



**BOLTON  
& MENK**

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Feasibility Report for

Improvement Project No. 21-08  
Pavement Management Program

# 99<sup>th</sup> Avenue/101<sup>st</sup> Avenue Rehabilitation

City of Blaine

Bolton & Menk, Inc. Project No. 0N1.122690

December 18, 2020

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.

By: \_\_\_\_\_

  
Michael Nill, P.E.

License No. 26914

**Submitted by:**

Bolton & Menk, Inc.  
2035 County Road D East  
Maplewood, MN 55109  
P: 651-704-9970  
F: 651-704-9971

# Table of Contents

I.	EXECUTIVE SUMMARY .....	1
II.	PROJECT HISTORY .....	1
III.	PROJECT AREA CHARACTERISTICS .....	1
IV.	PROPOSED IMPROVEMENTS .....	2
	A.    SANITARY SEWER .....	2
	B.    WATER MAIN .....	2
	C.    STREET CONSTRUCTION.....	2
	D.    STORM DRAINAGE .....	3
V.	IMPACT OF PROPOSED IMPROVEMENTS .....	3
VI.	SUMMARY OF ESTIMATED PROJECTS COSTS.....	4
VII.	ASSESSMENT METHODOLOGY.....	4
VIII.	FINANCING .....	5
IX.	SCHEDULE .....	6
X.	PROJECT FEASIBILITY AND RECOMMENDATION .....	6

## Appendix

### Appendix A – Figures & Exhibits

- Figure 1:           Location Map
- Figure 2:           Assessable Properties
- Exhibit 1:          Proposed Assessment Roll

## I. EXECUTIVE SUMMARY

This proposed project would rehabilitate 99<sup>th</sup> Avenue/101<sup>st</sup> Avenue, from Hwy 65 to University Avenue by means of a 2 ½" thick mill/overlay. It is also proposed to perform a chip seal on the milled surface, just prior to paving the overlay. The purpose of this treatment method, which is known as a Texas Underseal, is to extend the life of the mill/overlay and delay reflective cracking. Additional proposed street improvements include upgrades to the existing signal system (i.e. battery backup and pedestrian push buttons) concrete pedestrian ramps, replacement of damaged concrete sidewalks, construction of a new sidewalk on the north side of 99<sup>th</sup> Avenue, from Ulysses Street to the Holiday Station Store driveway, and replacement of all signing. Proposed utility improvements consist of replacement of the old-style hydrants and minor maintenance of the sanitary and storm sewer structures, such as patching the existing concrete adjusting rings, inverts, doghouses, etc.

The total estimated project cost of the proposed improvements is **\$1,801,845**, of which **\$35,962** is proposed to be assessed over a five-year period. In addition, patching of the existing sanitary sewer adjusting rings at an estimated cost of **\$4,725** and replacement of 7 hydrants at an estimated cost of **\$130,140** is proposed to be paid for by City Public Utility Funds. The remaining portion of **\$1,631,018** is proposed to be paid from the City's Pavement Management Program Fund and City Municipal State Aid Funds.

The project is necessary, cost-effective, and feasible and would result in a benefit to the properties proposed to be assessed.

## II. PROJECT HISTORY

The Blaine City Council initiated the project and ordered the preparation of a feasibility report on September 21, 2020, with Resolution No. 20-136.

This report is based on field observations, record drawing information, and 2019 aerial photography.

## III. PROJECT AREA CHARACTERISTICS

99<sup>th</sup> Avenue/101<sup>st</sup> Avenue was constructed in 1990 as a 52-foot wide, 4-lane, urban street with a section consisting of 5 inches of bituminous pavement on 6 inches of class 5 aggregate base. A five-foot wide concrete sidewalk exists along the south side for the entire length and along the north side between Clover Leaf Parkway and Ulysses Street. A 2-inch mill/overlay was performed on this street in 2006. The pavement is in relatively good condition with minor cracking and rutting. Approximately 10% of the concrete sidewalk is in need of repair. The public utilities are in good condition.

