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Feasibility Report for
2018 Roadway
Rehabilitation Project -
Wedgewood Area
City of Woodbury

City Project No. 14-2017-01
BMI Project No. N12.113563

January 29, 2018

(BASED ON LOW BID REC'D 3/29/2018)

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Certification

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

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Date: January 29, 2018

Table of Contents

I.	INTRODUCTION	1
II.	REQUIRED IMPROVEMENTS.....	2
	A. SANITARY SEWER	2
	B. WATER MAIN	2
	C. STORM SEWER	2
	D. STORM WATER QUALITY IMPROVEMENTS	2
	E. STREETS	3
III.	PERMITS AND EASEMENT REQUIRED	3
IV.	ESTIMATED COSTS	4
V.	COST ALLOCATION.....	4
	A. COMMERCIAL & PUBLIC/SEMI-PUBLIC PROPERTIES.....	6
	B. RESIDENTIAL AND PARK/OPEN SPACE PROPERTIES.....	8
VI.	FINANCING.....	13
VII.	SCHEDULE	14
VIII.	FEASIBILITY, NECESSITY, AND COST EFFECTIVENESS.....	14
IX.	PUBLIC HEARING	15
X.	RECOMMENDATIONS	15

Appendix

Appendix A: Figures

Appendix B: Preliminary Opinion of Probable Cost

I. INTRODUCTION

The City of Woodbury is planning to rehabilitate several residential streets during the 2018 construction season, in accordance with its Capital Improvement Plan. There are approximately 19 miles of public streets scheduled for rehabilitation as part of this project, which consists of several locations within the City. This report focuses on the Wedgewood residential area. The Wedgewood area consists of several developments northwest of Bailey Road and Woodbury Drive that contain approximately 10 miles of residential streets. The proposed streets to be rehabilitated are shown on Figures 1 and 2 in Appendix A.

The majority of the streets and utilities that serve the Wedgewood area were constructed between the mid 1980s to late 1990s. This neighborhood consists of a mix of single-family and multi-family residential properties, along with two public/semi-public properties (i.e. Middleton Elementary School and Valley Crossing Elementary School, both part of Independent School District 833), one commercial property (i.e. Prestwick Golf Course), and several open space properties.

As part of the City's pavement management program, selected neighborhoods have been analyzed relative to pavement condition and possible improvements. The aforementioned areas are included in the City's current Capital Improvement Plan as a 2018 Roadway Rehabilitation project.

The majority of the residential streets within the proposed project are 32 feet wide (from face of curb to face of curb) with D412 concrete curb and gutter. The Pavement Condition Index (PCI) of the streets ranges from 30 to 90, with an overall average of 67. These neighborhoods have experienced high levels of stripping under chip seals. Pothole repairs and thin overlays have been performed to keep the roads in a drivable and relatively smooth condition. A significant amount of street maintenance funds are used or are anticipated in upcoming maintenance cycles in these areas.

A neighborhood meeting was held with the adjacent property owners on August 22, 2017. The proposed project scope, costs, and funding sources were discussed at the meeting. Property owners had an opportunity to comment on the project and ask questions. Overall, those in attendance supported the proposed project. Additional neighborhood meetings will be held during the design process to allow for additional input from the property owners and prior to the start of construction.

This report includes a discussion of the improvements required for this street rehabilitation project. It also provides preliminary cost estimates for the proposed improvements and identifies funding sources to finance the work.

II. REQUIRED IMPROVEMENTS

A. SANITARY SEWER

The existing sanitary sewer consists of 8-inch diameter vitrified clay pipe (VCP) in areas constructed prior to 1993. All developments constructed in 1993 and after have polyvinyl chloride (PVC) pipe. The City televised the pipe this summer. Some problems encountered were cracked pipes, cracked service connections, roots, and leaking joints. Costs have been included in this report to account for these minor inline repairs. In addition, costs are included to spray line manholes with outside drop sections that have corroded to extend the life of the existing infrastructure.

The sanitary sewer manhole castings will be salvaged and reinstalled. Existing concrete adjusting rings will be replaced with new high density polyethylene (HDPE) adjusting rings to conform to current City standards.

B. WATER MAIN

The water mains within the project area are ductile iron pipes (DIP) and are in good condition. Valve boxes that are damaged would be replaced with a new top section as necessary. In addition, all hydrants would be sandblasted, painted, and equipped with a new locating flag.

