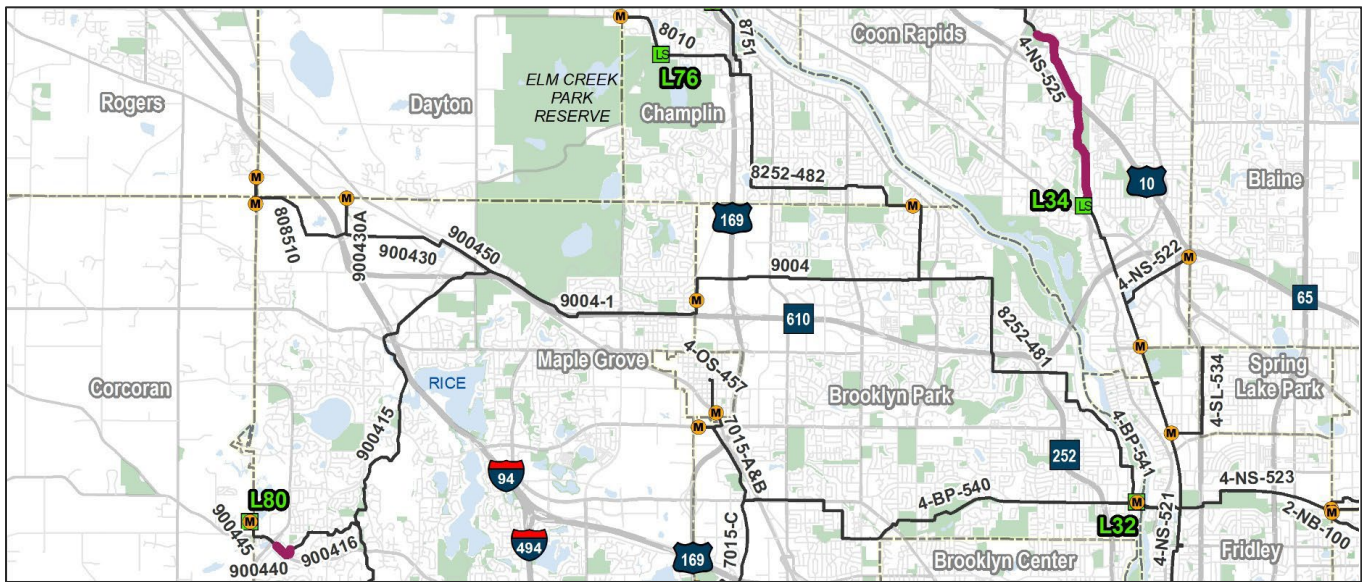


Program 8086 – North Area Interceptor (NAI) Rehabilitation



Map showing projects in the Maple Grove and Brooklyn Park area

Description

The interceptor systems in Blaine, Brooklyn Park, Champlin, Circle Pines, Coon Rapids, Forest Lake, Fridley, Hugo, Lexington, Lino Lakes, Maple Grove, Mounds View, Spring Lake Park, and other north area communities need rehabilitation and/or replacement. The project will rehabilitate existing interceptor facilities, including gravity sewers, forcemains, lift stations, and meter stations.

Purpose and justification

Inspections of the interceptors that serve the North Metro Area have revealed corrosion damage. The corrosion is extensive and has resulted in significant damage to the interior concrete surfaces of the interceptors and maintenance structures.

Program location

The active projects within this program are in the following Council districts: 1, 2, 6, 8, 9, and 11

Active projects in program

Project Number	Project Title
808600	North Area Interceptor (NAI) Rehabilitation (Parent Project)
808601	North Area Rehabilitation (Sites 1 - 3, 5 - 6)
808607	Fridley Liquid Waste Receiving Improvements
808622	Maple Grove Interceptor Replacement
808685	Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 1
808687	Lake Elmo West Connection
808688	L77 Lift Station Improvements
808689	Blaine Relief Interceptor
8086XX	Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 2

