APPENDIX C

City of Brooklyn Center

2009 CAPITAL IMPROVEMENT PROGRAM

PROFILE

The 2009 Capital Improvement Program (CIP) is a planning document that presents a fifteen-year overview of scheduled capital projects to address the City's goals for maintaining public infrastructure. The CIP includes a long-term financing plan that allows the City to allocate funds for these projects based on assigned priorities. The fifteen-year horizon of the CIP provides the City with an opportunity to evaluate project priorities annually and to adjust the timing, scope and cost of projects as new information becomes available. The information contained in this plan represents an estimate of improvement costs based on present knowledge and expected conditions. Changes in community priorities, infrastructure condition and inflation rates require that adjustments be made on a routine basis.

A capital improvement is defined as a major non-recurring expenditure related to the City's physical facilities and grounds. The 2009-2023 CIP makes a concerted effort to distinguish between major maintenance projects contained in the City's operating budgets and capital improvement projects financed through the City's capital funds and proprietary funds. Typical expenditures include the cost to construct roads, utilities, parks, or municipal structures.

The CIP is predicated on the goals and policies established by the City Council, including the general development, redevelopment, and maintenance policies that are part of the City's Comprehensive Plan. A primary objective of the CIP is to identify projects that further these goals and policies in a manner consistent with funding opportunities and in coordination with other improvement projects.

CIP Project Types

The Capital Improvement Program proposes capital expenditures totaling $93 million over the next 15 years for basic improvements to the City's streets, parks, public utilities, and municipal buildings. A brief description of the four functional areas is provided below.

Public Utilities
The City operates five utility systems, four of which have projects included in the CIP —water, sanitary sewer, storm drainage, and street lighting. A vast majority of the public utility improvements are constructed in conjunction with street reconstruction projects. The remaining portion of public utilities projects include improvements to water supply wells, water towers, lift stations and force mains.

Street Improvements
Street improvements include reconstruction of neighborhood streets and reconstruction of arterial and collector streets. Proposed improvements include the installation or reconstruction of curb and gutter along public roadways. As noted earlier, street improvements are often accompanied by replacement of public utilities.

Park Improvements
Park improvements include the construction of trails, shelters, playground equipment, athletic field lighting and other facilities that enhance general park appearance and increase park usage by providing recreational facilities that meet community needs.

Capital Building Maintenance Improvements
Capital building maintenance improvements include short and long term building and facility improvements identified in the 18-year Capital Building Maintenance Program approved in 2007.

CIP Funding Sources
Capital expenditures by funding source for the fifteen-year period are shown in Table 1 and the accompanying chart. Major funding sources are described below.

Public Utility Funds
Customers are billed for services provided by the City's water, sanitary sewer, storm sewer, and street lighting public utilities. Fees charged to customers are based on operating requirements and capital needs to ensure that equipment and facilities are replaced to maintain basic utility services. Annually the City Council evaluates the needs of each public utility system and establishes rates for each system to meet those needs.

Capital Improvements Fund
This fund is comprised of transfers from the General Fund, repayment of debt from the Golf Course operating fund, and transfers from liquor operations. Typically the City Council has directed these funds towards municipal facilities such as parks, trails, public buildings and other general purpose needs.

Special Assessment Collections
Properties benefiting from street improvements are assessed a portion of the project costs in accordance with the City's Special Assessment Policy. Every year the City Council establishes special assessment rates for projects occurring the following year. Rates are typically adjusted annually to maintain the relative proportion of special assessments to other funding sources.

Street Reconstruction Fund
The Street Reconstruction Fund provides for the cost of local street improvements along roadways that are not designated as municipal state aid routes. A majority of the revenue for this fund is generated from general fund transfers and franchise fees charged for the use of public right-of-way by natural gas and electric utility companies. The City's ability to provide adequate revenue for the Street Reconstruction Fund is currently one of the main limiting factors in determining the rate at which future street and utility improvements can be accomplished.

Municipal State Aid (MSA) Fund
State-shared gas taxes provide funding for street improvements and related costs for those roadways identified as MSA streets. The City has 21 miles of roadway identified as MSA streets and is therefore eligible to receive funding based on this designation. The annual amount available is approximately $780,000 and provides for maintenance and construction activities within the City's MSA street system.

Funds to be Determined
A dedicated funding source for portions of the Capital Building Maintenance Improvements is yet to be determined. The Liquor Store Enterprise fund is anticipated to be used in 2009.

	Total Funding Need 2009-2023	Average Annual Funding Need	Percent of Total Need
Water Utility	$15,840,450	$1,056,030	17%
Sanitary Sewer Utility	$12,273,950	$818,263	14%
Storm Drainage Utility	$17,064,000	$1,137,600	18%
Street Lighting Utility	$879,700	$58,647	1%
Municipal State Aid	$9,085,000	$605,667	10%
Street Reconstruction Fund	$12,570,200	$838,013	13%
Capital Projects Fund	$2,596,000	$173,067	3%
Special Assessment Collections	$17,928,400	$1,195,226	19%
Funds To Be Determined	$5,084,900	$338,994	5%
TOTAL	$93,322,600	$6,221,507	100%

TABLE 1. Capital Improvement Program - Summary by Funding Source

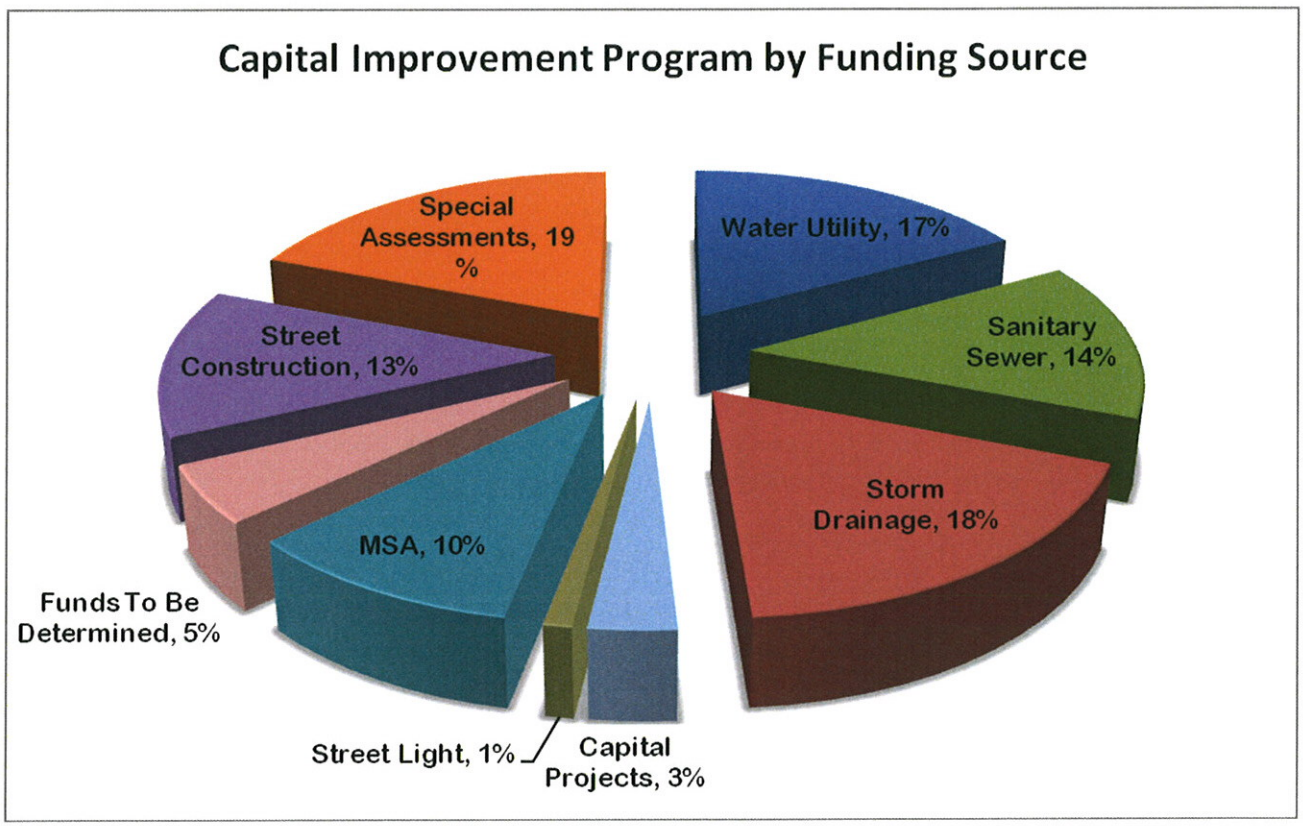
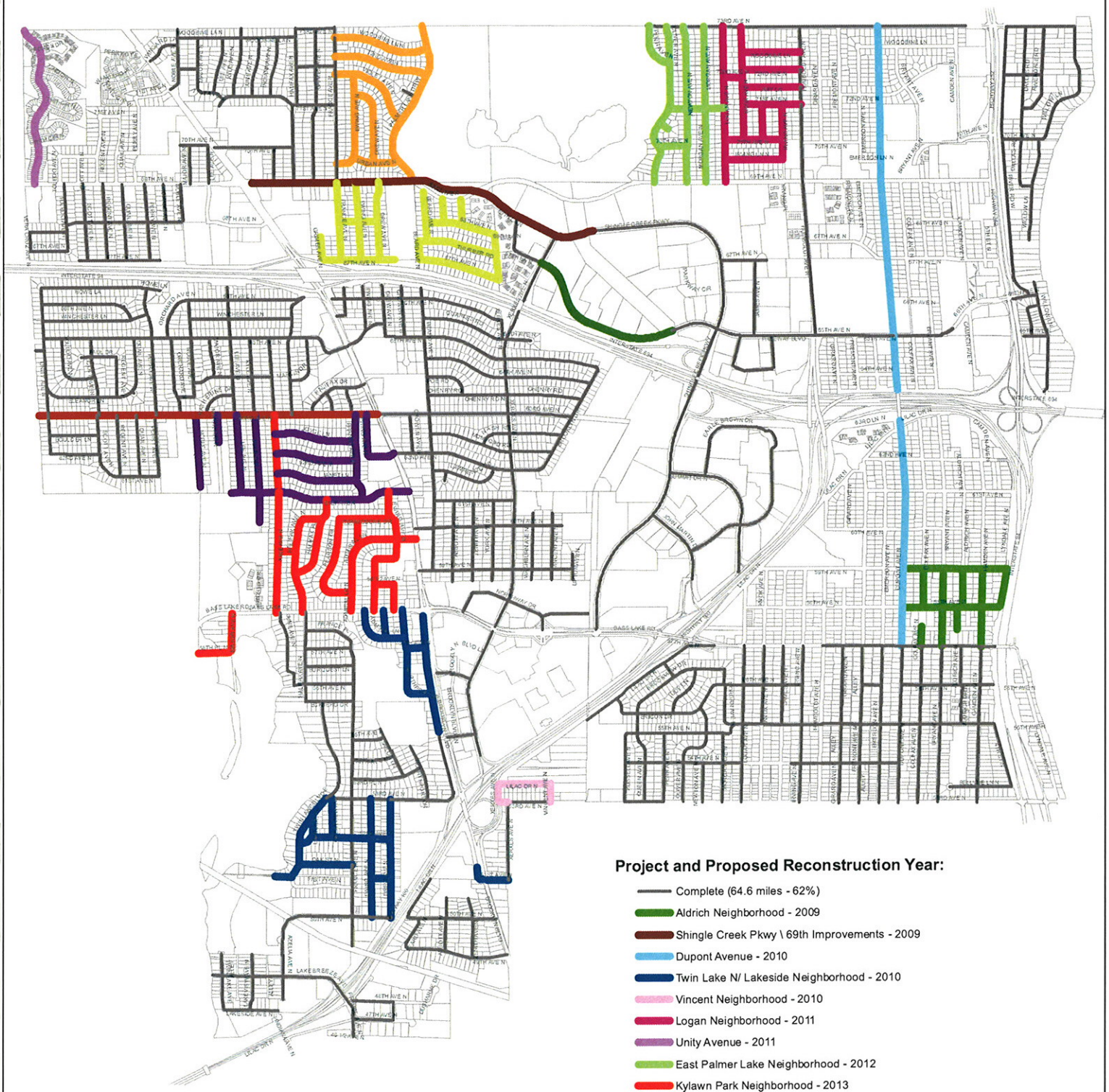


Table 2. Overview of projects and funding sources for the 2009 Capital Improvement Program. Annual breakdowns for each project year are accompanied by a brief description of each project.