C. STORM SEWER

The existing storm sewer consists of various sizes of reinforced concrete pipe (RCP). The City televised the storm pipe this summer. The pipe is relatively good condition. However, there are a few cracked pipes. Costs have been included in this report to account for minor inline repairs to these pipes.

Structures in poor condition will be lined or replaced to conform to current city standards. The storm sewer manhole castings and catch basin castings will be salvaged and reinstalled, or replaced if damaged. In some instances, old style grates will be replaced with new high flow vane grates where appropriate.

The storm sewer manhole castings will be salvaged and reinstalled. Existing concrete adjusting rings will be replaced with new high density polyethylene (HDPE) adjusting rings to conform to current City standards.

D. STORM WATER QUALITY IMPROVEMENTS

City staff is currently reviewing stormwater quality improvement needs within the project area. A portion of these improvements may be included in the 2018 Roadway Rehabilitation project, with the remaining improvements constructed in the winter of 2017/2018 under separate project process. The scope of these improvements within the 2018 Roadway Rehabilitation project will be determined during the design phase of the project.

E. STREETS

According to the record plans, the existing street section includes 8 inches of class 5 gravel base and 3 inches of bituminous pavement. The existing street section is similar to the City's current standard residential street section. Based on the condition of the existing pavement, the proposed rehabilitation consists of a combination of full pavement removal and replacement and edge mill/overlay.

The condition of the existing concrete curb and gutter varies on each street. On the majority of the streets, approximately 25% is in poor condition and would need to be removed and replaced. On some streets, over 40% of the curb needs to be replaced. On these streets, it is proposed to replace 100% of the curb and gutter.

Due to the extent of curb repairs anticipated on Wedgewood Drive, Heritage Way, and Edgewater Drive, full roadway replacement was considered, including reconstruction to the City's current roadway standards outlined in the Roadway Corridor Design Principles. The considered reconstruction proposed the addition of a trail or sidewalk along one side of the roadways. Neighborhood feedback was received by the City regarding the addition of the pedestrian facilities and the reduction of the roadway width from 32 to 28 feet. Approximately 80 percent of the feedback received was in opposition to the changes. Reconstruction of the roadways to the current Roadway Corridor Design Principles standards is not included in this report as the existing roadway condition does not warrant full reconstruction at this time.

All existing trails and pedestrian ramps have been evaluated. Costs have been included in this report to update all pedestrian ramps to the current Americans with Disabilities Act (ADA) standards. In addition, several trail sections would be rehabilitated by removing and replacing the existing pavement. Where possible, 8-foot wide trail segments would be widened to 10 feet in width.

III. PERMITS AND EASEMENT REQUIRED

All streets in the project area are located within the South Washington Watershed District (SWWD). Because there will be no disturbance to the existing subgrade, a permit is not required; however, plans will be submitted to the watershed district for review. Because this project is considered a maintenance project that would not create any new impervious surfaces and would not change the existing grade, hydraulics, or purpose of the roadway, the Phase II General Storm Water Permit from the MPCA is not required. A permit from Washington County would be required for various concrete pedestrian ramp upgrades along Bailey Road (C.S.A.H. 18) and Woodbury Drive (C.S.A.H. 19).

All proposed work is located on public right-of-way or City owned land. Permanent or temporary easements are not anticipated to be necessary to accomplish the proposed improvements.

IV. ESTIMATED COSTS

Detailed estimates of probable construction costs have been prepared for the improvements described in this report and are included in Appendix B. All costs are based on anticipated unit prices for the 2018 construction season and include a 25% percent allowance for engineering, administrative costs, and financing. Following is an overall summary of the estimated costs:

Estimated Project Costs	
Proposed Improvements	Total
Sanitary Sewer	\$369,694.94
Water Main	\$105,492.25
Storm Sewer	\$151,670.59
Storm Sewer Maintenance	\$30,804.95
Storm Water Quality	\$60,439.44
Streets	\$6,144,865.08
Off Road Trails	\$92,754.38
Total Estimated Project Costs	\$6,955,721.61

V. COST ALLOCATION

All streets that are proposed to be rehabilitated are considered residential streets. The properties adjacent to the residential streets are a mix of single-family residential, multi-family residential, commercial (i.e. golf course), public/semi-public (i.e. elementary schools), and park/open space. Following is a discussion of the proposed assessment policy for the properties adjacent to the residential streets.

