CITY OF EAST HELENA WASTEWATER COLLECTION SYSTEM MASTER PLAN UPDATE

MARCH 2024

Prepared For:
THE CITY OF EAST HELENA

Prepared By:
ROBERT PECCIA & ASSOCIATES
WWW.RPA-HLN.COM

City of East Helena
Wastewater Collection System Master Plan Update

FINAL

Prepared For: **City of East Helena, Montana**

MARCH 2024

Prepared by

Trevor Larson, E.I.
Engineering Designer/Construction Technician

Checked by

Brad Koenig, P.E.
Group Manager

ROBERT PECCIA & ASSOCIATES

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I. PURPOSE OF MASTER PLAN UPDATE

The City of East Helena completed a Wastewater Master Plan in 2020. A primary focus of this Master Plan was inflow and infiltration in the collection system and how it affected the wastewater treatment plant. The Master Plan was used to secure funding for several wastewater system improvements identified during that planning effort. However, the City of East Helena and its surrounding areas have experienced unprecedented and unforeseen growth in recent years since the Master Plan was completed. The Montana Environmental Trust Group (METG) also has large quantities of undeveloped land south of Highway 12 that has been sold to developers. This land was once owned by the American Smelting and Refining Company (ASARCO) but was annexed by the City after ASARCO went bankrupt.

This growth has necessitated this Master Plan Update. This Master Plan Update will focus on identifying the needs of the City's wastewater collection system as they correlate to the latest City Growth Model. The focus of this document is to identify needed infrastructure within the collection system to support the anticipated growth. A secondary goal is to identify known problems within the collection system and establish improvements to resolve these problems

II. EXISTING WASTEWATER COLLECTION SYSTEM

A. DESCRIPTION

The City of East Helena's wastewater collection system consists of gravity mains, force mains, manholes, and lift stations. The existing collection system is shown in its entirety in **Figure 2.1.** The gravity mains range in size from 8-inch to 21-inch and are a mix of both clay and PVC pipe. Currently, all wastewater generated by the City flows by gravity to a lift station located at the wastewater treatment plant (the WWTP Influent Pump Station). The force main from the Pele Park Trailer Park and the force main from the Red Fox Meadows Subdivision connect to the system downstream of the Influent Pump Station (IPS), but upstream of the Headworks at the WWTP. Two additional lift stations (one from the Highland Meadows subdivision and one from the Vigilante subdivision) have been constructed and connect to the 21-inch sewer main upstream of the Influent Pump Station. There are currently nine lift stations that convey wastewater to the collection system and WWTP. These lift stations are:

- Montana Avenue Lift Station
- East Clark Street Lift Station
- K & R Lift Station
- Lane Avenue Lift Station
- Bayard Street Lift Station
- Pele Park Lift Station
- East Helena High School Lift Station
- Highland Meadows Lift Station
- Vigilante Lift Station

B. RECENT PROJECTS

Since the completion of the 2020 Wastewater Master Plan, multiple projects and subdivision construction phases have been completed that either add flow to or improve the collection system. The projects and subdivision locations are shown in **Figure 2.2** and are described in the following subsections.

1. EAST HELENA HIGH SCHOOL

Construction of the East Helena High School was completed in 2020 after the Master Plan was written. The Master Plan estimated that attendance would be 600 students and each student would generate 25 gallons per day (gpd) of wastewater. The estimated flow from the High School is approximately 15,000 gpd to the wastewater system. All wastewater generated by the High School flows to the Highland Meadows Lift Station, where it is then pumped to the head of the WWTP.

2. RED FOX MEADOWS

Red Fox Meadows is a subdivision located off of Canyon Ferry Road and Lake Helena Drive, northeast of East Helena and outside of the East Helena City Limits. Prior to construction of this subdivision, the City agreed to take on wastewater generated by the

Vigilante Subdivision

Wastewater Treatment Facility

Pele Park Trailer Court

East Helena High School

Red Fox Meadows Subdivision

Highland Meadows Subdivision

East Clark Street Sewer and Water District

American Chemet

Applebee Ct
Canary Dr
Meadowlark Dr
Elk View Dr
Raghorn Dr
Lanning Road
West View Rd
Grand View Road
Elkview Dr
Shar Court
Eastview Rd
Trerise Road
Valley Dr
Plant Rd
Penol Lne
Bandera Dr
Fuente Lane
Cobre Dr
Prickly Pear Avenue
Tejon Road
Wildfire Rd
Lewis Street
Dudley
Dudley Street
Oak Avenue
Maple Avenue
E Lewis St
E Dudley St
E King St
Clinton Street
Groschell Street
Riggs Street
E Riggs St
Aster Street
Beechnut Street
E Main St
E Clark St
W Main St
Hulst Rd
Hwy 282
Montana Avenue
Rickard St
Eh Road
Tulip St
Giant View Dr
Gradestake Street
Flaxstem Street
Eastgate Dr
Haystack Dr
Buckboard Dr
Grove Dr
Daisy St
Buttercup Street
Kottas Ct
Cattle Dr
Prairie Nest Road
Prairie Nest Dr
Remington Dr
Boundary St
Casper Dr
Cody Dr
Colt Dr
Pike Dr
Pinkerton Dr
Winchester Dr
Stagecoach Dr
Sundance Dr
Laramie St
Ruger Lane
Shoshone Dr

Sanitary Sewer Manhole
East Clark Street Lift Station
East Helena High School Lift Station
Highland Meadows Lift Station
K & R Lift Station
Lane Avenue Lift Station
Montana Avenue Lift Station
Moontown Lift Station
Red Fox Meadows Lift Station
Vigilante Lift Station

Sewer Pipe Diameter
2 in
4 in
8 in
10 in
12 in
15 in
18 in
21 in
Force Main
External Forcemains
City of East Helena
Subdivisions Outside City Limits

N
0 600 1,200
Feet

RPA

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 2.1. Existing Wastewater Collection System

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Red Fox Meadows Subdivision

Vigilante Subdivision

East Helena High School

Highland Meadows Subdivision

Manlove Addition (Block 9)

Manlove Forcemain Casing Crossing

Pacific Street Reconstruction

Sanitary Sewer Manhole
Sanitary Sewer Pipe
External Forcemains

Lift Stations
Highland Meadows
Red Fox Meadows
Vigilante

Subdivisions
Highland Meadows Subdivision
Red Fox Meadows Subdivision
Vigilante Subdivision

Recent Projects
East Helena High School
Manlove Addition (Block 9)
Manlove Forcemain Crossing
Pacific Street Reconstruction

N

0 600 1,200
Feet

RPA

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 2.2. Recent Projects

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subdivision. At the time of this writing, Red Fox Meadows has connected 146 of the 234 EDUs allowed by the Interlocal Agreement that was established in 2018. The Interlocal Agreement is attached in **Appendix A.**

The Red Fox Meadows County Water and Sewer District was created as part of this agreement, and the City has reserved 55,000 gpd (average daily flow) at the treatment plant for the subdivision. Each unit in this subdivision pays the City's monthly rate for sewer service. This is a flat rate for both residential and commercial units based on estimated usage.

Although only 146 residents have gone through the wastewater connection process, the Red Fox Meadows subdivision is almost completely developed with only a handful of units left to be constructed.

The Red Fox Meadows collection system consists of 8-inch gravity mains, a lift station, and a 6-inch force main that conveys wastewater to the East Helena WWTP. The City does not own or maintain the Red Fox Meadows collection system, lift station, or force main.

3. HIGHLAND MEADOWS SUBDIVISION PHASES I, II, III

The Highland Meadows subdivision is located off of Valley Drive, southwest of the new high school. This property was formerly owned by the Montana Environmental Trust Group (METG) and was annexed into the City as part of this subdivision construction project.

Construction of Phase III of the Highland Meadows subdivision was substantially completed late in 2022. At the time of this writing, 40 of the 320 total Highland Meadows EDUs have connected to the wastewater system in the subdivision. As with Red Fox Meadows, although only 40 units have connected, contractors are continuing to build and sell homes within Phases I, II, and III of the Highland Meadows subdivision.

In 2022, Phase I was almost completely built out, and homes were being constructed in Phase II. Originally, this project was scheduled to have seven (7) phases; however, demand for lots and houses in this subdivision was so high that Phases III, IV, and V were combined into Phase III.

The Highland Meadows subdivision collection system consists of 8-inch gravity mains, a lift station, and a 6-inch force main that conveys wastewater to the treatment plant. Developers have also consolidated phases VI and VII into one phase (Phase IV).

4. VIGILANTE SUBDIVISION PHASES I, II, III

The Vigilante subdivision is located off of Plant Road, north of the wastewater treatment plant. This property was formerly owned by the METG and was also annexed into the City as part of this subdivision construction project.

Construction of Phase III, the final phase of the Vigilante Subdivision, was substantially completed late in 2022. At this time, the project has connected 35 of the 70 total Vigilante Subdivision EDUs. Phases I and II are almost fully built out, and construction of homes in Phase III begun in late 2022.

The Vigilante subdivision collection system consists of 8-inch gravity mains, a lift station, and a 4-inch force main that connects to the 21-inch gravity sewer upstream of the Influent Pump Station at the WWTP.

5. MANLOVE ADDITION (BLOCK 9)

The 7th Street extension in the Manlove area was constructed as part of a development project within the East Helena city limits. Water and gravity sewer mains were installed to provide service to an additional four lots, and 7th Street was fully paved.

6. PACIFIC STREET RECONSTRUCTION

A section of the collection system on Pacific Street from Helena Avenue to Thurman Avenue was replaced in the summer of 2022. The existing 8-inch clay tile gravity sewer main was replaced with 8-inch PVC. Two manholes were replaced, and one new manhole was installed. The 2020 Wastewater Master Plan identified Pacific Street as a location with significant inflow and infiltration (I&I) problems. The Master Plan called for cured-in-place pipe (CIPP) lining of Pacific Street, but this section was traditionally excavated and replaced as part of a larger project.

7. EAST HELENA CIPP LINING (2025 CONSTRUCTION)

The 2020 Wastewater Master Plan detailed sections of the collection system that needed to be open-dug or CIPP lined to reduce the amount of I&I into the wastewater collection system. These sections are shown in **Figure 2.3** and total approximately 5,800 linear feet of gravity main. Also, as part of this project, approximately 412 linear feet of gravity main will be excavated and replaced, and two manholes will be lined. The CIPP lining project will address all sections of gravity main with considerable I&I as identified in the 2020 Wastewater Master Plan. Construction of this project is assumed to begin in spring of 2025.

8. MANLOVE FORCE MAIN CROSSING

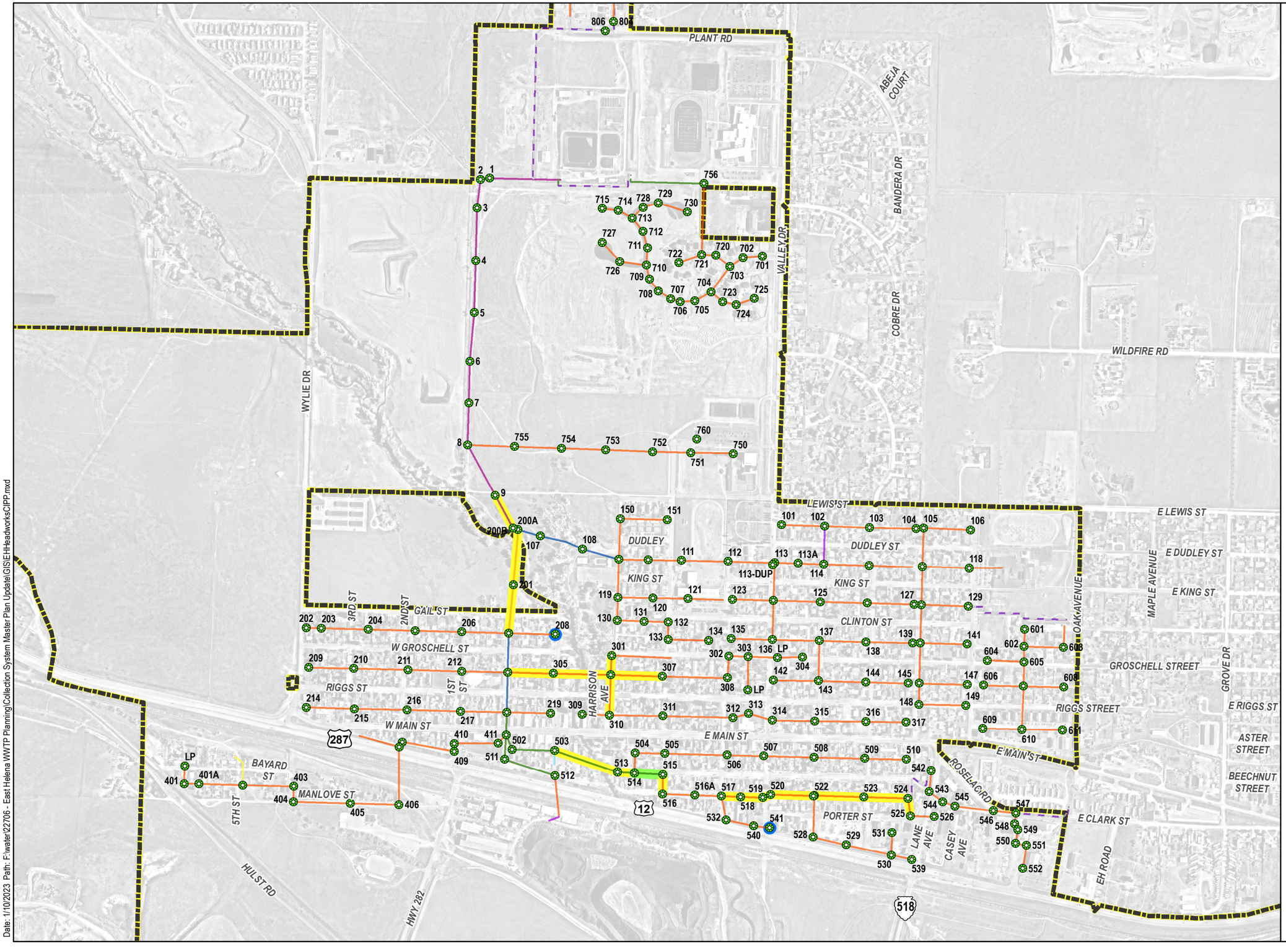
A new 36-inch steel casing was installed by way of jack and bore under Highway 12 and the railroad tracks as part of the East Helena Water Main Improvements – 2021 project. At the time of design for that project, it was not known that the Montana Environmental Trust Group (METG) had plans to sell and develop the parcels south of Highway 12 that were annexed to the City after ASARCO filed for bankruptcy. The project scope included installing a water main in the casing. The casing was originally oversized for the main reason of passing cobbles during the jack and bore installation.

During construction of this project, the METG released information regarding the development of the parcels south of Highway 12. This led the City to investigate the existing sewer crossings under Highway 12. There are two existing gravity crossings: one located east and one located west of Highway 282. The west crossing is an 8-inch gravity main owned by the City and extends from manhole #406 to manhole #407. The east crossing is an 8-inch sewer service for American Chemet, and records show the line is American Chemet's property.

Both crossings were TV inspected and found to be in critical condition. The City-owned crossing had multiple root intrusions and large amounts of corrosion and became impassable due to large objects in the pipe. This has not majorly affected the Manlove area residents due to the small flows these residents produce, but this line would easily become backed up as growth occurs.

While inspecting the American Chemet service line, it was determined that root intrusions are present and that the top of the clay pipe collapsed and is blocking the line. Similar to the Manlove Area, American Chemet produces small amounts of wastewater which are able to pass this blockage.

The City deemed it necessary to determine a solution for transporting wastewater under Highway 12 as soon as possible. After meetings, research, and discussion, the best solution was to request a deviation to install a 10-inch force main in the 36-inch casing installed as part of the East Helena Water Mains Improvements – 2021 project. This 10-inch force main would provide a means of conveying wastewater from the area south of Highway 12 to the north side. The deviation was approved in August of 2022, and installation of the HDPE force main was completed in 2023. The lift station and piping alignment are further described in **Section 4.A.**



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East Helena Wastewater Collection System Master Plan Update - 2023

Figure 2.3. East Helena CIPP Lining 2023 Project

C. SYSTEM DEFICIENCIES AND ONGOING PROBLEMS

The existing collection system has deficiencies and ongoing problems that need to be addressed. Some problems were explored in the 2020 Master Plan, some have been identified by the City of East Helena, and some have been identified in response to the new development plans south of Highway 12. These problems are identified as follows.

1. Manlove Sewer Main Crossing

As previously mentioned, the existing 8-inch sewer main crossing under Highway 12 services the portion of the City south of the highway referred to as the Manlove area. This sewer main serves as the single conveyance method for wastewater to connect to the City's collection system north of Highway 12. This main is aging and well past its service life, and TV inspection found the main to be in poor condition. There are large amounts of corrosion on the pipe walls, and as shown in the photo below, foreign objects made the line impassable for the City's camera. This line was likely installed before Highway 12 was constructed, and if this main is lost there is no way to convey wastewater from the Manlove area to the East Helena WWTP. As a result of these findings, the City opted to request a DEQ deviation to install a force main in the new casing under the railroad and Highway 12.

Corrosion and Debris in Manlove Sewer Crossing

2. American Chemet Sewer Service

A second sewer crossing under Highway 12 is owned by American Chemet. This 8-inch sewer service crosses from their property, under Highway 12, to manhole #512 on W Pacific Street. TV inspection of this service showed that it is severely damaged, and a section of the top of the pipe has completely caved in. The City could not TV this line in its entirety due to debris blocking the line.

Top of Pipe Missing in American Chemet Service Crossing

3. Montana Avenue Lift Station

The Montana Avenue Lift Station is the largest lift station operated by the City and is currently located in the middle of Montana Avenue/Valley Drive. This lift station was constructed in 2003 and is nearing the end of its service life. There are approximately 202 services connected to the lift station and the average daily flow is estimated to be 45,500 gpd. The design pumping rate for this lift station is 500 gpm.

According to City Operators, the Montana Avenue lift station has historically been prone to plugging which requires the pumps to be removed. The location of this lift station requires the operators to work in the middle of Montana Avenue/Valley Drive, often times during busy peak driving periods. This makes it difficult and unsafe for operators to access and maintain this lift station. Maintenance on this lift station also requires one lane of Montana Avenue to be closed, which can cause congestion and large traffic backups which increase safety risks. The lift station wet well is approximately 20 feet deep and cannot be fenced off from the public, which is also a safety concern. With the addition of the East Helena High School and the growth north of the City, traffic on Montana Avenue/Valley Drive has and will continue to increase dramatically over the next several years.

With the Montana Avenue lift station being located in the roadway, controls for the lift station are located on a rack in the road right-of-way. This lift station does not have a permanent generator and instead shares a portable trailer mounted generator with the City's water system. The City of East Helena design standards require all lift stations to have a permanent building for controls and an on-site generator. The Montana Avenue lift station does not adhere to these standards.

4. Manlove Area

Three houses on 6th Street in the Manlove area have sewer services that are lengthy and extremely shallow. City personnel have reported that these services are buried at depths of less than two feet. The services were installed at flat slopes and backup often, which requires frequent cleaning and maintenance. Backups can also lead to health hazards for residents affected by the problem.

The Bayard Street Lift Station (referenced as the Moontown Lift Station in the 2020 Wastewater Master Plan) is located north of Bayard Street in the Manlove Area, south of Highway 12. This lift station serves only two dwellings and does not meet the City or DEQ engineering standards for lift stations. The force main extends approximately 300 feet south on 5th Street, where it ties in to the existing 8-inch gravity main that runs in the alley between 5th Street and 4th Street. This lift station requires frequent maintenance due to clogs from debris in the force main. A third dwelling in this area is served by an unapproved septic system.

III. PROPOSED GROWTH AND FUTURE FLOWS

A. BACKGROUND

As of 2022, the City of East Helena had approximately 2,969 wastewater users. The number of people connected to the collection system, both inside and outside the city limits, are deemed to be wastewater users. Over the next 30 years, the number of wastewater users is estimated to increase to 16,719. **Table 1** below shows estimated growth for the City of East Helena's wastewater users. It should be noted that "wastewater users" is not equivalent to City population, as the wastewater system serves areas outside of East Helena city limits.

Table 1: City of East Helena Wastewater User Growth

Year	Wastewater Users	Average Yearly Wastewater User Increase
2022 – Current (Dec. of 2022)	2,969	-
2027 – 5 Year	6,801	18.0%
2037 – 15 Year	11,608	5.5%
2052 – 30 Year	16,719	2.5%

As stated above, the City annexed large parcels of property previously owned by ASARCO. Management of this land is conducted by the Montana Environmental Trust Group (METG). The METG and various developers have come forward with plans for purchase and development of these parcels. Plans include a significant amount of development on property south of Highway 12 in areas located both east and west of Prickly Pear Creek, as shown in **Figure 3.1.** This includes the Prickly Pear Estates subdivision on the 782 acres east of Highway 518. There are also 20 developable acres west of Highway 518.

There are also plans to develop 220 total acres on either side of Highway 282. According to developers, the majority of the space on the Highway 282 side will be used for residential development. Habitat for Humanity has proposed mixed housing for one of these parcels and purchased another parcel in 2023. The rest will be light industrial development by Power Townsend and American Chemet. The METG parcels south of Highway 12 will add approximately 3,722 EDUs to the City's service area.

B. GROWTH MODEL

When the City of East Helena received original plans for development of the METG parcels, they took on the task of determining the City's future service area and the wastewater flows these developments would create. The City created a growth model to calculate the future wastewater flows users would produce in the next 30 years. This growth model was produced through multiple meetings with the City of East Helena, the METG, and developers including Habitat for Humanity, American Chemet, Power Townsend, and the Oakland Group.

A detailed list of areas and growth predictions is included in **Table 1 in Appendix B.** "Existing Growth" includes any developments that are ongoing or developments that can reasonably be

expected within the next 5 years. "Proposed Growth" includes development that is expected to occur in the next 5-15 years. Finally, "Future Growth" includes development that is expected to occur in the next 15-30 years. Growth was further categorized as either residential or commercial within the planning periods to better estimate a realistic scenario for future wastewater discharge. This growth model was adopted in the summer of 2022. The estimated future service area for the City is shown in **Figure 3.2.** A summary of the model is shown in the **Flow Contributions** section below.

C. FUTURE FLOWS

Once population growth and land development areas were predicted, wastewater flow projections could be made. For residential use areas, the estimated number of Equivalent Dwelling Units (EDUs) were based on typical housing densities and planning meetings with developers and the City. Totals were then generated within each planning area. Based on data within the East Helena wastewater service boundary, it was assumed that there would be and average of 2.3 people per EDU, and each person would produce 100 gallons of wastewater flow per day. For commercial use areas, the acres of anticipated commercial development within each planning area were multiplied by a particular gallons/acre factor based on different types of commercial use. These gallons/acre values were determined by referencing *Table V-1: Wastewater Flow Rate for Zoned Undeveloped Areas* in the City of Bozeman's design standards. Having a daily flow from each planning area of residential and commercial growth allowed these daily flows to be totaled for each of the planning periods noted above.

D. FLOW CONTRIBUTIONS

As stated above, **Table 2** is a summary of the growth model and flow contributions that new developments and reasonably assumed existing areas will generate. Flows to the wastewater treatment plant over the next 30 years are expected to increase from 244,677 gallons per day (2022) to 1.62 million gallons per day (MGD). There are currently 1,291 EDUs contributing wastewater to the collection system and wastewater treatment plant.

Table 2: Flow Contributions from New Developments

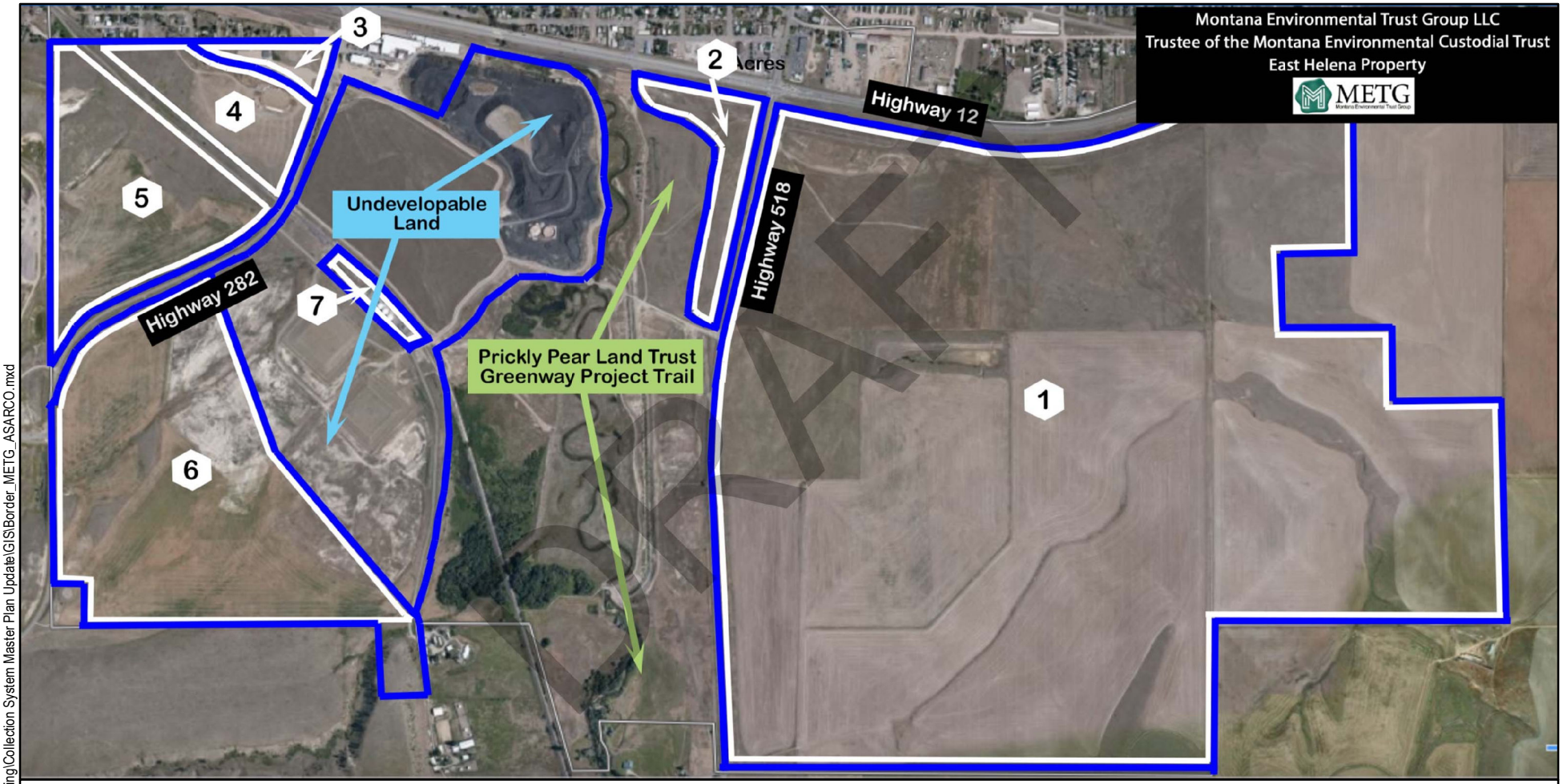
	Time Frame End Year	EDUs Developed in Time Frame	Flow Contribution (gpd)
Existing Growth	2027	1,666	382,170
Proposed Growth	2037	2,090	480,410
Future Growth	2052	2,222	510,850
	Totals	**5,978**	**1,373,430**

E. NEW DEVELOPMENTS

1. Proposed and Recent Developments

Since the growth model was developed and adopted, the METG and developers have provided updated plans and forecasts for the development of these parcels spanning the

next 30 years. **Figure 3.3** was received from the METG and details parcels and their current (2022) status. Other landowners have also reported plans for development including Highland Meadows, Town Pump, Vigilante West, and 4-plexes on Plant Road. The following is a summary of current plans as of December 2022.