CIP PROJECT AREAS

2009 - 2016



Project and Proposed Reconstruction Year:

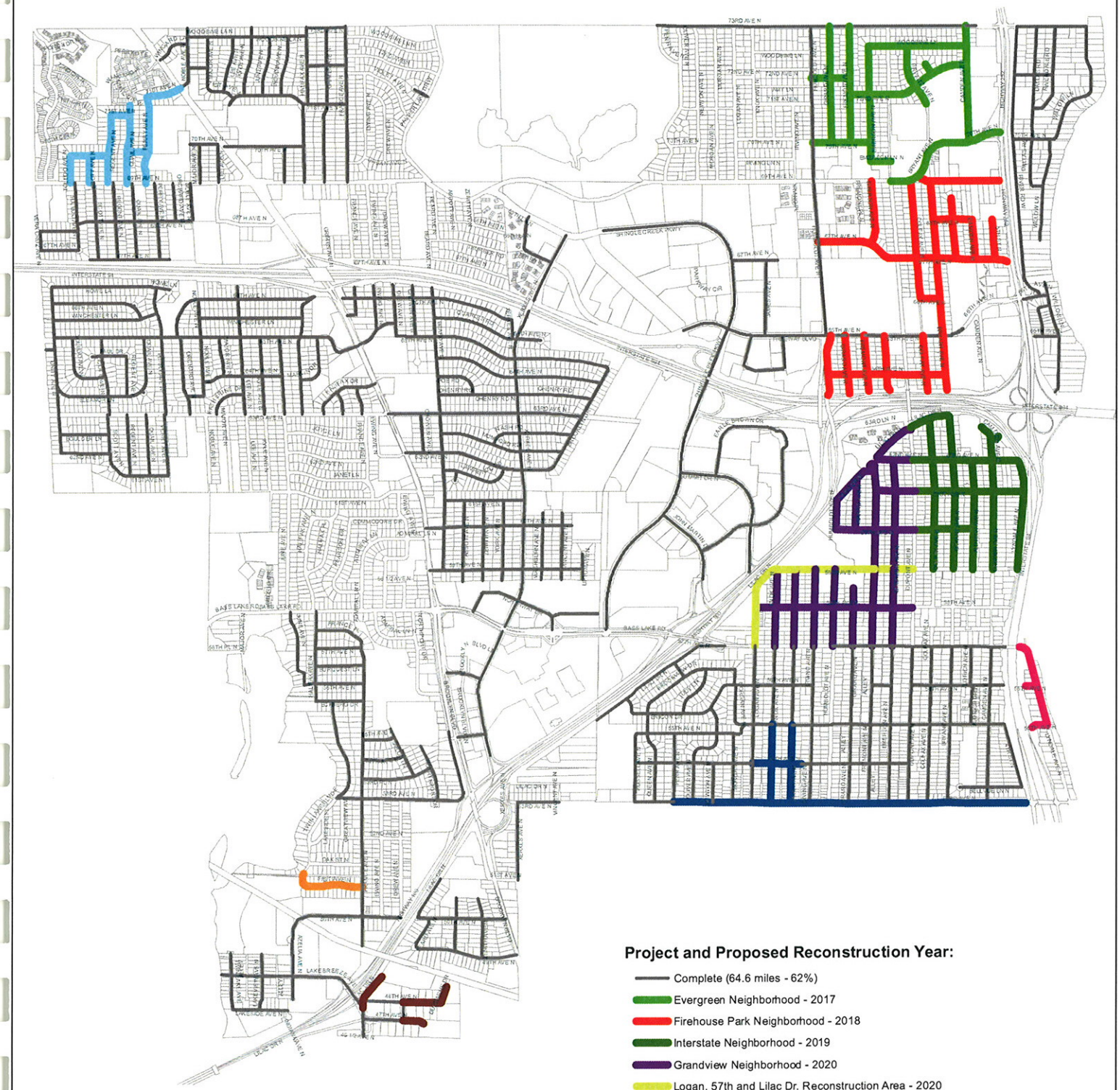
- Complete (64.6 miles - 62%)
- Aldrich Neighborhood - 2009
- Shingle Creek Pkwy \ 69th Improvements - 2009
- Dupont Avenue - 2010
- Twin Lake N/ Lakeside Neighborhood - 2010
- Vincent Neighborhood - 2010
- Logan Neighborhood - 2011
- Unity Avenue - 2011
- East Palmer Lake Neighborhood - 2012
- Kylawn Park Neighborhood - 2013
- Wangstad Park Neighborhood - 2014
- 63rd Avenue Reconstruction - 2015
- Freeway Park Neighborhood - 2015
- Palmer Lake West Neighborhood - 2016
- Freeway Blvd West Reconstruction - 2016

City of BROOKLYN CENTER

November 2008

CIP PROJECT AREAS

2017 - 2023



Project and Proposed Reconstruction Year:

- Complete (64.6 miles - 62%)
- Evergreen Neighborhood - 2017
- Firehouse Park Neighborhood - 2018
- Interstate Neighborhood - 2019
- Grandview Neighborhood - 2020
- Logan, 57th and Lilac Dr. Reconstruction Area - 2020
- Ryan Lake Reconstruction Area - 2021
- Northwest Neighborhood - 2022
- 51st Avenue Reconstruction - 2023
- Lyndale Reconstruction Area - 2023
- 53rd Reconstruction Area - 2023

City of BROOKLYN CENTER

November 2008

Table 2
Capital Improvement Program (2009 - 2023)

Revised November 12, 2008

Project	Special Assessments	Street Reconst. Fund	MSA Fund	Storm Drainage Utility	Sanitary Sewer Utility	Water Utility	Street Light Utility	Capital Projects Fund	To Be Determined	Total Project Cost
2009										
Aldrich Neighborhood	$441,000	$850,000	$0	$1,447,000	$285,000	$205,000	$38,000	$0	$0	$3,266,000
Wetland 639W participation with SCWMC	$0	$0	$0	$165,800	$0	$0	$0	$0	$0	$165,800
Shingle Ck Trail - Central Park to CR 10	$0	$0	$0	$0	$0	$0	$0	$95,000	$0	$95,000
Arboretum South Parking Lot Reconstruction	$0	$0	$0	$0	$0	$0	$0	$21,000	$0	$21,000
West Central Park Trail Rehabilitation	$0	$0	$0	$0	$0	$0	$0	$140,000	$0	$140,000
Automated Meter Reading Program	$0	$0	$0	$0	$687,250	$2,061,750	$0	$0	$0	$2,749,000
Centerbrook Golf Course Watermain Replacement	$0	$0	$0	$0	$0	$190,000	$0	$0	$0	$190,000
Sanitary Sewer Lining at Brooklyn Dr. and I-694	$0	$0	$0	$0	$51,000	$0	$0	$0	$0	$51,000
Shingle Creek Pkwy/69th Ave Street Improv	$0	$0	$650,000	$0	$0	$0	$0	$0	$0	$650,000
Emergency Bypass for Lift Station 6	$0	$0	$0	$0	$102,000	$0	$0	$0	$0	$102,000
Capital Building Maintenance Program 2009	$0	$0	$0	$0	$19,900	$56,100	$0	$0	$172,500	$248,500
Northport Tennis Court Resurfacing	$0	$0	$0	$0	$0	$0	$0	$24,000	$0	$24,000
West Palmer Park Tennis Court Resurfacing	$0	$0	$0	$0	$0	$0	$0	$22,000	$0	$22,000
Riverdale Open Picnic Shelter	$0	$0	$0	$0	$0	$0	$0	$68,000	$0	$68,000
2009 Subtotal	$441,000	$850,000	$650,000	$1,612,800	$1,145,150	$2,512,850	$38,000	$370,000	$172,500	$7,792,300
2010										
Dupont Avenue Reconstruction	$816,000	$0	$1,365,000	$563,000	$308,000	$290,000	$25,000	$0	$0	$3,367,000
Twin Lake North / Lakeside Neighborhood	$904,000	$1,305,000	$77,000	$1,108,000	$970,000	$902,000	$53,000	$0	$0	$5,319,000
Vincent Neighborhood	$75,000	$117,000	$0	$155,000	$45,000	$26,000	$0	$0	$0	$418,000
Storm Water Ponds 12-002 & 12-003 Dredging	$0	$0	$0	$110,000	$0	$0	$0	$0	$0	$110,000
Capital Building Maintenance Program 2010	$0	$0	$0	$0	$19,200	$39,000	$0	$0	$172,800	$231,000
Willow Lane Open Picnic Shelter	$0	$0	$0	$0	$0	$0	$0	$70,000	$0	$70,000
Kylawn and Firehouse Park Trail Rehab.	$0	$0	$0	$0	$0	$0	$0	$62,000	$0	$62,000
2010 Subtotal	$1,795,000	$1,422,000	$1,442,000	$1,936,000	$1,342,200	$1,257,000	$78,000	$132,000	$172,800	$9,577,000
2011										
Logan Neighborhood Reconstruction	$972,000	$906,000	$0	$873,000	$395,000	$720,000	$54,000	$0	$0	$3,920,000
Lift Station No. 9 Force Main Replacement	$0	$0	$0	$0	$415,000	$0	$0	$0	$0	$415,000
Emer Generator Replacement for Lift Station No. 2	$0	$0	$0	$0	$60,900	$0	$0	$0	$0	$60,900
Traffic Signal Replace at SCP and I-94	$0	$0	$303,000	$0	$0	$0	$0	$0	$0	$303,000
Storm Water Pond 12-005 Rehab	$0	$0	$0	$49,000	$0	$0	$0	$0	$0	$49,000
Capital Building Maintenance Program 2011	$0	$0	$0	$0	$55,500	$7,400	$0	$0	$474,200	$537,100
West Palmer Park Building Replacement	$0	$0	$0	$0	$0	$0	$0	$270,000	$0	$270,000
Unity Avenue Reconstruction	$181,000	$128,000	$0	$89,000	$15,000	$206,000	$13,000	$0	$0	$632,000
2011 Subtotal	$1,153,000	$1,034,000	$303,000	$1,011,000	$941,400	$933,400	$67,000	$270,000	$474,200	$6,187,000
2012										
Evergreen Park Fence & Court Reconstruction	$0	$0	$0	$0	$0	$0	$0	$77,000	$0	$77,000
Evergreen Athletic Field Lighting Replacement	$0	$0	$0	$0	$0	$0	$0	$105,000	$0	$105,000
Northport Park Building Replacement	$0	$0	$0	$0	$0	$0	$0	$275,000	$0	$275,000
Water Tower No. 2 - Painting	$0	$0	$0	$0	$0	$718,000	$0	$0	$0	$718,000
Storm Water Pond 18-001 Rehab	$0	$0	$0	$155,000	$0	$0	$0	$0	$0	$155,000
Storm Water Pond 46-001 Rehab	$0	$0	$0	$39,000	$0	$0	$0	$0	$0	$39,000
Capital Building Maintenance Program 2012	$0	$0	$0	$0	$17,300	$25,300	$0	$0	$202,500	$245,100
East Palmer Lake Neighborhood Reconstruction	$768,000	$860,000	$0	$756,000	$345,000	$315,000	$40,000	$0	$0	$3,084,000
2012 Subtotal	$768,000	$860,000	$0	$950,000	$362,300	$1,058,300	$40,000	$457,000	$202,500	$4,698,100

Table 2
Capital Improvement Program (2009 - 2023)

Revised November 12, 2008

Project	Special Assessments	Street Reconst. Fund	MSA Fund	Storm Drainage Utility	Sanitary Sewer Utility	Water Utility	Street Light Utility	Capital Projects Fund	To Be Determined	Total Project Cost
2013										
Baseball Backstop Replacements	$0	$0	$0	$0	$0	$0	$0	$20,000	$0	$20,000
Replace Traffic Signals at 66th Ave & Hwy 252	$0	$0	$150,000	$0	$0	$0	$0	$0	$0	$150,000
Storm Water Pond 60-001 Rehab	$0	$0	$0	$17,000	$0	$0	$0	$0	$0	$17,000
Capital Building Maintenance Program 2013	$0	$0	$0	$0	$0	$111,600	$0	$0	$565,200	$676,800
Humboldt Ave N (53rd to 57th) Reconstruction	$260,000	$0	$0	$0	$100,000	$90,000	$28,000	$0	$0	$478,000
Kylawn Park Neighborhood Reconstruction	$1,358,000	$866,000	$538,000	$878,000	$1,005,000	$958,000	$51,000	$0	$0	$5,654,000
2013 Subtotal	$1,618,000	$866,000	$688,000	$895,000	$1,105,000	$1,159,600	$79,000	$20,000	$565,200	$6,995,800
2014										
Central Park Tennis Courts Resurfacing	$0	$0	$0	$0	$0	$0	$0	$75,000	$0	$75,000
Capital Building Maintenance Program 2014	$0	$0	$0	$0	$54,900	$85,600	$0	$0	$81,900	$222,400
Storm Water Pond 50-001 Rehab	$0	$0	$0	$69,000	$0	$0	$0	$0	$0	$69,000
Willow Lane Trail Reconstruction	$0	$0	$0	$0	$0	$0	$0	$40,000	$0	$40,000
Wangstad Park Neighborhood Reconstruction	$1,515,000	$1,002,000	$397,000	$965,000	$1,075,000	$1,005,000	$52,000	$0	$0	$6,011,000
2014 Subtotal	$1,515,000	$1,002,000	$397,000	$1,034,000	$1,129,900	$1,090,600	$52,000	$115,000	$81,900	$6,417,400
2015										
Baseball Fence Replacement	$0	$0	$0	$0	$0	$0	$0	$35,000	$0	$35,000
Freeway Park Trail Replacement	$0	$0	$0	$0	$0	$0	$0	$28,000	$0	$28,000
Water Tower No. 3 Painting	$0	$0	$0	$0	$0	$410,000	$0	$0	$0	$410,000
Capital Building Maintenance Program 2015	$0	$0	$0	$0	$3,000	$123,600	$0	$0	$299,600	$426,200
Lions Park Trail Replacement	$0	$0	$0	$0	$0	$0	$0	$57,000	$0	$57,000
63rd Avenue North Reconstruction	$286,000	$0	$2,009,000	$0	$112,000	$90,000	$53,000	$0	$0	$2,550,000
Freeway Park Neighborhood Reconstruction	$1,085,000	$1,040,000	$0	$937,000	$880,000	$820,000	$45,000	$0	$0	$4,807,000
2015 Subtotal	$1,371,000	$1,040,000	$2,009,000	$937,000	$995,000	$1,443,600	$98,000	$120,000	$299,600	$8,313,200
2016										
Evergreen Park Trail Replacement	$0	$0	$0	$0	$0	$0	$0	$50,000	$0	$50,000
Brooklyn Blvd City Entrance Signs	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$12,000
Capital Building Maintenance Program 2016	$0	$0	$0	$0	$110,800	$17,000	$0	$0	$137,100	$264,900
Storm Water Pond 12-004 Rehab	$0	$0	$0	$67,000	$0	$0	$0	$0	$0	$67,000
69th Avenue Greenway Fence Rehab	$0	$0	$0	$0	$0	$0	$0	$36,000	$0	$36,000
Water Tower No. 1 Painting	$0	$0	$0	$0	$0	$360,000	$0	$0	$0	$360,000
Freeway Blvd West Reconstruction	$235,000	$0	$215,000	$0	$0	$0	$0	$0	$0	$450,000
Palmer Lake West Neighborhood Reconstruction	$975,000	$660,000	$0	$1,200,000	$813,000	$753,000	$50,000	$0	$0	$4,451,000
2016 Subtotal	$1,210,000	$660,000	$215,000	$1,267,000	$923,800	$1,130,000	$50,000	$98,000	$137,100	$5,690,900
2017										
West River Rd Trail Replacement	$0	$0	$0	$0	$0	$0	$0	$115,000	$0	$115,000
Capital Building Maintenance Program 2017	$0	$0	$0	$0	$0	$22,400	$0	$0	$261,100	$283,500
Evergreen Neighborhood Reconstruction	$1,527,000	$700,000	$1,195,000	$1,500,000	$710,000	$1,305,000	$65,000	$0	$0	$7,002,000
2017 Subtotal	$1,527,000	$700,000	$1,195,000	$1,500,000	$710,000	$1,327,400	$65,000	$115,000	$261,100	$7,400,500
2018										
Central Park East Trail Replacement	$0	$0	$0	$0	$0	$0	$0	$98,000	$0	$98,000
Capital Building Maintenance Program 2018	$0	$0	$0	$0	$20,600	$47,900	$0	$0	$389,500	$458,000
Firehouse Park Neighborhood Reconstruction	$1,903,000	$1,050,000	$405,000	$2,116,000	$827,000	$735,000	$70,000	$0	$0	$7,106,000
2018 Subtotal	$1,903,000	$1,050,000	$405,000	$2,116,000	$847,600	$782,900	$70,000	$98,000	$389,500	$7,662,000

