



**RICHFIELD MUNICIPAL CENTER, NOTICED TO BE HELD IN
BARTHOLOMEW ROOM**

MOVED TO COUNCIL CHAMBERS

AUGUST 29, 2023

4:00 PM

Call to order

OTHER BUSINESS

1. Consider approval of a change order to design and install a soil retention system for the 65th Street Reconstruction Project in order to replace sanitary sewer and install a stormwater box culvert.

Staff Report No. 104

2. Consider authorizing the City Engineer, City Manager, and Mayor to execute a Construction Work Order agreement with MnDOT and the I-494 Project 1 design-build contractor for the construction of a sanitary sewer crossing underneath I-35W.

Staff Report No. 105

3. Adjournment

Auxiliary aids for individuals with disabilities are available upon request. Requests must be made at least 96 hours in advance to the City Clerk at 612-861-9739.



STAFF REPORT NO. 104
CITY COUNCIL MEETING
8/29/2023

REPORT PREPARED BY: Olivia Wycklendt, Civil Engineer

DEPARTMENT DIRECTOR REVIEW: Kristin Asher, Public Works Director
 8/23/2023

OTHER DEPARTMENT REVIEW: N/A

CITY MANAGER REVIEW: Katie Rodriguez, City Manager
 8/23/2023

ITEM FOR COUNCIL CONSIDERATION:

Consider approval of a change order to design and install a soil retention system for the 65th Street Reconstruction Project in order to replace sanitary sewer and install a stormwater box culvert.

EXECUTIVE SUMMARY:

Background

Consistent with City Council direction, the Capital Improvement Plan (CIP), and the City's Comprehensive Plan, staff has been working towards the construction of the 65th Street Reconstruction Project over the past few years.

The 65th Street Reconstruction Project consists of a full road reconstruction to replace existing deteriorating infrastructure along the 65th Street corridor between 66th Street/Rae Drive and Nicollet Avenue. In addition to this road reconstruct, other improvements along this corridor include pedestrian improvements on Lyndale Avenue and the implementation of new trail along Richfield Lake on the North side of 65th Street. New stormwater infrastructure will be installed to address historical flooding issues in the area, and to accommodate any additional runoff that may occur from the redevelopment of the HUB property. The existing 18-inch watermain that runs through the HUB property will be relocated to 65th Street to allow for more flexibility when the HUB property redevelopments.

Necessity for Change Order

During excavation for the sanitary sewer replacement and storm sewer box culvert on 65th St, City staff were notified by Enclave, the owners of the Lynvue Apartment property, that the Lynvue building had been constructed on a four foot deep foundation and they were concerned about the stability of the building during excavation. Work was immediately stopped and staff reached out to consultant geotechnical engineers at Braun Intertec to assess the risk to the Lynvue building and the need for an engineered soil stabilization system.

Analysis by Braun Intertec shows that an engineered soil retention system is needed to install both the storm sewer box culvert and the sanitary sewer without impact to the Lynvue building. The system deemed most appropriate is the installation of permanent H-Piles with a timber lagging wall. In the interest of future maintenance access to the City's utilities, and to eliminate the risk of vibratory impacts to the Lynvue building during the removal of temporary H-piles, a permanent solution is proposed as the best course of action.

The anticipated cost to design and construct the soil retention system, modify the project's utility design, and accommodate any costs that may arise due to project delays is estimated to be \$700,000. The project's existing contingency is nearly exhausted. In order for the project to maintain a reasonable schedule and allow maintenance access to City utilities in the future, staff is advising that City Council approve the change order for the soil-retention system along 65th St.

The cost for the design and installation of the soil retention system, minor design and construction modifications to the sanitary sewer and storm sewer, and possible project delay costs will be borne by the project, however funding sources will need to be identified. Staff are investigating potential funding sources, including utility funds, franchise fees, Municipal State Aid construction funds, and Tax Increment Financing (TIF) pooled funds, and capital reserves, among other sources.

Staff and the City Attorney are investigating whether any external organizations could or should share responsibility for the extra costs incurred with this change order, as well as determining what requirements will be needed in future redevelopment reviews to ensure similar situations do not occur in the future.

RECOMMENDED ACTION:

By Motion: Approve the change order to design and install a soil retention system for the 65th St Reconstruction Project to replace sanitary sewer and install a stormwater box culvert.

