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Preliminary Engineering Report

Trunk Highway 30 Reconstruction

City of Rushford, Minnesota

September 2020

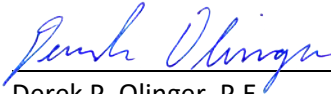
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Certification

Preliminary Engineering Report
for
Trunk Highway 30 Reconstruction
City of Rushford, Minnesota
H19.117700
September 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: 
Derek P. Olinger, P.E.
License No. 54287

Date: 9/10/2020

Revision 1 (9/14/2020)

Table of Contents

I.	EXECUTIVE SUMMARY	1
II.	PROJECT INTRODUCTION.....	2
III.	EXISTING CONDITIONS.....	2
	A. Street and Surface	2
	B. Sidewalk.....	4
	C. Storm Sewer	4
	D. Sanitary Sewer	4
	E. Watermain.....	5
	F. Other Utilities	5
IV.	PROPOSED IMPROVEMENTS	5
	A. Street and Surface	5
	B. Sidewalk.....	6
	C. Storm Sewer	6
	D. Sanitary Sewer	6
	E. Watermain.....	7
	F. Other Utilities	7
	G. Lighting & Other Aesthetic Improvements.....	7
	H. Right-of-Way and Easements	8
V.	APPROVALS AND PERMITS	8
VI.	PROJECT COST ESTIMATE AND FINANCING	9
	A. Cost Estimates	9
	B. Funding	10
	C. Special Assessments	10
VII.	TENTATIVE PROJECT SCHEDULE	12
VIII.	CONCLUSION AND RECOMMENDATIONS	12

Appendix

Appendix A: Figures

Appendix B: Detailed Cost Estimate

I. EXECUTIVE SUMMARY

This report is for a propose street and utility reconstruction project along Minnesota Trunk Highway (TH) 30 between Mill Street (TH 43) and a point directly west of Southview court in Rushford, Minnesota.

The corridor pavement surfaces and utilities in the project area are deteriorating and in need of repair. If the infrastructure is not replaced, maintenance costs will continue to rise as deterioration continues until the infrastructure items ultimately fail.

Most of the project area lies within state right-of-way and surfaces are maintained by the Minnesota Department of Transportation (MnDOT). Utilities are maintained by the City of Rushford. To date, the City and MnDOT have entered into a partnership agreement to complete the project design. As part of the agreement, the City is responsible for finalizing the design in accordance with MnDOT standards and obtaining any necessary easements to complete the work. MnDOT will let bids and administer the project through construction.

The project scope currently includes the reconstruction of street pavement, curb and gutter, sidewalks, private driveways (as needed), street lighting, and some aesthetic/landscaping improvements. Some new sidewalk extensions on the west end of the project will also be included. The project will also include replacement of storm sewer, sanitary sewer, watermain, and the associated service lines within the project area.

Project costs will be shared by the City of Rushford and MnDOT. The estimated total project costs is approximately \$5.20 Million. As currently understood, the City's share of these costs is \$2.33 million. The remaining \$2.87 Million would be funded by MnDOT. Funding for the City's portion of the proposed improvements is proposed to come from the sale of bonds, to be repaid through special assessments, enterprise funds and ad valorem funds.

According to the City's Assessment Policy, the proposed improvements are assessable to the benefitting properties as follows:

- Street, Water, and Sanitary Improvements – 30% Assessable, 70% City Cost
- Storm Sewer Improvements – 0% Assessable, 100% City Cost
- Sidewalks – 100% Assessable, 0% City Cost

Applying the City of Rushford's Assessment Policy to the project costs results in an estimated assessment as shown below for typical lots found within the project limits

- Residential Lot (100-feet wide): **\$12,515**
- Downtown Lot (50-feet wide): **\$9,974**

Estimated Assessment Costs Corrected
Revision 1 (9/14/2020)

These estimated assessments include assessments for street, sidewalk, and water/sewer connections. These estimates appear to be generally consistent with previously completed street and utility improvement project assessments.

From an engineering standpoint, the proposed improvements are feasible, cost effective, and necessary. Given the location of the project within trunk highway right-of-way, the project will be most cost effective if completed through a Cooperative Agreement with MnDOT.

We recommend that the Council accept this Preliminary Engineering Report and call for a public hearing on the proposed improvements. If approved, the design process would extend through summer of 2021 and construction would begin in the spring of 2022.

II. PROJECT INTRODUCTION

This Preliminary Engineering Report considers street and utility reconstruction on Trunk Highway 30 from approximately 300 feet west of Southview Court to the intersection with Trunk Highway 43/Mill Street. A project location map is illustrated in **Figure 1 of Appendix A**.

In accordance with Minnesota Statutes, Chapter 429, the City Council has authorized the preparation of a Preliminary Engineering Report to define the scope and determine the feasibility of the proposed project. The specific objectives of this Preliminary Engineering Report are to:

1. Evaluate the need for the project.
2. Determine the necessary improvements.
3. Provide information on the estimated costs for the proposed project.
4. Determine the project schedule.
5. Determine the feasibility of the proposed project.

The project would consist of surface and underground utility improvements. Additional details are provided in the following sections.

III. EXISTING CONDITIONS

A. Street and Surface

The existing streets in the project area are bituminous with B624 curb & gutter. The existing street surfaces are deteriorated with block cracking and heavy weathering and alligator cracking at joints. The table below provides a summary of existing street widths.

Table 1 – Proposed Street Widths		
From	To	Existing Street Width ¹ (ft)
300' W of Southview Ct	Southview Ct	36' - 40'
Southview Ct	Stevens Ave	41'
Stevens Ave	½ Block W of Elm St	44'
½ Block W of Elm St	TH 43/Mill St	54' – 60'

The platted right-of-way varies in width from 60 to 116 feet. In general, the area west of Stevens Avenue has steeper boulevard slopes and street grades while the area east of Stevens Ave is relatively flat terrain. Several photos of the existing street surfaces are provided below.



Elm St intersection



Western Project Limits, looking east

Heavy Joint Deterioration



Western Project Limits, looking east

Several Patches and joint deterioration

B. Sidewalk

The existing concrete sidewalk within the project corridor was found to be mostly out of compliance with the current American Disabilities Act (ADA) requirements. Compliance issues included excessive cross slopes, trip hazards, and several missing or non-compliant pedestrian ramps at intersections.

Currently, there is no sidewalk between south view court and a point 520 feet east (north side) or 1070 feet east (south side). It should be noted that this segment of sidewalk is also used by various residents to access the entrance to Magelsson Bluff, west of the project.

In summary, the condition of the existing sidewalks within the project corridor can be characterized as poor and in need of replacement.

C. Storm Sewer

Storm Sewer is present within the entirety of the project area. The existing storm sewer contains several structures with varying degrees of structural integrity. Pipe sizes range in size between 12" and 27" in diameter. The storm sewer within TH 30 serves a drainage area of approximately 58 acres; a large majority of which is steep bluffs. This drainage area is much larger than most urban systems.

In general, the network of existing storm sewer appears to be undersized, which results in drainage conditions which do not meet current MnDOT or City design standards.

The existing storm sewer is illustrated on the Existing Utilities Map, **Figure 2 of Appendix A.**

D. Sanitary Sewer

The existing sanitary sewer within the project area consists of mostly 8-inch vitrified clay pipe (VCP) mains. In most cases, service lines connected to mains are of similar construction to the main.

Complete as-built records for sanitary sewer within the project area were not available, although, it appears that sanitary sewer was installed within Jessie Street and Stevens Avenue in the early 1950's and consists of VCP. Sanitary sewer on the western end of the project, extending up to Southview Court was installed in 1973 and consists of concrete pipe.

In 2005, most of the sanitary sewer main between Elm Street and Southview Court was lined with Cured-in-Place Pipe (C.I.P.P.). Sanitary service lines within the right-of-way were not improved with this project. Recent inspections of this line have shown failure points within the 2005 liner system, as well as leaking joints at service line connections.

In 1996, the existing VCP sanitary sewer main between Elm Street and TH 43 was replaced with new PVC pipe and reinforced concrete manholes. Services were not replaced with this project.

Except for the sanitary main between Elm Street and TH 43, the sanitary sewer within the project area can be characterized as poor and in need of replacement. Aside from the structural integrity of this pipe, sanitary sewer of this condition is often susceptible to groundwater infiltration, which leads to excessive flows at the Wastewater Treatment Facility. Prior to moving forward with design, sanitary sewer within the project limits will be verified to better understand the locations and conditions of service lines.

The existing sanitary sewer collection system is shown on the Existing Utilities Map, **Figure 2 of Appendix A.**

E. Watermain

The Existing water distribution system within the project area consists of a combination of 3-inch, 6-inch and 8-inch diameter cast iron pipe. Based on limited record information, it appears that this watermain was likely constructed between the early 1950s and the mid- 1970s.

Cast iron watermain commonly susceptible to excessive corrosion, which can result in more frequent watermain breaks, pinhole leaks, and limited hydraulic conductivity (which limits flow available for fire protection). There are select water services near the Stevens Avenue intersection that have been known to freeze during winter months. This is most likely due to inadequate bury depth.

The existing water distribution system is shown on the Existing Utilities Map, **Figure 2** of **Appendix A**.

F. Other Utilities

Other non-municipal owned utilities are present in the right-of-way. These include natural gas and telecommunication. Municipal electric utilities are also present within the right-of-way. The locations of these utilities have been collected during the initial project survey, using the gopher one call system.

IV. PROPOSED IMPROVEMENTS

A. Street and Surface

All street surfaces within the project corridor are proposed for complete reconstruction, including the excavation of the existing section and replacement with new aggregate base, bituminous pavement and concrete curb and gutter.

The following table summarizes the proposed street widths and curb types within the project area.

