

**CITY OF LEAD
FACILITY PLAN
2021**

**PREPARED FOR:
City of Lead
September 2021
Project #L21-03-083.01**

**CITY OF LEAD
FACILITY PLAN**

September 2021

PREPARED BY:

**INTERSTATE ENGINEERING, INC.
CONSULTING ENGINEERS
SPEARFISH, SOUTH DAKOTA 57783**

PROJECT NO. L21-03-083.01

I HEREBY CERTIFY that this Facility Plan was prepared by me or under my direct supervision and that I am a duly Registered Engineer under the laws of the State of South Dakota.

Date _____ Reg. No. _____

CITY OF LEAD
FACILITY PLAN

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SECTION 1

INTRODUCTION

Much of the City of Lead's sewer collection system is in excess of 75 years old. The system serves as both a sanitary sewer collection system and a storm sewer collection system. In February 1994, Lead took over the water distribution system from Homestake Mining Company. Most of that distribution system was 75 to 100 years old.

In the late 1980's the City began televising their system and have found much of it in very poor condition. They found misaligned pipe with joints separated, root intrusion, areas with broken pipe, pipe filled with sediment, and brick manholes that are in extremely poor condition. The water system consists of cast-iron pipe with lead joints. As the pipe has been exposed in past projects, it is found to be in very poor condition.

In the mid 1980's the City began rehabilitating their system. At the same time, when it was possible, they started attempting the separation of the storm water from the sanitary system. At first, because of very limited funding, the projects were quite small. In 1989, Lead formulated a six (6) year rehabilitation plan. They completed a Facility Plan and received approval of that Plan from South Dakota DENR. They began working on that Plan in 1990 using funding from South Dakota Department of Environment and Natural Resources (SDDENR) loans and local funds. Each year when they set up a project the City would coordinate with Homestake Mining Company, owners of the water distribution system, and get the water lines replaced in the affected areas.

The City of Lead has updated its Facility Plan starting in May 1997, October 2003, November 2006, February 2009, August 2013, September 2018, and September 2021. The Facility Plan for 2021 is a ten (10) year long-range plan. This update to the Facility Plan has made minor changes to the project scope mainly adding certain side streets to the scope and updating the estimated costs and sequencing of the projects. The projects in this Facility Plan will begin in 2021 and consist of sanitary sewer replacement, storm sewer separation, water line replacement, and complete street rebuild. These projects also include tying the new utilities to the existing utilities on the adjoining streets. Funding being requested through this Facility Plan is intended to cover costs for sewer system replacement/separation, water line replacement, and a proportionate share of the street replacement costs.

SECTION 2

EFFLUENT LIMITATIONS

The City of Lead conveys its sanitary waste to the Lead-Deadwood Sanitary District wastewater treatment plant. The existing National Pollutant Discharge Elimination System (NPDES) that the Sanitary District has would still be applicable.

SECTION 3

ENVIRONMENTAL INFORMATION DOCUMENT

3.1 ENVIRONMENTAL SETTING

The projects comprising the tentative ten (10) year plan all fall within Lead City streets and/or utility ROW. Specific projects are as follows:

| <u>Project Description</u> | <u>Year of Construction</u> |
|--|-----------------------------|
| Project 1 Miner's Avenue (Pink) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street | 2022 |
| Project 2 Mill Street from McClellan to High Street (Red) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street | 2022 |
| Project 3 South Main Street to Lewies (Purple) <ul style="list-style-type: none">• Sewer and Water | 2023 |
| Project 4 Mill, Bleeker, Upper Gold, and High Streets (Orange) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street | 2024 |
| Project 5 Hill, Sawyer, High, and Summit Streets (Green) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street | 2025 |
| Project 6 Summit, Barclay, and Hill Streets (Yellow) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water | 2026 |
| Project 7 McClellan, Gold, and Bleeker Streets to Hill Street (Blue) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street | 2027 |
| Project 8 Mine Street to Cyanide Street then to Hwy. 85 (Light Blue) <ul style="list-style-type: none">• Storm Sewer, Sewer, Water, and Street (Map Color) | 2028 |

These projects are shown on Figure 1 – 1c.

Sewer line rehabilitation would be at the same location and alignment as the existing system. Storm sewer lines would be located within the existing street right-of-way. Water lines would be approximately the same location as existing.

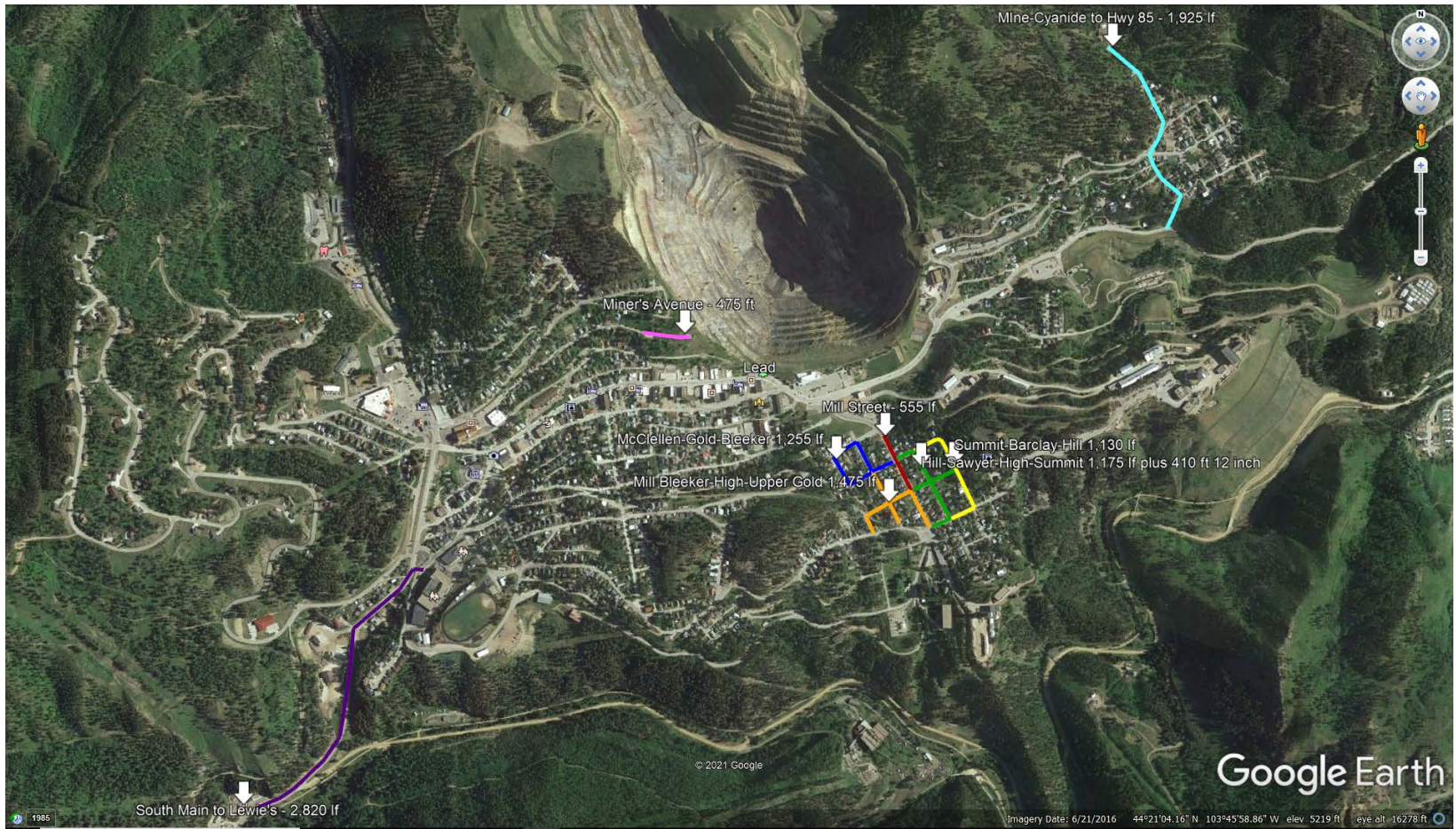


Figure 1 - Projects Overview



Figure 1a – Miners Avenue



Figure 1b – Mill Street Area Projects



Figure 1c

The following projects have been completed since the 2006 revision:

| | |
|--|----------------|
| Galena Street (Main Street to Julius Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2007 |
| Stone Street (Main Street to Julius Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2007 |
| Julius Street (Stone to Grand) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2008 |
| Siever Street (Main Street to Julius Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2008 |
| Grand Ave. (Julius Street to McQuillian) | |
| • Water and Street | Completed 2008 |
| Alert Street (Main Street to Julius Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2009 |
| Paul Street (Main Street to Julius Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2009 |
| Julius Street (Grand to Blatt) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2009 |
| Lower May, South Main Street, and Addie Street (May Street from Addie to South Main) (South Main from CC Curran to Baltimore) (Addie Street from South Main to Lower May) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2010 |
| West Addie Street (Lower May Street to Grand Ave.) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2011 |
| Main Street (Blatt to Wells Fargo Bank Building) | |
| • Sewer and Water | |
| • Storm Sewer and Street by Department of Transportation | Completed 2016 |

| | |
|---|----------------|
| Blue Street (Main Street to Railroad Avenue) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2016 |
| Water Meter Replacement Project | Completed 2017 |
| Houston to Pavilion (from West Summit to Mill Street) | |
| • Storm Sewer, Sewer, Water, and Street | Completed 2020 |

An environmental evaluation was solicited from the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the South Dakota Department of Game, Fish, and Parks, the USDA Soil Conservation Service, and the South Dakota Department of Environment and Natural Resources (DENR). The DENR forwarded the solicitation to the State Historical Preservation Organization, and they made a determination as to the effect the projects have on cultural resources.

The following is a climatological summary of the area. This area is located in the Northern Black Hills. Average annual mean temperatures are at or below freezing for the months of December, January, February, and March. Average annual lake evaporation is approximately 40.5 inches of which 31.2 inches are in the May - October period. The annual average precipitation is 25.4 inches of which 9.4 inches falls in the winter period and 16.0 inches falls in the summer period.

3.2 IMPACT OF PROJECT ON ENVIRONMENT

The condition of the sewer lines and manholes within the project areas is such that both infiltration and exfiltration are occurring. Also, at random locations along the hillside where these streets are located, there are springs. So, in the case of exfiltration, there is a certain degradation of the ground water quality. With the combined sewer and storm sewer, the existing system can cause problems at the wastewater treatment plant during heavy rains. There is also an overflow located at the bottom end of the city's collection system in which untreated effluent along with the storm water will discharge directly to a tributary of Whitewood Creek in Gold Run draw then ultimately to Whitewood Creek after reaching a certain peak flow.

