Cultural Resource Inventory for the Proposed Mullan BUILD Project, Missoula County, Montana.

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1. Introduction

Project Name: Cultural Resource Inventory for the Proposed Mullan BUILD Project, Missoula County, Montana.
Agency Name: Federal Highway Administration
Report Author and Principal Investigator: Brian Herbel, MA
Date: July 2020
County: Missoula County, Montana
Legal Descriptions: Township 13N, Range 19W, Sections 6, 7, 18, and Township 13N, Range 20W Sections 1, 12, 13

Rabbitbrush Archaeological Services, LLC (RBAS) contract with HDR and DJ&A for cultural resource investigations related to the proposed Mullan Road BUILD[1] Project (Project) in Missoula County, Montana (MT) (Figure 1). The Project is administrated by the office of Missoula County Public Works (MCPW) while the Federal Highway Administration (FHWA) serves as the lead federal agency.

The following cultural resource inventory report is for cultural resources investigations that are in accordance with the regulations (36 CFR Part 800) that implement Section 106 of the National Historic Preservation Act of 1966, as amended, and meet all state and federal guidelines.

[1] Missoula County and the City of Missoula received a discretionary $13 million dollar grant through the US Department of Transportation known as Better Utilizing Investments to Leverage Development (BUILD).

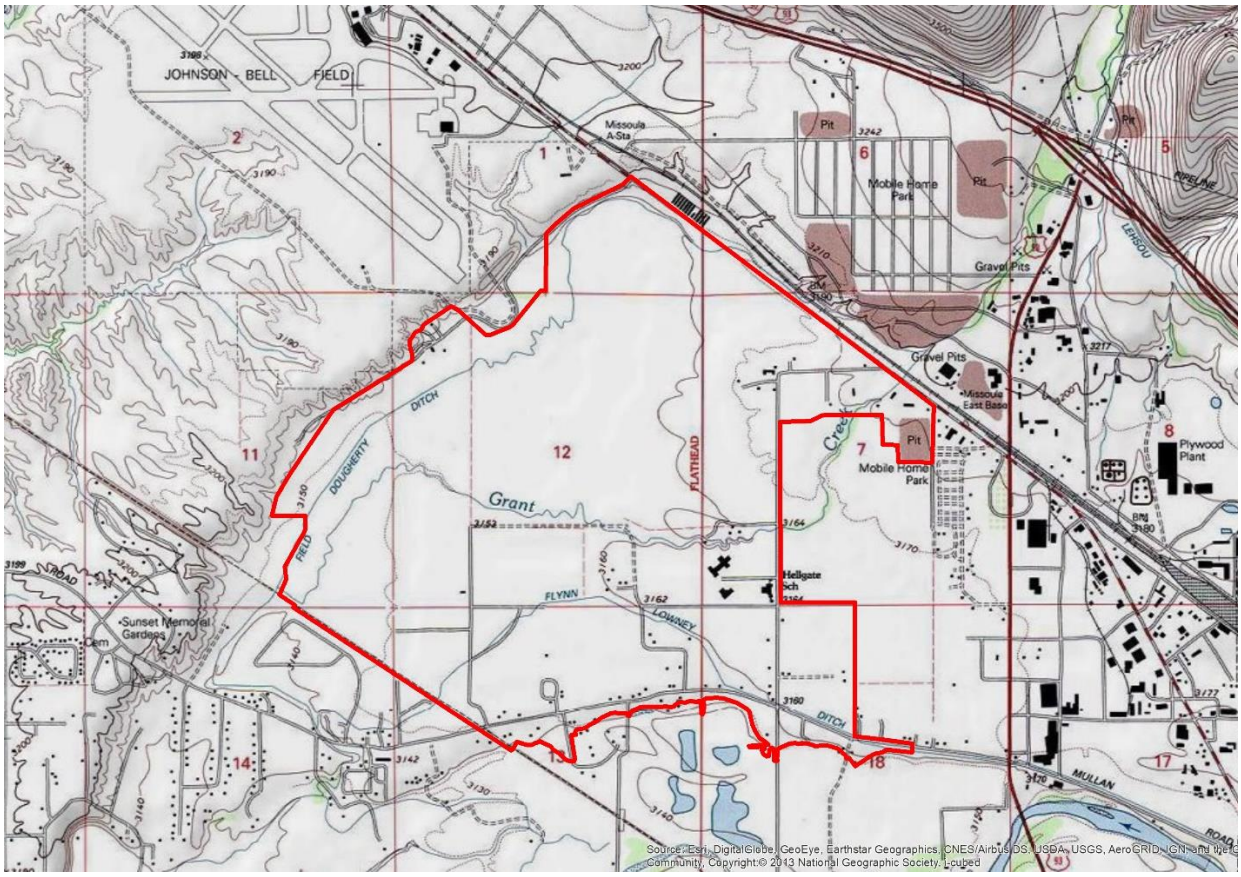

Figure 1. Project location[2].

The project study area (Figure 2) can be narrowed down to an Area of Potential Effect (APE) (Figure 3) that includes extensions of existing streets, a proposed trail system, and a proposed realignment of Grant Creek associated with the Grant Creek Trail. MCPW provides the following[3] project elements that would constitute the project APE.

A total of eight of the project elements (see Figure 3) that were included in the original BUILD grant application will be inventoried to provide a baseline. However, for evaluation purposes, two of the larger project elements (George Elmer Dr. and Mary Jane Blvd.) have been further divided into north/south segments to allow for more granular analysis of these large project elements. Proposed roads were inventoried with a 200 feet (ft) either side of centerline buffer and proposed trails were inventoried with a 50 ft either side of centerline buffer.

[2] The USGS location for Grant Creek on the 2020 Missoula NW USGS 7.5 topo quad in not accurate, rather the creek now flows in the path of the Field Dougherty Ditch (see Section 6 of this report).

[3] Memo from MCPW to the Missoula County Commissioners, March 11, 2020

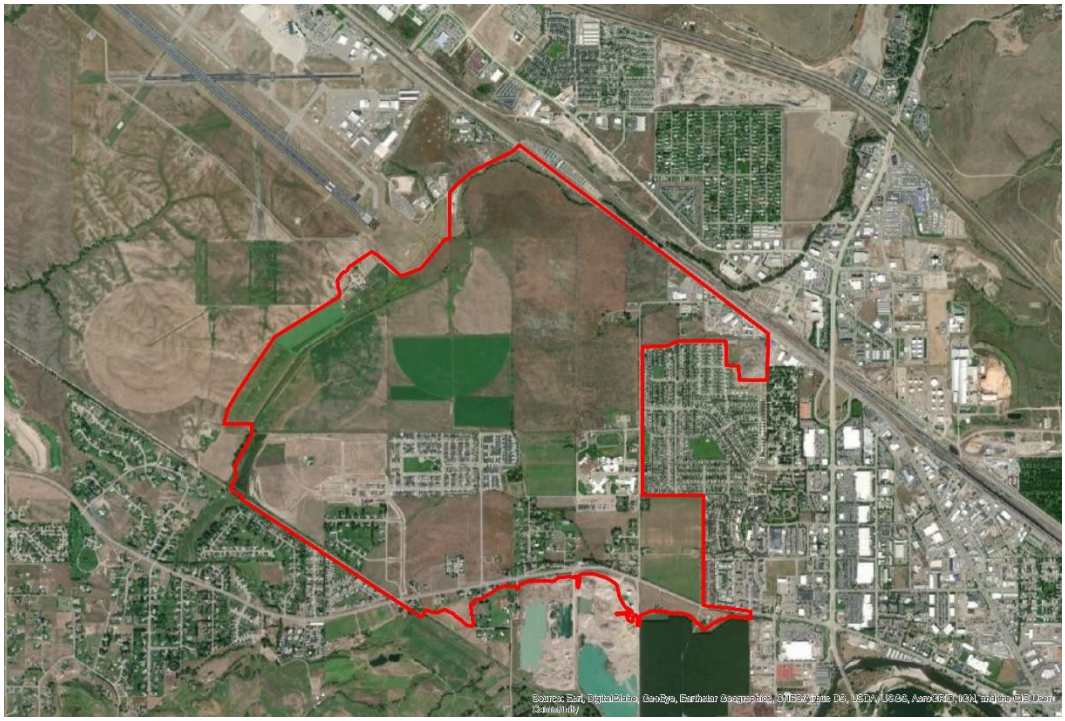

Figure 2. Aerial Photograph showing the Mullan BUILD Study Area.

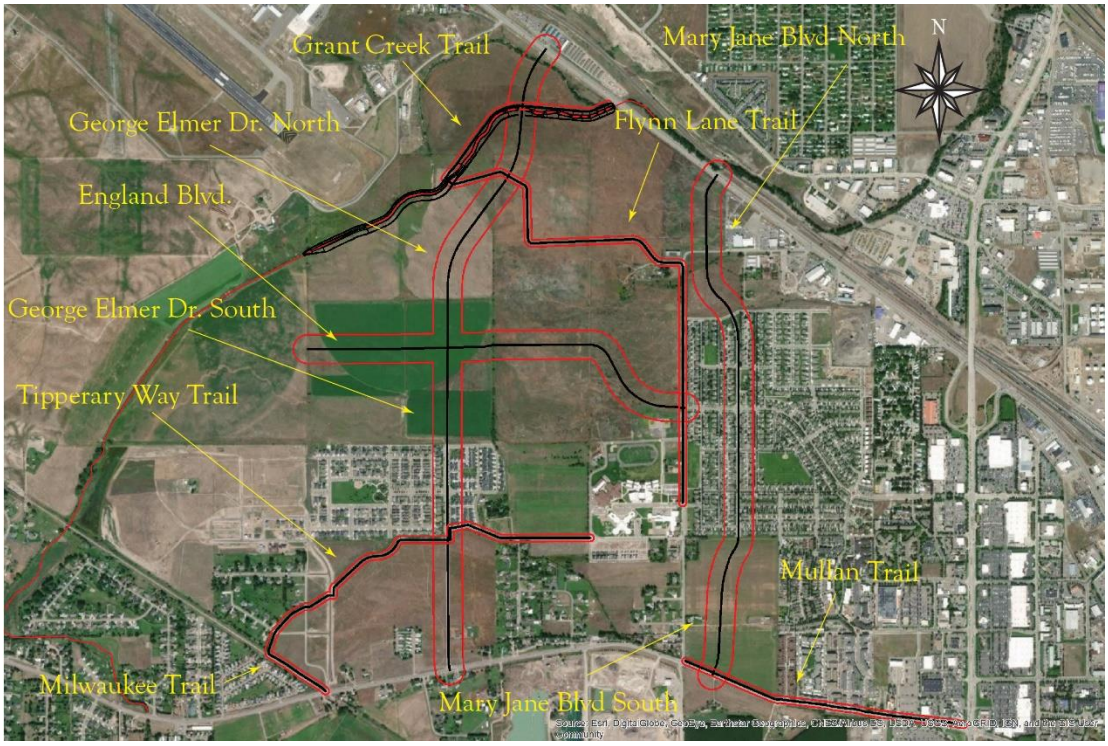

Figure 3. Aerial Photograph showing the proposed Mullan BUILD Project Elements that constitute the project APE.

Proposed Action

The $13 million awarded for this project was only a portion of the $23.2 million requested from the Federal BUILD program in the 2019 grant application. As a result of partial funding, the entire project will not be able to be constructed using Federal dollars as originally proposed in the 2019 grant application. The City/County are committed to constructing all of the project elements included in the BUILD grant request but, due to the $10.2M shortfall in funding, the City/County must prioritize which project elements will be delivered with the grant funding that is currently available and which elements will be delayed until future funding becomes available.

To that end, an evaluation committee comprised of government officials and industry experts ranked the ten project elements (both elements 1 and 2 include two separate north-south segments) based on evaluation criteria related to safety, traffic congestion, access to land for economic development, transportation modes, and environmental considerations. Based on the evaluation results, the following five elements have been selected as providing the greatest public benefit and are therefore the proposed scope of the federal project.

1. Mary Jane Boulevard South;
2. Mary Jane Boulevard North;
3. George Elmer Drive South;
4. England Boulevard; and
5. Flynn Lane Trail.

Mary Jane Boulevard South and North

The proposed Mary Jane Boulevard South and North project elements would construct a roadway connecting to the existing Mary Jane Boulevard within the Pleasant View subdivision. The south portion of the roadway would begin with a new intersection with Mullan Road, cross over the Flynn-Lowney Ditch, and proceed northward through vacant agricultural fields. A large parcel of land immediately south of the existing subdivision is currently being developed. On the north end of the subdivision, the northern portion of the proposed roadway would pass through a vacant field, cross the Flynn-Dougherty Ditch, intersect with Flynn Lane, and then travels northward to a new intersection with West Broadway Street. The total width of the roadway including sidewalk and landscaped boulevard varies from 82 for the south portion to 89 feet for the north portion. When completed, the new Mary Jane Boulevard will create a new north-south minor arterial roadway that connects West Broadway Street to Mullan Road.

George Elmer Drive South

The proposed George Elmer Drive South project element would improve the existing George Elmer Drive south of the existing 44 Ranch Estates subdivision to include a complete street typical section, then construct a new roadway north of the subdivision to connect to the proposed England Boulevard. The total width of the new roadway including sidewalk and landscaped boulevard is 84 feet.

England Boulevard

The proposed England Boulevard project element would construct a new east-west extension from the existing terminus of England Boulevard at Flynn Lane to connect to the proposed George Elmer Drive. The proposed England Boulevard would cross the Flynn-Lowney Lateral 1. The total width of the new roadway including sidewalk and landscaped boulevard is 84 feet.

Flynn Lane Trail

The proposed Flynn Lane Trail is approximately 3340 feet long and begins on the west side of Flynn Lane, North of Camden Street. This trail terminates at the existing shared use path near Hellgate Elementary School. The trail is all within right-of-way yet to be dedicated. This trail contains no horizontal curves or design constraints/concerns.

Occurring concurrently with the Mullan BUILD design project, Missoula County is conducting the Mullan Area Master Plan, a public planning and design process for the study area that is intended to identify future land use planning and regulations, transportation elements, and plans for amenities through community and stakeholder engagement. The final Mullan Area Master Plan, expected to be complete towards the end of 2020, will provide an illustrative plan meant to help guide future development in the area.

2. Environmental Context

The project is situated on Grant Creek north of the Clark Fork River. Geologically the region consists of intermontane valleys that formed in alluvium, outwash, and lacustrine sediments[4]. Elevations range from 3,000 to 4,400 feet (Nesser et al. 1997:42). The general project area occupies a stable terrace above the north bank of the Clark Fork River.

The general topography varies from a level land surface at the east end of the terrace to a dissected area of low rolling hills at the west end of the corridor. The area is currently being subdivided for residential, commercial and recreational development. Some open agricultural lands remain, central to the project area, and include cultivated and irrigated cropland and livestock pasture.

This area is further distinguished by the Idaho Batholith and the Precambrian Ravalli and Wallace formations of the Belt rock series (Alt and Hyndman 2000). The Idaho Batholith began forming 90 to 70 million years ago when vast quantities of granite magma melted deep within a broad welt that had formed across Idaho and western Montana. The magma melted 15 mi below the surface and rose in great masses until it began to crystallize about 10 mi below the surface. Great slabs of rock that covered this body began to detach and move north and east, exposing the Idaho Batholith. The Precambrian Ravalli and Wallace formations slid north on large faults about 70 to 80 million years ago. Large masses of granitic magma invaded the Belt rocks and crystallized below the surface to become the Lolo batholith.

The primary native vegetation range type association for the area is defined as Intermountain Valley Grassland and Meadow (Payne 1973) (Nesser et al. 1997). The principle forage species include cheatgrass brome, needlegrass, meadow grasses and sedge. Other distinguishing species include Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue (Payne 1973:5-6). Payne indicates that much of the native valley meadows of western Montana have been cultivated for cropland or hay and that even the livestock ranges have seen heavy transformation with rough fescue and Idaho fescue/blue-bunch wheatgrass meadows being overrun by the common cheatgrass brome and spotted knapweed (Payne 1973). Douglas fir trees are common in limited areas of the project area and shrubs, willows, and cottonwood trees are present along irrigation canals.

Fauna in and near the project area in the past would have been abundant and diverse. Because the area is becoming increasingly urbanized, there are few large populations of native animals present with the exception of Whitetail deer and coyote. In the past, black and grizzly bears, wolves, elk, moose, marten, and beaver were most likely present. Birds in the area include a variety of hawks, falcons, and golden and bald eagles.

[4] Section M332B, subsection M332Bb - Nesser et al. 1997:42

The immediate area is mixed forest at the toe of a colluvial slope at an elevation of 3300 feet. Soils present in the project area is entirely Desmet loam[5] derived from alluvial parent material and is considered prime farmland when irrigated. Mean annual precipitation varies greatly between 10 to 19 inches annually with 40 to 60 percent of that falling as snow in the higher elevations (Nesser et al. 1997:40). The topography consists of ranges and valleys with colluvial fans derived from sandstone, shale, limestone, and diorite parent material (Nesser et al. 1997:37).

[5] https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

3. Cultural Context

As the result of background research and this inventory pertains exclusively to historic-era resources (see Section 5.0, 6.0 this report), a historic-era background only will be presented here. The historical development of the region surrounding the project area followed the same general trajectory as it did in much of the West. Euroamerican exploration, transportation improvements, and agricultural settlement all influenced its history. Euroamerican activity in Montana may have occurred as early as the sixteenth century, when Spanish explorers reportedly passed through the region. French explorers likely followed. By the early nineteenth century, however, documented accounts of Euroamerican travels in Montana became increasingly common. The most notable of these parties is the Lewis and Clark Expedition (1804–1806), which was the first known group of Euroamericans to navigate the Missouri River above the mouth of the Yellowstone River (Toole 1959, Hamilton 1970).

At the time of contact with non-Indian people, the Salish Indians were the primary occupants of the Bitterroot Valley, with permanent villages established in the lower-elevation terraces near the Bitterroot River. The valley represented but a small part of the Salish aboriginal territory, which extended east of the Continental Divide to include much of present-day central Montana. Groups from the Columbia Plateau and Great Basin, including the Shoshone and the Nez Perce, passed through the valley in the course of completing their seasonal exploitation of native plants and animals.

The Corps of Discovery, led by Captains Meriwether Lewis and William Clark, represented the first direct contact between the Salish and non-Indian people. In 1805, the expedition traveled northward through the valley to a site near present-day Lolo, Montana, which they subsequently called Traveler's Rest. Journal entries indicate that the area adjacent to the corps' campsite bore evidence of a large Indian encampment – an indication of the intensity of use of the Bitterroot Valley by Indians in pre-contact times (Hagen et al. 2002:10; Toole 1959:26).

In 1841, 35 years after the Corps of Discovery passed through the Bitterroot Valley, Jesuit missionary Father Pierre Jean De Smet and five associates arrived in the valley at the behest of a delegation of Salish and Nez Perce, in the vicinity of present-day Stevensville. There they established St. Mary's Mission, the first permanent non-Indian settlement in the area. However, increasing raids by the Blackfeet Indians into the valley throughout the 1840s resulted in the Jesuits closing St. Mary's Mission in 1850, at which time all "non-moveable property" of the mission was sold to Major John Owen for $250. Father Ravalli reopened St. Mary's in 1866, but in the interim Owen constructed a trading post near the mission, where he continued the Jesuits' tradition of raising cattle and growing grain and vegetables; he also updated the grist and sawmills established by the Jesuits (State Engineer's Office 1965).

In 1855, Washington Territorial Governor Isaac Stevens negotiated a treaty with the Salish, Kootenai, and Pend d'Oreille tribes at Council Grove, outside present-day Missoula. Under the provisions of the "Hellgate Treaty," the tribes ceded most of their traditional lands to the U.S. government, reserving lands for their exclusive use in the lower Flathead River Basin north of Missoula. The tribes also reserved the right to hunt, fish, and gather resources on open and unclaimed land throughout their ceded territory (State Engineer's Office 1960).

The pace of non-Indian settlement of Missoula and the Bitterroot Valley increased after the establishment of Fort Owen in 1841. A series of gold strikes in the region brought prospectors from other areas; in many cases, failed miners claimed lands in the valley, which they then used for agricultural purposes. The success of the earliest valley farmers was predicated on providing agricultural produce to area mining camps (State Engineer's Office 1965).

The Missoula County seat was moved to the newly-settled town of Missoula (1860) from neighboring Hellgate in 1861. Soon afterward the first irrigation water appropriation took place on Grant Creek, a tributary of the Bitterroot (Latousek 1995). Latousek (1995:6) presents a history of early irrigation in the Missoula area:

> While many simple gravity diversions from the numerous nearby streams were constructed by area farmers, most were forced to resort to dry farming techniques to grow low-value grains and wheat. The first large-scale attempt at water development occurred in 1880 when the Missoula Irrigation District was formed to construct the Orchard Homes Canal which diverted Bitterroot River flows onto about 2,000 acres of land south of Missoula. In between the future Missoula Valley Project's Big Flat district to Missoula's west and the city of Missoula itself was the Hellgate Valley Irrigation Company's Flynn [Lowney] Ditch, built in 1902 to serve about 1900 acres with Clark Fork River water. By the World War I era, it was estimated that the Missoula vicinity had at least 13,000 acres of irrigated lands, but there were still additional suitable lands in the valley that residents were interested in irrigating. Since the region had ample water resources from which to draw, locals saw no reason why all viable lands could not be irrigated. Beginning in 1918, Reclamation officials and local consultants investigated the possibility of further irrigation in the Missoula Valley.

The Montana Department of Natural Resources and Conservation provides[6] a circa late 1950s-early 1960s snapshot of all existing irrigation resources by county compiled by the State Engineers Office. These volumes are an invaluable resource for documenting the historic flow of irrigation water. Maps depicting known resources in T13N, R19W and 20W are presented here as Figure 4 and Figure 5 (State Engineers Office 1960:81-82).