Table 2 – Proposed Street Widths				
From	To	Existing Street Width ¹ (ft)	Proposed Street Width ¹ (ft)	Parking
300' W of Southview Ct	Southview Ct	36' - 40'	34'	North Side
Southview Ct	Stevens Ave	41'	40'	Both Sides
Stevens Ave	½ Block W of Elm St	44'	40'	Both Sides
½ Block W of Elm St	TH 43/Mill St	54' – 60'	48'	Both Sides

Notes: ¹Curb Face to Curb Face

The Street width of 34 feet will allow for two 12-foot travel lanes, one 8-foot parking lane on the north side, and a 2-foot concrete shoulder on the south. Street widths of 40 feet allow for an additional parking lane; two 12-foot travel lanes and two 8-foot parking lanes. The 48 feet Downtown area width will allow for increased parking lane widths. Minor revisions to the overall street width may be made during the final design process.

Based on the preliminary pavement recommendations from MnDOT, the typical bituminous pavements structure will consist of 6-inch thick bituminous pavement over 6 inches of aggregate base and 18 inches of select granular borrow (sand).

Private driveway aprons along the entire project will be reconstructed from the back of the new curb to the extent necessary to match into the existing driveways.

All disturbed turf will be restored with topsoil borrow, seeding and/or sod upon completion of grading. Trees or bushes located within the street right-of-way may need to be removed in order to facilitate underground utility reconstruction. Attempts will be made to reduce impacts to existing trees; however, some tree removals should be expected.

The proposed typical roadway sections are provided in **Figure 6 of Appendix A**. A plan view of the proposed street and surface improvements is illustrated in **Figures 3-5 of Appendix A**.

B. Sidewalk

All the existing public sidewalk within the project area will be replaced with new concrete walk. Full replacement of the sidewalk will be required to bring the public walk in compliance with current ADA requirements. Sidewalk will be extended on the north side of the street to the intersection with Bluffview Road. On the south side, sidewalk will be extended to the intersection with Southview Court to provide safer pedestrian access to residences on the west end of town and those travelling to and from Magelsson Bluff.

Steep grades in areas of the project will require the replacement of existing retaining walls and construction of new retaining walls on the north side of W Stevens Avenue. In other areas, front yards will be cut or filled to the grade needed to accommodate the new walk and other improvements. Any existing approach sidewalks from the street to the house will be reconstructed in a similar fashion as the driveways.

The proposed improvements will include replacement and regrading of all intersection curb ramps to bring them into ADA compliance. Sidewalk improvements are illustrated in **Figures 3-5 of Appendix A**.

C. Storm Sewer

As discussed previously, storm sewer exists throughout the entirety of the project area. The proposed project will include replacement of the existing storm sewer system in its entirety. The proposed design will include upsizing and relocation of storm sewer mains and additional storm sewer inlets throughout the project.

The new storm sewer collection system will discharge to the existing outlet points as depicted in the attached figures. The collection system will be designed to meet current State trunk highway drainage standards. In this case, the system will be design to convey a minimum 5-year (3.77") rain event with little to no ponding within travel lanes.

Perforated subsurface drain piping is proposed along the back of the curb lines on each street. These drains are proposed to be 6-inch diameter perforated PVC. The new subsurface drains will be connected to downstream catch basins. The purpose of these drains is to remove subsurface water from the pavement section and underlying soils. This will help keep the underlying soils stable and help to preserve the life of the street.

The proposed storm sewer construction is shown on **Figures 3-5 of Appendix A**.

D. Sanitary Sewer

The existing sanitary sewer collection west of Elm Street will be replaced with new, 8-inch diameter PVC mains and reinforced concrete manhole structures. Private service lines adjacent to this area will also be replaced with new 4- or 6-inch diameter PVC service pipe between the main and a point near the right-of-way line. Manholes will be spaced at a maximum of 400-foot intervals to facilitate maintenance and cleaning.

Sanitary mains and manholes between Trunk Highway 43/Mill Street and Elm Street were replaced in 1996. As we understand the sanitary sewer main in this area is in satisfactory

condition and is not proposed for replacement; however, service lines between the main and building front will be replaced as part of this project.

Additionally, sump pump services will be provided to each lot. Buried sump service connections provide homeowners with an additional option for sump pumps which may reduce the number of illegal sanitary sewer connections and is generally more favorable than discharging water to yards.

It should be noted that the existing concrete sanitary main near Southview court may contain asbestos materials, based on the installation date. If verified during final design, these materials will need to be removed and disposed by a specialty abatement contractor.

In 2017-18, the City evaluated the infrastructure needs for potential future development west of Rushford, along TH 30. If the area west of Rushford were to experience rapid growth, the downstream sanitary sewer within TH 30 may require upsizing from the standard 8-inch main to 10-inch main. The cost to upsize sanitary sewer within the proposed project limits is in the range of \$40,000 to \$50,000. This cost is not included in the total project costs, discussed later in this report.

The proposed sanitary sewer construction is illustrated on **Figures 3-5 of Appendix A.**

E. Watermain

The proposed project includes the replacement of all watermain within the project limits with new PVC watermain. The new watermain will be a minimum diameter of 8-inches, however; the City will have the option of upsizing the main to 10-inch diameter pipe to provide additional capacity for future growth to the west of town. The cost to upgrade watermain from 8-inch to 10-inch main is approximately \$22,000. This cost is included in the total project cost estimates, discussed in the following sections.

Hydrants with dedicated valves will be installed at appropriate intervals and main line valves will be installed to properly isolate the system for flushing, repair, and maintenance.

New, 1-inch water service pipe will be constructed between the main and property line for each home, and new curb stops will be installed. Any known combined water services will be separated to have individual shut offs as a part of this project.

The proposed watermain construction is illustrated on **Figures 3-5 of Appendix A.**

F. Other Utilities

The design of the proposed improvements will be coordinated with the owners of other utilities such as natural gas, electric, and communications. 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.

G. Lighting & Other Aesthetic Improvements

The proposed design will include the replacement of existing street lighting between TH 43/Mill Street and Stevens Avenue. The existing lights will be removed and replaced with new decorative poles and fixtures, similar or identical to the lighting installed with the TH 43 reconstruction project in 2014.

Existing street lights between Stevens Avenue and the western project limits will likely be impacted by the surface and utility reconstruction. Street lights in this area will be relocated as needed.

In the downtown area of the project (between TH 43/Mill Street and ½ block west of Elm Street), aesthetic improvements including but not limited to boulevard trees and planter boxes may be included in the project scope.

H. Right-of-Way and Easements

Although the project will be designed to limit construction of the proposed improvements to within the existing right-of-way, there will be multiple impacts to private property. Therefore, easements will be necessary along the project frontage and will be obtained by the City.

At this time, an estimated 36 temporary construction easements and 4 permanent easements will be necessary to accommodate the proposed improvements. One additional property on the west end of the project will also require a partial acquisition of an existing residential property and rental house structure. This portion of the project scope will be completed by MnDOT and is therefore excluded from this report.

Proposed easements are illustrated in the attached figures.

V. APPROVALS AND PERMITS

The City and MnDOT have entered into a partnership agreement to complete the project design. As part of the agreement, the City is responsible for finalizing the design in accordance with MnDOT standards and obtaining any necessary easements to complete the work. MnDOT will let bids and administer the project through construction.

Since this will be a MnDOT project, multiple intermittent design and plan reviews and approvals are required. The project will also require environmental review by various groups as part of the State's review process. The details of this environmental review are included in the Categorical Exclusion document for this project. A copy of this document is available upon request.

The project will require permits from the following agencies:

- Minnesota Pollution Control Agency (MPCA) General Construction Storm Water Permit
- Minnesota Dept. of Health (MDH) Plan Review for watermain construction
- MnDOT
 - Utility Accommodation & Misc. Work on Trunk Highway Right-of-Way
 - Drainage Permit

VI. PROJECT COST ESTIMATE AND FINANCING

A. Cost Estimates

The estimated project costs for the base project area are summarized in the following table.

Table 3 – Preliminary Cost Estimate			
Project Component	Total Project Cost	State Share	City Share
Street Improvements (Residential ¹)	\$1,415,885.70	\$1,131,437.57	\$284,448.13
Street Improvements (Downtown ²)	\$466,781.64	\$370,660.53	\$96,121.11
Sidewalk Improvements (Residential ¹)	\$618,009.17	\$446,958.87	\$171,050.30
Sidewalk Improvements (Downtown ²)	\$318,569.74	\$248,188.13	\$70,381.62
Street Lighting Improvements	\$223,804.75	\$0.00	\$223,804.75
Aesthetic ³ , Landscaping Improvements	\$93,886.77	\$56,000.00	\$37,886.77
Storm Sewer Improvements	\$846,010.95	\$615,638.95	\$230,372.00
Sanitary Sewer Improvements	\$427,695.46	\$0.00	\$427,695.46
Sanitary Services (Mill St to Elm St)	\$25,113.10	\$0.00	\$25,113.10
Water System Improvements	\$589,224.70	\$0.00	\$589,224.70
Right-of-Way Acquisition	\$175,377.00	\$0.00	\$175,377.00
Project Total	\$5,200,359.00	\$2,868,884.05	\$2,331,474.95

- Notes:
- 1) TH 30 between the western project limits and ~1/2 block west of Elm Street
 - 2) TH 30 between Th 43/Mill St and ~1/2 block west of Elm Street
 - 3) Aesthetics includes increased cost of lighting for decorative poles and fixtures
 - 4) Engineering and contingency costs are included in the totals above

Detailed cost estimates are included in *Appendix B*. These cost estimates are based on public construction cost information from other recent projects which are similar in scope. Since the cost estimates are dependent on the cost of labor, materials, competitive bidding process, weather conditions, and other factors, all cost estimates are opinions for general information and no warranty or guarantee as to the accuracy of construction cost is made. Therefore, financing for this project should be based upon actual competitive bid prices with reasonable contingencies.

B. Funding

The cost sharing between the City and the State is summarized in the following table.

Table 4 – City/State Cost Sharing		
Project Component	State Share	City Share
Driving Lanes (Up to 12' in width) Curb & Gutter	100%	0%
Parking Lanes	90%	10%
Sidewalk Improvements ¹	100%	0%
Oversized Sidewalk Improvements ²	0%	100%
Street Lighting	50%	50%
Aesthetic & Landscaping	2% of Total State Share ³	Remainder
Storm Sewer Improvements	95%	5%
Storm Sewer Elm Street Crossing	0%	100%
Sanitary Sewer Improvements	0%	100%
Water System Improvements	0%	100%
Right-of-Way Acquisition ⁴	0%	100%
Preliminary and Final Design Engineering	0%	100%

- Notes:
- 1) Includes all downtown sidewalks 14 feet or less in width and all 5-foot public residential sidewalks.
 - 2) Includes downtown walk for widths greater than 14 feet, residential outwalks, Stevens Avenue Sidewalk connection and extension and crosswalk pavement markings.
 - 3) 2% of total share of state cost, not 2% of aesthetic and landscaping costs.
 - 4) State has agreed to fund 100% of the costs associated with property acquisition at 604 Stevens Ave.

