

Permit Application Review

Permit No. 2022-086
Received complete: June 22, 2022

Applicant: Julie Long; City of Bloomington
Applicant's Contact: Steve Gurney; City of Bloomington
Project: Skriebakken Pond Culvert Replacement at Harrison Road
Location: 4100 West 90th Street: Bloomington
Applicable Rule(s): 2, 3, 4, 5, 6, and 7
Reviewer(s): Louise Heffernan and Gabrielle Campagnola; Barr Engineering, Co.

General Background & Comments

The City of Bloomington (City) is proposing the replacement of a deteriorating culvert beneath Harrison Road in Bloomington, adjacent to Skriebakken Pond and Skriebakken Pond East, located near 4100 West 90th Street in Bloomington. Skriebakken Pond (Pond) is a Minnesota Department of Natural Resources (MnDNR) Public Water Wetland (#1049W). The following storm sewer improvements are being proposed:

- Removal and replacement of bituminous pavement, curb and gutter, and two catch basins.
- Removal of an existing 24-inch corrugated metal pipe (CMPA) arch culvert beneath Harrison Road.
- Installation of a 28-inch corrugated aluminized steel (CAS) culvert and storm sewer (equivalent hydraulic capacity pipe) at the same upstream and downstream invert elevations.
- Installation of riprap, granular filter material, and a flared end sections (FES) at the culvert ends.

Exhibits Reviewed:

1. Permit Application dated June 6, 2022, received June 7, 2022.
2. Permit Application Cover Letter dated June 7, 2022 and received June 7, 2022, prepared by the City of Bloomington
3. Rule 6 Narrative received June 7, 2022, prepared by the City of Bloomington
4. Construction Plans dated June 6, 2022, prepared by the City of Bloomington Engineering Division
5. Wetland Conservation Act (WCA) Notice of Decision issued June, 21, 2022 from the Local Government Unit (LGU), the City of Bloomington

The application with the submitted information is complete.

2.0 Floodplain Management and Drainage Alterations

Because the project will involve land-altering activities below the Atlas 14 100-year frequency flood elevation of Skriebakken Pond, elevation 807.3 M.S.L. (as identified in the City Storm Water Management Plan), the project must conform to the requirements of the District's Floodplain Management and Drainage Alterations Rule 2.0.

Proposed earth work and grading below the 100-year frequency flood elevation of the Pond (807.3 M.S.L.) includes the installation of the 28-inch CAS culvert, and placement of riprap and granular filter material. The storm sewer improvements are exempt from the requirements set forth by the District's Floodplain Management and Drainage Alterations Rule because:

- Replacement of the storm sewer will be completed with an equivalent hydraulic capacity (in-kind), and upstream and downstream invert elevations maintained in accordance with subsection 2.2.1c. The replacement of the existing public infrastructure and associated land-altering activities will not result in net fill or net impacts within the floodplain of the Pond. At the locations of the proposed riprap, the areas will be over excavated allowing the riprap and granular filter material to be placed at an elevation that matches existing grade. The area disturbed within the floodplain and above the water surface elevation of the pond will be regraded and seeded with a native seed mixture. No permanent floodplain impacts are proposed as part of this project.

Under subsection 2.2.1a of the rule, the riprap installation is exempt from the requirements set forth by the District's Floodplain Management and Drainage Alterations Rule because:

- The riprap will be installed at the inlet and outlet of the pipe to provide an energy dissipation measure to reduce the erosive force of concentrated stormwater and prevent scour.
- The riprap design and materials are consistent with the standards in the District's Shoreline and Streambank Improvements Rule 7.0, as described below.

7.3.1 - the riprap is not for cosmetic purposes but for the dissipation of energy and preventing scour.

7.3.2- bioengineering alone is not sufficient to dissipate velocities, estimated to be as high as 6 feet/second, at the culvert downstream end.

7.3.3 – 10 cubic yards of Class III riprap, size less than 30-inches in diameter, (Rule 7.3.3a) and 6 inches of granular filter material (Rule 7.3.3c) is to be installed at the culvert ends. The cross-section detail and plan view show the location and work proposed is to conform with the existing alignment of the wetland (Rule 7.3.3b). The work will remove wetland vegetation that is discussed in Rule 3 as a no-loss exemption for compliance with Rule 7.3.3d. The riprap is to be installed to the top of the pipe. Rule 7.3.3e allows for the riprap to extend to no higher than two feet above the 100-year high water elevation, in compliance with subsection 7.3.3 criteria. The remaining sections of Rule 7.0 are not applicable to the project.

3.0 Wetlands Management

The District's Wetland Management Rule 3.0 applies to the project because land-disturbing activities are proposed within the Pond, MnDNR Public Water Wetland #1049W. Proposed work within the wetland includes storm sewer improvements and the installation of riprap at

both the pipe inlet and outlet. All wetland area disturbed or altered by the project will be restored to pre-project conditions. The City is the Local Government Unit (LGU) responsible for administering the requirements of the Wetland Conservation Act (WCA) in Bloomington.

The wetland type and boundary determination was completed by the City. NMCWD is in agreement with the type and boundary determination. A WCA Notice of Decision received June 21, 2022, has been issued approving the wetland no-loss determination for the proposed work within the wetland. Subsection 3.2.2a of the District's Rules indicates that the provisions of Rule 3.4 Wetland Buffers and Rule 3.5 Stormwater Treatment do not apply to wetlands that are disturbed by utility improvements or repairs that are the subject of a no-loss determination from the LGU. The project conforms to the requirements of Rule 3.0.

4.0 Stormwater Management

The District's requirements for both stormwater management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b and 5.2.1a and b. The project is within a drainage and utility easement and is considered a linear project as stated in Rule 4.2.4. For linear projects creating less than one (1) acre of new or additional impervious area (zero (0) acres of net new impervious area is proposed to be created), the stormwater requirements of Rules 4.3.1 or 4.3.2 do not apply.

5.0 Erosion and Sediment Control

The District's requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan submitted includes installation of perimeter controls (silt fence and floating silt curtain), stabilized construction entrances, and storm drain inlet protection. Erosion control blanket and native seed mixtures will be implemented for final stabilization measures.

The City must designate a contact who will remain liable to the District for performance under the District's Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e.

6.0 Waterbody Crossings and Structures

The District's Waterbody Crossings and Structures Rule 6.0 applies to the waterbody crossing improvements as described in the *General Background and Comments* section of this report. Conformance with Rule 6.3 criteria is required.

Rule 6.3.1 states construction, improvement, repair or removal of a waterbody crossing in contact with the bed or bank of a waterbody:

- a) *Must retain adequate hydraulic capacity and assure no net increase in the flood stage of the pertinent waterbody:*

As previously stated, work along the bank of the Pond includes replacement of the existing 24-inch culvert beneath Harrison Road. The existing 24-inch CMP-arch will be replaced with a 28-inch CAS pipe, providing an equivalent hydraulic capacity. The upstream and

downstream invert elevations will be maintained. Due to the in-kind replacement, hydraulic capacity modifications are not proposed, in compliance with subsection 6.3.1a criteria.

An increase in impervious surface within the project area is not proposed, therefore, stormwater runoff volume discharging to the Pond from the disturbed area will be maintained. Because the proposed hydraulic configuration will remain similar to existing conditions, the replacement pipe will maintain the hydraulic capacity of the existing pipe and. The project does not propose a net reduction in flood storage volume or increase in flood stage maintain the Pond flood elevation at 807.3 M.S.L. Rule 6.3.1a is met.

b) Must retain adequate navigational capacity pursuant to any requirements of the waterbody's classification by the District:

This section of the Pond is not used for navigational purposes.

c) Must not be reasonably likely to significantly adversely affect water quality, change the existing flowline/gradient, or cause increased scour, erosion, or sedimentation:

As stated in item (a), the hydraulic capacity of the existing storm sewer system within the project corridor will be maintained, as the culvert system will be replaced in-kind. Any change in the water quality of the Pond or downstream waterbodies will be temporary during construction. Erosion control measures including silt fence and floating silt curtain will be installed to minimize water quality impacts (sedimentation).

The proposed culvert replacement will be replaced at approximately the same elevations as existing conditions. Waterbody characteristics including elevations, contours, and substrate will be restored to pre-project conditions within 90 days of the commencement of construction.

Reconstruction activities will correct a hydraulic problem associated with the deteriorated storm sewer. The existing storm sewer system is not effectively handling stormwater runoff and functioning as designed due to deterioration. The identified deterioration may prevent normal flow through the pipe, which may introduce sediment into the waterbody over time and exacerbate erosion along the pipe alignment.

The proposed design is not reasonably likely to cause adverse effects to water quality and the physical or biological character of the waterbody because of the similar-kind replacement. Rule 6.3.1c is met.

d) Must provide post-project wildlife passage along each bank and riparian area

The project will not permanently change conditions in a manner that will deter wildlife from using the area adjacent and within the Pond once the project is complete. Construction activities may temporarily displace wildlife until the area is restored to pre-project conditions. Once the project is complete, the two outlets of the pipe will be submerged comparable to existing conditions, which allows wildlife to pass.

e) Shall represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives:

The project is an in-kind replacement project, therefore a reasonable alternative analysis is not required.

Rule 6.3.2 states, *projects involving directional boring or horizontal drilling must provide for minimum clearance of 3 feet below the bed of a waterbody and a minimum setback of 50 feet from any stream bank for pilot, entrance and exit holes.*

No directional boring or horizontal drilling below a waterbody or near a stream bank is proposed.

Rule 6.3.3 states, removal of structures or other waterway obstructions:

- a) *Must maintain the original cross-section and bed conditions to the greatest extent practicable:*

No removal of structures or other waterway obstructions are proposed.

- b) *Must achieve complete removal of the structure, including any footings or pilings that impede navigation:*

This portion of the pond is not used for navigation, and there are no structures or other waterway obstructions proposed to be removed by the project.

- c) *Must not involve the removal of a water-level control device:*

There are no water-level control devices proposed to be removed by the project.

Rule 6.3.4 requires *that the plans must state no activity affecting the bed of a protected water may be conducted between April 1 and June 30 on public waterbodies to minimize the impacts on fish spawning and migration:*

The applicant must provide documentation stating that the work will not be conducted between April 1 and June 30. project work will not affect the bed of a protected water body.

Rule 6.3.5 states, *a separate permit under District Rule 7.0 is not required for shoreline or streambank stabilization associated with a waterbody crossing or structure, but such stabilization must comply with the criteria 7.3.3c to e.*

See *Section 7.0 Shoreline and Streambank Improvements* of this report for Rule 7.0 conformance analysis.

In accordance with the requirements of subsection 6.5 for the maintenance of the waterbody structures, the city must submit a draft agreement with NMCWD providing for maintenance of the waterbody crossings, then execute the agreement on approval of NMCWD.

7.0 Shoreline and Streambank Improvements

Because the waterbody crossing improvements involve placement of riprap at the culvert ends to dissipate energy, the requirements of Rule 7.0 Shoreline and Streambank Improvements apply to the project. Rule 7.2.2 states that no NMCWD permit under Rule 7.0 is required for activities in an incidental wetland or for utility improvements or repairs that are the subject of a no-loss determination or utility exemption from the relevant LGU. As stated in *Section 3.0 Wetlands Management* of this report, the City (LGU) administering the requirements of WCA has issued a utility exemption for the project.

11.0 Fees

Because the property owner is a public entity, no fees are charged.

Rules 2.0, 3.0, 4.0, 5.0, 6.0 and 7.0

\$0

12.0 Financial Assurances

Because the property owner is a public entity, the District's financial assurance requirements do not apply.

Sureties for the project are:

\$0

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to the requirements of Rules 5 and 6 if the rule specific permit conditions identified in the *Recommendations* section of this report are met.

Recommendation

Approval, contingent upon:

Compliance with the General Provisions (attached).

The applicant providing a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

Per Rule 6.5, the City must submit for NMCWD approval a written agreement providing for the maintenance of the crossings in contact with the bed/bank of Skriebakken Pond for the crossings improved/replaced with the project.

The City, in accordance with Rule 6.3.4, must provide documentation stating that the work will not be conducted between April 1 and June 30 within Skriebakken Pond, a protected waterbody.

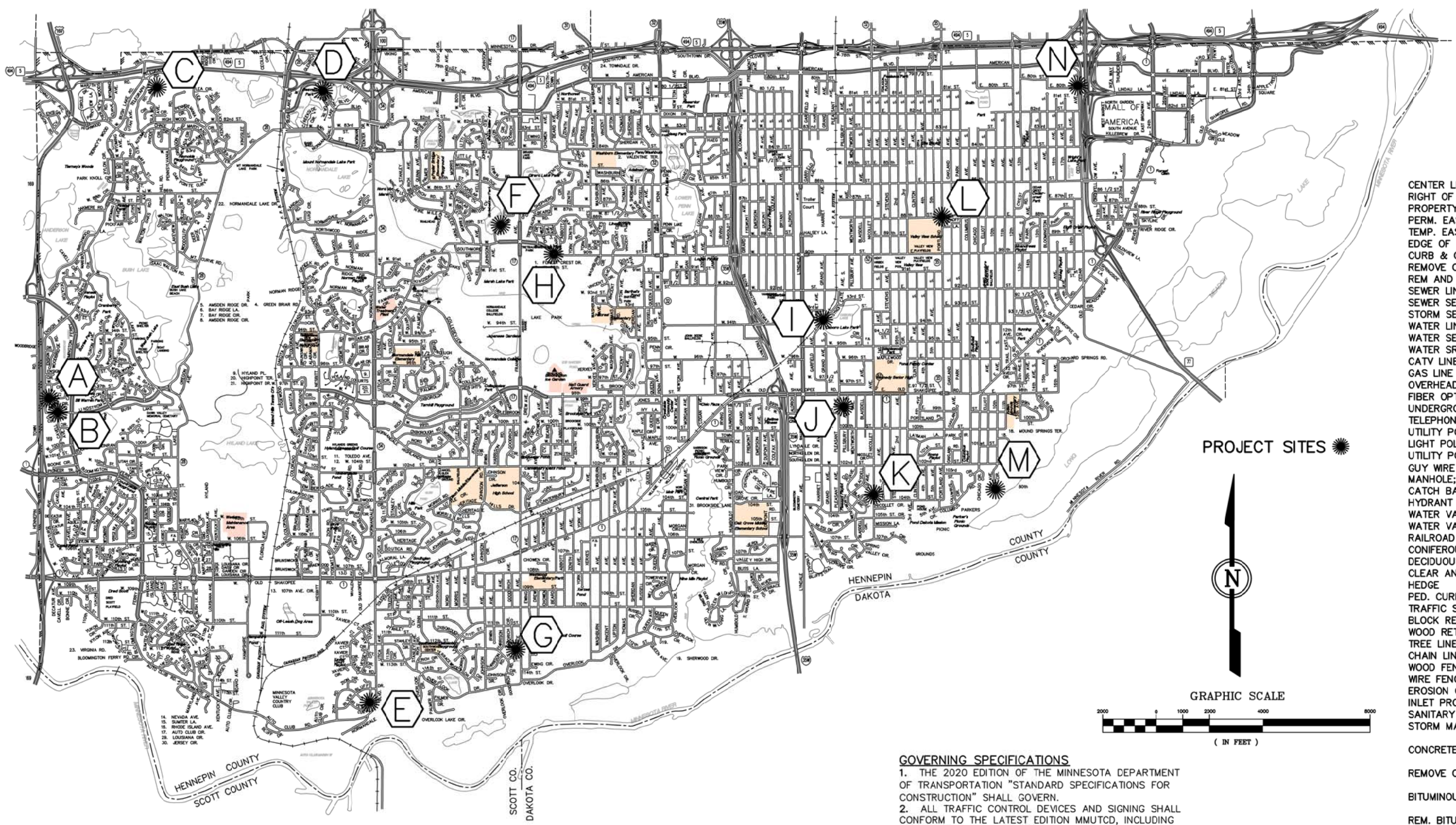
By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit:

An as-built drawing of the floodplain mitigation areas conforming to the design specifications as approved by the District.

CITY OF BLOOMINGTON, ENGINEERING DIVISION

CONSTRUCTION PLANS FOR: 2022-901

STORM SEWER
MAINTENANCE PROJECT



INDEX	
SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
2-3	SITE LOCATION SHEETS
4-5	STATEMENT OF QUANTITIES
6-8	STANDARD DETAIL SHEETS
9-22	PLAN SHEETS

LEGEND	
EXISTING	PROPOSED
CENTER LINE	---
RIGHT OF WAY LINE	---
PROPERTY LINE	---
PERM. EASEMENT LINE	---
TEMP. EASEMENT LINE	---
EDGE OF ASPHALT	---
CURB & GUTTER LINE	---
REMOVE CURB AND GUTTER	---
REM AND REPLACE C & G	---
SEWER LINE	---
SEWER SERVICE LINE	---
STORM SEWER	---
WATER LINE	---
WATER SERVICE LINE	---
WATER SRVC. LINE (ABAN.)	---
CATV LINE	---
GAS LINE	---
OVERHEAD ELECTRIC	---
FIBER OPTIC	---
UNDERGROUND ELECTRIC	---
TELEPHONE CABLE	---
UTILITY POLE	---
LIGHT POLE	---
UTILITY POLE W/ LIGHT	---
GUY WIRE	---
MANHOLE; STORM, SAN.	---
CATCH BASIN	---
HYDRANT	---
WATER VALVE	---
WATER VALVE IN MANHOLE	---
RAILROAD	---
CONIFEROUS TREE	---
DECIDUOUS TREE	---
CLEAR AND GRUB TREE	---
HEDGE	---
PED. CURB RAMP	---
TRAFFIC SIGNAL	---
BLOCK RETAINING WALL	---
WOOD RETAINING WALL	---
TREE LINE	---
CHAIN LINK FENCE	---
WOOD FENCE	---
WIRE FENCE	---
EROSION CONTROL FENCE	---
INLET PROTECTION	---
SANITARY MANHOLE	---
STORM MANHOLE	---

GOVERNING SPECIFICATIONS
1. THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
2. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, CURRENT EDITION.

I HEREBY CERTIFY THAT THIS PLAN 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.

40497

6/6/2022

APPROVED

6/6/2022

DATE

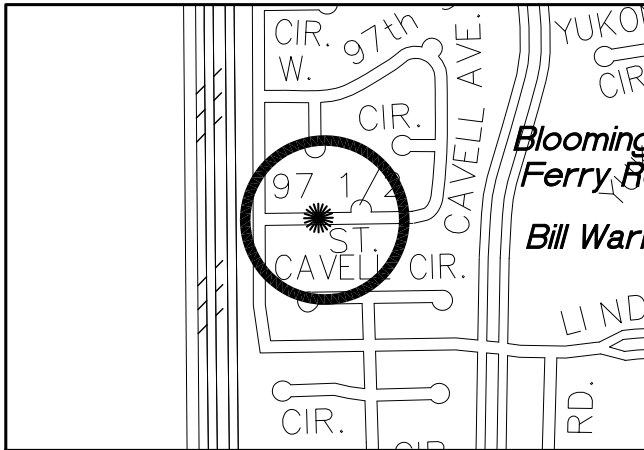
DATE

AWARD DATE _____
COMPLETION DATE _____
CONTRACTOR _____
INSPECTOR _____

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 COVERSHEET.dwg -- Printed: Jun 07, 2022 -- 8:08am

