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FEASIBILITY REPORT
FOR
51ST AVENUE
STREET AND UTILITY IMPROVEMENTS

IMPROVEMENT PROJECT NO. 2023-03

CITY OF BROOKLYN CENTER, MINNESOTA

September 19, 2022

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

Michael Albers

*Michael J Albers, P.E.
Reg. No. 47074
September 19, 2022*

I. BACKGROUND

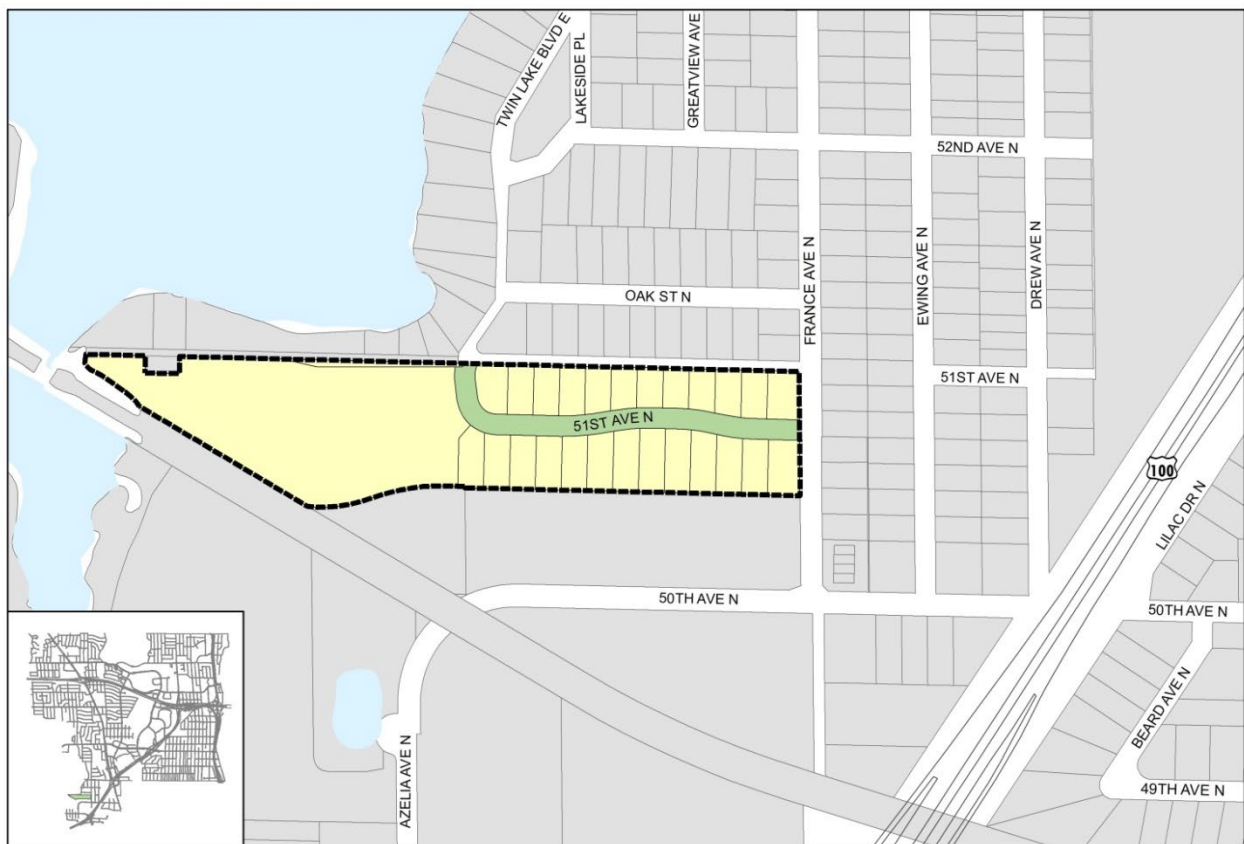
In 2023, the City of Brooklyn Center will be entering the 30th year of its long-range infrastructure rehabilitation program often referred to as the Neighborhood Street and Utility Improvement Program. This program has consisted of a systematic rehabilitation and/or replacement of the City’s aging streets, water main, sanitary sewer, storm sewers, sidewalks, trails and street lights.

The City’s Capital Improvement Program identifies the 51st Avenue for partial reconstruction in 2023. The proposed project includes roadway, utility and trail improvements within the project limits shown on Figure 1. The 51st Avenue project area extends from 185 feet south of Oak Street on Twin Lake Boulevard to France Avenue.

This report was prepared in response to City Council Resolution No. 2022-71 dated July 25, 2022, directing staff to prepare a feasibility report and collect public input for the proposed project. Staff conducted a public informational meeting with residents and property owners located within the project area on September 15, 2022.

The 2023 project area consists of approximately 1,171 feet of streets and utilities. The neighborhood consists of approximately 25 residential properties that are zoned "R1".