Funding for the City's portion of the proposed improvement is proposed to come from the sale of bonds, to be repaid through special assessments, City enterprise funds, reserve funds and/or tax levy. Additional details on assessments are included in the following section.

C. Special Assessments

According to the City's Assessment Policy, the proposed improvements are assessable to the benefitting properties as follows.

Table 5 – Assessment Policy Summary		
Project Component	% Assessable	% City Cost
Street	30%	70%
Sidewalk	100%	0%
Storm Sewer	0%	100%
Street Lighting	0%	100%
Aesthetic & Landscaping	0%	100%
Storm Sewer	0%	100%
Sanitary Sewer	30%	70%
Water System Improvements	30%	70%
Right-of-Way Acquisition	0%	100%

- Notes:
- 1) Percentages presented in this table apply to City's cost share of improvements, as described in Table 3.
 - 2) Costs funded by MnDOT are not assessable.

Only the City's portion of the overall project cost will be assessable. Costs funded by MnDOT will not be assessed. Additional details regarding the calculation of assessments are provided below.

Table 6 – Assessment Calculation Method	
Project Component	Distribution of Assessments
Street	Adjusted Front Foot Method ¹
Sidewalk	Adjusted Front Foot Method ¹
Sanitary Sewer	Unit Method ²
Water System	Unit Method ²

- 1) Adjusted Front Footage = (100% x front property width) + (50% x side property width)
- 2) Unit = 1 per connected lot
- 3) Additional adjustments may apply for oddly shaped lots or circumstances where water or sanitary sewer services are larger than the typical residential lot.

Estimated assessments for various components of this project are provided in the table below:

Table 7 – Preliminary Assessment Rates	
Project Component	Estimated Assessment Rate
Street (Residential)	\$16.50 per ft
Street (Downtown)	\$22.35 per ft
Sidewalk (Residential)	\$47.37 per ft
Sidewalk (Downtown)	\$54.56 per ft
Sanitary Sewer Main & Service	\$2,916.11 per unit
Sanitary Sewer (Service Only) ¹	\$753.39 per unit
Water Main & Service	\$3,212.25 per unit

- 1) Applies to sanitary services between Elm Street and TH 43 (Mill Street) only.

Based on these assessment rates, typical assessments for example lots are provided in the table below:

Table 8 – Typical Total Assessments	
Property Description	Estimated Total Assessment
Typ. Residential Lot (100' frontage) w/ sidewalk, sanitary & water service	\$12,515
Typ. Downtown Lot (50' frontage) w/ sidewalk, sanitary & water service	\$9,974

Based on a review of previous project assessments, the proposed preliminary assessment estimates appear to be slightly higher, but generally consistent **with past projects**. The table below provides previous project assessments and the associated adjustments for inflation and budgeting contingency.

Table 9 – Historical Assessment Rates		
Past City Project	Total Assessment for a 100-ft Lot	Total Assessment for a 100-ft Lot (Adjusted for 4% Inflation)
2019 Street & Utility	\$11,153	\$12,063
2016 Street & Utility	\$8,699	\$10,584
2014 Street & Utility (TH 43)	\$8,042	\$10,582

Assessment proceedings (hearings, notices, etc.) for the project would follow the requirements of Chapter 429. In general, this will include the preparation of a feasibility report (this document), an improvement hearing, and an assessment hearing before final assessments can

be certified. Additional details regarding the timing of these hearings is provided in the following section.

VII. TENTATIVE PROJECT SCHEDULE

The following table provides a tentative project schedule. All dates are subject to change.

Table 10 – Tentative Project Schedule	
Council Authorize Preliminary Engineering Report	6/8/2020
Prepare Feasibility Report	Summer 2020
Resolution Receiving Report and Calling for Hearing on Improvement	9/14/2020
Published Notice of Hearing on Improvement	10/1/2020
	10/8/2020
Mailed Notice of Hearing on Improvement	10/1/2020
Public Informational Meetings (two – afternoon & evening)	Week of 10/5/2020
Hold Improvement Hearing Resolution Ordering Improvement and Preparation of Plans and Specs	10/13/2020
Prepare Plans and Specifications	Oct. '20 – Jul '21
Resolution Authorizing Authority to Make Offers (for easements)	1/25/2021
Send Offers (for easements)	Feb – Mar 2021
Public Informational Meeting(s)	Mar – Apr 2021
Final Plan Submittal to MnDOT	8/3/2021
Resolution Approving Plans and Specifications	Fall 2021
Open Bids (by MnDOT)	1/28/2022
Order Assessment of Hearing	2/14/2022
Published Notice for Assessment Hearing	2/24/2022
Mailed Notice for Assessment Hearing	2/26/2022
Public Informational Meeting(s)	Week of 3/7/2022
Hold Assessment Hearing Resolution Approving Final Assessment Roll	3/14/2022
Cooperative Agreement with MnDOT	Feb – Mar 2022
Begin Construction	April/May 2022
Substantial Completion of Construction	September 2022
Final Completion of Construction	June 2022