Legend (as of July 2022)

1. METG 1 - Prickly Pear Estates
2. METG 2 - Sussex
3. METG 3 - American Chemet
4. METG 4 - Power Townsend
5. METG 5 - Habitat for Humanity
6. METG 6 - Potentially Saleable Land
7. METG 7 - Montana Propane

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 3.1.
ASARCO Property Annexed by City of East Helena
(Courtesy of METG)

RPA

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	Name	Map Label	Acres	Assumed Use
Existing (5 Years)	Vigilante Subdivision	1	20	Residential
	Highland Meadows	2	75	Residential
	Red Fox Meadows	3	160	Residential
	4-Plexes on Plant Road	4	5	Residential
	Town Pump Property	5	40	Commercial
	East Fields Mixed Use	METG 1	50	Residential
	Prickly Pear Creek Corridor Mixed Use	METG 2	12	Residential
			8	Commercial
	Light Industrial/Commercial (Manlove/Highway 282)	METG 3	7	Commercial
	Light Industrial/Commercial (Manlove/Highway 282 North)	METG 4	25	Commercial
	Residential/Commercial (Highway 282 North)	METG 5	16	Residential
			2	Commercial
	Light Industrial (Highway 282 South)	METG 6	55	Commercial
	Industrial (Davy Spur/Smelter Road)	METG 7	3	Commercial
	Vigilante West	8	20	Residential
	La Casa Grande Estates	9	105	Residential
Proposed (5-15 Years)	Mason Property	11	12	Residential
			5	Commercial
	Gorsich Property (outside floodplain)	12	14	Residential
	East Fields Mixed Use	METG 1	270	Residential
			80	Commercial
	Residential/Commercial (Highway 282 North)	METG 5	48	Residential
			4	Commercial
	Light Industrial (Highway 282 South)	METG 6	60	Commercial
Future (15-30 Years)	Seaver Park Addition	13	51.5	Residential
			8.5	Commercial
	Town Pump Remainder	10	60	Residential
			75	Commercial
	East Fields Mixed Use	METG 1	310	Residential
			30	Commercial

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Legend

- Sanitary Sewer Manhole

Lift Stations
- East Clark Street Lift Station
- Highland Meadows Lift Station
- K & R Lift Station
- Lane Avenue Lift Station
- Montana Avenue Lift Station
- Moontown Lift Station
- Red Fox Meadows Lift Station
- Vigilante Lift Station

Sewer Pipe Diameter
- 2 in
- 4 in
- 8 in
- 10 in
- 12 in
- 15 in
- 18 in
- 21 in
- Force Main
- External Forcemains
- City of East Helena
- East Clark Street Sewer and Water District
- Pele Park Trailer Court
- Helena City Limits

Subdivision Boundaries
- Existing Commercial
- Existing Residential
- Proposed Commercial
- Proposed Residential
- Future Commercial
- Future Residential

N

0 1,000 2,000

Feet

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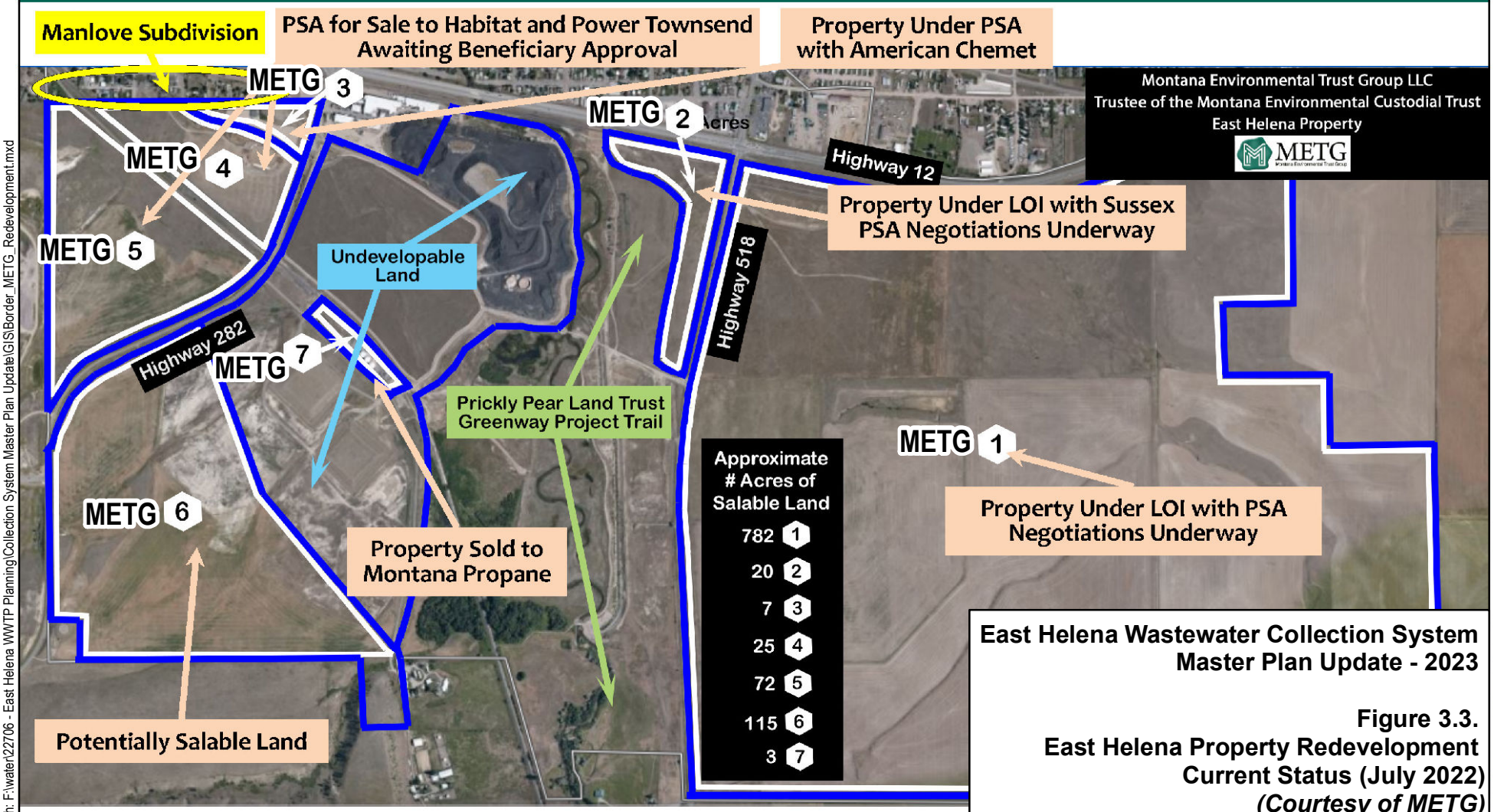
East Helena Wastewater Collection System Master Plan Update - 2023

Figure 3.2. Future Wastewater Service Area (Based on City Growth Model)

Attachment 1
East Helena Property Redevelopment



East Helena Wastewater Collection System Master Plan Update - 2023

Figure 3.3.
East Helena Property Redevelopment
Current Status (July 2022)
(Courtesy of METG)

Montana Environmental Trust Group, LLC
Trustee of the Montana Environmental Custodial Trust

RPA

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a) Highland Meadows Subdivision

The Highland Meadows Subdivision (2 in **Figure 3.2**) was originally slated to be a 7-phase project. With housing demand rising, the developers combined phases 3, 4, and 5 into one phase (Phase 3). Phase 4 construction is scheduled to start in 2023, and Phase 5 is slated for 2024. The completed subdivision will add approximately 320 EDUs to the collection system and WWTP.

b) METG 1 – Prickly Pear Estates

The 782-acre parcel south of Highway 12 and east of Highway 518 (METG 1 in **Figure 3.2**) is in the review stages of a purchase and sale agreement between the Oakland Group and the METG. The Oakland Group has until February of 2023 to complete the purchase of this land. Preliminarily, this area has been named the Prickly Pear Estates. Development of this parcel will add approximately 2,500 EDUs to the wastewater system over the next 20 to 25 years. Current plans include developing 630 acres of residential property, 110 acres of commercial property, and 42 acres of park area and other City-owned property, including the new rodeo grounds. According to the developers, the first 50 acres of residential development is slated to begin in 2025 and utilities will be installed by 2027.

c) METG 2

The 20-acre parcel west of Highway 518 (METG 2 on **Figure 3.2**) is planned to be developed into a mixed residential and commercial area. RPA and the City of East Helena met with Sussex Construction in early October, and the developer reported plans to begin design but was assessing possible sewer routes and ideas. The wastewater generated from this parcel could potentially flow to either one of the new lift stations south of Highway 12 (see Section **IV.A** and **IV.C**). The lift station this development connects to will likely be determined by the developer's schedule. Since October, discussions have been minimal and the schedule for development of this parcel is unknown.

d) METG 4 – Power Townsend

Power Townsend is waiting on final approval of the purchase of the 25-acre parcel west of Highway 282 (METG 4 in **Figure 3.2**). In a meeting conducted on November 28, 2022, Power Townsend reported plans to construct a warehouse type commercial building to produce prefabricated walls for construction and add a railroad spur at this location. Planning and design for this property will occur throughout 2023 with construction likely to begin in 2024.

Habitat for Humanity and Power Townsend also noted in the meeting that there is a potential for Habitat for Humanity to purchase four acres of this parcel and develop residential units on this property on the west end. An estimated 25 EDUs would be constructed on this parcel.

e) METG 5 – Habitat for Humanity

Habitat for Humanity is waiting on final approval of the purchase of the 72-acre parcel west of Highway 282 (METG 5 in **Figure 3.2**). In the same November 28 meeting, Habitat for Humanity reported plans for mixed residential development and approximately 260 EDUs. Preliminary plans for this development include single family housing, apartments, and 4-unit townhouses. Habitat for Humanity reported construction was planned for spring or summer of 2025, with houses beginning to be built in the fall of 2025. Preliminary plans for this parcel are shown in **Figure 3.4.**

f) Town Pump

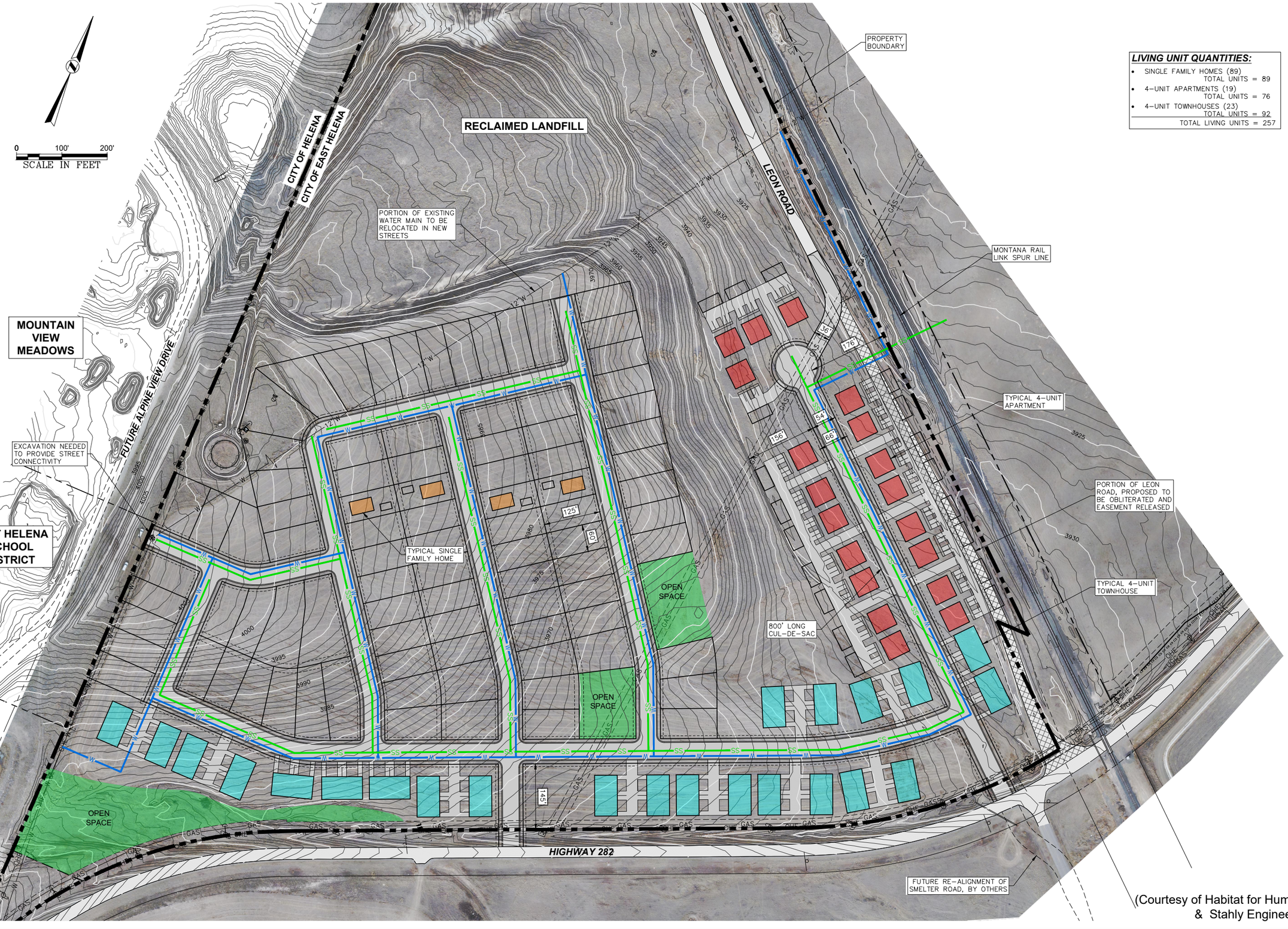
Town Pump owns the 40-acre property north of Highway 12 and on the west end of the City (5 on **Figure 3.2**). Town Pump has plans to build a new gas station and extended convenience store on this property. Town Pump also plans to install up to three RV dumps on this site, which may add concentrated wastewater to the collection system and treatment plant.

g) Vigilante West

The 20-acre parcel to the west of the new Vigilante Subdivision (8 on **Figure 3.2**), is currently under subdivision review with the City of East Helena. Once approved, the Vigilante West subdivision will begin design and construction, likely in the spring or summer of 2023. This subdivision is currently estimated to be 10 acres and will have 29 lots. This subdivision will be annexed into the City of East Helena and will have sewer service for residents that will flow to the East Helena WWTP.

h) Plant Road 4-Plexes

The City of East Helena has received multiple inquiries about developing 4-plexes on the north side of plant road. In December of 2022, RPA received a report from the developer with plans to construct 14 to 15 4-plexes north of plant road and east of the new Vigilante Subdivision. This development will add approximately 60 EDUs to the wastewater system.



LIVING UNIT QUANTITIES:

- SINGLE FAMILY HOMES (89) TOTAL UNITS = 89
- 4-UNIT APARTMENTS (19) TOTAL UNITS = 76
- 4-UNIT TOWNHOUSES (23) TOTAL UNITS = 92

TOTAL LIVING UNITS = 257

(Courtesy of Habitat for Humanity & Stahly Engineering)

Figure 3.4
CONCEPT DEVELOPMENT PLAN

STAHLY ENGINEERING & ASSOCIATES
PROFESSIONAL ENGINEERS & SURVEYORS
www.seaeng.com

2223 MONTANA AVE.
STE. 201
BILLINGS, MT 59101
Phone: (406)601-4055

3530 CENTENNIAL DR.
HELENA, MT 59601
Phone: (406)442-8594

851 BRIDGER DR. STE. 1
BOZEMAN, MT 59715
Phone: (406)522-9526

ISSUE/REVISION			
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HABITAT FOR HUMANITY
EAST HELENA, MONTANA

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IV. NEEDED INFRASTRUCTURE

A. MANLOVE LIFT STATION AND PIPING IMPROVEMENTS

After METG reported plans for development south of Highway 12, both the existing City main and the American Chemet service located below Highway 12 and the railroad tracks were TV inspected. This inspection revealed that both crossings were severely damaged and at the end of their useful life. Neither of these crossings are in casings and were likely installed before Highway 12. The City's crossing had multiple root intrusions, and an obstruction blocked the main and made it impassable for the camera. American Chemet's service crossing shows pieces of the top of the pipe have fallen in, and soil is visible in the crown of the pipe. Neither of these crossings are likely to endure much longer. Due to the blockages, there is no additional capacity in the City main, and the City will not allow any new connections. The City main also would not have the capacity to serve the developments as proposed. Sags and obstructions prevent slip lining the gravity crossings, and slip lining would not provide the needed capacity.

When the City found out about these damaged crossings, it was determined that installing a force main in the 36-inch steel casing that was being installed as part of the City water project would be the best solution to provide service south of Highway 12. A force main in the existing casing is far less expensive and provides more predictable results than boring and jacking a new casing for a gravity main. Large cobbles in the soil under Highway 12 greatly affected the grade and alignment of the existing steel casing. It was determined a new casing would likely not meet grade requirements for installing a new gravity main.

Due to the challenges faced while installing the existing casing, it is estimated that a similar installation cost be very high. The cost of installing the 36-inch steel casing for the waterline in 2022 was $531,375.

Traditional excavation methods for installing new crossings under Highway 12 would not be allowed by the Montana Department of Transportation (MDT). MDT has no plans for construction on Highway 12 in this area. There is no room for directional drilling between the highway and railroad tracks, so directional drilling was ruled out.

1. Lift Station

Due to growth and development of the area south of Highway 12 and west of Prickly Pear Creek, along with the decision to install a force main, a new lift station needs to be constructed to convey wastewater under Highway 12. The Manlove Lift Station preliminary layout is shown in **Figure 4.1.** A lift station and force main were deemed to be the best alternative due to the condition of the gravity crossings that are currently in service, along with the difficulty and high cost of boring another crossing.

The Manlove Lift Station will likely be located west of Highway 282 and south of the railroad tracks. This location makes the most sense as the topography of the area generally slopes to this corner, which will complement gravity flow from new developments. The newly installed casing also ends near the southwest corner of

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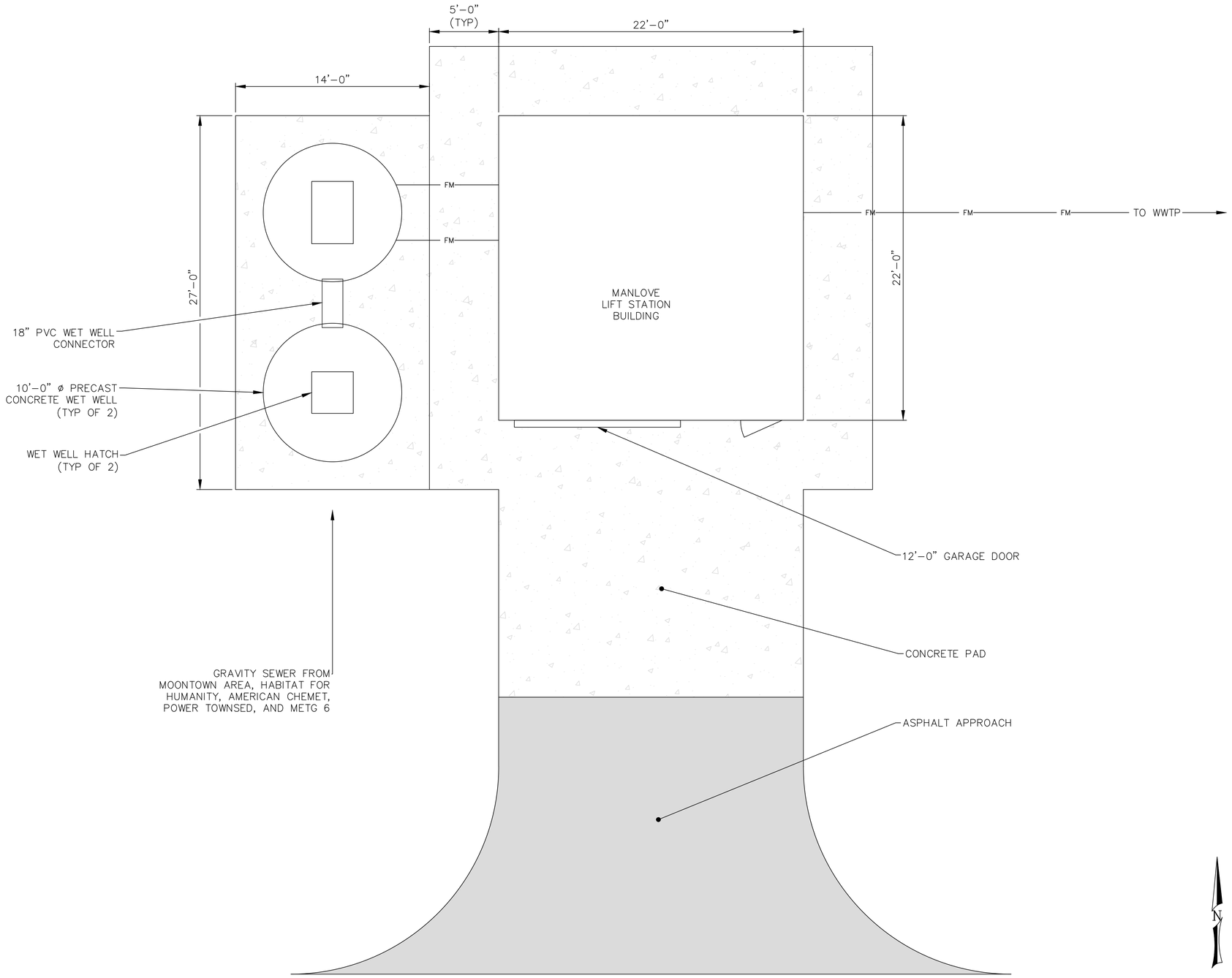
PROJECT TITLE
East Helena Wastewater Collection System Master Plan Update
East Helena, Montana

SHEET TITLE
MANLOVE LIFT STATION CONCEPTUAL LAYOUT

SHEET
4.1
OF



MANLOVE LIFT STATION BUILDING 1

N

4 0 4 8
(SCALE IN FEET)

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Manlove Avenue and Highway 282, making this location ideal for minimizing cost to connect the lift station.

There are a couple of options for locating the new Manlove Lift Station, including a City owned parcel on the north side of Manlove Avenue or on American Chemet property near the final casing location. Locating this lift station on American Chemet's property would be subject to negotiation and depend on their plans for the parcel. Locating the lift station on the American Chemet property could benefit them as the length of pipe required to connect the lift station would be less.

The conveyance mechanism for wastewater under the highway will be a 10-inch HDPE DR13.5 force main inside the 36-inch steel casing that was installed in the summer of 2022. The force main installation is under contract and will be installed in 2023.