Street and Storm Sewer: Per the City's current assessment policy, residential properties that have front yard frontage or private street/driveway access to a residential roadway being rehabilitated would be responsible for 33% of the street and storm sewer costs on a per residential lot basis or the minimum assessment as identified based on the construction cost index, whichever is greater. Commercial properties and Park/open space properties that have frontage on a rehabilitated roadway would be assigned 100% of the street and storm sewer costs, and public/semi-public properties would be assigned 75%. The costs would be assigned to the park and open space properties on an equivalent residential unit basis and to the commercial and public/semi-public properties based on their frontage. The City would be responsible for all remaining street and storm sewer costs. The City would also be responsible for 100% of the storm water quality and storm sewer maintenance improvements.

Sanitary Sewer and Water Main: The City would finance 100% of the sanitary sewer and water main costs.

Trunk Utilities: If improvements are made to trunk utilities that serve as laterals, costs would be based on the equivalent cost of a 21-inch diameter lateral storm sewer pipe, an 8-inch diameter lateral sanitary sewer pipe, and an 8-inch diameter lateral water main pipe, as appropriate.

Commercial Driveway Aprons: 100% of the costs for replacing or adding commercial driveway aprons would be assessed to those benefited properties.

Off Road Trails: The City would be responsible for 100% of the off road trail improvements.

The aforementioned assessment procedure is consistent with current City policy.

There are several different types of properties adjacent to the residential streets within these neighborhoods. A breakdown of the various types of properties is shown below and on Figure 2 in Appendix A:

Adjacent Properties	
Type of Property	Number of Properties
Residential (Single Family)	551
Residential (Multi-Family)	153
Commercial	1
Public/Semi-Public	2
Park and Open Space	NA
Total Number of Properties	707

As per City policy, in areas where multiple land uses exist, 50% of the proportional share would be assigned equally to each individual residential property or equivalent residential unit without reference to lot width, corner lot location, or subdivision. The remaining 50% of the assessment would be based on the proportion of street frontage of each land use divided amongst the units in that land use. This assessment method applies to the park/open space properties as well. However, commercial and public/semi-public properties are to be assessed based on their adjacent footage. This assessment method is consistent with current City policy.

Following is a discussion of how the proposed project costs would be assigned to the various adjacent properties per the city's current assessment policy.

A. COMMERCIAL & PUBLIC/SEMI-PUBLIC PROPERTIES

As mentioned previously in this report, there is one commercial property (i.e. Prestwick Golf Course) and two public/semi-public properties (i.e. Middleton Elementary School and Valley Crossing Elementary School, both owned by ISD 833). For these properties, the appropriate percentage of improvement cost would be assigned based on their adjacent footage on the street being improved. The cost would be determined by multiplying the cost per adjacent foot by the length of adjacent footage.

There are 102,865 feet of adjacent footage within this project, of which 5,624 feet is commercial property and 2,081 feet is public/semi-public property as shown in the following table:

Adjacent Footage			
Parcel ID	Owner	Adjacent Footage (LF)	
		Commercial Properties	Public/Semi-Public Properties
VARIABLES	Prestwick Golf Club Inc	5,624	
15-028-21-11-0010	ISD #833 (Middleton Elem. School)		1,076
21-028-21-11-0001	ISD #833 (Valley Crossing Elem. School)		1,005
Totals		5,624	2,081

Dividing the estimated project costs (except for the construction costs of the concrete driveway aprons) by the total adjacent footage and applying the city's current assessment policy results in the following assessment per adjacent foot for commercial and public/semi-public properties:

Assessment Rates (Commercial & Public/Semi-Public Properties)							
Item	Estimated Project Cost	Total Adjacent Footage	Cost Per Adjacent Foot	Commercial Properties		Public/Semi-Public Properties	
				Assessable Percent	Assessment per Adjacent Foot	Assessable Percent	Assessment per Adjacent Foot
Sanitary Sewer	\$369,694.94	102,865	\$3.59	0%	\$0.00	0%	\$0.00
Water Main	\$105,492.25	102,865	\$1.03	0%	\$0.00	0%	\$0.00
Storm Sewer	\$151,670.59	102,865	\$1.47	100%	\$1.47	75%	\$1.10
Storm Sewer Maintenance	\$30,804.95	102,865	\$0.30	0%	\$0.00	0%	\$0.00
Storm Water Quality	\$60,439.44	102,865	\$0.59	0%	\$0.00	0%	\$0.00
Streets (Not Including Aprons)	\$6,116,385.08	102,865	\$59.46	100%	\$59.46	75%	\$44.60
Off Road Trails	\$92,754.38	102,865	\$0.90	0%	\$0.00	0%	\$0.00
Totals	\$6,927,241.61		\$67.34		\$60.93		\$45.70

