

Item 7b.**Sunfish Lake Engineer's Report for December 1, 2020**

By: Jeff Sandberg, PE
City Engineer

Date: November 25, 2020

1. Engineering Activities Undertaken in the Month of November

The following Engineer's Report reflects the Engineering activities undertaken this past month.

- A. NPDES Annual Public Hearing – SEE ATTACHMENT 1A.
- B. Feasibility Studies for 2021 CIP Projects – Staff has prepared the four draft studies. – SEE ATTACHMENTS 1B.

2. Building and Site Reviews in the Month of November

- A. Staff conducted reviews for three properties in November:
 - Riley Bancroft Property: Staff reviewed a minor subdivision/ CUP request.
 - 357 Salem Church Road: Staff reviewed as-built survey plans submitted and conducted a final site visit.
 - 2150 Charlton: Staff reviewed new information provided by the engineer related to the as-builts. Continuing to work with engineer to resolve remaining issues.

3. Public Works Activities Undertaken in the Month of November

- A. Signed contract and certificates of insurance were received from the Snow plowing contractor.

4. Anticipated Engineering/Public Works Activities for the Month of December

- A. Staff will work with the city snowplow contractor to keep roads clear and safe. If residents find slippery areas on the city streets that need attention, please email your concerns to sunfishlakesnow@gmail.com and copy me at jsandberg@wsbeng.com.

The above constitutes the Engineering Report for the City of Sunfish Lake for December 1, 2020.

Respectfully submitted,
WSB



Jeffery S. Sandberg, PE
City Engineer



MS4 Annual Meeting

DECEMBER 1, 2020

Purpose of Meeting

Federal Law (NPDES –National Pollutant Elimination System)

MS4 = Municipal Separate Storm Sewer System

- Storm drains discharge directly into lakes rivers, streams, and wetlands
- Stormwater runoff is a leading source of water pollution.

Who is regulated?

- Cities within Urbanized Areas as determined by U.S. Census
- Other MS4's as determined by MPCA policy and criteria (e.g. MnDOT, Watershed Districts, Colleges, County Lands/ROW)

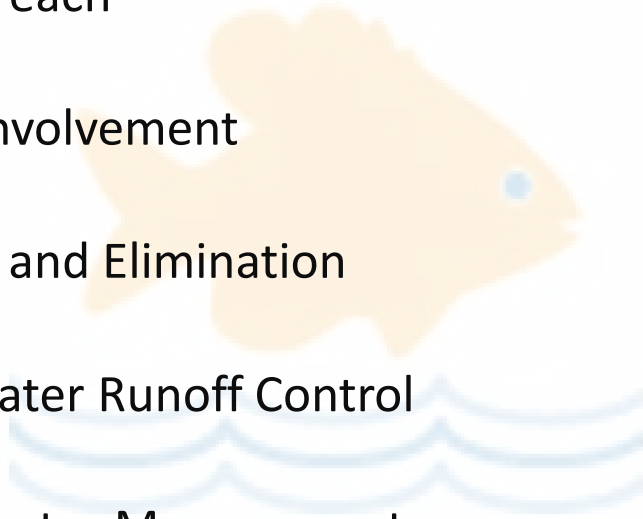
Why?

- Annual requirement of the MS4 Permit
- Educate interested residents of the 6 Minimum Control Measures
- Status of the MS4 Permit Reissuance
- Receive comments from the public



6 Minimum Control Measures

1. Public Education and Outreach
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention and Good Housekeeping for Municipal Operations



2019 MS4 Activities

MCM 1 & 2. Public Education, Participation, and Involvement

- Stormwater-related articles in City's newsletter
- Info on City's website
- Arbor Day Green Fair 2019
- Annual Public Meeting (April 2, 2019)



MCM 3. Illicit Discharge Detection and Elimination

- 0 illicit discharges discovered in 2019

2019 MS4 Activities

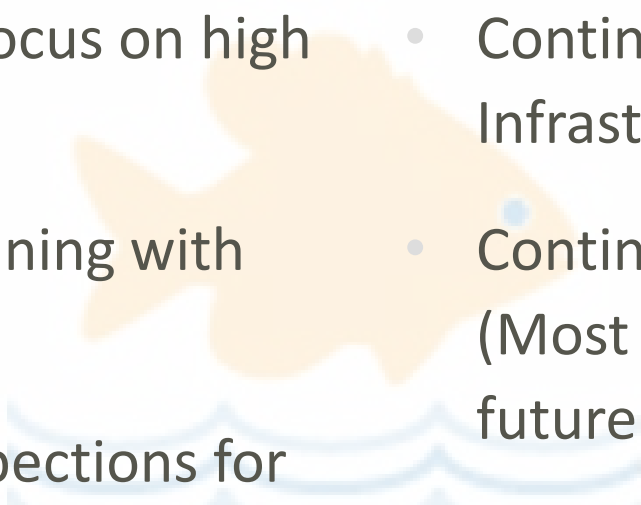
MCM 4 & 5. Construction/Post-Construction Stormwater Runoff Control

- 10 plan reviews completed for projects greater than 1 acre
- 7 NPDES Construction Stormwater Permits active
- Regular site inspections completed by WSB
 - 7 site inspections for active projects with an NPDES permit in 2019

MCM 6 Pollution Prevention and Good Housekeeping

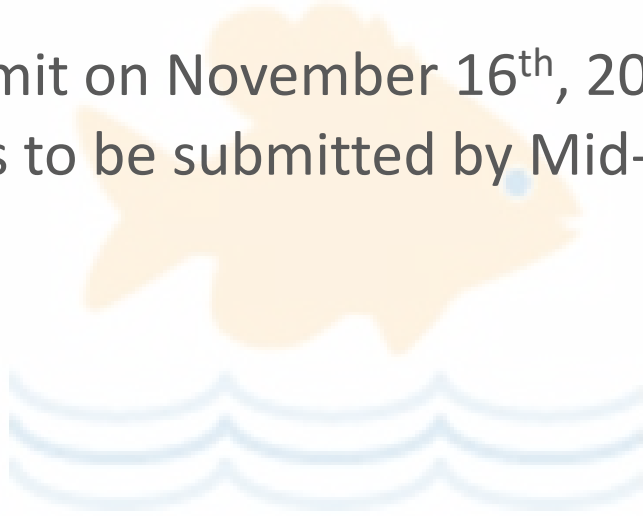
- Continued training of field/seasonal staff

Where to go from here?

- 
- Provide education and focus on high priority areas
 - Continue to perform training with city staff
 - Continually perform inspections for illicit discharges, construction sites, and post-construction sites
 - Complete stormwater system inspections and maintenance
 - Continue to update Stormwater Infrastructure through GIS
 - Continue to document MS4 activities. (Most crucial element to a possible future MS4 MPCA Audit)
 - Prepare for MS4 Permit Reissuance

MS4 Permit Update

- Current MS4 permit expired since July 31, 2018
- MPCA released new permit on November 16th, 2020
 - New application needs to be submitted by Mid-April 2021



Additional Information

MPCA MS4 Page: <https://www.pca.state.mn.us/water/municipal-stormwater-ms4>

Dakota County Soil and Water Conservation District Page: <http://www.dakotaswcd.org/>





THANK YOU

Memorandum

To: Honorable Mayor and City Council
City of Sunfish Lake

From: Jeff Sandberg, PE
City Engineer

Date: December 1, 2020

Re: Feasibility Studies for 2021 CIP
City of Sunfish Lake, MN

INTRODUCTION

Staff has completed drafts of the 2021 Capital Improvement Program project's feasibility studies. There are three mill and overlay projects, and one street reconstruction project proposed for 2021. The three mill and overlay projects are for Sunnyside Lane, Zehnder Road, and Angell Road. The street reconstruction project is on Grieve Glen Lane.

DISCUSSION

At this time, staff is presenting the four feasibility studies for preliminary discussion and review of the proposed projects schedule. Additionally, staff is recommending that a Benefit Analysis be conducted for the Angell Road mill and overlay project and for the Grieve Glen Road street reconstruction project. An outside consultant can be retained to conduct a Benefit Analysis, and they will review the project feasibility study, evaluate each individual property identified for the assessments, and will provide an opinion on the monetary benefit that a property will receive for the proposed improvements. Staff is recommending this option for the two projects to assist with determining financing options and appropriate bond amounts to fund the projects.

Staff recommends retaining Larry Danich, from Metzen Appraisals, to conduct the Benefit Analysis. The cost for each project would be \$6,500 (\$13,000 total).

The City Engineer and City Attorney have collaborated on a proposed schedule for the projects that accounts for the two Benefit Analysis to be conducted. In short, the Sunnyside and Zehnder Road projects would be on a separate path and those reports will be formally submitted at the January meeting for consideration. Public hearings would be set for those two projects in February, and if approved, the projects would be ordered and plans and specs would be presented at the April City Council meeting to authorize bidding.

In parallel, the Benefit Analysis's for both Grieve Glen and Zehnder Road projects would be discussed at the January meeting. The feasibility studies would be formally presented at the February meeting and public hearings would be set for the two projects in March. If approved, the projects would be ordered and plans and specs would be presented at the April City Council meeting to authorize bidding.

The schedule above allows all four projects to be part of one bid package to get the most competitive pricing. A detailed schedule for the projects consistent with the above will be presented by the City Attorney.

OPTIONS

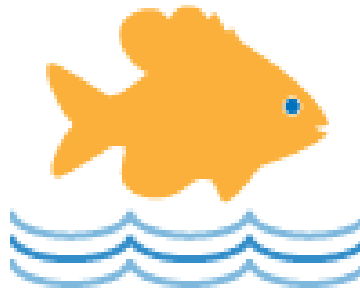
Staff has developed the following options for the City Council to consider:

- 1) Authorize staff to engage Metzen Appraisals to conduct Benefit Analysis for the Grieve Glen Project for \$6,500 and for the Angell Road Project for \$6,500.
- 2) Direct staff to complete the feasibility studies without conducting a Benefit Analysis.
- 3) Direct staff on other action.

Staff Recommendation:

Staff recommends Option #1, for the City Council to authorize staff to engage Metzen Appraisals to conduct a Benefit Analysis for the Grieve Glen Project for \$6,500 and for the Angell Road Project for \$6,500.

Attachments



FEASIBILITY REPORT

2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT

CITY OF SUNFISH LAKE | DAKOTA COUNTY, MINNESOTA

DECEMBER 1, 2020

Prepared for:
City of Sunfish Lake

CITY PROJECT NO. 2021-03

WSB PROJECT NO. 014460-000



FEASIBILITY REPORT

2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT

**FOR THE
CITY OF SUNFISH LAKE, MINNESOTA**

December 1, 2020

Prepared By:





December 1, 2020

Honorable Mayor and City Council
City of Sunfish Lake, MN
c/o Cathy Iago, City Clerk
7378 Jordan Ave S
Cottage Grove, MN 55016

Re: Feasibility Report
2021 Angell Road East Mill and Overlay Project
City of Sunfish Lake, MN
WSB Project No. 014460-000

Dear Honorable Mayor and City Council Members:

Attached for your review is a feasibility report which addresses improvements associated with the 2021 Angell Road East Mill and Overlay Project.

We would be happy to discuss this report with you at your convenience. Please contact me at 651.286.8474 if you have any questions or concerns.

Sincerely,

WSB

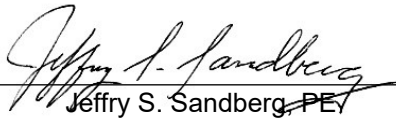

Jeffrey S. Sandberg, PE
City Engineer

Attachment

bpm

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.


Jeffrey S. Sandberg, PE

Date: December 1, 2020

Lic. No. 25393

Quality Control Review Completed By:


Lydia M. Eher, PE

Date: December 1, 2020

Lic. No. 57221

TABLE OF CONTENTS

TITLE SHEET
LETTER OF TRANSMITTAL
CERTIFICATION SHEET
TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	2
2.1	Authorization	2
2.2	Scope	2
2.3	Data Available	2
2.4	Project History	2
3.	EXISTING CONDITIONS	3
3.1	Surface	3
3.1.1	Roadway Alignment	3
3.1.2	Right-of-Way	3
3.1.3	Street Section	3
3.2	Drainage	3
3.3	Private Utilities	3
3.4	Criteria for Investigation	4
3.4.1	Surface	4
3.4.2	Drainage	4
4.	PROPOSED IMPROVEMENTS	5
4.1	Surface	5
4.1.1	Roadway Alignment	5
4.1.2	Right-of-Way	5
4.1.3	Street Section	5
4.2	Drainage	5
4.3	Construction Access/Staging	5
5.	FINANCING	6
5.1	Opinion of Probable Cost	6
5.2	Funding	6
6.	NECESSITY AND EFFECTIVENESS	7
7.	PROJECT SCHEDULE	8
8.	FEASIBILITY AND RECOMMENDATION	9

TABLE OF CONTENTS (continued)

Appendix A

Figure 1 – Project Location Map
Figure 2 – Typical Sections

Appendix B

Opinion of Probable Cost

Appendix C

Assessment Map
Preliminary Assessment Roll

Appendix D

Pavement Condition Report

Appendix E

Sunfish Lake Assessment Policy

1. EXECUTIVE SUMMARY

The 2021 Angell Road East Mill and Overlay Project consists of roadway surface improvements on Angell Road from MN-62 to Sunnyside Lane. A map illustrating the project location is shown on **Figure 1** in **Appendix A**.

Roadway surface improvements consist of a two-inch mill and overlay. Additionally, existing storm culverts in the project area were reviewed and determined to need maintenance such as jetting out sediment and debris.

The cost of the 2021 Angell Road East Mill and Overlay Project, based on the recommended scope of work, is estimated at **\$83,895**. This includes a 10% contingency and 35% indirect costs. Funding for the project will consist of special assessments to benefitting properties and City financing.

The proposed project schedule includes construction beginning May 2021, with final completion by the fall of 2021.

The project is feasible, necessary, and cost-effective from an engineering standpoint and should be constructed as proposed herein.

2. INTRODUCTION

2.1 Authorization

On October 6, 2020, the Sunfish Lake City Council authorized a feasibility report for the 2021 Angell Road East Mill and Overlay Project.

2.2 Scope

This feasibility report includes roadway surface improvements and drainage improvements along Angell Road from MN-62 to Sunnyside Lane.

2.3 Data Available

Information and materials used in the preparation of this report include the following:

- City of Sunfish Lake Capital Improvement Plan
- City of Sunfish Lake Assessment Policy
- City of Sunfish Lake Property Index Records
- City of Sunfish Lake Pavement Condition Report (2018)
- Field Observations of the Area

2.4 Project History

Angell Road is identified in the City's Capital Improvement Plan to address the poor condition of the roadway.

The City had previously accepted a feasibility report for the 2020 Mill and Overlay Project (City Project 2020-01) on September 3, 2019, which included Angell Road for a two-inch mill and overlay. During final design of the project, it was determined the final design cost estimate would be too great for the City to move forward with in 2020. As a result, the project was tabled until 2021 and the City instructed the project be broken up into 3 individual Feasibility Reports for each roadway originally in the 2020 Mill and Overlay Project.

3. EXISTING CONDITIONS

3.1 Surface

Angell Road was constructed in 1989. Routine maintenance using seal coating and crack sealing was completed in 2013.

In May of 2018, WSB completed a Pavement Condition Report for the City, summarizing the results of pavement inspections on all City streets. The results are shown as a calculated Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a new roadway with no distresses present.

The existing 2018 and projected 2020 PCI values for Angell Road are shown below in **Table 1**.

Table 1 – Existing and Projected PCI Values		
Street	Existing PCI Value (2018)	Projected PCI Value (2020)
Angell Road	60	42

The full Pavement Condition Report can be found in **Appendix D**.

3.1.1 Roadway Alignment

Angell Road has a typical vertical and horizontal alignment for a residential neighborhood.

3.1.2 Right-of-Way

The existing right-of-way width for Angell Road is 60 feet.

3.1.3 Street Section

The street width of Angell Road is 22 feet and consists of a rural section. The pavement is beginning to show signs of pavement failure, including edge cracking and alligator cracking.

3.2 Drainage

Existing drainage infrastructure consists of roadway ditches along both sides of Angell Road, conveying stormwater to neighboring lakes, wetlands or urban roadways with storm sewer. Angell Road has three storm culverts conveying stormwater under driveways along the roadway.

In August of 2019, WSB staff completed a field visit to verify the conditions of all the culverts in the project area. While most of the culverts were filled with sediment, the structural integrity of the culverts is sound.

3.3 Private Utilities

Private utilities that have facilities in or near the project area will be notified during the final design phase of the project. They will be requested to coordinate any necessary repairs and replacements as needed at their cost. Private utility companies that have facilities within the project area include the following:

- Comcast (Telephone/Internet)
- CenturyLink (Telephone/Internet)
- Sprint (Telephone)
- Xcel Energy (Electric/Gas)

3.4 Criteria for Investigation

Local streets identified to be reviewed for improvements will be reviewed against current City standards and policy where applicable.

3.4.1 Surface

Bituminous seal coating is a street maintenance method that is recommended on streets with a PCI ranging from 60 to 100.

Milling and overlaying is a street rehabilitation method that is recommended on streets with a PCI ranging from 30 to 70.

Reclamations and reconstructions are street improvement methods that are recommended on streets with a PCI ranging from 0 to 40.

3.4.2 Drainage

Current City Standards will be utilized for stormwater management and water quality design.

4. PROPOSED IMPROVEMENTS

4.1 Surface

Angell Road is proposed to have a two-inch mill and overlay. Milling and overlaying consists of grinding off the top two inches of asphalt and then repaving the milled two inches with new asphalt.

4.1.1 Roadway Alignment

The proposed improvements will maintain the existing vertical and horizontal alignments of the roadway.

4.1.2 Right-of-Way

All proposed improvements are located within the platted right-of-way, no permanent easements will be required. Temporary construction easements or waivers of trespass may be required for utility improvements, if applicable.

4.1.3 Street Section

The proposed typical section is shown on **Figure 2** in **Appendix A**.

4.2 Drainage

Based on the August 2019 site visit by WSB staff and the limited scope of work proposed for Angell Road, culvert jetting and maintenance is proposed for all three culverts in the project area.

4.3 Construction Access/Staging

The contractor will be responsible for providing access to properties throughout the project. Signed detours will be required to direct traffic around the construction zones and notify users of the increased truck and construction activity as needed.

5. FINANCING

5.1 Opinion of Probable Cost

A detailed opinion of probable cost is included in **Appendix B** of this report. The opinion of probable cost is based on projected construction costs for 2021 and includes a 10% contingency and 35% indirect costs. The indirect costs include engineering, legal and administrative costs associated with the project.

The total project cost is estimated at **\$83,895**.

5.2 Funding

Funding for the 2021 Angell Road East Mill and Overlay Project will be through assessments to benefitting properties and City financing.

Assessments will be levied to the benefitting properties as outlined in Minnesota Statute 429 and the City's assessment policy, found in **Appendix E**. Detailed preliminary assessment rolls are included in **Appendix C**. Prior to the finalization of the assessment roll, a Special Assessment Benefit Appraisal will be performed for the adjacent properties.

Financing the 2021 Angell Road East Mill and Overlay Project will be based on the City's special assessment policy, which calls for 60% of the proposed improvements to be specially assessed for roads identified as Neighborhood Collector Streets, which Angell Road is designated as. The remaining 40% of the improvements will be financed by the City.

A summary of the assessment rates is:

- Single-Family Mill and Overlay\$10,070/unit

The project funding is summarized as follows:

2021 Angell Road East Mill and Overlay Project Project Funding Summary	
Funding Source	Proposed Funding
Special Assessments	\$50,350
City Financing	\$33,545
TOTAL	\$83,895

6. NECESSITY AND EFFECTIVENESS

The improvements proposed in this report are necessary for several reasons.

The proposed roadway improvements provide the City with a high quality, aesthetically pleasing roadway while minimizing maintenance concerns, eliminating existing safety concerns, and extending the life expectancy of the roadway.

The proposed drainage improvements provide the City with a cost-effective solution while minimizing maintenance concerns and extending the life expectancy of the culverts.

Combining the roadway and drainage improvements into one project will provide a project large enough to ensure a competitive bidding environment and economy of scale, and therefore, are deemed to be cost-effective. Based on the information contained in this report, the proposed improvements as described can be considered to be necessary, cost-effective, and feasible from an engineering standpoint.

7. PROJECT SCHEDULE

The proposed schedule for the 2021 Angell Road East Mill and Overlay Project is as follows:

City Council Authorizes Feasibility Report	October 6, 2020
City Council Gives Preliminary Consideration to Draft Feasibility Report	December 1, 2020
City Council Gives Final Consideration to Feasibility Report And Orders Public Hearing	February 2, 2021
City Council Approves Preliminary Financing, and holds Public Hearing	March 2, 2021
City Council Authorized Preparation of Plans and Specifications	March 2, 2021
Plans/Specifications Preparation	March - April 2021
City Council Approves Plans/Specifications & Authorizes Bidding	April 6, 2021
Project Bidding	May 2021
Award Contract	June 2021
Construction	June – September 2021
Assessment Hearing	September 7, 2021
First Payment Due with 2022 Taxes	May 2022

8. FEASIBILITY AND RECOMMENDATION

The 2021 Angell Road East Mill and Overlay Project consists of roadway and drainage improvements. The cost of the project is estimated at **\$83,895**.

Based on the information contained within this report, the proposed improvements as described are necessary, cost-effective, and feasible from an engineering standpoint. WSB recommends construction of the proposed improvements as detailed in this report. The economic feasibility of this project will be determined by the City Council.