Flows for the Manlove Lift Station have been calculated based on the City's Growth Model and expected flows from new developments. METG and developers reported that all the METG parcels on the Highway 282 side (METG 3 through 7 on **Figure 3.2**) were estimated for full development during the next 15 years. These flows are shown in **Table 3.**

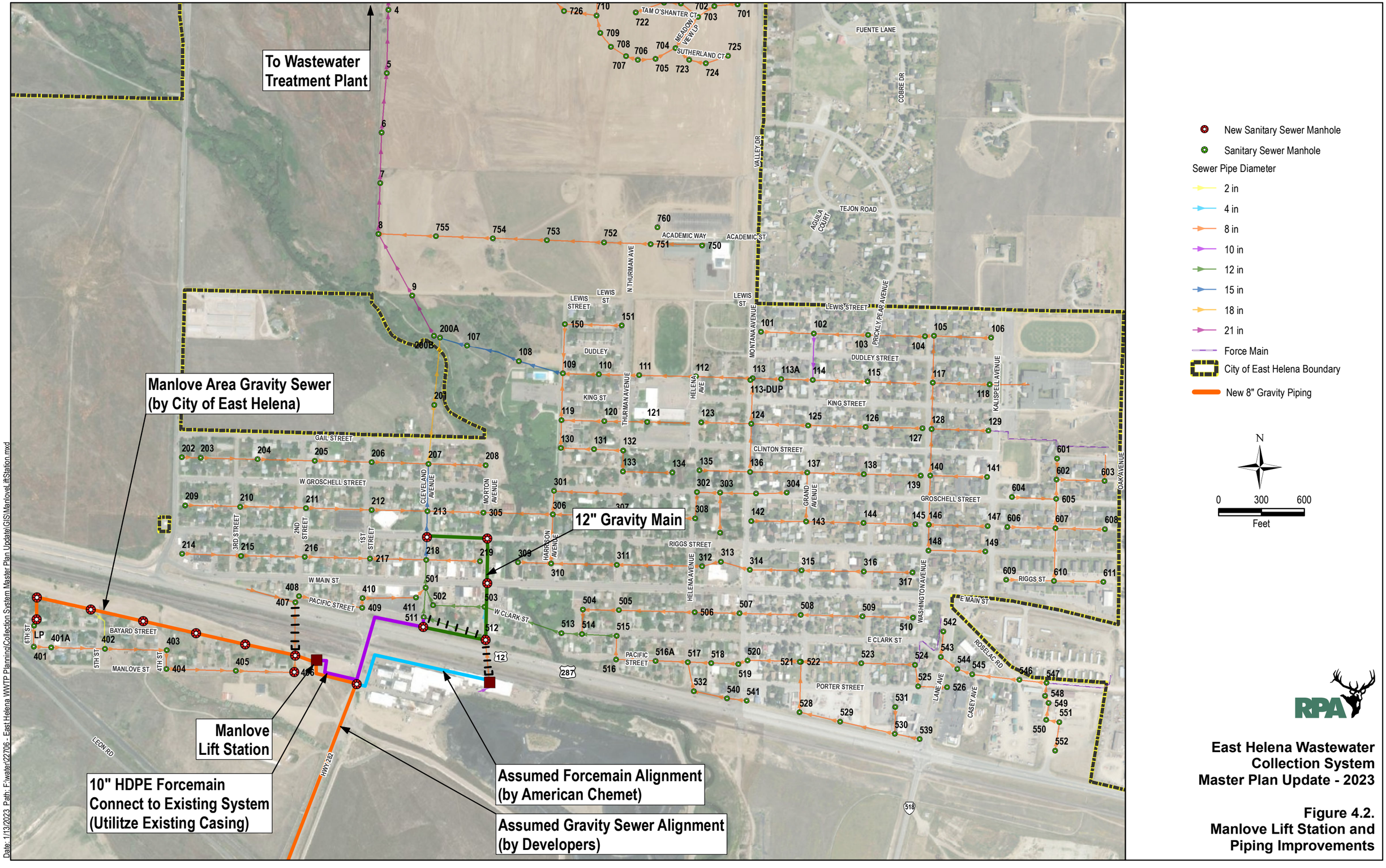
Table 3: Estimated Flows to Future Manlove Lift Station

Year	Average Daily Flow (gpd)	Average Daily Flow (gpm)	Peak Hour Flow (gpm)
2022	18,280	15	60
2027	127,930	89	355
2032	188,605	133	466
2037	249,280	173	561
2042	18,280	200	600

The 20-year design peak hour flow for this lift station is estimated to be 600 gallons per minute (gpm). Existing average daily flows are estimated to be 15 gpm. A peaking factor of 3.0 was used for the design flow. This lift station will be oversized for a period of time and needs to be designed for a wide range of flows. Mixers will be installed in the wet well to combat septic conditions with longer times between pump runs. Velocity requirements in the 10-inch force main will be met by adjusting fill times and pumping rates. Fill times will be lessened as development occurs. Pumping rates will be controlled and adjusted using VFDs.

2. Manlove Lift Station Discharge Piping Alignment

The preliminary Manlove Area piping alignment is shown in **Figure 4.2.** The Manlove Lift Station force main will be 10-inch PVC from the new lift station site to where it connects to the 10-inch HDPE inside the steel casing. On the north side of Highway 12 the force main will bend east and transition back to 10-inch PVC on Pacific Street and connect to existing manhole #511. At manhole #511 the force main will transition to gravity sewer.



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East Helena Wastewater Collection System Master Plan Update - 2023

Figure 4.2. Manlove Lift Station and Piping Improvements

The gravity sewer will continue to run east down Pacific Street to Morton Avenue. At Morton Avenue, the gravity main will turn north to Riggs Avenue. The main will turn back east and connect to the existing 15-inch gravity sewer main on Cleveland Avenue. A new gravity sewer alignment is required as the existing 12-inch main does not have the capacity to support the estimated flows. Approximately five new manholes will be installed along this alignment. It should be noted that the new gravity sewer could potentially be placed on Cleveland Avenue (parallel to the existing main), but more survey information will be required, and the final alignment will be determined during design.

3. Gravity Piping

Gravity sewer piping to the Manlove lift station will be the responsibility American Chemet and individual developers. The City of East Helena will be responsible for getting wastewater from the Manlove area to this lift station as well. As stated above, the existing 12-inch gravity main on Cleveland Avenue does not have capacity for the flows from the Manlove Lift Station, so this section will be bypassed, and new gravity sewer main will be installed and connected to the existing 15-inch on Cleveland Avenue. A new manhole will be required at the intersection of Cleveland Avenue and Riggs Street where the gravity mains connect.

4. Schedule and Timing

The Manlove Lift Station must be constructed to serve new development planned west of Prickly Pear Creek. Power Townsend reportedly plans to begin construction as soon as possible after the 2023 East Helena Rodeo. Given the condition of the existing sewer crossing, under Highway 12 and the proposed development timeline, the Manlove Lift Station will need to be completed in 2024.

The estimated total construction cost of the Manlove Lift Station and associated piping required to convey wastewater to the existing 15-inch main on Cleveland Avenue is **$2,082,000** in 2023 dollars. The full breakdown of this cost estimate is attached in **Appendix C.** A summary of these improvements is included in **Table 4.** It should be noted that the City of East Helena has already expended approximately $531,400 on the 36-inch steel casing installed across Highway 12, and the City will pay approximately $208,400 for the 10-inch HDPE force main installation. In total, the City will have contributed approximately **$739,800** to the Manlove Lift Station and Piping Improvements. These costs **are not included** in the construction cost below.

Table 4: Manlove Lift Station and Piping Alignment Summary

Description	Construction Cost[1] (in 2023 Dollars)
Construct wet wells, lift station building, and necessary equipment and install force main and gravity piping from lift station to connection on Cleveland/Riggs, install manholes	**$2,082,000**

[1]Construction cost does not include administrative fees, engineering fees, or contingency.

B. MANLOVE AREA GRAVITY PIPING IMPROVEMENTS

1. Bayard Street Lift Station

The Bayard Street Lift Station serves two residential properties in the Manlove Area, south of Highway 12. The lift station is located at the north end of 5th Street. The City has reported that this lift station clogs often due to debris and the force main piping must be cleaned frequently. The pump is housed in an old concrete septic tank that was modified to act as a wet well. The City has replaced the pump in this wet well once, along with old floats that were reported to be held together with duct tape. The lift station also does not meet City or DEQ Standards, and the City would like to install gravity piping to discontinue operation of the lift station.

2. 6th Street Sewer Services

Three residents near 6th Street in the Manlove area have sewer services that often backup and require cleaning. These services are long and were generally found to be less than two feet deep. These services continue to be a hassle for City personnel and need to be upgraded to prevent further backups.

3. Preferred Solution – Bayard Street Lift Station and Gravity Piping Improvements

With this project, a new 8-inch PVC gravity main will be installed on 6th Street and ran north and then southeast behind the existing houses. The services on 6th Street will be deepened to a minimum of four feet and reconnected to the new gravity main to prevent further issues and backups.

To accommodate the two houses connected to the Bayard Street Lift Station after its abandonment, the two residents connected to the lift station will also have their services rerouted and connected to the 8-inch PVC gravity main that will be installed north of the houses. One resident in this area is served by an unapproved septic tank, and the City would abandon this tank and connect the resident to the new gravity main as well.

The new gravity main will run southeast and connect to the new Manlove Lift Station, with manholes at changes in direction or at 400-foot intervals along the alignment. A new gravity main will be installed from manhole #406 to the farthest east manhole on the new alignment. The existing 8-inch gravity crossing from manhole #406 will be capped and abandoned. There is potentially and option to route the new gravity main to existing manhole #403 dependent upon elevations and existing gravity main depths. More survey information is required to assess this option, and the final gravity main alignment will be determined during design.

The Bayard Street Lift Station abandonment and gravity piping improvements are shown in **Figure 4.3.**

4. Schedule and Timing

All gravity sewer upgrades in this area could be completed at the same time as the Manlove Lift Station construction. It is advantageous to complete the project at this time

as there will be a contractor performing similar work in the general Manlove area. The existing Manlove sewer crossing will also be abandoned at this time as well. Therefore, the 6th Street gravity improvements can take place and connect to the new lift station with minimal interruption to service.

The Manlove Lift Station will need to be completed and operational before connecting the new gravity piping to the wet well. The Bayard Street Lift Station will be abandoned once the gravity sewer is installed and tested, and services have been reconnected.

The estimated construction cost for the Manlove Area gravity piping improvements is **$841,700** in 2023 dollars**.** The full breakdown of this cost estimate is attached in **Appendix C.** A summary of these improvements is included in **Table 5.**

Table 5: Summary of Manlove Area Gravity Piping Improvements

Description	Construction Cost[1] (in 2023 Dollars)
Install new 8-inch gravity main and deepen/reconnect services to main, install new manholes, abandon Bayard Street Lift Station and force main, abandon residential septic tank	$841,700

[1]Construction cost does not include administrative fees, engineering fees, or contingency.

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New Sanitary Sewer Manhole

Sanitary Sewer Manhole

Sewer Pipe Diameter

2 in

8 in

New 8" Gravity Piping

City of East Helena Boundary

N

0 100 200

Feet

RPA

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 4.3. Manlove Area Gravity Piping Improvements

C. SOUTHSIDE LIFT STATION AND CONVEYANCE TO WWTP

1. Lift Station

A lift station will need to be constructed south of Highway 12 and presumably east of Highway 518 to serve the developments on the east side of Prickly Pear Creek (METG 1 and 2 on **Figure 3.2**). METG has plans to move the existing Manlove Cabin. The current location of the cabin was deemed a preliminary location for the lift station due to the topography of this area. However, the final location of the lift station remains in question and will be determined as development plans progress.

This will be a regional-type lift station that will generally follow the City Standards for new lift stations. However, this lift station will likely be more complex than any lift station currently operated by the City, especially in terms of pumps and controls, and may deviate from the standards in some regards. Centrifugal screw pumps are included as the choice of pump for this lift station. This type of pump has a proven track record for large scale lift stations where flows are high. The Southside Lift Station preliminary layout is shown in **Figure 4.4.**

Flows for this lift station have been calculated based on the City's Growth Model and expected flows from developments. METG and developers report that both METG parcels on the east side of Prickly Pear Creek (METG 1 and 2 on **Figure 3.2**) would be developed over the next 20 to 25 years. As stated above, the largest parcel (METG 1) is under consideration by a single developer who has plans to develop the entire parcel over a 20 to 25-year timeframe. The associated flows from these parcels to the Southside Lift Station are shown in **Table 6.**

Table 6: Future Flows to Southside Lift Station

Year	Average Daily Flow (gpd)	Average Daily Flow (gpm)	Peak Hour Flow (gpm)
2027	75,550	52	156
2032	227,193	158	474
2037	357,850	249	747
2042	467,502	325	975
2047	556,166	386	1,158
2052	623,850	433	1,300

Using a peaking factor of 3.0, the 30-year design flow for this lift station is estimated to be 1,300 gallons per minute (gpm). Due to the large range of expected flows over this period, it is recommended that this lift station be phased to accommodate growth as it occurs.

There is a multitude of ways to design and phase this lift station. However, RPA has made assumptions for the purpose of this writing and cost estimating. RPA has assumed phasing of the wet well will take place, with the first wet well being cast with the construction of

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DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NO.
LS_Conc_LS
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PROJECT TITLE
East Helena Wastewater Collection System Master Plan Update
East Helena, Montana

SHEET TITLE
SOUTHSIDE LIFT STATION CONCEPTUAL LAYOUT

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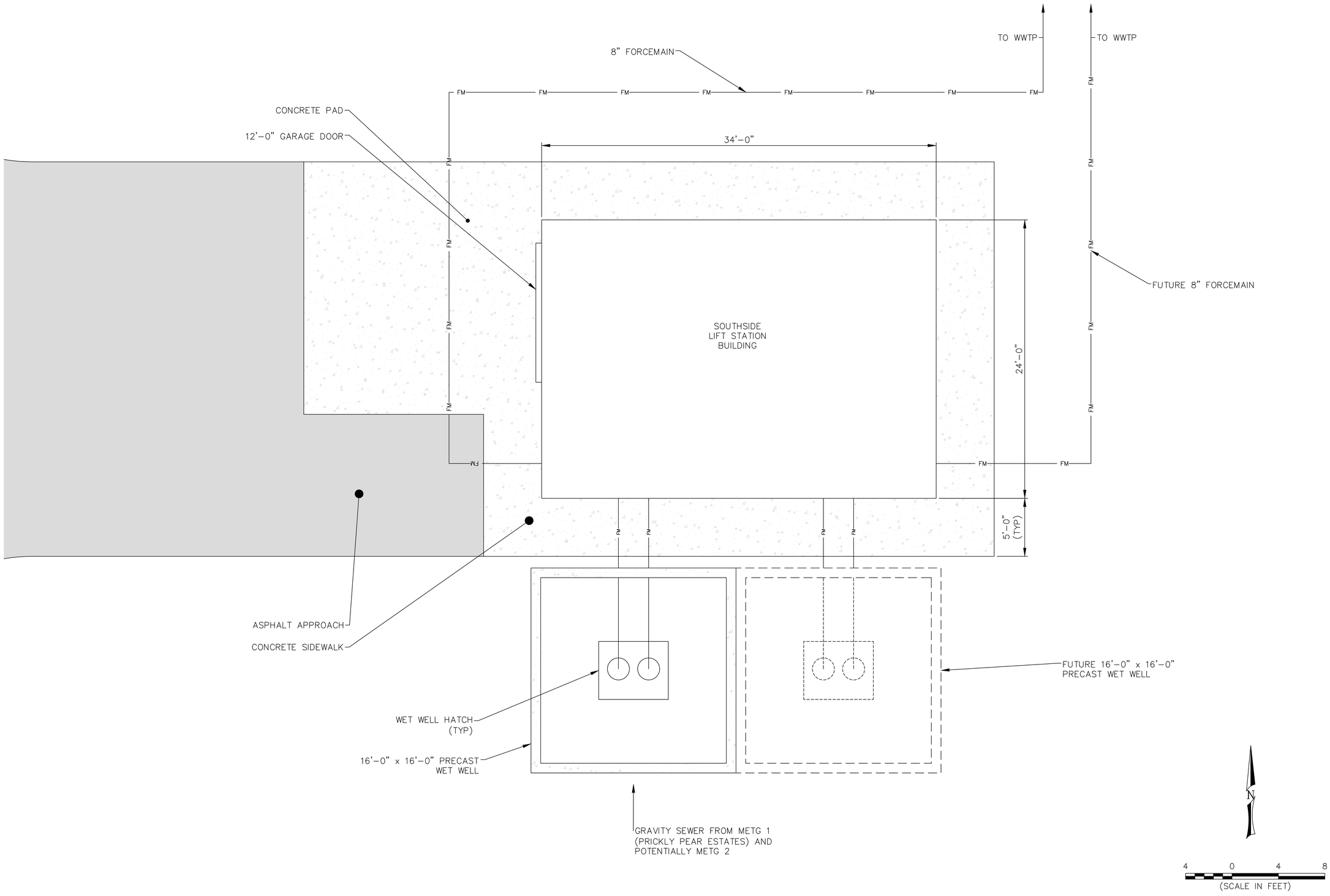

SOUTHSIDE LIFT STATION BUILDING (1)

the building in its entirety. Each wet well is assumed to be 16 feet square and have a depth of 15 feet. A separating wall in the middle of the wet wells with concrete knockouts or slide gates will be installed to allow for the use of one wet well until development requires more volume. The building and necessary piping for both wet wells will be constructed in the first phase. Two Pumps and VFDs for the first wet well will also be installed initially. As development occurs and peak hour flows eclipse 700 gpm, a new wet well with the same dimensions will be cast, two more pumps will be installed and will ideally be identical to the existing pumps, and the knockouts or slide gates will be removed to connect the wet wells and increase storage volume.

The estimated construction cost for the first phase of the Southside Lift Station is **$1,654,900** in 2023 dollars**.** The estimated construction cost for Phase II of the Southside Lift Station is **$650,500** in 2023 dollars**.** The full breakdown of these cost estimates is attached in **Appendix C.** Construction cost does not include administrative fees, engineering fees, or contingency.

2. Wastewater Piping Alternatives to the WWTP

Currently, there is no usable wastewater infrastructure anywhere on the two METG parcels east of Prickly Pear Creek. There was an old 8-inch gravity main that crossed under Highway near METG 2, but this line was plugged with concrete and abandoned after ASARCO filed for bankruptcy.

With the large amount of wastewater flow estimated to be produced by these parcels, there is also no existing route to the WWTP that has the capacity to carry the flow. The City's current wastewater infrastructure is mainly 8-inch clay tile with some PVC. These gravity mains simply do not have the capacity to convey the estimated 1,300 gpm flow from the Southside Lift Station. Therefore, new infrastructure will be required to serve these parcels and the development.

To convey wastewater under the railroad and Highway 12, two 8-inch PVC force mains will be installed parallel to each other. Two force mains will help meet DEQ velocity requirements during the early stages of development. There are many options for the force main alignment after crossing under Highway 12, and the following alternatives were seen as the best routes based on the City's needs and existing infrastructure. Each alternative alignment will utilize the same layout from the lift station to Casey Avenue on the north side of Highway 12. The dual 8-inch force mains will be routed from the lift station under the railroad tracks and under Highway 12. Similar to the above, RPA has assumed that both 8-inch force mains, the steel casings, and other necessary piping will be installed with Phase I of the Southside Lift Station. Sections **IV.C.3** and **IV.C.4** include more detailed information about the steel casings and crossings.

It should be noted that a mixture of force main and gravity sewer could be used to convey wastewater to the treatment plant with multiple lift stations. However, the cost of this

option and adding lift stations will greatly increase the overall project cost, so this option will not be further discussed in this document.

a) Wastewater Piping Alignment Alternative 1

Alignment Alternative 1 is shown in **Figure 4.5.** From the Highway 12 crossing and casing, the dual 8-inch force mains would connect to a new manhole at the south end of Casey Avenue. The force mains would transition to 18-inch PVC gravity main at this manhole. At the design flow of 1,300 gpm, the 18-inch PVC gravity main will flow with a depth of approximately 10.2 inches. From the manhole, the 18-inch gravity main would continue approximately 10,500 feet to a new connection at the screw pumps at the head of the wastewater treatment plant. 48-inch manholes will be installed along this alignment at a distance of no more than 500 feet and at all changes of direction in the alignment. Vertical adjustments will be made as necessary to avoid connecting the new alignment with existing gravity sewer mains.

The estimated construction cost of this alternative is **$6,558,400** in 2023 dollars**.** The full breakdown of this cost estimate is attached in **Appendix C.**

b) Wastewater Piping Alignment Alternative 2

Alignment Alternative 2 is shown in **Figure 4.6.** From the Highway 12 crossing and casing, the dual 8-inch force mains would again connect to a new manhole at the south end of Casey Avenue. The force mains would transition to 18-inch PVC gravity main at this manhole. At the design flow of 1,300 gpm, the 18-inch PVC gravity main will flow with a depth of approximately 10.2 inches. From the manhole, the 18-inch gravity main would continue approximately 10,600 feet to a new connection at the screw pumps at the head of the wastewater treatment plant. 48-inch manholes will be installed along this alignment at a distance of no more than 500 feet and at all changes of direction in the alignment. Vertical adjustments will be made as necessary to avoid connecting the new alignment with existing gravity sewer mains. This alternative does utilize the Lewis Street easement between the East Helena Cemetery Prickly Pear Elementary School. The road does not currently exist in this easement, and installing the gravity main in this location would need to happen in the summer to avoid safety issues with children and the school.

The estimated construction cost of this alternative is **$6,648,100.** The full breakdown of this cost estimate is attached in **Appendix C.**

To Wastewater Treatment Plant

New 18" Gravity Sewer Main

New 18" Gravity Sewer Main

Dual 8" Forcemain

Southside Lift Station Location

FUENTE LANE
COBRE DR
WILDFIRE RD
VALLEY DR
TEJON ROAD
AGUILA COURT
PRICKLY PEAR AVENUE
ACADEMIC WAY
ACADEMIC ST
N THURMAN AVE
DUDLEY STREET
CLINTON STREET
GROSCHELL STREET
OAK AVENUE
KALISPELL AVENUE
RIGGS ST
E MAIN ST
E CLARK ST
ROSELAC RD
GAIL STREET
W GROSCHELL STREET
RIGGS STREET
W MAIN ST
PACIFIC STREET
BAYARD STREET
MANLOVE STREET
6TH STREET
3RD STREET
2ND STREET
1ST STREET
MEADOW VIEW LP
SUTHERLAND CT
LEON RD
HWY 282
12
287
518
LP

New Sanitary Sewer Manhole
Sanitary Sewer Manhole

Sewer Pipe Diameter
- 2 in
- 4 in
- 8 in
- 10 in
- 12 in
- 15 in
- 18 in
- 21 in
- Force Main
- New Dual 8" Forcemain
- New 8" Gravity Piping
- New 18" Gravity Sewer
- City of East Helena Boundary

N

0 300 600
Feet

RPA

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 4.5. Southside Lift Station and Wastewater Piping Alignment Alternative 1

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RPA

East Helena Wastewater Collection System Master Plan Update - 2023

Figure 4.6. Southside Lift Station and Wastewater Piping Alignment Alternative 2

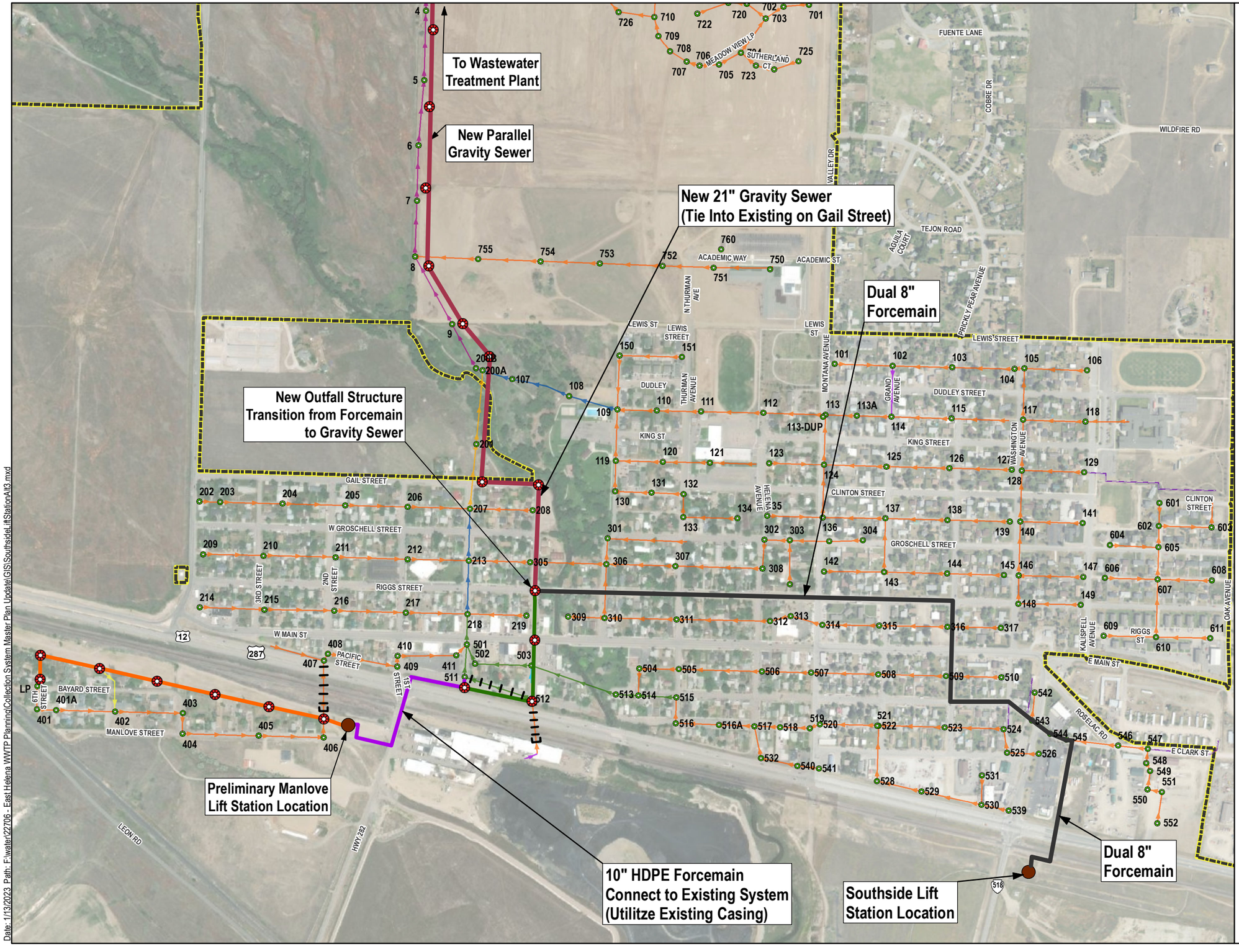
c) Wastewater Piping Alignment Alternative 3

Alignment Alternative 3 is shown in **Figure 4.7.** This alternative includes installing the dual 8-inch force mains all the way to Prickly Pear Creek on Riggs Street. Two horizontal directional drills would be required to install HDPE force main under Prickly Pear Creek. After the creek crossing, the dual force mains would connect to a new gravity outfall manhole at the intersection of Riggs Street and Morton Avenue. This outfall would also collect wastewater from the Manlove Lift Station. All force mains would transition to 21-inch gravity sewer from this manhole and continue north to the wastewater treatment plant parallel to the existing 18 and 21-inch gravity sewer mains. At the design flow of 1,900 gpm from the Southside and Manlove Lift Stations, the 21-inch PVC gravity main will flow with a depth of approximately 12.2 inches. 48-inch manholes would be installed along the gravity portion of this alignment at a distance of no more than 500 feet and at all changes of direction in the alignment.