In addition to the assessments per adjacent foot, properties will be assessed 100% of the cost to construct new commercial driveway aprons, if deemed necessary. There are two aprons that need to be replaced at Valley Crossing Elementary School. In addition, it is proposed to add concrete driveway aprons at the five entrances to the Prestwick Golf Course clubhouse. The estimated construction cost for the two aprons at Valley Crossing Elementary School and five aprons at Prestwick Golf Course is \$13,248.00 and \$15,232.00, respectively, for a total of \$28,480.00 for all seven aprons.

Applying the assessment rates shown in the previous table to the assessable adjacent footage results in the following assessment summary table for the commercial and public/semi-public properties:

Assessment Summary						
Item	Commercial Properties		Public/Semi-Public Properties		Remaining Project Costs	Total Project Costs
	Assessment per Adjacent Foot	Total Commercial Assessment (5,624 LF)	Assessment per Adjacent Foot	Total Public/Semi-Public Assessment (2,081 LF)		
Sanitary Sewer	\$0.00	\$0.00	\$0.00	\$0.00	\$369,694.94	\$369,694.94
Water Main	\$0.00	\$0.00	\$0.00	\$0.00	\$105,492.25	\$105,492.25
Storm Sewer	\$1.47	\$8,267.28	\$1.10	\$2,294.30	\$141,109.01	\$151,670.59
Storm Sewer Maintenance	\$0.00	\$0.00	\$0.00	\$0.00	\$30,804.95	\$30,804.95
Storm Water Quality	\$0.00	\$0.00	\$0.00	\$0.00	\$60,439.44	\$60,439.44
Streets (Not Including Aprons)	\$59.46	\$334,403.04	\$44.60	\$92,802.20	\$5,689,179.84	\$6,116,385.08
Off Road Trails	\$0.00	\$0.00	\$0.00	\$0.00	\$92,754.38	\$92,754.38
Commercial Driveway Aprons	N/A	\$15,232.00	N/A	\$13,248.00	\$0.00	\$28,480.00
Total Project Amounts	\$60.93	\$357,902.32	\$45.70	\$108,344.50	\$6,489,474.80	\$6,955,721.61

The public/semi-public assessment would be applied to the two public/semi-public properties based on their adjacent footage. Similarly, the commercial assessment would be applied to the commercial property on an adjacent footage basis. The commercial driveway apron costs would be assigned to the parcel that the improved apron serves.

Applying the assessment rates and commercial driveway apron costs as previously described, results in the following preliminary assessment roll:

Preliminary Assessment Roll

Parcel ID	Owner	Adjacent Footage	Commercial Assessment (\$60.93/Adj. Ft.)	Public/Semi-Public Assessment (\$45.70/Adj.Ft.)	Commercial Driveway Aprons	Total Assessment
VARIABLES	Prestwick Golf Club Inc	5,624	\$342,670.32		\$15,232.00	\$357,902.32
15-028-21-11-0010	ISD #833 (Middleton Elem. School)	1,076		\$49,170.51	\$13,248.00	\$62,418.51
21-028-21-11-0001	ISD #833 (Valley Crossing Elem. School)	1,005		\$45,925.99		\$45,925.99
Totals		7,705	\$342,670.32	\$95,096.50	\$28,480.00	\$466,246.82

B. RESIDENTIAL AND PARK/OPEN SPACE PROPERTIES

The remaining project costs of **\$6,489,474.80** as shown in the previous Assessment Summary table would be assigned to the remaining residential and park/open space properties per the city's current assessment policy as described in the following paragraphs.

As shown previously in this report in the Adjacent Properties table and on Figure 2 in Appendix A, there are 704 existing residential properties in the project area that have either front yard frontage on a roadway being improved or have direct access via a private street to a roadway being improved and, therefore, will be assigned 33% of the street and storm sewer project costs per the City's assessment policy. The residential properties consist of 551 single-family homes and 153 multi-family homes. For purposes of assessing, each residential property will be considered one equivalent residential unit (ERU), resulting in 704 ERU's.