Table 2
Capital Improvement Program (2009 - 2023)

Revised November 12, 2008

Project	Special Assessments	Street Reconst. Fund	MSA Fund	Storm Drainage Utility	Sanitary Sewer Utility	Water Utility	Street Light Utility	Capital Projects Fund	To Be Determined	Total Project Cost
2019										
Park Playground Equip Replacement	$0	$0	$0	$0	$0	$0	$0	$203,000	$0	$203,000
Capital Building Maintenance Program 2019	$0	$0	$0	$0	$2,600	$11,300	$0	$0	$480,400	$494,300
Interstate Neighborhood Reconstruction	$1,120,000	$1,025,000	$0	$1,670,000	$1,090,000	$1,020,000	$48,000	$0	$0	$5,973,000
2019 Subtotal	$1,120,000	$1,025,000	$0	$1,670,000	$1,092,600	$1,031,300	$48,000	$203,000	$480,400	$6,670,300
2020										
Park Playground Equip Replacement	$0	$0	$0	$0	$0	$0	$0	$207,000	$0	$207,000
Capital Building Maintenance Program 2020	$0	$0	$0	$0	$6,300	$42,100	$0	$0	$831,600	$880,000
Logan/Lilac/59th Avenue Reconstruction	$450,000	$0	$1,075,000	$0	$46,000	$150,000	$20,000	$0	$0	$1,741,000
Grandview Neighborhood Reconstruction	$2,070,000	$950,000	$305,000	$1,465,000	$1,175,000	$1,100,000	$84,000	$0	$0	$7,149,000
2020 Subtotal	$2,520,000	$950,000	$1,380,000	$1,465,000	$1,227,300	$1,292,100	$104,000	$207,000	$831,600	$9,977,000
2021										
Park Playground Equip Replacement	$0	$0	$0	$0	$0	$0	$0	$211,000	$0	$211,000
Capital Building Maintenance Program 2021	$0	$0	$0	$0	$3,100	$0	$0	$0	$95,700	$98,800
Ryan Lake Industrial Park	$335,000	$165,000	$0	$437,000	$211,000	$541,000	$32,000	$0	$0	$1,721,000
2021 Subtotal	$335,000	$165,000	$0	$437,000	$214,100	$541,000	$32,000	$211,000	$95,700	$2,030,800
2022										
Palmer Lake Trail Mill and Overlay	$0	$0	$0	$0	$0	$0	$0	$180,000	$0	$180,000
Capital Building Maintenance Program 2022	$0	$0	$0	$0	$3,600	$37,700	$0	$0	$366,300	$407,600
Northwest Area Neighborhood Mill & Overlay	$125,000	$215,000	$0	$35,000	$25,000	$25,000	$0	$0	$0	$425,000
2022 Subtotal	$125,000	$215,000	$0	$35,000	$28,600	$62,700	$0	$180,000	$366,300	$1,012,600
2023										
Capital Building Maintenance Program 2023	$0	$0	$0	$0	$4,000	$7,700	$0	$0	$554,500	$566,200
51st Avenue Reconstruction	$74,000	$137,300	$0	$25,000	$30,000	$30,000	$7,500	$0	$0	$303,800
53rd Avenue Reconstruction Area	$353,300	$408,000	$401,000	$143,200	$145,000	$155,000	$40,200	$0	$0	$1,645,700
Lyndale Avenue Reconstruction Area	$100,100	$185,900	$0	$30,000	$30,000	$25,000	$11,000	$0	$0	$382,000
2023 Subtotal	$527,400	$731,200	$401,000	$198,200	$209,000	$217,700	$58,700	$0	$554,500	$2,897,700

PROJECT DESCRIPTIONS
2009 – 2023 Capital Improvement Program

City of Brooklyn Center

Street and Utility Improvement Projects

Aldrich Neighborhood Improvements
Humboldt Avenue South Improvements
Dupont Avenue Neighborhood Improvements
Twin Lake North Improvements
Logan Neighborhood Improvements
Unity Avenue Improvements
East Palmer Lake Neighborhood Improvements
Kylawn Park Neighborhood Improvements
Wangstad Park Neighborhood Improvements
63rd Avenue Improvements
Freeway Park Neighborhood Improvements
Freeway Boulevard West Improvements
Vincent Neighborhood Improvements
Palmer Lake West Improvements
Evergreen Park Neighborhood Improvements
Firehouse Park Neighborhood Improvements
Interstate Neighborhood Improvements
Logan, 59th and Lilac Drive Improvements
Grandview Park Neighborhood Improvements
Ryan Lake Industrial Park Improvements
51st Avenue North Improvements
53rd Avenue Neighborhood Improvements
Lyndale Avenue Neighborhood Improvements

Miscellaneous Water Main and Sanitary Sewer Improvements

Automated Meter Reading Program
Lining Sanitary Sewer Under I-694 at Brooklyn Drive
Emergency Bypass for Lift Station No. 6
Centerbrook Golf Course Water Main Improvements
Water Tower No. 1 Painting
Water Tower No. 2 Painting
Water Tower No. 3 Painting

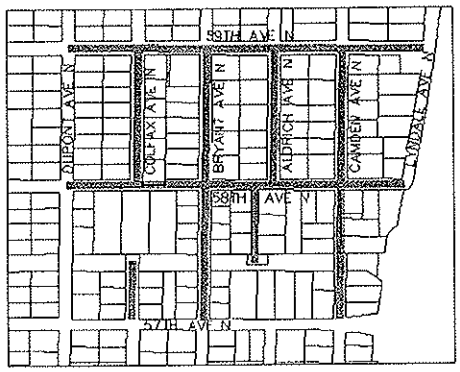
Storm Water Improvements

Wetland 639W
Storm Water Pond 12-002
Storm Water Pond 12-003
Storm Water Pond 12-004
Storm Water Pond 12-005
Storm Water Pond 18-001
Storm Water Pond 46-001
Storm Water Pond 50-001
Storm Water Pond 60-001

Park and Trail Improvements

Shingle Creek Trail Improvements
Arboretum Park South Parking Lot Reconstruction
West Central Park Trail Improvements
Northport Tennis Court Resurfacing
West Palmer Park Tennis Court Resurfacing
Riverdale Park Open Picnic Shelter
Willow Lane Park Open Picnic Shelter
Firehouse Park Trail Improvements
Kylawn Park Trail Improvements
West Palmer Park Improvements
Evergreen Park Fence and Tennis Court Reconstruction
Evergreen Athletic Field Lighting Replacement
Northport Park Building
Baseball Backstop Replacements
Central Park Tennis Court Resurfacing
Willow Lane Park Trail Improvements
Baseball Fence Replacement
Freeway Park Trail Improvements
Lions Park Trail Improvements
Evergreen Park Trail Improvements
Brooklyn Boulevard City Entrance Signs
69th Avenue Greenway Fence Rehabilitation
West River Road Trail Improvements
Central Park East Trail Improvements
Play Ground Equipment Replacement
Palmer Lake Trail Mill and Overlay

Aldrich Neighborhood Improvements



The Aldrich Neighborhood project area extends from Dupont Avenue to Interstate 94 and from 59th Avenue to 57th Avenue. The project area contains a total of 8,010 linear feet of local streets. The neighborhood consists of approximately 103 residential properties.

Streets

The majority of the streets in the project area were originally constructed in 1968 through 1969. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood due to the age of the pavement and inadequate drainage. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and full depth replacement of bituminous street pavement.

Water main

The existing water main in the Aldrich Neighborhood area consists of 6-inch, 8-inch and 10-inch diameter cast iron pipe throughout the project area and 24-inch diameter steel water main along 59th Avenue. A majority of the existing cast iron waterman was installed between 1964 and 1968 and is believed to have an internal lining. New segments of 8-inch diameter water main and sanitary sewer were installed on the southern part of Camden Avenue as part of the 1996-06 project. A condition survey must be conducted for the existing water system in the neighborhood to determine the extent of corrosion. Water records indicate one main break has occurred within the neighborhood. The water main is in fair condition based on current maintenance records. The current project cost estimate includes replacement of watermain along Aldrich, Bryant and Camden Avenues due to isolated areas of corrosion or as necessary to allow for the replacement of sanitary sewer and trunk storm sewer within the neighborhood.

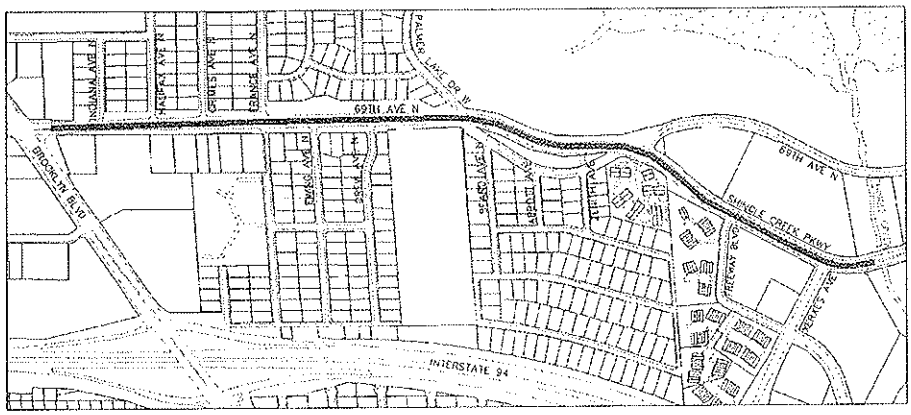
Sanitary Sewer

The existing sanitary sewer consists of 8-inch diameter vitrified clay pipe lateral sewers along local streets and a 12-inch diameter reinforced concrete trunk sewer along the Xcel easement between 57th Avenue and 58th Avenue. These sewers were originally installed between 1959 and 1962. Approximately 75 percent of the sanitary sewer is subjected to problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair to poor. The current project cost estimate includes replacement of approximately 50 percent of the 8-inch diameter sanitary sewer. The sanitary sewer located along Camden Avenue must be lowered to facilitate the installation of a new trunk storm sewer between 57th and 59th Avenues.

Storm Sewer

A substantial portion of the southeastern section of the city drains through two trunk storm sewers located along 59th Avenue and along the west side of Interstate 94. These trunk storm sewers, installed in 1952, are under-sized and do not provide sufficient capacity to convey storm water runoff through the neighborhood and under Interstate 94. The installation of new trunk storm sewers along Camden Avenue, 59th Avenue and under I-94 is necessary to prevent local flooding. The current project cost estimate includes the replacement of storm sewer throughout the project area, boring a new trunk storm line under Interstate 94 and installation of two precast water quality treatment devises. A detailed description of the proposed storm drainage improvements are further described in a feasibility report titled "59th Avenue Trunk Storm Sewer Improvements" prepared by Bonestroo & Associates in 2006.

Shingle Creek Parkway and 69th Avenue Street Improvements



The Shingle Creek Parkway and 69th Avenue project area extends from Brooklyn Blvd to Shingle Creek Pkwy along 69th Avenue and from 69th Avenue to the Shingle Creek Bridge along Shingle Creek Pkwy. The project area contains a total of 5,692 linear feet of local streets.

Streets
This segment of roadway is designated as a Municipal State Aid Route. 69th Avenue was reconstructed in 1993. Shingle Creek Pkwy was most recently reconstructed in 1995. Existing streets are generally 70 to 85 feet wide with concrete curb and gutter and raised concrete medians. The street pavement exhibits a moderate rate of deterioration due to higher volumes of traffic. The current cost estimate assumes street improvements that consist of approximately 25 percent curb replacement, 10 percent sidewalk replacement, 25 percent concrete apron replacement, a 2-inch mill and overlay of the bituminous pavement on 69th Avenue between Brooklyn Blvd and Drew Avenue and full depth pavement replacement on the remainder of the project.

