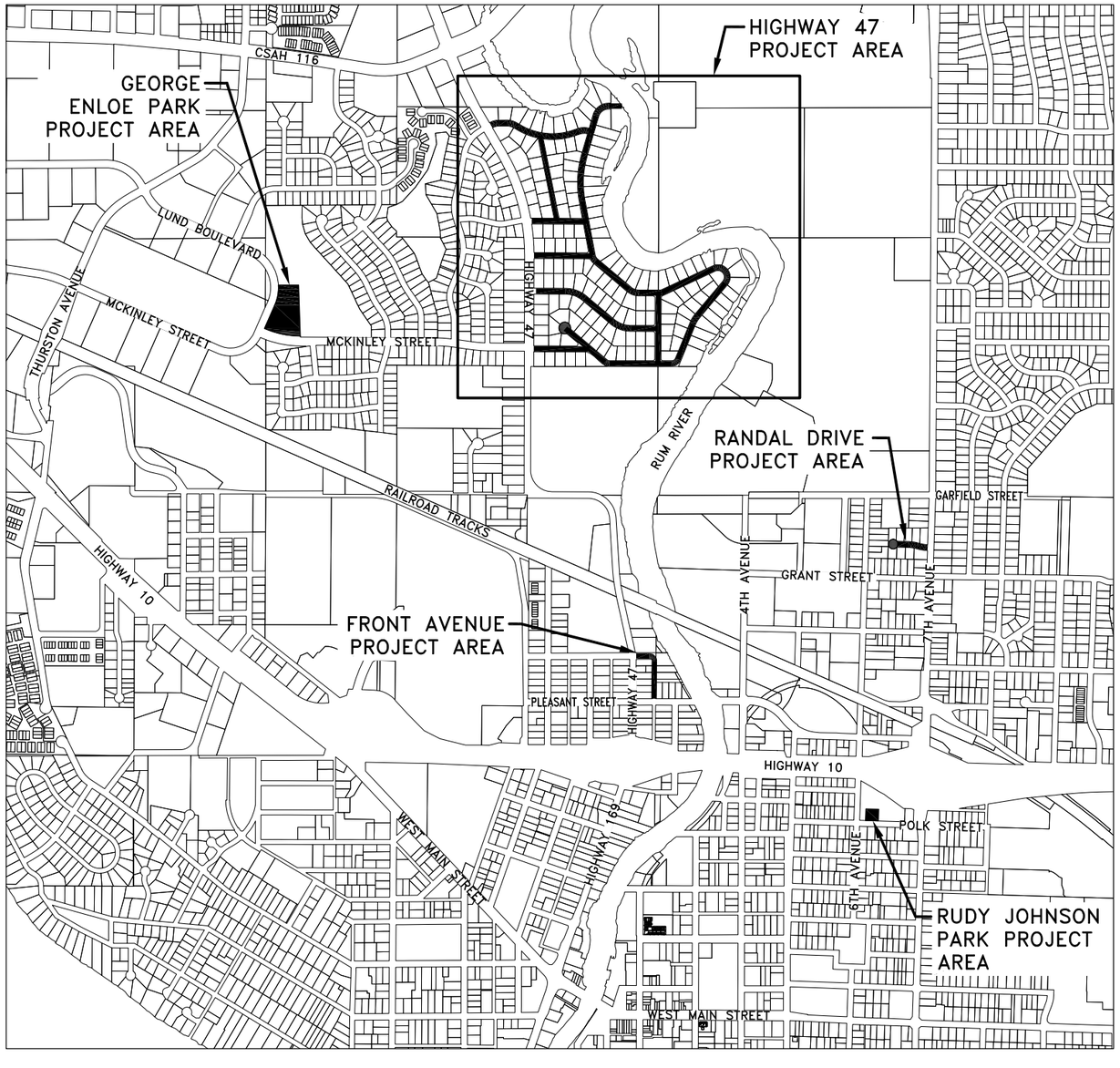
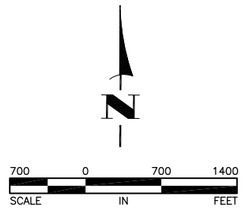
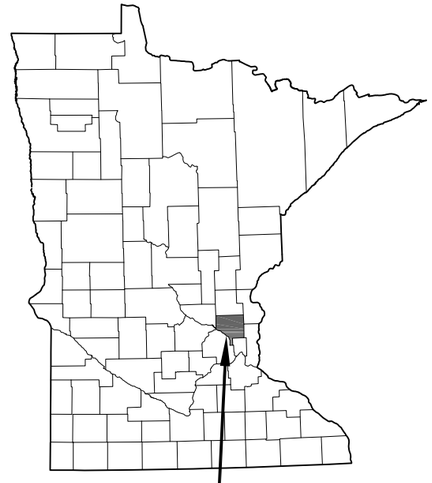
2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLANS FOR BITUMINOUS PAVEMENT RECLAMATION, AGGREGATE BASE, BITUMINOUS SURFACING, STORM SEWER, CURB AND GUTTER, GRADING AND MISCELLANEOUS CONSTRUCTION

CITY OF ANOKA







CITY OF ANOKA,
ANOKA COUNTY,
MINNESOTA

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE 2018 EDITION OF THE CITY ENGINEER'S ASSOCIATION OF MINNESOTA "STANDARD SPECIFICATIONS" SHALL APPLY.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

ALL REQUIREMENTS OF THE PROJECT MANUAL FOR THE 2022 STREET SURFACE IMPROVEMENT PROJECT.

SHEET INDEX

THIS PLAN CONTAINS 45 SHEETS

APPROVED: GREG LEE
ANOKA CITY MANAGER
DATE 3/3/22

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
HAKANSON ANDERSON
DESIGN ENGINEER
23461 LIC. NO.
DATE 3/3/22

DATE	REVISION

SHEET 1 OF 33 SHEETS

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520

Mar 04, 2022 - 3:49pm
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AN393

ESTIMATED QUANTITIES

ITEM NO.	REF. NOTES	Mn/DOT SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	HIGHWAY 47 PROJECT AREA	RAIN GARDENS	RANDAL DRIVE PROJECT AREA	GEORGE ENLOE PARK PROJECT AREA	RUDY JOHNSON PARK PROJECT	FRONT AVENUE PROJECT AREA	COUNTY ROAD 30 TURN LANE
1		2021.501	MOBILIZATION	LUMP SUM	1.00	0.83	0.05	0.04	0.04	0.02	0.01	0.01
2		2102.503	PAVEMENT MARKING REMOVAL	LIN FT	31							31
3		2104.502	REMOVE MANHOLE OR CATCH BASIN	EACH	11	11						
4		2104.502	REMOVE CASTING	EACH	81	79		2				
5		2104.502	SALVAGE SIGN	EACH	1							1
6		2104.503	SAWING CONCRETE PAVEMENT - FULL DEPTH	LIN FT	1967	1774		104	70	4		15
7		2104.503	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LIN FT	944	358		101	10	60	52	363
8		2104.503	REMOVE CURB AND GUTTER	LIN FT	7494	6730		270	325	52		117
9		2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	444	104		11	11	24		294
10	3	2104.518	REMOVE CONCRETE PAVEMENT	SQ FT	2676	1850		500	200			126
11		2106.507	EXCAVATION - COMMON	CU YD	444		250			108		86
12		2106.507	EXCAVATION - SUBGRADE	CU YD	6663	5823		406	434			
13		2106.507	SELECT GRANULAR EMBANKMENT (CV)	CU YD	22							22
14	5	2106.507	COMMON EMBANKMENT (CV)	CU YD	100					100		
15	12	2106.602	DEWATERING	EACH	4	4						
16	1	2106.607	HAUL AND STOCKPILE EXCESS MATERIAL (LV)	CU YD	8423	6986	325	487	521	104		
17		2108.604	SOIL STABILIZATION GEOGRID	SQ YD	1540			1540				
18		2112.519	SUBGRADE PREPARATION	ROAD STA	122.4	112.5		4.0			5.9	
19		2112.604	SUBGRADE PREPARATION	SQ YD	2873				2403	470		
20		2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	68	48		5	5	5	5	
21	11	2123.610	BACKHOE	HOUR	8			8				
22		2130.523	WATER	M GALLON	771	342	298	18	20	43	50	
23	10	2211.509	AGGREGATE BASE CLASS 5	TON	2832	2288		277	144	118		5
24		2215.504	FULL DEPTH RECLAMATION	SQ YD	43653	38116		1540	2403		1594	
25		2215.507	SALVAGE FULL DEPTH RECLAMATION (CV)	CU YD	5841	5293		214	334			
26		2215.507	HAUL AND DISPOSE FULL DEPTH RECLAMATION (LV)	CU YD	115						115	
27		2232.504	MILL BITUMINOUS SURFACE (1.5")	SQ YD	91	44		18		14	15	
28		2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	16							16
29		2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLONS	3055	2669		108	168	26	45	39
30	6	2360.504	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B) 2.5" THICK	SQ YD	115	104		11				
31		2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B)	TON	4293	3617		146	228	35	267	
32		2360.509	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	TON	12							12
33		2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,B)	TON	90							90
34		2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (2,B)	TON	6710	6028		244	380	58		
35		2411.502	CONCRETE FLUME	EACH	5		4			1		
36	2	2411.618	MODULAR BLOCK RETAINING WALL	SQ FT	1250		1250					
37		2451.601	#3 WASHED CRUSHED STONE	CU YD	12		12					
38		2501.602	12" PIPE APRON	EACH	1					1		
39		2501.602	TRASH GUARD FOR 12" PIPE APRON	EACH	1					1		
40		2502.503	24" PERF PE PIPE DRAIN (SMOOTH)	LIN FT	20		20					
41		2503.503	4" PVC PIPE SEWER	LIN FT	20	20						
42		2503.503	12" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	80	53				27		
43		2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	40	40						
44		2503.503	18" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	32	32						
45		2503.503	21" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	8	8						
46		2503.602	CONNECT TO EXISTING STORM SEWER	EACH	14	12				2		
47		2504.602	CONNECT TO EXISTING WATERMAIN	EACH	23	23						
48		2504.602	6" GATE VALVE AND BOX	EACH	13	13						
49		2504.602	8" GATE VALVE AND BOX	EACH	10	10						
50		2506.502	CASTING ASSEMBLY	EACH	93	86	4	2		1		
51	8	2506.502	CONSTRUCT SANITARY STRUCTURE DESIGN 4007	EACH	8	7		1				
52		2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	LIN FT	9.7	9.7						
53	9	2506.503	CONSTRUCT SANITARY STRUCTURE DESIGN 4007	LIN FT	4.5	4.5						
54		2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 4021	LIN FT	30.0	30.0						
55		2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	9.7	4.2				5.5		
56		2506.602	GROUT CATCH BASIN OR MANHOLE	HOUR	29	29						
57		2506.602	MANHOLE SURFACE RESTORATION	LIN FT	120	120						
58		2511.507	RANDOM RIPRAP CLASS II	CU YD	5.4					5.4		
59		2521.518	4" CONCRETE WALK	SQ FT	657	216			200			241
60		2521.518	6" CONCRETE WALK	SQ FT	320	63			103	80		74

ESTIMATED QUANTITIES

ITEM NO.	REF. NOTES	Mn/DOT SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	HIGHWAY 47 PROJECT AREA	RAIN GARDENS	RANDAL DRIVE PROJECT AREA	GEORGE ENLOE PARK PROJECT AREA	RUDY JOHNSON PARK PROJECT	FRONT AVENUE PROJECT AREA	COUNTY ROAD 30 TURN LANE
61		2531.503	CONCRETE CURB AND GUTTER DESIGN B612	LIN FT	575				325	250		
62		2531.503	CONCRETE CURB AND GUTTER DESIGN B618	LIN FT	942	278		270		16		378
63		2531.503	CONCRETE CURB AND GUTTER DESIGN D418	LIN FT	6452	6452						
64		2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	261	205		56				
65	4	2531.504	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	67	47				20		
66		2531.618	TRUNCATED DOMES	SQ FT	76	16			20	24		16
67		2563.601	TRAFFIC CONTROL	LUMP SUM	1.00	0.83	0.05	0.04	0.04	0.02	0.01	0.01
68		2564.502	INSTALL SIGN	EACH	1							1
69		2565.602	RIGID PVC LOOP DETECTOR 6'X6'	EACH	1							1
70	13	2571.601	1" PLANT PLUG	EACH	488		488					
71	13	2571.601	4" POT	EACH	84		84					
72	13	2571.601	1-GALLON POT	EACH	36		36					
73		2573.501	STABILIZED CONSTRUCTION EXIT	LUMP SUM	1.00	0.83	0.05	0.04	0.04	0.02	0.01	0.01
74		2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1.00	0.83	0.05	0.04	0.04	0.02	0.01	0.01
75		2573.502	STORM DRAIN INLET PROTECTION	EACH	30	25				1		4
76	5	2573.503	SILT FENCE; TYPE MS	LIN FT	265					265		
77	5	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	LIN FT	105					105		
78		2573.602	RAIN GUARDIAN BUNKER PRETREATMENT CHAMBER	EACH	4		4					
79	5	2574.507	LOAM TOPSOIL BORROW	CU YD	60					60		
80		2574.507	COMPOST GRADE 2	CU YD	15		15					
81	5	2575.504	ROLLED EROSION PREVENTION CATEGORY 15	SQ YD	160					160		
82		2575.601	2" MAX DOUBLE SHREDDED HARDWOOD MULCH	CU YD	45		45					
83		2575.601	LANDSCAPING RESTORATION	ALLOWANCE	1	0.85	0.04	0.04	0.04	0.02	0.01	
84	7	2575.605	SITE RESTORATION	SQ YD	4579	3028	267	120	144	420	600	
85		2582.503	4" SOLID LINE MULTI-COMPONENT	LIN FT	1641				1000	200		441
86		2582.518	PAVEMENT MESSAGE MULTI-COMPONENT	SQ FT	12				8	4		
87		2582.518	PAVEMENT MESSAGE PREFORM THERMOPLASTIC	SQ FT	15							15

REFERENCE NOTES:

① THIS ITEM INCLUDES EXCAVATING AND DISPOSING OF THE SUBGRADE MATERIAL FROM ALL STREETS AS DESCRIBED IN SECTION 01 35 00 OF THE PROJECT MANUAL.

② ONLY THE WALL ABOVE THE FINAL GRADE WILL BE MEASURED. WALL BELOW THE FINAL GRADE SHALL BE INCIDENTAL.

③ THIS ITEM INCLUDES REMOVAL OF CONCRETE WALK, APRONS, DRIVEWAYS AND VALLEY GUTTERS.

④ THIS ITEM INCLUDES CONSTRUCTION OF CONCRETE VALLEY GUTTERS AND EITHER COMMERCIAL OR MULTI-TENANT CONCRETE DRIVEWAYS, IF NECESSARY.

⑤ THIS ITEM TO BE USED AT RUDY JOHNSON PARK, AS APPROVED BY THE ENGINEER.

⑥ THIS ITEM INCLUDES RECONSTRUCTION OF RESIDENTIAL BITUMINOUS DRIVEWAYS, IF NECESSARY.

⑦ SEE DIVISION 2, SPECIAL PROVISION S-18, OF THE PROJECT MANUAL FOR ADDITIONAL INFORMATION ON ESTABLISHING TURF.

⑧ THIS ITEM INCLUDES THE SANITARY SEWER MANHOLE CONE SECTIONS.

⑨ THIS ITEM INCLUDES THE SANITARY SEWER MANHOLE RISER SECTIONS.

⑩ THIS ITEM WILL BE USED AT RUDY JOHNSON PARK, RANDAL DRIVE AND COUNTY ROAD 30 AND, ONLY AS APPROVED BY THE ENGINEER, AT THE HIGHWAY 47 AND GEORGE ENLOE PARK PROJECT AREAS.

⑪ THIS ITEM WILL BE USED TO PAY FOR THE EXCAVATION OF TEST PITS ON RANDAL DRIVE TO DETERMINE THE EXTENT OF THE ORGANIC SOIL. THE BACKHOE SHALL HAVE THE ABILITY TO EXCAVATE UP TO 6 FEET DEEP. THE QUANTITY FOR ITEM 2108-SOIL STABILIZATION GEOGRID MAY BE ADJUSTED AFTER EVALUATION OF THE ORGANIC SOIL LIMITS. THE CONTRACT UNIT PRICE SHALL NOT BE ADJUSTED FOR A REDUCTION IN THE QUANTITY FOR THIS ITEM.