There are several locations where city-owned park property or open space is adjacent to a roadway proposed to be rehabilitated. The amount of adjacent frontage of the combined park and open space properties is 5,621 feet. It is proposed to convert the total adjacent frontage of the public park/open space properties to ERU's based on an average residential lot width within the project area of 100 feet. This results in 56 ERUs for the park and open space properties (5,621 feet of frontage ÷ 100 feet per residential lot = 56.2 ERUs). Note that the ERU's are rounded down to the nearest unit since the portion of an additional lot would not be buildable. The City would be 100% responsible for all costs assigned to the 56 park/open space ERU's above.

The total ERU's to which the various remaining project costs are to be assigned is shown in the following table:

Equivalent Residential Units (ERU's)	
Type of Property	ERUs
Residential (Single Family)	551
Residential (Multi-Family)	153
Park and Open Space	56
Total ERU's	760

Half of the remaining project costs (i.e. total project costs less the amount assigned previously in the report to the commercial and public/semi-public properties) would be assigned equally to each ERU. The Cost Per ERU would be calculated by dividing 50% of the remaining project costs for each improvement by the total number of ERUs. The City's current assessment policy would be applied to the Cost per ERU resulting in the following Assessment per ERU:

Table A - Assessment per ERU (50%) (Residential and Park/Open Space Properties)							
Item	50% of Remaining Project Costs	Number of ERUs	Total Cost per ERU	Residential		Park and Open Space	
				Assessable Percent	Assessment per ERU	Assessable Percent	Assessment per ERU
Sanitary Sewer	\$184,847.47	760	\$243.22	0%	\$0.00	0%	\$0.00
Water Main	\$52,746.13	760	\$69.40	0%	\$0.00	0%	\$0.00
Storm Sewer	\$70,554.50	760	\$92.83	33%	\$30.63	100%	\$92.83
Storm Sewer Maintenance	\$15,402.48	760	\$20.27	0%	\$0.00	0%	\$0.00
Storm Water Quality	\$30,219.72	760	\$39.76	0%	\$0.00	0%	\$0.00
Streets	\$2,844,589.92	760	\$3,742.88	33%	\$1,235.15	100%	\$3,742.88
Off Road Trails	\$46,377.19	760	\$61.02	0%	\$0.00	0%	\$0.00
Totals	\$3,244,737.40		\$4,208.36		\$1,265.78		\$3,835.71

The other half of the remaining project costs would be assigned equally to each residential and park/open space ERU based on the percentage of frontage for each property type. The frontage calculations are shown in the following table:

Frontage Calculations		
Type of Property	Length of Frontage (LF)	% of Total Frontage
Residential (Single Family)	75,472	79.31%
Residential (Multi-Family)	14,067	14.78%
Park and Open Space	5,621	5.91%
Totals	95,160	100%

Applying the percentage of each frontage to half of the remaining project costs and dividing by the number of ERU's per property type results in the following table of assessments:

Table B - Assessment per ERU Based on Property Frontage (50%) (Residential and Park/Open Space Properties)						
Item	50% of Remaining Project Cost	% of Total Frontage	# of ERUs	Total Cost per ERU	Assessable Percent	Assessment per ERU
Single-Family						
Sanitary Sewer	\$184,847.47	79.31%	551	\$266.07	0%	\$0.00
Water Main	\$52,746.13	79.31%	551	\$75.92	0%	\$0.00
Storm Sewer	\$70,554.50	79.31%	551	\$101.55	33%	\$33.51
Storm Sewer Maintenance	\$15,402.48	79.31%	551	\$22.17	0%	\$0.00
Storm Water Quality	\$30,219.72	79.31%	551	\$43.50	0%	\$0.00
Streets	\$2,844,589.92	79.31%	551	\$4,094.45	33%	\$1,351.17
Off Road Trails	\$46,377.19	79.31%	551	\$66.75	0%	\$0.00
Totals - Single-Family	\$3,244,737.40			\$4,670.41		\$1,384.68
Multi-Family						
Sanitary Sewer	\$184,847.47	14.78%	153	\$178.57	0%	\$0.00
Water Main	\$52,746.13	14.78%	153	\$50.95	0%	\$0.00
Storm Sewer	\$70,554.50	14.78%	153	\$68.16	33%	\$22.49
Storm Sewer Maintenance	\$15,402.48	14.78%	153	\$14.88	0%	\$0.00
Storm Water Quality	\$30,219.72	14.78%	153	\$29.19	0%	\$0.00
Streets	\$2,844,589.92	14.78%	153	\$2,747.91	33%	\$906.81
Off Road Trails	\$46,377.19	14.78%	153	\$44.80	0%	\$0.00
Totals - Multi-Family	\$3,244,737.40			\$3,134.46		\$929.30
Public Park and Open Space						
Sanitary Sewer	\$184,847.47	5.91%	56	\$195.08	0%	\$0.00
Water Main	\$52,746.13	5.91%	56	\$55.67	0%	\$0.00
Storm Sewer	\$70,554.50	5.91%	56	\$74.46	100%	\$74.46
Storm Sewer Maintenance	\$15,402.48	5.91%	56	\$16.26	0%	\$0.00
Storm Water Quality	\$30,219.72	5.91%	56	\$31.89	0%	\$0.00
Streets	\$2,844,589.92	5.91%	56	\$3,002.06	100%	\$3,002.06
Off Road Trails	\$46,377.19	5.91%	56	\$48.94	0%	\$0.00
Totals - Public Park & Open Space	\$3,244,737.40			\$3,424.36		\$3,076.52