APPENDIX A

Figure 1 – Project Location Map
Figure 2 – Typical Sections

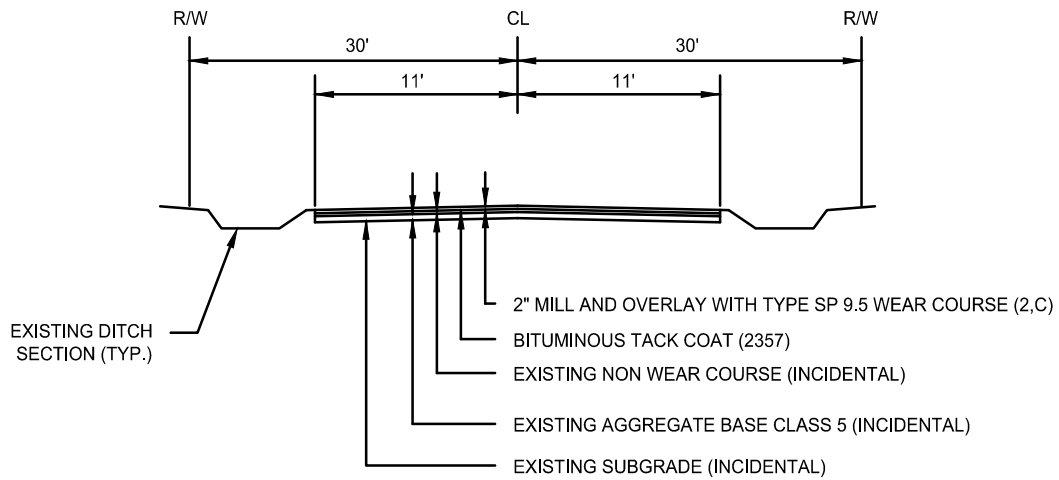
K:\014460-000\Cad\Exhibits\Angell Road\014460-000 Project Location Map (Angell).dwg 10/14/2020 9:57:20 AM



WSB PROJECT NO.:
014460-000

2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT
FIGURE 1 - PROJECT LOCATION MAP
CITY OF SUNFISH LAKE, MN





STREET MILL AND OVERLAY



WSB PROJECT NO.:
014460-000

2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT FIGURE 2 - TYPICAL SECTIONS CITY OF SUNFISH LAKE, MN



APPENDIX B

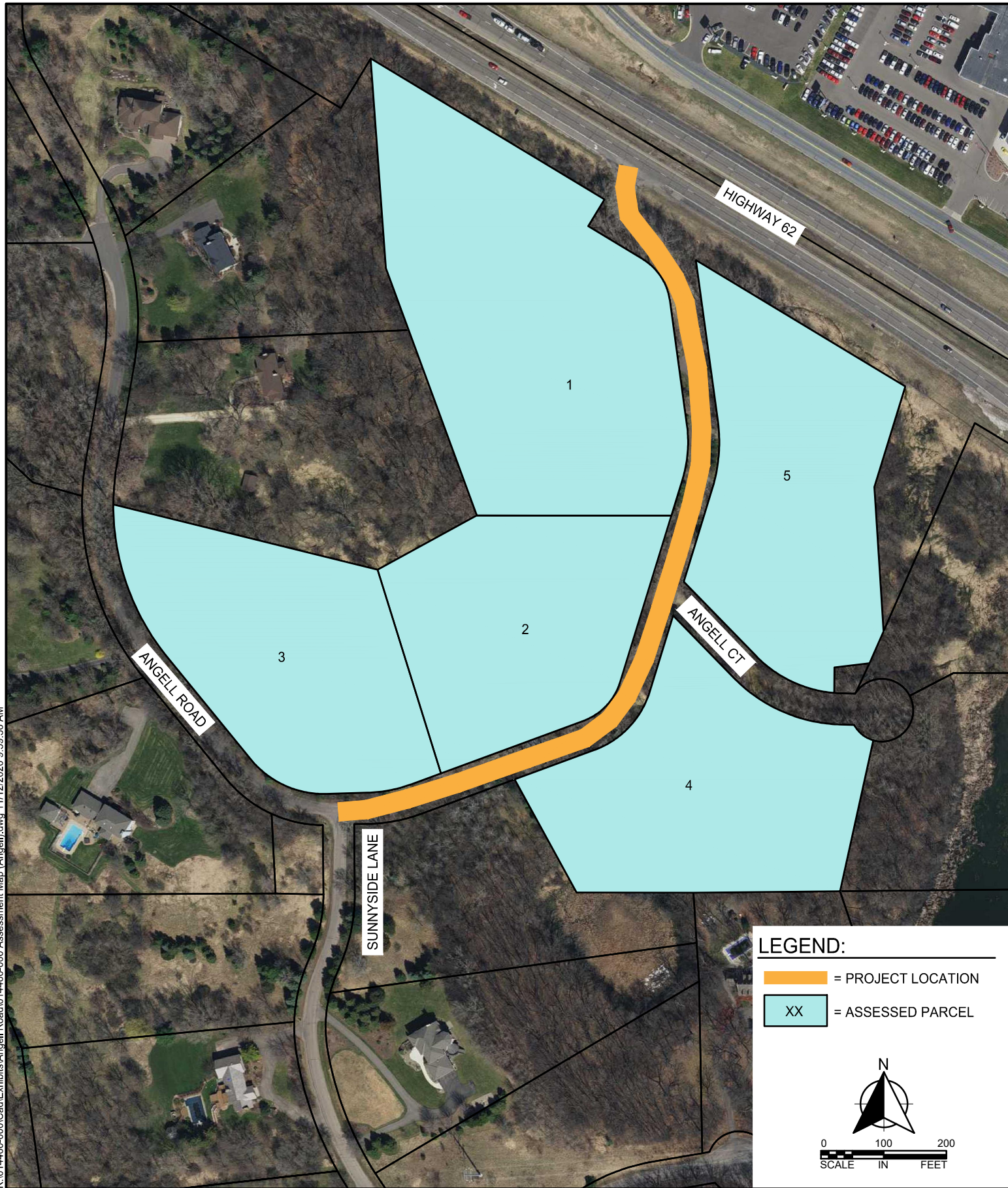
Opinion of Probable Cost

OPINION OF PROBABLE COST						
WSB Project: 2021 Angell Road East Mill and Overlay Project				Design By: BPM		
Project Location: Sunfish Lake				Checked By: JSS		
City Project No.: 2021-03				Date: 12/1/2020		
WSB Project No: 014460-000						
Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
A. Angell Road Surface Improvements						
1	2021.501	MOBILIZATION	LS	1	\$ 3,000.00	\$ 3,000.00
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	120	\$ 5.00	\$ 600.00
3	2106.507	EXCAVATION - COMMON	C Y	10	\$ 20.00	\$ 200.00
4	2211.509	AGGREGATE BASE CLASS 5	TON	10	\$ 20.00	\$ 200.00
5	2232.504	MILL BITUMINOUS SURFACE (2.0")	S Y	3810	\$ 2.50	\$ 9,525.00
6	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	390	\$ 3.00	\$ 1,170.00
7	2360.509	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	480	\$ 75.00	\$ 36,000.00
8	2501.602	CLEAN PIPE CULVERT	EACH	3	\$ 1,000.00	\$ 3,000.00
9	2563.601	TRAFFIC CONTROL	L S	1	\$ 2,000.00	\$ 2,000.00
10	2573.503	SEDIMENT CONTROL LOG WOOD FIBER	L F	200	\$ 2.00	\$ 400.00
11	2573.503	SILT FENCE TYPE MS	L F	200	\$ 2.00	\$ 400.00
CONSTRUCTION TOTAL						\$ 56,495.00
CONTINGENCY TOTAL (10%)						\$ 5,650.00
SUBTOTAL						\$ 62,145.00
INDIRECT COST TOTAL (35%)						\$ 21,750.00
TOTAL						\$ 83,895.00
GRAND TOTAL						\$ 83,895.00

APPENDIX C

Assessment Map
Preliminary Assessment Roll

K:\014460-000\Cad\Exhibits\Angell Road\014460-000 Assessment Map (Angell).dwg 11/12/2020 9:59:36 AM



WSB PROJECT NO.:
014460-000

2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT
ASSESSMENT MAP
CITY OF SUNFISH LAKE, MN



CITY OF SUNFISH LAKE, MN
2021 ANGELL ROAD EAST MILL AND OVERLAY PROJECT
PRELIMINARY ASSESSMENT ROLL

Date: 12/1/2020	Rate
-----------------	------

City Project No. 2021-03
WSB Project No. 014460-000

Date: 12/1/2020	
	<u>Rate</u>
Single Family Mill and Overlay Assessment:	\$10,070.00

MAP ID	PID	FEE OWNER	FEE OWNER ADDRESS	CITY/STATE/ZIP	PROPERTY ADDRESS	USE DESCRIPTION	UNITS	UNIT ASSESSMENT RATE	FRONT FOOTAGE (LF)	FOOTAGE ASSESSMENT RATE	PROPOSED ASSESSMENT
1	387325000090	SHOSHANNAH BARON-PALCHIZACA & BENEDETTO PALCHIZACA TENEZACA	2050 ANGELL RD	SUNFISH LAKE, MN 55118	2050 ANGELL RD	RESIDENTIAL	1	\$10,070.00			\$10,070.00
2	387325000100	MICHAEL G COSTELLO	2150 ANGELL RD	SUNFISH LAKE, MN 55118	2150 ANGELL RD	RESIDENTIAL	1	\$10,070.00			\$10,070.00
3	387325000110	MEGAN & DEAN MANTERNACH	2336 ANGELL RD	SUNFISH LAKE, MN 55118	2336 ANGELL RD	RESIDENTIAL	1	\$10,070.00			\$10,070.00
4	387325000050	MAYNARD TSTE JACOBSON	3 ANGELL CT	SUNFISH LAKE, MN 55118	3 ANGELL CT	RESIDENTIAL	1	\$10,070.00			\$10,070.00
5	387325000080	JOHAN L ERIKSSON & PAMELA P SKROCH	2095 ANGELL RD	SUNFISH LAKE, MN 55118	2095 ANGELL RD	RESIDENTIAL	1	\$10,070.00			\$10,070.00
GRAND TOTAL - PRELIMINARY PROJECT ASSESSMENT:											\$50,350.00

APPENDIX D

Pavement Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: May 7, 2018

Re: Pavement Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this pavement condition report summarizing the results of the pavement inspection performed on April 30, 2018 on all the City streets. The distresses observed on the surface of roadways evaluated were analyzed using our pavement management software, PAVER to calculate the Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a brand-new roadway with no distresses present.

Bituminous roadways were evaluated but gravel road and private roads were not rated. A map showing the condition rating can be found labeled in the **Appendix A** section of this report. The condition rating for each street is included in a table in **Appendix B**. Any type of road maintenance (i.e. patching or crack sealing) done prior to inspections is accounted for in each PCI value. The weighted average was computed by averaging the PCI values based on the area of each segment, which was calculated to be 78.

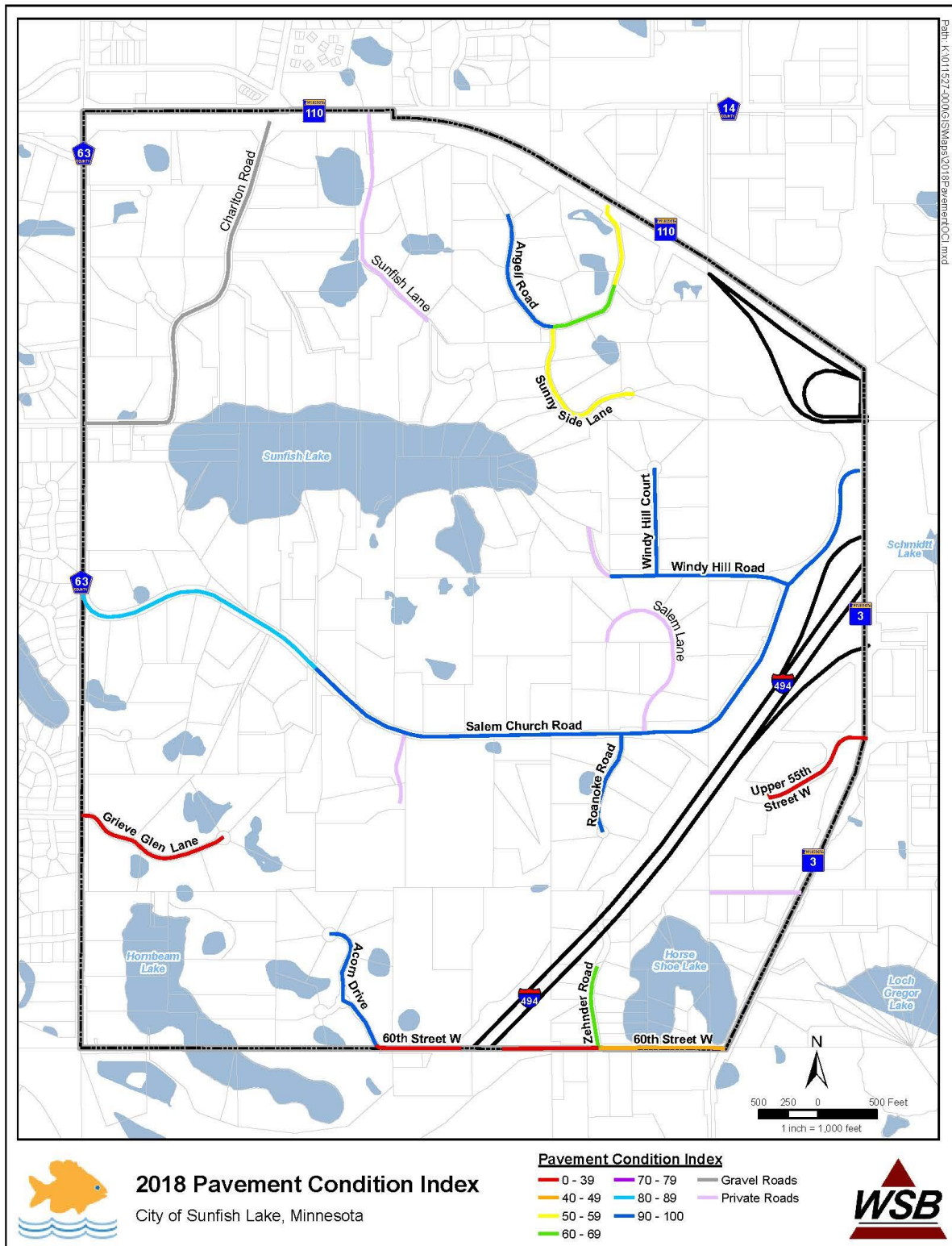
On new roads with high PCI values, which are in the range from 80 to 100, we would recommend performing preventative maintenance such as crack sealing or chip sealing, or a combination of both to protect the road surface from infiltration of water and incompressible materials as well as oxidation. Good candidates for preventative maintenance upon field inspection are Salem Church Road, Roanoke Road, Windy Hill Road, and Windy Hill Court.

There are areas where the PCI values of pavements have dropped drastically since last inspection in 2015, such as 60th Street West and Grieve Glen Lane. It is important to note that these roads were previously chip sealed and the treatment masked the existing distresses of the pavements. Thus, when these roads were reviewed this year, the PCI values are much lower than when rated in 2015 because the distresses have surfaced through the layer of chip seal.

It is our understanding that the condition of Grieve Glen Lane is a concern to the City. The PCI of this road obtained from field inspection is 36, which indicates that the street is in poor condition needing a major repair. The street is highly raveled with potholes developing. Pavement coring will be performed on this street to determine the extent of distresses. If the distresses are only present on the surface and they do not extend through the depth of bituminous pavement, which we believe is most likely the case, a mill and overlay could help eliminate the surface distresses. However, if the distresses are found to be caused by underlying materials, a reclamation or reconstruction needs to be carried out to restore the structural capacity of the pavement. A separate forensic report will be delivered to the City once pavement coring has been completed.

Appendix A

Sunfish Lake
2018 PCI Map



Appendix B

Sunfish Lake
2018 Street PCI

Name	Section ID	Length (ft)	Area (ft²)	2018 PCI
<i>60TH ST W</i>	<i>2</i>	<i>809.83</i>	<i>16,196.58</i>	<i>30.80</i>
<i>60TH ST W</i>	<i>3</i>	<i>726.13</i>	<i>14,522.64</i>	<i>32.12</i>
<i>GRIEVE GLEN LN</i>	<i>8</i>	<i>1,350.79</i>	<i>32,418.85</i>	<i>35.73</i>
<i>UPPER 55TH ST E</i>	<i>1</i>	<i>1,060.26</i>	<i>22,265.37</i>	<i>36.12</i>
<i>60TH ST W</i>	<i>4</i>	<i>1,070.43</i>	<i>21,408.53</i>	<i>46.87</i>
<i>SUNNYSIDE LN</i>	<i>20</i>	<i>1,384.93</i>	<i>27,698.53</i>	<i>57.64</i>
<i>ANGELL RD</i>	<i>7</i>	<i>710.21</i>	<i>14,204.13</i>	<i>59.55</i>
<i>ANGELL RD</i>	<i>6</i>	<i>697.89</i>	<i>13,957.90</i>	<i>60.68</i>
<i>ZEHNDER RD</i>	<i>24</i>	<i>702.02</i>	<i>12,636.30</i>	<i>68.57</i>
<i>SALEM CHURCH RD</i>	<i>13</i>	<i>2,313.04</i>	<i>55,513.03</i>	<i>87.49</i>
<i>ROANOKE RD</i>	<i>9</i>	<i>880.63</i>	<i>20,254.49</i>	<i>92.00</i>
<i>SALEM CHURCH RD</i>	<i>14</i>	<i>2,188.1</i>	<i>52,514.32</i>	<i>92.39</i>
<i>SALEM CHURCH RD</i>	<i>15</i>	<i>537.06</i>	<i>12,889.53</i>	<i>92.82</i>
<i>SALEM CHURCH RD</i>	<i>12</i>	<i>221.21</i>	<i>5,309.00</i>	<i>94.42</i>
<i>ACORN DR</i>	<i>27</i>	<i>1,182.59</i>	<i>28,382.19</i>	<i>94.44</i>
<i>ANGELL RD</i>	<i>5</i>	<i>1,135.66</i>	<i>22,713.12</i>	<i>95.26</i>
<i>WINDY HILL CT</i>	<i>22</i>	<i>1,006.58</i>	<i>26,171.05</i>	<i>99.87</i>
<i>SALEM CHURCH RD</i>	<i>10</i>	<i>1,949.04</i>	<i>46,776.85</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>11</i>	<i>1,001.06</i>	<i>24,025.33</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>29</i>	<i>237.18</i>	<i>5,692.29</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>21</i>	<i>905.95</i>	<i>18,119.06</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>23</i>	<i>511.06</i>	<i>9,199.03</i>	<i>100.00</i>

APPENDIX E

Sunfish Lake Assessment Policy

CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA

SPECIAL ASSESSMENT POLICY

Section 1. Background. Chapter 429 of the Minnesota Statutes authorizes the City to levy special assessments for certain public improvements. The two most common types of public improvements within the City are street improvements and storm water improvements.

The City acknowledges that the validity of any special assessment to a particular lot depends on whether the amount of the assessment is equal to or less than the benefit conferred upon the lot by reason of the public improvement. Under state law, the benefit is determined by the increase in fair market value of the lot caused by reason of the improvement. The benefit rule controls all special assessments and supersedes any City formulas and calculations relating to how project costs are allocated. The City also acknowledges that assessments have to be uniformly imposed on similarly situated properties within a class of properties.

The first step in determining an assessment is to determine which portion of project costs will be paid by the City and which portion will be specially assessed. The second step is to spread or divide the total assessment amount among the various lots that have received a special benefit. This policy addresses both steps. The policy is a guideline and the Council has the authority to alter the policy from time to time based on facts and circumstances that the Council believes justify such changes.

Section 2. Street Improvements. The typical types of street improvements in the City are:

- a. Sealcoating;
- b. Mill and overlay; and
- c. Street reconstruction, including new pavement where none existed before.

If only sealcoating is being performed, the policy is not to assess the cost of the sealcoating. Rather, the City will pay the cost of sealcoating out of the general fund as a maintenance item.

Projects involving mill and overlay and street reconstruction will be specially assessed. The percentage of costs that will be specially assessed depends on the type of street.

Within the City, there are three (3) types of streets. They are:

- a. Collector Street. – A collector street is a City street that provides access to local streets, private streets, direct driveway access and is utilized by the surrounding area for trips originating outside of the City and terminating outside of the City limits. The number of through trips exceed the number of local trips. The City streets that meet this criteria are:

- Salem Church Road; and
- Charlton Road.

The assessment policy for a Collector Street is to assess 40% of street improvement cost to the specially benefitted properties.

- b. Neighborhood Collector Street - a neighborhood collector street is a City street that provides direct access to local streets, private streets, direct driveway access and has fewer trips that originate outside of the area and terminate outside the area than local trips. A local trip is considered a trip that remains within the City limits. The City streets that meet this criteria are:

- 60th Street North;
- Windy Hill Road; and
- Angell Road (east of Sunnyside Lane).

The assessment policy for a Neighborhood Collector Street is to assess 60% of street improvement cost to the specially benefitted properties.

- c. Local Street - a local street is a City Street that only provides direct access to private driveways which has trips that originate on the street and or terminate on the street. A local street includes a public street that provides access to shared driveways. The City Streets that meet this criteria are:

- Acorn Drive;
- Zehnder Road;
- 55th Street West;
- Roanoke Road;
- Grieve Glen Lane;
- Windy Hill Court; and
- Angell Road (west of Sunnyside Lane).

The assessment policy for a Local Street is to assess 80% of street improvement cost to the specially benefitted properties.

The special assessments for mill and overlay and for street reconstruction will be spread or divided on a per buildable lot basis with each such lot receiving an equal amount of assessment.

A special assessment for mill and overlay and for street reconstruction will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.

To the extent storm water improvements are constructed with the street improvements and are incident and ancillary to the street improvement and do not otherwise confer significant benefit to properties outside of the lots that would typically be assessed for the street improvements and do not constitute more than 50% of the project costs, the storm water improvements will be considered as part of the street assessments and will be levied on the same basis as the street assessments.

In general, in determining the specially benefitted properties for a street assessment, the following lots will be included:

- a. The lots that adjoin a public street or have indirect driveway access to the public street.
- b. The lots that adjoin or have indirect driveway access to a private street where the private street has access to the public street that is being improved.

Section 3. Storm Water Improvements. Storm water improvements include such items as culvert repair or reconstruction, holding ponds, erosion control, drainage ditch reconstruction, surface drainage improvements, trunk lines, and lateral lines.

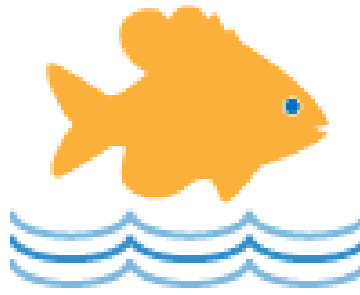
Storm water improvements can generally be placed into two (2) categories:

- a. Lateral Storm Water Management Improvements. Lateral storm water management improvements benefit the immediate adjacent area. Lateral storm water management improvements are storm water infrastructure facilities that receive runoff from adjacent public right of way or from some or all adjacent parcels but do not include significant runoff from locations that are off site of the improvements.
- b. Trunk Storm Water Management Improvements. Trunk storm water management improvements benefit an area that extends beyond the immediate property (i.e. beyond the lateral benefit). Trunk storm water management improvements manage runoff from areas of the City that are not immediately adjacent to the improvement. The trunk portion of an improvement is the size or cost of the improvement that exceeds the lateral storm water needs. Trunk storm water management improvements usually have a design and capacity to receive storm water runoff from lots that adjoin the improvement as well as non-adjoining lots.

Lateral storm water management improvements will be assessed to the adjacent specially benefitted properties on the same basis as a street assessment, taking into account the different classes of streets and allocating the assessable portion of the project on a per buildable lot basis.

With respect to trunk storm water management improvements, 50% of the project costs will be assessed and the assessable amount will be spread or divided among the specially benefitted properties on a per buildable lot basis with each such lot receiving an equal amount of assessment.

Special assessments for lateral storm water management improvements and trunk storm water management improvements will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.