⑫ THIS ITEM IS FOR WORK REQUIRED TO DEWATER THE EXCAVATION, IF REQUIRED, FOR VALVE INSTALLATION. PAYMENT FOR THIS ITEM WILL NOT BE INCLUDED FOR VALVES THAT ARE ABOVE THE WATER TABLE.

⑬ SEE MN/DOT SPEC. 2571, PLANT INSTALLATION AND ESTABLISHMENT, FOR CONSTRUCTION OF THESE ITEMS, INCLUDING MAINTENANCE AND WORK ACCEPTANCE.

BASIS OF ESTIMATED QUANTITIES

AGGREGATE BASE CLASS 5	100 lbs/yd^2/in
NON WEARING BITUMINOUS COURSE MIXTURE	110 lbs/yd^2/in
WEARING COURSE BITUMINOUS MIXTURE	110 lbs/yd^2/in
BITUMINOUS MATERIAL FOR TACK COAT	0.05 gal/yd^2
SEED MIXTURE 25-131	220 lbs/acre
SEED MIXTURE 33-261	35 lbs/acre
HYDRAULIC BONDED FIBER MATRIX	3500 lbs/acre
TYPE 3, SLOW RELEASE FERTILIZER	400 lbs/acre

STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

PLATE NO.	DESCRIPTION
3000M	REINFORCED CONCRETE PIPE (6 SHEETS)
3006H	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
4005M	MANHOLE OR CATCH BASIN TYPE A & B CONE SECTION PRECAST - DESIGN F
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4010H	CONCRETE SHORT CONE AND ADJUSTING RING (SECTIONAL CONCRETE)
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4021F	PRECAST CURB OPENING CATCH BASIN
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4110F	COVER CASTING FOR MANHOLE
4154B	CATCH BASIN GRATE CASTING
4160D	CURB BOX CASTING FOR CATCH BASIN
4180J	MANHOLE OR CATCH BASIN STEP
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7102K	CONCRETE CURB AND GUTTER (DESIGN D, DESIGN S, AND DESIGN R)
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

ESTIMATED QUANTITIES AND TABULATIONS

CITY OF ANOKA, MINNESOTA

SHEET 2 OF 33 SHEETS

AN393

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GENERAL CONSTRUCTION AND SOILS NOTES:

1. IN AREAS OF STREET CONSTRUCTION, THE EXPOSED SAND SHALL BE SURFACE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM D698, IN AT LEAST THE UPPER THREE FEET.
2. UNLESS OTHERWISE RECOMMENDED IN THESE PLANS, THE GRADING SUBGRADE SHALL BE CONSTRUCTED OF SUITABLE GRADING MATERIAL. THE FILL SHALL BE PLACED IN 8'' TO 10'' LOOSE LIFTS, AND COMPACTED TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. SUITABLE GRADING MATERIAL FOR THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, SILT, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL.
4. WHEN PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT CUT VERTICALLY TO THE BOTTOM OF INPLACE SURFACING OR TOP OF GRADING SUBGRADE, WHICHEVER IS DEEPER, AT A 1(V):2(H) TO THE BOTTOM OF EXCAVATION.
5. PROVIDE A SAW CUT WHEN PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT AND AT TERMINI OF CONSTRUCTION TO ENSURE A UNIFORM JOINT.
6. BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH MN/DOT SPEC. 2104.
7. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.04 GAL/SY TO 0.06 GAL/SY BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS.
8. PERFORMANCE GRADED (PG) ASPHALT BINDER PG 58S-28, PER MN/DOT SPEC. 3151, SHALL BE USED FOR ALL BITUMINOUS MIXES ON THIS PROJECT.
9. THE BITUMINOUS MIXTURES SHALL MEET THE REQUIREMENTS OF SPECIFICATIONS 2360 AND 3139.
10. IF NECESSARY, THE UTILITY COMPANIES WILL RELOCATE THEIR FACILITIES CONCURRENTLY WITH THE CONSTRUCTION OPERATIONS UNDER THIS CONTRACT. CONTRACTOR SHALL SCHEDULE CONSTRUCTION IN COOPERATION WITH UTILITY RELOCATION.
11. CONTRACTOR SHALL REMOVE AND TEMPORARILY PLACE ALL MAILBOXES AT AN ENGINEER APPROVED LOCATION AS NEEDED DURING CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL.
12. SAWCUT DRIVEWAYS AND SIDEWALKS AT THE DISCRETION OF THE ENGINEER.
13. SUBCUT AREAS AND LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
14. ALL BITUMINOUS PAVEMENT THAT NEEDS TO BE REMOVED, BUT CANNOT BE RECLAIMED, TO COMPLETE THE CONSTRUCTION SHALL BE INCIDENTAL, UNLESS OTHERWISE NOTED ON THE PLANS.
15. CURB AND SIDEWALK REPLACEMENT AREAS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. CONTRACTOR WILL BE PAID TO SAWCUT SIDEWALK OR CONCRETE CURB AND GUTTER PER ITEM 2104-SAWING CONCRETE PAVEMENT-FULL DEPTH.
16. SEE SECTION 01 35 00, SPECIAL PROJECT PROCEDURES, OF THE PROJECT MANUAL FOR ADDITIONAL INFORMATION REGARDING MEASUREMENT AND PAYMENT ITEMS.
17. CONTRACTOR SHALL PREPARE SUBGRADE UNDER CONCRETE CURB AND GUTTER AND SIDEWALKS WITH SUITABLE GRADING MATERIAL. PREPARATION OF THE SUBGRADE SHALL BE INCIDENTAL.
18. THE CONCRETE MIX DESIGNS FOR THIS PROJECT SHALL BE 3F52 FOR HAND-FORMED CONCRETE AND 3F32 FOR MACHINE FORMED CONCRETE. ENTRAINED AIR SHALL BE MAINTAINED BETWEEN 5% AND 7%. COARSE AGGREGATE SHALL BE CLASS A AGGREGATE.
19. BITUMINOUS DRIVEWAYS SHALL BE CONSTRUCTED WITH A MINIMUM OF 2.5" BITUMINOUS WEAR COURSE (SPWEA240B) OVER 4" RECLAIMED AGGREGATE BASE. DRIVEWAY PAVEMENT SHALL BE PAID PER ITEM 2360-TYPE SP 9.5 WEARING COURSE MIXTURE (2,B) 2.5" THICK. PLACEMENT OF THE RECLAIMED AGGREGATE BASE SHALL BE INCIDENTAL. CONCRETE DRIVEWAYS SHALL BE CONSTRUCTED WITH A MINIMUM OF 6" OF CONCRETE DRIVEWAY PAVEMENT OVER 4" OF RECLAIMED AGGREGATE BASE.
20. IN ALL DISTURBED AREAS, EXCEPT RUDY JOHNSON PARK, THE CONTRACTOR SHALL SALVAGE AND REPLACE ALL EXISTING TOPSOIL. ALL DISTURBED AREAS SHALL BE RESTORED WITH SEED MIXTURE 25-131 AT A RATE OF 220 LBS/ACRE, TYPE 3 FERTILIZER AT A RATE OF 400 LBS/ACRE AND HYDRAULIC BONDED FIBER MATRIX AT A RATE OF 3500 LBS/ACRE. ALL RESTORATION WORK SHALL BE MEASURED BY THE SQUARE YARD AND PAID PER ITEM 2575-SITE RESTORATION.
21. IN RUDY JOHNSON PARK, CONTRACTOR SHALL PLACE 4 INCHES OF LOAM TOPSOIL BORROW OVER ALL DISTURBED AREAS. ALL DISTURBED AREAS, EXCEPT THE INFILTRATION BASIN, SHALL BE RESTORED WITH SEED MIXTURE 25-131 AT A RATE OF 220 LBS/ACRE, TYPE 3 FERTILIZER AT A RATE OF 400 LBS/ACRE AND HYDRAULIC BONDED FIBER MATRIX AT A RATE OF 3500 LBS/ACRE. ALL RESTORATION WORK SHALL BE MEASURED BY THE SQUARE YARD AND PAID PER ITEM 2575-SITE RESTORATION. THE INFILTRATION BASIN SHALL BE RESTORED AS DESCRIBED ON THE PLANS AND INCLUDE TYPE 3 FERTILIZER AS DESCRIBED ABOVE.

GENERAL EROSION CONTROL NOTES:

1. EROSION CONTROL SHALL CONFORM TO THE MN/DOT EROSION CONTROL HANDBOOK.
2. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ACQUIRE THE MPCA NPDES CONSTRUCTION STORMWATER GENERAL PERMIT.
3. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) PRIOR TO GRADING AND REMOVAL ACTIVITIES. BMP'S SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES AND POTENTIAL FOR EROSION HAS PASSED.
4. THE CONTRACTOR SHALL SCHEDULE THEIR OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
5. BMP'S SHALL BE INSPECTED DAILY BY THE CONTRACTOR. OBSERVATIONS SHALL BE RECORDED IN AN INSPECTION LOG.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION.
7. THE CONTRACTOR SHALL FILE A NOTICE OF TERMINATION WITH THE MPCA AFTER FINAL STABILIZATION HAS BEEN APPROVED.

LEGEND

- PROPERTY LINE/RIGHT-OF-WAY
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING WATER VALVE
- EXISTING CATCH BASIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER MANHOLE
- HDYRANT
- EXISTING CONCRETE CURB & GUTTER
- DETAIL NUMBER / SHEET NUMBER
- BITUMINOUS CORING LOCATION
- SOIL BORING LOCATION

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

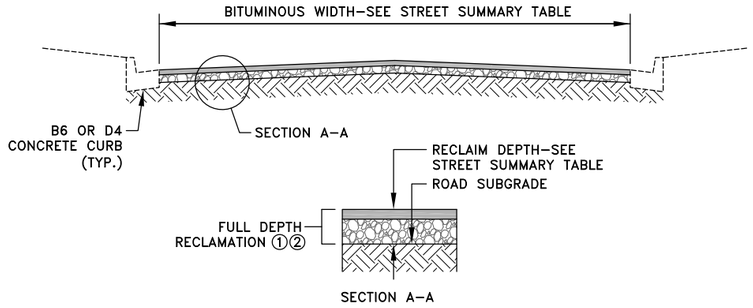
2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION NOTES AND PROJECT LEGEND

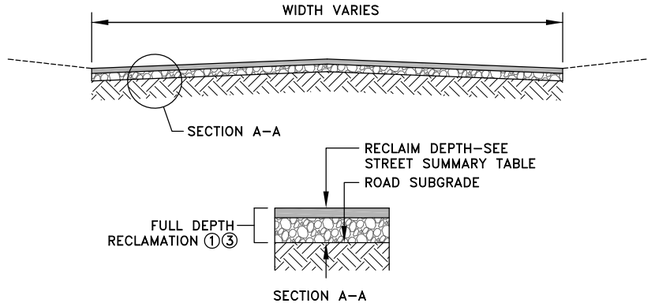
CITY OF ANOKA, MINNESOTA

SHEET 3 OF 33 SHEETS

AN393



EXISTING STREET SECTION



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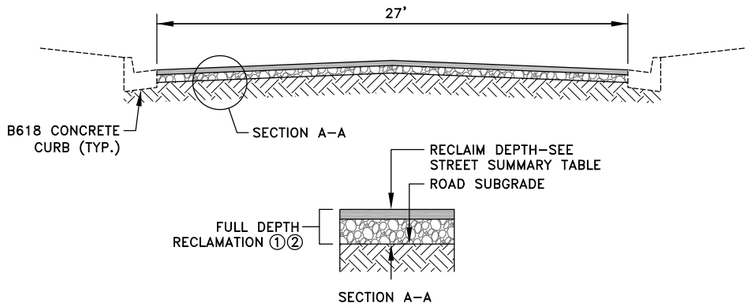

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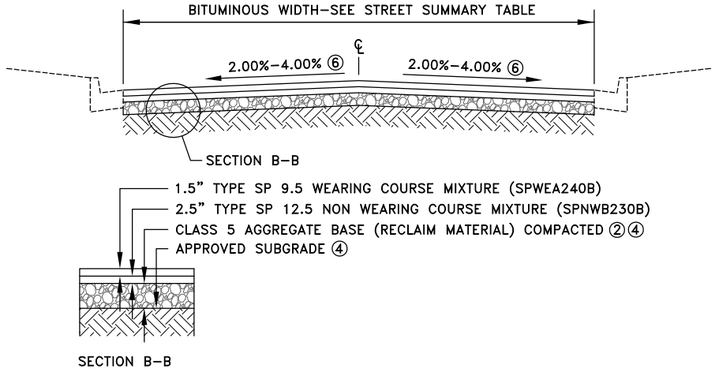
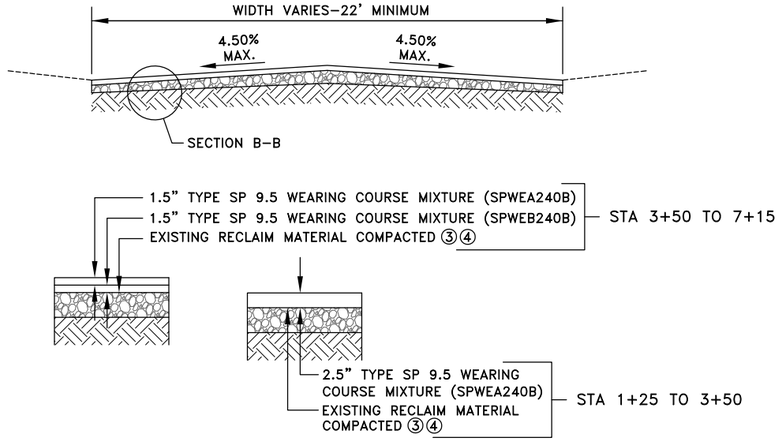
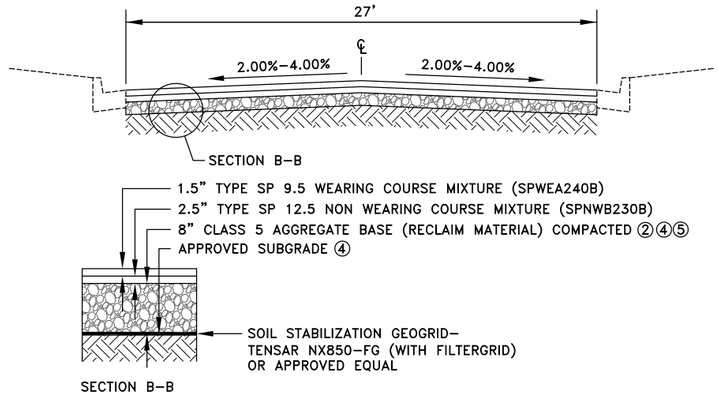


PROPOSED STREET SECTION



PROPOSED STREET SECTION



PROPOSED STREET SECTION

1/4 TYPICAL SECTION
HIGHWAY 47 PROJECT AREA

2/4 TYPICAL SECTION
FRONT AVENUE AND MARTIN STREET

3/4 TYPICAL SECTION
RANDAL DRIVE

REFERENCE NOTES:

① CONTRACTOR SHALL RECLAIM THE EXISTING BITUMINOUS PAVEMENT, AGGREGATE BASE AND SUBGRADE MATERIAL TO THE RECLAMATION DEPTH SHOWN ON THE STREET SUMMARY TABLE. ACTUAL DEPTH MAY NEED TO BE ADJUSTED BASED ON THE EXISTING DEPTHS OF THE BITUMINOUS AND AGGREGATE BASE. THIS WORK SHALL BE PAID PER ITEM 2215–FULL DEPTH RECLAMATION.

② IN THE HIGHWAY 47 PROJECT AREA, ON RANDAL DRIVE AND AT GEORGE ENLOE PARK, CONTRACTOR SHALL SALVAGE RECLAIM MATERIAL AND EXCAVATE AND DISPOSE OF SUBGRADE MATERIAL TO THE SUBGRADE EXCAVATION DEPTH SHOWN ON THE STREET SUMMARY TABLE. SALVAGED RECLAIM MATERIAL SHALL THEN BE PLACED AND COMPACTED TO THE RECLAMATION DEPTH SHOWN ON THE STREET SUMMARY TABLE. SALVAGING AND REPLACING THE RECLAIM MATERIAL SHALL BE PAID PER ITEM 2215–SALVAGE FULL DEPTH RECLAMATION (CV), EXCAVATING THE SUBGRADE MATERIAL SHALL BE PAID PER ITEM 2106–EXCAVATION–SUBGRADE AND DISPOSING OF THE SUBGRADE MATERIAL AT SUNNY ACRES PARK SHALL BE PAID PER ITEM 2106–HAUL AND STOCKPILE EXCESS MATERIAL (LV).