BASIS OF RECOMMENDATION:

A. HISTORICAL CONTEXT

Need for Soil Retention System

On July 19 of 2023, the City received a letter from Enclave Companies formally notifying the City of their concerns regarding the soil stabilization surrounding the footings of the building at 6501 Lyndale Ave S while excavation for storm sewer installation was being prepared as a part of the 65th St Reconstruction Project. They requested that the City remedy this risk and provide documentation showing appropriate densities/specifications of the soil required for the building. This risk largely results from the building's footings being approximately 4' in depth.

Over the course of the next several weeks, the City hired Braun Intertec as a consultant to analyze the situation and propose possible design solutions so that the 65th St Reconstruction Project may continue to move forward with sewer and stormwater installation while minimizing risk to the Lynvue Apartments.

Several solutions were investigated, including soil solidification, a W-section Retention wall, and temporary or permanent H-Piles with timber lagging. Soil solidification was both costly and has yielded mixed results in the past, so it was removed as a possible solution. The two solutions that were deemed most appropriate were to install either a temporary or permanent H-Pile with timber lagging soil retention wall.

Braun reached out to Veit, Bolander, and Minger for quotes on these solutions. Bolander's estimate came in at the lowest, with the temporary wall being estimated at a cost of \$445,687.00 and the permanent wall at \$525,706.00.

Braun indicated that it had concerns with removing the H-Piles in the case of a temporary soil retention system, as the vibration from the removals could pose a risk to the footings of the Lynvue building. Additionally, the permanent H-Pile system would allow for safer maintenance access to the underground utilities in the future.

For these reasons, staff are recommending the installation of a permanent H-Pile with timber lagging soil retention wall parallel to the Lynvue Apartments on 65th St.

B. POLICIES (resolutions, ordinances, regulations, statutes, etc):

- The 65th Street Reconstruction Project is consistent with the following approved plans:
 - 5 Year Street Reconstruction

- Comprehensive Plan (Chapter 7 - Transportation)
- Pedestrian Master Plan
- Bicycle Master Plan
- Street Reconstruction Guiding Principles
- Complete Streets Policy
- Arterial Roads Study

C. CRITICAL TIMING ISSUES:

For project construction to continue and remain on schedule, the change order must be approved.

D. FINANCIAL IMPACT:

- The overall project uses/sources is attached.
- The contingency for the project at the time the contract was awarded was \$206,700 (2% of construction costs); 2% is typical for contingency at time of project award.
- As of August 21st, 2023, the total amount of approved change orders is \$90,148.03. Change Order 10 is anticipated to be approved soon, with the total amount in change orders being \$195,852.37.
- This leaves the project with \$10,847.63 in contingency.
- The anticipated cost to design and construct the soil retention system, modify the project's utility design, and accommodate any costs that may arise due to project delays is estimated to be \$700,000.

E. LEGAL CONSIDERATION:

The City Attorney has been participating in staff discussions and will be available to answer questions.

ALTERNATIVE RECOMMENDATION(S):

None

PRINCIPAL PARTIES EXPECTED AT MEETING:

None

ATTACHMENTS:

| Description | Type |
|----------------------------|-----------------|
| ▢ Sources and Uses Summary | Backup Material |

65th St Reconstruction/Lyndale Avenue Pedestrian Improvements

Richfield Project No.

SAP Nos.