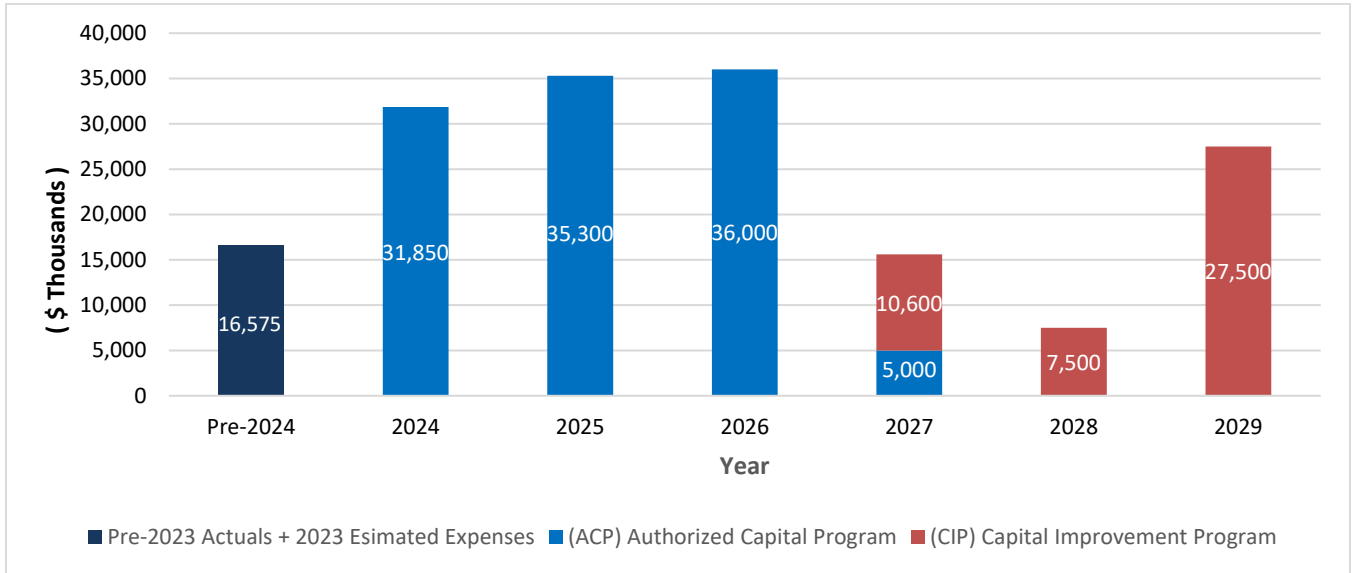
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Environmental Services 2024 through 2029 Capital Program

- Authorized Capital Program (ACP): \$124,724,883
- Capital Improvement Plan (CIP): \$45,600,000

Estimated program cash flow from 2024 through 2029

Note: the ACP is the total amount of all past and present authorizations including pre-2024 expenses.



North Area Rehabilitation - Interceptor 7029
Program family 8086

Project #808601

Project location: Council district #11, City of Forest Lake



Map of Project #808601 Site 1 north of 180th Street North in Forest Lake

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Site 1 of the North Area Improvements. This project includes rehabilitation and/or replacement of approximately 8,000 linear feet of interceptor and associated structures.

Project need

Interceptor 7029 was constructed in 1970 to convey flow from the City of Forest Lake. A condition assessment was completed in 2018 of the 36-inch reinforced concrete pipe (RCP). The worst condition was between MH 99 and L 02 where a 1,000-foot segment was identified as condition 4.5 and the remaining 7,000 feet to be condition 4.

Project schedule:



Planning: 2023



Design: 2023 through 2024



Construction: 2024 through 2025

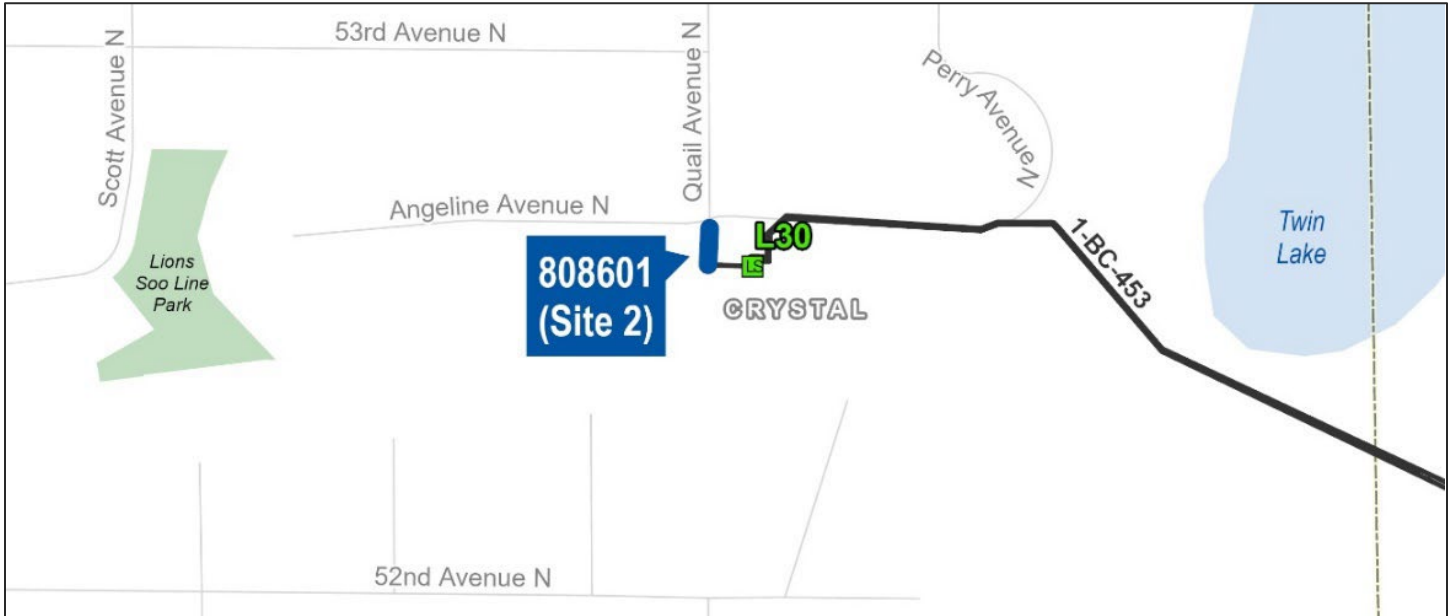
Financial analysis

2024 cash flow:	\$1,600,000
Current ACP:	\$5,118,000
2024 through 2029 cash flow:	\$5,018,000
Total project cost:	\$5,118,000