[6] http://dnrc.mt.gov/divisions/water/water-rights/records-unit/survey-books

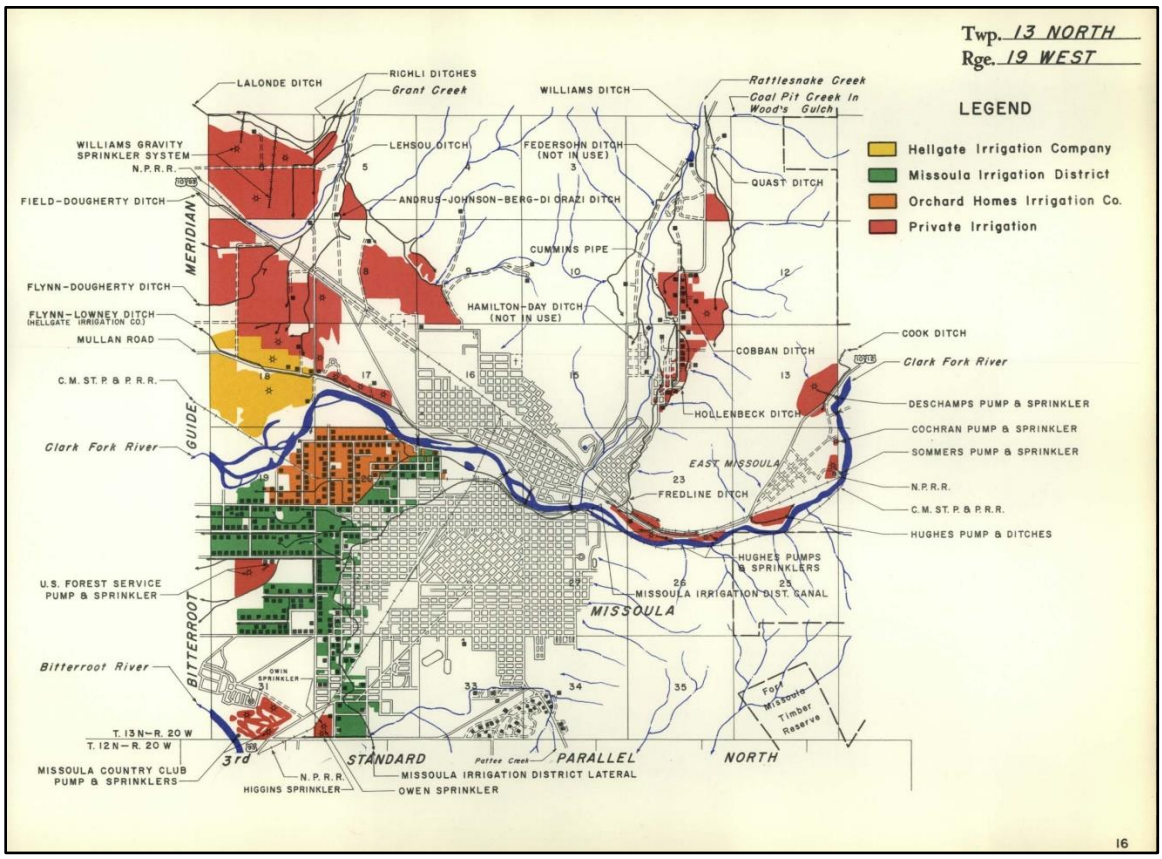

Figure 4. Map showing historic irrigation resources present in T13N, R19W (State Engineers Office 1960:81).

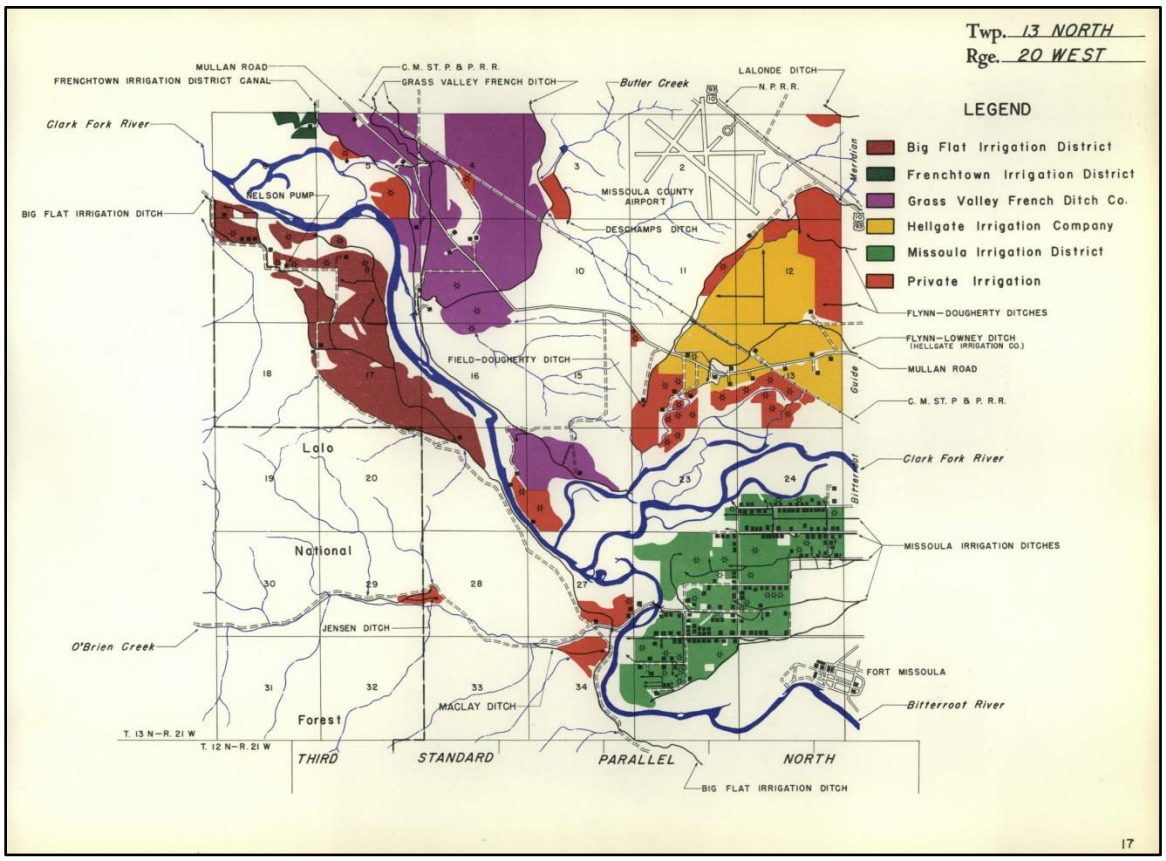

Figure 5. Map showing historic irrigation resources present in T13N, R20W (State Engineers Office 1960:82).

5. Methodology and Research

The requisite file search with the Montana SHPO (File search #2020041001) was conducted prior to fieldwork. Results of the records search indicated that there are 16 previously recorded sites (Table 1) present within a 1-mile radius of the project area, three of which, 24MO0550 (Flynn-Lowney Ditch), 24MO0901 (Flynn-Dougherty Ditch) and 24MO0902 (Field Dougherty Ditch), are present the project study area.

A total of 11 previous cultural resource inventories (Table 2) have occurred within adjacent sections, none of which apply directly the proposed project. The inventory and evaluation were conducted by Secretary of Interior qualified personnel walking systematic transects appropriate for the field conditions, but no greater than 30-meters apart. Given the nature of the project and the disposition of the project area as having excellent surface visibility and in active cultivation, shovel probes were not excavated.

Table 1. Previously Recorded Sites within the contiguous sections of the Project APE.

Site	Site Type	NRHP Status	Relationship to Study Area
24MO0231	Historic Site – Grass Valley French Ditch Headgate	Unresolved	Outside
24MO0249	Historic Agriculture – Flynn Residence	**NR Listed**	Outside
24MO0311	Historic Homestead/Ranch – Mitchell Homestead	Unresolved	Outside
24MO0450	Historic Railroad – Northern Pacific	Eligible	Outside
24MO0550	Historic Irrigation System – Flynn-Lowney Ditch	Eligible	**Inside**
24MO0575	Mammal Fossil	Undetermined	Outside
24MO0713	Historic Railroad - Chicago, Milwaukee, St. Paul & Pacific	Eligible	Outside
24MO0882	Historic Residence – Benson Residence	Eligible	Outside
24MO0901	Historic Irrigation System – Flynn Dougherty Ditch	Unresolved	**Inside**

Table 1. Previously Recorded Sites within the contiguous sections of the Project APE.

Site	Site Type	NRHP Status	Relationship to Study Area
24MO0902	Historic Irrigation System – Field Dougherty Ditch	Ineligible	Inside
24MO0918	Historic Trash Dump	Ineligible	Outside
24MO0919	Historic Trash Dump	Ineligible	Outside
24MO0951	Historic Log Structure	Ineligible	Outside
24MO1557	Historic Trash Dump	Undetermined	Outside
24MO1565	Historic Commercial Development – Missoula Airport Control Tower	Ineligible	Outside
24MO1569	Historic Commercial Development – Johnson Flying Service Parts House	Undetermined	Outside

Table 2. Previous cultural resource investigations in the study area.

Author	Year	Report	Report No.
BABCOCK	1979	CULTURAL RESOURCE RECONNAISSANCE SURVEY MISSOULA: MULLAN ROAD STRUCTURE (S263[1])	MO 4 6159
ROSSILLON	1989	A CULTURAL RESOURCES INVENTORY OF THE MULLAN ROAD PROJECT, WEST OF MISSOULA	MO 4 6179
SELL	1990	PHILLIPS LEASE/WESTERN MATERIALS SOUTH TARGET RANGE	MO 5 24553
LIGHT	1993	MISSOULA COUNTY AIRPORT INTERCHANGE	MO 4 15064
COYOTE	1998	SURVEY REPORT FOR THE RESERVE STREET INTERCHANGE GRAVEL PIT PROJECT	MO 5 21008
GREISER	2000	RESULTS OF A CULTURAL RESOURCES INVENTORY FOR THE TOUCH AMERICA/AT & T FIBER OPTIC CABLE ROUTE BETWEEN BILLINGS AND LOOKOUT PASS IN MONTANA	ZZ 6 23275
O ' BOYLE	2001	CULTURAL RESOURCE INVENTORY REPORT ON THE MULLAN ROAD GRAVEL SOURCE IN MISSOULA COUNTY MONTANA	MO 6 26756

Author	Year	Report	Report No.
BEERY	2003	CULTURAL RESOURCE INVENTORY OF THE AREA OF POTENTIAL EFFECT ASSOCIATED WITH THE PROPOSED MISSOULA COUNTY MULLAN ROAD SEWER PROJECT	MO 6 25354
KNUDSEN	2004	MISSOULA COUNTY AIRPORT EXPANSION CULTURAL RESOURCE INVESTIGATION	MO 6 27025
HERBEL	2006	CLASS III CULTURAL RESOURCES SURVEY FOR SECTION 595 FLOODWAY IMPROVEMENTS ALONG THE GRANT CREEK CORRIDOR, MISSOULA COUNTY, MONTANA	MO 6 28527
NOISAT	2013	CLASS III CULTURAL RESOURCE INVENTORY: VZW MT5 HELLGATE COMMUNICATIONS SITE, MISSOULA COUNTY, MONTANA	MO 6 37186

6. Results of Inventory

RBAS conducted a 100 percent inventory of the aforementioned project elements which comprises the total Area of Potential Effect (see Figure 3, Figures 6-9). Surface visibility was between 75-100 percent in those areas in agriculture (the majority of the project area) as inventory preceded abundant spring growth. A total of three sites (24MO0550, 24MO0901, 24MO0902) were reevaluated as part as a result and one newly identified resource, the Dougherty Ranch (24MO1781), was recorded. Proposed roads were inventoried with a 200 ft either side of centerline buffer and proposed trails were inventoried with a 50 ft either side of centerline buffer.

Those portions of the project related to the proposed expansion of Mary Jane Blvd. are currently in active construction. To the north, the ground has been graded and is an active construction site. To the south, another phase of residential development has already cleared ground and at some point in the past the City of Missoula has laid a sewer line under the path of the proposed southern extension of Mary Jane Blvd. (see Figure 3). That area is in active cultivation of alfalfa which obscures the previous disturbance associated with the sewer line placement. Elsewhere in the project area active cultivation is still present (in particular along the proposed extension of England Blvd.) with some areas fallow, mostly along the northern portions of the project area and on those parcels owned by Missoula County Airport Authority.

Figure 6. Overview of the proposed George Elmer Dr. extension from its southern origin. View to the north.

Figure 7. Overview of the proposed England Bvld. and George Elmer intersection. View to the east.

Figure 8. Overview of the proposed area encompassing the proposed Mary Jane Bvld north extension. View to the northeast.

Figure 9. Overview of the proposed area encompassing the proposed Mary Jane Blvd. north extension. View to the northeast.

24MO901 Flynn-Dougherty Ditch

The Flynn-Dougherty ditch was first recorded in 2003 during work for the Mullan Road Sewer project (Beery 2003) and updated in 2005 (Herbel and Beery 2006) as part of the Grant Creek Corridor Environmental Restoration and Flood Control Project[7]. The ditch is approximately 5 ft wide and 2.5-3 ft in depth. The main ditch diverted water from Grant Creek at a point north side of Interstate 90, carrying it south to irrigate private agricultural fields on the south side of the interstate. However, local residents familiar with the area indicated to Beery (2003) that the field ditch has not been used for several decades.

Moreover, as a result of this inventory it was determined that the historic southern branch (State Engineers Office 1960) of the ditch (see Figure 4, Figure 5) has been eradicated by modern development east of Flynn Lane and is no longer present. The northern extant branch (Figure 10)

[7] The Grant Creek Environmental Restoration and Flood Control project was intended to evaluate flood hazard and environmental degradation in the lower Grant Creek reach of western Missoula Valley. The enhancements were designed to balance hydraulic capacity, flood control, sediment management, maintenance, new development, airport expansion, aesthetics, and aquatic management. The primary goals of the project were to reduce groundwater and surface water flood problems, improve recreational and aesthetic opportunities, and improve fish passage. The project was a cooperative effort between Missoula County and the Army Corps of Engineers with potential assistance from the Federal Emergency Management Agency (FEMA) Pre-disaster Mitigation Grant Program.

crosses under Flynn Lane (Figure 11) at the location of the Dougherty Ranch and continues west where is has been filled in just west of the Ranch eliminating its former terminus with a primary lateral of the Flynn-Lowney Ditch (24MO0550). A dilapidated and abandoned, rough-aggregate concrete headgate (Figure 12) is present just southwest of the Dougherty Ranch (24MO1781) where the extant ditch alignment turns briefly to the south.

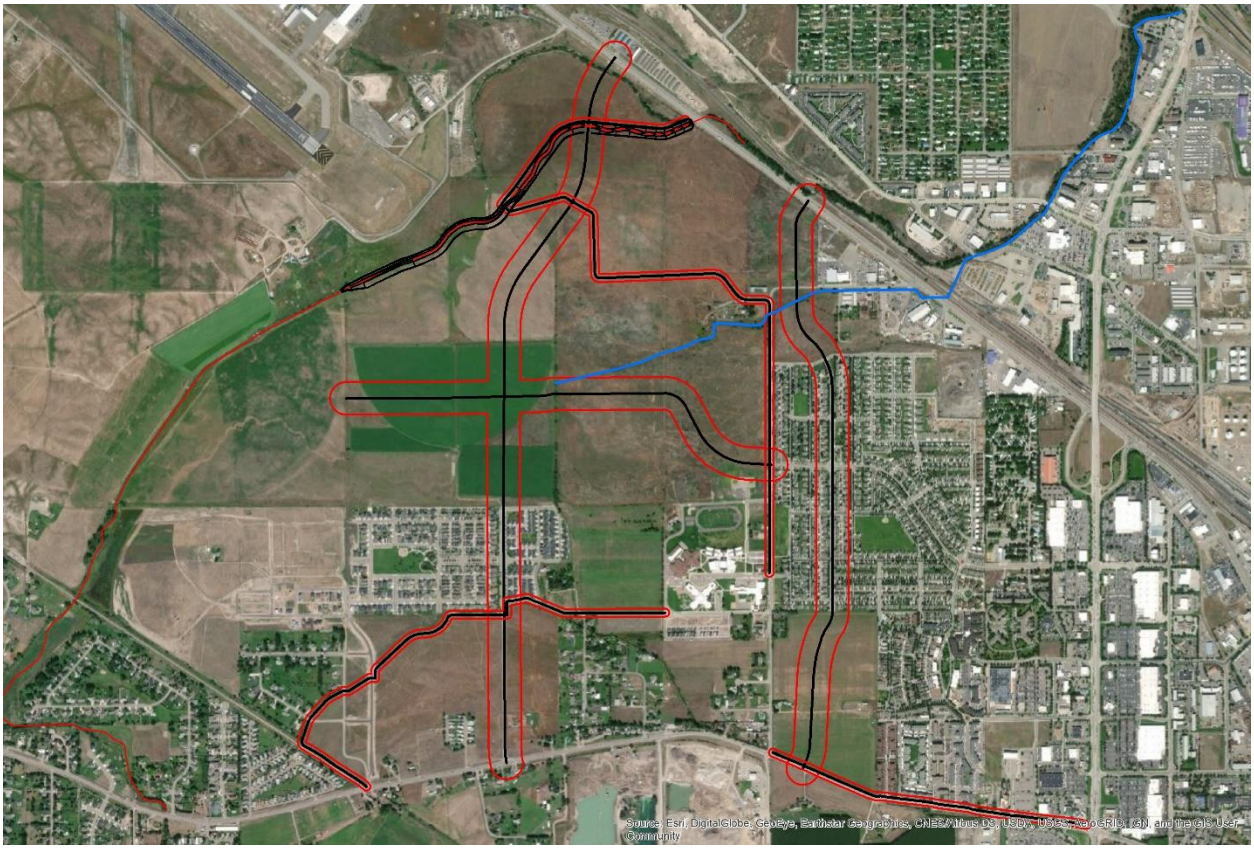

Figure 10. Modern alignment (in blue) of the Flynn-Dougherty Ditch, 24MO0901.

Figure 11. The Flynn-Dougherty Ditch (24MO0901) at its culvert under Flynn Lane, view to the west. The Dougherty Ranch in pictured in the background.

Figure 12. Abandoned headgate structure on the Flynn-Dougherty Ditch (24MO0901) at the Dougherty Ranch, view to the south.

NRHP Recommendation

The site has been previously recommended as not eligible for inclusion the NRHP (Beery 2003). In regard to the proposed Project situated on the northern branch of the resource, aspects of integrity (location and setting) remain while others (feeling, workmanship, association, materials, and design) are lost. A small portion of the original alignment is present, though the historic system related to the

greater ditch system itself are no longer present. RBAS concurs with the previous recommendation for this resource as being Not Eligible for inclusion in the NRHP. While some aspects of integrity remain, a majority have been compromised over time. No further work is recommended in regard to this resource.

24MO902 Field Dougherty Ditch

The Field Dougherty ditch was first recorded in 2003 during work for the Mullan Road Sewer project (Beery 2003) and updated in 2005 (Herbel and Beery 2006) as part of the Grant Creek Corridor Environmental Restoration and Flood Control Project. As a result of post 1960s realignments and the aforementioned Grant Creek restoration project, the ditch is essentially the path of Grant Creek (Figure 13) and no longer serves as an irrigation resource but rather as the creek itself. The waterway is approximately 10-20 ft wide and 3-8 ft in depth (Figure 14, Figure 15). The resource in considered to be not eligible for inclusion the NRHP (see Table 2).

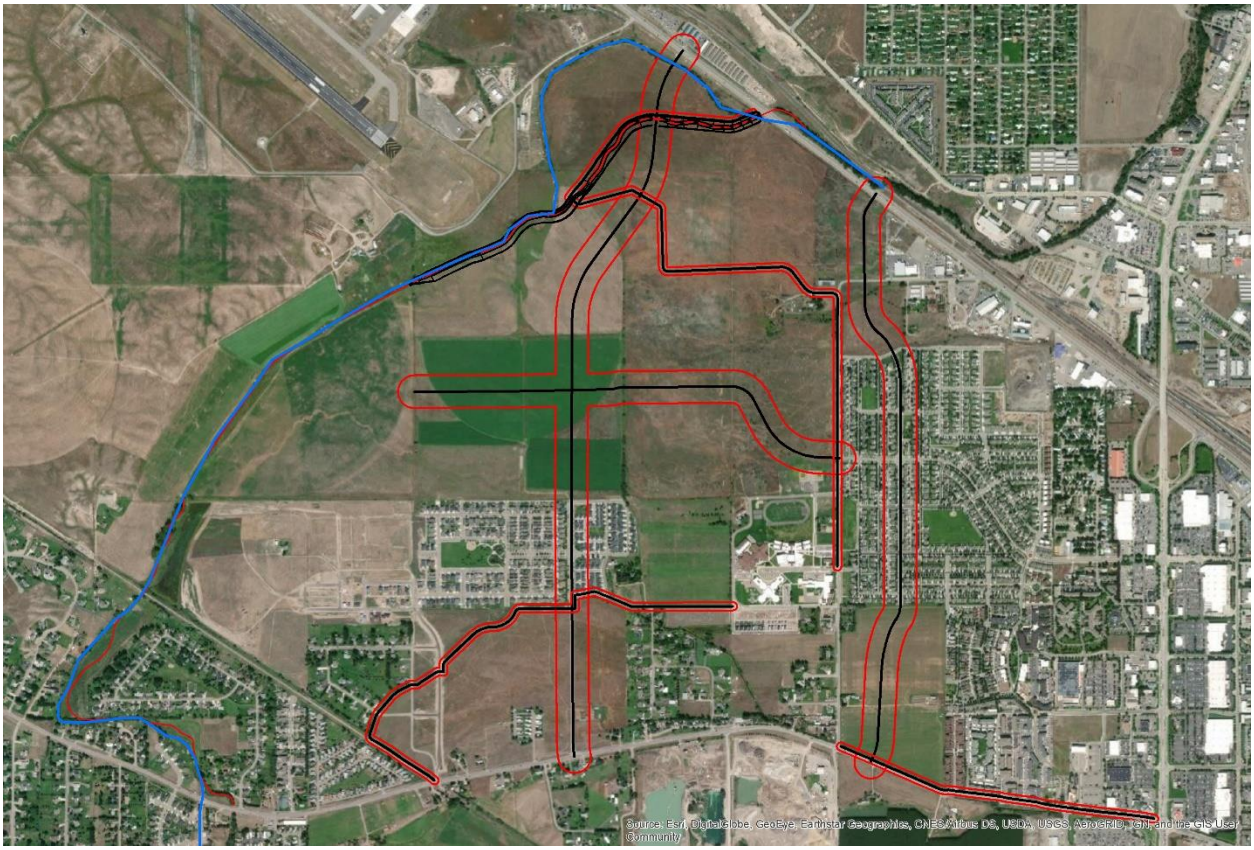

Figure 13. Modern alignment (in blue) of the Field Dougherty Ditch, 24MO0902.