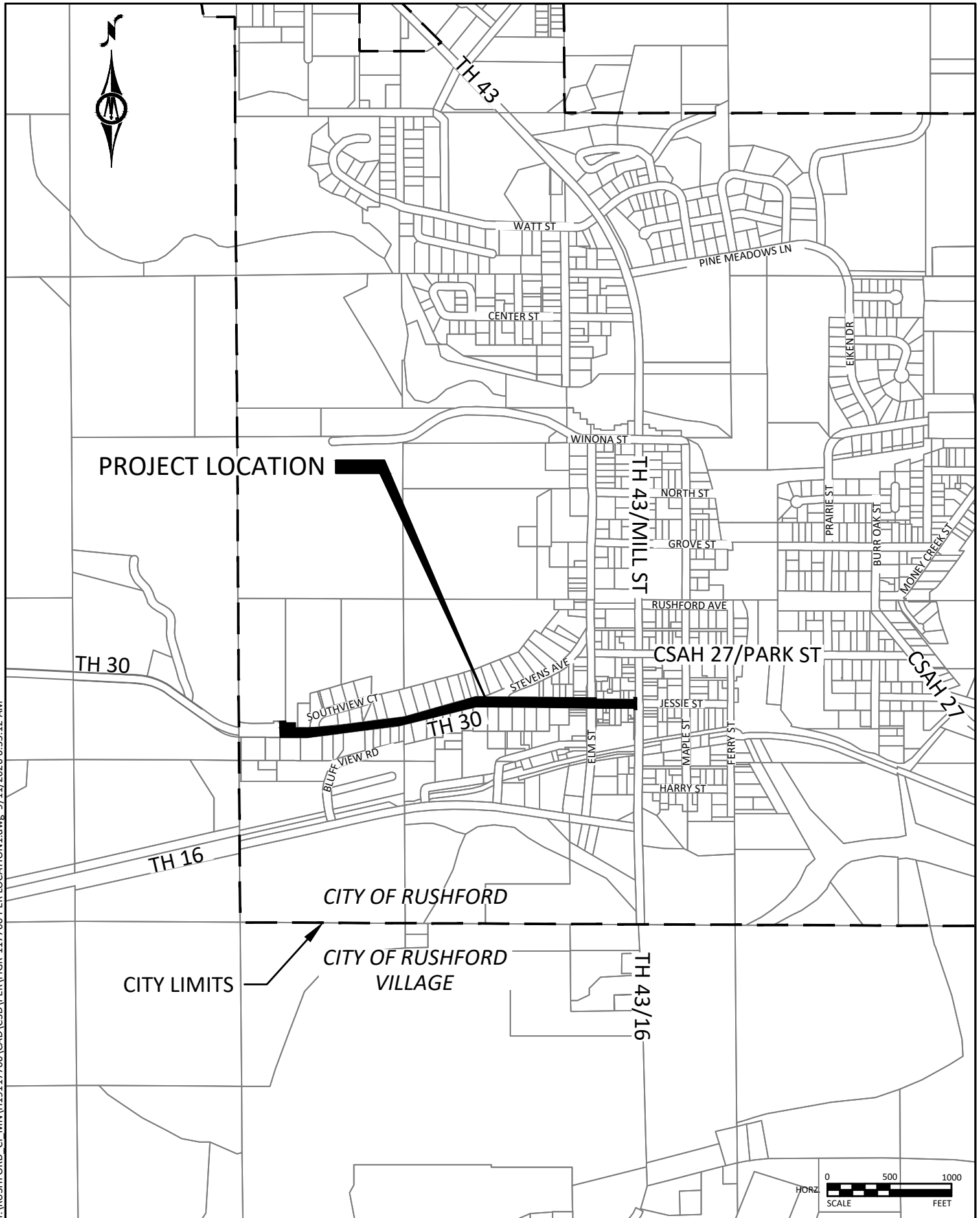
VIII. CONCLUSION AND RECOMMENDATIONS

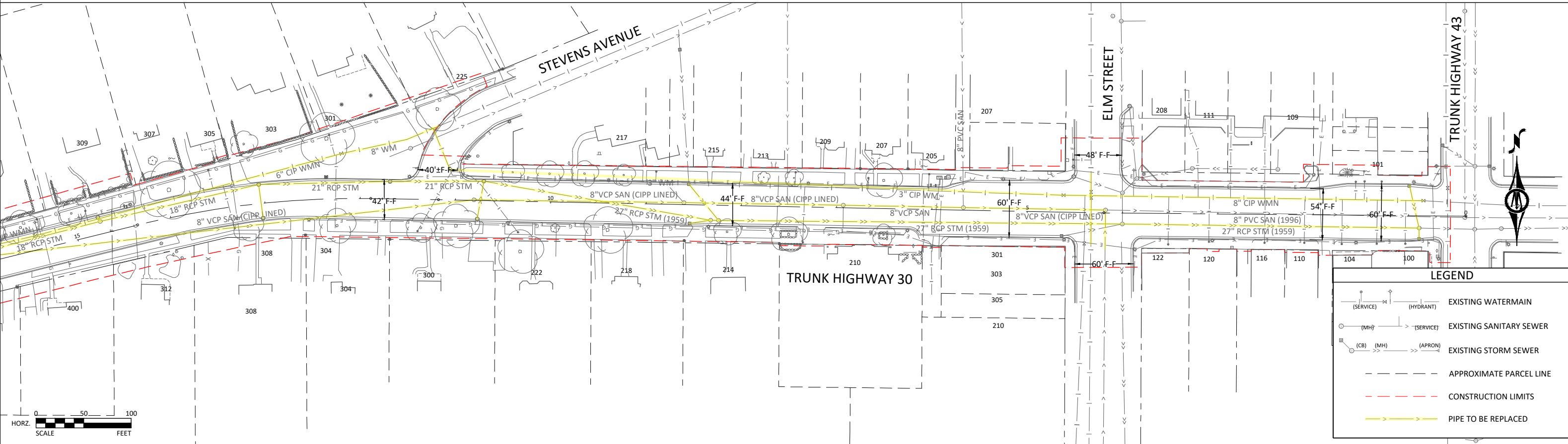
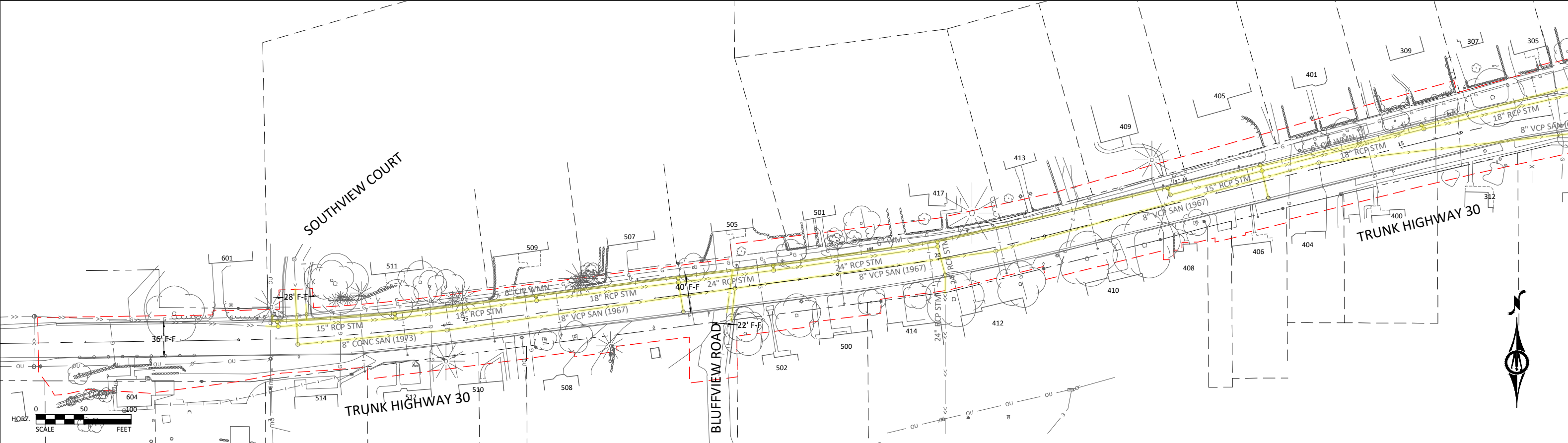
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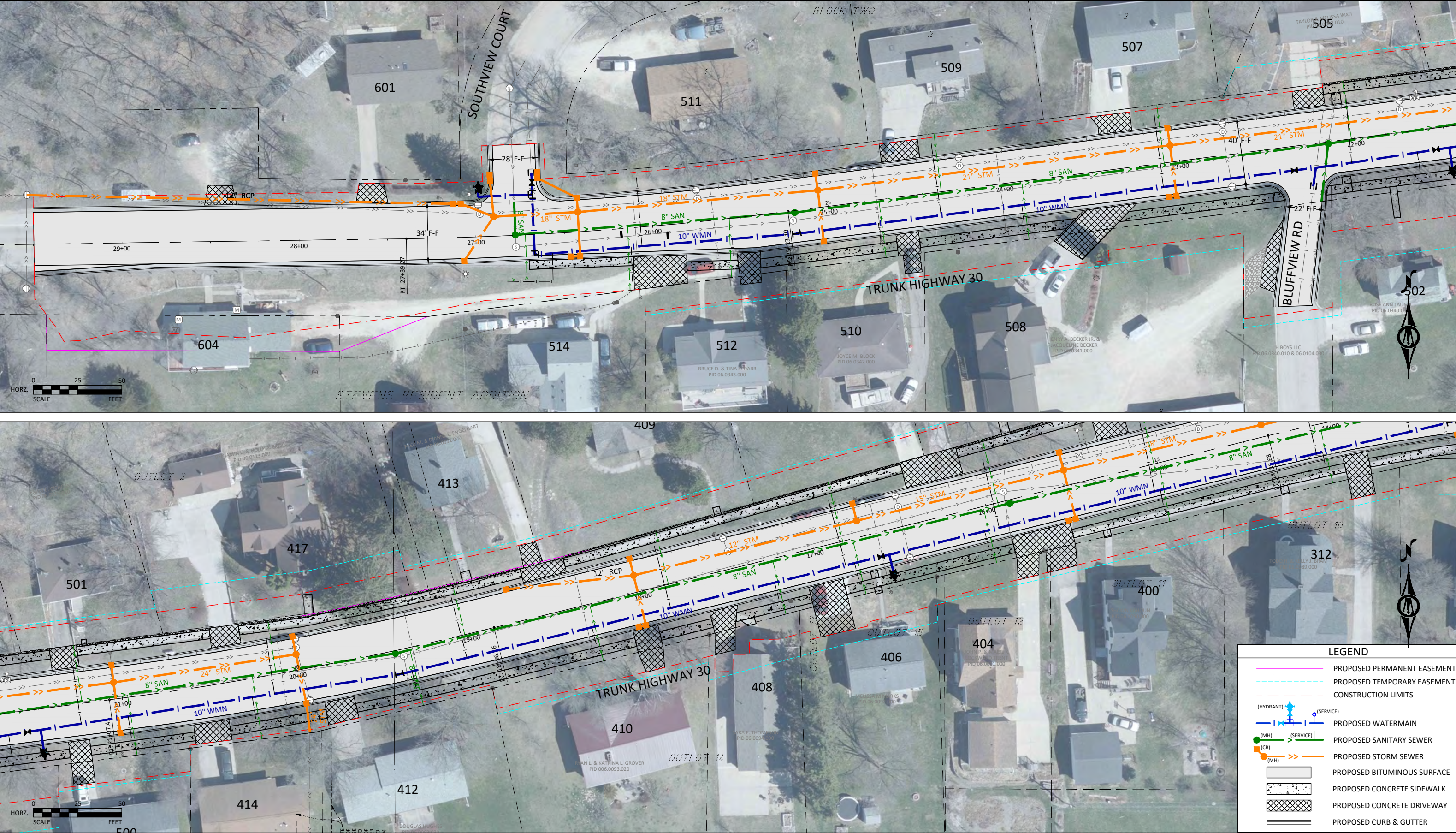
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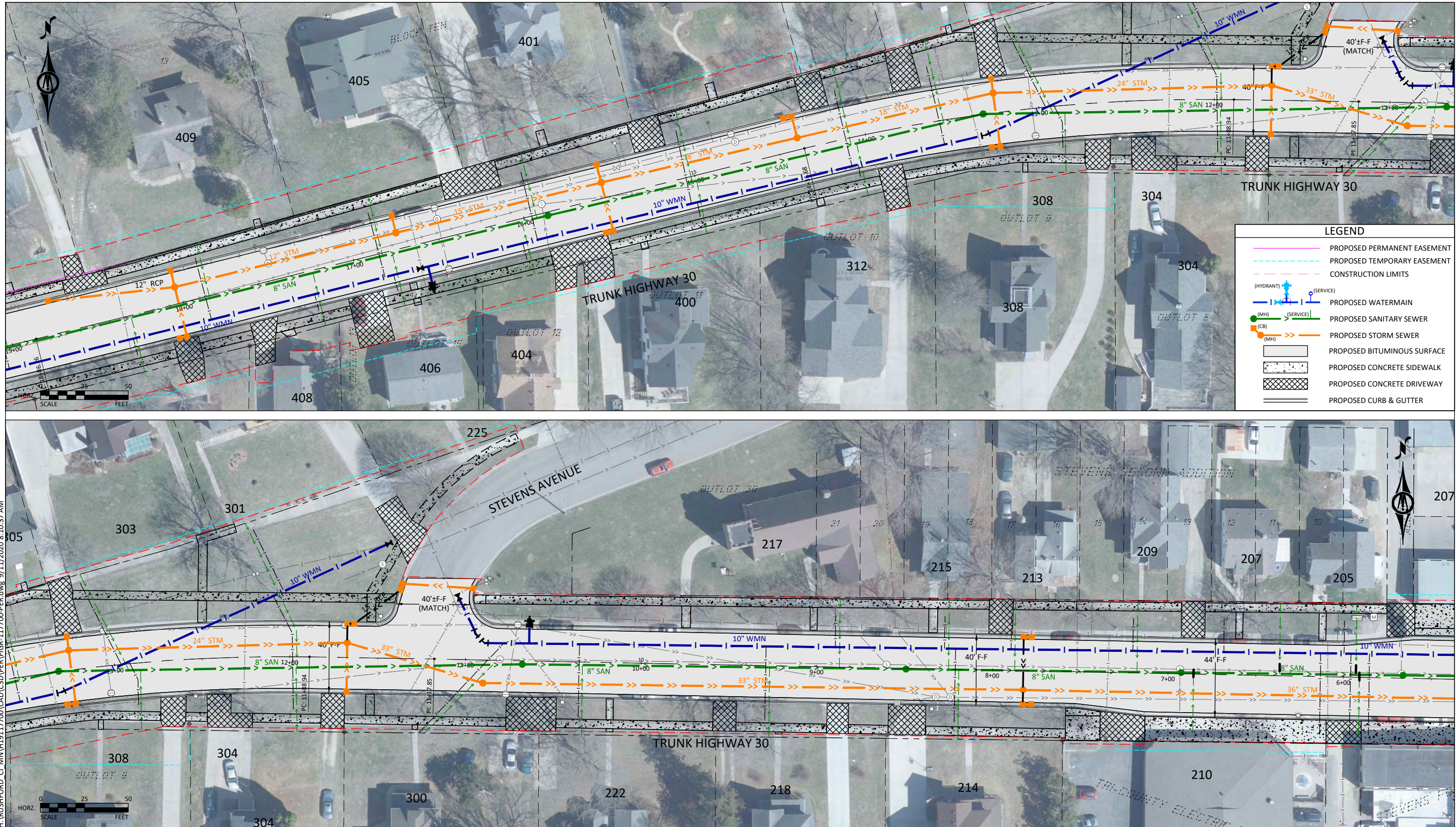
Appendix A: Figures