Figure 1: Project Area



Project Area
51st Avenue Street and Utility Improvements



Figure 1

II. STREET IMPROVEMENTS

A. EXISTING CONDITIONS

The roadway in the 51st Avenue Area was originally constructed in 1990 resulting in the existing street pavement being in service for approximately 32 years. The existing streets are 30 feet wide with curb and gutter, which is typical for most low volume residential streets in Brooklyn Center. The existing street is 30 feet wide with curb and gutter.

An existing pavement evaluation was conducted resulting with the road surface showing signs of deterioration such as some lateral cracking throughout the project area and potholes have occurred in some locations. The existing low volume pavement section within the project area generally consists of 4 inches of bituminous pavement and 6 inches of aggregate base per the typical section in 1990. Additionally, limited sections of deteriorated concrete curb and gutter were identified within the project area.

The existing trail on 51st Avenue is located in the south boulevard the entire length of the project area. The trail is showing signs of deterioration. See Figure 2 for existing sidewalk and trail locations.

A geotechnical investigation will be performed within the project area to obtain and analyze soil samples below the street pavement. The geotechnical evaluation report will contain information regarding the subsurface soil and groundwater conditions and includes appropriate design and construction recommendations.

Traffic on 51st Avenue is generally limited to local traffic access to residential properties within the neighborhood with traffic volumes expected to be less than 500 vehicles per day.

B. PROPOSED STREET IMPROVEMENTS

Based on the age and condition of the existing bituminous asphalt pavement surfaces and the proposed replacement of underlying utilities in certain locations, complete replacement of the street surface is warranted. Proposed street improvements include partial reconstruction with full depth pavement replacement for the existing streets. The existing concrete curb and gutter throughout the project area has not exceed its life expectancy and can be suitably rehabilitated with spot repairs. Approximately 20 percent of the concrete curb and gutter are estimated to be replaced due to heaving/settling issues and as warranted or impacted by other construction (e.g. public utility repairs).

In accordance with the Complete Streets Policy adopted by the City in 2013, all streets and trail projects, including design, planning, reconstruction, rehabilitation, maintenance or operations by the City of Brooklyn Center shall be designed and executed in a responsible, equitable and financially reasonable way to accommodate and encourage travel by bicyclists, pedestrians, public transportation, emergency and commercial vehicles in a balanced manner. Implementation of the City's Complete Streets Policy ensures that the needs and safety of pedestrians, bicyclists, motorists and transit riders of all ages and abilities are considered in the design and operation of roads.

Additionally, the Safe Routes to School Planning (SRTS) Assistance Memorandum prepared by MnDOT in June 2013 and the Pedestrian & Bicycle Plan (P&BP) adopted in March 2014 are used to plan additional sidewalk and trail routes. The SRTS and the P&BP do not identify missing sidewalk/trail connects and no additional pedestrian or bicycle facilities were identified within the project area.

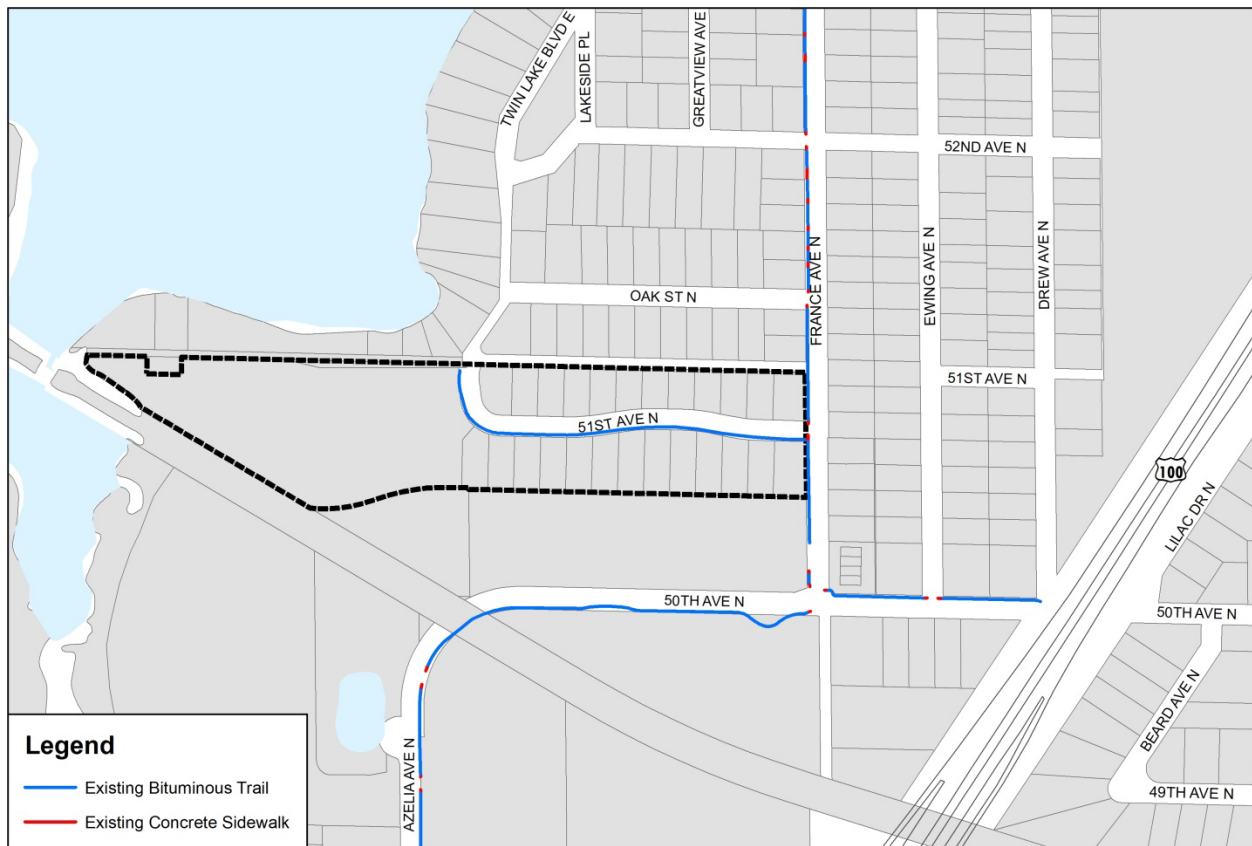
Based on these considerations, the following strategies and improvements are recommended:

- The existing bituminous trail on the south side of 51st Avenue will be reconstructed.
- Pedestrian curb ramps will be reconstructed throughout the project at each crosswalk location with truncated dome detectable warning systems in compliance with the Americans with Disabilities Act (ADA).

Other improvements include the repair of concrete driveway aprons, the replacement of trees, landscaping elements and irrigation systems that are impacted by the construction. Disturbed boulevard areas will be restored with topsoil and sod.

It should also be noted that in-depth property surveys are not performed and when constructing the new driveway aprons, the determined location generally matches existing driveway locations and widths. It is not the intent under this project to verify and fix driveway-property line issues, which sometimes exist. Rather, the construction under this project generally occurs within City right-of-way.

Figure 2: Sidewalks and Trails



Existing Sidewalk
51st Avenue Street and Utility Improvements

Figure 2

III. STREET LIGHTING SYSTEM

A. EXISTING CONDITIONS

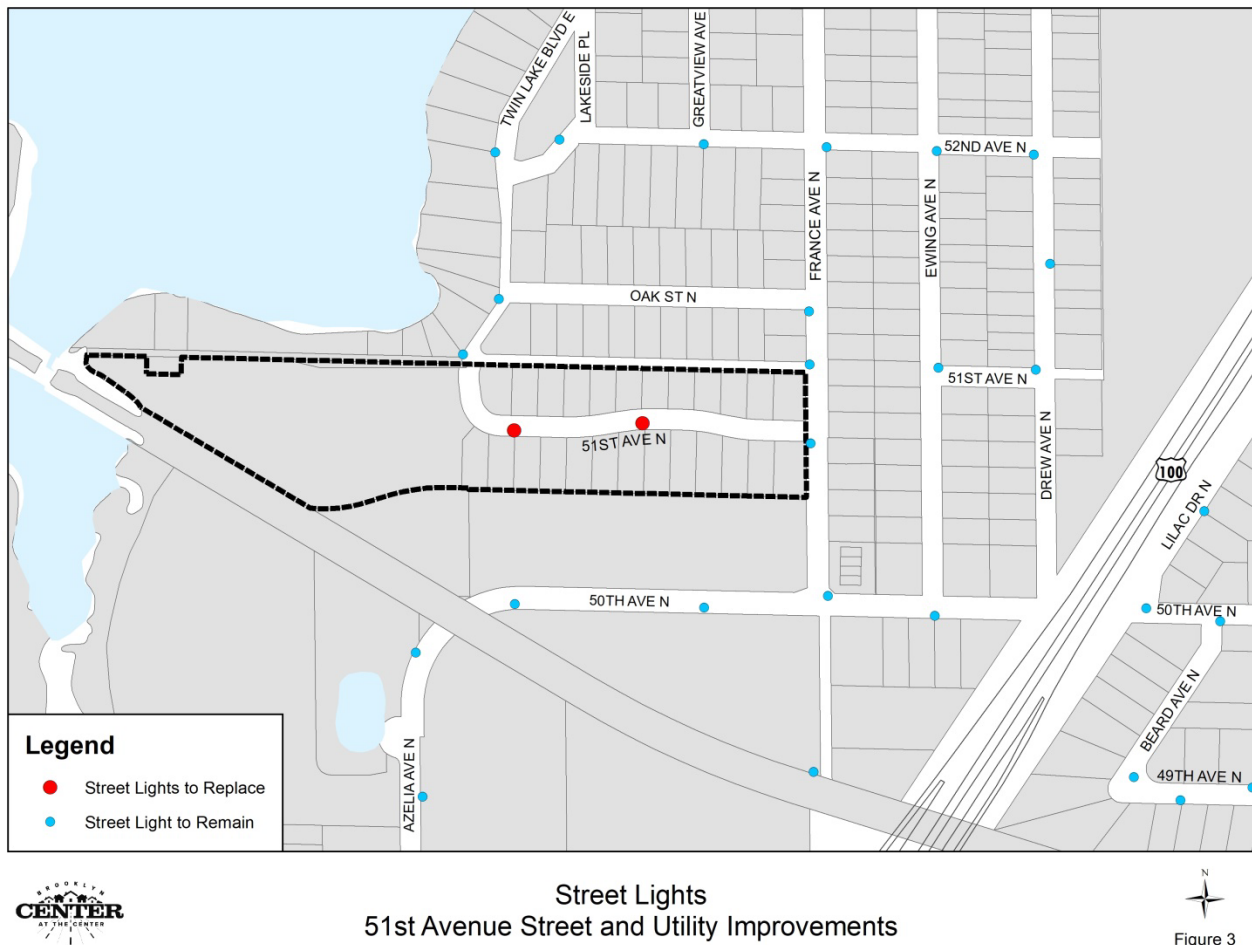
The neighborhood improvement program has historically included the replacement of free-standing street lights located within the neighborhood. Free-standing street lights are defined as lights mounted on poles, which do not contain any other overhead utilities attached to them. There are currently two (2) free-standing street lights within the project area. These lights consist of older style wood utility poles that have been in service for many years, most likely dating back to the original construction of the neighborhood. The existing free-standing street lights have underground power services with cobra-head type light fixtures.