Figure 14. The Field Dougherty Ditch (24MO0902)/Grant Creek near the proposed intersection of George Elmer Dr. (north segment) and West Broadway. View to the south.

Figure 15. The Field Dougherty Ditch (24MO0902)/Grant Creek. Plank bridge originally recorded by Herbel and Beery (2006:20). View to the south.

NRHP Recommendation

The site has been previously recommended as not eligible for inclusion the NRHP (Herbel and Beery 2006) with concurrence by the Montana SHPO. RBAS agrees with the previous determinations for this resource as being not eligible for inclusion in the NRHP. No further work is recommended in regard to this resource.

24MO0550 Flynn-Lowney Ditch

The Flynn-Lowney Ditch (Figure 16) is located in the southern portion of the project area and is a largely intact irrigation system that ferries water from the Clark Fork River to Grant Creek. The ditch has been previously recorded largely at its diversion point at the Clark Fork River (Thompson 1996, Beery 2006, Ferguson 2017).

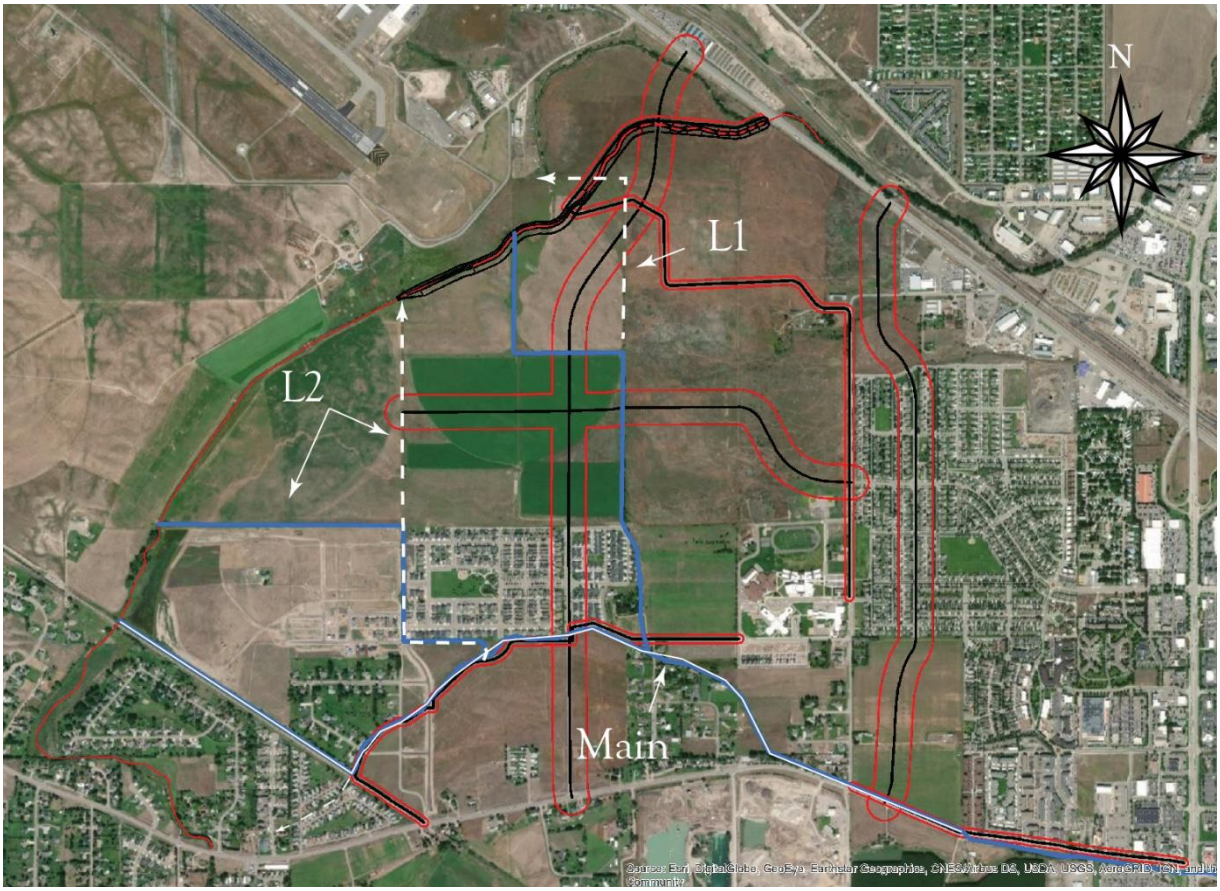

Figure 16. Modern alignment of the Flynn-Lowney Ditch, 24MO0550. Abandoned or modified segments are a dashed white line, blue is the flow of water, and solid white is the main canal.

The ditch (canal) is approximately 10-12 feet in width and 6-8 feet in depths. From its point of diversion on the right bank of the Clark Fork River in the NWNE of Sec. 21, T13N, R19W, the main canal of the Flynn-Lowney Ditch follows a generally westerly direction for the irrigation of lands in Secs. 18 and 19, T. 13 N., R. 19 W.; and Secs. 11, 12, 13, and 14, T13, R20W. The initial capacity of the canal is in excess of 50 cfs and has a length of 4.5 miles (State Engineers Office 1960:48). Within the project area, two primary laterals diverge from the main flow carrying water to the north into past and present-day agricultural lands. Both of the north flowing primary laterals have been realigned from their historic paths. The easternmost primary lateral (L1) has been reconfigured to provide access to a pump that provides water to a pivot irrigator and then returns unpumped water into Grant Creek, while the westernmost primary lateral (L2) has been reconfigured at its diversion and culverted and buried within modern subdivision development with it east west branch still open and directing water into Grant Creek (see Figure 16).

Inventory of the section of the project related to the Tipperary Way Trail (see Figure 3) identified a newly poured and aligned headgate (Figure 17) on the section of the ditch between its crossing with George Elmer Drive to the east and Chuckwagon Drive to the west. The newly constructed headgate

has a modern Parshall Flume[8] (Figure 18) located at the newly configured diversion point for primary lateral L2. The ditch (Figures 19-22) flows along the entity of its path along the southern boundary of the project area (see Figure 3).

Figure 17. Newly constructed structure between George Elmer Drive and Chuckwagon Drive. View to the southwest. The headgate on the right directs flow into L2 and is a reconfiguration of the historic diversion point for L2.

[8] A Parshall Flume is a fixed, hydraulic structure that is placed in a flow stream to determine the flow of water. The flume accelerates flow by both a contraction of the parallel sidewalls and a drop in the floor elevation in the throat. Short-throated flumes like the Parshall have only one point of measurement (Ha) at which the flow rate can be determined. A level reading taken upstream of the point of measurement will result in the flume over reading, while one taken downstream will result in the flume under reading (as the flow accelerates and the water surface draws down towards the throat). - https://www.openchannelflow.com/flumes/parshall-flumes

Figure 18. Newly constructed Parshall Flume at a lateral (L2) diversion point between George Elmer Drive and Chuckwagon Drive. View to the north.

Figure 19. Photo of L2 at it is east-west run that return water to Grant Creek.

Figure 20. Overview of the confluence of L1 and the Grant Creek/Field-Dougherty Ditch 20MO0902.

Figure 21. Overview of the Flynn-Lowney Ditch main channel at its existing culvert at George Elmer Drive. View to the east.

Figure 22. Overview of the Flynn-Lowney Ditch, main channel, at its existing culvert at Chuckwagon Drive. View to the northeast.

Figure 23. Overview of the Flynn-Lowney Ditch main channel at the proposed intersection of Mullan Road and the proposed extension of Mary Jane Boulevard and the location of the proposed Mullan Trail pedestrian path. View to the east.

Site History – State Engineers Office, 1960:40-41

On October 9, 1919, the private ditch known as the "Flynn-Lowney Ditch," incorporated for a period of 40 years under the name of the Hellgate Valley Irrigation Company. The original Flynn -Lowney Ditch was first constructed by Michael Flynn and C. C. Lowney in the year 1903 for the irrigation of their ranch lands.

The corporation articles list the capital stock of this company at $37,500 which is divided into 2,500 shares of a par value of $15 per share. Shares of stock actually subscribed to in the company are 1,750, valued at $26,250.

When the Hellgate Valley Irrigation Company was organized, 600 shares were given to the heirs of Michael Flynn and 600 shares to the successors in interest of C. C. Lowney. This amount representing 1,200 miner's inches (l share equals 1 miner's inch) is a priority right on the first 1,200

miner's inches of water flowing in the ditch system. By an agreement with the corporation, the American Crystal Sugar Company may use the full capacity of the Hellgate Valley Irrigation Company ditch for irrigating and for their sugar beet processing plant. For this privilege, the Sugar Company agreed to pay one third of the operation and maintenance charges and one third of the total costs of any new construction connected with the ditch east of their factory.

The stock of the corporation is assessable for the purpose of raising funds for the construction of dams, head gates, reservoirs, ditches, flumes, and maintenance of the same, and for the purchase of rights-of-way if necessary. In 1959, there were 1,339 acres irrigated under this Company's ditch system with no potential irrigable acres.

Water right filings which are applicable to the Hellgate Valley Irrigation Company are as follows: From the Clark Fork (Hellgate) River an appropriation made by Michael, John J., and Michael Jr. Flynn, as of the date of December 1, 1902 for 1,600 miner's inches. (Ref. Book D of Water Right Records, Page 612); an appropriation made by the Hellgate Valley Irrigation Company as of the date November 17, 1919 for 2,500 miner's inches. (Ref. Book J of Water Right Records, Page 124); an appropriation made by John A. Shaughnessy as of the date July 28, 1919 for 2,500 miner's inches. (Ref. Book I of Water Right Records, Page 362); an appropriation made by Con Lowney as of the date May, 1903 for 10,000 miner's inches. (Ref. Book I of Water Right Records, Page 147). The American Crystal Sugar Company have their own water right filings that they use in the Hellgate Valley Irrigation Company ditch. These 2 filings were made under the name of the Amalgamated Sugar Company and are as follows: From the Clark Fork (Missoula) River an appropriation dated December 3, 1917 for 280 miner's inches. (Ref. Book J of Water Right Records, Page 269); an appropriation dated December 3, 1917 for 280 miner's inches. (Ref. Book J of Water Right Records, Page 274).

NRHP Recommendation

The site retains a high level of integrity of location, association, feeling, setting, and workmanship and represents an example of a complete irrigation system present in Missoula. While historic usage related to agriculture has diminished, the main channel is intact. The site has been previously recommended not eligible for inclusion in the NRHP based on studies mostly at its diversion point from the Clark Fork River (Thompson 1996, Beery 2006, Ferguson 2017). While modern head gates are present and impact the integrity of design, the ditch has been culverted or hid as a result of commercial development in Missoula, the resource still ferry's water from its diversion to areas in active agriculture that it has served since its construction.

Site 24MO0550, the Flynn-Lowney Ditch main channel, is recommended as eligible for inclusion in the NRHP. The primary laterals have been reconfigured and while serving the same intent, their integrity has been compromised and are recommended at non-contributing to the sites recommended

eligibility. It is recommended that the proposed project would have No Adverse Effect to the Flynn-Lowney Ditch (24MO0550). The proposed project would involve placing approximately 125 linear feet of the ditch into a pipe to allow for the extension of Mary Jane Boulevard at its new intersection with Mullan Road. The existing ditch alignment would be perpetuated, as would its historic function, and there would be no diminution in the amount of water it carries. No mitigation is currently proposed or recommended for the effect on the Flynn-Lowney Ditch.

24MO1781; 3285 Flynn Lane – The Dougherty Ranch

Address: 3285 Flynn Lane
Legal: S07, T13N, R19W, COS 6071, Parcel 2, Acres 15.74
Current Owner: James D. Dougherty Family LLC
Geocode: 04-2200-07-2-01-08-0000

The Dougherty Ranch (Figure 24) is located within the current study area and was evaluated in part due to its relationship with the proposed Flynn Lane Trail (see Figure 3) that would bisect the property (Figure 25). The site (Figure 26) consists of a series of functional farm buildings, the primary residence, icehouse, as well as a boneyard of agricultural equipment (trailers, cultivators, combines, grain auger, hay baler, hay rakes, etc.).

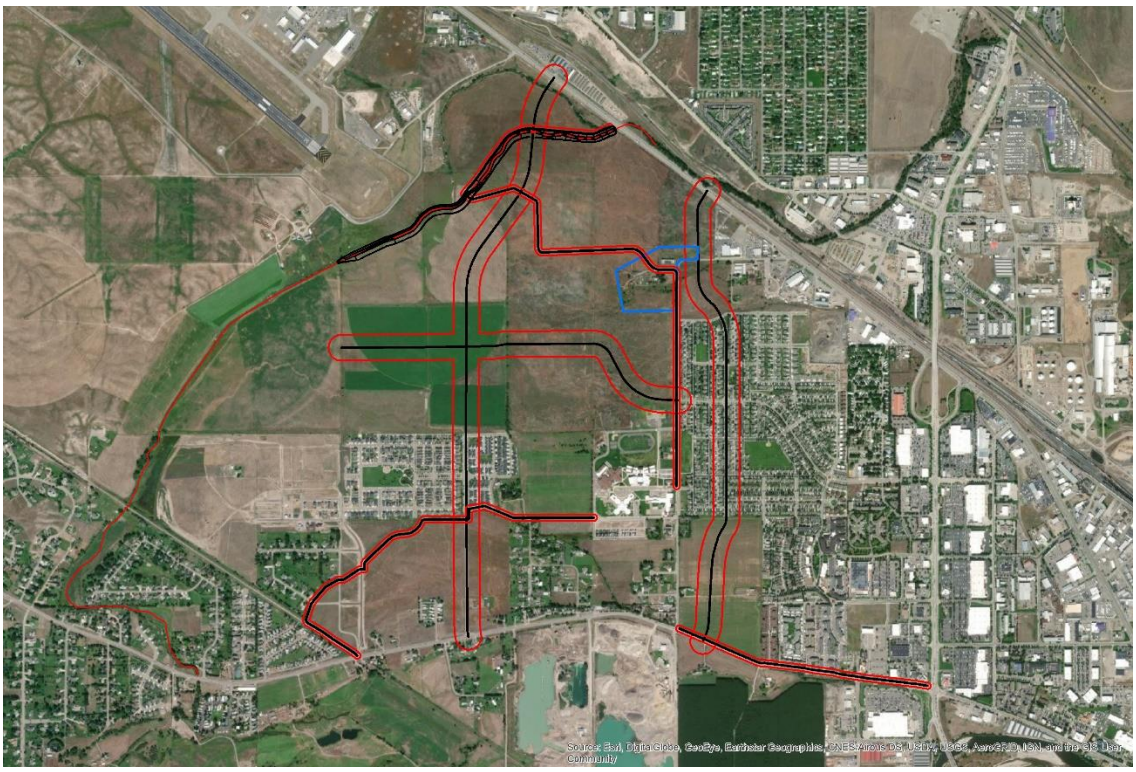

Figure 24. Overview map of the location of the Dougherty Ranch (in blue) within the Mullan Build study area.

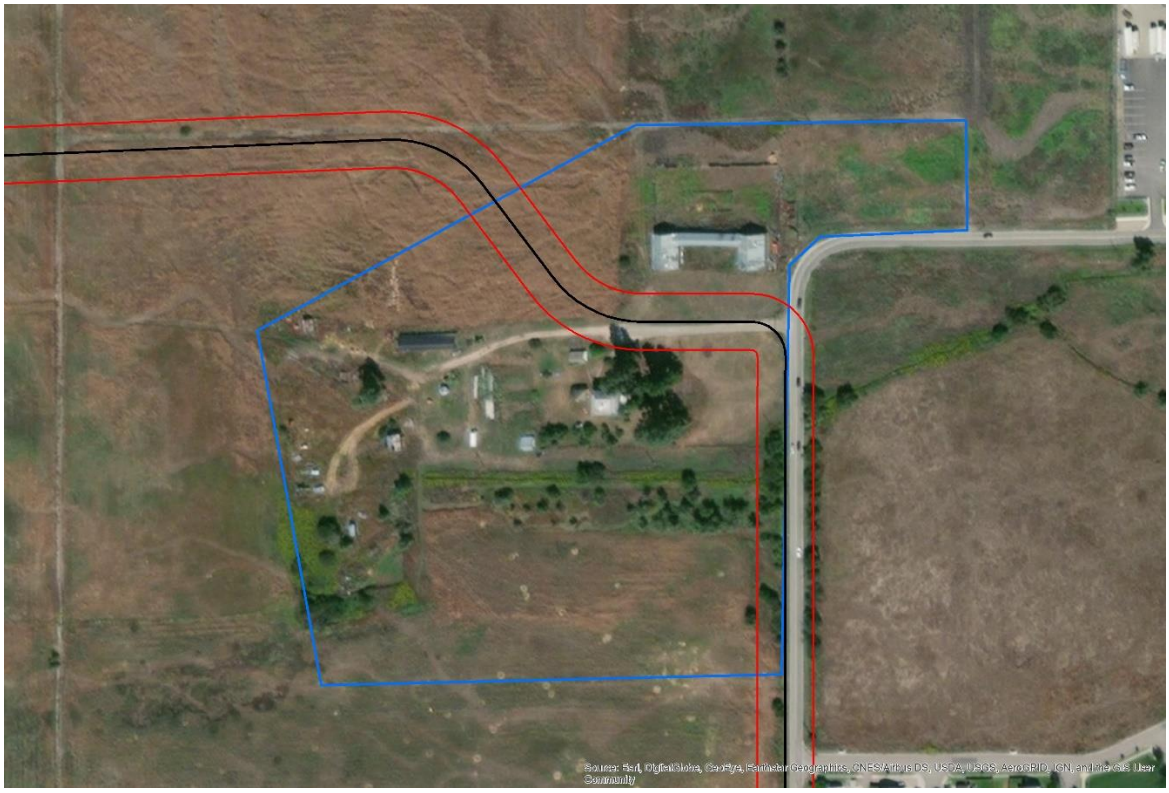

Figure 25. Overview map of the location of the Dougherty Ranch in relation to the proposed Flynn Lane Trail.

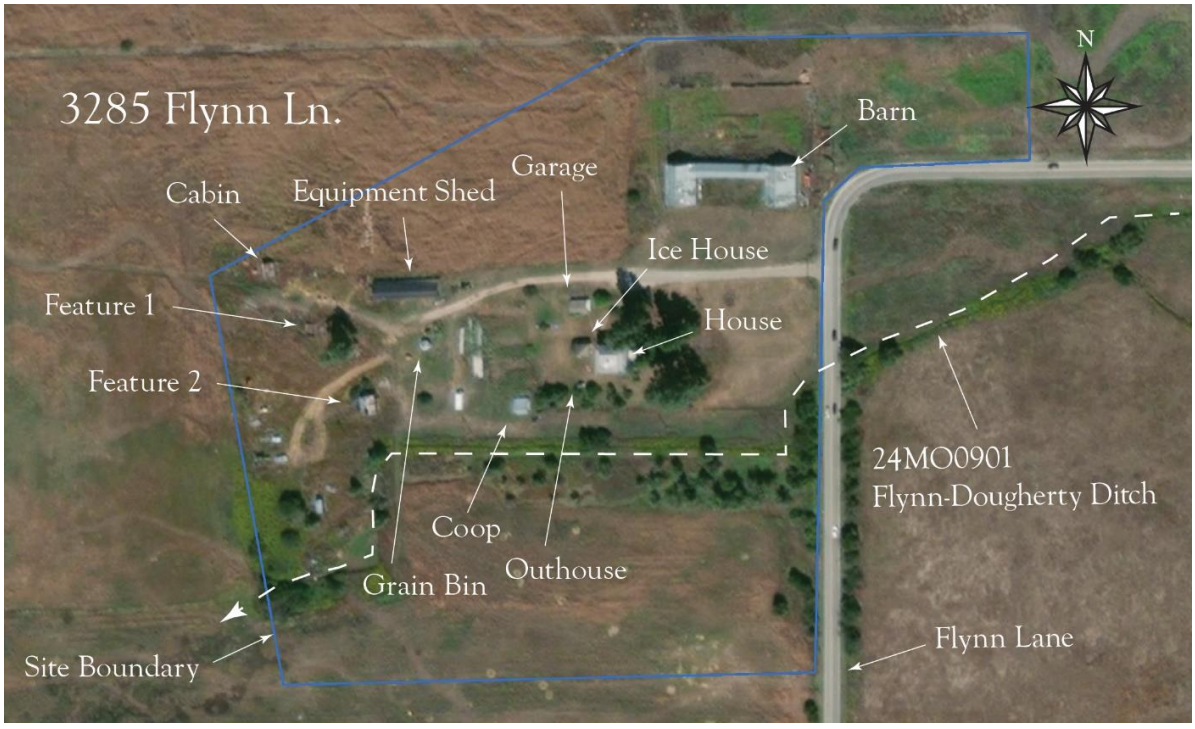

Figure 26. Site map of the location of the Dougherty Ranch.