FEASIBILITY REPORT

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT

CITY OF SUNFISH LAKE | DAKOTA COUNTY, MINNESOTA

DECEMBER 1, 2020

Prepared for:
City of Sunfish Lake

CITY PROJECT NO. 2021-04

WSB PROJECT NO. 014460-000



FEASIBILITY REPORT

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT

**FOR THE
CITY OF SUNFISH LAKE, MINNESOTA**

December 1, 2020

Prepared By:





December 1, 2020

Honorable Mayor and City Council
City of Sunfish Lake, MN
c/o Cathy Iago, City Clerk
7378 Jordan Ave S
Cottage Grove, MN 55016

Re: Feasibility Report
2021 Grieve Glen Lane Reconstruction Project
City of Sunfish Lake, MN
WSB Project No. 014460-000

Dear Honorable Mayor and City Council Members:

Attached for your review is a feasibility report which addresses improvements associated with the 2021 Grieve Glen Lane Reconstruction Project.

We would be happy to discuss this report with you at your convenience. Please contact me at 651.286.8474 if you have any questions or concerns.

Sincerely,

WSB

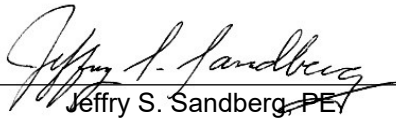

Jeffrey S. Sandberg, PE
City Engineer

Attachment

bpm

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.


Jeffrey S. Sandberg, PE

Date: December 1, 2020

Lic. No. 25393

Quality Control Review Completed By:


Lydia M. Eher, PE

Date: December 1, 2020

Lic. No. 57221

TABLE OF CONTENTS

TITLE SHEET
LETTER OF TRANSMITTAL
CERTIFICATION SHEET
TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	2
2.1	Authorization	2
2.2	Scope	2
2.3	Data Available	2
2.4	Project History	2
3.	EXISTING CONDITIONS	3
3.1	Surface	3
3.1.1	Roadway Alignment	3
3.1.2	Right-of-Way	3
3.1.3	Street Section	3
3.2	Drainage	3
3.3	Private Utilities	4
3.4	Criteria for Investigation	4
3.4.1	Surface	4
3.4.2	Drainage	4
4.	PROPOSED IMPROVEMENTS	5
4.1	Surface	5
4.1.1	Roadway Alignment	5
4.1.2	Right-of-Way	5
4.1.3	Street Section	5
4.2	Drainage	5
4.3	Construction Access/Staging	5
5.	FINANCING	6
5.1	Opinion of Probable Cost	6
5.2	Funding	6
6.	NECESSITY AND EFFECTIVENESS	7
7.	PROJECT SCHEDULE	8
8.	FEASIBILITY AND RECOMMENDATION	9

TABLE OF CONTENTS (continued)

Appendix A

Figure 1 – Project Location Map

Figure 2 – Typical Sections

Figure 3 – Existing Culvert Conditions

Appendix B

Opinion of Probable Cost

Appendix C

Assessment Map

Preliminary Assessment Roll

Appendix D

Pavement Condition Report

Appendix E

Grieve Glen Lane Forensic Report

Appendix F

Culvert Condition Report

Appendix G

Sunfish Lake Assessment Policy

1. EXECUTIVE SUMMARY

The 2021 Grieve Glen Lane Reconstruction Project consists of roadway surface improvements on Grieve Glen Lane from Delaware Avenue (CR 63) to the end of the cul-de-sac. A map illustrating the project location is shown on **Figure 1** in **Appendix A**.

Roadway surface improvements consist of the reconstruction of the existing roadway using the reclamation process. Additionally, existing storm culverts in the project area were reviewed and determined to need maintenance such as jetting out sediment and debris.

The cost of the 2021 Grieve Glen Lane Reconstruction Project, based on the recommended scope of work, is estimated at **\$166,234**. This includes a 10% contingency and 35% indirect costs. Funding for the project will consist of special assessments to benefitting properties and City financing.

The proposed project schedule includes construction beginning May 2021, with final completion by the fall of 2021.

The project is feasible, necessary, and cost-effective from an engineering standpoint and should be constructed as proposed herein.

2. INTRODUCTION

2.1 Authorization

On October 6, 2020, the Sunfish Lake City Council authorized a feasibility report for the 2021 Grieve Glen Lane Reconstruction Project.

2.2 Scope

This feasibility report includes roadway surface improvements and drainage improvements along Grieve Glen Lane from Delaware Avenue (CR 63) to the end of the cul-de-sac.

2.3 Data Available

Information and materials used in the preparation of this report include the following:

- City of Sunfish Lake Capital Improvement Plan
- City of Sunfish Lake Assessment Policy
- City of Sunfish Lake Property Index Records
- City of Sunfish Lake Pavement Condition Report (2018)
- Grieve Glen Lane Forensic Report
- City of Sunfish Lake Culvert Condition Report (2018)
- Field Observations of the Area

2.4 Project History

Grieve Glen Lane is identified in the City's Capital Improvement Plan to address the poor condition of the roadway.

3. EXISTING CONDITIONS

3.1 Surface

Grieve Glen Lane was constructed in 1996. Routine maintenance using seal coating and crack sealing was completed in 2013, and spot bituminous patching was completed in 2019.

In May of 2018, WSB completed a Pavement Condition Report for the City, summarizing the results of pavement inspections on all City streets. The results are shown as a calculated Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a new roadway with no distresses present.

The existing 2018 and projected 2020 PCI values for Grieve Glen Lane are shown below in **Table 1**.

Table 1 – Existing and Projected PCI Values		
Street	Existing PCI Value (2018)	Projected PCI Value (2020)
Grieve Glen Lane	36	18

The full Pavement Condition Report can be found in **Appendix D**.

Per the results of the Pavement Condition Report and at the direction of the City, WSB completed a Forensic Report for Grieve Glen Lane in May of 2018. A total of three pavement cores were taken along Grieve Glen Lane, and it was recommended that the street should be reconstructed using reclamation. The full Grieve Glen Lane Forensic Report can be found in **Appendix E**.

3.1.1 Roadway Alignment

Grieve Glen Lane has a typical vertical and horizontal alignment for a residential neighborhood.

3.1.2 Right-of-Way

The existing right-of-way width for Grieve Glen Lane is 50 feet.

3.1.3 Street Section

The street width of Grieve Glen Lane is 22 feet and consists of a rural section. The pavement is failing, resulting in large areas of severe bituminous cracking and fracture.

3.2 Drainage

Existing drainage infrastructure consists of roadway ditches along both sides of Grieve Glen Lane, conveying stormwater to neighboring lakes or wetlands. Grieve Glen Lane has seven storm culverts conveying stormwater under driveways of the roadway itself.

In June of 2018, WSB completed a Culvert Condition Report, summarizing the results of culvert inspections on all culverts within the City right-of-way. The results are shown as a calculated rating based on the MnDOT HydInfra Inspection Manual. The ratings are based on a 1 to 4 scale, with 1 being 'excellent' and 4 being 'very poor'.

Five of the seven culverts on Grieve Glen Lane received a rating of 2, or 'fair'. The sixth culvert was not able to be rated and wasn't visible. The seventh culvert received a rating of 3, or 'poor'.

The full Culvert Condition Report can be found in **Appendix F**.

In October of 2020, WSB staff completed a field visit to verify the conditions of all the culverts in the project area. While most of the culverts were filled with sediment, the structural integrity of the culverts is sound. Images taken during the field visit can be found on **Figure 3** in **Appendix A**.

3.3 Private Utilities

Private utilities that have facilities in or near the project area will be notified during the final design phase of the project. They will be requested to coordinate any necessary repairs and replacements as needed at their cost. Private utility companies that have facilities within the project area include the following:

- Comcast (Telephone/Internet)
- CenturyLink (Telephone/Internet)
- Sprint (Telephone)
- Xcel Energy (Electric/Gas)

3.4 Criteria for Investigation

Local streets identified to be reviewed for improvements will be reviewed against current City standards and policy where applicable.

3.4.1 Surface

Bituminous seal coating is a street maintenance method that is recommended on streets with a PCI ranging from 60 to 100.

Milling and overlaying is a street rehabilitation method that is recommended on streets with a PCI ranging from 30 to 70.

Reconstructions and reclamations are street improvement methods that are recommended on streets with a PCI ranging from 0 to 40.

3.4.2 Drainage

Current City Standards will be utilized for stormwater management and water quality design.

4. PROPOSED IMPROVEMENTS

4.1 Surface

Grieve Glen Lane is proposed to be reconstructed using the reclamation process. Reclamation consists of pulverizing the existing bituminous pavement in-place and mixing it with the underlying aggregate base to create a stronger, recycled base layer. On top of this layer of reclaimed aggregate will be two new layers of asphalt.

4.1.1 Roadway Alignment

The proposed improvements will maintain the existing vertical and horizontal alignments of the roadway.

4.1.2 Right-of-Way

All proposed improvements are located within the platted right-of-way, so no permanent easements will be required. Temporary construction easements or waivers of trespass may be required for utility improvements, if applicable.

4.1.3 Street Section

The proposed typical section is shown on *Figure 2* in *Appendix A*.

4.2 Drainage

Due to the ratings of the seven culverts in the Culvert Condition Report, culvert jetting and maintenance is proposed for all seven culverts in the project area.

4.3 Construction Access/Staging

The contractor will be responsible for providing access to properties throughout the project. Signed detours will be required to direct traffic around the construction zones and notify users of the increased truck and construction activity as needed.

5. FINANCING

5.1 Opinion of Probable Cost

A detailed opinion of probable cost is included in **Appendix B** of this report. The opinion of probable cost is based on projected construction costs for 2021 and includes a 10% contingency and 35% indirect costs. The indirect costs include engineering, legal and administrative costs associated with the project.

The total project cost is estimated at **\$166,234**.

5.2 Funding

Funding for the 2021 Grieve Glen Lane Reconstruction Project will be through assessments to benefitting properties and City financing.

Assessments will be levied to the benefitting properties as outlined in Minnesota Statute 429 and the City's assessment policy, found in **Appendix G**. Detailed preliminary assessment rolls are included in **Appendix C**. Prior to the finalization of the assessment roll, a Special Assessment Benefit Appraisal will be performed for the adjacent properties.

Financing the 2021 Grieve Glen Lane Reconstruction Project will be based on the City's special assessment policy, which can be found in **Appendix G**. The policy calls for 80% of the proposed improvements to be specially assessed for roads identified as Local Streets, which Grieve Glen Lane is designated as. The remaining 20% of the improvements will be financed by the City.

A summary of the assessment rates is:

- Single-Family Reconstruction\$19,000/unit

The project funding is summarized as follows:

2021 Grieve Glen Lane Reconstruction Project Project Funding Summary	
Funding Source	Proposed Funding
Special Assessments	\$133,000
City Financing	\$33,234
TOTAL	\$166,234

6. NECESSITY AND EFFECTIVENESS

The improvements proposed in this report are necessary for several reasons.

The proposed roadway improvements provide the City with a high quality, aesthetically pleasing roadway while minimizing maintenance concerns, eliminating existing safety concerns, and extending the life expectancy of the roadway.

The proposed drainage improvements provide the City with a cost-effective solution while minimizing maintenance concerns and extending the life expectancy of the culverts.

Combining the roadway and drainage improvements into one project will provide a project large enough to ensure a competitive bidding environment and economy of scale, and therefore, are deemed to be cost-effective. Based on the information contained in this report, the proposed improvements as described can be considered to be necessary, cost-effective, and feasible from an engineering standpoint.

7. PROJECT SCHEDULE

The proposed schedule for the 2021 Grieve Glen Lane Reconstruction Project is as follows:

City Council Authorizes Feasibility Report	October 6, 2020
City Council Gives Preliminary Consideration to Draft Feasibility Report	December 1, 2020
City Council Gives Final Consideration to Feasibility Report And Orders Public Hearing	February 2, 2021
City Council Approves Preliminary Financing, and holds Public Hearing	March 2, 2021
City Council Authorized Preparation of Plans and Specifications	March 2, 2021
Plans/Specifications Preparation	March - April 2021
City Council Approves Plans/Specifications & Authorizes Bidding	April 6, 2021
Project Bidding	May 2021
Award Contract	June 2021
Construction	June – September 2021
Assessment Hearing	September 7, 2021
First Payment Due with 2022 Taxes	May 2022

8. FEASIBILITY AND RECOMMENDATION

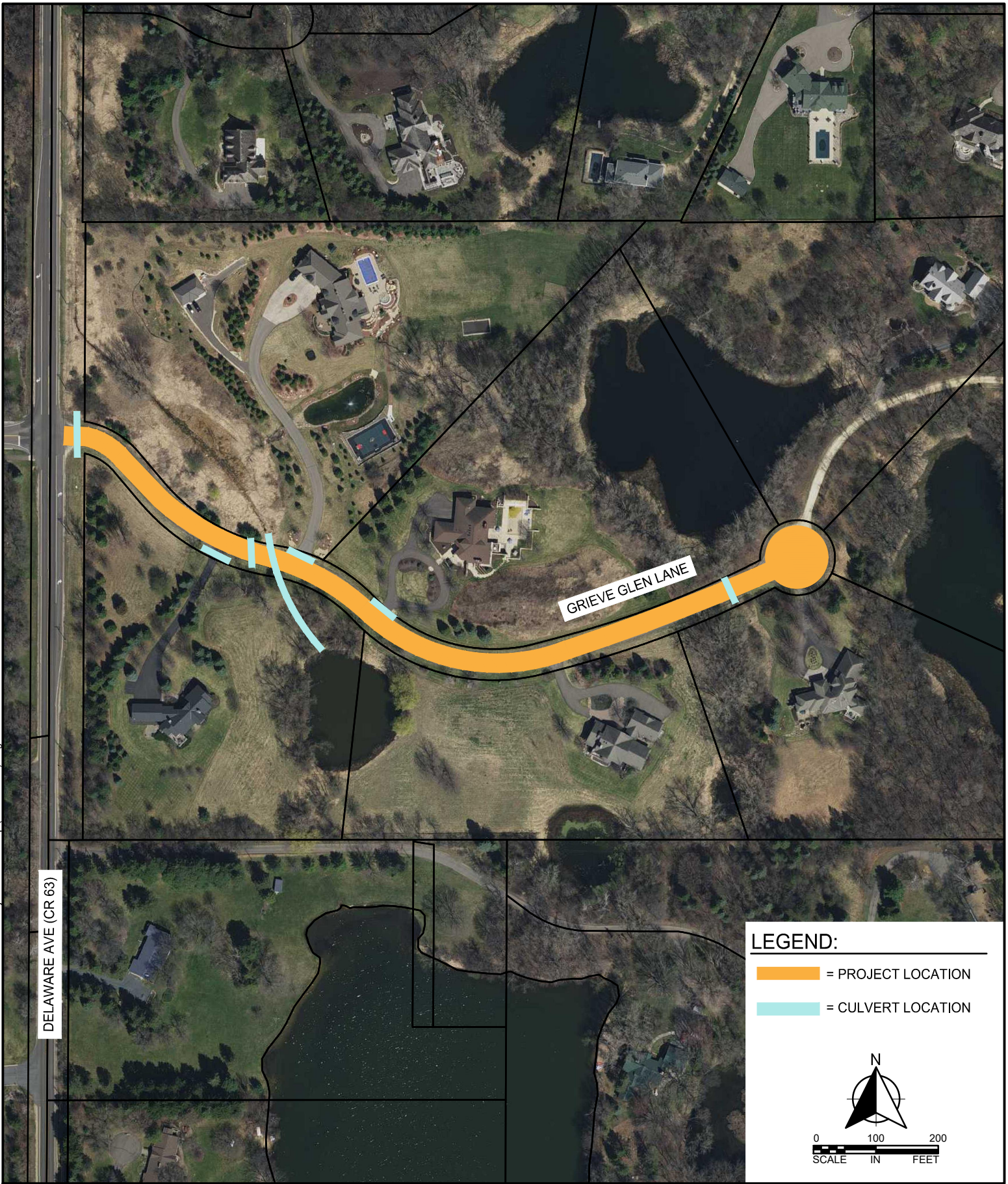
The 2021 Grieve Glen Lane Reconstruction Project consists of roadway and drainage improvements. The cost of the project is estimated at **\$166,234**.

Based on the information contained within this report, the proposed improvements as described are necessary, cost-effective, and feasible from an engineering standpoint. WSB recommends construction of the proposed improvements as detailed in this report. The economic feasibility of this project will be determined by the City Council.

APPENDIX A

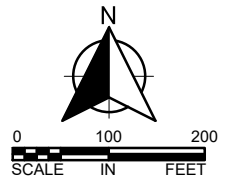
Figure 1 – Project Location Map
Figure 2 – Typical Sections
Figure 3 – Existing Culvert Conditions

K:\014460-000\Cad\Exhibits\Grieve Glen Lane\014460-000 Project Location Map (Grieve Glen).dwg 10/15/2020 8:42:57 AM



LEGEND:

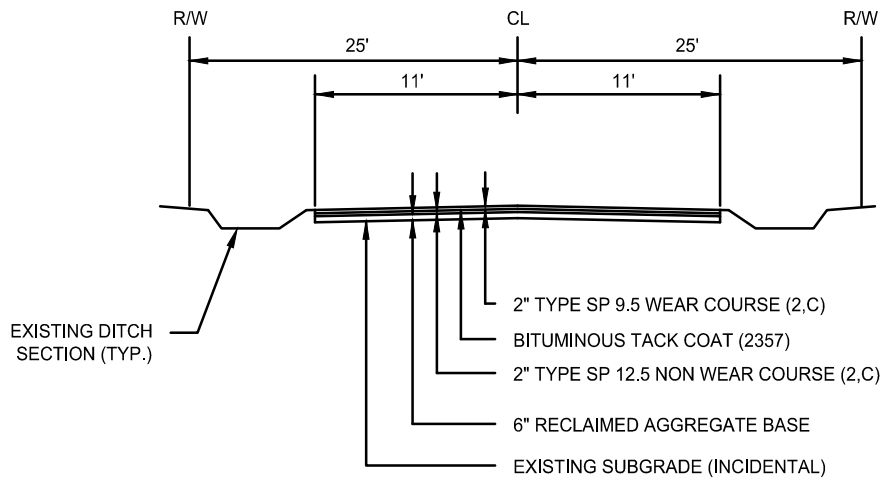
-  = PROJECT LOCATION
-  = CULVERT LOCATION



WSB PROJECT NO.:
014460-000

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT
FIGURE 1 - PROJECT LOCATION MAP
CITY OF SUNFISH LAKE, MN





STREET RECONSTRUCTION



WSB PROJECT NO.:
014460-000

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT FIGURE 2 - TYPICAL SECTIONS CITY OF SUNFISH LAKE, MN





K:\014460-000\Cad\Exhibits\Grieve Glen Lane\014460-000 Existing Culvert Conditions (Grieve Glen).dwg 11/2/2020 11:26:47 AM



WSB PROJECT NO.:
014460-000

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT FIGURE 3 - EXISTING CULVERT CONDITIONS CITY OF SUNFISH LAKE, MN



APPENDIX B

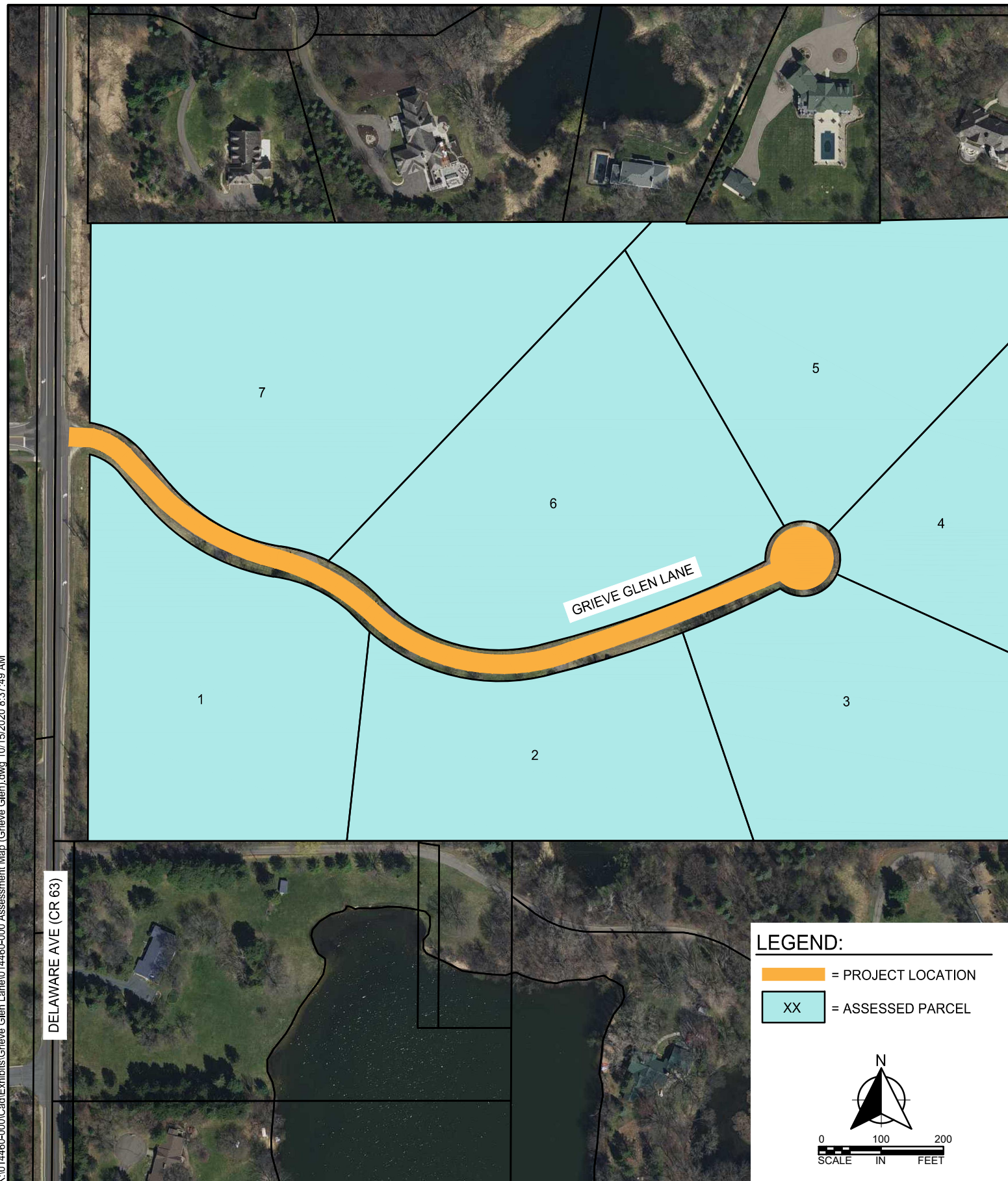
Opinion of Probable Cost

OPINION OF PROBABLE COST						
<i>WSB Project:</i> 2021 Grieve Glen Lane Reconstruction Project <i>Project Location:</i> Sunfish Lake <i>City Project No.:</i> 2021-04 <i>WSB Project No.:</i> 014460-000					<i>Design By:</i> BPM <i>Checked By:</i> JSS <i>Date:</i> 12/1/2020	
Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
A. Grieve Glen Lane Improvements						
1	2021.501	MOBILIZATION	LS	1	\$ 5,000.00	\$ 5,000.00
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	30	\$ 5.00	\$ 150.00
3	2106.507	EXCAVATION - COMMON	C Y	10	\$ 20.00	\$ 200.00
4	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOURL	10	\$ 150.00	\$ 1,500.00
5	2130.523	WATER	MGAL	20	\$ 50.00	\$ 1,000.00
6	2215.504	FULL DEPTH RECLAMATION	S Y	3980	\$ 3.00	\$ 11,940.00
7	2215.607	HAUL FULL DEPTH RECLAMATION (SV)	C Y	450	\$ 15.00	\$ 6,750.00
8	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	200	\$ 3.00	\$ 600.00
9	2360.509	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	500	\$ 75.00	\$ 37,500.00
10	2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (2,C)	TON	500	\$ 75.00	\$ 37,500.00
11	2501.602	CLEAN PIPE CULVERT	EACH	7	\$ 1,000.00	\$ 7,000.00
12	2563.601	TRAFFIC CONTROL	L S	1	\$ 2,000.00	\$ 2,000.00
13	2573.503	SEDIMENT CONTROL LOG WOOD FIBER	L F	200	\$ 2.00	\$ 400.00
14	2573.503	SILT FENCE TYPE MS	L F	200	\$ 2.00	\$ 400.00
					CONSTRUCTION TOTAL	\$ 111,940.00
					CONTINGENCY TOTAL (10%)	\$ 11,194.00
					SUBTOTAL	\$ 123,134.00
					INDIRECT COST TOTAL (35%)	\$ 43,100.00
					TOTAL	\$ 166,234.00
					GRAND TOTAL	\$ 166,234.00

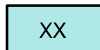
APPENDIX C

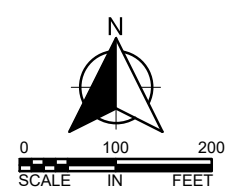
Assessment Map
Preliminary Assessment Roll

K:\014460-000\Cad\Exhibits\Grieve Glen Lane\014460-000 Assessment Map (Grieve Glen).dwg 10/15/2020 8:37:49 AM



LEGEND:

-  = PROJECT LOCATION
-  = ASSESSED PARCEL



WSB PROJECT NO.:
014460-000

2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT
ASSESSMENT MAP
CITY OF SUNFISH LAKE, MN



CITY OF SUNFISH LAKE, MN
2021 GRIEVE GLEN LANE RECONSTRUCTION PROJECT
PRELIMINARY ASSESSMENT ROLL

Date: 12/1/2020	Rate
-----------------	------

City Project No. 2021-03
WSB Project No. 014460-000

Date: 12/1/2020

	Rate
Single Family Reconstruction Assessment:	\$19,000.00

[illegible]

APPENDIX D

Pavement Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: May 7, 2018

Re: Pavement Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this pavement condition report summarizing the results of the pavement inspection performed on April 30, 2018 on all the City streets. The distresses observed on the surface of roadways evaluated were analyzed using our pavement management software, PAVER to calculate the Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a brand-new roadway with no distresses present.