The proposed project is located in the Coon Creek Watershed District. Storm water runoff west of Polk Street is currently captured and controlled with catch basins and a storm sewer pipe system that ultimately discharges to a storm water pond located in the northwest corner of the 99<sup>th</sup> Avenue/Clover Leaf Parkway intersection. Similarly, storm water runoff east of Polk Street discharges to the south through an existing ditch along the west side of Buchanan Street.

The location of the proposed project within the City of Blaine is shown on attached Figure 1 in Appendix A.

## **IV. PROPOSED IMPROVEMENTS**

The proposed improvements consist of a 2.5-inch mill/overlay, including a chip seal on the milled surface. There would also be upgrades to the existing signal system at the 99<sup>th</sup> Avenue/Clover Leaf Parkway intersection and repairs to the existing sidewalk.

The improvements are necessary, cost-effective, and feasible. It is not anticipated that additional right-of-way would be needed for the project. Each improvement is further described as follows:

### **A. SANITARY SEWER**

Public Works and Engineering staff have reviewed the existing sanitary sewer along the project corridor and concur that there are no issues with the existing mains. All sanitary sewer lines on the project are 8-inch and 10-inch diameter vitrified clay pipe (VCP), with the exception of a 36-inch diameter reinforced concrete pipe (RCP) trunk main that crosses 101<sup>st</sup> Avenue, just west of Clover Leaf Parkway. The VCP sewer was originally installed between 1969 and 1985 and was lined in 2011. The project would include patching existing concrete adjusting rings as needed on sanitary manholes.

### **B. WATER MAIN**

Public Works and Engineering staff have reviewed the water main installation dates and water main break data along the project corridor and concur that the existing 16-inch and 24-inch diameter cast iron pipe (CIP) water mains installed between 1969 and 1977 have no issues indicating the need for replacement or repair. The project would include adjusting existing gate valve boxes located within the street typical section, as well as replacing the top section of existing valve boxes, as necessary. In addition, all existing old-style hydrants would be removed and replaced with new hydrants.

### **C. STREET CONSTRUCTION**

Bituminous cores were taken at 14 locations along this segment of Polk Street. Based on the condition of the existing cores, the proposed project would consist of a 2.5-inch thick mill/overlay of the existing bituminous pavement, including a chip seal on the milled surface, known as a Texas Underseal, prior to the overlay. The purpose of the chip seal is to extend the life of the mill/overlay and delay reflective cracking. The pedestrian push buttons on the northerly leg of 99th Avenue/Clover Leaf Parkway intersection would be upgraded, and a battery backup system would be added to the existing signal.

The concrete sidewalk is in relatively good condition with only about 10% needing repairs. It is proposed to remove and replace only the damaged (i.e. cracked, settled, heaved, etc.) sidewalk panels. Also, all existing pedestrian ramps would be upgraded to meet current Americans with Disabilities Act (ADA) standards. In addition, a new 5-foot wide sidewalk would be constructed within the north boulevard of 99th Avenue, between Ulysses Street and the Holiday Station Store driveway.

A mill and overlay is a cost efficient method to extend the life of a road by 10 or more years. Unlike the more expensive and complex partial or full reconstruction, a mill and overlay typically does not include any curb and gutter replacement. Therefore, no curb and gutter replacement is proposed on this project except for areas where the pedestrian ramp upgrades occur.

#### **D. STORM DRAINAGE**

The proposed project is located in the Coon Creek Watershed District. Surface drainage throughout the majority of the project site, spanning from the west end at University Avenue to Polk Street, is captured within a series of catch basins along the existing roadway alignment and routed to a main regional stormwater basin located within the northwest quadrant of the Clover Leaf Parkway and 99<sup>th</sup> Avenue intersection. This stormwater basin is directly in line with Pleasure Creek, with the creek ultimately conveying captured flows to the south, offsite.