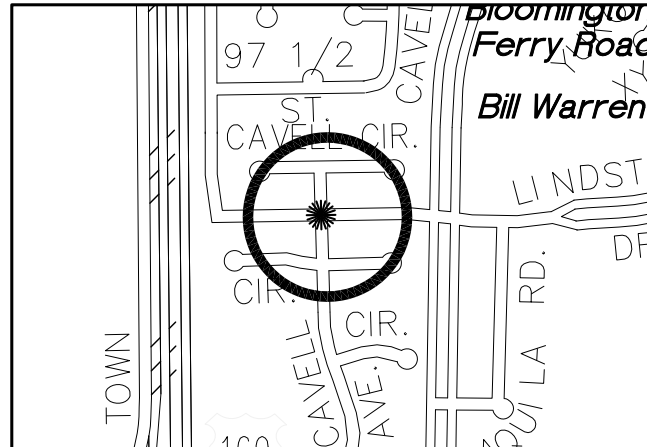
SITE A

8515 W 97 1/2 ST
F&I (2) 4LF 18" CIPP LINERS
SHEET 9



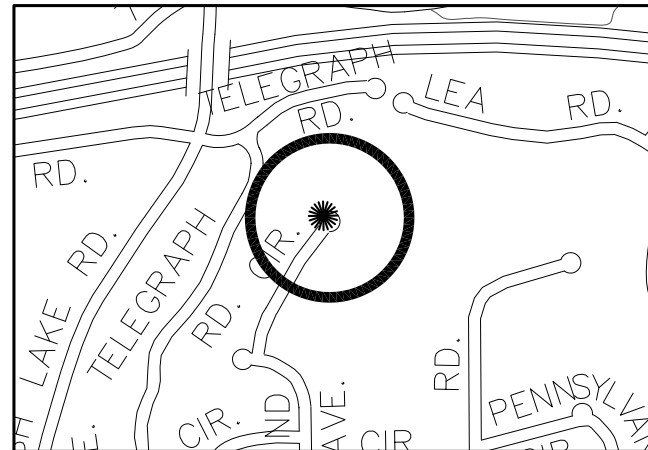
SITE B

INTERSECTION OF CAVELL AVE S & W 98TH ST
F & I 4LF 12" CI[PP LINER
SHEET 10



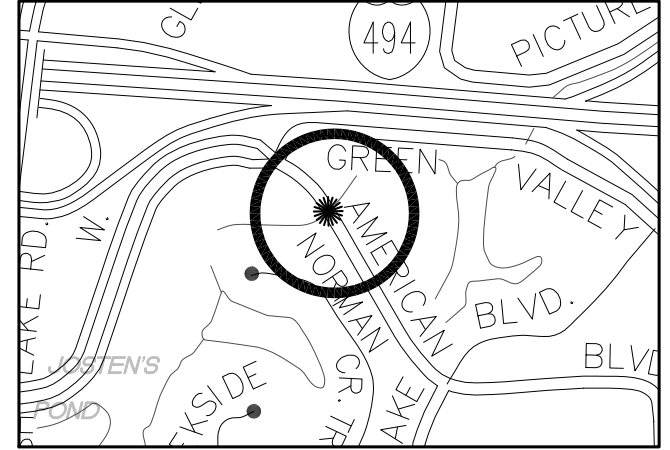
SITE C

7912 RHODE ISLAND CIR
F & I 1EA CB AND 22LF 15" RCP
SHEET 11



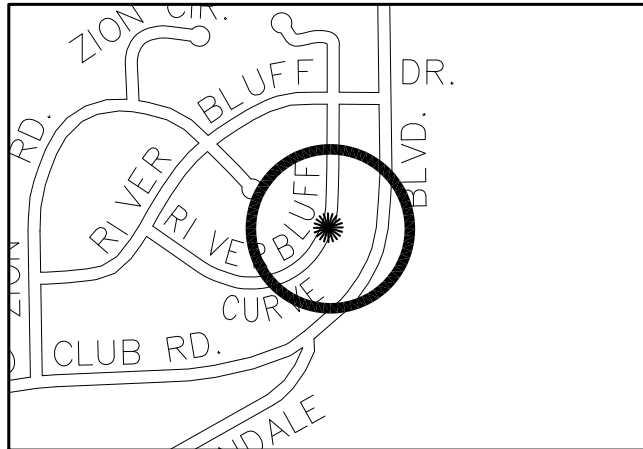
SITE D

5800 AMERICAN BLVD W
F & I 18LF 18" CIPP LINER & 4LF 12" CIPP LINER
SHEET 12



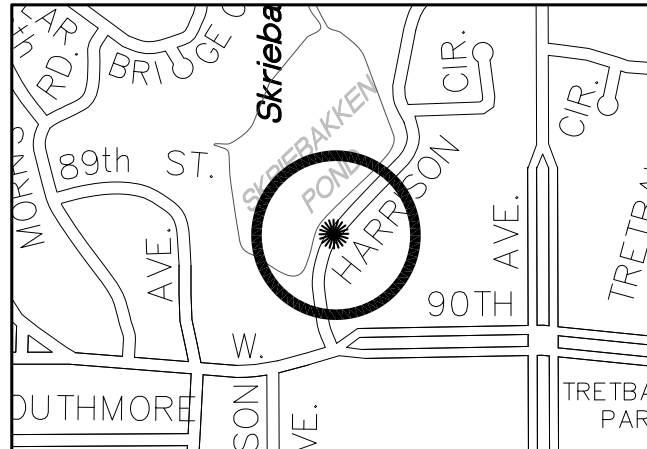
SITE E

5332 RIVER BLUFF CUR
F & I 4LF 15" CIPP LINER
SHEET 13



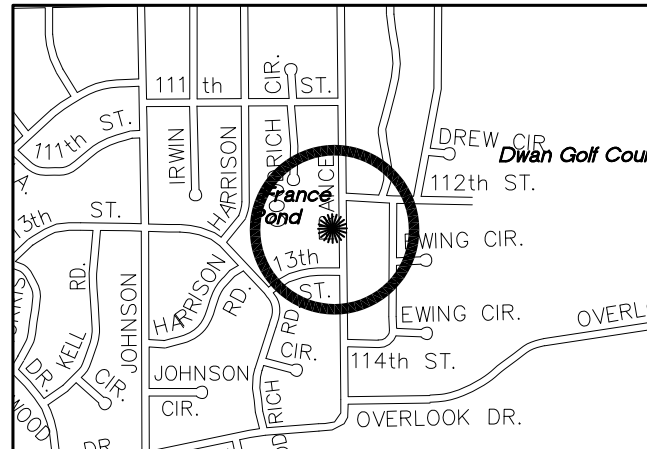
SITE F

4100 W 90TH ST AT SKRIEBAKKEN POND
F & I (2)EA CBMH'S & 114LF 24" CMP-A
SHEET 14



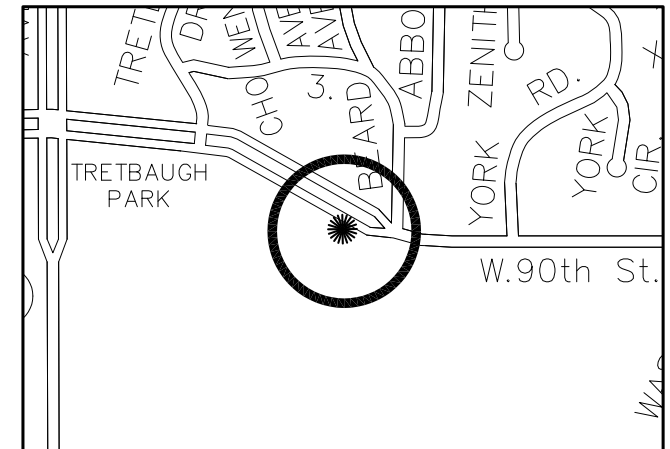
SITE G

11200 FRANCE AVE S
F & I 1EA MH, 14LF 12" CAS,
30LF 30" HDPE, & 63LF SLOPLINING 42" CMP
SEE SHEET 15



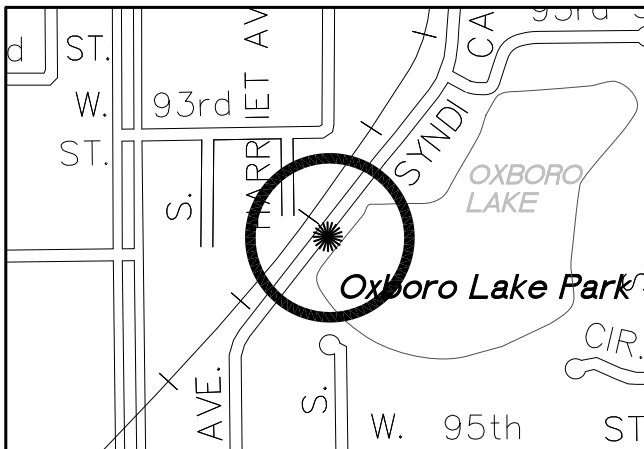
SITE H

3701 W 90TH ST
F & I 1EA CBMH W/ SAFL BAFFLE
AND 115LF 15" CAS
SEE SHEET 16



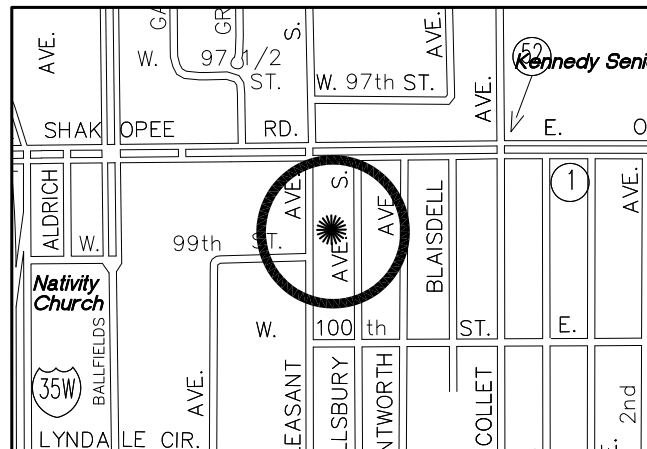
SITE 1

9425 SYNDICATE AVE S
CONSTRUCT CONCRETE WEIR
SEE SHEET 17



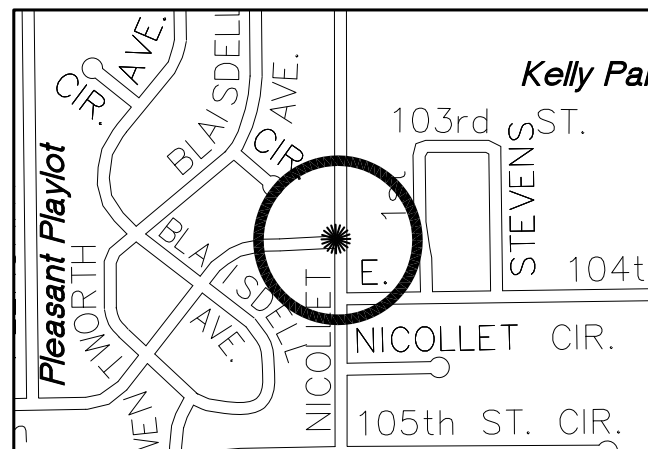
SITE J

9827, 9833, 9839, & 9845 PLEASANT AVE S
ABANDON 247LF 15" CMP
SEE SHEET 18



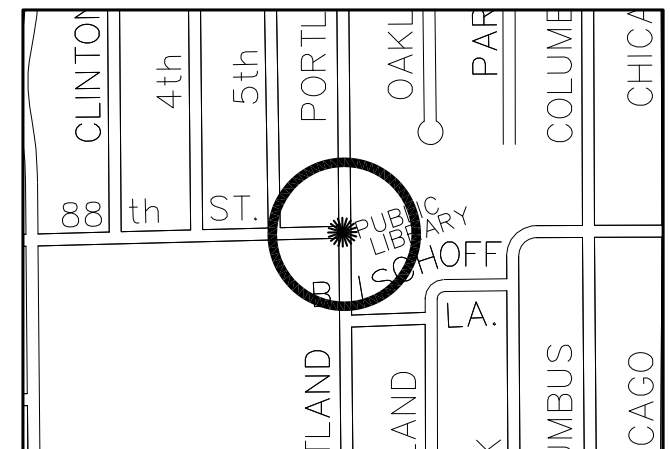
SITE K

NICOLLET AVE S AT W 104TH ST
F & I (2) 4LF 15" CIPP LINERS
SEE SHEET 19



SITE L

PORTLAND AVE S AT E 88TH ST
F&I 35LF 10" CIPP LINER
SEE SHEET 20



SITE LOCATIONS
SITES A - L

1700 W 98TH ST.
BLOOMINGTON MN 55431
PHONE (952) 563-8700



ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
901 STORM SEWER MAINTENANCE PR

2022-2023 STORM SEWER MAINTENANCE PROJECT

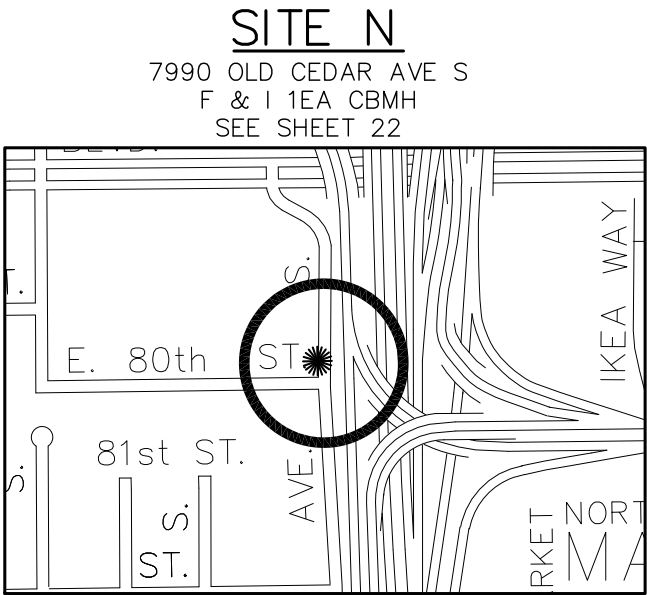
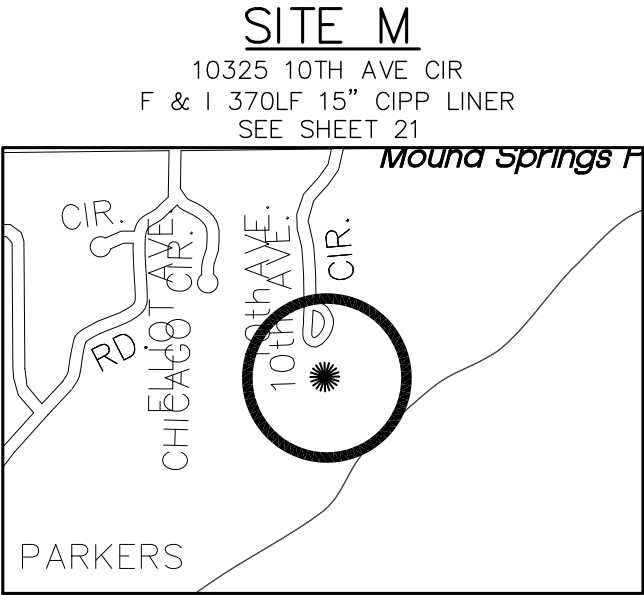
REVISIONS

REVISIONS		
DATE	DESCRIPTION	BY
		DAC

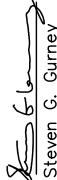
PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DRAWN: DAC
 CHECKED: SGG
 APPROVED: SGG

2 OF 22



I HEREBY CERTIFY THAT THIS PLAN 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.



Steven G. Gurney

40497 6/6/22

LIC. # DATE


DRAWN: DAC

CHECKED: SGG

APPROVED: SGG

SHEET:

3 OF 22



CITY OF

BLOOMINGTON

MINNESOTA

1700 W. 90TH ST.
BLOOMINGTON MN 55431
PHONE (952) 563-8700

ENGINEERING DIVISION

PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS

DATE	DESCRIPTION	BY

SITE LOCATIONS

SITES M-N

STATEMENT OF QUANTITIES

2022-901 Storm Sewer Maintenance Project				Project		Site A		Site B		Site C		Site D		Site E		Site F		Site G	
Schedule 1				Total		8515 W 97 1/2 ST		Cavell Ave S at W 98th St		7912 Rhode Island Cir		5800 American Blvd W		5332 River Bluff Cir.		4100 W 90th St at Skriebakken Pond		11200 France Ave S	
Estimated Quantities																			
				Quantity		Quantity		Quantity		Quantity		Quantity		Quantity		Quantity		Quantity	
Item No.	Item Description	Unit	NOTES	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final
2021.501	MOBILIZATION	LUMP SUM		1	0	0.05		0.05		0.1		0.1		0.05		0.1		0.1	
2101.502	CLEARING	EACH		5	0													5	
2101.502	GRUBBING	EACH		5	0													5	
2104.502	REMOVE MANHOLE OR CATCH BASIN	EACH		5	0											2		1	
2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT		213	0					64						64			
2104.503	REMOVE SEWER PIPE (STORM)	LIN FT		266	0											120		44	
2104.503	REMOVE CURB & GUTTER	LIN FT		90	0					15						30			
2104.504	REMOVE CONCRETE WALK	SQ YD		7	0														
2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD		154	0					42						54			
2104.603	ABANDON STORM SEWER	LF		247	0														
2105.601	WATER MANAGEMENT	LS		1	0							0.25				0.25		0.25	
2105.607	COMMON EXCAVATION	CU YD		47	0					7						9		20	
2211.609	AGGREGATE BASE CLASS 5 (100% CRUSHED LIMESTONE)	TON		49	0					13						17			
2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		16	0					4						6			
2360.509	TYPE SP 9.5 WEARING COURSE MIX (3,B)	TON		18	0					5						6			
2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON		24	0					5						6			
2411.502	CONCRETE WEIR	EACH		1	0														
2501.502	15" CAS PIPE APRON	EACH		1	0														
2501.502	30" CAS PIPE APRON	EACH		1	0													1	
2501.502	28" SPAN CAS PIPE-ARCH APRON	EACH		1	0											1			
2501.503	28" SPAN CAS PIPE-ARCH CULVERT	LF		120	0											120			
2503.503	12" CAS PIPE SEWER	LF		14	0													14	
2503.503	15" CAS PIPE SEWER	LF		115	0														
2503.503	15" RC PIPE SEWER DES 3006 CL V	LF		21	0					21									
2503.603	30" HDPE PIPE SEWER	LF		30	0													30	
2503.603	10" CIPP LINING	LF		35	0														
2503.603	12" CIPP LINING (P)	LF		8	0			4				4							
2503.603	15" CIPP LINING	LF		370	0														
2503.603	15" CIPP LINING (P)	LF		12	0									4					
2503.603	18" CIPP LINING (P)	LF		8	0	8													
2503.603	18" CIPP LINING	LF		18	0							18							
2506.502	CONST DRAINAGE STRUCTURE DESIGN SPEC 1	EACH		1	0													1	
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	EACH		4	0											2			
2506.602	CONNECT TO EXISTING MANHOLE	EACH		1	0														
2506.602	STANDARD CATCH BASIN	EACH		1	0					1									
2506.602	48" SAFL BAFFLE	EACH		1	0														
2507.503	LINING CULVERT PIPE 42"	LF		63	0													63	
2511.509	RANDOM RIP RAP CLASS III	TON		37	0											20		11	
2511.509	GRANULAR FILTER MATERIAL	TON		19	0											10		6	
2521.518	4" CONCRETE WALK	SQ FT		62	0														
2531.503	CONCRETE CURB & GUTTER DESIGN B618	LF		90	0					15						30			
2563.601	TRAFFIC CONTROL	LUMP SUM		1	0	0.05		0.05		0.05		0.05		0.05		0.15		0.1	
2573.502	STORM DRAIN INLET PROTECTION	EACH		6	0					2						2			
2573.503	FLOATATION SILT CURTAIN TYPE STILL WATER	EACH		50	0											50			
2573.608	TEMPORARY WOOD CHIP CONSTRUCTION ENTRANCE	SQ YD		133	0													133	
2574.507	LOAM TOPSOIL BORROW (LV)	CU YD		112	0					1						35		29	
2575.504	SODDING TYPE LAWN	SQ YD		8	0					8									
2575.504	ROLLED EROSION PREVENTION CATEGORY 10	SQ YD		1000	0											316		267	
2575.604	SEEDING A	SQ YD		239	0											80		40	
2575.604	SEEDING B	SQ YD		819	0											236		267	

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 - QUANTITIES.dwg -- Printed: Jun 09, 2022 - 8:56am

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PHONE (952) 563-8700

CITY OF
BLOOMINGTON
MINNESOTA

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

STATEMENT OF QUANTITIES

REVISIONS

DATE	DESCRIPTION	BY
6/1/21	ADDENDUM #1	DAC

I HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22

DATE

6-6-22

LIC. #

Steven G. Gurney

DRAWN: DAC

CHECKED: SGG

APPROVED: SGG

SHEET: 4 OF 22

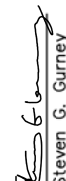
STATEMENT OF QUANTITIES

2022-901 Storm Sewer Maintenance Project				Project		Site H		Site I		Site J		Site K		Site L		Site M		Site N	
Schedule 1				Total		3701 W 90th St		9425 Syndicate Ave S		9827, 9833, 9839 & 9845 Pleasant Ave S		Nicolet Ave S at W 104th St		Portland Ave S at E 88th St		10325 10th Ave Cir		7990 Old Cedar Ave S	
Estimated Quantities																			
				Quantity		Quantity		Quantity		Quantity		Quantity		Quantity		Quantity		Quantity	
Item No.	Item Description	Unit	NOTES	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final	Estimated	Final
2021.501	MOBILIZATION	LUMP SUM		1	0	0.1		0.05		0.05		0.05		0.05		0.05		0.1	
2101.502	CLEARING	EACH		5	0														
2101.502	GRUBBING	EACH		5	0														
2104.502	REMOVE MANHOLE OR CATCH BASIN	EACH		5	0	1												1	
2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT		213	0	60												25	
2104.503	REMOVE SEWER PIPE (STORM)	LIN FT		266	0	102													
2104.503	REMOVE CURB & GUTTER	LIN FT		90	0	30												15	
2104.504	REMOVE CONCRETE WALK	SQ YD		7	0	7													
2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD		154	0	50												8	
2104.603	ABANDON STORM SEWER	LF		247	0					247									
2105.601	WATER MANAGEMENT	LS		1	0			0.25											
2105.607	COMMON EXCAVATION	CU YD		47	0	9												2	
2211.609	AGGREGATE BASE CLASS 5 (100% CRUSHED LIMESTONE)	TON		49	0	16												3	
2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON		16	0	5												1	
2360.509	TYPE SP 9.5 WEARING COURSE MIX (3,B)	TON		18	0	6												1	
2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON		24	0	12												1	
2411.502	CONCRETE WEIR	EACH		1	0			1											
2501.502	15" CAS PIPE APRON	EACH		1	0	1													
2501.502	30" CAS PIPE APRON	EACH		1	0														
2501.502	28" SPAN CAS PIPE-ARCH APRON	EACH		1	0														
2501.503	28" SPAN CAS PIPE-ARCH CULVERT	LF		120	0														
2503.503	12" CAS PIPE SEWER	LF		14	0														
2503.503	15" CAS PIPE SEWER	LF		115	0	115													
2503.503	15" RC PIPE SEWER DES 3006 CL V	LF		21	0														
2503.603	30" HDPE PIPE SEWER	LF		30	0														
2503.603	10" CIPP LINING	LF		35	0									35					
2503.603	12" CIPP LINING (P)	LF		8	0														
2503.603	15" CIPP LINING	LF		370	0											370			
2503.603	15" CIPP LINING (P)	LF		12	0							8							
2503.603	18" CIPP LINING (P)	LF		8	0														
2503.603	18" CIPP LINING	LF		18	0														
2506.502	CONST DRAINAGE STRUCTURE DESIGN SPEC 1	EACH		1	0														
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	EACH		4	0	1												1	
2506.602	CONNECT TO EXISTING MANHOLE	EACH		1	0											1			
2506.602	STANDARD CATCH BASIN	EACH		1	0														
2506.602	48" SAFL BAFFLE	EACH		1	0	1													
2507.503	LINING CULVERT PIPE 42"	LF		63	0														
2511.509	RANDOM RIP RAP CLASS III	TON		37	0	6													
2511.509	GRANULAR FILTER MATERIAL	TON		19	0	3													
2521.518	4" CONCRETE WALK	SQ FT		62	0	62													
2531.503	CONCRETE CURB & GUTTER DESIGN B618	LF		90	0	30												15	
2563.601	TRAFFIC CONTROL	LUMP SUM		1	0	0.05		0.05		0.05		0.1		0.1		0.05		0.1	
2573.502	STORM DRAIN INLET PROTECTION	EACH		6	0	1												1	
2573.503	FLOATATION SILT CURTAIN TYPE STILL WATER	EACH		50	0														
2573.608	TEMPORARY WOOD CHIP CONSTRUCTION ENTRANCE	SQ YD		133	0														
2574.507	LOAM TOPSOIL BORROW (LV)	CU YD		112	0	46												1	
2575.504	SODDING TYPE LAWN	SQ YD		8	0														
2575.504	ROLLED EROSION PREVENTION CATEGORY 10	SQ YD		1000	0	417													
2575.604	SEEDING A	SQ YD		239	0	110												9	
2575.604	SEEDING B	SQ YD		819	0	307												9	