Bituminous roadways were evaluated but gravel road and private roads were not rated. A map showing the condition rating can be found labeled in the **Appendix A** section of this report. The condition rating for each street is included in a table in **Appendix B**. Any type of road maintenance (i.e. patching or crack sealing) done prior to inspections is accounted for in each PCI value. The weighted average was computed by averaging the PCI values based on the area of each segment, which was calculated to be 78.

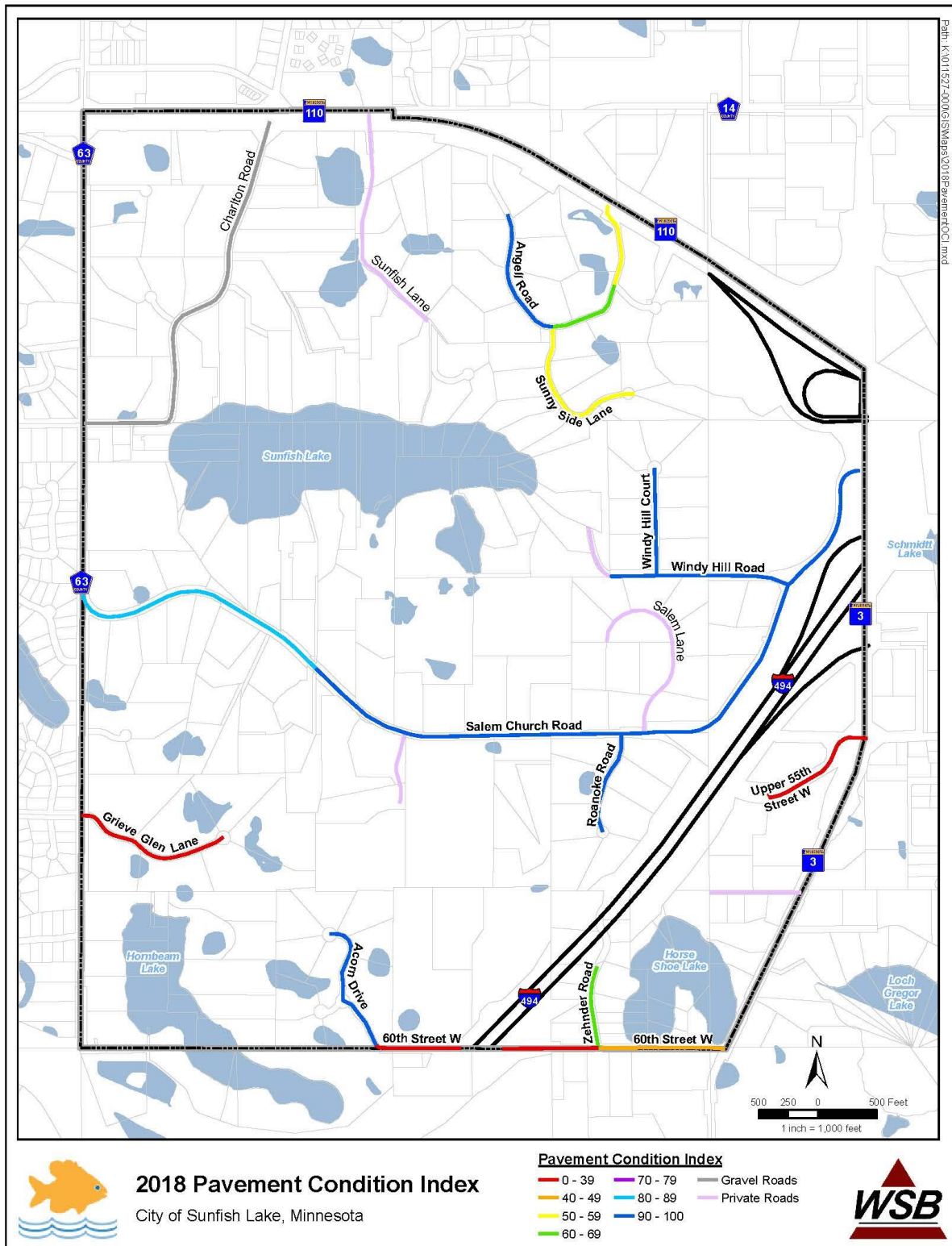
On new roads with high PCI values, which are in the range from 80 to 100, we would recommend performing preventative maintenance such as crack sealing or chip sealing, or a combination of both to protect the road surface from infiltration of water and incompressible materials as well as oxidation. Good candidates for preventative maintenance upon field inspection are Salem Church Road, Roanoke Road, Windy Hill Road, and Windy Hill Court.

There are areas where the PCI values of pavements have dropped drastically since last inspection in 2015, such as 60th Street West and Grieve Glen Lane. It is important to note that these roads were previously chip sealed and the treatment masked the existing distresses of the pavements. Thus, when these roads were reviewed this year, the PCI values are much lower than when rated in 2015 because the distresses have surfaced through the layer of chip seal.

It is our understanding that the condition of Grieve Glen Lane is a concern to the City. The PCI of this road obtained from field inspection is 36, which indicates that the street is in poor condition needing a major repair. The street is highly raveled with potholes developing. Pavement coring will be performed on this street to determine the extent of distresses. If the distresses are only present on the surface and they do not extend through the depth of bituminous pavement, which we believe is most likely the case, a mill and overlay could help eliminate the surface distresses. However, if the distresses are found to be caused by underlying materials, a reclamation or reconstruction needs to be carried out to restore the structural capacity of the pavement. A separate forensic report will be delivered to the City once pavement coring has been completed.

Appendix A

Sunfish Lake
2018 PCI Map



Appendix B

Sunfish Lake
2018 Street PCI

Name	Section ID	Length (ft)	Area (ft²)	2018 PCI
<i>60TH ST W</i>	<i>2</i>	<i>809.83</i>	<i>16,196.58</i>	<i>30.80</i>
<i>60TH ST W</i>	<i>3</i>	<i>726.13</i>	<i>14,522.64</i>	<i>32.12</i>
<i>GRIEVE GLEN LN</i>	<i>8</i>	<i>1,350.79</i>	<i>32,418.85</i>	<i>35.73</i>
<i>UPPER 55TH ST E</i>	<i>1</i>	<i>1,060.26</i>	<i>22,265.37</i>	<i>36.12</i>
<i>60TH ST W</i>	<i>4</i>	<i>1,070.43</i>	<i>21,408.53</i>	<i>46.87</i>
<i>SUNNYSIDE LN</i>	<i>20</i>	<i>1,384.93</i>	<i>27,698.53</i>	<i>57.64</i>
<i>ANGELL RD</i>	<i>7</i>	<i>710.21</i>	<i>14,204.13</i>	<i>59.55</i>
<i>ANGELL RD</i>	<i>6</i>	<i>697.89</i>	<i>13,957.90</i>	<i>60.68</i>
<i>ZEHNDER RD</i>	<i>24</i>	<i>702.02</i>	<i>12,636.30</i>	<i>68.57</i>
<i>SALEM CHURCH RD</i>	<i>13</i>	<i>2,313.04</i>	<i>55,513.03</i>	<i>87.49</i>
<i>ROANOKE RD</i>	<i>9</i>	<i>880.63</i>	<i>20,254.49</i>	<i>92.00</i>
<i>SALEM CHURCH RD</i>	<i>14</i>	<i>2,188.1</i>	<i>52,514.32</i>	<i>92.39</i>
<i>SALEM CHURCH RD</i>	<i>15</i>	<i>537.06</i>	<i>12,889.53</i>	<i>92.82</i>
<i>SALEM CHURCH RD</i>	<i>12</i>	<i>221.21</i>	<i>5,309.00</i>	<i>94.42</i>
<i>ACORN DR</i>	<i>27</i>	<i>1,182.59</i>	<i>28,382.19</i>	<i>94.44</i>
<i>ANGELL RD</i>	<i>5</i>	<i>1,135.66</i>	<i>22,713.12</i>	<i>95.26</i>
<i>WINDY HILL CT</i>	<i>22</i>	<i>1,006.58</i>	<i>26,171.05</i>	<i>99.87</i>
<i>SALEM CHURCH RD</i>	<i>10</i>	<i>1,949.04</i>	<i>46,776.85</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>11</i>	<i>1,001.06</i>	<i>24,025.33</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>29</i>	<i>237.18</i>	<i>5,692.29</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>21</i>	<i>905.95</i>	<i>18,119.06</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>23</i>	<i>511.06</i>	<i>9,199.03</i>	<i>100.00</i>

APPENDIX E

Grieve Glen Lane Forensic Report



Technical Memorandum

To: *Jeff Sandberg, PE*
City Engineer

From: *Andrea Blanchette, PE*
Sheue Torng Lee, EIT
Tom Wood

Date: *May 11, 2018*

Re: *Pavement Coring Forensic Report*
WSB Project Number: 012011

Introduction

WSB & Associates, Inc. is pleased to submit this pavement forensics report detailing the results of the pavement coring performed on May 10, 2018 along Grieve Glen Lane in the City of Sunfish Lake. The various characteristics of the pavement cores were analyzed to assist in determining an appropriate pavement maintenance or rehabilitation method for this roadway segment.

A total of 3 pavement cores were taken along Grieve Glen Lane. The locations of the pavement cores are summarized in **Figure 1**. A summary of the pavement depths and conditions, and recommended maintenance activity for each core location is shown on **Table 1**. Pictures of the pavement cores and roadway surface are shown in **Appendix A** of this report.

Mr. Jeff Sandberg
May 11, 2018



Figure 1. Pavement core locations taken within the City of Sunfish Lake along Grieve Glen Lane.

Table 1. Pavement core information.

Core ID	Bituminous Depth (inches)	Aggregate Depth (inches)	Notes	Recommended Maintenance Activity
1	4	5.5 - 6	Core was in poor condition with the top 0.5" delaminated from the bottom. Core showed signs of deterioration.	Full Depth Reclamation (FDR)
2	3.5	5.5 - 6	Core was in good condition with a 1.75" top lift.	
3	4	5.5 - 6	Core showed signs of delamination and deterioration. Top lift was 2" thick.	

Note: Please refer to the summary section for detailed explanations.

Full Depth Reclamation (FDR): FDR involves pulverizing the full depth of bituminous and a portion of the underlying material and blending them together to provide a sound base to the new pavement. This process helps to eliminate the existing distresses. The reclaimed mixture can be topped with different types of surface course, depending on the structural requirements and anticipated traffic level.

Mill and Overlay: A mill and overlay involves grinding a portion of the in-place asphalt surface and topping it with a bituminous wearing course over the entire surface. A mill and overlay can only eliminate some of the surface distresses, thus it is common to see cracks reflecting through the new pavement within a few years. It is important to note that additional patching would be anticipated on areas with thinner bituminous that may be encountered once the surface is milled. Because of the existing condition of the pavement and the delamination and condition of the cores, it would not be recommended to try a mill and overlay along Grieve Glen Lane.

Summary of Findings and Recommendations

Several factors are considered when determining the number of pavement cores to be taken, including the pavement condition or visible distresses present on the pavement and the variability of the pavement depth as the cores are being completed. Pavement coring identifies what exists underneath the visible layer of the pavement and can give a lot of information including depths of the pavement layers, signs of bonding or debonding, and distresses that might not be visible from the road surface.

The pavement surface rating on Grieve Glen Lane was determined to be a 36, which falls into the poor category requiring a major fix. The road was previously chip sealed, and observed to be highly raveled with potholes developing. Three cores taken along this street had bituminous depths ranging from 3.5 inches to 4 inches. One of the cores was in good condition but the remaining two cores showed signs of deterioration and delamination. There was 5.5 inches to 6 inches of crushed limestone found underneath the bituminous layer.

Core #3 was taken on one of the worst locations on Grieve Glen Lane where high severity potholes were found and it was determined that delamination was developing on the top 0.5 inches of the bituminous core. It was also seen on Core #1 that the top 0.5 inches was completely stripped off the bottom. Although the distresses observed on the surface did not extend through the full depth of bituminous layer, a 2-inch mill and overlay would not be recommended based on the condition of the cores taken in this study. The left in-place bituminous after milling would be too thin (approximately 1.5 inches to 2 inches), paired with areas where the bituminous had deteriorated, the existing pavement would crumble easily as it does not have the capacity to withstand construction traffic. It would be our recommendation to perform a Full Depth Reclamation (FDR). There is no curb and gutter, and there is sufficient underlying material (crushed limestone) which would serve as a suitable base material for a reclamation. This activity would disrupt existing crack patterns and allow a new surface to be placed over the reclaimed materials. A FDR is estimated to last between 20 and 30 years if properly designed and appropriate preventative maintenance is performed.

Mr. Jeff Sandberg
May 11, 2018

Appendix A

Sunfish Lake Coring Pictures

Core 1



Core 2



Core 3



APPENDIX F

Culvert Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: June 7, 2018

Re: Culvert Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this culvert condition report summarizing the results of the culvert inspection performed in May. The culverts were inspected in accordance with the MnDOT HydInfra Inspection Manual. Using the ratings guide from the manual, the condition ratings are listed as follows.

<u>Rating</u>	<u>Condition</u>	<u>Description</u>
1	Excellent	Like new condition
2	Fair	Some wear, but structurally sound
3	Poor	Deteriorated, consider for repair or replacement
4	Very Poor	Serious deterioration

A map showing the condition rating can be found labeled in the **Appendix A** section of this report. Some culverts may be buried, submerged, or out of sight and they were labeled as “Not Able to Rate/Not Visible” with a 0 rating as shown in the map. The condition rating and comment for each culvert is included in a table in **Appendix B**.

The table below summarizes the number of culverts inspected under each condition category.

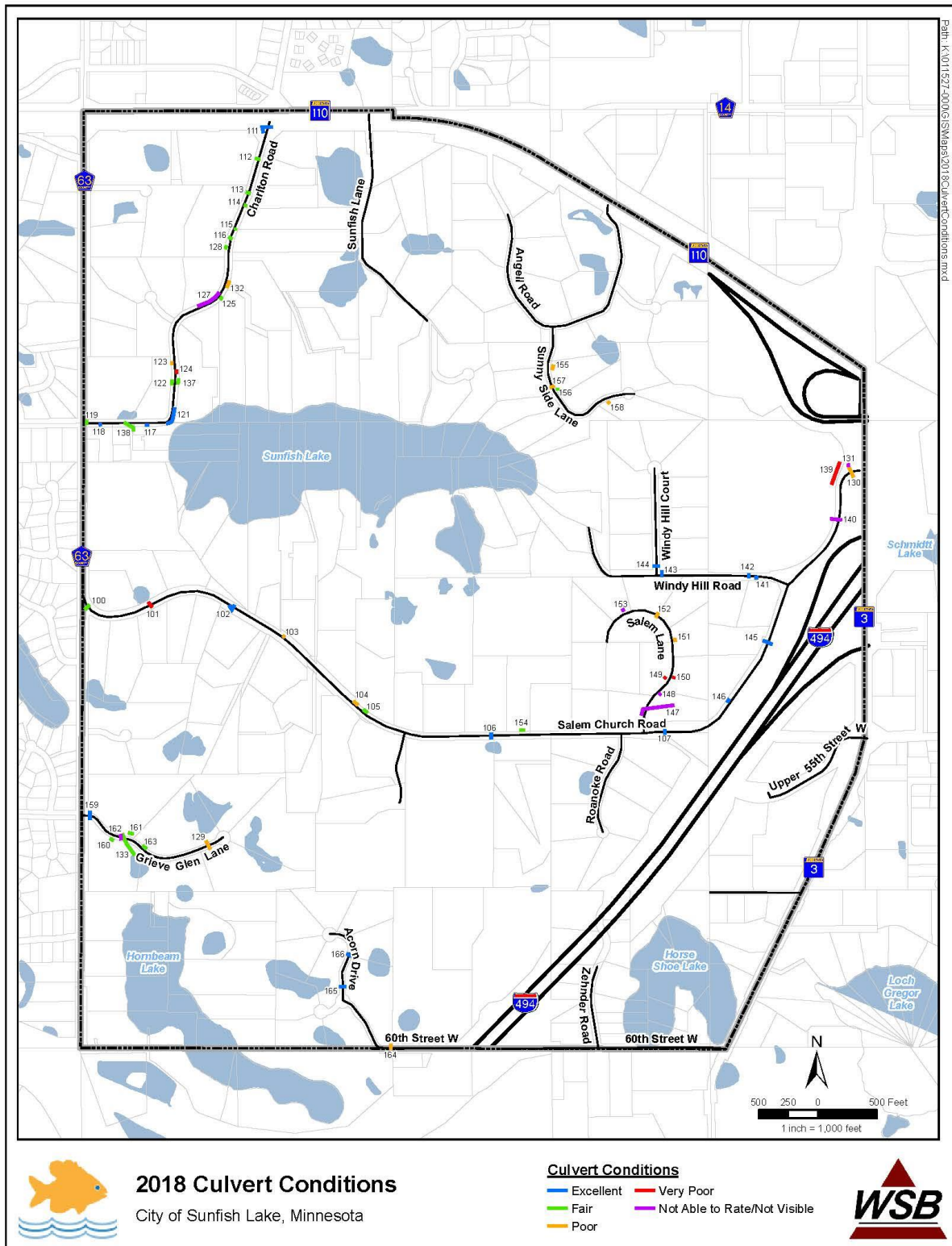
Rating	Condition	Number of Culvert
0	Not able to rate / not visible	7
1	Excellent	16
2	Fair	19
3	Poor	12
4	Very poor	5

Of the 59 culverts evaluated in this survey, it was determined that a majority of the culverts were rated in excellent or fair condition, however, several culverts in these categories have sediment or debris built up and need cleaning performed. Some culverts from the survey were plugged so that water flow is reduced or prevented and they are no longer functioning as desired. There were also a few culverts that need repair.

Photos of the culverts taken during inspection were documented but not included in this report. However, the photos may be provided to the City upon request.