If force main Alternative 3 was the chosen alignment for the Southside Lift Station, a new gravity outfall structure would be required and likely installed at the intersection of Morton Avenue and Riggs Street. This structure would take all the wastewater from south of Highway 12 and transition to gravity flow from there. A 21-inch gravity main would be required to convey wastewater from this structure to the WWTP. According to the City's Growth model, the new 21-inch could tie into the existing 18-inch on Cleveland Avenue and Gail Street for approximately 10 years before capacity is reached. As development continues and flows south of Highway 12 increase, a parallel 21-inch gravity main would have to be installed all the way to the treatment plant, as the existing infrastructure does not have the capacity for the existing City flows and all of the flows from the METG development south of Highway 12.

The gravity outfall structure would be installed along with all the force main piping along the Alternative 3 alignment, as sewer from the Southside Lift Station would begin flowing shortly after the lift station is constructed. Wastewater from the Manlove Lift Station would be routed to Morton Avenue and connected to the gravity outfall as well.

The estimated construction cost of this alternative is **$7,139,200.** The full breakdown of this cost estimate is attached in **Appendix C.**


To Wastewater Treatment Plant
New Parallel Gravity Sewer
New 21" Gravity Sewer (Tie Into Existing on Gail Street)
Dual 8" Forcemain
New Outfall Structure Transition from Forcemain to Gravity Sewer
Preliminary Manlove Lift Station Location
10" HDPE Forcemain Connect to Existing System (Utilitze Existing Casing)
Southside Lift Station Location
Dual 8" Forcemain
New Sanitary Sewer Manhole
Sanitary Sewer Manhole
Sewer Pipe Diameter
2 in
4 in
8 in
10 in
12 in
15 in
18 in
21 in
Force Main
New Dual 8" Forcemain
New 8" Gravity Piping
New 21" Gravity Sewer
City of East Helena Boundary
N
0
300
600
Feet
FUENTE LANE
COBRE DR
WILDFIRE RD
VALLEY DR
TEJON ROAD
AGUILA COURT
PRICKLY PEAR AVENUE
ACADEMIC WAY
ACADEMIC ST
N THURMAN AVE
LEWIS ST
LEWIS STREET
MONTANA AVENUE
GRAND AVENUE
DUDLEY STREET
THURMAN AVENUE
DUDLEY
KING ST
KING STREET
WASHINGTON AVENUE
HELENA AVENUE
CLINTON STREET
GROSCHELL STREET
W GROSCHELL STREET
GAIL STREET
3RD STREET
2ND STREET
RIGGS STREET
W MAIN ST
PACIFIC STREET
1ST STREET
6TH STREET
BAYARD STREET
MANLOVE STREET
LEON RD
HWY 282
KALISPELL AVENUE
OAK AVENUE
E MAIN ST
ROSELAC RD
E CLARK ST
MEADOW VIEW LP
SUTHERLAND CT
East Helena Wastewater Collection System Master Plan Update - 2023
Figure 4.7. Southside Lift Station and Wastewater Piping Alignment Alternative 3
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3. **Wastewater Piping Recommendation**
   The recommended alternative for the piping alignment from the Southside Lift Station is **Alternative 1.** There is ample elevation change from where the casing would end on the north side of Highway 12 to the WWTP to install gravity piping. Gravity piping is easier to maintain with jetting and cleaning. This option would greatly reduce the length of force main required and would eliminate the "bellies" that the force main would have with the directional drill under Prickly Pear Creek. A shorter force main would also mean less friction head and that the pump size could be reduced, which would lead to energy savings. This alternative includes installing the gravity main in existing City streets until it reaches the path west of Harrison Avenue and avoids the corridor directly adjacent to Prickly Pear Elementary School. Although alternatives 1 and 2 are comparable in price, **Alternative 1** is the most cost effective of the wastewater piping alignments.

4. **Highway 12 Crossing**
   The City will need dual 8-inch force mains below Highway 12. This could potentially be done with directional drilling, but there is likely not adequate space between the Highway and railroad for the required directional drilling equipment. Tying this directional drill into the assumed steel casing under the railroad (see below) may also prove difficult with space constraints. The soils in this area are extremely rocky and may be challenging to directional drill in. There is also a need for a 12-inch water main to serve these developments which needs to cross Highway 12. A single 60-inch diameter steel casing pipe may be the best option for the three pipes needed. Special casing chocs will likely be required for the unique piping layout inside the casing.

   The City has had some communication with the Montana Department of Transportation (MDT) about a future project to upgrade Highway 12 in this area and the potential to install a casing during this project. However, MDT only has plans to resurface this stretch of the Highway and no subsurface work is included. This basically eliminates the potential for installing a new casing with conventional excavation.

5. **Railroad Crossing**
   A second steel casing will need to be installed under the railroad tracks south of Highway 12. This casing will require boring and jacking. According to the BNSF Utility Accommodation Policy, the steel casing must extend 45 feet from the centerline of the track, measured at a right angle. This policy also notes that the same requirement must be met for additional tracks that are planned for future construction (if applicable). The steel casing nominal thickness requirement is 0.781 inches for a 60-inch steel casing. It should also be noted that utility pipes running parallel to the railroad within 40 feet of the centerline of the track will also require a steel casing, and utility piping cannot be installed within 25 feet of the centerline of the track.

6. **Clark Street Sewer**
   The City of East Helena analyzed their collection system and identified a route with some additional capacity that could accommodate temporary connection for 350 EDUs from

the proposed Prickly Pear Estates subdivision. It is estimated that this section of piping has a remaining capacity of 250 gpm. The City has determined that they would allow for a flow of 250 gpm from the Southside Lift Station, equating to approximately 350 EDUs.

This existing section of gravity main is located in the alley between E. Clark Street and East Main Street (MH 510 to MH 504 in **Figure 2.1**). While this section of gravity main does have capacity, an in-depth TV inspection revealed numerous offset joints and some alignment issues. Temporarily connecting to this gravity main could allow the developers to begin construction of utilities and homes while providing time to install the necessary infrastructure to get their full buildout flow to the wastewater treatment plant.

7. Schedule and Timing

The Southside Lift Station and piping to the WWTP will need to be constructed and operational before development begins in either the METG 1 or METG 2 parcel. The METG 1 developer reported a construction start date in 2025 at the earliest. The METG 2 developer could begin development before 2025, but the plans going forward for this parcel are unknown as of now. As stated above, boring and jacking steel casings in the soils in this area is extremely difficult and expensive due to the large cobbles in the soil.

In summary, the Southside Lift Station will be constructed and phased to serve the developments south of Highway 12 and east of Prickly Pear Creek. The recommended lift station construction and necessary piping summary is included in **Table 7**.

Table 7: Summary of Improvements

Phase	Description	Construction Cost[1] (2023 Dollars)
Phase I	Construct Southside Lift Station building, one 16'x16' wet well, and install piping for both wet wells, two pumps, two VFDs	$1,654,900
Phase I	Install dual 8-inch force mains, steel casings under Highway 12 and railroad, gravity main to WWTP, all manholes along alignment	$6,558,400
Phase II	Construct and install second wet well, two pumps, two VFDs, connect to existing building and piping	$650,500
Total Construction Cost[1] in 2023 Dollars		**$8,863,800**

[1]Construction cost does not include administrative fees, engineering fees, or contingency.

D. METG 2

As mentioned above, there is some development planning for the METG 2 parcel on **Figure 3.2**. Currently, plans include mixed residential and commercial development for this parcel. Depending on scheduling, wastewater from this parcel could possibly be conveyed to either the Southside Lift Station or the Manlove Lift Station. Conveying wastewater to the Southside Lift Station is the simpler of the two options, with Highway 518 being the major foreseen obstacle. The route to the Manlove Lift Station presents more challenges such as installing force main under Prickly Pear Creek and through American Chemet's property, but this option is not out of the question.

1. **Gravity Piping**

   Gravity piping will be likely installed in the development to convey wastewater to the north end of the parcel. From there, gravity sewer could potentially be installed from METG 2 to the Southside Lift Station. This would require traditional excavation or a bore and jack to cross Highway 518, but this route is a simpler option for the developer. If the developer did choose to try to connect to the Manlove Lift Station, gravity piping could potentially be installed along this route depending on depths and topography of the chosen route.

2. **Lift Station**

   A lift station could be installed for this development. Directional drilling could be utilized with a lift station to convey wastewater under Highway 518 and to avoid disturbing the highway. Directional drills will most likely occur if the developer chose to connect to the Manlove Lift Station to cross the creek and get onto American Chemet property (if American Chemet agreed to this option).

   The lift station would be relatively small, and a 4-inch force main would suffice for the estimated peak flows for this parcel. The lift station location will largely depend on the developer and the site, but somewhere on the northern section of the parcel would facilitate gravity flow to a lift station and reduce the length of force main required to move wastewater to one of the larger lift stations with highway crossings.

3. **Force Main**

   A 4-inch PVC force main would need to be installed from the Sussex lift station to convey wastewater to the Southside Lift Station, with an HDPE section directionally drilled under Highway 518. If it was decided that a route under Prickly Pear Creek and through American Chemet's property was best and agreed upon by American Chemet, an HDPE force main would likely be directional drilled for the majority of the route to American Chemet's property.

4. Schedule and Timing

The gravity piping or lift station for this development would need to be constructed with all the utility piping in this parcel. However, development of this parcel and the schedule are still being worked out between multiple parties.

E. MONTANA AVENUE LIFT STATION RELOCATION

Due to the increased traffic and safety concerns on Montana Avenue, the following Montana Avenue Lift Station alternative was assessed in the 2020 Master Plan. This alternative includes relocating the lift station. The planned lift station location will be in the existing East Helena Cemetery property. West Dudley Street and the King Street alley were also locations that were discussed in the 2020 Master Plan; however, the West Dudley Street option does not fully resolve all of the existing problems, and the King Street alley property has been sold and is no longer a viable option. The Montana Avenue Lift Station was constructed in 2003 and is nearing its service life. The lift station has a design peak hourly flow rate of 500 gpm. The area served by the lift station is not experiencing growth, so the design flow and sizing parameters will remain the same.

1. Alternative 1 – East Helena Cemetery

This alternative explores the option of relocating the existing lift station that is currently located in the middle of Montana Avenue to the northeast corner of the East Helena Cemetery. Relocating the lift station to this location would also provide the City Operators with much better access to the facility. The City of East Helena is also going to put adopting the Cemetery on the ballot. If this vote passes, the cemetery will become City property, which will greatly ease the process of moving the lift station and increase the chances of putting it on the cemetery property.

This alternative would provide a new submersible pump type lift station. The new lift station would be located northwest of the existing lift station and all pump controls would be housed in a 16’ x 16’ building that would allow the operators to access and maintain the lift station easily to access the controls and a permanent generator which meets the City of East Helena’s design standards A fence would be installed around the new lift station to secure the property. This alternative would include a 60kW generator for use as backup power. This alternative includes the abandonment of the existing Montana Avenue lift station.

Figure 4.8 shows the location of the new Montana Avenue lift station and **Figure 4.9** shows a schematic of the Montana Avenue lift station alternative at the East Helena Cemetery.

The estimated construction cost for this project is **$2,002,700** in 2023 dollars. The full breakdown of this cost estimate is attached in **Appendix C.** It should be noted that construction cost does not include administrative fees, engineering fees, or contingency.

2. Schedule and Timing

The Montana Avenue Lift Station is planned to be relocated with construction of the new wastewater treatment plant. This construction is expected to begin around 2027. The treatment plant upgrades will be a costly project and will raise user rates, so this may be a good time to relocate the lift station as well. Relocating the lift station at this time also allows time for the East Helena cemetery property to be sorted out, as this is the preferred new location for the lift station. A summary of the Montana Avenue Lift Station is included in **Table 8.**

Table 8: Summary of Montana Avenue Lift Station Improvements

Description	Construction Cost[1] (in 2023 Dollars)
Construct new wet well and lift station building, install necessary equipment and force main and gravity piping to and from lift station to connection, abandon existing lift station wet well, valve vault, and electrical equipment	$2,002,700

[1]Construction cost does not include administrative fees, engineering fees, or contingency.

City of East Helena Boundary
Existing Montana Avenue Lift Station
New Montana Avenue Lift Station

N

0 50 100
Feet

East Helena Wastewater Collection System
Master Plan Update - 2023

Figure 4.8.
Montana Avenue Lift Station Replacement
Alternative 1 - East Helena Cemetery Location

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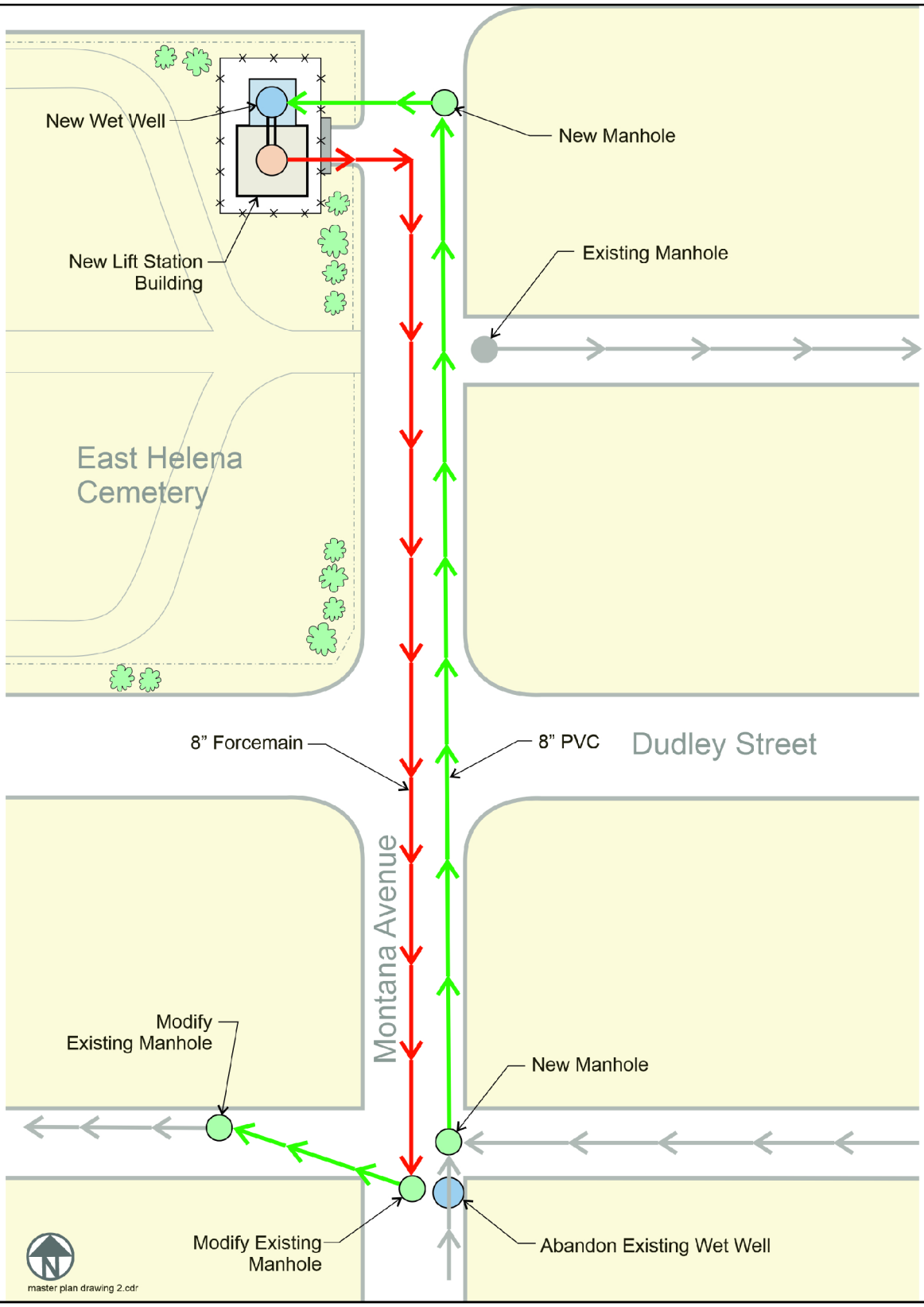

East Helena Wastewater Collection System
Master Plan Update - 2023

Figure 4.9.
Montana Avenue Lift Station Replacement
Alternative 1 - Schematic of the East Helena Cemetery Lift Station

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V. FUNDING

Funding alternatives for improvements discussed in this report fall generally into two categories:

A. Improvements to replace and upgrade existing City infrastructure
B. Improvements necessary to support proposed development

The funding opportunities and mechanisms vary significantly between these categories and are discussed separately below.

A. IMPROVEMENTS THAT UPGRADE EXISTING INFRASTRUCTURE

Projects that improve or upgrade existing City infrastructure have a number of funding alternatives. The majority of these require a Preliminary Engineering Report that follows a specific outline. Projects are ranked by a specific set of criteria and funding is awarded based on a scoring process. Projects within this report that fall into this category include The City's portion of the Manlove Lift Station and Piping Improvements, Manlove Area Gravity Piping Improvements, and the Montana Avenue Lift Station Relocation. These funding alternatives include grant and loan programs as follows:

- Montana Coal Endowment Program (MCEP) – Typically $500,000
- Community Development Block Program (CDBG) – Typically $750,000
- DNRC Renewable Resources Grants and Loans (RRGL) - $125,000
- USDA Rural Development Grants and Loans – Not Limited
- State Revolving Fund Loan (SRF) – Not Limited

This report will not delve into the details of these programs as the City of East Helena has utilized all five of the above referenced programs and is aware of their requirements and particular scoring criteria.

It seems logical in this circumstance that the SRF Program would be a likely source of funding for projects included in this report. The Manlove Lift Station and Piping Improvements and Manlove Area Gravity Piping Improvements would likely happen at the same time and would include SRF as part of the funding utilized. The Montana Avenue Lift Station Relocation may be constructed at the time as the wastewater treatment plant upgrades and would also likely include SRF funding.

B. IMPROVEMENTS NECESSARY TO SUPPORT PROPOSED DEVELOPMENT

Funding projects needed to support new development is more difficult and can be complicated. The grant and loan programs traditionally used by cities to construct infrastructure do not allow their funds to be utilized for projects that support new development. Projects discussed in this report that fall into this category include the Southside Lift Station and piping required to convey the wastewater to the City's wastewater treatment facility. Funding agencies may also view a portion of the capacity needed at the Manlove Lift Station as "only to support new development".

A method for funding the Southside Lift Station and conveyance piping is particularly difficult due to the high capital costs of the infrastructure needed and the location and complexity of the improvements.

There are two primary methods available to cities for funding improvements needed to support new development. These include Special Improvement Districts (SIDs) and Development or Impact Fees.

1. SPECIAL IMPROVEMENTS DISTRICT (SID)

The City could create a Special Improvement District (SID). Under this scenario a boundary would be set that includes all the properties that would utilize the infrastructure constructed. The SID would be created while the developer owns the land, and the fees would be passed down to residents as development occurs. Bonds would be sold in the amount of the infrastructure project. Assessments would be levied on properties within the boundary to repay the principal and interest for the bond (project). It is a requirement of such bonds that five percent of the proceeds be collected and placed into a revolving fund to ensure payments are made.

There is some risk with this approach. The City would be required to fulfill the bond obligation. The City cannot levy undeveloped property and there is a risk (especially with phased projects) that the project would not continue. To mitigate this risk, it is recommended that a portion of the project be paid for prior to creating an SID to help assure the project continues.

2. IMPACT OR DEVELOPMENT FEE

A Special Service Area could be designated that utilizes specific infrastructure. The City would secure a loan backed through issuance of a bond in the amount of the infrastructure project. A boundary would be set while the developer owns the land. Properties within this boundary would be those that utilize the infrastructure constructed. At the time of final platting for phases within this boundary, fees would be paid directly to the City for each lot or Equivalent Dwelling Unit (EDU) within that phase or portion of development. These fees would be in the amount required to repay the principal and interest on the loan and could possibly be used to complete subsequent phases of the infrastructure needed to support growth within the Special Service Area. The developer could include these fees in the price of the lot at the time of sale.

This approach has similar risks to those incurred with an SID. The City would be required to fulfill the bond obligation. There is risk that the development project would not continue. It is recommended that a portion of the project be paid for in advance to mitigate the City's risk.

APPENDIX A

INTERLOCAL AGREEMENT

For Sharing of Municipal Wastewater Treatment Services

Prepared for and between:

Red Fox Meadows County Water and/or Sewer District

and

City of East Helena

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List of Exhibits

INTERLOCAL AGREEMENT

This Interlocal Agreement (the "Agreement") is entered into on this 14 day of MARCH, 2018,[95] by and between the Red Fox Meadow County Water and/or Sewer District, of Lewis and Clark County, Montana (the "District"), and the City of East Helena, Lewis and Clark County, Montana (the "City"). Collectively, the District and the City are referred to herein as the "Parties."

1.0 RECITALS

WHEREAS, the City is a duly incorporated city located in Lewis and Clark County, Montana; and

WHEREAS, the District is a county water and sewer district, validly organized pursuant to Title 7, Chapter 13, parts 22 and 23, Montana Code Annotated ("MCA"). The District was incorporated on April 22, 2016 and is located entirely within the boundaries of Lewis and Clark County, Montana, near the northeast boundary of the City; and

WHEREAS, the District does not have a public wastewater system serving properties in the District but intends to have a gravity flow collection system built as part of the subdivision development in the District, with all lots connected, and a pumping station and force main constructed to the City's wastewater treatment plant (the "District System"); and

WHEREAS, the City owns a public wastewater system consisting of collection and main lines, lift stations and a mechanical wastewater treatment plant (the "City Plant") having an approved design flow of 435,000 gallons per day (average daily flow), which services all current users of the City's wastewater system (the "City Customers") and has additional capacity remaining; and

WHEREAS, the District has been advised by its engineer that the costs of connecting the District' System to the City Plant, through a force main and lift station to be funded by the developer of the subdivision with the same boundaries as the District, and transferred to the District at no charge, including design, engineering and construction of the District's System to the City Plant, (including related improvements and any connection fee to be paid to the City for the use and availability of capacity within the City) (collectively, the "Project"), are, together with the District's share of the City's O&M costs, comparable to the costs of the District property owners providing for their own approved new wastewater treatment; and

WHEREAS, the City has been advised by its engineers that, in addition to its regular and anticipated use, the City Plant can accept as additional flow of up to 55,000 gallons per day (average daily flow) from the District, which will provide for full build out for the District and allow the City to meet its anticipated needs for wastewater treatment; and

WHEREAS, pursuant to Title 7, Chapter 13, Part 43, MCA, the City has authority to furnish wastewater treatment services to properties outside the City limits, as well as the authority to enter into contracts for wastewater treatment services outside the municipal boundary; and

WHEREAS, pursuant to Title 7, Chapter 13, Part 43, MCA, the City will require consent to annexation from each district property owner seeking to connect their tract or parcel of land to the City's wastewater system as a condition of initiating service; and

WHEREAS, the City will require, as a condition of any connection by any property owner in the District to the District's System, the execution of a recordable consent to annexation and waiver of any right to protest annexation and the provision of that executed written instrument to the City which will then be recorded and create a covenant running with the land to be binding upon the title of the said real property and any and all subsequent holders or owners of the real property; and

WHEREAS, although the City is not presently contemplating the annexation of the properties located within the District, it believes it to be in the best interests of the public for the District's System (apart from service lines to be owned and maintained by District residents) to become the property and responsibility of the City upon any eventual annexation; and

WHEREAS, pursuant to Title 7, Chapter 11, Part 1, MCA, the City and the District have the authority to enter into interlocal agreements for the extension of wastewater treatment services.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City and the Board of Directors of the District that, for the reasons stated above and pursuant to MCA § 7-11-104, the City and District agree it is to their mutual advantage to enter into this Interlocal Agreement as follows:

2.0 DEFINITIONS

"Average Daily Flow," for purposes of determining capacity and availability, means: *"The average flowrate occurring over a 24-hour period based upon annual flowrate data"*, and calculated as follows:

> Example:
> Total Annual Flow (V) = 30,000,000 gallons
> Average Daily Flow (Q_{ave}) = 30,000,000 gallons/365 days = 82,192 GPD

"Deleterious Substances" has the meaning given in the attached Exhibit D.

"District Customers" means all persons who own property in the District, whether or not currently served by the District System, and all persons served by the District System from time to time, as of the date hereof.

"District System" means the proposed wastewater collection system and pumping station and force-main facilities to be owned and operated by the District, but not including the service lines, which will be the responsibility of the property owner.

"Final Project Costs" means all costs incurred [by the District] for the Project to the point of Substantial Completion of the Project.

"Monthly Charge" means the monthly fee established in Section 11.1 hereof.

"Point of Connection" means the point where the District System connects to the existing City System at the City Wastewater Treatment Plant.

"Project" means the design, engineering, financing and construction of collection lines, mains, force-main and pumping station connecting the properties in the District to the City System, all as more specifically described in Exhibit B. The construction of the service lines from the collection main to individual properties will be the responsibility of the property owner to build and maintain.

"Reserved Capacity" means, initially, the capacity of the City Plant to accept and treat 55,000 gpd (Average Daily Flow) from the District. The Reserved Capacity is discussed in more detail in Exhibit C hereto. The Reserved Capacity may be amended by mutual agreement of the Parties, as discussed in Section 14.0. The Reserved Capacity is based on full build out of the District and on an estimated 110 individual single-family homes, 62 duplexes and one commercial development (currently planned for a gas station and convenience store and estimated to account for 400 gpd of total sewer capacity).