Site History: Abner G. England of Lawrence, Illinois held the original land patent for the W½ NW¼ of T13N, R19W, Sec 7 (as well as lands in NENE of Sec 12 and SESE of Sec 1 of T13N, R20W). His total acreage of 159.37 acres was issued under the State Grant-Agri College decree of July 2, 1862 to Mr. England/Illinois Industrial University[9] on May 2, 1871 (Accession Number AGS-0325-018: BLM 2020). England claimed Missoula as his residence beginning in 1870 and married Mary Fowler Cosens, of Palestine, Illinois, in 1875 following the birth of their children daughter Ella Missoula England and Orville Grier England[10]. England died in 1904 and in 1905 as part of the distribution of his estate, his lands were decreed to his widow Mary Fowler England (Missoula County Clerks and Recorders Office [MCCR] Deed Book [DB] 1:364). Mary England died on August 27, 1920 of severe burns[11] . Upon her death the property was passed to daughter Ella and her husband Charles Liberty Anderson of Missouri (MCCR DB 3:186). Charles and Ella had been married in December of 1910 and had three children Abner Anderson, Edna May Anderson, and Mary Jane Anderson. Ella passed away from pneumonia on May 2, 1930[12]. Charles Anderson, widower, decreed the entire lands to his daughter Mary Jane in January of 1938 (MCCR DB 123:273) prior to his death later that year in May. Mary Jane, now Mary Jane Dougherty having married Missoula native 18-year-old John William Dougherty in August of 1933. Dougherty Ranch was created by decree in 1939 (MCCR DB 170:260). John passed away in 1964 and Mary Jane continued as the family matriarch until her death of natural causes in 1999 where she was survived by an extensive family of grandchildren and great grandchildren. A deed of distribution was filed some years later in 2008 by her son James Dennis Dougherty (b. 1944 - d. 2009) for the 20.01 acres of the homesite. The parcel was further divided with MCCR Certificate of Survey 6071[13] reflecting the current legal location and acreage (18.73 ac.) of the homesite. Dougherty family members created the James D. Dougherty Family LLC and in 2016 are listed as current owners of the parcel (MCCR DB 959:270). In particular the entirety of the landownership has seen the land consistently in cultivation/ranching/farming in particular during the tenure of Mary Jane Dougherty. The Dougherty family could not be reached for comment. Attempts were made to contact them in regard to the site's history, building details, and historical asides.

[9] The University of Illinois began in 1867 as the Illinois Industrial University, a name with roots in the philosophy of higher education that led to the creation of land-grant universities.

[10] https://www.ancestry.com

[11] State of Montana, Bureau of Vital Statistics, Missoula County, Register No. 172

[12] Great Falls Tribune, May 3, 1930, Page 2 - Obituary

[13] https://gis.missoulacounty.us/Documents/COS/pdf/6071.pdf

Barn: The barn is a circa 1920[14] front facing compound U-plan style stock barn (Figure 27). It is one and a half stories, with a low-pitch single-end-view gable per roof line in the plan. The barn is oriented with its front to the south with each wing having front gables and the median span having a cross gable. Roofing materials consist of corrugated tin sheets covering decomposing asphalt shingles. The barn sits on an uncut stone and mortar foundation (Figure 28), likely from stones that would have been available on site or locally. Each wing measures approximately 60 by 40 ft with the central span running approximately 125 by 20 ft. The Montana Cadastral Property Record Card lists each wing at 2436 square feet (sq ft) and the center span a 3080 sq ft for a total of 7952 sq ft of a standard barn(s) that constitutes building improvements 4-6.

Figure 27. Photograph of the barn, view to the north.

[14] http://svc.mt.gov/msl/mtcadastral

Figure 28. Photograph of representative door on the north elevation, showing door type, casement, and the uncut stone foundation.

Windows are almost entirely two-over-two, four-light windows with wood casements, wood reveals, and wood sills. The west elevation of the east wing has six such windows evenly spaced with a 6 ft square opening to the upper hay loft (Figure 29). The center span, south elevation has twelve such windows, four in an upper row, with the remaining an even spacing below. This elevation also has 3 points of entry, vertical plank wooden doors with wood casements. The east elevation of the west wing (Figure 30) is identical the east wing with the exception of one additional window, a horizontal three-over-three six-light window with the same casement, reveal, and sill.

Figure 29. Photograph of the southwest corner of the east wing, view to the northeast.

Figure 30. Photograph of the southeast corner of the west wing, view to the northwest.

The south elevation of the wings both possess a series of three, six ft square sliding doors as entry to the upper loft and two primary entry doors that are identical to those found on the south elevation of the center span. The east wing has a larger central opening for vehicle access while the west wing has a smaller 8 ft square slider door.

The west elevation of the west wing has twelve of the two-over-two, four-light windows, two three-over-three six-light windows with wood casements, wood reveals, and wood sills, a primary entry door, as well as an upper loft entry. The east elevation of the east wing is the least occupied by design features and possess six two-over-two, four-light windows only.

The north elevation (Figure 31) is the largest linear span with seven 6ft slider doors (likely for ventilation), and two large 12 ft hay trolly load-in openings at the gable of each wing.

Figure 31. Photograph of the southeast corner of the west wing, view to the northwest.

The interior was not able to be closely examined, but what could be ascertained is that the central span is a series of equidistant stalls. The upper loft portions of each wing are clearly designed for hay storage. There appears to be a tack room and a foaling pen in the east elevation while the lower portion of the west elevation is a series of pens with a large central pathway occupied by a two-axle light duty, horse-drawn farm wagon.

House/Primary Dwelling: The primary residence is a two-story brick home (Figure 32-35). Each floor is 1581 square ft. The plan is considered to be simple with irregularities. The roof line is a two-unit, normal-pitch hipped roof with composite shingles. There are wide-eve overhangs with

rectangular brackets. The foundation is irregular-course cut stone and the brick pattern is English with seven rows of stretchers per header row.

There are four brick chimneys present each with a corbelled cap and a projected masonry band below each corbel. Chimneys are located near the northwest, northeast, and southeast corners, with a small chimney located on the south slope.

The east elevation has a full width one-story 403 square ft covered porch with a large cornice, simple squared decorative columns, two of which, at each corner appear to have been replaced. A smaller 54 square ft covered porch is present at the west elevation. In addition to the east elevation primary entry, there is a smaller "mud room" entry on the west elevation that connects to the garage with a concrete pathway. A covered entry is also present no the north elevation with a two-light transom and pediment, identical to the east elevation entry with the exception of the east elevation having single pane side-lights.

Windows are almost entirely single-hung one-over one windows with an arched (extended segmental) top and a decorative brick pediment with a wood sill and reveal. The upper story has four equally spaced windows on both the east and west elevations with the north and south elevations have just three. There are basement windows (two each on the north and south elevation, one on the west elevation) that are a simpler three-over-three six-light window with a wood lintel. The irregular plan north elevation has one fixed three-pane window with a brick sill. This window stands out as temporally different indicating that this was a remodel or addition as a portion of the brick pattern is also interrupted here.

Figure 32. Southeast corner of the house showing the south and west elevations.

Figure 33. Northeast corner of the house showing the north and west elevations.

Figure 34. Southwest corner of the house showing the south and east elevations.

Figure 35. Northwest corner of the house showing the north and east elevations.

Icehouse: The icehouse a 324 square ft (18 by 18 ft), one-unit simple plan building with a normal pitch pyramidal roof line and plain wood shingles (Figure 36, Figure 37). There is a single two-panel entry door on the east elevation closest to the house. The door has a deep casement and a brick piedmont identical to the house. It also has an identical wide-eve with brackets as the house. The foundation is irregular-course cut stone and the brick pattern is English with seven rows of stretchers per header row. The west elevation is obscured by a lilac though has a single wood frame, fixed window with brick pediment. This buildings construction was likely contemporaneous with the house given array of matching features.

Figure 36. Southeast corner of the icehouse showing the south and east elevations

Figure 37. Northeast corner of the icehouse showing the north and east elevations.

Garage: The garage is ca. 1920, 450 square ft, detached three-bay garage that opens to the north with standard hinged plank doors (Figure 38). It is side-gabled, medium pitch, with a basketball hoop on the west elevation. Shingles are plain wood shake shingles and there is a standard door opening on

the south elevation with a poured cement path that leads to the house. There is a single three-over-three six-light window on the south elevation just west of the door.

Figure 38. Northwest corner of the garage showing the north and west elevations.

Equipment Shed: This six-bay equipment shed (Figure 39) is ca. 1930 and approximately 2500 square ft (100 by 25 ft). The westernmost four bays are open while the easternmost three have hinged plank doors. The east elevation has single three-panel man door and a three-over-three six-light window. The saltbox style building is side-gabled, normal pitch with eves, with composite shingles. The west elevation has no features, while the north elevation has one small wood casement fixed three-light window with a wood sill. The interior is home to tractor parts, tires, oil drums, implements for hay production, and a 1949 International Harvester flatbed truck that does not appear to be in working order.

Figure 39. Southwest corner of the equipment shed showing the south and west elevations.

Cabin: The cabin is a steep-pitched side-gable cabin with seven courses of diamond-notched logs (Figure 40). It has 391 square ft (17 by 21 ft) and a door in the west elevation. No windows are present. Corrugated tin roofing covers and older layer of simple rectangular shingles. It is not clear what the function of this cabin is. It is possible that this was a dwelling occupied by the England family prior to the construction of the main house.

Figure 40. Southwest corner of the cabin showing the south and west elevations.

Feature 1: Feature 1 is the remains of 19 by 13 ft, six-course high log building (Figure 41). The logs are milled and dovetail notched. It is likely that this structure would have been contemporaneous to the cabin located nearby and was likely a small barn.

Figure 41. Overview of Feature 1, view to the south.

Feature 2: Feature 2 is a 20 by 30 ft cement foundation with miscellaneous building debris within (Figure 42). Earlier air photos (ca. 2016) of the site show a building present here that has since been torn down.

Figure 42. Overview of Feature 2, view to the south.

Grain Bin: The grain bin is galvanized steel, 14 ft in diameter and 8ft in height (Figure 43). The door is stamped with "BUTLER MFG COMPANY". The capacity of this bin would have been approximately 985 bushels of grain[15].

Figure 43. Butler Grain Bin, view to the west.

[15] 1 Bushel equals 8 dry gallons.

Coop/Greenhouse: This building is a 462 square ft saltbox style building with a side gable and corrugated tin roofing covering aged composited shingles. The entire south elevation is comprised of three-over-three six-light, four-over-four twelve-light, and three-over-three twelve-light windows (Figure 44). There is a small 2.5 ft by 2 ft opening in each gable face and a narrow 6 panel door on the east elevation. The interior has an array of gardening equipment and nesting boxes. Land to the north of this building is where a large garden had been present in the past.

Figure 44. Southeast corner of the coop showing the south and east elevations.

Outhouse: The outhouse (Figure 45) opens to the south with a large eve, steep-pitch side-gable roof with wood plank shingles. The simple plan is 5 by 7 ft with shiplap siding. There is slope positioned chimney on the north slope of the gable.

Figure 45. Southeast corner of the coop showing the south and east elevations.

NRHP Recommendation

The Dougherty Ranch, 24MO1781, is recommended as eligible for inclusion in the NRHP. The site possesses a good degree of integrity and represents a functional ranch property that was distinctive of Missoula's early development. Also, the site has changed hands little over time with a direct family line maintained to the land grant decreed to Abner England in 1871. The site has changed little over time, save modern development to the east of the property. The Dougherty Ranch holdings are largely intact, though some future development is planned. The homesite similarly has seen little modern addition with the majority of the buildings in fair to good condition showcasing the plan of a ranch property. The barn, the house, and icehouse in particular are in good condition and are rare in Missoula County. Nearby to the south, the National Register Listed Flynn Ranch[16] (24MO0249) is contemporaneous.

The property is currently for sale. Currently, the proposed Flynn Lane Trail begins on the west side of Flynn Lane, north of Camden Street and terminates at the existing shared use path near Hellgate Elementary School. The proposed trail is within existing right-of-way and therefore No Adverse Effect to Site 24MO1781 would be present. RBAS recommends that any future extension of the Flynn Lane Trail path (as inventoried) avoid bisecting a portion of ranch and skirt the property to the north along the property line behind the barn.

[16] https://npgallery.nps.gov/AssetDetail/NRIS/80002426

7. Recommendations

RBAS conducted a 100 percent inventory of the aforementioned project elements which comprises the total Area of Potential Effect (see Figures 6-9). Surface visibility was between 65-90 percent in those areas in agriculture (the majority of the project area) as inventory preceded abundant spring growth. A total of three sites (24MO0550, 24MO0901, 24MO0902) were reevaluated and one newly identified resource, 24MO1781 (The Dougherty Ranch), was recorded. Proposed roads were inventoried with a 200 ft either side of centerline buffer and proposed trails were inventoried with a 50 ft either side of centerline buffer.

Previously recorded sites 24MO0901(Flynn-Dougherty Ditch) and 24MO0902 (Field-Dougherty Ditch) are considered to be not eligible for inclusion in the NHRP.

Site 24MO0550, the Flynn-Lowney Ditch main channel, is recommended as eligible for inclusion in the NRHP. The primary laterals have been reconfigured and while serving the same intent, their integrity has been compromised and are recommended at non-contributing to the sites recommended eligibility. It is recommended that the proposed project would have No Adverse Effect to the Flynn-Lowney Ditch (24MO0550). The proposed project would involve placing approximately 125 linear feet of the ditch into a pipe to allow for the extension of Mary Jane Boulevard at its new intersection with Mullan Road. The existing ditch alignment would be perpetuated, as would its historic function, and there would be no diminution in the amount of water it carries. No mitigation is currently proposed or recommended for the effect on the Flynn-Lowney Ditch.

Site 24MO1781, The Dougherty Ranch is recommended as eligible for inclusion in the NRHP. The site possesses a good degree of integrity and represents a functional ranch property that was distinctive of Missoula's early development. Also, the site has changed hands little over time with a direct family line maintained to the land grant decreed to Abner England in 1871. The site has changed little over time, save modern development to the east of the property. The Dougherty Ranch holdings are largely intact, though some future development is planned. The homesite similarly has seen little modern addition with the majority of the buildings in fair to good condition showcasing the plan of a ranch property. The barn, the house, and icehouse in particular in good condition and are rare in Missoula County. Nearby to the south, the National Register Listed Flynn Ranch[17] (24MO0249) is contemporaneous.

The property is currently for sale. Currently, the proposed Flynn Lane Trail begins on the west side of Flynn Lane, north of Camden Street and terminates at the existing shared use path near Hellgate Elementary School. The proposed trail is within existing right-of-way and therefore, it is

[17] https://npgallery.nps.gov/AssetDetail/NRIS/80002426

recommended that No Adverse Effect to Site 24MO1781 would be present. RBAS recommends that any future extension of the Flynn Lane Trail path avoid bisecting a portion of ranch and skirt the property to the north along the property line behind the barn.

Elsewhere in the Mullan BUILD APE, no further cultural resource work is recommended; with the exception of those resources listed and described above, no additional cultural resources were identified as a part of the research and field effort.

Inadvertent Discovery

In the event that archaeological deposits are inadvertently discovered during construction in any portion of the Mullan BUILD APE, ground-disturbing activities should be halted immediately in an area large enough to maintain integrity of the deposits, and MTSHPO, interested tribes, and MCPW project manager should be immediately notified.

If the find were to include or consist of human remains, then all activity that may cause further disturbance to those remains must cease, and the area of the find must be secured and protected from further disturbance. In addition, the finding of human skeletal remains must be reported to the county coroner and local law enforcement in the most expeditious manner possible. The remains should not be touched, moved, or further disturbed.

The county coroner would assume jurisdiction over the human skeletal remains, and make a determination of whether those remains are forensic or non-forensic. If the county coroner determines the remains are non-forensic, they will report that finding to the MTSHPO. MTSHPO will then take jurisdiction over those remains. The State Physical Anthropologist will make a determination of whether the remains are Indian or non-Indian, and report that finding to any appropriate cemeteries and the affected tribes. MTSHPO will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

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1995 *The Missoula Valley Project.* Water Resources Center Archives, University of California, Berkley California. Bureau of Reclamation History Program, Denver Colorado, Research of Historic Relemation.

Nesser, John, Gary Ford, C. Lee Maynard, and Deborah Page-Dumroese

1997 Ecological Units of the Northern Region: Subsections. USDS Intermountain Research Station General Technical Report INT-GTR-369, Rocky Mountain Research Station, Ogden, Utah.

Rossillion, Mitzi

2007 Site form for 24MO1377. On file at the Montana State Historic Preservation Office, Helena, MT.

State Engineers Office

1960 Water Resources Survey: Missoula County, Montana. State Engineers Office, Helena, Montana.

1965 Water Resources Survey: Ravalli County, Montana. State Engineers Office, Helena, Montana.

Thompson, Wayne

2003 Montana Cultural Resources Inventory System form 24MO550, on file at the Montana State Historic Preservation Office, Helena.

Toole, K. Ross

1959 *Montana: An Uncommon Land*. The University of Oklahoma Press, Norman.

9. Appendix A – Montana SHPO Site Forms

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

1. IDENTIFICATION

1.1 Smithsonian Number: 24MO0550 **1.2 Field Designation:** Flynn Lowney Ditch

1.3 Project Name: Mullan BUILD

1.4 Agency Project Number: **1.5 Consultant Project Number:**

2. LOCATION

2.1 Township/Range: T13 N, R19 E, Section 18**; ¼ Section(s):** NWNW **2.2 County:** Missoula

2.3 UTM Coordinates: Zone 11 E 722893m; N 5197210m, Additional UTM's **Datum used:** ☐ NAD 83 conus

2.4 Administrative/Surface Ownership: Hellgate Irrigation Co.

2.5 7.5' USGS Map Name, Date: Northwest Missoula, MT 2017

2.6 Narrative of access: The is linear but primarily crosses under George Elmer Drive approximately 0.35 miles north of Mullan Road.

2.7 Vicinity of (city/town): Missoula

3. DESCRIPTION

3.1 Site Type: Historic Irrigation

3.2 Site Time Period (use dropdowns)**:** **Prehistoric:** **Historic:** 1900-1909

Paleontological: **Combination:** ☐ **Unknown:** ☐

3.3 Narrative Description of Site: The site consists of the ca. 1903 Flynn Lowney Irrigation Ditch.

3.4 Site Dimensions: 4.4 miles long, 10-12 feet wide, 6-8 feet deep. **Surface visibility:** 100%

3.5 Feature Descriptions: N/A

3.6 Artifacts: (✔ all that apply) ☐ Chipped Stone ☐ Wood ☐ Ground Stone ☐ Ceramics ☐ Bone ☐ Trade ☐ Other

Description:

3.7 Diagnostic Artifacts: N/A

3.8 Subsurface Testing: N/A

3.9 Site function/interpretation: Historic Irrigation

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

4: ENVIRONMENTAL SETTING

4.1 Geographic Setting: The general topography varies from a level land surface at the east end of the area to a dissected area of low rolling hills at the west end of the corridor The area is currently being subdivided for residential, commercial and recreational development, including housing subdivisions, trailer courts, convenience stores, storage areas, and a new golf course. Some open agricultural lands remain, central to the project area, and include cultivated and irrigated cropland and livestock pasture.

From its point of diversion on the right bank of the Clark Fork River in the NWNE of Sec. 21, T13N, R19W, the main canal of the Flynn-Lowney Ditch follows a generally westerly direction for the irrigation of lands in Secs. 18 and 19, T. 13 N., R. 19 W.; and Secs. 11, 12, 13, and 14, T13, R20W. The initial capacity of the canal is in excess of 50 cfs and has a length of 4.5 miles (State Engineers Office 1960:48).

4.2 Contour: ☒ Known ☐ Approximate ☐ Unknown **4.3 Elevation:** 3160 ft

4.4 View/Aspect: East-west trending

4.5 Sediments: Desmet Loam

Deposition: ☐ Surface Only ☐ Buried Only ☐ Surface and Buried ☐ Redeposited ☐ Other

4.6 Available Water Source: Stream/River/Creek

4.7 Major River Drainage: Clark Fork River

4.8 Minor Drainage: Grant Creek, on site

4.9 Local Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

Regional Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

5. ASSESSMENT, RECORDING & MANAGEMENT

5.1 Significance: See Section 6.5

The Flynn-Lowney Ditch is located in the southern portion of the project area and is a succinct irrigation and largely intact system that ferries water from the Clark Fork River to Grant Creek. The ditch has been previously recorded largely at its diversion point at the Clark Fork River (Thompson 1996, Beery 2006, Ferguson 2017). (The ditch (canal) is approximately 10-12 feet in width and 6-8 feet in depths. Within the project area two primary laterals diverge from the main flow carrying water to the north into present day agricultural lands. From its point of diversion on the right bank of the Clark Fork River in the NWNE of Sec. 21, T13N, R19W, the main canal of the Flynn-Lowney Ditch follows a generally westerly direction for the irrigation of lands in Secs. 18 and 19, T. 13 N., R. 19 W.; and Secs. 11, 12, 13, and 14, T13, R20W. The initial capacity of the canal is in excess of 50 cafes and has a length of 4.5 miles (State Engineers Office 1960:48). Both of the north flowing primary laterals have been realigned from their historic paths. The easternmost primary lateral (L1) has been reconfigured to provide access to a pump that provides water to a pivot irrigator and then returns unpumped water into Grant Creek, while the westernmost primary lateral (L2) has been reconfigured at its diversion and culverted and buried within modern subdivision development with it east west branch still open and directing water into Grant Creek.

5.2 Condition/Integrity: The site retains a high level of integrity of location, association, feeling, setitng, and worksmanship. Modern headgate updates have somewhat comprimsied intgirty of design and matierals but not in such as way as to comprimise the main channels integrity completely. The primary laterals have been reconfigured and while serving the same intent, their integrity has been compromised and are recommended at non-contributing to the sites recommended eligibility.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

5.3 Possible impacts to site: Development

5.4 Evaluation: Does this property meet National Register criteria for eligibility? ☒ **Yes** ☐ **No** ☐ **Unevaluated**

Evaluation Procedures/Justification: The site retains a high level of integrity of location, association, feeling, setting, and workmanship. and represents an example of a complete irrigation system present in Missoula. While historic usage related to agriculture has diminished, the main channel is intact. The site has been previously recommended not eligible for inclusion in the NRHP based on studies mostly at its diversion point from the Clark Fork River (Thompson 1996, Beery 2006, Ferguson 2017). While modern head gates are present and impact the integrity of design, the ditch has been culverted or hid as a result of commercial development in Missoula, the resource still ferrys water from its diversion to areas in active agriculture that it has served since its construction. RBAS recommends 24MO0550, the main channel, as eligible for inclusion in the NRHP. The primary laterals have been reconfigured and while serving the same intent, their integrity has been compromised and are recommended at non-contributing to the sites recommended eligibility.

The proposed project would have No Adverse Effect to the Flynn-Lowney Ditch (24MO0550). The proposed project would involve placing approximately 125 linear feet of the ditch into a pipe to allow for the extension of Mary Jane Boulevard at its new intersection with Mullan Road. The existing ditch alignment would be perpetuated, as would its historic function, and there would be no diminution in the amount of water it carries. No mitigation is currently proposed or recommended for the effect on the Flynn-Lowney Ditch.