Appendix A

Sunfish Lake 2018 Culvert Condition Map



Appendix B

Sunfish Lake 2018 Culvert Condition and Rating

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Additional Comments
127	City	4	Drain Tile	225	0	Not Able to Rate/Not Visible	
131	MnDOT	24	RCP	26	0	Not Able to Rate/Not Visible	Could be connecting to Culvert #130 but not visible upon inspection
140	City	24	CMP	97	0	Not Able to Rate/Not Visible	Could not locate the culvert
147	City	12	CMP	55	0	Not Able to Rate/Not Visible	Outlet plugged, inlet mostly plugged
148	City	10	CMP	18.5	0	Not Able to Rate/Not Visible	Almost full of debris
153	City	12	CMP	25	0	Not Able to Rate/Not Visible	Could not locate the culvert
162	City	18	CMP	52	0	Not Able to Rate/Not Visible	Could not locate the culvert
102	City	18	CHD Plastic	45	1	Excellent	Culvert has been lined with plastic
106	City	24	CHD Plastic	56	1	Excellent	
107	City	24	CMP	47	1	Excellent	
111	MnDOT	18	CMP	89	1	Excellent	New, located on state right-of-way
117	City	15	CMP	36	1	Excellent	Looks new
118	City	18	CMP	21	1	Excellent	
121	City	16	CMP	172	1	Excellent	Clean
141	City	15	CMP	24.5	1	Excellent	Bush covering West end of the culvert
142	City	18	CMP	44	1	Excellent	New
143	City	18	CMP	47	1	Excellent	2 culverts
144	City	15	CMP	54	1	Excellent	
145	City	48	RCP	86	1	Excellent	
146	City	15	CMP	30	1	Excellent	
159	City	15	RCP	74	1	Excellent	Very good
165	City	18	RCP	56	1	Excellent	Discharge needs cleaning
166	City	18	RCP	50	1	Excellent	Needs cleaning

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Comments
100	City	18	CMP	55	2	Fair	1/3 full of debris
105	City	18	CMP	48	2	Fair	
112	City	18	RCP	46	2	Fair	East end needs cleaning
113	City	18	RCP	42	2	Fair	West discharge needs cleaning
114	City	15	CMP	27	2	Fair	Ditch needs cleaning
115	City	12	CMP	19	2	Fair	Needs cleaning
116	City	18	RCP	34	2	Fair	
119	MnDOT	27	RCP	36	2	Fair	
122	City	15	CMP	42	2	Fair	Needs cleaning
125	City	16	CMP	34	2	Fair	
128	City	15	CMP	34	2	Fair	Half full of debris. Ditch needs cleaning
133	City	24	RCP	210	2	Fair	Discharge needs cleaning
137	City	15	CMP	50	2	Fair	Discharge needs cleaning
138	City	15	CMP	36	2	Fair	
154	City	16	RCP	48	2	Fair	Needs cleaning
156	City	12	CMP	12	2	Fair	
160	City	15	CMP	35	2	Fair	East apron needs repair
161	City	15	CMP	48	2	Fair	
163	City	15	CMP	35	2	Fair	
103	City	24	CMP	22	3	Poor	Needs cleaning, Clean and Re-Evaluate
104	City	15	CMP	51	3	Poor	Discharge half full of debris, Clean and Re-Evaluate
123	City	12	CMP	20	3	Poor	Needs cleaning, Clean and Re-Evaluate
129	City	18	RCP	85	3	Poor	Needs cleaning, Clean and Re-Evaluate
130	MnDOT	24	RCP	99	3	Poor	North apron is broken, needs to be replaced

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Comments
132	City	12	CMP	63	3	Poor	Discharge 80% plugged, Clean and Re-Evaluate
151	City	12	CMP	25	3	Poor	Outlet plugged, Clean and Re-evaluate
152	City	18	CMP	46	3	Poor	
155	City	12	CMP	45	3	Poor	East end smashed needs to be replaced
157	City	18	CMP	37	3	Poor	Needs cleaning, Clean and Re-Evaluate
158	City	12	CMP	18	3	Poor	Discharge needs cleaning, Clean and Re-Evaluate
164	City	18	CMP	50	3	Poor	Discharge needs cleaning, Clean and Re-Evaluate
101	City	27	CMP	56	4	Very poor	North end smashed. South end buried under logs
124	City	15	CMP	36	4	Very poor	Culvert 60% plugged
139	City	30	CMP	203	4	Very poor	North outlet submerged
149	City	12	CMP	20	4	Very poor	Ends smashed could not see into the culvert
150	City	18	CMP	19	4	Very poor	Rusty

APPENDIX G

Sunfish Lake Assessment Policy

CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA

SPECIAL ASSESSMENT POLICY

Section 1. Background. Chapter 429 of the Minnesota Statutes authorizes the City to levy special assessments for certain public improvements. The two most common types of public improvements within the City are street improvements and storm water improvements.

The City acknowledges that the validity of any special assessment to a particular lot depends on whether the amount of the assessment is equal to or less than the benefit conferred upon the lot by reason of the public improvement. Under state law, the benefit is determined by the increase in fair market value of the lot caused by reason of the improvement. The benefit rule controls all special assessments and supersedes any City formulas and calculations relating to how project costs are allocated. The City also acknowledges that assessments have to be uniformly imposed on similarly situated properties within a class of properties.

The first step in determining an assessment is to determine which portion of project costs will be paid by the City and which portion will be specially assessed. The second step is to spread or divide the total assessment amount among the various lots that have received a special benefit. This policy addresses both steps. The policy is a guideline and the Council has the authority to alter the policy from time to time based on facts and circumstances that the Council believes justify such changes.

Section 2. Street Improvements. The typical types of street improvements in the City are:

- a. Sealcoating;
- b. Mill and overlay; and
- c. Street reconstruction, including new pavement where none existed before.

If only sealcoating is being performed, the policy is not to assess the cost of the sealcoating. Rather, the City will pay the cost of sealcoating out of the general fund as a maintenance item.

Projects involving mill and overlay and street reconstruction will be specially assessed. The percentage of costs that will be specially assessed depends on the type of street.

Within the City, there are three (3) types of streets. They are:

- a. Collector Street. – A collector street is a City street that provides access to local streets, private streets, direct driveway access and is utilized by the surrounding area for trips originating outside of the City and terminating outside of the City limits. The number of through trips exceed the number of local trips. The City streets that meet this criteria are:

- Salem Church Road; and
- Charlton Road.

The assessment policy for a Collector Street is to assess 40% of street improvement cost to the specially benefitted properties.

- b. Neighborhood Collector Street - a neighborhood collector street is a City street that provides direct access to local streets, private streets, direct driveway access and has fewer trips that originate outside of the area and terminate outside the area than local trips. A local trip is considered a trip that remains within the City limits. The City streets that meet this criteria are:

- 60th Street North;
- Windy Hill Road; and
- Angell Road (east of Sunnyside Lane).

The assessment policy for a Neighborhood Collector Street is to assess 60% of street improvement cost to the specially benefitted properties.

- c. Local Street - a local street is a City Street that only provides direct access to private driveways which has trips that originate on the street and or terminate on the street. A local street includes a public street that provides access to shared driveways. The City Streets that meet this criteria are:

- Acorn Drive;
- Zehnder Road;
- 55th Street West;
- Roanoke Road;
- Grieve Glen Lane;
- Windy Hill Court; and
- Angell Road (west of Sunnyside Lane).

The assessment policy for a Local Street is to assess 80% of street improvement cost to the specially benefitted properties.

The special assessments for mill and overlay and for street reconstruction will be spread or divided on a per buildable lot basis with each such lot receiving an equal amount of assessment.

A special assessment for mill and overlay and for street reconstruction will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.

To the extent storm water improvements are constructed with the street improvements and are incident and ancillary to the street improvement and do not otherwise confer significant benefit to properties outside of the lots that would typically be assessed for the street improvements and do not constitute more than 50% of the project costs, the storm water improvements will be considered as part of the street assessments and will be levied on the same basis as the street assessments.

In general, in determining the specially benefitted properties for a street assessment, the following lots will be included:

- a. The lots that adjoin a public street or have indirect driveway access to the public street.
- b. The lots that adjoin or have indirect driveway access to a private street where the private street has access to the public street that is being improved.

Section 3. Storm Water Improvements. Storm water improvements include such items as culvert repair or reconstruction, holding ponds, erosion control, drainage ditch reconstruction, surface drainage improvements, trunk lines, and lateral lines.

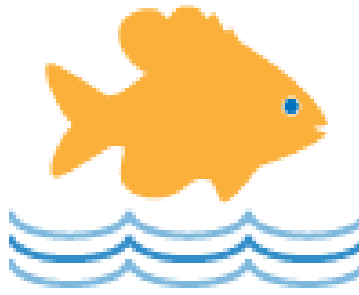
Storm water improvements can generally be placed into two (2) categories:

- a. Lateral Storm Water Management Improvements. Lateral storm water management improvements benefit the immediate adjacent area. Lateral storm water management improvements are storm water infrastructure facilities that receive runoff from adjacent public right of way or from some or all adjacent parcels but do not include significant runoff from locations that are off site of the improvements.
- b. Trunk Storm Water Management Improvements. Trunk storm water management improvements benefit an area that extends beyond the immediate property (i.e. beyond the lateral benefit). Trunk storm water management improvements manage runoff from areas of the City that are not immediately adjacent to the improvement. The trunk portion of an improvement is the size or cost of the improvement that exceeds the lateral storm water needs. Trunk storm water management improvements usually have a design and capacity to receive storm water runoff from lots that adjoin the improvement as well as non-adjoining lots.

Lateral storm water management improvements will be assessed to the adjacent specially benefitted properties on the same basis as a street assessment, taking into account the different classes of streets and allocating the assessable portion of the project on a per buildable lot basis.

With respect to trunk storm water management improvements, 50% of the project costs will be assessed and the assessable amount will be spread or divided among the specially benefitted properties on a per buildable lot basis with each such lot receiving an equal amount of assessment.

Special assessments for lateral storm water management improvements and trunk storm water management improvements will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.



FEASIBILITY REPORT

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT

CITY OF SUNFISH LAKE | DAKOTA COUNTY, MINNESOTA

DECEMBER 1, 2020

Prepared for:
City of Sunfish Lake

CITY PROJECT NO. 2021-01

WSB PROJECT NO. 014460-000

FEASIBILITY REPORT

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT

**FOR THE
CITY OF SUNFISH LAKE, MINNESOTA**

December 1, 2020

Prepared By:





December 1, 2020

Honorable Mayor and City Council
City of Sunfish Lake, MN
c/o Cathy Iago, City Clerk
7378 Jordan Ave S
Cottage Grove, MN 55016

Re: Feasibility Report
2021 Sunnyside Lane Mill and Overlay Project
City of Sunfish Lake, MN
WSB Project No. 014460-000

Dear Honorable Mayor and City Council Members:

Attached for your review is a feasibility report which addresses improvements associated with the 2021 Sunnyside Lane Mill and Overlay Project.

We would be happy to discuss this report with you at your convenience. Please contact me at 651.286.8474 if you have any questions or concerns.

Sincerely,

WSB

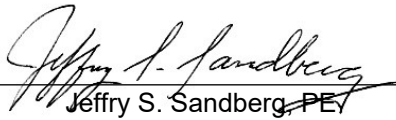

Jeffrey S. Sandberg, PE
City Engineer

Attachment

bpm

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.


Jeffrey S. Sandberg, PE

Date: December 1, 2020

Lic. No. 25393

Quality Control Review Completed By:


Lydia M. Eher, PE

Date: December 1, 2020

Lic. No. 57221

TABLE OF CONTENTS

TITLE SHEET
LETTER OF TRANSMITTAL
CERTIFICATION SHEET
TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	2
2.1	Authorization	2
2.2	Scope	2
2.3	Data Available	2
2.4	Project History	2
3.	EXISTING CONDITIONS	3
3.1	Surface	3
3.1.1	Roadway Alignment	3
3.1.2	Right-of-Way	3
3.1.3	Street Section	3
3.2	Drainage	3
3.3	Private Utilities	4
3.4	Criteria for Investigation	4
3.4.1	Surface	4
3.4.2	Drainage	4
4.	PROPOSED IMPROVEMENTS	5
4.1	Surface	5
4.1.1	Roadway Alignment	5
4.1.2	Right-of-Way	5
4.1.3	Street Section	5
4.2	Drainage	5
4.3	Construction Access/Staging	5
5.	FINANCING	6
5.1	Opinion of Probable Cost	6
5.2	Funding	6
6.	NECESSITY AND EFFECTIVENESS	7
7.	PROJECT SCHEDULE	8
8.	FEASIBILITY AND RECOMMENDATION	9

TABLE OF CONTENTS (continued)

Appendix A

Figure 1 – Project Location Map

Figure 2 – Typical Sections

Figure 3 – Existing Culvert Conditions

Appendix B

Opinion of Probable Cost

Appendix C

Assessment Map

Preliminary Assessment Roll

Appendix D

Pavement Condition Report

Appendix E

Culvert Condition Report

Appendix F

Sunfish Lake Assessment Policy

1. EXECUTIVE SUMMARY

The 2021 Sunnyside Lane Mill and Overlay Project consists of roadway surface improvements on Sunnyside Lane from Angell Road to the end of the cul-de-sac. A map illustrating the project location is shown on **Figure 1** in **Appendix A**.

Roadway surface improvements consist of a two-inch mill and overlay. Additionally, existing storm culverts in the project area were reviewed and determined to need maintenance such as jetting out sediment and debris. Culverts will be considered for replacement at the time of full street reconstruction.

The cost of the 2021 Sunnyside Lane Mill and Overlay Project, based on the recommended scope of work, is estimated at **\$84,710**. This includes a 10% contingency and 35% indirect costs. Funding for the project will consist of special assessments to benefitting properties and City financing.

The proposed project schedule includes construction beginning May 2021, with final completion by the fall of 2021.

The project is feasible, necessary, and cost-effective from an engineering standpoint and should be constructed as proposed herein.

2. INTRODUCTION

2.1 Authorization

On October 6, 2020, the Sunfish Lake City Council authorized a feasibility report for the 2021 Sunnyside Lane Mill and Overlay Project.

2.2 Scope

This feasibility report includes roadway surface improvements and drainage improvements along Sunnyside Lane from Angell Road to the end of the cul-de-sac.

2.3 Data Available

Information and materials used in the preparation of this report include the following:

- City of Sunfish Lake Capital Improvement Plan
- City of Sunfish Lake Assessment Policy
- City of Sunfish Lake Property Index Records
- City of Sunfish Lake Pavement Condition Report (2018)
- City of Sunfish Lake Culvert Condition Report (2018)
- Field Observations of the Area

2.4 Project History

Sunnyside Lane is identified in the City's Capital Improvement Plan to address the poor condition of the roadway.

The City had previously accepted a feasibility report for the 2020 Mill and Overlay Project (City Project 2020-01) on September 3, 2019, which included Sunnyside Lane for a two-inch mill and overlay. During final design of the project, it was determined the final design cost estimate would be too great for the City to move forward with in 2020. As a result, the project was tabled until 2021 and the City instructed the project be broken up into 3 individual Feasibility Reports for each roadway originally in the 2020 Mill and Overlay Project.

3. EXISTING CONDITIONS

3.1 Surface

Sunnyside Lane was constructed in 1989. Routine maintenance using seal coating and crack sealing was completed in 2013.

In May of 2018, WSB completed a Pavement Condition Report for the City, summarizing the results of pavement inspections on all City streets. The results are shown as a calculated Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a new roadway with no distresses present.

The existing 2018 and projected 2020 PCI values for Sunnyside Lane are shown below in **Table 1**.

Table 1 – Existing and Projected PCI Values		
Street	Existing PCI Value (2018)	Projected PCI Value (2020)
Sunnyside Lane	58	40

The full Pavement Condition Report can be found in **Appendix D**.

3.1.1 Roadway Alignment

Sunnyside Lane has a typical vertical and horizontal alignment for a residential neighborhood.

3.1.2 Right-of-Way

The existing right-of-way width for Sunnyside Lane is 60 feet.

3.1.3 Street Section

The street width of Sunnyside Lane is 20 feet and consists of a rural section. The pavement is beginning to show signs of pavement failure, including alligator cracking, longitudinal cracks and edge cracking.

3.2 Drainage

Existing drainage infrastructure consists of roadway ditches on both sides on Sunnyside Lane, and four drainage culverts below driveways and the roadbed. Stormwater is conveyed through the ditches and culverts to neighboring lakes and wetlands.

In June of 2018, WSB completed a Culvert Condition Report, summarizing the results of culvert inspections on all culverts within the City right-of-way. The results are shown as a calculated rating based on the MnDOT HydInfra Inspection Manual. The ratings are based on a 1 to 4 scale, with 1 being 'excellent' and 4 being 'very poor'.

Three of the four culverts on Sunnyside Lane received a rating of 3, or 'very poor', and the other received a rating of 2, or 'fair'.

The full Culvert Condition Report can be found in **Appendix E**.

In August of 2019, WSB staff completed a field visit to verify the conditions of all the culverts in the project area. While most of the culverts were filled with sediment, the structural integrity of the culverts is sound. Images taken during the field visit can be found on **Figure 3** in **Appendix A**.

3.3 Private Utilities

Private utilities that have facilities in or near the project area will be notified during the final design phase of the project. They will be requested to coordinate any necessary repairs and replacements as needed at their cost. Private utility companies that have facilities within the project area include the following:

- Comcast (Telephone/Internet)
- CenturyLink (Telephone/Internet)
- Sprint (Telephone)
- Xcel Energy (Electric/Gas)

3.4 Criteria for Investigation

Local streets identified for improvements will be reviewed against current City standards and policy where applicable.

3.4.1 Surface

Bituminous seal coating is a street maintenance method that is recommended on streets with a PCI ranging from 60 to 100.

Milling and overlaying is a street rehabilitation method that is recommended on streets with a PCI ranging from 30 to 70.

Reclamations and reconstructions are street improvement methods that are recommended on streets with a PCI ranging from 0 to 40.

3.4.2 Drainage

Current City Standards will be utilized for stormwater management and water quality design.

4. PROPOSED IMPROVEMENTS

4.1 Surface

Sunnyside Lane is proposed to have a two-inch mill and overlay. Milling and overlaying consists of grinding off the top two inches of asphalt and then repaving the milled two inches with new asphalt.

4.1.1 Roadway Alignment

The proposed improvements will maintain the existing vertical and horizontal alignments of the roadway.

4.1.2 Right-of-Way

All proposed improvements are located within the platted right-of-way, no permanent easements will be required. Temporary construction easements or waivers of trespass may be required for utility improvements, if applicable.

4.1.3 Street Section

The proposed typical section is shown on **Figure 2** in **Appendix A**.

4.2 Drainage

Based on the August 2019 site visit by WSB staff and the limited scope of work proposed for Sunnyside Lane, culvert jetting and maintenance is proposed for all four culverts in the project area. Culvert replacement is proposed to take place at the time of the next full street reconstruction project that includes Sunnyside Lane.

4.3 Construction Access/Staging

The contractor will be responsible for providing access to properties throughout the project. Signed detours will be required to direct traffic around the construction zones and notify users of the increased truck and construction activity as needed.

5. FINANCING

5.1 Opinion of Probable Cost

A detailed opinion of probable cost is included in **Appendix B** of this report. The opinion of probable cost is based on projected construction costs for 2021 and includes a 10% contingency and 35% indirect costs. The indirect costs include engineering, legal and administrative costs associated with the project.

The total project cost is estimated at **\$84,710**.

5.2 Funding

Funding for the 2021 Sunnyside Lane Mill and Overlay Project will be through assessments to benefitting properties and City financing.

Assessments will be levied to the benefitting properties as outlined in Minnesota Statute 429 and the City's assessment policy, included in **Appendix F**. Detailed preliminary assessment rolls are included in **Appendix C**.

Financing the 2021 Sunnyside Lane Mill and Overlay Project will be based on the City's special assessment policy, which calls for 80% of the proposed improvements to be specially assessed for roads identified as Local Streets, which Sunnyside Lane is designated as. The remaining 20% of the improvements will be financed by the City.

A summary of the assessment rates is:

- Single-Family Mill and Overlay\$7,530/unit

The project funding is summarized as follows:

2021 Sunnyside Lane Mill and Overlay Project Project Funding Summary	
Funding Source	Proposed Funding
Special Assessments	\$67,770
City Financing	\$16,940
TOTAL	\$84,710

6. NECESSITY AND EFFECTIVENESS

The improvements proposed in this report are necessary for several reasons.

The proposed roadway improvements provide the City with a high quality, aesthetically pleasing roadway while minimizing maintenance concerns, eliminating existing safety concerns, and extending the life expectancy of the roadway.

The proposed drainage improvements provide the City with a cost-effective solution while minimizing maintenance concerns and extending the life expectancy of the culverts.

Combining the roadway and drainage improvements into one project will provide a project large enough to ensure a competitive bidding environment and economy of scale, and therefore, are deemed to be cost-effective. Based on the information contained in this report, the proposed improvements as described can be considered to be necessary, cost-effective, and feasible from an engineering standpoint.

7. PROJECT SCHEDULE

The proposed schedule for the 2021 Sunnyside Lane Mill and Overlay Project is as follows:

City Council Authorizes Feasibility Report	October 6, 2020
City Council Gives Preliminary Consideration to Draft Feasibility Report	December 1, 2020
City Council Gives Final Consideration to Feasibility Report And Orders Public Hearing	January 5, 2021
Public Hearing	February 2, 2021
City Council Authorized Preparation of Plans and Specifications	February 2, 2021
Plans/Specifications Preparation	February - April 2021
City Council Approves Plans/Specifications & Authorizes Bidding	April 6, 2021
Project Bidding	May 2021
Award Contract	June 2021
Construction	June – September 2021
Assessment Hearing	September 7, 2021
First Payment Due with 2022 Taxes	May 2022

8. FEASIBILITY AND RECOMMENDATION

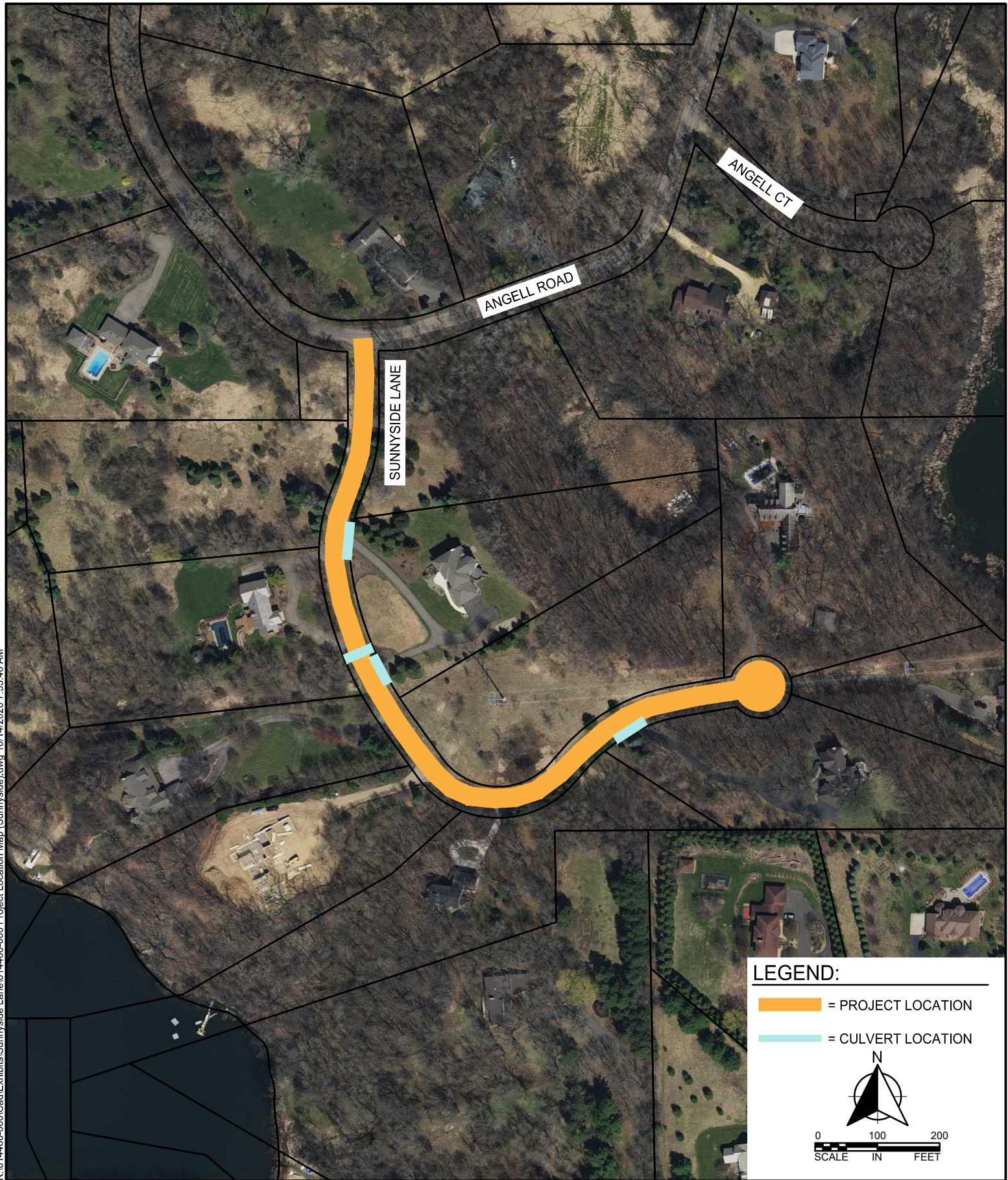
The 2021 Sunnyside Lane Mill and Overlay Project consists of roadway and drainage improvements. The cost of the project is estimated at **\$84,710**.