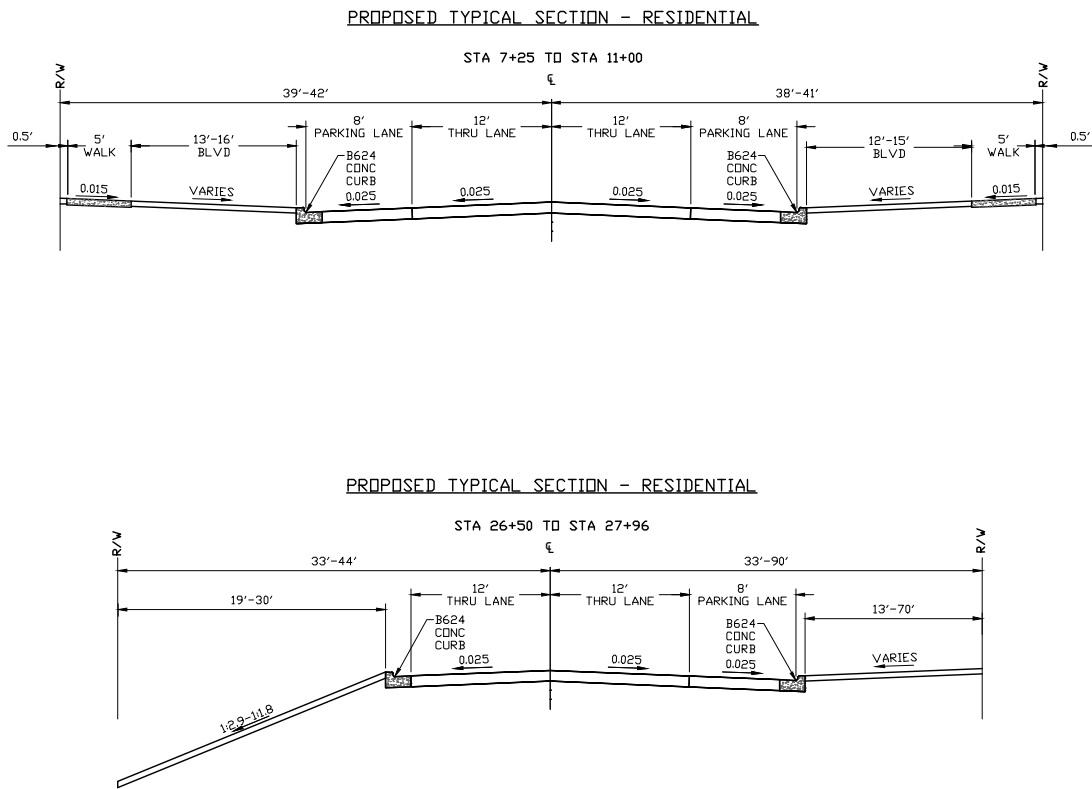
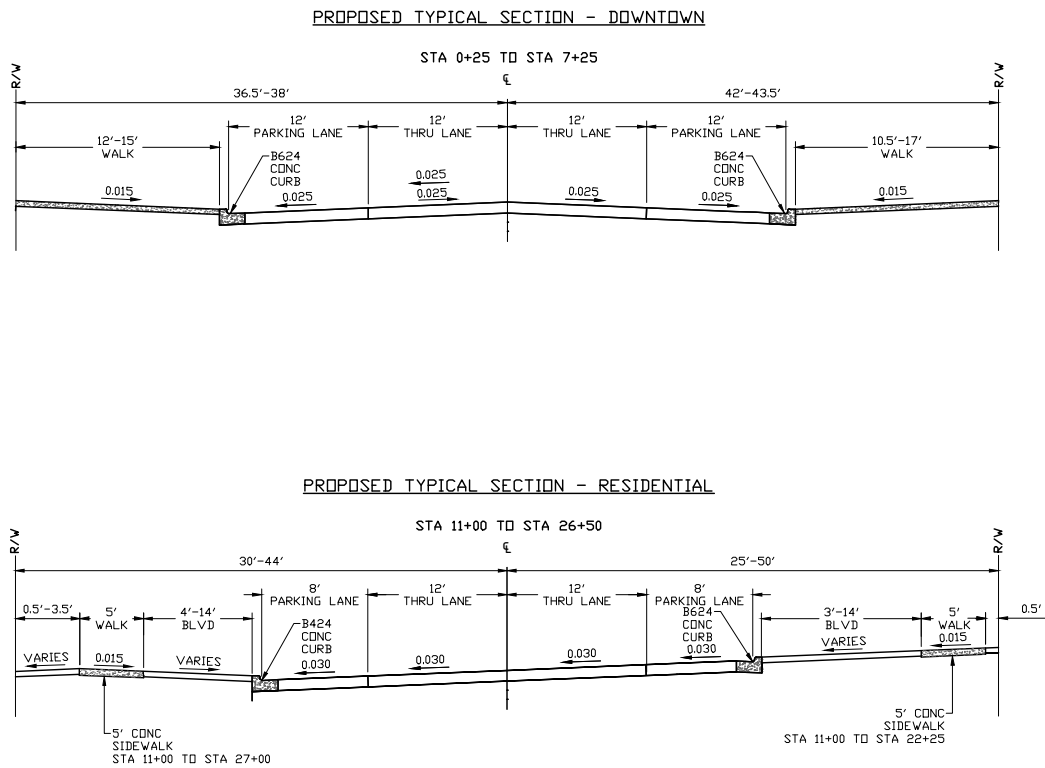


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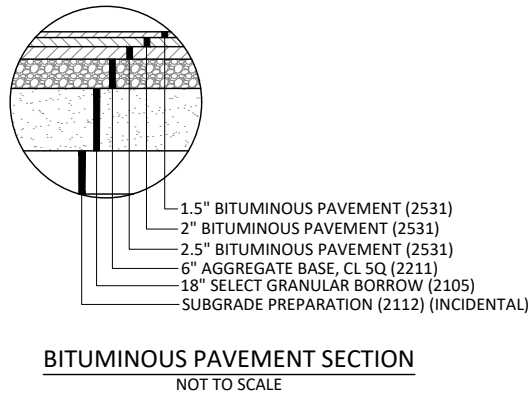