5.5 Recording status: ☒ surface examination ☐ photo ☐ map ☐ subsurface tested

5.6 Recommendations (use dropdown)**:** Avoidance

Comments: As an active waterway, community development that would seek to disrupt said flow should be avoided.

5.7 Site Located by: Brian Herbel - Rabbibrush Archaeological Services LLC **Date Located:** June 7, 2020

5.8 Site Recorded by: Brian Herbel - Rabbibrush Archaeological Services LLC **Date Recorded:** July 1, 2020

5.9 Site form update and revisions by: **Date Updated:**

5.10 Federal/State Permit No:

5.11 Publication(s)/Report(s) where site is described: Cultural Resource Inventory for the Proposed Mullan BUILD Project, Missoula County, Montana.

5.12 Artifact Repository: N/A

5.13 Field notes/maps/photos repository: Rabbitbrush Archaeological Services, 300B Main St Suite 201, Stevensville, MT 59870

6. DESCRIPTION OF HISTORIC SITES

6.1 Property boundaries:

4.4 miles **: estimated** **: measured**

Boundary justification: extent of the main channel of the Flynn Lowney Ditch, excluding primary laterals.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance: 4.4 miles long, 10-12 feet wide, 6-8 feet deep.

6.3 Artifacts observed, collected:

6.4 Subsurface Testing Methods and Results:

6.5 Historical Information and Context (footnote sources): Missoula County Water Resrouce Survey - Page 47-48
On October 9, 1919, the private ditch known as the "Flynn-Lowney Ditch," incorporated for a period of 40 years under the name of the Hellgate Valley Irrigation Company. The original Flynn -Lowney Ditch was first constructed by Michael Flynn and C. C. Lowney in the year 1903 for the irrigation of their ranch lands.

The corporation articles list the capital stock of this company at $37,500 which is divided into 2,500 shares of a par value of $15 per share. Shares of stock actually subscribed to in the company are 1,750, valued at $26,250.

When the Hellgate Valley Irrigation Company was organized, 600 shares were given to the heirs of Michael Flynn and 600 shares to the successors in interest of C. C. Lowney. This amount representing 1,200 miner's inches (l share equals 1 miner's inch) is a priority right on the first 1,200 miner's inches of water flowing in the ditch system.

By an agreement with the corporation, the American Crystal Sugar Company may use the full capacity of the Hellgate Valley Irrigation Company ditch for irrigating and for their sugar beet processing plant. For this privilege, the Sugar Company agreed to pay one third of the operation and maintenance charges and one third of the total costs of any new construction connected with the ditch east of their factory.

The stock of the corporation is assessable for the purpose of raising funds for the construction of dams, head gates, reservoirs, ditches, flumes, and maintenance of the same, and for the purchase of rights-of-way if necessary.

PRESENT STATISTICS

Location: From its point of diversion on the right bank of the Clark Fork River in the NW Y, - NEY, of sec. 21, T. 13 N., R. 19 W. the main canal of the Hellgate Valley Irrigation Company fool• lows a generally westerly direction for the irrigation of lands in secs. 18 and 19, T. 13 N., R. 19 W.; and secs. 11, 12, 13, and 14, T. 13 N., R. 20 W.

Length and Capacity of Canal: The initial capacity of the canal is in excess of 50 cafes and has a length of 4.5 miles.

Present Users: Active stock shares in this Company total 1, 750 which are owned m various amounts by 15

water users. One share of stock represents one miner's inch of water.

Acreage Irrigated: In 1959, there were 1,339 acres irrigated under this Company's ditch system with no potential irrigable acres.

WATER RIGHT DATA

Water right filings which are applicable to the Hellgate Valley Irrigation Company are as follows: From the Clark Fork (Hellgate) River an appropriation made by Michael, John J., and Michael Jr. Flynn, as of the date of December 1, 1902 for 1,600 miner's inches. (Ref. Book D of Water Right Records, Page 612); an appropriation made by the Hellgate Valley Irrigation Company as of the date November 17, 1919 for 2,500 miner's inches. (Ref. Book J of Water Right Records, Page 124); an appropriation made by John A. Shaughnessy as of the date July 28, 1919 for 2,500 miner's inches. (Ref. Book I of Water Right Records, Page 362); an appropriation made by Con Lowney as of the date May, 1903 for 10,000 miner's inches. (Ref. Book I of Water Right Records, Page 147). The American Crystal Sugar Company have their own water right filings that they use in the Hellgate Val• ley Irrigation Company ditch. These 2 filings were made under the name of the Amalgamated Sugar Company and are as follows: From the Clark Fork (Missoula) River an appropriation dated December 3, 1917 for 280 miner's inches. (Ref. Book J of Water Right Records, Page 269); an appropriation dated December 3, 1917 for 280 miner's inches. (Ref. Book J of Water Right Records, Page 274).

All of the above water right filings are recorded in the Clerk and Recorder's Office, Missoula County Courthouse.

6.6 Sources, files, people consulted: Beery, Derek

2003 Cultural Resource Inventory of the Area of Potential Effect Associated with the Proposed Missoula County Mullan Road Sewer Project (RSID No. 8474). Report Prepared for HDR, Inc. by Historical Research Associates, Inc., Missoula, MT.

Ferguson, Dave
2017 Montana Cultural Resources Inventory System updated form 24MO550, on file at the Montana State Historic Preservation Office, Helena.

State Engineers Office
1960 Water Resources Survey: Missoula County, Montana. State Engineers Office, Helena, Montana.

Thompson, Wayne
2003 Montana Cultural Resources Inventory System form 24MO550, on file at theMontana State Historic Preservation Office, Helena.

7. ADDITIONAL INFORMATION

Legal locations: T13N, R19W N1/2 Section 21, S1/2 Section 17, N 1/2 Section 18; T13N, R20W N1/2 Section 13, NW Section 14, Section 12, SE Section 11, SE Section 1.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

PHOTOGRAPHS

Overview of the Flynn Lowney ditch at its crossing at Chuckwagon Drive. View to the southwest.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

PHOTOGRAPHS

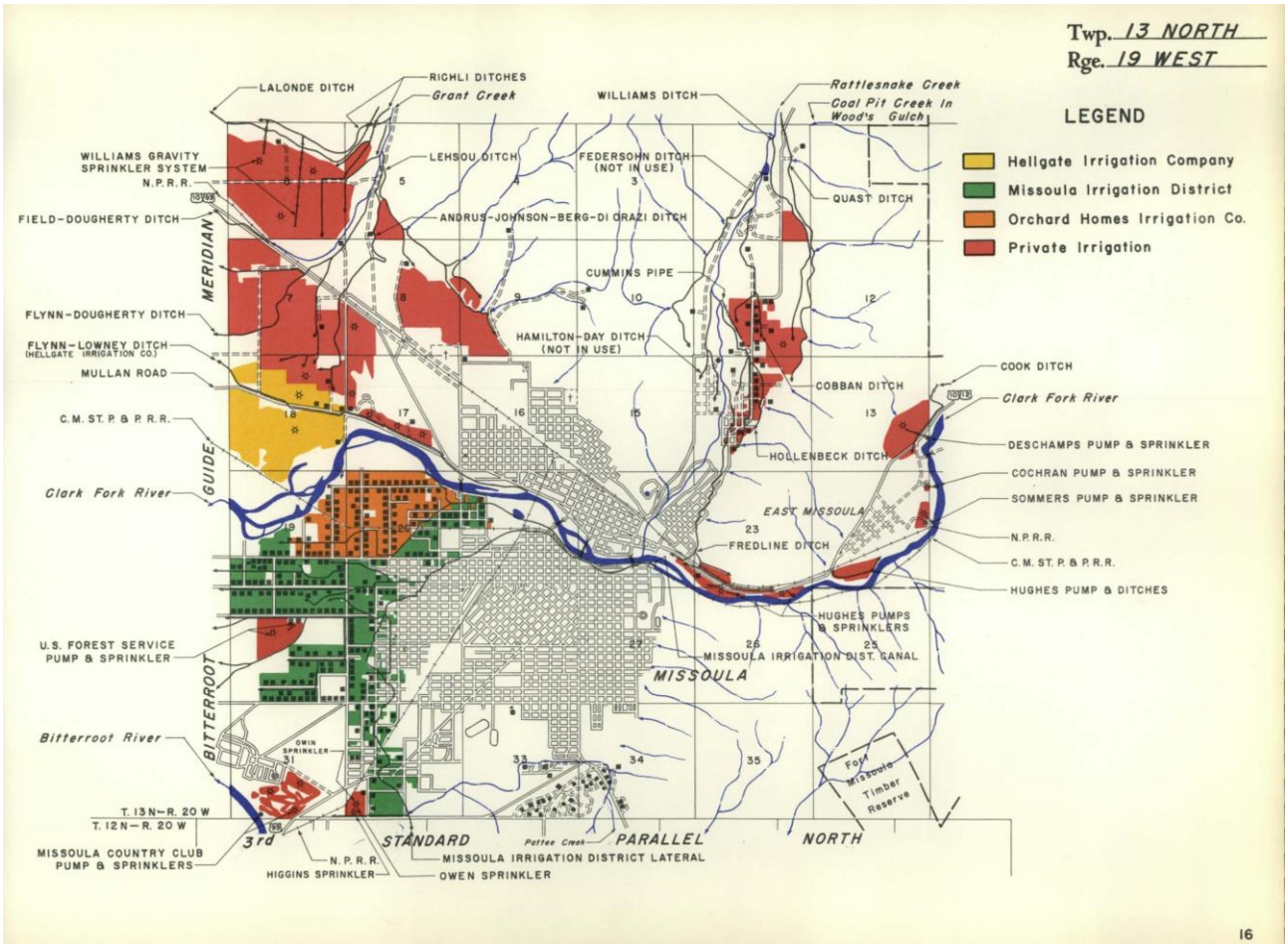
Overview of the Flynn Lowney ditch at its modern crossing at George Elmer Drive. View to the east.

Insert photos here

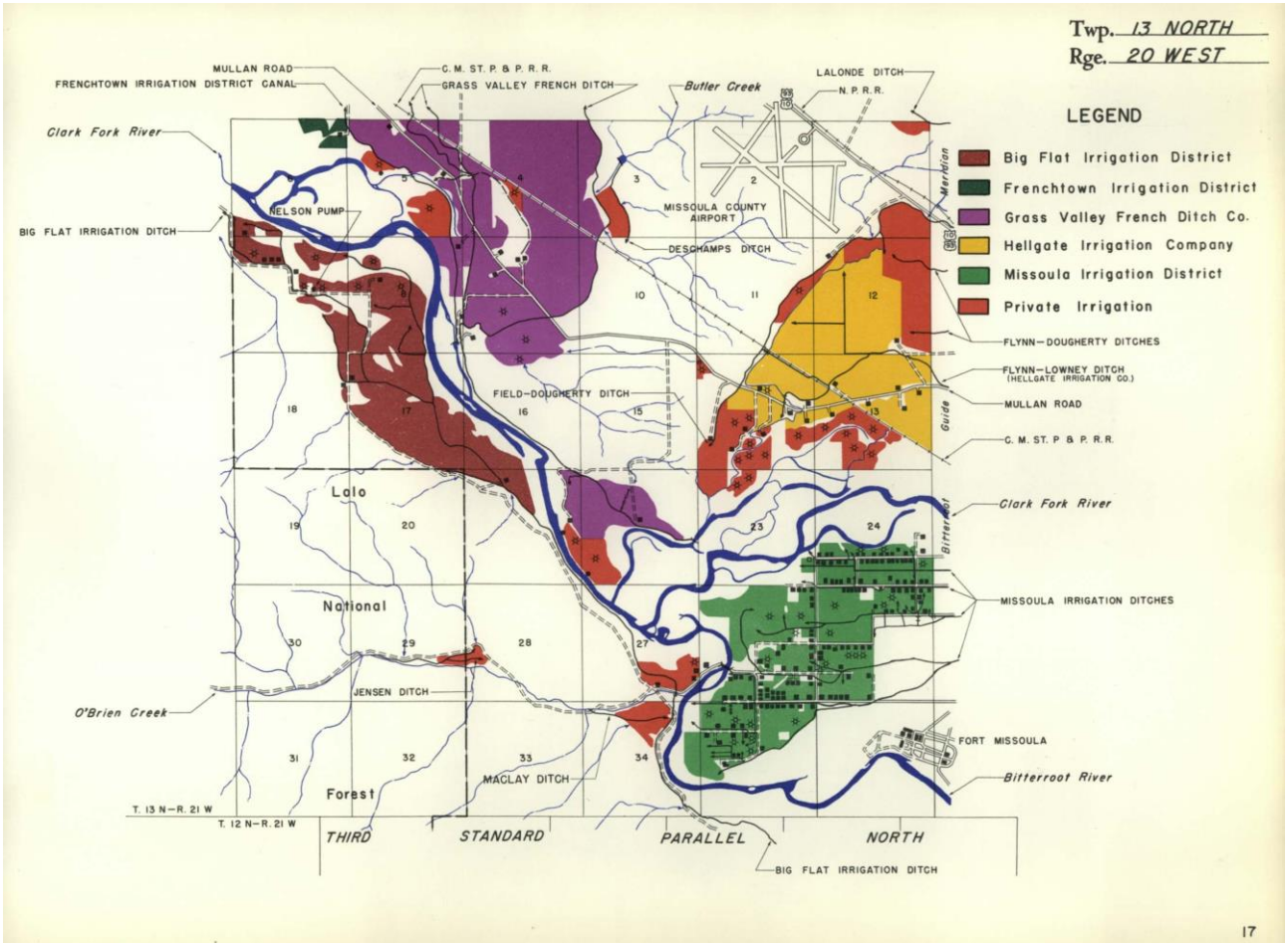
MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

MAPS

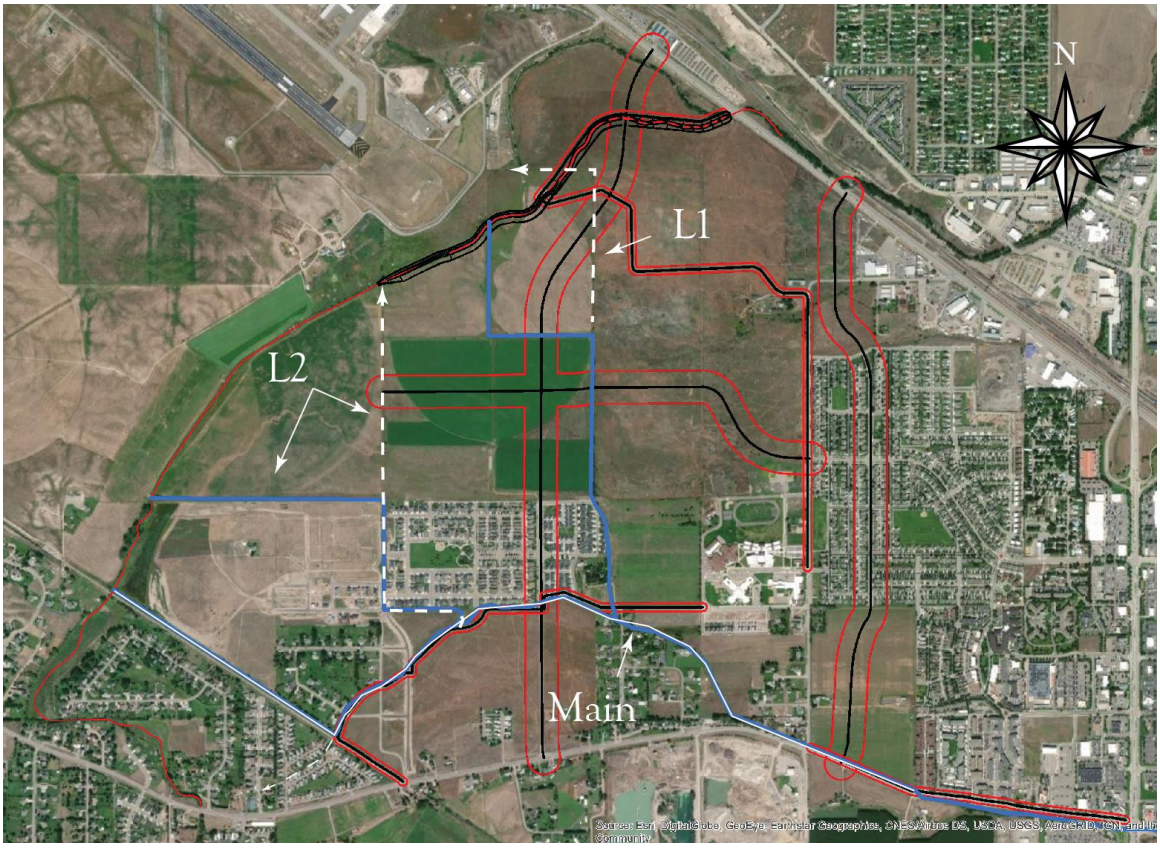
Attach a sketch map (if applicable) and 7.5' Quad showing site location.



MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

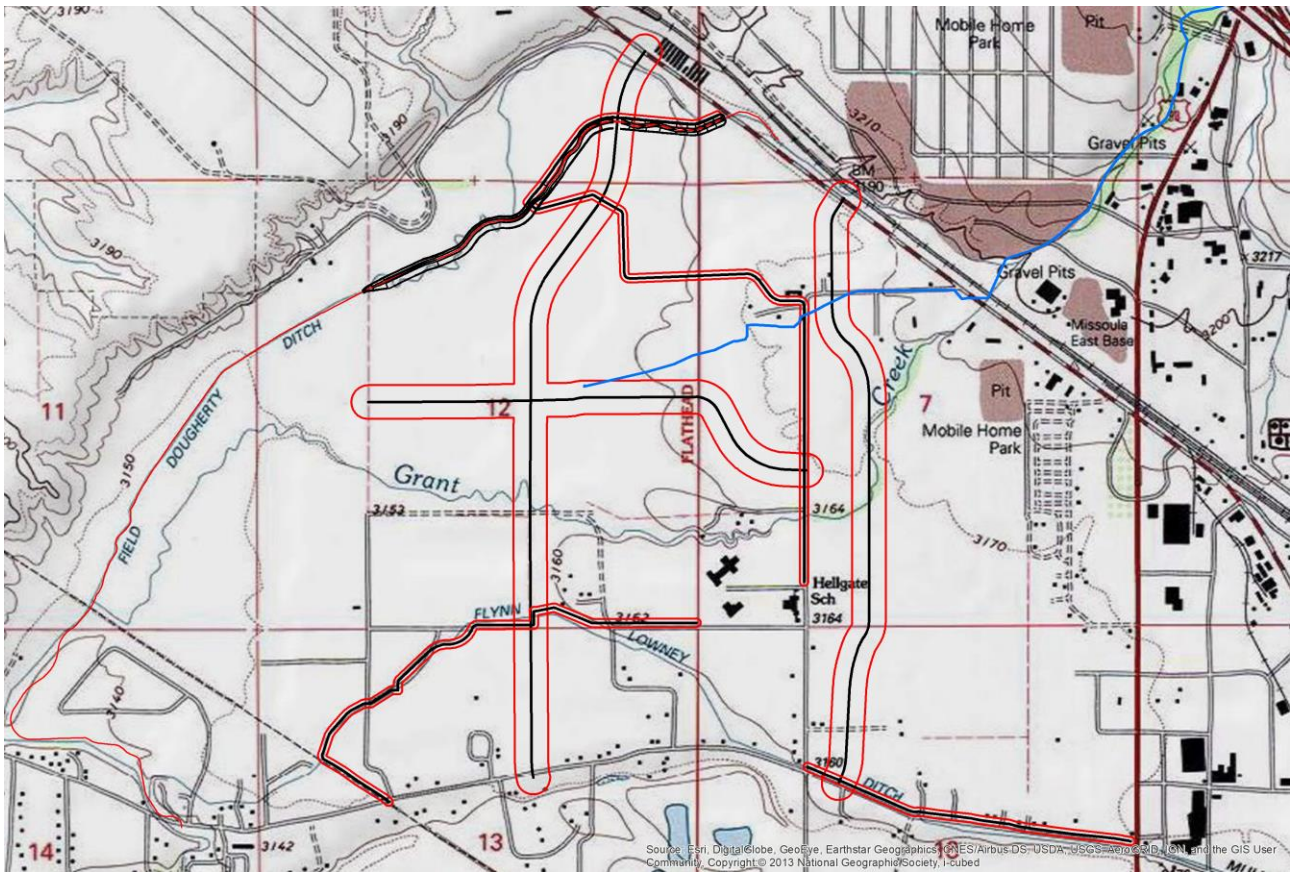


MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM



Modern alignment of the Flynn-Lowney Ditch, 24MO0550. Abandoned or modified segments are a dashed white line, blue is the flow of water, and solid white is the main canal.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM



Northwest Missoula, USGS 7.5 Minute 2020.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

1. IDENTIFICATION

1.1 Smithsonian Number: 24MO0901 **1.2 Field Designation:** Flynn Dougherty Ditch

1.3 Project Name: Mullan BUILD

1.4 Agency Project Number: **1.5 Consultant Project Number:** 032

2. LOCATION

2.1 Township/Range: T13 N, R19 W, Section 7**;** ¼ **Section(s):** SENW **2.2 County:** Missoula

2.3 UTM Coordinates: Zone 11 E 724273m; N 5198539m, Additional UTM's **Datum used:** ☒NAD 83 conus

2.4 Administrative/Surface Ownership: Private

2.5 7.5' USGS Map Name, Date: Northwest Missoula, MT 2017

2.6 Narrative of access: The site is linear and primarily crosses under Flynn Lane approximately 0.35 miles south of its intersection with West Broadway, Missoula.

2.7 Vicinity of (city/town): Missoula

3. DESCRIPTION

3.1 Site Type: Historic Irrigation

3.2 Site Time Period (use dropdowns)**:** **Prehistoric:** **Historic:** 1900-1909

Paleontological: **Combination:** ☐ **Unknown:** ☐

3.3 Narrative Description of Site: The site consists of the Flynn Dougherty Irrigation Ditch.

3.4 Site Dimensions: 2.7 miles long, 5 feet wide, 2.5-3 feet deep. **Surface visibility:** 100%

3.5 Feature Descriptions: N/A

3.6 Artifacts: (✔ all that apply) ☐Chipped Stone ☐Wood ☐Ground Stone ☐Ceramics ☐Bone ☐Trade ☐Other

Description:

3.7 Diagnostic Artifacts: N/A

3.8 Subsurface Testing: N/A

3.9 Site function/interpretation: Historic Irrigation

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

4: ENVIRONMENTAL SETTING

4.1 Geographic Setting: The ferries water from a diverson point on Grant Creek to the north.The general topography varies from a level land surface at the east end of the area to a dissected area of low rolling hills at the west end of the corridor. The area is currently being subdivided for residential, commercial and recreational development, including housing subdivisions, trailer courts, convenience stores, storage areas, and a new golf course. Some open agricultural lands remain, central to the project area, and include cultivated and irrigated cropland and livestock pasture.