③ ON FRONT AVENUE AND MARTIN STREET, CONTRACTOR SHALL SHAPE THE RECLAIM MATERIAL SUCH THAT THE EDGE OF THE PROPOSED ROAD MATCHES THE EXISTING EDGE OF THE ROAD WITH A MAXIMUM CROSS SLOPE OF 4.50%. EXCESS RECLAIM MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF OFF SITE. SHAPING THE RECLAIM MATERIAL SHALL BE PAID PER ITEM 2112–SUBGRADE PREPARATION AND DISPOSING OF THE RECLAIM MATERIAL SHALL BE PAID PER ITEM 2215–HAUL AND DISPOSE FULL DEPTH RECLAMATION (LV).

④ COMPACT TO 100% STANDARD PROCTOR DENSITY.

⑤ A COMBINATION OF RECLAIM MATERIAL AND CLASS 5 AGGREGATE BASE SHALL BE USED TO CONSTRUCT RANDAL DRIVE TO THE DEPTH SHOWN.

⑥ IN AREAS WHERE THE CROSS SLOPES CANNOT BE CONSTRUCTED, WITH THE CROWN AT THE CENTERLINE OF THE ROAD, BETWEEN 2.00% AND 4.00%, SPECIAL SECTIONS WILL HAVE TO BE CONSTRUCTED WITH THE CROWN SHIFTED AWAY FROM THE CENTERLINE OF THE ROAD. THE STREETS WITH SPECIAL SECTIONS ARE DETAILED IN THE PLANS.

⑦ SUBGRADE EXCAVATION DEPTH ASSUMES THAT THE CROWN IS NOT CONSISTENT THROUGHOUT THE PROJECT. MATERIAL SHALL BE EXCAVATED SUCH THAT THE PROPOSED SECTIONS SHOWN ON 1/4 AND 3/4 CAN BE CONSTRUCTED.

⑧ SUBGRADE EXCAVATION DEPTH ASSUMES THAT THE EXCAVATION DEPTH IS NOT CONSISTENT TRHOUGHOUT THE PARKING LOT. MATERIAL SHALL BE EXCAVATED SUCH THAT THE PROPOSED SECTION SHOWN ON 7/5 CAN BE CONSTRUCTED TO THE PROPOSED GRADES SHOWN ON SHEET 22.

STREET SUMMARY TABLE

STREET	FROM	TO	BITUMINOUS WIDTH (FEET)	EXISTING CURB TYPE	FULL DEPTH RECLAMATION AREA (SQ YD)	RECLAMATION DEPTH (INCHES)	SALVAGE FULL DEPTH RECLAMATION (CV) (CU YD)	HAUL FULL DEPTH RECLAMATION (LV) (CU YD)	SUBGRADE EXCAVATION DEPTH (INCHES)	SUBGRADE EXCAVATION (EV) (CU YD)	REFERENCE NOTES
HIGHWAY 47 PROJECT AREA											
MCKINLEY STREET	HIGHWAY 47	BAILEY STREET	33	D418	5,266	5	731	0	5.5	805	7
MCKINLEY CIRCLE	CUL-DE-SAC	MCKINLEY STREET	27	D418	1,121	5	156	0	5.5	171	7
RUM RIVER DRIVE	BAILEY LANE (S)	BAILEY LANE (N)	27	D418	5,877	5	816	0	5.5	898	7
RUM RIVER DRIVE	BAILEY LANE (N)	COOLIDGE STREET	33	D418	7,930	5	1,101	0	5.5	1,212	7
RUM RIVER DRIVE	COOLIDGE STREET	END	27	D418	1,187	5	165	0	5.5	181	7
MCCANN AVENUE	HIGHWAY 47	BAILEY LANE	27	D418	4,161	5	578	0	5.5	636	7
BAILEY LANE	MCKINLEY STREET	RUM RIVER DRIVE	29	D418	2,193	5	305	0	5.5	335	7
DUNHAM DRIVE	HIGHWAY 47	RUM RIVER DRIVE	29	D418	1,939	5	269	0	5.5	296	7
WILSON STREET	HIGHWAY 47	RUM RIVER DRIVE	33	D418	2,075	5	288	0	5.5	317	7
ROSEBERRY PLACE	WILSON STREET	COOLIDGE STREET	27	D418	2,529	5	351	0	5.5	386	7
COOLIDGE STREET	HIGHWAY 47	RUM RIVER DRIVE	33	D418	3,838	5	533	0	5.5	586	7
RANDAL DRIVE PROJECT AREA											
RANDAL DRIVE	CUL-DE-SAC	7TH AVENUE	27	B618	1,540	5	214	0	9.5	406	7
GEORGE ENLOE PARK PROJECT AREA											
N/A	N/A	N/A	VARIES	B612	2,403	5	334	0	6.5	434	8
FRONT AVENUE PROJECT AREA											
MARTIN STREET/ FRONT AVENUE	HIGHWAY 47	PLEASANT STREET	VARIES	NONE	1,594	5	0	115	0	0	

DATE	REVISION
3/8/22	ADDENDUM NO. 1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763–427–5860 FAX 763–427–0520
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2022 STREET SURFACE IMPROVEMENT PROJECT

TYPICAL SECTIONS

CITY OF ANOKA, MINNESOTA

SHEET 4 OF 33 SHEETS

AN393

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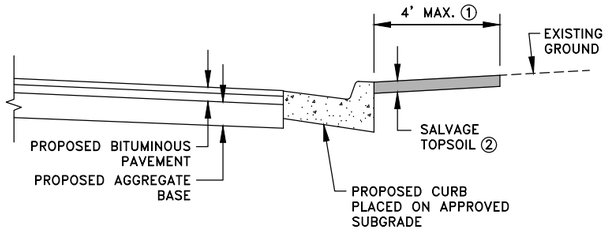
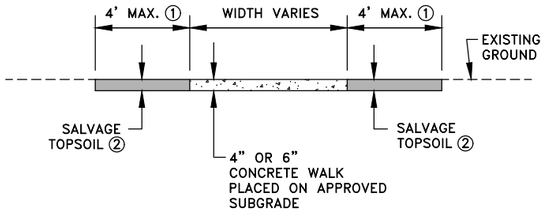


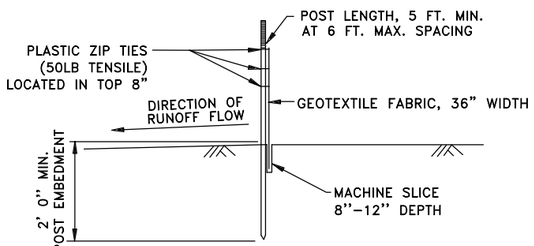
1/5 RESTORATION AT CURB AND CATCH BASIN REPLACEMENT LOCATIONS

NO SCALE



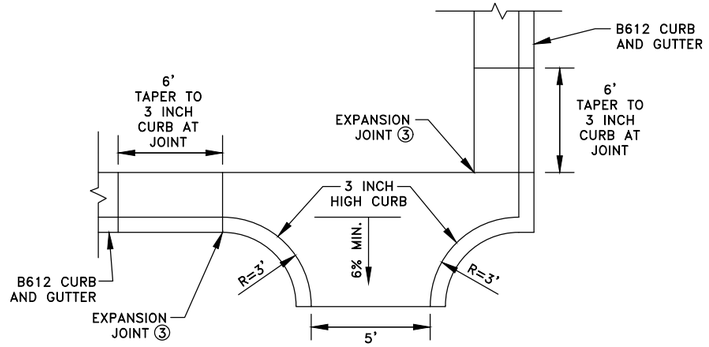
2/5 RESTORATION AT SIDEWALK AND PEDESTRIAN CURB RAMP REPLACEMENT LOCATIONS

NO SCALE

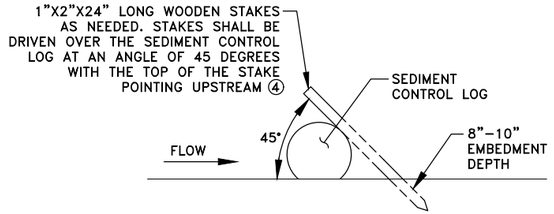


STANDARD MACHINE SLICED

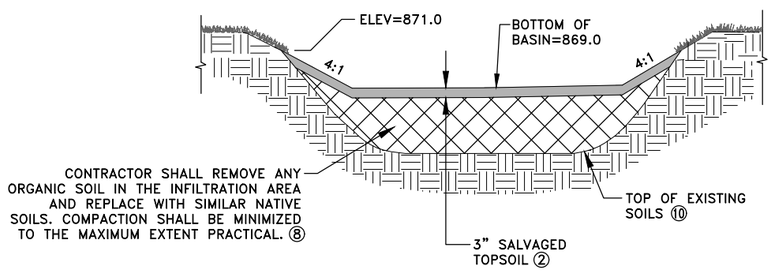
3/5 SILT FENCE DETAILS



4/5 CONCRETE FLUME



5/5 SEDIMENT CONTROL LOG TYPE STRAW ⑤



6/5 INFILTRATION BASIN ⑥⑦⑧⑨

NO SCALE

REFERENCE NOTES:

① SEE SHEET 3 FOR RESTORATION REQUIREMENTS. THE CONTRACTOR WILL BE PAID FOR SITE RESTORATION UP TO THE MAXIMUM DISTANCES SHOWN. ALL RESTORATION BEYOND THIS DISTANCE SHALL BE INCIDENTAL.

② CONTRACTOR SHALL SALVAGE AND REPLACE EXISTING TOPSOIL. THIS WORK SHALL BE INCIDENTAL.

③ PAY ITEM 2531–CONCRETE CURB AND GUTTER DESIGN B612 ENDS AT THE EXPANSION JOINT. THE CONCRETE FLUME SHALL BE PAID PER ITEM 2411–CONCRETE FLUME.

④ PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS.

⑤ SEDIMENT CONTROL LOG SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3897.2.A.

⑥ CONTRACTOR SHALL PROTECT THE INFILTRATION BASIN WITH 48" HIGH ORANGE SAFETY FENCE PRIOR TO THE START OF CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL.

⑦ CONSTRUCTION EQUIPMENT SHALL BE MINIMIZED OVER THE FOOTPRINT OF THE BASIN. ONLY LOW PRESSURE, WIDE TRACKED EQUIPMENT SHALL BE USED FOR CONSTRUCTION.

⑧ INFILTRATION BASIN SHALL NOT BE GRADED TO WITHIN THREE FEET OF THE FINAL GRADES UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED OR RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS, SUCH AS DIVERSION BERMS, TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREAS HAVE BEEN PROVIDED.

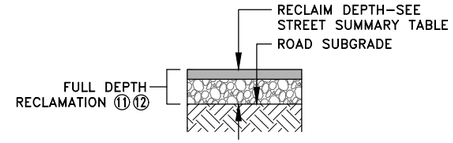
⑨ INFILTRATION BASIN SHALL BE SEEDED WITH SEED MIX 33–261 FROM ELEVATION 869 TO 871. ALL AREAS BELOW ELEVATION 871 SHALL BE STABILIZED WITH ROLLED EROSION PREVENTION CATEGORY 15. BELOW ELEVATION 871, PAYMENT FOR THE RESTORATION OF THE INFILTRATION BASIN SHALL BE INCLUDED IN ITEM 2575–ROLLED EROSION PREVENTION CATEGORY 15.

⑩ CONTRACTOR SHALL SCARIFY THE TOP 3 FEET OF THE SUBGRADE PRIOR TO PLACING TOPSOIL.

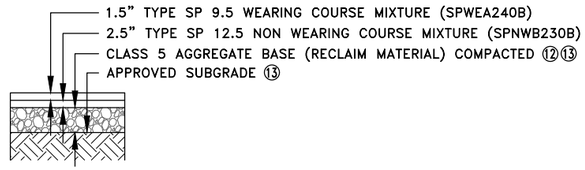
⑪ CONTRACTOR SHALL RECLAIM THE EXISTING BITUMINOUS PAVEMENT, AGGREGATE BASE AND SUBGRADE MATERIAL TO THE RECLAMATION DEPTH SHOWN ON THE STREET SUMMARY TABLE. ACTUAL DEPTH MAY NEED TO BE ADJUSTED BASED ON THE EXISTING DEPTHS OF THE BITUMINOUS AND AGGREGATE BASE. THIS WORK SHALL BE PAID PER ITEM 2215–FULL DEPTH RECLAMATION.

⑫ CONTRACTOR SHALL SALVAGE RECLAIM MATERIAL AND EXCAVATE AND DISPOSE OF SUBGRADE MATERIAL TO THE SUBGRADE EXCAVATION DEPTH SHOWN ON THE STREET SUMMARY TABLE ON SHEET 4. SALVAGED RECLAIM MATERIAL SHALL THEN BE PLACED AND COMPACTED TO THE RECLAMATION DEPTH SHOWN ON THE STREET SUMMARY TABLE NO SHEET 4. SALVAGING AND REPLACING THE RECLAIM MATERIAL SHALL BE PAID PER ITEM 2215–SALVAGE FULL DEPTH RECLAMATION (CV), EXCAVATING THE SUBGRADE MATERIAL SHALL BE PAID PER ITEM 2106–EXCAVATION–SUBGRADE AND DISPOSING OF THE SUBGRADE MATERIAL AT SUNNY ACRES PARK SHALL BE PAID PER ITEM 2106–HAUL AND STOCKPILE EXCESS MATERIAL (LV).

⑬ COMPACT TO 100% STANDARD PROCTOR DENSITY.



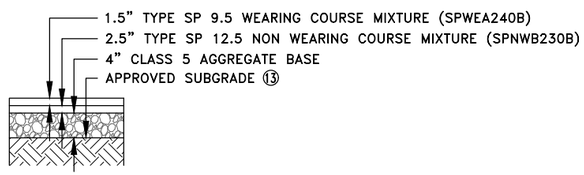
EXISTING PARKING LOT SECTION



PROPOSED PARKING LOT SECTION

7/5 PARKING LOT SECTION

GEORGE ENLOE PARK



8/5 PARKING LOT AND PATCHING SECTION

RUDY JOHNSON PARK

DATE	REVISION
3/8/22	ADDENDUM NO. 1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
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2022 STREET SURFACE IMPROVEMENT PROJECT

DETAILS

CITY OF ANOKA, MINNESOTA

SHEET 5 OF 33 SHEETS

AN393

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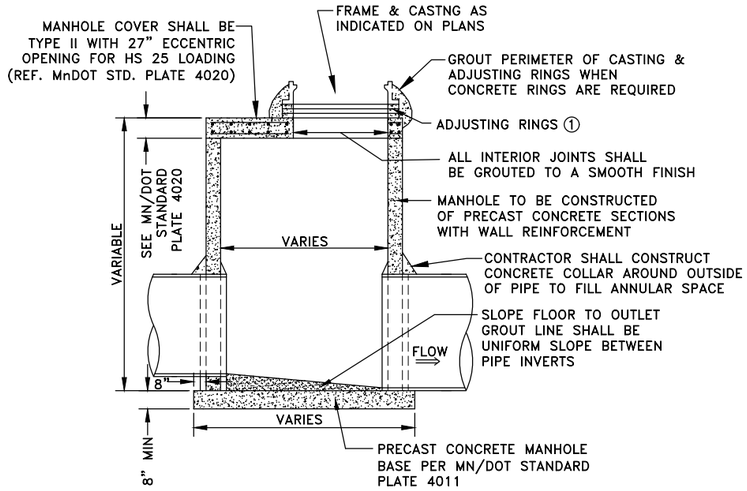
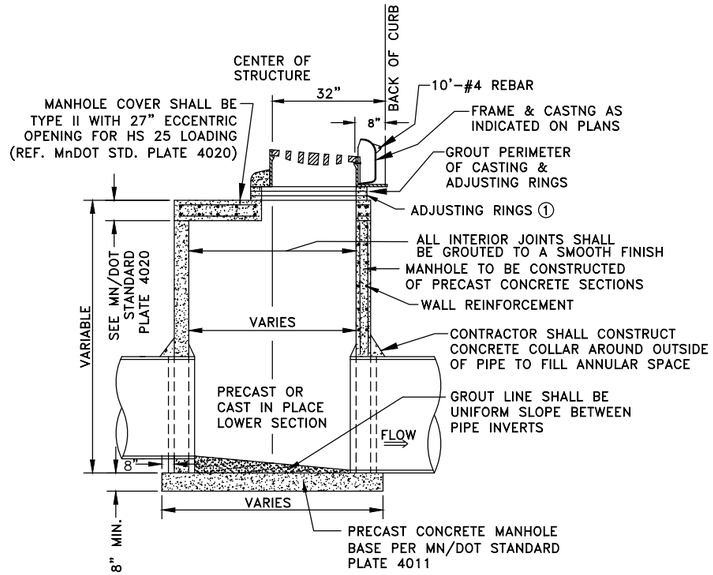