The City’s Street Light Policy states that street lights may be provided at street intersections and at mid-block locations where the distance between intersections exceeds 700 feet. Street lights are currently located at all intersections and at most of the longer blocks that exceed 700 feet with minor exceptions.

B. PROPOSED STREET LIGHTING IMPROVEMENTS

The recommended street light improvements include replacement of the two (2) existing free-standing street lights with fiberglass poles, cut-off type LED light fixtures.

Figure 3: Street Light Exhibit



IV. STORM DRAINAGE AND TREATMENT SYSTEM

A. EXISTING CONDITIONS

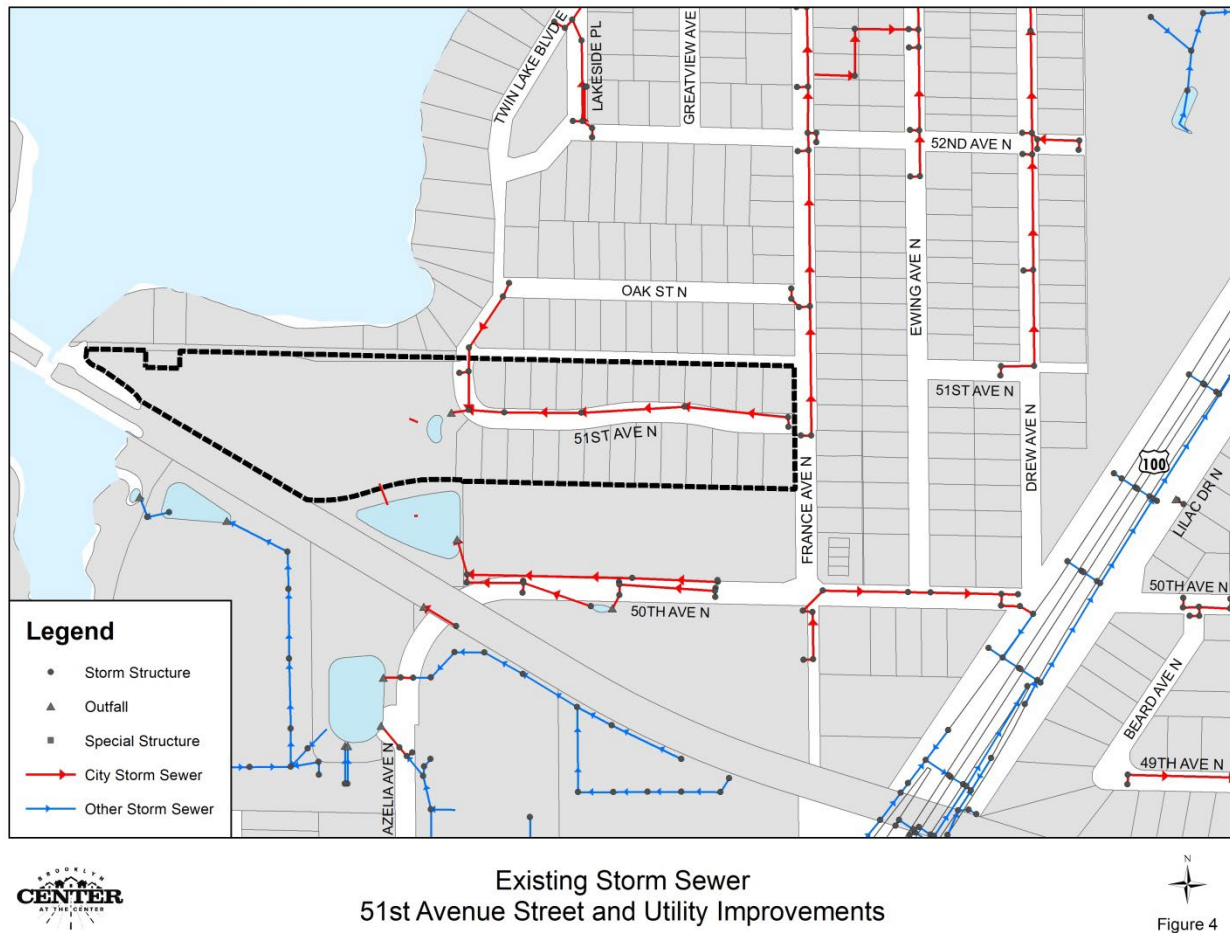
The project area is located within the Shingle Creek Watershed Management Commission area and ultimately flows to nearby storm water treatment ponds and then to Shingle Creek. The existing storm sewer in the project area consists of network of storm sewer pipes installed in 1990 and range in size from 15-inch to 21-inch diameter concrete storm sewer pipes (see Figure 4). A televising of the storm sewer in this area was conducted in the summer of 2022 and it was found to be in good condition.