NOTE:
STATIONING ILLUSTRATED ON FIGURES 3-5
SEE PLAN ILLUSTRATION FOR ADDITIONAL DETAIL



Appendix B: Preliminary Cost Estimate

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



STREET IMPROVEMENTS (CENTER 24', C&G) - 100% STATE

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.30	\$37,500.00	\$41,363.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.30	\$7,500.00	\$8,273.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.30	\$3,600.00	\$3,971.00
4	CLEARING & GRUBBING	EACH	\$650.00	10	\$6,500.00	\$7,170.00
5	EROSION AND SEDIMENT CONTROL	LUMP SUM	\$20,000.00	1	\$20,000.00	\$22,060.00
6	EXCAVATE, HAUL & DISPOSE CONTAMINATED SOIL	CU YD	\$60.00	100	\$6,000.00	\$6,618.00
SUBTOTAL					\$81,100.00	\$89,455.00
West of Southview (12' Lanes)						
7	REMOVE CURB AND GUTTER	LIN FT	\$3.00	406	\$1,218.00	\$1,344.00
8	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	554	\$1,246.50	\$1,375.00
9	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	\$2.50	40	\$100.00	\$111.00
10	REMOVE RETAINING WALLS	LS	\$15,000.00	1	\$15,000.00	\$16,545.00
11	COMMON EXCAVATION	CU YD	\$12.00	721	\$8,652.00	\$9,544.00
12	SUBGRADE EXCAVATION	CU YD	\$12.00	72	\$864.00	\$953.00
13	STABILIZING AGGREGATE	CU YD	\$30.50	72	\$2,196.00	\$2,423.00
14	18" SELECT GRANULAR BORROW	CU YD	\$16.50	371	\$6,121.50	\$6,753.00
15	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	124	\$3,782.00	\$4,172.00
16	4" BITUMINOUS WEARING MIX	TON	\$103.00	127	\$13,081.00	\$14,429.00
17	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	64	\$6,400.00	\$7,060.00
18	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	\$17.50	406	\$7,105.00	\$7,837.00
19	6" PERFORATED PVC PIPE DRAIN	LIN FT	\$12.50	406	\$5,075.00	\$5,598.00
20	TOPSOIL, SEED, FERTILIZE AND HYDROMULCH	SQ YD	\$8.50	1,541	\$13,098.50	\$14,448.00
21	4" DOUBLE SOLID LINE	LIN FT	\$0.75	406	\$304.50	\$336.00
22	REMOVE CABLE BARRIER	LIN FT	\$15.00	125	\$1,875.00	\$2,069.00
SUBTOTAL					\$86,119.00	\$94,997.00
Residential Area (12' Lane x 2)						
22	REMOVE CURB AND GUTTER	LIN FT	\$3.00	4,287	\$12,861.00	\$14,186.00
23	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	6,037	\$13,583.25	\$14,983.00
24	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	\$2.50	120	\$300.00	\$331.00
25	COMMON EXCAVATION	CU YD	\$12.00	5,750	\$69,000.00	\$76,107.00
26	SUBGRADE EXCAVATION	CU YD	\$12.00	575	\$6,900.00	\$7,611.00
27	STABILIZING AGGREGATE	CU YD	\$30.50	575	\$17,537.50	\$19,344.00
28	18" SELECT GRANULAR BORROW	CU YD	\$16.50	4,012	\$66,198.00	\$73,017.00
29	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	1,337	\$40,778.50	\$44,979.00
30	4" BITUMINOUS WEARING MIX	TON	\$103.00	1,388	\$142,964.00	\$157,690.00
31	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	694	\$69,400.00	\$76,549.00
32	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	\$17.50	4,287	\$75,022.50	\$82,750.00
33	6" PERFORATED PVC PIPE DRAIN	LIN FT	\$12.50	4,287	\$53,587.50	\$59,108.00
34	TOPSOIL, SEED, FERTILIZE AND HYDROMULCH	SQ YD	\$8.50	5,716	\$48,586.00	\$53,591.00
35	4" DOUBLE SOLID LINE	LIN FT	\$0.75	3,978	\$2,983.50	\$3,291.00
SUBTOTAL					\$619,701.75	\$683,537.00
Downtown Area (12' Lane x 2)						
36	REMOVE CURB AND GUTTER	LIN FT	\$3.00	1,299	\$3,897.00	\$4,299.00
37	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	2,419	\$5,442.75	\$6,004.00
38	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	\$2.50	250	\$625.00	\$690.00
39	COMMON EXCAVATION	CU YD	\$12.00	2,307	\$27,684.00	\$30,536.00
40	SUBGRADE EXCAVATION	CU YD	\$12.00	231	\$2,772.00	\$3,058.00
41	STABILIZING AGGREGATE	CU YD	\$30.50	231	\$7,045.50	\$7,772.00
42	18" SELECT GRANULAR BORROW	CU YD	\$16.50	1,510	\$24,915.00	\$27,482.00
43	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	503	\$15,341.50	\$16,922.00
44	4" BITUMINOUS WEARING MIX	TON	\$103.00	556	\$57,268.00	\$63,167.00
45	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	278	\$27,800.00	\$30,664.00
46	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	\$17.50	1,299	\$22,732.50	\$25,074.00
47	6" PERFORATED PVC PIPE DRAIN	LIN FT	\$12.50	1,299	\$16,237.50	\$17,910.00
48	TOPSOIL, SEED, FERTILIZE AND HYDROMULCH	SQ YD	\$8.50	264	\$2,244.00	\$2,476.00
49	24" SOLID LINE	LIN FT	\$15.00	22	\$330.00	\$364.00
50	4" DOUBLE SOLID LINE	LIN FT	\$0.75	1,404	\$1,053.00	\$1,162.00
SUBTOTAL					\$215,387.75	\$237,580.00
SUBTOTAL					\$1,002,308.50	\$1,105,569.00
CONTINGENCY 10%					\$100,300.00	\$110,600.00
TOTAL					\$1,102,608.50	\$1,216,169.00
STATE 100%					\$1,102,608.50	\$1,216,169.00
CITY 0%					\$0.00	\$0.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



STREET IMPROVEMENTS (PARKING LANES) - 90% STATE, 10% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.08	\$10,000.00	\$11,030.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.08	\$2,000.00	\$2,206.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.08	\$960.00	\$1,059.00
4	CLEARING	EACH	\$650.00	2	\$1,300.00	\$1,434.00
5	EXCAVATE, HAUL & DISPOSE CONTAMINATED SOIL	CU YD	\$60.00	50	\$3,000.00	\$3,309.00
			SUBTOTAL		\$17,260.00	\$19,038.00
West of Southview (8' Lane x 1)						
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	149	\$335.25	\$370.00
7	COMMON EXCAVATION	CU YD	\$12.00	103	\$1,236.00	\$1,364.00
8	SUBGRADE EXCAVATION	CU YD	\$12.00	10	\$120.00	\$133.00
9	STABILIZING AGGREGATE	CU YD	\$30.50	10	\$305.00	\$337.00
10	18" SELECT GRANULAR BORROW	CU YD	\$16.50	68	\$1,122.00	\$1,238.00
11	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	23	\$701.50	\$774.00
12	4" BITUMINOUS WEARING MIX	TON	\$103.00	31	\$3,193.00	\$3,522.00
13	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	16	\$1,600.00	\$1,765.00
			SUBTOTAL		\$8,612.75	\$9,503.00
Residential Area (8' Lane x 2)						
14	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	2,814	\$6,331.50	\$6,984.00
15	COMMON EXCAVATION	CU YD	\$12.00	1,954	\$23,448.00	\$25,864.00
16	SUBGRADE EXCAVATION	CU YD	\$12.00	195	\$2,340.00	\$2,582.00
17	STABILIZING AGGREGATE	CU YD	\$30.50	195	\$5,947.50	\$6,561.00
18	18" SELECT GRANULAR BORROW	CU YD	\$16.50	1,279	\$21,103.50	\$23,278.00
19	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	426	\$12,993.00	\$14,332.00
20	4" BITUMINOUS WEARING MIX	TON	\$103.00	588	\$60,564.00	\$66,803.00
21	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	294	\$29,400.00	\$32,429.00
			SUBTOTAL		\$162,127.50	\$178,833.00
Downtown Area (12' Lane x 2)						
22	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.25	2,043	\$4,596.75	\$5,071.00
23	COMMON EXCAVATION	CU YD	\$12.00	867	\$10,404.00	\$11,476.00
24	SUBGRADE EXCAVATION	CU YD	\$12.00	87	\$1,044.00	\$1,152.00
25	STABILIZING AGGREGATE	CU YD	\$30.50	87	\$2,653.50	\$2,927.00
26	18" SELECT GRANULAR BORROW	CU YD	\$16.50	568	\$9,372.00	\$10,338.00
27	6" AGGREGATE BASE CLASS 5	CU YD	\$30.50	189	\$5,764.50	\$6,359.00
28	4" BITUMINOUS WEARING MIX	TON	\$103.00	261	\$26,883.00	\$29,652.00
29	2" BITUMINOUS NON-WEARING MIX	TON	\$100.00	131	\$13,100.00	\$14,450.00
			SUBTOTAL		\$73,817.75	\$81,425.00
			SUBTOTAL		\$261,818.00	\$288,799.00
			CONTINGENCY	10%	\$26,200.00	\$28,900.00
			TOTAL		\$288,018.00	\$317,699.00
			STATE	90%	\$259,216.20	\$285,929.10
			CITY	10%	\$28,801.80	\$31,769.90

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



SIDEWALK IMPROVEMENTS - 100% STATE

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.17	\$21,250.00	\$23,439.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.17	\$4,250.00	\$4,688.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.17	\$2,040.00	\$2,251.00
			SUBTOTAL		\$27,540.00	\$30,378.00
Downtown Area (Primarily full width/paved boulevards)						
4	REMOVE CONCRETE WALK/DRIVE	SQ FT	\$0.90	16,940	\$15,246.00	\$16,817.00
5	4" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$5.90	0	\$0.00	\$0.00
6	4-6" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$10.00	13,658	\$136,580.00	\$150,648.00
7	6" CONCRETE DRIVE (INCLUDES AGGREGATE)	SQ YD	\$63.00	0	\$0.00	\$0.00
8	7" CONCRETE DRIVE (INCLUDES AGGREGATE)	SQ YD	\$71.00	450	\$31,950.00	\$35,241.00
9	TRUNCATED DOMES	SQ FT	\$57.00	192	\$10,944.00	\$12,072.00
			SUBTOTAL		\$194,720.00	\$214,778.00
Residential Area (Replacement of existing with 5' walk and North Walk Extension)						
10	REMOVE CONCRETE WALK/DRIVE	SQ FT	\$0.90	22,343	\$20,108.70	\$22,180.00
11	MODULAR BLOCK RETAINING WALL	SQ FT	\$50.00	2,665	\$133,250.00	\$146,975.00
12	4" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$5.90	10,558	\$62,292.20	\$68,709.00
13	6" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$10.00	275	\$2,750.00	\$3,034.00
14	6" CONCRETE DRIVE (INCLUDES AGGREGATE)	SQ YD	\$63.00	1,577	\$99,351.00	\$109,585.00
15	TRUNCATED DOMES	SQ FT	\$57.00	50	\$2,850.00	\$3,144.00
			SUBTOTAL		\$320,601.90	\$353,627.00
Residential Area (New Walk Extension - To Bluffview & Southview Ct)						
16	4" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$5.90	4,496	\$26,526.40	\$29,259.00
17	6" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$10.00	126	\$1,260.00	\$1,390.00
18	TRUNCATED DOMES	SQ FT	\$57.00	40	\$2,280.00	\$2,515.00
			SUBTOTAL		\$30,066.40	\$33,164.00
			SUBTOTAL		\$572,928.30	\$631,947.00
			CONTINGENCY	10%	\$57,300.00	\$63,200.00
			TOTAL		\$630,228.30	\$695,147.00
			STATE	100%	\$630,228.30	\$695,147.00
			CITY	0%	\$0.00	\$0.00