The rehabilitation of the sewer system will eliminate the possible degradation of the ground water in those areas. The separation of the sanitary sewer and storm sewer will be a step toward total separation that would help in the operation of the existing treatment plant and would help extend the life of the treatment plant.

The replacement of the old cast iron lead-joint water lines will insure that safe quality water is being delivered to the residents of the City.

These projects will be constructed within existing sewer and water line ditches and along existing streets. Therefore, they will not encounter wetlands, recharge areas, wildlife habitat or disturb and endanger species. The geographical locations are such that no flood plains exist in the areas.

A minor increase in noise levels and dust levels shall occur during the time of construction. These, however, will not cause any long-term health hazards.

SECTION 4

CURRENT SITUATION

4.1 WATER QUALITY

These projects will improve the ground water quality in the immediate areas by the elimination of exfiltration from the collection lines.

The City is supplied with potable water from the old Homestake Mining Company collection system. Their water source is not from the immediate area and is not affected by this project. It comes from springs in the Hanna area located about six (6) to seven (7) miles southwest of Lead.

Currently this water is treated in a treatment plant owned and operated by the Lead-Deadwood Sanitary District. This plant was built in 1995 and is located in the northwest part of Lead on Pavilion Street.

4.2 EXISTING WASTEWATER TREATMENT FACILITIES

The City of Lead owns their wastewater collection system. Their sewage is treated at the wastewater treatment plant owned and operated by the Lead-Deadwood Sanitary District, in Deadwood. This plant was constructed in 1979. It is a complete mix, activated sludge, secondary treatment plant with a partial tertiary capability. The plant has a capacity of 2.33 MGD.

4.3 WASTEWATER FLOWS

The collection lines that are included in these projects service 1,214 residences, 56 apartment units, 30 businesses, and a school with 400 pupils. No flow measurements have been done on these lines to determine the exact amount of flow, but with the following formula, a close approximation can be made.

| | | | |
|------------|--------------------------------------|---|--------------|
| Residence: | 1,214 x 3.5 persons/res. x 100 GPCPD | = | 424,900 |
| Apt. Res.: | 56 x 2.0 persons/res. x 75 GPCPD | = | 8,400 |
| Business: | 150 employees x 20 GPCPD | = | 3,000 |
| School: | 400 pupils x 15 GPCPD | = | <u>6,000</u> |
| | Total Approximate Flow | = | 442,300 |

4.4 POPULATION

The total population of Lead based on the 2020 census is 2,887 people. A copy of the 2020 census data from World Population Review is included in on the next page.

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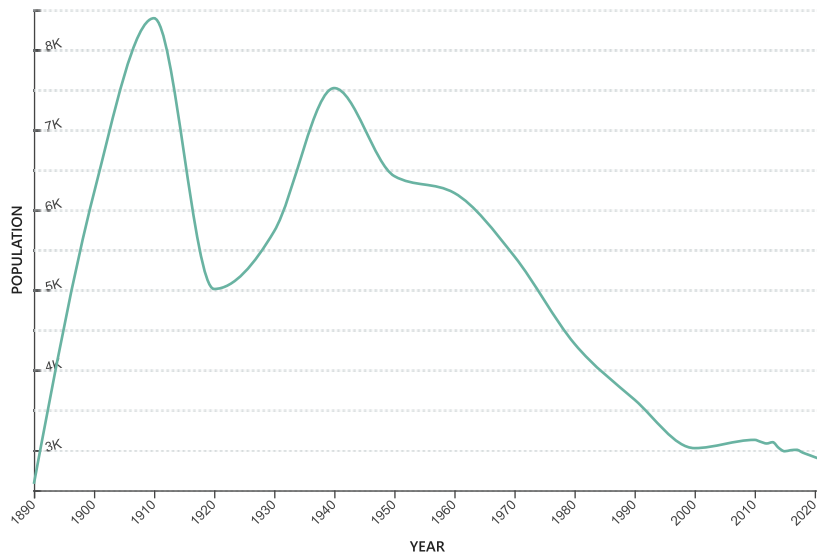


Lead, South Dakota Population 2021

Show Sources

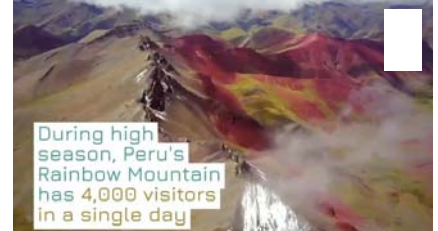
Lead, South Dakota Population 2021

2,887



| | |
|-------------------|---------------------------------|
| State | South Dakota |
| County | Lawrence County |
| Land Area | 2.1 sq mi |
| Density | 1,402.60/sq mi |
| 2020 Growth Rate | -0.96% |
| Growth Since 2010 | -7.59% |
| Rank in State | 26th |
| Rank in Country | 6366th |

The current population of Lead, South Dakota is **2,887**, based on our projections of the latest US Census estimates. The US Census estimates the 2018 population at **2,971**. The last official US Census in 2010 recorded the population at **3,124**.



Lead is a city located in [South Dakota](#). With a 2020 population of **2,887**, it is the **26th largest city in South Dakota** and the **6366th largest city in the United States**. Lead is currently declining at a rate of **-0.96%** annually and its population has decreased by **-7.59%** since the most recent census, which



SECTION 5

FUTURE SITUATION

5.1 WASTEWATER FLOW AND POPULATION PROJECTION

This area is nearly all developed and very little change would be expected in the next twenty (20) years.

5.2 SERVICE AREA

See Figure 1 for the proposed service area.

5.3 PROPOSED PROJECT

From the data collected through the televising project that the City has conducted, the lines located in the streets mentioned in Section 3.1 are in the greatest need of the replacement. These lines will be replaced in these projects. The City also intends to install separate storm sewer lines where feasible and new water lines in these streets at the same time. Therefore, when the street is resurfaced it will not have to be dug up for a long period of time.

SECTION 6

FINANCIAL PLAN

6 Capital Costs: Section 6 is dedicated to providing an estimate of capital costs for each of the eight (8) projects. The estimates identify the unit cost with the appropriate quantities. We have also created a life cycle project cost using an effective life of fifty (50) years. These project cost estimates will help the city to create their financial plans for this ten (10) year Facility Plan.

6.1 Project Funding: The intent is to fund the yearly Capital Construction Project through the State Revolving Fund. Revenue from water and sewer fees will be applied to the repayment plan. The total payoff for the existing loans will occur in 2036. See Table 6.1A for project funding summary and Table 6.1B for project payment and balance summary.

TABLES

6.1A City of Lead Project Funding

6.1B City of Lead Project Payment and Balances

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)

PROJECT: MINERS AVENUE

| CAPITAL COST | | Pink (Map Color) | | | SRF Eligible Qty | SRF Eligible Cost |
|---|-------|------------------|----------|----------------------|------------------|-------------------|
| Item | Units | Unit Cost | Quantity | Cost | | |
| Water Distribution | | | | | | |
| Pipe Encasement | CuYd | \$ 100.00 | 10 | \$ 1,000.00 | 10.00 | 1,000.00 |
| 6" PVC Watermain | Ft | \$ 65.00 | 320 | \$ 20,800.00 | 320.00 | 20,800.00 |
| 1" Copper Pipe | Ft | \$ 28.00 | 136 | \$ 3,808.00 | 136.00 | 3,808.00 |
| 1" Corporation Stop with Tapping Saddle | Each | \$ 525.00 | 7 | \$ 3,675.00 | 7.00 | 3,675.00 |
| 1" Curb Stop with Box | Each | \$ 475.00 | 7 | \$ 3,325.00 | 7.00 | 3,325.00 |
| 6" Gate Valve With Box | Each | \$ 1,500.00 | 3 | \$ 4,500.00 | 3.00 | 4,500.00 |
| Poly Wrap Insulation for 6" Pipe | Ft | \$ 80.00 | 40 | \$ 3,200.00 | 40.00 | 3,200.00 |
| Standard Fire Hydrant | Each | \$ 4,000.00 | 1 | \$ 4,000.00 | 1.00 | 4,000.00 |
| Type 1 Granular Backfill | Ton | \$ 30.00 | 102 | \$ 3,060.00 | 102.00 | 3,060.00 |
| <i>Sub-Total:</i> | | | | \$ 47,368.00 | | |
| Sanitary Sewer | | | | | | |
| 4" Sewer Service | Ft | \$ 48.00 | 136 | \$ 6,528.00 | 136.00 | 6,528.00 |
| 4" Sanitary Sewer Service Cleanout | Each | \$ 500.00 | 7 | \$ 3,500.00 | 7.00 | 3,500.00 |
| 8" PVC Restrained Joint Water Main | Ft | \$ 75.00 | 180 | \$ 13,500.00 | 180.00 | 13,500.00 |
| 8" Water Main Restraining Device | Each | \$ 140.00 | 20 | \$ 2,800.00 | 20.00 | 2,800.00 |
| 8" PVC Sewer Pipe | Ft | \$ 70.00 | 143 | \$ 10,010.00 | 143.00 | 10,010.00 |
| 48" Manhole 0' to 6' Deep | Each | \$ 3,250.00 | 2 | \$ 6,500.00 | 2.00 | 6,500.00 |
| 48" Manhole 8' to 10' Deep | Each | \$ 3,500.00 | 2 | \$ 7,000.00 | 2.00 | 7,000.00 |
| 48" Manhole 10' to 12' Deep | Each | \$ 3,600.00 | 1 | \$ 3,600.00 | 1.00 | 3,600.00 |
| 48" Manhole 16' to 18' Deep | Each | \$ 4,050.00 | 1 | \$ 4,050.00 | 1.00 | 4,050.00 |
| <i>Sub-Total:</i> | | | | \$ 57,488.00 | | |
| Roadway | | | | | | |
| Mobilization | LS | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.50 | 27,500.00 |
| Unclassified Excavation | CuYd | \$ 10.00 | 2,708 | \$ 27,080.00 | 1,624.80 | 16,248.00 |
| Rock Excavation | CuYd | \$ 20.00 | 500 | \$ 10,000.00 | 300.00 | 6,000.00 |
| PG 58-34 Asphalt Binder | Ton | \$ 650.00 | 21 | \$ 13,650.00 | 12.60 | 8,190.00 |
| Class E Asphalt Concrete | Ton | \$ 55.00 | 401 | \$ 22,034.38 | 240.38 | 13,220.63 |
| SS-1h or CSS-1h Asphalt for Tack | Ton | \$ 650.00 | 1 | \$ 650.00 | 0.60 | 390.00 |
| 24" RCP Class 2, Furnish | Ft | \$ 32.00 | 145 | \$ 4,640.00 | 87.00 | 2,784.00 |
| 24" RCP, Install | Ft | \$ 42.00 | 145 | \$ 6,090.00 | 87.00 | 3,654.00 |
| Type B66 Concrete Curb and Gutter | Ft | \$ 45.00 | 235 | \$ 10,575.00 | 141.00 | 6,345.00 |
| Type P6 Concrete Gutter | Ft | \$ 45.00 | 105 | \$ 4,725.00 | 63.00 | 2,835.00 |
| 3' x 4' Type B Drop Inlet | Each | \$ 4,000.00 | 1 | \$ 4,000.00 | 0.60 | 2,400.00 |
| Type B Frame and Grate Assembly | Each | \$ 750.00 | 1 | \$ 750.00 | 0.60 | 450.00 |
| Traffic Control Signs | SqFt | \$ 4.00 | 10 | \$ 40.00 | 5.00 | 20.00 |
| Traffic Control Misc | LS | \$ 2,500.00 | 1 | \$ 2,500.00 | 0.50 | 1,250.00 |
| Type 3 Barricade | Each | \$ 150.00 | 1 | \$ 150.00 | 0.50 | 75.00 |
| Seeding, Fertilizing and Mulching | LS | \$ 2,500.00 | 1 | \$ 2,500.00 | 0.50 | 1,250.00 |
| 12" Diameter Erosion Control Wattle | Ft | \$ 5.00 | 786 | \$ 3,930.00 | 393.00 | 1,965.00 |
| Class B Riprap | Ton | \$ 55.00 | 270 | \$ 14,822.50 | 161.70 | 8,893.50 |
| Place Riprap | Ton | \$ 15.00 | 270 | \$ 4,042.50 | 161.70 | 2,425.50 |
| Type B Drainage Fabric | SqYd | \$ 3.00 | 343 | \$ 1,029.00 | 205.80 | 617.40 |
| Gravity Large Concrete Block Wall | SqFt | \$ 60.00 | 3,268 | \$ 196,080.00 | 1,634.00 | 98,040.00 |
| Granular Backfill for Gravity Large Concrete Block Wall | CuYd | \$ 35.00 | 726 | \$ 25,417.78 | 363.11 | 12,708.89 |
| <i>Sub-Total:</i> | | | | \$ 409,706.15 | | |
| Total Construction Costs: | | | | \$ 514,562.15 | | |
| Total Construction Costs SRF Eligible: | | | | | | 322,117.91 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 154,368.65 | | 96,635.37 |
| TOTAL CAPITAL COSTS: | | | | \$ 668,930.80 | | |
| TOTAL SRF CAPITAL COSTS: | | | | | | 418,753.29 |