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 - QUANTITIES.dwg -- Printed: Jun 09, 2022 - 8:58am

REVISIONS		
DATE	DESCRIPTION	BY
6/1/21	ADDENDUM #1	DAC

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 Steven G. Gurney
40497 6/6/22
LIC. # DATE

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

SHEET: 5 OF 22



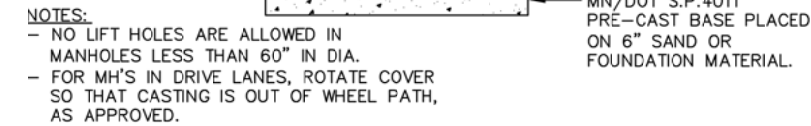
CITY OF
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ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

STATEMENT OF QUANTITIES

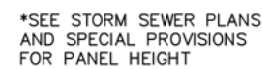
STANDARD DETAILS



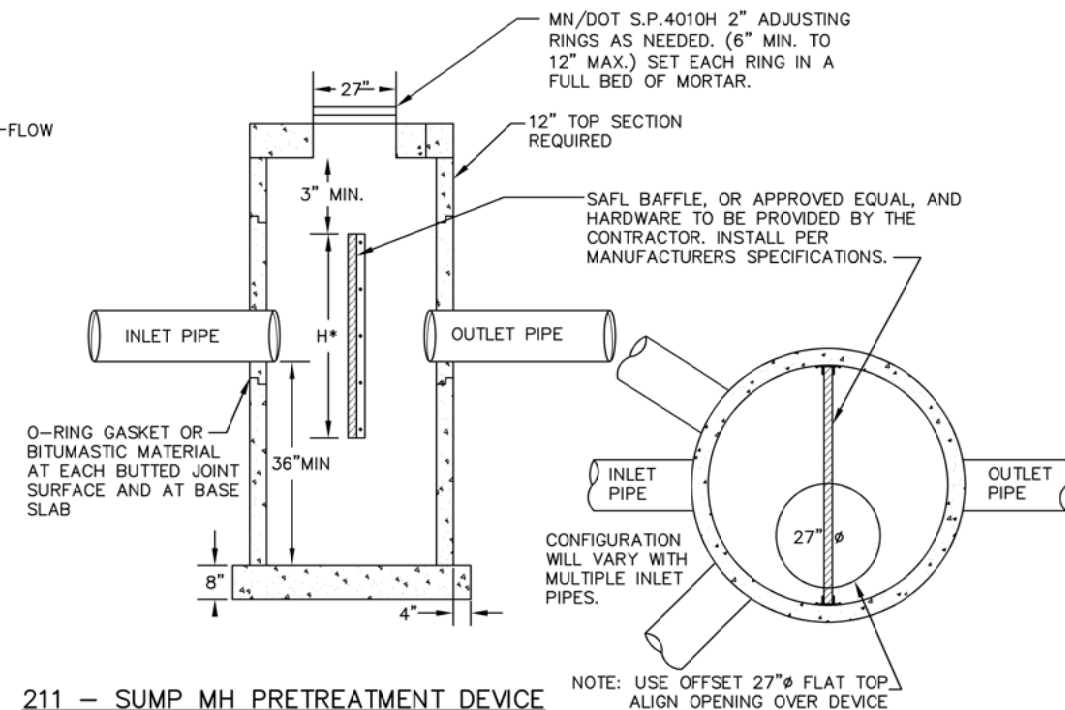
DESIGN SPEC X, X & X
200 - STD_MH.DWG 9/2013



504 - RECTANGULAR CATCH BASIN CASTING ASSEMBLY
504 - Rect. CB.dwg 5/2015



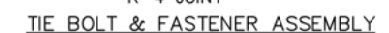
211 – SUMP MH PRETREATMENT DEVICE
211 – SUMP MH PRETREATMENT DEVICE.DWG 3/2022




203 - STD MH (CB-MH)
203 - STD MH (CB-MH).DWG 9/2016



206 - STD CB
206 - STD CB.DWG 9/2016



TIE BOLT REQUIREMENT	
PIPE SIZE	DIAMETER OF BOLT
12–21" (305–533mm)	1/2" (13mm)
24–36" (610–914mm)	5/8" (16mm)
42–54" (1067–1372mm)	3/4" (19mm)
60" (1524mm) & LARGER	1" (25mm)

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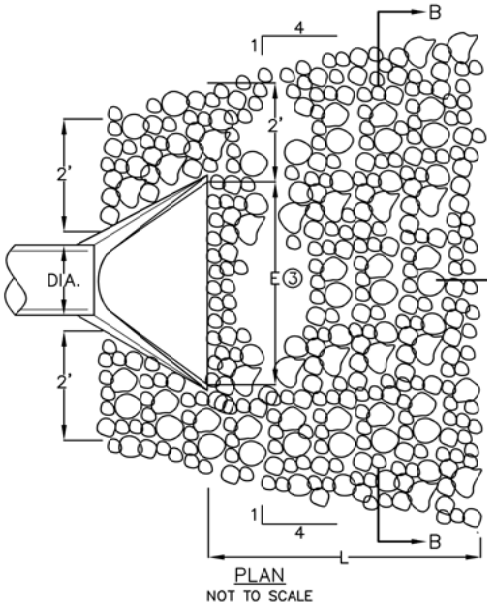
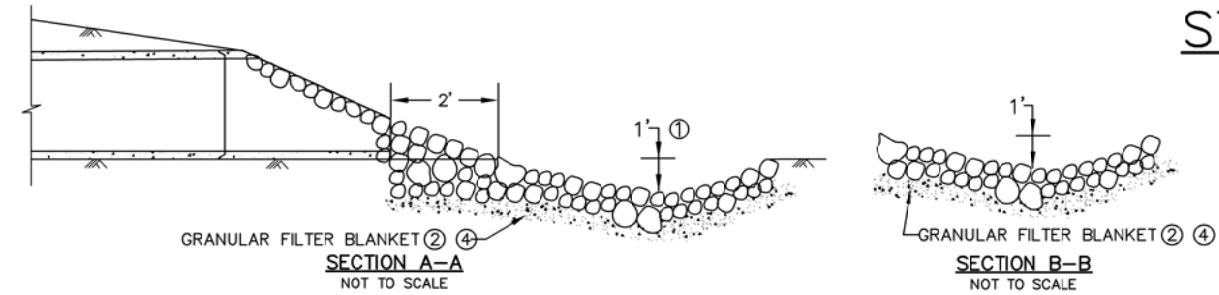
Steven G. Gurney

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

SHEET:
6 OF 22

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 - DETAILS.dwg -- Printed: Jun 07, 2022 - 10:55am

STANDARD DETAILS

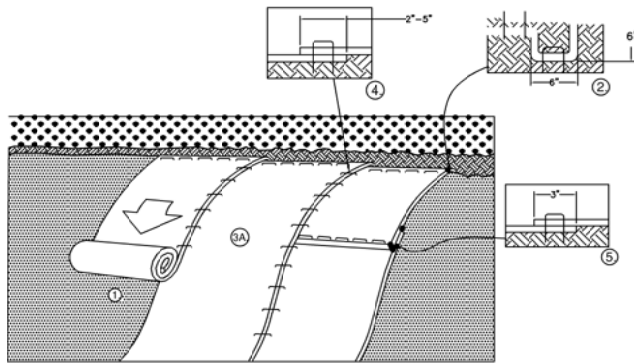


		CLASS II		CLASS III		CLASS IV	
		d50 = 6"		d50 = 6"		d50 = 6"	
DIA. OF ROUND PIPE (IN.)	L (ft.)	12" DEPTH RIPRAP (CY)	6" DEPTH GRANULAR FILTER (CY)	18" DEPTH RIPRAP (CY)	9" DEPTH GRANULAR FILTER (CY)	24" DEPTH RIPRAP (CY)	12" DEPTH GRANULAR FILTER (CY)
12	8	2.8	1.4	4.1	2.1	5.5	2.8
15	8	2.9	1.5	4.4	2.2	5.8	2.9
18	10	3.9	2.0	5.9	3.0	7.8	3.9
21	10	4.2	2.1	6.3	3.2	8.4	4.2
24	12	5.5	2.8	8.3	4.2	11.0	5.5
27	12	5.8	2.9	8.7	4.4	11.6	5.8
30	14	7.3	3.7	10.9	5.5	14.5	7.3
36	16	9.2	4.6	13.8	6.9	18.3	9.2
42	18	10.9	5.5	16.3	8.2	21.7	10.9
48	20	12.9	6.5	19.4	9.7	25.8	12.9

NOTES:
PIPE SIZES LARGER THAN THOSE LISTED REQUIRE A SPECIAL DESIGN

- ① FOR PIPES GREATER THAN 30" USE 1.5'
- ② GEOTEXTILE FABRIC, SPEC 3733, MAY BE SUBSTITUTED FOR GRANULAR FILTER BLANKET AS APPROVED BY THE ENGINEER
- ③ DIMENSION 'E' IS GIVEN ON Mn/DOT STANDARD PLATES 3100 & 3110
- ④ GRANULAR FILTER BLANKET SHALL CONFORM TO SPEC 3601.2B

RIPRAP @ RCP OUTLETS
RIPRAP_AT_RC-OUTLET.DWG 4/2009

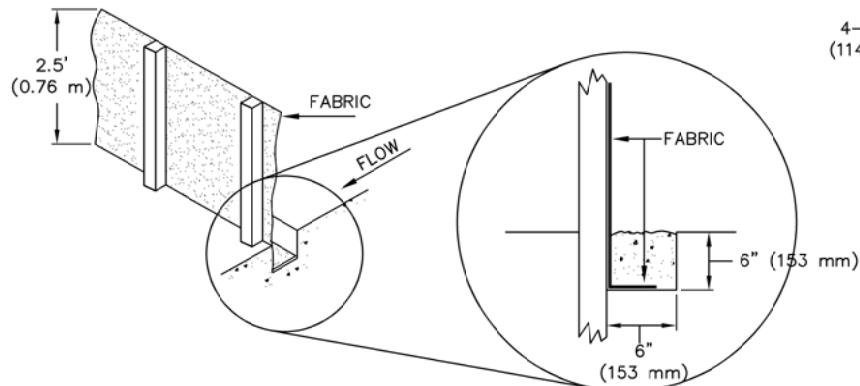


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM*, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH* ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPUN DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.
6. FOLLOW MANUFACTURER'S RECOMMENDED STAPLE PATTERN, FOR THE SLOPE FOR THE SPECIFIED BLANKET.

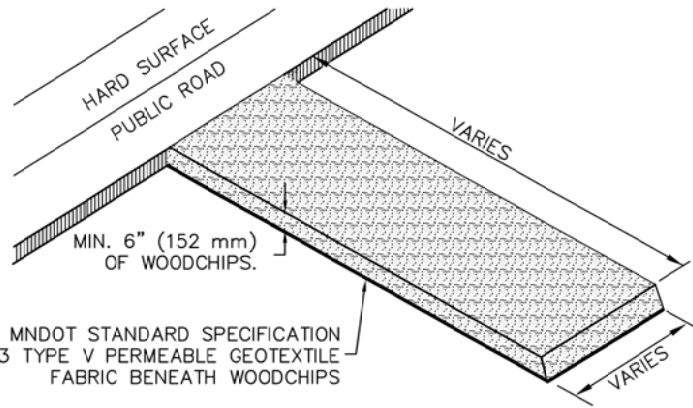
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET INSTALLATION

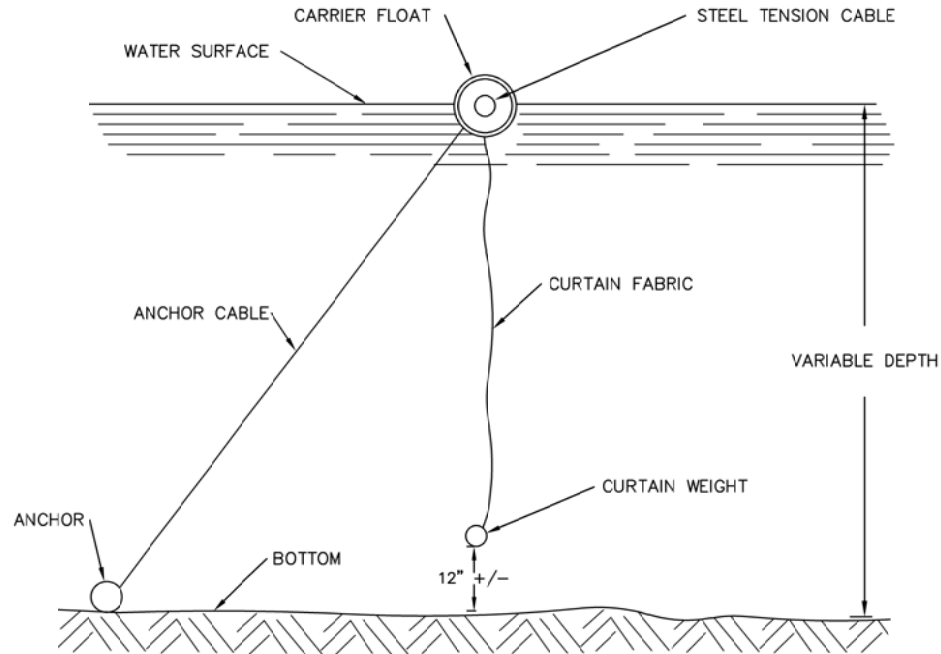
- NOTES:
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP TRENCH AND BACKFILLED IMMEDIATELY.
 - POSTS SHALL BE:
 - 4' (1.22 m) ON CENTER
 - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STEEL FENCE POSTS. MINIMUM LENGTH 4.5'
 - DRIVEN 2' (0.61 m) INTO THE GROUND.



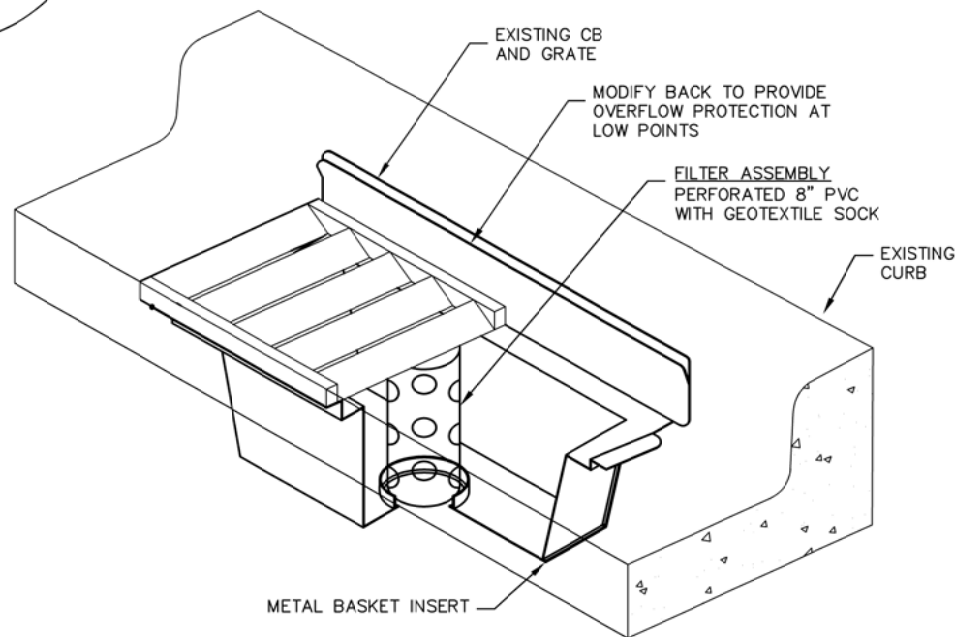
EROSION CONTROL FENCE
ERS-FNCE.dwg



WOODCHIP ACCESS PAD



612 - FLOATATION SILT CURTAIN
612 - Float Silt Curtain.dwg 5/2015



601 - INLET PROTECTION, METAL BASKET TYPE
601 - Wimco (CB).dwg 5/2015

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CITY OF
BLOOMINGTON
MINNESOTA

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS		BY	DATE
DESCRIPTION			

I HEREBY CERTIFY THAT THIS PLAN 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.

404976/6/22
LIC. #
Steven G. Gurney

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

SHEET:
7 OF 22

STANDARD DETAILS

CONSTRUCTION NOTES

1. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, MUCK AND OTHER UNSTABLE MATERIAL.
2. OTHER GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED ON THIS PROJECT EXCEPT DEBRIS.
3. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF 3149.2B2.
4. SUITABLE GRADING MATERIAL FROM ALL PORTIONS OF THE PROJECT SHALL BE USED IN FILL AREAS, AS REQUIRED, THROUGHOUT THE PROJECT.
5. NO DISPOSAL SITE IS PROVIDED. ALL EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR DISPOSAL. THE CONTRACTOR SHALL DISPOSE OF MATERIAL UNSUITABLE FOR USE IN THE CONSTRUCTION IN ACCORDANCE WITH PROVISIONS OF 2104.3C3 AND 2105.3D.
6. COMPACTION OF THE GRADING OF THE PROJECT SHALL BE BY THE "QUALITY COMPACTION METHOD" UNLESS OTHERWISE SPECIFIED.
7. ROADWAY EMBANKMENTS SHALL BE CONSTRUCTED OF SUITABLE GRADING MATERIAL.
8. CLEARING AND GRUBBING OF TREES SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED WITHIN THE PROJECT LIMITS AND APPROVED BY THE CITY ENGINEER.
9. BITUMINOUS SURFACING REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED IN THE BITUMINOUS BASE OR DISPOSED OF OFF THE PROJECT, IN ACCORDANCE WITH THE PROVISIONS OF 2104 AND 2105.
10. WHERE MATCHING INTO EXISTING ROADWAYS AT THE ENDS OF CONSTRUCTION, CUT VERTICALLY TO THE TOP OF THE GRADING SUBGRADE AND THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
11. GRADING GRADE (TOP OF GRADING SUBGRADE) IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE.
12. PROVIDE 1:20 TAPERS BETWEEN LONGITUDINAL CHANGES IN SUBCUT DEPTHS.
13. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT THE UNIFORM RATE SPECIFIED. THE APPLICATION RATE IS FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY).
14. COMPACTION OF THE CLASS 5 AGGREGATE BASE FOR ALL AREAS TO RECEIVE BITUMINOUS SURFACING SHALL BE BY THE "QUALITY COMPACTION METHOD".
15. COMPACTION OF THE BITUMINOUS MIXTURES SHALL BE BY THE "ORDINARY COMPACTION METHOD" UNLESS OTHERWISE SPECIFIED (SEE SPECIAL PROVISIONS).
16. STRIP AND REUSE AS SLOPE DRESSING ALL TOPSOIL AND EXISTING SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION. ALL SLOPE DRESSING SHALL MEET THE REQUIREMENTS OF "SELECT TOPSOIL BORROW" (SPEC.3877). TESTING OF SOILS USED SHALL BE REQUIRED.
17. PLACE A MINIMUM OF 6" TOPSOIL OR SLOPE DRESSING ON ALL AREAS DISTURBED BY CONSTRUCTION AND SCHEDULED FOR PERMANENT TURF ESTABLISHMENT.
18. ALL METAL PIPE INCLUDING VALVES, FITTINGS AND APPURTENANCES, SHALL BE FULLY ENCASED IN POLYETHYLENE FILM OF 8 MIL NOMINAL THICKNESS.
19. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF EXISTING MANHOLES PRIOR TO ANY STORM SEWER CONSTRUCTION.
20. ALL DRIVEWAYS AND EXISTING STREETS SHALL BE SAW CUT AT MATCH POINTS OR EDGE MILLED CLEANLY.
21. BULKHEADING OF EXISTING PIPES SHALL BE INCIDENTAL TO OTHER STORM SEWER CONSTRUCTION.
22. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL C. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
23. REMOVE ALL SOILS AND SEDIMENT TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS. SWEEPING MAY BE ORDERED AT ANY TIME IF CONDITIONS WARRANT. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
24. INSTALL INLET PROTECTION AT ALL CATCH BASIN INLETS, WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CATCH BASIN INSERTS ARE REQUIRED IN UNDISTURBED AREAS THAT RECEIVE RUNOFF FROM DISTURBED AREAS.