SIDEWALK IMPROVEMENTS - 100% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.02	\$2,500.00	\$2,758.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.02	\$500.00	\$552.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.02	\$240.00	\$265.00
			SUBTOTAL		\$3,240.00	\$3,575.00
Downtown Walk Oversizing (for Widths >14')						
4	6" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$10.00	761	\$7,610.00	\$8,394.00
			SUBTOTAL		\$7,610.00	\$8,394.00
Residential Outwalks						
5	REMOVE CONCRETE WALK/DRIVE	SQ FT	\$0.90	2,266	\$2,039.40	\$2,250.00
6	4" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$5.90	2,266	\$13,369.40	\$14,747.00
7	CONCRETE STEPS	EACH	\$3,000.00	5	\$15,000.00	\$16,545.00
			SUBTOTAL		\$30,408.80	\$33,542.00
Stevens Ave Sidewalk Extension & Pavement Markings						
8	REMOVE CONCRETE WALK/DRIVE	SQ FT	\$0.90	840	\$756.00	\$834.00
9	4" CONCRETE WALK (INCLUDES AGGREGATE)	SQ FT	\$5.90	567	\$3,345.30	\$3,690.00
10	6" CONCRETE DRIVE (INCLUDES AGGREGATE)	SQ YD	\$63.00	56	\$3,528.00	\$3,892.00
11	4" SOLID LINE	LIN FT	\$1.00	321	\$321.00	\$355.00
12	CROSSWALK MARKING	SF	\$5.00	630	\$3,150.00	\$3,475.00
			SUBTOTAL		\$11,100.30	\$12,246.00
			SUBTOTAL		\$52,359.10	\$57,757.00
			CONTINGENCY	10%	\$5,300.00	\$5,800.00
			TOTAL		\$57,659.10	\$63,557.00
			STATE	0%	\$0.00	\$0.00
			CITY	100%	\$57,659.10	\$63,557.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



STREET LIGHTING - 50% STATE, 50% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.04	\$5,000.00	\$5,515.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.04	\$1,000.00	\$1,103.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.04	\$480.00	\$530.00
			SUBTOTAL		\$6,480.00	\$7,148.00
Downtown Lighting						
4	REMOVE LIGHTING UNIT	EACH	\$400.00	10	\$4,000.00	\$4,412.00
5	LIGHT FOUNDATION	EACH	\$1,000.00	14	\$14,000.00	\$15,442.00
6	LIGHTING UNIT SPECIAL 1	EACH	\$4,200.00	11	\$46,200.00	\$50,959.00
7	LIGHTING UNIT SPECIAL 2	EACH	\$7,400.00	2	\$14,800.00	\$16,325.00
8	RELOCATE EXISTING LIGHT POLE	EACH	\$1,000.00	1	\$1,000.00	\$1,103.00
9	HANDHOLE	EACH	\$675.00	4	\$2,700.00	\$2,979.00
10	2" NON-METALLIC CONDUIT	LIN FT	\$6.50	2,125	\$13,812.50	\$15,236.00
11	UNDERGROUND WIRE 1/C (BARE) 6 AWG	LIN FT	\$2.40	2,315	\$5,556.00	\$6,129.00
12	UNDERGROUND WIRE 1/C 6 AWG	LIN FT	\$2.40	6,945	\$16,668.00	\$18,385.00
13	SERVICE CABINET & EQUIPMENT PAD	EACH	\$7,000.00	2	\$14,000.00	\$15,442.00
			SUBTOTAL		\$132,736.50	\$146,412.00
Residential Lighting						
14	RELOCATE EXISTING LIGHT POLE	EACH	\$2,000.00	5	\$10,000.00	\$11,030.00
			SUBTOTAL		\$10,000.00	\$11,030.00
			SUBTOTAL		\$149,216.50	\$164,590.00
* ADDITIONAL COST FOR DECORATIVE LIGHTING PROVIDED BELOW			CONTINGENCY	10%	\$15,000.00	\$16,500.00
			TOTAL		\$164,216.50	\$181,090.00
			STATE	0%	\$0.00	\$0.00
			CITY	100%	\$164,216.50	\$181,090.00

LANDSCAPING & ASTHETIC IMPROVEMENTS - UP TO 2% OF STATE SHARE, REMAINDER CITY COST

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.02	\$2,500.00	\$2,758.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.02	\$500.00	\$552.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.02	\$240.00	\$265.00
			SUBTOTAL		\$3,240.00	\$3,575.00
Construction Costs						
4	DOWNTOWN DECORATIVE LIGHTING UPCHARGE	EACH	\$3,000.00	13	\$39,000.00	\$43,017.00
5	TREE GRATE	EACH	\$2,000.00	8	\$16,000.00	\$17,648.00
6	TREE PLANTING	EACH	\$550.00	8	\$4,400.00	\$4,854.00
			SUBTOTAL		\$59,400.00	\$65,519.00
			SUBTOTAL		\$62,640.00	\$69,094.00
			CONTINGENCY	10%	\$6,300.00	\$7,000.00
			TOTAL		\$68,940.00	\$76,094.00
			STATE	NA	\$51,000.00	\$56,000.00
			CITY	NA	\$17,940.00	\$20,094.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



STORM SEWER IMPROVEMENTS - 95% STATE, 5% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.16	\$20,000.00	\$22,060.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.16	\$4,000.00	\$4,412.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.16	\$1,920.00	\$2,118.00
SUBTOTAL					\$25,920.00	\$28,590.00
Construction Costs						
4	REMOVE STORM SEWER PIPE	LIN FT	\$15.00	2,710	\$40,650.00	\$44,837.00
5	REMOVE MANHOLE/CATCH BASIN	EACH	\$415.00	34	\$14,110.00	\$15,564.00
6	12" PIPE SEWER	LIN FT	\$42.00	942	\$39,564.00	\$43,640.00
7	15" PIPE SEWER	LIN FT	\$45.00	215	\$9,675.00	\$10,672.00
8	18" PIPE SEWER	LIN FT	\$50.00	423	\$21,150.00	\$23,329.00
9	21" PIPE SEWER	LIN FT	\$50.00	402	\$20,100.00	\$22,171.00
10	24" PIPE SEWER	LIN FT	\$60.00	307	\$18,420.00	\$20,318.00
11	27" RC PIPE SEWER	LIN FT	\$65.00	0	\$0.00	\$0.00
12	33" RC PIPE SEWER	LIN FT	\$100.00	389	\$38,900.00	\$42,907.00
13	36" RC PIPE SEWER	LIN FT	\$110.00	704	\$77,440.00	\$85,417.00
14	CASTING ASSEMBLY	EACH	\$750.00	63	\$47,250.00	\$52,117.00
15	CONSTRUCT DRAINAGE STRUCTURE, 2'X3'	LIN FT	\$350.00	216	\$75,600.00	\$83,387.00
16	CONSTRUCT DRAINAGE STRUCTURE, 60" DIA	LIN FT	\$670.00	70	\$46,900.00	\$51,731.00
17	CONSTRUCT DRAINAGE STRUCTURE, 72" DIA	LIN FT	\$950.00	33	\$31,350.00	\$34,580.00
18	CONSTRUCT DRAINAGE STRUCTURE, 84" DIA	LIN FT	\$1,500.00	14	\$21,000.00	\$23,163.00
19	EXCAVATE, HAUL & DISPOSE CONTAMINATED SOIL	CU YD	\$60.00	100	\$6,000.00	\$6,618.00
SUBTOTAL					\$508,109.00	\$560,451.00
SUBTOTAL					\$534,029.00	\$589,041.00
CONTINGENCY 10%					\$53,500.00	\$59,000.00
TOTAL					\$587,529.00	\$648,041.00
STATE 95%					\$558,152.55	\$615,638.95
CITY 5%					\$29,376.45	\$32,402.05

STORM SEWER IMPROVEMENTS - 100% CITY (ELM STREET CROSSING)

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
Fixed Costs						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.01	\$1,250.00	\$1,379.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.01	\$250.00	\$276.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.01	\$120.00	\$133.00
SUBTOTAL					\$1,620.00	\$1,788.00
Construction Costs						
4	REMOVE STORM SEWER PIPE	LIN FT	\$15.00	145	\$2,175.00	\$2,400.00
5	REMOVE MANHOLE/CATCH BASIN	EACH	\$415.00	4	\$1,660.00	\$1,831.00
6	15" RC PIPE SEWER	LIN FT	\$45.00	25	\$1,125.00	\$1,241.00
7	18" RC PIPE SEWER	LIN FT	\$50.00	120	\$6,000.00	\$6,618.00
8	CONSTRUCT DRAINAGE STRUCTURE, 48" DIA	LIN FT	\$375.00	10	\$3,750.00	\$4,137.00
9	CONSTRUCT DRAINAGE STRUCTURE, 60" DIA	LIN FT	\$670.00	7	\$4,690.00	\$5,174.00
10	CONSTRUCT DRAINAGE STRUCTURE, 72" DIA	LIN FT	\$950.00	7	\$6,650.00	\$7,335.00
11	CASTING ASSEMBLY	EACH	\$750.00	4	\$3,000.00	\$3,309.00
SUBTOTAL					\$29,050.00	\$32,045.00
SUBTOTAL					\$30,670.00	\$33,833.00
CONTINGENCY 10%					\$3,100.00	\$3,400.00
TOTAL					\$33,770.00	\$37,233.00
STATE 0%					\$0.00	\$0.00
CITY 100%					\$33,770.00	\$37,233.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



SANITARY SEWER IMPROVEMENTS - 100% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
<i>Fixed Costs</i>						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.09	\$11,250.00	\$12,409.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.09	\$2,250.00	\$2,482.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.09	\$1,080.00	\$1,192.00
4	ROCK EXCAVATION IN TRENCH	CU YD	\$50.00	200	\$10,000.00	\$11,030.00
5	DEWATERING	LUMP SUM	\$25,000.00	0.5	\$12,500.00	\$13,788.00
6	EXCAVATE, HAUL & DISPOSE CONTAMINATED SOIL	CU YD	\$60.00	50	\$3,000.00	\$3,309.00
SUBTOTAL					\$40,080.00	\$44,210.00
<i>Sanitary Main & Service Line Replacement</i>						
4	REMOVE MANHOLE	EACH	\$400.00	10	\$4,000.00	\$4,412.00
5	REMOVE SANITARY SEWER PIPE	LIN FT	\$3.00	2,340	\$7,020.00	\$7,744.00
6	SUMP PUMP SERVICE	EACH	\$700.00	41	\$28,700.00	\$31,657.00
7	SANITARY SEWER SERVICE	LIN FT	\$32.00	1,575	\$50,400.00	\$55,592.00
8	CONNECT TO EXISTING SANITARY SEWER	EACH	\$750.00	5	\$3,750.00	\$4,137.00
9	8" PVC PIPE SEWER	LIN FT	\$41.00	2,340	\$95,940.00	\$105,822.00
10	CASTING ASSEMBLY	EACH	\$1,400.00	10	\$14,000.00	\$15,442.00
11	ADJUST EXISTING CASTING	EACH	\$850.00	1	\$850.00	\$938.00
12	CONSTRUCT MANHOLE (SANITARY)	LIN FT	\$310.00	110	\$34,100.00	\$37,613.00
13	SANITARY WYE (8x4)	EACH	\$310.00	44	\$13,640.00	\$15,045.00
SUBTOTAL					\$252,400.00	\$278,402.00
<i>Sanitary Service Line Replacement (Mill St to Elm St)</i>						
14	SANITARY SEWER SERVICE	LIN FT	\$32.00	385	\$12,320.00	\$13,589.00
15	CONNECT TO EXISTING SANITARY WYE	EACH	\$250.00	10	\$2,500.00	\$2,758.00
SUBTOTAL					\$14,820.00	\$16,347.00
SUBTOTAL					\$307,300.00	\$338,959.00
CONTINGENCY 10%					\$30,800.00	\$33,900.00
TOTAL					\$338,100.00	\$372,859.00
STATE 0%					\$0.00	\$0.00
CITY 100%					\$338,100.00	\$372,859.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



