



CITY OF SPRING PARK  
WORK SESSION AGENDA  
OCTOBER 18, 2021 – 6:00 PM  
SPRING PARK CITY HALL

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(Work Session discussion times are approximate)

1. 6:00 – Black Lake Road Feasibility Report Discussion
2. 6:30 – Sunset Drive Reconstruction Update
3. 6:40 – Sunset Drive Lake Access Discussion
4. 6:50 – Adjourn

FEASIBILITY  
AND COST ESTIMATE  
FOR  
IMPROVEMENT PROJECT NO. 21963  
BLACK LAKE ROAD  
STREET AND UTILITY IMPROVEMENTS

CITY OF SPRING PARK, MINNESOTA  
October 18, 2021

Street reconstruction, concrete curb and gutter, storm sewer, sanitary sewer rehabilitation, water main, fitting, valves, hydrants, services, and appurtenant construction.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



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Michael J. Nielson, PE  
City Engineer  
Minn. Reg. No. 23623



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# FEASIBILITY REPORT BLACK LAKE ROAD PROJECT NO. 21963

## EXECUTIVE SUMMARY

The proposed project will include:

- Reconstruction of Black Lake Road from Shoreline Drive (CSAH-15) to 2494 Black Lake Road.
- Drainage Improvements.
- Sanitary and Watermain Utility improvements.

Proposed utility improvements include replacement of the sanitary sewer main, manholes and water main piping, valves and fire hydrants. In addition to the main line replacements the sewer and water service lines will be replaced to the Right-of-Way limits. The roadway improvements will include widening the street to 20-feet between flow lines of the concrete curb and gutter, with storm sewer to improve drainage and 3.5" bituminous pavement. As noted in the slide below Minnesota State Fire Code Section 503.21 requires a minimum access road width of 20-feet, except for sprinkler protected structures.

The estimated cost of the street, storm sewer, sanitary sewer and water systems improvements is \$2,013,900. The roadway and storm sewer portion of the project estimated to be \$999,000 is eligible to be assessed to benefitting properties at 25% of the actual cost over a ten-year period.

The Assessment Policy states that the rehabilitation or replacement of existing sanitary sewer, water main, and related appurtenances including replacement of castings, rings, valves, and hydrants, and fittings and water main reconstruction is not a cost that will be assessed to property owners and will be paid for in part by City Sewer and Water Funds. The City may be eligible for reimbursement for I&I improvements through the MCES I&I Grant. Costs not covered by Grants or Sewer and Water funds will be covered by the City's General Obligation Funds and Bonding.

As an alternate for consideration with this project is converting the overhead power to underground power and the construction of standalone streetlights. The additional cost to complete these improvements is estimated to be \$250,000. If the council determines that completing the undergrounding of the power and streetlights is feasible a separate assessment calculation will be completed.

It is the recommendation of the engineer that this project is feasible and cost effective as outlined in this report and we recommend moving forward with public hearing in assessments in accordance with State Statute 429.

## **1. PROJECT AREA CHARACTERISTICS**

### **Existing Conditions**

Black Lake Road is a dead-end street serving a residential neighborhood with 26 abutting homes that has an aging infrastructure that needs replacement.

Right-of-Way - The platted right-of-way is 16-feet wide with a 10-foot permanent easement on the east side of the road throughout the entire length of the roadway. The currently roadway width is generally 16-feet but does vary in certain locations. The existing roadway does not follow platted right-of-way and is outside of the right-of-way in several locations. There are several locations where private improvements are encroaching into the right-of-way. The 10-foot permanent easement has been identified on the record drawing as-built plan from the 1963 sewer improvement project. This easement will need to be verified to ensure that it was recorded and legal.