Drainage within the Polk Street and 99<sup>th</sup> Avenue intersection is collected within a series of catch basins within the intersection, where surface drainage is then routed through the Polk Street trunk system to the south.

The remaining project drainage, between Polk Street and Hwy 65, is collected within a series of catch basins along the existing roadway alignment and routed to Springbrook Creek, with the creek crossing located just west of the Buchanan Street and 99<sup>th</sup> Avenue intersection, where it ultimately conveys flows to the south.

Due to the proposed construction methods, total site disturbance as well as proposed impervious increases will be limited to less than a cumulative acre, therefore applicable Coon Creek Watershed District, as well as MPCA Stormwater management regulations, will not apply to this project.

#### **V. IMPACT OF PROPOSED IMPROVEMENTS**

The proposed street improvements would not create any new maintenance issues for the Public Works staff other than snow plowing the new sidewalk. The City would work with affected property owners and the Contractor to resolve any situation that may arise during construction. Short term traffic delays, construction dust and noise, and erosion would occur. Efforts to minimize these impacts include the restriction of work hours and dust and erosion control measures included in the project. Any disruptions that occur to existing yards, sprinkler systems, and driveways would be restored.

## VI. SUMMARY OF ESTIMATED PROJECTS COSTS

A breakdown of the estimated construction and administrative costs for each area is shown in the following table. All costs are based on anticipated unit prices for the 2021 construction season and include a 10% contingency to account for any elements of construction that are unknown at this time.

Estimated Project Costs		
Item	99th Avenue & 101st Avenue	
<b>Construction Costs</b>		
Streets		\$1,234,800
Water Main		\$96,400
Sanitary Sewer		\$3,500
<b>Total Estimated Construction Costs</b>		<b>\$1,334,700</b>
<b>Administrative Costs</b>		
Engineering	18%	\$240,246
Assessment	1%	\$13,347
Legal	2%	\$26,694
Administration	4%	\$53,388
Capitalized Interest	8%	\$106,776
Bonding	2%	\$26,694
<b>Total Estimated Administrative Costs</b>		<b>\$467,145</b>
<b>Total Estimated Project Costs</b>		<b>\$1,801,845</b>

## VII. ASSESSMENT METHODOLOGY

It is proposed to assess this mill/overlay project at the City's current standard rate of \$12.68 per front foot over 5 years for commercial/industrial/high density residential properties. The City is responsible for 100% of the remaining costs.

See Figure 2 in Appendix A for the parcels proposed to be assessed and Exhibit 1 for the proposed assessment roll.

## VIII. FINANCING

Based on the previous Estimated Project Costs table, the total estimated project cost is **\$1,801,845**. The proposed project would be temporarily financed by the City. Permanent funding would be provided by the Pavement Management Program (PMP) Funds, Public Utility Funds, Municipal State Aid Street (MSAS) Funds, and the costs assessed to the benefiting parcels in accordance with current City Assessment Policy and Minnesota Statutes Chapter 429, Special Assessment Laws.

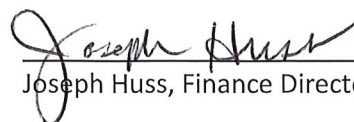
A breakdown of the costs assigned to each funding source to finance the estimated projects costs for each street is shown in the following table:

Financing Summary	
Temporary Funding Source	City Internal Funds
Permanent Funding Source	PMP Funds, Public Utility Funds, MSAS Funds, and Assessments
<b>Financing</b>	
Total Paid from PMP Funds	\$881,018
Total Paid from Public Utility Funds	\$134,865
Total Paid from MSAS Funds	\$750,000
Total Generation from Assessments	\$35,962
<b>Total</b>	<b>\$1,801,845</b>

### A. FINANCE DIRECTOR STATEMENT

With reference to this Feasibility Report for Improvement Project 21-08 as prepared by Bolton & Menk, Inc., dated December 18, 2020, I find the following:

1. The project would be temporarily funded through existing City internal funds whereupon permanent financing would be obtained through the City's Municipal State Aid Street Funds, Pavement Management Program Funds, Public Utility Funds, and assessments.
2. Sufficient moneys are currently available from the City's internal funds to temporarily fund the special assessment portion of the project. It is estimated that **\$35,962** would be assessed.
3. Sufficient moneys are currently available from the City's Public Utility Funds to pay for the proposed utility improvements for the street rehabilitation at an estimated cost of **\$134,865**.

