28.73	33.67	114.15	153.65
Approach Delay [s/veh]	17.86		5.56		12.12	
Approach LOS	C		A		B	
Intersection Delay [s/veh]	10.82					
Intersection LOS	B					

Mullan BUILD - 2050 PM

Vistro File: H:\...\24667_PM2050.vistro
Report File: H:\...\24667_PM2050_SIGNAL.pdf

Scenario 4 Signal (2050)
7/17/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	George Elmer Dr & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.750	28.8	C
2	George Elmer Dr & England Blvd	Signalized	HCM 6th Edition	NB Left	0.607	24.2	C
5	George Elmer Dr & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.841	42.9	D
7	Doughtery Dr & W Broadway St	Signalized	HCM 6th Edition	WB Left	0.847	29.4	C
9	Flynn Ln & England Blvd	Signalized	HCM 6th Edition	NB Thru	0.464	15.2	B
12	Flynn Ln & Mullan Rd	Signalized	HCM 6th Edition	WB Thru	1.033	46.4	D
13	Mary Jane Blvd & Mullan Rd	Signalized	HCM 6th Edition	SB Left	0.939	44.0	D
16	Mary Jane Blvd & England Blvd	Signalized	HCM 6th Edition	SB Left	0.529	18.8	B
20	Mary Jane Blvd & W Broadway St	Signalized	HCM 6th Edition	NB Left	0.751	18.6	B
21	Flynn Ln & W Broadway St	Signalized	HCM 6th Edition	NB Thru	0.843	11.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: George Elmer Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	George Elmer Dr			Commercial Access			W Broadway St			W Broadway St		
Base Volume Input [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	1	159	1	1	1	1	1435	250	137	1098	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	43	0	0	0	0	390	68	37	298	0
Total Analysis Volume [veh/h]	222	1	173	1	1	1	1	1560	272	149	1193	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	54	0	0	54	0	11	33	0	33	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	20	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	32	32	32	76	64	64	76	70	70
g / C, Green / Cycle	0.26	0.26	0.26	0.64	0.53	0.53	0.64	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.16	0.12	0.00	0.00	0.48	0.19	0.29	0.36	0.00
s, saturation flow rate [veh/h]	1403	1465	998	533	3279	1464	512	3279	1464
c, Capacity [veh/h]	235	388	305	316	1739	776	274	1914	854
d1, Uniform Delay [s]	46.17	36.77	32.90	11.28	25.25	16.26	24.57	16.36	10.41
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.77	0.81	0.01	0.02	7.73	1.25	7.56	1.54	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.45	0.01	0.00	0.90	0.35	0.54	0.62	0.00
d, Delay for Lane Group [s/veh]	62.94	37.58	32.91	11.30	32.99	17.51	32.13	17.90	10.42
Lane Group LOS	E	D	C	B	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.55	4.36	0.07	0.01	19.16	4.15	1.91	9.63	0.01
50th-Percentile Queue Length [ft/ln]	188.77	108.98	1.65	0.24	478.93	103.77	47.68	240.86	0.26
95th-Percentile Queue Length [veh/ln]	12.06	7.78	0.12	0.02	26.34	7.47	3.43	14.72	0.02
95th-Percentile Queue Length [ft/ln]	301.43	194.58	2.97	0.44	658.38	186.79	85.82	368.12	0.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.94	37.58	37.58	32.91	32.91	32.91	11.30	32.99	17.51	32.13	17.90	10.42
Movement LOS	E	D	D	C	C	C	B	C	B	C	B	B
d_A, Approach Delay [s/veh]	51.80			32.91			30.68			19.47		
Approach LOS	D			C			C			B		
d_I, Intersection Delay [s/veh]	28.81											
Intersection LOS	C											
Intersection V/C	0.750											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	450	817
d_b, Bicycle Delay [s]	21.60	21.60	36.04	21.00
l_b,int, Bicycle LOS Score for Intersection	2.213	1.565	3.072	2.668
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: George Elmer Dr & England Blvd

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	George Elmer Dr			George Elmer Dr			England Blvd			England Blvd		
Base Volume Input [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	199	46	42	169	184	122	301	159	43	431	42
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	54	13	11	46	50	33	82	43	12	117	11
Total Analysis Volume [veh/h]	154	216	50	46	184	200	133	327	173	47	468	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	39	0	96	39	0	96	51	0	96	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	5	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	10	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	33	33	33	33	45	45	45	45
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.04	0.25	0.15	0.31	0.05	0.30
s, saturation flow rate [veh/h]	999	1654	1113	1565	886	1623	898	1696
c, Capacity [veh/h]	212	604	322	572	316	813	315	850
d1, Uniform Delay [s]	39.85	21.58	28.72	24.00	28.48	16.18	25.89	16.07
k, delay calibration	0.11	0.11	0.11	0.18	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.65	0.50	0.20	2.33	4.07	3.46	1.00	3.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.44	0.14	0.67	0.42	0.61	0.15	0.60
d, Delay for Lane Group [s/veh]	44.50	22.09	28.92	26.33	32.55	19.64	26.89	19.25
Lane Group LOS	D	C	C	C	C	B	C	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.68	4.19	0.82	6.97	2.78	7.72	0.86	7.83
50th-Percentile Queue Length [ft/ln]	91.98	104.83	20.43	174.13	69.43	192.95	21.51	195.81
95th-Percentile Queue Length [veh/ln]	6.62	7.55	1.47	11.29	5.00	12.27	1.55	12.42
95th-Percentile Queue Length [ft/ln]	165.57	188.69	36.77	282.34	124.97	306.86	38.73	310.56

Movement, Approach, & Intersection Results

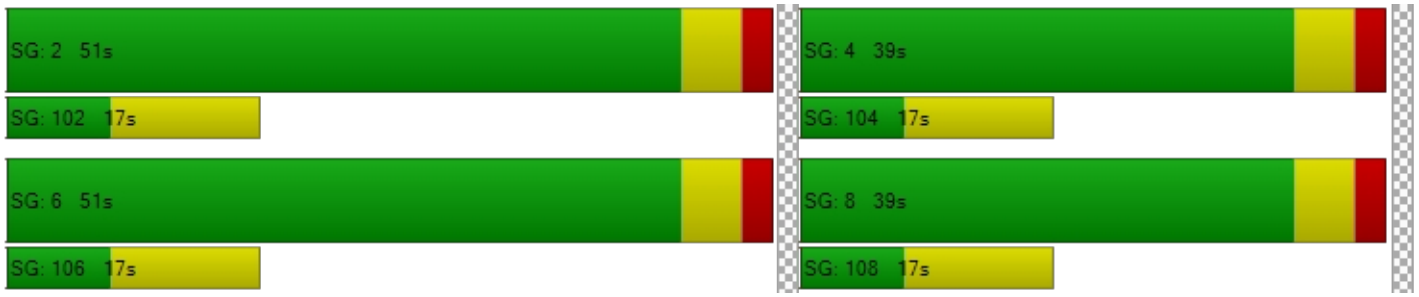
d_M, Delay for Movement [s/veh]	44.50	22.09	22.09	28.92	26.33	26.33	32.55	19.64	19.64	26.89	19.25	19.25
Movement LOS	D	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	30.31			26.60			22.35			19.89		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.21											
Intersection LOS	C											
Intersection V/C	0.607											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.274	2.397	2.632	2.325
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	18.05	18.05	11.25	11.25
l_b,int, Bicycle LOS Score for Intersection	2.253	2.269	2.604	2.485
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.841

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	275	179	637	1185	353
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	49	173	322	96
Total Analysis Volume [veh/h]	113	299	195	692	1288	384
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	61	61	30	120	90	90
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.08	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.51	0.20	0.36	0.40	0.75	0.26
s, saturation flow rate [veh/h]	220	1464	548	1722	1722	1452
c, Capacity [veh/h]	60	0	129	1636	1477	1246
d1, Uniform Delay [s]	59.95	0.00	0.31	0.25	4.81	1.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	452.89	0.00	268.08	0.80	7.35	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.88	10000.00	1.52	0.42	0.87	0.31
d, Delay for Lane Group [s/veh]	512.84	0.00	268.39	1.05	12.15	2.29
Lane Group LOS	F	F	F	A	B	A
Critical Lane Group	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.55	0.00	9.58	0.37	8.96	0.83
50th-Percentile Queue Length [ft/ln]	238.87	0.00	239.38	9.13	223.90	20.74
95th-Percentile Queue Length [veh/ln]	14.62	0.00	16.42	0.66	13.86	1.49
95th-Percentile Queue Length [ft/ln]	365.61	0.00	410.60	16.44	346.59	37.33

Movement, Approach, & Intersection Results

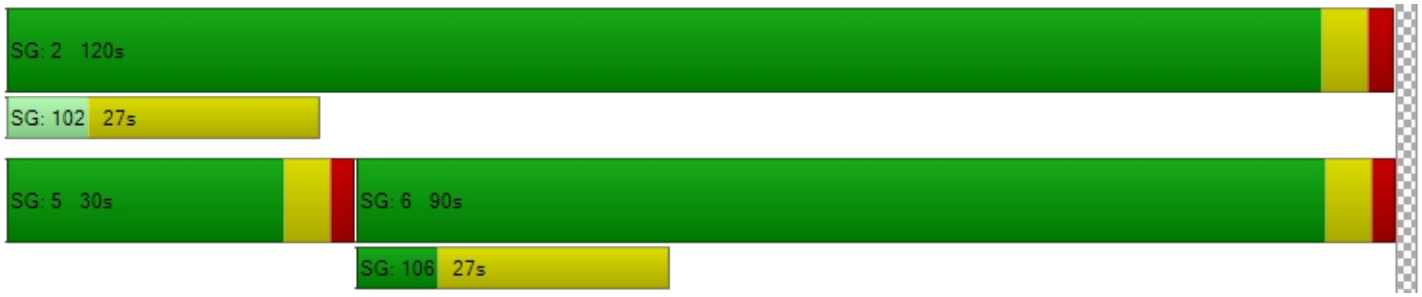
d_M, Delay for Movement [s/veh]	512.84	0.00	268.39	1.05	12.15	2.29
Movement LOS	F	A	F	A	B	A
d_A, Approach Delay [s/veh]	140.66		59.83		9.89	
Approach LOS	F		E		A	
d_I, Intersection Delay [s/veh]	42.93					
Intersection LOS	D					
Intersection V/C	0.841					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.290	3.160	3.322
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	1400
d_b, Bicycle Delay [s]	60.00	0.15	5.40
l_b,int, Bicycle LOS Score for Intersection	1.560	3.023	4.318
Bicycle LOS	A	C	E

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Doughtery Dr & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name	Dougherty Dr		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Dougherty Dr		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	175	300	1394	200	254	1060
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	300	1394	200	254	1060
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	82	379	54	69	288
Total Analysis Volume [veh/h]	190	326	1515	217	276	1152
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	53	53	51	51	16	67
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	29	29	63	63	79	79
g / C, Green / Cycle	0.24	0.24	0.52	0.52	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.12	0.22	0.46	0.15	0.48	0.35
s, saturation flow rate [veh/h]	1640	1464	3279	1464	577	3279
c, Capacity [veh/h]	400	357	1712	764	323	2151
d1, Uniform Delay [s]	38.77	44.10	25.48	16.09	33.38	10.94
k, delay calibration	0.11	0.13	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.88	10.52	7.12	0.93	24.11	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.91	0.89	0.28	0.86	0.54
d, Delay for Lane Group [s/veh]	39.65	54.62	32.60	17.02	57.48	11.90
Lane Group LOS	D	D	C	B	E	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.89	10.40	18.45	3.23	4.63	6.90
50th-Percentile Queue Length [ft/ln]	122.27	259.98	461.32	80.76	115.80	172.51
95th-Percentile Queue Length [veh/ln]	8.52	15.69	25.50	5.81	8.16	11.21
95th-Percentile Queue Length [ft/ln]	212.94	392.19	637.44	145.36	204.04	280.21

Movement, Approach, & Intersection Results

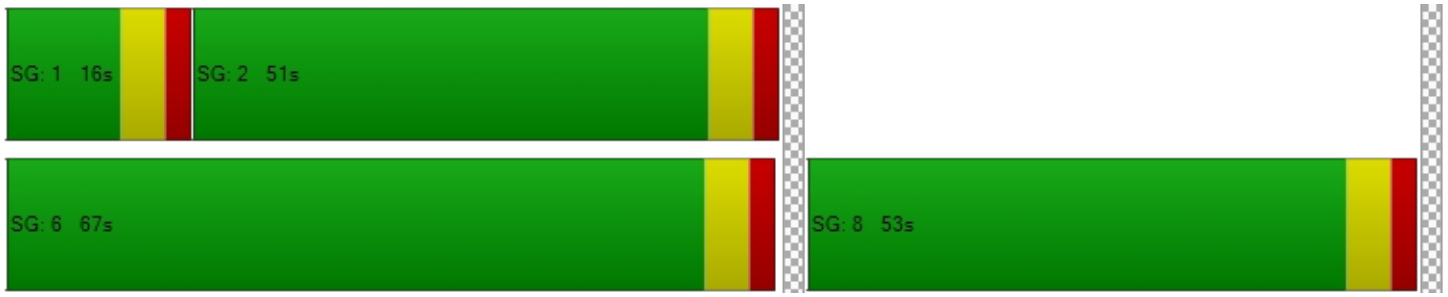
d_M, Delay for Movement [s/veh]	39.65	54.62	32.60	17.02	57.48	11.90
Movement LOS	D	D	C	B	E	B
d_A, Approach Delay [s/veh]	49.11		30.65		20.71	
Approach LOS	D		C		C	
d_I, Intersection Delay [s/veh]	29.38					
Intersection LOS	C					
Intersection V/C	0.847					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	783	750	1017
d_b, Bicycle Delay [s]	22.20	23.44	14.50
I_b,int, Bicycle LOS Score for Intersection	1.560	2.989	2.738
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	20	18	5	21	1	6	88	4	16	125	4
Total Analysis Volume [veh/h]	2	80	71	18	86	3	23	352	16	63	501	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	0	33	0	0	33	0	24	46	0	11	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	4.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	11	11	68	57	68	59
g / C, Green / Cycle	0.12	0.12	0.75	0.64	0.75	0.66
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.02	0.22	0.06	0.30
s, saturation flow rate [veh/h]	1593	1611	955	1709	1089	1713
c, Capacity [veh/h]	227	236	691	1090	824	1126
d1, Uniform Delay [s]	38.83	37.46	4.04	7.53	3.49	7.57
k, delay calibration	0.11	0.15	0.50	0.50	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.45	1.94	0.09	0.84	0.01	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.45	0.03	0.34	0.08	0.46
d, Delay for Lane Group [s/veh]	42.27	39.41	4.13	8.37	3.50	8.92
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.51	2.35	0.10	3.14	0.22	4.62
50th-Percentile Queue Length [ft/ln]	87.64	58.67	2.40	78.54	5.61	115.41
95th-Percentile Queue Length [veh/ln]	6.31	4.22	0.17	5.65	0.40	8.14
95th-Percentile Queue Length [ft/ln]	157.74	105.61	4.32	141.37	10.10	203.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.27	42.27	42.27	39.41	39.41	39.41	4.13	8.37	8.37	3.50	8.92	8.92
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	42.27			39.41			8.12			8.33		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	15.19											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.903	1.828	2.234	2.297
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	889	600
d_b, Bicycle Delay [s]	22.05	22.05	13.89	22.05
I_b,int, Bicycle LOS Score for Intersection	1.812	1.736	2.205	2.517
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	46.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.033

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	38	15	186	0	0	371	27
Total Analysis Volume [veh/h]	0	0	1	0	0	151	60	745	1	1	1483	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor stree		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Overla	Permis	Permis	Overla	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	0	5	0	0	5	0	2	0	0	6	6
Auxiliary Signal Groups			5			5						
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	5	0	0	5	0	5	0	0	5	5
Maximum Green [s]	0	0	30	0	0	30	0	30	0	0	30	30
Amber [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
All red [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Split [s]	0	0	30	0	0	30	0	120	0	0	90	90
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	0	0	0	20	0	0	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk			No			No		No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	4.0	0.0	0.0	4.0	0.0	4.0	0.0	0.0	4.0	4.0
Minimum Recall			No			No		No			No	
Maximum Recall			No			No		No			No	
Pedestrian Recall			No			No		No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	R	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	0.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	14	14	114	114	94	94	94
g / C, Green / Cycle	0.12	0.12	0.95	0.95	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.11	0.43	0.00	0.86	0.07
s, saturation flow rate [veh/h]	1464	1464	562	1722	715	1722	1464
c, Capacity [veh/h]	174	174	344	1636	577	1345	1143
d1, Uniform Delay [s]	46.57	51.89	38.16	0.26	4.60	13.13	3.11
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	12.12	1.10	0.92	0.01	57.65	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.87	0.17	0.46	0.00	1.10	0.09
d, Delay for Lane Group [s/veh]	46.58	64.01	39.26	1.18	4.61	70.78	3.27
Lane Group LOS	D	E	D	A	A	F	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.03	5.08	0.11	0.42	0.01	44.48	0.49
50th-Percentile Queue Length [ft/ln]	0.68	127.01	2.63	10.44	0.16	1112.1	12.19
95th-Percentile Queue Length [veh/ln]	0.05	8.78	0.19	0.75	0.01	60.56	0.88
95th-Percentile Queue Length [ft/ln]	1.22	219.43	4.74	18.79	0.29	1513.9	21.95

