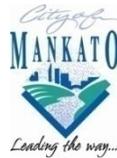


STADIUM ROAD OVERLAY

Project Feasibility Report

City Project Number 10543

November 2, 2015



Project Feasibility Report

Stadium Road Overlay
City Project Number 10543
City Of Mankato

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II. CERTIFICATION PAGE

CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

Jeffrey Johnson, PE
Reg. No. 45826

Date

III. PROJECT CONTACTS

TITLE	NAME	PHONE	EMAIL
Mayor	Eric Anderson	507.386.1750	eanderson@ mankatomn.gov
Councilor at Large	Christopher Frederick	507.382.7299	cfrederick@ mankatomn.gov
Councilor Ward 1	Karen Foreman	507.382.4256	kforeman@ mankatomn.gov
Councilor Ward 2	Tamra Rovney	507.388.3326	trovney@ mankatomn.gov
Councilor Ward 3	Mark Frost	507.387.3169	mfrost@ mankatomn.gov
Councilor Ward 4	Jason Mattick	507.720.8787	jmattick@ mankatomn.gov
Councilor Ward 5	Trudy Kunkel	507.317.6990	tkunkel@ mankatomn.gov
City Manager	Patrick Hentges	507.387.8695	phentges@ mankatomn.gov
City Engineer	Jeffrey Johnson	507.387.8640	jjohnson@ mankatomn.gov
Project Engineer	Michael McCarty	507.387.8643	mmccarty@ mankatomn.gov
Project Operations	Jim Tatge	507.387.8504	jtatge@ mankatomn.gov
Project Designer	Todd Wiens	507.387.8509	twiens@ mankatomn.gov
Project Representative	Todd Wiens	507.387.8509	twiens@ mankatomn.gov

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IV. EXECUTIVE SUMMARY

Stadium Road between Stoltzman Road and a point 500 feet east of Map Drive was constructed between the 1970s and the 1990s. During that time no major pavement rehabilitation has been performed on the road other than minor maintenance. This section of road way has continued to see an increase in traffic as the City of Mankato has developed to the south and enrollment at MSU-Mankato has increased. The pavement of Stadium Road is at a condition where heavy maintenance needs to be performed in order to achieve the desired service life of the pavement section.

Suggested improvements include edge milling and overlay the existing bituminous pavement, select curb and gutter replacement, select pedestrian ramp replacement and installation of continuous lighting.

The estimated cost of these necessary improvements is approximately \$1,650,890.

From an engineering standpoint, the proposed improvements are necessary, cost effective, and feasible. This can best be accomplished by letting competitive bids for the work. It is recommended that the council accept this project feasibility report and schedule a preliminary assessment hearing for the proposed improvements.

V. PROJECT INTRODUCTION

The recommended pavement and utility improvements on Stadium road between the center line of Stoltzman Road and a point 500 feet east of the centerline of Map Drive are being proposed for the summer of 2016. In accordance with Minnesota Statutes, Chapter 429, the City Council has authorized the preparation of a project feasibility report to define the scope and determine the reasonableness of the project. The specific objectives of this preliminary engineering report are to:

- Evaluate the need for this project.
- Determine the necessary improvements.
- Provide information on the estimated costs for the proposed project.
- Determine the project schedule.
- Determine the feasibility of the proposed project.

This project, as proposed, is 10,500 feet. Specific items that will be included in the construction are as follows:

- Edge mill existing bituminous pavement
- Select water valve replacement
- Remove and replace select curb and gutter
- Remove and replace select pedestrian ramps
- Install continuous lighting.
- Stripe roadway including bicycle lanes where applicable.

VI. EXISTING CONDITIONS

A. STREET

Stadium Road between Stoltzman Road and a point 500 feet east of Map Drive was construction in various sections between the 1970s and the 1990s. The road has not had any major maintenance performed on it since its initial construction. The pavement has an aggregate

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pavement condition index rating of 43, indicating a fair condition. The pavement section varies along the project but is typically represented by 6-inches of bituminous, 8-inches of class 5 aggregate and 24-inches of select granular borrow. The existing street layout for Stadium Road is located in Figure 1 in the Appendix.