Utilities -The sanitary sewer, watermain and storm sewer servicing the residents along Black Lake Road were constructed in 1963 and are currently 58 years old. The 8-inch Vitrified Clay Pipe (VCP) sanitary sewer and 6-inch Cast Iron Pipe (CIP) water main exist along the approximate centerline of Black Lake Road. Based on project records and sanitary sewer televising reports, there have been minimal improvements made to the sanitary sewer, water main and storm sewer systems since their installation in the mid-1960s.

Roadway - The roadway last received improvements that included some patching and a bituminous overlay in 1993 making this pavement 28 years old. The current paved road width varies throughout this corridor but is generally 16 feet wide. The existing roadway does not follow the alignment of the platted right-of-way in all locations, with portions of the pave surfacing outside of the right-of-way. In other locations there are encroachments by driveways and landscaping of the residences along Black Lake Road see Figure 1. The existing right of way appears to be 16 feet wide with a 10-foot permanent easement to the east side of the roadway as indicated on as-built drawings from the 1963 construction. Easements and right of way areas would need to be confirmed during the feasibility of the project.

Pedestrian Accommodations – There are currently no pedestrian accommodations along this section of roadway.

## **2. PROPOSED IMPROVEMENTS**

### **Sanitary Sewer and Water Main**

Two alternatives were considered for replacing the sanitary sewer and watermain including trenchless technology with cured in place pipe (CIPP) for the sanitary sewer and pipe bursting to replace the watermain. The second alternative looked at replacing

the sewer and watermain with conventional methods or excavating, removing and replacing the pipe with new materials.

Trenchless methods are generally used where:

1. Pavement is in good condition and does not need to be replaced.
2. Where a trenchless method can save time and allow better access to properties or.
3. Where a trenchless method would be cost effective compared to an overly deep excavation.

Traditional, excavate, remove and replace methods are typically chosen for the following reasons.

1. Pavement is going to be replaced due to age and poor conditions
2. Where services lines to homes need to be replaced.
3. Where digging depths are not excessive and
4. Where the traditional methods are less costly.

After meeting with a reputable contractor to discuss the pros and cons of traditional excavating methods versus trenchless methods we are recommending that the sewer and water be replaced with the traditional methods for the following reasons.

1. Due to the limited right-of-way, pipe bursting pits would not allow traffic to access homes on a daily basis and therefore would not provide a benefit over excavating methods.
2. The age and materials of the service lines requires that the service line from the main to the property line be replaced. Even with trenchless methods for the main line replace and excavating from the centerline of the road to each home would be required to replace the service lines. With tradition excavation methods the connection to sewer and watermain are easier to complete and can be completed with a higher level of confidence that the connection will not leak and will provide a much longer service line.
3. Sanitary sewer manholes can be replaced with new manholes versus spray lining the old manholes and therefore will further reduce I&I and provide a lower long term life cycle cost.
4. Traditional methods can be completed at a lower cost with minimal additional disruption to access or homes on the roadway.

The water main on Black Lake Road is fed from three locations. The watermain will be replaced with 8" C-900 PVC from Shoreline Drive (TH15) to House number 2494 and approximately 10-feet of the lines feeding the Black Lake Road water main from Interlachen Road via Channel Road and Rose Hill Drive. The project will include the replacement of gate valves and hydrants in addition to corporation stops, services from main to property line, and curb stop box and valves.

The sanitary sewer will be replaced with 8" PVC Pipe and new precast concrete manholes and casting, and each home will receive a new service line wye and PVC service line pipe to the property line.