Movement, Approach, & Intersection Results

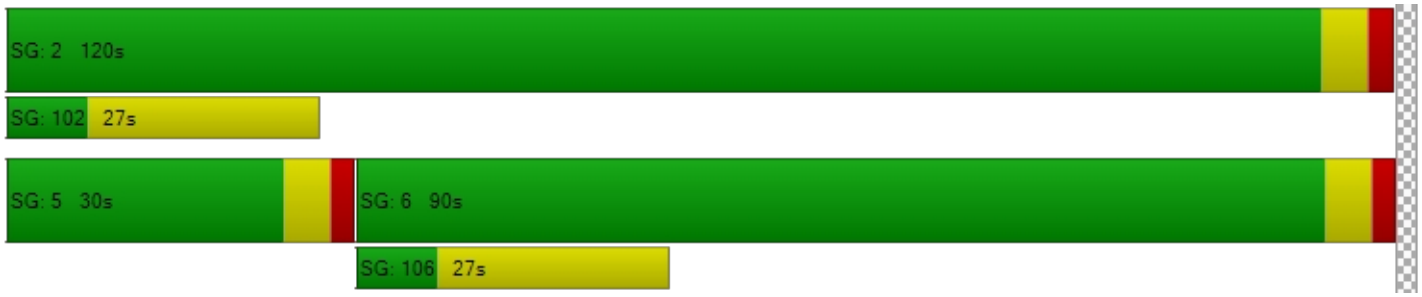
d_M, Delay for Movement [s/veh]	0.00	0.00	46.58	0.00	0.00	64.01	39.26	1.18	1.18	4.61	70.78	3.27
Movement LOS			D			E	D	A	A	A	F	A
d_A, Approach Delay [s/veh]	46.58			64.01			4.02			66.16		
Approach LOS	D			E			A			E		
d_I, Intersection Delay [s/veh]	46.38											
Intersection LOS	D											
Intersection V/C	1.033											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	24.0	24.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	38.40	38.40
I_p,int, Pedestrian LOS Score for Intersection	1.732	1.926	3.133	2.990
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1900	1400
d_b, Bicycle Delay [s]	38.40	38.40	0.15	5.40
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	2.890	4.186
Bicycle LOS	A	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Signalized	Delay (sec / veh):	44.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.939

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	135	119	565	1330	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	37	32	154	361	34
Total Analysis Volume [veh/h]	118	147	129	614	1446	136
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	61	61	30	120	90	90
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0.00	0.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	0	0	9	114	103	103
g / C, Green / Cycle	0.00	0.00	0.07	0.95	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.58	0.10	0.24	0.36	0.84	0.09
s, saturation flow rate [veh/h]	203	1464	544	1722	1722	1464
c, Capacity [veh/h]	60	0	128	1636	1478	1257
d1, Uniform Delay [s]	59.95	0.00	0.31	0.23	7.49	1.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	488.57	0.00	81.23	0.66	18.73	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.97	10000.00	1.01	0.38	0.98	0.11
d, Delay for Lane Group [s/veh]	548.52	0.00	81.54	0.89	26.22	1.50
Lane Group LOS	F	F	F	A	C	A
Critical Lane Group	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.15	0.00	2.89	0.30	18.01	0.23
50th-Percentile Queue Length [ft/ln]	253.75	0.00	72.30	7.49	450.25	5.81
95th-Percentile Queue Length [veh/ln]	15.37	0.00	5.21	0.54	24.97	0.42
95th-Percentile Queue Length [ft/ln]	384.37	0.00	130.13	13.48	624.24	10.45

Movement, Approach, & Intersection Results

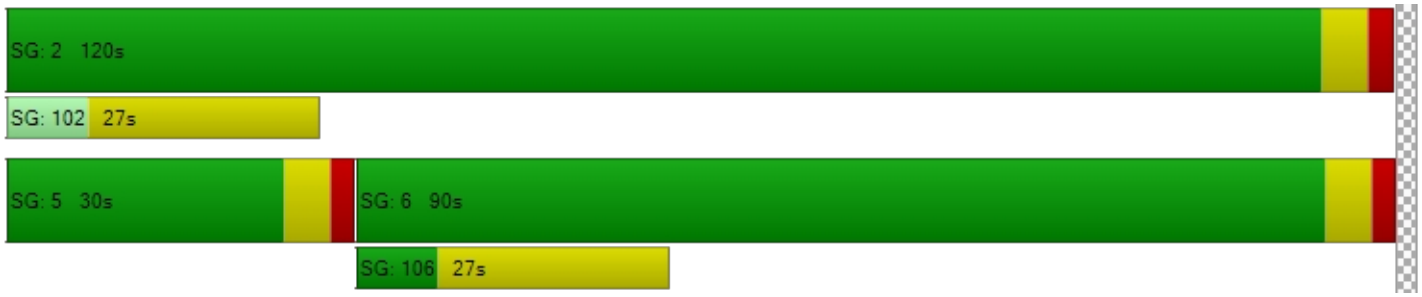
d_M, Delay for Movement [s/veh]	548.52	0.00	81.54	0.89	26.22	1.50
Movement LOS	F	A	F	A	C	A
d_A, Approach Delay [s/veh]	244.25		14.89		24.10	
Approach LOS	F		B		C	
d_I, Intersection Delay [s/veh]	43.98					
Intersection LOS	D					
Intersection V/C	0.939					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.135	3.093	3.250
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1900	1400
d_b, Bicycle Delay [s]	60.00	0.15	5.40
l_b,int, Bicycle LOS Score for Intersection	1.560	2.786	4.170
Bicycle LOS	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Mary Jane Blvd & England Blvd

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mary Jane Blvd			Mary Jane Blvd			England Blvd			England Blvd		
Base Volume Input [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	78	106	92	156	14	26	348	33	64	452	93
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	21	29	25	42	4	7	95	9	17	123	25
Total Analysis Volume [veh/h]	74	85	115	100	170	15	28	378	36	70	491	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	15	20	0	15	20	0	15	20	0	15	20	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Split [s]	96	39	0	96	39	0	96	51	0	96	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	7	7	0	5	7	0	0	7	0	7	7	0
Pedestrian Clearance [s]	10	10	0	10	10	0	0	10	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	23	23	23	23	55	55	55	55
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.08	0.11	0.03	0.24	0.07	0.35
s, saturation flow rate [veh/h]	1198	1564	1182	1698	825	1696	972	1672
c, Capacity [veh/h]	236	398	212	432	406	1039	545	1024
d1, Uniform Delay [s]	36.26	28.68	38.77	28.07	17.05	8.95	13.20	10.47
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.98	1.62	0.67	0.33	1.14	0.49	2.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.50	0.47	0.43	0.07	0.40	0.13	0.58
d, Delay for Lane Group [s/veh]	37.01	29.66	40.40	28.74	17.38	10.09	13.68	12.86
Lane Group LOS	D	C	D	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.54	3.73	2.21	3.36	0.39	4.05	0.84	6.90
50th-Percentile Queue Length [ft/ln]	38.45	93.17	55.21	83.91	9.78	101.15	20.95	172.39
95th-Percentile Queue Length [veh/ln]	2.77	6.71	3.98	6.04	0.70	7.28	1.51	11.20
95th-Percentile Queue Length [ft/ln]	69.21	167.71	99.39	151.04	17.60	182.07	37.71	280.06

Movement, Approach, & Intersection Results

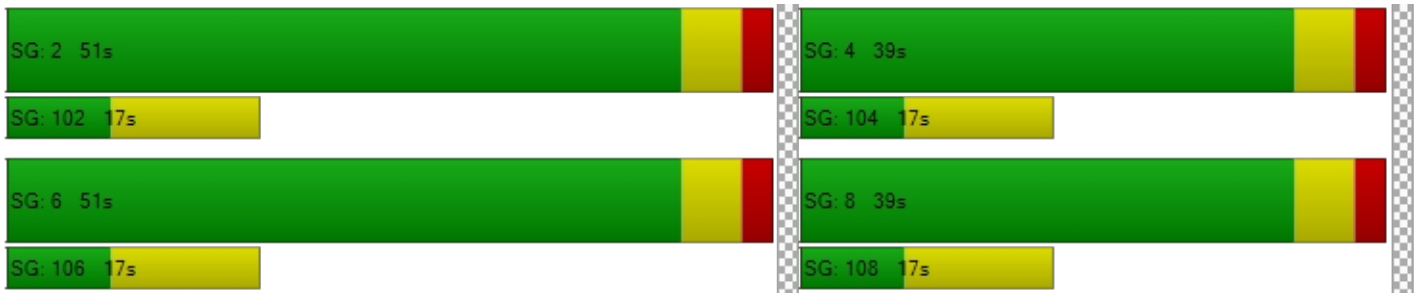
d_M, Delay for Movement [s/veh]	37.01	29.66	29.66	40.40	28.74	28.74	17.38	10.09	10.09	13.68	12.86	12.86
Movement LOS	D	C	C	D	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	31.65			32.83			10.56			12.94		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.80											
Intersection LOS	B											
Intersection V/C	0.529											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.218	2.142	2.377	2.490
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	18.05	18.05	11.25	11.25
I_b,int, Bicycle LOS Score for Intersection	2.012	2.030	2.289	2.652
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Mary Jane Blvd & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	216	101	1471	223	184	1097
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	2.00	3.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	101	1471	223	184	1097
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	27	400	61	50	298
Total Analysis Volume [veh/h]	235	110	1599	242	200	1192
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	ProtPerm	Permissive
Signal Group	8	8	2	2	1	6
Auxiliary Signal Groups						
Lead / Lag	Lag	-	-	-	Lead	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	53	53	51	51	16	67
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	20	20	76	76	88	88
g / C, Green / Cycle	0.16	0.16	0.63	0.63	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.14	0.08	0.49	0.17	0.42	0.36
s, saturation flow rate [veh/h]	1627	1452	3279	1452	475	3279
c, Capacity [veh/h]	268	239	2064	914	322	2412
d1, Uniform Delay [s]	48.93	45.29	16.07	9.88	22.17	6.60
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.94	1.38	2.91	0.71	8.71	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.46	0.77	0.26	0.62	0.49
d, Delay for Lane Group [s/veh]	57.87	46.67	18.98	10.59	30.88	7.33
Lane Group LOS	E	D	B	B	C	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.52	3.06	13.80	2.59	1.87	4.74
50th-Percentile Queue Length [ft/ln]	188.00	76.55	345.10	64.83	46.85	118.47
95th-Percentile Queue Length [veh/ln]	12.02	5.51	19.90	4.67	3.37	8.31
95th-Percentile Queue Length [ft/ln]	300.44	137.79	497.43	116.70	84.33	207.72

Movement, Approach, & Intersection Results

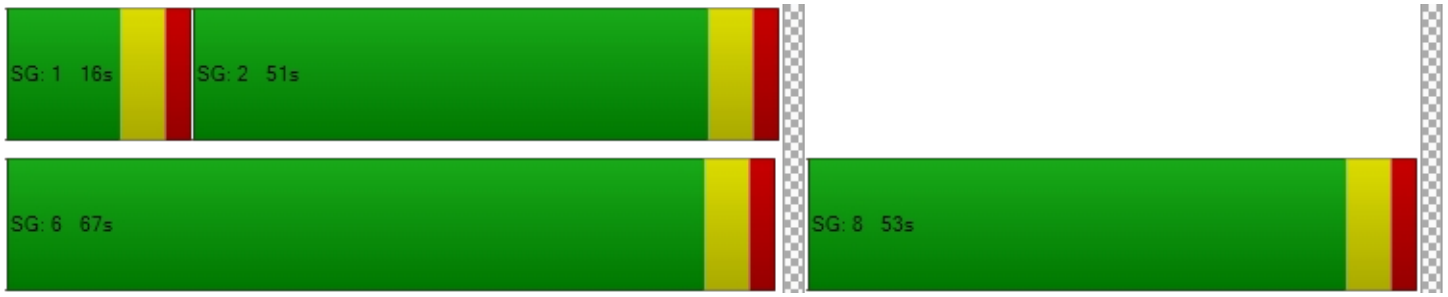
d_M, Delay for Movement [s/veh]	57.87	46.67	18.98	10.59	30.88	7.33
Movement LOS	E	D	B	B	C	A
d_A, Approach Delay [s/veh]	54.30		17.88		10.71	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	18.60					
Intersection LOS	B					
Intersection V/C	0.751					

Other Modes

g_Walk,mi, Effective Walk Time [s]	45.0	47.0	47.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.44	22.20	22.20
I_p,int, Pedestrian LOS Score for Intersection	2.364	3.450	3.390
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	783	750	1017
d_b, Bicycle Delay [s]	22.20	23.44	14.50
I_b,int, Bicycle LOS Score for Intersection	1.560	3.078	2.708
Bicycle LOS	A	C	B

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Flynn Ln & W Broadway St

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.843

Intersection Setup

Name	Flynn Ln		W Broadway St		W Broadway St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	49.21	0.00	0.00
Speed [mph]	25.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Flynn Ln		W Broadway St		W Broadway St	
Base Volume Input [veh/h]	0	283	1397	143	0	1280
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	283	1397	143	0	1280
Peak Hour Factor	0.7900	0.9200	0.9200	0.9200	0.7900	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	77	380	39	0	348
Total Analysis Volume [veh/h]	0	308	1518	155	0	1391
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	0	8	2	2	0	6
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	-	-
Minimum Green [s]	0	5	5	5	0	5
Maximum Green [s]	0	30	30	30	0	30
Amber [s]	0.0	4.0	4.0	4.0	0.0	4.0
All red [s]	0.0	2.0	2.0	2.0	0.0	2.0
Split [s]	0	30	90	90	0	90
Vehicle Extension [s]	0.0	3.0	3.0	3.0	0.0	3.0
Walk [s]	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			No
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	0.0	2.0
I2, Clearance Lost Time [s]	0.0	4.0	4.0	4.0	0.0	4.0
Minimum Recall		No	No			No
Maximum Recall		No	No			No
Pedestrian Recall		No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	C
C, Cycle Length [s]	50	50	50	50
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	27	27	27
g / C, Green / Cycle	0.22	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.18	0.46	0.11	0.42
s, saturation flow rate [veh/h]	1750	3279	1464	3279
c, Capacity [veh/h]	384	1768	789	1768
d1, Uniform Delay [s]	18.38	9.83	5.91	9.17
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.92	1.31	0.12	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.86	0.20	0.79
d, Delay for Lane Group [s/veh]	22.30	11.14	6.03	9.98
Lane Group LOS	C	B	A	A
Critical Lane Group	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.44	3.61	0.43	3.01
50th-Percentile Queue Length [ft/ln]	86.09	90.20	10.74	75.17
95th-Percentile Queue Length [veh/ln]	6.20	6.49	0.77	5.41
95th-Percentile Queue Length [ft/ln]	154.96	162.37	19.33	135.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	22.30	11.14	6.03	0.00	9.98
Movement LOS		C	B	A		A
d_A, Approach Delay [s/veh]	22.30		10.67		9.98	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	11.44					
Intersection LOS	B					
Intersection V/C	0.843					

Other Modes

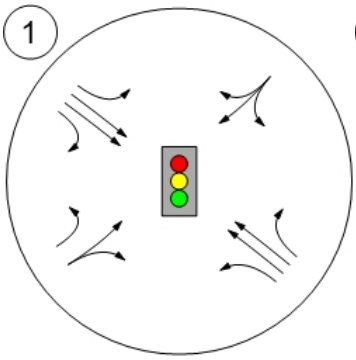
g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1400	1400
d_b, Bicycle Delay [s]	38.40	5.40	5.40
I_b,int, Bicycle LOS Score for Intersection	2.068	2.940	2.707
Bicycle LOS	B	C	B

Sequence

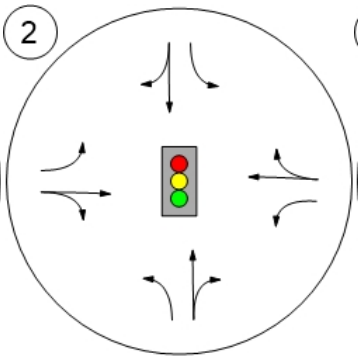
Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lane Configuration and Traffic Control

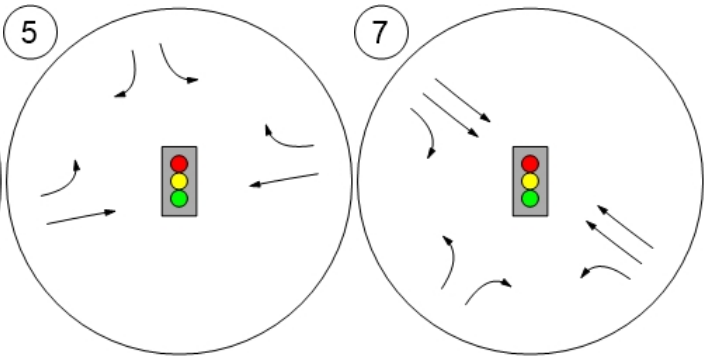
George Elmer Dr & W Broad



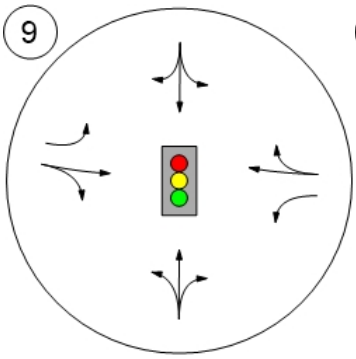
George Elmer Dr & England



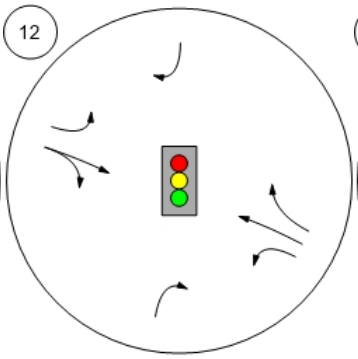
George Elmer Dr & Mullan R Doughtery Dr & W Broadway



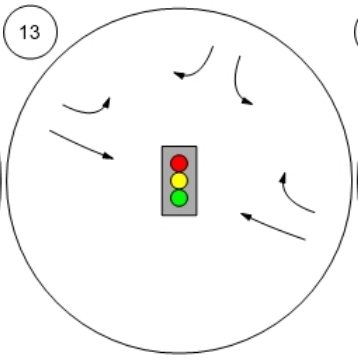
Flynn Ln & England Blvd



Flynn Ln & Mullan Rd



Mary Jane Blvd & Mullan Rd



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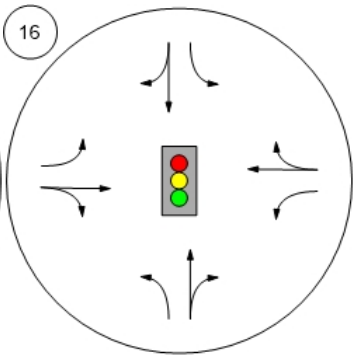
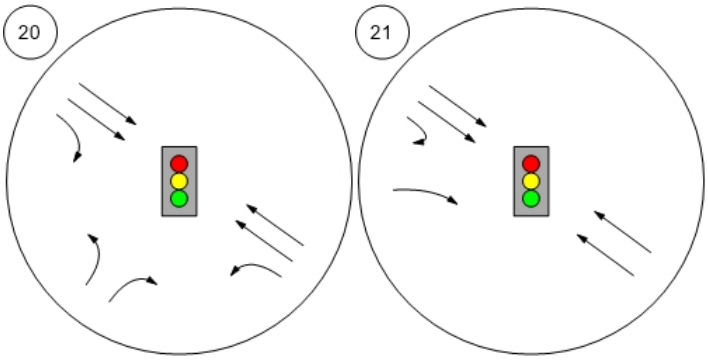