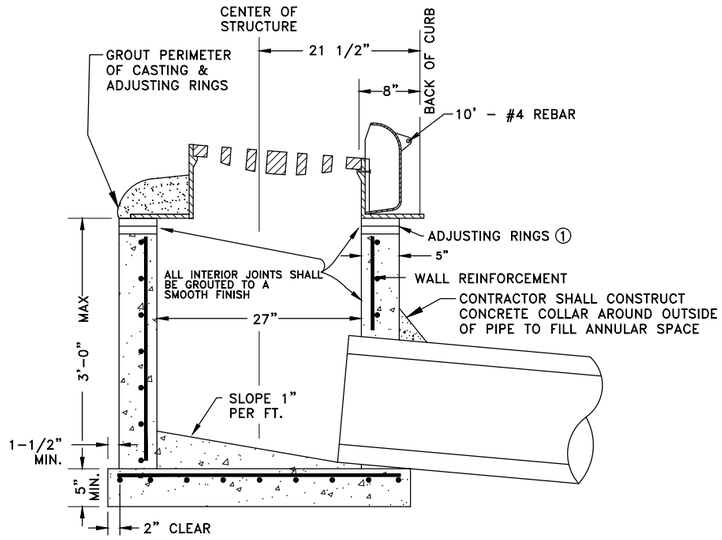
1/6 STANDARD SLAB–TOP MANHOLE

(STORM SEWER)
NO SCALE



2/6 STANDARD CATCH BASIN MANHOLE

NO SCALE



3/6 STANDARD CATCH BASIN

(REF. Mn/DOT STANDARD PLATE 4006 DESIGN H)
NO SCALE

REFERENCE NOTES:

① HIGH DENSITY POLYETHYLENE ADJUSTMENT RINGS SHALL BE USED FOR ALL STORM SEWER MANHOLES WITH SOLID LIDS (NON–INLET TYPE). ALL INLET TYPE STORM SEWER CASTINGS SHALL USE CONCRETE ADJUSTMENT RINGS. THE CONTRACTOR SHALL USE STANDARD AVAILABLE RING THICKNESSES THAT MINIMIZE THE NUMBER OF RINGS REQUIRED. A MAXIMUM OF 3 RINGS SHALL BE USED FOR ADJUSTMENT. THE MINIMUM ADJUSTMENT HEIGHT SHALL BE 4 INCHES AND THE MAXIMUM ADJUSTMENT HEIGHT SHALL BE 8 INCHES.

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

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2022 STREET SURFACE IMPROVEMENT PROJECT

DETAILS

CITY OF ANOKA, MINNESOTA

SHEET 6 OF 33 SHEETS

AN393

EXISTING STRUCTURE SUMMARY TABLE

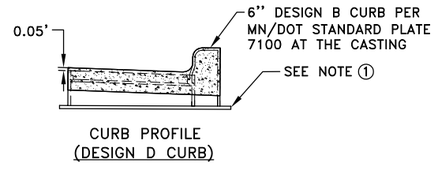
STRUCTURE NO.	REF. NOTES	STREET	STRUCTURE TYPE	APPROXIMATE ADJUSTMENT RING HEIGHT (INCHES)	PROPOSED NEENAH CASTING	PROPOSED RING TYPE
16-1	2,4	MCKINLEY STREET	STM/MH	14	R-1733	HDPE
16-2	3	MCKINLEY STREET	SAN/MH	11	R-1733	HDPE
16-3	2,9	MCKINLEY STREET	CB	N/A	N/A	N/A
16-4	2,4	MCKINLEY STREET	STM/MH	10	R-1733	HDPE
16-5	2,9	MCKINLEY STREET	CB	N/A	N/A	N/A
16-6	3,11	MCKINLEY STREET	SAN/MH	7	R-1733	HDPE
16-7	2,5,9	MCKINLEY STREET	CB	6	R-3250-DVSP	CONCRETE
16-8	2,4	MCKINLEY STREET	STM/MH	10	R-1733	HDPE
16-9	2,5,9	MCKINLEY STREET	CB	6	R-3250-DVSP	CONCRETE
16-10	3	MCKINLEY CIRCLE	SAN/MH	11	R-1733	HDPE
16-11	2,5,9	MCKINLEY STREET	CB	4	R-3250-DVSP	CONCRETE
16-12	3,11	MCKINLEY STREET	SAN/MH	12	R-1733	HDPE
16-13	2,4	MCKINLEY STREET	STM/MH	15	R-1733	HDPE
16-14	3,11	MCKINLEY STREET	SAN/MH	6	R-1733	HDPE
16-15	2,4,13	MCKINLEY STREET	STM/MH	8	R-1733	HDPE
16-16	2,5,9	MCKINLEY STREET	CB	4	R-3250-DVSP	CONCRETE
16-17	2,4	MCKINLEY STREET	STM/MH	12	R-1733	HDPE
16-18	2,5,9	MCKINLEY STREET	CB	5	R-3250-DVSP	CONCRETE
16-19	3,11	MCKINLEY STREET	SAN/MH	10	R-1733	HDPE
16-20	3,11	MCCANN AVENUE	SAN/MH	13	R-1733	HDPE
16-21	3,11,12	MCCANN AVENUE	SAN/MH	15 - EXISTING 3 - PROPOSED	R-1733	HDPE
16-22	3,16	MCCANN AVENUE	SAN/MH	6	R-1733	HDPE
16-23	3,11	MCCANN AVENUE	SAN/MH	9	R-1733	HDPE
16-24	3,11	MCCANN AVENUE	SAN/MH	9	R-1733	HDPE
16-25	3,11	MCCANN AVENUE	SAN/MH	9	R-1733	HDPE
16-26	3	RUM RIVER DRIVE	SAN/MH	11	R-1733	HDPE
17-1	2,4	MCKINLEY STREET	STM/MH	8	R-1733	HDPE
17-2	3,11,12	MCKINLEY STREET	SAN/MH	18 - EXISTING 6 - PROPOSED	R-1733	HDPE
17-3	2,5,9	BAILEY LANE	CB	3	R-3250-DVSP	CONCRETE
17-4	6,9,14,15	BAILEY LANE	CB	N/A	MN/DOT 790-2 MN/DOT 716	N/A
17-5	6,9,14,15	BAILEY LANE	CB	N/A	MN/DOT 790-2 MN/DOT 716	N/A
17-6	2,4	BAILEY LANE	STM/MH	20	R-1733	HDPE
17-7	2,4	RUM RIVER DRIVE	STM/MH	3 - EXISTING 6 - PROPOSED	R-1733-1	HDPE
17-8	3,11	RUM RIVER DRIVE	SAN/MH	11	R-1733	HDPE
17-9	3,11	RUM RIVER DRIVE	SAN/MH	6	R-1733	HDPE
17-10	3,11	RUM RIVER DRIVE	SAN/MH	7	R-1733	HDPE
17-11	3,11	RUM RIVER DRIVE	SAN/MH	8	R-1733	HDPE
17-12	3,11	BAILEY LANE	SAN/MH	6	R-1733	HDPE
17-13	5,6,7,9	RUM RIVER DRIVE	CB/MH	6	R-3250-DVSP	CONCRETE
17-14	5,6,7,9	RUM RIVER DRIVE	CB	6	R-3250-DVSP	CONCRETE
17-15	3,11	RUM RIVER DRIVE	SAN/MH	0 - EXISTING 3 - PROPOSED	R-1733-1	HDPE
17-16	3,16	RUM RIVER DRIVE	SAN/MH	11	R-1733	HDPE
18-1	3,11	RUM RIVER DRIVE	SAN/MH	4	R-1733	HDPE
18-2	6,9,14	RUM RIVER DRIVE	CB	N/A	MN/DOT 790-2 MN/DOT 716	N/A
18-3	3	RUM RIVER DRIVE	SAN/MH	6	R-1733	HDPE
18-4	6,9,14	RUM RIVER DRIVE	CB/MH	N/A	MN/DOT 790-2 MN/DOT 716	N/A
18-5	3	RUM RIVER DRIVE	SAN/MH	10	R-1733	HDPE
18-6	3,11	RUM RIVER DRIVE	SAN/MH	9	R-1733	HDPE
18-7	3,16	RUM RIVER DRIVE	SAN/MH	4	R-1733	HDPE

EXISTING STRUCTURE SUMMARY TABLE

STRUCTURE NO.	REF. NOTES	STREET	STRUCTURE TYPE	APPROXIMATE ADJUSTMENT RING HEIGHT (INCHES)	PROPOSED NEENAH CASTING	PROPOSED RING TYPE
19-1	3,16	RUM RIVER DRIVE	SAN/MH	5	R-1733	HDPE
19-2	3	RUM RIVER DRIVE	SAN/MH	4	R-1733	HDPE
19-3	3,12	RUM RIVER DRIVE	SAN/MH	24 - EXISTING 6 - PROPOSED	R-1733	HDPE
19-4	3	DUNHAM DRIVE	SAN/MH	9	R-1733	HDPE
19-5	3,11	DUNHAM DRIVE	SAN/MH	6	R-1733	HDPE
19-6	3,11	DUNHAM DRIVE	SAN/MH	9	R-1733	HDPE
19-7	2,5,9	RUM RIVER DRIVE	CB	3	R-3250-DVSP	CONCRETE
19-8	2,5,9	RUM RIVER DRIVE	CB	5	R-3250-DVSP	CONCRETE
19-9	2,4	RUM RIVER DRIVE	STM/MH	10	R-1733	HDPE
19-10	2,4	RUM RIVER DRIVE	STM/MH	16	R-1733	HDPE
19-11	3,11	RUM RIVER DRIVE	SAN/MH	7	R-1733	HDPE
19-12	2,4	WILSON STREET	STM/MH	10	R-1733	HDPE
19-13	2,5,9	WILSON STREET	CB	5	R-3250-DVSP	CONCRETE
19-14	3,11	WILSON STREET	SAN/MH	6	R-1733	HDPE
19-15	5,6,7,9	WILSON STREET	CB	7	R-3250-DVSP (4" FRAME)	CONCRETE
19-16	2,4	WILSON STREET	STM/MH	4	R-1733-1	HDPE
19-17	5,6,7,9	WILSON STREET	CB	6	R-3250-DVSP (4" FRAME)	CONCRETE
19-18	2,4	WILSON STREET	STM/MH	5	R-1733	HDPE
19-19	3,16	WILSON STREET	SAN/MH	4	R-1733	HDPE
20-1	2,5,9	RUM RIVER DRIVE	CB	4	R-3250-DVSP	CONCRETE
20-2	2,4	RUM RIVER DRIVE	STM/MH	9	R-1733	HDPE
20-3	3	RUM RIVER DRIVE	SAN/MH	7	R-1733	HDPE
20-4	2,5,9	RUM RIVER DRIVE	CB	5	R-3250-DVSP	CONCRETE
20-5	3,11	RUM RIVER DRIVE	SAN/MH	8	R-1733	HDPE
20-6	3	RUM RIVER DRIVE	SAN/MH	8	R-1733	HDPE
20-7	3	RUM RIVER DRIVE	SAN/MH	5	R-1733	HDPE
20-8	3,16	COOLIDGE STREET	SAN/MH	8	R-1733	HDPE
20-9	3,11	COOLIDGE STREET	SAN/MH	9	R-1733	HDPE
20-10	6,9,14	COOLIDGE STREET	CB/MH	N/A	MN/DOT 790-2 MN/DOT 716	N/A
20-11	6,9,14	ROSEBERRY PLACE	CB/MH	N/A	MN/DOT 790-2 MN/DOT 716	N/A
20-12	6,9,14	ROSEBERRY PLACE	CB	N/A	MN/DOT 790-2 MN/DOT 716	N/A
20-13	3,11	COOLIDGE STREET	SAN/MH	5	R-1733	HDPE
20-14	3,11	COOLIDGE STREET	SAN/MH	14	R-1733	HDPE
20-15	3,11,12	COOLIDGE STREET	SAN/MH	15 - EXISTING 3 - PROPOSED	R-1733	HDPE
20-16	2,9	COOLIDGE STREET	CB/MH	N/A	N/A	N/A
20-17	3,11	COOLIDGE STREET	SAN/MH	9	R-1733	HDPE
20-18	3,11	ROSEBERRY PLACE	SAN/MH	5	R-1733	HDPE
20-19	3,11	ROSEBERRY PLACE	SAN/MH	3	R-1733	HDPE
20-20	3,16	RUM RIVER DRIVE	SAN/MH	6	R-1733	HDPE
20-21	3	RUM RIVER DRIVE	SAN/MH	2	R-1733-1	HDPE
21-1	3	RANDAL DRIVE	SAN/MH	9	R-1733	HDPE
21-2	3,16	RANDAL DRIVE	SAN/MH	2 - EXISTING 5 - PROPOSED	R-1733-1	HDPE

CASTING ASSEMBLY SUMMARY

STRUCTURE TYPE	MN/DOT RING CASTING NUMBER	MN/DOT CURB BOX CASTING NUMBER	MN/DOT GRATE OR COVER CASTING NUMBER	NEENAH CASTING NUMBER	CASTING QUANTITY
SANITARY SEWER MANHOLE	700-7	N/A	N/A	R-1733	48
SANITARY SEWER MANHOLE	700-4	N/A	N/A	R-1733-1	3
STORM SEWER MANHOLE	700-7	N/A	N/A	R-1733	14
STORM SEWER MANHOLE	700-4	N/A	N/A	R-1733-1	2
CATCH BASIN	N/A	823A	816	R-3250-DVSP	13
CATCH BASIN	N/A	823A	816	R-3250-DVSP (4" FRAME)	2
CATCH BASIN	790-2	N/A	716	N/A	7
FRENCH DRAIN	N/A	N/A	N/A	R-2501-A	5
				TOTAL	94



CURB PROFILE
(DESIGN D CURB)

GENERAL NOTES:

1. ALL SANITARY SEWER STRUCTURES WILL REMAIN IN PLACE. UNLESS NOTED, DO NOT DISTURB.

REFERENCE NOTES:

① GROUT PERIMETER OF CATCH BASIN AND ADJUSTING RINGS PER MN/DOT STANDARD PLATE 4026.

② STORM SEWER STRUCTURE TO REMAIN IN PLACE. UNLESS NOTED, DO NOT DISTURB. CONTRACTOR SHALL GROUT THE DOGHOUSES AND MANHOLE WALLS FOR ALL EXISTING STORM SEWER STRUCTURES DESIGNATED TO REMAIN IN PLACE AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID PER ITEM 2506–GROUT CATCH BASIN OR MANHOLE.

③ THE CONTRACTOR SHALL REMOVE THE SANITARY SEWER CASTING AND RINGS AND REPLACE THEM WITH A NEW CASTING AND HDPE ADJUSTING RINGS. REMOVAL OF THE CASTING AND RINGS SHALL BE PAID PER ITEM 2104–REMOVE CASTING AND THE NEW CASTING AND RINGS SHALL BE PAID PER ITEM 2506–CASTING ASSEMBLY. SANITARY SEWER MANHOLE CASTINGS SHALL BE NEENAH R–1733 OR APPROVED EQUAL. SANITARY SEWER MANHOLE CASTINGS SHALL HAVE A NEOPRENE GASKET AND GROOVE FOR WATERTIGHT APPLICATION. THE WORDS "SANITARY SEWER" SHALL BE IMPRINTED ON THE COVER. THE CONTRACTOR SHALL USE STANDARD AVAILABLE RING THICKNESSES THAT MINIMIZE THE NUMBER OF RINGS REQUIRED. CASTINGS SHALL BE INSTALLED TO THE TOLERANCES SHOWN ON (1/8).