B. STORM SEWER

Stadium Road has an extensive stormwater system that spans several watersheds. There are 28 storm manholes that will be impacted by the project. The existing storm water drainage system for the surrounding area is located in Figure 2 in the Appendix with the storm system shown in green.

C. SANITARY SEWER

Stadium Road has sanitary sewer in various locations along its length. A majority of this sewer existing outside the pavement and is located within the boulevard. There are 5 manholes that will be impacted by this project. The existing sanitary sewer system for Stadium Road is located in Figure 3 in the Appendix with the sanitary system shown in brown.

D. WATERMAIN

Water main is present along various sections of Stadium Road. A majority of the watermain is located in the boulevard. This project will impact 18 water valves. There is an unused ductile iron watermain stub that extends west and south in the intersection of Pohl Road and Stadium Road. At this junction there are also 3 gate valves that date to the early 1970's. The existing domestic water distribution system for Stadium Road is located in Figure 3 in the Appendix with the domestic water distribution system shown in blue.

E. OTHER UTILITIES

Other non-municipal-owned utilities may be present in the right-of-way. These include natural gas, electric, and telecommunications. The condition of these utilities is unknown and their replacement is beyond the scope of this report.

VII. PROPOSED IMPROVEMENTS

Proposed improvements for Stadium Road include edge milling and overlaying the existing bituminous pavement, replacing select areas of curb and gutter, replacing select pedestrian ramps, removing unused watermain and replacing select gate valves; installation of continuous lighting and reconfiguring travel lanes to include on street bike lanes.

A. STREET

it is proposed that the bituminous pavement be edge milled 2-inches and a 2-inch overlay wearing surface be installed. This will restore the ride quality of the pavement and extend the life of the pavement section. In order to promote proper drainage select areas of curb and gutter are proposed to be replaced. Non-compliant pedestrian ramps are also proposed to be replaced. Continuous lighting will be installed along the project as well. In accordance with the City of Mankato "Complete Streets Plan & Policy" it is proposed to add 4 to 6 foot on street bike lanes. The proposed street cross section and pavement section are located in Figures 5 in the Appendix.

Any temporary damages that occur to the boulevard during construction will be repaired after the project with sod in all of the disturbed areas. Trees, bushes, and other vegetation located in the construction zone will be protected where possible; however, some trees and bushes may need to be removed as part of construction due to direct conflict with the proposed utilities or due to unavoidable root damage.

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B. STORM SEWER

No improvements to the storm sewer are proposed. .

C. SANITARY SEWER

No improvements to the sanitary sewer are proposed.

D. WATERMAIN

It is proposed that 120 feet of dead end watermain stub be removed from the intersection of Pohl Road and Stadium Road. It is also proposed that the valve at this junction also be replaced.

E. OTHER UTILITIES

The design of the proposed improvements will be coordinated with the owners of private utilities such as natural gas, electric, telephone, and cable television. A design coordination meeting will be held with all private utility companies to identify those utilities that are in conflict with the proposed improvements. Private utility companies will be requested to submit proposed designs and construction schedules for any relocation. The construction schedule for the proposed improvements will be coordinated with the utility relocation schedule to avoid unnecessary delays.

VIII. RIGHT-OF-WAY AND EASEMENT

The right-of-way varies in width from 66 to 83 feet. No additional right-of-way or easements is anticipated for this project. .

IX. APPROVALS/PERMITS

Approvals and permits are required from various agencies for the construction of the project. They include:

- None

X. PROJECT COST ESTIMATE AND FINANCING

Estimated projections for the cost of this project are summarized below. A detailed cost estimate is included at the end of the report.

ITEM	COST
Street	\$1,266,258
Strom Water	\$12,315
Watermain	\$14,992
Sanitary Sewer	\$0
Construction Contingency	\$129,357
TOTAL CONSTRUCTION	\$1,422,922
Admin/bonding	\$85,375
Engineering	\$142,292
TOTAL PROJECT COST	\$1,650,589

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Funding for the proposed improvements is shown in the table below.