THE FOLLOWING STANDARD PLATES APPROVED BY FHWA SHALL APPLY ON THIS PROJECT

[illegible]

BASIS FOR ESTIMATED QUANTITIES

AGGREGATE BASE CLASS 5	139 LB/CF
BITUMINOUS MIXTURES	112.5LBS/SQ. YD/INCH
BITUMINOUS TACK COAT	0.08 GAL/SQ. YD
SEED MIXTURE A	120#/ACRE
SEED MIXTURE B	36.5#/ACRE

STANDARD DETAILS



ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

[illegible]

40497 6/6/22
LIC. # DATE
Steven G. Gurney

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

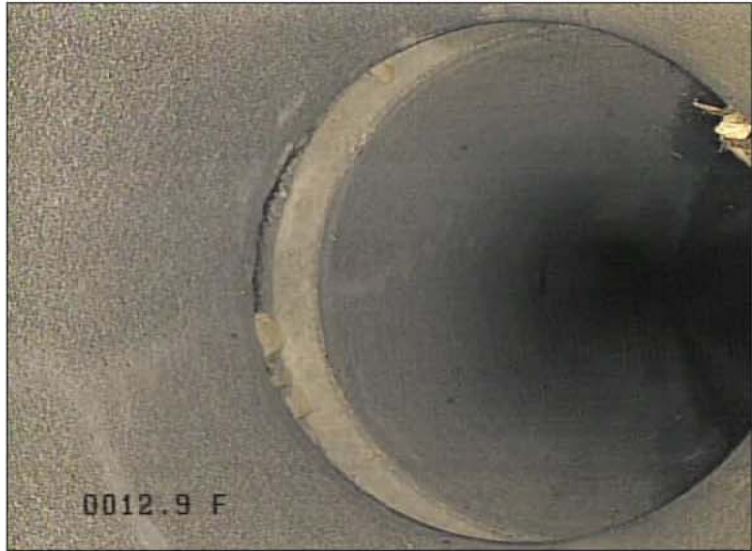
SHEET:
8 OF 22

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 Derek CURRENT2.dwg -- Printed: Jun 07, 2022 -- 11:11am

CONSTRUCTION NOTES

- CONSTRUCT STORM SEWER AS SHOWN
- *FURNISH AND INSTALL 8 LF OF 18" CIPP LINER (CURED IN PLACE THERMO SETTING RESIN PIPE). SEE SPECIAL PROVISIONS.
- TRAFFIC CONTROL
- *W 97 1/2 ST TRAFFIC INFO:
SPEED LIMIT 30 MPH
ADT = 200
 - *ENSGN AVE S TRAFFIC INFO:
SPEED LIMIT 30 MPH
ADT = 800
 - *MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
 - *THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 27 OF THE 2018 FIELD MANUAL
 - *THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
 - *SEE SPECIAL PROVISIONS

COORDINATE WITH CITY PROJECT 2022-102

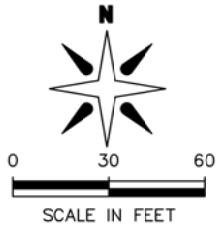


OPEN JOINT APPROXIMATELY 13' FROM ST MH 1

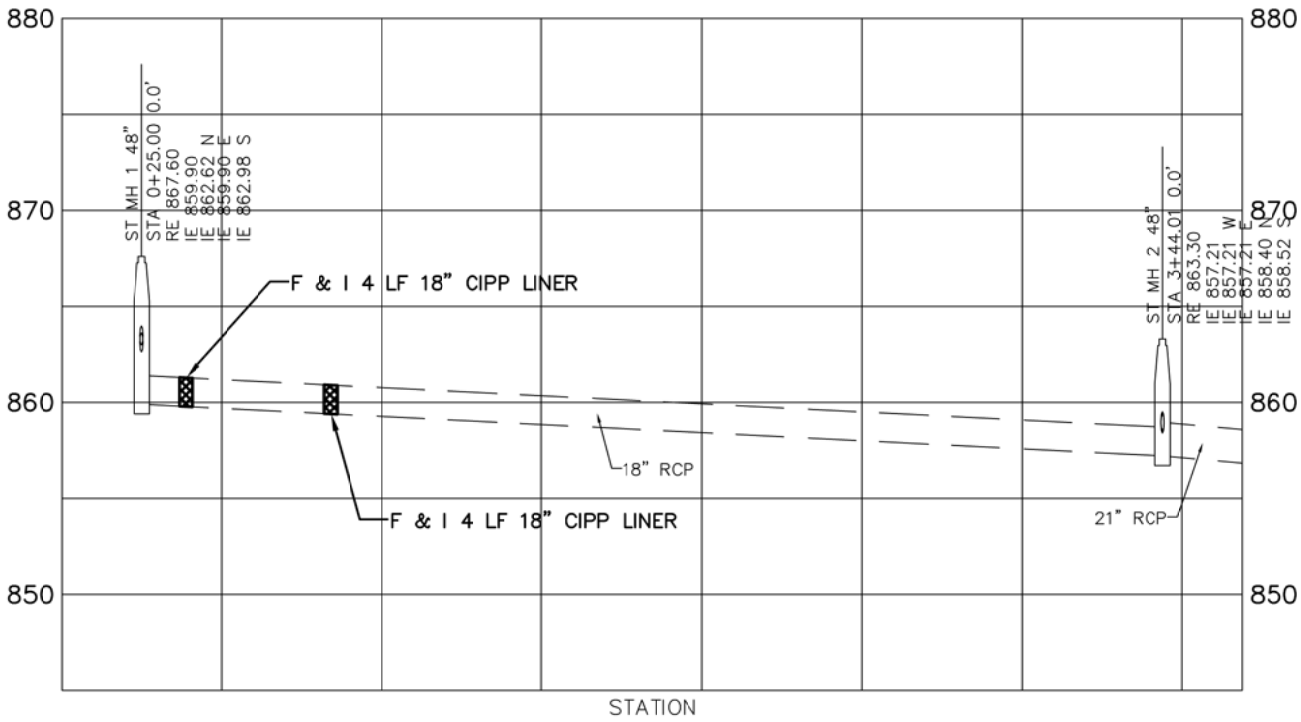
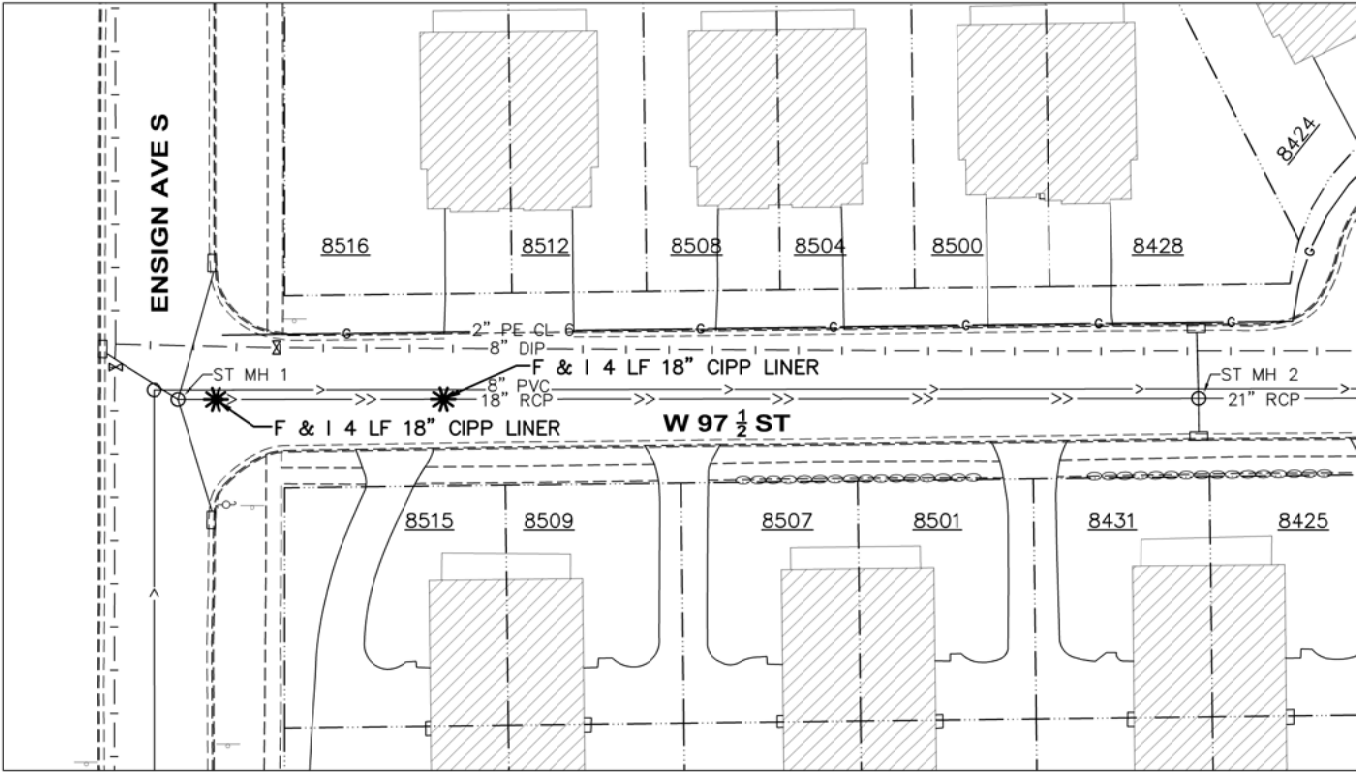


OPEN JOINT APPROXIMATELY 82' FROM ST MH 1

SITE A
8515 W 97 1/2 ST



SITE A
8515 W. 97 1/2 ST.



CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (952) 563-8700

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS	
DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22
LIC. # DATE

Steven G. Gurney

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

SHEET: 9 OF 22

CONSTRUCT STORM SEWER AS SHOWN

TRAFFIC CONTROL

SPEED LIMIT 30 MPH

$$ADT = 200$$

* W 98TH ST TRAFFIC INFO:

SPEED LIMIT 30 MPH

ADT = 1100

- MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
- THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 4 OF THE 2018 FIELD MANUAL
- THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
- SEE SPECIAL PROVISIONS

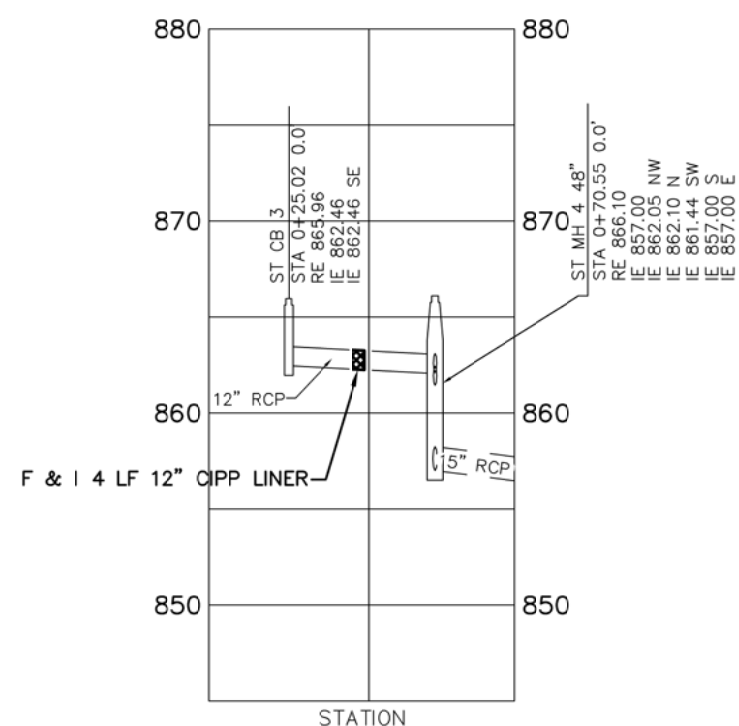
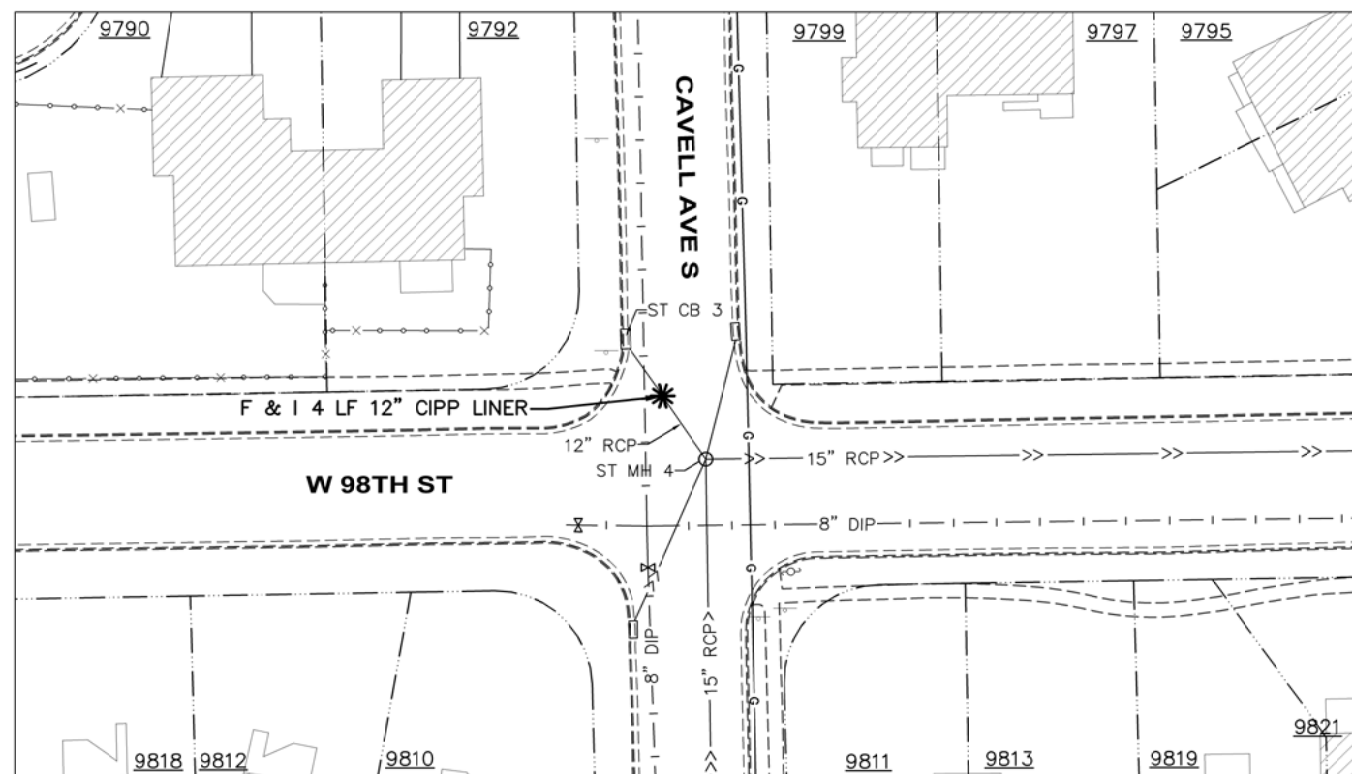


QUICKVIEW
BY ENVIROSIGHT
32/13/2017 04:32 PM
1.0X
0P
9.9DEG
GEO-POS N/A

OFFSET JOINT

1.7X
08/20/2021 01:16 PM
70C08
70C08 TO CB3

OFFSET JOINT APPROXIMATELY 24 LF FROM ST MH 5



SITE B

CAVELL AVE S AT W 98TH ST

**CITY OF
BLOOMINGTON
MINNESOTA**

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

[illegible]

I HEREBY CERTIFY THAT THIS PLAN 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.

Steven G. Gurney 40497 6/6/22
LIC. # DATE

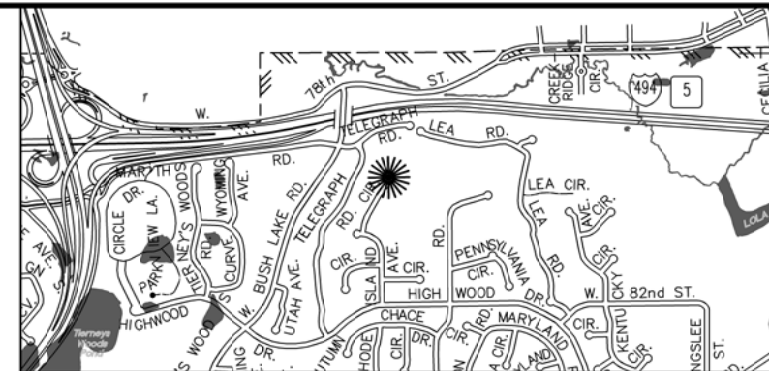
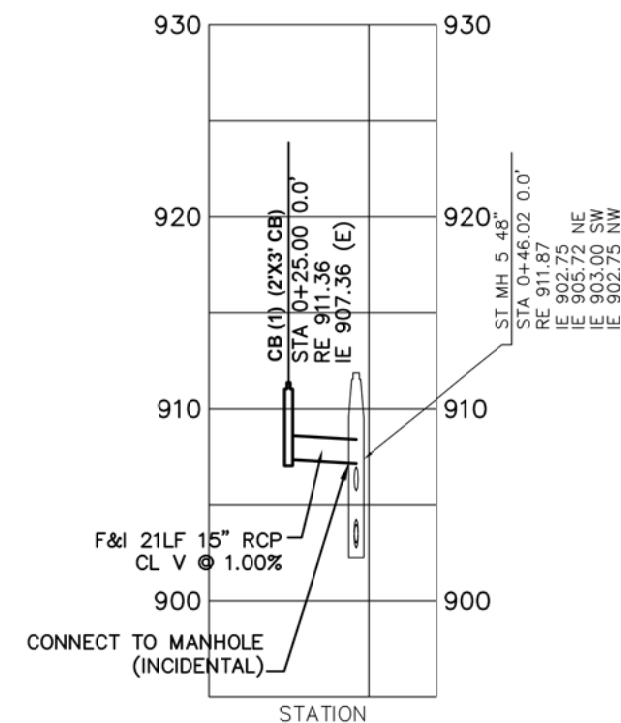
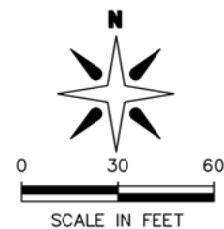
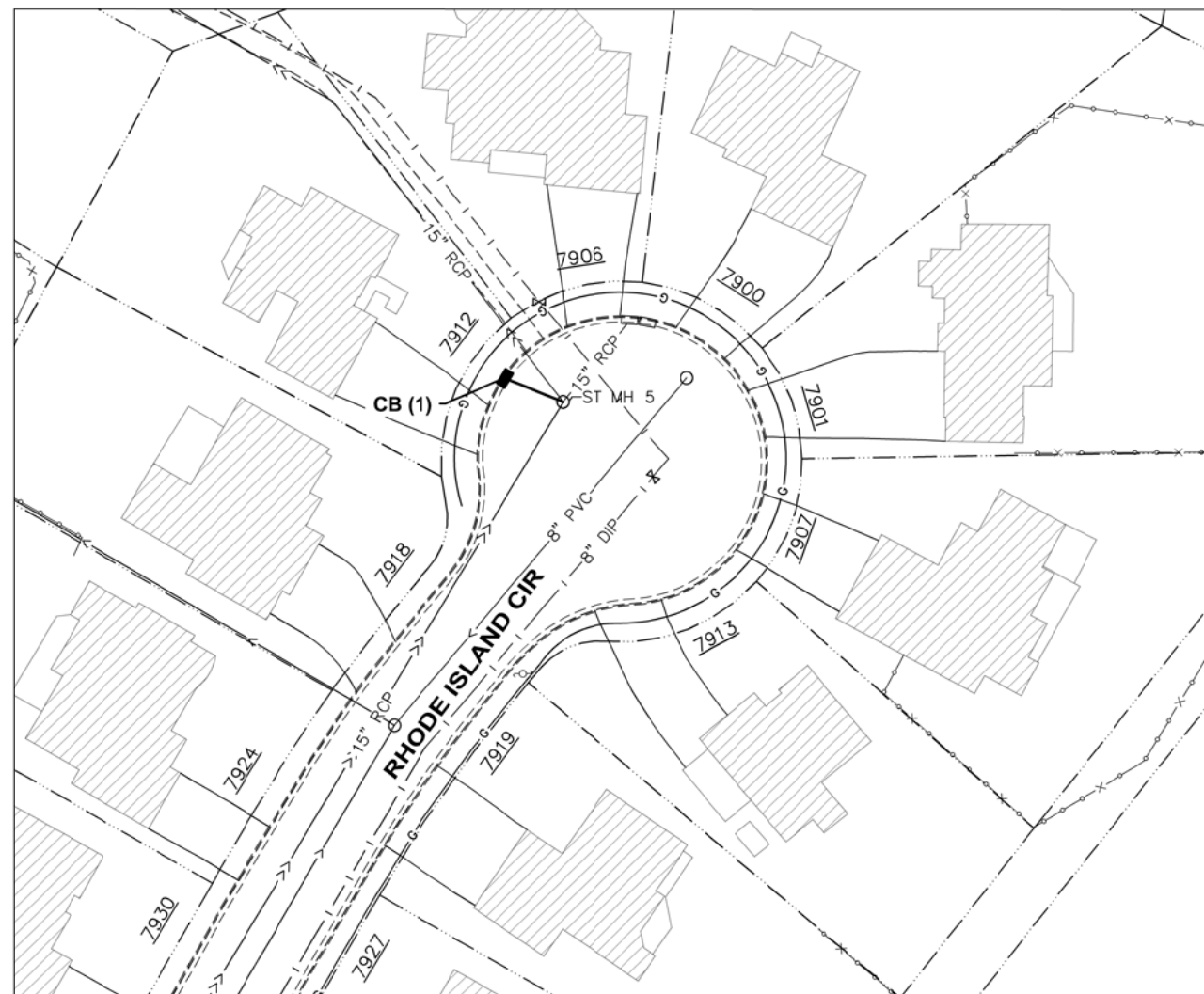
DRAWN:	DAC
CHECKED:	SGG
APPROVED:	SGG


SHEET:
10 OF 22

CONSTRUCTION NOTES

CONSTRUCT STORM SEWER AS SHOWN
FURNISH AND INSTALL 1EA STANDARD CATCH BASIN
FURNISH AND INSTALL 21LF 15" RCP
BITUMINOUS SURFACE
*REMOVE EX. BITUMINOUS SURFACE AS PER SPECIAL PROVISION
*REPLACE SURFACE WITH:
2" TYPE SP 9.5 WEARING COARSE MIXTURE (3,B)
2" TYPE SP 12.5 NON WEAR COARSE MIXTURE (3,B)
6" AGGREGATE BASE CL 5
*SAW CUT ALL BITUMINOUS SURFACES PRIOR TO PLACING WEAR
COURSE
CURB AND GUTTER
*REMOVE CONCRETE CURB AS APPROVED
*FURNISH AND INSTALL 15 LF OF CONCRETE CURB & GUTTER (B618
OR BLOOMINGTON STD).
LANDSCAPE
*FURNISH AND INSTALL LOAM TOPSOIL BORROW AND SOD
TRAFFIC CONTROL
*MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT
ALL TIMES
*THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING,
& SPACING AS SHOWN IN LAYOUT 4 OF THE 2018 FIELD MANUAL
*THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION
LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL,
INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT
IDENTIFIED ON THIS PLAN.
*SEE SPECIAL PROVISIONS

SEWER STRUCTURE SCHEDULE		
NO.	DESIGN	CASTING ASSEMBLY
CB 1	2'X3' CB	STD RECT CB




 CITY OF
BLOOMINGTON
MINNESOTA

1700 W. ORFELA ST.
BLOOMINGTON, MN 55431
PHONE (952) 563-8700

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

[illegible]

I HEREBY CERTIFY THAT THIS PLAN 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.		40497 6/6/22 LIC. # DATE
DRAWN: DAC CHECKED: SGG APPROVED: SGG		 Steven G. Gurney
SHEET: 11 OF 22		

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 Derek CURRENT2.dwg -- Printed: Jun 07, 2022 -- 11:34am

CONSTRUCTION NOTES

CONSTRUCT STORM SEWER AS SHOWN

*FURNISH AND INSTALL 18 LF OF 18" CIPP LINER (CURED IN PLACE THERMO SETTING RESIN PIPE). SEE SPECIAL PROVISIONS. SAND-BAGGING AND DEWATERING WILL BE REQUIRED (PAID AS WATER MANAGEMENT)

*FURNISH AND INSTALL 4 LF OF 12" CIPP LINER (CURED IN PLACE THERMO SETTING RESIN PIPE). SEE SPECIAL PROVISIONS.