4.2 Contour: ☒ Known ☐ Approximate ☐ Unknown **4.3 Elevation:** 3170 ft

4.4 View/Aspect: East-west trending

4.5 Sediments: Desmet Loam

Deposition: ☐ Surface Only ☐ Buried Only ☐ Surface and Buried ☐ Redeposited ☐ Other

4.6 Available Water Source: Stream/River/Creek

4.7 Major River Drainage: Clark Fork River

4.8 Minor Drainage: Grant Creek, on site

4.9 Local Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

Regional Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

5. ASSESSMENT, RECORDING & MANAGEMENT

5.1 Significance: The Flynn-Dougherty ditch was first recorded in 2003 during work for the Mullan Road Sewer project (Beery 2003) and updated in 2005 (Herbel and Beery 2006) as part of the Grant Creek Corridor Environmental Restoration and Flood Control Project . The ditch is approximately 5 feet wide and 2.5-3 ft in depth. The main ditch diverted water from Grant Creek at a point north side of Interstate 90, carrying it south to irrigate private agricultural fields on the south side of the interstate. However, local residents familiar with the area indicated to Beery (2003) that the field ditch has not been used for several decades.

Moreover, as a result of this inventory it was determined that the historic southern branch (State Engineers Office 1960) of the ditch has been eradicated by modern development east of Flynn Lane and is no longer present. The northern extant branch crosses under Flynn Lane at the location of the Dougherty Ranch and continues west where is has been filled in just west of the Ranch eliminating its former terminus with a primary lateral of the Flynn-Lowney Ditch (24MO0550). A dilapidated and abandoned, rough-aggregate concrete headgate is present just southwest of the Dougherty Ranch where the extant ditch alignment turns briefly to the south.

5.2 Condition/Integrity: The site has been previously recommended as not eligible for inclusion the NRHP (Beery 2003). In regard to the proposed Project situated on the northern branch of the resource, aspects of integrity (location and setting) remain while others (feeling, workmanship, association, materials, and design) are lost.

5.3 Possible impacts to site: Development

5.4 Evaluation: Does this property meet National Register criteria for eligibility? ☐ **Yes** ☒ **No** ☐ **Unevaluated**

Evaluation Procedures/Justification: The site has been previously recommended as not eligible for inclusion the NRHP (Beery 2003). In regard to the proposed Project situated on the northern branch of the resource, aspects of integrity (location and setting) remain while others (feeling, workmanship, association, materials, and design) are lost. A small portion of the original alignment is present, though the historic system related to the greater ditch system itself are no longer present. RBAS concurs with the previous recommendation for this recourse as being Not Eligible for inclusion in the NRHP. While some aspects of integrity remain, a majority have been compromised over time. No further work is recommended in regard to this resource. .

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

5.5 Recording status: ☒ surface examination ☒ photo ☒ map ☐ subsurface tested

5.6 Recommendations (use dropdown)**:** No Recommendation

Comments:

5.7 Site Located by: Derek Beery - HRA **Date Located:** March 1, 2003

5.8 Site Recorded by: Derek Beery - HRA **Date Recorded:** March 1, 2003

5.9 Site form update and revisions by: Brian Herbel, Rabbitbrush Archaeologcial Services, LLC **Date Updated:** June 15, 2020

5.10 Federal/State Permit No:

5.11 Publication(s)/Report(s) where site is described: Cultural Resource Inventory for the Proposed Mullan BUILD Project, Missoula County, Montana.

5.12 Artifact Repository: N/A

5.13 Field notes/maps/photos repository: Rabbitbrush Archaeological Services, 300B Main St Suite 201, Stevensville, MT 59870

6. DESCRIPTION OF HISTORIC SITES

6.1 Property boundaries:

2.7 miles **: estimated** **: measured**

Boundary justification: extent of the main channel of the Flynn Dougherty Ditch.

6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance: 2.7 miles long, 5 feet wide, 2.5-3 feet deep.

6.3 Artifacts observed, collected: N/A

6.4 Subsurface Testing Methods and Results: N/A

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

6.5 Historical Information and Context (footnote sources):

6.6 Sources, files, people consulted:

Beery, Derek
2003 Cultural Resource Inventory of the Area of Potential Effect Associated with the Proposed Missoula County Mullan Road Sewer Project (RSID No. 8474). Report Prepared for HDR, Inc. by Historical Research Associates, Inc., Missoula, MT.

Herbel, Brian and Derek Beery
2006 Class III Cultural Resources Survey for Section 595 Floodway Improvements along the Grant Creek Corridor, Missoula County, Montana. Report Prepared for HDR, Inc. by Historical Research Associates, Inc., Missoula, MT.

State Engineers Office
1960 Water Resources Survey: Missoula County, Montana. State Engineers Office, Helena, Montana.

7. ADDITIONAL INFORMATION

Legal locations: T13N, R19W SWSW Sec 7, SESESE Section 6, N1/2 Section 7, T13N R20W S1/2NE Section 12.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

The Flynn-Dougherty Ditch (24MO0901) at its culvert under Flynn Lane, view to the west. The Dougherty Ranch in pictured in the background.

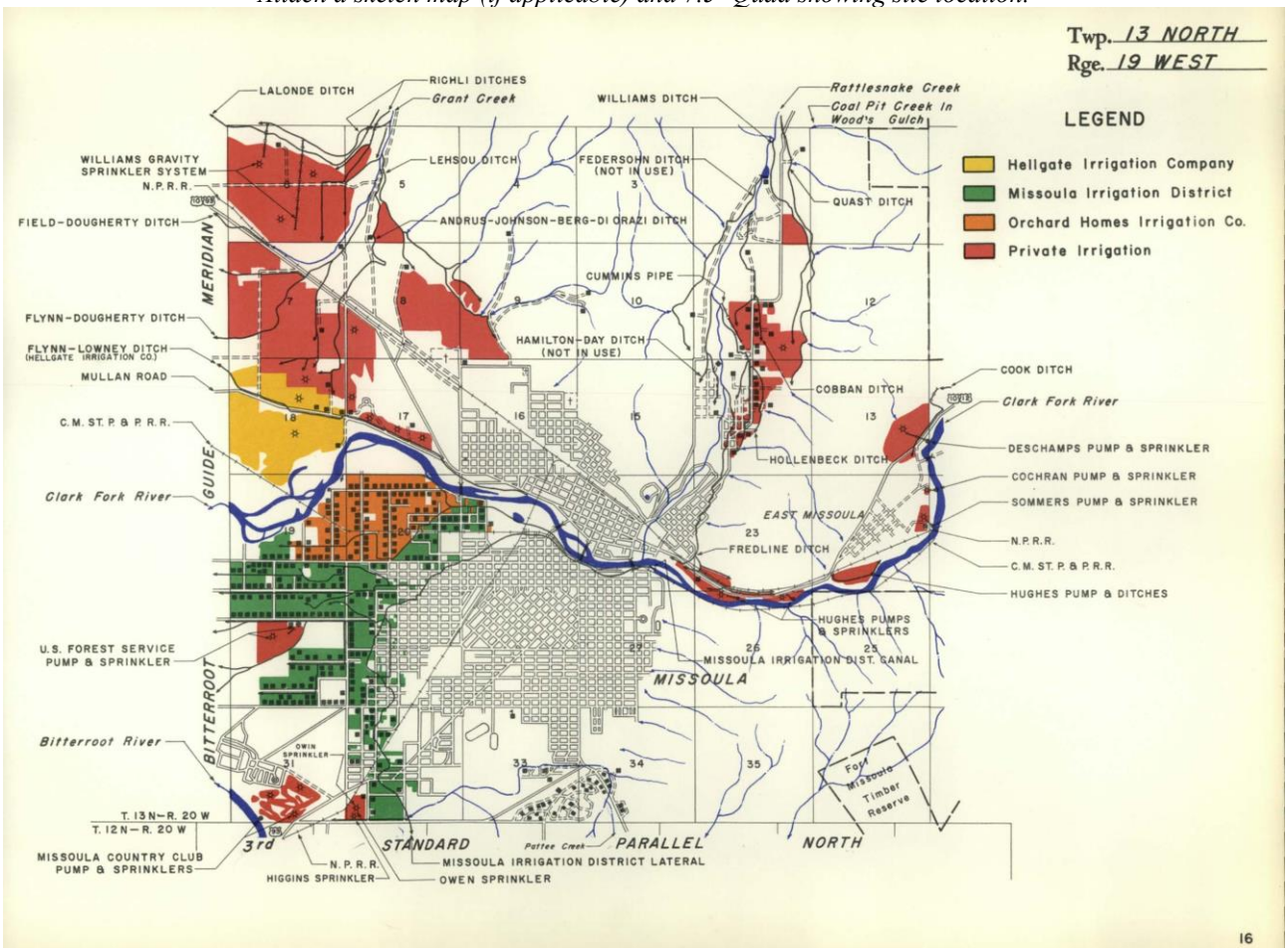
MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

Abandoned headgate structure on the Flynn-Dougherty Ditch (24MO0901) at the Dougherty Ranch, view to the south.

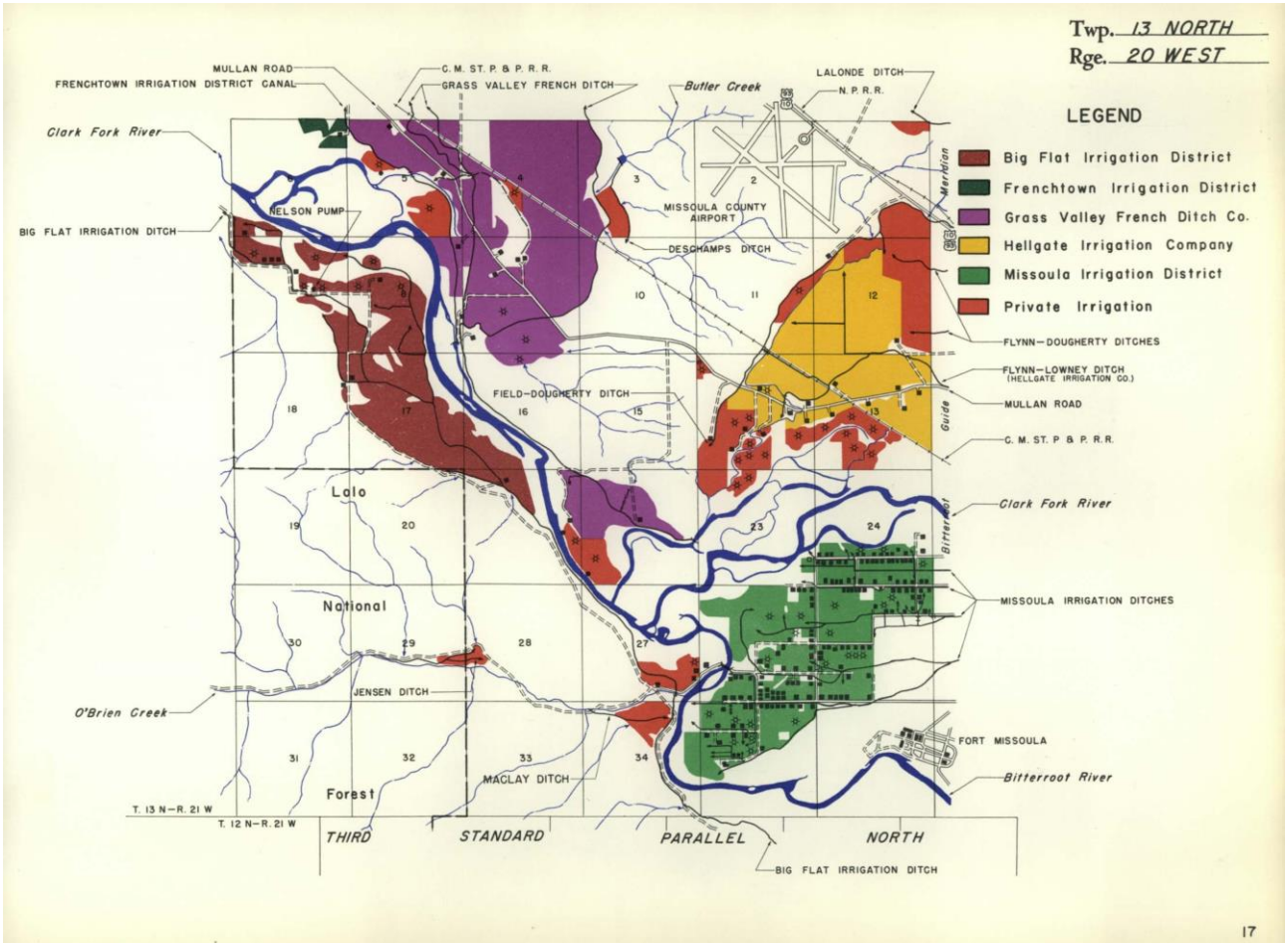
MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

MAPS

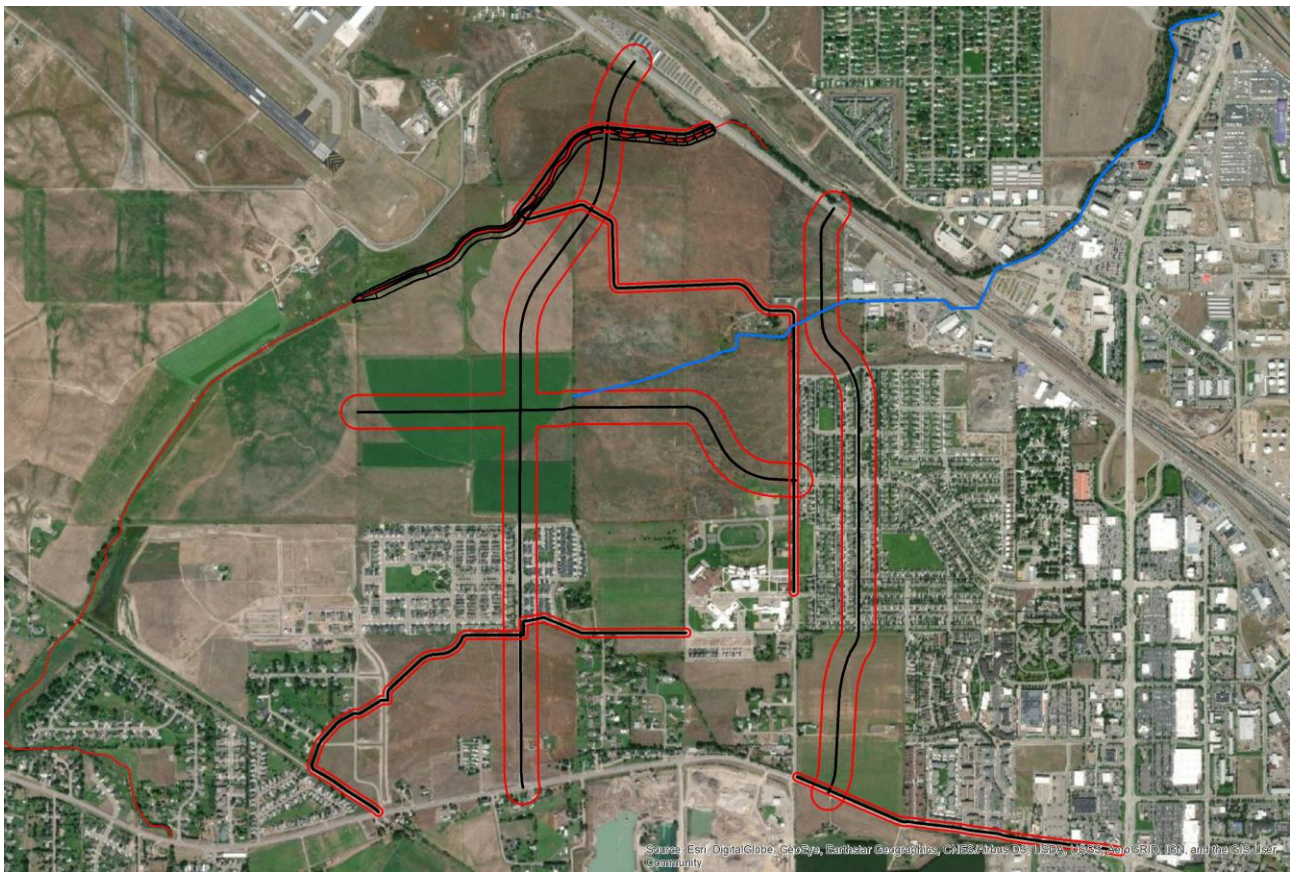
Attach a sketch map (if applicable) and 7.5' Quad showing site location.



MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

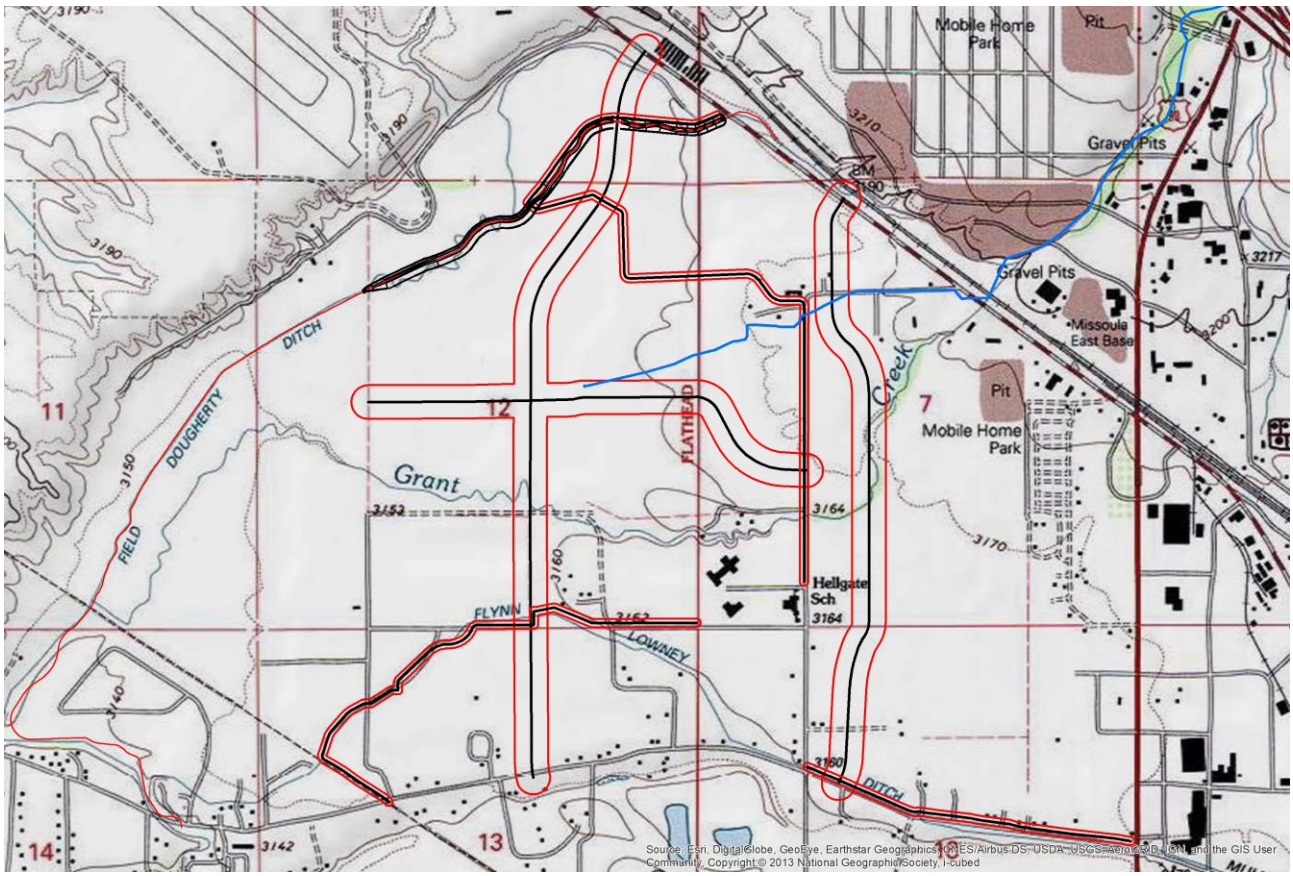


MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM



Extant route of the Flynn Dougherty Ditch (in blue).

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM



Northwest Missoula, USGS 7.5 Minute 2020.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

1. IDENTIFICATION

1.1 Smithsonian Number: 24MO0902 **1.2 Field Designation:** Field Dougherty Ditch

1.3 Project Name: Mullan BUILD

1.4 Agency Project Number: **1.5 Consultant Project Number:** 032

2. LOCATION

2.1 Township/Range: T13 N, R20 W, Section 1**;** ¼ **Section(s):** SE **2.2 County:** Missoula

2.3 UTM Coordinates: Zone 11 E 723885m; N 5199234m, Additional UTM's **Datum used:** ☒NAD 83 conus

2.4 Administrative/Surface Ownership: Private

2.5 7.5' USGS Map Name, Date: Northwest Missoula, MT 2017

2.6 Narrative of access: The site is located just south, 300 ft from the intsection of Whipporwill Drive and West Broadway, Missoula.