B. PROPOSED DRAINAGE IMPROVEMENTS

Storm sewer improvements will be made to the existing system that includes replacing catch basins casting and adjustments as necessary within the project area.

There are no indicators or comments regarding significant ponding or flooding issues within the neighborhood and expansion of the existing storm sewer system is not being planned. No additional stormwater quality facilities are being planned for the project.

Figure 4: Storm Sewer



V. SANITARY SEWER SYSTEM

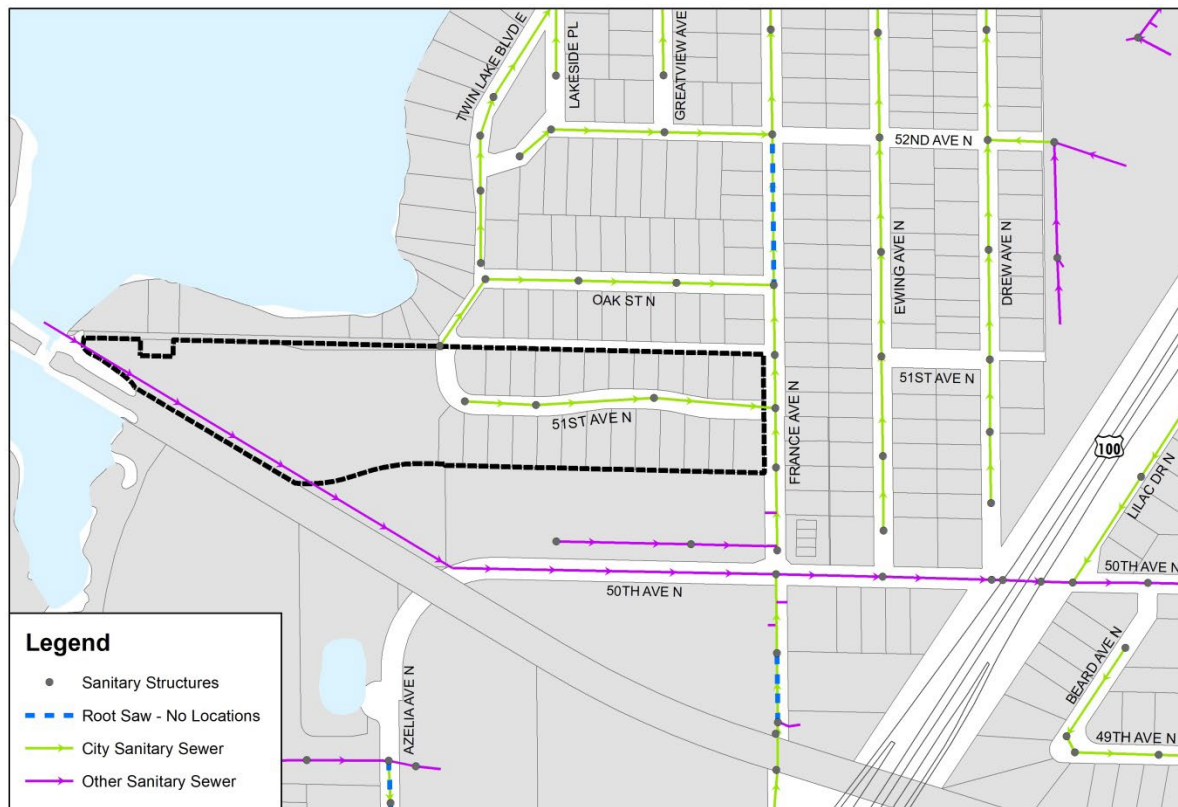
A. EXISTING CONDITIONS

The existing sanitary sewer collection system within the project area consists of mainly eight-inch diameter polyvinyl chloride (PVC) that was installed in 1990. During the project planning phase, all public sanitary sewer pipes were inspected with remote televising equipment. The condition of the sanitary sewer system within the area is rated as good.

B. PROPOSED SANITARY SEWER IMPROVEMENTS

Sanitary sewer improvements will be made to the existing system that includes replacing sanitary manhole castings and lids. The replacement of the castings with external seals will help minimize inflow and infiltration of rainwater into the sanitary sewer system.