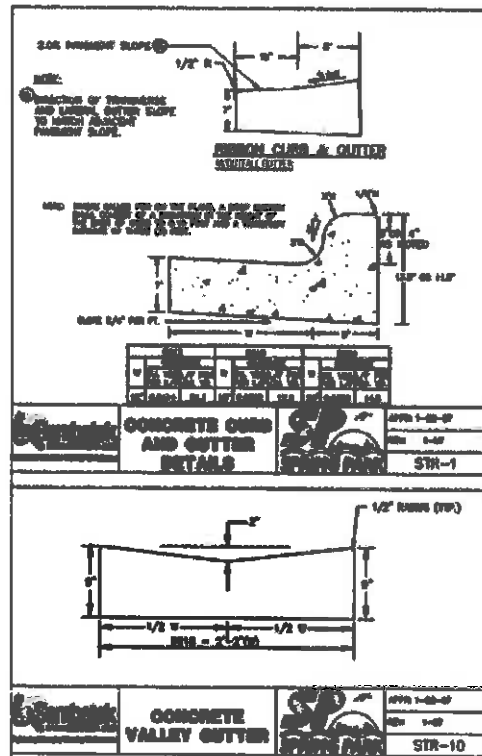
Minnesota Department of Health will conduct a plan review of the project as it pertains to water main improvements.

**Street Construction**

**Right of Way -Black Lake Road**

The existing roadway width varies throughout the corridor but is generally 16 feet wide. State fire code guidance on minimum roadway width for two-way traffic is 20 ft. Therefore, road widening will be necessary. As indicated in the ROW paragraph above, there are existing encroachments along the corridor which will be considered in the final design of the project. A typical road width of 20-feet from curb face to face will be the goal but will be adjusted to 18-feet wide as necessary to avoid existing obstacles. To allow for a 20-foot roadway from face of curb to face of curb, we will need to provide a 24-foot-wide combination of right-of-way and permanent easement to allow for the construction of the road. Temporary easements or right of entry may be required to complete the sanitary sewer and water service line connections to the individual homes.

The existing street section will be reconstructed with a new typical section with 3.5" of bituminous surfacing and a Class 5 aggregate base to provide a 7-ton design. The new street section will include a ribbon concrete curb and gutter in most locations and where required to control drainage a B618 curb & gutter will be used.



## **Storm Drainage**

**Black Lake Road** - The project will include installation of new storm sewer pipe and catch basins at project low points. The new system will direct and capture flow and address spread issues in high intensity rain events. Stormwater treatment devices are proposed to aid in the removal of pollutants prior to discharging to the lake. Revised MS4 requirements that go into effect for the 2022 construction season require treatment of existing impervious areas. Due to site constraints which include limited ROW areas, these devices are intended to provide this required treatment. Where excessive runoff on the lake side of the road is causing problems, B618 Curb & Gutter will be used to prevent runoff or reduce the amount of onto private properties.

The storm sewer will be designed to current City standards for a five-year storm event. No changes to the existing drainage patterns are proposed.

### **3. IMPACT OF PROPOSED IMPROVEMENTS**

The proposed street improvements will not create new maintenance issues for the Public Works staff. The City will work with affected property owners and the Contractor to resolve any situations that may arise during construction. Short term traffic delays, construction dust and noise, and erosion may occur. Efforts to minimize these impacts include the restriction of work hours and dust and erosion control measures included in the project. Any disruptions that occur to existing yards, sprinkler systems, and driveways will be restored.

### **4. OPINION OF PROBABLE COST**

**Sambatek Project No:** 21963

**Description:** Black Lake Road Street and Utility Improvements

<b>Cost Item</b>	<b>Percent</b>	<b>Amount</b>
<b>Construction Costs</b>		
Street and Drainage Improvements		\$652,200
Water and Sanitary Sewer Improvements		\$811,500
Right of Way/Easement		\$147,000
<b>Total Construction Costs</b>		<b>\$1,610,700</b>
Note: Construction Costs include a 20% Contingency.		
<b>Administrative Costs</b>		
Engineering	20%	\$322,200
Assessment	1%	\$16,200
Legal	1%	\$16,200

Administration	1%	\$16,200
Capitalized Interest	1%	\$16,200
Bonding	1%	\$16,200
<b>Total Administrative Costs</b>		<b>\$403,200</b>

**TOTAL ESTIMATED PROJECT COSTS** **\$2,013,900**

## **5. PROJECT FINANCING**

**Grants** – The city will continue to pursue any available grant funding or low interest loans through the Met Council I&I program for the replacement of the sanitary sewer.