FINANCIAL IMPACT (Life Cycle Cost Estimate)

SECTION 6

PROJECT: MINERS AVENUE

Pink (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|---------------|------------|-----------------------|-------------------------|---------------|
| Water Distribution | | | | | |
| Pipe Encasement | \$ 1,000.00 | 50 | \$ 250.00 | \$ 50.00 | \$ 950.00 |
| 6" PVC Watermain | \$ 20,800.00 | 50 | \$ 5,200.00 | \$ 1,040.00 | \$ 19,760.00 |
| 1" Copper Pipe | \$ 3,808.00 | 50 | \$ 952.00 | \$ 190.40 | \$ 3,618.00 |
| 1" Corporation Stop with Tapping Sad | \$ 3,675.00 | 50 | \$ 918.75 | \$ 183.75 | \$ 3,491.00 |
| 1" Curb Stop with Box | \$ 3,325.00 | 50 | \$ 831.25 | \$ 166.25 | \$ 3,159.00 |
| 6" Gate Valve With Box | \$ 4,500.00 | 50 | \$ 562.50 | \$ 112.50 | \$ 4,388.00 |
| Poly Wrap Insulation for 6" Pipe | \$ 3,200.00 | 50 | \$ 800.00 | \$ 160.00 | \$ 3,040.00 |
| Standard Fire Hydrant | \$ 4,000.00 | 50 | \$ 1,000.00 | \$ 100.00 | \$ 3,900.00 |
| Type 1 Granular Backfill | \$ 3,060.00 | 50 | \$ 765.00 | \$ 153.00 | \$ 2,907.00 |
| Sub-Total: | \$ 47,368.00 | | | | |
| Sanitary Sewer | | | | | |
| 4" Sewer Service | \$ 6,528.00 | 50 | \$ 1,632.00 | \$ 326.40 | \$ 6,202.00 |
| 4" Sanitary Sewer Service Cleanout | \$ 3,500.00 | 50 | \$ 875.00 | \$ 175.00 | \$ 3,325.00 |
| 8" PVC Restrained Joint Water Main | \$ 13,500.00 | 50 | \$ 3,375.00 | \$ 675.00 | \$ 12,825.00 |
| 8" Water Main Restraining Device | \$ 2,800.00 | 50 | \$ 350.00 | \$ 70.00 | \$ 2,730.00 |
| 8" PVC Sewer Pipe | \$ 10,010.00 | 50 | \$ 2,502.50 | \$ 500.50 | \$ 9,510.00 |
| 48" Manhole 0' to 6' Deep | \$ 6,500.00 | 50 | \$ 1,625.00 | \$ 325.00 | \$ 6,175.00 |
| 48" Manhole 8' to 10' Deep | \$ 7,000.00 | 50 | \$ 1,750.00 | \$ 350.00 | \$ 6,650.00 |
| 48" Manhole 10' to 12' Deep | \$ 3,600.00 | 50 | \$ 900.00 | \$ 180.00 | \$ 3,420.00 |
| 48" Manhole 16' to 18' Deep | \$ 4,050.00 | 50 | \$ 1,012.50 | \$ 202.50 | \$ 3,848.00 |
| Sub-Total: | \$ 57,488.00 | | | | |
| Roadway | | | | | |
| Mobilization | \$ 55,000.00 | 50 | \$ 13,750.00 | \$ 2,750.00 | \$ 52,250.00 |
| Unclassified Excavation | \$ 27,080.00 | 50 | \$ 6,770.00 | \$ 1,354.00 | \$ 25,726.00 |
| Rock Excavation | \$ 10,000.00 | 50 | \$ 2,500.00 | \$ 500.00 | \$ 9,500.00 |
| PG 58-34 Asphalt Binder | \$ 13,650.00 | 50 | \$ 3,412.50 | \$ 682.50 | \$ 12,968.00 |
| Class E Asphalt Concrete | \$ 22,034.38 | 50 | \$ 5,508.59 | \$ 1,101.72 | \$ 20,933.00 |
| SS-1h or CSS-1h Asphalt for Tack | \$ 650.00 | 50 | \$ 162.50 | \$ 32.50 | \$ 618.00 |
| 24" RCP Class 2, Furnish | \$ 4,640.00 | 50 | \$ 1,160.00 | \$ 232.00 | \$ 4,408.00 |
| 24" RCP, Install | \$ 6,090.00 | 50 | \$ 1,522.50 | \$ 304.50 | \$ 5,786.00 |
| Type B66 Concrete Curb and Gutter | \$ 10,575.00 | 50 | \$ 2,643.75 | \$ 528.75 | \$ 10,046.00 |
| Type P6 Concrete Gutter | \$ 4,725.00 | 50 | \$ 1,181.25 | \$ 236.25 | \$ 4,489.00 |
| 3' x 4' Type B Drop Inlet | \$ 4,000.00 | 50 | \$ 1,000.00 | \$ 200.00 | \$ 3,800.00 |
| Type B Frame and Grate Assembly | \$ 750.00 | 50 | \$ 187.50 | \$ 37.50 | \$ 713.00 |
| Traffic Control Signs | \$ 40.00 | 50 | \$ - | \$ - | \$ 40.00 |
| Traffic Control Misc | \$ 2,500.00 | 50 | \$ - | \$ - | \$ 2,500.00 |
| Type 3 Barricade | \$ 150.00 | 50 | \$ - | \$ - | \$ 150.00 |
| Seeding, Fertilizing and Mulching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| 12" Diameter Erosion Control Wattle | \$ 3,930.00 | 50 | \$ 982.50 | \$ 196.50 | \$ 3,734.00 |
| Class B Riprap | \$ 14,822.50 | 50 | \$ 3,705.63 | \$ 741.13 | \$ 14,081.00 |
| Place Riprap | \$ 4,042.50 | 50 | \$ 1,010.63 | \$ 202.13 | \$ 3,840.00 |
| Type B Drainage Fabric | \$ 1,029.00 | 50 | \$ 257.25 | \$ 51.45 | \$ 978.00 |
| Gravity Large Concrete Block Wall | \$ 196,080.00 | 50 | \$ 49,020.00 | \$ 9,804.00 | \$ 186,276.00 |
| Granular Backfill for Gravity Large Co | \$ 25,417.78 | 50 | \$ 6,354.44 | \$ 1,270.89 | \$ 24,147.00 |
| Sub-Total: | \$ 409,706.15 | | | | |
| Total Construction Costs: | \$ 514,562.15 | | | | \$ 446,950.00 |
| 30% Contingencies, Engineering, Legal & Administration: | \$ 154,368.65 | | | | \$ 154,368.65 |
| TOTAL CAPITAL COSTS: | \$ 668,930.80 | | | | \$ 601,318.65 |
| PROJECT COST, NET PRESENT WORTH | | | | \$ 601,318.65 | |
| TOTAL NET PRESENT WORTH | | | | \$ 601,318.65 | |
| AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) | | | | | \$ 48,250.00 |
| C.R.F. = 0.08024 L=5.0% N=20 YEARS | | | | | |

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
PROJECT: MILL STREET from McCLELLAN to HIGH STREETS
Red (Map Color)