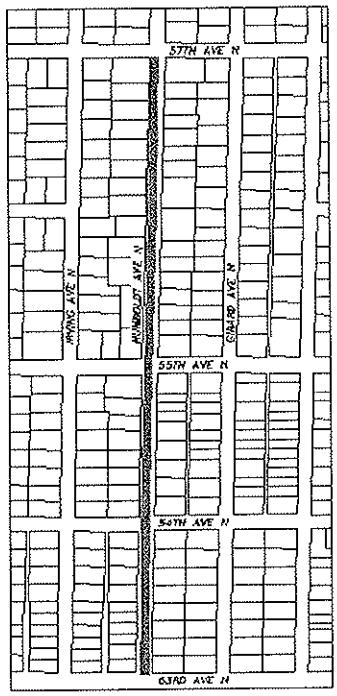
Water main
The existing water main in the Shingle Creek Pkwy and 69th Avenue project area consists of 10-inch, 16-inch and 18-inch diameter cast iron pipe (CIP) installed between 1956 and 1969. A second 16-inch diameter ductile iron pipe water main was installed on 69th Avenue in 1993 when the road was reconstructed. The water main is in good condition based on current maintenance records. The current project cost estimate includes no water main replacement.

Sanitary Sewer
The existing sanitary sewer along 69th Avenue consists of 8-inch and 18-inch diameter poly vinyl chloride (PVC) pipe installed in 1993. The existing sanitary sewer on Shingle Creek Pkwy consists of 10-inch diameter vitrified clay pipe installed in 1969. The condition of the sanitary sewer system within the neighborhood is rated as good. The current project cost estimate includes no sanitary sewer replacement.

Storm Sewer
The storm sewer on 69th Avenue consists of 12-inch to 27-inch diameter reinforced concrete pipe that drains to Palmer Lake. This storm sewer was installed in 1956 and 1993. The storm sewer on Shingle Creek Pkwy consists of 12-inch to 48-inch diameter reinforced concrete pipe that drains to Shingle Creek. This storm sewer was installed in 1969. The condition of the storm sewer within the neighborhood is rated as good. The current project cost estimate includes replacing storm structure castings and isolated portions of lateral storm sewer as necessary.

Humboldt Avenue South Improvements

The Humboldt Avenue South project area extends from 53rd Avenue to 57th Avenue. The total project length is approximately 2,660 linear feet. The neighborhood consists of approximately 56 residential properties.



Streets

This segment of roadway is a Hennepin County Roadway. Humboldt Avenue was originally constructed between 1966 and 1969. Existing streets are generally 36 feet wide with no curb and gutter. The street pavement is deteriorated due to the age of the pavement and inadequate drainage. This project is included in the City's CIP due to a potential cost sharing agreement for the street and drainage improvements and funding for water main and sanitary sewer improvements as described below.

Water main

The existing water main in the Humboldt Avenue South project area consists of 6-inch diameter cast iron pipe (CIP) installed in 1966. A condition survey must be conducted for the existing water system in the project area to determine the extent of corrosion. The water main is in fair condition based on current maintenance records. The current project cost estimate assumes that water main will be replaced between 53rd and 55th Avenues to coincide with sanitary sewer replacement.

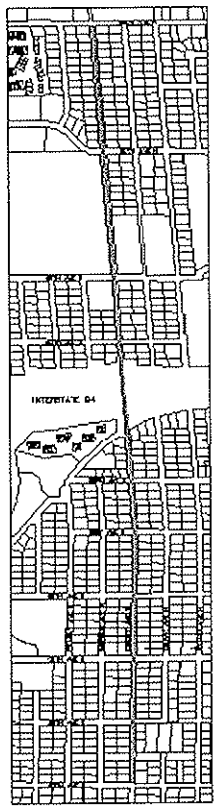
Sanitary Sewer

The existing sanitary sewer consists of 8-inch diameter vitrified clay pipe lateral sewers. These sewers were originally installed in 1952. Sanitary sewer between 53rd and 55th Avenues is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The current project cost estimate includes replacement of sanitary sewer between 53rd and 55th Avenues.

Storm Sewer

The storm sewer on Humboldt Avenue consists of 18-inch diameter corrugated metal pipe that drains to a trunk line along 55th Avenue. This storm sewer was installed in 1952. The current project cost estimate includes replacing 100 percent of the storm sewer. The cost estimate assumes that Brooklyn Center may contribute to a portion of the storm drainage cost for the project.

Dupont Avenue Neighborhood Improvements



The Dupont Avenue Neighborhood project area extends from 73rd Avenue to 57th Avenue. The total project length is 10,007 feet. The neighborhood consists of approximately 140 residential properties and the Brooklyn Center High School property and one city parcel.

Streets

The entire length of the project area is designated as a Minnesota State Aid Route. The majority of the streets in the project area were originally constructed between 1963 and 1968. The existing street between 57th Avenue and 67th Avenue is 42 feet wide with concrete curb and gutter. The existing street between 67th Avenue and 73rd Avenue are 30 feet wide with no curb and gutter. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement between 59th Avenue and Lilac Drive N and between 67th Avenue and 73rd Avenue. Proposed improvements for the remaining areas include 20 percent curb replacement, 10 percent sidewalk replacement and installation on new street pavement.

Water main

The existing water main in the south portion of the project area is 6-inch diameter cast iron pipe installed in 1968 and 1969. Dupont Avenue between Interstate 94 and 69th Avenue contains a 30-inch steel water main installed in 1963. The water main between 69th Avenue and 73rd Avenue consists of 6-inch and 12-inch cast iron pipe installed in 1961 and 1962. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. However, there is a history of water main breaks along Dupont Avenue between 69th and 73rd. The current project estimate includes complete water main replacement between 59th Avenue and Lilac Drive N and between 67th Avenue and 73rd Avenue. No water main replacement is anticipated in the remaining areas.

Sanitary Sewer

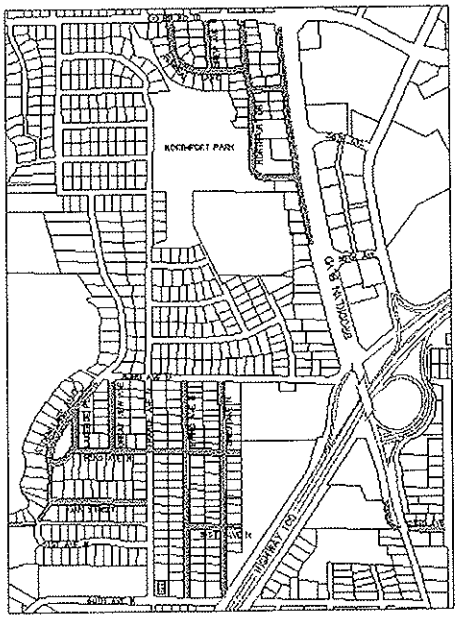
The sanitary sewer in the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1960, 1961 and 1967. Approximately 25 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair. The current project cost estimate includes 100 percent sanitary sewer replacement between 57th Avenue and Lilac Drive N and between 67th Avenue and 73rd Avenue.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the existing trunk storm sewer lines flowing to the Mississippi River. These trunk storm lines area located on 70th Avenue, 65th Avenue, 59th Avenue and 57th Avenue. The current project cost estimate includes 100 percent storm sewer replacement between 57th Avenue and Lilac Drive N and between 67th Avenue and 73rd Avenue. The cost estimate also includes the replacement of approximately 5 catch basins and approximately 700 feet of smaller diameter lateral storm pipe in the remaining areas.

Twin Lake North Improvements

The north portion of the Twin Lake North project area extends from County Road 10 to 55th Ave, and from Admiral Lane to Brooklyn Blvd. The south portion of the project area extends from 53rd Ave. to 50th Ave., and from East Twin Lake Blvd to Highway 100. The total project length is 15,745 feet. The neighborhood consists of approximately 209 residential properties (R1 and R4) and 4 commercial properties (C1).



Streets

51st Avenue east of Brooklyn Blvd is a designated Municipal State Aid Route. The majority of the streets in the project area were originally constructed in 1965 and 1967. Existing streets are generally 30 feet wide with no curb and gutter. The service road along Brooklyn Boulevard is currently 25 feet wide. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main in the north portion of the project area is 6-inch diameter cast iron pipe installed in 1965. The south portion of the project area contains 6-inch and 8-inch diameter cast iron pipe installed in 1966 and 1967. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. However, there is a history of water main breaks along East Twin Lake Blvd. and Great View Avenue. The current project estimate assumes complete replacement of the water main within the project area.

Sanitary Sewer

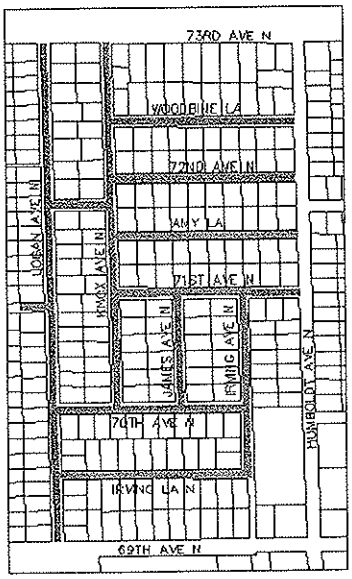
The sanitary sewer in the north portion of the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1956 and 1958. The south portion of the project area contains 8-inch diameter VCP installed in 1958 and 1960. Approximately 75 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project. Further investigation of the sewer line within Brooklyn Boulevard is necessary to determine if cured-in-place pipe rehabilitation is necessary or warranted.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the regional storm water treatment facility in Centerbrook Golf Course. Runoff from the portion of the project area south of 53rd Avenue and West of France Avenue is conveyed to Twin Lake. A portion of the existing storm sewer system within the project area could be salvaged, although it is anticipated that expansion of the system and higher capacity will be needed to minimize local flooding. The current project cost estimate assumes complete replacement of the storm sewer system as part of the scheduled neighborhood improvements. The current cost estimate includes an in-line treatment device to remove sediment prior to discharging runoff into Twin Lake.

Logan Neighborhood Improvements

The Logan Neighborhood project area extends from Logan Avenue to Humboldt Avenue and from 73rd Avenue to 69th Avenue. The project area includes a total of approximately 12,321 feet of local streets. The neighborhood consists of approximately 210 single family residential properties (R1) and 1 multi-family residential property (R5).



Streets

The majority of the streets in the project area were originally constructed in 1962 through 1969. Existing streets are generally 30 feet wide with no curb and gutter. Poor surface drainage and low stability subgrade material has resulted in deteriorated pavement throughout the neighborhood. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

Existing water main in the Logan Neighborhood area consists of 6-inch and 10-inch diameter cast iron pipe installed between 1960 and 1969. Higher corrosion rates have been noted within a majority of the project area. Water records indicate thirteen main breaks have occurred within the area. Several isolation valves have also failed within the project area. Complete water main replacement within the project area is scheduled.

Sanitary Sewer

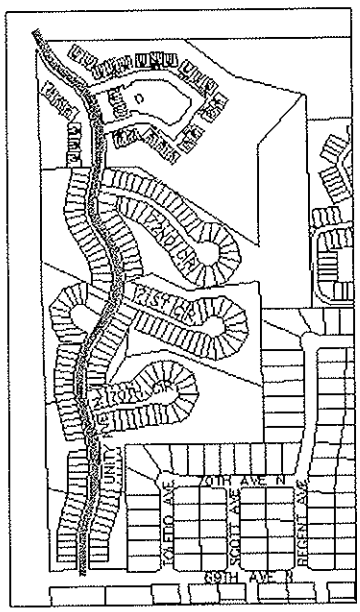
Existing sanitary sewer within the neighborhood consists of 8-inch and 10-inch diameter vitrified clay pipe originally installed in 1960 and 1965. A short segment of sanitary sewer along Irving Avenue was installed in 1978. Approximately 30 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. A televising inspection is necessary to determine the extent of sanitary sewer replacement is justified. The current project cost estimate includes the replacement of 50 percent of the sanitary sewer pipes and access structures within the neighborhood. The cost estimate also includes cured-in-place pipe rehabilitation for the 10-inch diameter sanitary sewer extending along 71st Avenue from Logan Avenue to Humboldt Avenue. The actual cost may need to be adjusted upon completion of a condition survey.

Storm Sewer

The existing storm sewer in the project area ranges in size from 18-inch to 33-inch diameter reinforced concrete pipe. The project area contains one trunk storm line running through an easement from 73rd Avenue to 71st Avenue, then flowing east to Humboldt Avenue. The current project cost estimate assumes that an expansion and replacement of a vast majority of the storm sewer system will be necessary as part of the scheduled neighborhood improvements. The current estimate does not include replacement of the trunk storm sewer noted above.

Unity Avenue Improvements

The Unity Avenue project area extends from the north city limits to 69th Avenue. The total project length is 2,786 feet. The neighborhood consists of approximately 100 residential properties (R3).



Streets

The Unity Avenue was originally constructed in 1978. The existing street is 30 feet wide with concrete curb and gutter. The overall pavement condition rating is fair. Private streets adjacent to Unity Avenue, such as 71st, 72nd and 73rd Circle, are not included as part of the project. Proposed street improvements consist of the reconstruction of the of bituminous street pavement and replacement of concrete curb as necessary based on the extent of water main replacement on the west side of Unity Avenue.

Water main

The existing water main in the project area is 8-inch and 10-inch diameter ductile iron pipe installed in 1977 and 1978. The corrosion rate within the project area has not been thoroughly documented at this time. The Public Utility Division will excavate and inspect various fittings to determine the extent of water main replacement that is warranted. Water records indicate that two main breaks have occurred within the neighborhood. Elevated corrosion rates have been documented within this segment of watermain. The current project estimate includes replacement of water main along Unity Avenue.