TRAFFIC CONTROL

*AMERICAN BLVD W TRAFFIC INFO:

SPEED LIMIT 35 MPH

ADT = 3100

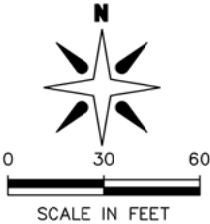
*MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES

*THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 4.3 OF THE 2018 FIELD MANUAL

*THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.

*SEE SPECIAL PROVISIONS

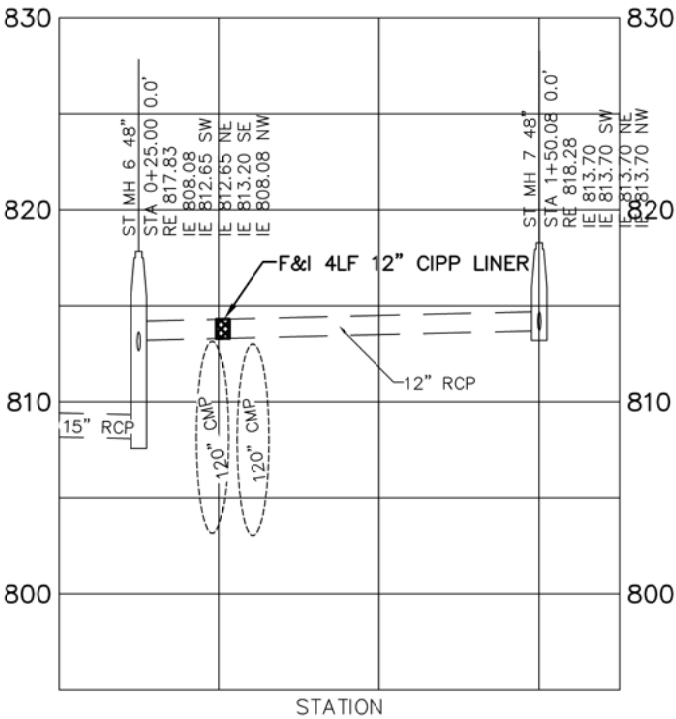
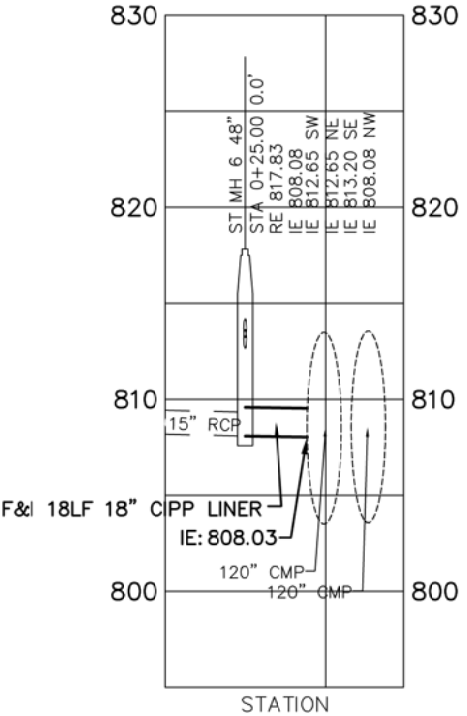
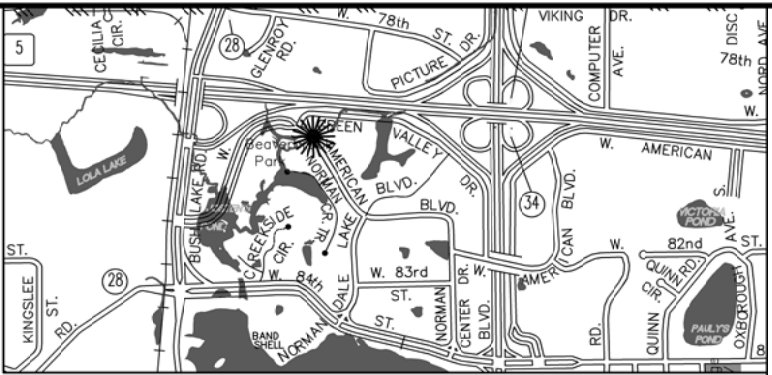
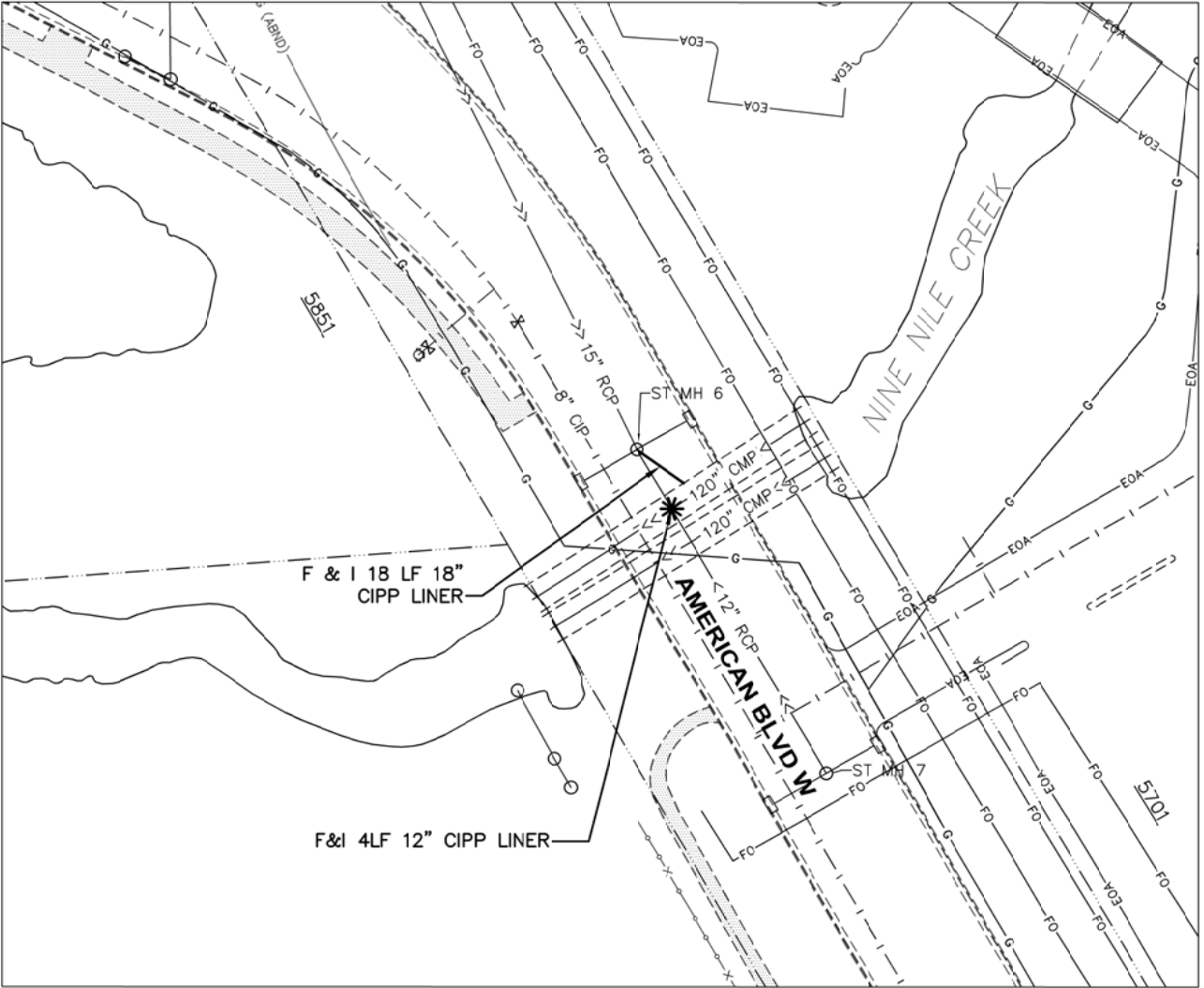
SITE D
5800 AMERICAN BLVD W



DETERIORATED 18" CMP



18" CMP CONNECTION AT 120" CMP



REVISIONS		DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THIS PLAN 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.	
DRAWN: DAC	DATE: 6/6/22
CHECKED: SGG	LIC. # 40497
APPROVED: SGG	Steven G. Gurney
SHEET: 12 OF 22	

CITY OF BLOOMINGTON MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT
1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (952) 563-8700

SITE D
5800 AMERICAN BLVD W

CONSTRUCT STORM SEWER AS SHOWN

TRAFFIC CONTROL

SPEED LIMIT 30 MPH

 $ADT = 300$

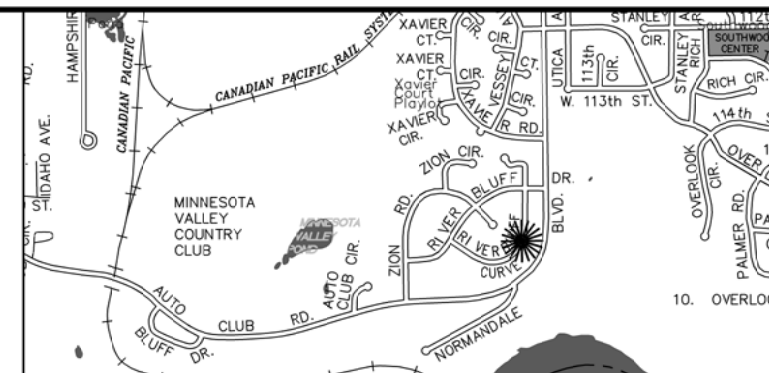
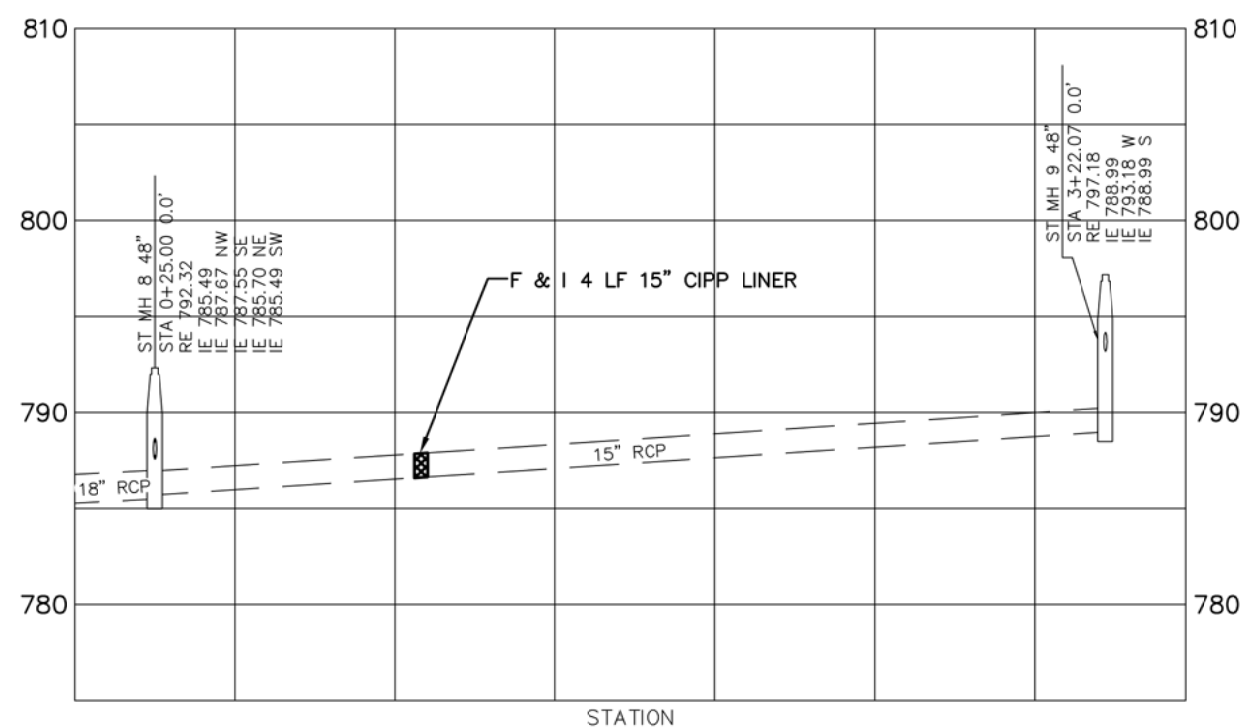
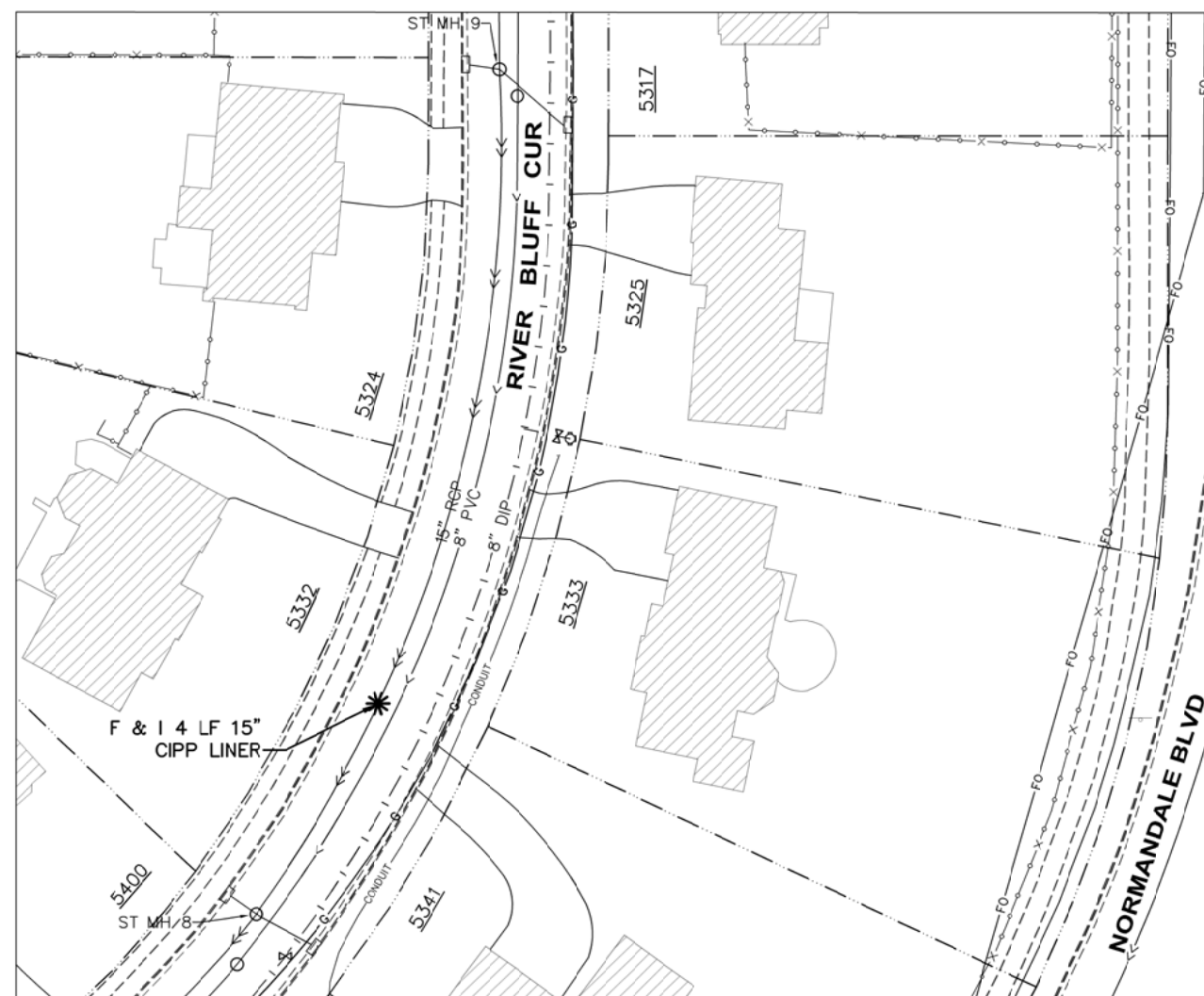
- MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
- THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 1 OF THE 2018 FIELD MANUAL
- THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
- SEE SPECIAL PROVISIONS

COORDINATE WITH CITY PROJECT 2022-102



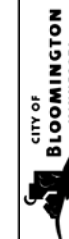
OFFSET JOINT APPROXIMATELY 214 LF FROM ST MH 8

5332 RIVER BLUFF CUR.



SITE E

5332 RIVER BLUFF CUR



1700 W 98TH ST.
BLOOMINGTON MN 55431
PHONE (952) 563-8700

MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
PHONE (952) 563-8700

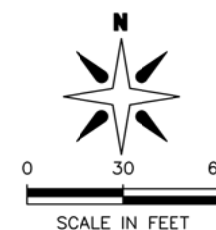
2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS		
DATE	DESCRIPTION	BY

HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22
LIC. # DATE

DRAWN:	DAC
CHECKED:	SGG
APPROVED:	SGG
SHEET:	
13 OF 22	

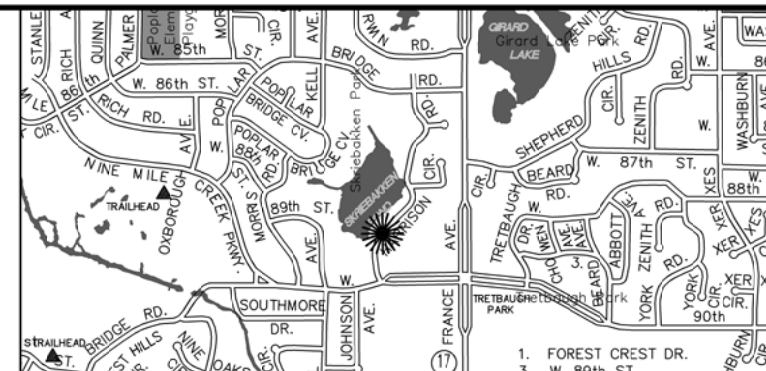
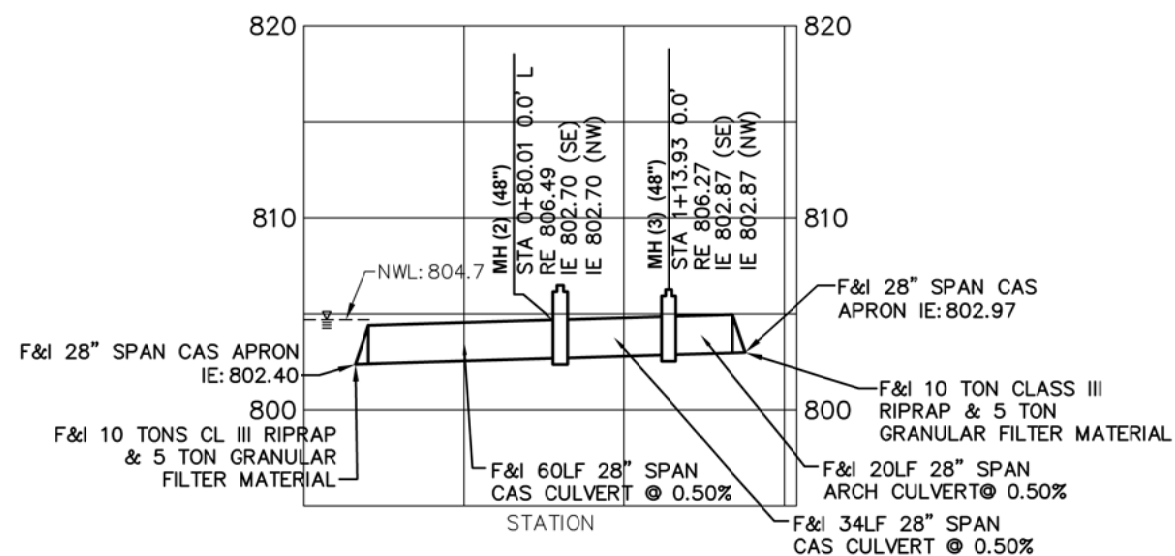
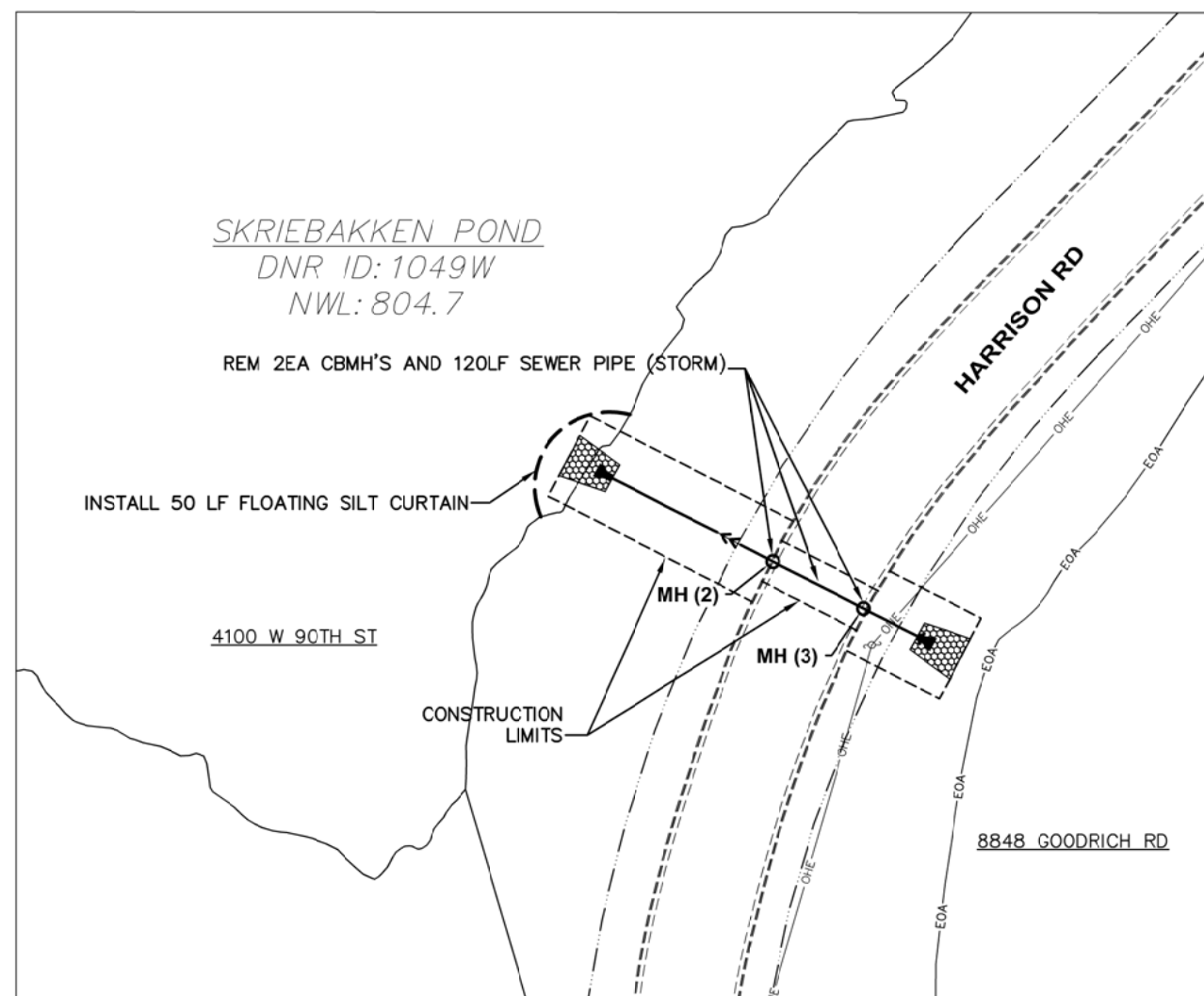


CONSTRUCT STORM SEWER AS SHOWN

- | SEWER STRUCTURE SCHEDULE | | |
|--------------------------|---------|------------------|
| NO. | DESIGN | CASTING ASSEMBLY |
| MH 2 | 48" DIA | STD RECT CB |
| MH 3 | 48" DIA | STD RECT CB |

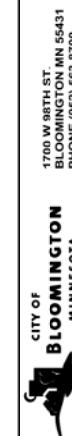
SEWER STRUCTURE SCHEDULE		
NO.	DESIGN	CASTING ASSEMBLY
MH 2	48" DIA	STD RECT CB
MH 3	48" DIA	STD RECT CB

4100 W 90TH ST AT SKRIEBAKKEN POND



SITE F

4100 W 90TH ST AT SKRIEBAKKEN RD



MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
PHONE (952) 563-8700

2022-901 STORM SEWER MAINTENANCE PROJECT

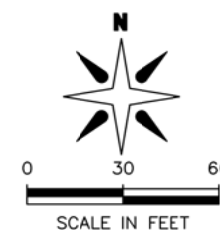
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

40497 6/6/22
LIC. # DATE
Steven G. Gurney

DRAWN:	DAC
CHECKED:	SGG
APPROVED:	SGG

SHEET:
14 OF 22



CONSTRUCT STORM SEWER AS SHOWN

- *FURNISH AND INSTALL WOODCHIP ACCESS PADS
- *CLEAR AND GRUB TREES AS APPROVED
- *FURNISH AND INSTALL 1EA 48" DIA MH (DESIGN SPEC 1)
- *REMOVE AND DISPOSE 1EA MH AND 14LF 12" CMP
- *FURNISH AND INSTALL 14LF 12" CAS PIPE
- *SLIPLINE 63LF OF EXISTING 42" CMP, SEE SPECIAL PROVISIONS
- *FURNISH AND INSTALL 30LF 30" HDPE, SEE SPECIAL PROVISIONS
- *FURNISH AND INSTALL 30" CAS APRON
- *COMMON EXCAVATION 20 CY

DEWATERING

*CITY FORCES WILL PUMP DOWN THE POND VIA LIFT STATION TO
~778.0. ADDITIONAL DEWATERING EFFORTS MAY BE REQUIRED (PAID
AS "WATER MANAGEMENT")

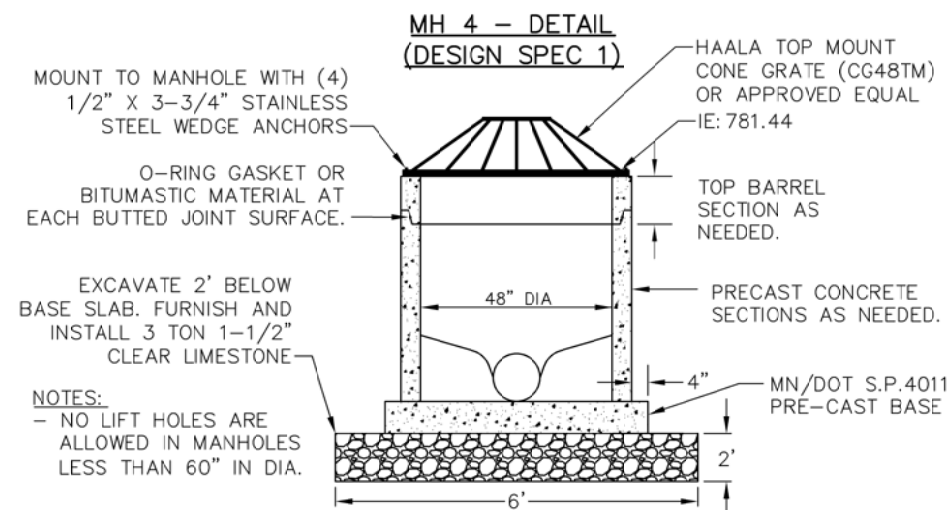
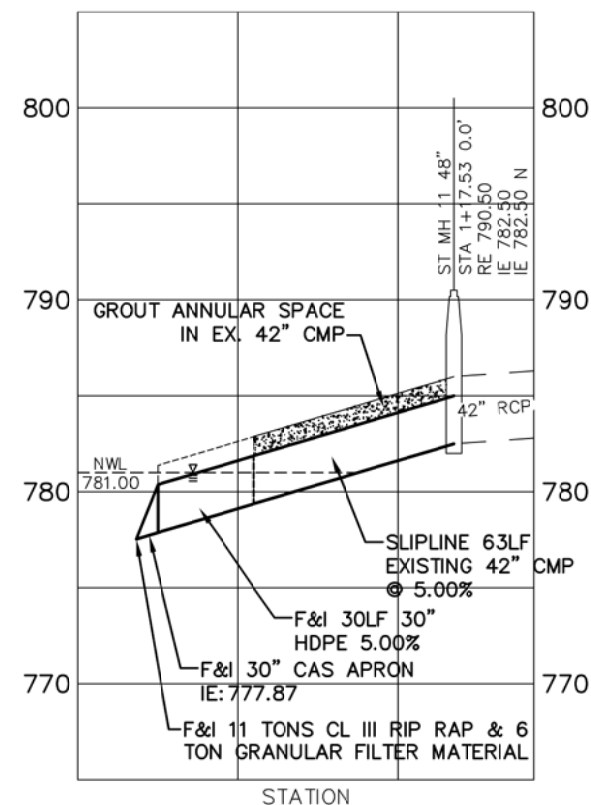
LANDSCAPE

- *FURNISH AND INSTALL LOAM TOPSOIL BORROW AND SEED
- *FURNISH AND INSTALL EROSION CONTROL BLANKET; CATEGORY 3N
- *TRAFFIC CONTROL

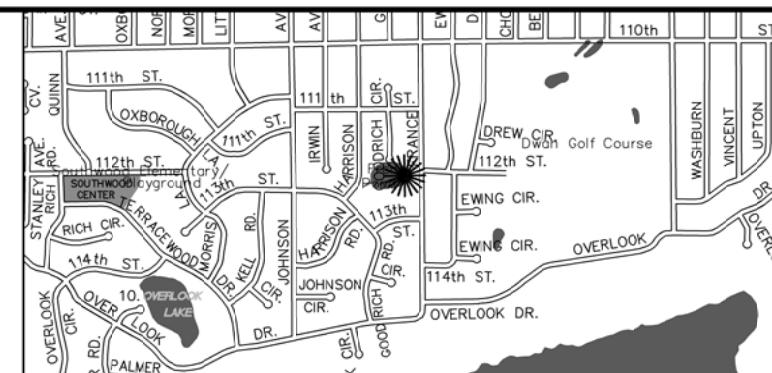
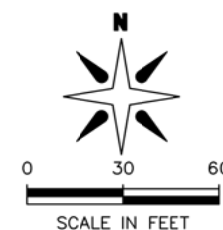
* TRAFFIC CONTROL

FRANCE AVE S TRAFFIC INFO:
SPEED LIMIT 30 MPH
ADT = 1400

- * MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
- * THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 15 OF THE 2018 FIELD MANUAL
- * THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
- * SEE SPECIAL PROVISIONS




SEWER STRUCTURE SCHEDULE		
NO.	DESIGN	CASTING ASSEMBLY
MH 4	48" DIA	HAALA CONE GRATE (CG48TM)



SITE G

11200 FRANCE AVE S

 CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST.
BLOOMINGTON MN 55431
PHONE (652) 563-8700

MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

[illegible]

HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22
LIC. # DATE
Steven G. Gurney

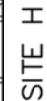
DRAWN:	DAC
CHECKED:	SGG
APPROVED:	SGG
SHEET:	
15 OF 22	

CONSTRUCT STORM SEWER AS SHOWN

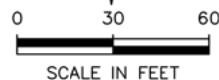
- | SEWER STRUCTURE SCHEDULE | | |
|--------------------------|------------------------|------------------|
| NO. | DESIGN | CASTING ASSEMBLY |
| CBMH 5 | 48" DIA W/ SAFL BAFFLE | STD RECT CB |
| | | |



3701 W 90TH ST



3701 W 90TH ST

[illegible]

I HEREBY CERTIFY THAT THIS PLAN 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.	DRAWN: DAC	40497	6/6/22
	CHECKED: SGG	LIC. #	DATE
	APPROVED: SGG	Steven G. Gurney	
	SHEET: 16 OF 22		

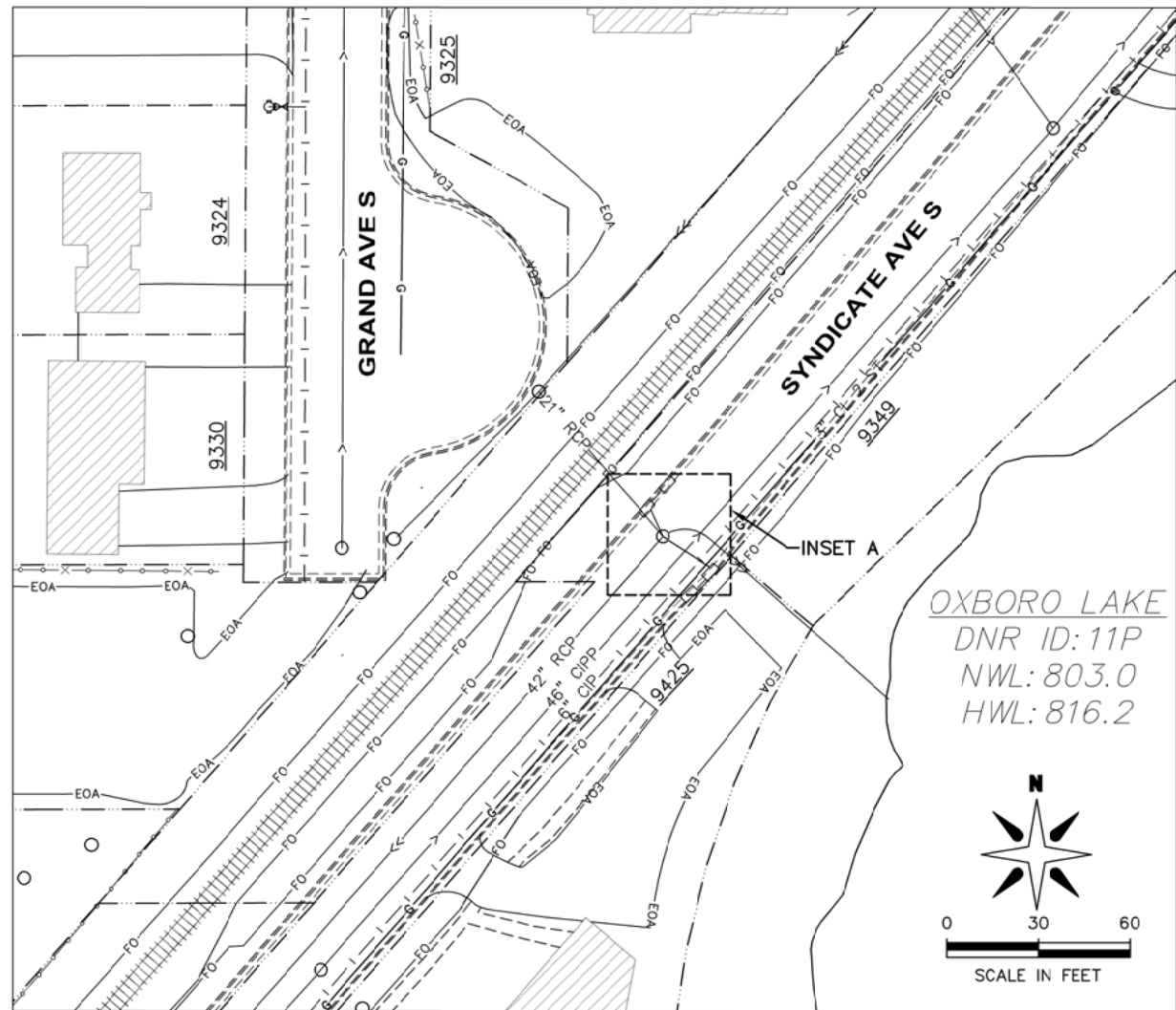
Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 Derek CURRENT2.dwg -- Printed: Jun 07, 2022 -- 12:40pm

CONSTRUCTION NOTES

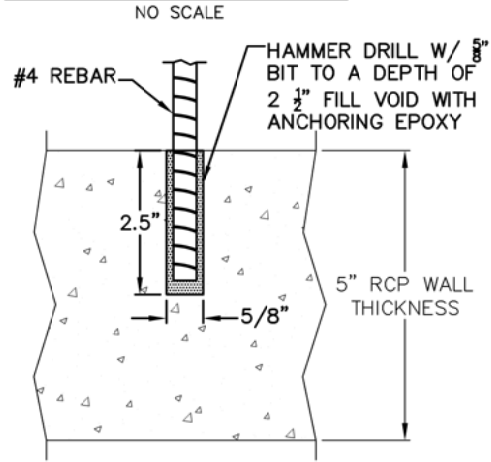
- CONSTRUCT STORM SEWER AS SHOWN
- * FURNISH AND INSTALL CONCRETE WEIR WALL ON THE INVERT OF THE EXISTING 48" RCP INVERT AS SHOWN
 - * SAND BAGGING OR OTHER DEWATERING METHODS MAY BE REQUIRED TO DIVERT FLOW OR ISOLATE THE WORK AREA (PAID ITEM "WATER MANAGEMENT")
 - * THE PAY ITEM "CONCRETE WEIR" INCLUDES ALL MATERIALS AND LABOR TO CONSTRUCT THE WALL AS SHOWN ON THE PLAN

TRAFFIC CONTROL

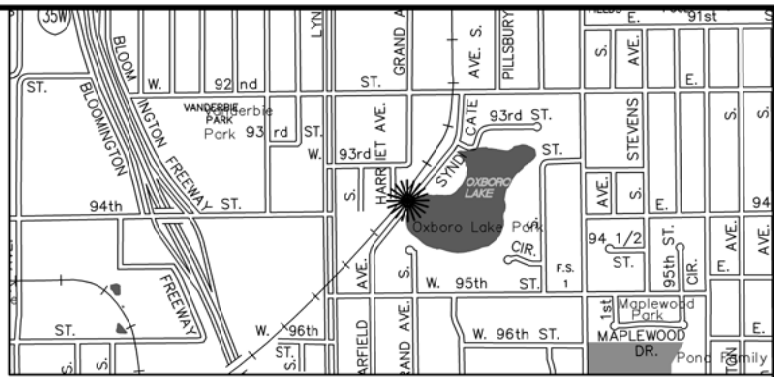
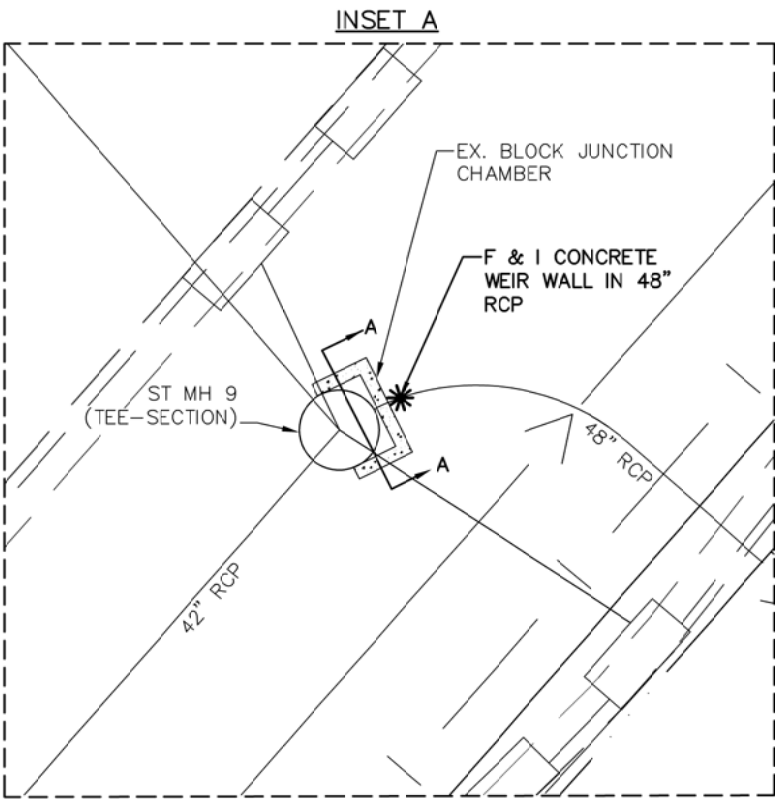
- * SYNDICATE AVE S TRAFFIC INFO:
SPEED LIMIT 30 MPH
ADT = 2600
- * MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
- * THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 14 OF THE 2018 FIELD MANUAL
- * THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
- * SEE SPECIAL PROVISIONS