CAPITAL COST

| Item | Units | Unit Cost | Quantity | Cost | SRF Eligible Qty | SRF Eligible Cost |
|---|-------|--------------|----------|----------------------|------------------|----------------------|
| Water Distribution Items | | | | | | |
| Pipe Bedding | Ton | \$ 50.00 | 25.00 | \$ 1,250.00 | 25.00 | \$ 1,250.00 |
| 6" PVC Watermain | LF | \$ 65.00 | 850.00 | \$ 55,250.00 | 850.00 | \$ 55,250.00 |
| 6" Valves with Box | EA | \$ 1,500.00 | 10.00 | \$ 15,000.00 | 10.00 | \$ 15,000.00 |
| 6" Fittings | EA | \$ 650.00 | 3.00 | \$ 1,950.00 | 3.00 | \$ 1,950.00 |
| Fire Hydrant with Valve | EA | \$ 6,500.00 | 4.00 | \$ 26,000.00 | 4.00 | \$ 26,000.00 |
| 1" Copper Water Service | LF | \$ 45.00 | 575.00 | \$ 25,875.00 | 575.00 | \$ 25,875.00 |
| 1" Corporation Stop with Tapping Saddle | EA | \$ 500.00 | 23.00 | \$ 11,500.00 | 23.00 | \$ 11,500.00 |
| 1" Curb Stop with Box | EA | \$ 500.00 | 23.00 | \$ 11,500.00 | 23.00 | \$ 11,500.00 |
| Connect to Existing Water | EA | \$ 2,500.00 | 2.00 | \$ 5,000.00 | 2.00 | \$ 5,000.00 |
| Water Distribution Total: | | | | \$ 153,325.00 | | \$ 153,325.00 |
| Sanitary Sewer Items | | | | | | |
| 4" Sanitary Service | LF | \$ 50.00 | 575.00 | \$ 28,750.00 | 575.00 | \$ 28,750.00 |
| 6" Sanitary | LF | \$ 45.00 | 200.00 | \$ 9,000.00 | 200.00 | \$ 9,000.00 |
| 8" Sanitary | LF | \$ 55.00 | 585.00 | \$ 32,175.00 | 585.00 | \$ 32,175.00 |
| 48" Sanitary Manhole | EA | \$ 4,000.00 | 2.00 | \$ 8,000.00 | 2.00 | \$ 8,000.00 |
| Connect to Existing Sewer | EA | \$ 2,500.00 | 2.00 | \$ 5,000.00 | 2.00 | \$ 5,000.00 |
| Sanitary Sewer Total: | | | | \$ 82,925.00 | | \$ 82,925.00 |
| Storm Sewer | | | | | | |
| 18" RCP Storm Sewer | LF | \$ 55.00 | 384.00 | \$ 21,120.00 | 384.00 | \$ 21,120.00 |
| 24" RCP Storm Sewer | LF | \$ 75.00 | 585.00 | \$ 43,875.00 | 585.00 | \$ 43,875.00 |
| Drop Inlet | EA | \$ 2,000.00 | 12.00 | \$ 24,000.00 | 12.00 | \$ 24,000.00 |
| Storm Sewer Total: | | | | \$ 88,995.00 | | \$ 88,995.00 |
| Roadway Items | | | | | | |
| Mobilization | LS | \$ 25,000.00 | 1.00 | \$ 25,000.00 | 0.50 | \$ 12,500.00 |
| Traffic Control | LS | \$ 7,500.00 | 1.00 | \$ 7,500.00 | 0.50 | \$ 3,750.00 |
| Demolition | LS | \$ 15,000.00 | 1.00 | \$ 15,000.00 | 0.50 | \$ 7,500.00 |
| Road Shaping | SY | \$ 3.00 | 3,781.00 | \$ 11,343.00 | 2,268.60 | \$ 6,805.80 |
| Asphalt Surfacing | Ton | \$ 85.00 | 468.00 | \$ 39,780.00 | 280.80 | \$ 23,868.00 |
| Asphalt Tie-In/Patching | Ton | \$ 125.00 | 21.40 | \$ 2,675.00 | 10.70 | \$ 1,337.50 |
| Type B Curb & Gutter | LF | \$ 35.00 | 1,170.00 | \$ 40,950.00 | 702.00 | \$ 24,570.00 |
| 6" Concrete Fillets | SY | \$ 125.00 | 48.00 | \$ 6,000.00 | 24.00 | \$ 3,000.00 |
| 6" Concrete Driveway | SF | \$ 12.00 | 2,760.00 | \$ 33,120.00 | 0.00 | \$ - |
| 4" Concrete Sidewalk | SF | \$ 8.00 | 5,850.00 | \$ 46,800.00 | 2,925.00 | \$ 23,400.00 |
| Sodding | SY | \$ 7.50 | 260.00 | \$ 1,950.00 | 130.00 | \$ 975.00 |
| Retaining Wall | SF | \$ 65.00 | 200.00 | \$ 13,000.00 | 100.00 | \$ 6,500.00 |
| Roadway Total: | | | | \$ 243,118.00 | | \$ 114,206.30 |
| Total Construction Costs: | | | | \$ 568,363.00 | | |
| Total Construction Costs SRF Eligible: | | | | | | \$ 439,451.30 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 170,508.90 | | \$ 131,835.39 |
| TOTAL CAPITAL COSTS: | | | | \$ 738,871.90 | | |
| TOTAL SRF CAPITAL COSTS: | | | | | | \$ 571,286.69 |

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
PROJECT: MILL STREET from McCLELLAN to HIGH STREETS
Red (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YR | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|---|---------------|---------|-----------------------|-------------------------|---------------|
| Water Distribution Items | \$ - | | \$ - | \$ - | \$ - |
| Pipe Bedding | \$ 1,250.00 | 50 | \$ 312.50 | \$ 62.50 | \$ 1,188.00 |
| 6" PVC Watermain | \$ 55,250.00 | 50 | \$ 13,812.50 | \$ 2,762.50 | \$ 52,488.00 |
| 6" Valves with Box | \$ 15,000.00 | 50 | \$ 3,750.00 | \$ 750.00 | \$ 14,250.00 |
| 6" Fittings | \$ 1,950.00 | 50 | \$ 243.75 | \$ 48.75 | \$ 1,901.00 |
| Fire Hydrant with Valve | \$ 26,000.00 | 50 | \$ 6,500.00 | \$ 1,300.00 | \$ 24,700.00 |
| 1" Copper Water Service | \$ 25,875.00 | 50 | \$ 6,468.75 | \$ 1,293.75 | \$ 24,581.00 |
| 1" Corporation Stop with Tapping Saddle | \$ 11,500.00 | 50 | \$ 2,875.00 | \$ 575.00 | \$ 10,925.00 |
| 1" Curb Stop with Box | \$ 11,500.00 | 50 | \$ 2,875.00 | \$ 287.50 | \$ 11,213.00 |
| Connect to Existing Water | \$ 5,000.00 | 50 | \$ 1,250.00 | \$ 250.00 | \$ 4,750.00 |
| Water Distribution Total: | \$ 153,325.00 | | | | |
| Sanitary Sewer Items | \$ - | 50 | \$ - | \$ - | \$ - |
| 4" Sanitary Service | \$ 28,750.00 | 50 | \$ 7,187.50 | \$ 1,437.50 | \$ 27,313.00 |
| 6" Sanitary | \$ 9,000.00 | 50 | \$ 1,125.00 | \$ 225.00 | \$ 8,775.00 |
| 8" Sanitary | \$ 32,175.00 | 50 | \$ 8,043.75 | \$ 1,608.75 | \$ 30,566.00 |
| 48" Sanitary Manhole | \$ 8,000.00 | 50 | \$ 2,000.00 | \$ 400.00 | \$ 7,600.00 |
| Connect to Existing Sewer | \$ 5,000.00 | 50 | \$ 1,250.00 | \$ 250.00 | \$ 4,750.00 |
| Sanitary Sewer Total: | \$ 82,925.00 | | | | |
| Storm Sewer | \$ - | | \$ - | \$ - | \$ - |
| 18" RCP Storm Sewer | \$ 21,120.00 | 50 | \$ 5,280.00 | \$ 1,056.00 | \$ 20,064.00 |
| 24" RCP Storm Sewer | \$ 43,875.00 | 50 | \$ 10,968.75 | \$ 2,193.75 | \$ 41,681.00 |
| Drop Inlet | \$ 24,000.00 | 50 | \$ 3,000.00 | \$ 600.00 | \$ 23,400.00 |
| Storm Sewer Total: | \$ 88,995.00 | | | | |
| Roadway Items | \$ - | | \$ - | \$ - | \$ - |
| Mobilization | \$ 25,000.00 | 50 | \$ 6,250.00 | \$ 1,250.00 | \$ 23,750.00 |
| Traffic Control | \$ 7,500.00 | 50 | \$ - | \$ - | \$ 7,500.00 |
| Demolition | \$ 15,000.00 | 50 | \$ 3,750.00 | \$ 750.00 | \$ 14,250.00 |
| Road Shaping | \$ 11,343.00 | 50 | \$ 1,417.88 | \$ 567.15 | \$ 10,776.00 |
| Asphalt Surfacing | \$ 39,780.00 | 50 | \$ 9,945.00 | \$ 1,989.00 | \$ 37,791.00 |
| Asphalt Tie-In/Patching | \$ 2,675.00 | 50 | \$ 334.38 | \$ 66.88 | \$ 2,608.00 |
| Type B Curb & Gutter | \$ 40,950.00 | 50 | \$ 10,237.50 | \$ 2,047.50 | \$ 38,903.00 |
| 6" Concrete Fillets | \$ 6,000.00 | 50 | | | |
| 6" Concrete Driveway | \$ 33,120.00 | 50 | \$ - | \$ - | \$ 33,120.00 |
| 4" Concrete Sidewalk | \$ 46,800.00 | 50 | \$ - | \$ - | \$ 46,800.00 |
| Sodding | \$ 1,950.00 | 50 | \$ - | \$ - | \$ 1,950.00 |
| Retaining Wall | \$ 13,000.00 | 50 | \$ - | \$ - | \$ 13,000.00 |
| Roadway Total: | \$ 243,118.00 | | | | |
| Total Construction Costs: | \$ 568,363.00 | | | | \$ 540,593.00 |
| ies, Engineering, Legal & Administration: | \$ 170,508.90 | | | | \$ 170,508.90 |
| TOTAL CAPITAL COSTS: | \$ 738,871.90 | | | | \$ 711,101.90 |

PROJECT COST, NET PRESENT WORTH \$ 711,101.90
TOTAL NET PRESENT WORTH \$ 711,101.90

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 57,059.00
C.R.F. = 0.08024 L=5.0% N=20 YEARS

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
 PROJECT: South Main to Lewie's
 Purple (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|---------------|-------|------------------------|--------------|----------------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt | S.Y. | \$ 7.00 | 8,000 | \$ 56,000.00 | 4,000.0 | \$ 28,000.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 2,000 | \$ 130,000.00 | 2,000.0 | \$ 130,000.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 4 | \$ 6,000.00 | 4.0 | \$ 6,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 4 | \$ 2,000.00 | 4.0 | \$ 2,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 3 | \$ 15,600.00 | 3.0 | \$ 15,600.00 |
| Water Services | EACH | \$ 1,570.00 | 5 | \$ 7,850.00 | 5.0 | \$ 7,850.00 |
| Highway Bore | EACH | \$ 25,000.00 | 4 | \$ 100,000.00 | 4.0 | \$ 100,000.00 |
| Sanitary Sewer Lift Station | EACH | \$ 150,000.00 | 1 | \$ 150,000.00 | 1.0 | \$ 150,000.00 |
| Force Main Sanitary Sewer | L.F. | \$ 70.00 | 2,000 | \$ 140,000.00 | 2,000.0 | \$ 140,000.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 1 | \$ 4,100.00 | 1.0 | \$ 4,100.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 5 | \$ 7,000.00 | 5.0 | \$ 7,000.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 1 | \$ 1,850.00 | 1.0 | \$ 1,850.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 1 | \$ 1,650.00 | 1.0 | \$ 1,650.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 750 | \$ 60,000.00 | 450.0 | \$ 36,000.00 |
| Road Shaping | S.Y. | \$ 8.00 | 7,778 | \$ 62,222.22 | 4,666.7 | \$ 37,333.00 |
| Driveways | S.Y. | \$ 75.00 | 67 | \$ 5,000.00 | 0.0 | \$ - |
| Pipe Bedding | TON | \$ 40.00 | 1,305 | \$ 52,200.00 | 1,305.0 | \$ 52,200.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 864,377.22 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 751,036.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 259,313.00 | | \$ 225,311.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,123,690.22 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 976,347.00 |