41017

157-104-004

157-105-005

157-363-033

Sources and Uses Tracking - updated 5/5/2022

| | Council Action | | | | | Council Action | | | |
|-----------------------------------|--------------------|--------------------|--|----------------------|--|---|---|---|---------------------|
| | 2019 CIP | 2020 CIP | 30% Engineer's Estimate and Project Approval (Updated 7/20/2020) | 4/23/21 CIP Estimate | 4/23/21 CIP Estimate (updated sources for Council Worksession 7/23/21) | 60% Engineer's Estimate (Updated 10/5/2021) | 90% Engineer's Estimate (Updated 12/6/2021) | Final Engineer's Estimate and Project Bid (Updated 4/14/2022) | Contract Award |
| Planned Construction Year: | 2020 | 2020&2021 | 2022 | 2022 | 2022 | 2022-2023 | 2022-2023 | 2022-2023 | 2022-2023 |
| Estimated Uses: | | | | | | | | | |
| Design | \$600,000 | \$704,000 | \$842,000 | \$950,000 | \$950,000 | \$950,000.00 | \$970,000.00 | \$970,000 | \$970,000 |
| 65th St Reconstruction | \$5,500,000 | \$6,100,000 | \$3,362,700 | \$3,750,000 | \$3,750,000 | \$3,930,000.00 | \$4,240,000.00 | \$4,680,000.00 | \$5,685,000 |
| Lyndale Ave Improvements | Included above | Included above | \$52,000 | \$670,000 | \$670,000 | \$280,000.00 | \$360,000.00 | \$350,000.00 | \$450,000 |
| Stormwater Improvements | | | \$2,500,000 | \$2,100,000 | \$2,100,000 | \$3,100,000.00 | \$3,200,000.00 | \$3,900,000.00 | \$4,200,000 |
| Change Orders | | | | | | | | | |
| Right of Way | \$50,000 | \$60,000 | \$60,000 | \$60,000 | \$60,000 | \$60,000 | \$60,000 | \$30,000 | \$30,000 |
| Legal | \$90,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000.00 | \$100,000.00 | \$100,000 | \$100,000 |
| Construction Admin/Engineering | \$550,000 | \$610,000 | \$591,470 | \$600,000 | \$600,000 | \$600,000.00 | \$600,000.00 | \$850,000 | \$850,000 |
| Staff | \$90,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000 | \$100,000.00 | \$100,000.00 | \$100,000 | \$100,000 |
| Contingency | \$1,100,000 | \$1,220,000 | \$1,182,940 | \$1,304,000 | \$1,304,000 | \$1,462,000.00 | \$1,170,000.00 | \$893,000.00 | \$206,700 |
| Bond Issuance Costs | | | | | | \$200,000.00 | \$200,000.00 | \$200,000 | \$300,000 |
| | 20% Contingency | 20% Contingency | 20% Contingency | 20% Contingency | 20% Contingency | 20% Contingency | 15% Contingency | 10% Contingency | 2% Contingency |
| Total Uses | \$7,980,000 | \$8,894,000 | \$8,791,110 | \$9,634,000 | \$9,634,000 | \$10,782,000 | \$11,000,000 | \$12,073,000 | \$12,891,700 |
| Sources: | | | | | | | | | |
| Street Reconstruction Bonds | \$8,000,000 | \$7,800,000 | \$7,800,000 | \$8,600,000 | \$6,100,000 | \$6,500,000 | \$6,500,000 | \$6,500,000 | \$5,400,000 |
| Utility Bonds | | \$1,200,000 | \$1,200,000 | \$1,200,000 | \$3,700,000 | \$4,500,000 | \$4,500,000 | \$4,500,000 | \$4,600,000 |
| Municipal State Aid | | | | | | | | \$1,075,000 | \$1,800,000 |
| ARPA | | | | | | | | | \$1,100,000 |
| | | | | | | | | | |
| Total Sources | \$8,000,000 | \$9,000,000 | \$9,000,000 | \$9,800,000 | \$9,800,000 | \$11,000,000 | \$11,000,000 | \$12,075,000 | \$12,900,000 |
| | | | | | | | | | |
| Difference | \$20,000 | \$106,000 | \$208,890 | \$166,000 | \$166,000 | \$218,000 | \$0 | \$2,000 | \$8,300 |

Notes

Anticipated Debt Issuance (updated 05/2022):

Street Reconstruction Bonds

2022

Utility Bonds

2022

Low Risk

Medium Risk

High Risk



STAFF REPORT NO. 105
CITY COUNCIL MEETING
8/29/2023

REPORT PREPARED BY: Chad Donnelly, Assistant Utility Superintendent

DEPARTMENT DIRECTOR REVIEW: Kristin Asher, Public Works Director
8/17/2023

OTHER DEPARTMENT REVIEW:

CITY MANAGER REVIEW: Katie Rodriguez, City Manager
8/22/2023

ITEM FOR COUNCIL CONSIDERATION:

Consider authorizing the City Engineer, City Manager, and Mayor to execute a Construction Work Order agreement with MnDOT and the I-494 Project 1 design-build contractor for the construction of a sanitary sewer crossing underneath I-35W.

EXECUTIVE SUMMARY:

Public Works is requesting authorization to enter into a work order agreement with MnDOT for the construction of a sanitary sewer crossing underneath I-35W. This work order is pursuant to the Master Utility Agreement for the I-494 Project 1 (MnDOT Agreement No. 1051052) and approved by the City Council on February 14, 2023.

The project will replace the existing 9-inch clay sewer that is below I-35W on the north side of I-494. This utility services a portion of the business district along the 77th St corridor and is a critical piece of infrastructure. The project will eliminate a flow capacity issue that has been long outstanding, as well as eliminate a conflict foreseen with the bridge abutments that are proposed with I-494 Project 1.