North Area Rehabilitation - Interceptor 1-CL-455
Program family 8086

Project #808601

Project location: Council district #8, City of Crystal, Interceptor 1-CL-455



Map of Project #808601 Site 2 near Angeline Avenue North and Quail Avenue North in Crystal

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitate a section of pipe between Shaft 1 and MH 100

Project need

Condition assessment of pipe shows the pipe in this section as poor condition and a sag in the pipe. There is severe grease build up from the city pipe coming in and a need for frequent cleaning.

Project schedule:



Planning: 2023



Design: 2023 through 2024



Construction: 2024 through 2025

Financial analysis

2024 cash flow:	\$96,000
Current ACP:	\$1,599,000
2024 through 2029 cash flow:	\$1,499,000
Total project cost:	\$1,599,000

North Area Rehabilitation - Interceptor 7015-C
Program family 8086

Project #808601

Project location: Council district #2, City of Brooklyn Park, Interceptor 7015-C



Map of Project #808601 Site 3 east of Bass Creek Park in Brooklyn Park

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Site 3 of the North Area Improvements. This project includes rehabilitation and/or replacement of approximately 10 feet of interceptor that was not lined during the 2007 rehabilitation project and replacement of two structures. An extensive temporary conveyance system will be needed to repair this section.

Project need

Interceptor 7015-C in Brooklyn Park is a 36-inch reinforced concrete pipe (RCP) constructed in 1970 and lined in 2007. A five to ten linear foot section of pipe was found unlined on the downstream end of Section 124009 near Manhole (MH) 45. Prior to lining, the condition of the pipe was 4.5.

Project schedule:



Planning: 2023



Design: 2023 through 2024



Construction: 2024 through 2025

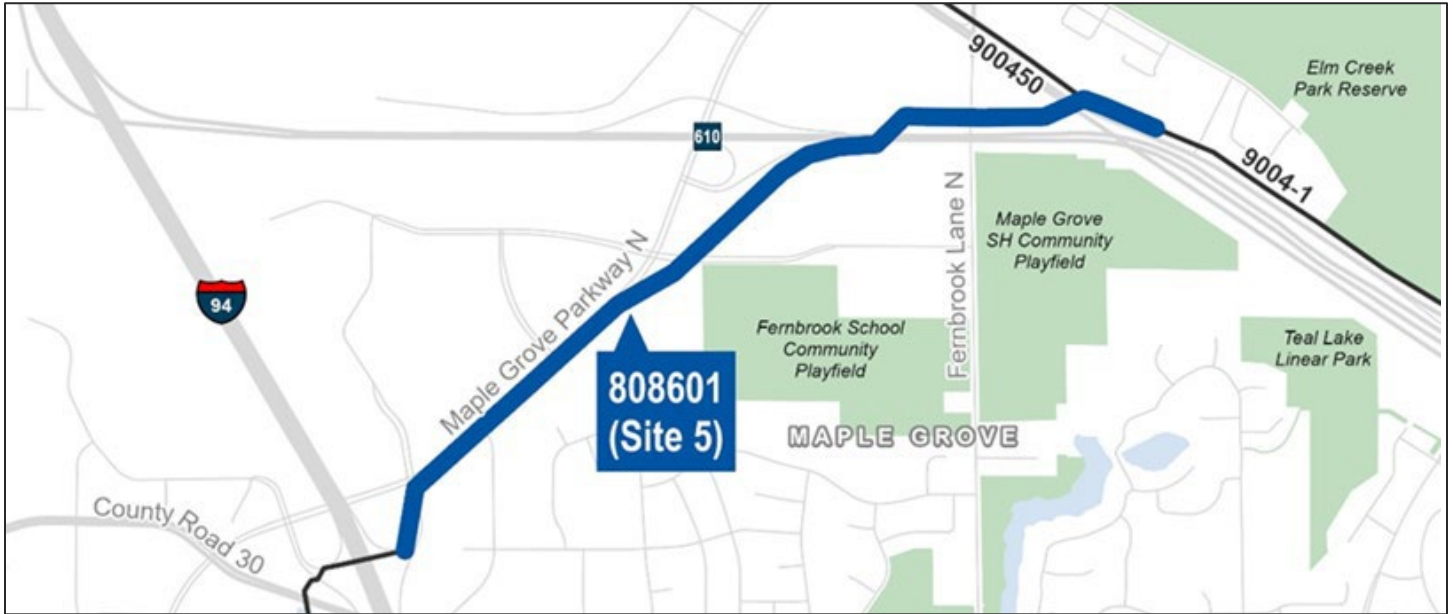
Financial analysis

2024 cash flow:	\$260,000
Current ACP:	\$2,605,000
2024 through 2029 cash flow:	\$2,505,000
Total project cost:	\$2,605,000

North Area Rehabilitation – Interceptor 9004-1
Program family 8086

Project #808601

Project location: Council district #1, City of Maple Grove



Map of Project #808601 Site 5 along Maple Grove Parkway North in Maple Grove

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitate 410 feet of severely corroded 48-inch RCP.