  
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Joseph Huss, Finance Director

## IX. SCHEDULE

The following schedule allows for construction to be completed during the 2021 construction season:

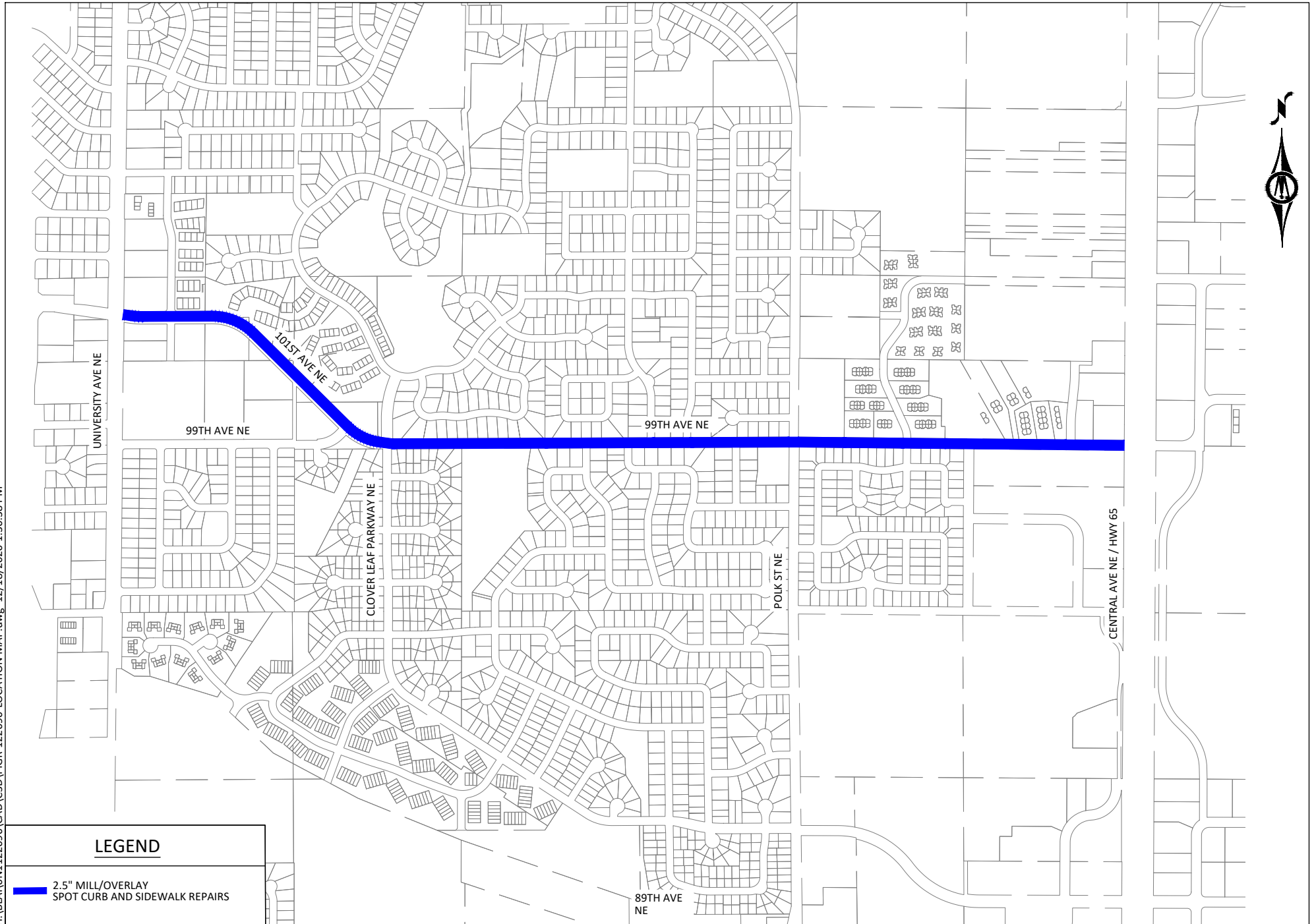
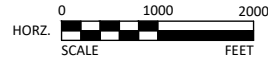
<b>Proposed Project Schedule</b>	
January 4, 2021	Receive feasibility report, order public hearing
January 11, 2021	Information packet discussing project and proposed assessments mailed to residents
February 1, 2021	Hold public hearing, order plans & specifications, award design contract
March 1, 2021	Approve plans & specifications, order advertisement for bids
March 30, 2021	Open bids
April 5, 2021	Award contract
May - Sept 2021	Construct improvements
October 2021	Hold assessment hearing
2022	First assessment payment due with real estate taxes