④ THE CONTRACTOR SHALL REMOVE THE STORM SEWER CASTING AND RINGS AND REPLACE THEM WITH A NEW CASTING AND HDPE ADJUSTING RINGS. REMOVAL OF THE CASTING AND RINGS SHALL BE PAID PER ITEM 2104–REMOVE CASTING AND THE NEW CASTING AND RINGS SHALL BE PAID PER ITEM 2506–CASTING ASSEMBLY. STORM SEWER MANHOLE CASTINGS SHALL BE NEENAH R–1733 OR APPROVED EQUAL. COVER SHALL BE IN ACCORDANCE WITH MN/DOT STANDARD PLATE 4110, COVER CASTING 716. THE WORDS "STORM SEWER" SHALL BE IMPRINTED ON THE COVER. THE CONTRACTOR SHALL USE STANDARD AVAILABLE RING THICKNESSES THAT MINIMIZE THE NUMBER OF RINGS REQUIRED. CASTINGS SHALL BE INSTALLED TO THE TOLERANCES SHOWN ON (1/8).

⑤ THE CONTRACTOR SHALL REMOVE THE STORM SEWER INLET CASTING AND RINGS AND REPLACE THEM WITH A NEW CASTING AND CONCRETE ADJUSTING RINGS. REMOVAL OF THE EXISTING CASTING AND RINGS SHALL BE PAID PER ITEM 2104–REMOVE CASTING AND THE NEW CASTING AND RINGS SHALL BE PAID PER ITEM 2506–CASTING ASSEMBLY. NEW CASTINGS SHALL BE AS SHOWN IN THE EXISTING STRUCTURE SUMMARY TABLE OR APPROVED EQUAL. GROUTING OF THE ADJUSTING RINGS SHALL BE INCIDENTAL. REMOVAL AND RECONSTRUCTION OF THE CURB AT THE CATCH BASIN SHALL BE PER (1/7).

⑥ CONTRACTOR SHALL REMOVE THE CATCH BASIN OR MANHOLE. THIS WORK SHALL BE PAID PER ITEM 2104–REMOVE MANHOLE OR CATCH BASIN.

⑦ CONTRACTOR SHALL CONSTRUCT CATCH BASIN OR MANHOLE PER (1/6), (2/6) OR (3/6). SEE SHEETS 26–32 FOR ADDITIONAL DETAILS. GROUTING OF THE ADJUSTING RINGS SHALL BE INCIDENTAL.

⑧ ALL AREAS DISTURBED BY CATCH BASIN REPLACEMENT SHALL BE RESTORED WITH SEED AND FERTILIZER AND STABILIZED WITH HYDRAULIC BONDED FIBER MATRIX AT THE RATES SHOWN ON SHEET 2 AND PER (1/5). THIS WORK SHALL BE PAID PER ITEM 2575–SITE RESTORATION. SEE THE PROJECT MANUAL FOR ADDITIONAL INFORMATION.

⑨ CONTRACTOR SHALL PROTECT INLET FROM SEDIMENT. THIS WORK SHALL BE PAID PER ITEM 2573–STORM DRAIN INLET PROTECTION.

⑩ CURB AT CATCH BASINS SHALL BE PAID PER ITEM 2531–CONCRETE CURB AND GUTTER DESIGN B618.

⑪ RESTORE SANITARY SEWER MANHOLE SURFACE AS DIRECTED BY ENGINEER. SEE DIVISION 2 OF THE PROJECT MANUAL FOR ADDITIONAL INFORMATION. PAYMENT FOR MANHOLE RESTORATION SHALL BE PER ITEM 2506–MANHOLE SURFACE RESTORATION.

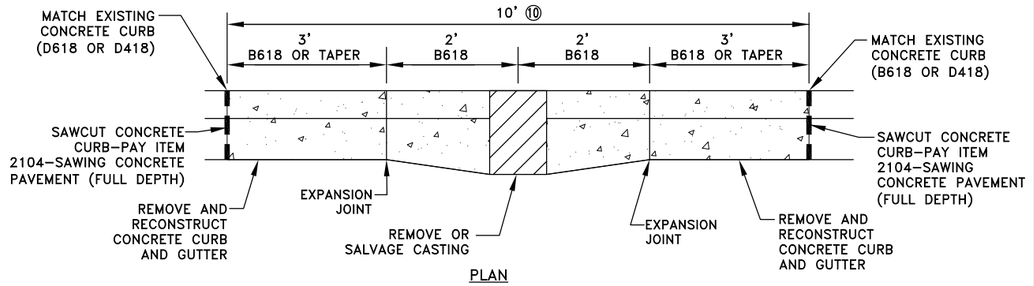
⑫ CONTRACTOR SHALL ADJUST MANHOLES WHEN THE ADJUSTMENT RING HEIGHT IS 15" OR GREATER. ADJUSTMENT SHALL INCLUDE SALVAGING THE EXISTING CONCRETE CONE SECTION, FURNISHING AND INSTALLING THE APPROPRIATE MANHOLE RISER SECTION AND REINSTALLING THE CONCRETE CONE SECTION. MANHOLE RISERS SHALL BE 48" DIAMETER SECTIONS THAT MEET THE REQUIREMENTS OF MN/DOT STANDARD PLATE 4007. THIS WORK SHALL BE PAID PER ITEM 2506–CONSTRUCT SANITARY STRUCTURE DESIGN 4007 (LIN FT).

⑬ ROTATE MANHOLE COVER 180° SO THE CASTING IS OUT OF THE CURB. THIS WORK SHALL BE INCIDENTAL.

⑭ CONTRACTOR SHALL CONSTRUCT CATCH BASIN PER MN/DOT STANDARD PLATE 4021. CASTING SHALL BE PRECAST IN THE STRUCTURE AS SHOWN ON MN/DOT STANDARD PLATE 4021. STRUCTURE SHALL BE PAID PER ITEM 2506–CONSTRUCT DRAINAGE STRUCTURE DESIGN 4021 AND THE CASTING SHALL BE PAID PER ITEM 2506–CASTING ASSEMBLY. GROUTING OF THE DOGHOUSES AND MANHOLE JOINTS SHALL BE INCIDENTAL.

⑮ THE BASE AND LOWER WALL SECTION SHALL BE CONSTRUCTED AS ONE STRUCTURE FOR STRUCTURES 17–4 AND 17–5.

⑯ CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING MANHOLE CONE SECTION. THE NEW CONE SHALL BE TYPE B AND SHALL MEET THE REQUIREMENTS OF MN/DOT STANDARD PLATE 4005. THIS WORK SHALL BE PAID PER ITEM 2506–CONSTRUCT SANITARY STRUCTURE DESIGN 4007 (EACH).



PLAN

(1/7) CATCH BASIN CASTING RECONSTRUCTION ⑧

NO SCALE

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CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

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DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763–427–5860 FAX 763–427–0520
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2022 STREET SURFACE IMPROVEMENT PROJECT

STRUCTURE SUMMARY TABLE AND DETAILS

CITY OF ANOKA, MINNESOTA

SHEET 7 OF 33 SHEETS

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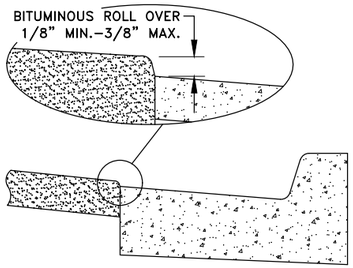
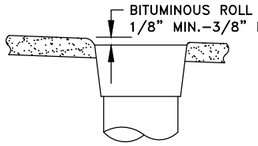
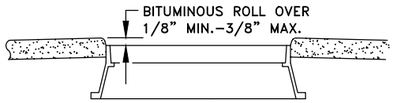


PAVING AT CURB

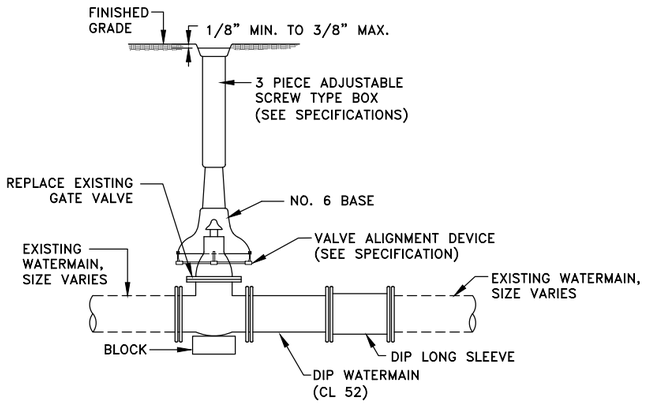


PAVING AT VALVE BOX



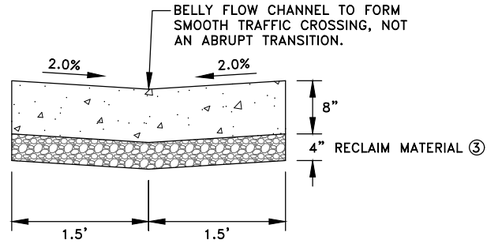
PAVING AT MANHOLE

1/8 PAVING DETAILS



NOTE:
CONTRACTOR SHALL USE A VALVE STEM ALIGNMENT TUBE TOOL TO MAINTAIN VERTICAL ALIGNMENT WHEN BACKFILLING THE VALVE BONNET AND VALVE BOX ASSEMBLY. THE ALIGNMENT TUBE SHALL CONSIST OF METAL PIPE WITH A SQUARE NUT RECEIVER SECURELY FASTENED TO THE END FOR PLACEMENT ON THE VALVE OPERATING NUT.

2/8 TYPICAL VALVE REPLACEMENT AND VALVE BOX INSTALLATION
NO SCALE



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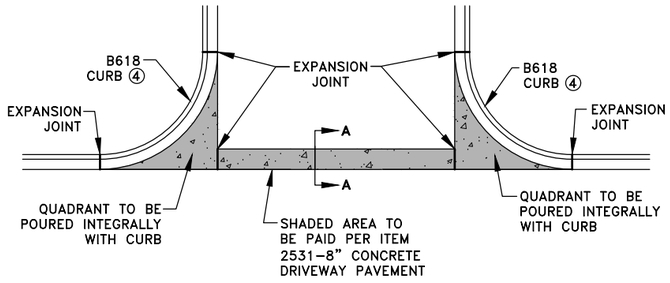

PLAN VIEW

4/8 CONCRETE VALLEY GUTTER ①
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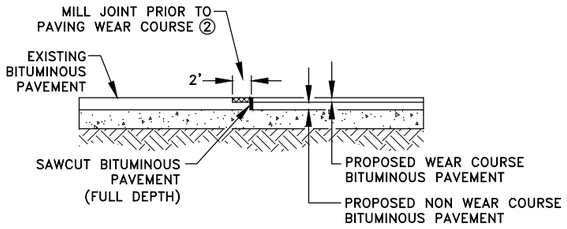

3/8 WEAR COURSE JOINT MILLING

REFERENCE NOTES:
① CONCRETE VALLEY GUTTERS SHALL BE CONSTRUCTED IN TWO PHASES TO ALLOW FOR TRAFFIC TO PASS. CONTRACTOR SHALL PROTECT CONCRETE WITH BARRICADES AND FLASHERS AS NECESSARY FOR A MINIMUM OF 7 DAYS PRIOR TO ALLOWING TRAFFIC ON THE NEW CONCRETE.
② MILLING DEPTH SHALL MATCH THE BITUMINOUS WEAR COURSE THICKNESS.
③ PLACEMENT OF RECLAIM MATERIAL SHALL BE INCIDENTAL.
④ TIPOUT CURB AS NECESSARY TO PROMOTE DRAINAGE.

DATE	REVISION

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CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

DETAILS

CITY OF ANOKA, MINNESOTA

SHEET 8 OF 33 SHEETS

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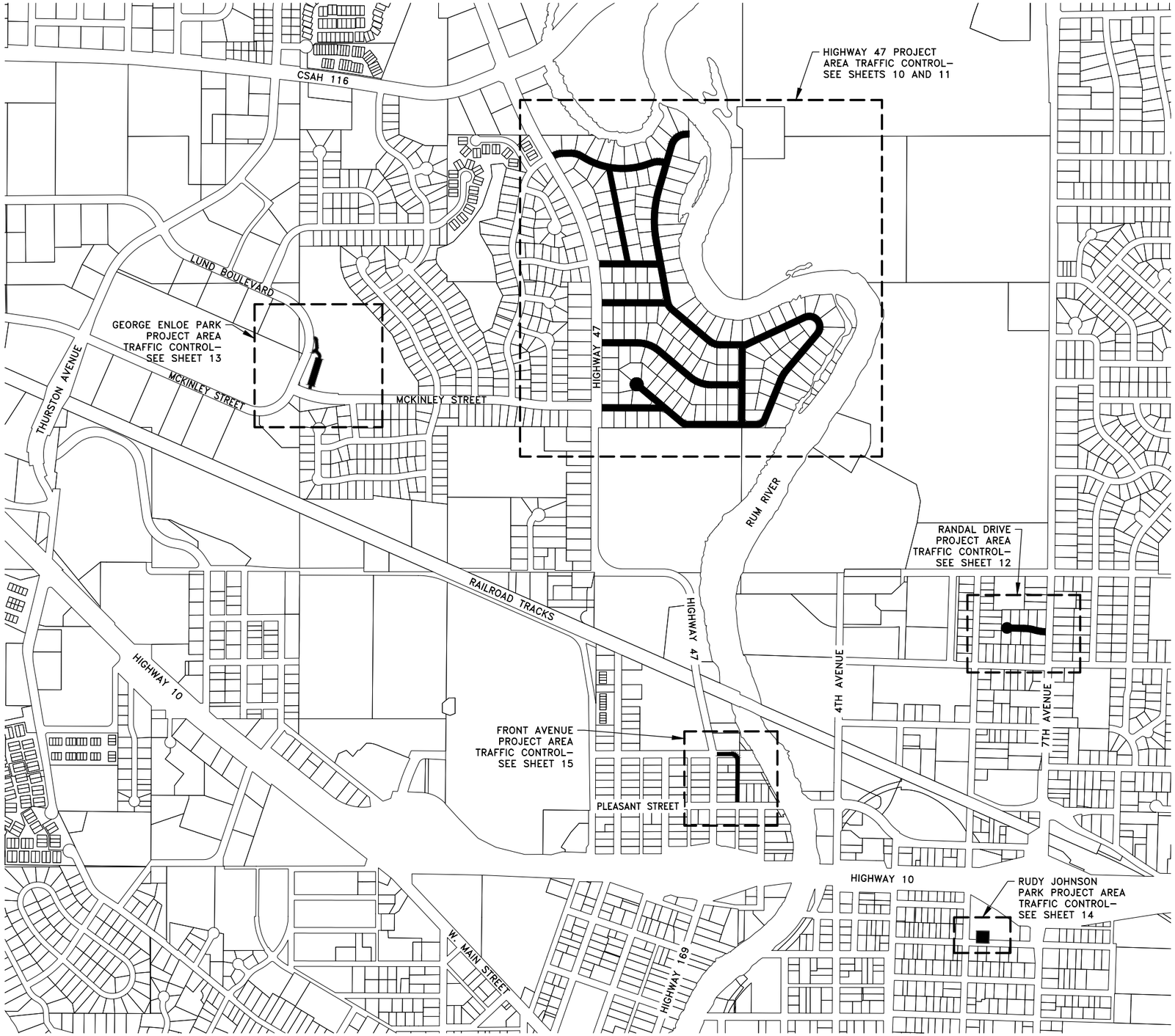

LEGEND

STREET SURFACE IMPROVEMENT PROJECT AREAS

GENERAL NOTES FOR SHEETS 9–15:

1. ALL CONTRACTOR TRAFFIC WITHIN THE CITY OF ANOKA SHALL BE LIMITED TO THE PROJECT AREA, DESIGNATED HAUL ROUTES, APPROVED CITY COLLECTOR STREETS OR COUNTY AND STATE HIGHWAYS.
2. SEE SHEETS 10–11 FOR HIGHWAY 47 PROJECT AREA TRAFFIC CONTROL PHASING.
3. THE TRAFFIC CONTROL DEPICTED ON SHEETS 9–15 IS CONSIDERED THE MINIMUM TRAFFIC CONTROL REQUIRED TO COMPLETE THE CONSTRUCTION IN THE REQUIRED PHASES. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE A SAFE WORK ZONE AT ALL TIMES. THE TRAFFIC CONTROL PHASES SHOWN DO NOT DEPICT TRAFFIC CONTROL THAT IS REQUIRED FOR CONSTRUCTION OF THE BITUMINOUS WEAR COURSE. CONTRACTOR SHALL PROVIDE LAYOUTS FOR APPROVAL BY THE ENGINEER FOR THESE WORK ITEMS. ALL TRAFFIC CONTROL REQUIRED TO COMPLETE THIS PROJECT SHALL BE PAID PER ITEM 2563–TRAFFIC CONTROL.
4. ALL NON STANDARD TRAFFIC CONTROL SIGNS ON SHEETS 10–15 SHALL HAVE 6" SERIES C LETTERING.
5. ALL TEMPORARY TRAFFIC CONTROL SIGNS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED ON TWO PERMANENT POSTS. POSTS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT, OR UNTIL NO LONGER NEEDED, AND ALL DISTURBED AREAS SHALL BE RESTORED.
6. ALL SIGNS SHALL BE REMOVED WITHIN 24 HOURS AFTER THEY ARE NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
7. FULL ACCESS AT ALL DRIVEWAYS SHALL BE MAINTAINED AND REMAIN FULLY OPERATIONAL AT ALL TIMES. DRIVEWAYS WITHIN THE WORK ZONE MAY BE CLOSED FOR A SHORT PERIOD OF TIME FOR REMOVALS, UTILITY CONSTRUCTION AND PAVEMENT CONSTRUCTION. CLOSURE OF ALL DRIVEWAYS SHALL BE COORDINATED WITH THE PROPERTY OWNER AND CITY. AFTER REMOVAL OF THE PAVEMENT ADJACENT TO THE DRIVEWAYS IN THE WORK ZONE, THE CONTRACTOR SHALL IMMEDIATELY RAMP THE MATCH POINTS WITH CLASS 5 AGGREGATE BASE OR BITUMINOUS MILLINGS. ALL LABOR, MATERIAL AND WORK REQUIRED TO MAINTAIN ACCESS SHALL BE INCIDENTAL. CONTRACTOR SHALL ALSO IMMEDIATELY RAMP DRIVEWAYS AND ALLOW PROPERTY OWNERS ACCESS TO THEIR PROPERTY THROUGH THEIR DRIVEWAYS AS SOON AS THE CONCRETE HAS CURED.