Lane Configuration and Traffic Control

Mary Jane Blvd & W Broadw



Flynn Ln & W Broadway St

Option 1: Dual Through Lanes EB & WB

Number	5					
Intersection	George Elmer Dr & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	104	275	179	637	1185	353
Total Analysis Volume [veh/h]	113	299	195	692	1288	384

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	8	8	0	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	30
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0
All red [s]	2.0	2.0	0.0	2.0	2.0	2.0
Split [s]	34	34	0	86	53	53
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.22	0.22	0.68	0.68	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.07	0.20	0.40	0.21	0.39	0.26
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1640	1464	486	3279	3279	1452
c, Capacity [veh/h]	359	321	312	2233	2066	915
X, volume / capacity	0.31	0.93	0.62	0.31	0.62	0.42
d, Delay for Lane Group [s/veh]	39.78	70.18	26.77	8.10	14.96	12.58
Lane Group LOS	D	E	C	A	B	B

Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.86	10.85	2.36	3.21	9.70	4.93
50th-Percentile Queue Length [ft/ln]	71.44	271.28	58.90	80.34	242.38	123.25
95th-Percentile Queue Length [veh/ln]	5.14	16.25	4.24	5.78	14.80	8.57
95th-Percentile Queue Length [ft/ln]	128.59	406.34	106.03	144.60	370.05	214.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.78	70.18	26.77	8.10	14.96	12.58
Movement LOS	D	E	C	A	B	B
Critical Movement	No	Yes	No	No	No	No
d_A, Approach Delay [s/veh]	61.84		12.21		14.41	
Approach LOS	E		B		B	
d_I, Intersection Delay [s/veh]	20.33					
Intersection LOS	C					
Intersection V/C	0.663					

Option 1: Dual Through Lanes EB & WB

Number	13					
Intersection	Mary Jane Blvd & Mullan Rd					
Control Type	Signalized					
Analysis Method	HCM 6th Edition					
Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Base Volume Input [veh/h]	109	135	119	565	1330	125
Total Analysis Volume [veh/h]	118	147	129	614	1446	136

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Fully actuated					
Lost time [s]	12.00					
Control Type	Split	Split	ProtPerm	Permissive	Permissive	Permissive
Signal Group	8	8	5	2	6	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lag	-	-	-
Minimum Green [s]	5	5	5	5	5	5
Maximum Green [s]	30	30	30	30	30	30
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	2.0	2.0	2.0	2.0	2.0	2.0
Split [s]	33	33	33	87	54	54
Walk [s]	7	7	0	7	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.12	0.12	0.78	0.78	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.26	0.19	0.44	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1750	1750	1750	1750	1750	1750
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1640	1464	491	3279	3279	1464
c, Capacity [veh/h]	196	175	376	2560	2258	1008
X, volume / capacity	0.60	0.84	0.34	0.24	0.64	0.13
d, Delay for Lane Group [s/veh]	53.06	61.95	11.75	3.78	11.81	6.69
Lane Group LOS	D	E	B	A	B	A

Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.53	4.82	0.78	1.49	9.23	1.10
50th-Percentile Queue Length [ft/ln]	88.14	120.56	19.60	37.36	230.84	27.43
95th-Percentile Queue Length [veh/ln]	6.35	8.42	1.41	2.69	14.22	1.97
95th-Percentile Queue Length [ft/ln]	158.65	210.60	35.28	67.25	355.43	49.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.06	61.95	11.75	3.78	11.81	6.69
Movement LOS	D	E	B	A	B	A
Critical Movement	No	Yes	No	No	No	No
d_A, Approach Delay [s/veh]	57.99		5.16		11.37	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	14.36					
Intersection LOS	B					
Intersection V/C	0.627					

Mullan BUILD - 2050 AM

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Scenario 3 Two Way Stop Control (2050)
7/23/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Dougherty Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.299	21.6	C
9	Flynn Ln & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.245	33.9	D
12	Flynn Ln & Mullan Rd	Two-way stop	HCM 6th Edition	NB Right	0.006	25.6	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.299

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	85	75	50	361	324	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	8.00	4.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	75	50	361	324	30
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	20	14	98	88	8
Total Analysis Volume [veh/h]	92	82	54	392	352	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.30	0.12	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	21.61	11.05	8.22	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.22	0.41	0.14	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	30.59	10.28	3.61	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.63		0.99		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	15	72	73	55	29	19	33	378	34	142	320	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	8.00	2.00	2.00	4.00	2.00
Growth Factor	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	52	53	40	21	14	24	272	24	102	230	54
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	14	11	6	4	7	74	7	28	63	15
Total Analysis Volume [veh/h]	12	57	58	43	23	15	26	296	26	111	250	59
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.23	0.08	0.24	0.09	0.02	0.02	0.00	0.00	0.09	0.00	0.00
d_M, Delay for Movement [s/veh]	26.73	25.00	15.57	33.88	27.44	18.13	7.94	0.00	0.00	8.19	0.00	0.00
Movement LOS	D	D	C	D	D	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.60	1.60	1.60	1.52	1.52	1.52	0.06	0.00	0.00	0.29	0.00	0.00
95th-Percentile Queue Length [ft/ln]	39.98	39.98	39.98	38.01	38.01	38.01	1.59	0.00	0.00	7.37	0.00	0.00
d_A, Approach Delay [s/veh]	20.86			29.14			0.59			2.17		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	6.28											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	7.00	2.00	2.00	7.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	106	200	1272	1	1	395	197
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	54	346	0	0	107	54
Total Analysis Volume [veh/h]	0	0	1	0	0	115	217	1383	1	1	429	214
Pedestrian Volume [ped/h]	0			0			0			0		

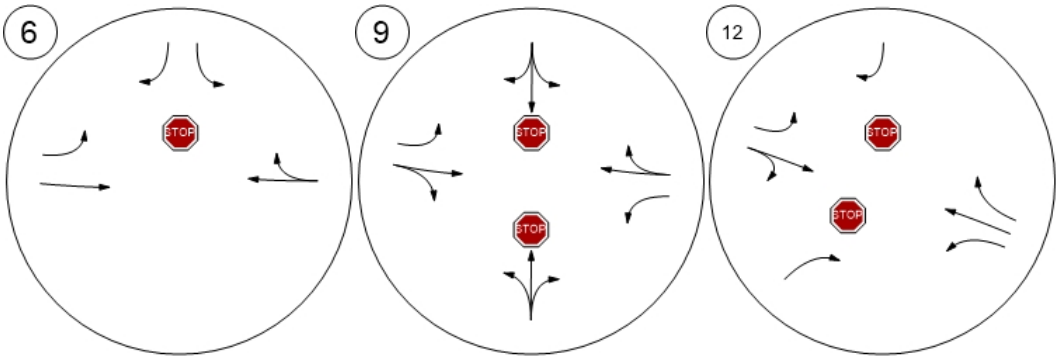
Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.18	0.23	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	25.59	0.00	0.00	12.04	9.96	0.00	0.00	12.29	0.00	0.00
Movement LOS			D			B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.00	0.00	0.67	0.89	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.43	0.00	0.00	16.70	22.24	0.00	0.00	0.15	0.00	0.00
d_A, Approach Delay [s/veh]	25.59			12.04			1.35			0.02		
Approach LOS	D			B			A			A		
d_I, Intersection Delay [s/veh]	1.52											
Intersection LOS	D											

Lane Configuration and Traffic Control



Mullan BUILD - 2050 AM

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Scenario 5 Roundabout (2050)
7/23/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		16.9	C
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	EB Thru		15.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	222	50	253	1259	405	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	4.00	7.00	7.00	4.00
Growth Factor	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	37	185	919	296	62
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	10	50	250	80	17
Total Analysis Volume [veh/h]	176	40	201	999	322	67
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	345		183		209	
Exiting Flow Rate [veh/h]	279		386		1252	
Demand Flow Rate [veh/h]	162	37	185	919	296	62
Adjusted Demand Flow Rate [veh/h]	176	40	201	999	322	67

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.96	0.93	0.93	0.96
Entry Flow Rate [veh/h]	184	42	210	1069	345	70
Capacity of Entry and Bypass Lanes [veh/h]	1038	1038	1203	1203	1175	1175
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	998	998	1156	1124	1098	1129
X, volume / capacity	0.18	0.04	0.17	0.89	0.29	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	D	A	A
95th-Percentile Queue Length [veh]	0.64	0.13	0.63	13.08	1.23	0.19
95th-Percentile Queue Length [ft]	15.96	3.13	15.70	327.01	30.76	4.73
Approach Delay [s/veh]	5.02		22.71		5.69	
Approach LOS	A		C		A	
Intersection Delay [s/veh]	16.93					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	207	53	231	1042	512	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	4.00	3.00	7.00	7.00	3.00
Growth Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	178	46	199	896	440	86
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	13	54	243	120	23
Total Analysis Volume [veh/h]	193	50	216	974	478	93
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	511		201		222	
Exiting Flow Rate [veh/h]	318		563		1243	
Demand Flow Rate [veh/h]	178	46	199	896	440	86
Adjusted Demand Flow Rate [veh/h]	193	50	216	974	478	93

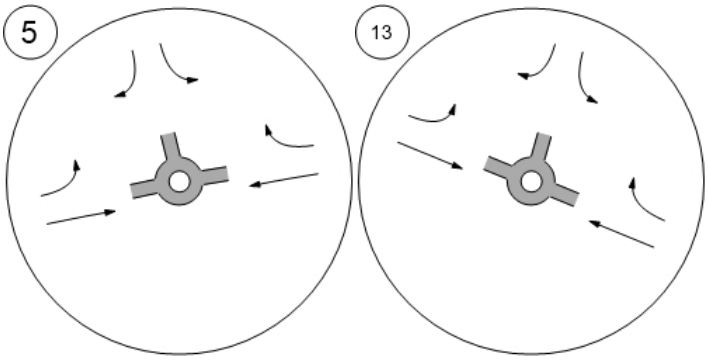
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.96	0.96	0.97	0.93	0.93	0.97
Entry Flow Rate [veh/h]	201	52	223	1043	512	96
Capacity of Entry and Bypass Lanes [veh/h]	892	892	1183	1183	1160	1160
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	858	858	1149	1106	1084	1126
X, volume / capacity	0.23	0.06	0.19	0.88	0.44	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	D	A	A
95th-Percentile Queue Length [veh]	0.86	0.19	0.69	12.58	2.30	0.27
95th-Percentile Queue Length [ft]	21.57	4.64	17.27	314.58	57.43	6.74
Approach Delay [s/veh]	6.17		21.90		7.43	
Approach LOS	A		C		A	
Intersection Delay [s/veh]	15.87					
Intersection LOS	C					

Lane Configuration and Traffic Control



Mullan BUILD - 2050 PM

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Scenario 3 Two Way Stop Control (2050)
7/23/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
6	Dougherty Dr & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.471	33.1	D
9	Flynn Ln & England Blvd	Two-way stop	HCM 6th Edition	SB Left	0.089	34.7	D
12	Flynn Ln & Mullan Rd	Two-way stop	HCM 6th Edition	SB Right	0.490	33.7	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 6: Dougherty Dr & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	33.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name	Dougherty Dr		England Blvd		England Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Dougherty Dr		England Blvd		England Blvd	
Base Volume Input [veh/h]	111	100	150	249	416	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	92	138	229	383	46
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	25	38	62	104	13
Total Analysis Volume [veh/h]	111	100	150	249	416	50
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.16	0.14	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	33.15	11.97	8.81	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.32	0.58	0.47	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	58.06	14.40	11.85	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.11		3.31		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	5.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 9: Flynn Ln & England Blvd

Control Type:	Two-way stop	Delay (sec / veh):	34.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.089

Intersection Setup

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Flynn Ln			Flynn Ln			England Blvd			England Blvd		
Base Volume Input [veh/h]	2	74	65	17	79	3	21	324	15	58	461	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	63	55	14	67	3	18	275	13	49	392	13
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	15	4	18	1	5	75	4	13	107	4
Total Analysis Volume [veh/h]	2	68	60	15	73	3	20	299	14	53	426	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.26	0.08	0.09	0.28	0.00	0.02	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	29.33	23.72	15.02	34.66	27.04	19.16	8.27	0.00	0.00	8.01	0.00	0.00
Movement LOS	D	C	C	D	D	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.53	1.53	1.53	1.63	1.63	1.63	0.05	0.00	0.00	0.13	0.00	0.00
95th-Percentile Queue Length [ft/ln]	38.36	38.36	38.36	40.72	40.72	40.72	1.36	0.00	0.00	3.33	0.00	0.00
d_A, Approach Delay [s/veh]	19.79			28.04			0.50			0.86		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	5.46											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 12: Flynn Ln & Mullan Rd

Control Type:	Two-way stop	Delay (sec / veh):	33.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

Intersection Setup

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Flynn Ln			Mullan Rd			Mullan Rd		
Base Volume Input [veh/h]	0	0	1	0	0	139	55	685	1	1	1364	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	0.7800	1.0000	1.0000	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1	0	0	108	43	534	1	1	1064	77
Peak Hour Factor	1.0000	1.0000	0.9200	0.9200	1.0000	0.9200	0.9200	0.9200	1.0000	1.0000	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	29	12	145	0	0	289	21
Total Analysis Volume [veh/h]	0	0	1	0	0	117	47	580	1	1	1157	84
Pedestrian Volume [ped/h]	0			0			0			0		

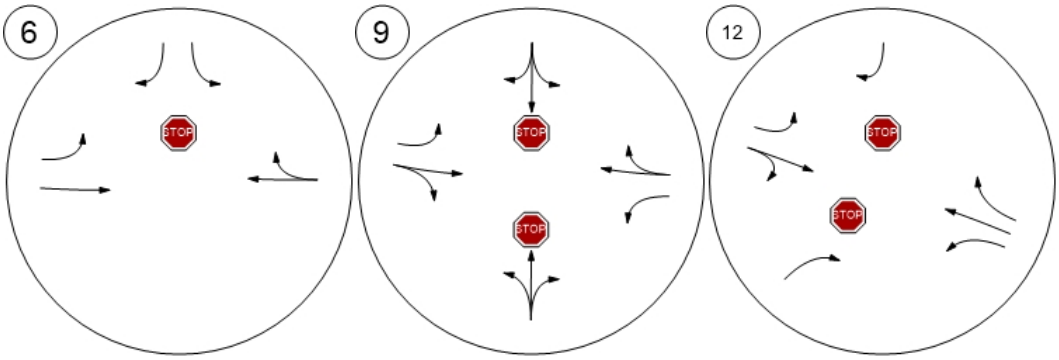
Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.49	0.08	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	12.02	0.00	0.00	33.70	12.00	0.00	0.00	8.63	0.00	0.00
Movement LOS			B			D	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.00	2.48	0.27	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.15	0.00	0.00	61.88	6.83	0.00	0.00	0.08	0.00	0.00
d_A, Approach Delay [s/veh]	12.02			33.70			0.90			0.01		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	2.28											
Intersection LOS	D											

Lane Configuration and Traffic Control



Mullan BUILD - 2050 PM

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Scenario 5 Roundabout (2050)
7/23/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	George Elmer Dr & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		15.7	C
13	Mary Jane Blvd & Mullan Rd	Roundabout	HCM 6th Edition	WB Thru		16.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 5: George Elmer Dr & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	George Elmer Dr		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	104	275	179	637	1185	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	3.00	2.00	2.00	3.00
Growth Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	228	149	529	984	293
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	62	40	144	267	80
Total Analysis Volume [veh/h]	93	248	162	575	1070	318
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	2		1		1	
Circulating Flow Rate [veh/h]	1091		95		167	
Exiting Flow Rate [veh/h]	494		1344		681	
Demand Flow Rate [veh/h]	86	228	149	529	984	293
Adjusted Demand Flow Rate [veh/h]	93	248	162	575	1070	318

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1350.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00092	0.00085	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.97	0.98	0.98	0.97
Entry Flow Rate [veh/h]	95	253	167	587	1092	328
Capacity of Entry and Bypass Lanes [veh/h]	495	562	1303	1303	1220	1220
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	485	551	1265	1278	1197	1185
X, volume / capacity	0.19	0.45	0.13	0.45	0.89	0.27

Movement, Approach, & Intersection Results

Lane LOS	B	B	A	A	D	A
95th-Percentile Queue Length [veh]	0.70	2.32	0.44	2.39	13.65	1.09
95th-Percentile Queue Length [ft]	17.55	57.93	10.98	59.80	341.18	27.25
Approach Delay [s/veh]	12.98		6.60		21.22	
Approach LOS	B		A		C	
Intersection Delay [s/veh]	15.71					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: Mary Jane Blvd & Mullan Rd

Control Type:	Roundabout	Delay (sec / veh):	16.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes		

Intersection Setup

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	1	0	1
Exit Pocket Length [ft]	0.00	100.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Mary Jane Blvd		Mullan Rd		Mullan Rd	
Base Volume Input [veh/h]	109	135	119	565	1330	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	105	93	441	1037	98
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	29	25	120	282	27
Total Analysis Volume [veh/h]	92	114	101	479	1127	107
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	1150		94		103	
Exiting Flow Rate [veh/h]	212		1266		582	
Demand Flow Rate [veh/h]	85	105	93	441	1037	98
Adjusted Demand Flow Rate [veh/h]	92	114	101	479	1127	107