Project need

Condition assessment of the Interceptor has identified it as severely corroded. Rehabilitation of the interceptor is needed to prevent further deterioration and potential failure.

Project schedule:



Planning: 2023



Design: 2023 through 2024



Construction: 2024 through 2025

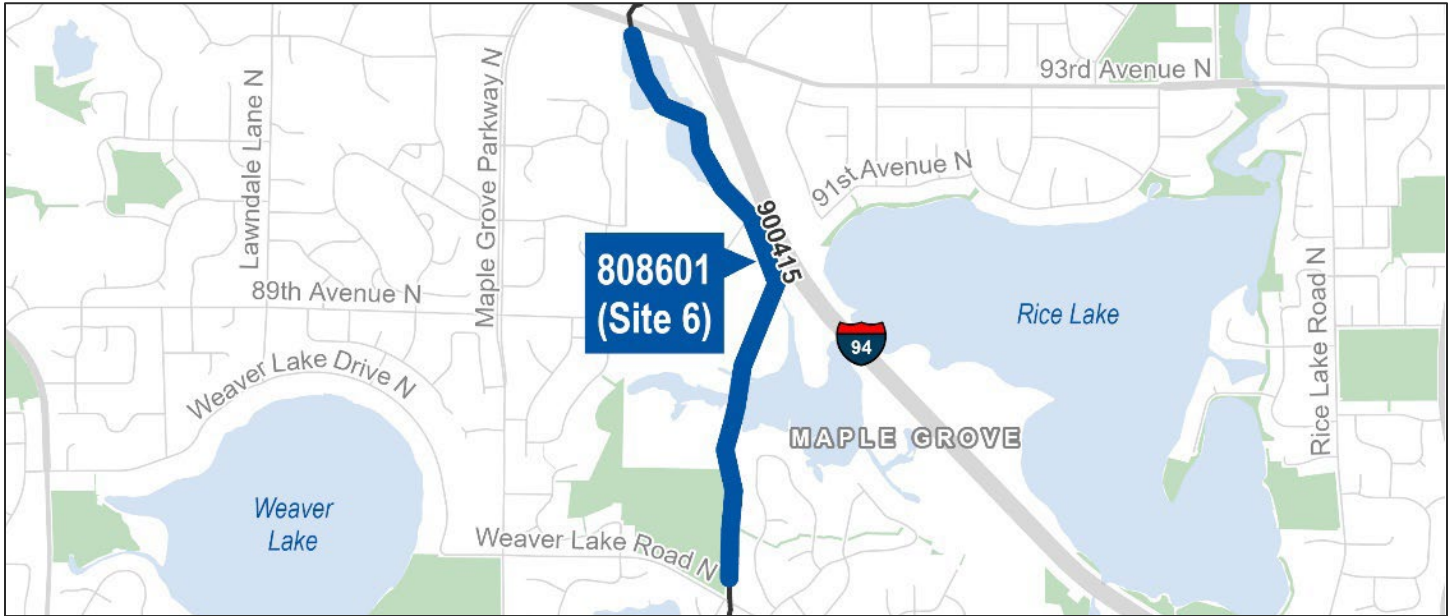
Financial analysis

2024 cash flow:	\$206,000
Current ACP:	\$2,291,000
2024 through 2029 cash flow:	\$2,191,000
Total project cost:	\$2,291,000

North Area Rehabilitation – Interceptor 900415
Program family 8086

Project #808601

Project location: Council district #1, City of Maple Grove



Map of Project #808601 Site 6 west of Rice Lake in Maple Grove

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Rehabilitate 18 Manholes on Interceptor 900415.

Project need

Routine inspection of the Interceptor identified several manholes that were in poor condition. The interceptor was previously rehabilitated and is in good condition. If not addressed, further deterioration will result in failure.

Project schedule:



Planning: 2023



Design: 2023 through 2024



Construction: 2024 through 2025

Financial analysis

2024 cash flow:	\$85,000
Current ACP:	\$1,411,000
2024 through 2029 cash flow:	\$1,311,000
Total project cost:	\$1,411,000

Fridley Liquid Waste Receiving Improvements
Program family 8086

Project #808607

Project location: Council district #2, City of Fridley, 8296 Hickory Street NE



Fridley Liquid Waste Receiving Facility

Project type

Interceptor Improvements

Objectives

Asset Preservation and Quality Improvements

Scope

The loadout bay discharge pipe elevation needs to be lowered to allow customers to hookup more efficiently, provide larger rock traps and replacement or recalibration of existing flow meters. Access improvements are necessary to allow large tanker trucks into the bay. The maintenance structure that is used to dump during outages needs to be upgraded to include a grit chamber.

Project need

There are several deficiencies and issues with the receiving, process, and treatment at the Fridley Liquid Waste Receiving Facility. Several upgrades are necessary for this to be successfully used as a regional liquid waste receiving and maintenance facility.