Based on the information contained within this report, the proposed improvements as described are necessary, cost-effective, and feasible from an engineering standpoint. WSB recommends construction of the proposed improvements as detailed in this report. The economic feasibility of this project will be determined by the City Council.

APPENDIX A

Figure 1 – Project Location Map
Figure 2 – Typical Sections
Figure 3 – Existing Culvert Conditions

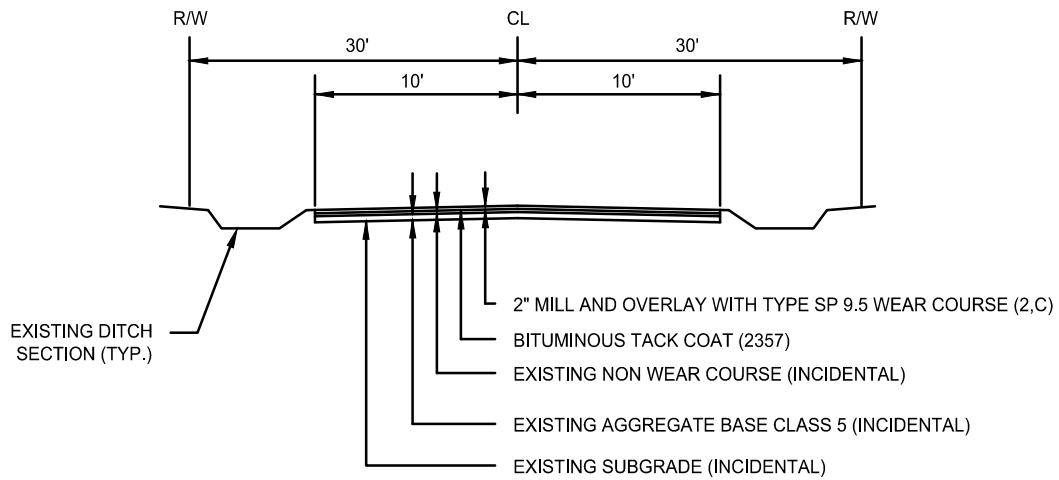
K:\014460-000\Cad\Exhibits\Sunnyside Lane\014460-000 Project Location Map (Sunnyside).dwg 10/14/2020 7:55:46 AM



WSB PROJECT NO.:
014460-000

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT
FIGURE 1 - PROJECT LOCATION MAP
CITY OF SUNFISH LAKE, MN





STREET MILL AND OVERLAY



WSB PROJECT NO.:
014460-000

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT FIGURE 2 - TYPICAL SECTIONS CITY OF SUNFISH LAKE, MN





K:\014460-000\Cad\Exhibits\Sunnyside Lane\014460-000 Existing Culvert Conditions (Sunnyside).dwg 10/14/2020 8:06:42 AM



WSB PROJECT NO.:
014460-000

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT
FIGURE 3 - EXISTING CULVERT CONDITIONS
CITY OF SUNFISH LAKE, MN



APPENDIX B

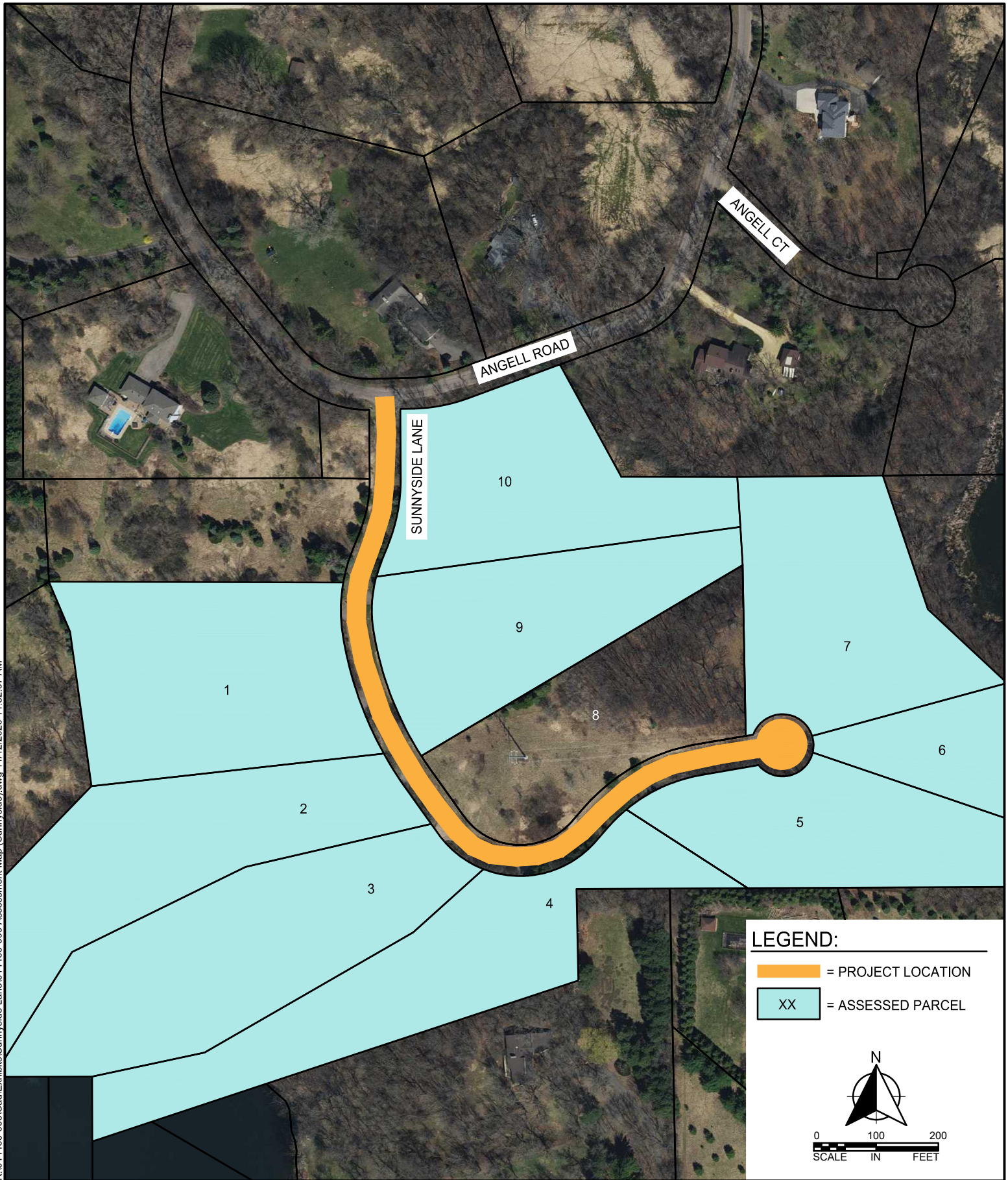
Opinion of Probable Cost

OPINION OF PROBABLE COST						
WSB Project: 2021 Sunnyside Lane Mill and Overlay Project Project Location: Sunfish Lake City Project No.: 2021-01 WSB Project No: 014460-000					Design By: BPM Checked By: JSS Date: 12/1/2020	
Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost
A. Sunnyside Lane Improvements						
1	2021.501	MOBILIZATION	LS	1	\$ 3,000.00	\$ 3,000.00
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	30	\$ 5.00	\$ 150.00
3	2106.507	EXCAVATION - COMMON	C Y	10	\$ 20.00	\$ 200.00
4	2211.509	AGGREGATE BASE CLASS 5	TON	10	\$ 20.00	\$ 200.00
5	2232.504	MILL BITUMINOUS SURFACE (2.0")	S Y	3810	\$ 2.50	\$ 9,525.00
6	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	390	\$ 3.00	\$ 1,170.00
7	2360.509	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	480	\$ 75.00	\$ 36,000.00
8	2501.602	CLEAN PIPE CULVERT	EACH	4	\$ 1,000.00	\$ 4,000.00
9	2563.601	TRAFFIC CONTROL	L S	1	\$ 2,000.00	\$ 2,000.00
10	2573.503	SEDIMENT CONTROL LOG WOOD FIBER	L F	200	\$ 2.00	\$ 400.00
11	2573.503	SILT FENCE TYPE MS	L F	200	\$ 2.00	\$ 400.00
					CONSTRUCTION TOTAL	\$ 57,045.00
					CONTINGENCY TOTAL (10%)	\$ 5,705.00
					SUBTOTAL	\$ 62,750.00
					INDIRECT COST TOTAL (35%)	\$ 21,960.00
					TOTAL	\$ 84,710.00
					GRAND TOTAL	\$ 84,710.00

APPENDIX C

Assessment Map
Preliminary Assessment Roll

K:\014460-000\Cad\Exhibits\Sunnyside Lane\014460-000 Assessment Map (Sunnyside).dwg 11/12/2020 11:32:07 AM



WSB PROJECT NO.:
014460-000

2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT
ASSESSMENT MAP
CITY OF SUNFISH LAKE, MN



CITY OF SUNFISH LAKE, MN
2021 SUNNYSIDE LANE MILL AND OVERLAY PROJECT
PRELIMINARY ASSESSMENT ROLL

	<u>Rate</u>
Single Family Mill and Overlay Assessment:	\$7,530.00

[illegible]

APPENDIX D

Pavement Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: May 7, 2018

Re: Pavement Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this pavement condition report summarizing the results of the pavement inspection performed on April 30, 2018 on all the City streets. The distresses observed on the surface of roadways evaluated were analyzed using our pavement management software, PAVER to calculate the Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a brand-new roadway with no distresses present.

Bituminous roadways were evaluated but gravel road and private roads were not rated. A map showing the condition rating can be found labeled in the **Appendix A** section of this report. The condition rating for each street is included in a table in **Appendix B**. Any type of road maintenance (i.e. patching or crack sealing) done prior to inspections is accounted for in each PCI value. The weighted average was computed by averaging the PCI values based on the area of each segment, which was calculated to be 78.

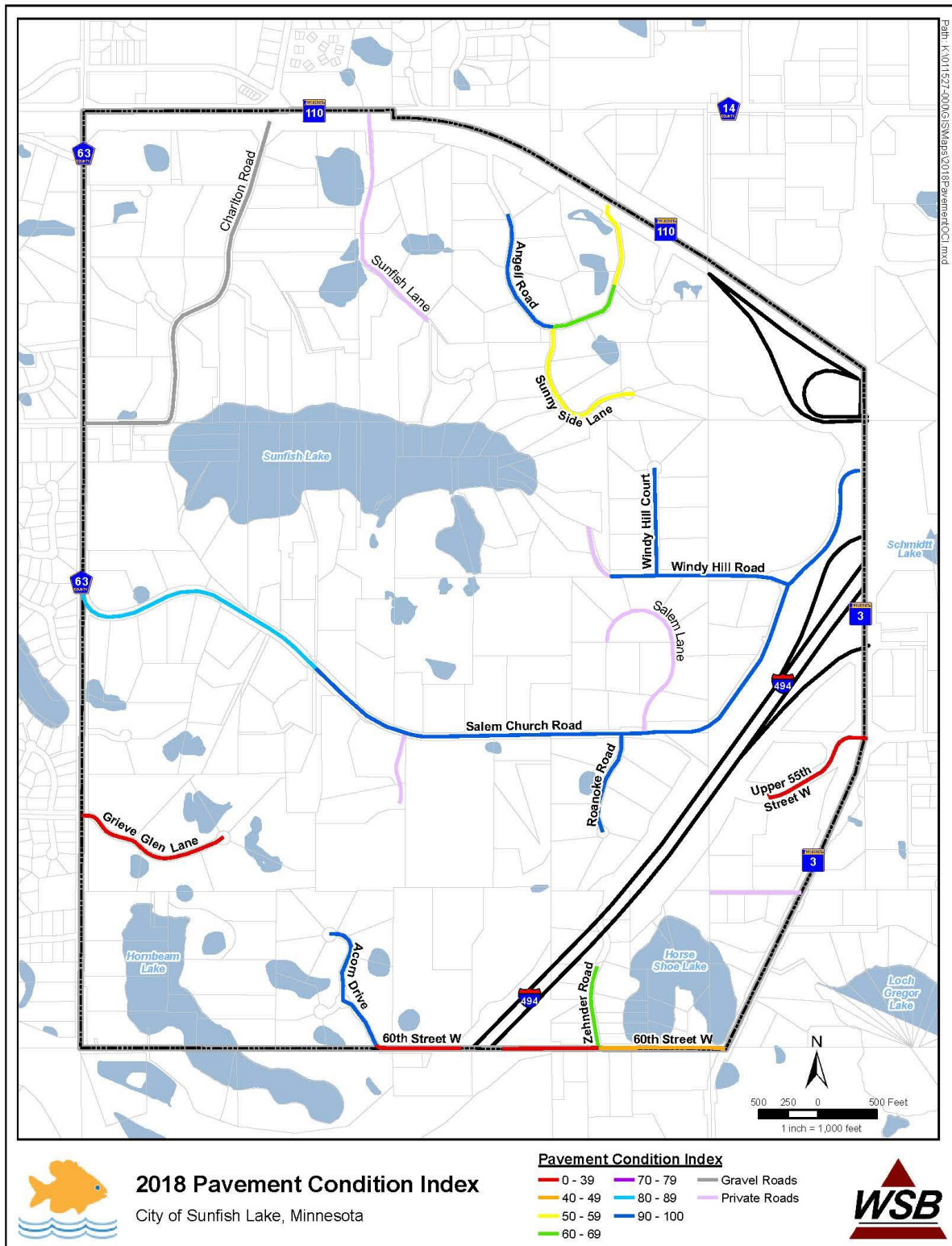
On new roads with high PCI values, which are in the range from 80 to 100, we would recommend performing preventative maintenance such as crack sealing or chip sealing, or a combination of both to protect the road surface from infiltration of water and incompressible materials as well as oxidation. Good candidates for preventative maintenance upon field inspection are Salem Church Road, Roanoke Road, Windy Hill Road, and Windy Hill Court.

There are areas where the PCI values of pavements have dropped drastically since last inspection in 2015, such as 60th Street West and Grieve Glen Lane. It is important to note that these roads were previously chip sealed and the treatment masked the existing distresses of the pavements. Thus, when these roads were reviewed this year, the PCI values are much lower than when rated in 2015 because the distresses have surfaced through the layer of chip seal.

It is our understanding that the condition of Grieve Glen Lane is a concern to the City. The PCI of this road obtained from field inspection is 36, which indicates that the street is in poor condition needing a major repair. The street is highly raveled with potholes developing. Pavement coring will be performed on this street to determine the extent of distresses. If the distresses are only present on the surface and they do not extend through the depth of bituminous pavement, which we believe is most likely the case, a mill and overlay could help eliminate the surface distresses. However, if the distresses are found to be caused by underlying materials, a reclamation or reconstruction needs to be carried out to restore the structural capacity of the pavement. A separate forensic report will be delivered to the City once pavement coring has been completed.

Appendix A

Sunfish Lake
2018 PCI Map



Appendix B

Sunfish Lake
2018 Street PCI

Name	Section ID	Length (ft)	Area (ft²)	2018 PCI
<i>60TH ST W</i>	<i>2</i>	<i>809.83</i>	<i>16,196.58</i>	<i>30.80</i>
<i>60TH ST W</i>	<i>3</i>	<i>726.13</i>	<i>14,522.64</i>	<i>32.12</i>
<i>GRIEVE GLEN LN</i>	<i>8</i>	<i>1,350.79</i>	<i>32,418.85</i>	<i>35.73</i>
<i>UPPER 55TH ST E</i>	<i>1</i>	<i>1,060.26</i>	<i>22,265.37</i>	<i>36.12</i>
<i>60TH ST W</i>	<i>4</i>	<i>1,070.43</i>	<i>21,408.53</i>	<i>46.87</i>
<i>SUNNYSIDE LN</i>	<i>20</i>	<i>1,384.93</i>	<i>27,698.53</i>	<i>57.64</i>
<i>ANGELL RD</i>	<i>7</i>	<i>710.21</i>	<i>14,204.13</i>	<i>59.55</i>
<i>ANGELL RD</i>	<i>6</i>	<i>697.89</i>	<i>13,957.90</i>	<i>60.68</i>
<i>ZEHNDER RD</i>	<i>24</i>	<i>702.02</i>	<i>12,636.30</i>	<i>68.57</i>
<i>SALEM CHURCH RD</i>	<i>13</i>	<i>2,313.04</i>	<i>55,513.03</i>	<i>87.49</i>
<i>ROANOKE RD</i>	<i>9</i>	<i>880.63</i>	<i>20,254.49</i>	<i>92.00</i>
<i>SALEM CHURCH RD</i>	<i>14</i>	<i>2,188.1</i>	<i>52,514.32</i>	<i>92.39</i>
<i>SALEM CHURCH RD</i>	<i>15</i>	<i>537.06</i>	<i>12,889.53</i>	<i>92.82</i>
<i>SALEM CHURCH RD</i>	<i>12</i>	<i>221.21</i>	<i>5,309.00</i>	<i>94.42</i>
<i>ACORN DR</i>	<i>27</i>	<i>1,182.59</i>	<i>28,382.19</i>	<i>94.44</i>
<i>ANGELL RD</i>	<i>5</i>	<i>1,135.66</i>	<i>22,713.12</i>	<i>95.26</i>
<i>WINDY HILL CT</i>	<i>22</i>	<i>1,006.58</i>	<i>26,171.05</i>	<i>99.87</i>
<i>SALEM CHURCH RD</i>	<i>10</i>	<i>1,949.04</i>	<i>46,776.85</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>11</i>	<i>1,001.06</i>	<i>24,025.33</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>29</i>	<i>237.18</i>	<i>5,692.29</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>21</i>	<i>905.95</i>	<i>18,119.06</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>23</i>	<i>511.06</i>	<i>9,199.03</i>	<i>100.00</i>

APPENDIX E

Culvert Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: June 7, 2018

Re: Culvert Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this culvert condition report summarizing the results of the culvert inspection performed in May. The culverts were inspected in accordance with the MnDOT HydInfra Inspection Manual. Using the ratings guide from the manual, the condition ratings are listed as follows.

<u>Rating</u>	<u>Condition</u>	<u>Description</u>
1	Excellent	Like new condition
2	Fair	Some wear, but structurally sound
3	Poor	Deteriorated, consider for repair or replacement
4	Very Poor	Serious deterioration

A map showing the condition rating can be found labeled in the **Appendix A** section of this report. Some culverts may be buried, submerged, or out of sight and they were labeled as “Not Able to Rate/Not Visible” with a 0 rating as shown in the map. The condition rating and comment for each culvert is included in a table in **Appendix B**.

The table below summarizes the number of culverts inspected under each condition category.

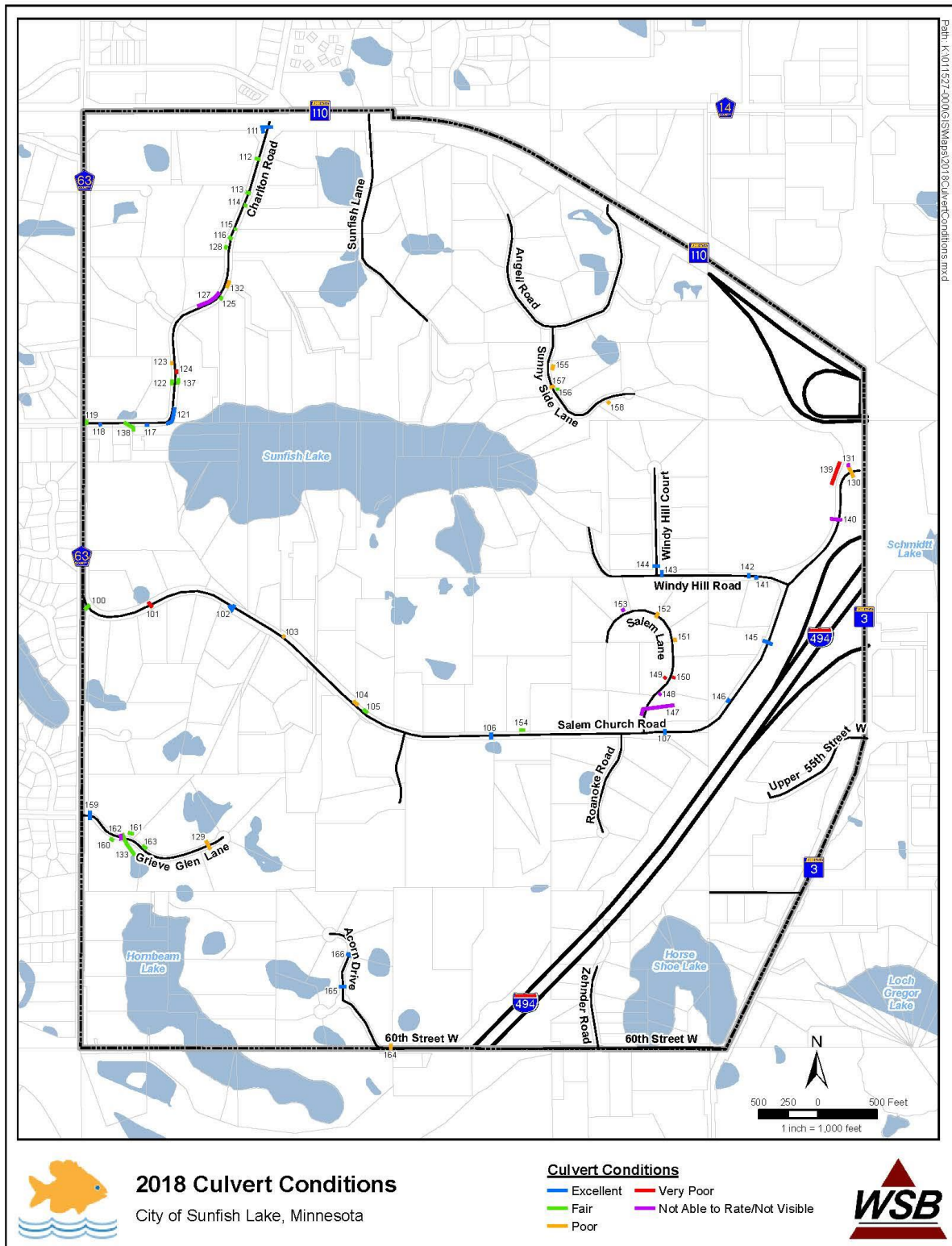
Rating	Condition	Number of Culvert
0	Not able to rate / not visible	7
1	Excellent	16
2	Fair	19
3	Poor	12
4	Very poor	5

Of the 59 culverts evaluated in this survey, it was determined that a majority of the culverts were rated in excellent or fair condition, however, several culverts in these categories have sediment or debris built up and need cleaning performed. Some culverts from the survey were plugged so that water flow is reduced or prevented and they are no longer functioning as desired. There were also a few culverts that need repair.