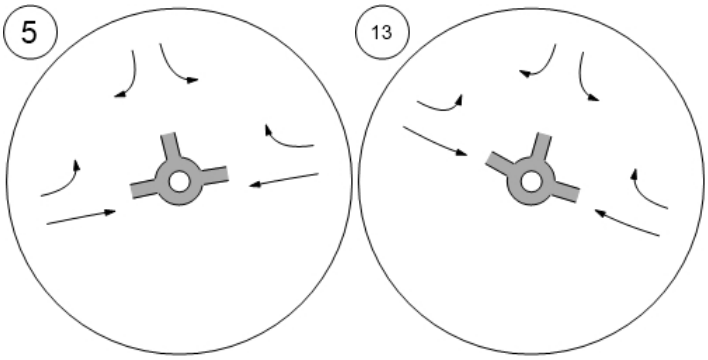
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	94	117	104	489	1150	110
Capacity of Entry and Bypass Lanes [veh/h]	499	499	1304	1304	1293	1293
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	490	490	1279	1279	1268	1268
X, volume / capacity	0.19	0.23	0.08	0.37	0.89	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	B	A	A	C	A
95th-Percentile Queue Length [veh]	0.69	0.89	0.26	1.77	13.57	0.28
95th-Percentile Queue Length [ft]	17.14	22.37	6.42	44.17	339.27	6.90
Approach Delay [s/veh]	10.41		5.86		22.47	
Approach LOS	B		A		C	
Intersection Delay [s/veh]	16.47					
Intersection LOS	C					

Lane Configuration and Traffic Control



D. Roadway Level of Service

Status	Roadway	From	To	Existing Functional Class	Recommended Functional Class	2050 ADT	Existing Speed Limit	Recommended Speed Limit	Existing Lanes	Recommended Lanes	2050 LOS
Existing	Broadway St	Flynn Ln	Reserve St	Principal Arterial	Principal Arterial	29,460	45	45	5	5	C
Existing	Broadway St	Aviation	Flynn Ln	Principal Arterial	Principal Arterial	30,780	55	55	5	5	C
Future	Doughtery Dr	George Elmer Dr	W Broadway St		Collector	11,956	0	30	0	3	C
Future	England Blvd	George Elmer Dr	Mary Jane Blvd		Collector	10,300	0	30	0	3	C
Existing	England Blvd	Mary Jane Blvd	Reserve St	Collector	Collector	14,920	25	25	3	3	B
Existing	Flynn Ln	Mullan Rd	England Blvd	Collector	Local	1,675	25	25	2	2	C
Existing	Flynn Ln	England Blvd	W Broadway St	Collector	Local	3,340	35	25	2	2	B
Existing	George Elmer Dr	Mullan Rd	Cattle Dr	Collector	Collector	7,050	45	30	2	2	C
Future	George Elmer Dr	England Blvd	Broadway St		Collector	11,950	0	30	0	3	B
Future	George Elmer Dr	Cattle Dr	England Blvd		Collector	7,050	0	30	0	3	B
Existing	Mary Jane Blvd	England Blvd	Camden St	Local	Collector	5,910	25	30	2	3	C
Future	Mary Jane Blvd	Camden St	W Broadway St		Collector	5,725	0	30	0	3	C
29460	Mary Jane Blvd	Melrose Pl	England Blvd	Local	Collector	5,375	25	30	2	3	C
Future	Mary Jane Blvd	Mullan Rd	Melrose Pl		Collector	6,840	0	30	0	3	C
Existing	Mullan Rd	George Elmer Dr	Mary Jane Blvd	Minor Arterial	Minor Arterial	19,820	45	45	2	3	C
Existing	Mullan Rd	Mary Jane Blvd	Reserve St	Minor Arterial	Minor Arterial	24,045	45	45	2	5	C
Existing	Reserve St	Broadway St	England Blvd	Principal Arterial	Principal Arterial	47,760	45	45	5	5	C
Existing	Reserve St	England Blvd	Mullan Rd	Principal Arterial	Principal Arterial	57,015	45	45	5	5	C

State Arterials

IF('RoadwayData'!i2<='FDOT
AADT'!$D$22,"C",IF(i2<='FDO
AADT'!$E$22,"D",IF(i2>'FDOT Urban AAD

Non State Arterials

IF('RoadwayData'!i2<='FDOT
AADT'!$D$22,"B",IF(i2<='FDO
AADT'!$E$22,"C",IF(i2<='FDO
AADT'!$F$22,"D",IF(i2>'FDOT Urban AAD

E. Pedestrian Intersection Risk Analysis

Pedestrian Risk Scoring					
Speed (mph)	Points	Volume (AADT)	Points	Lanes	Points
25	1	3000	1	2	1
30	2	9000	2	3	2
35	3	15000	3	4	3
40	4	15001	4	5	4
45	5				
50	5				
55	5				

Adapted from the Missoula MPO Pedestrian Facilities Master Plan (2018)

Bicyclist Risk Scoring					
Speed (mph)	Points	Volume (AADT)	Points	Lanes	Points
25	1	1,500	1	2	1
30	2	3,000	2	3	2
35	3	6,000	3	4	3
40	4	6,001	4	5	4
45	5			Right Turn Lane	2
50	5				
55	5				

Adapted from the Missoula MPO Bicycle Facilities Master Plan (2018)

#	Intersection	Speed 2050	Speed Points Pedestrian	Speed Points Bicycle	Volume 2050	Volume Points Pedestrian	Volume Points Bicycle	Lanes 2050	Lane Points Pedestrian	Lanes Points Bicycle
1	George Elmer Dr / Broadway St	55	5	5	**29,460**	4	4	5	4	4
2	George Elmer Dr / England Blvd	30	2	2	**11,950**	3	4	3	2	2
3	George Elmer Dr / Cattle Dr	30	2	2	**7,050**	2	4	3	2	2
4	George Elmer Dr / Heron's Landing	30	2	2	**7,050**	2	4	3	2	2
5	George Elmer Dr / Mullan Rd	45	5	5	**19,820**	4	4	4	3	3
6	England Blvd / Dougherty Dr	30	2	2	**11,956**	3	4	3	2	2
7	Broadway St / Dougherty Dr	55	5	5	**30,780**	4	4	5	4	4
8	Flynn Ln / Camden St	25	1	1	**3,340**	2	3	2	1	1
9	Flynn Ln / England Blvd	30	2	2	**3,340**	2	3	3	2	2
10	Flynn Ln / Chelsea Dr	25	1	1	**1,675**	1	2	2	1	1
11	Flynn Ln / Siren's Dr	25	1	1	**1,675**	1	2	3	2	2
12	Flynn Ln / Mullan Rd	45	5	5	**1,675**	1	2	4	3	3
13	Mary Jane Blvd / Mullan Rd	45	5	5	**19,820**	4	4	5	4	4
14	Mary Jane Blvd / O'Leary St	30	2	2	**6,840**	2	4	2	1	1
15	Mary Jane Blvd / Melrose Pl	30	2	2	**6,840**	2	4	2	1	1
16	Mary Jane Blvd / England Blvd	30	2	2	**5,375**	2	3	3	2	2
17	Mary Jane Blvd / Camden St	30	2	2	**5,910**	2	3	2	1	1
18	Mary Jane Blvd / Flynn Ln	30	2	2	**5,725**	2	3	3	2	2
19	Mary Jane Blvd / Veteran's Way	30	2	2	**5,725**	2	3	2	1	1
20	Mary Jane Blvd / Broadway St	55	5	5	**30,780**	4	4	5	4	4
21	Flynn Ln / Broadway St	55	5	5	**29,460**	4	4	5	4	4
	Broadway St / EB-Ramps	55	5	5	**29,460**	4	4	5	4	4
	Broadway St / WB-Ramps	55	5	5	**29,460**	4	4	5	4	4
	Reserve St / Broadway Ramp 1	45	5	5	**20,000**	4	4	5	4	4
	Reserve St / Broadway Ramp 2	45	5	5	**19,500**	4	4	5	4	4
	Reserve St / England Blvd	45	5	5	**47,760**	4	4	5	4	4
	Reserve St / Mullan Rd	45	5	5	**57,015**	4	4	5	4	4

INDEX(PedestrianRiskScore!$B$4:$B$9,MATCH(IntersectionData!I3,PedestrianRiskScore!$A$4:$A$9,0))

#	Intersection	Pedestrian Risk Score	Pedestrian Improvement Score	Pedestrian Score	Bicyclist Risk Score	Bicyclist Improvement Score	Bicyclist Score
1	George Elmer Dr / Broadway St	13	TBD	TBD	13	TBD	TBD
2	George Elmer Dr / England Blvd	7	TBD	TBD	8	TBD	TBD
3	George Elmer Dr / Cattle Dr	6	TBD	TBD	8	TBD	TBD
4	George Elmer Dr / Heron's Landing	6	TBD	TBD	8	TBD	TBD
5	George Elmer Dr / Mullan Rd	12	TBD	TBD	12	TBD	TBD
6	England Blvd / Dougherty Dr	7	TBD	TBD	8	TBD	TBD
7	Broadway St / Dougherty Dr	13	TBD	TBD	13	TBD	TBD
8	Flynn Ln / Camden St	4	TBD	TBD	5	TBD	TBD
9	Flynn Ln / England Blvd	6	TBD	TBD	7	TBD	TBD
10	Flynn Ln / Chelsea Dr	3	TBD	TBD	4	TBD	TBD
11	Flynn Ln / Siren's Dr	4	TBD	TBD	5	TBD	TBD
12	Flynn Ln / Mullan Rd	9	TBD	TBD	10	TBD	TBD
13	Mary Jane Blvd / Mullan Rd	13	TBD	TBD	13	TBD	TBD
14	Mary Jane Blvd / O'Leary St	5	TBD	TBD	7	TBD	TBD
15	Mary Jane Blvd / Melrose Pl	5	TBD	TBD	7	TBD	TBD
16	Mary Jane Blvd / England Blvd	6	TBD	TBD	7	TBD	TBD
17	Mary Jane Blvd / Camden St	5	TBD	TBD	6	TBD	TBD
18	Mary Jane Blvd / Flynn Ln	6	TBD	TBD	7	TBD	TBD
19	Mary Jane Blvd / Veteran's Way	5	TBD	TBD	6	TBD	TBD
20	Mary Jane Blvd / Broadway St	13	TBD	TBD	13	TBD	TBD
21	Flynn Ln / Broadway St	13	TBD	TBD	13	TBD	TBD
	Broadway St / EB-Ramps	13	TBD	TBD	13	TBD	TBD
	Broadway St / WB-Ramps	13	TBD	TBD	13	TBD	TBD
	Reserve St / Broadway Ramp 1	13	TBD	TBD	13	TBD	TBD
	Reserve St / Broadway Ramp 2	13	TBD	TBD	13	TBD	TBD
	Reserve St / England Blvd	13	TBD	TBD	13	TBD	TBD
	Reserve St / Mullan Rd	13	TBD	TBD	13	TBD	TBD

ATTACHMENT E

Roundabout Fastest Path Calculation Summary

ASSUMPTIONS:

1. MDT ROAD DESIGN MANUAL CHAPTER 6, NCHRP 672, AND WISDOT USED FOR FASTEST PATH CALCULATIONS
2. THE EQUATION USED FOR CALCULATING SPEED FROM MINIMUM RADIUS COMES FROM NCHRP 672 SECTION 6.7.1.2 AND ASSUMES A CROSS SLOPE OF 2%
3. THE EQUATION USED FOR CALCULATING SPEED FROM MINIMUM RADIUS DOES NOT ACCOUNT FOR ACCELERATION OR DECELERATION ENTERING/EXITING THE ROUNDABOUT WHICH COULD LEAD TO POTENTIALLY OVER ESTIMATING THE ENTRY AND EXIT SPEEDS
4. THE FASTEST PATH FOR EACH MOVEMENT WAS DRAWN ASSUMING A VEHICLE COULD USE BOTH APPROACHING/CIRCULATING LANES

North Leg (George Elmer)

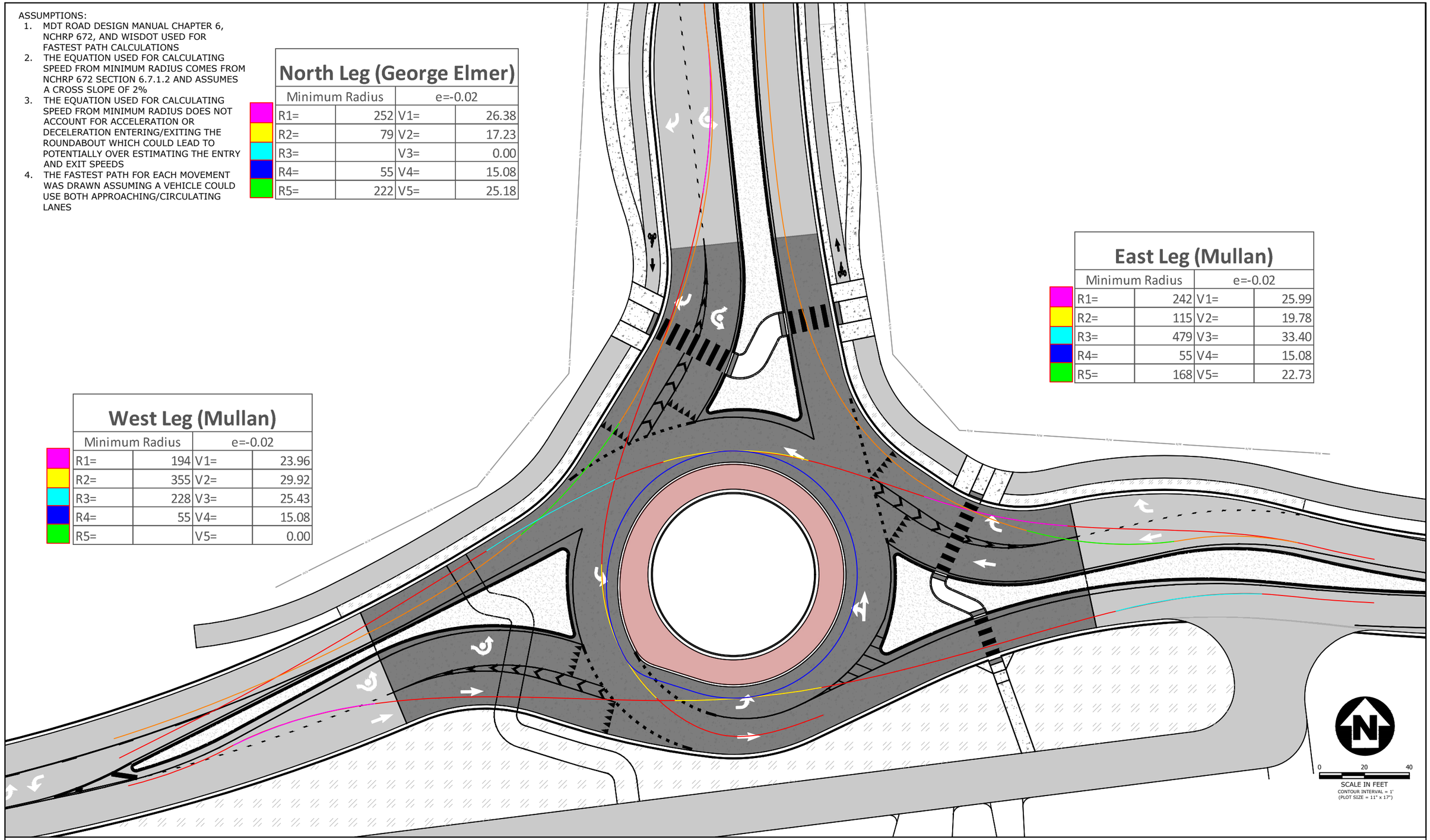
Minimum Radius		e=-0.02	
R1=	252	V1=	26.38
R2=	79	V2=	17.23
R3=		V3=	0.00
R4=	55	V4=	15.08
R5=	222	V5=	25.18

East Leg (Mullan)

Minimum Radius		e=-0.02	
R1=	242	V1=	25.99
R2=	115	V2=	19.78
R3=	479	V3=	33.40
R4=	55	V4=	15.08
R5=	168	V5=	22.73

West Leg (Mullan)

Minimum Radius		e=-0.02	
R1=	194	V1=	23.96
R2=	355	V2=	29.92
R3=	228	V3=	25.43
R4=	55	V4=	15.08
R5=		V5=	0.00



REVISION	DATE	DESCRIPTION
-	-	-

DESIGNER BB PROJ. NO. 7065
DRAWN BB DATE 07/30/2021
CHECKED PD SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

MULLAN BUILD
100% - RFC PLANS

GEORGE ELMER AND MULLAN
FASTEST PATH

SHEET 11 OF 11

North Leg (Mary Jane)

Minimum Radius		e=-0.02	
R1=	170	V1=	22.83
R2=	98	V2=	18.65
R3=		V3=	0.00
R4=	55	V4=	15.08
R5=	98	V5=	18.65

West Leg (Mullan)

Minimum Radius		e=-0.02	
R1=	289	V1=	27.74
R2=	254	V2=	26.46
R3=	205	V3=	24.45
R4=	55	V4=	15.08
R5=		V5=	0.00

East Leg (Mullan)

Minimum Radius		e=-0.02	
R1=	228	V1=	25.43
R2=	113	V2=	19.65
R3=	374	V3=	30.50
R4=	55	V4=	15.08
R5=	154	V5=	22.02

ASSUMPTIONS:

1. MDT ROAD DESIGN MANUAL CHAPTER 6, NCHRP 672, AND WISDOT USED FOR FASTEST PATH CALCULATIONS
2. THE EQUATION USED FOR CALCULATING SPEED FROM MINIMUM RADIUS COMES FROM NCHRP 672 SECTION 6.7.1.2 AND ASSUMES A CROSS SLOPE OF 2%
3. THE EQUATION USED FOR CALCULATING SPEED FROM MINIMUM RADIUS DOES NOT ACCOUNT FOR ACCELERATION OR DECELERATION ENTERING/EXITING THE ROUNDABOUT WHICH COULD LEAD TO POTENTIALLY OVER ESTIMATING THE ENTRY AND EXIT SPEEDS
4. THE FASTEST PATH FOR EACH MOVEMENT WAS DRAWN ASSUMING A VEHICLE COULD USE BOTH APPROACHING/CIRCULATING LANES

0 20 40

SCALE IN FEET

CONTOUR INTERVAL = 1'
(PLOT SIZE = 11" x 17")

REVISION	DATE	DESCRIPTION
-	-	-

DESIGNER BB PROJ. NO. 7065
DRAWN BB DATE 07/30/2021
CHECKED PD SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

MULLAN BUILD
100% - RFC PLANS

MARY JANE AND MULLAN
FASTEST PATH

SHEET 10 OF 10

ATTACHMENT F

Dry Utility Report

Table of Contents

Tables

Attachments

1.0 Introduction

This is the dry utility consultation report for the *Mullan Build* project in Missoula, Montana. The report includes an outline of existing dry utilities in the overall project area, provided mapping from private utility companies, proposed dry utility placement, and potential dry utility conflicts that could require relocates. Sections of this report reflect a Subsurface Utility Engineering (SUE) Phase 1 approach, however this is not a SUE Phase 1 deliverable for dry utilities.