FUNDING SOURCE	AMOUNT	PERCENT
Special Assessments	\$860,085	52%
Water Utility	\$17,631	1%
Blue Earth County	\$772,873	47%
TOTAL FUNDS	\$1,650,589	100%

XI. POSSIBLE SCHEDULE

The following is a possible schedule for the proposed improvements on Stadium Road:

12/14/2015	Set date of Hearing
12/30/2015	Informational meeting
03/14/2016	Project feasibility hearing
02/08/2016	Preliminary Assessment Hearing
02/08/2016	Advertise for bids
03/11/2016	Open Bids
03/21/2016	Award Bids
04/18/2016	Project Start
07/08/2016	Final Completion

XII. CONCLUSION AND RECOMMENDATIONS

The existing conditions of Stadium Road are unfavorable with only further deteriorations to come. If these road and utility improvements are not made, maintenance costs will continue to be an issue and failure of the road and system will occur. From an engineering standpoint, this project is cost effective, necessary, and feasible. The best way to accomplish this project is by letting competitive bids for the work. Feasibility is contingent upon City Council findings with respect to project financing.

We recommend the Council accept this project feasibility report, set a date for the preliminary assessment hearing, order the City Engineer to prepare final plans and specifications and instruct the City Manager to advertise for bids in accordance with the requirement of law.

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XIII. APPENDIX

A. FIGURE 1: EXISTING LAYOUT OF STADIUM ROAD



Figure 1a



Figure 1b



Figure 1c



Figure 1d

B. FIGURE 2: STADIUM ROAD EXISTING STORM SEWER LAYOUT

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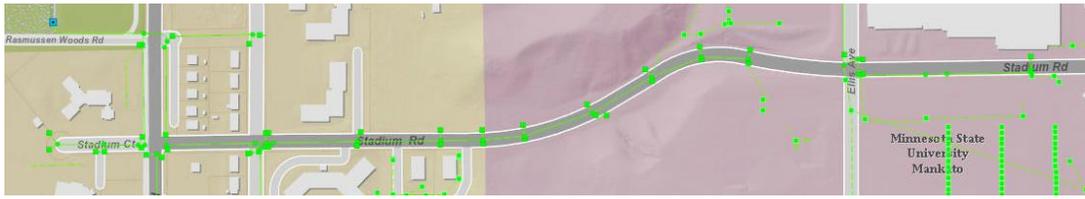


Figure 2a



Figure 2b



Figure 2c



Figure 3d

C. FIGURE 3: STADIUM ROAD EXISTING SANITARY SEWER AND WATERMAIN LAYOUT



Figure 3a

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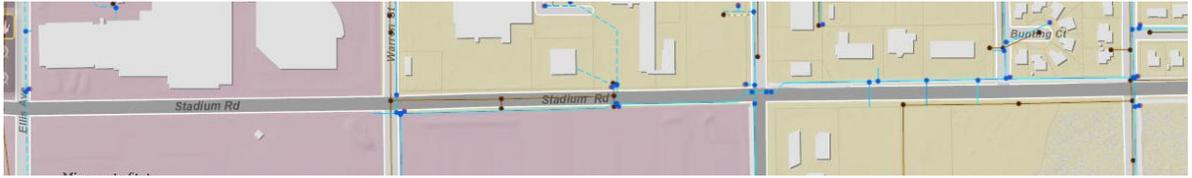