Photos of the culverts taken during inspection were documented but not included in this report. However, the photos may be provided to the City upon request.

Appendix A

Sunfish Lake 2018 Culvert Condition Map



Appendix B

Sunfish Lake 2018 Culvert Condition and Rating

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Additional Comments
127	City	4	Drain Tile	225	0	Not Able to Rate/Not Visible	
131	MnDOT	24	RCP	26	0	Not Able to Rate/Not Visible	Could be connecting to Culvert #130 but not visible upon inspection
140	City	24	CMP	97	0	Not Able to Rate/Not Visible	Could not locate the culvert
147	City	12	CMP	55	0	Not Able to Rate/Not Visible	Outlet plugged, inlet mostly plugged
148	City	10	CMP	18.5	0	Not Able to Rate/Not Visible	Almost full of debris
153	City	12	CMP	25	0	Not Able to Rate/Not Visible	Could not locate the culvert
162	City	18	CMP	52	0	Not Able to Rate/Not Visible	Could not locate the culvert
102	City	18	CHD Plastic	45	1	Excellent	Culvert has been lined with plastic
106	City	24	CHD Plastic	56	1	Excellent	
107	City	24	CMP	47	1	Excellent	
111	MnDOT	18	CMP	89	1	Excellent	New, located on state right-of-way
117	City	15	CMP	36	1	Excellent	Looks new
118	City	18	CMP	21	1	Excellent	
121	City	16	CMP	172	1	Excellent	Clean
141	City	15	CMP	24.5	1	Excellent	Bush covering West end of the culvert
142	City	18	CMP	44	1	Excellent	New
143	City	18	CMP	47	1	Excellent	2 culverts
144	City	15	CMP	54	1	Excellent	
145	City	48	RCP	86	1	Excellent	
146	City	15	CMP	30	1	Excellent	
159	City	15	RCP	74	1	Excellent	Very good
165	City	18	RCP	56	1	Excellent	Discharge needs cleaning
166	City	18	RCP	50	1	Excellent	Needs cleaning

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Comments
100	City	18	CMP	55	2	Fair	1/3 full of debris
105	City	18	CMP	48	2	Fair	
112	City	18	RCP	46	2	Fair	East end needs cleaning
113	City	18	RCP	42	2	Fair	West discharge needs cleaning
114	City	15	CMP	27	2	Fair	Ditch needs cleaning
115	City	12	CMP	19	2	Fair	Needs cleaning
116	City	18	RCP	34	2	Fair	
119	MnDOT	27	RCP	36	2	Fair	
122	City	15	CMP	42	2	Fair	Needs cleaning
125	City	16	CMP	34	2	Fair	
128	City	15	CMP	34	2	Fair	Half full of debris. Ditch needs cleaning
133	City	24	RCP	210	2	Fair	Discharge needs cleaning
137	City	15	CMP	50	2	Fair	Discharge needs cleaning
138	City	15	CMP	36	2	Fair	
154	City	16	RCP	48	2	Fair	Needs cleaning
156	City	12	CMP	12	2	Fair	
160	City	15	CMP	35	2	Fair	East apron needs repair
161	City	15	CMP	48	2	Fair	
163	City	15	CMP	35	2	Fair	
103	City	24	CMP	22	3	Poor	Needs cleaning, Clean and Re-Evaluate
104	City	15	CMP	51	3	Poor	Discharge half full of debris, Clean and Re-Evaluate
123	City	12	CMP	20	3	Poor	Needs cleaning, Clean and Re-Evaluate
129	City	18	RCP	85	3	Poor	Needs cleaning, Clean and Re-Evaluate
130	MnDOT	24	RCP	99	3	Poor	North apron is broken, needs to be replaced

Culvert ID	Owner	Size	Material	Length (ft)	Rating	Condition	Comments
132	City	12	CMP	63	3	Poor	Discharge 80% plugged, Clean and Re-Evaluate
151	City	12	CMP	25	3	Poor	Outlet plugged, Clean and Re-evaluate
152	City	18	CMP	46	3	Poor	
155	City	12	CMP	45	3	Poor	East end smashed needs to be replaced
157	City	18	CMP	37	3	Poor	Needs cleaning, Clean and Re-Evaluate
158	City	12	CMP	18	3	Poor	Discharge needs cleaning, Clean and Re-Evaluate
164	City	18	CMP	50	3	Poor	Discharge needs cleaning, Clean and Re-Evaluate
101	City	27	CMP	56	4	Very poor	North end smashed. South end buried under logs
124	City	15	CMP	36	4	Very poor	Culvert 60% plugged
139	City	30	CMP	203	4	Very poor	North outlet submerged
149	City	12	CMP	20	4	Very poor	Ends smashed could not see into the culvert
150	City	18	CMP	19	4	Very poor	Rusty

APPENDIX F

Sunfish Lake Assessment Policy

CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA

SPECIAL ASSESSMENT POLICY

Section 1. Background. Chapter 429 of the Minnesota Statutes authorizes the City to levy special assessments for certain public improvements. The two most common types of public improvements within the City are street improvements and storm water improvements.

The City acknowledges that the validity of any special assessment to a particular lot depends on whether the amount of the assessment is equal to or less than the benefit conferred upon the lot by reason of the public improvement. Under state law, the benefit is determined by the increase in fair market value of the lot caused by reason of the improvement. The benefit rule controls all special assessments and supersedes any City formulas and calculations relating to how project costs are allocated. The City also acknowledges that assessments have to be uniformly imposed on similarly situated properties within a class of properties.

The first step in determining an assessment is to determine which portion of project costs will be paid by the City and which portion will be specially assessed. The second step is to spread or divide the total assessment amount among the various lots that have received a special benefit. This policy addresses both steps. The policy is a guideline and the Council has the authority to alter the policy from time to time based on facts and circumstances that the Council believes justify such changes.

Section 2. Street Improvements. The typical types of street improvements in the City are:

- a. Sealcoating;
- b. Mill and overlay; and
- c. Street reconstruction, including new pavement where none existed before.

If only sealcoating is being performed, the policy is not to assess the cost of the sealcoating. Rather, the City will pay the cost of sealcoating out of the general fund as a maintenance item.

Projects involving mill and overlay and street reconstruction will be specially assessed. The percentage of costs that will be specially assessed depends on the type of street.

Within the City, there are three (3) types of streets. They are:

- a. Collector Street. – A collector street is a City street that provides access to local streets, private streets, direct driveway access and is utilized by the surrounding area for trips originating outside of the City and terminating outside of the City limits. The number of through trips exceed the number of local trips. The City streets that meet this criteria are:

- Salem Church Road; and
- Charlton Road.

The assessment policy for a Collector Street is to assess 40% of street improvement cost to the specially benefitted properties.

- b. Neighborhood Collector Street - a neighborhood collector street is a City street that provides direct access to local streets, private streets, direct driveway access and has fewer trips that originate outside of the area and terminate outside the area than local trips. A local trip is considered a trip that remains within the City limits. The City streets that meet this criteria are:

- 60th Street North;
- Windy Hill Road; and
- Angell Road (east of Sunnyside Lane).

The assessment policy for a Neighborhood Collector Street is to assess 60% of street improvement cost to the specially benefitted properties.

- c. Local Street - a local street is a City Street that only provides direct access to private driveways which has trips that originate on the street and or terminate on the street. A local street includes a public street that provides access to shared driveways. The City Streets that meet this criteria are:

- Acorn Drive;
- Zehnder Road;
- 55th Street West;
- Roanoke Road;
- Grieve Glen Lane;
- Windy Hill Court; and
- Angell Road (west of Sunnyside Lane).

The assessment policy for a Local Street is to assess 80% of street improvement cost to the specially benefitted properties.

The special assessments for mill and overlay and for street reconstruction will be spread or divided on a per buildable lot basis with each such lot receiving an equal amount of assessment.

A special assessment for mill and overlay and for street reconstruction will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.

To the extent storm water improvements are constructed with the street improvements and are incident and ancillary to the street improvement and do not otherwise confer significant benefit to properties outside of the lots that would typically be assessed for the street improvements and do not constitute more than 50% of the project costs, the storm water improvements will be considered as part of the street assessments and will be levied on the same basis as the street assessments.

In general, in determining the specially benefitted properties for a street assessment, the following lots will be included:

- a. The lots that adjoin a public street or have indirect driveway access to the public street.
- b. The lots that adjoin or have indirect driveway access to a private street where the private street has access to the public street that is being improved.

Section 3. Storm Water Improvements. Storm water improvements include such items as culvert repair or reconstruction, holding ponds, erosion control, drainage ditch reconstruction, surface drainage improvements, trunk lines, and lateral lines.

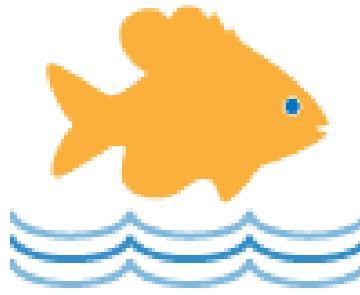
Storm water improvements can generally be placed into two (2) categories:

- a. Lateral Storm Water Management Improvements. Lateral storm water management improvements benefit the immediate adjacent area. Lateral storm water management improvements are storm water infrastructure facilities that receive runoff from adjacent public right of way or from some or all adjacent parcels but do not include significant runoff from locations that are off site of the improvements.
- b. Trunk Storm Water Management Improvements. Trunk storm water management improvements benefit an area that extends beyond the immediate property (i.e. beyond the lateral benefit). Trunk storm water management improvements manage runoff from areas of the City that are not immediately adjacent to the improvement. The trunk portion of an improvement is the size or cost of the improvement that exceeds the lateral storm water needs. Trunk storm water management improvements usually have a design and capacity to receive storm water runoff from lots that adjoin the improvement as well as non-adjoining lots.

Lateral storm water management improvements will be assessed to the adjacent specially benefitted properties on the same basis as a street assessment, taking into account the different classes of streets and allocating the assessable portion of the project on a per buildable lot basis.

With respect to trunk storm water management improvements, 50% of the project costs will be assessed and the assessable amount will be spread or divided among the specially benefitted properties on a per buildable lot basis with each such lot receiving an equal amount of assessment.

Special assessments for lateral storm water management improvements and trunk storm water management improvements will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.



FEASIBILITY REPORT

2021 ZEHNDER ROAD MILL AND OVERLAY PROJECT

CITY OF SUNFISH LAKE | DAKOTA COUNTY, MINNESOTA

DECEMBER 1, 2020

Prepared for:
City of Sunfish Lake

CITY PROJECT NO. 2021-02

WSB PROJECT NO. 014460-000



FEASIBILITY REPORT

2021 ZEHNDER ROAD MILL AND OVERLAY PROJECT

**FOR THE
CITY OF SUNFISH LAKE, MINNESOTA**

December 1, 2020

Prepared By:





December 1, 2020

Honorable Mayor and City Council
City of Sunfish Lake, MN
c/o Cathy Iago, City Clerk
7378 Jordan Ave S
Cottage Grove, MN 55016

Re: Feasibility Report
2021 Zehnder Road Mill and Overlay Project
City of Sunfish Lake, MN
WSB Project No. 014460-000

Dear Honorable Mayor and City Council Members:

Attached for your review is a feasibility report which addresses improvements associated with the 2021 Zehnder Road Mill and Overlay Project.

We would be happy to discuss this report with you at your convenience. Please contact me at 651.286.8474 if you have any questions or concerns.

Sincerely,

WSB

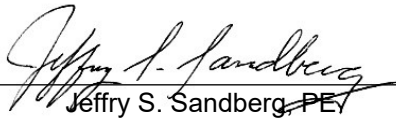

Jeffrey S. Sandberg, PE
City Engineer

Attachment

bpm

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.


Jeffrey S. Sandberg, PE

Date: December 1, 2020

Lic. No. 25393

Quality Control Review Completed By:


Lydia M. Eher, PE

Date: December 1, 2020

Lic. No. 57221

TABLE OF CONTENTS

TITLE SHEET
LETTER OF TRANSMITTAL
CERTIFICATION SHEET
TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	2
2.1	Authorization	2
2.2	Scope	2
2.3	Data Available	2
2.4	Project History	2
3.	EXISTING CONDITIONS	3
3.1	Surface	3
3.1.1	Roadway Alignment	3
3.1.2	Right-of-Way	3
3.1.3	Street Section	3
3.2	Drainage	3
3.3	Private Utilities	3
3.4	Criteria for Investigation	4
3.4.1	Surface	4
3.4.2	Drainage	4
4.	PROPOSED IMPROVEMENTS	5
4.1	Surface	5
4.1.1	Roadway Alignment	5
4.1.2	Right-of-Way	5
4.1.3	Street Section	5
4.2	Drainage	5
4.3	Construction Access/Staging	5
5.	FINANCING	6
5.1	Opinion of Probable Cost	6
5.2	Funding	6
6.	NECESSITY AND EFFECTIVENESS	7
7.	PROJECT SCHEDULE	8
8.	FEASIBILITY AND RECOMMENDATION	9

TABLE OF CONTENTS (continued)

Appendix A

Figure 1 – Project Location Map
Figure 2 – Typical Sections

Appendix B

Opinion of Probable Cost

Appendix C

Assessment Map
Preliminary Assessment Roll

Appendix D

Pavement Condition Report

Appendix E

Sunfish Lake Assessment Policy

1. EXECUTIVE SUMMARY

The 2021 Zehnder Road Mill and Overlay Project consists of roadway surface improvements on Zehnder Road from 60th Street W to the end of Zehnder Road. A map illustrating the project location is shown on **Figure 1** in **Appendix A**.

Roadway surface improvements consist of a two-inch mill and overlay. Additionally, existing storm culverts in the project area were reviewed and determined to need maintenance such as jetting out sediment and debris.

The cost of the 2021 Zehnder Road Mill and Overlay Project, based on the recommended scope of work, is estimated at **\$37,380**. This includes a 10% contingency and 35% indirect costs. Funding for the project will consist of special assessments to benefitting properties and City financing.

The proposed project schedule includes construction beginning May 2021, with final completion by the fall of 2021.

The project is feasible, necessary, and cost-effective from an engineering standpoint and should be constructed as proposed herein.

2. INTRODUCTION

2.1 Authorization

On October 6, 2020, the Sunfish Lake City Council authorized a feasibility report for the 2021 Zehnder Road Mill and Overlay Project.

2.2 Scope

This feasibility report includes roadway surface improvements and drainage improvements along Zehnder Road from 60th Street W to the end of Zehnder Road.

2.3 Data Available

Information and materials used in the preparation of this report include the following:

- City of Sunfish Lake Capital Improvement Plan
- City of Sunfish Lake Assessment Policy
- City of Sunfish Lake Property Index Records
- City of Sunfish Lake Pavement Condition Report (2018)
- Field Observations of the Area

2.4 Project History

Zehnder Road is identified in the City's Capital Improvement Plan to address the poor condition of the roadway.

The City had previously accepted a feasibility report for the 2020 Mill and Overlay Project (City Project 2020-01) on September 3, 2019, which included Zehnder Road for a two-inch mill and overlay. During final design of the project, it was determined the final design cost estimate would be too great for the City to move forward with in 2020. As a result, the project was tabled until 2021 and the City instructed the project be broken up into 3 individual Feasibility Reports for each roadway originally in the 2020 Mill and Overlay Project.

3. EXISTING CONDITIONS

3.1 Surface

Zehnder Road was constructed in 1989. Routine maintenance using seal coating and crack sealing was completed in 2013.

In May of 2018, WSB completed a Pavement Condition Report for the City, summarizing the results of pavement inspections on all City streets. The results are shown as a calculated Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a new roadway with no distresses present.

The existing 2018 and projected 2020 PCI values for Zehnder Road are shown below in **Table 1**.

Table 1 – Existing and Projected PCI Values		
Street	Existing PCI Value (2018)	Projected PCI Value (2020)
Zehnder Road	69	51

The full Pavement Condition Report can be found in **Appendix D**.

3.1.1 Roadway Alignment

Zehnder Road has a typical vertical and horizontal alignment for a residential neighborhood.

3.1.2 Right-of-Way

The existing right-of-way width for Zehnder Road is 60 feet.

3.1.3 Street Section

The street width of Zehnder Road is 20 feet and consists of a rural section. The pavement is beginning to show signs of pavement failure, including edge cracking and alligator cracking.

3.2 Drainage

Existing drainage infrastructure consists of roadway ditches along both sides of Zehnder Road, and four storm culverts under driveways and the roadway. The existing drainage system convey the stormwater to neighboring lakes, wetlands, and urban roadways with storm sewer.

In August of 2019, WSB staff completed a field visit to verify the conditions of all the culverts in the project area. While most of the culverts were filled with sediment, the structural integrity of the culverts is sound.

3.3 Private Utilities

Private utilities that have facilities in or near the project area will be notified during the final design phase of the project. They will be requested to coordinate any necessary repairs and replacements as needed at their cost. Private utility companies that have facilities within the project area include the following:

- Comcast (Telephone/Internet)
- CenturyLink (Telephone/Internet)
- Sprint (Telephone)
- Xcel Energy (Electric/Gas)

3.4 Criteria for Investigation

Local streets identified to be reviewed for improvements will be reviewed against current City standards and policy where applicable.

3.4.1 Surface

Bituminous seal coating is a street maintenance method that is recommended on streets with a PCI ranging from 60 to 100.

Milling and overlaying is a street rehabilitation method that is recommended on streets with a PCI ranging from 30 to 70.

Reclamations and reconstructions are street improvement methods that are recommended on streets with a PCI ranging from 0 to 40.

3.4.2 Drainage

Current City Standards will be utilized for stormwater management and water quality design.

4. PROPOSED IMPROVEMENTS

4.1 Surface

Zehnder Road is proposed to have a two-inch mill and overlay. Milling and overlaying consists of grinding off the top two inches of asphalt and then repaving the milled two inches with new asphalt.

4.1.1 Roadway Alignment

The proposed improvements will maintain the existing vertical and horizontal alignments of the roadway.

4.1.2 Right-of-Way

All proposed improvements are located within the platted right-of-way, no permanent easements will be required. Temporary construction easements or waivers of trespass may be required for utility improvements, if applicable.

4.1.3 Street Section

The proposed typical section is shown on **Figure 2** in **Appendix A**.

4.2 Drainage

Based on the August 2019 site visit by WSB staff and the limited scope of work proposed for Zehnder Road, culvert jetting and maintenance is proposed for all four culverts in the project area.

4.3 Construction Access/Staging

The contractor will be responsible for providing access to properties throughout the project. Signed detours will be required to direct traffic around the construction zones and notify users of the increased truck and construction activity as needed.

5. FINANCING

5.1 Opinion of Probable Cost

A detailed opinion of probable cost is included in **Appendix B** of this report. The opinion of probable cost is based on projected construction costs for 2021 and includes a 10% contingency and 35% indirect costs. The indirect costs include engineering, legal and administrative costs associated with the project.

The total project cost is estimated at **\$37,380**.

5.2 Funding

Funding for the 2021 Zehnder Road Mill and Overlay Project will be through assessments to benefitting properties and City financing.

Assessments will be levied to the benefitting properties as outlined in Minnesota Statute 429 and the City's assessment policy. Detailed preliminary assessment rolls are included in **Appendix C**.

Financing the 2021 Zehnder Road Mill and Overlay Project will be based on the City's special assessment policy, which can be found in **Appendix E**. The policy calls for 80% of the proposed improvements to be specially assessed for roads identified as Local Streets, which Zehnder Road is designated as. The remaining 20% of the improvements will be financed by the City.

A summary of the assessment rates is:

- Single-Family Mill and Overlay\$5,980/unit

The project funding is summarized as follows:

2021 Zehnder Road Mill and Overlay Project Project Funding Summary	
Funding Source	Proposed Funding
Special Assessments	\$29,900
City Financing	\$7,480
TOTAL	\$37,380

6. NECESSITY AND EFFECTIVENESS

The improvements proposed in this report are necessary for several reasons.

The proposed roadway improvements provide the City with a high quality, aesthetically pleasing roadway while minimizing maintenance concerns, eliminating existing safety concerns, and extending the life expectancy of the roadway.

The proposed drainage improvements provide the City with a cost-effective solution while minimizing maintenance concerns and extending the life expectancy of the culverts.

Combining the roadway and drainage improvements into one project will provide a project large enough to ensure a competitive bidding environment and economy of scale, and therefore, are deemed to be cost-effective. Based on the information contained in this report, the proposed improvements as described can be considered to be necessary, cost-effective, and feasible from an engineering standpoint.

7. PROJECT SCHEDULE

The proposed schedule for the 2021 Zehnder Road Mill and Overlay Project is as follows:

City Council Authorizes Feasibility Report	October 6, 2020
City Council Gives Preliminary Consideration to Draft Feasibility Report	December 1, 2020
City Council Gives Final Consideration to Feasibility Report And Orders Public Hearing	January 5, 2021
Public Hearing	February 2, 2021
City Council Authorized Preparation of Plans and Specifications	February 2, 2021
Plans/Specifications Preparation	February - April 2021
City Council Approves Plans/Specifications & Authorizes Bidding	April 6, 2021
Project Bidding	May 2021
Award Contract	June 2021
Construction	June – September 2021
Assessment Hearing	September 7, 2021
First Payment Due with 2022 Taxes	May 2022

8. FEASIBILITY AND RECOMMENDATION

The 2021 Zehnder Road Mill and Overlay Project consists of roadway and drainage improvements. The cost of the project is estimated at **\$37,380**.

Based on the information contained within this report, the proposed improvements as described are necessary, cost-effective, and feasible from an engineering standpoint. WSB recommends construction of the proposed improvements as detailed in this report. The economic feasibility of this project will be determined by the City Council.