"Substantial Completion" means the time at which the Project has progressed to the point where, in the opinion of the District Engineer, the Project is sufficiently complete so that the Project can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Project refer to Substantial Completion thereof.

"City Customers" means all users of the City's wastewater system, whether within or outside the boundaries or limits of the City, except for the District Customers.

"City System" means the sewer collection system facilities owned and operated by the City located in and around the City, to the Point of Connection, that convey wastewater to the City Plant.

"City Plant" means the mechanical wastewater treatment plant of the City.

"Wastewater" means residential strength wastewater.

"Wastewater Pumping Station" shall mean the wastewater pumping station that will be constructed as part of the Project and forming a part of the District System, as described in Exhibit B.

3.0 PURPOSE AND DURATION

It is the purpose of this Agreement to delineate the responsibilities between the District and City with respect to financing, construction, ownership, operation and maintenance of the Project, the District System, and the City System; to set forth the agreement of the City to accept, properly treat and dispose of wastewater of the District in an amount up to the Reserved Capacity; and to provide for sharing the operations and maintenance costs of wastewater treatment at the City Plant. This Agreement shall remain in full force and effect for the term of thirty (30) years unless terminated or renewed according to the provisions of Section 13.2 hereof.

4.0 ADMINISTRATION

4.1 NO JOINT OR LEGAL ENTITY

Except as otherwise provided herein, this Agreement does not affect each party's responsibility to manage its own affairs. No separate or joint legal entity is established by this Agreement, and no joint board or budget shall result from the undertakings set forth in this Agreement. No partnership or joint venture exists or shall be deemed to exist between the parties.

4.2 FUNDING ADMINISTRATION

The District and the District Engineer (as hereinafter defined) will administer the funding established for the Project, including grant funds and loans to be made to the District.

4.3 DISTRICT ENGINEER; DISTRICT REPRESENTATIVE

4.3.1 The District has contracted with WWC Engineering (the "District Engineer") for the Project, wherein the District Engineer will be responsible for overseeing the design, construction and certification of the Project as Substantially Complete.

4.3.2 The Board of Directors of the District will appoint a representative (the "District Representative"), who will coordinate with the District Engineer and the City Representative (as hereinafter defined) as necessary. The District may appoint a new District Representative at any time and from time to time after notice to the City Representative.

4.4 CITY REPRESENTATIVE

4.4.1 The City Public Works Director, City Clerk or the City Engineer (the "City Representative") shall coordinate and consult with the District Engineer and the District Representative as necessary in fulfilling the City's obligations under this Agreement. The City may designate a new City Representative at any time and from time to time after notice to the District Representative.

5.0 DESIGN AND CONSTRUCTION OF PROJECT

5.1 CITY APPROVAL OF PLANS

5.1.1 The District agrees to submit to the City Representative complete plans and specifications for the Project prior to submitting the plans to DEQ for approval. The City Representative shall review and provide any comments within 30 business days after receiving such plans.

5.1.2 After the City Representative has reviewed the plans and any comments have been addressed to the City Representative's reasonable satisfaction, the City agrees to provide written approval of the design plans and permission to the District to connect to the City's System, recognizing that such written permission may be required for DEQ approval of the plans and specifications for the Project.

5.2 CITY APPROVAL AND ACCEPTANCE OF CONSTRUCTION

5.2.1 The District Engineer agrees to notify the City Representative at least 7 days in advance of connecting to the City's System.

5.2.2 Upon completion of construction, the City shall review the work and provide to the District any necessary items requiring correction. Upon correction of these items, the City shall provide a letter of acceptance to the District.

5.2.3 The District Engineer shall provide the necessary certification of completion to DEQ and furnish record drawings to the District Representative, the City Representative and DEQ, at which time the Project will be Substantially Complete.

6.0 OPERATION, CONTROL AND OWNERSHIP

6.1 OWNERSHIP OF PROJECT AND DISTRICT SYSTEM; RESPONSIBILITY FOR DISTRICT SYSTEM

6.1.1 Unless and until the property within the District is annexed by the City, the District will maintain ownership of and responsibility for the Project (except for the service lines which, after completion, will be the responsibility of the property owner). The District is solely responsible for any and all indebtedness incurred by the District in connection with the Project. The proportionate cost of the Project for each lot connected will be included in the price of each lot sold by the developer of the subdivision which has the same boundaries as the District. Nothing in this Interlocal Agreement shall obligate the City to pay for any capital costs of the Project.

6.1.2 Unless and until the property within the District is annexed by the City and upon completion of the construction of and DEQ approval of the District System, the District will own, maintain, operate and repair the District System. The District is solely responsible for any and all operation, maintenance, repair and replacement costs of the District System, including any indebtedness incurred by the District in connection with such costs. The District will make repairs to the System as necessary, and as soon as reasonably practicable based on the City Engineer's and District Engineer's assessment.

6.1.3 The District is responsible for the assessing, charging and collecting any and all assessments, taxes, charges and fees required to provide income and revenue adequate to pay: all expenses of operation and maintenance of the District System; administration costs of the District; principal and interest on any bonded or other indebtedness of the District; and to establish or maintain any required reserves.

6.1.4 Unless and until the property within the District is annexed by the City, the District shall own and operate the District's System and associated equipment. The District shall allow the City access to the Wastewater Pumping Stations and associated equipment at all times. All personnel working on or inspecting the District's System must adhere to the District's safety policy.

6.1.5 Within thirty (30) days of any eventual annexation by the City, the District will convey at no cost to the City, any and all right, title and interest in and to the Project, the District System and the Wastewater Pumping Station. Such conveyance will be effected by the appropriate and necessary documents and following such conveyance the District will no longer have any ownership interest in the Project, the District System or the Wastewater Pumping Station. Any special assessments levied against the properties in the District necessary to pay for the Project will continue to be levied against the Properties until the Project indebtedness is paid in full. Upon any eventual annexation, the City agrees to operate, maintain, repair and replace the District System as may be required during and after the transfer of such ownership to the City.

6.2 OWNERSHIP OF CITY PLANT AND CITY SYSTEM; RESPONSIBILITY FOR CITY SYSTEM

6.2.1 The City will own, maintain, operate and repair the City Plant and the City System.

6.2.2 The City is solely responsible for any and all operation, maintenance, repair and replacement costs of the City System, including any indebtedness incurred by the City in connection with such costs.

6.2.3 The City shall maintain that portion of the City System that is necessary or appropriate to collect and convey the discharge from the District System to the City Plant in good repair and condition so that the City Plant is continuously available to service the discharge of the District System. The City will maintain the City Plant in good repair and condition.

6.3 RESPONSIBILITY FOR CITY PLANT

6.3.1 The District agrees to share with the City in the costs of operation, maintenance and enlargement of the City Plant only to the extent of the District's payment of the Monthly Charge described in Section 11.1.

6.3.2 The City agrees to maintain its discharge permit in good standing throughout the term of this Agreement. If discharge permit regulations change such that the City is required to perform upgrades to its system in order to maintain its discharge permit in good standing, the District shall share equally in the costs.

7.0 SEWER ORDINANCE

Prior to the first use of the Wastewater Pumping Station, the District shall adopt a sewer ordinance regulating discharges into the District System, which shall be substantially similar to the City's ordinance and shall be substantially in the form attached hereto as Exhibit D. The District agrees to amend its ordinance as necessary from time to time, upon request of the City, to ensure that the District's sewer ordinance and the City's sewer ordinance remain substantially similar. The District's sewer ordinance shall not be more restrictive or limiting in respect of discharge into the District System than the City's sewer ordinance is in respect of discharge into the City System.

8.0 FURNISHING OF WASTEWATER TREATMENT SERVICES BY THE CITY; RESERVED CAPACITY

8.1.1 The City hereby agrees to accept, properly treat, and dispose of wastewater of the District in an amount of up to the Reserved Capacity, currently 55,000 gallons per day (Average Daily Flow), from the District.

The City and District hereby agree that the initial Reserved Capacity of 55,000 gallons per day (Average Daily Flow) shall be reassessed after the initial 10 years of this agreement and adjusted to reflect the actual average daily usage over the previous 2 years of service. The adjusted Reserved Capacity will include an additional 10% of the previous two-year average. The reassessed Reserved Capacity will remain in effect for the remaining 20 years of this agreement.

8.1.2 The District hereby agrees to pay the Monthly Charge as described in Section 11.1 below.

8.1.3 Each of the District Customers as of the date of this Agreement is included in the calculation of the Reserved Capacity.

8.1.4 The District shall not be allowed to sell any excess or unused capacity of the City Plant available to the District System without the prior written consent of the City.

8.1.5 The District hereby agrees that any connections to the District System, although within the Reserved Capacity, will be made in accordance with Section 12 of this agreement.

9.0 INSURANCE AND INDEMNIFICATION

9.1.1 The District shall carry and maintain property and liability insurance on the Project and the District System in such amounts as normally maintained by similar sized County sewer districts and shall name the City as an additional insured to the extent the District's insurance policy reasonably allows the naming of a City as an additional insured. The City shall carry and maintain property and liability insurance on the City System and the City Plant in amounts customarily carried by comparable sized Montana cities, and shall name the District as an additional insured to the extent the City's insurance policy reasonably allows the naming of a water and sewer district as an additional insured. The District and the City agree to provide proof of such insurance annually to each other.

9.2.2 The District will indemnify, hold harmless and defend the City and its agents, principals, and employees from and against all claims, demands, damages, costs, expenses, losses,

liability (including liability where activity is inherently or intrinsically dangerous), judgments, defense expenses, and attorneys' fees arising out of or resulting from the District's wrongful acts, errors, omissions, or negligence or from the District's failure to comply with the requirements of this Agreement or with any federal, state or local law applicable to its performance under this Agreement.

9.2.3 The City will indemnify, hold harmless and defend the District and its agents, principals, and employees from and against all claims, demands, damages, costs, expenses, losses, liability (including liability where activity is inherently or intrinsically dangerous), judgments, defense expenses, and attorneys' fees arising out of or resulting from the City's wrongful acts, errors, omissions, or negligence or from the City's failure to comply with the requirements of this Agreement or with any federal, state or local law applicable to its performance under this Agreement.

10.0 ANNEXATION

Pursuant to Title 7, Chapter 13, Part 4314, MCA, the City will require as a condition to initiate sewer service to the District that any property owner who connects to the District System consent to annexation of the tract of property served by the City through the District System. Although the City does not intend initially to annex the properties located within the District it will require the execution of a recordable Petition for Annexation form and a Consent to and Waiver of Right to Protest Annexation form ("Annexation Forms") from each District property owner seeking to connect their tract or parcel. Upon execution of the Annexation Forms, the City shall file a true and correct copy with the Lewis & Clark County Clerk and Recorder. These recorded Annexation Forms shall create a covenant that will run with and be binding upon the title of the said real property, and shall be binding upon the heirs, assigns, successors in interest, purchasers, and any and all subsequent holders or owners of the real property. The format of these forms will conform to the standard as attached hereto and made a part hereof as Exhibit "E".

The District specifically agrees to present to the City, prior to commencement of any construction of the District System, fully executed Annexation Forms from each of those District property owners seeking to connect their properties to the District System during the initial construction of the District System. The District further agrees to require any District property owner seeking to connect their tract in the future, under Section 12.0 of this agreement, to provide the fully executed Annexation Forms prior to and as a condition of that owner's connection to the District System. The District additionally agrees to promptly transmit the executed Annexation Forms to the City for recording with the Lewis & Clark County Clerk & Recorder, along with a payment to the City for any recording fees it may incur.

Failure of the District to abide by the provisions of this section shall constitute an event of default as described in Section 13.1.1.5 and shall result in termination of this agreement as described in Section 13.2.

11.0 CHARGES

11.1 DISTRICT MONTHLY CHARGE AMOUNT

The District agrees to pay to the City monthly an amount equal to the number of residential and equivalent commercial customers within the district that are hooked up to use the City's System multiplied by a flat monthly charge for each equivalent residential customer, based on residential customers average water use of 200 gpd in December through February (an "ERC"). The following is an example of the charge at full build out in the District with the current monthly charge per ERC of $66.40 per month.

Customer Class		Number of ERC	Flat Monthly Charge	Total
Residential	Single Family Homes – 110	110	$ 66.40	$ 7,304.00
	Duplexes – 62 x 2 ERC each	124	$ 66.40	$ 8,233.60
Commercial	(Gas Station, Convenience Store) x __ ERC each	2	$ 66.40	$ 132.80
			District Monthly Charge	$ 15,670.40

11.1.1 Rate Schedule:

Customer Class	"Equivalent Residential Customer" Billing Factor	Rate Structure	Monthly Charge
Residential	1.0	Flat rate	**$66.40**
Commercial	Q/200	Flat rate	$66.40 x 2 (ERC Billing Factor) = **$132.80**

Where: Q (400 gallons) is the average daily metered water usage (in gallons) for commercial customers similar in size, number of bathrooms, business use and water or wastewater use as proposed in this agreement currently receiving water service in East Helena over the consecutive months of December 2016, January 2017, and February 2017; and 200 is the average daily metered water usage (in gallons) for a single residence. See Exhibit F for examples. The proposed commercial user in the District will be charged based on the above formula, but will have an opportunity to negotiate with the City the appropriateness of the similarity of the businesses used in the comparison.

11.1.2 Residential: Residential customers shall be charged using a flat rate water usage structure of two hundred (200) gallons, which is an average of East Helena residential, metered water consumption during winter months.

11.1.3 Commercial: Commercial customers rates shall be determined by multiplying an equivalent residential customer billing factor, determined as described in Exhibit F and

described in 11.1.1, by the flat rate residential wastewater service charge in accordance with the sewer service rate schedule (currently, $66.40 per month) adopted and updated from time to time by the city council.

11.1.4 Equivalent Residential Customer Billing Factor: The "Equivalent Residential Customer" Billing Factor is determined by an average of the daily metered water usage of residential customers currently receiving service within East Helena during winter months (December 2016, January 2017, and February 2017).

11.2 Monthly Billing and Penalty Charge Amount

A flow meter will be installed at the District's Wastewater Pumping Station to provide flow meter readings and measure the District's conformance with the Reserved Capacity limit. The meter will be continuously recording with both instantaneous readings and totalized flows for use in billing. Totalized flow readings will be taken from this flow meter and utilized by the City for purposes of measuring the Average Daily Flow and Reserved Capacity limits calculating and billing the Monthly Charge as described above. For any wastewater flow volume above the Reserved Capacity as calculated on a monthly average (currently 55,000 gpd x 365 days = 20,075,000 gpd ÷ 12 = 1,672,916 monthly in gallons of Reserve Capacity), the District agrees to pay the City an amount equal to $0.01815/per gallon for usage in excess of the 1,672,916 gpm ("Penalty Charge").

The City will bill the District the Monthly Charge and any Penalty Charge in arrears. The District shall pay the Monthly Charge and any Penalty Charge to the City within [30] days of receiving such bill.

11.3 Procedure for Rate Increase

The City may adjust the initial agreed-to rate structure in accordance with Title 69, Chapter 7, Part 1, MCA, and agrees to comply with Title 69, Chapter 7, Part 1, MCA in connection with any proposed increase within the rate structure and Monthly Charge. In addition, the City shall give the Board of the District notice and the opportunity to comment on any proposed increases to the rate structure and Monthly Charge. The Board of Directors of the District and its consultants will be afforded the opportunity to review all materials that the City has available that relate to any proposed increase and the Board will have the full opportunity to provide to the City information and data in response to a proposed increase, which the City shall accord reasonable consideration in any proposed increase. Any proposed increase in the rates underlying the Monthly Charge by the City that would cause the rates and charges imposed by the District for use and availability of the District System to increase will go into effect no sooner than forty-five (45) days or later than sixty (60) days after the City's adoption to allow the District time to implement an increase in its rates and changes and collect the increased rates and charges. The City acknowledges that an increase in the District's rates and charges will take at least one month to implement and an additional month to collect. At no time shall the District be responsible for the City's existing debt, debt service, or operation and maintenance cost not related to the City Plant.

The City will make available to the District at all reasonable times upon request by the District the books and records of the City to confirm all factors that are associated with the Monthly Charge. If it is determined that the amount of the Monthly Charge exceeds the proper amount of that charge as calculated in accordance with this Agreement, subsequent billing for the Monthly Charge will be reduced accordingly to offset as soon as practicable the additional and improper amount charged to the District.

11.4 District's Obligation to Collect Payment From District Users

The City will not bill, or attempt to collect from, individual District Customers. The City will send bills reflecting charges payable under this Agreement to the attention of the District at an address provided by the District, as may be updated from time to time by the District by notice to the City. The District will collect the charges and, upon a determination that they are properly calculated in accordance with this Agreement, pay them monthly to the City and shall pay the City the entire amount due as calculated in accordance with this Agreement each billing cycle, regardless of whether the District was able to collect from its users.

12.0 INCREASED USE IN DISTRICT

Subject to applicable rules, regulations, process, and as long as the Reserved Capacity is not exceeded, and the written consent of the City Council is obtained, the District from time to time may consider providing wastewater services within the District's boundaries to additional users not already described in the District's anticipated users in the Reserved Capacity. Within the first ten years of this agreement, if the District has not yet reached the Reserved Capacity and demonstrates to the City's reasonable satisfaction that the proposed expansion in use will not cause the then-existing Reserved Capacity to be exceeded, the consent of the City is expected to be granted, provided the District is then in compliance with this Agreement and the additional users comply with the annexation provisions contained in Section 10. After the first ten years of this agreement any additional connections to the District System, even within the Reserved Capacity, shall be requested in writing by the District and may be approved by the City Council at its complete discretion. Any expansions of the District System that in the Parties' reasonable projections would cause the District to exceed its then-existing Reserved Capacity will be granted by the City only upon mutually agreeable amendments to the Agreement.

Persons proposing to connect to the District System after completion of the Project shall pay such fees and charges as may be determined by the District at the time of application for connection, and shall be required to provide the District with an executed recordable consent to annexation and waiver of any right to protest annexation as referenced in Paragraph 10 above as a condition of any connection to the District System. Such fees shall be used or reserved for any reasonable purpose of the District, including, without limitation, to pay repair or replacement costs of the District System or to purchase additional capacity, if necessary, in the City Plant. Nothing herein shall be considered a guarantee by the City that the District will be allowed any capacity beyond the Reserved Capacity. Any capacity in addition to the Reserved Capacity may be provided to the District in the sole discretion of the City.

Connections to the District system will not be strictly prohibited nor permitted by this Agreement but must be approved by both the City Council and the District.

Nothing in this Agreement binds the City or the District to permit expansion or guarantees permission to connect any subsequent connections, or any capacity above the Reserved Capacity.

13.0 TERMINATION.

13.1 EVENTS OF DEFAULT

13.1.1 The following are Events of Default by the District under this Agreement:

13.1.1.1 Failure to pay the Monthly Charge and/or Penalty Charge as calculated in accordance with the terms and conditions of this Agreement within [30] days of receiving a bill for such Monthly Charge and/or Penalty Charge from the City.

13.1.1.2 Exceeding Reserved Capacity for more than any two (2) months in a twelve (12) month period after Notice of an exceedance is provided to the District by the City.

13.1.1.3 Additional connections or expansions of the District without prior written consent of the City Council.

13.1.1.4 Failure to timely maintain, operate, and repair the District system in compliance with Section 6.1.2 of this agreement

13.1.1.5 Failure to secure recordable consent to and waiver of right to protest annexation documents from the District property owners as a condition of connecting to the District System.

13.1.1.6 Failure to commence construction on the District System within two years of the execution of this agreement.

13.1.2 The following are Events of Default by the City under this Agreement:

13.1.2.1 Failure to maintain the City Plant's discharge permit in good standing;

13.1.2.2 Failure to maintain the City Plant or City System in good working order to the detriment of the District; and

13.1.2.3 Failure to reserve the Reserved Capacity for the District.

13.2 TERMINATION

13.2.1 This Agreement may be terminated prior to commencing construction of the Project by mutual written consent of the parties hereto.

13.2.2 This Agreement may be terminated by the City for Events of Default by the District as set forth above. The District must be given written notice (a copy of which must be sent to the Funding Agencies and DEQ). The City may terminate this Agreement only after holding a duly called and noticed public hearing, which the Board of Directors of the District is given notice of and the opportunity to attend and speak, and a majority of the City Council votes in favor. The District shall have up to two years following termination to make provisions for an alternate wastewater plan and shall be able to use the City Plant during that period of time, provided that the District continues to pay the Monthly Charge during that time. At the end of the two years, the City shall terminate the ability of the District to use the City Plant. If the District is not making timely payments of the Monthly Charge the City may terminate this agreement after ninety (90) days in accordance with the notice provisions herein described and then immediately terminate the District's ability to use the City Plant.

13.2.3 This Agreement may be terminated by the District for Events of Default by the City as set forth above. The City must be given two-years written notice (a copy of which must be sent to the Funding Agencies and DEQ) prior to termination of the Agreement for failure to provide wastewater treatment service. The District may terminate service only after holding a duly called and noticed public hearing, which the City Council of the City is given notice of and the opportunity to attend and speak, and a majority of the Board of Directors vote in favor.

13.2.4 Either party may request that mediation (the cost of which will be split by the Parties) be accomplished prior to the Notices described above.

13.3 REMEDIES

Either Party shall be entitled to any or all remedies available in law or at equity, including, without limitation, specific performance, injunctive relief, preventative relief, consequential damages, and attorney fees for prevailing parties.

14.0 AMENDMENT

Subject to the immediately following sentences of this Section 14, this Agreement may be amended only after a duly held and noticed public meeting identifying the proposed amendment has been held by both the City and the District and approved by a majority of the Board of Directors of the District and a majority of the City Council of the City.

15.0 FILING

The District Representative shall file this Agreement, once executed, with the Lewis and Clark County Clerk and Recorder and Montana Secretary of State pursuant to Section 7-11-107, MCA.

16.0 MISCELLANEOUS

16.1.1 Headings. The headings used herein are for convenience only and shall not be deemed to be relevant in resolving any question of interpretation or construction of any provision contained herein.

16.1.2 Entire Agreement. The parties intend that the terms of this Agreement shall be the final expression of their agreement with respect to the subject matter hereof and may not be contradicted by evidence of any prior or contemporaneous agreement. The parties further intend that this Agreement, together with the exhibits attached hereto, shall constitute the complete and exclusive statement of its terms and that no extrinsic evidence whatsoever may be introduced in any judicial, administrative, arbitral, or other legal proceeding involving this Agreement.

16.1.3 Severability. If any term or provision of this Agreement shall, to any extent, be determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby, and each term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

16.1.4 Further Assurances The Parties will cooperate in executing all further documents necessary to effect the transactions discussed herein.

Signature authorized by District Resolution No. _____, adopted on _____.

RED FOX MEADOWS COUNTY WATER AND/OR SEWER DISTRICT

By Jenny Hamblin
Its President

Jenny Hamblin

ATTEST:
Barbara J. Hamblin
Secretary

Signature authorized by City Resolution No. _____, adopted on 2/6/2018.

CITY OF EAST HELENA

By _____
Its Mayor

ATTEST:
_____
City Clerk

CITY OF EAST HELENA CORPORATE SEAL MONTANA

Exhibit A – Legal Description of District & Map

Tract 4, Certificate of Survey No. 3268465 as filed for record in the office of the Lewis and Clark County, Montana.

Exhibit B – Project Description and Preliminary Plans

The proposed project will include design, construction and financing of a wastewater collection and transportation system in the Red Fox Meadows County Water and Sewer District (the "District") from the collection lines in the District wastewater system which will tie into the City's Plant via a lift station and force main and approximately 14,033 feet of 8-inch PVC sanitary sewer mains and 71 precast concrete manholes that will gravity flow to the lift station located adjacent to Musselshell Road near the intersection of Fishtail Way. From this lift station wastewater will be pumped via 14,165 feet of 6-inch PVC force main to the City's Plant.

A flow meter will be installed at the Point of Connection to provide flow meter readings. The meter will be continuously recording with both instantaneous readings and totalized flows for use in billing. Totalized flow readings will be taken periodically from this flow meter and provided to the City no less than monthly for purposes of billing.

Exhibit C – Reserved Capacity and Wastewater Flow Definitions

Reserved Capacity

The City shall reserve the capacity for 55,000 gpd (Average Daily Flow) at the City Plant for the District. The District wastewater flow will be discharged into the City's Wastewater Treatment Plant at the Connection Point.

For purposes of determining capacity and availability, the term Average Daily Flow shall be defined as: *"The average flowrate occurring over a 24-hour period based upon annual flowrate data"*, and calculated as follows:

Example:

Total Annual Flow (V) = 20,075,000 gallons

Average Daily Flow (Q_{ave}) = 20,075,000 gallons/365 days = 55,000 GPD

Exhibit D – Proposed District Sewer Ordinance

Proposed Rules and Regulations for Construction, Operation, Maintenance, Use and Availability of Red Fox Meadows County Water/ Sewer District Wastewater System
Originally Approved _____
The Board of Directors of the Red Fox Meadows County Water/ Sewer District adopt by Resolution No. _____ these Rules and Regulations regulating the public system, individual wastewater treatment systems, the installation and connection of sewer laterals, and the discharge of waters and wastes into the sewage system.
This adoption of Rules and Regulations is pursuant to the authority granted to the Board under § 7-13-2218, MCA.

ARTICLE I – TITLE, OTHER APPLICABLE LAWS/RULES AND DEFINITIONS

Section 101 TIITLE. This document and all revised versions of this document shall be known and cited as: THE RULES AND REGULATIONS FOR THE RED FOX MEADOWS COUNTY WATER AND/OR SEWER DISTRICT WASTEWATER SYSTEM.
Section 102 OTHER LAWS/RULES INCORPORATED BY REFERENCE. This document and all revised versions of this document incorporate by reference the document entitled "_____" adopted by the District on _____, as amended from time-to-time.
Also incorporated by reference are all rules and regulations adopted by Lewis and Clark County, including but not limited to THE REGULATIONS GOVERNING THE ON-SITE TREATMENT OF WASTEWATER IN LEWIS AND CLARK COUNTY and all Montana statutes governing County Water/Sewer Districts, including but not limited to § 7-13-2101 through § 7-13-2251, MCA.