Project schedule:



Planning: 2022 through 2023



Design: 2023 through 2024



Construction: 2024 through 2025

Financial analysis

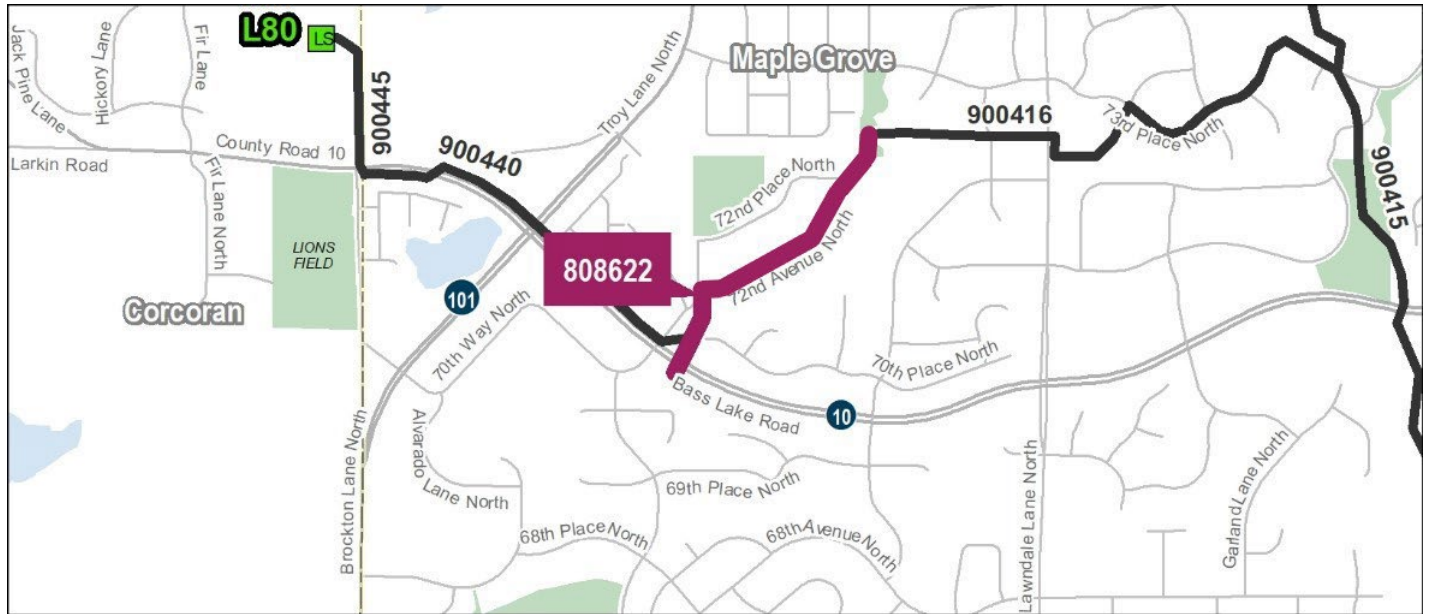
2024 cash flow:	\$1,350,000
Current ACP:	\$2,600,000
2024 through 2029 cash flow:	\$2,450,000
Total project cost:	\$2,600,000

Maple Grove Interceptor Replacement

Program family 8086

Project #808622

Project location: Council district #1, City of Maple Grove



Map of Project #808622 location east of Highway 101 and north of Highway 10 in Maple Grove

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

Areas of Interceptor 900416 have been identified with varies degrees of deflection. The interceptor will be evaluated to determine which sections require rehabilitation or replacement.

Project need

To maintain the integrity of the system and to prevent potential damage to the environment due to pipe failure, sections of the interceptor must be repaired or replaced.

Project schedule:



Planning: 2019 through 2021



Design: 2021 through 2022



Construction: 2023 through 2026

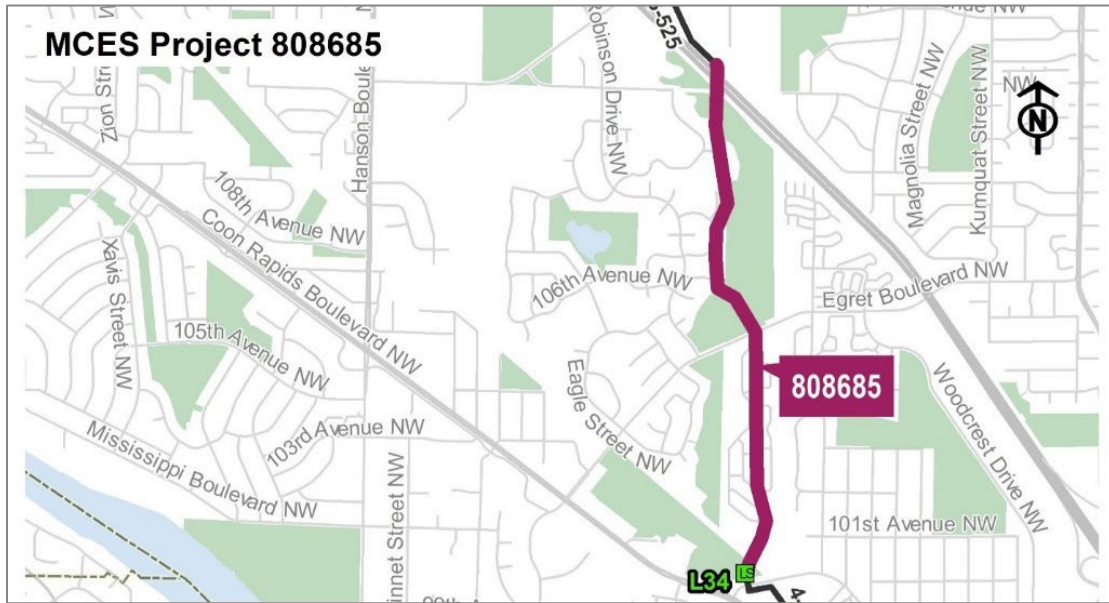
Financial analysis

2024 cash flow:	\$1,000,000
Current ACP:	\$7,552,000
2024 through 2029 cash flow:	\$7,000,000
Total project cost:	\$7,552,000

Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 1
Program family 8086

Project #808685

Project location: Council district #9, City of Coon Rapids, Interceptor 4-NS-525



Map of Project #808685 Phase 1 location northeast of Coon Rapids Boulevard NW.

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

This project is the first of a two-phase interceptor rehabilitation project. This first phase will renew approximately 7,900 LF of 48-inch RCP and 19 MHs with Cured-In-Place Pipe technology. The project will require 8 temporary construction easements, permits from BNSF and MnDOT for work in highway and railroad right of ways, city road and park permits, and will require coordination with CenterPoint Energy and Xcel Energy. A cooperative agreement with the City of Coon Rapids is desired by the city for the purpose of rehabilitating trunk sewers that connect directly to the interceptor.

Project need

3,600 linear feet of 48-inch RCP is in need of immediate rehabilitation to extend useful life and provide reliability. Risk of failure includes a sinkhole forming that could engulf a mobile home and a 6.0 MGD spill to nearby Coon Creek that discharges directly to the Mississippi River.



Planning: 2020



Design: 2020 through 2024

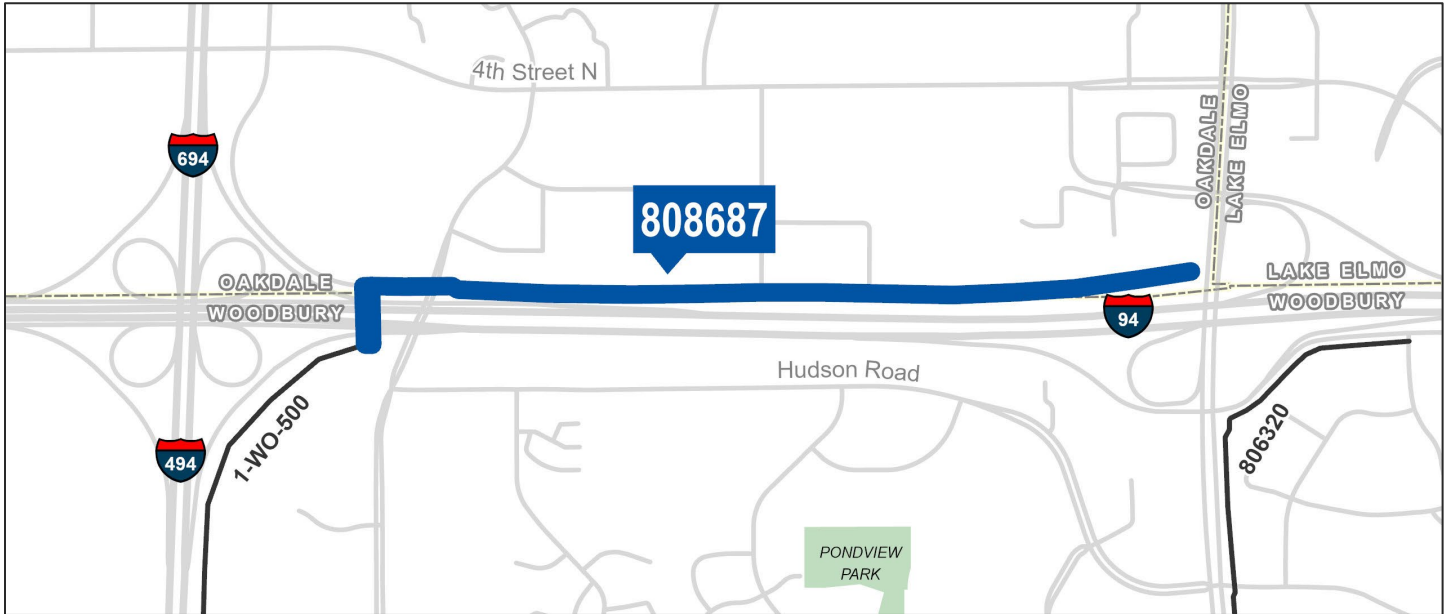


Construction: 2023 through 2024

Financial analysis

2024 cash flow:	\$5,000,000
Current ACP:	\$13,879,000
2024 through 2029 cash flow:	\$5,000,000
Total project cost:	\$13,879,000

Project location: Council Districts #12 and 13; Cities of Lake Elmo, Oakdale, and Woodbury



Project #808687 location along Hudson Road between I-694 and I-94

Project type

Interceptor Improvements

Objectives

System Expansion

Scope

Provide regional sewer service to southwestern Lake Elmo through a gravity interceptor extension from 1-WO-500. Includes the upgrade of an existing interceptor sewer crossing I-94 to accommodate current and future growth in the service area.