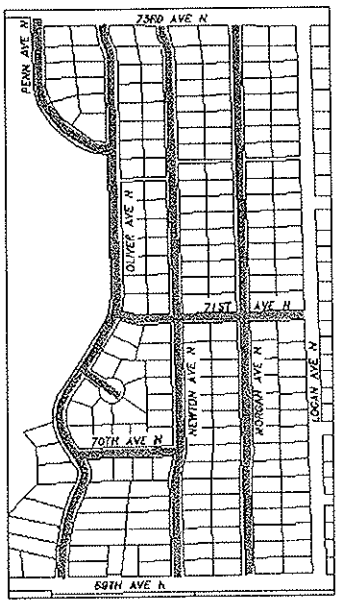
Sanitary Sewer

The sanitary sewer in the north portion of the project area consists of 8-inch and 10-inch diameter poly vinyl chloride (PVC) pipe installed in 1977. The condition of the sanitary sewer system within the neighborhood is rated as good. The current project estimate includes replacement sanitary sewer castings only.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the storm water ponds surrounding Unity Avenue. The existing storm sewer in the project area consists of 15-inch to 24-inch diameter reinforced concrete pipe installed in 1978. The current project cost estimate includes replacing storm structure castings and isolated portions of lateral storm sewer as necessary.

East Palmer Lake Neighborhood Improvements



The East Palmer Lake Neighborhood project area extends from Penn Avenue to Morgan Avenue and from 69th Avenue to 73rd Avenue. The project area includes a total of approximately 10,460 feet of local streets. The neighborhood consists of approximately 169 single family residential properties.

Streets

The majority of the streets in the project area were originally constructed between 1962 and 1969. Existing streets are generally 30 feet wide with no curb and gutter. Poor surface drainage and low stability subgrade material has resulted in deteriorated pavement throughout the neighborhood. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

Existing water main in the East Palmer Lake Neighborhood area consists of 6-inch diameter cast iron pipe installed between 1960 and 1969. Water records indicate that no water main breaks have occurred within the project area. The Public Utility Division will excavate and inspect various fittings to determine the extent of water main replacement that is warranted. The replacement of approximately 50 percent of the water main within the project area is currently included in the project cost estimate to facilitate replacement of sanitary sewer as noted below.

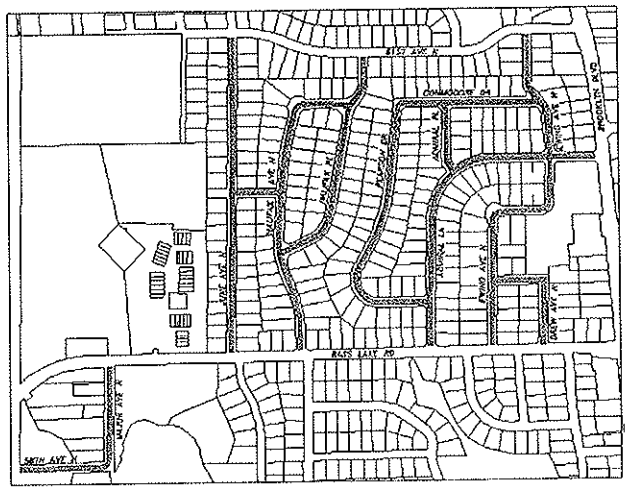
Sanitary Sewer

Existing sanitary sewer within the neighborhood consists of 8-inch and 10-inch diameter vitrified clay pipe originally installed in 1960 and 1965. Approximately 30 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. A televising inspection is necessary to determine the extent of sanitary sewer replacement is justified. An estimated 50 percent of the sewer system is in poor condition. The current project cost estimate assumes replacement of 50 percent of the sanitary sewer pipes and access structures. The actual cost may be reduced upon completion of a condition survey.

Storm Sewer

The existing storm sewer ranges in size from 15-inch to 21-inch diameter reinforced concrete pipe. The project area contains three small storm sewer lines that run to Palmer Lake. Much of the small diameter storm sewer must be reconfigured to reduce local flooding and preserve street pavement. The current cost estimate assumes replacement of all storm sewer in the project area.

Kylawn Park Neighborhood Improvements



The north portion of the Kylawn Park Neighborhood project area extends from County Road 10 to 61st Ave, and from June Ave to Brooklyn Blvd. The south portion of the project area includes 58th Place and Major Ave. The total project length is 15,311 feet. The neighborhood consists of approximately 279 residential properties (R1 and R4) and 1 commercial property (C1).

Streets

June Avenue from County Road 10 to 61st Avenue is designated as a Municipal State Aid Route. The majority of the streets in the project area were originally constructed in 1965 and 1968. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main on June Avenue is 8-inch diameter cast iron pipe installed in 1955. The remaining project area consists of 6-inch cast iron pipe installed between 1963 and 1966. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. Water records indicate that three main breaks have occurred within the neighborhood. In general, cast iron water main is highly vulnerable to leaks and breaks when disturbed by replacement of adjacent sanitary sewer as noted below. The current project estimate includes complete replacement of water main within the project area to facilitate the replacement of sanitary sewer as noted below.

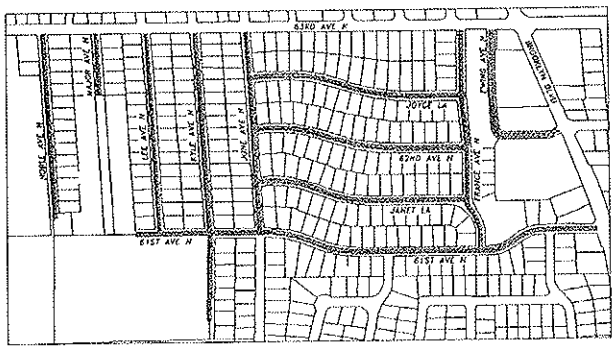
Sanitary Sewer

The sanitary sewer along Major Avenue consists for 8-inch diameter vitrified clay pipe (VCP) installed in 1967. The remaining project area contains 8-inch and 10-inch diameter vitrified clay pipe installed between 1956 and 1959. Approximately 90 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer

The storm water runoff from the southeast portion of the project area is collected in the existing storm sewer system and conveyed to the regional storm water treatment facility in Centerbrook Golf Course. Runoff from the southwest portion of the project area is conveyed to the Northport Park storm water pond. Expansion of the storm system and increased conveyance capacity is needed to minimize local flooding. The current project cost estimate assumes complete replacement of the storm sewer system as part of the neighborhood improvements.

Wangstad Park Neighborhood Improvements



The Wangstad Park Neighborhood extends from Noble Ave. to Brooklyn Blvd and from 63rd Ave. to 61st Ave. The total project length is 15,884 feet. The neighborhood consists of approximately 257 residential properties (R1 and R4) and 6 commercial properties (C1).

Streets

June Avenue from 61st to 63rd is a designated Municipal State Aid Route. The majority of the streets in the project area were originally constructed between 1966 and 1968. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main in the project area is 6-inch and 8-inch diameter cast iron pipe installed in 1955 and between 1960 and 1969. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. Water records indicate that three main breaks have occurred within the neighborhood. In general, cast iron water main is highly vulnerable to leaks and breaks when disturbed by replacement of adjacent sanitary sewer as noted below. The current project estimate includes replacement of the water main within the project area to facilitate the replacement of sanitary sewer as noted below.

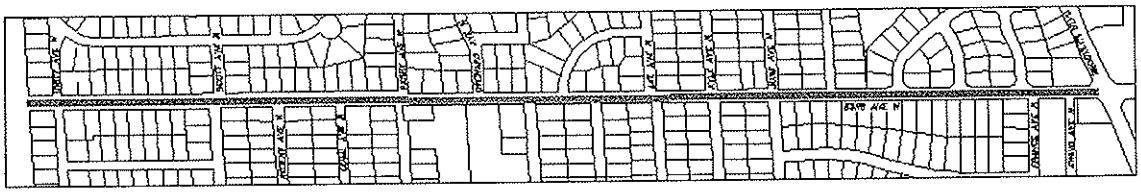
Sanitary Sewer

The sanitary sewer the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed between 1956 and 1960. Approximately 85 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer

The Wangstad Park Neighborhood has only one short stretch of storm sewer on 61st Avenue. An expansion of the storm drainage system within the project area is necessary to reduce local flooding and preserve street pavement. The existing storm sewer in the project area flows from France Avenue. to Brooklyn Blvd. The pipe size and material are unknown. The cost estimate for this project area assumes new storm sewer installation in the entire project area.

63rd Avenue Improvements



The 63rd Avenue project area extends from the west City Limits to Brooklyn Boulevard. The project area contains a total of 5,709 linear feet of local streets. The neighborhood consists of approximately 55 residential properties (R1 to R4) and 1 commercial zoned property (C2).

Streets
This segment of roadway is designated a Municipal State Aid Route. 63rd Avenue was originally constructed in 1965. The existing street is 43 feet wide with concrete curb and gutter. Proposed street improvements consist of the replacement of curb and gutter to improve drainage, full depth replacement of bituminous street pavement and complete sidewalk replacement.

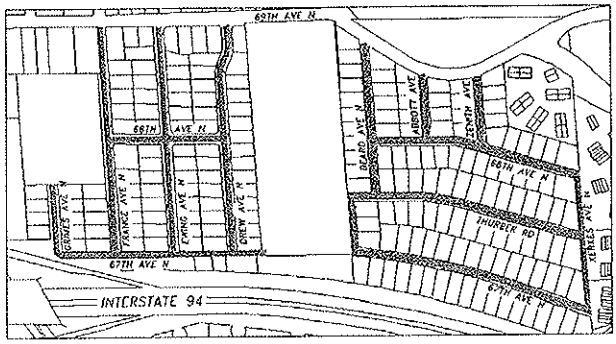
Water main
The existing water main in the 63rd Avenue project area consists of 6-inch and 10-inch diameter cast iron pipe (CIP) installed between 1956 and 1958. A condition survey must be conducted for the existing water system in the project area to determine the extent of corrosion. Water records indicate three main breaks have occurred within the project corridor. The water main is in fair condition based on current maintenance records. The current project cost estimate includes replacement of approximately 20 percent water main and miscellaneous hydrants as necessary in the project area.

Sanitary Sewer
The existing sanitary sewer consists of 8-inch diameter vitrified clay pipe lateral sewers. These sewers were originally installed between 1956 and 1960. Approximately 35 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair. The current project cost estimate includes cast-in-place pipe (CIPP) in 35 percent of the sanitary sewer.

Storm Sewer
63rd Avenue contains two storm drainage systems. The first drainage system consists of 12-inch and 15-inch diameter reinforced concrete pipe. This system flows to Orchard Avenue and then to the storm drainage pond in Cahlander Park. The second storm system ranges from 18-inch to 36-inch reinforced concrete pipe. This system drains to Brooklyn Boulevard and then to Shingle Creek. The current project cost estimate includes replacing a majority of catch basin structures, castings and various pipe laterals.

Freeway Park Neighborhood Improvements

The Freeway Park Neighborhood project area extends from Grimes Ave to Xerxes Ave and from 69th Ave to Interstate 94. The project area includes a total of approximately 12,869 feet of local streets. The neighborhood consists of approximately 216 residential properties.



Streets

The majority of the streets in the project area were originally constructed between 1967 and 1968. Existing streets are generally 30 feet wide with no curb and gutter. Poor surface drainage and low stability subgrade material has resulted in deteriorated pavement throughout the neighborhood. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

Existing water main in the Freeway Park Neighborhood consists of 6-inch diameter cast iron pipe installed between 1956 and 1960. Existing water main along France Ave. consists of 16-inch cast iron pipe installed in 1956. This water main is trunk feeder from Water Tower No. 1 on the corner of 69th Avenue. and France Avenue. Higher corrosion rates have been noted within a majority of the project area. Water records indicate thirteen main breaks have occurred within the area. The current cost estimate assumes 100 percent of the water main in the project area will be replaced.

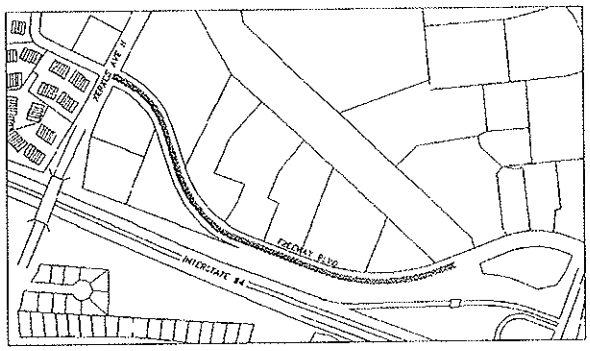
Sanitary Sewer

Existing sanitary sewer within the neighborhood consists of 8-inch diameter vitrified clay pipe originally installed between 1956 and 1961. A sanitary sewer trunk line consisting of 21-inch diameter corrugated metal pipe runs along Ewing Avenue, 68th Avenue. and Drew Avenue. A cured-in-place liner was installed along the 21-inch diameter trunk sanitary sewer as part of project 1995-11. This portion of the sanitary sewer collection system is not proposed to be replaced with the project. Approximately 50 percent of the remaining sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. At least 50 percent of the sewer system is in poor condition. Replacement of the 8-inch diameter sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer

The Freeway Park improvement area consists of five small diameter storm sewer lines draining to 69th Avenue and Interstate 94. The existing storm sewer ranges in size from 12-inch to 21-inch diameter reinforced concrete pipe. The current cost estimate assumes replacement of the storm sewer in the improvement area to increase conveyance capacity and minimize local flooding during larger storm events.

Freeway Boulevard West Improvements



The Freeway Blvd West project area extends from Xerxes Avenue. to the Shingle Creek Bridge. The project area contains a total of 2,826 linear feet of local streets. The neighborhood consists of approximately 9 commercial/industrial properties.

Streets

This segment of roadway is designated as a Municipal State Aid Route. Freeway Blvd was originally constructed in 1974. The existing street is generally 45 feet wide with concrete curb and gutter. The street pavement exhibits a moderate rate of deteriorated due to higher volumes of traffic. The current cost estimate assumes street improvements that consist of approximately 15 percent curb replacement, 10 percent sidewalk replacement, 25 percent concrete apron replacement and a 2 ½ -inch mill and overlay of the bituminous pavement.

Water main

The existing water main in the Freeway Blvd West project area consists of 12-inch diameter cast iron pipe installed in 1974. The water main is in good condition based on current maintenance records. The current project cost estimate includes no water main replacement.