Also incorporated by reference are all the rules and regulations included in CITY CODE OF EAST HELENA TITLE 7 HEALTH AND SANITATION, Sections 7-3-1 Definitions, 7-3-5 Use of Public Sewers, and 7-3-11 Pretreatment of Industrial Wastewaters.

This document and all revised versions of this document are intended to be a living document insofar as the other laws/rules which are incorporated; that is, as the District's bylaws, rules of Lewis and Clark County and statutes of Montana are revised, the revised versions become the bylaws, rules, and law incorporated herein.

Section 103 DEFINITIONS. Unless the context specifically indicates otherwise, the meaning of terms used in these rules and regulations are as follows:

"BEDROOM" means any room or living space that can be used for the purpose of sleeping that includes a doorway and closet.

"BOARD" means the Board of Directors of the Red Fox Meadows County Water and/or Sewer District.

"BOD" means the quantity of oxygen utilized in the biochemical oxidation of organic matter in five (5) days at 20·C, expressed as milligrams per liter (mg/l). Quantitative determination of BOD shall be made in accordance with procedures set forth in "Standard Methods"

"BUILDING DRAIN" means that part of the lowest horizontal piping of a drain system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer lateral beginning outside of the building wall.

"CHANGE IN USE" means to change the use of any existing structure so as to cause the EDUs to increase or decrease.

"City" means the City of East Helena, Montana.

"DEPARTMENT" means the Department of Environmental Quality provided for in 2-15-3501, MCA.

"DISTRICT" means the Red Fox Meadows County Water and/or Sewer District No.D227155 created pursuant to Title 7, Chapter 13, Parts 22 and 23, MCA.

"EASEMENT" means an acquired legal right for the specified use of land owned by others.

"EDU" means equivalent dwelling unit, and is the average characteristics of the single-family in residences within the District's service area. One EDU means a common characteristic of flow from a typical single family 1 to 4 bedroom residence
Average daily sewage flow per EDU = 200 gpd –

"EFFLUENT" means the outflow of treated sewage from the wastewater treatment facilities.

"FLOATABLE OIL" is oil, fat or grease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. Wastewater shall be considered free of floatable oil if it is properly pre-treated and does not interfere with the collection system.

"GARBAGE" means the animal and vegetable waste resulting from the handling, preparation, cooking, and serving of foods.

"INCOMPATIBLE POLLUTANTS" means wastewater containing pollutants that will adversely affect the wastewater treatment facilities or disrupt the quality of wastewater treatment if discharged to the wastewater treatment facilities.

"INDIVIDUAL WASTEWATER TREATMENT SYSTEM" means any privy, privy vault, septic tank, drain field, cesspool, or other individual facility for the treatment or disposal of wastewater.

"INDUSTRIAL WASTE" means a waste substance from the process of business or industry or from the development of any natural resource, together with any sewage that may be present.

"LATERAL STUB" means a part of the public system which begins as a service "T" from the sewer main line and ends at the lot line of the property being serviced.

"LESSEE" means one who holds real property through a lease agreement with the owner for a term that exceeds two (2) years.

"MASTER PLUMBER" means a person who is a holder of a master plumber license issued pursuant to Section 37 -69 -305, MCA.

"MAY" is permissive (see "shall").

"MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) PERMIT" means a document issued by the State of Montana which establishes effluent limitations and monitoring requirements for the municipal wastewater treatment facility.

"NATURAL OUTLET" means any outlet, including foundation drains, storm sewers or storm sewer overflows, into a water course, pond, ditch, lake or other body of surface water or ground water.

"NORMAL DOMESTIC STRENGTH WASTEWATER" means wastewater with concentrations of BOD no greater than 190 mg/l, suspended solids no greater than 210 mg/l, phosphorus no greater than 7 mg/l and TKN (Total Kjeldahl Nitrogen) no greater than 25 mg/l.

"OPERATION, MAINTENANCE & REPLACEMENT COSTS (OM&R)" shall include all costs associated with the operation and maintenance of the wastewater treatment facilities including administration, and expenditures for permitting, obtaining and replacing equipment, accessories or appurtenances, lab fees, etc. which are or become necessary during the useful life of the wastewater treatment facilities to maintain the capacity and performance of the public system. OM&R shall be determined from time to time by the Board.

"OTHER WASTES" means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, night soil, oil, grease, tar, heat, chemicals, dead animals, sediment, wrecked or discarded equipment, radioactive materials, solid waste, and all other substances that may pollute state waters.

"PARAMETER" means a physical, biological, or chemical property of water as a determinant of the quality of the water.

"PERMIT" means a public system connection permit issued by the District

"PERSON" means any individual, firm, company, association, partnership, firm, institution, society, corporation, group, and also includes the state and any political subdivision of the state, or other entity.

"pH" means the negative logarithm to the base 10 of the hydrogen-ion concentration. The concentration is expressed in moles of hydrogen ions, in grams per liter of solution. Neutral water, for example, has a pH value of 7 and a hydrogen-ion concentration of 10^{-7}.

"POLLUTION" means the discharge, seepage, drainage, infiltration, inflow, or flow of liquid, gaseous, solid, radioactive or other substance into state water that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, or welfare, to livestock, or to wild animals, birds, fish, or other wildlife.

"PUBLIC SYSTEM" means a sewage collection system controlled by the District including any devices and systems used in the collection, conducting, storage, disposal of sew age and industrial waste. The systems include sewage systems, pipes and equipment used to convey sewage into the City's Wastewater Treatment System to the City's wastewater treatment facility.

"RATES AND CHARGES" means a charge levied on users of the public system for payment of: operation, maintenance, and replacement costs (OM&R), and other expenses or obligations of said facilities.

"REMODEL" means to add on to by means of construction, or reconfigure any existing structure so as to increase or decrease the EDUs of the structure.

"SEWAGE" means water-carried waste products from residences, public buildings, institutions, or other buildings, including discharge from human beings or animals together with ground water infiltration and surface water inflow (I&I).

"SEWAGE SYSTEM" means a device for collecting or conducting sewage, industrial wastes, or other wastes to an ultimate treatment or disposal point.

"SEWER EXTENSION" includes, but is not limited to: sewer laterals, mains, trunks, and interceptor lines, including associated manholes, when that equipment is intended to expand service and/or when that equipment will connect to the District's existing wastewater collection system. "Sewer extension" does not include the individual sewer service connections that were installed during the original construction of the District's system.

"SEWER LATERAL" means a private sewer service line which begins immediately outside of the foundation wall of any building or structure being served, and ends at its connection to the public system at the lateral stub, generally located at the lot line of the property being serviced.

"SEWER MAIN" means a sewer collector that is designed to convey sewage from more than one structure and has a diameter that is eight (8) inches or more in diameter.

"SHALL" is mandatory (see "May").

"SLUG" means any discharge of water or wastewater which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes, more than five (5) times the average twenty-four (24) hour concentration of flows during normal operation and/or adversely affects the public system.

"STANDARD METHODS" means the examination and analytical procedures set forth in the most recent edition of "Standard Methods for the Examination of Water and Wastewater"

published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation.

"STORM SEWER" means a drain or pipe for conveying water, ground water, and or subsurface water from any source.

"SUBSTANTIAL COMPLETION" is the stage in the progress of the work when the work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the owner can occupy or use the work or a portion thereof for its intended use.

"SUSPENDED SOLIDS" means total suspended matter that either floats on the surface of, or is in suspension in water, wastewater or other liquids, and that is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater" and referred to as non-filterable residue.

"UNITS OF GOVERNMENT" means local, county, state or federal governmental entities.

"UNPOLLUTED WATER" is water whose quality is equal to or better than the effluent criteria in effect or water quality that would not cause violation of receiving water quality standards and would not be benefited by discharge to the public system.

"WASTEWATER" means the spent water, and sewage of a community or person, but does not include septage, holding tank waste (including RV holding tank waste) and privy waste. Wastewater includes a combination of liquid and water-carried wastes from residences, commercial buildings, and institutions, together with any ground water and surface water that may be present.

"WASTEWATER TREATMENT FACILITY" means an arrangement of devices and structures for treating wastewater and sludge, which includes the outfall pipe line and structures. Also referred to as wastewater treatment plant or publicly owned treatment works.

ARTICLE II - USE OF THE PUBLIC SEWER SYSTEM

Section 201 DISTRICT BOUNDARIES-SERVICE AREA. The public system may only serve the residential and commercial, and industrial users located within the boundaries of the District as established by the Board pursuant to Title 7, Chapter 13, Parts 22 and 23, MCA and as described in the then current Interlocal Agreement between the District and the City of East Helena.

Section 202 PROHIBITIONS & LIMITATIONS.

A. East Helena City Code Section 7-3-5 Use of the Public Sewers is incorporated by reference.

Section 203 EXCEPTIONS. Nothing in these Rules and Regulations shall be construed as prohibiting any special agreement between the District and any person whereby a waste of unusual strength or character may be admitted to the wastewater collection system, either before or after pretreatment, provided that there is no impairment of the functioning of the City of East Helena's wastewater treatment facilities by reason of the admission of such wastes, and no extra

costs are incurred by the District without recompense by the person; and further provided that all rates and provisions set forth in these Rules and Regulations are recognized and adhered to.
Section 204 AUTHORIZATION OF WORK. No unauthorized person shall uncover, make any connections with or opening into, use, alter, or disturb the public system without first obtaining a permit from the District.
Section 205 PROTECTION FROM DAMAGE. No person(s) shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is part of the wastewater system.

ARTICLE III - CONNECTION PERMITTING AND REALLOCATION PROCEDURE

Section 301 ALLOCATION OF CAPACITY. The District, in consultation with engineers and the City of East Helena has entered into an Interlocal Agreement between the District and the City of East Helena dated _____. The Interlocal Agreement stipulates the maximum volume of wastewater per month that the District may discharge into the City's wastewater system, unless a penalty is paid for excess volume.
Section 302 CONNECTION TO THE PUBLIC SYSTEM. The owner or lessee of any new residential, commercial, industrial, condominium, recreational, apartment, or other development that generates wastewater and is located within the District is required to connect to the public system if an on-site wastewater disposal system cannot meet the current County Septic System regulations. The connection must be made within 180 days after date of official notice to do so provided that the public system is located within **200** feet of the property line and capacity is available as determined by the Board. The cost of connecting to the public system shall be at the expense of the owner or lessee and shall be done in accordance with the provisions of these Rules and Regulations.
Section 303 CONNECTION PERMIT/First Use Notification/Penalty. No person may connect to the public system, remodel, or change the use so as to increase the number of EDU's in an existing structure without first obtaining a written connection permit from the District that has been approved by the District. By acceptance of the Connection Permit the owner of the residential or commercial unit to be connected agrees to execute a Sewer Use Agreement and to notify the District in writing of the owner's initial actual use of the District's System within 5 days of the first use. Failure to so notify the District of such first use will be subject to a penalty of $_____ and an Order from the District of discontinued use. When the District is so notified of the first use, it will notify the City Clerk so that billing for such unit may start.
Section 304 APPLICATION FOR A CONNECTION PERMIT (NEW CONSTRUCTION). Any person who wishes to obtain a connection permit must submit a completed application on a form provided by the District. All permit applications shall be supplemented by the following information:
A. Construction Plans for review;
B. Applicable permits from units of government including but not limited to state or local building permits; and
C. Any other plans, specifications, or information considered pertinent by the Board.
Section 305 APPLICATION FOR A CONNECTION PERMIT (REMODELING). Any person who wishes to remodel an existing structure where the remodeling could result in a change in the wastewater produced by the site must also obtain a connection permit by submitting a completed application on a form provided by the District.

All increases must be approved by the District through its permitting process. Projects resulting in the possibility of increased wastewater production shall be reviewed by the Board and the EDU determination and subsequent rates and charges shall be reviewed and approved by the Board on a case by case basis.

Section 306 CONNECTION PERMIT APPROVAL. Complete connection permit applications and supplements required under Section 305 must be filed with the Board. The Board shall then have the authority to approve applications for sewer connections for projects. The Board must either approve or deny the application within sixty (60) days.

Section 307 CONNECTION PERMIT DENIAL. The Board may reject any application for a connection permit where such connection does not meet the requirements of these Rules and Regulations. If an application is denied, it must be returned to the applicant with the reasons for denial clearly stated. A permit may be denied by the Board for any of one the following reasons:

A. Applicant's property is not within the District's boundaries. However, the applicant may elect to undertake the legal process of a district boundary adjustment;

B. Public system has reached allowable allocation of capacity as defined in section 301;

C. Proposed connection fails to comply with regulations of other units of government; or

E. Any other information considered pertinent by the Board.

Section 308 CONNECTION PERMIT TERM & EXPIRATION. Upon approval by the Board, the connection permit shall be issued for a period of one (1) year for residential, small commercial, or small condominium projects (less than or equal to 2 EDU's), and two (2) years for larger commercial and condominium projects (greater than 2 EDU's). The Board, at its discretion, will consider longer permit terms for very large projects that are clearly shown to take longer than two years to construct. The applicant then has one year for residential or small commercial projects, and two years for large commercial projects from the date of receiving a valid connection permit to connect to the public system, and receive final inspection approval from the District. The applicant may request a permit extension by providing a written explanation of the reason for delay, projected timeline for the project, and the term of the requested extension to the District. An extension will only be granted for good cause shown. If construction has not commenced within one year from the date of permit issuance, the permit shall become null and void. The applicant must request an extension in writing explaining why an extension is needed. Once the written request has been received by the District, the Board has 60 days to either approve or deny the written request for good cause shown on a case by case basis. The permit shall remain in effect until the Board makes a decision.

Section 309 SYSTEM DEVELOPMENT FEE. Currently the District and the City of East Helena do not charge a system development fee to hook up to the Sewage System. The property owner will also be required to pay the required rates and charges as described herein upon substantial completion of their sewer service connection.

Section 310 OBLIGATION FOR COST OF SEWER CONNECTION. All costs and expenses incident to the installation and connection of the sewer lateral shall be paid by the owner, or the person making the connection. That person shall indemnify the District from any loss or damage that may directly or indirectly be caused by the installation of the sewer lateral. Such person shall be responsible for the cost of the sewer lateral from the building drain to the lateral stub at the property line. If no lateral stub has been installed to the lot line, then the owner shall be responsible for the entire cost of labor and materials of installing a lateral stub. The cost of operating and maintaining the sewer lateral shall also be paid by the owner or person making the connection. See Section 503.

ARTICLE IV - INDIVIDUAL ON-SITE WASTEWATER TREATMENT SYSTEMS

Section 401 INDIVIDUAL WASTEWATER TREATMENT SYSTEMS. Prohibition on Construction. Unless specifically authorized by Lewis and Clark County, a person shall not construct any individual wastewater treatment system within the boundaries of the District after the date of enactment of these Rules and Regulations.

Section 402 INSTALLATIONS. The type, capacities, location, and layout of an individual wastewater treatment system shall comply with all requirements of the Department, Lewis and Clark County, and all applicable plumbing code regulations. No septic tank or cesspool shall be permitted to discharge to any natural outlet. No statement contained in this section shall be construed to interfere with any requirement that may be imposed by applicable regulations of other units of government.

Section 403 OPERATION & MAINTENANCE. The owner shall operate and maintain the individual wastewater treatment system in a sanitary manner at all times, at no expense to the District.

ARTICLE V - PUBLIC SYSTEM RATE, FEE AND CHARGE METHODS

Section 501 POLICY. It is the policy of the District to obtain sufficient revenues to pay all costs of the operation and maintenance, (O&M) of the public system through a system of fees as defined in this Article. The method shall assure that each user of the wastewater treatment facilities pays a proportionate share of the cost of facilities.

Section 502 OBLIGATION FOR COST OF OPERATING/MANTAINING SEWER LATERAL. All costs and expenses incident to the operation and maintenance of a person's sewer lateral shall be paid by the owner, or the person making the connection. That person shall indemnify the District from any loss or damage that may directly or indirectly be caused by the operation and maintenance of the sewer lateral.

Section 503 RATES AND CHARGES. Rates and charges were initially set by the District on _____ by Resolution No._____, which is incorporated herein by reference. These rates and changes are based on information provided to the District by its consultants and public comments.

Rates and charges will only be billed to those lots connected to the District's wastewater system. Rates and charges consist of a combination of two parts. Part One is for the fees charged by the City of East Helena to the District to discharge the collected wastewater into the City of East Helena's wastewater system for treatment and disposal. Part Two is for the operation, repair and maintenance of the District's system.

The District has adopted the following method for determining rates and charges based on a residential wastewater user (herein called an equivalent dwelling unit or "EDU") being charged for 1 EDU. The Board determines the number of EDU's for each property and thusly the rate to be charged for each property connected to the system. The number of EDUs for each property is based on the number of connections or the estimated wastewater volume generated. Where two or more structures or connection points exist on one lot or property, each structure or living unit will be connected with a separate 4-inch service. Each 4-inch service shall be considered a separate EDU and the property charged accordingly.

PART ONE. Fees charged by the City of East Helena to the District to discharge the collected wastewater into the City of East Helena's wastewater system for treatment and disposal

are described in the Interlocal Agreement dated _____ and in the City of East Helena City Ordinance.

PART TWO. OPERATION, REPAIR AND MAINTENANCE.

The second portion of the rate includes those costs necessary to operate, repair and maintain the District's sewage system. This cost may be adjusted annually by the Board based on actual operating maintenance and repair expenses and those anticipated during the next year. This portion of the rate will be charged according to the number of EDU's for each connected property/lot. An amount of $_____ is required to be collected _____ for this purpose (this amount may be adjusted annually by the Board). The general formula for this portion of the rate for any given property/lot is:

_____

Example:

Lot __EDUs= *1*

Sum of connected EDUs within the System = ___

Total Annual O&M Cost for District= *$*_____

[_____ per month)

Total rates and charges consist of a combination of the two parts illustrated above. Part One is for the fees charged by the City of East Helena to the District to discharge the collected wastewater into the City of East Helena's wastewater system for treatment and disposal. Part Two is for a portion of the operation and maintenance of the District's system.

PART THREE. OTHER CHARGES.

A. If the District's monthly sewage use exceeds the monthly Reserve capacity, the City of East Helena will charge a penalty and the District will charge each EDU its prorata share of the penalty.

B. A late charge of 5.0% of the amount due for wastewater charges will be charged on accounts that are more than 30 days delinquent. In addition to the late charge, the District will charge 10% interest on a customer's unpaid wastewater bill balance that is over 30 days delinquent

Section 504 ESTABLISHING RATES, FEES AND CHARGES. All rates, fees and charges for the public system have been set and shall be set by the Board by separate Resolution following a properly noticed public hearing if fees are established or changed. The rates, fees and charges shall be reviewed as part of the annual budget process. However, a public hearing is not required for any cumulative rate increase of 5% or less if done in accordance with MCA 7-13-2275, requiring appropriate notice to all persons within the district.

Section 505 INDUSTRIAL POLLUTANTS. East Helena City Code Section 7-3-5 Use of Public Sewers in incorporated by reference.

Section 506 BILLING PRACTICE, COLLECTION & PENALTIES. Rates and Charges shall be billed monthly to the owner or occupant of the property served on the last day of each calendar month.

Section 507 PAYMENT OF RATES AND CHARGES. Rates and Charges are due and payable thirty (30) days after the billing date and become delinquent thirty one (31) days after the billing date.

Section 508 LATE PENALTY. The District shall apply the maximum allowable late payment penalty per month and shall be applied to all bills for public system services that, according to District records have not been paid prior to the delinquent date. Late penalties are established in the same separate Resolution establishing rates and charges.
Section 509 LIENS. Delinquent rates and charges under these Rules and Regulations may be collected with taxes on the property pursuant to Montana law, 7-13-2301, MCA.

ARTICLE VI - SEWER CONSTRUCTION & LATERAL CONNECTIONS

Section 601 CONNECTION INSPECTIONS. No person shall uncover, alter, disturb, tamper, or make any connections to the public system without authorization from the District. The person or contractor making a connection to the public system shall have the site prepared safe for inspection and must give the District at least two (2) business days advance notice when the sewer lateral, and/or sewer lateral stub is ready for inspection and connection to the public sewer. The connection shall be inspected, tested, and approved by a person authorized by the District prior to backfilling. No connection inspections shall be performed on Friday afternoons, weekends, or holidays.
Section 602 USE OF OLD SEWER LATERALS. Old sewer laterals may be used in connection with new buildings only when approved by the District after examination. Approval shall be in the form of a written letter from the Board to the owner or contractor.
Section 603 MATERIALS & METHODS OF CONSTRUCTION. All sewer laterals and sewer lateral stubs shall be constructed and laid in accordance with the State Law and Plumbing Code Requirements, or other applicable rules and regulations of the District. In the absence of code provisions, the materials and procedures set forth in applicable sections of the ASTM and WPCF Manual of Practice No. 9 shall apply.
Section 604 SEWER LATERAL GRADE. Sewer laterals shall be brought to the building at an elevation below the gravity sewage discharge pipe to provide a gravity flow connection to the sewer main in accordance with the Uniform Plumbing Code. In all buildings in which any building drain is too low to permit gravity flow to the public system, sewage shall be lifted by an owner provided and District approved method and discharged to the sewer lateral.
Section 605 SEWER LATERAL RELOCATIONS. If the owner or contractor installs a new sewer lateral stub to accomplish a gravity flow connection or for any other reason, the sewer lateral stub shall be exposed and abandoned if one has been provided to the property. Abandonment shall include cutting and capping the lateral. The abandonment must also be inspected by the District. All costs for sewer lateral abandonment and/or sewer lateral stub relocation shall be paid by the owner.
Section 606 STORM & GROUND WATER DRAINS. No person shall connect roof downspouts, exterior foundation drains, area-way drains, or other sources of surface runoff or ground water to the public system.
Section 607 SEPARATE CONNECTIONS. A separate and independent sewer lateral shall be installed for every building. The District will review on a case by case basis and may approve a multiple connection to a sewer lateral if it is not feasible to install an additional lateral.
Section 608 BARRICADES & RESTORATION. All excavations related to the public system shall be adequately guarded with barricades and lights to as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the District.

ARTICLE VII - SEWER EXTENSIONS

Section 701 SEWER EXTENSIONS. A person may not commence sewer extension work without prior approval of the Board. A person shall make an application for a sewer extension on a form provided by the District. All costs of new sewer extensions including but not limited to construction and engineering costs are the responsibility of the owner or developer. A completed sewer extension application must be submitted to the Board no later than 10 days before the next regularly scheduled Board meeting. The Board must either approve or deny the application within sixty (60) days. The completed extension application shall be supplemented with the following:

1 Initial sewer construction plans and specifications which have been designed and stamped by a professional engineer in the State of Montana;

2 Capacity analysis completed and stamped by a professional engineer in the State of Montana that verifies the collection and treatment system has adequate capacity to accommodate the projected wastewater flows;

3 Final or preliminary plat, whichever is applicable showing the configuration of parceled land to be served by the sewer extension;

4 Plans must show the proposed location of sewer mains, manholes, lift stations, and easements; and

5 Preliminary construction schedule and estimated cost of construction.

B. Preliminary Approval. If the application is approved by the Board, the Board shall notify the owner in writing that the application for sewer extension has been granted preliminary approval. Final approval is conditioned on plat and plan approval by the State of Montana, and other local units of government if applicable.

C. Final Extension Approval. If an application has preliminary approval from the District, and written evidence has been provided to the District that the State of Montana has approved the extension plans and specifications, the Board is authorized to notify the owner in writing of final extension approval as "Authorization to Proceed" prior to the start of construction.

D. Extension Application Denial. The Board may reject any application for a sewer extension where such extension does not meet the requirements of these Rules and Regulations. If an application is denied, it must be returned to the applicant with the reasons for denial clearly stated.

Section 702 MATERIALS & METHODS OF CONSTRUCTION. All sewer extensions shall be constructed in accordance with the Montana Public Works Standard Specifications, or other applicable rules and regulations of the District. In the absence of code provisions, the materials and procedures set forth in the applicable sections of the ASTM and WPCF Manual of Practice No. 9 shall apply. All engineering and sewer extension costs shall be paid by the developer. If the contractor finds deficiencies in the public system during the course of constructions, he shall notify the District of the problem. The District may pay costs to correct the problem. The District requires a pre-construction meeting with the developer, design engineer, and contractor before any work commences.

Section 703 CONSTRUCTION INSPECTION. Full time construction inspection is required by the District and shall be a condition of final acceptance by the District of the sewer extension. The District also requires a Professional Engineer responsible for the installation and inspection of the sewer extension, to certify in writing that the extension has been installed in accordance

with the plans and specifications. The City of East Helena has the right to inspect construction along with the District.

Section 704 PLAN MODIFICATIONS. Substantive modifications to sewer extension plans must be approved by the Department before construction commences. In addition, the developer must submit the design modifications to the District at the same time that plans are submitted to the Department for review.

Section 705 ACCEPTANCE & TRANSFER OF OWNERSHIP. Upon completion of the sewer extension, the District will accept the extension and allow connection to the public system if it meets the requirements of these Rules and Regulations. Final acceptance by the District shall be contingent on the following:

A. Where feasible, provide an unobstructed (20) twenty foot wide permanent easement to the District over the improvements for access, maintenance and repair. All applicable easements must be recorded at the Lewis and Clark County Clerk and Recorder's office at the developer's expense.

B. The developer must post security for the warranty period described in Section 706. The security may be in the form of either:

1 Bond in the amount of 10% of the construction cost of the utility improvement for a period sufficient to cover the warranty period described in Section 806. The District will hold the bond for a period of two (2) years from the date that the sewer extension is formally transferred to the District; or

2 Cash deposit in the amount of 10% of the construction cost of the utility improvement for a period sufficient to cover the warranty period described in Section 806. The District will hold the deposit in a segregated interest bearing account for two (2) years from the date of extension ownership conveyance.