Project need

This project will provide interceptor facilities to convey wastewater from southwestern Lake Elmo and eastern Oakdale to the Metro WWTP in Saint Paul. The project is needed to support growth in this eastern portion of the metropolitan area.



Planning: 2020



Design: 2021 through 2023



Construction: 2024 through 2026

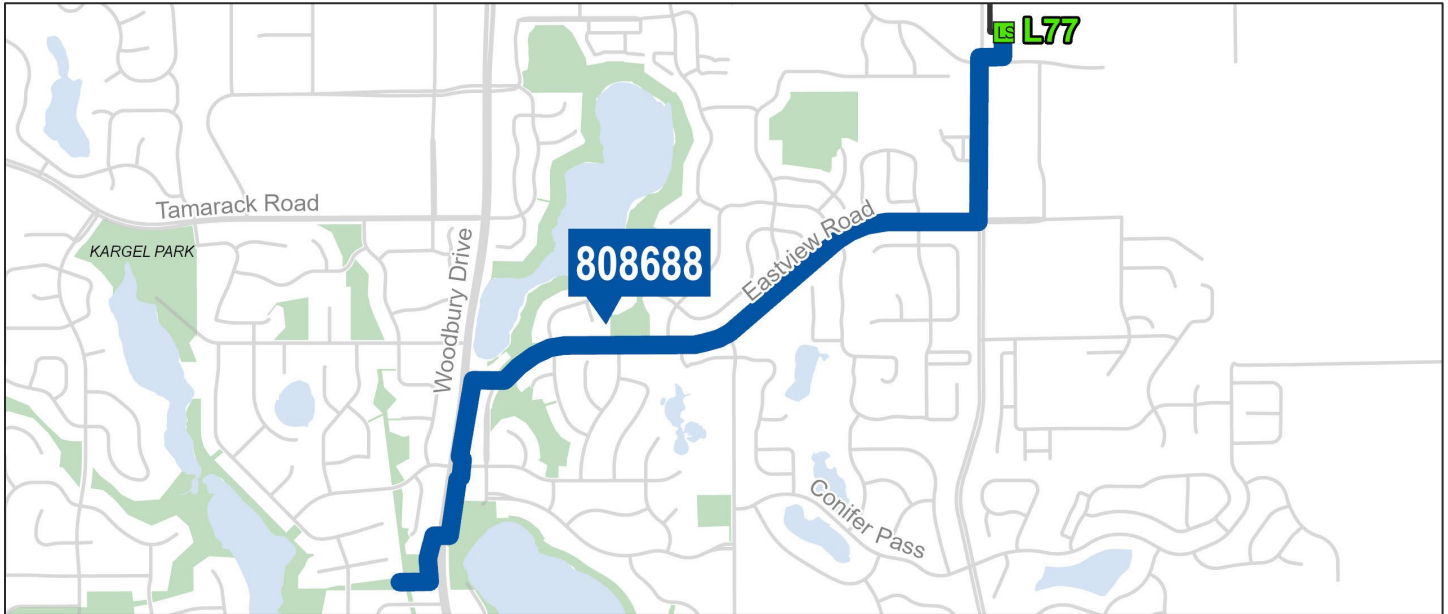
Financial analysis

2024 cash flow:	\$12,000,000
Current ACP:	\$36,500,000
2024 through 2029 cash flow:	\$36,000,000
Total project cost:	\$36,500,000

L77 Lift Station Improvements
Program family 8086

Project #808688

Project location: Council Districts #11 and 12, City of Woodbury



Project #808688 location along Eastview Road in Woodbury.

Project type

Lift Station and Interceptor Improvements

Objectives

System Expansion and Quality Improvements

Scope

Expand L77 lift station and connect to larger forcemain. Work includes the addition of an emergency generator for the lift station.

Project need

Growth in northeastern Woodbury and southeastern Lake Elmo necessitates an expansion of pumping capacity at the L77 lift station. The forcemain was constructed earlier by the City of Woodbury during road improvements to serve flows from the L77 lift station, and an agreement entered into with the City for purchase of the infrastructure for regional use.