2.7 Vicinity of (city/town): Missoula

3. DESCRIPTION

3.1 Site Type: Historic Irrigation

3.2 Site Time Period (use dropdowns)**:** **Prehistoric:** **Historic:** 1900-1909

Paleontological: **Combination:** ☐ **Unknown:** ☐

3.3 Narrative Description of Site: The site consists of the Field Dougherty Irrigation Ditch.

3.4 Site Dimensions: 5.8 miles long, 10-20 feet wide, 3-8 feet deep. **Surface visibility:** 100%

3.5 Feature Descriptions: N/A

3.6 Artifacts: (✔ all that apply) ☐Chipped Stone ☐Wood ☐Ground Stone ☐Ceramics ☐Bone ☐Trade ☐Other

Description:

3.7 Diagnostic Artifacts: N/A

3.8 Subsurface Testing: N/A

3.9 Site function/interpretation: Historic Irrigation

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

4: ENVIRONMENTAL SETTING

4.1 Geographic Setting: The ferries water from a diverson point on Grant Creek to the north.The general topography varies from a level land surface at the east end of the area to a dissected area of low rolling hills at the west end of the corridor. The area is currently being subdivided for residential, commercial and recreational development, including housing subdivisions, trailer courts, convenience stores, storage areas, and a new golf course. Some open agricultural lands remain, central to the project area, and include cultivated and irrigated cropland and livestock pasture.

4.2 Contour: ☒ Known ☐ Approximate ☐ Unknown **4.3 Elevation:** 3170 ft

4.4 View/Aspect: North-south trending

4.5 Sediments: Desmet Loam

Deposition: ☐ Surface Only ☐ Buried Only ☐ Surface and Buried ☐ Redeposited ☐ Other

4.6 Available Water Source: Stream/River/Creek

4.7 Major River Drainage: Clark Fork River

4.8 Minor Drainage: Grant Creek, on site

4.9 Local Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

Regional Vegetation: Other (Farmland, Cultivated)

Sandberg bluegrass, Canada bluegrass, prairie June grass, and rough fescue, cheat grass, spotted knapweed, timothy, aflalfa

5. ASSESSMENT, RECORDING & MANAGEMENT

5.1 Significance: The Field Dougherty ditch was first recorded in 2003 during work for the Mullan Road Sewer project (Beery 2003) and updated in 2005 (Herbel and Beery 2006) as part of the Grant Creek Corridor Environmental Restoration and Flood Control Project. As a result of post 1960s realignments and the aforementioned Grant Creek restoration project, the ditch is essentially the path of Grant Creek and no longer serves as an irrigation resource but rather as the creek itself. The waterway is approximately 10-20 feet (ft) wide and 3-8 ft in depth. The resource in considered to be not eligible for inclusion the NRHP.

5.2 Condition/Integrity: The site has been previously recommended as not eligible for inclusion the NRHP (Beery 2003, Herbel and Beery 2006). In regard to the proposed Project situated on the northern branch of the resource, aspects of integrity (location and setting) remain while others (feeling, workmanship, association, materials, and design) are lost.

5.3 Possible impacts to site: Development

5.4 Evaluation: Does this property meet National Register criteria for eligibility? ☐ **Yes** ☒ **No** ☐ **Unevaluated**

Evaluation Procedures/Justification: The site has been previously recommended as not eligible for inclusion in the NRHP (Beery 2003; Herbel and Beery 2006) with concurrence by the Montana SHPO. RBAS agrees with the previous determinations for this recourse as being not eligible for inclusion in the NRHP. No further work is recommended in regard to this resource. .

5.5 Recording status: ☒ surface examination ☒ photo ☒ map ☐ subsurface tested

5.6 Recommendations (use dropdown)**:** No Recommendation

Comments:

5.7 Site Located by: Derek Beery - HRA **Date Located:** March 1, 2003

5.8 Site Recorded by: Derek Beery - HRA **Date Recorded:** March 1, 2003

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

5.9 Site form update and revisions by: Brian Herbel, Rabbitbrush Archaeologcial Services, LLC **Date Updated:** June 15, 2020

5.10 Federal/State Permit No:

5.11 Publication(s)/Report(s) where site is described: Cultural Resource Inventory for the Proposed Mullan BUILD Project, Missoula County, Montana.

5.12 Artifact Repository: N/A

5.13 Field notes/maps/photos repository: Rabbitbrush Archaeological Services, 300B Main St Suite 201, Stevensville, MT 59870

6. DESCRIPTION OF HISTORIC SITES

6.1 Property boundaries:

5.8 miles **: estimated** **: measured**

Boundary justification: extent of the main channel of the Field Dougherty Ditch/Grant Creek.

6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance: 5.8 miles long, 10-20 feet wide, 3-8 feet deep.

6.3 Artifacts observed, collected: N/A

6.4 Subsurface Testing Methods and Results: N/A

6.5 Historical Information and Context (footnote sources):

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

6.6 Sources, files, people consulted:

Beery, Derek
2003 Cultural Resource Inventory of the Area of Potential Effect Associated with the Proposed Missoula County Mullan Road Sewer Project (RSID No. 8474). Report Prepared for HDR, Inc. by Historical Research Associates, Inc., Missoula, MT.

Herbel, Brian and Derek Beery
2006 Class III Cultural Resources Survey for Section 595 Floodway Improvements along the Grant Creek Corridor, Missoula County, Montana. Report Prepared for HDR, Inc. by Historical Research Associates, Inc., Missoula, MT.

State Engineers Office
1960 Water Resources Survey: Missoula County, Montana. State Engineers Office, Helena, Montana.

7. ADDITIONAL INFORMATION

Legal locations: T13N, R19W SW Section 6, T13N R20W SE Section 1, NW Section 12, SE Section 11, NE Section 14
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MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

The Field Dougherty Ditch (24MO0902)/Grant Creek near the proposed intersection of George Elmer Dr. (north segment) and West Broadway. View to the south.

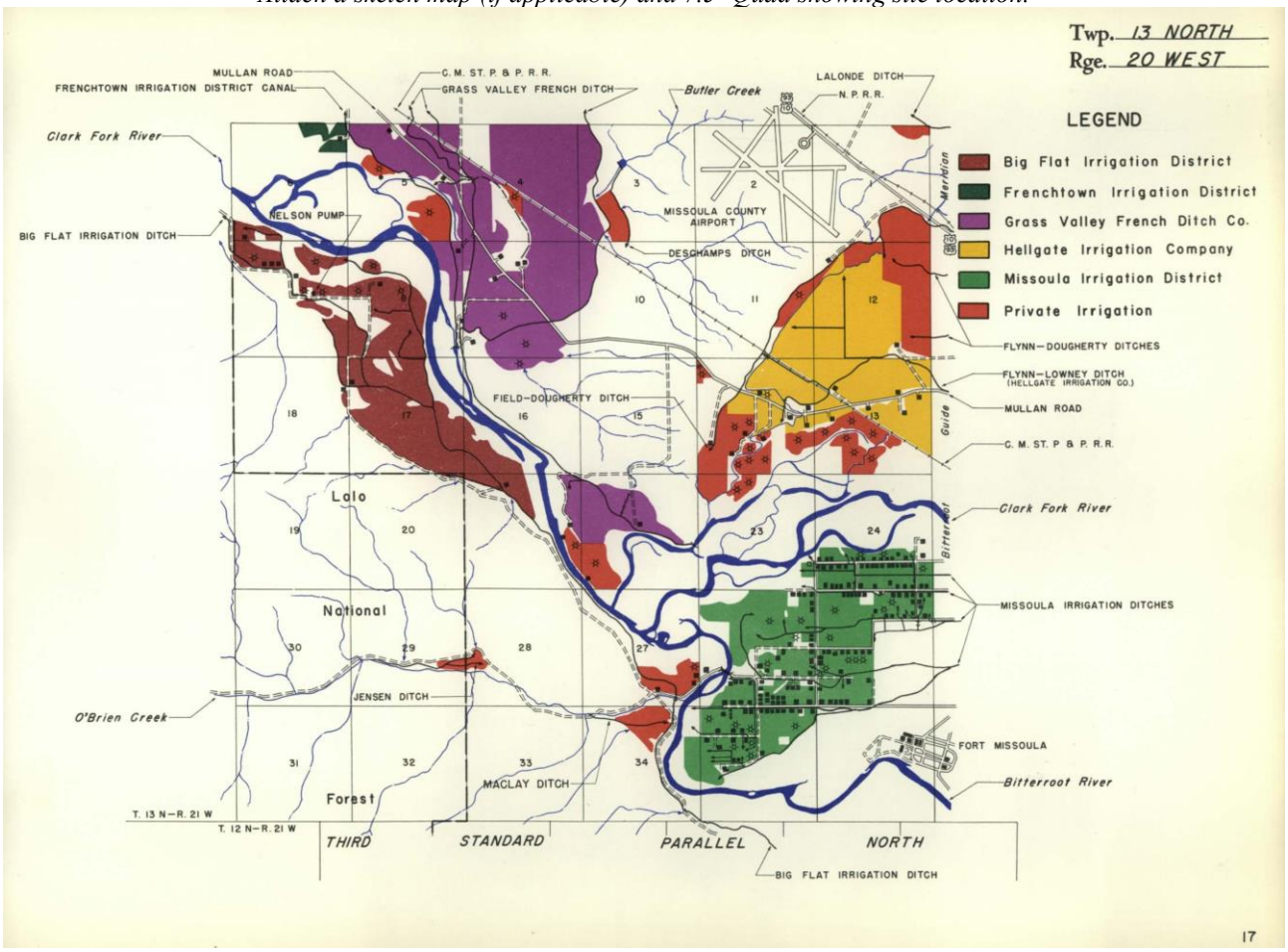
MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

The Field Dougherty Ditch (24MO0902)/Grant Creek. Plank bridge originally recorded by Herbel and Beery (2006:20). View to the south.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

MAPS

Attach a sketch map (if applicable) and 7.5' Quad showing site location.



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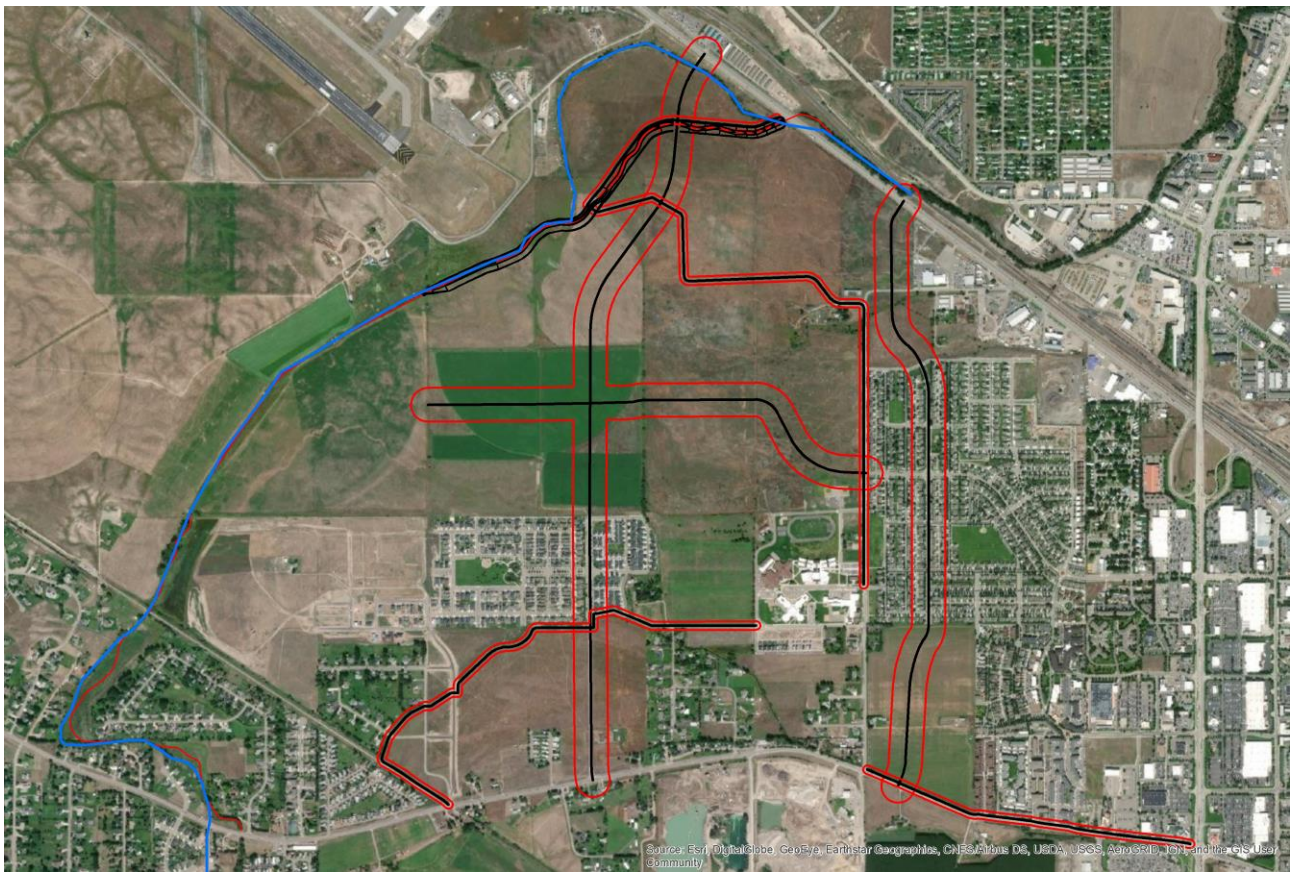
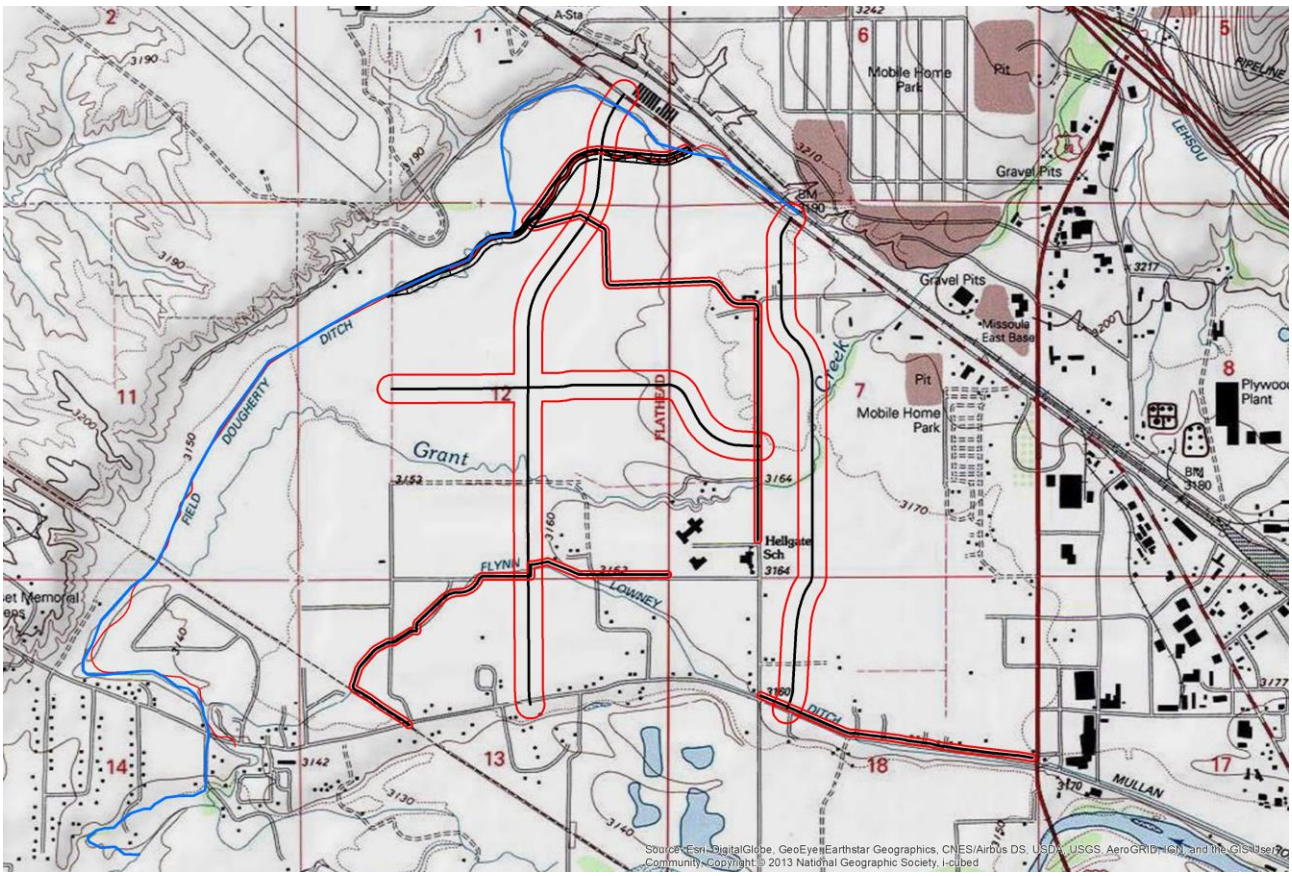


Extant route of the Field Dougherty Ditch (in blue).

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM



Northwest Missoula, USGS 7.5 Minute 2020.

MONTANA HISTORIC PROPERTY RECORD

For the Montana National Register of Historic Places Program and State Antiquities Database

Montana State Historic Preservation Office
Montana Historical Society
PO Box 201202, 1410 8th Ave
Helena, MT 59620-1202

Property Address: **3285 Flynn Lane** Historic Address (if applicable): City/Town: **Missoula, MT**	Site Number: **24MO1781** (An historic district number may also apply.) County: **Missoula**
Historic Name: **England Farmstead** Original Owner(s): **Abner England** Current Ownership ☒ Private ☐ Public Current Property Name: **Dougherty Ranch** Owner(s): **James D Dougherty Familly LLC** Owner Address: Phone:	Legal Location PM: **Montana** Township: **13N** Range: **19W** **SE** ¼ **NW** ¼ **NW** ¼ of Section: **07** Lot(s): Block(s): Addition: Year of Addition: USGS Quad Name: **Northwest Missoula, MT** Year: **2017**
Historic Use: Farm Current Use: **Farm** Construction Date: ☐ Estimated ☐ Actual ☒ Original Location ☐ Moved Date Moved:	UTM Reference www.nris.mt.gov ☐ NAD 27 or ☒ NAD 83(**preferred**) Zone: **11** Easting: **724170** Northing: **5198535**
National Register of Historic Places NRHP Listing Date: Historic District: NRHP Eligible: ☒ Yes ☐ No	Date of this document: **7/1/2020** Form Prepared by: **Rabbitbrush Archaeological Services LLC** Address: **300B Main St., Suite 201, Stevensville, MT 59870** Daytime Phone: **406-625 2727**
MT SHPO USE ONLY Eligible for NRHP: □ yes □ no Criteria: □ A □ B □ C □ D Date: Evaluator:	Comments:

ARCHITECTURAL DESCRIPTION

Architectural Style: **Other:** If Other, specify: **Italian Rennissance Revival**
Property Type: **Agriculture** Specific Property Type: **Farm/Ranch**

Architect: **Unknown** Architectural Firm/City/State: **Unknown**
Builder/Contractor: **Unknown** Company/City/State: **Unknown**
Source of Information:

Property Name: **England Farmstead** Site Number: **24MO1781**

HISTORY OF PROPERTY

Abner G. England of Lawrence, Illinois held the original land patent for the W½ NW¼ of T13N, R19W, Sec 7 (as well as lands in NENE of Sec 12 and SESE of Sec 1 of T13N, R20W). His total acreage of 159.37 acres was issued under the State Grant-Agri College decree of July 2, 1862 to Mr. England/Illinois Industrial[1] University on May 2, 1871 (Accession Number AGS-0325-018: BLM 2020). England claimed Missoula as his residence beginning in 1870 and married Mary Fowler Cosens, of Palestine, Illinois, in 1875 following the birth of their children daughter Ella Missoula England and Orville Grier England[2]. England died in 1904 and in 1905 as part of the distribution of his estate, his lands were decreed to his widow Mary Fowler England (Missoula County Clerks and Recorders Office [MCCR] Deed Book [DB] 1:364). Mary England died on August 27, 1920 of severe burns[3] . Upon her death the property was passed to daughter Ella and her husband Charles Liberty Anderson of Missouri (MCCR DB 3:186). Charles and Ella had been married in December of 1910 and had three children Abner Anderson, Edna May Anderson, and Mary Jane Anderson. Ella passed away from pneumonia on May 2, 1930[4]. Charles Anderson, widower, decreed the entire lands to his daughter Mary Jane in January of 1938 (MCCR DB 123:273) prior to his death later that year in May. Mary Jane, now Mary Jane Dougherty having married Missoula native 18-year-old John William Dougherty in August of 1933. Dougherty Ranch was created by decree in 1939 (MCCR DB 170:260). John passed away in 1964 and Mary Jane continued as the family matriarch until her death of natural causes in 1999 where she was survived by an extensive family of grand children and great grandchildren. A deed of distribution was filed some years later in 2008 by her son James Dennis Dougherty (b. 1944 - d. 2009) for the 20.01 acres of the homesite. The parcel was further divided with MCCR Certificate of Survey 6071[5] reflecting the current legal location and acreage (15.74 ac.) of the homesite. Dougherty family members created the James D. Dougherty Family LLC and in 2016 are listed as current owners of the parcel (MCCR DB 959:270). In particular the entirety of the landownership has seen the land consistently in cultivation/ranching/farming in particular during the tenure of Mary Jane Dougherty.

[1] The University of Illinois began in 1867 as the Illinois Industrial University, a name with roots in the philosophy of higher education that led to the creation of land-grant universities.
[2] https://www.ancestry.com
[3] State of Montana, Bureau of Vital Statistics, Missoula County, Register No. 172
[4] Great Falls Tribune, May 3, 1930, Page 2 - Obituary
[5] https://gis.missoulacounty.us/Documents/COS/pdf/6071.pdf

INFORMATION SOURCES/BIBLIOGRAPHY

See above

Property Name: **England Farmstead** Site Number: **24MO1781**

NATIONAL REGISTER OF HISTORIC PLACES

NRHP Listing Date:
NRHP Eligibility: ☒ Yes ☐ No ☒ Individually ☐ Contributing to Historic District ☐ Noncontributing to Historic District
NRHP Criteria: ☒ A ☐ B ☐ C ☒ D
Area of Significance: **Agriculture** Period of Significance: **1888-1939**

STATEMENT OF SIGNIFICANCE

The Dougherty Ranch is recommended as eligible for inclusion in the NRHP. The site possesses a good degree of integrity and represents a functional ranch property that was distinctive of Missoula's early development. Also, the site has changed hands little over time with a direct family line maintained to the land grant decreed to Abner England in 1871. The site has changed little over time, save modern development to the east of the property. The Dougherty Ranch holdings are largely intact, though some future development is planned. The homesite similarly has seen little modern addition with the majority of the buildings in fair to good condition showcasing the plan of a ranch property. The barn, the house, and icehouse in particular in good condition and are rare in Missoula County. Nearby to the south, the National Register Listed Flynn Ranch (24MO0249) is contemporaneous.