Figure 5: Sanitary Sewer



Legend

- Sanitary Structures
- Root Saw - No Locations
- City Sanitary Sewer
- Other Sanitary Sewer



Existing Sanitary Sewer
51st Avenue Street and Utility Improvements



Figure 5

VI. WATER SYSTEM

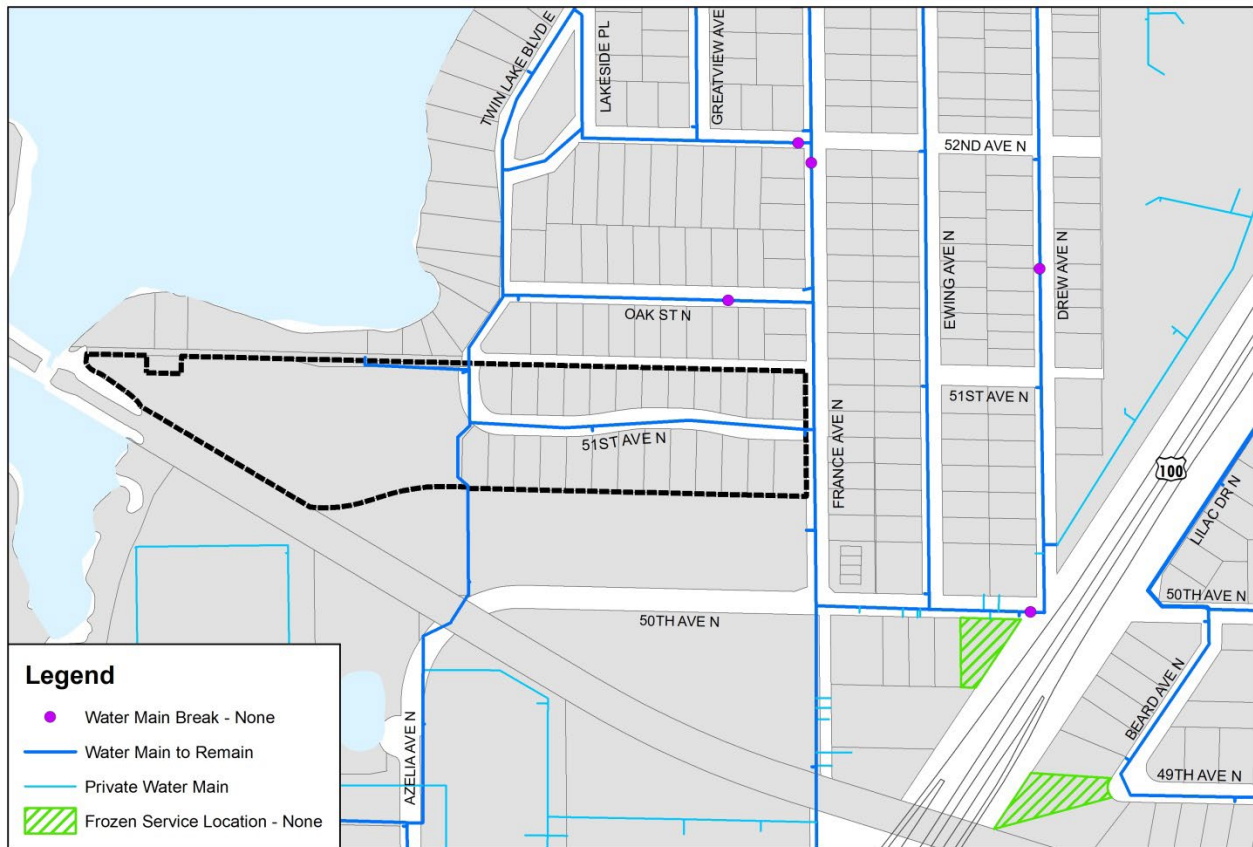
A. EXISTING CONDITIONS

The water main within the project area consists of 8-inch diameter ductile iron pipe (DIP) installed in 1990. The water main pipe velocities in this project area are adequate as confirmed by water distribution modeling. There is no history of water main breaks within the project area (see Figure 6). The water main is in good condition and has not approached the end of its life cycle.

B. PROPOSED WATER MAIN IMPROVEMENTS

Recommended water main improvements include replacement the valve and hydrant (the moving parts) of the water main system as these parts tend to wear and fail prior to the remainder of the water main system.

Figure 6: Water Main



Existing Water Main
51st Avenue Street and Utility Improvements



Figure 6

VIII. RIGHT-OF-WAY AND EASEMENTS

Generally, all public infrastructure owned, maintained and operated by the City throughout the project area is located within City easements and/or right-of-way. It is not anticipated that the City will need to acquire any additional right of way or easements as part of the project.

IX. ESTIMATED COSTS AND FUNDING CONSIDERATIONS

The total estimated cost of the proposed project is \$380,000.00. Table 1 provides a summary of the estimated project costs and recommended funding amounts from the various sources as indicated. Funding for the project is further described below.