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)

PROJECT: Mill, Bleeker, Hig and Upper Gold High Streets
Orange (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|--------------|--------|------------------------|--------------|------------------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt, G&G, & SW | S.Y. | \$ 7.00 | 6,556 | \$ 45,892.00 | 3,278.0 | \$ 22,946.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 1,120 | \$ 72,800.00 | 1,120.0 | \$ 72,800.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 16 | \$ 24,000.00 | 16.0 | \$ 24,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 16 | \$ 8,000.00 | 16.0 | \$ 8,000.00 |
| 12" PVC Watermain | L.F. | \$ 40.00 | 355 | \$ 14,200.00 | 355.0 | \$ 14,200.00 |
| 12" Valves with Box | EACH | \$ 1,500.00 | 4 | \$ 6,000.00 | 4.0 | \$ 6,000.00 |
| 12" Fittings | EACH | \$ 500.00 | 4 | \$ 2,000.00 | 4.0 | \$ 2,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 4 | \$ 20,800.00 | 4.0 | \$ 20,800.00 |
| Water Services | EACH | \$ 1,570.00 | 35 | \$ 54,950.00 | 35.0 | \$ 54,950.00 |
| 8" Sanitary Sewer | L.F. | \$ 70.00 | 1,475 | \$ 103,250.00 | 1,475.0 | \$ 103,250.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 4 | \$ 16,400.00 | 4.0 | \$ 16,400.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 35 | \$ 49,000.00 | 35.0 | \$ 49,000.00 |
| 18" Storm Sewer | L.F. | \$ 50.00 | 1,475 | \$ 73,750.00 | 1,475.0 | \$ 73,750.00 |
| Drop Inlets | EACH | \$ 3,600.00 | 16 | \$ 57,600.00 | 16.0 | \$ 57,600.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 3 | \$ 5,550.00 | 3.0 | \$ 5,550.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 3 | \$ 4,950.00 | 3.0 | \$ 4,950.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 1,107 | \$ 88,560.00 | 664.2 | \$ 53,136.00 |
| Road Shaping | S.Y. | \$ 8.00 | 5,736 | \$ 45,888.89 | 3,441.7 | \$ 27,533.00 |
| Curb & Gutter | L.F. | \$ 35.00 | 2,950 | \$ 103,250.00 | 1,770.0 | \$ 61,950.00 |
| Fillets | S.Y. | \$ 100.00 | 253 | \$ 25,311.11 | 126.6 | \$ 12,656.00 |
| Driveways | S.Y. | \$ 75.00 | 467 | \$ 35,000.00 | 0.0 | \$ - |
| Sidewalks | S.F. | \$ 7.50 | 14,750 | \$ 110,625.00 | 7,375.0 | \$ 55,313.00 |
| Pipe Bedding | TON | \$ 40.00 | 1,694 | \$ 67,760.00 | 1,694.0 | \$ 67,760.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| Retaining Wall | S.F. | \$ 35.00 | 20 | \$ 700.00 | 10.0 | \$ 350.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 1,099,142.00 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 846,347.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 329,743.00 | | \$ 253,904.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,428,885.00 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 1,100,251.00 |

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
 PROJECT: Mill, Bleeker, Hig and Upper Gold High Streets
 Orange (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|------------------------|------------|-----------------------|-------------------------|------------------------|
| Mobilization | \$ 55,000.00 | 50 | \$ - | \$ - | \$ 55,000.00 |
| Traffic Control | \$ 5,000.00 | 50 | \$ - | \$ - | \$ 5,000.00 |
| Remove Asphalt, G&G, & SW | \$ 45,892.00 | 50 | \$ - | \$ - | \$ 45,892.00 |
| 6" PVC Watermain | \$ 72,800.00 | 50 | \$ 18,200.00 | \$ 3,640.00 | \$ 69,160.00 |
| 6" Valves with Box | \$ 24,000.00 | 50 | \$ 3,000.00 | \$ 600.00 | \$ 23,400.00 |
| 6" Fittings | \$ 8,000.00 | 50 | \$ 2,000.00 | \$ 400.00 | \$ 7,600.00 |
| 12" PVC Watermain | \$ 14,200.00 | 50 | \$ 3,550.00 | \$ 710.00 | \$ 13,490.00 |
| 12" Valves with Box | \$ 6,000.00 | 50 | \$ 1,500.00 | \$ 300.00 | \$ 5,700.00 |
| 12" Fittings | \$ 2,000.00 | 50 | \$ 500.00 | \$ 100.00 | \$ 1,900.00 |
| Fire Hydrant with Valve | \$ 20,800.00 | 50 | \$ 5,200.00 | \$ 1,040.00 | \$ 19,760.00 |
| Water Services | \$ 54,950.00 | 50 | \$ 13,737.50 | \$ 2,747.50 | \$ 52,203.00 |
| 8" Sanitary Sewer | \$ 103,250.00 | 50 | \$ 25,812.50 | \$ 5,162.50 | \$ 98,088.00 |
| 48" Sanitary Manhole | \$ 16,400.00 | 50 | \$ 4,100.00 | \$ 820.00 | \$ 15,580.00 |
| 4" Sewer Services | \$ 49,000.00 | 50 | \$ 12,250.00 | \$ 2,450.00 | \$ 46,550.00 |
| 18" Storm Sewer | \$ 73,750.00 | 50 | \$ 18,437.50 | \$ 3,687.50 | \$ 70,063.00 |
| Drop Inlets | \$ 57,600.00 | 50 | \$ 7,200.00 | \$ 1,440.00 | \$ 56,160.00 |
| Connecting to Existing Water | \$ 5,550.00 | 50 | \$ 1,387.50 | \$ 277.50 | \$ 5,273.00 |
| Connecting to Existing Sewer | \$ 4,950.00 | 50 | \$ 1,237.50 | \$ 247.50 | \$ 4,703.00 |
| Class E Asphalt 4 inch | \$ 88,560.00 | 50 | \$ 22,140.00 | \$ 4,428.00 | \$ 84,132.00 |
| Road Shaping | \$ 45,888.89 | 50 | \$ 11,472.22 | \$ 2,294.44 | \$ 43,594.00 |
| Curb & Gutter | \$ 103,250.00 | 50 | \$ 25,812.50 | \$ 5,162.50 | \$ 98,088.00 |
| Fillets | \$ 25,311.11 | 50 | \$ 6,327.78 | \$ 1,265.56 | \$ 24,046.00 |
| Driveways | \$ 35,000.00 | 50 | \$ 8,750.00 | \$ 1,750.00 | \$ 33,250.00 |
| Sidewalks | \$ 110,625.00 | 50 | \$ 13,828.13 | \$ 2,765.63 | \$ 107,859.00 |
| Pipe Bedding | \$ 67,760.00 | 50 | \$ 16,940.00 | \$ 1,694.00 | \$ 66,066.00 |
| Sodding | \$ 405.00 | 50 | \$ 101.25 | \$ 20.25 | \$ 385.00 |
| Asphalt Patching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| Retaining Wall | \$ 700.00 | 50 | \$ 175.00 | \$ 35.00 | \$ 665.00 |
| 30% Contingency, Engineering Legal & Administration | \$ 329,742.60 | 50 | \$ - | \$ - | \$ 329,742.60 |
| | \$ 1,428,884.60 | | | | \$ 1,385,724.60 |

PROJECT COST, NET PRESENT WORTH \$ 1,385,724.60TOTAL NET PRESENT WORTH \$ 1,385,724.60

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 111,191.00
 C.R.F. = 0.08024 L=5.0% N=20 YEARS

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
 PROJECT: Hill-Sawyer-High-Summit Streets
 Green (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|--------------|--------|------------------------|--------------|----------------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt, G&G, & SW | S.Y. | \$ 7.00 | 5,223 | \$ 36,561.00 | 2,611.5 | \$ 18,281.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 1,010 | \$ 65,650.00 | 1,010.0 | \$ 65,650.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 16 | \$ 24,000.00 | 16.0 | \$ 24,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 16 | \$ 8,000.00 | 16.0 | \$ 8,000.00 |
| 12" PVC Watermain | L.F. | \$ 40.00 | 410 | \$ 16,400.00 | 410.0 | \$ 16,400.00 |
| 12" Valves with Box | EACH | \$ 1,500.00 | 4 | \$ 6,000.00 | 4.0 | \$ 6,000.00 |
| 12" Fittings | EACH | \$ 500.00 | 4 | \$ 2,000.00 | 4.0 | \$ 2,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 4 | \$ 20,800.00 | 4.0 | \$ 20,800.00 |
| Water Services | EACH | \$ 1,570.00 | 30 | \$ 47,100.00 | 30.0 | \$ 47,100.00 |
| 8" Sanitary Sewer | L.F. | \$ 70.00 | 1,175 | \$ 82,250.00 | 1,175.0 | \$ 82,250.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 4 | \$ 16,400.00 | 4.0 | \$ 16,400.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 30 | \$ 42,000.00 | 30.0 | \$ 42,000.00 |
| 18" Storm Sewer | L.F. | \$ 50.00 | 1,175 | \$ 58,750.00 | 1,175.0 | \$ 58,750.00 |
| Drop Inlets | EACH | \$ 3,600.00 | 16 | \$ 57,600.00 | 16.0 | \$ 57,600.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 3 | \$ 5,550.00 | 3.0 | \$ 5,550.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 3 | \$ 4,950.00 | 3.0 | \$ 4,950.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 882 | \$ 70,560.00 | 529.2 | \$ 42,336.00 |
| Road Shaping | S.Y. | \$ 8.00 | 4,569 | \$ 36,555.56 | 2,741.7 | \$ 21,933.00 |
| Curb & Gutter | L.F. | \$ 35.00 | 2,350 | \$ 82,250.00 | 1,410.0 | \$ 49,350.00 |
| Fillets | S.Y. | \$ 100.00 | 253 | \$ 25,311.11 | 126.6 | \$ 12,656.00 |
| Driveways | S.Y. | \$ 75.00 | 400 | \$ 30,000.00 | 0.0 | \$ - |
| Sidewalks | S.F. | \$ 7.50 | 11,750 | \$ 88,125.00 | 5,875.0 | \$ 44,063.00 |
| Pipe Bedding | TON | \$ 40.00 | 1,426 | \$ 57,040.00 | 1,426.0 | \$ 57,040.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| Retaining Wall | S.F. | \$ 35.00 | 20 | \$ 700.00 | 10.0 | \$ 350.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 947,457.67 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 734,912.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 284,237.00 | | \$ 220,474.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,231,694.67 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 955,386.00 |