**Assessments** – The current city assessment policy allow for up to 25% of the Roadway Improvement cost to be assessed on accordance with State Statute Section 429. The Assessment Policy states that the replacement of existing sewer and water mains and services lines will not be assessed.

Street improvements can be assessed by the unit or by the adjusted front foot method. There are 26 properties that will benefit from the roadway improvements to Black Lake Road with varying front footage from 39' to 70' of abutting frontage. The adjusted front footage method could be applied to this project, but it would be our recommendation to use the Unit method of Assessments. The preliminary assessment for roadway, storm sewer and right-of-way acquisitions for this project would be 25% of \$999,000 or \$249,750 or 9,605.77 per parcel assuming 26 equal assessments. The council would need to set the terms of the assessment including length of payback and interest rate.

If the option to underground the power and construction a standalone streetlight system at an estimate cost of \$250,000 the council would need to determine an appropriate assessment and or method of financing this cost.

## **6. PROJECT SCHEDULE**

- Council Accepts the Feasibility Report and Orders Public Hearing .....November 1, 2021
- Public Hearing ..... December 6, 2021
- Authorize the preparation of the Plans and Specifications..... December 6, 2021
- Approve the Plans and Specifications and Authorize the Ad for Bid.....February 7, 2022
- Set Assessment Hearing Date..... February 7, 2022
- Open Bids.....March 16, 2022
- Award of Bids.....March 21, 2022
- Begin Construction.....June 6, 2022
- Complete Construction.....July 22,2022
- Assessment Hearing.....September 5, 2022
- Adopt Assessment Rolls..... September 19, 2022

Note: The assessment hearing can be held after the bids are opened but prior to awarding the bids or after the construction has been completed to ensure the project costs are finalized. The assessment public hearing dates can be adjusted based on the council's preference for before or after construction is completed.



## **7. SUMMARY AND RECOMMENDATION**

The project as proposed addresses deteriorating infrastructure needs along Black Lake Road. Several alternatives for utility replacement have been reviewed and it has been determined that the sanitary sewer and water utilities will be replaced by conventional open trench methods. The roadway will be widened up to a width of 20-feet to meet state fire codes where possible and concrete curb & gutter will be provided to control drainage along the roadway with storm sewer treatment structures provided to enhance the water quality of the discharge to the lake. Additional right-of-way or permanent easement will be required in several areas and the final requirements will be determined during the preliminary design stages.

The City Council has determined that the abutting properties will benefit from the improvements and that assessments in accordance with the City Assessment Policy will be levied in accordance with the State Statutes with a public hearing scheduled prior to approving the project and an assessment hearing held after the costs of the project has been determined.

The project has been determined to be feasible and cost effective and provides for the long term needs of the abutting properties and community and the recommendation is to move forward with the public hearing for this project.