A. FUNDING FOR STREET IMPROVEMENTS

The estimated project cost of roadway improvements for all streets in this project area is \$270,000.00. This preliminary estimate includes the cost for project administration, legal, engineering and construction contingency. Special assessments for street improvements are proposed in accordance with the 2023 rates which are expected to be considered for adoption by the City Council on November 14, 2022. The standard 2023 residential street assessment rate is estimated to be \$3,914 per R1 zoned residential property. This rate would be assessed to all benefitting single family residential properties within the project area (see Figure 7).

A total estimated special assessment amount of \$97,850.00 would be levied for street improvements. The remaining street construction costs would be funded from the Street Reconstruction Fund. A summary of the proposed special assessments for street improvements is provided in Appendix A.

B. FUNDING FOR STORM DRAINAGE IMPROVEMENTS

The total estimated cost for storm drainage improvements within the project area is \$70,000.00. This preliminary estimate includes the cost for project administration, legal, engineering and construction contingency. The City has not historically assessed storm sewer improvement costs as part of a partial reconstruction project. The storm sewer improvement costs would be funded from the Storm Drainage Fund and the Municipal State Aid (MSA) Fund.

C. FUNDING FOR UTILITY IMPROVEMENTS

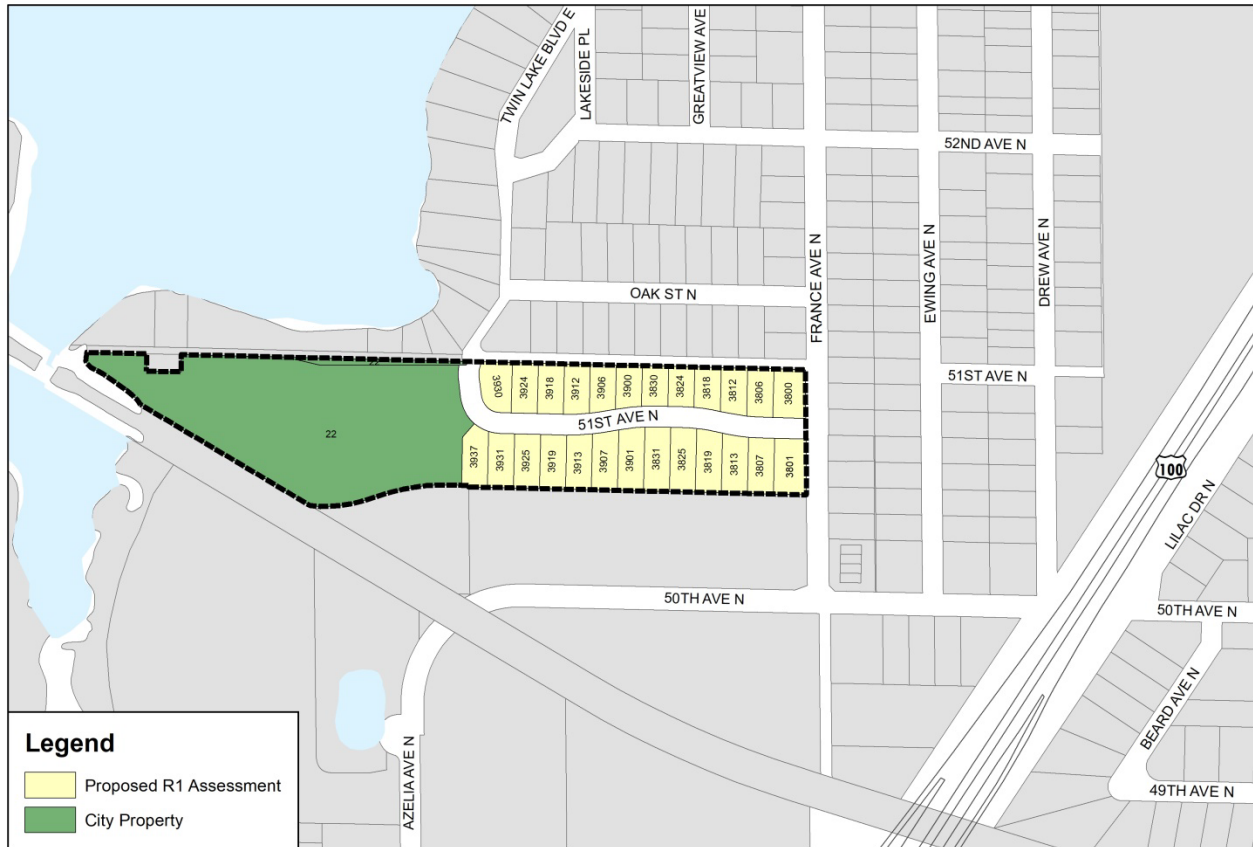
The estimated cost of sanitary sewer improvements is \$10,000.00; the estimated cost for water main improvements is \$10,000.00; and the estimated cost for street light replacement is \$20,000.00. As previously noted, these total cost estimates include the costs for project administration, engineering, legal and construction contingency. All costs for water, sanitary sewer and street light improvements will be funded by their respective utility funds in accordance with established policy for such improvements.