Attachment A outlines the 11 different areas within the overall Mullan Build project area where roadwork and trail improvements are proposed.

2.0 Existing Conditions

2.1 General Information

There are several dry utility companies that have infrastructure throughout the project area. All utility companies have been contacted and informed about the project. Existing dry utility infrastructure includes overhead and underground electric primary, overhead and underground electric secondary, natural gas distribution, overhead and underground telephone, and fiber optic lines. See *Table 1* for all dry utility companies with infrastructure in the project area.

Table 1 - Dry Utility Contact Information

Utility Company	Utility	Contact
Missoula Electric Cooperative	Electric	Danny Baker DannyB@meccoop.com
NorthWestern Energy	Electric/Natural Gas	Erik Loran Erik.loran@northwestern.com
CenturyLink	Communication	John Olson John.Olson@centurylink.com
Blackfoot Communications	Communication	Dan Patterson Dpatterson@blackfoot.com
Access Montana	Communication	Robbie Oconnor Roberto@ronan.net
Charter Communications	Communication	Benny Murphy Benny.murphy@charter.com

2.2 Utility Mapping

All dry utility companies, with the exception of Charter, have provided the project team with some sort of existing mapping for the layout of their infrastructure. Utility mapping has been provided via mapping software files, pdf's, and google earth screenshots showing layouts. Certain mapping, for example CenturyLink, does not have accurate mapping data and infrastructure shown can be +/- 30-feet. Also, natural gas mapping from NorthWestern Energy cannot be distributed to the project team per DOT regulations. The only natural gas mapping obtained is from locates picked up from survey crews in the field.

Missoula Electric Cooperative (MEC) provided the project team with accurate ArcGIS shape files that have been incorporated into our base map. See **Attachment B**. The mapping shows all primary distribution, services, MEC service area boundary, and NorthWestern Energy's service area boundary. Field survey crews have verified that MEC's mapping aligns with collected survey data in areas where dry utility locates have been picked up.

NorthWestern Energy (NWE) provided the project team with a printout pdf of their electrical mapping in the overall project area. See **Attachment C**. NWE uses an internal mapping software called GTViewer which shows a horizontal layout of their infrastructure to +/- 15-feet.

CenturyLink has provided the project team with a kmz file of their infrastructure for the overall project area. See **Attachment D**. CenturyLink has noted that the infrastructure shown on the mapping is approximately +/- 20-feet. Survey crews have picked up CenturyLink locates in some project areas to verify the horizontal layout.

Blackfoot Communications provided the project team with a google earth markup of their fiber optic lines in the project area. Blackfoot previously installed fiber optic infrastructure through the Dougherty property. The line follows the proposed extension of England Boulevard, to the west from the Flynn Lane and England Boulevard intersection, then cuts north along the proposed Dougherty Lane (Dougherty Lane not part of this project scope of work) to W. Broadway. See **Attachment E**.

Access Montana has provided the project team with as-built information of their existing infrastructure. See **Attachment F**. It has been verified that the only known location they have infrastructure within the overall project area is along the south side of W. Broadway. Access Montana has a fiber optic line that feeds from a Zayo source fiber line in Missoula that ultimately services the Mission Valley.

Charter Communications, also known as Spectrum, has not yet provided the project team with as-built information of their existing infrastructure. All Charter infrastructure referenced in this report has been determined by the process of elimination from other provided infrastructure. Referenced Charter infrastructure could be another utilities infrastructure.

3.0 Existing & Proposed Dry Utility Placement

3.1 Roadwork

Typically, the utility companies will not install their infrastructure along a new roadway unless it's being funded by either a local, state, or federal agency or by a private developer. The Mullan Build Grant project will open the door for developers in this area of Missoula for both residential and commercial growth. However, during consultation with utility companies, CenturyLink is the only company that has expressed interest in wanting to extend their infrastructure into the project areas that they currently do not occupy.

Dry utilities are generally installed to the outside of the roadway section, between the sidewalk and the edge of ROW (open space). Preliminary typical road sections can be seen in **Attachment G**. This area ensures that the dry utilities will not be conflicting with other infrastructure improvements in

the roadway or vegetation in the boulevard. It is also easier for the utility companies to maintain their infrastructure in the open space area without ripping up roads or sidewalk.

3.1.1 George Elmer Drive North

George Elmer Drive North (see **Attachment A**) is proposed to be extended north to W. Broadway from the proposed George Elmer Drive and England Boulevard intersection. At the W. Broadway intersection there are fiber optic lines running parallel to W. Broadway on the south side of the road. Access Montana, Blackfoot, and CenturyLink all have individual fiber optic lines occupying the area. The Blackfoot line services the Missoula Airport. The Access Montana line follows W. Broadway west to the HWY-93 and I-90 interchange where it heads north to service the Mission Valley. The CenturyLink line heads west on W. Broadway, then on HWY 10 to service Frenchtown, Montana. CenturyLink mapping is also showing 5 buried copper lines on the south side of W. Broadway running east to west. CenturyLink has noted that the 3 southern most lines are no longer in service and have been abandoned in place. MEC also has an overhead 3-phase primary distribution line paralleling W. Broadway on the south side.

CenturyLink has expressed interest in extending their infrastructure to the north along the west side of the proposed George Elmer Drive corridor. No other utility companies have expressed interest in extending their infrastructure unless it's being funded by this project or a new development within the vicinity of the project area.

3.1.2 George Elmer Drive South

The section of George Elmer Drive South (see **Attachment A**) between Mullan Road and the 44 Ranch Subdivision is existing. However, curb and gutter, boulevard, and sidewalk are proposed to be added (see proposed road sections in **Attachment G**) for this section. The improvements will happen between Mullan Road and where the improvements ended for the 44 Ranch Subdivision on the north side of the Flynn Lowney Ditch. George Elmer Drive South is proposed to continue north from the where it is currently terminated at the Pius Way intersection to the proposed England Boulevard intersection.

CenturyLink and NWE both have infrastructure on west side of George Elmer Drive South between Mullan Road and the 44 Ranch subdivision. CenturyLink has a fiber optic line and NWE has a natural gas distribution main that services the 44 Ranch Subdivision. At the intersection of George Elmer Drive South and Mullan Road, MEC has an overhead 3-phase primary distribution line paralleling Mullan Road on the north side. NWE also has a natural gas distribution main running east to west on the north side of Mullan Road through the intersection. CenturyLink mapping shows a buried fiber optic line running east to west on the north side of Mullan.

On the north end where Tipperary Way Trail connects into George Elmer Drive South, there is a cluster of utility boxes owned by CenturyLink and NWE on the west side of the road, south of the Flynn Lowney Ditch. NWE has an underground natural gas distribution main that crosses George Elmer Drive South west to east where the Tipperary Way Trail alignment is proposed.

At the George Elmer and Pius Way intersection, Blackfoot has a fiber optic line that runs north on the east side of the proposed George Elmer South corridor. CenturyLink has an underground copper line (copper lines for telephone and DSL) on the west side of George Elmer Drive that services the 44

Ranch Subdivision. CenturyLink also has conduit stubbed on the west side of George Elmer Drive for future extension to the north (See **Attachment D**). NorthWestern Energy has an underground 3-phase primary electric and a natural gas distribution line that crosses east to west on the north side of the George Elmer and Pius Way intersection. NorthWestern Energy's natural gas and electric infrastructure is currently in place for expansion to the north.

CenturyLink has expressed interest in extending their infrastructure to the north along the west side of the proposed George Elmer Drive corridor from Pius Way. No other utility companies have expressed interest in extending their infrastructure unless it's being funded by this project or a new development within the vicinity of the project area.

3.1.3 England Boulevard

England Boulevard is proposed to be extended from the intersection of Flynn Lane to the west and connect into the proposed George Elmer Drive extension (see **Attachment A**). The intersection of Flynn Lane and England Boulevard is occupied by NWE, MEC, CenturyLink, Charter, and Blackfoot infrastructure. NWE has an underground 3-phase primary distribution line paralleling Flynn Lane on the west side. NWE has a Switchgear at the southwest corner of the intersection that acts as pivot for their underground circuits in the area. NWE does not have any natural gas in the area. MEC has an overhead 3-phase primary distribution line that parallels Flynn Lane on the east side. MEC has a pole on the southeast corner of the intersection with a 3-phase primary dip to service the subdivision to the east. Charter has infrastructure on the MEC poles running north from the pole at the southeast corner of the intersection. Charter also has a dip on this pole to service to the subdivision to the east. CenturyLink has a fiber optic line running east to west across the south side of the intersection that cuts north along Flynn Lane on the west side paralleling the NWE underground 3-phase primary distribution line. Blackfoot has a fiber optic line running on the west side of Flynn Lane that cuts west on the north side of the proposed England Drive corridor. Blackfoot mapping shows the fiber line following the proposed road corridor on the north side all the way to the George Elmer Drive North intersection.

At the proposed England Boulevard and George Elmer Drive North intersection the only known existing dry utility in the area is the Blackfoot fiber optic line. Blackfoot mapping shows the fiber optic line on the east side of George Elmer Drive North underneath the proposed sidewalk, then crosses through the intersection. The line then heads east on the north side of the proposed England Boulevard corridor.

No utility companies have expressed interest in improving and/or installing new infrastructure in this area.

3.1.4 Mary Jane Boulevard North

Mary Jane Boulevard North extends north from Camden Drive through Flynn Lane then eventually connecting into W. Broadway (See **Attachment A**). There are two active projects happening at the north end of Mary Jane Boulevard North. The VA clinic and the Summit Beverage projects. Both projects are on the west side of Mary Jane Boulevard North. Summit Beverage has recently broke ground while the VA clinic project has not started. Territorial Landworks is the civil engineer for both projects and was responsible for designing the section of Mary Jane Boulevard North from Veterans Way to W. Broadway. Territorial Landworks has delivered their design to DJ&A to incorporate into the

corridor design for the entire section of Mary Jane Boulevard North. NWE and MEC will be extending underground electric and natural gas for both of these projects. Coordination with NWE has taken place to ensure that the natural gas distribution main extension will not be in conflict with the road design. DJ&A has not received a layout of what MEC has planned in the area for their electrical distribution to service both projects.

The intersection of Mary Jane Boulevard North and W. Broadway has multiple utilities in the proposed road corridor. Blackfoot, CenturyLink, and Access Montana all have fiber optic lines running along the south side of W. Broadway. CenturyLink mapping is also showing 5 buried copper lines on the south side of W. Broadway running east to west. CenturyLink has noted that the 3 southern most lines are no longer in service and have been abandoned in place. MEC also has an overhead 3-phase primary distribution line paralleling W. Broadway on the south side.

The intersection of Mary Jane Boulevard North and Flynn Lane has existing dry utilities on both the north and south side. MEC has an overhead 3-phase primary distribution line on the north side that parallels Flynn Lane. CenturyLink has an underground fiber optic line running east to west on the north side of Flynn Lane. CenturyLink mapping shows the fiber optic line turning north on the west side of the proposed Mary Jane Boulevard North corridor from the Flynn Lane and Mary Jane Boulevard North intersection.

The intersection of Mary Jane Boulevard North and Camden Street is where Mary Jane Boulevard North starts the extension north towards Flynn Lane. NWE has a 3-phase underground primary line running east to west on the north side of Camden Street with a 3-phase junction box located in the proximity of the proposed street section. Survey crews picked up underground telephone lines on the north side of the intersection that appear to belong to Charter. There are also communication pedestals in the proposed street section.

3.1.5 Mary Jane Boulevard South

Mary Jane Boulevard South extends from where Mary Jane is currently terminated, just south of Melrose Place, to Mullan Road (see **Attachment A**). Construction is underway on the Hellgate Village subdivision project on the northern section of Mary Jane Boulevard South. WGM, the civil designer for the subdivision, has designed the section of Mary Jane Boulevard South through the subdivision and have released the road design to our project team to incorporate into our corridor design to Mullan Road. Utility companies have already been consulted about the subdivision and will be extending dry utilities. DJ&A has not been provided a layout of the proposed dry utility configuration for the subdivision.

At the proposed Mary Jane Boulevard South and Mullan Road intersection NWE has an overhead 3-phase primary distribution line paralleling Mullan Road on the north side. Charter has a communication line under-build on the NWE poles along Mullan Road. NWE also has a natural gas distribution main running east to west along the north side of Mullan road. CenturyLink mapping is showing a buried copper line paralleling the north side of Mullan Road.

3.2 Trail Work

There are 5 trails throughout the overall project area where improvements are proposed. The Grant Creek Trail, Milwaukee Trail, Tipperary Way Trail, Flynn Lane Trail, and the Mullan Trail (See

Attachment A). It is not anticipated that the utility companies will be extending their infrastructure along the trail improvements. Preliminary typical trail sections can be seen in **Attachment H.**

3.2.1 Grant Creek Trail

The Grant Creek Trail is proposed to follow the Grant Creek stream restoration alignment from the south side of W. Broadway approximately one-half mile to the southwest where it intersects with the proposed Flynn Lane Trail (see **Attachment A**). The Grant Creek Trail alignment is proposed on the north side of the proposed Grant Creek stream restoration alignment. The only known utilities that reside in the proposed Grant Creek Trail corridor are along the south side of W. Broadway where the trail connects. Access Montana, Blackfoot, and CenturyLink all have buried fiber optic lines paralleling W. Broadway on the south side. CenturyLink mapping is also showing 5 buried copper lines on the south side of W. Broadway running east to west. CenturyLink has noted that the 3 southern most lines are no longer in service and have been abandoned in place. MEC has an overhead 3-phase primary distribution line that parallels W. Broadway on the south side.

3.2.2 Milwaukee Trail

The Milwaukee Trail is proposed to follow Hiawatha Road on the east side from Mullan Road to the Flynn Lowney Ditch (see **Attachment A**). At the Flynn Lowney Ditch the Milwaukee Trail intercepts the Tipperary Way Trail. There are dry utilities along the entire proposed Milwaukee Trail corridor. At the intersection with Mullan Road, CenturyLink has a buried fiber optic line that parallels Mullan Road on the north side. NWE has a natural gas distribution main on the north side of Mullan Road running east to west. MEC also has an overhead 3-phase primary distribution line that parallels Mullan Road on the north side.

Along the entire length of the Milwaukee Trail, NWE has an overhead transmission line that runs approximately 25-feet to east of Hiawatha Road. NWE has a transmission pole on the northeast corner of the Hiawatha Road and Mullan Road intersection which MEC has a 3-phase under-build on for their distribution to the west along Mullan Road. Charter also shares this same pole with an under-build running to the west and also has a distribution drop to underground.

3.2.3 Tipperary Way Trail

The Tipperary Way Trail is proposed to follow the Flynn Lowney Ditch from where it intercepts with the Milwaukee Trail (see **Attachment A**) all the way to George Elmer Drive South, then continues to the east where it ties into a roundabout at Siren's Road southeast of Hellgate Elementary. The trail is proposed on the south side of the Flynn Lowney Ditch to the west of George Elmer Drive South and on the north side of the Flynn Lowney Ditch to the east of George Elmer Drive South.

To the west of George Elmer Drive South, The Tipperary Way Trail crosses Lariat Loop and Roundup Drive. Charter has an underground communication line on the east of Roundup Drive running south to north. There are no known utilities where Tipperary Way Trail crosses Lariat Loop. At the intersection of Tipperary Way Trail and George Elmer Drive South, there is a utility box cluster on the west side of George Elmer road that was discussed in Section 3.1.2. The trail is proposed to be to the south of the utility box cluster that services the 44 Ranch Subdivision.

Going east, The Tipperary Way trail connects into George Elmer Drive South on the north side of the Flynn Lowney Ditch. At the connection, Both CenturyLink and Blackfoot show buried fiber optic lines. NWE mapping shows an underground 3-phase primary distribution line that crosses the intersection to the west.

The Tipperary Way Trail follows the Flynn Lowney Ditch to the east towards Belleauwood Lane. NWE's mapping is showing the underground 3-phase primary distribution line following the Flynn Lowney Ditch on the north side to Belleauwood Lane where it dips down from overhead distribution from a pole on the northwest corner of the Belleauwood Lane and Tipperary Way intersection. The primary dip appears to be feeding the western half of the 44 Ranch Subdivision. CenturyLink mapping is showing buried copper from George Elmer Drive South going approximately 450-feet east along our proposed trail alignment, then cuts north. MEC has an overhead distribution line that runs south to north crossing over our trail section approximately halfway between George Elmer Drive South and Belleauwood Lane. The Tipperary Way Trail then continues east, following Tipperary Way on the north side, until it connects into existing sidewalk at the roundabout at Siren's Lane. There is a Charter pedestal at the proposed connection point. NWE also has an overhead 3-phase primary distribution line that runs on the north side of Tipperary Way to the east from Belleauwood Lane to where it connects into the roundabout at Siren's Lane. The Tipperary Way Trail is proposed to be on the north side of the NWE 3-phase distribution line for this section.

3.2.4 Flynn Lane Trail

The Flynn Lane Trail is proposed to run along the west side of Flynn Lane from Chelsea Drive north to where Flynn Lane makes a 90-degree turn to the east, then cuts west to where it eventually connects into the Grant Creek Trail (see **Attachment A**). CenturyLink mapping shows buried and overhead communication lines on the west side of Flynn Lane from Chelsea Drive to the access road to the west for the Hellgate football field. CenturyLink also shows a buried fiber optic line on the west side of Flynn Lane from the southern end of the England Boulevard and Flynn Lane intersection all the way north where Flynn Lane makes the 90-degree bend to the east. Blackfoot also has a buried fiber optic line on the west side of Flynn Lane from Chelsea Drive that runs north to the intersection of England Boulevard and Flynn Lane. The line then cuts west along the northern part of the proposed England Boulevard road alignment as described in Section 3.1.3. NWE has an underground 3-phase primary distribution line that runs on the west side of Flynn Lane between the access road to the Hellgate football field and Camden street. The Blackfoot fiber line that follows the proposed Dougherty Lane alignment south to north (Dougherty Lane not part of this scope of work) is the only known dry utility in the undeveloped fields between Flynn Lane and the Grant Creek Trail connection for the proposed Flynn Lane Trail alignment.