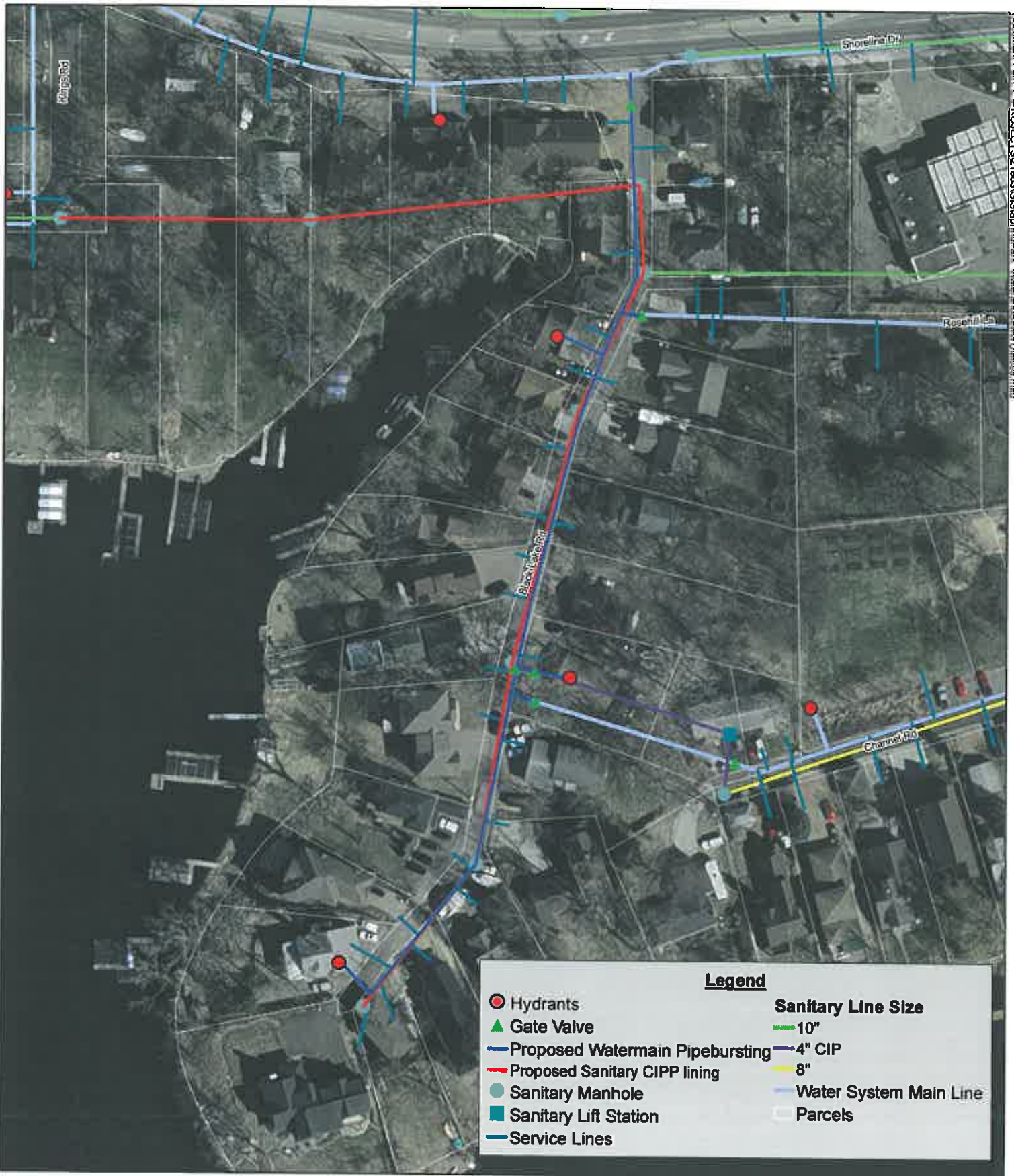
# Street and Storm Improvements

Spring Park, Minnesota

Figure 1

<p>Scale in Feet</p>	

This map was created using Sambatek's Geographic Information Systems (GIS). It is a compilation of information and data from various sources. This map is not a surveyed or legally recorded map and is intended to be used as a reference. Sambatek is not responsible for any inaccuracies contained herein.



Legend	
● Hydrants	Sanitary Line Size
▲ Gate Valve	— 10"
— Proposed Watermain Pipebursting	— 4" CIP
— Proposed Sanitary CIPP lining	— 8"
● Sanitary Manhole	— Water System Main Line
■ Sanitary Lift Station	□ Parcels
— Service Lines	

**Water and Sewer Utility Improvements**  
Spring Park, Minnesota

**Figure 2**

<p>Scale in Feet</p>	
<p>Date: 05/12/2021</p>	
<p>Project Number: 21963</p>	
<p>Notes:</p>	