## X. PROJECT FEASIBILITY AND RECOMMENDATION


The project as proposed is technically and financially feasible, cost effective, and would result in a benefit to the properties proposed to be assessed. It is recommended that the Council accept this report, hold the public hearing, and order the improvements.



## Appendix A: Figures & Exhibits



**LEGEND**

-  2.5" MILL/OVERLAY  
SPOT CURB AND SIDEWALK REPAIRS



H:\BLA\01122690\CAD\C3D\FGR-122690-ASSESSMENT MAP.dwg 12/18/2020 1:37:45 PM

**LEGEND**

 **ASSESSABLE PROPERTY**

PROJECT 21-08  
**99th Avenue/101st Avenue Rehabilitation**  
 CITY OF BLAINE  
 EXHIBIT NO. 1  
 PROPOSED ASSESSMENT ROLL

<b>ASSESSMENT RATE BREAKDOWN</b>
<b>ASSESSMENT RATE PER FRONT FOOT FOR MILL/OVERLAY = \$12.68</b>

PROPERTY PIN	PROPERTY OWNER	ASSESSABLE FRONT FOOTAGE	ASSESSMENT RATE PER FRONT FOOT	PROPOSED ASSESSMENT	
303123220079	KING OF GLORY LUTHERAN CHURCH 10103 UNIVERSITY AVE NE	188.0	*	\$12.68	\$2,383.84
303123220009	REVERE 9745 PARTNERS LLC 10041 UNIVERSITY AVE NE	190.0	*	\$12.68	\$2,409.20
303123220014	ALEXANDRA HOUSE INC 10065 3RD ST NE	470.1	*	\$12.68	\$5,960.87
303123220015	ALEXANDRA HOUSE INC UNADDRESSED		**		
303123140023	MASIH ENTERPRISES LLC 9850 POLK ST NE	250.0		\$12.68	\$3,170.00
293123220006	MILLPOND PARTNERS LLC 9901 POLK ST NE	361.5		\$12.68	\$4,583.82
293123210051	ULYSSES PROPERTY LLC UNADDRESSED	142.4		\$12.68	\$1,805.63
293123210050	HOLIDAY STATIONSTORES INC 9933 ULYSSES ST NE	211.8		\$12.68	\$2,685.62
293123240008	AREC 1 LLC 9890 CENTRAL AVE NE	1,022.3	*	\$12.68	\$12,962.76
<b>TOTALS:</b>		<b><u>2,836.1</u></b>			<b><u>\$35,961.74</u></b>

NOTES:

\* INCLUDES 150 FOOT CORNER LOT CREDIT TOWARDS ASSESSABLE FRONT FOOTAGE

\*\* COMBINED FRONTAGE OF THESE TWO PROPERTIES WITH SAME OWNER