APPENDIX A

Figure 1 – Project Location Map
Figure 2 – Typical Sections

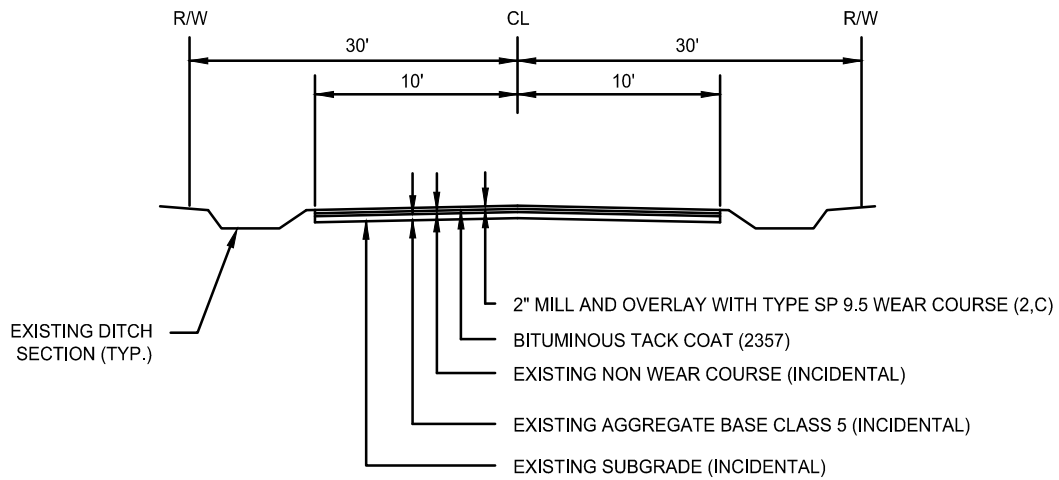
K:\014460-000\Cad\Exhibits\Zehnder Road\014460-000 Project Location Map (Zehnder).dwg 10/14/2020 10:41:13 AM



WSB PROJECT NO.:
014460-000

2021 ZEHNDER ROAD MILL AND OVERLAY PROJECT
FIGURE 1 - PROJECT LOCATION MAP
CITY OF SUNFISH LAKE, MN





STREET MILL AND OVERLAY



APPENDIX B

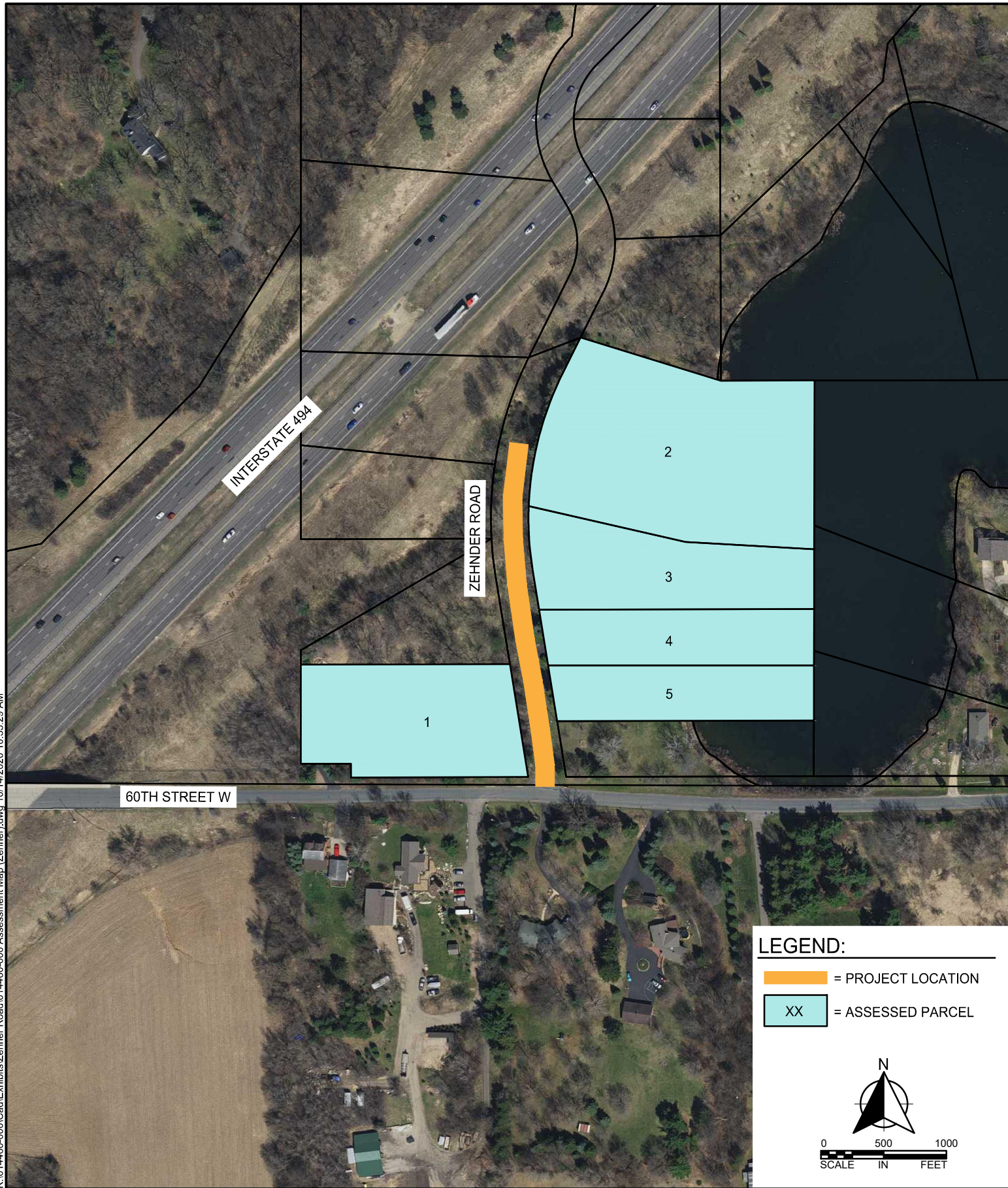
Opinion of Probable Cost

OPINION OF PROBABLE COST							
WSB Project: 2021 Zehnder Road Mill and Overlay Project Project Location: Sunfish Lake City Project No.: 2021-02 WSB Project No: 014460-000					Design By: BPM Checked By: JSS		
					Date:		12/1/2020
Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Price	Estimated Total Cost	
A. Zehnder Road Surface Improvements							
1	2021.501	MOBILIZATION	LS	1	\$ 1,000.00	\$ 1,000.00	
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	L F	80	\$ 5.00	\$ 400.00	
3	2106.507	EXCAVATION - COMMON	C Y	10	\$ 20.00	\$ 200.00	
4	2211.509	AGGREGATE BASE CLASS 5	TON	10	\$ 20.00	\$ 200.00	
5	2232.504	MILL BITUMINOUS SURFACE (2.0")	S Y	1360	\$ 2.50	\$ 3,400.00	
6	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	140	\$ 3.00	\$ 420.00	
7	2360.509	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	170	\$ 75.00	\$ 12,750.00	
8	2501.602	CLEAN PIPE CULVERT	EACH	4	\$ 1,000.00	\$ 4,000.00	
9	2563.601	TRAFFIC CONTROL	L S	1	\$ 2,000.00	\$ 2,000.00	
10	2573.503	SEDIMENT CONTROL LOG WOOD FIBER	L F	200	\$ 2.00	\$ 400.00	
11	2573.503	SILT FENCE TYPE MS	L F	200	\$ 2.00	\$ 400.00	
					CONSTRUCTION TOTAL	\$ 25,170.00	
					CONTINGENCY TOTAL (10%)	\$ 2,520.00	
					SUBTOTAL	\$ 27,690.00	
					INDIRECT COST TOTAL (35%)	\$ 9,690.00	
					TOTAL	\$ 37,380.00	
					GRAND TOTAL	\$ 37,380.00	

APPENDIX C

Assessment Map
Preliminary Assessment Roll

K:\014460-000\Cad\Exhibits\Zehnder Road\014460-000 Assessment Map (Zehnder).dwg 10/14/2020 10:35:29 AM



WSB PROJECT NO.:
014460-000

2021 ZEHNDER ROAD MILL AND OVERLAY PROJECT
ASSESSMENT MAP
CITY OF SUNFISH LAKE, MN



CITY OF SUNFISH LAKE, MN
2021 ZEHNDER ROAD MILL AND OVERLAY PROJECT
PRELIMINARY ASSESSMENT ROLL

Date: 11/3/2020	Rate
-----------------	------

City Project No. 2021-02
WSB Project No. 014460-000

Date: 11/3/2020		
		<u>Rate</u>
	Single Family Mill and Overlay Assessment:	\$5,980.00

[illegible]

APPENDIX D

Pavement Condition Report



Memorandum

To: Jeff Sandberg, PE, City Engineer

From: Sheue Torng Lee

Date: May 7, 2018

Re: Pavement Condition Report
WSB Project No. 011527

WSB & Associates, Inc. is pleased to submit this pavement condition report summarizing the results of the pavement inspection performed on April 30, 2018 on all the City streets. The distresses observed on the surface of roadways evaluated were analyzed using our pavement management software, PAVER to calculate the Pavement Condition Index (PCI) for each street. The PCI is based on a 0 to 100 scale, with 100 being a brand-new roadway with no distresses present.

Bituminous roadways were evaluated but gravel road and private roads were not rated. A map showing the condition rating can be found labeled in the **Appendix A** section of this report. The condition rating for each street is included in a table in **Appendix B**. Any type of road maintenance (i.e. patching or crack sealing) done prior to inspections is accounted for in each PCI value. The weighted average was computed by averaging the PCI values based on the area of each segment, which was calculated to be 78.

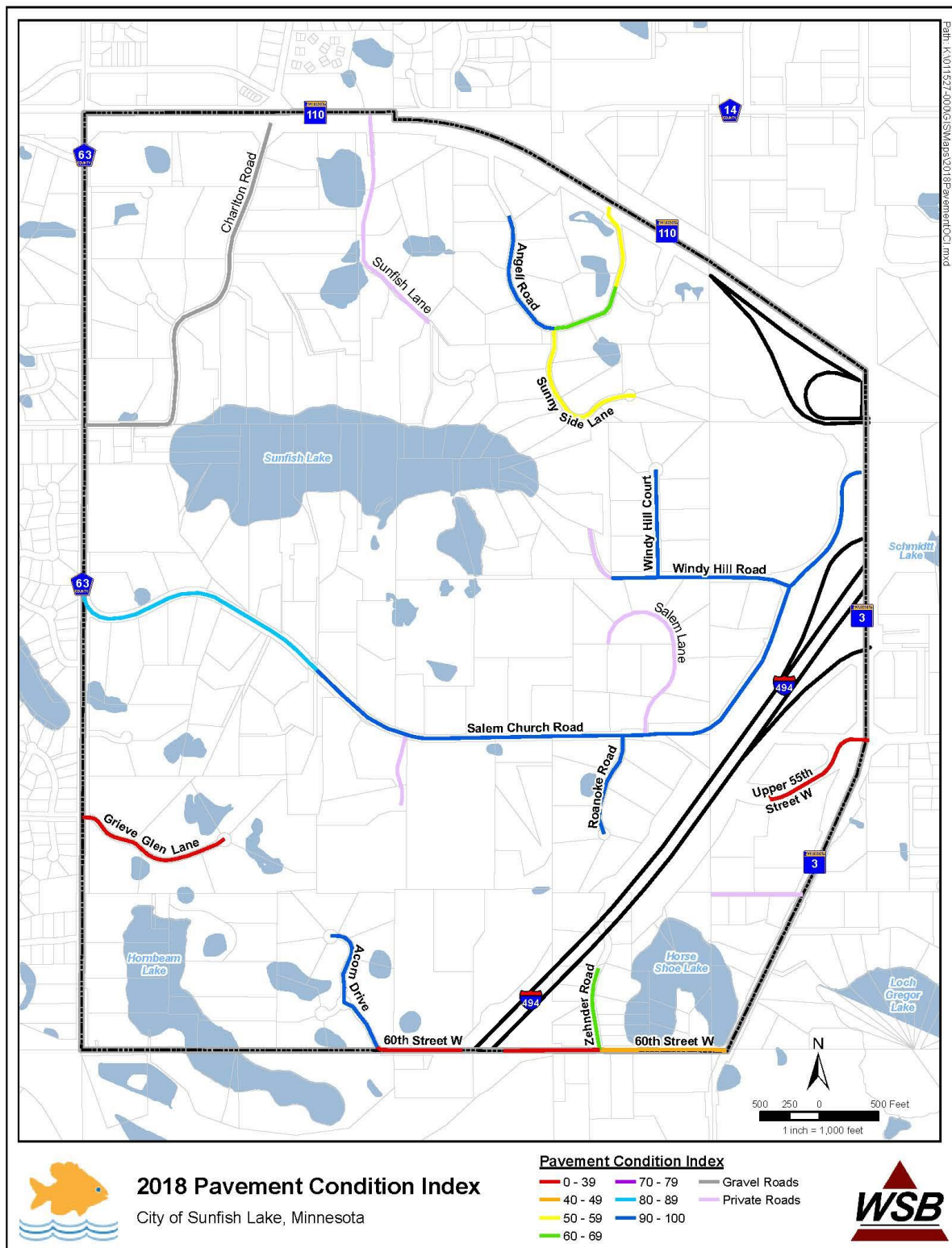
On new roads with high PCI values, which are in the range from 80 to 100, we would recommend performing preventative maintenance such as crack sealing or chip sealing, or a combination of both to protect the road surface from infiltration of water and incompressible materials as well as oxidation. Good candidates for preventative maintenance upon field inspection are Salem Church Road, Roanoke Road, Windy Hill Road, and Windy Hill Court.

There are areas where the PCI values of pavements have dropped drastically since last inspection in 2015, such as 60th Street West and Grieve Glen Lane. It is important to note that these roads were previously chip sealed and the treatment masked the existing distresses of the pavements. Thus, when these roads were reviewed this year, the PCI values are much lower than when rated in 2015 because the distresses have surfaced through the layer of chip seal.

It is our understanding that the condition of Grieve Glen Lane is a concern to the City. The PCI of this road obtained from field inspection is 36, which indicates that the street is in poor condition needing a major repair. The street is highly raveled with potholes developing. Pavement coring will be performed on this street to determine the extent of distresses. If the distresses are only present on the surface and they do not extend through the depth of bituminous pavement, which we believe is most likely the case, a mill and overlay could help eliminate the surface distresses. However, if the distresses are found to be caused by underlying materials, a reclamation or reconstruction needs to be carried out to restore the structural capacity of the pavement. A separate forensic report will be delivered to the City once pavement coring has been completed.

Appendix A

Sunfish Lake
2018 PCI Map



Appendix B

Sunfish Lake
2018 Street PCI

Name	Section ID	Length (ft)	Area (ft²)	2018 PCI
<i>60TH ST W</i>	<i>2</i>	<i>809.83</i>	<i>16,196.58</i>	<i>30.80</i>
<i>60TH ST W</i>	<i>3</i>	<i>726.13</i>	<i>14,522.64</i>	<i>32.12</i>
<i>GRIEVE GLEN LN</i>	<i>8</i>	<i>1,350.79</i>	<i>32,418.85</i>	<i>35.73</i>
<i>UPPER 55TH ST E</i>	<i>1</i>	<i>1,060.26</i>	<i>22,265.37</i>	<i>36.12</i>
<i>60TH ST W</i>	<i>4</i>	<i>1,070.43</i>	<i>21,408.53</i>	<i>46.87</i>
<i>SUNNYSIDE LN</i>	<i>20</i>	<i>1,384.93</i>	<i>27,698.53</i>	<i>57.64</i>
<i>ANGELL RD</i>	<i>7</i>	<i>710.21</i>	<i>14,204.13</i>	<i>59.55</i>
<i>ANGELL RD</i>	<i>6</i>	<i>697.89</i>	<i>13,957.90</i>	<i>60.68</i>
<i>ZEHNDER RD</i>	<i>24</i>	<i>702.02</i>	<i>12,636.30</i>	<i>68.57</i>
<i>SALEM CHURCH RD</i>	<i>13</i>	<i>2,313.04</i>	<i>55,513.03</i>	<i>87.49</i>
<i>ROANOKE RD</i>	<i>9</i>	<i>880.63</i>	<i>20,254.49</i>	<i>92.00</i>
<i>SALEM CHURCH RD</i>	<i>14</i>	<i>2,188.1</i>	<i>52,514.32</i>	<i>92.39</i>
<i>SALEM CHURCH RD</i>	<i>15</i>	<i>537.06</i>	<i>12,889.53</i>	<i>92.82</i>
<i>SALEM CHURCH RD</i>	<i>12</i>	<i>221.21</i>	<i>5,309.00</i>	<i>94.42</i>
<i>ACORN DR</i>	<i>27</i>	<i>1,182.59</i>	<i>28,382.19</i>	<i>94.44</i>
<i>ANGELL RD</i>	<i>5</i>	<i>1,135.66</i>	<i>22,713.12</i>	<i>95.26</i>
<i>WINDY HILL CT</i>	<i>22</i>	<i>1,006.58</i>	<i>26,171.05</i>	<i>99.87</i>
<i>SALEM CHURCH RD</i>	<i>10</i>	<i>1,949.04</i>	<i>46,776.85</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>11</i>	<i>1,001.06</i>	<i>24,025.33</i>	<i>100.00</i>
<i>SALEM CHURCH RD</i>	<i>29</i>	<i>237.18</i>	<i>5,692.29</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>21</i>	<i>905.95</i>	<i>18,119.06</i>	<i>100.00</i>
<i>WINDY HILL CT</i>	<i>23</i>	<i>511.06</i>	<i>9,199.03</i>	<i>100.00</i>

APPENDIX E

Sunfish Lake Assessment Policy

CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA

SPECIAL ASSESSMENT POLICY

Section 1. Background. Chapter 429 of the Minnesota Statutes authorizes the City to levy special assessments for certain public improvements. The two most common types of public improvements within the City are street improvements and storm water improvements.

The City acknowledges that the validity of any special assessment to a particular lot depends on whether the amount of the assessment is equal to or less than the benefit conferred upon the lot by reason of the public improvement. Under state law, the benefit is determined by the increase in fair market value of the lot caused by reason of the improvement. The benefit rule controls all special assessments and supersedes any City formulas and calculations relating to how project costs are allocated. The City also acknowledges that assessments have to be uniformly imposed on similarly situated properties within a class of properties.

The first step in determining an assessment is to determine which portion of project costs will be paid by the City and which portion will be specially assessed. The second step is to spread or divide the total assessment amount among the various lots that have received a special benefit. This policy addresses both steps. The policy is a guideline and the Council has the authority to alter the policy from time to time based on facts and circumstances that the Council believes justify such changes.

Section 2. Street Improvements. The typical types of street improvements in the City are:

- a. Sealcoating;
- b. Mill and overlay; and
- c. Street reconstruction, including new pavement where none existed before.

If only sealcoating is being performed, the policy is not to assess the cost of the sealcoating. Rather, the City will pay the cost of sealcoating out of the general fund as a maintenance item.

Projects involving mill and overlay and street reconstruction will be specially assessed. The percentage of costs that will be specially assessed depends on the type of street.

Within the City, there are three (3) types of streets. They are:

- a. Collector Street. – A collector street is a City street that provides access to local streets, private streets, direct driveway access and is utilized by the surrounding area for trips originating outside of the City and terminating outside of the City limits. The number of through trips exceed the number of local trips. The City streets that meet this criteria are:

- Salem Church Road; and
- Charlton Road.

The assessment policy for a Collector Street is to assess 40% of street improvement cost to the specially benefitted properties.

- b. Neighborhood Collector Street - a neighborhood collector street is a City street that provides direct access to local streets, private streets, direct driveway access and has fewer trips that originate outside of the area and terminate outside the area than local trips. A local trip is considered a trip that remains within the City limits. The City streets that meet this criteria are:

- 60th Street North;
- Windy Hill Road; and
- Angell Road (east of Sunnyside Lane).

The assessment policy for a Neighborhood Collector Street is to assess 60% of street improvement cost to the specially benefitted properties.

- c. Local Street - a local street is a City Street that only provides direct access to private driveways which has trips that originate on the street and or terminate on the street. A local street includes a public street that provides access to shared driveways. The City Streets that meet this criteria are:

- Acorn Drive;
- Zehnder Road;
- 55th Street West;
- Roanoke Road;
- Grieve Glen Lane;
- Windy Hill Court; and
- Angell Road (west of Sunnyside Lane).

The assessment policy for a Local Street is to assess 80% of street improvement cost to the specially benefitted properties.

The special assessments for mill and overlay and for street reconstruction will be spread or divided on a per buildable lot basis with each such lot receiving an equal amount of assessment.

A special assessment for mill and overlay and for street reconstruction will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.

To the extent storm water improvements are constructed with the street improvements and are incident and ancillary to the street improvement and do not otherwise confer significant benefit to properties outside of the lots that would typically be assessed for the street improvements and do not constitute more than 50% of the project costs, the storm water improvements will be considered as part of the street assessments and will be levied on the same basis as the street assessments.

In general, in determining the specially benefitted properties for a street assessment, the following lots will be included:

- a. The lots that adjoin a public street or have indirect driveway access to the public street.
- b. The lots that adjoin or have indirect driveway access to a private street where the private street has access to the public street that is being improved.

Section 3. Storm Water Improvements. Storm water improvements include such items as culvert repair or reconstruction, holding ponds, erosion control, drainage ditch reconstruction, surface drainage improvements, trunk lines, and lateral lines.

Storm water improvements can generally be placed into two (2) categories:

- a. Lateral Storm Water Management Improvements. Lateral storm water management improvements benefit the immediate adjacent area. Lateral storm water management improvements are storm water infrastructure facilities that receive runoff from adjacent public right of way or from some or all adjacent parcels but do not include significant runoff from locations that are off site of the improvements.
- b. Trunk Storm Water Management Improvements. Trunk storm water management improvements benefit an area that extends beyond the immediate property (i.e. beyond the lateral benefit). Trunk storm water management improvements manage runoff from areas of the City that are not immediately adjacent to the improvement. The trunk portion of an improvement is the size or cost of the improvement that exceeds the lateral storm water needs. Trunk storm water management improvements usually have a design and capacity to receive storm water runoff from lots that adjoin the improvement as well as non-adjoining lots.

Lateral storm water management improvements will be assessed to the adjacent specially benefitted properties on the same basis as a street assessment, taking into account the different classes of streets and allocating the assessable portion of the project on a per buildable lot basis.

With respect to trunk storm water management improvements, 50% of the project costs will be assessed and the assessable amount will be spread or divided among the specially benefitted properties on a per buildable lot basis with each such lot receiving an equal amount of assessment.

Special assessments for lateral storm water management improvements and trunk storm water management improvements will be amortized over a period of time not less than five years and not more than ten years. The interest rate payable by the landowners on the remaining balance of the special assessments will not be more than 2% above the bond interest rate charged the City. If the City has not issued bonds, the interest rate charged the landowners will not be more than 2% above the estimated interest rate that the City would have incurred if bonds were issued to finance the project. Interest will begin to accrue from the date the assessments are levied.