Although this project was not programmed, the timing of I-494 Project 1 provides a unique cost-saving opportunity to resolve these issues. The costs associated with designing and resolving the bridge abutment conflict are being applied towards the cost of designing and constructing the new crossing.

RECOMMENDED ACTION:

By Motion: Authorize the City Engineer, City Manager, and Mayor to execute a work order agreement with MnDOT and the I-494 Project 1 design-build contractor for the construction of a sanitary sewer crossing underneath I-35W.

BASIS OF RECOMMENDATION:

A. **HISTORICAL CONTEXT**

See Executive Summary.

B. **POLICIES (resolutions, ordinances, regulations, statutes, etc):**

Construction of this sanitary sewer crossing is consistent with City Council Priority/Outcome 3a - Sustainable infrastructure: City infrastructure supports service needs.

C. CRITICAL TIMING ISSUES:

This project as well as the location of the work is critical to the timely progress of I-494 Project 1. The Construction Work Order will need to be executed as soon as possible once design work has been completed in order to not delay I-494 Project 1.

D. FINANCIAL IMPACT:

- The cost of the sanitary sewer crossing is estimated at \$635,634.
- The cost of the project to resolve the bridge abutment conflict is estimated at \$135,000.
- This value is being applied towards the total cost which means \$500,634 is the estimated expense the City will bear. This cost could change slightly depending on the final design of the sanitary sewer crossing.
- The project will be funded from the City's sanitary sewer utility fund.
- In order to fund this project, Public Works will reduce the linear feet of sanitary sewer lining proposed in 2024. The 2024 budget currently programs \$900,000 for sanitary sewer lining.

E. LEGAL CONSIDERATION:

None

ALTERNATIVE RECOMMENDATION(S):

None

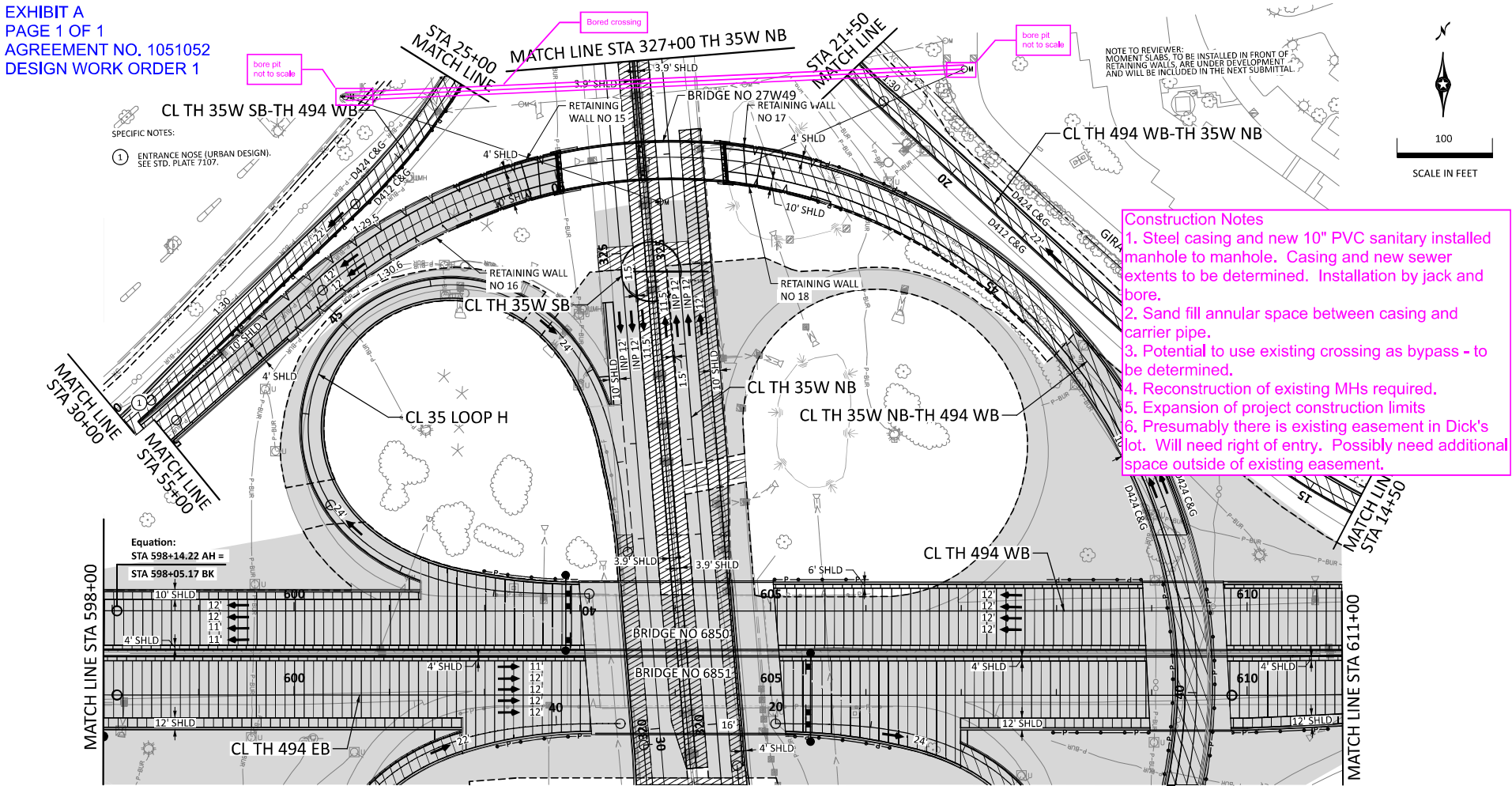
PRINCIPAL PARTIES EXPECTED AT MEETING:

None

ATTACHMENTS:

| Description | Type |
|-----------------------------|-----------------|
| ▣ Preliminary Design Sketch | Exhibit |
| ▣ Cost Summary | Backup Material |

EXHIBIT A
PAGE 1 OF 1
AGREEMENT NO. 1051052
DESIGN WORK ORDER 1



NOTE TO REVIEWER:
MOMENT SLABS, TO BE INSTALLED IN FRONT OF
RETAINING WALLS, ARE UNDER DEVELOPMENT
AND WILL BE INCLUDED IN THE NEXT SUBMITTAL.



- Construction Notes**
- 1. Steel casing and new 10" PVC sanitary installed manhole to manhole. Casing and new sewer extents to be determined. Installation by jack and bore.
 - 2. Sand fill annular space between casing and carrier pipe.
 - 3. Potential to use existing crossing as bypass - to be determined.
 - 4. Reconstruction of existing MHs required.
 - 5. Expansion of project construction limits
 - 6. Presumably there is existing easement in Dick's lot. Will need right of entry. Possibly need additional space outside of existing easement.

SPECIFIC NOTES:
1. ENTRANCE NOSE (URBAN DESIGN).
SEE STD. PLATE 7107.

Equation:
STA 598+14.22 AH =
STA 598+05.17 BK

- GENERAL NOTES:**
- I. STATION CALLOUTS REFERENCE THE ADJACENT ALIGNMENT UNLESS OTHERWISE NOTED.
 - II. DESIGN VALUE FOR LANE AND SHOULDER WIDTHS ARE SHOWN FACE TO FACE. SEE TYPICAL SECTIONS FOR PAVING WIDTHS. SEE PERMANENT PAVEMENT MARKING PLAN FOR PAVEMENT MARKING LOCATIONS.
 - III. CONTRACTOR NOT ALLOWED TO IMPACT AREAS MARKED AS "AREA OF ENVIRONMENTAL SENSITIVITY" OUTSIDE OF CONSTRUCTION LIMITS SHOWN.
 - IV. FOR C&G ON RAMP AND LOOPS THE HIGH SIDE GUTTER CROSS SLOPE SHALL MATCH ADJACENT PAVEMENT CROSS SLOPE ON THE RAMP AND LOOP PROPER.
 - V. SEE INTERSECTION DETAIL SHEETS FOR INTERSECTION IMPROVEMENTS.
 - VI. ITS LOOPS TO BE PLACED PRIOR TO PERMANENT PAVEMENT. SEE SEPARATE ITS PLANS.