Combining the assessments per ERU from previous Table A and Table B results in the following total assessment rates for each type of property:

Table A + B Total Assessment Rate per Property Type (Residential and Park/Open Space Properties)			
Item	Single-Family Assessment (\$/ERU)	Multi-Family Assessment (\$/ERU)	Public Park/ Open Space Assessment (\$/ERU)
Sanitary Sewer	\$0.00	\$0.00	\$0.00
Water Main	\$0.00	\$0.00	\$0.00
Storm Sewer	\$64.14	\$53.12	\$167.29
Storm Sewer Maintenance	\$0.00	\$0.00	\$0.00
Storm Water Quality	\$0.00	\$0.00	\$0.00
Streets	\$2,586.32	\$2,141.96	\$6,744.94
Off Road Trails	\$0.00	\$0.00	\$0.00
Total Cost per ERU	\$2,650.46	\$2,195.08	\$6,912.23

The City of Woodbury has implemented a minimum residential assessment rate for rehabilitation projects. The rate applies to the street and storm sewer portions only. As of August 2016, the rates were \$2,484 per single-family unit and \$1,242 per multi-family unit with 3 to 4.9 units per acre. Based on the Engineering News Record (ENR) Construction Cost Index for Minneapolis, the current rates updated from August 2016 to August 2017 would be:

$$\begin{aligned}
 & \$2,484 \times (12602.94 \div 12010.20) = \$2,607 \text{ per Single Family} \\
 & \$1,242 \times (12602.94 \div 12010.20) = \$1,303 \text{ per Multi-Family}
 \end{aligned}$$

In this case, the minimum rates won't apply since the proposed assessments are already higher than the minimum assessments.

Applying the assessment rates shown in the previous table to each assessable residential property type results in the following assessment summary table. Note that the City would be responsible for 100% of the costs assigned to the Public Park & Open Space ERUs. Therefore, these costs are included in the Remaining City Costs column:

Assessment Summary (Residential and Park/Open Space Properties)				
	Single-Family (551 ERUs)	Multi-Family (153 ERUs)	Remaining City Costs	Remaining Project Costs
Sanitary Sewer	\$0.00	\$0.00	\$369,694.94	\$369,694.94
Water Main	\$0.00	\$0.00	\$105,492.25	\$105,492.25
Storm Sewer	\$35,343.29	\$8,127.96	\$97,637.76	\$141,109.01
Storm Sewer Maintenance	\$0.00	\$0.00	\$30,804.95	\$30,804.95
Storm Water Quality	\$0.00	\$0.00	\$60,439.44	\$60,439.44
Streets	\$1,425,062.54	\$327,719.94	\$3,936,397.36	\$5,689,179.84
Off Road Trails	\$0.00	\$0.00	\$92,754.38	\$92,754.38
Total Project Amounts	\$1,460,405.83	\$335,847.90	\$4,693,221.07	\$6,489,474.80

The assessments per unit ERU to the multi-family parcels would be applied the various multi-family parcels based on their ERUs, as shown in the following table:

Multi-Family Properties			
Development	ERUs	Multi-Family Assessment (\$/ERU)	Total Assessment
Wedgewood Estates 8th Add.	38	\$2,195.08	\$83,413.20
Wedgewood Estates 9th Add.	23	\$2,195.08	\$50,486.94
Wedgewood Village	44	\$2,195.08	\$96,583.71
Wedgewood Heights 4th Add.	48	\$2,195.08	\$105,364.05
Totals	153		\$335,847.90