Sanitary Sewer

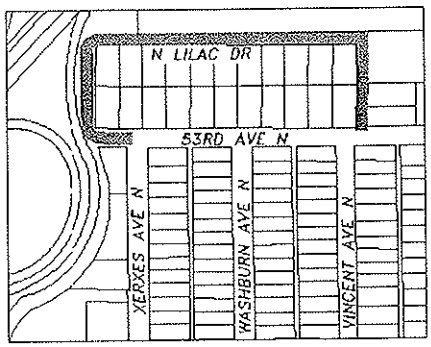
The existing sanitary sewer along the west half of the project area consists of 15-inch diameter reinforced concrete pipe installed in 1996. The existing sanitary sewer on the east half of the project area consists of 8-inch diameter vitrified clay pipe installed in 1974. The condition of the sanitary sewer system within the neighborhood is rated as good. The current project cost estimate includes no sanitary sewer replacement.

Storm Sewer

The storm sewer on Freeway Blvd consists of 12-inch to 30-inch diameter reinforced concrete pipe that drains to Shingle Creek. This storm sewer was installed in 1974. The current project cost estimate includes replacing structure castings and isolated pipe laterals as necessary within the project area.

Vincent Neighborhood Improvements

The Vincent Neighborhood project area extends from the Centerbrook Golf Course to 53rd Avenue and from Highway 100 to Vincent Avenue. The total project length is 1,616 feet. The neighborhood consists of approximately 15 residential properties.



Streets

The majority of the streets in the project area were originally constructed in 1956. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main in the project area consists of 6-inch diameter cast iron pipe installed in 1973 and 12-inch and 16-inch diameter steel water main installed in 1965. A majority of the existing water main is believed to have a cement based internal liner. Water records indicate one main break has occurred within the neighborhood. The current project estimate includes replacement of the 6-inch diameter cast iron water main within the project area.

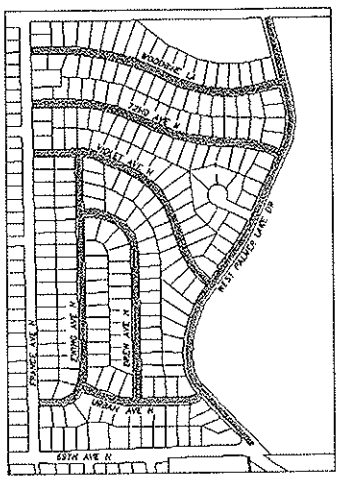
Sanitary Sewer

The sanitary sewer in the project area consists of 9-inch diameter vitrified clay pipe (VCP) installed in 1954. The sanitary sewer in the project area extends along back property lines north of 53rd Avenue then runs south along Vincent Avenue. The entire sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. The current project estimate includes replacement of the sanitary sewer along Vincent Avenue and cured-in-place rehabilitation of the sanitary sewer along the rear yards.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system south of 53rd Avenue. The current project cost estimate assumes installation of new storm sewer in the neighborhood due to the need to increased capacity of local storm sewers and address minor local flooding issues.

Palmer Lake West Improvements



The Palmer Lake West Neighborhood project area extends from the north City limits to 69th Ave. and from France Ave. to West Palmer Lake Dr. The total project length is 11,621 feet. The neighborhood consists of approximately 198 residential properties.

Streets

The majority of the streets in the project area were originally constructed in 1956 and 1957. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main is 6-inch diameter cast iron pipe installed in 1956 and 1957. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. However, the project area has a history of water main breaks along West Palmer Lake Dr., Ewing Ave. and Woodbine Lane. Water records indicate seven main breaks have occurred within the area. The current project estimate includes complete water main replacement.

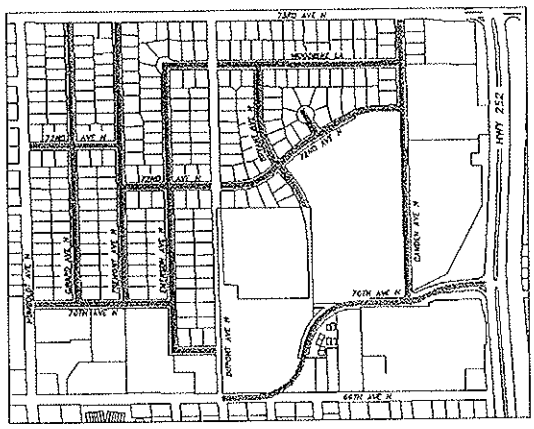
Sanitary Sewer

The sanitary sewer in the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1956 and 1957. Lift Station No. 3 is located in the project area on West Palmer Lake Drive. The lift station was reconstructed in 1982, the force main was replaced in 1992, and the control cabinet was replaced in 2003. Approximately 75 percent of the sanitary sewer in the project area is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer

An expansion of the storm drainage system within the project area is necessary to reduce local flooding and preserve street pavement. A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to a regional storm water management pond adjacent to Palmer Lake. A trunk storm sewer line extends along back property lines north of Urban Ave. This line consists of 54-inch diameter reinforced concrete pipe installed in 1956. Expansion of the existing storm sewer system and higher capacity will be needed to minimize local flooding. The current project cost estimate assumes reconstruction of the existing storm sewer system within the street right-of-way, but does not include the replacement of the 54-inch diameter trunk storm sewer within the rear yards.

Evergreen Park Neighborhood Improvements



The Evergreen Park Neighborhood project area extends from Humboldt Ave. to State Highway 252 and from 69th Ave. to 73rd Ave. Dupont Ave. is not included in the project area. The total project length is 16,996 feet. The neighborhood consists of approximately 214 residential properties (R1 to R5).

Streets

70th Avenue is designated as a Municipal State Aid Route. The majority of the streets in the project area were originally constructed between 1963 and 1966. Existing streets are generally 30 feet wide with no curb and gutter. 70th Ave. from Dupont to Hwy 252 has concrete curb and gutter and ranges in size from 30 to 65 feet wide. 70th Ave. was constructed in 1982. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The Evergreen project area contains a complex water main system. This area contains five municipal wells and one water tower. The existing water main ranges in size from 6-inch diameter cast iron pipe to 30-inch ductile iron pipe. The main line water main in the residential areas generally consists of 6-inch cast iron pipe installed between 1961 and 1965. A majority of the existing water main is believed to have a cement based internal liner. There is a history of water main breaks along 72nd Ave., Woodbine Lane and Camden Ave. Water records indicate twenty main breaks have occurred within the neighborhood. The project design process must include a detailed hydraulics study using the City's water distribution computer model to determine any warranted modifications to water main sizes and configuration. The current project estimate assumes replacement of the older cast iron water main.

Sanitary Sewer

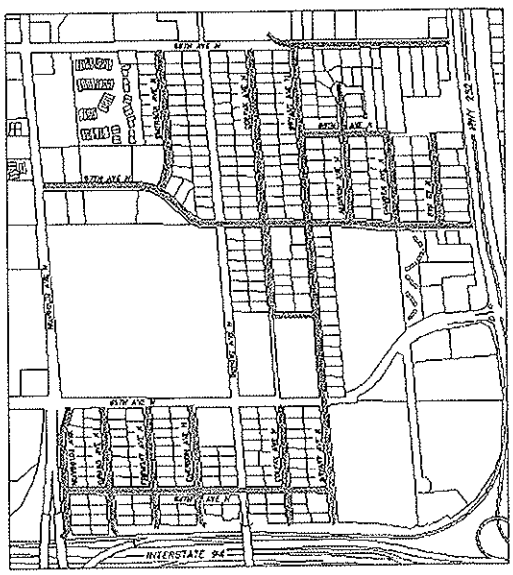
The sanitary sewer in the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1961 and 15-inch reinforced concrete pipe installed in 1960. The south portion of the project area contains 8-inch diameter VCP installed in the 1958 and 1960. Approximately 25 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair. The current cost estimate includes 50 percent replacement of the sanitary sewer.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the Mississippi River. Emerson Ave., Bryant Ave. and Camden Ave. have storm drainage systems that flow to 70th Ave. and then to the Mississippi River. The trunk line on 70th Ave. consists of pipe ranging in size from 42-inch to 66-inch reinforced concrete pipe installed in 1960. The current project cost estimate assumes complete reconstruction of the existing storm system in the project area. The condition of the trunk storm sewer pipe along 70th Avenue must be evaluated to determine the remaining service life. The project estimate includes construction of a stormwater pond located to the north of 70th Avenue and east of Camden Avenue to treat regional storm water runoff prior to discharging to the Mississippi River.

Firehouse Park Neighborhood Improvements

The Firehouse Park Neighborhood project area extends from 69th Avenue to Interstate 94 and from Humboldt Avenue to Highway 252. Dupont Avenue and 65th Avenue are not included in the project area. The total project length is 21,456 feet. The neighborhood consists of approximately 305 single family residential properties (R1) and 14 multi-family properties (R4 and R5).



Streets

67th Avenue is designated as a Municipal State Aid Route. The majority of the streets in the project area were originally constructed between 1964 and 1967. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main in the project area is 6-inch and 8-inch diameter cast iron pipe installed between 1961 and 1969. In 1974, a 16-inch diameter ductile iron water main was installed along 64th Ave. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. The current project estimate includes replacement of approximately 50 percent of the water main within the project area. The estimated water main costs will need to be refined by conducting further field inspections.

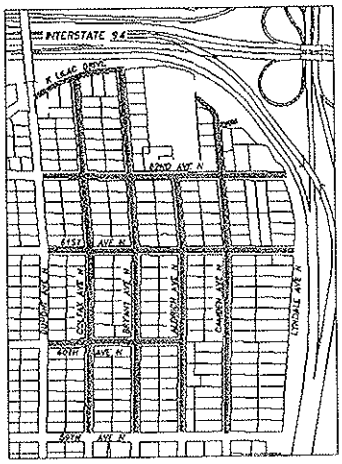
Sanitary Sewer

The sanitary sewer in the north portion of the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed between 1961 and 1968 and between 1971 and1974. Approximately 25 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair. The current project estimate includes replacement of approximately 50 percent of sanitary sewer pipes and access structures.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the trunk storm sewer line on 65th Avenue, and then to the Mississippi River. Runoff from the portion of the project area north of 68th Avenue is conveyed to the trunk storm sewer line on 69th Avenue. The current project cost assumes reconstruction and expansion of the residential storm sewer system, but does not include replacement of the trunk storm sewer along 65th and 69th Avenues.

Interstate Neighborhood Improvements



The Interstate Neighborhood project area extends from Interstate 94 to 59th Avenue and from Dupont Avenue to Lyndale Avenue. The total project length is 14,821 feet. The neighborhood consists of approximately 214 residential properties (R1).

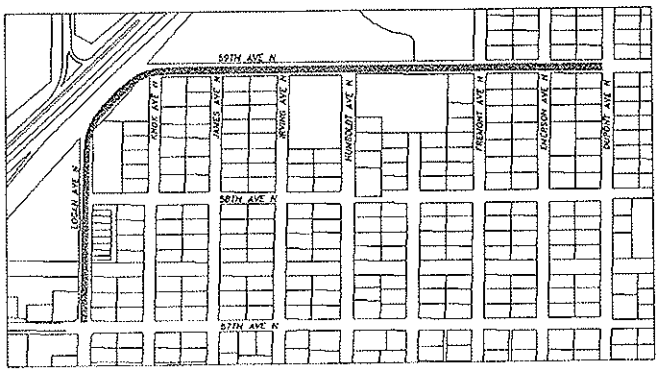
Streets
The majority of the streets in the project area were originally constructed in 1968 and 1969. Existing streets are generally 30 feet wide with concrete curb and gutter. The street pavement is showing signs of distress throughout most of the neighborhood. Proposed street improvements consist of the replacement of curb and gutter as necessary and placement of bituminous street pavement.

Water main
The existing water main in the project area consists of 6-inch and 8-inch diameter cast iron pipe installed in 1969. Colfax Avenue contains a 24-inch steel water main installed in 1964. A majority of the existing water main is believed to have a cement based internal liner. There is no history of water main breaks in the project area. In 2019, the water main system will be in service for 50 to 55 years. Cast iron water main is highly vulnerable to leaks and breaks when disturbed by replacement of adjacent sanitary sewer. The current project estimate assumes complete replacement of the water main to facilitate the sanitary sewer replacement noted below.

Sanitary Sewer
The sanitary sewer in the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1960. Approximately 90 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer
A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the storm trunk line on 59th Avenue and then to the Mississippi River. Replacement of the trunk storm sewer along 59th Avenue and an in-line water quality treatment device is proposed as part of the Aldrich Neighborhood Street and Utility Improvement project. The current project cost estimate assumes complete reconstruction of the storm drainage system within the neighborhood due to the need to increased capacity of local storm sewers and the expansion of the system to address minor local flooding issues.

Logan, 59th and Lilac Drive Improvements



This project area includes Logan Avenue from 57th Avenue to Lilac Drive N, 59th from Lilac Drive N to Dupont Avenue and Lilac Dr. N from Logan Avenue to 59th Avenue. The total project length is 3,761 feet. The neighborhood consists of approximately 19 residential properties (R1 to R5) and 5 commercial zoned properties (C1 and C2).

Streets

The entire project area is designated as a Municipal State Aid Route. The majority of the streets in the project area were originally constructed in 1966. The existing roads are 30 to 35 feet wide. Logan Avenue and Lilac Dr. N have concrete curb and gutter, and 59th Avenue has no curb. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main along Logan and Lilac Dr. is 10-inch diameter cast iron pipe installed in 1965 and 16-inch diameter cast iron main along 59th Avenue installed in 1969. A majority of the existing water main is believed to have a cement based internal liner. The corrosion rate within the project area has not been thoroughly documented at this time. Utility records indicate that there has been one water main break along Logan Avenue. However, the Public Utilities Division will need to excavate and inspect various fittings to determine the extent of water main replacement that is warranted. The current project estimate includes replacement of water main along Logan Avenue and Lilac Drive only.