| PAVEMENT LEGEND | | | | | | | |
|-----------------|---------|--|---------|--|---------|--|---------|
| | INSET A | | INSET F | | INSET K | | INSET P |
| | INSET B | | INSET G | | INSET L | | INSET Q |
| | INSET C | | INSET H | | INSET M | | INSET R |
| | INSET D | | INSET I | | INSET N | | |
| | INSET E | | INSET J | | INSET O | | |

| LEGEND | | | |
|--------|---------------------------------------|--|--|
| | EXISTING R/W | | WIRE FENCE DESIGN 60V-9322 |
| | PROPOSED R/W | | TRAFFIC BARRIER TYPE 31 SEE STD. PLAN 5-297.690 |
| | TEMPORARY EASEMENT | | PROPOSED HIGH TENSION CABLE BARRIER |
| | ACCESS CONTROL | | HIGH TENSION CABLE BARRIER (HTCB) END ANCHOR |
| | CONSTRUCTION LIMITS | | IMPACT ATTENUATOR |
| | AREAS OF ENVIRONMENTAL SENSITIVITY | | NOISE WALL |
| | | | RETAINING WALL |
| | | | TRAFFIC DIRECTION |
| | | | AREA NOT RELEASED FOR CONSTRUCTION |

| | | | | |
|-----|------|-----|------|-----------|
| NO. | DATE | OWN | CHKD | REVISIONS |
| | | | | |

C.S. McCrossan **Michael Baker**
INTERNATIONAL

I HEREBY CERTIFY THAT THIS SHEET 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.

PRINT NAME: WILLIAM R. CURTIS
SIGNATURE: _____
DATE: 7/11/2023 LICENSE: *61414

CONSTRUCTION PLAN
TH 494 EB
STA 598+00 TO STA 611+00

I-494: AIRPORT TO HWY 169 DB (S.P. 2785-424)
SHEET NO. _____ OF _____ SHEETS

I-494 Richfield Sanitary Sewer Conflict 9-30 Scope/ROM Pricing Options - Rev 2

Option 1 - Base Scope (Required by Contract)

Split Casing around existing 9" Pipe

Option 1 Total

| <u>U of M</u> | <u>Qty</u> | <u>Unit Price</u> | <u>Total Price</u> |
|---------------|------------|-------------------|----------------------|
| LS | 1.0 | \$135,000.00 | \$ 135,000.00 |
| | | | \$ 135,000.00 |

Option 3 - Full Replacement

Design Fee

Mobilization

24" Steel Casing Pipe (Jacked)

24" Steel Casing Pipe

10" PVC SDR 26

4" Insulation

Connect to Existing Pipe

Remove / Abandon Existing Pipe

Sanitary Sewer Bypass

Remove Curb and Gutter

Sawcut Bituminous Pavement

Remove Bituminous Pavement

Concrete Curb & Gutter B612

Replace Bituminous Pavement

Subtotal 1

Fixed Fee (6.94% of Subtotal 1)

Subtotal 2

Design Risk (1% of Subtotal 2)

Bond Risk (1% of Subtotal 2)

Utility Warranty Risk (3% of Subtotal 3)

Option 3 Total

Base Scope Deduct

Option 3 Total Outside Base Scope

| <u>U of M</u> | <u>Qty</u> | <u>Unit Price</u> | <u>Total Price</u> |
|---------------|------------|-------------------|------------------------|
| LS | 1.0 | \$ 77,000.00 | \$ 77,000.00 |
| LS | 1.0 | \$ 18,500.00 | \$ 18,500.00 |
| LF | 225.0 | \$ 800.00 | \$ 180,000.00 |
| LF | 435.0 | \$ 220.00 | \$ 95,700.00 |
| LF | 660.0 | \$ 110.00 | \$ 72,600.00 |
| SY | 200.0 | \$ 60.00 | \$ 12,000.00 |
| EA | 2.0 | \$ 4,100.00 | \$ 8,200.00 |
| LF | 696.0 | \$ 35.00 | \$ 24,360.00 |
| LS | 1.0 | \$ 40,000.00 | \$ 40,000.00 |
| LF | 60.0 | \$ 7.00 | \$ 420.00 |
| LF | 100.0 | \$ 5.00 | \$ 500.00 |
| SY | 300.0 | \$ 11.00 | \$ 3,300.00 |
| LF | 100.0 | \$ 55.00 | \$ 5,500.00 |
| TON | 100.0 | \$ 280.00 | \$ 28,000.00 |
| | | | \$ 566,080.00 |
| | | | \$ 39,285.95 |
| | | | \$ 605,365.95 |
| | | | \$ 6,053.66 |
| | | | \$ 6,053.66 |
| | | | \$ 18,160.98 |
| | | | \$ 635,634.25 |
| | | | \$ (135,000.00) |
| | | | \$ 500,634.25 |

Add Option

~~Upsize Jacked Steel Casing to 30"~~

| | | | |
|---------------|------------------|----------------------|-------------------------|
| LF | 225.0 | \$ 200.00 | \$ 45,000.00 |
|---------------|------------------|----------------------|-------------------------|