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
 PROJECT: Hill-Sawyer-High-Summit Streets
 Green (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|------------------------|---------------|-----------------------------|-------------------------------|------------------------|
| Mobilization | \$ 55,000.00 | 50 | \$ - | \$ - | \$ 55,000.00 |
| Traffic Control | \$ 5,000.00 | 50 | \$ - | \$ - | \$ 5,000.00 |
| Remove Asphalt, G&G, & SW | \$ 36,561.00 | 50 | \$ - | \$ - | \$ 36,561.00 |
| 6" PVC Watermain | \$ 65,650.00 | 50 | \$ 16,412.50 | \$ 3,282.50 | \$ 62,368.00 |
| 6" Valves with Box | \$ 24,000.00 | 50 | \$ 3,000.00 | \$ 600.00 | \$ 23,400.00 |
| 6" Fittings | \$ 8,000.00 | 50 | \$ 2,000.00 | \$ 400.00 | \$ 7,600.00 |
| 12" PVC Watermain | \$ 16,400.00 | 50 | \$ 4,100.00 | \$ 820.00 | \$ 15,580.00 |
| 12" Valves with Box | \$ 6,000.00 | 50 | \$ 1,500.00 | \$ 300.00 | \$ 5,700.00 |
| 12" Fittings | \$ 2,000.00 | 50 | \$ 500.00 | \$ 100.00 | \$ 1,900.00 |
| Fire Hydrant with Valve | \$ 20,800.00 | 50 | \$ 5,200.00 | \$ 1,040.00 | \$ 19,760.00 |
| Water Services | \$ 47,100.00 | 50 | \$ 11,775.00 | \$ 2,355.00 | \$ 44,745.00 |
| 8" Sanitary Sewer | \$ 82,250.00 | 50 | \$ 20,562.50 | \$ 4,112.50 | \$ 78,138.00 |
| 48" Sanitary Manhole | \$ 16,400.00 | 50 | \$ 4,100.00 | \$ 820.00 | \$ 15,580.00 |
| 4" Sewer Services | \$ 42,000.00 | 50 | \$ 10,500.00 | \$ 2,100.00 | \$ 39,900.00 |
| 18" Storm Sewer | \$ 58,750.00 | 50 | \$ 14,687.50 | \$ 2,937.50 | \$ 55,813.00 |
| Drop Inlets | \$ 57,600.00 | 50 | \$ 7,200.00 | \$ 1,440.00 | \$ 56,160.00 |
| Connecting to Existing Water | \$ 5,550.00 | 50 | \$ 1,387.50 | \$ 277.50 | \$ 5,273.00 |
| Connecting to Existing Sewer | \$ 4,950.00 | 50 | \$ 1,237.50 | \$ 247.50 | \$ 4,703.00 |
| Class E Asphalt 4 inch | \$ 70,560.00 | 50 | \$ 17,640.00 | \$ 3,528.00 | \$ 67,032.00 |
| Road Shaping | \$ 36,555.56 | 50 | \$ 9,138.89 | \$ 1,827.78 | \$ 34,728.00 |
| Curb & Gutter | \$ 82,250.00 | 50 | \$ 20,562.50 | \$ 4,112.50 | \$ 78,138.00 |
| Fillets | \$ 25,311.11 | 50 | \$ 6,327.78 | \$ 1,265.56 | \$ 24,046.00 |
| Driveways | \$ 30,000.00 | 50 | \$ 7,500.00 | \$ 1,500.00 | \$ 28,500.00 |
| Sidewalks | \$ 88,125.00 | 50 | \$ 11,015.63 | \$ 2,203.13 | \$ 85,922.00 |
| Pipe Bedding | \$ 57,040.00 | 50 | \$ - | \$ - | \$ 57,040.00 |
| Sodding | \$ 405.00 | 50 | \$ 101.25 | \$ 20.25 | \$ 385.00 |
| Asphalt Patching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| Retaining Wall | \$ 700.00 | 50 | \$ 175.00 | \$ 35.00 | \$ 665.00 |
| 30% Contingency, Engineering Legal & Administration | \$ 284,237.30 | 50 | \$ - | \$ - | \$ 284,237.30 |
| | \$ 1,231,694.97 | | | | \$ 1,196,249.30 |

PROJECT COST, NET PRESENT WORTH \$ 1,196,249.30

TOTAL NET PRESENT WORTH \$ 1,196,249.30

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 95,987.00
 C.R.F. = 0.08024 L=5.0% N=20 YEARS

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
 PROJECT: Summit-Barclay-Hill Streets
 Yellow (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|--------------|--------|------------------------|--------------|----------------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt, G&G, & SW | S.Y. | \$ 7.00 | 5,023 | \$ 35,161.00 | 2,511.5 | \$ 17,581.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 1,130 | \$ 73,450.00 | 1,130.0 | \$ 73,450.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 8 | \$ 12,000.00 | 8.0 | \$ 12,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 8 | \$ 4,000.00 | 8.0 | \$ 4,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 2 | \$ 10,400.00 | 2.0 | \$ 10,400.00 |
| Water Services | EACH | \$ 1,570.00 | 28 | \$ 43,960.00 | 28.0 | \$ 43,960.00 |
| 8" Sanitary Sewer | L.F. | \$ 70.00 | 1,130 | \$ 79,100.00 | 1,130.0 | \$ 79,100.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 2 | \$ 8,200.00 | 2.0 | \$ 8,200.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 28 | \$ 39,200.00 | 28.0 | \$ 39,200.00 |
| 18" Storm Sewer | L.F. | \$ 50.00 | 1,130 | \$ 56,500.00 | 1,130.0 | \$ 56,500.00 |
| Drop Inlets | EACH | \$ 3,600.00 | 16 | \$ 57,600.00 | 16.0 | \$ 57,600.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 3 | \$ 5,550.00 | 3.0 | \$ 5,550.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 3 | \$ 4,950.00 | 3.0 | \$ 4,950.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 848 | \$ 67,840.00 | 508.8 | \$ 40,704.00 |
| Road Shaping | S.Y. | \$ 8.00 | 4,394 | \$ 35,155.56 | 2,636.7 | \$ 21,093.00 |
| Curb & Gutter | L.F. | \$ 35.00 | 2,260 | \$ 79,100.00 | 1,356.0 | \$ 47,460.00 |
| Fillets | S.Y. | \$ 100.00 | 127 | \$ 12,655.56 | 63.3 | \$ 6,328.00 |
| Driveways | S.Y. | \$ 75.00 | 373 | \$ 28,000.00 | 0.0 | \$ - |
| Sidewalks | S.F. | \$ 7.50 | 11,300 | \$ 84,750.00 | 5,650.0 | \$ 42,375.00 |
| Pipe Bedding | TON | \$ 40.00 | 1,475 | \$ 59,000.00 | 1,475.0 | \$ 59,000.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| Retaining Wall | S.F. | \$ 35.00 | 20 | \$ 700.00 | 10.0 | \$ 350.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 860,177.11 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 661,254.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 258,053.00 | | \$ 198,376.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,118,230.11 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 859,630.00 |

SECTION 6

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
 PROJECT: Summit-Barclay-Hill Streets
 Yellow (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|------------------------|------------|-----------------------|-------------------------|------------------------|
| Mobilization | \$ 55,000.00 | 50 | \$ - | \$ - | \$ 55,000.00 |
| Traffic Control | \$ 5,000.00 | 50 | \$ - | \$ - | \$ 5,000.00 |
| Remove Asphalt, G&G, & SW | \$ 35,161.00 | 50 | \$ - | \$ - | \$ 35,161.00 |
| 6" PVC Watermain | \$ 73,450.00 | 50 | \$ 18,362.50 | \$ 3,672.50 | \$ 69,778.00 |
| 6" Valves with Box | \$ 12,000.00 | 50 | \$ 1,500.00 | \$ 300.00 | \$ 11,700.00 |
| 6" Fittings | \$ 4,000.00 | 50 | \$ 1,000.00 | \$ 200.00 | \$ 3,800.00 |
| Fire Hydrant with Valve | \$ 10,400.00 | 50 | \$ 2,600.00 | \$ 520.00 | \$ 9,880.00 |
| Water Services | \$ 43,960.00 | 50 | \$ 10,990.00 | \$ 2,198.00 | \$ 41,762.00 |
| 8" Sanitary Sewer | \$ 79,100.00 | 50 | \$ 19,775.00 | \$ 3,955.00 | \$ 75,145.00 |
| 48" Sanitary Manhole | \$ 8,200.00 | 50 | \$ 2,050.00 | \$ 410.00 | \$ 7,790.00 |
| 4" Sewer Services | \$ 39,200.00 | 50 | \$ 9,800.00 | \$ 1,960.00 | \$ 37,240.00 |
| 18" Storm Sewer | \$ 56,500.00 | 50 | \$ 14,125.00 | \$ 2,825.00 | \$ 53,675.00 |
| Drop Inlets | \$ 57,600.00 | 50 | \$ 7,200.00 | \$ 1,440.00 | \$ 56,160.00 |
| Connecting to Existing Water | \$ 5,550.00 | 50 | \$ 1,387.50 | \$ 277.50 | \$ 5,273.00 |
| Connecting to Existing Sewer | \$ 4,950.00 | 50 | \$ 1,237.50 | \$ 247.50 | \$ 4,703.00 |
| Class E Asphalt 4 inch | \$ 67,840.00 | 50 | \$ 16,960.00 | \$ 3,392.00 | \$ 64,448.00 |
| Road Shaping | \$ 35,155.56 | 50 | \$ 8,788.89 | \$ 1,757.78 | \$ 33,398.00 |
| Curb & Gutter | \$ 79,100.00 | 50 | \$ 19,775.00 | \$ 3,955.00 | \$ 75,145.00 |
| Fillets | \$ 12,655.56 | 50 | \$ 3,163.89 | \$ 632.78 | \$ 12,023.00 |
| Driveways | \$ 28,000.00 | 50 | \$ 7,000.00 | \$ 1,400.00 | \$ 26,600.00 |
| Sidewalks | \$ 84,750.00 | 50 | \$ 10,593.75 | \$ 2,118.75 | \$ 82,631.00 |
| Pipe Bedding | \$ 59,000.00 | 50 | \$ 14,750.00 | \$ 1,475.00 | \$ 57,525.00 |
| Sodding | \$ 405.00 | 50 | \$ 101.25 | \$ 20.25 | \$ 385.00 |
| Asphalt Patching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| Retaining Wall | \$ 700.00 | 50 | \$ 175.00 | \$ 35.00 | \$ 665.00 |
| 30% Contingency, Engineering Legal & Administration | \$ 258,053.13 | 50 | \$ - | \$ - | \$ 258,053.13 |
| | \$ 1,118,230.24 | | | | \$ 1,085,315.13 |