N

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DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

OVERALL TRAFFIC CONTROL PLAN

CITY OF ANOKA, MINNESOTA

SHEET 9 OF 33 SHEETS

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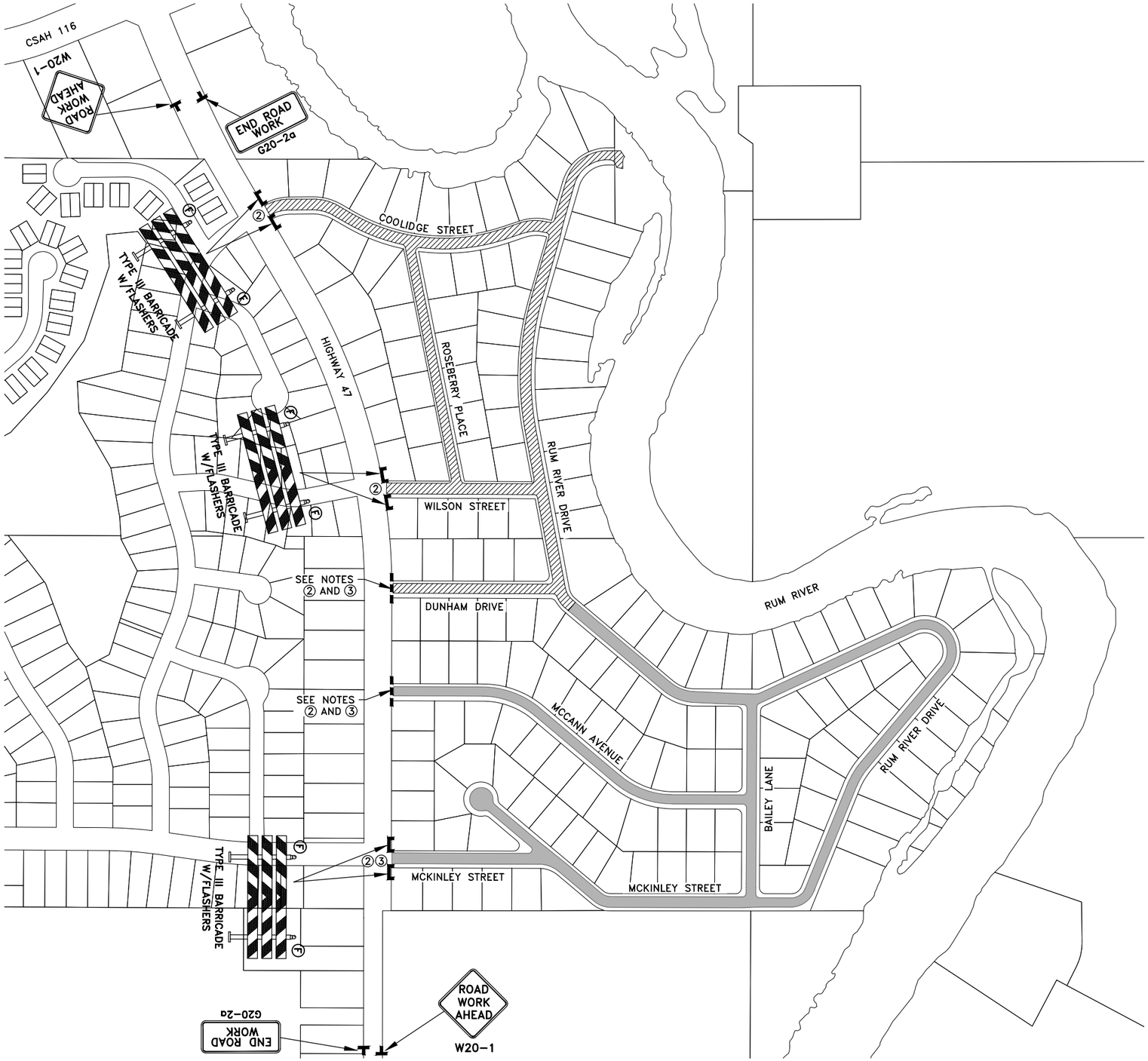

LEGEND

PHASE 1 WORK ZONE

EXISTING PAVEMENT TO REMAIN ①

REFERENCE NOTES:

① PAVEMENT SHALL REMAIN UNTIL THE BITUMINOUS NON WEARING COURSE IS CONSTRUCTED IN PHASE 1.

② ANY WORK REQUIRED IN THE RIGHT-OF-WAY OF HIGHWAY 47 WILL REQUIRE A PERMIT FROM MN/DOT. IF ANY LANE CLOSURES ARE REQUIRED, THEY WILL ONLY BE ALLOWED DURING THE HOURS OF 9:00 A.M. AND 2:30 P.M. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TRAFFIC CONTROL, FOR THE LANE CLOSURE, IN THE MN/DOT RIGHT-OF-WAY BETWEEN THE HOURS OF 2:30 P.M. AND 9:00 A.M. NO ADDITIONAL PAYMENT WILL BE MADE IF TRAFFIC CONTROL LAYOUTS ARE NEEDED TO COMPLETE THE WORK.

③ AS PART OF THE MN/DOT HIGHWAY 10 PROJECT, MN/DOT WILL BE PLACING A TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF HIGHWAY 47 AND MCKINLEY STREET. IN ADDITION TO THE TRAFFIC SIGNAL, DUNHAM DRIVE AND MCCANN AVENUE WILL BE CLOSED AT HIGHWAY 47. THE SIGNAL AND THE CLOSURES ARE EXPECTED TO BE IN PLACE BY MAY 1, 2022.

N

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SCALE IN FEET

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN-PHASE 1

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 10 OF 33 SHEETS

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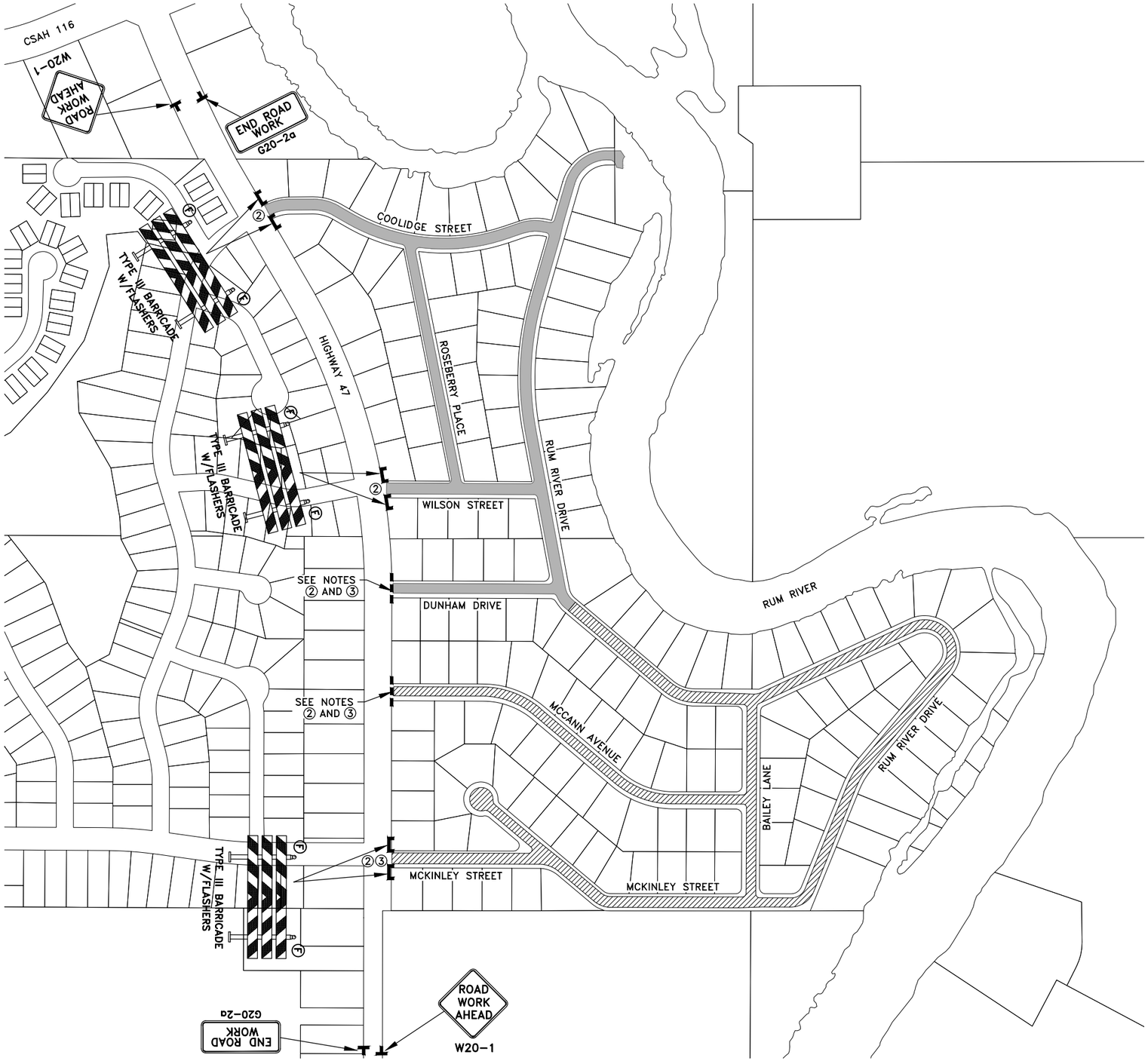

LEGEND

PHASE 2 WORK ZONE ①

BITUMINOUS NON WEAR COURSE

REFERENCE NOTES:

① PAVEMENT SHALL NOT BE RECLAIMED IN THE PHASE 2 WORK ZONE UNTIL THE BITUMINOUS NON WEARING COURSE HAS BEEN CONSTRUCTED IN THE PHASE 1 WORK ZONE SHOWN ON SHEET 10.

② ANY WORK REQUIRED IN THE RIGHT-OF-WAY OF HIGHWAY 47 WILL REQUIRE A PERMIT FROM MN/DOT. IF ANY LANE CLOSURES ARE REQUIRED, THEY WILL ONLY BE ALLOWED DURING THE HOURS OF 9:00 A.M. AND 2:30 P.M. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TRAFFIC CONTROL, FOR THE LANE CLOSURE, IN THE MN/DOT RIGHT-OF-WAY BETWEEN THE HOURS OF 2:30 P.M. AND 9:00 A.M. NO ADDITIONAL PAYMENT WILL BE MADE IF TRAFFIC CONTROL LAYOUTS ARE NEEDED TO COMPLETE THE WORK.

③ AS PART OF THE MN/DOT HIGHWAY 10 PROJECT, MN/DOT WILL BE PLACING A TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF HIGHWAY 47 AND MCKINLEY STREET. IN ADDITION TO THE TRAFFIC SIGNAL, DUNHAM DRIVE AND MCCANN AVENUE WILL BE CLOSED AT HIGHWAY 47. THE SIGNAL AND THE CLOSURES ARE EXPECTED TO BE IN PLACE BY MAY 1, 2022.

N

200 0 200 400
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2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN-PHASE 2

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 11 OF 33 SHEETS

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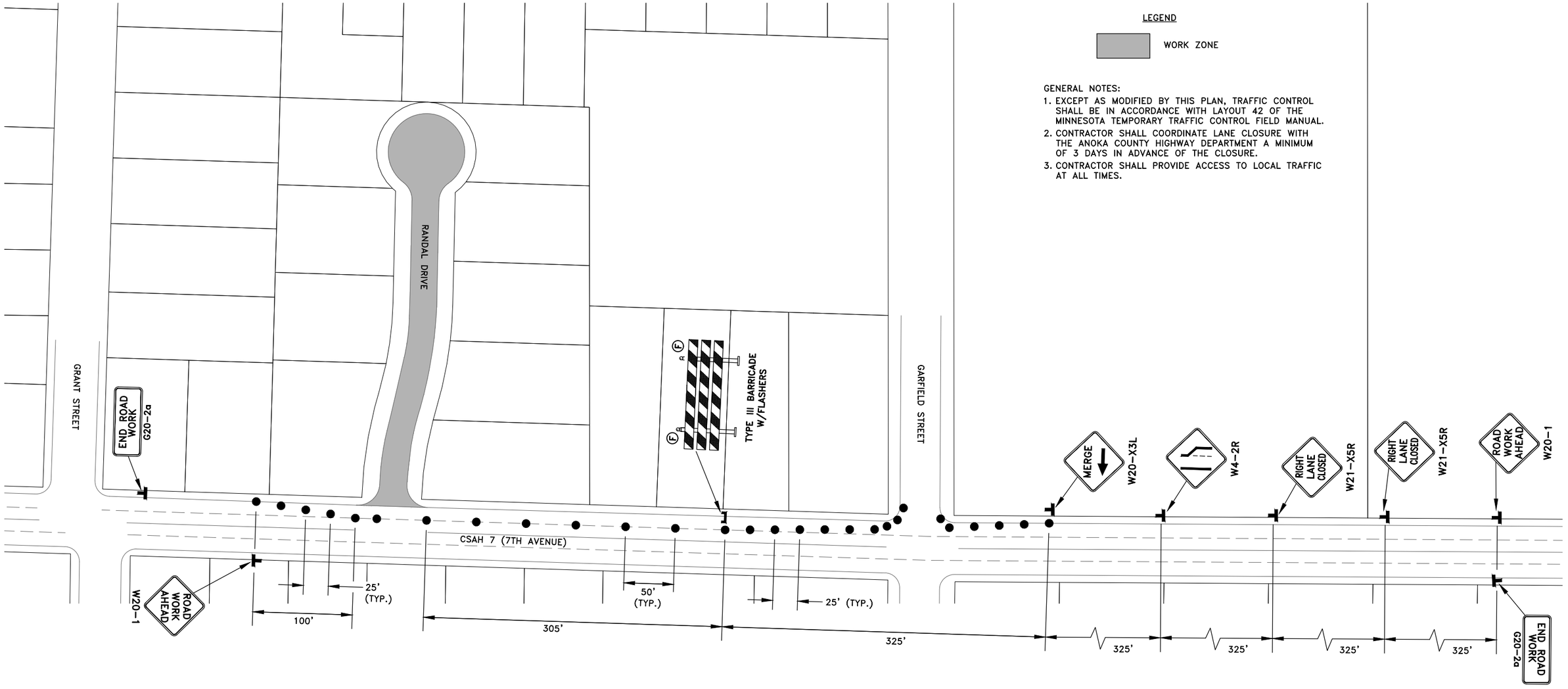