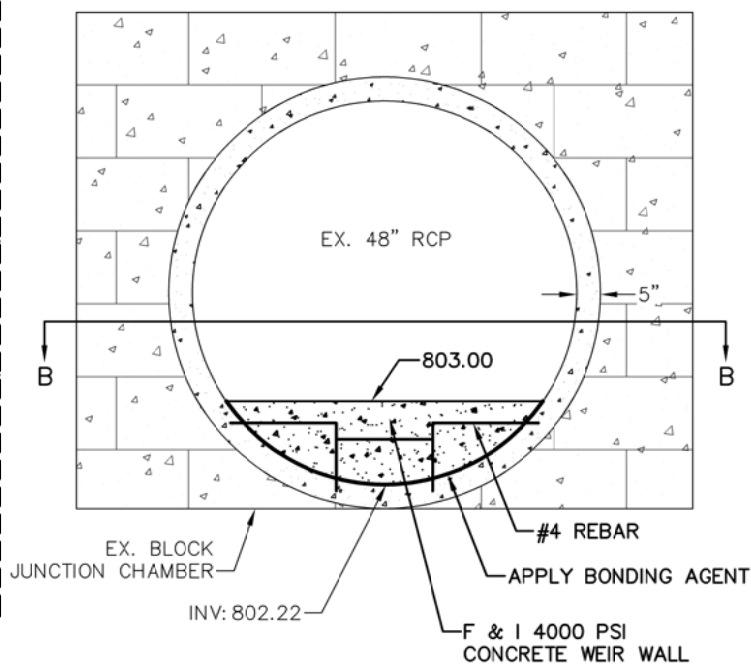
REBAR ANCHORING DETAIL



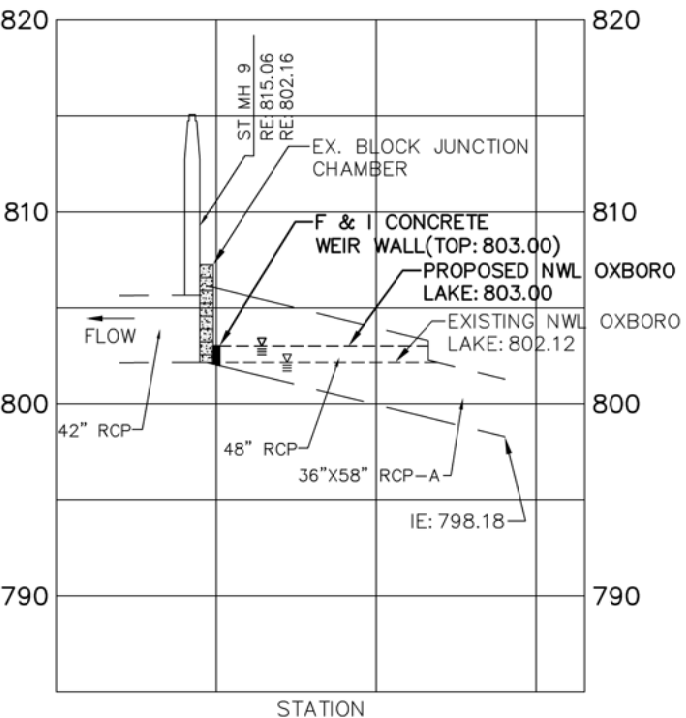
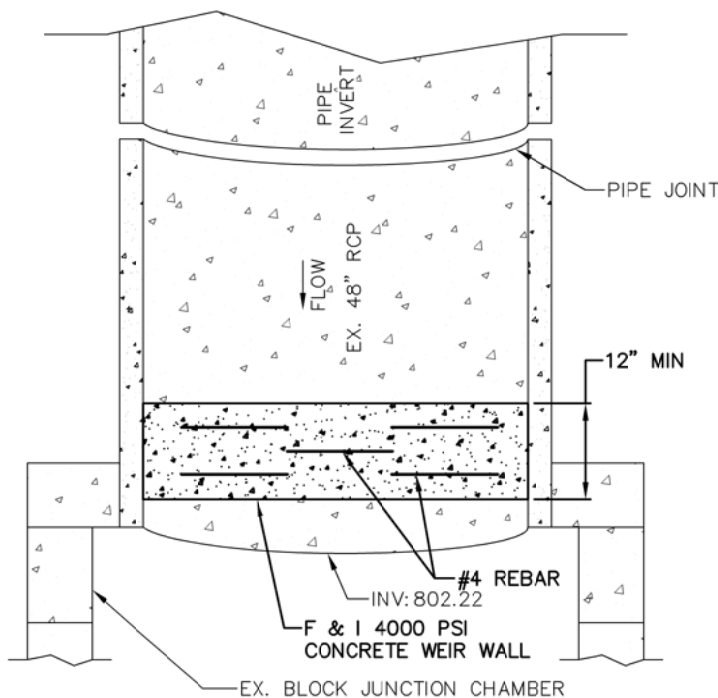
SITE I
9425 SYNDICATE AVE S



SECTION A-A



SECTION B-B



CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (952) 563-8700

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS		DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22
LIC. #
Steven G. Gurney

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

SHEET:
17 OF 22

SITE I
9425 SYNDICATE AVE S

CONSTRUCTION NOTES

CONSTRUCT STORM SEWER AS SHOWN

* ABANDON 247 LF 15" CMP, SEE SPECIAL PROVISIONS.

TRAFFIC CONTROL

*PLEASANT AVE S TRAFFIC INFO:

SPEED LIMIT 30 MPH

$$ADT = 400$$

*PILLSBURY AVE S TRAFFIC INFO:

SPEED LIMIT 30 MPH

ADT = 300

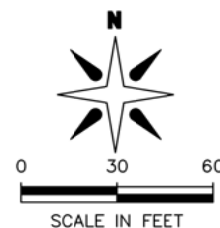
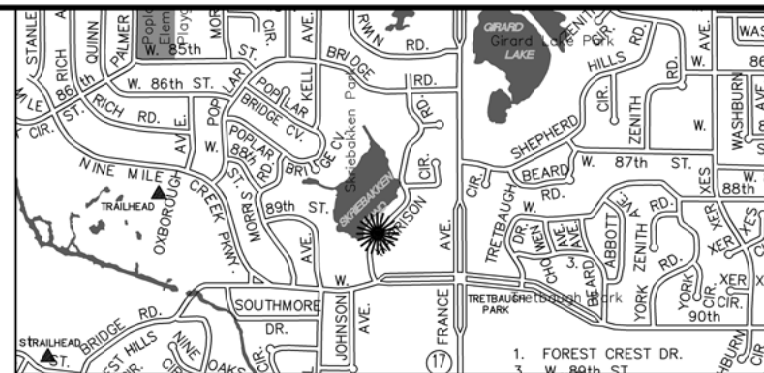
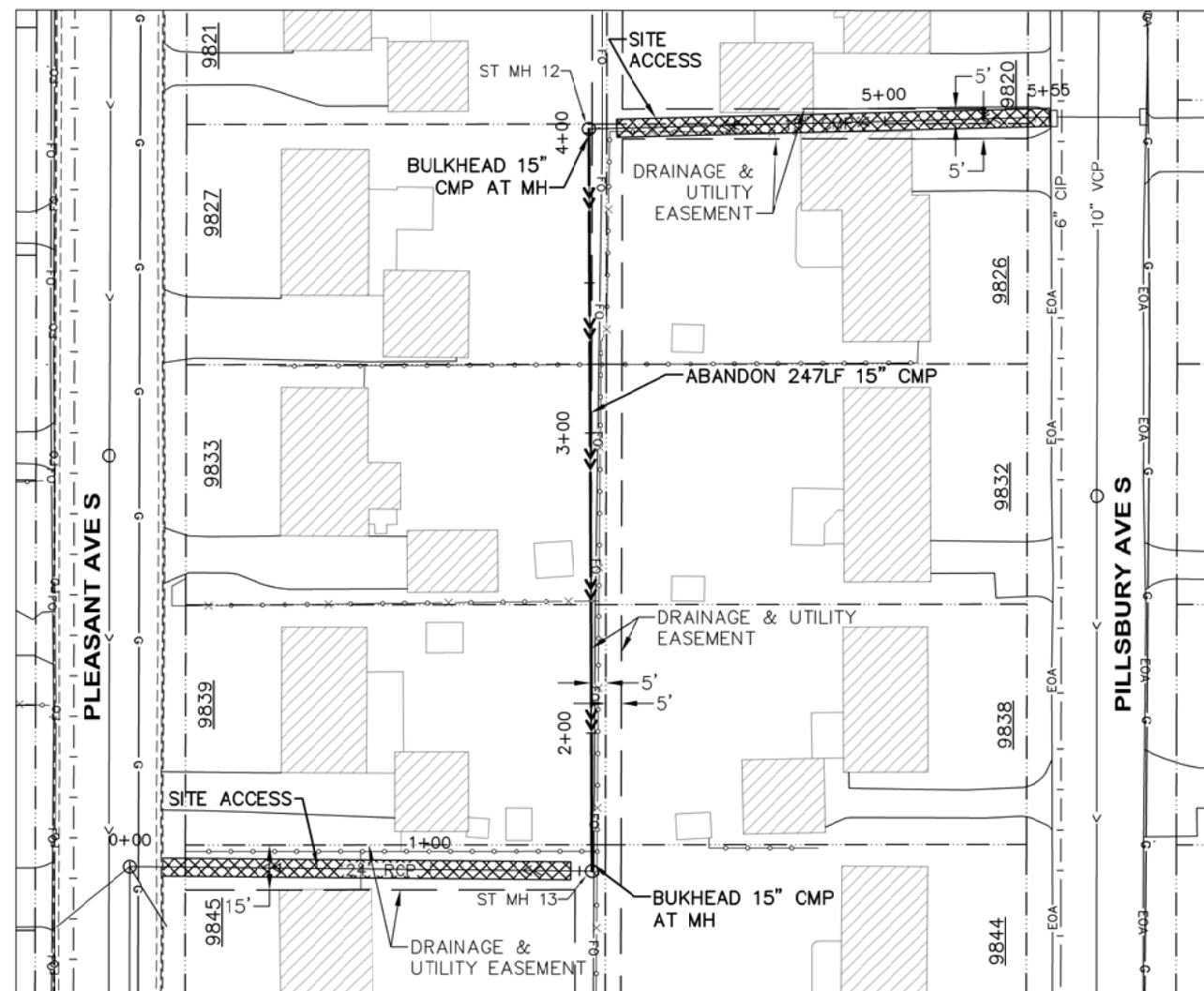
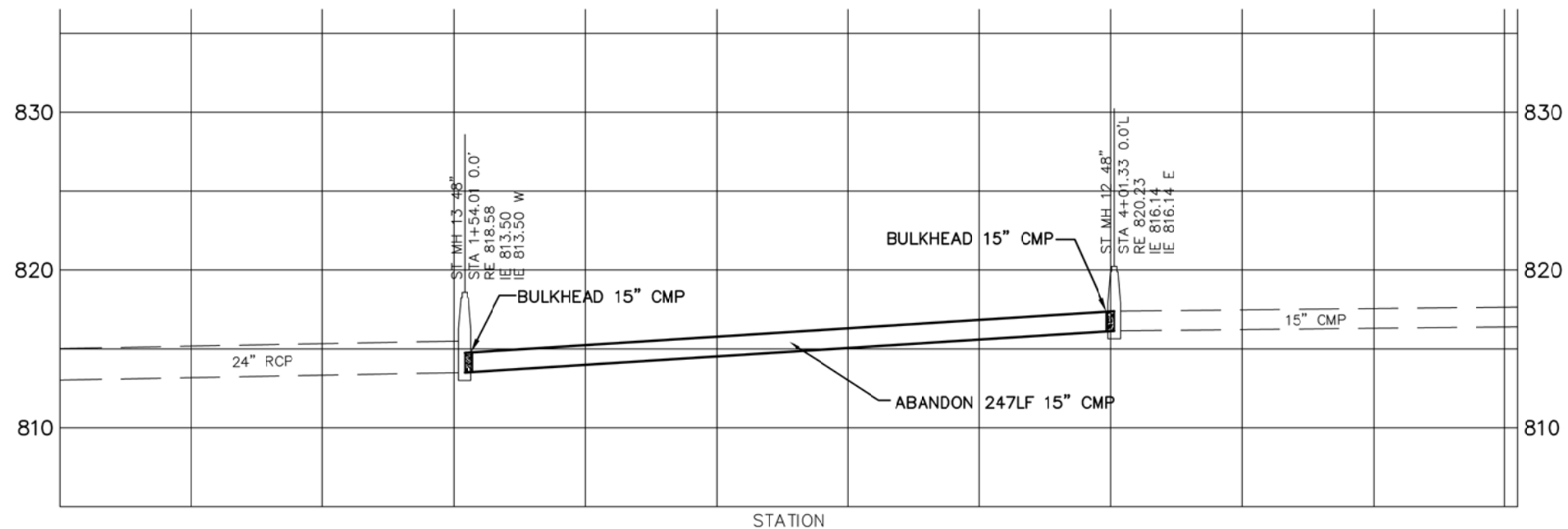
*MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION
AT ALL TIMES

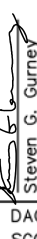

* THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES,
SIGNING, & SPACING AS SHOWN IN LAYOUT 4 OF THE 2018 FIELD
MANUAL

*THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.

*SEE SPECIAL PROVISIONS

COORDINATE WITH 2022-101 PMP PROJECT



<div>I HEREBY CERTIFY THAT THIS PLAN 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.</div> <div><div></div><div>40497 6/6/22</div></div> <div><div>DRAWN: DAC</div><div>CHECKED: SGG</div><div>APPROVED: SGG</div></div>		<div>REVISIONS</div> <table><thead><tr><th>DATE</th><th>DESCRIPTION</th><th>BY</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		DATE	DESCRIPTION	BY															
DATE	DESCRIPTION	BY																			
<div><div><div><div>CITY OF</div><div>BLOOMINGTON</div><div>MINNESOTA</div></div></div><div><div>1700 W 98TH ST.</div><div>BLOOMINGTON MN 55431</div><div>PHONE (952) 563-8700</div></div></div>		<div><div>SITE J</div><div>9827, 9833, 9839, & 9845 PLEASANT AVE S</div></div>																			
<div>SHEET: 18 OF 22</div>		<div>2022-901 STORM SEWER MAINTENANCE PROJECT</div>																			

Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 Derek CURRENT2.dwg -- Printed: Jun 07, 2022 -- 1:33pm

CONSTRUCTION NOTES

- CONSTRUCT STORM SEWER AS SHOWN
- *FURNISH AND INSTALL 8 LF OF 15" CIPP LINER (CURED IN PLACE THERMO SETTING RESIN PIPE). SEE SPECIAL PROVISIONS.
 - TRAFFIC CONTROL
 - *W 86TH ST TRAFFIC INFO:
 - SPEED LIMIT 35 MPH
 - ADT = 5600
 - *14TH AVE S TRAFFIC INFO:
 - SPEED LIMIT 30 MPH
 - ADT = 400
 - *MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
 - *THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 4 AND 37 OF THE 2018 FIELD MANUAL
 - *THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
 - *SEE SPECIAL PROVISIONS

COORDINATE WITH CITY PROJECT 2022-102

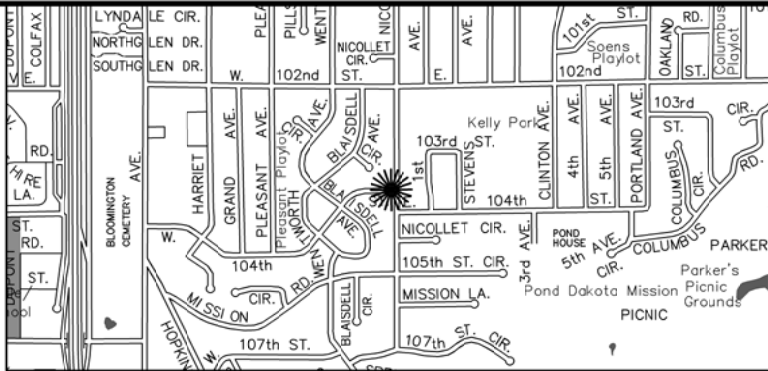


OFFSET JOINT AT FIRST JOINT FROM ST MH 11 TO ST CB 12



OFFSET JOINT APPROXIMATELY 71 LF FROM ST MH 11

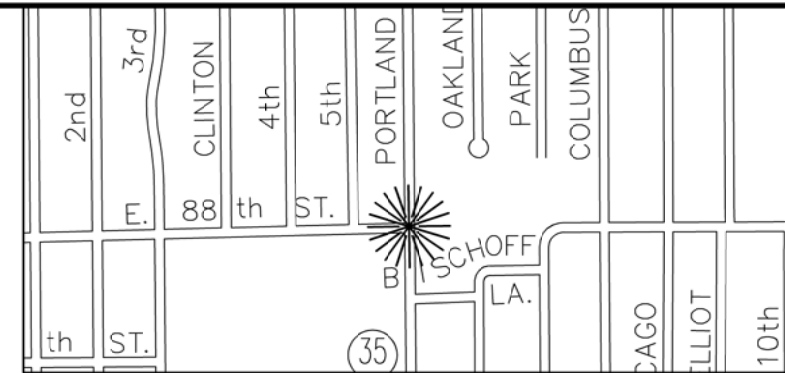
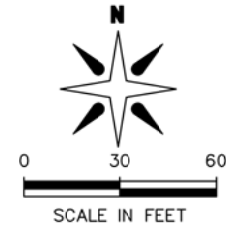
SITE K
NICOLLET AVE S AT W 104TH ST



Drawing name: H:\PROJECTS\2022\2022-901 Storm Sewer Maintenance\CAD Files\2022-901 Deve.dwg -- Printed: Jun 07, 2022 -- 12:45pm

SITE L

PORTLAND AVE S (CSAH 35) AT EAST 88TH STREET



SITE L
PORTLAND AVENUE SOUTH (CSAH 35)
AT EAST 88TH STREET

CITY OF BLOOMINGTON MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS		DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THIS PLAN 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.

40497 6/6/22
LIC. #
Steven G. Gurney

DRAWN: DG
CHECKED: SGG
APPROVED: SGG

SHEET:
20 OF 22

CONSTRUCTION NOTES:

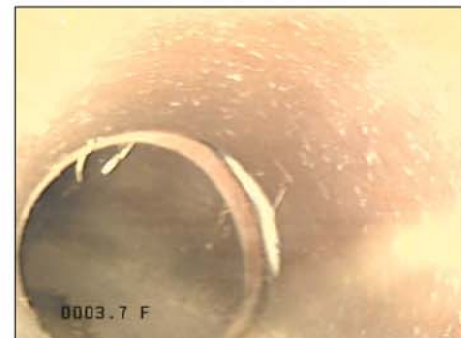
CONSTRUCT STORM SEWER AS SHOWN

- * FURNISH AND INSTALL 35 LF 10" CIPP LINING (CURED-IN-PLACE THERMSETTING RESIN PIPE)
- * SEE SPECIAL PROVISIONS

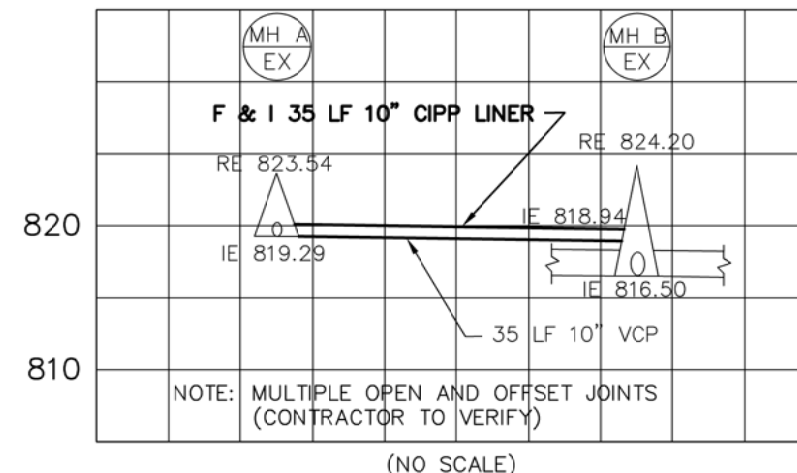
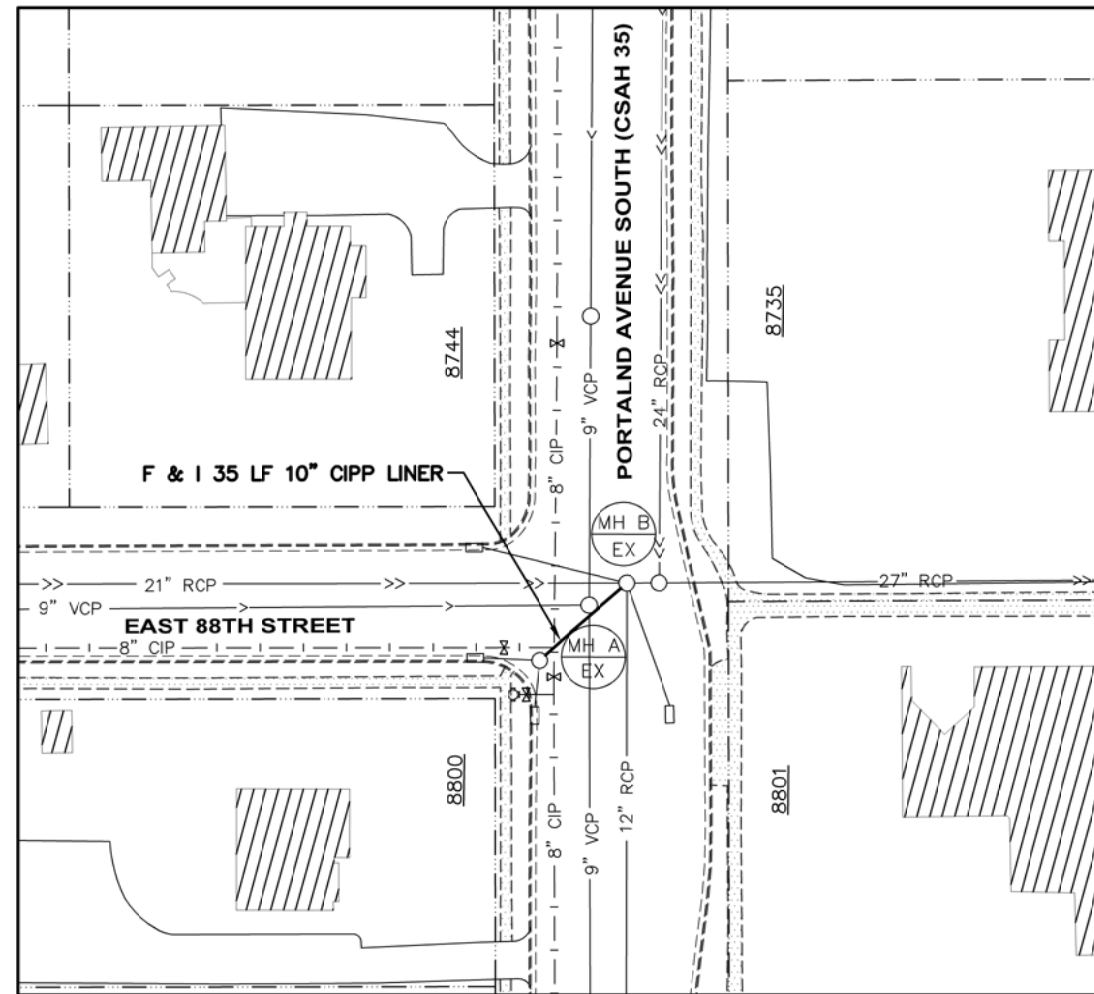
TRAFFIC CONTROL

- * MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES.
TRAFFIC INFO (PORTLAND AVE. SO / CSAH 35)
-ADT = 5700
-SPEED LIMIT = 35
TRAFFIC INFO (EAST 88TH STREET)
-ADT = 900
-SPEED LIMIT = 30
- * THE GENERAL TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING AND SPACING AS SHOWN IN LAYOUT 37 AND LAYOUT 8 OF THE 2018 FIELD MANUAL (PORTLAND AVENUE SOUTH).
THE GENERAL TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING AND SPACING AS SHOWN IN LAYOUT 15 OF THE 2018 FIELD MANUAL (EAST 88TH STREET).
THIS PLAN INDICATES A GENERAL PHASING AND CHANNELIZATION LAYOUT AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
- * SEE SPECIAL PROVISIONS

COORDINATE WITH 2022-101 PMP PROJECT



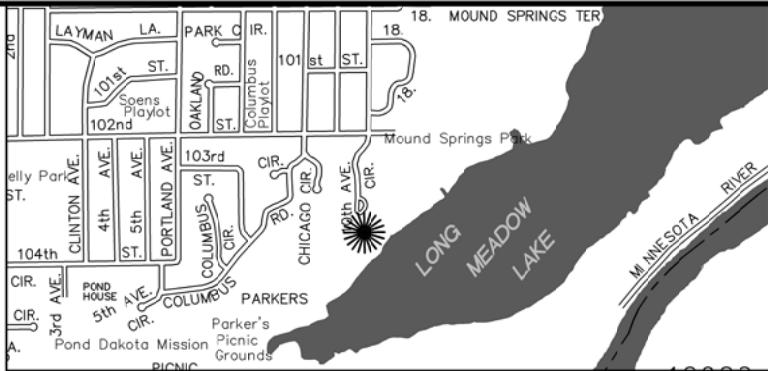
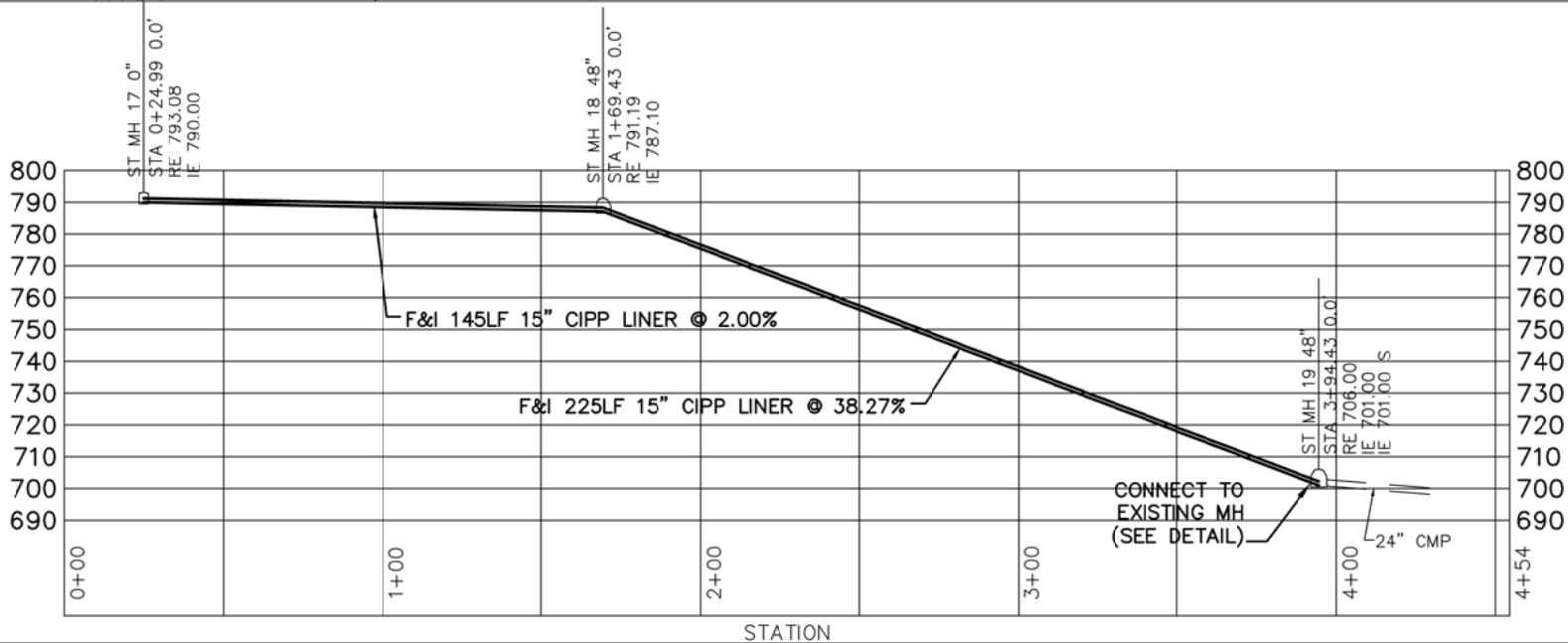
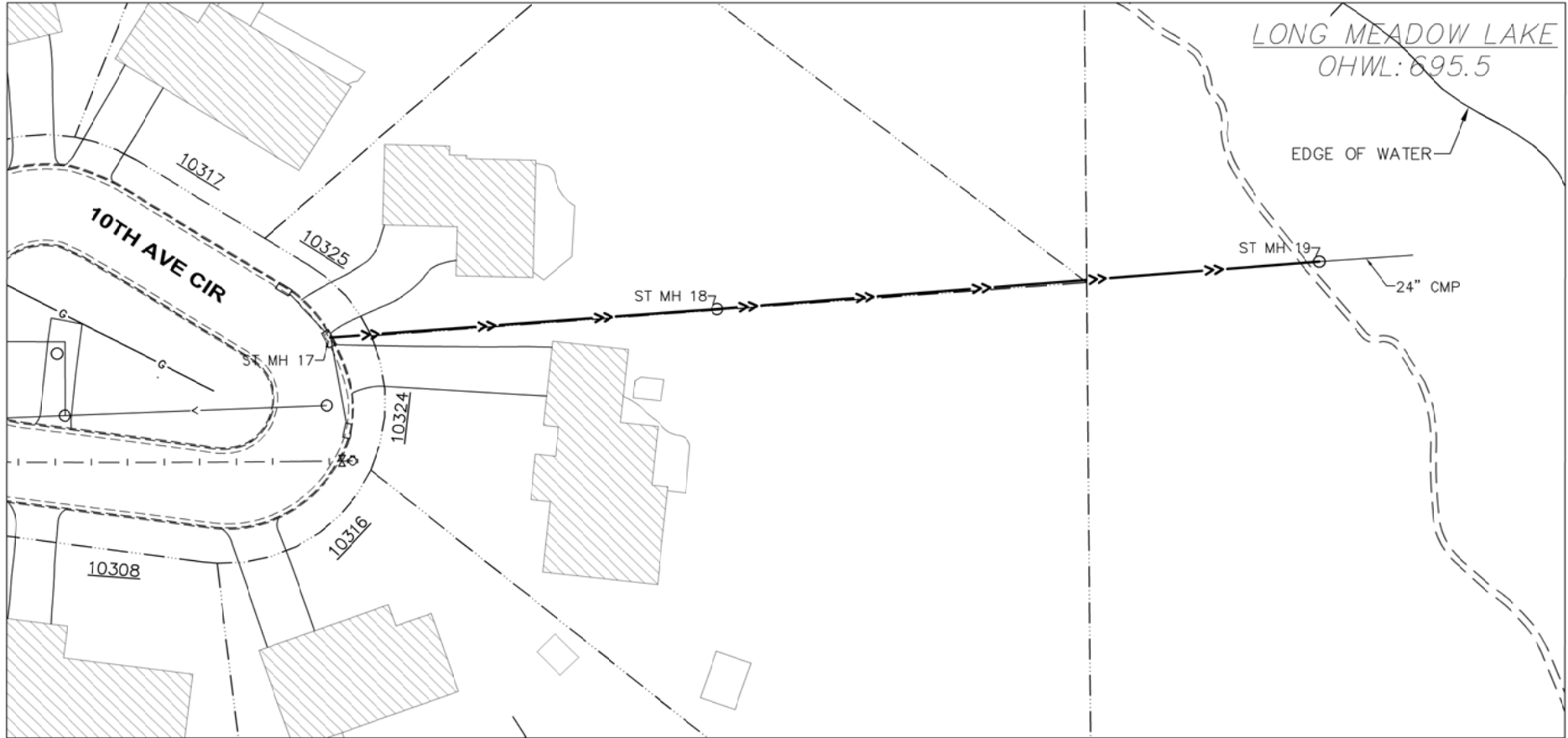
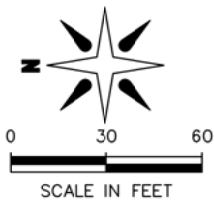
BROKEN CLAY PIPE, MULTIPLE OPEN AND OFFSET JOINTS FROM MH A TO MH B



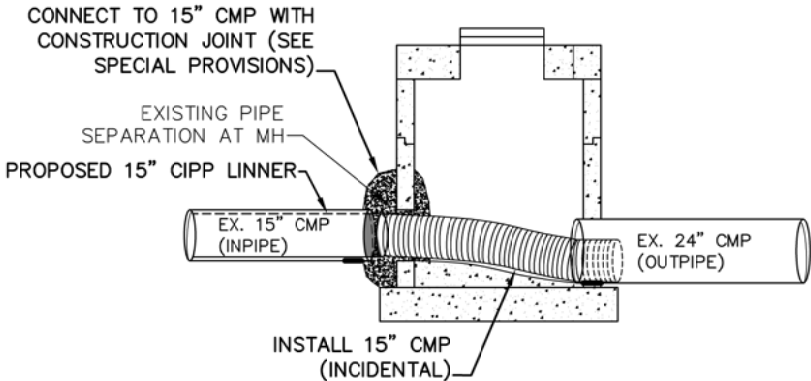
CONSTRUCTION NOTES

- CONSTRUCT STORM SEWER AS SHOWN
- *FURNISH AND INSTALL 370 LF OF 15" CIPP LINER (CURED IN PLACE THERMO SETTING RESIN PIPE). SEE SPECIAL PROVISIONS.
 - *CONNECT TO EXISTING MH, SEE SPECIAL PROVISIONS
- TRAFFIC CONTROL
- *10TH AVE CIR TRAFFIC INFO:
SPEED LIMIT 30 MPH
ADT = 200
 - *MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT ALL TIMES
 - *THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING, & SPACING AS SHOWN IN LAYOUT 4 OF THE 2018 FIELD MANUAL
 - *THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL, INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT IDENTIFIED ON THIS PLAN.
 - *SEE SPECIAL PROVISIONS

SITE M
10325 10TH AVE CIR



CONNECTION AT ST MH 19



CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (952) 563-8700

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2022-901 STORM SEWER MAINTENANCE PROJECT

REVISIONS		BY	DATE
DESCRIPTION			

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6/6/22
Steven G. Gurney
LIC. # 40497
DATE 6/6/22

DRAWN: DAC
CHECKED: SGG
APPROVED: SGG

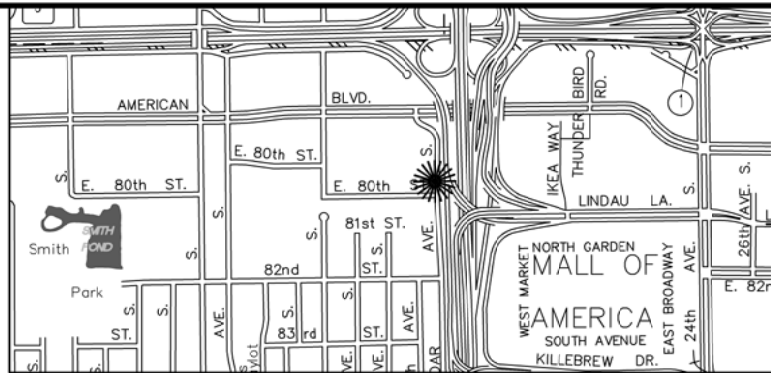
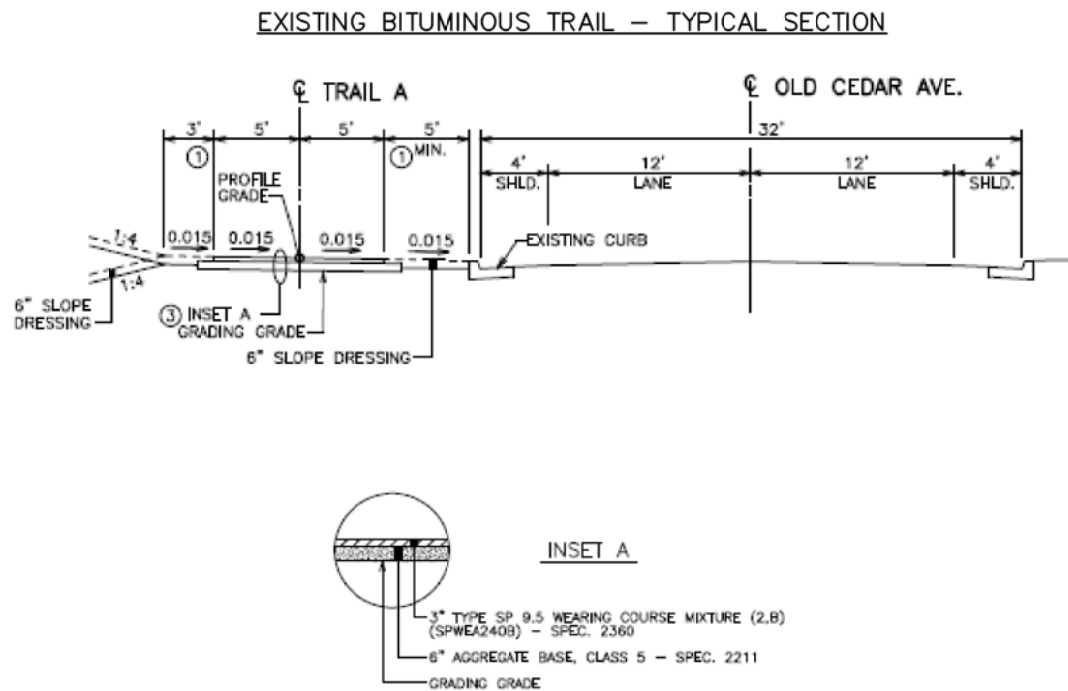
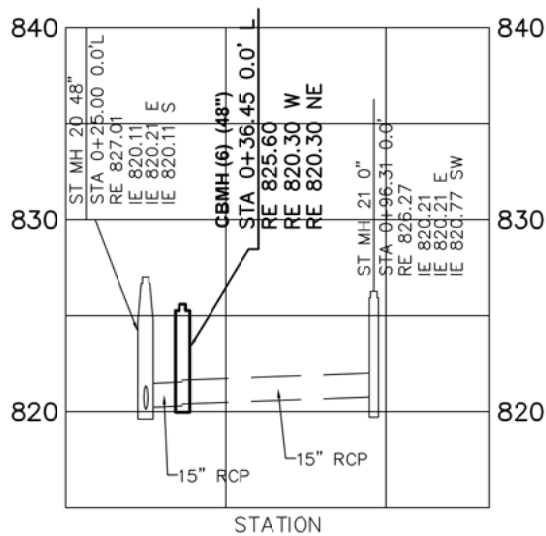
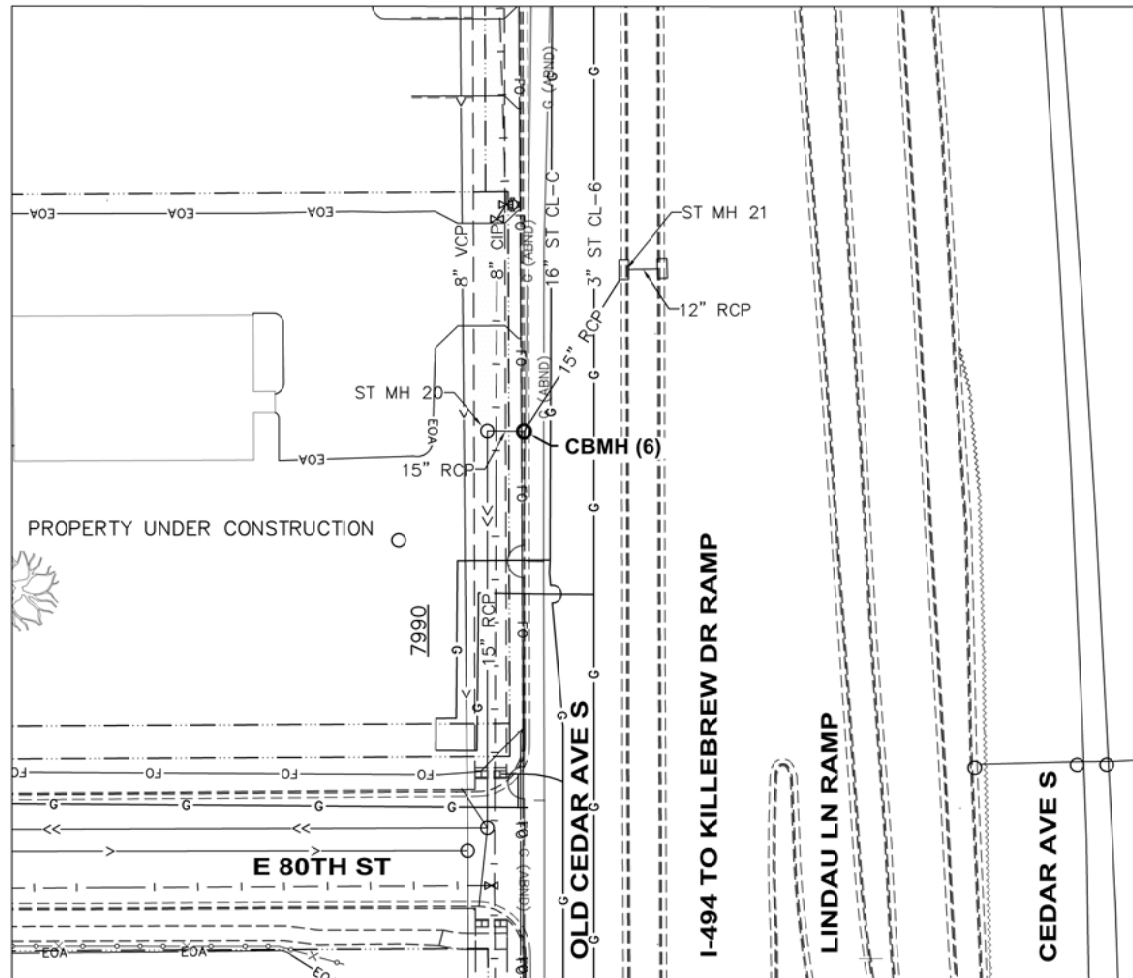
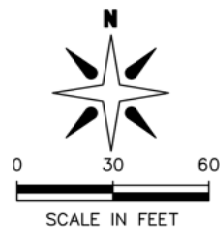
SHEET: 21 OF 22


CONSTRUCTION NOTES

- CONSTRUCT STORM SEWER AS SHOWN
*REMOVE AND DISPOSE 1 EA CATCH BASIN
*FURNISH AND INSTALL 1EA 48" DIA CBMH
BITUMINOUS SURFACE
*REMOVE EX. BITUMINOUS SURFACE AS PER SPECIAL PROVISION
*REPLACE SURFACE WITH:
2" TYPE SP 9.5 WEARING COARSE MIXTURE (3,B)
2" TYPE SP 12.5 NON WEAR COARSE MIXTURE (3,B)
6" AGGREGATE BASE CL 5
*SAW CUT ALL BITUMINOUS SURFACES PRIOR TO PLACING WEAR
COURSE
CURB AND GUTTER
*REMOVE CONCRETE CURB AS APPROVED
*FURNISH AND INSTALL 15 LF OF CONCRETE CURB & GUTTER (B618
OR BLOOMINGTON STD).
LANDSCAPE
*FURNISH AND INSTALL LOAM TOPSOIL BORROW AND SEED
*FURNISH AND INSTALL EROSION CONTROL BLANKET; CATEGORY 3N
TRAFFIC CONTROL
*OLD CEDAR AVE S TRAFFIC INFO:
SPEED LIMIT 35 MPH
ADT = 2900
*MAINTAIN AT LEAST ONE 11' DRIVING LANE IN EACH DIRECTION AT
ALL TIMES
*THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING,
& SPACING AS SHOWN IN LAYOUT 16 OF THE 2018 FIELD MANUAL
*THIS PLAN INDICATES GENERAL PHASING AND CHANNELIZATION
LAYOUT(S) AND MAY NOT BE ALL INCLUSIVE. ADDITIONAL,
INCIDENTAL TRAFFIC CONTROL MAY BE NEEDED THAT IS NOT
IDENTIFIED ON THIS PLAN.
*SEE SPECIAL PROVISIONS

SITE N
7990 OLD CEDAR AVE S

SEWER STRUCTURE SCHEDULE		
NO.	DESIGN	CASTING ASSEMBLY
CBMH 6	48" DIA	STD RECT CB




 CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST.
BLOOMINGTON MN 55431
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2022-901 STORM SEWER MAINTENANCE PROJECT

[illegible]

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DRAWN: DAC CHECKED: SGG APPROVED: SGG		 Steven G. Gurney
SHEET: 22 OF 22		