3 Letter of Credit in the District's name in the amount of 10% of the construction cost of the utility improvement for a period sufficient to cover the warranty period described in Section 806. The letter of credit must be for two (2) years from the date of extension ownership conveyance.

C. TV inspecting all sewer mains according to section 02722.3.3.5 Montana Public Works Standard Specifications. A copy of all videotapes shall be furnished to the District. The District shall review the videotapes before final acceptance of the system.

D. One complete set of an as-built drawings showing all lateral stub locations both in paper copy and on computer diskette in a format that is compatible with AutoCAD version 12 (if computer designed), and all O&M manuals.

E. Transferring ownership of all sewer extension improvements to the District upon final inspection and acceptance by the District. The District will provide an "Agreement for Conveyance of Sewer Extension" to the developer which must be signed by the owner and the District. The District shall be responsible for recording the agreement.

Section 706 WARRANTY PERIOD. If within two (2) years of the date acceptance any work is found to be defective, the District shall be responsible for the repair or replacement of any defects at its sole discretion and may utilize the funds posted as security to pay for the repairs. However, if the costs of repair and/or replacement within the first two (2) years exceed the available funds posted as security, the developer and not the district shall bear the responsibility for those costs.

ARTICLE VIII – USE OF THE PUBLIC SEWERS

Section 801 USE OF THE PUBLIC SEWERS. The City of East Helena Code Section 7-3-5 Use of the Public Sewers is incorporated by reference.

ARTICLE IX - ENTRY ONTO PRIVATE PROPERTY FOR INSPECTION AND/OR MAINTENANCE

Section 901 RIGHT OF ENTRY. The Board or other duly authorized employee of the District, bearing proper credentials and identification, and in accordance with the provisions of these Rules and Regulations shall be permitted to enter all properties connected to the public system and easements for the purpose of inspecting, observing, testing, auditing for the purpose of billing, and/or maintenance of the system, with the owner being responsible for all maintenance costs of the sewer lateral, as provide in Section 502. The Board or other duly authorized employees are authorized to obtain information concerning processes which have been determined to have a direct bearing on the kind and source of discharge to the public system.

Section 902 LIMITATIONS ON RIGHT OF ENTRY. The Board or other duly authorized employee of the District must give reasonable notice to the owner or occupant of the property to be entered, the reasonableness of the notice to be determined by the immediacy of the concern. The entry, both in terms of extent of property entered and length of timeframe for entry shall be limited to the minimum required to carry out the requisite task.

Section 903 HOLD HARMLESS. The owner or the occupant shall be held harmless for injury or death of District employees, and the District shall indemnify the owner against loss or damage to its property by District employees and against liability claims and demands for personal injury or property damage asserted against the owner, except as such may be caused by negligence or failure of the owner to maintain safe conditions.

ARTICLE X - VIOLATIONS & PENALTIES

Section 1001 REFUSAL TO CONNECT. Any person who has executed an Agreement to connect to the District's System and thereafter breaches its terms by refusing or failing, without just cause, to connect a service line to that system, is subject to the District's choice of remedies. The District may either seek specific performance of the agreement (a court order to require hook-up) or assess damages commensurate with the damages incurred by the District.

Section 1002 ACCIDENTAL DISCHARGE. Any person found to be responsible for accidentally allowing a deleterious discharge into the public system which causes damage to the City's wastewater treatment facility, or incidents of unreported industrial discharges to the system shall be subject to Sections 1005 and 1006.

Section 1003 VANDALISM. No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance or equipment which is part of the public system.

Section 1004 INJUNCTION. The District may seek an injunction against any person violating any provision of these Rules and Regulations.

Section 1005 FINES & PENALTIES FOR VIOLATION. The District may seek a penalty not to exceed $1,000 per day for each violation, or six months imprisonment or both for the violation of any provision of these Rules and Regulations relating to local or federal wastewater pretreatment standards implemented in the Federal Water Pollution Control Act, 33 USC1251 through 1387.

Section 1006 LIABILITY TO DISTRICT FOR LOSSES. Any person violating any provision of these Rules and Regulations shall, in addition to any penalty or fine which may be assessed

against him/her, become liable to the District for any expense, loss or damage occasioned by reason of such violation which the District may suffer as a result thereof.

Section 1007 LIABILITY TO DISTRICT FOR NONPAYMENT OF MONTHLY SEWER CHARGE. Any person who has executed an Agreement to connect to the District's System has agreed to be liable for certain automatic penalties for non-payment of monthly sewer charges, as follows:

A. Nonpayment of any amount which is delinquent for more than thirty (30) days will result in a late charge of five percent (5%) of the delinquent amount.
B. Nonpayment of any delinquent amount (more than 30 days overdue) will result in a charge of ten percent (10%) per anum on the cumulative sum of all such delinquent amounts.
C. Nonpayment of any delinquent amount for a period of more than ninety (90) days will entitle the District to all other remedies and collection steps allowed by law, and those remedies include, but are not limited to the following procedures:

1. The District is entitled to install an elder valve on the person's sewer service line, the function of which is to shut off services to that property; and that in order to restore services, the person will be required to pay all delinquencies, penalties and interest, as well as the cost of installing the elder valve, and any other costs associated either with shutting off or restoration of services; and
2. The District is entitled to take the necessary steps under Section 7-13-2301 to have the county assess the entire amount owed by the person, including penalties and interest, as a tax against his real property; and
3. The District is entitled to institute suit against the person in any court of competent jurisdiction to recover all amounts due, including penalties and interest, etc.

ARTICLE XI - APPEALS

Section 1101 REQUEST FOR APPEAL. If the Board denies a connection permit application, the applicant may file a written request for reconsideration with the District within thirty (30) days after having been informed of the Board's decision to deny. The written request for appeal must include the reasons supporting the applicants request for reconsideration. The applicant may request to appear before the Board. The Board shall issue its final decision within sixty (60) days after receiving the request for reconsideration.

ARTICLE XII -VALIDITY

Section 1201 INVALIDATION CLAUSE. Invalidity of any section, clause, sentence or provision in these Rules and Regulations shall not affect the validity of any other section, clause, sentence or provision of these Rules and Regulations which can be given effect without such invalid part or parts.

Section 1202 AMENDMENT. The District, through its duly authorized officers, reserves the right to amend these Rules and Regulations in part or in whole whenever it may deem necessary.

ARTICLE XIII - EFFECTIVE DATE

Section 1301 DATE OF EFFECT. These Rules and Regulations shall become effective on the date that the Board adopts these Rules and Regulations.

Passed and adopted by the Board of Directors of the Red Fox Meadows County Water /Sewer District, Lewis and Clark County, State of Montana on _____, by the following vote:

Ayes: _____
namely_____

Nays: _____
namely_____

Approved this _____day of
_____,

Signed _____,
President

Attest:

Signed _____,
Secretary

Exhibit E – Annexation Forms

(E-1)

PETITION NO. _____

BEFORE THE CITY COUNCIL
OF THE
CITY OF EAST HELENA

PETITION FOR MUNICIPAL ANNEXATION

COME NOW the undersigned owner of the below described real property and respectfully petitions the City Council of the City of East Helena requesting municipal annexation of the following real property into the City of East Helena and to remove the following real property from any rural fire district:

Lot(s)…

consisting of approximately 00.00 acres of land.

The petitioner requesting annexation of the property described herein hereby agrees that immediately upon annexation of the land, all City of East Helena municipal services will be provided to the property described herein on substantially the same basis and in the same manner as such services are provided or made available within the rest of the municipality at the time of annexation.

Petitioner hereby agrees and consents to, and hereby votes "yes" pursuant to any constitutional or statutory requirement for voting on taxes or fees or other initiatives of a similar nature and hereby submits the real property described herein to municipal taxation and assessments including but not limited to sanitary sewer and water utility assessments in the same manner as other private property within the City is taxed and assessed for municipal tax, assessment, and utility service purposes.

Petitioner hereby states that there is no need to prepare a Municipal Annexation Service Plan for this annexation pursuant to § 7-2-4610, MCA, since the parties are in agreement as to the provision of municipal services to the property requested to be annexed.

Dated this _____ day of _____, 2017.

_____
Name

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this _____ day of _____, 2017, before me, a notary public for the state of Montana, personally appeared _____, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same.

In witness whereof, I have hereunto set my hand and affixed my notarial seal on the day and year first-above written.

_____

Printed typed name:

_____

Notary Public for the State of Montana
Residing at: _____ Helena, Montana
My Commission expires: _____

(E-2)

WAIVER OF PROTEST OF ANNEXATION

The undersigned as owner of the following real property:

Lot(s) .....

consisting of approximately 00.00 acres of land; and as a City of East Helena sewer "Service Recipient,' in consideration of the receipt of municipal sewer service, hereby waives any right to protest granted by any of the annexation laws of the State of Montana. In addition to waiving any right to protest, the Service Recipient agrees to execute any petition or other document required by any of the laws of the State of Montana or any of the ordinances of the City of East Helena in order to effect successful annexation of the above described property into the City of East Helena. The promise to execute shall include any petition of document necessary to withdraw or separate from any Rural Fire District.

The undersigned Service Recipient understands that annexation may occur under any one of the several statutory methods; the choice being in the sole discretion of the City of East Helena.

Upon execution of the waiver, the City of East Helena shall file a true and correct copy with the Clerk and Recorder of Lewis and Clark County, Montana. The Service Recipient fully understands that this agreement is binding upon any of their heirs, assigns, or successors in interest.

The Service Recipient hereby warrants full authority to enter into this waiver, either by virtue of ownership of the property free and clear of the interest of any other person or entity or by the express written approval of any other interest holder.

Failure of the Service Recipient to abide by the terms and conditions contained herein shall allow the City of East Helena to terminate municipal sewer service to any portion of, or all of the afore described real property.

Dated this ____ day of _____, 2017.

_____
Name
"SERVICE RECIPIENT"

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this _____ day of _____, 2017, before me, a notary public for the State of Montana, personally appeared _____, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that she/he executed the same.

In witness whereof, I have hereunto set my hand and affixed my notarial seal on the day and year first-above written.

_____

Printed typed name:

_____

Notary Public for the State of Montana
Residing at: _____ Helena, Montana
My Commission expires: _____

Exhibit F – Commercial Equivalent Residential Customer Billing Factor

Account	Customer Name	Usage Dec 16	Usage Jan 17	Usage Feb 17	Usage Dec - Feb	Q= sum/90	Billing Factor = Q/200	Billing Factor	Monthly charge
LAN116-00	TOWN PUMP (GAS/CASINO/NO CARWASH)	45,000	47,000	45,000	137,000	1,522.222	7.611	7.6	$505.38
MAIW410-00	TOWN PUMP (GAS/CASINO/CARWASH)	24,000	23,000	24,000	71,000	788.889	3.944	3.9	$261.91
					Average Q:	770.37			
					Average Billing Factor:	3.9			

The Commercial Billing Factor for commercial customers in the District will be determined at the time of the final hook-up and use of the commercial facility on the District's collection system. As described in Section 11.1, the Billing Factor is based on the monthly average of similar commercial customers in the City (for example, averages of gas stations or convenience stores or both) and their reported average monthly metered water usage in the months of the previous December, January and February, is divided by the ERC of 200 gpd times the flat monthly charge per ERC (currently $66.40) which average is then applied to the anticipated sewage use of a new gas station or convenience store in the District.

MEETING MINUTES
CITY OF EAST HELENA
REGULAR COUNCIL MEETING: 7PM
TUESDAY, February 6, 2018

COUNCIL MEMBERS PRESENT: Kit Johnson, Don Dahl, Mike Misowic, and Judy Leland

EXCUSED/ABSENT: Volunteer Fire Chief Troy Maness

PRESENT FROM CITY: Mayor James Schell, Clerk Treasurer Gena Berry, Acting Chief of Police William Harrington, City Attorney Peter Elverum and Public Works Director Scott St. Clair

OTHERS PRESENT: Cheryl Verbanac, Myrna Verbanac, Blaine Verbanac, Dave Jensen, Sally Nyland, Blair Verbanac, Jeremy Fadness, Sarah Nicolai, Michael Grover, Paul Jensen, Chris DeVerniero, Bryan Sandrock, Deryl Sandrock, Bob Murdo

PUBLIC HEARING CALLED TO ORDER / PLEDGE OF ALLEGIANCE: Mayor Schell called the public hearing to order at 7:00 pm. The Pledge of Allegiance was led by Councilmember Leland.

PUBLIC HEARING:

1. **Zoning Conditional Use Permit Application For A Casino & Sales Of Alcohol For On Premise Consumption At 119 South Lane Avenue –** Jeremy Fadness went over the site plan review then gave the staff report regarding the CUP. **Action:** Information Only
2. **Zoning Conditional Use Permit Application For A Casino & Sales Of Alcohol For On Premise Consumption At 119 South Lane Avenue –** Mayor Schell called for public comment in support. The petitioner, Brian Sandrock spoke in favor of the request. Realtor Ryan Stavnes spoke in favor of the request. Mayor Schell called for public comment opposed the request three times and received none. Mayor Schell called for public comments neutral to the request three times and received none. **Action:** Hear the Public
3. **Zoning Conditional Use Permit Application For A Casino & Sales Of Alcohol For On Premise Consumption At 119 South Lane Avenue –** Mayor Schell opened the floor to the Council for discussion. After Council discussion Mayor Schell asked Mr. Fadness and Clerk Treasurer Berry if there were any written comments submitted. None were received. No verbal public comments were given. **Action:** Councilmember Dahl made a motion to accept the request striking condition two which would limit hours of operation while the other casinos in the City operate 24 hours. Councilmember Johnson seconded. Motion carried unanimously.

PUBLIC HEARING:

1. **Ordinance 264 Prohibiting Nuisance Vegetation -** Mayor Schell presented the changes drafted by the City attorney since discussions during the last public meeting. Attorney Elverum explained the intent of the rewritten ordinance. **Action:** Information Only
2. **Ordinance 264 Prohibiting Nuisance Vegetation -** Mayor Schell asked for public comments in support of the revisions. Blaine Verbanac spoke in favor with the changes. David Jensen spoke in support also inclusive of the changes. He spoke to written comment submitted previously by Blaine Verbanac regarding unsigned intersections and visual obstructions. Mayor Schell asked for verbal support two more times. Receiving none he then called for public comment opposing the ordinance three times and received none. Mayor Schell called for public comments neutral to the ordinance three times and received none. No written comments were received other than Blaine Verbanac's afore mentioned included in the Council Packets. Sally Nyland asked a question about the language in the ordinance. **Action:** Hear the Public
3. **Ordinance 264 Prohibiting Nuisance Vegetation First Reading –** Mayor Schell opened the floor to the Council for discussion. Mayor Schell asked for a motion to approve the first reading of Ordinance 264 Prohibiting Nuisance Vegetation. **Action:** Councilmember Misowic made that motion. Councilmember Johnson seconded. Motion carried unanimously.

PUBLIC COMMENTS: None

PRESENTATION:
Montana Department of Transportation Highway 12 Viaduct Safety Project – Chris DeVerniero and Sarah Nicolai gave a presentation regarding upcoming safety measures involving a center median and street lighting on the viaduct.

APPROVAL OF MINUTES: The minutes of the January 16, 2018 Regular Council Meeting were reviewed for approval as presented. **Action:** A motion was made by Councilmember Leland to approve as presented. The motion was seconded by Councilmember Dahl. Motion carried unanimously.

CITY COURT REPORT:

None

MONTANA ENVIRONMENTAL TRUST GROUP/EPA UPDATE:

Last written report was dated May 16, 2017. The Collective Measure Study Report is expected soon. Action: None – Information only.

DEPARTMENTAL REPORTS:

City Clerk Treasurer: Clerk Treasurer Berry submitted a written report and spoke of the following items:

- Recent mechanical problems with the main copier in the administration office, the City received a quote for a new one.
- Mayor Schell highlighted the item on Clerk Treasurer's written report about Deputy Clerk Shannon and Kevin Ore of the Public Works Department working to clear up meter reading issues.

Police Department: Acting Chief Harrington submitted a written report and had a brief question and answer discussion with the Council.

Public Works Department: Public Works Director St. Clair submitted a written report and spoke of the following:

- East Clark Street Sewer District numbers are coming in low and will need monitoring and possibly adjusting to equate what City residents pay
- Snow and Ice removal

Volunteer Fire Department: Fire Chief Troy Maness was absent.

COMMITTEE REPORTS:

- Gazebo/Main Street Park Brick Committee- Mayor Schell gave a brief update and invited the public to the next meeting Friday February 23, 2018 at 3pm.

UNFINISHED BUSINESS:

1. **Review And/Or Approval Red Fox Meadows Water-Sewer District Interlocal Agreement –** Mayor Schell and Attorney Elverum reviewed the agreement and the most recent changes. Councilmember Dahl asked a few questions. David Jensen asked about plant capacity. **Action:** Councilmember Johnson made a motion to approve the agreement with the proposed changes. Councilmember Dahl seconded. Motion carried unanimously.
2. **ROW Committee Ordinance Update/Schedule –** Mayor Schell gave a review of the proposed order to submit ordinances for public hearings. The updates to the Method of Parking Ordinance will be presented to the Council at one of the next few meetings. No public comment. **Action:** Information only
3. **Jaycee Hall City Owned Building Legal Disposition/Sale Process –** Mayor Schell stated he is working on the public notice and obtaining a large sign to be placed at the site. No public comment. **Action:** Information Only
4. **Lewis & Clark County Sheriff Memorandum of Understanding –** Mayor Schell stated that this is still in the works. No public comment. **Action:** Information Only
5. **Post Office Parking Configuration –** Mayor Schell had met with the Post Master earlier in the day. The Post Master reportedly does not have an opinion on the parking matter. Mayor Schell indicated written comment received from Blaine Verbanac in favor of eliminating parking on the street side of the building. David Jensen asked if anyone has spoken to the actual property owner. Mayor Schell stated that he would do that. Blaine Verbanac reiterated that the portion in question is public right of way. David Jensen asked about the stakes at the site regarding placement and ownership. Sally Nyland asked about just letting snow pile there in the meantime.
   Action: Councilmember Johnson made a motion to table until hearing from the landowner. Councilmember Misowic seconded. Motion carried unanimously.

NEW BUSINESS:

1. **Lewis & Clark County Criminal Justice Coordinating Council East Helena Member –** Mayor Schell gave an overview of this Council and asked to be approved as the representative from the City of East Helena. No public comment. **Action:** Councilmember Johnson made a motion to approve Mayor Schell. Councilmember Leland seconded. Motion passed unanimously.

2. Resolution 499 Establishing the Salaries of the Mayor And Members of The City Council – City Attorney Elverum explained the process and history of this resolution. No public comment. **Action:** Councilmember Misowic made a motion to adopt resolution 499 establishing the rates of pay for Mayor and Council as discussed during the budget process. Councilmember Leland seconded. Motion carried unanimously.

MAYOR'S REPORT:

Mayor Schell reported on the following items:

- Handouts on new Gas Tax law
- Handout on Prickly Pear Creek Rewatering Project Final Report
- Handout letter from Elevated Property Investment letter to Council
- Handout invitation to a fundraiser for Montana Independent Living Project
- Handout Stairclimb information from Chief Maness
- City resident Bill Houston would like to give the City a quote for natural gas services through his employer, Big Sky Gas. No public comment.
- Out of the Darkness Walk fundraiser at Pizza Ranch Thursday March 1, 5-9pm
- Out of the Darkness Walk fundraiser at Taco Johns Thursday March 22, 5-7pm
- Attended the MLCT Board meeting
- Attended the Water Quality Protection District meeting
- Attended the Local Government Center Advisory Board meeting
- Working with Laura Erickson regarding TA grants
- Scott St Clair would like a member of the board on the Street Safety Committee

COUNCIL MEMBERS' REPORTS:

Don Dahl attended the open house at the new school and the MDT open house regarding the Viaduct.
Kit Johnson attended the MDT open house and the Brick Committee meeting
Judy Leland attended the open house at the school.
Mike Misowic attended the MDT open house.

LEGAL REPORT:

Attorney Elverum reported on:

- The birth of his new baby.
- Criminal court case working its way through District Court.
- Writing the RFP for the grants.
- Worked on a letter for PWD regarding water meter issues.

PAYMENT OF BILLS: In the packet for approval were claims 290386-290430 totaling $92,165.30. Councilmember Dahl made a motion to approve the claims. Councilmember Misowic seconded. Motion carried unanimously. On the tables and emailed to Council earlier in the day were claims 290431-290454 totaling $69,436.46. Councilmember Johnson made a motion to approve. Councilmember Misowic seconded. Motion carried unanimously.

SPECIAL ANNOUNCEMENTS:

1. Montana Department of Transportation Highway 12 Viaduct Safety Project Public Informational Open House, Project Overview at 3PM and 5:30PM, Tuesday, February 6, 2018, East Helena Fireman's Hall, 2 East Pacific (Behind Smith's Place)
2. East Helena Main Street Park Brick Committee Meeting, Friday, February 23, 2018, 3PM, City Hall Rm 110
3. East Helena Water Master Plan Public Meeting, Tuesday, February 27, 2018, 6PM, City Hall Rm 110
4. Department of Homeland Security Grants Bid Openings: City Hall Cyber Security System, East Helena Police Department Radios, & East Helena Volunteer Fire Department Radios, Wednesday, February 28, 2018, 3PM, City Hall Rm 110

MEETING SCHEDULE:

1. Scheduled East Helena Council Meeting, Tuesday, February 20, 2018, 7PM, City Hall Rm 110

ADJOURNMENT: Mayor Schell adjourned the meeting at 9:12.

APPENDIX B

TABLE 1: CITY OF EAST HELENA WASTEWATER GROWTH MODEL - 2022

					Residential			Commercial			
	Name	Map Label	Acres	Assumed Use	EDU/Acre	EDUs	Flow (Gal/Day)	EDUs	GPD/Acre	Flow (Gal/Day)	Total Flow (Gal/Day)
Existing (5 Years)	Vigilante Subdivision [1]	1	20	Residential	3.5	35	8,050				8,050
	Highland Meadows [1]	2	75	Residential	4.3	280	64,400				64,400
	Red Fox Meadows [1]	3	160	Residential	1.6	88	20,240				20,240
	4-Plexes on Plant Road	4	5	Residential	7.2	36	8,280				8,280
	Town Pump Property	5	40	Commercial				418	2,400	96,000	96,000
	East Fields Mixed Use	METG 1	50	Residential	3.0	150	34,500				34,500
	Prickly Pear Creek Corridor Mixed Use	METG 2	12	Residential	7.9	95	21,850				21,850
			8	Commercial				84	2,400	19,200	19,200
	Light Industrial/Commercial (Manlove/Highway 282)	METG 3	7	Commercial				31	1,000	7,000	7,000
	Light Industrial/Commercial (Manlove/Highway 282 North)	METG 4	25	Commercial				109	1,000	25,000	25,000
	Residential/Commercial (Highway 282 North)	METG 5	16	Residential	4.7	75	17,250				17,250
			2	Commercial				11	1,200	2,400	2,400
	Light Industrial (Highway 282 South)	METG 6	55	Commercial				240	1,000	55,000	55,000
	Industrial (Davy Spur/Smelter Road)	METG 7	3	Commercial				14	1,000	3,000	3,000
	Existing Subtotal					**759**	**174,570**	**907**		**207,600**	**382,170**
Proposed (5-15 Years)	Vigilante West	8	20	Residential	3.5	70	16,100				16,100
	La Casa Grande Estates	9	105	Residential	1.5	157	36,110				36,110
	Mason Property	11	12	Residential	2.5	30	6,900				6,900
			5	Commercial				22	1,000	5,000	5,000
	Gorsich Property (outside floodplain)	12	14	Residential	3.9	55	12,650				12,650
	East Fields Mixed Use	METG 1	270	Residential	3.0	810	186,300				186,300
			80	Commercial				418	1,200	96,000	96,000
	Residential/Commercial (Highway 282 North)	METG 5	48	Residential	4.7	225	51,750				51,750
			4	Commercial				42	2,400	9,600	9,600
	Light Industrial (Highway 282 South)	METG 6	60	Commercial				261	1,000	60,000	60,000
	Proposed Subtotal					**1,347**	**309,810**	**743**		**170,600**	**480,410**
Future (15-30 Years)	Seaver Park Addition	13	51.5	Residential	0.9	45	10,350				10,350
			8.5	Commercial				37	1,000	8,500	8,500
	Town Pump Remainder	10	60	Residential	3.3	200	46,000				46,000
			75	Commercial				783	2,400	180,000	180,000
	East Fields Mixed Use	METG 1	310	Residential	3.2	1,000	230,000				230,000
			30	Commercial				157	1,200	36,000	36,000
	Future Subtotal					**1,245**	**286,350**	**977**		**224,500**	**510,850**

Growth Subtotal:	**1,373,430**
Current WWTP Flow:	**241,400**
Total WWTP Flow:	**1,614,830**
Existing EDU's:	**1,291**
Commercial EDU's:	**2,627**
Residential EDU's:	**3,351**
Total EDU's:	**7,269**

[1] Number of EDUs remaining to be connected after FY22.