WATERMAIN IMPROVEMENTS - 100% CITY

ITEM NUMBER	ITEM DESCRIPTION	UNIT	2020 UNIT PRICE	QUANTITY	2020 Cost	2022 Cost (1.103 Factor)
<i>Fixed Costs</i>						
1	MOBILIZATION	LUMP SUM	\$125,000.00	0.12	\$15,000.00	\$16,545.00
2	TRAFFIC CONTROL	LUMP SUM	\$25,000.00	0.12	\$3,000.00	\$3,309.00
3	COMBINATION FIELD LABORATORY & OFFICE	LUMP SUM	\$12,000.00	0.12	\$1,440.00	\$1,589.00
			SUBTOTAL		\$19,440.00	\$21,443.00
<i>Watermain & Service Line Replacement (Standard Sizing)</i>						
4	REMOVE HYDRANT	EACH	\$700.00	4	\$2,800.00	\$3,089.00
5	REMOVE WATER MAIN	LIN FT	\$3.50	2,730	\$9,555.00	\$10,540.00
6	TEMPORARY WATER SYSTEM	LUMP SUM	\$25,000.00	1	\$25,000.00	\$27,575.00
7	ROCK EXCAVATION IN TRENCH	CU YD	\$50.00	150	\$7,500.00	\$8,273.00
8	DEWATERING	LUMP SUM	\$25,000.00	0.5	\$12,500.00	\$13,788.00
8	CONNECT TO EXISTING WATER MAIN	EACH	\$1,000.00	6	\$6,000.00	\$6,618.00
9	1" CORPORATION STOP	EACH	\$375.00	58	\$21,750.00	\$23,991.00
10	1" CURB STOP AND BOX	EACH	\$375.00	58	\$21,750.00	\$23,991.00
11	1" WATER SERVICE	LIN FT	\$29.00	2,130	\$61,770.00	\$68,133.00
12	HYDRANT	EACH	\$4,100.00	5	\$20,500.00	\$22,612.00
13	6" GATE VALVE AND BOX	EACH	\$1,500.00	5	\$7,500.00	\$8,273.00
14	8" GATE VALVE AND BOX (CROSS STREETS)	EACH	\$2,100.00	6	\$12,600.00	\$13,898.00
15	8" GATE VALVE AND BOX (TH 30)	EACH	\$2,100.00	4	\$8,400.00	\$9,266.00
16	6" WATER MAIN	LIN FT	\$42.00	70	\$2,940.00	\$3,243.00
17	8" WATER MAIN (CROSS STREETS)	LIN FT	\$45.00	60	\$2,700.00	\$2,979.00
18	8" WATER MAIN (TH 30)	LIN FT	\$45.00	2,600	\$117,000.00	\$129,051.00
19	WATER MAIN FITTINGS	POUND	\$10.25	1,650	\$16,912.50	\$18,655.00
20	EXCAVATE, HAUL & DISPOSE CONTAMINATED SOIL	CU YD	\$60.00	50	\$3,000.00	\$3,309.00
			SUBTOTAL		\$360,177.50	\$397,284.00
<i>10" Watermain Oversizing</i>						
21	10" WATER MAIN (UPSIZING COST)	LIN FT	\$3.00	2,600	\$7,800.00	\$8,604.00
22	10" GATE VALVE AND BOX (UPSIZING COST)	EACH	\$600.00	4	\$2,400.00	\$2,648.00
23	ADDITIONAL WATERMAIN FITTINGS	POUND	\$10.25	350	\$3,587.50	\$3,958.00
			SUBTOTAL		\$13,787.50	\$15,210.00
			SUBTOTAL		\$393,405.00	\$433,937.00
			CONTINGENCY	10%	\$39,400.00	\$43,400.00
			TOTAL		\$432,805.00	\$477,337.00
			STATE	0%	\$0.00	\$0.00
			CITY	100%	\$432,805.00	\$477,337.00

APPENDIX B

PRELIMINARY COST ESTIMATE (2022 DOLLARS)

Trunk Highway 30 Reconstruction (300' W of Southview Ct to TH 43)

City of Rushford, MN

Revised 9/10/2020



TOTAL PROJECT COST SUMMARY	2020 Cost	2022 Cost (1.103 Factor)
SUBTOTAL	\$3,366,674.40	\$3,713,526.00
CONTINGENCY	\$337,200.00	\$371,700.00
TOTAL ESTIMATED CONSTRUCTION COSTS	\$3,703,874.40	\$4,085,226.00
ENGINEERING, ADMINISTRATION & FEES	\$852,000.00	\$939,756.00
RIGHT-OF-WAY	\$159,000.00	\$175,377.00
TOTAL ESTIMATED PROJECT COSTS	\$4,714,874.40	\$5,200,359.00

ESTIMATED STATE SHARE SUMMARY	2020 Cost	2022 Cost (1.103 Factor)
CONSTRUCTION	\$2,601,205.55	\$2,868,884.05
TOTAL STATE SHARE	\$2,601,205.55	\$2,868,884.05

ESTIMATED CITY SHARE SUMMARY	2020 Cost	2022 Cost (1.103 Factor)
CONSTRUCTION	\$1,102,668.85	\$1,216,341.95
ENGINEERING, ADMINISTRATION & FEES	\$852,000.00	\$939,756.00
RIGHT-OF-WAY	\$159,000.00	\$175,377.00
TOTAL CITY SHARE	\$2,113,668.85	\$2,331,474.95

PROJECT OPTIONS

Optional Sanitary Sewer Sizing (not included in overall project cost)

10" Sanitary Main Oversizing						
1	10" PVC PIPE SEWER (UPSIZING COST)	LIN FT	\$6.00	2,260	\$13,560.00	\$14,957.00
2	ADDITIONAL MAIN REPLACEMENT (ELM TO MILL)	LIN FT	\$50.00	378	\$18,900.00	\$20,847.00
3	ADDITIONAL MANHOLE REPLACEMENT	LIN FT	\$310.00	11	\$3,410.00	\$3,762.00
4	ADDITIONAL CASTING ASSEMBLY	EACH	\$1,400.00	1	\$1,400.00	\$1,545.00
5	ADJUST EXISTING CASTING	EACH	\$850.00	-1	-\$850.00	-\$938.00
6	SANITARY WYE (8x4 TO 10x4 UPSIZING)	EACH	\$50.00	44	\$2,200.00	\$2,427.00
	SUBTOTAL				\$38,620.00	\$42,600.00

Appendix B: Preliminary Assessment Calculation Summary

Project Component	Total Project Cost	State Share	City Share	Assessable City						
				Oversizing Cost	Share	% Assessable	Assessable Units		Assessment Rate	
Street Improvements (Residential)	\$1,415,885.70	\$1,131,437.57	\$284,448.13	\$28,444.81	\$256,003.32	30%	4654	Ft	\$16.50	per Ft
Street Improvements (Downtown)	\$466,781.64	\$370,660.53	\$96,121.11		\$96,121.11	30%	1290	Ft	\$22.35	per Ft
Sidewalk Improvements (Residential)	\$618,009.17	\$446,958.87	\$171,050.30		\$171,050.30	100%	3611	Ft	\$47.37	per Ft
Sidewalk Improvements (Downtown)	\$318,569.74	\$248,188.13	\$70,381.62		\$70,381.62	100%	1290	Ft	\$54.56	per Ft
Street Lighting Improvements	\$223,804.75	\$0.00	\$223,804.75		\$223,804.75	0%				
Aesthetic & Landscaping Improvements	\$93,886.77	\$56,000.00	\$37,886.77		\$37,886.77	0%				
Storm Sewer Improvements	\$846,010.95	\$615,638.95	\$230,372.00		\$230,372.00	0%				
Sanitary Sewer Improvements	\$427,695.46	\$0.00	\$427,695.46		\$427,695.46	30%	44	Lots	\$2,916.11	per Lot
Sanitary Services (Mill St to Elm St)	\$25,113.10	\$0.00	\$25,113.10		\$25,113.10	30%	10	Lots	\$753.39	per Lot
Water System Improvements	\$589,224.70	\$0.00	\$589,224.70	\$21,726.64	\$567,498.06	30%	53	Lots	\$3,212.25	per Lot
Right-of-Way Acquisition	\$175,377.00	\$0.00	\$175,377.00		\$175,377.00	0%				
Project Total	\$5,200,359.00	\$2,868,884.05	\$2,331,474.95	\$50,171.45	\$2,281,303.50					

Assessment Summary	
Total City Cost	\$2,331,474.95
Total Assessable (Non-City) Cost	\$583,250.36
Total Percentage Assessed	25.02%

		Water	Sewer	Street	Sidewalk	Total
Typical Residential Lot	100 frontage	\$3,212.25	\$2,916.11	\$1,650.21	\$4,736.92	\$12,515.50
Typical Downtown Lot	50 frontage	\$3,212.25	\$2,916.11	\$1,117.69	\$2,727.97	\$9,974.02

A Copy of the preliminary assessment roll will be available for inspection during the Improvement Hearing

TH 30 STREET & UTILITY IMPROVEMENTS