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2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN

RANDAL DRIVE
CITY OF ANOKA, MINNESOTA

SHEET 12 OF 33 SHEETS

AN393

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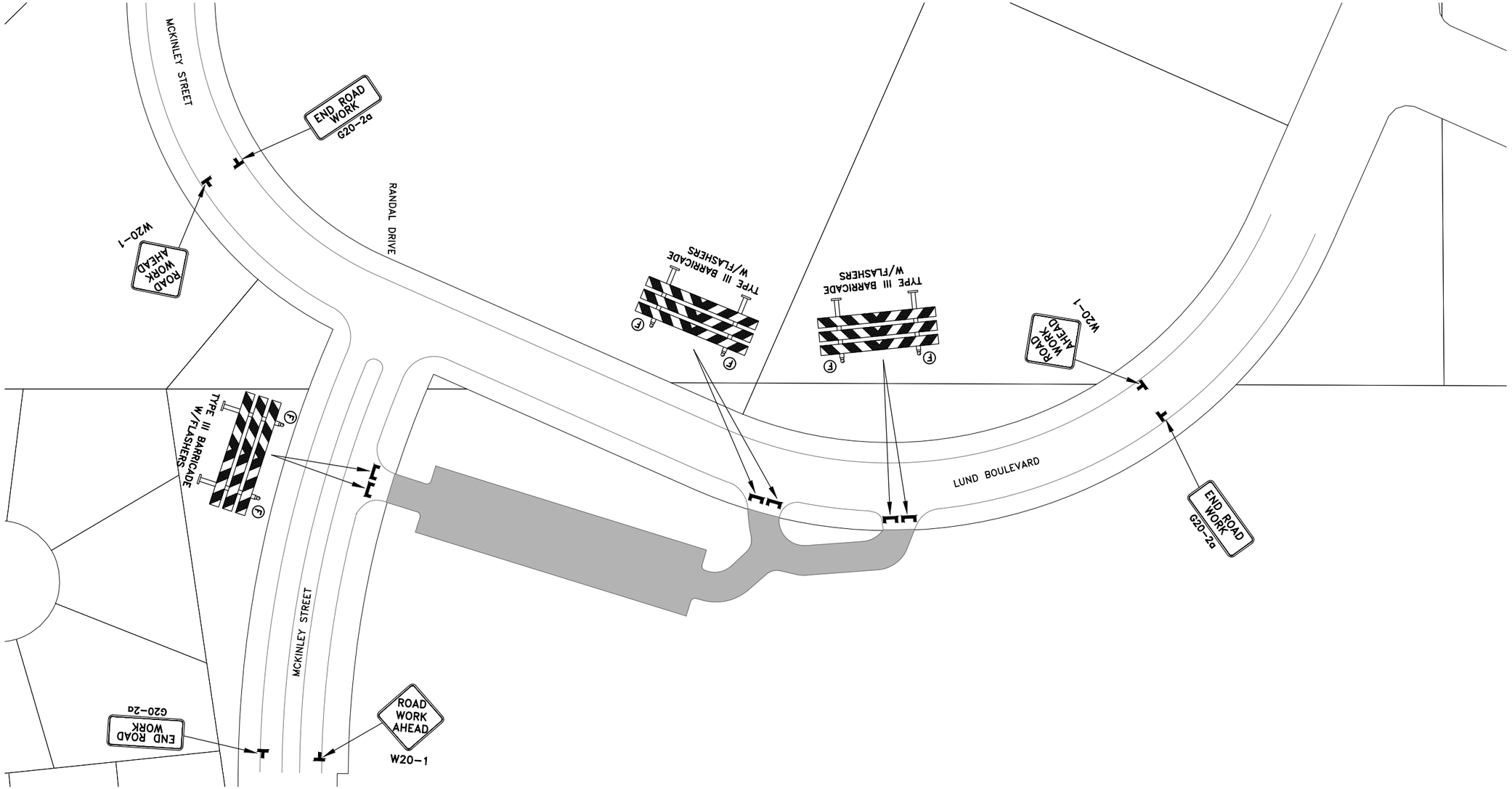

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN

GEORGE ENLOE PARK
CITY OF ANOKA, MINNESOTA

SHEET 13 OF 33 SHEETS

AN393

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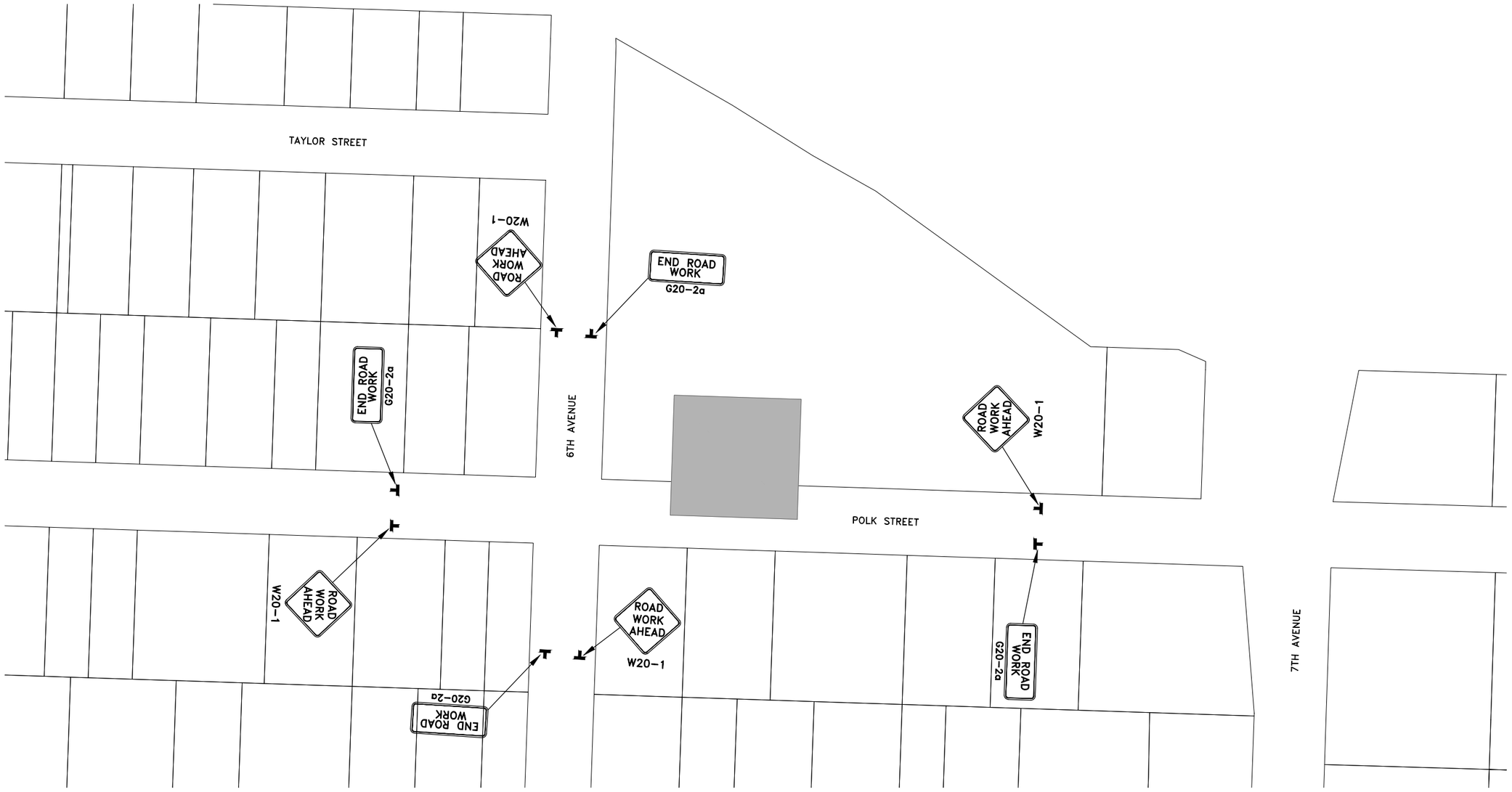

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2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN

RUDY JOHNSON PARK
CITY OF ANOKA, MINNESOTA

SHEET 14 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:36am
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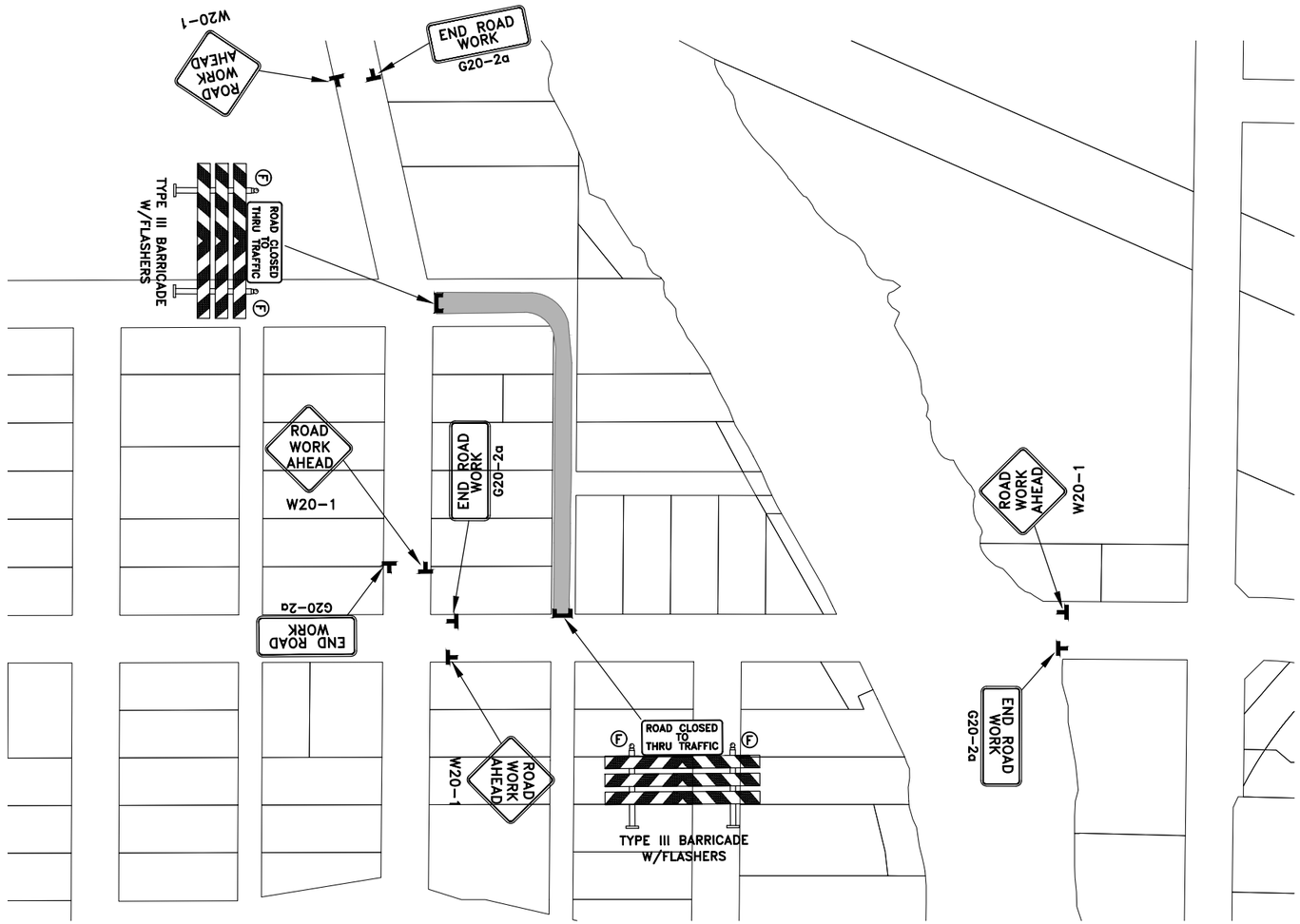

LEGEND

WORK ZONE

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SCALE IN FEET

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

TRAFFIC CONTROL PLAN

FRONT AVENUE AND MARTIN STREET
CITY OF ANOKA, MINNESOTA

SHEET 15 OF 33 SHEETS

AN393

Mar 04, 2022 – 8:37am
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SEE SHEET 19

SEE SHEET 17

GENERAL NOTES:

1. EXISTING WATERMAIN MATERIAL IS DUCTILE IRON.

REFERENCE NOTES:

① REMOVE VALVE AND VALVE BOX. THIS WORK SHALL BE INCIDENTAL.

② CONTRACTOR SHALL FURNISH AND INSTALL A NEW VALVE AND VALVE BOX PER (2/8). THIS WORK SHALL BE PAID PER ITEM 2504– __" GATE VALVE AND BOX. CONNECTING TO THE WATERMAIN ADJACENT TO THE VALVE SHALL BE PAID PER ITEM 2504–CONNECT TO EXISTING WATERMAIN. EACH VALVE WILL ONLY INCLUDE PAYMENT FOR ONE "CONNECT TO EXISTING WATERMAIN". DUCTILE IRON PIPE AND FITTINGS NEEDED TO MAKE THE CONNECTION SHALL BE INCIDENTAL.

③ SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

(X–X) STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.

HIGHWAY 47

SAWCUT 32LF AND MILL 7 SY BITUMINOUS PAVEMENT ③

6" GATE VALVE ①②

SAWCUT 45LF AND MILL 10 SY BITUMINOUS PAVEMENT ③

8" GATE VALVE ①②

6" GATE VALVE ①②

6" GATE VALVE ①②

8" GATE VALVE ①②

SEE SHEET 26 FOR CUL–DE–SAC DETAILS

RUM RIVER DRIVE

MCCANN AVENUE

MCKINLEY CIRCLE

MCKINLEY STREET

MCKINLEY STREET

B–6 B–7 B–10 B–11 C–5 C–8 C–9

16–1 16–2 16–3 16–4 16–5 16–6 16–7 16–8 16–9 16–10 16–11 16–12 16–13 16–14 16–15 16–16 16–17 16–18 16–19 16–20 16–21 16–22 16–23 16–24 16–25 16–26

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SCALE 50 0 50 100 IN FEET

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 16 OF 33 SHEETS

AN393

Mar 04, 2022 – 8:38am
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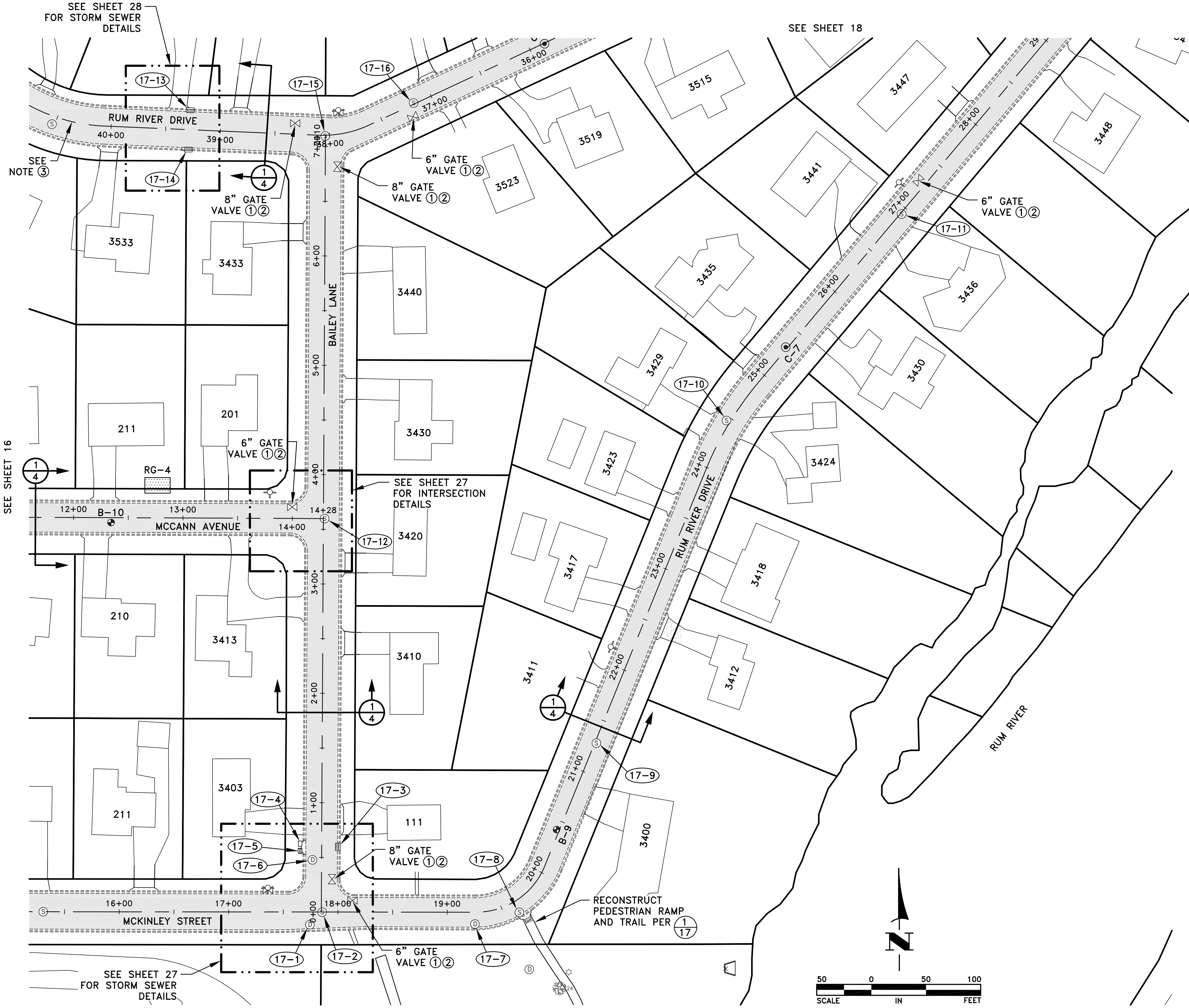