Sanitary Sewer

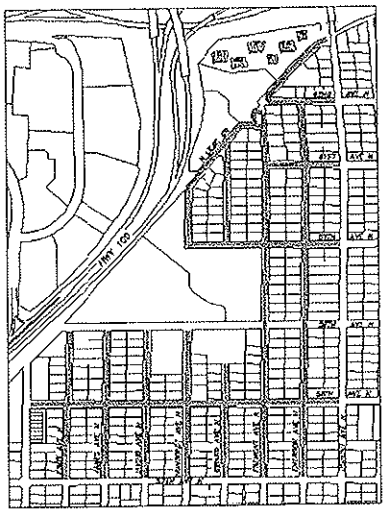
The only sanitary sewer in the project area runs along Logan Avenue. This sanitary sewer was lined with cured-in-place pipe (CIPP) in 2005. Manhole casting replacement is the only proposed sanitary sewer improvement for the project.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing trunk line along 59th Avenue. This line consists of 24" to 36" corrugated metal pipe. A second storm lines runs south along Logan Avenue to 57th Avenue. This line consists of 21" to 42" RCP installed in 1988. The current project cost estimate assumes replacement of the corrugated metal pipe alone 59th Avenue as part of the scheduled neighborhood improvements.

Grandview Park Neighborhood Improvements

The Grandview Park Neighborhood project area extends Interstate 694 to 57th Avenue and from Logan Avenue to Dupont Avenue. The total project length is 28,821 feet. The neighborhood consists of approximately 345 residential properties (R1) and 4 multi-family properties (R6).



Streets

The majority of the streets in the project area were originally constructed between 1964 and 1969. Existing streets are generally 30 feet wide with no curb and gutter. The street pavement is deteriorated throughout most of the neighborhood. The overall pavement condition rating is fair to poor. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main in the north portion of the project area is 6-inch and 8-inch diameter cast iron pipe installed between 1964 and 1969. A 16-inch steel water main runs along Emerson Avenue from 57th to 59th. A majority of the existing water main is believed to have a cement based internal liner. Water records indicate two main breaks have occurred within the neighborhood. The current project estimate includes replacement of approximately 50 to 75 percent of the water main within the project area. The 16-inch steel water main along Emerson Avenue potently could be replaced with C900 plastic water main

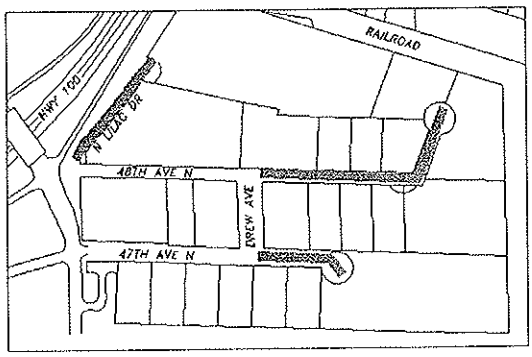
Sanitary Sewer

The sanitary sewer in the north portion of the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1960 and 1963. Approximately 50 percent of the sanitary sewer is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair to poor. The current project estimate includes replacement of approximately 50 to 75 percent of the sanitary sewer system within the project area.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to the trunk storm sewer line on 59th Avenue and then to the Mississippi River. A portion of the existing storm sewer system within the project area could be salvaged, although it is anticipated that expansion of the system and additional conveyance capacity will be needed to minimize local flooding. The current project cost estimate includes replacement of 75 percent of the local drainage system within the neighborhood.

Ryan Lake Industrial Park Improvements



The Ryan Lake project area includes Lilac Drive N from 48th Avenue to the dead end, 48th Avenue and Dusharm Drive from Drew Avenue to the dead end and 47th Avenue from Drew Avenue to the dead end. The total project length is 1,932 feet. The neighborhood consists of approximately 12 industrial properties and 3 multi-family properties (R5).

Streets

The majority of the streets in the project area were originally constructed in 1958 and 1960. The western portion of 47th Avenue and Drew Avenue were reconstructed in 2002. The western portion of 48th Avenue was reconstructed in 2005. The remaining street sections are 25 to 40 feet wide with no curb and gutter. The street pavement is deteriorated and in poor condition. Proposed street improvements consist of the reconstruction of the street subgrade, installation of curb and gutter to improve drainage and placement of bituminous street pavement.

Water main

The existing water main on Lilac Drive N and 48th Avenue consists of 10-inch diameter cast iron pipe installed in 1958. The water main on 47th Avenue consists of 6-inch cast iron pipe installed in 1960. The current project estimate assumes complete replacement of the water main in the project area. The cost estimate also includes the cost of jacking new water main under the railroad tracks from Dusharm Drive to 49th Avenue.

Sanitary Sewer

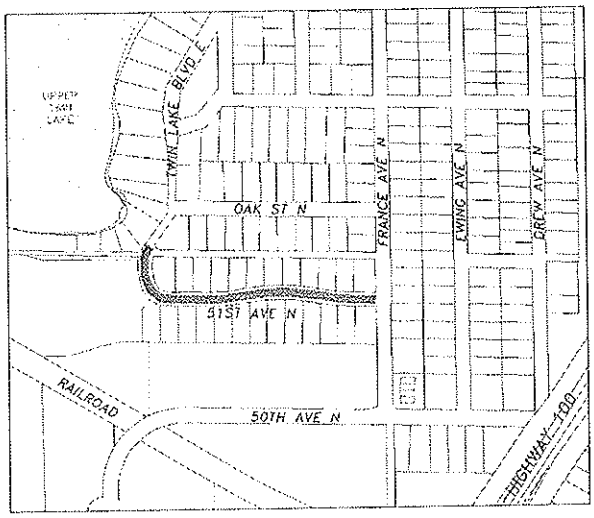
The sanitary sewer in the project area consists of 8-inch diameter vitrified clay pipe (VCP) installed in 1960. The sanitary sewer along 47th Avenue and 48th Avenue is subjected to frequent problems with root intrusion. Root sawing must be performed on an annual basis to maintain the system conveyance capacity. The condition of the sanitary sewer system within the neighborhood is rated as fair to poor. Complete replacement of all sanitary sewer pipes and access structures are proposed as part of the project.

Storm Sewer

A majority of the storm water runoff from the project area is collected in the existing storm sewer system and conveyed to Ryan Lake. Runoff from Lilac Drive is conveyed to storm drainage ditches along Highway 100. The current project cost estimate assumes reconstruction of all of the existing storm sewer system. The cost estimate also includes installation of a small storm water management pond at the intersection of 48th Avenue and Dusharm Drive within City owned property adjacent to Ryan Lake.

51st Avenue North Improvements

The 51st Avenue project area extends from 185 feet south of Oak Street on Twin Lake Blvd E to France Avenue. The total project length is 1,171 feet. The neighborhood consists of approximately 25 residential properties.



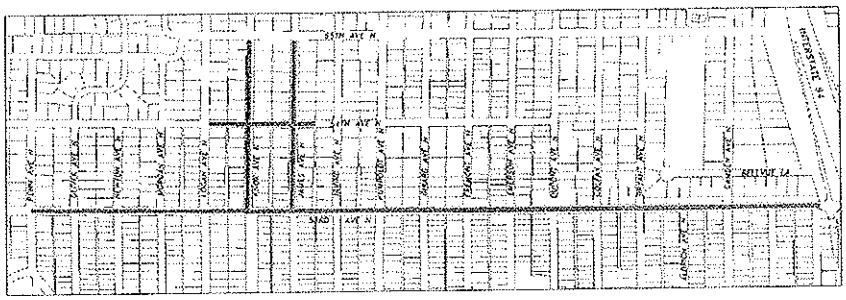
Streets
The 51st Avenue project area was originally constructed in 1990. The existing street is 30 feet wide with concrete curb and gutter. After the year 2023 the pavement will have exceeded the expected service cycle. Proposed street improvements consist of reconstruction of the bituminous street pavement and replacement of the concrete curb and gutter as necessary.

Water Main
The existing water main in the 51st Avenue project area consists of 8-inch diameter ductile iron pipe installed in 1990. The water main is in good condition based on current maintenance records. Water main repairs should be limited to the replacement of miscellaneous valve and hydrants based on current conditions.

Sanitary Sewer
The sanitary sewer in the 51st Avenue project area consists of 8-inch diameter poly vinyl chloride (PVC) pipe installed in 1990. The condition of the sanitary sewer system within the neighborhood is rated as good. The current project estimate includes the replacement on sanitary sewer castings only.

Storm Sewer
The storm sewer runoff from the 51st Avenue project area is collected in the existing storm sewer system and conveyed to the storm water pond west of 51st Avenue. The existing storm sewer in the project area consists of 15-inch to 21-inch diameter reinforced concrete pipe installed in 1990. The current project cost estimate includes replacing the storm sewer structure castings and isolated portions of lateral storm sewer as necessary.

53rd Avenue Neighborhood Improvements



The 53rd Avenue project area extends on 53rd Avenue from Penn Avenue to 4th Street N. The project area also includes James and Knox between 55th Avenue and 53rd Avenue, and 54th Avenue between Logan Avenue and Irving Avenue. The project area includes a total of 9,426 feet of local streets. The neighborhood consists of approximately 100 residential properties.

Streets

53rd Avenue is designated as a Municipal State Aid Route. 53rd Avenue is also the border between Brooklyn Center and Minneapolis. The north portion of 53rd Avenue is maintained by Brooklyn Center and the south portion is maintained by Minneapolis. The existing streets in the project area are 30 to 32 feet wide with concrete curb and gutter. 53rd Avenue was constructed in 1985, and Knox, James and 54th Avenues were constructed in 1994. Proposed street improvements consist of the reconstruction of the street subgrade, installation new of curb and gutter to improve drainage and placement of bituminous street pavement on 53rd Avenue. Proposed improvements for the remaining areas consist of new street pavement and replacement of isolated sections of concrete curb and gutter as necessary.

Water Main

The existing watermain on 53rd Avenue is 6-inch diameter cast iron pipe (CIP) installed between 1965 and 1969. The existing watermain in the remainder of the project area is 6-inch diameter ductile iron pipe (DIP) installed in 1994. The corrosion rate within the project area has not been thoroughly documented at this time. The current project estimate includes complete water main replacement on 53rd Avenue. No water main replacement is anticipated in the remaining project area. The project cost estimate also includes an emergency connection with Minneapolis if formal inter-communication arrangements can be established for this connection. Brooklyn Center staff will need to contact the Minneapolis Water Utility to discuss this potential emergency connection.

Sanitary Sewer

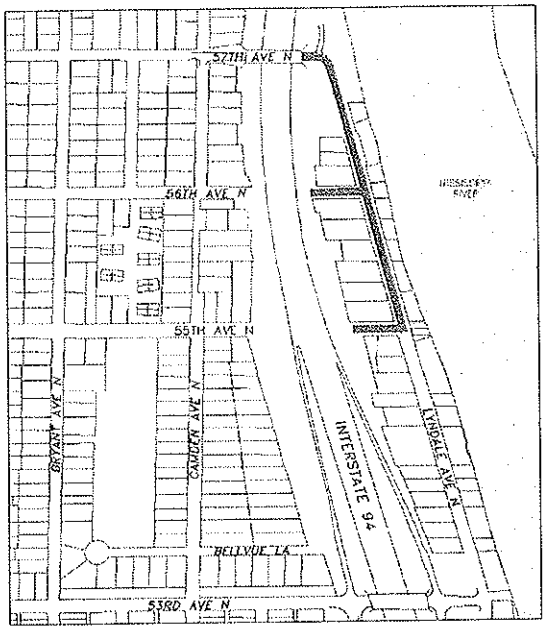
The sanitary sewer on 53rd Avenue consists of 8-inch and 9-inch diameter vitrified clay pipe (VCP) installed between 1952 and 1959. The sanitary sewer in the remainder of the project area consists of 10-inch diameter poly vinyl chloride (PVC) installed in 1994. The condition of the sanitary sewer system within the neighborhood is rated as fair. The current project cost estimate includes sanitary sewer replacement on 53rd Avenue. The remainder of the project area includes the replacement on sanitary sewer castings only.

Storm Sewer

The majority of the storm sewer runoff in the project area drains to the trunk storm sewer line on 55th Avenue and is conveyed to the Mississippi River. The storm sewer on 53rd consists of 12-inch diameter to 15-inch diameter reinforce concrete pipe installed between 1952 and 1979. The storm sewer on the remainder of the project consists of 12-inch diameter to 18-inch diameter reinforced concrete pipe installed in 1994. The current project cost estimate includes replacement of 50 percent of the storm sewer laterals and structure on 53rd Avenue. Replacement of storm sewer castings is anticipated in the remainder of the project area.

Lyndale Avenue Neighborhood Improvements

The Lyndale Avenue project area extents from 57th Avenue to 55th Avenue and includes the 56th Avenue and 55th Avenue cul-de-sacs. The current project length is 1,905 feet. The neighborhood consists of 11 residential properties (R2 and R4).



Streets

The streets in the project area were constructed in 1985. The existing streets area 30 feet wide with concrete curb and gutter. Proposed improvements include 20 percent curb replacement and installation of new street pavement.

Water Main

The existing water main in the project area consists of 6-inch diameter ductile iron pipe (DIP) installed in 1978 and 1985. The water main is in good condition based on current maintenance records. The current project cost estimate includes replacement of miscellaneous valves and hydrants as necessary.

Sanitary Sewer

The existing sanitary sewer consists of 24-inch diameter reinforced concrete pipe installed in 1959. This sanitary sewer line is the main trunk line that carries the sanitary flow from the eastern third of Brooklyn Center to a lift station on Lyndale Avenue south of 55th Avenue. The condition of the sanitary sewer in the neighborhood is rated fair. The current project cost estimate includes replacement of sanitary services and replacement of sanitary sewer castings. Cured-in-place lining of the trunk sanitary sewer may be necessary based on future televising inspections.