VI. FINANCING

Based on the previous Assessment Summary table, the total project cost to the City would be **\$4,693,221.07**. Various funds would be used to finance the City's portion of each improvement cost as shown in the following financing summary table:

Financing Summary		
Item	City Costs	Fund
Sanitary Sewer	\$369,694.94	Water and Sewer Utility Fund
Water Main	\$105,492.25	Water and Sewer Utility Fund
Storm Sewer	\$97,637.76	Storm Water Utility Fund
Storm Sewer Maintenance	\$30,804.95	Storm Water Utility Fund
Storm Water Quality	\$60,439.44	Storm Water Utility Fund (Non-Degradation Retrofit for Street Rehabilitation Projects allocation)
Streets	\$3,936,397.36	Street Reconstruction / Maintenance Fund
Off Road Trails	\$92,754.38	Parks Fund
Sub-Total (City Costs)	\$4,693,221.07	
Assessments	\$2,262,500.54	
Total Project Costs	\$6,955,721.61	

Assessments would be levied against the benefitting residential properties in accordance with the City's current assessment policy.

VII. SCHEDULE

The following schedule allows for construction to be completed during the 2018 construction season:

Proposed Project Schedule	
Order preliminary report	June 14, 2017
Neighborhood meeting #1	August 22, 2017
Neighborhood meeting #2	October 4, 2017
Authorize plans/specs	November 29, 2017
Neighborhood meeting #3	February 8, 2018
Approve report, public improvement hearing, order project	February 14, 2018
Approve plans/specs, set bid date	February 28, 2018
Advertise in local paper	March 7, 2018
Open bids	March 28, 2018
Neighborhood meeting #4	Week of April 9, 2018
Assessment hearing, award contract	April 25, 2018
Neighborhood meeting #5	Week of May 7, 2018
Begin construction	May 14, 2018
Complete construction	October 2018

VIII. FEASIBILITY, NECESSITY, AND COST EFFECTIVENESS

The following table compares the cost per linear foot of this project versus the costs shown in the preliminary reports of other similar rehabilitation projects recently constructed within the City:

Project Cost Comparison	
Project	Cost per Linear Foot
2014/2015 Roadway Rehabilitation - Evergreen and Whispering Pines	\$137
2017 Roadway Rehabilitation - Residential (West Area)	\$154
2018 Roadway Rehabilitation - Residential Areas	\$130

Based on the previous table, the cost to rehabilitate the streets within the proposed 2018 project area is similar to previous projects.

This project is financially feasible. Financial responsibilities have been determined based on estimated project costs and adopted City policy. Funding sources consist of assessments to benefitted properties and use of existing designated City funds.

The deteriorated condition of the pavement surface, stable condition of the subgrade, and relatively good condition of the concrete curb and gutter suggest that full pavement removal and replacement be performed. The improvements are cost effective as they utilize the existing subgrade and keep existing curb wherever possible.

From an engineering standpoint, this project is feasible, necessary, and cost effective.

IX. PUBLIC HEARING

This project will be partially funded by assessing the benefitted properties. Therefore, the City will need to hold a public improvement hearing to receive comments on the proposed project and to determine what further action should be taken. For purposes of the hearing, the following information should be utilized:

Estimated Cost: **\$6,955,721.61**

Total Assessed Cost: **\$2,262,500.54**

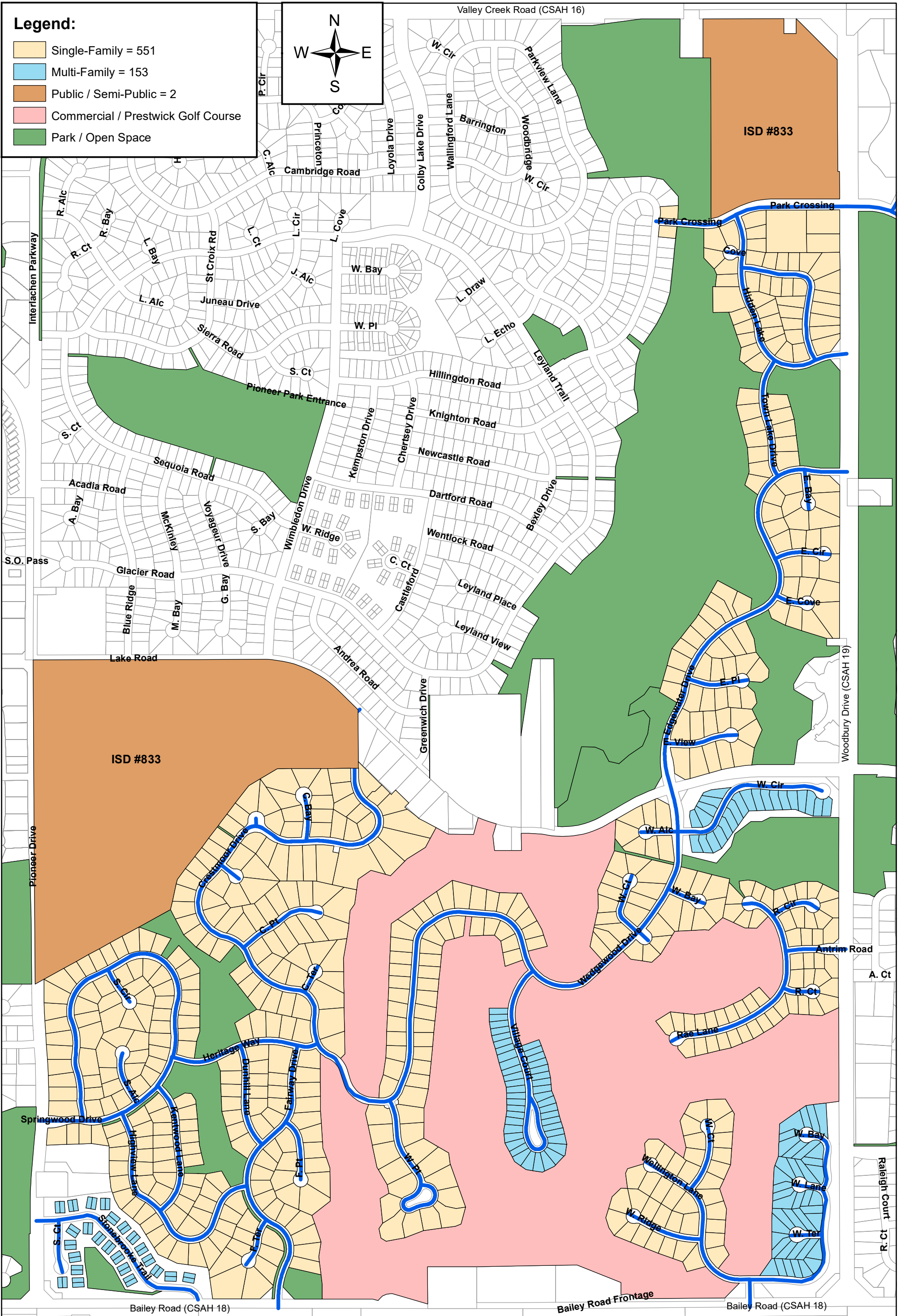
Benefited Area:

All parcels within Section 22, the east half of Section 21, and the east half of Section 15 Township 28N, Range 21W, City of Woodbury, County of Washington, State of Minnesota that have direct driveway or private street access to Stonebrooke Trail, Stonebrooke Court, Springwood Drive, Springwood Alcove, Springwood Circle, Highview Lane, Kentwood Lane, Heritage Way, Dunhill Lane, Fairway Drive, Fairway Point, Fairway Terrace, Crestmoor Drive, Crestmoor Alcove, Crestmoor Bay, Crestmoor Point, Crestmoor Terrace, Wedgewood Drive, Wedgewood Point, Village Court, Wedgewood Alcove, Wedgewood Bay, Wedgewood Circle, Wedgewood Court, Wedgewood Draw, Antrim Road, Rae Lane, Rae Circle, Rae Court, Wellington Lane, Wellington Bay, Wellington Court, Wellington Ridge, Wellington Terrace, Edgewater Drive, Edgewater Bay, Edgewater Circle, Edgewater Cove, Edgewater Place, Edgewater View, Town Lake Drive, Hidden Lake Drive, Hidden Lake Cove, Shadow Creek Trail, Park Crossing,

X. RECOMMENDATIONS

It is recommended that this report be used as a guide for the layout, design and cost allocation for the public improvements to be made as part of the 2018 Roadway Rehabilitation – Wedgewood Area project. It is further recommended that the owners of properties within the project limits be properly notified of the proposed improvements in order to provide comment.

Appendix A: Figures



Appendix B: Preliminary Opinion of Probable Cost