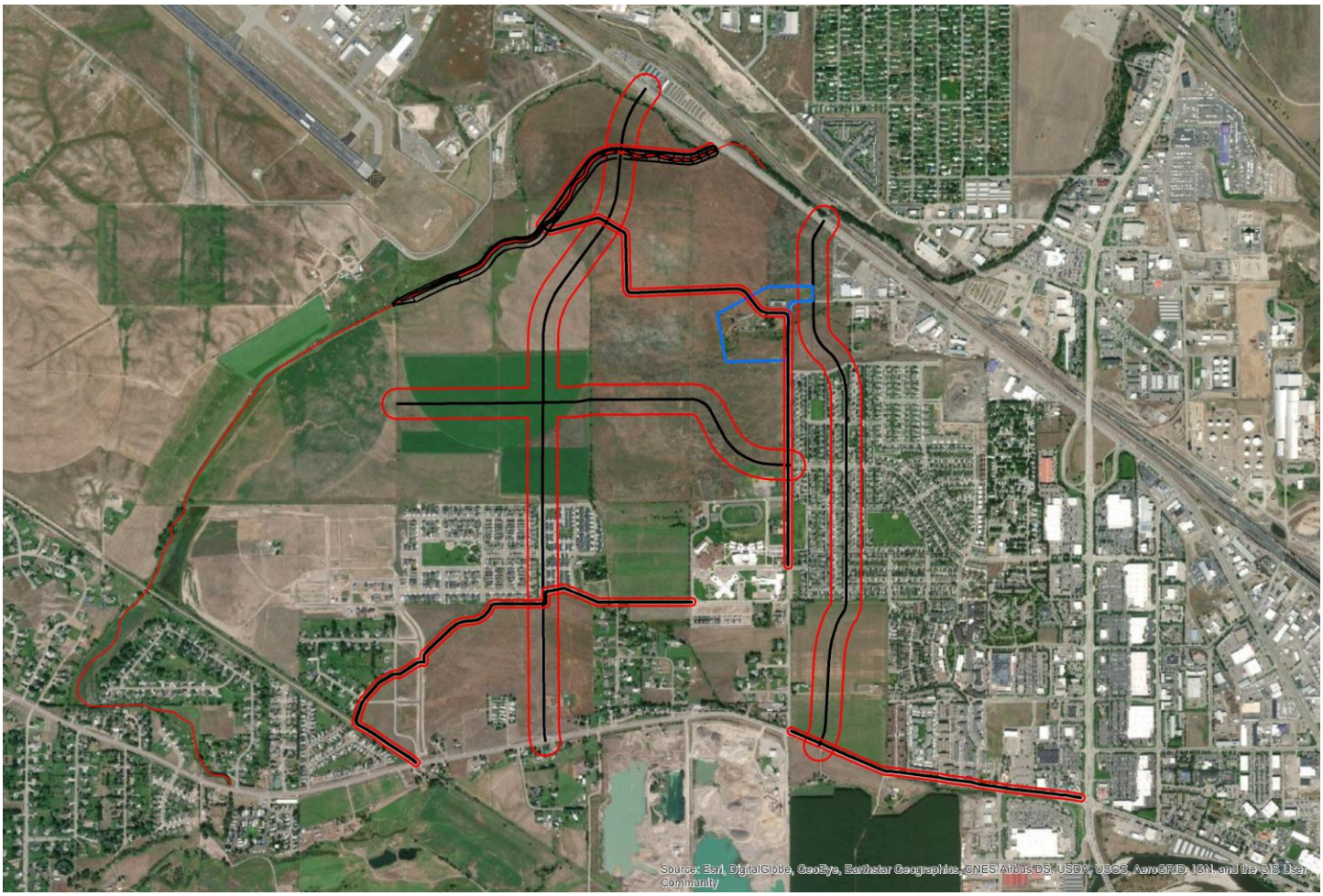
The property is currently for sale. Currently, the proposed Flynn Lane Trail begins on the west side of Flynn Lane, north of Camden Street and terminates at the existing shared use path near Hellgate Elementary School. The proposed trail is within existing right-of-way and therefore No Adverse Effect to Site 24MO1781 would be present. RBAS recommends that any future extension of the Flynn Lane Trail path (as inventoried) avoid bisecting a portion of ranch and skirt the property to the north along the property line behind the barn.

Property Name: **England Farmstead** Site Number: **24MO1781**

INTEGRITY (location, design, setting, materials, workmanship, feeling, association)

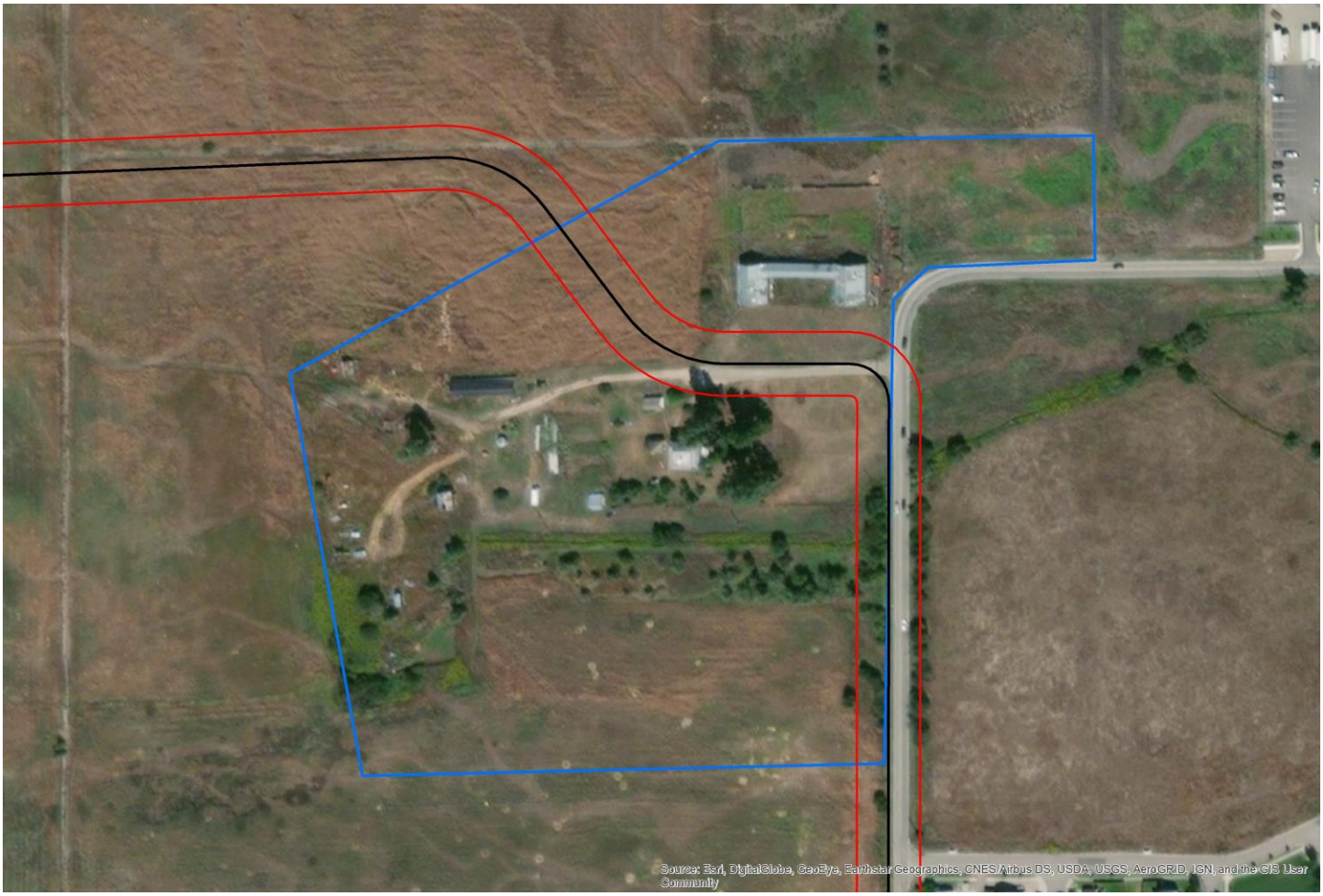
The site retains all aspects of integrity. Some buildings are dilapidated or torn down, but the majority of the property is intact. The aspect setting is beginning to be compromised by modern development surrounding the property, but active agricultural practices to the west on the property continue.

Property Name: **England Farmstead** Site Number: **24MO1781**



Overview map of the location of the Dougherty Ranch as it relates to the Mullan Build APE.

Property Name: **England Farmstead** Site Number: **24MO1781**



Overview map of the location of the Dougherty Ranch in relation to the proposed Flynn Lane Trail.

Site map of the location of the Dougherty Ranch.

Barn: The barn is a circa 1920[6] front facing compound U-plan style stock barn. It is one and a half stories, with a low-pitch single-end-view gable per roof line in the plan. The barn is oriented with its front to the south with each wing having front gables and the median span having a cross gable. Roofing materials consist of corrugated tin sheets covering decomposing asphalt shingles. The barn sits on an uncut stone and mortar foundation, likely from stones that would have been available on site or locally. Each wing measures approximately 60 by 40 ft with the central span running approximately 125 by 20 ft. The Montana Cadastral Property Record Card lists each wing at 2436 square feet (sq ft) and the center span a 3080 sq ft for a total of 7952 sq ft of a standard barn(s) that constitutes building improvements 4-6.

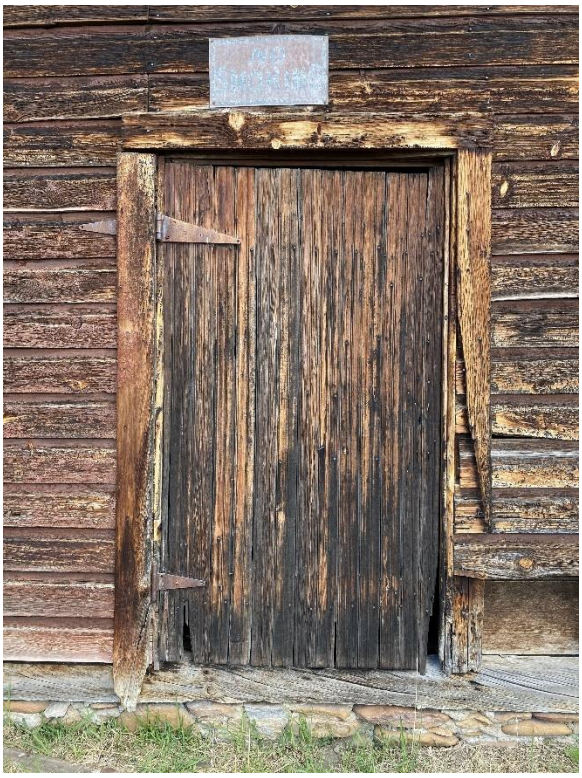
[6] http://svc.mt.gov/msl/mtcadastral

Property Name: **England Farmstead** Site Number: **24MO1781**

Photograph of the barn, view to the north.

Windows are almost entirely two-over-two, four-light windows with wood casements, wood reveals, and wood sills. The west elevation of the east wing has six such windows evenly spaced with a 6 ft square opening to the upper hay loft. The center span, south elevation has twelve such windows, four in an upper row, with the remaining an even spacing below. This elevation also has 3 points of entry, vertical plank wooden doors with wood casements. The east elevation of the west wing is identical the east wing with the exception of one additional window, a horizontal three-over-three six-light window with the same casement, reveal, and sill.

Property Name: **England Farmstead** Site Number: **24MO1781**



Photograph of representative door on the north elevation, showing door type, casement, and the uncut stone foundation.

Photograph of the southwest corner of the east wing, view to the northeast.

Property Name: **England Farmstead** Site Number: **24MO1781**

Photograph of the southeast corner of the west wing, view to the northwest.

The south elevation of the wings both possess a series of three 6 ft square sliding doors as egress to the upper loft and two primary entry doors that are identical to those found on the south elevation of the center span. The east wing has a larger central opening for vehicle access while the west wing has a smaller 8 ft square slider door.

The west elevation of the west wing has twelve of the two-over-two, four-light windows, two three-over-three six-light windows with wood casements, wood reveals, and wood sills, a primary entry door, as well as an upper loft entry. The east elevation of the east wing is the least occupied by design features and possess six two-over-two, four-light windows only.

The north elevation is the largest linear span with seven 6ft slider doors (likely for ventilation), and two large 12 ft hay trolly load-in openings at the gable of each wing.

Photograph of the southeast corner of the west wing, view to the northwest.

The interior was not able to be closely examined, but what could be ascertained is that the central span is a series of equidistant stalls. The upper loft portions of each wing are clearly designed for hay storage. There appears to be a tack room and a foaling pen in the east elevation while the lower portion of the west elevation is a series of pens with a large central pathway occupied by a two-axle light duty, horse-drawn farm wagon.

House/Primary Dwelling: The primary residence is a two-story brick home. Each floor is 1581 square ft. The plan is considered to be simple with irregularities. The roof line is a two-unit, normal-pitch hipped roof with composite shingles. There are wide-eve overhangs with rectangular brackets. The foundation is irregular-course cut stone and the brick pattern is English with seven rows of stretchers per header row.

There are four brick chimneys present each with a corbelled cap and a projected masonry band below each corbel. Chimneys are located near the northwest, northeast, and southeast corners, with a small chimney located on the south slope.

The east elevation has a full width one-story 403 square ft covered porch with a large cornice, simple squared decorative columns, two of which, at each corner appear to have been replaced. A smaller 54 square ft covered porch is present at the west elevation. In addition to the east elevation primary entry, there is a smaller "mud room" entry on the west elevation that connects to the garage with a concrete pathway. A covered entry is also present no the north elevation with a two-light transom and pediment, identical to the east elevation entry with the exception of the east elevation having single pane side-lights.

Windows are almost entirely single-hung one-over one windows with an arched (extended segmental) top and a decorative brick pediment with a wood sill and reveal. The upper story has four equally spaced windows on both the east and west elevations with the north and south elevations have just three. There are basement windows (two each on the north and south elevation, one on the west elevation) that are a simpler three-over-three six-light window with a wood lintel. The irregular plan north elevation has one fixed three-pane window with a brick sill. This window stands out as temporally different indicating that this was a remodel or addition as a portion of the brick pattern is

also interrupted here.

Southeast corner of the house showing the south and west elevations.

Northeast corner of the house showing the north and west elevations.

Southwest corner of the house showing the south and east elevations.

Northwest corner of the house showing the north and east elevations.

Icehouse: The icehouse a 324 square ft (18 by 18 ft), one-unit simple plan building with a normal pitch pyramidal roof line and plain wood shingles. There is a single two-panel entry door on the east elevation closest to the house. The door has a deep casement and a brick piedmont identical to the house. It also has an identical wide-eve with brackets as the house. The foundation is irregular-course cut stone and the brick pattern is English with seven rows of stretchers per header row. The west elevation is obscured by a lilac though has a single wood frame, fixed window

with brick pediment. This buildings construction was likely contemporaneous with the house given array of matching features.

Southeast corner of the icehouse showing the south and east elevations.

Northeast corner of the icehouse showing the north and east elevations.

Garage: The garage is ca. 1920, 450 square ft, detached three-bay garage that opens to the north with standard hinged plank doors. It is side-gabled, medium pitch, with a basketball hoop on the west elevation. Shingles are plain wood

shake shingles and there is a standard door opening on the south elevation with a poured cement path that leads to the house. There is a single three-over-three six-light window on the south elevation just west of the door.

Northwest corner of the garage showing the north and west elevations.

Equipment Shed: This six-bay equipment shed is ca. 1930 and approximately 2500 square ft (100 by 25 ft). The westernmost four bays are open while the easternmost three have hinged plank doors. The east elevation has single three-panel man door and a three-over-three six-light windows. The saltbox style building is side-gabled, normal pitch with eves, with composite shingles. The west elevation has no features, while the north elevation has one small wood casement fixed three-light window with a wood sill. The interior is home to tractor parts, tires, oil drums, implements for hay production, and a 1949 International Harvester flatbed truck that does not appear to be in working order.

Southwest corner of the equipment shed showing the south and west elevations.

Cabin: The cabin is a steep-pitched side-gable cabin with seven courses of diamond-notched logs. It has 391 square ft (17 by 21 ft) and a door in the west elevation. No windows are present. Corrugated tin roofing covers and older layer of simple rectangular shingles. It is not clear what the function of this cabin is. It is possible that this was a dwelling occupied by the England family prior to the construction of the main house.

Southwest corner of the cabin showing the south and west elevations.

Feature 1: Feature 1 is the remains of 19 by 13 ft, six-course high log building. The logs are milled and dovetail notched. It is likely that this structure would have been contemporaneous to the cabin located nearby and was likely a small barn.

Overview of Feature 1, view to the south

Feature 2: Feature 2 is a 20 by 30 ft cement foundation with miscellaneous building debris within. Earlier air photos (ca. 2016) of the site show a building present here that has since been torn down.

Overview of Feature 2, view to the north

Grain Bin: The grain bin is galvanized steel, 14 ft in diameter and 8ft in height. The door is stamped with "BUTLER MFG COMPANY". The capacity of this bin would have been approximately 985 bushels of grain[7].

Grain bin, view to the west

Coop/Greenhouse: This building is a 462 square ft saltbox style building with a side gable and corrugated tin roofing covering aged composited shingles. The entire south elevation is comprised of three-over-three six-light, four-over-four twelve-light, and three-over-three twelve-light windows. There is a small 2.5 ft by 2 ft opening in each gable face and a

[7] 1 Bushel equals 8 dry gallons.

narrow 6 panel door on the east elevation. The interior has an array of gardening equipment and nesting boxes. Land to the north of this building is where a large garden had been present in the past.

Southeast corner of the coop showing the south and east elevations.

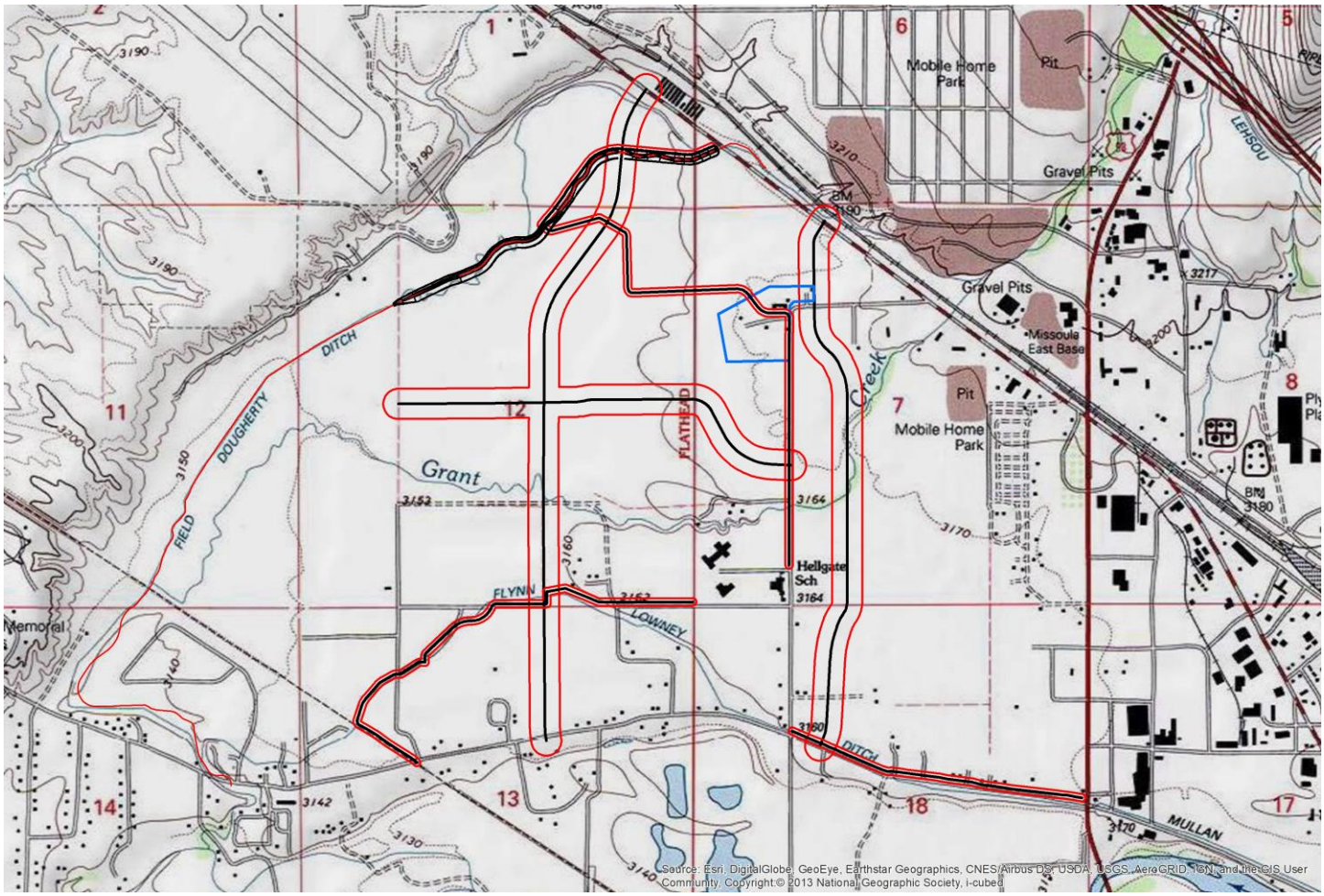
Outhouse: The outhouse opens to the south with a large eve, steep-pitch side-gable roof with wood plank shingles. The simple plan is 5 by 7 ft with shiplap siding. There is slope positioned chimney on the north slope of the gable.

Property Name: **England Farmstead** Site Number: **24MO1781**

Southeast corner of the equipment shed showing the south and east elevations.

See above

Property Name: **England Farmstead** Site Number: **24MO1781**



Northwest Missoula, USGS 7.5 Minute 2020.