Storm Sewer

A substantial portion of the southeast section of the city drains through the trunk storm sewer located along 55th Avenue. The existing trunk storm sewer line consists of 36-inch diameter reinforced concrete pipe installed in 1952. The remainder of the project area consists of 12-inch diameter to 18-inch diameter reinforced pipe installed in 1955 and 1985. The current project cost estimate includes replacing the storm sewer structure castings and isolated portions of lateral storm sewer as necessary.

Miscellaneous Water Main and Sanitary Sewer Improvements

Emergency Bypass for Lift Station No. 6
Lift Station No. 6, located at 3900 Lakebreeze Avenue, receives wastewater flow from a service area of approximately 130 acres within the southwest portion of the city. Wastewater is then pumped into a force main that conveys the flow north from the lift station under the Canadian Pacific Railroad tracks to a Metropolitan Council Environmental Services (MCES) interceptor extending along 50th Avenue North.

Prior to the Trunk Highway 100 improvements at the France Avenue interchange, the city had a casing under the railroad tracks for the purposes of installing an emergency by-pass line from the lift station to the MCES interceptor along 50th Avenue. During the TH 100 project, this casing was removed as part of the grade adjustments completed along the railroad tracks. Installation of a temporary by-pass line from the lift station to the interceptor would be very difficult and time consuming now that a casing under the railroad tracks is not available. In the event of a force main break, wastewater would be discharged into the MnDOT right-of-way and eventually into downstream surface waters until an emergency bypass could be installed.

The proposed project consists of installing a new 10-inch diameter casing under the railroad tracks by horizontal directional drilling methods. Access structures would also be placed at both the north end and south end of the casing to allow access for installation of a temporary bypass hose.

Centerbrook Golf Course Water Main Improvements
Proposed construction includes replacement of the existing 16-inch diameter steel watermain through the Centerbrook Golf Course from Russell Avenue to the Shingle Creek pedestrian bridge. Replacement of an existing 16-inch valve near Water Tower No. 3 is also included in the project. A section of this water main was excavated in 2005 to repair a leak. Further inspection revealed that the timber pilings were partially deteriorated and isolated sections of the exterior coating on the steel water main were beginning to fail.

Water Tower No. 1 Painting
The 500,000 gallon elevated storage tank located at 69th Avenue and France Avenue was last painted in 1999 with complete interior reconditioning and exterior spot repairs. The estimated service life for the paint coating is 15 years. The proposed paint coating improvements consist of interior spot repair and exterior coating replacement.

Water Tower No. 2 Painting
The one-million gallon elevated storage tank located at 69th Avenue and Dupont Avenue was last painted in 1997 when spot repairs were completed for the interior coating and the exterior of the structure was painted. The estimated service life for the paint coating is 15 years. The proposed paint coating improvements consist of complete replacement of the interior and exterior paint coatings.

Water Tower No. 3 Painting
The 1.5 million gallon elevated storage tank located within the Centerbrook Golf Course was last painted in 1998 with completed interior reconditioning and exterior spot repairs. Exterior spot repairs were also completed on the fluted column in 2005 as part of an exterior pressure washing project. The proposed paint coating improvements consist of interior spot repair and exterior coating replacement.

Storm Water Improvements

Wetland 639W

The *Twin and Ryan Lakes Nutrient TMDL Report* and the *2003 Twin Lakes Management Plan* identify DNR Wetland 639W as a significant source of phosphorus to the Twin Lakes/Ryan Lake system. These reports indicate that Wetland 639W contains high levels of phosphorous within the sediments that have accumulated from the upstream watershed. Water quality sampling conducted in 2003 indicated that the average total phosphorous concentrations double between the inlet and outlet of the wetland. Wetland 639W contributes an estimated 730 pounds of total phosphorous per year into Upper Twin Lake and nearly half of this is in readily available dissolved form. This load represents one of the largest sources of the total phosphorus to Upper Twin Lake.

The purpose of this project is to substantially reduce the amount of phosphorous release from Wetland 639W by modifying the hydraulic characteristics and/or implementing active treatment methods. This large wetland complex is located adjacent to the Crystal Airport. Three alternatives for achieving this have been proposed in past studies: 1.) partial diversion of flow around the wetland; 2.) dechannelization and increased storage within the wetland; and 3.) an alum ferric chloride treatment system. The initial project development phase would include a feasibility study to determine the most appropriate and cost effective option for achieving a reduction in phosphorous loads release from the wetland.

This project would be implemented through a cooperative arrangement between the Shingle Creek Watershed Management Commission and the Cities of Brooklyn Center, Brooklyn Park, Crystal and New Hope. The estimated project cost included in the Capital Improvement Program consists of the estimated portion of the total project cost for Brooklyn Center.

Storm Water Management Basins

In 2005, the City of Brooklyn Center hired the consulting firm of Bonestroo Rosene Anderlik & Associates to conduct a condition assessment of 30 storm water management ponds located throughout the City. The assessment process resulted in a list of improvements to address problems with shoreline erosion, sediment accumulation, inlet and outlet blockages and other miscellaneous maintenance issues. Below is a description of the projects that were not considered routine annual maintenance work normally addressed as part of the annual operating budget for the Storm Drainage Utility.

Storm Water Pond 12-002

Pond 12-002 is located within the west central portion of the golf course. The basin receives runoff from approximately 400 acres within the southwest portion of the City. Pond deficiencies noted during the inspection include, shoreline erosion along the eastern portion of the pond; an erosion channel that has cut through the berm separating pond 12-002 from pond 12-003; and a large volume of accumulated sediments within the pond. Proposed improvements consist of repairing erosion areas and removal of a portion of the accumulated sediment.

Storm Water Pond 12-003
Pond 12-002 is located within the west central portion of the golf course and includes a concrete headwall structure connecting Ponds 12-002, 12-003 and 12-004. The basin receives runoff from approximately 400 acres within the southwest portion of the City, the same drainage area as 12-002. Pond deficiencies noted during the inspection include shoreline erosion along the north and east sides of the pond. The concrete headwall structure is filling with sediment with an average of one foot of sediment in the trench and three feet of sediment near the weir outlet. Proposed improvements consist of repairing erosion areas, removal of sediment from the headwall trench and near the outlets of the headwall structure.

Storm Water Pond 12-004
Pond 12-004 is located within the northern portion of the golf course. The basin receives runoff from the Brookdale Shopping Center. The pond has lost approximately 20 percent of the wet volume due to sediment accumulation over the first 8 years of operation. By the year 2016, the pond is expected to loose approximately 45 percent of the wet volume due to sediment accumulation. Proposed work consists of the removal of accumulated sediments to restore the water quality treatment function of the storm water pond.

Storm Water Pond 12-005
Pond 12-005 receives runoff from the upstream ponds 12-002 and 12-004. The condition survey revealed that an excessive volume of sediment has accumulated in the pond and has decreased the wet storage volume necessary to provide water quality treatment. The proposed work consists of removing the accumulated sediment.

Storm Water Pond 18-001
Pond 18-001 is located northwest of Northport Park. The pond receives runoff from approximately 120 acres of upstream drainage area. This basin has filled with an extensive amount of sediment over the past 40 to 50 years. A majority of this basin is likely classified as jurisdictional wetland under the Wetland Conservation Act. However, the basin has lost many of the wetland values due to the accumulation of sediment. The proposed project consists of excavating sediment from the basin to restore the flow capacity through the wetland and restore a wet pool volume with an average depth of 2 to 3 feet in the central part of the wetland. Fringe areas would be restored with native wetland species.

Storm Water Pond 46-001
Pond 46-001 is located within the northern portion of Orchard Lane Park. The pond receives runoff from approximately 60 acres of residential development located west of Orchard Lane Park and approximately 50 acres located north of Interstate 94/694. The pond is was originally design as a detention basin without wet volume to provide additional water quality benefit. The proposed improvements consist of excavating wet storage volume below the invert of the outlet pipe to increase the water quality treatment performance of the basin.

Storm Water Pond 50-001
Pond 50-001 is located within Cahlander Park. The pond receives runoff from approximately 230 acres of upstream residential development. Due to the large watershed to pond area ratio, this pond is subject to higher rates of sediment accumulation and potential erosion issues. Traces of hydrocarbon pollutants were noted in the sediment during the most recent site inspection. The proposed project consists of dredging and properly disposing of sediment from the pond and repairs to various shoreline erosion issues.

Park and Trail Improvements

Shingle Creek Trail Improvements
Proposed construction includes replacement of the trail system along Shingle Creek from the south City Hall parking lot to County Road 10. Parallel biking and walking trails would be removed and replaced with a single ten foot wide trail section.

Arboretum Park South Parking Lot Reconstruction
Proposed construction includes replacement of the bituminous pavement within the south parking lot of Arboretum Park.

West Central Park Trail Improvements
Proposed construction includes replacing the bituminous trail system within Central Park west of Shingle Creek. The project cost estimate includes relocation of a portion of the bituminous trail along Shingle Creek away from the creek edge to prevent flooding and sinking of the new trail. An eight foot wide trail section is proposed.

Northport Tennis Court Resurfacing
Proposed construction includes the resurfacing and rehabilitation of the tennis courts located within Northport Park. Maintenance of this facility has become an increased priority due to the elimination of tennis courts within Kylawn Park in 2007.

West Palmer Park Tennis Court Resurfacing
Proposed construction includes the resurfacing and rehabilitation of the tennis courts located within West Palmer Park. Maintenance of this facility has become an increased priority due to the elimination of tennis courts within Kylawn Park in 2007.

Riverdale Park Open Picnic Shelter
Proposed construction activities include the replacement of the existing shelter building with a small picnic shelter and installation of one security light. The picnic shelter structure would be similar in design to the open picnic shelters located within Firehouse Park and Happy Hollow Park.

Willow Lane Park Open Picnic Shelter
The former Willow Lane Park building was lost to a fire in 2004. Proposed construction activities include the installation of a small picnic shelter and installation of one security light. The picnic shelter structure would be similar in design to the open picnic shelters located within Firehouse Park and Happy Hollow Park.

Firehouse Park Trail Improvements
Proposed construction includes replacement of the entire bituminous trail system within Firehouse Park. Extension of the north trail section to the north baseball diamond is also proposed. An eight foot wide trail section is proposed.

Kylawn Park Trail Improvements
Proposed construction includes replacement of the bituminous trail system along the north part of Kylawn Park and through the playground area. An eight foot trail is proposed. The south portion of the trail system, installed in 1998, is not scheduled to be replaced.

West Palmer Park Improvements
Proposed construction activities include the replacement of the existing park building and replacement of four park lights. The new structure is scheduled to include picnic facilities, one unisex restroom and a small utility area. The new shelter will be consistent with the park building constructed in Kylawn Park in 2007/2008.

Evergreen Park Fence and Tennis Court Reconstruction
Proposed construction includes replacement of the soccer field fence and gate, replacement of the baseball and softball outfield fences and resurfacing the tennis courts within Evergreen Park.

Evergreen Athletic Field Lighting Replacement
Proposed construction includes replacement of the elevated outdoor lighting system for the athletic fields located within Evergreen Park. This project includes replacement of the existing lighting system. The project does not include substantial expansion of the current lighting system.

Northport Park Building
Proposed construction activities include the replacement of the existing shelter building. The new structure is scheduled to include picnic facilities, one unisex restroom and a small utility area. The new shelter will be consistent with the park building constructed in Kylawn Park in 2007/2008.

Baseball Backstop Replacements
Proposed construction includes replacement of the baseball backstop fences at Central Park, Freeway Park and Willow Lane Park.

Central Park Tennis Court Resurfacing
Proposed construction includes the removal of two existing tennis courts and resurfacing of the two remaining two tennis courts within Central Park.

Willow Lane Park Trail Improvements
Proposed construction includes replacement of the trail system within Willow Lane Park. An eight foot wide trail section is proposed.

Baseball Fence Replacement
Proposed construction includes replacement of the line fences at Central Park and East Palmer Lake Park and the replacement of the line and outfield fences at Northport Park.

Freeway Park Trail Improvements
Proposed construction includes replacement of the trail system within Freeway Park. An eight foot wide trail section is proposed.

Lions Park Trail Improvements
Proposed construction includes replacement of the trail system within Lions Park. Parallel biking and walking trails would be removed and replaced with a single ten foot wide trail section.

Evergreen Park Trail Improvements
Proposed construction includes replacement of the bituminous trail within Evergreen Park. Replacement of the trail along 70th Avenue is not part of the project. An eight foot wide trail section is proposed.

Brooklyn Boulevard City Entrance Signs
Proposed improvements include painting the existing City entrance signs and cedar fences surrounding the signs located along Brooklyn Boulevard at the Minneapolis and Brooklyn Park borders.

69th Avenue Greenway Fence Rehabilitation
Proposed construction includes refinishing the wood fence along the north side of the 69th Avenue greenway between Brooklyn Boulevard and Palmer Lake Drive.

West River Road Trail Improvements
Proposed construction includes replacement of the bituminous trail along West River Road from 73rd Avenue to 66th Avenue. A ten foot wide trail section is proposed.

Central Park East Trail Improvements
Proposed construction includes replacement of the bituminous trail system within the eastern portion of Central Park. The trail segment proposed for replacement is between Interstate 94 and the south City Hall parking lot, east of Shingle Creek. A ten foot wide trail section is proposed along the main trail corridor and an eight foot wide trail section is proposed for the adjacent pedestrian trails.

Play Ground Equipment Replacement
Proposed construction includes replacing park play ground equipment over a five year period. A total of 20 parks with playground equipment are located within Brooklyn Center. Four parks are scheduled for replacement each year over the five year period. An assessment of the play ground equipment will need to be done to determine replacement priority.

Palmer Lake Trail Mill and Overlay
Proposed construction includes resurfacing of the existing trail system extending around Palmer Lake. This trail was last reconstructed in 2005 with an expected maximum service life of 15 to 20 years due to the soil stability issues within the park area.