3.2.5 Mullan Trail

The Mullan Trail alignment is proposed on the north side of Mullan Road from Flynn Lane to Reserve Street. There are a handful of buried and overhead dry utilities through the proposed trail corridor. The current plan for the section of Mullan Trail between Reserve Street and all the development to the west on the north side (development stops at the 4100 Condominiums) is to only add trail improvements where there currently is not existing sidewalk or trail sections. For example, the stretch between Clark Fork Lane and the Mullan Reserve Apartments. There is currently no sidewalk or trail section between Flynn Lane and the 4100 Condominiums.

For the area between Flynn Lane and the 4100 Condominiums, CenturyLink has a buried copper line running on the north side of Mullan. NWE has an overhead 3-phase primary distribution line running east to west on the north side of Mullan Road with a Charter under-build. Charter also has a buried fiber optic line on the north side of Mullan road running east to west. NWE also has a natural gas distribution main that parallels Mullan Road on the north side.

The unimproved area on the north side of Mullan Road between Clark Fork Lane and the Mullan Reserve Apartments is the only area in this stretch where trail improvements are proposed. CenturyLink mapping shows 4 buried copper lines running east to west on the north side of the road. NWE has both overhead and underground primary distribution lines running east to west on the north side of Mullan Road as well as an underground natural gas distribution main.

4.0 Potential Dry Utility Conflicts

All conflicts identified from consultation with dry utilities are from provided mapping or from survey crews collecting marked out utility locates in the field. All utility locations shown on mapping and/or plans are approximate and not all utilities are shown. It will be the responsibility of the contractor to verify locations of all utilities in the field during construction. Additional conflicts could arise during project development. It will also be the responsibility of the City/County to reimburse the utility companies for payment for all utility relocates for the Mullan Build project.

Initial assessment of the proposed road and trail corridor designs have identified utilities that will be in conflict requiring relocation. See *Table 2* for estimated dry utility relocation costs. Anticipated utility relocates and corresponding relocations costs will be broken down for their respective areas in Section 4.1 and Section 4.2

Table 2 – Estimated Dry Utility Relocation Costs

Utility	Costs
Overhead/Underground 3-Phase Electric Primary	$30.00/ft
Overhead/Underground 1-Phase Electric Primary	$20.00/ft
Overhead/Underground Communication	$20.00/ft
Underground Fiber Optic	$30.00/ft
Underground Natural Gas Distribution	$30.00/ft
Commination Pedestal	$1000/each
Power Pole	$7500/each
3-Phase Junction Box	$3000/each
Overhead Transformer with Service Reconnect	$3000/each
Gas Valve Adjustment	$2500/each
Utility Manhole Adjustment	$1000/each

In areas where utilities need to be relocated within the Montana Department of Transportation (MDT) ROW (W. Broadway and/or Mullan Road), a utility occupancy permit agreement through MDT will

need to be obtained. The agreements will be between the respective utility company and MDT. It has also been determined through discussions with MDT that this project will not trigger any cost sharing scenarios.

Existing underground communication lines, electric lines, and natural gas line are assumed to be buried approximately 30-inches if originally installed correctly per standards. Proposed road plans and profiles are matching existing grade and have fills to build the road up. Utility companies can be concerned if large fills are proposed over direct buried lines (not in conduit) due to maintenance reasons. However, during initial consultation this issue has not been a concern.

4.1 Roadwork

Proposed road plan and profiles can be found in the Basis of Design Report. Roads have been preliminarily designed to match the existing surface grades where possible. However, there are exceptions where proposed corridors connect into W. Broadway where more fill is required to build up to match into existing. Proposed road sections can be found in **Attachment G**.

4.1.1 George Elmer Drive North

At the intersection of George Elmer Drive North and W. Broadway, as mentioned in section 3.1.1, there are several buried fiber optic and copper lines. The proposed section through this area is all fill and buried utilities will not be affected. There is a fiber optic utility box in the proposed road corridor that will need to be relocated outside of the proposed street section. Relocating the utility box could also trigger pulling additional fiber line through existing conduit to reconnect the system. Approximately 1000-feet of fiber would need to be pulled to reconnect the system from where existing utility boxes are to the east and west of the utility box in conflict. MEC has a power pole for their overhead 3-phase primary distribution line that will need to be relocated to the east or west along the south side of W. Broadway. Doing so would require an additional power pole to be installed and reconductored due to the existing spans being at their max lengths. New pole placements are assumed to be approximately 100-feet apart off-centered from the centerline of George Elmer Drive North inside the southern boundary of the HWY-10 MDT ROW. Total relocation costs for this intersection are proposed to be ~$50,000.

The intersection of George Elmer Drive North and England Boulevard has minimal existing dry utilities. As mentioned in section 3.1.1, the only known existing utility in the area is the Blackfoot fiber optic line which runs underneath the proposed sidewalk on the east side of the road. There is concern with the cuts required to build up the road section in the intersection that the fiber optic line will be exposed during construction actives (assuming 30-inch bury depth to top-of-pipe). Once backfilled the fiber line will have approximately 2.5-feet of cover. If relocate efforts are required, approximately 100-ft of new fiber line and 2 utility boxes for pulling will be needed. Total relocation costs for this intersection are proposed to be ~$5000.

The total estimated lump sum relocation costs for George Elmer Drive North are ~**$55,000**.

4.1.2 George Elmer Drive South

George Elmer Drive South has existing utilities as described in section 3.1.2.

At the intersection of George Elmer Drive South and Mullan road there are no anticipated utility relocates for the proposed improvements besides a natural gas valve that will need to be adjusted to finish grade. The natural gas valve adjustment is proposed to be $2,500.

On the west side of George Elmer Drive South between Mullan Road and the 44 Ranch Subdivision, CenturyLink mapping shows a buried fiber optic line. It is unknown if this line is direct buried or in conduit. The fiber optic line will end up underneath the proposed boulevard area in the road section. CenturyLink may want this fiber line to be in conduit for easier maintenance. The length of line is approximately 1800-feet. Proposed costs to replace this section of fiber line in conduit is ~$54,000**.**

On the north end where Tipperary Way Trail ties into George Elmer Drive South, proposed utility relocates consist of two natural gas valves that need adjusted to finish grade. The proposed costs for valve adjustments are $5,000**.**

The intersection of George Elmer Drive South and Pius Way has underground power and natural gas as described in section 3.1.2. It is not anticipated that the underground power and natural gas will require relocates as the road section is matching existing.

The total estimated lump sum relocation costs for George Elmer Drive South are ~**$61,500.**

4.1.3 England Boulevard

England Boulevard has existing utilities as described in section 3.1.3. The intersection of England Boulevard and George Elmer Drive North has already been discussed in section 4.1.1.

The intersection of England Boulevard and Flynn Lane has various underground utilities on the west side of the intersection where the proposed England Boulevard improvements start. With the proposed road section and plan and profiles showing fills and no cuts for the area, there are no anticipated utility relocates for the intersection. NWE has a switchgear utility box on the southwest corner of the intersection that will be avoided. The Blackfoot fiber optic line running to the west on the north side of the proposed England Boulevard alignment has been verified to be in conduit.

Through initial consultation with the dry utility companies, there have been no identified dry utility conflicts within the proposed England Boulevard project area. However, utility conflicts could arise during project development.

4.1.4 Mary Jane Boulevard North

Mary Jane Boulevard North has existing utilities as described in section 3.1.4.

The intersection of Mary Jane Boulevard North and W. Broadway has utilities that will require relocates. MEC has a power pole for their overhead 3-phase primary distribution line that would need to be relocated to the east or west along the south side of W. Broadway. Doing so will require an additional power pole to be installed and reconductored to achieve the horizontal offset requirements from the road. Assuming new pole placements are approximately 100-feet apart off-centered from the centerline of Mary Jane Boulevard North inside the southern boundary of the HWY-10 MDT ROW. There is an at grade utility manhole believed to be owned by CenturyLink that will need to be

adjusted to finish grade. Proposed costs for utility relocates at the Mary Jane Boulevard North and W. Broadway intersection are ~$19,000.

At the Mary Jane Boulevard North and Flynn Lane intersection, MEC has a power pole on the north side of the intersection for their overhead 3-phase primary distribution line that needs to be relocated outside of the proposed road corridor. Doing so will require an additional power pole to be installed and reconductored to achieve the horizontal offset requirements from the road. Assuming new pole placements approximately 100-feet apart off-centered from the centerline of Mary Jane Boulevard North. Proposed costs for utility relocates at the Mary Jane Boulevard North and Flynn Lane intersection are ~$18,000.

The intersection of Mary Jane Boulevard North and Camden Street will require utility relocates. NWE has an underground 3-phase distribution line on the north side of the intersection running east to west. There is concern with the cuts required to build up the road section in the intersection that the underground electric line will be exposed during construction actives (assuming 30-inch bury depth to top-of-pipe). Once backfilled the electric line will have approximately 2.5-feet of cover. If relocate efforts are required to increase the bury depth, approximately 100-ft of new electric line and 2 junction boxes for pulling will be required. There are also two Charter communication pedestals in conflict at the northeast corner of the intersection. The pedestals should be able to be relocated a short distance to the east. Total relocation costs for this intersection are proposed to be ~$11,000.

The total estimated lump sum relocation costs for Mary Jane Boulevard North are ~**$48,000.**

4.1.5 Mary Jane Boulevard South

Mary Jane Boulevard South has existing utilities as described in section 3.1.5.

At the northern end of Mary Jane Boulevard South where it connects into Melrose Place, there are no anticipated utility relocates.

The intersection of Mary Jane Boulevard South and Mullan Road will have required utility relocations. NWE has a power pole for their overhead 3-phase primary distribution line that would need to be relocated to the east or west along the north side of Mullan Road. This pole has an overhead transformer on it with an underground service drop to service irrigation lines to the north. Relocation of this pole will also require an additional power pole to be installed and reconductored to achieve the horizontal offset requirements from the roadway. New pole placements are assumed to be approximately 100-feet apart off-centered from the centerline of Mary Jane Boulevard South. There are also three communication pedestals that are in conflict with the proposed road corridor and will need to be relocated to the west or east along Mullan Road. Two of the three pedestals are believed to be fiber optic boxes owned by CenturyLink and Charter. It is not known if the fiber optic lines are in conduit. If the lines are direct buried then conduit will need to be installed between new pull boxes in order to relocate the existing utility pedestals in conflict. Assuming that 100-feet of fiber optic line and two pull boxes will be needed for relocation of each line. Total relocation costs for the intersection are proposed to be ~$31,000.

The total estimated lump sum relocation costs for Mary Jane Boulevard South are ~**$32,000.**

4.2 Trail Work

In most cases, the trail work will not trigger any utility relocates due to thoroughly thought out alignments to avoid conflicts. The proposed trail sections (see **Attachment H**) also do not require excessive cut/fills to trigger relocates where proposed trail alignments are above buried dry utilities. There are situations where utility companies have direct buried (not in conduit) infrastructure that they require not to be underneath hard surfaces such as asphalt and concrete. However, during consultation with all utilities this issue has not been a concern for our proposed trail alignments. For areas where trails parallel overhead powerlines, a minimum 5-ft offset from the edge of trail to the power poles is proposed in most areas.

4.2.1 Grant Creek Trail

The existing utilities that are in close proximity of the Grant Creek Trail alignment are discussed in section 3.2.1.

Through initial consultation with the dry utility companies, there have been no identified dry utility conflicts within the proposed Grant Creek Trail project area. However, utility conflicts could arise during project development.

4.2.2 Milwaukee Trail

The existing utilities that are in close proximity of the Milwaukee Trail alignment are discussed in section 3.2.2.

Through initial consultation with the dry utility companies, there have been no identified dry utility conflicts within the proposed Milwaukee Trail project area. However, utility conflicts could arise during project development.

4.2.3 Tipperary Way Trail

The existing utilities that are in close proximity of the Tipperary Way Trail alignment are discussed in section 3.2.3.

There is one conflict for the entire alignment at the connection to the roundabout at Siren's Road. Charter Communications has a pedestal in conflict with the proposed trail alignment. The pedestal will need to be relocated. It should also be noted that other utility conflicts could arise during project development.

The total estimated lump sum relocation costs for the Tipperary Way Trail are ~$**1000.**

4.2.4 Flynn Lane Trail

The existing utilities that are in close proximity of the Flynn Lane Trail alignment are discussed in section 3.2.4.

The CenturyLink overhead communication line on the west side of Flynn Lane is in conflict with the proposed trail corridor and will need to be relocated. It is assumed that this line will be reinstalled underground. The total length is approximately 1000-feet. NWE has two switchgears and one 3-phase junction box to the west of the proposed trail alignment that can all be avoided. It should also be noted that other utility conflicts could arise during project development.

The total estimated lump sum relocation costs for the Flynn Lane Trail are ~**$32,000.**

4.2.5 Mullan Trail

The existing utilities that are in close proximity of the Mullan Trail alignment are discussed in section 3.2.5.

The section of the Mullan Trail between Flynn Lane and the 4100 Condominiums avoids the power poles for the NWE overhead 3-phase primary distribution line. However, there are two utility pedestals believed to be owned by CenturyLink and Charter that are in conflict. The utility box for Charter is a junction box for their fiber optic line. It is not known if this section of fiber optic line is in conduit. If the fiber optic line is direct buried an additional utility box will need to be installed and approximately 100-feet of new fiber optic line to reconnect the system. Relocation costs for this section of trail are proposed to be ~$6,000.

The section of the Mullan Trail between the Mullan Reserve Apartments and Clark Fork Lane does not have any anticipated dry utility conflicts with the proposed trail alignment. However, utility conflicts could arise during project development.

The total estimated lump sum relocation costs for the Mullan Trail are ~**$6,000.**

ATTACHMENT A

Mullan Build Overall Project Area

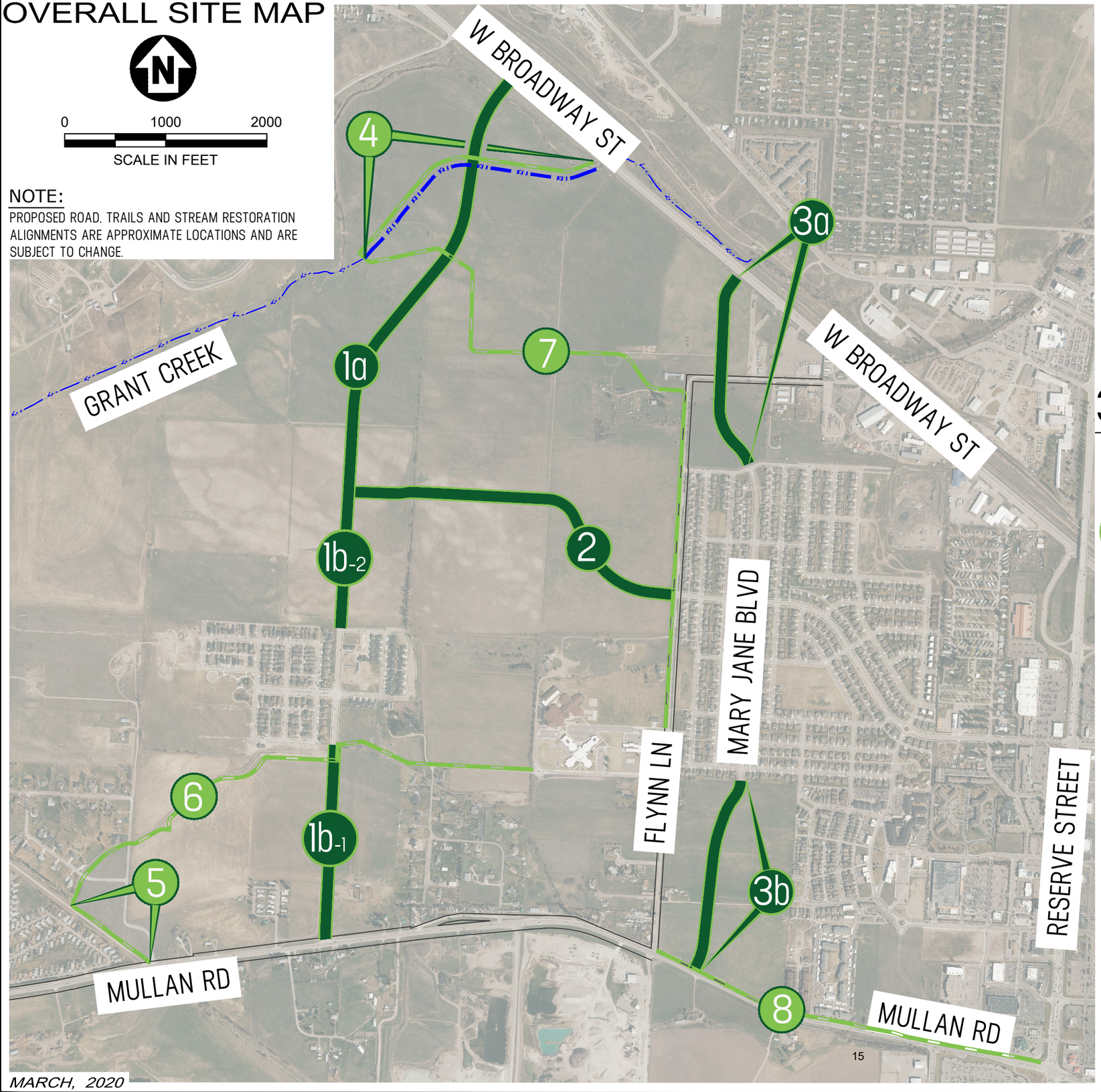
OVERALL SITE MAP

0 1000 2000

SCALE IN FEET

NOTE:

PROPOSED ROAD, TRAILS AND STREAM RESTORATION ALIGNMENTS ARE APPROXIMATE LOCATIONS AND ARE SUBJECT TO CHANGE.