Planning: 2020 through 2021



Design: 2022 through 2023

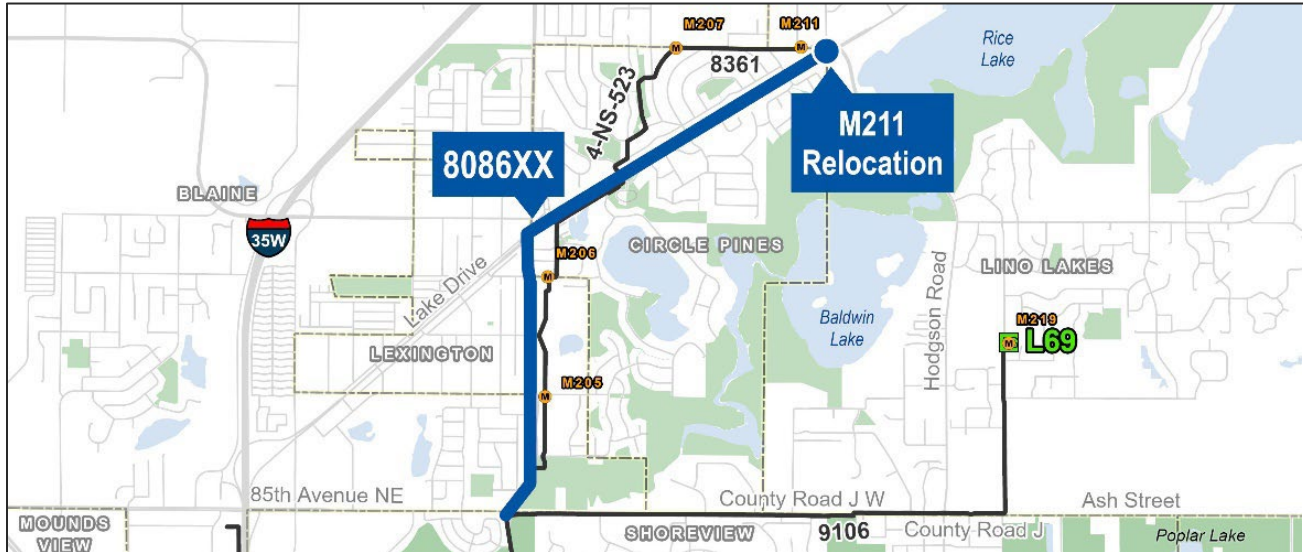


Construction: 2024 through 2026

Financial analysis

2024 cash flow:	\$3,000,000
Current ACP:	\$9,700,000
2024 through 2029 cash flow:	\$9,300,000
Total project cost:	\$9,700,000

Project location: Council district #10, City of Circle Pines, Lexington Avenue and Lake Drive



Map of Project #8086xx, Blaine Relief Interceptor project and M211 Relocation along Lake Drive in Circle Pines

Project type

Interceptor Improvements

Objectives

System Expansion

Scope

Construction of a new 14,000+ feet, 36-inch (approximate) interceptor in Circle Pines along Lexington Avenue between County Road J, north to Lake Drive then east, along Lake Drive to approximately the Lino Lakes corporate border. Project would include the relocation of M211 to allow for the measurement of flow from the western portion of Lino Lakes.

Project need

The project need was first identified in 2005 to accommodate projected growth in western Lino Lakes. Existing capacity within interceptor 4-NS-523 was insufficient to accommodate the expected increase in flow generated by the growth. An engineering report was completed in 2006 which recommended the above referenced project out of four identified alternatives. In response to the economic downturn in 2007-08 Lino Lakes revised its growth forecasts that no longer reflected the need for additional capacity. The project was then placed on hold. The city in its 2018 Comprehensive Sewer Plan added growth within its western area that once again reflects the need for additional wastewater conveyance capacity. The Council committed to having the additional capacity available for the city by the end of 2030. Project schedule:



Planning: 2023



Design: 2024 through 2027



Construction: 2028 through 2030

Financial analysis

2024 cash flow:	\$200,000
Current ACP:	\$1,250,000
2024 through 2029 cash flow:	\$16,800,00
Total project cost:	\$24,350,000

Coon Rapids Interceptor 4-NS-525 Rehabilitation Phase 2
Program family 8086

Project #8086XX

Project location: Council district #9, City of Coon Rapids, Interceptor 4-N5-525



Map of Project #8086xx Phase 2 location northeast of Highway 10 in Coon Rapids

Project type

Interceptor Improvements

Objectives

Asset Preservation

Scope

This project is the second of a two-phase interceptor rehabilitation project. This second phase will renew approximately 6,100 LF of 48-inch RCP and 21 MHs with Cured-In-Place Pipe technology. The project will require 8 temporary construction easements, permits from MNDOT for work in highway right-of-way, city road and park permits, and will require coordination with CenterPoint Energy and Xcel Energy. A cooperative agreement with the City of Coon Rapids is desired by the city for the purpose of rehabilitating trunk sewers that connect directly to the interceptor.

Project need

48-inch RCP is in need of immediate planning for rehabilitation to extend useful life and provide reliability. Risk of failure includes a sinkhole near the foundation of an apartment complex and a 6.0 MGD spill to a tributary of Coon Creek that eventually discharges directly to the Mississippi River.



Planning: 2020 through 2022



Design: 2022 through 2024



Construction: 2024 through 2026

Financial analysis

2024 cash flow:	\$300,000
Current ACP:	\$10,900,000
2024 through 2029 cash flow:	\$10,800,000
Total project cost:	\$10,900,000