PROJECT COST, NET PRESENT WORTH \$ 1,085,315.13
 TOTAL NET PRESENT WORTH \$ 1,085,315.13

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 87,086.00
 C.R.F. = 0.08024 L=5.0% N=20 YEARS

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
 PROJECT: McClellan - Gold - Bleeker Streets
 Blue (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|--------------|--------|-----------------|--------------|-----------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt, G&G, & SW | S.Y. | \$ 7.00 | 5,578 | \$ 39,046.00 | 2,789.0 | \$ 19,523.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 1,255 | \$ 81,575.00 | 1,255.0 | \$ 81,575.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 16 | \$ 24,000.00 | 16.0 | \$ 24,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 16 | \$ 8,000.00 | 16.0 | \$ 8,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 4 | \$ 20,800.00 | 4.0 | \$ 20,800.00 |
| Water Services | EACH | \$ 1,570.00 | 36 | \$ 56,520.00 | 36.0 | \$ 56,520.00 |
| 8" Sanitary Sewer | L.F. | \$ 70.00 | 1,255 | \$ 87,850.00 | 1,255.0 | \$ 87,850.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 4 | \$ 16,400.00 | 4.0 | \$ 16,400.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 36 | \$ 50,400.00 | 36.0 | \$ 50,400.00 |
| 18" Storm Sewer | L.F. | \$ 50.00 | 1,255 | \$ 62,750.00 | 1,255.0 | \$ 62,750.00 |
| Drop Inlets | EACH | \$ 3,600.00 | 16 | \$ 57,600.00 | 16.0 | \$ 57,600.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 3 | \$ 5,550.00 | 3.0 | \$ 5,550.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 3 | \$ 4,950.00 | 3.0 | \$ 4,950.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 942 | \$ 75,360.00 | 565.2 | \$ 45,216.00 |
| Road Shaping | S.Y. | \$ 8.00 | 4,881 | \$ 39,044.44 | 2,928.3 | \$ 23,427.00 |
| Curb & Gutter | L.F. | \$ 35.00 | 2,510 | \$ 87,850.00 | 1,506.0 | \$ 52,710.00 |
| Fillets | S.Y. | \$ 100.00 | 253 | \$ 25,311.11 | 126.6 | \$ 12,656.00 |
| Driveways | S.Y. | \$ 75.00 | 480 | \$ 36,000.00 | 0.0 | \$ - |
| Sidewalks | S.F. | \$ 7.50 | 12,550 | \$ 94,125.00 | 6,275.0 | \$ 47,063.00 |
| Pipe Bedding | TON | \$ 40.00 | 1,638 | \$ 65,520.00 | 1,638.0 | \$ 65,520.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| Retaining Wall | S.F. | \$ 35.00 | 20 | \$ 700.00 | 10.0 | \$ 350.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 1,002,256.56 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 774,313.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 300,677.00 | | \$ 232,294.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,302,933.56 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 1,006,607.00 |

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
 PROJECT: McClellan - Gold - Bleeker Streets
 Blue (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|------------------------|------------|-----------------------|-------------------------|------------------------|
| Mobilization | \$ 55,000.00 | 50 | \$ - | \$ - | \$ 55,000.00 |
| Traffic Control | \$ 5,000.00 | 50 | \$ - | \$ - | \$ 5,000.00 |
| Remove Asphalt, G&G, & SW | \$ 39,046.00 | 50 | \$ - | \$ - | \$ 39,046.00 |
| 6" PVC Watermain | \$ 81,575.00 | 50 | \$ 20,393.75 | \$ 4,078.75 | \$ 77,496.00 |
| 6" Valves with Box | \$ 24,000.00 | 50 | \$ 3,000.00 | \$ 600.00 | \$ 23,400.00 |
| 6" Fittings | \$ 8,000.00 | 50 | \$ 2,000.00 | \$ 400.00 | \$ 7,600.00 |
| Fire Hydrant with Valve | \$ 20,800.00 | 50 | \$ 5,200.00 | \$ 1,040.00 | \$ 19,760.00 |
| Water Services | \$ 56,520.00 | 50 | \$ 14,130.00 | \$ 2,826.00 | \$ 53,694.00 |
| 8" Sanitary Sewer | \$ 87,850.00 | 50 | \$ 21,962.50 | \$ 4,392.50 | \$ 83,458.00 |
| 48" Sanitary Manhole | \$ 16,400.00 | 50 | \$ 4,100.00 | \$ 820.00 | \$ 15,580.00 |
| 4" Sewer Services | \$ 50,400.00 | 50 | \$ 12,600.00 | \$ 2,520.00 | \$ 47,880.00 |
| 18" Storm Sewer | \$ 62,750.00 | 50 | \$ 15,687.50 | \$ 3,137.50 | \$ 59,613.00 |
| Drop Inlets | \$ 57,600.00 | 50 | \$ 7,200.00 | \$ 1,440.00 | \$ 56,160.00 |
| Connecting to Existing Water | \$ 5,550.00 | 50 | \$ 1,387.50 | \$ 277.50 | \$ 5,273.00 |
| Connecting to Existing Sewer | \$ 4,950.00 | 50 | \$ 1,237.50 | \$ 247.50 | \$ 4,703.00 |
| Class E Asphalt 4 inch | \$ 75,360.00 | 50 | \$ 18,840.00 | \$ 3,768.00 | \$ 71,592.00 |
| Road Shaping | \$ 39,044.44 | 50 | \$ 9,761.11 | \$ 1,952.22 | \$ 37,092.00 |
| Curb & Gutter | \$ 87,850.00 | 50 | \$ 21,962.50 | \$ 4,392.50 | \$ 83,458.00 |
| Fillets | \$ 25,311.11 | 50 | \$ 6,327.78 | \$ 1,265.56 | \$ 24,046.00 |
| Driveways | \$ 36,000.00 | 50 | \$ 9,000.00 | \$ 1,800.00 | \$ 34,200.00 |
| Sidewalks | \$ 94,125.00 | 50 | \$ 11,765.63 | \$ 2,353.13 | \$ 91,772.00 |
| Pipe Bedding | \$ 65,520.00 | 50 | \$ 16,380.00 | \$ 1,638.00 | \$ 63,882.00 |
| Sodding | \$ 405.00 | 50 | \$ 101.25 | \$ 20.25 | \$ 385.00 |
| Asphalt Patching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| Retaining Wall | \$ 700.00 | 50 | \$ 175.00 | \$ 35.00 | \$ 665.00 |
| 30% Contingency, Engineering Legal & Administration | \$ 300,676.97 | 50 | \$ - | \$ - | \$ 300,676.97 |
| | \$ 1,302,933.52 | | | | \$ 1,263,806.97 |

PROJECT COST, NET PRESENT WORTH \$ 1,263,806.97
 TOTAL NET PRESENT WORTH \$ 1,263,806.97

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 101,408.00
 C.R.F. = 0.08024 L=5.0% N=20 YEARS

FINANCIAL IMPACT
(PROJECT COST ESTIMATE)
 PROJECT: Mine-Cyanide to Hwy 85
 Light Blue (Map Color)

CAPITAL COST

| ITEM | UNITS | UNIT COST | QNTY | COST | SRF ELIGIBLE | |
|---|-------|--------------|--------|-----------------|--------------|-----------------|
| | | | | | QNTY | COST |
| Mobilization | L.S. | \$ 55,000.00 | 1 | \$ 55,000.00 | 0.5 | \$ 27,500.00 |
| Traffic Control | L.S. | \$ 5,000.00 | 1 | \$ 5,000.00 | 0.5 | \$ 2,500.00 |
| Remove Asphalt, G&G, & SW | S.Y. | \$ 7.00 | 8,556 | \$ 59,892.00 | 4,278.0 | \$ 29,946.00 |
| 6" PVC Watermain | L.F. | \$ 65.00 | 1,925 | \$ 125,125.00 | 1,925.0 | \$ 125,125.00 |
| 6" Valves with Box | EACH | \$ 1,500.00 | 8 | \$ 12,000.00 | 8.0 | \$ 12,000.00 |
| 6" Fittings | EACH | \$ 500.00 | 8 | \$ 4,000.00 | 8.0 | \$ 4,000.00 |
| Fire Hydrant with Valve | EACH | \$ 5,200.00 | 2 | \$ 10,400.00 | 2.0 | \$ 10,400.00 |
| Water Services | EACH | \$ 1,570.00 | 34 | \$ 53,380.00 | 34.0 | \$ 53,380.00 |
| 8" Sanitary Sewer | L.F. | \$ 70.00 | 1,925 | \$ 134,750.00 | 1,925.0 | \$ 134,750.00 |
| 48" Sanitary Manhole | EACH | \$ 4,100.00 | 2 | \$ 8,200.00 | 2.0 | \$ 8,200.00 |
| 4" Sewer Services | EACH | \$ 1,400.00 | 34 | \$ 47,600.00 | 34.0 | \$ 47,600.00 |
| 18" Storm Sewer | L.F. | \$ 50.00 | 1,925 | \$ 96,250.00 | 1,925.0 | \$ 96,250.00 |
| Drop Inlets | EACH | \$ 3,600.00 | 16 | \$ 57,600.00 | 16.0 | \$ 57,600.00 |
| Connecting to Existing Water | EACH | \$ 1,850.00 | 3 | \$ 5,550.00 | 3.0 | \$ 5,550.00 |
| Connecting to Existing Sewer | EACH | \$ 1,650.00 | 3 | \$ 4,950.00 | 3.0 | \$ 4,950.00 |
| Class E Asphalt 4 inch | TON | \$ 80.00 | 1,444 | \$ 115,520.00 | 866.4 | \$ 69,312.00 |
| Road Shaping | S.Y. | \$ 8.00 | 7,486 | \$ 59,888.89 | 4,491.7 | \$ 35,933.00 |
| Curb & Gutter | L.F. | \$ 35.00 | 3,850 | \$ 134,750.00 | 2,310.0 | \$ 80,850.00 |
| Fillets | S.Y. | \$ 100.00 | 127 | \$ 12,655.56 | 63.3 | \$ 6,328.00 |
| Driveways | S.Y. | \$ 75.00 | 453 | \$ 34,000.00 | 0.0 | \$ - |
| Sidewalks | S.F. | \$ 7.50 | 19,250 | \$ 144,375.00 | 9,625.0 | \$ 72,188.00 |
| Pipe Bedding | TON | \$ 40.00 | 2,513 | \$ 100,520.00 | 2,513.0 | \$ 100,520.00 |
| Sodding | S.Y. | \$ 6.75 | 60 | \$ 405.00 | 30.0 | \$ 203.00 |
| Asphalt Patching | TON | \$ 125.00 | 20 | \$ 2,500.00 | 10.0 | \$ 1,250.00 |
| Retaining Wall | S.F. | \$ 35.00 | 20 | \$ 700.00 | 10.0 | \$ 350.00 |
| TOTAL CONSTRUCTION COST: | | | | \$ 1,285,011.44 | | |
| Total Construction Cost SRF Eligible: | | | | | | \$ 986,685.00 |
| 30% Contingencies, Engineering, Legal & Administration: | | | | \$ 385,503.00 | | \$ 296,006.00 |
| TOTAL CAPITAL COST: | | | | \$ 1,670,514.44 | | |
| TOTAL SRF CAPITAL COST: | | | | | | \$ 1,282,691.00 |