Figure 3b

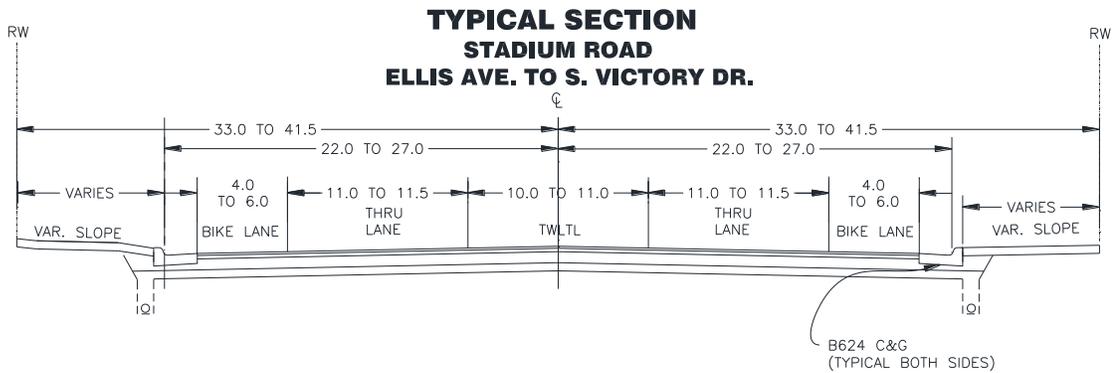


Figure 3c



Figure 3d

D. FIGURE NUMBER: STREET NAME PROPOSED STREET CROSS SECTION AND PAVEMENT SECTION



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E. ENGINEERS ESTIMATE

CITY PROJECT NUMBER 10543 STADIUM ROAD ENGINEERS ESTIMATE				
CONTRACT ITEM	UNIT	EST QTY	BID UNIT PRICE	BID PRICE
MOBILIZATION	LS	1.00	\$59,748.84	\$59,748.84
REMOVE CURB AND GUTTER	LF	2250.00	\$3.94	\$8,859.38
REMOVE WATER MAIN	LF	120.00	\$4.61	\$553.14
REMOVE CONCRETE SIDEWALK	SF	1908.00	\$1.40	\$2,664.52
REMOVE CONCRETE PAVEMENT	SY	466.67	\$7.35	\$3,430.00
REMOVE GATE VALVE & BOX	EA	3.00	\$220.57	\$661.72
MILL BITUMINOUS SURFACE 2"	SY	16333.33	\$4.20	\$68,600.00
TYPE SP 12.5 WEAR CRS MIX (3,C) 2" THICK	SY	63000.00	\$9.03	\$568,890.00
12" GATE VALVE AND BOX	EA	3.00	\$3,049.02	\$9,147.06
ADJUST VALVE BOX - WATER	EA	18.00	\$257.25	\$4,630.50
ADJUST FRAME RING AND CASTING	EA	31.00	\$397.25	\$12,314.64
5" CONCRETE WALK	SF	1908.00	\$5.09	\$9,716.49
CONCRETE CURB & GUTTER DESIGN B618	LF	2250.00	\$17.26	\$38,839.50
CONCRETE CURB AND CUTTER DESIGN B624	LF	2250.00	\$26.60	\$59,842.13
8" CONCRETE DRIVEWAY PAVEMENT	SY	466.67	\$69.09	\$32,242.00
TRUNCATED DOMES	SF	224.00	\$43.49	\$9,741.98
LIGHTING UNIT TYPE SPECIAL	EA	70.00	\$2,193.53	\$153,547.38
LIGHT FOUNDATION DESIGN E	EA	70.00	\$669.38	\$46,856.25
2" NON-METALLIC CONDUIT	LF	10500.00	\$4.08	\$42,887.25
UNDERGROUND WIRE 1 COND NO 4	LF	21000.00	\$2.49	\$52,258.50
TRAFFIC CONTROL	LS	1.00	\$4,961.53	\$4,961.53
PAVEMENT MESSAGE (LEFT ARROW) EPOXY	EA	54.00	\$131.78	\$7,115.85
PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	EA	54.00	\$204.26	\$11,029.85
4" SOLID LINE WHITE - EPOXY	LF	22500.00	\$2.74	\$61,661.25
4" SOLID LINE YELLOW-EPOXY	LF	23100.00	\$0.51	\$11,884.95
8" SOLID LINE WHITE-EPOXY	LF	832.00	\$8.93	\$7,425.60
24" SOLID LINE WHITE-EPOXY	LF	448.00	\$9.05	\$4,054.85
				\$1,293,565.17