MARCH, 2020

MULLAN BUILD

30% DESIGN PROJECT ELEMENTS

- 1a — GEORGE ELMER DRIVE NORTH
- 1b-1 & 1b-2 — GEORGE ELMER DRIVE SOUTH
- 2 — ENGLAND BOULEVARD
- 3a — MARY JANE BOULEVARD NORTH
- 3b — MARY JANE BOULEVARD SOUTH
- 4 — GRANT CREEK TRAIL AND STREAM RESTORATION
- 5 — MILWAUKEE TRAIL
- 6 — TIPPERARY WAY TRAIL
- 7 — FLYNN LANE TRAIL
- 8 — MULLAN TRAIL

ATTACHMENT B

Missoula Electric Mapping

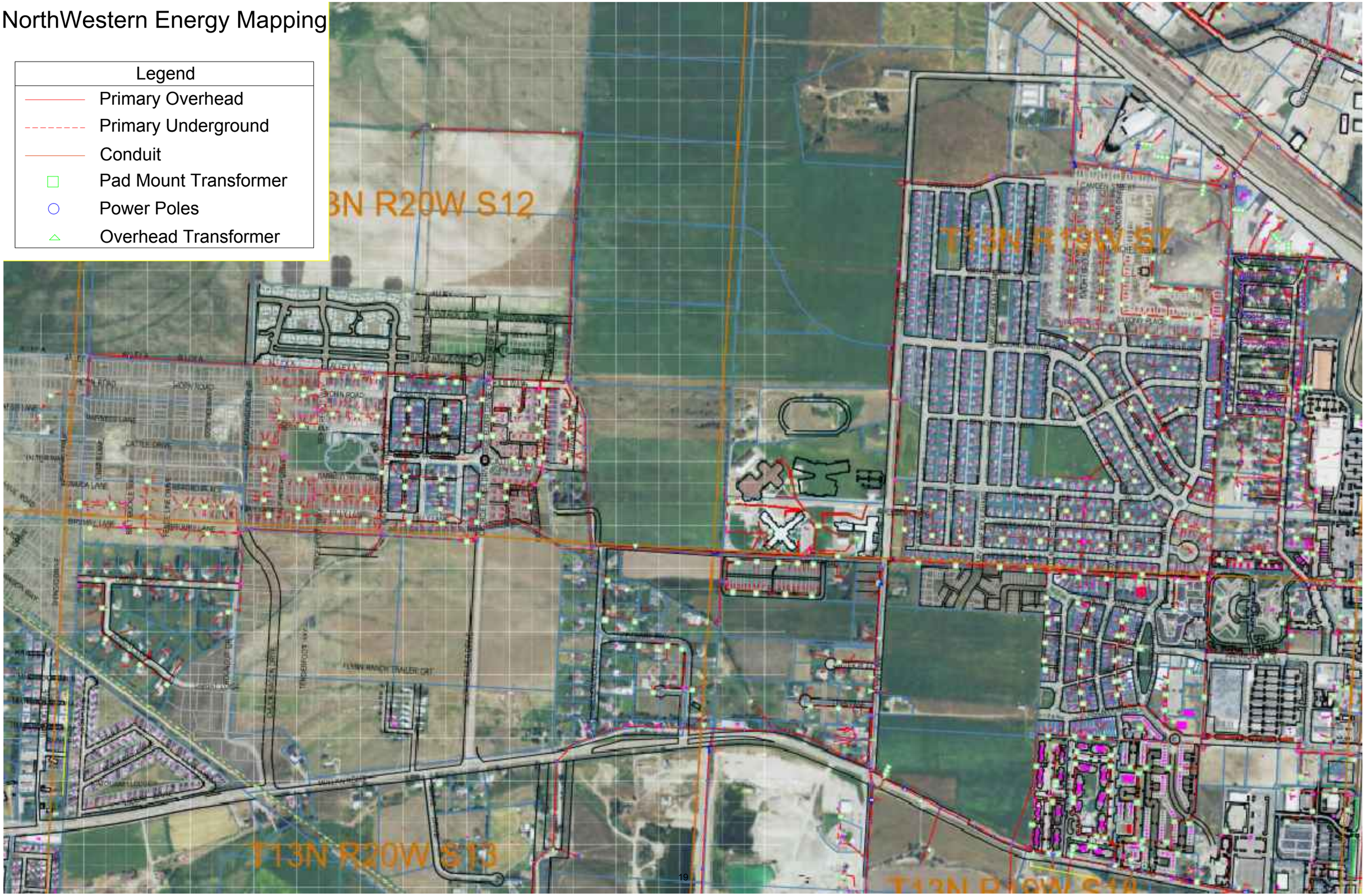
Missoula Electric Mapping

Legend
Primary Overhead
Primary Underground
Secondary Overhead
Secondary Underground

ATTACHMENT C

NorthWestern Energy Mapping

NorthWestern Energy Mapping

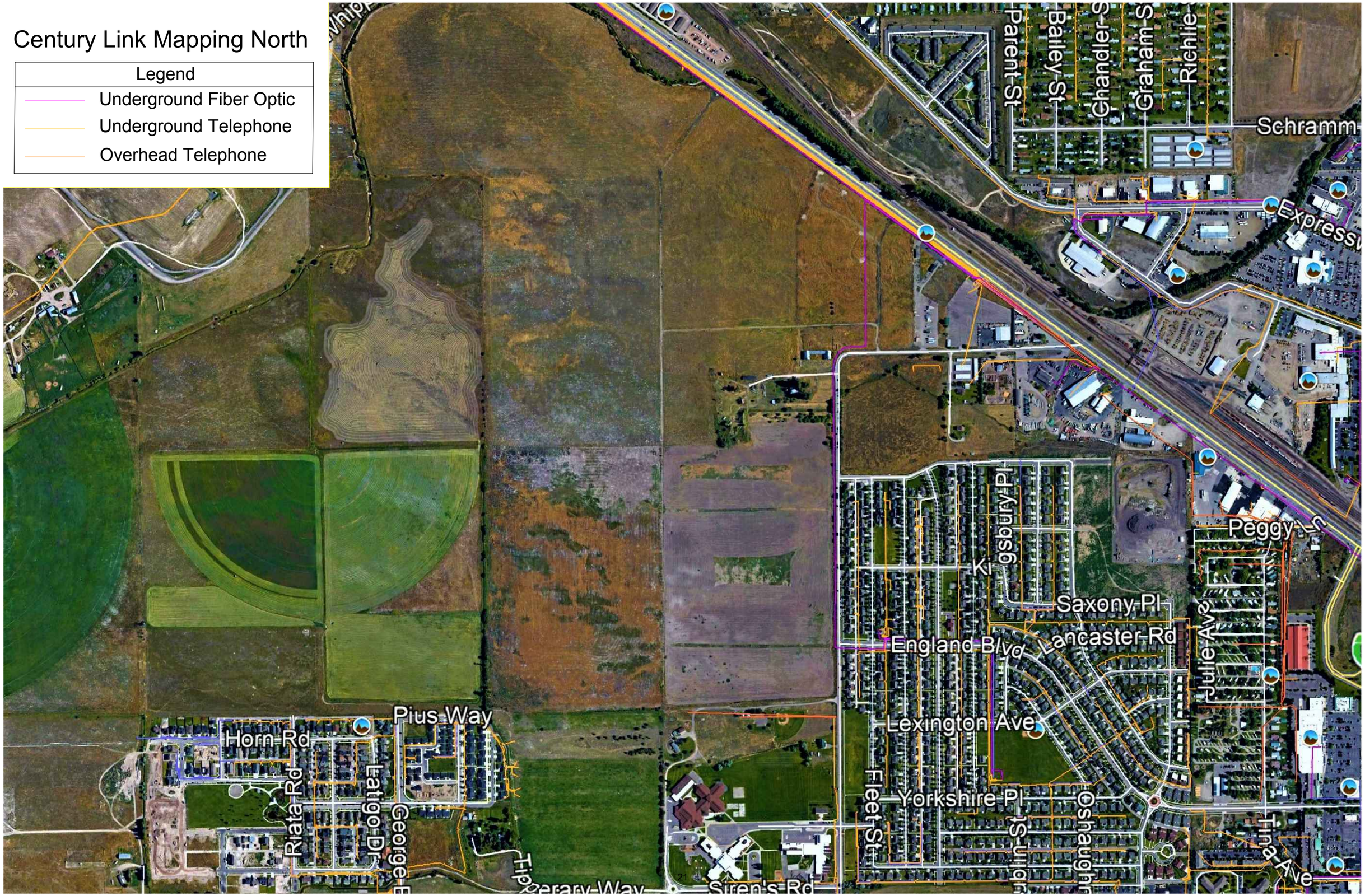


ATTACHMENT D

CenturyLink Mapping

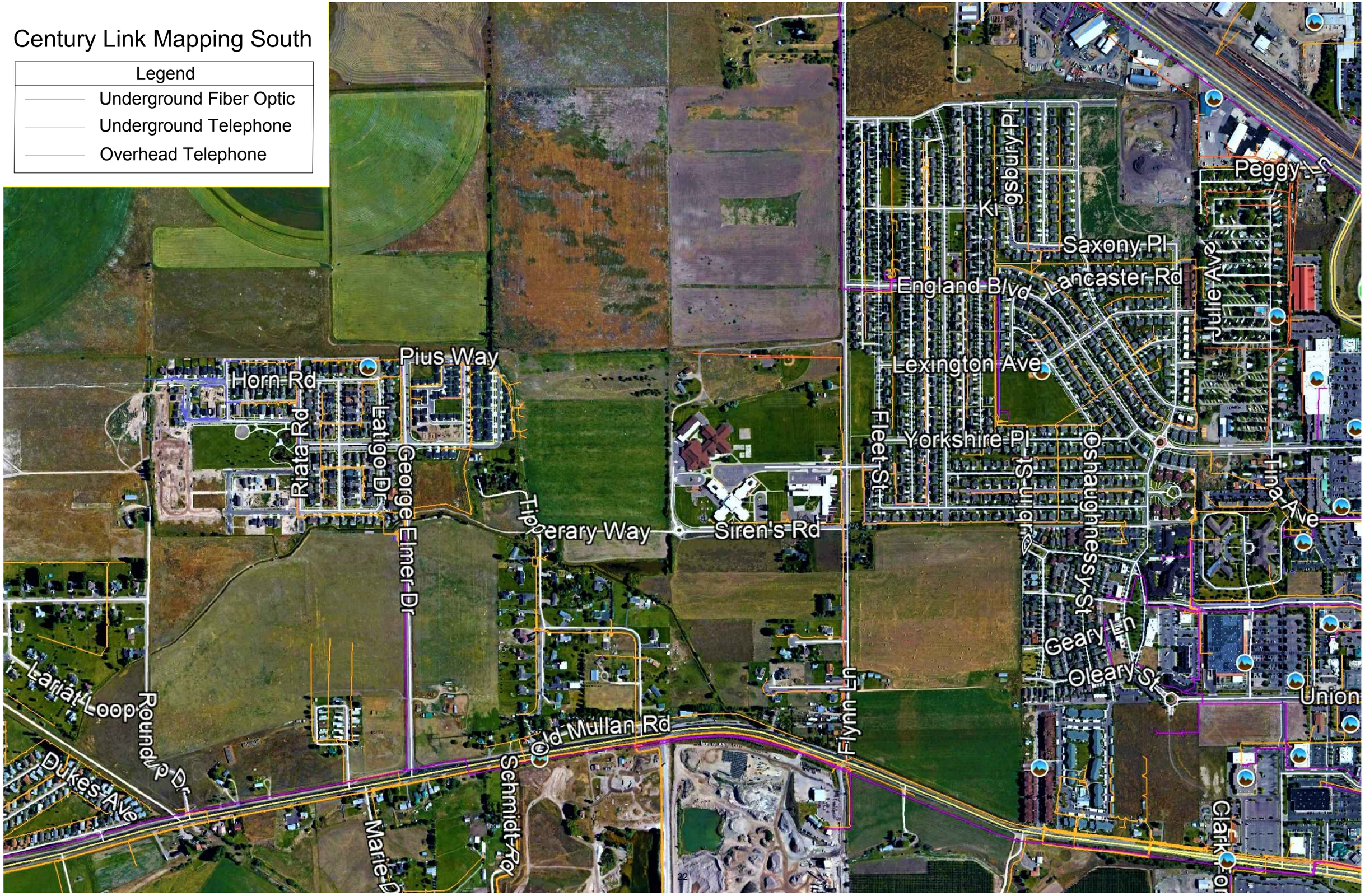
Century Link Mapping North

Legend
Underground Fiber Optic
Underground Telephone
Overhead Telephone



Century Link Mapping South

Legend
Underground Fiber Optic
Underground Telephone
Overhead Telephone



ATTACHMENT E

Blackfoot Mapping

Blackfoot Mapping

ATTACHMENT F

Access Montana Mapping

Wheeler Dr

Storehouse Vw

Majestic Dr

Wilke St

Ambrose St

Sage St

Parent St

Bailey St

Chandler St

Graham St

Mathew St

Schramm St

Expressway

Wheeler Dr

Whippoorwill Dr

Vault

Conduit/Fiber Path

Vault

Montana Rail Link

W Broadway St

Vault

Vault

* 2 - 2" Conduits -- 1 Empty &
  1 w/ 96ct Fiber Optic Cable
* 5 - 2'x3' Hand Hole Style Vaults
  From Proposed Mary Jane Int
  To Whippoorwill/Wheeler Int

MP 5

Vault

Future
Summit Beverage
Site

International Dr

Patterson Rd

Splice Point
(96ct to 144ct)

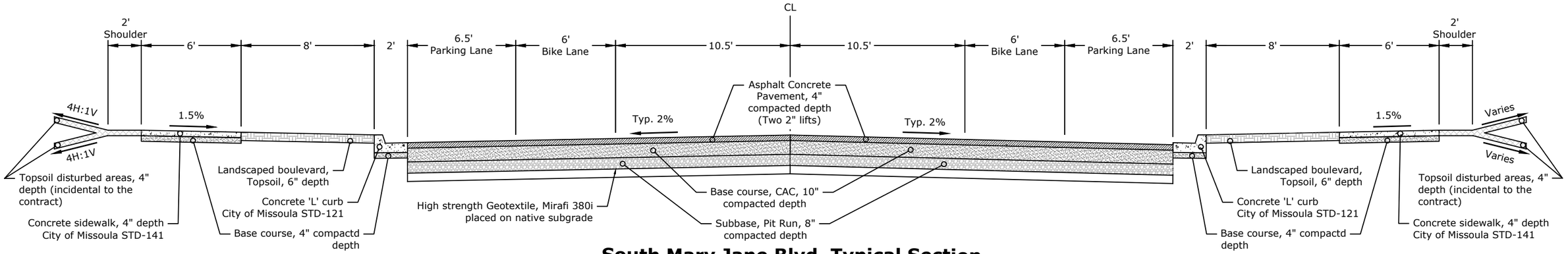
Flynn Ln

Biggers Ln

Robbie OConnor AAS, AAS, BS, AS, BS
Telecom QA/QC Engineer/Fiber Master Journeyman
Access Montana a Community Tel Company
312 Main Street SW
Ronan, MT 59864
www.accessmontana.com
roberto@ronan.net
Cell: 406-529-8304

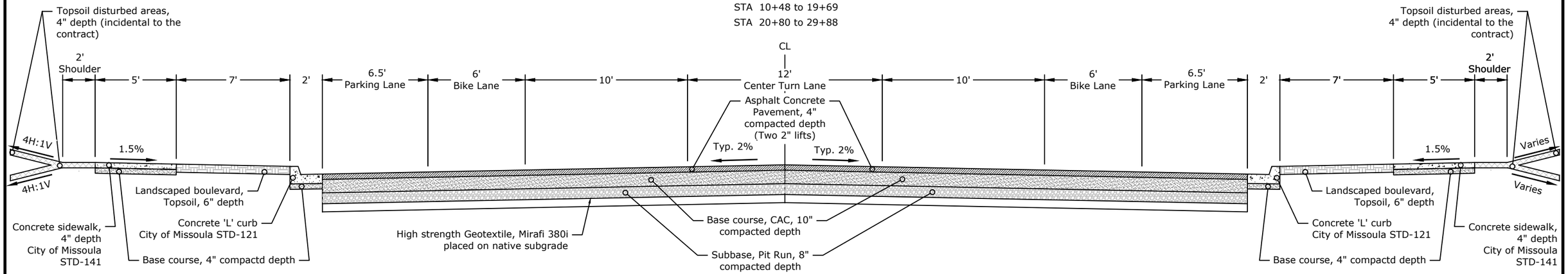
ATTACHMENT G

Typical Road Sections



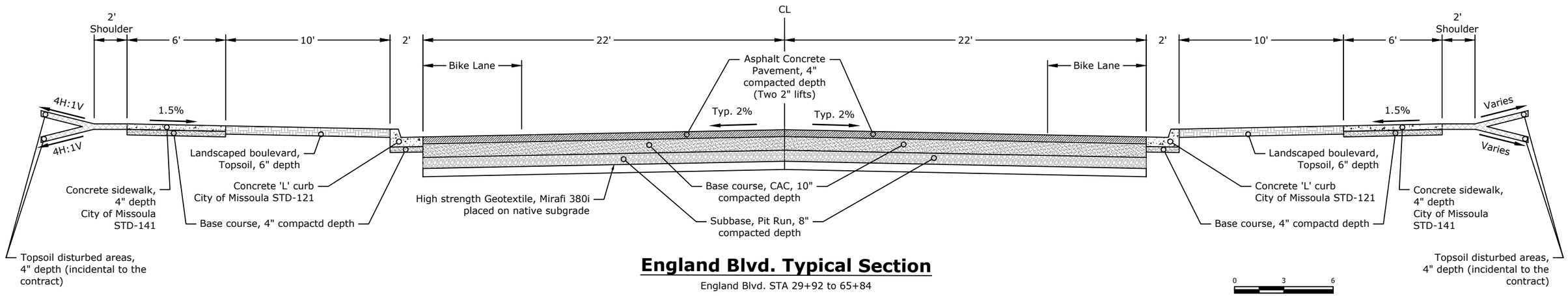
South Mary Jane Blvd. Typical Section

STA 10+48 to 19+69
STA 20+80 to 29+88



North Mary Jane Blvd. Typical Section

STA 61+03 to 70+35
STA 71+19 to 81+08



England Blvd. Typical Section

England Blvd. STA 29+92 to 65+84

0 3 6
SCALE IN FEET
(PLOT SIZE = 11" x 17")