FINANCIAL IMPACT
(LIFE CYCLE COST ESTIMATE)
 PROJECT: Mine-Cyanide to Hwy 85
 Light Blue (Map Color)

COST EFFECTIVE SUMMARY

| ITEM | COST | LIFE YEARS | 20 YEAR SALVAGE VALUE | PRESENT WORTH SA. VALUE | NET P.W. |
|--|------------------------|------------|-----------------------|-------------------------|------------------------|
| Mobilization | \$ 55,000.00 | 50 | \$ - | \$ - | \$ 55,000.00 |
| Traffic Control | \$ 5,000.00 | 50 | \$ - | \$ - | \$ 5,000.00 |
| Remove Asphalt, G&G, & SW | \$ 59,892.00 | 50 | \$ - | \$ - | \$ 59,892.00 |
| 6" PVC Watermain | \$ 125,125.00 | 50 | \$ 31,281.25 | \$ 6,256.25 | \$ 118,869.00 |
| 6" Valves with Box | \$ 12,000.00 | 50 | \$ 1,500.00 | \$ 300.00 | \$ 11,700.00 |
| 6" Fittings | \$ 4,000.00 | 50 | \$ 1,000.00 | \$ 200.00 | \$ 3,800.00 |
| Fire Hydrant with Valve | \$ 10,400.00 | 50 | \$ 2,600.00 | \$ 520.00 | \$ 9,880.00 |
| Water Services | \$ 53,380.00 | 50 | \$ 13,345.00 | \$ 2,669.00 | \$ 50,711.00 |
| 8" Sanitary Sewer | \$ 134,750.00 | 50 | \$ 33,687.50 | \$ 6,737.50 | \$ 128,013.00 |
| 48" Sanitary Manhole | \$ 8,200.00 | 50 | \$ 2,050.00 | \$ 410.00 | \$ 7,790.00 |
| 4" Sewer Services | \$ 47,600.00 | 50 | \$ 11,900.00 | \$ 2,380.00 | \$ 45,220.00 |
| 18" Storm Sewer | \$ 96,250.00 | 50 | \$ 24,062.50 | \$ 4,812.50 | \$ 91,438.00 |
| Drop Inlets | \$ 57,600.00 | 50 | \$ 7,200.00 | \$ 1,440.00 | \$ 56,160.00 |
| Connecting to Existing Water | \$ 5,550.00 | 50 | \$ 1,387.50 | \$ 277.50 | \$ 5,273.00 |
| Connecting to Existing Sewer | \$ 4,950.00 | 50 | \$ 1,237.50 | \$ 247.50 | \$ 4,703.00 |
| Class E Asphalt 4 inch | \$ 115,520.00 | 50 | \$ 28,880.00 | \$ 5,776.00 | \$ 109,744.00 |
| Road Shaping | \$ 59,888.89 | 50 | \$ 14,972.22 | \$ 2,994.44 | \$ 56,894.00 |
| Curb & Gutter | \$ 134,750.00 | 50 | \$ 33,687.50 | \$ 6,737.50 | \$ 128,013.00 |
| Fillets | \$ 12,655.56 | 50 | \$ 3,163.89 | \$ 632.78 | \$ 12,023.00 |
| Driveways | \$ 34,000.00 | 50 | \$ 8,500.00 | \$ 1,700.00 | \$ 32,300.00 |
| Sidewalks | \$ 144,375.00 | 50 | \$ 18,046.88 | \$ 3,609.38 | \$ 140,766.00 |
| Pipe Bedding | \$ 100,520.00 | 50 | \$ 25,130.00 | \$ 2,513.00 | \$ 98,007.00 |
| Sodding | \$ 405.00 | 50 | \$ 101.25 | \$ 20.25 | \$ 385.00 |
| Asphalt Patching | \$ 2,500.00 | 50 | \$ 625.00 | \$ 125.00 | \$ 2,375.00 |
| Retaining Wall | \$ 700.00 | 50 | \$ 175.00 | \$ 35.00 | \$ 665.00 |
| 30% Contingency, Engineering Legal & Administration | \$ 385,503.43 | 50 | \$ - | \$ - | \$ 385,503.43 |
| | \$ 1,670,514.88 | | | | \$ 1,620,124.43 |

PROJECT COST, NET PRESENT WORTH \$ 1,620,124.43
 TOTAL NET PRESENT WORTH \$ 1,620,124.43

AVE. ANNUAL EQUIVALENT COST (P.W. x C.R.F) \$ 129,999.00
 C.R.F. = 0.08024 L=5.0% N=20 YEARS

City of Lead Project Funding

| Year | City Funds | State Grants | SRF Loan | EPA Funds | CDBG Funds |
|------|------------|--------------|------------|------------|------------|
| 2007 | \$ 138,803 | \$ 40,677 | \$ 53,100 | \$ 235,001 | \$ - |
| 2008 | \$ 138,570 | \$ 43,022 | \$ 81,294 | \$ 243,973 | \$ - |
| 2009 | \$ 343,169 | \$ 87,303 | \$ 105,605 | \$ 479,318 | \$ - |
| 2010 | \$ 89,709 | \$ 2,378 | \$ 273,713 | \$ 398,115 | \$ - |
| 2011 | \$ 5,004 | \$ - | \$ 215,245 | \$ 272,960 | \$ - |
| 2012 | \$ - | \$ - | \$ 52,836 | \$ 64,504 | \$ - |
| 2013 | \$ - | \$ - | \$ - | \$ - | \$ - |
| 2014 | \$ - | \$ - | \$ 661,506 | \$ - | \$ - |
| 2015 | \$ - | \$ - | \$ 904,881 | \$ - | \$ - |
| 2016 | \$ - | \$ - | \$ - | \$ - | \$ - |
| 2017 | \$ 48,312 | \$ - | \$ 227,107 | \$ - | \$ 140,939 |
| 2018 | | | | | |
| 2019 | | | | | |
| 2020 | | | | | |
| 2021 | | | | | |

City of Lead Project Payment and Balances

| Year | Loan Balance | Annual Payment |
|------|-----------------|-------------------|
| 2018 | \$ 2,771,439 | \$ 202,406 |
| 2019 | \$ 2,612,661 | \$ 238,780 |
| 2020 | \$ 2,449,240 | \$ 238,780 |
| 2021 | \$ 2,281,035 | \$ 238,780 |
| 2022 | \$ 2,100,902 | \$ 238,780 |
| 2023 | \$ 1,929,700 | \$ 238,780 |
| 2024 | \$ 1,746,273 | \$ 238,780 |
| 2025 | \$ 1,557,471 | \$ 234,848 |
| 2026 | \$ 1,378,320 | \$ 223,775 |
| 2027 | \$ 1,193,695 | \$ 223,775 |
| 2028 | \$ 1,004,255 | \$ 223,775 |
| 2029 | \$ 852,618 | \$ 180,188 |
| 2030 | \$ 708,866 | \$ 167,853 |
| 2031 | \$ 506,730 | \$ 167,853 |
| 2032 | \$ 437,463 | \$ 138,672 |
| 2033 | \$ 323,641 | \$ 125,736 |
| 2034 | \$ 206,343 | \$ 125,736 |
| 2035 | \$ 85,462 | \$ 125,736 |
| 2036 | | \$ 86,748 |
| 2037 | | |
| 2038 | | |
| 2039 | | |
| 2040 | | |
| 2041 | | |
| 2042 | | |
| 2043 | | |
| 2044 | | |
| 2045 | | |
| 2046 | | |

SECTION 7

PLAN SELECTION AND IMPLEMENTATION

7.1 RECOMMENDATION

Due to the extremely poor condition that the sewer collection system is in within the project areas, it is imperative that this system be rehabilitated as soon as possible. Because the City has taken a policy of separating storm flow from the sanitary system whenever possible, it is recommended that the storm flow be separated in these streets. Due to the age and condition of the water lines, they should be replaced when the other utility work is being completed.

7.2 IMPLEMENTATION SCHEDULE

The recommended implementation and construction schedule:

- 1. *Submit Facility Plan to the State by the 1st of October, 2021.***
- 2. *Send out Environmental Agency Review Letters no later than 5th of October, 2021.***
- 3. *Submit Application for CDBG Grant by the 1st of October, 2021.***
- 4. *Conduct Public Hearing for the Facility Plan prior to the 15th of October, 2021.***

SECTION 8

PRIORITY RATINGS 2021 – 2031

| <u>Project Description</u> | <u>Year of Construction</u> |
|---|-----------------------------|
| Project 1 Miners Avenue (Pink) • Storm Sewer, Sewer, Water, and Street | 2022 |
| Project 2 Mill Street from McClellan to High Street (Red) • Storm Sewer, Sewer, Water, and Street | 2022 |
| Project 3 South Main Street to Lewies (Purple) • Sewer and Water | 2023 |
| Project 4 Mill, Bleeker, Upper Gold, and High Streets (Orange) • Storm Sewer, Sewer, Water, and Street | 2024 |
| Project 5 Hill, Sawyer, High, and Summit Streets (Green) • Storm Sewer, Sewer, Water, and Street | 2025 |
| Project 6 Summit, Barclay, and Hill Streets (Yellow) • Storm Sewer, Sewer, Water | 2026 |
| Project 7 McClellan, Gold, and Bleeker Street to Hill Streets (Blue) • Storm Sewer, Sewer, Water, and Street | 2027 |
| Project 8 Mine Street to Cyanide Street then to Hwy. 85 (Light Blue) • Storm Sewer, Sewer, Water, and Street | 2028 |
| (Map Color) | |