APPENDIX C

MANLOVE LIFT STATION AND PIPING IMPROVEMENTS
COST ESTIMATE
January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	**1**	**LS**	**$ 189,271.50**	**$ 189,271.50**
Manlove Lift Station Site Civil	**-**	**-**	**-**	**$ 363,375.00**
Building Excavation (assume 22'x22'x5')	125	CY	$ 75.00	$ 9,375.00
Wet Well Excavation (10' MH, 25' deep)	415	CY	$ 110.00	$ 45,650.00
Soils Disposal	1	LS	$ 30,000.00	$ 30,000.00
Structural Backfill (Building and Precast Wetwells)	320	CY	$ 115.00	$ 36,800.00
10' Dia. Precast Wetwell (Base Slab Included)	2	EA	$ 38,000.00	$ 76,000.00
Wet Well Shoring	1	LS	$ 25,000.00	$ 25,000.00
8-inch Buried DI Piping	60	LF	$ 205.00	$ 12,300.00
Hatches (54"x36")	2	EA	$ 6,500.00	$ 13,000.00
4-Inch Sewer Service with Connection (Floor Drains)	30	LF	$ 150.00	$ 4,500.00
Chain Link Fencing	280	LF	$ 100.00	$ 28,000.00
Seeding mulching and fertilizing	1	LS	$ 5,000.00	$ 5,000.00
Concrete Flatwork	25	CY	$ 1,000.00	$ 25,000.00
Finish Grading	1	LS	$ 10,000.00	$ 10,000.00
Base Course Gravel (assumed approach construction)	75	SY	$ 50.00	$ 3,750.00
Asphalt Drive (assumed approach)	75	SY	$ 120.00	$ 9,000.00
New Water Service	1	LS	$ 5,000.00	$ 5,000.00
Utility Power and Gas	1	LS	$ 25,000.00	$ 25,000.00
Manlove Lift Station Structural	**-**	**-**	**-**	**$ 182,340.00**
Building Base Slab (5-inch)	8	CY	$ 1,200.00	$ 9,600.00
Building Foundation Walls and Footings	9	CY	$ 1,500.00	$ 13,500.00
Building Construction (22'x22')	484	SF	$ 210.00	$ 101,640.00
Interior Framing and Metal	880	SF	$ 20.00	$ 17,600.00
Building Roof	500	SF	$ 50.00	$ 25,000.00
Garage Door	1	EA	$ 15,000.00	$ 15,000.00
Manlove Lift Station Mechanical	**-**	**-**	**-**	**$ 366,000.00**
Pump Equipment Package (with Control Panel)	1	LS	$ 105,000.00	$ 105,000.00
Pump Installation	1	LS	$ 60,000.00	$ 60,000.00
10-Inch DI Piping	1	LS	$ 75,000.00	$ 75,000.00
10-inch Plug Valve	2	EA	$ 9,000.00	$ 18,000.00
10-inch Check Valve	2	EA	$ 10,000.00	$ 20,000.00
RPZ Valve	1	EA	$ 3,500.00	$ 3,500.00
Air Powered Mixers	1	LS	$ 15,000.00	$ 15,000.00
Magnetic Flow Meter	1	EA	$ 20,000.00	$ 20,000.00
HVAC	1	LS	$ 15,000.00	$ 15,000.00
Building Drainage (Floor Drains and Piping)	1	LS	$ 7,500.00	$ 7,500.00
Plumbing	1	LS	$ 12,000.00	$ 12,000.00
Painting	1	LS	$ 15,000.00	$ 15,000.00
Manlove Lift Station Electrical	**-**	**-**	**-**	**$ 265,000.00**
Electrical Service (480/277 Wye)	1	LS	$ 25,000.00	$ 25,000.00
Install and Wire Mfr Control Panel	1	LS	$ 20,000.00	$ 20,000.00
General Building Wiring and Power Feeds	1	LS	$ 40,000.00	$ 40,000.00
Level Control System Install	1	LS	$ 15,000.00	$ 15,000.00
Emergency Generator	1	LS	$ 60,000.00	$ 60,000.00
Handholes	1	LS	$ 5,000.00	$ 5,000.00
VFD	2	EA	$ 25,000.00	$ 50,000.00
SCADA	1	LS	$ 50,000.00	$ 50,000.00
Manlove Lift Station Piping Alignment - From Manlove Lift Station to Cleveland Ave	**-**	**-**	**-**	**$ 701,000.00**
12-inch PVC Gravity Main	1580	LF	$ 250.00	$ 395,000.00
48" Dia. Manhole	5	EA	$ 8,000.00	$ 40,000.00
10-inch PVC Force Main	750	LF	$ 240.00	$ 180,000.00
Connect to Existing 15-inch on Cleveland Ave.	1	LS	$ 15,000.00	$ 15,000.00
Forcemain Casing Connection	2	EA	$ 8,500.00	$ 17,000.00
Asphalt Removal and Replacement	450	SY	$ 120.00	$ 54,000.00
Permitting	**1**	**LS**	**$ 5,000.00**	**$ 5,000.00**
Traffic Control	**1**	**LS**	**$ 10,000.00**	**$ 10,000.00**
Sub Total Construction Cost - 2023				**$ 2,082,000.00**
Admin 5%				$104,100.00
Contingency @ 15%				$312,300.00
Engineering @ 18%				$374,800.00
Total Project Cost				**$ 2,873,200.00**

MANLOVE AREA GRAVITY PIPING IMPROVEMENTS
COST ESTIMATE
January 12, 2023

ITEM			QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)			1	LS	$ 76,515.00	$ 76,515.00
Bayard Street Lift Station Abandonment			1	LS	$ 10,000.00	$ 10,000.00
8-inch Sanitary Sewer Gravity Main			2200	LF	$ 220.00	$ 484,000.00
48-inch Manhole			8	EA	$ 8,000.00	$ 64,000.00
Plug Existing Manhole Connection			1	LS	$ 3,000.00	$ 3,000.00
New Sanitary Sewer Service Connection			6	EA	$ 3,500.00	$ 21,000.00
Gravel Removal and Replacement			2475	SY	$ 50.00	$ 123,750.00
Pavement Removal and Replacement			220	SY	$ 120.00	$ 26,400.00
Utility Crossings			1	LS	$ 5,000.00	$ 5,000.00
Manlove Lift Station Connection			1	LS	$ 10,000.00	$ 10,000.00
Permitting			1	LS	$ 15,000.00	$ 15,000.00
Traffic Control			1	LS	$ 3,000.00	$ 3,000.00
Sub Total Construction Cost - 2023						**$ 841,700.00**
Number of Years until Construction						1
Inflation Rate						5.0%
Sub Total Construction Cost - 2024						**$883,800.00**
Admin 5%						$44,200.00
Contingency @ 15%						$132,600.00
Engineering @ 18%						$159,100.00
Total Project Cost						**$1,219,700.00**

SOUTHSIDE LIFT STATION - PHASE I
COST ESTIMATE
January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	**1**	**LS**	**$ 150,446.00**	**$ 150,446.00**
Southside Lift Station Site Civil	**-**	**-**	**-**	**$ 511,300.00**
Building Excavation (40'x30'x6')	270	CY	$ 75.00	$ 20,250.00
Wet Well Excavation (21'x21'x16', 2:1 Slope for 7')	915	CY	$ 110.00	$ 100,650.00
Soils Disposal	1	LS	$ 30,000.00	$ 30,000.00
Structural Backfill (Building and Wetwell)	510	CY	$ 115.00	$ 58,650.00
Cast in Place Concrete Wet Well Base Slab (20'x20'x18")	23	CY	$ 1,200.00	$ 27,600.00
Cast in Place Concrete Wet Well Walls (16'x16', 12" thick)	41	CY	$ 1,500.00	$ 61,500.00
Cast in Place Concrete Wet Well Suspended Slab (16'x16'x12")	10	CY	$ 1,800.00	$ 18,000.00
Wet Well Shoring	1	LS	$ 25,000.00	$ 25,000.00
8-inch Buried DI Piping (40' each)	80	LF	$ 205.00	$ 16,400.00
Hatch (5'x6')	1	EA	$ 15,000.00	$ 15,000.00
4-Inch Sewer Service with Connection (Floor Drains)	30	LF	$ 150.00	$ 4,500.00
Chain Link Fencing	350	LF	$ 100.00	$ 35,000.00
Seeding mulching and fertilizing	1	LS	$ 5,000.00	$ 5,000.00
Concrete Flatwork	19	CY	$ 1,000.00	$ 19,000.00
Finish Grading	1	LS	$ 10,000.00	$ 10,000.00
Base Course Gravel (assumed approach construction)	175	SY	$ 50.00	$ 8,750.00
Asphalt Drive (assumed approach construction)	175	SY	$ 120.00	$ 21,000.00
New Water Service	1	LS	$ 5,000.00	$ 5,000.00
Utility Power and Gas	1	LS	$ 30,000.00	$ 30,000.00
Southside Lift Station Structural	**-**	**-**	**-**	**$ 306,160.00**
Building Base Slab (5-inch)	13	CY	$ 1,200.00	$ 15,600.00
Building Foundation Walls and Footings	24	CY	$ 1,500.00	$ 36,000.00
Building Construction (34'x24')	816	SF	$ 210.00	$ 171,360.00
Interior Framing and Metal	1160	SF	$ 20.00	$ 23,200.00
Building Roof	900	SF	$ 50.00	$ 45,000.00
Garage Door	1	EA	$ 15,000.00	$ 15,000.00
Southside Lift Station Mechanical	**-**	**-**	**-**	**$ 357,000.00**
Pump Equipment Package (with Control Panel)	1	LS	$ 112,000.00	$ 112,000.00
Pump Installation	1	LS	$ 60,000.00	$ 60,000.00
8-Inch DI Piping (inside building)	1	LS	$ 60,000.00	$ 60,000.00
8-inch Plug Valve	2	EA	$ 8,000.00	$ 16,000.00
8-inch Check Valve	2	EA	$ 9,000.00	$ 18,000.00
RPZ Valve	1	EA	$ 3,500.00	$ 3,500.00
Air Powered Mixers	1	LS	$ 15,000.00	$ 15,000.00
Magnetic Flow Meter	1	EA	$ 20,000.00	$ 20,000.00
HVAC	1	LS	$ 18,000.00	$ 18,000.00
Building Drainage (Floor Drains and Piping)	1	LS	$ 7,500.00	$ 7,500.00
Plumbing	1	LS	$ 12,000.00	$ 12,000.00
Painting	1	LS	$ 15,000.00	$ 15,000.00
Southside Lift Station Electrical	**-**	**-**	**-**	**$ 320,000.00**
Electrical Service (480/277 Wye)	1	LS	$ 25,000.00	$ 25,000.00
Install and Wire Mfr Control Panel	1	LS	$ 30,000.00	$ 30,000.00
General Building Wiring and Power Feeds	1	LS	$ 50,000.00	$ 50,000.00
Level Control System Install	1	LS	$ 15,000.00	$ 15,000.00
Emergency Generator	1	LS	$ 90,000.00	$ 90,000.00
Handholes	1	LS	$ 5,000.00	$ 5,000.00
VFD	2	EA	$ 25,000.00	$ 50,000.00
SCADA	1	LS	$ 55,000.00	$ 55,000.00
Permitting	**1**	**LS**	**$ 5,000.00**	**$ 5,000.00**
Traffic Control	**1**	**LS**	**$ 5,000.00**	**$ 5,000.00**
Sub Total Construction Cost - 2023				**$ 1,654,900.00**
Number of Years until Construction				4
Inflation Rate				5.0%
Sub Total Construction Cost - 2027				**$2,011,500.00**
Admin 5%				$100,600.00
Contingency @ 15%				$301,700.00
Engineering @ 18%				$362,100.00
Total Project Cost				**$2,775,900.00**

SOUTHSIDE LIFT STATION - PHASE II
COST ESTIMATE
January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	**1**	**LS**	**$ 59,133.33**	**$ 59,133.33**
Southside Lift Station Site Civil	**-**	**-**	**-**	**$ 268,500.00**
Wet Well Excavation (20'x20'x16')	700	CY	$ 110.00	$ 77,000.00
Structural Backfill (Wetwell)	200	CY	$ 115.00	$ 23,000.00
Cast in Place Concrete Wet Well Base Slab (20'x20'x18")	23	CY	$ 1,200.00	$ 27,600.00
Cast in Place Concrete Wet Well Walls (16'x16', 12" thick)	41	CY	$ 1,500.00	$ 61,500.00
Cast in Place Concrete Wet Well Suspended Slab (16'x16'x12")	10	CY	$ 1,800.00	$ 18,000.00
Hatch (6'x5')	1	EA	$ 15,000.00	$ 15,000.00
Wet Well Shoring	1	CY	$ 25,000.00	$ 25,000.00
8-inch Buried DI Piping (40' each)	80	LF	$ 205.00	$ 16,400.00
Seeding mulching and fertilizing	1	LS	$ 2,000.00	$ 2,000.00
Finish Grading	1	LS	$ 3,000.00	$ 3,000.00
Southside Lift Station Mechanical	**-**	**-**	**-**	**$ 254,500.00**
Pump Equipment Package	1	LS	$ 112,000.00	$ 112,000.00
Pump Installation	1	LS	$ 60,000.00	$ 60,000.00
8-inch DI Piping Connections	1	LS	$ 10,000.00	$ 10,000.00
8-inch Plug Valve	2	EA	$ 8,000.00	$ 16,000.00
8-inch Check Valve	2	EA	$ 9,000.00	$ 18,000.00
RPZ Valve	1	EA	$ 3,500.00	$ 3,500.00
Air Powered Mixers	1	LS	$ 15,000.00	$ 15,000.00
Magnetic Flow Meter	1	EA	$ 20,000.00	$ 20,000.00
Southside Lift Station Electrical	**-**	**-**	**-**	**$ 68,333.33**
Level Control System Install	1	LS	$ 15,000.00	$ 15,000.00
Handholes	2	EA	$ 1,666.67	$ 3,333.33
VFD	2	EA	$ 25,000.00	$ 50,000.00
Sub Total Construction Cost - 2023				**$ 650,500.00**
Number of Years until Construction				12
Inflation Rate				5.0%
Sub Total Construction Cost - 2035				**$1,168,200.00**
Admin 5%				$58,400.00
Contingency @ 15%				$175,200.00
Engineering @ 18%				$210,300.00
Total Project Cost				**$1,612,100.00**

SOUTHSIDE LIFT STATION - WASTEWATER PIPING ALIGNMENT

ALTERNATIVE 1 - FROM SOUTHSIDE LIFT STATION TO WWTP (CLINTON STREET)

COST ESTIMATE

January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	1	LS	$ 596,220.00	$ 596,220.00
Dual 8-inch PVC Forcemain (From Lift Station to manhole on Casey Ave)	800	LF	$ 300.00	$ 240,000.00
Force Main Connection (at manhole on Casey Ave)	1	EA	$ 3,200.00	$ 3,200.00
18-inch Gravity Main (from manhole on Casey Ave to WWTP)	10500	LF	$ 300.00	$ 3,150,000.00
48-inch Manhole	31	EA	$ 8,000.00	$ 248,000.00
Fencing Removal and Replacement	75	LF	$ 100.00	$ 7,500.00
Seeding, Mulching, and Fertilizing	1	LS	$ 15,000.00	$ 15,000.00
Gravel Removal and Replacement	1650	SY	$ 50.00	$ 82,500.00
Pavement Removal and Replacement	8300	SY	$ 120.00	$ 996,000.00
Path Removal and Replacement	750	SY	$ 80.00	$ 60,000.00
Open Dig 60" Steel Casing (under Highway 12)	165	LF	$ 3,000.00	$ 495,000.00
Bore and Jack 60" Steel Casing (under railroad tracks)	120	LF	$ 4,500.00	$ 540,000.00
Permitting	1	LS	$ 45,000.00	$ 45,000.00
Utility Crossings/Relocations	1	LS	$ 50,000.00	$ 50,000.00
Treatment Plant Connection	1	LS	$ 10,000.00	$ 10,000.00
Traffic Control	1	LS	$ 20,000.00	$ 20,000.00
Sub Total Construction Cost - 2023				**$ 6,558,400.00**
Number of Years until Construction				4
Inflation Rate				5.0%
Sub Total Construction Cost - 2027				**$7,971,800.00**
Admin 5%				$398,600.00
Contingency @ 15%				$1,195,800.00
Engineering @ 18%				$1,434,900.00
Total Project Cost				**$11,001,100.00**

SOUTHSIDE LIFT STATION - FORCE MAIN ALIGNMENT

ALTERNATIVE 2 - FROM SOUTHSIDE LIFT STATION TO WWTP (LEWIS STREET)

COST ESTIMATE

January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	1	LS	$ 604,370.00	$ 604,370.00
Dual 8-inch PVC Forcemain (From Lift Station to manhole on Casey Ave)	800	LF	$ 300.00	$ 240,000.00
Force Main Connection (at manhole on Casey Ave)	1	EA	$ 3,200.00	$ 3,200.00
18-inch Gravity Main (from manhole on Casey Ave to WWTP)	10600	LF	$ 300.00	$ 3,180,000.00
48-inch Manhole	31	EA	$ 8,000.00	$ 248,000.00
Fencing Removal and Replacement	75	LF	$ 100.00	$ 7,500.00
Seeding, Mulching, and Fertilizing	1	LS	$ 15,000.00	$ 15,000.00
Gravel Removal and Replacement	3600	SY	$ 50.00	$ 180,000.00
Pavement Removal and Replacement	7500	SY	$ 120.00	$ 900,000.00
Path Removal and Replacement	750	SY	$ 80.00	$ 60,000.00
Open Dig 60" Steel Casing (under Highway 12)	165	LF	$ 3,000.00	$ 495,000.00
Bore and Jack 60" Steel Casing (under railroad tracks)	120	LF	$ 4,500.00	$ 540,000.00
Permitting	1	LS	$ 45,000.00	$ 45,000.00
Utility Crossings/Relocations	1	LS	$ 100,000.00	$ 100,000.00
Treatment Plant Connection	1	LS	$ 10,000.00	$ 10,000.00
Traffic Control	1	LS	$ 20,000.00	$ 20,000.00
Sub Total Construction Cost - 2023				**$ 6,648,100.00**
Number of Years until Construction				4
Inflation Rate				5.0%
Sub Total Construction Cost - 2027				**$8,080,800.00**
Admin 5%				$404,000.00
Contingency @ 15%				$1,212,100.00
Engineering @ 18%				$1,454,500.00
Total Project Cost				**$11,151,400.00**

SOUTHSIDE LIFT STATION - FORCE MAIN ALIGNMENT

ALTERNATIVE 3 - FROM SOUTHSIDE LIFT STATION TO WWTP (RIGGS STREET)

COST ESTIMATE

January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals (10%)	1	LS	$ 649,020.00	$ 649,020.00
Dual 8-inch PVC Force Main (from Lift Station to Gravity Outfall on Riggs Street)	5400	LF	$ 300.00	$ 1,620,000.00
Force Main Connection (at Gravity Outfall on Riggs Street)	1	EA	$ 3,200.00	$ 3,200.00
21-inch Gravity Main (from Gravity Outfall to WWTP)	5800	LF	$ 325.00	$ 1,885,000.00
Gravity Outfall Manhole	1	LS	$ 12,000.00	$ 12,000.00
48-inch Manhole	17	EA	$ 8,000.00	$ 136,000.00
Fencing Removal and Replacement	75	LF	$ 100.00	$ 7,500.00
Seeding, Mulching, and Fertilizing	1	LS	$ 20,000.00	$ 20,000.00
Gravel Removal and Replacement	1700	SY	$ 50.00	$ 85,000.00
Pavement Removal and Replacement	8900	SY	$ 120.00	$ 1,068,000.00
Open Dig 60" Steel Casing (under Highway 12)	165	LF	$ 3,000.00	$ 495,000.00
Bore and Jack 60" Steel Casing (under railroad tracks)	165	LF	$ 4,500.00	$ 742,500.00
Dual 8-inch Force Main Directional Drill (150' each, under Prickly Pear Creek)	300	LF	$ 420.00	$ 126,000.00
Bore and Jack 36" Steel Casing (under Prickly Pear Creek)	150	LF	$ 1,200.00	$ 180,000.00
Permitting	1	LS	$ 55,000.00	$ 55,000.00
Utility Crossings/Relocations	1	LS	$ 25,000.00	$ 25,000.00
Treatment Plant Connection	1	LS	$ 10,000.00	$ 10,000.00
Traffic Control	1	LS	$ 20,000.00	$ 20,000.00
Sub Total Construction Cost - 2023				**$ 7,139,200.00**
Number of Years until Construction				4
Inflation Rate				5.0%
Sub Total Construction Cost - 2027				**$8,677,700.00**
Admin 5%				$433,900.00
Contingency @ 15%				$1,301,700.00
Engineering @ 18%				$1,562,000.00
Total Project Cost				**$11,975,300.00**

MONTANA AVENUE LIFT STATION REPLACEMENT - EAST HELENA CEMETERY
COST ESTIMATE
January 12, 2023

ITEM	QUAN.	UNIT	UNIT PRICE	TOTAL PRICE
Mobilization, Bonding and Submittals	**1**	**LS**	**$ 182,061.50**	**$ 182,061.50**
Montana Avenue Lift Station Site Civil	**-**	**-**	**-**	**$ 341,975.00**
Abandon Existing Wet Well and Valve Vault	1	LS	$ 20,000.00	$ 20,000.00
Building Excavation (assume 22'x22'x5')	125	CY	$ 75.00	$ 9,375.00
Wet Well Excavation	400	CY	$ 110.00	$ 44,000.00
Soils Disposal	1	LS	$ 30,000.00	$ 30,000.00
Structural Backfill (Building and Precast Wetwells)	350	CY	$ 115.00	$ 40,250.00
Precast Wetwell (Base Slab Included)	1	EA	$ 38,000.00	$ 38,000.00
Wet Well Shoring	1	LS	$ 25,000.00	$ 25,000.00
6-inch Buried DI Piping	30	LF	$ 205.00	$ 6,150.00
Hatche (54"x36")	1	EA	$ 6,500.00	$ 6,500.00
4-Inch Sewer Service with Connection (Floor Drains)	30	LF	$ 150.00	$ 4,500.00
Chain Link Fencing	180	LF	$ 100.00	$ 18,000.00
Seeding mulching and fertilizing	1	LS	$ 5,000.00	$ 5,000.00
Concrete Flatwork	15	CY	$ 1,000.00	$ 15,000.00
Finish Grading	1	LS	$ 10,000.00	$ 10,000.00
Base Course Gravel (assumed approach construction)	60	SY	$ 50.00	$ 3,000.00
Asphalt Drive (assumed approach)	60	SY	$ 120.00	$ 7,200.00
Bypass Pumping	1	LS	$ 30,000.00	$ 30,000.00
New Water Service	1	LS	$ 5,000.00	$ 5,000.00
Utility Power and Gas	1	LS	$ 25,000.00	$ 25,000.00
Montana Avenue Lift Station Structural	**-**	**-**	**-**	**$ 182,340.00**
Building Base Slab (5-inch)	8	CY	$ 1,200.00	$ 9,600.00
Building Foundation Walls and Footings	9	CY	$ 1,500.00	$ 13,500.00
Building Construction (22'x22')	484	SF	$ 210.00	$ 101,640.00
Interior Framing and Metal	880	SF	$ 20.00	$ 17,600.00
Building Roof	500	SF	$ 50.00	$ 25,000.00
Garage Door	1	EA	$ 15,000.00	$ 15,000.00
Montana Avenue Lift Station Mechanical	**-**	**-**	**-**	**$ 338,000.00**
Pump Equipment Package (with Control Panel)	1	LS	$ 105,000.00	$ 105,000.00
Pump Installation	1	LS	$ 60,000.00	$ 60,000.00
6-Inch DI Piping	1	LS	$ 55,000.00	$ 55,000.00
6-inch Plug Valve	2	EA	$ 7,000.00	$ 14,000.00
6-inch Check Valve	2	EA	$ 8,000.00	$ 16,000.00
RPZ Valve	1	EA	$ 3,500.00	$ 3,500.00
Air Powered Mixers	1	LS	$ 15,000.00	$ 15,000.00
Magnetic Flow Meter	1	EA	$ 20,000.00	$ 20,000.00
HVAC	1	LS	$ 15,000.00	$ 15,000.00
Building Drainage (Floor Drains and Piping)	1	LS	$ 7,500.00	$ 7,500.00
Plumbing	1	LS	$ 12,000.00	$ 12,000.00
Painting	1	LS	$ 15,000.00	$ 15,000.00
Montana Avenue Lift Station Electrical	**-**	**-**	**-**	**$ 272,500.00**
Electrical Service (480/277 Wye)	1	LS	$ 25,000.00	$ 25,000.00
Abandon Exisitng Electrical Components	1	LS	$ 7,500.00	$ 7,500.00
Install and Wire Mfr Control Panel	1	LS	$ 20,000.00	$ 20,000.00
General Building Wiring and Power Feeds	1	LS	$ 40,000.00	$ 40,000.00
Level Control System Install	1	LS	$ 15,000.00	$ 15,000.00
Emergency Generator	1	LS	$ 60,000.00	$ 60,000.00
Handholes	1	LS	$ 5,000.00	$ 5,000.00
VFD	2	EA	$ 25,000.00	$ 50,000.00
SCADA	1	LS	$ 50,000.00	$ 50,000.00
Montana Avenue Lift Station Piping Alignment - Dudley Street South Alley to Lift Station	**-**	**-**	**-**	**$ 605,800.00**
8-inch PVC Gravity Main (Deep)	560	LF	$ 260.00	$ 145,600.00
Sanitary Sewer Service Connection	5	EA	$ 3,500.00	$ 17,500.00
48" Dia. Manhole	3	EA	$ 8,000.00	$ 24,000.00
8-inch Buried PVC Force Main	560	LF	$ 220.00	$ 123,200.00
Modify and Connect to Existing Manhole on Montana Ave	1	LS	$ 15,000.00	$ 15,000.00
Gravel Removal and Replacement	90	Sy	$ 50.00	$ 4,500.00
Asphalt Removal and Replacement	2300	SY	$ 120.00	$ 276,000.00
Permitting	**1**	**LS**	**$ 5,000.00**	**$ 5,000.00**
Traffic Control	**1**	**LS**	**$ 75,000.00**	**$ 75,000.00**
Sub Total Construction Cost - 2023				**$ 2,002,700.00**
Number of Years until Construction				4
Inflation Rate				5%
Sub Total Construction Cost - 2027				**$2,434,300.00**
Admin 5%				$100,100.00
Contingency @ 15%				$300,400.00
Engineering @ 18%				$360,500.00
Total Project Cost				**$3,195,300.00**