Table 1: Cost and Funding

Table 1. Cost and Funding
Improvement Project No. 2023-03
2023 51st Avenue Improvements (Twin Lake Blvd to France Ave)
 Feasibility Report, September 19, 2022

	Streets	Storm Drainage	Sanitary Sewer	Water Main	Street Lights	Estimated Total
Estimated Expenditures						
Estimated Construction Cost Street & Utility	\$204,500.00	\$53,000.00	\$7,300.00	\$7,300.00	\$15,000.00	\$287,100.00
Contingencies (10%)	\$20,500.00	\$5,000.00	\$700.00	\$700.00	\$2,000.00	\$28,900.00
Administration, Engineering, Legal (20%)	\$45,000.00	\$12,000.00	\$2,000.00	\$2,000.00	\$3,000.00	\$64,000.00
Total Estimated Project Costs (Feasibility)	\$270,000.00	\$70,000.00	\$10,000.00	\$10,000.00	\$20,000.00	\$380,000.00
Estimated Revenue						
Street Special Assessments	\$97,850.00					\$97,850.00
Storm Drainage Special Assessments						\$0.00
Sanitary Sewer Utility Fund			\$10,000.00			\$10,000.00
Water Utility Fund				\$10,000.00		\$10,000.00
Storm Drainage Utility Fund		\$70,000.00				\$70,000.00
Street Light Utility Fund					\$20,000.00	\$20,000.00
Street Reconstruction Fund	\$172,150.00					\$172,150.00
Total Estimated Revenue (Feasibility)	\$270,000.00	\$70,000.00	\$10,000.00	\$10,000.00	\$20,000.00	\$380,000.00

Figure 7: Assessment Map



Assessment Map
51st Avenue Street and Utility Improvements

Figure 7

X. RECOMMENDED PROJECT SCHEDULE

Table 2 is the preliminary schedule for the project.

Table 2. 51st Avenue Improvements – Schedule

Action	Target Date
City Council Receives Feasibility Report and Calls for an Improvement Public Hearing	September 26, 2022
City Council Holds Improvement Public Hearing, Authorizes the Project and Orders Preparation of Plans and Specifications	October 24, 2022
City Council Establishes 2023 Assessment Rates, Declaring Costs to be Assessed and Calling for a Public Hearing on Proposed Special Assessments	November 14, 2022
City Council Holds Assessment Public Hearing and Certify Assessment Roll	December 12, 2022
City Council Approves Plans and Specs, and Authorizes Advertisement for Bids	January 2023
City Receives and Opens Project Bids	February/March 2023
City Council Considers Award of Contract	March 2023
Start Project Construction	Spring/Summer 2023
Construction Substantially Complete	October 2023

XI. CONCLUSIONS AND RECOMMENDATIONS

The overall condition of the City's street and utility infrastructure systems is critical to the operation, safety, welfare and economic health of the entire community. As a result of the infrastructure needs described and the proposed solutions and estimated costs provided in this report, the proposed project is considered to be necessary, cost effective and feasible.

Appendix A

DRAFT Proposed Pending Assessment Roll

CITY OF BROOKLYN CENTER PROPOSED PENDING ASSESSMENT ROLL

September 19, 2022

**2023 51ST AVENUE IMPROVEMENTS
IMPROVEMENT PROJECT NO. 2023-03**

DRAFT

PROPERTY ID	HOUSE	STREET NAME	LEVY#	STREET	NOTES
1011821240006	3800	51st Ave N		\$ 3,914.00	R1 - Corner
1011821240018	3801	51st Ave N		\$ 3,914.00	R1 - Corner
1011821240007	3806	51st Ave N		\$ 3,914.00	R1
1011821240019	3807	51st Ave N		\$ 3,914.00	R1
1011821240008	3812	51st Ave N		\$ 3,914.00	R1
1011821240020	3813	51st Ave N		\$ 3,914.00	R1
1011821240009	3818	51st Ave N		\$ 3,914.00	R1
1011821240021	3819	51st Ave N		\$ 3,914.00	R1
1011821240010	3824	51st Ave N		\$ 3,914.00	R1
1011821240022	3825	51st Ave N		\$ 3,914.00	R1
1011821240011	3830	51st Ave N		\$ 3,914.00	R1
1011821240023	3831	51st Ave N		\$ 3,914.00	R1
1011821240012	3900	51st Ave N		\$ 3,914.00	R1
1011821240024	3901	51st Ave N		\$ 3,914.00	R1
1011821240013	3906	51st Ave N		\$ 3,914.00	R1
1011821240025	3907	51st Ave N		\$ 3,914.00	R1
1011821240014	3912	51st Ave N		\$ 3,914.00	R1
1011821240026	3913	51st Ave N		\$ 3,914.00	R1
1011821240015	3918	51st Ave N		\$ 3,914.00	R1
1011821240027	3919	51st Ave N		\$ 3,914.00	R1
1011821240016	3924	51st Ave N		\$ 3,914.00	R1
1011821240028	3925	51st Ave N		\$ 3,914.00	R1
1011821240017	3930	51st Ave N		\$ 3,914.00	R1
1011821240029	3931	51st Ave N		\$ 3,914.00	R1
1011821240030	3937	51st Ave N		\$ 3,914.00	R1
Total Assessments				\$ 97,850.00	