REVISION	DATE	DESCRIPTION
-	-	-

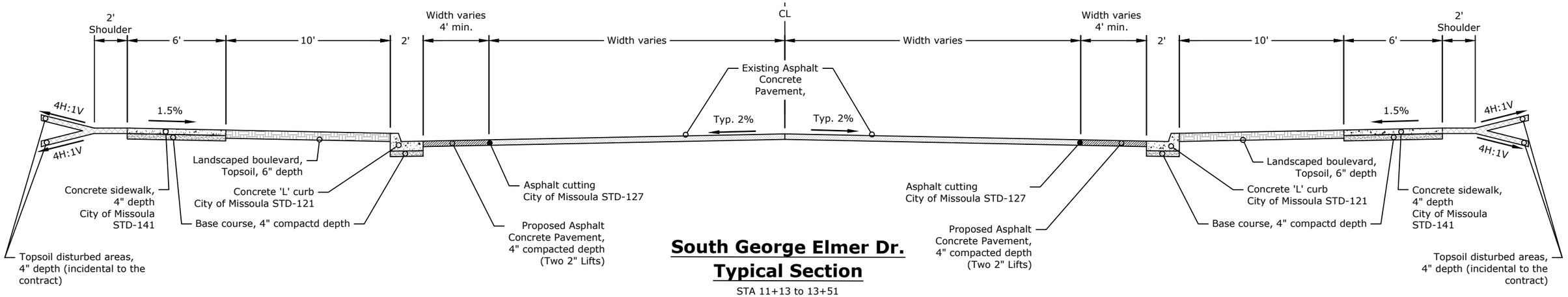
DESIGNER - PROJ. NO. -
DRAWN - DATE -
CHECKED - SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

Mullan BUILD
PRELIMINARY 20% NOT FOR CONSTRUCTION

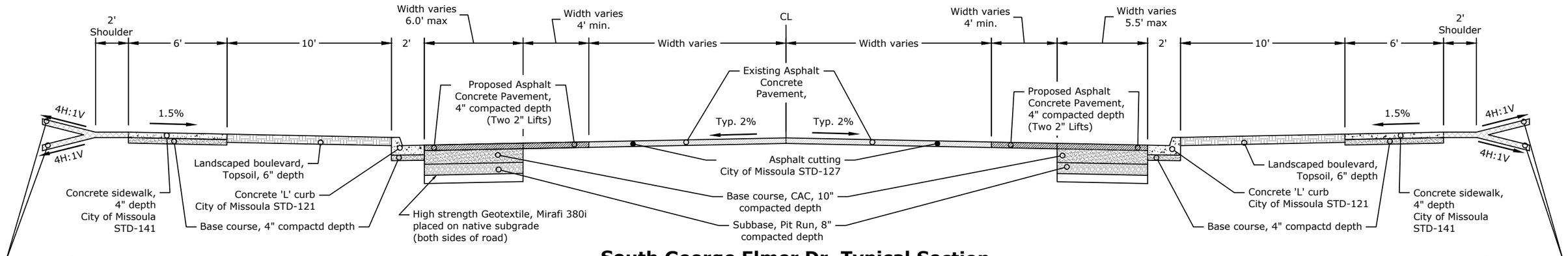
Mary Jane Boulevard & England Boulevard
Typical Roadway Sections

SHEET OF A.4 A.7



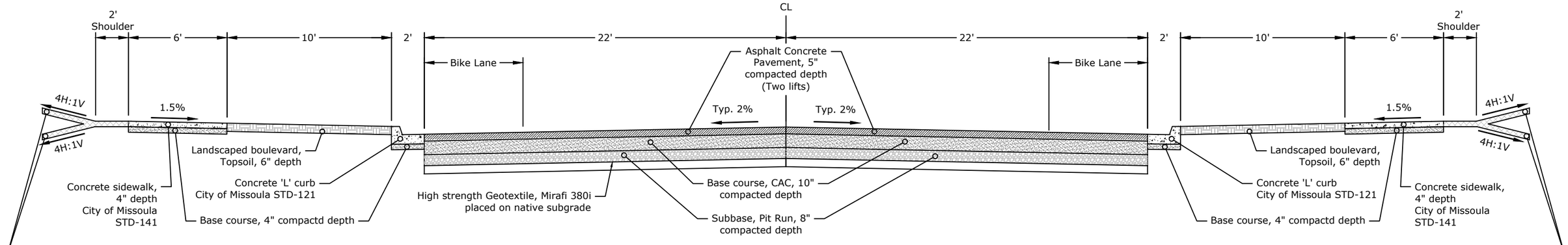
South George Elmer Dr. Typical Section

STA 11+13 to 13+51



South George Elmer Dr. Typical Section

STA 13+51 to 22+54
STA 23+48 to 29+18



South/North George Elmer Drive Typical Section

South George Elmer STA 41+41 to 54+38
North George Elmer STA 55+45 to 99+34

0 3 6
SCALE IN FEET
(PLOT SIZE = 11" x 17")

REVISION	DATE	DESCRIPTION
-	-	-

DESIGNER - PROJ. NO. -
DRAWN - DATE -
CHECKED - SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

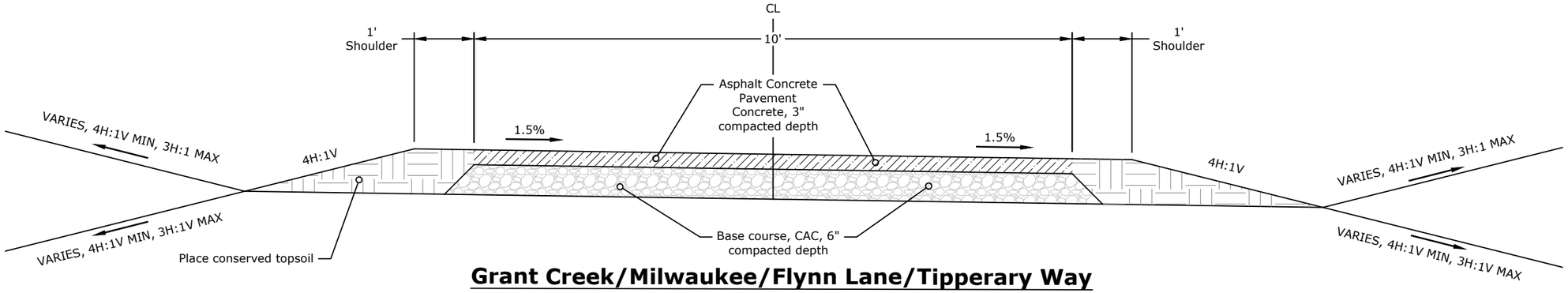
Mullan BUILD
PRELIMINARY 20% NOT FOR CONSTRUCTION

George Elmer Drive Typical Roadway Sections

SHEET OF A.5 A.7

ATTACHMENT H

Typical Trail Sections



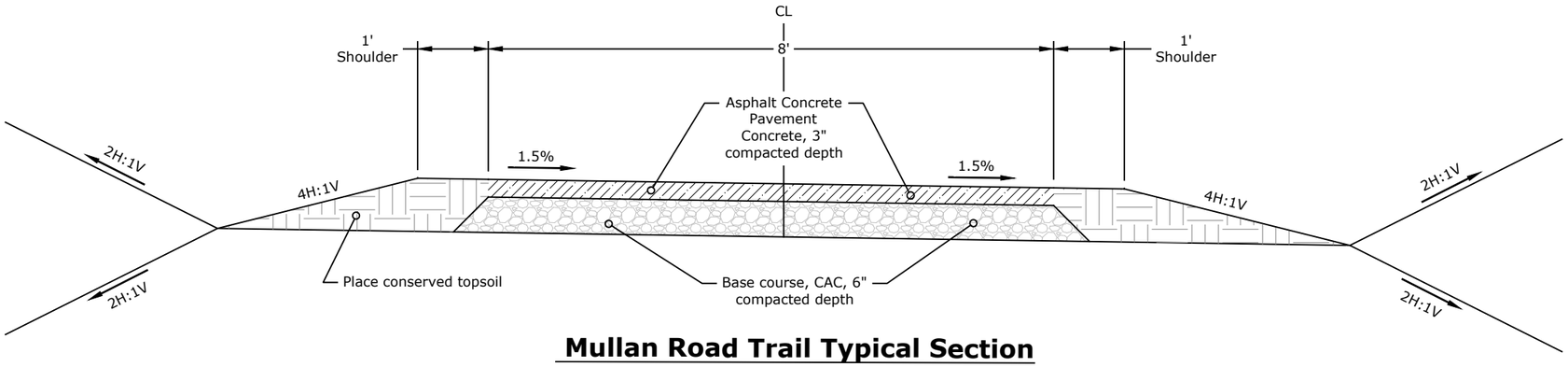
Grant Creek/Milwaukee/Flynn Lane/Tipperary Way Trail Typical Section

Grant Creek Trail: STA 10+00 to 37+56

Milwaukee Trail: STA 10+00 to 19+25

Flynn Lane Trail: STA 10+00 to 85+91

Tipperary Way Trail: STA 10+00 to 42+38 & 44+79 to 64+58

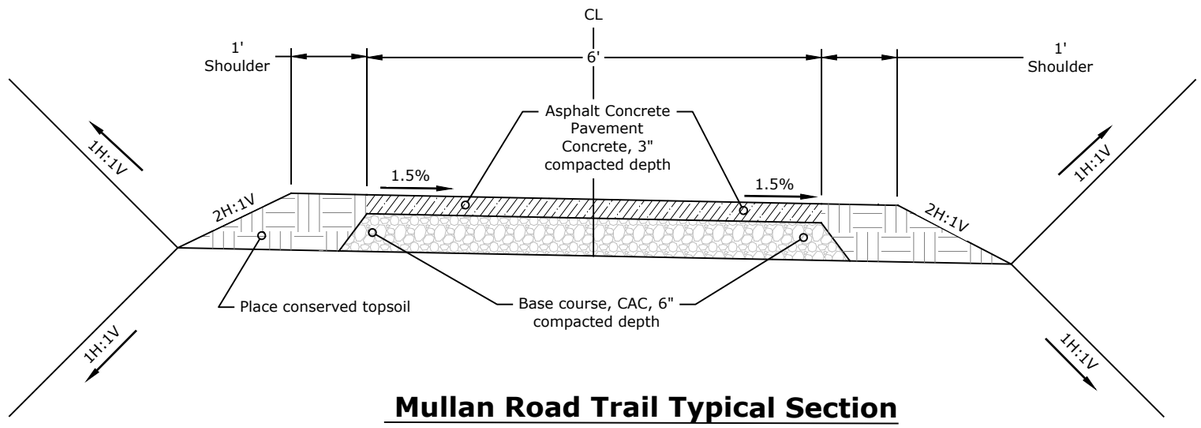


Mullan Road Trail Typical Section

STA 10+00 to 13+77

STA 14+56 TO 24+50

STA 30+60 to 35+95



Mullan Road Trail Typical Section

STA 35+95 to 38+35

0 3 6

SCALE IN FEET

(PLOT SIZE = 11" x 17")

REVISION	DATE	DESCRIPTION
-	-	-

DESIGNER - PROJ. NO. -

DRAWN - DATE -

CHECKED - SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

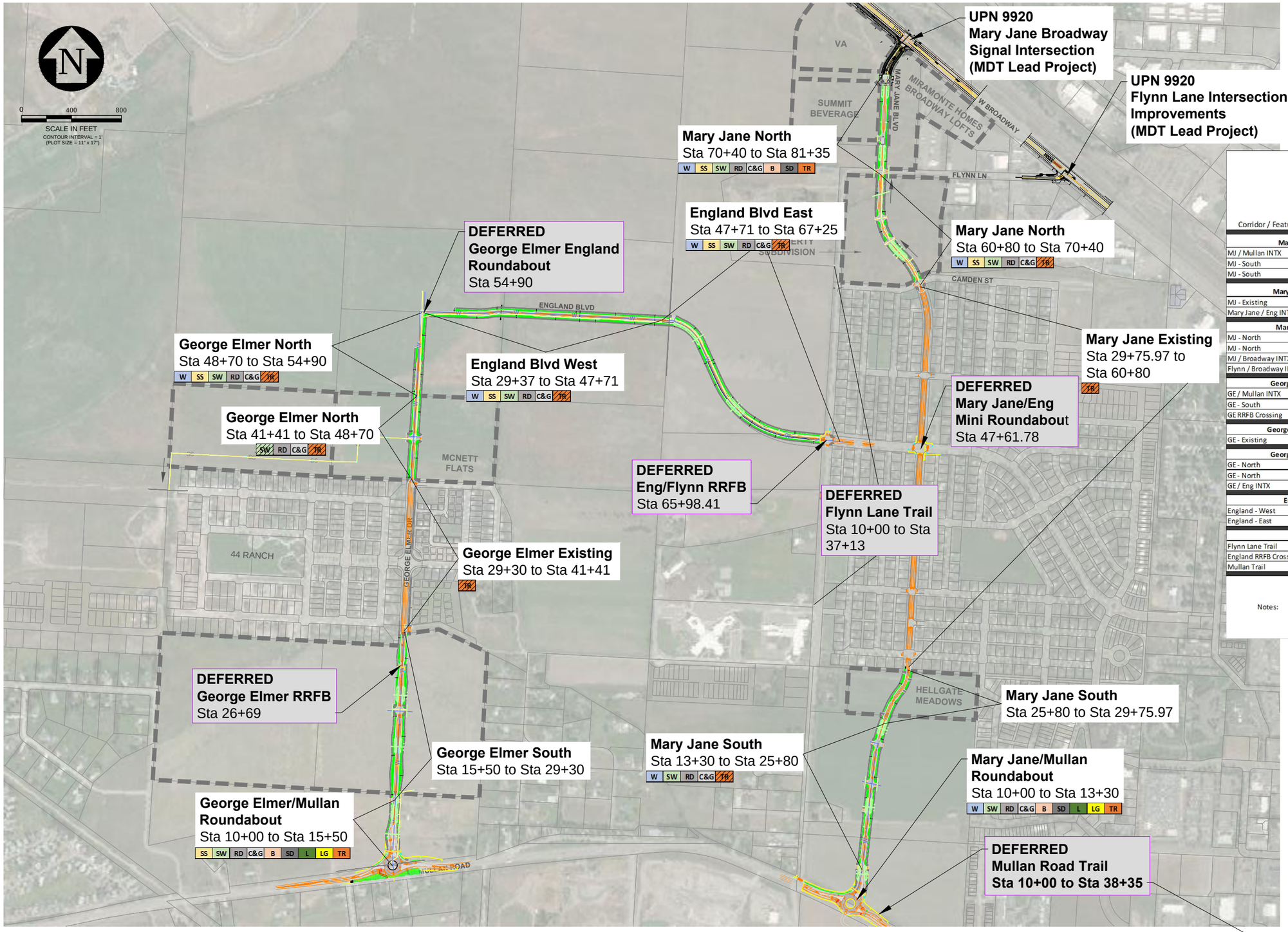
Mullan BUILD
PRELIMINARY 20% NOT FOR CONSTRUCTION

Trail Typical Sections

SHEET OF A.6 A.7

ATTACHMENT G

Mullan BUILD Project Scope



MULLAN BUILD

CONTRACT SCOPE SUMMARY TABLE

Corridor / Feature	Station	W Water Utility	SS Sewer Utility	SW Stormwater Utility	RD Roadway	C&G Curb and Gutter	B Bike Facilities	SD Sidewalk	L Landscaping	LG Lighting	TR Stripe & Signing	D Fully Defered
Mary Jane South												
MJ / Mullan INTX	10+00 to 13+30											
MJ - South	13+30 To 25+80											
MJ - South	25+80 To 29+75.97											
Mary Jane - Existing												
MJ - Existing	29+75.97 to 60+80											
Mary Jane / Eng INTX	47+61.78											
Mary Jane - North												
MJ - North	60+80 to 70+40											
MJ - North	70+40 to 81+35											
MJ / Broadway INTX	N/A											MDT
Flynn / Broadway INTX	N/A											MDT
George Elmer - South												
GE / Mullan INTX	10+00 to 15+50											
GE - South	15+50 to 29+30											
GE RRFB Crossing	26+69											
George Elmer - Existing												
GE - Existing	29+30 to 41+41											
George Elmer - North												
GE - North	41+41 to 48+70											
GE - North	48+70 to 54+90											
GE / Eng INTX	54+90											
England Blvd												
England - West	29+37 to 47+71											
England - East	47+71 + 67+25											
Trails												
Flynn Lane Trail	10+00 to 37+13											
England RRFB Crossing	Eng 65+98.41											
Mullan Trail	10+00 to 38+35											

Notes:

- Scope to be completed by MDT lead project — MDT
- Partial facilities scope installed
- For more information regarding partial Stripe & Signing see plans section "I"
- Scope to be completed with BUILD Project
- Scope to be defered and constructed with other funding
- For specific scope of work limits see section "D" Plan & Profiles

LEGEND

- WATER UTILITY
- SEWER UTILITY
- STORMWATER
- ROADWAY
- CURB AND GUTTER
- BIKE FACILITIES
- SIDEWALK
- LANDSCAPING
- LIGHTING
- STRIPE & SIGNING
- FULLY DEFERRED

REVISION	DATE	DESCRIPTION
1	12/30/2020	PARTIAL SCOPE APPLIED
2	1/7/2021	PARTIAL SCOPE UPDATED, MULLAN LANE TRAIL DEFERRED
3	3/17/2021	SCOPE CHANGES UPDATED

DESIGNER DW PROJ. NO. 7065
DRAWN DW DATE 07/30/2021
CHECKED DP SURVEYED DJ&A, P.C.

DJ&A ENGINEERS PLANNERS SURVEYORS

MULLAN BUILD PROJECT SCOPE

EXHIBIT A

SHEET OF A.4 A.16