GENERAL NOTES:

1. EXISTING WATERMAIN MATERIAL IS DUCTILE IRON.

REFERENCE NOTES:

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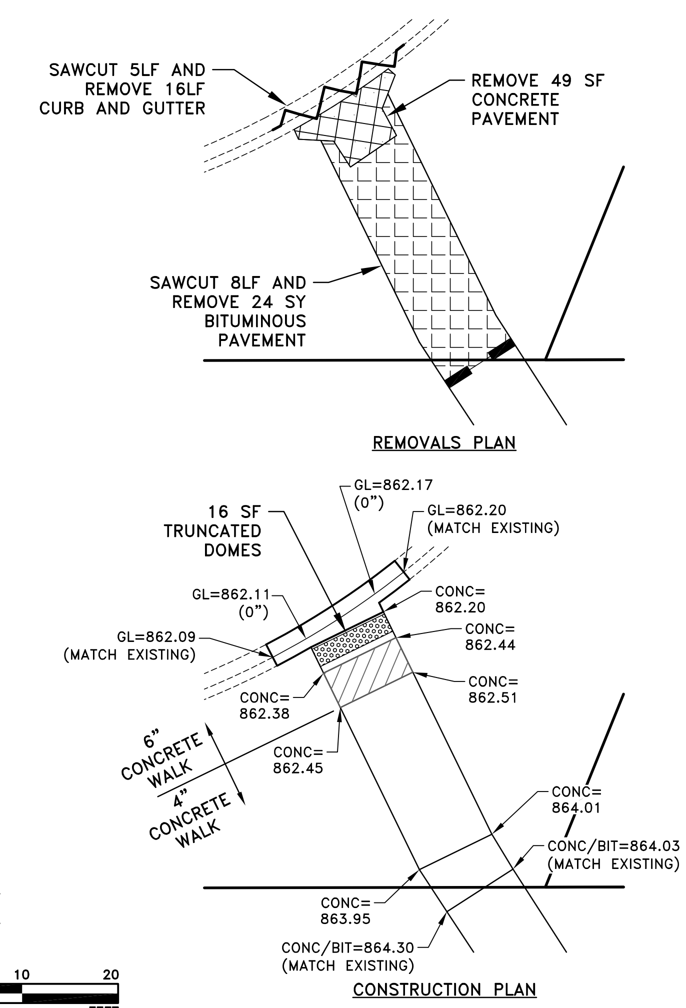
② CONTRACTOR SHALL FURNISH AND INSTALL A NEW VALVE AND VALVE BOX PER 2/8. THIS WORK SHALL BE PAID PER ITEM 2504-__" GATE VALVE AND BOX. CONNECTING TO THE WATERMAIN ADJACENT TO THE VALVE SHALL BE PAID PER ITEM 2504-CONNECT TO EXISTING WATERMAIN. EACH VALVE WILL ONLY INCLUDE PAYMENT FOR ONE "CONNECT TO EXISTING WATERMAIN". DUCTILE IRON PIPE AND FITTINGS NEEDED TO MAKE THE CONNECTION SHALL BE INCIDENTAL.

③ SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER 3/8.

④ SEE SHEETS RG-1 THROUGH RG-7 FOR TYPICAL RAIN GARDEN CONSTRUCTION.

LEGEND

- BITUMINOUS PAVEMENT RECLAMATION AREA
- (X-X) STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.
- PROPOSED LANDING AREA-MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS
- RG-X PROPOSED RAIN GARDEN LOCATION ④



1/17 PEDESTRIAN RAMP CONSTRUCTION DETAILS

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

AN393

Mar 04, 2022 – 3:53pm
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GENERAL NOTES:

1. EXISTING WATERMAIN MATERIAL IS DUCTILE IRON.

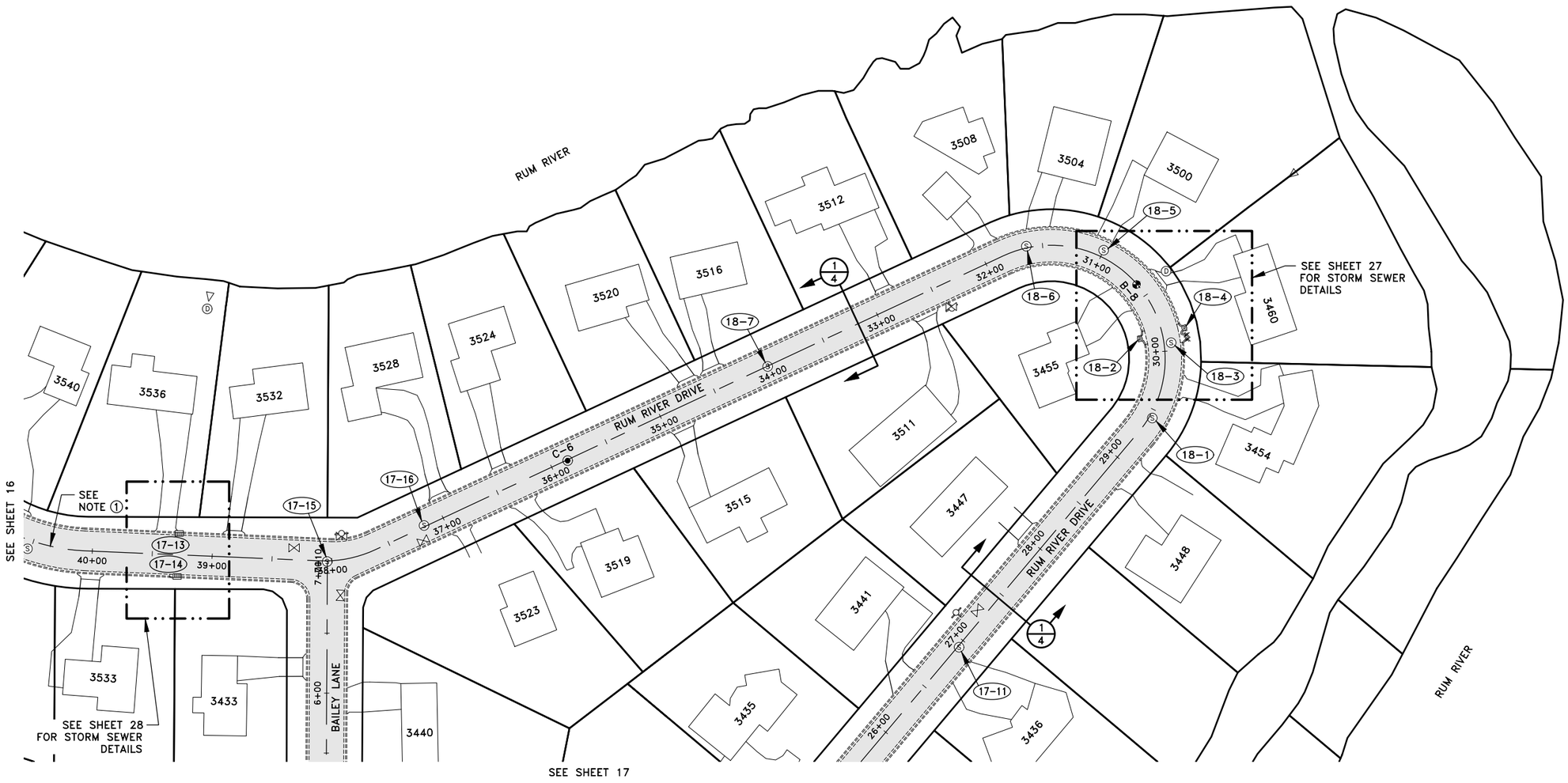
REFERENCE NOTES:

(1) SPECIAL SECTION FROM STA 37+62 TO STA 48+50 ON RUM RIVER DRIVE. SEE SHEET 28 FOR ADDITIONAL DETAILS.

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

(X–X) STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.



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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 18 OF 33 SHEETS

AN393

Mar 04, 2022 – 8:44am
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GENERAL NOTES:

1. EXISTING WATERMAIN MATERIAL IS DUCTILE IRON.

REFERENCE NOTES:

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③ SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).

④ SPECIAL SECTION FROM STA 37+62 TO STA 48+50 ON RUM RIVER DRIVE. SEE SHEET 28 FOR ADDITIONAL DETAILS.

⑤ SPECIAL SECTION FROM STA 0+28 TO STA 6+00 ON ROSEBERRY PLACE. SEE SHEET 30 FOR ADDITIONAL DETAILS.

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

(X-X) STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 19 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:46am
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GENERAL NOTES:

1. EXISTING WATERMAIN MATERIAL IS DUCTILE IRON.

REFERENCE NOTES:

① REMOVE VALVE AND VALVE BOX. THIS WORK SHALL BE INCIDENTAL.

② CONTRACTOR SHALL FURNISH AND INSTALL A NEW VALVE AND VALVE BOX PER (2/8). THIS WORK SHALL BE PAID PER ITEM 2504–___" GATE VALVE AND BOX. CONNECTING TO THE WATERMAIN ADJACENT TO THE VALVE SHALL BE PAID PER ITEM 2504–CONNECT TO EXISTING WATERMAIN. EACH VALVE WILL ONLY INCLUDE PAYMENT FOR ONE "CONNECT TO EXISTING WATERMAIN". DUCTILE IRON PIPE AND FITTINGS NEEDED TO MAKE THE CONNECTION SHALL BE INCIDENTAL.

③ SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).

④ SPECIAL SECTION FROM STA 0+28 TO STA 6+00 ON ROSEBERRY PLACE. SEE SHEET 30 FOR ADDITIONAL DETAILS.

⑤ SPECIAL SECTION FROM STA 53+50 TO STA 62+50 ON RUM RIVER DRIVE. SEE SHEET 31 FOR ADDITIONAL DETAILS.

⑥ SPECIAL SECTION FROM STA 9+50 TO STA 10+50 ON COOLIDGE STREET. SEE SHEET 32 FOR ADDITIONAL DETAILS.

⑦ SEE SHEETS RG-1 THROUGH RG-7 FOR TYPICAL RAIN GARDEN CONSTRUCTION.

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

PROPOSED RAIN GARDEN LOCATION ⑦
RG-X

(X-X) STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 20 OF 33 SHEETS

AN393

Mar 04, 2022 – 3:53pm
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REFERENCE NOTES:
① SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

X-X STRUCTURE NUMBER. SEE SHEET 7 FOR RECONSTRUCTION REQUIREMENTS.

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SCALE 20 0 20 40 IN FEET

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

RANDAL DRIVE
CITY OF ANOKA, MINNESOTA

SHEET 21 OF 33 SHEETS

AN393

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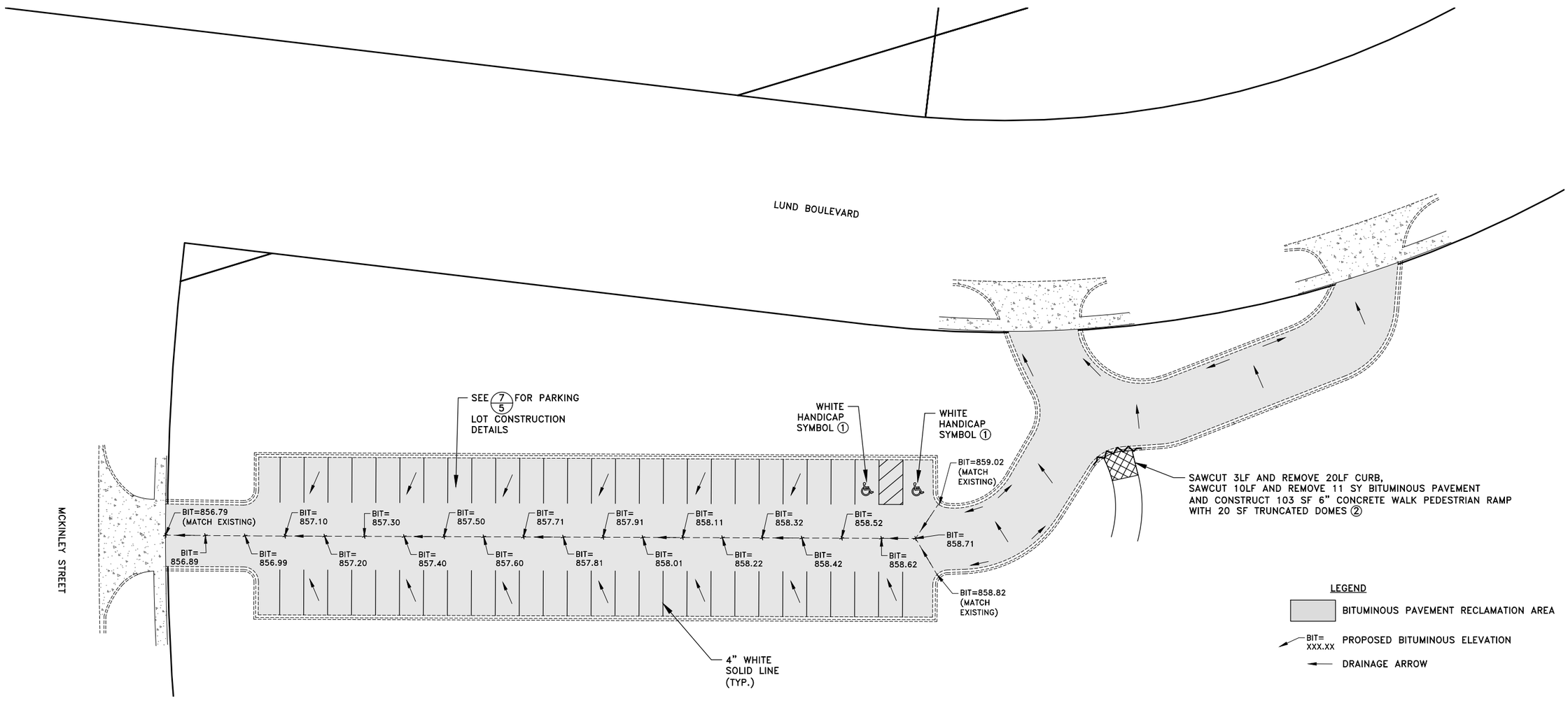

LEGEND

- BITUMINOUS PAVEMENT RECLAMATION AREA
- BIT= XXX.XX — PROPOSED BITUMINOUS ELEVATION
- DRAINAGE ARROW

GENERAL NOTES:

1. ALL STRIPING MATERIAL SHALL BE MULTI-COMPONENT LIQUID PER MN/DOT SPECIFICATION 3590

REFERENCE NOTES:

① HANDICAP SYMBOL SHALL BE PAID PER ITEM 2582-PAVEMENT MESSAGE-MULTI COMPONENT.

② PEDESTRIAN RAMP SHALL MEET CURRENT ADA STANDARDS.

20 0 20 40
SCALE IN FEET

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

GEORGE ENLOE PARK
CITY OF ANOKA, MINNESOTA

SHEET 22 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:51am
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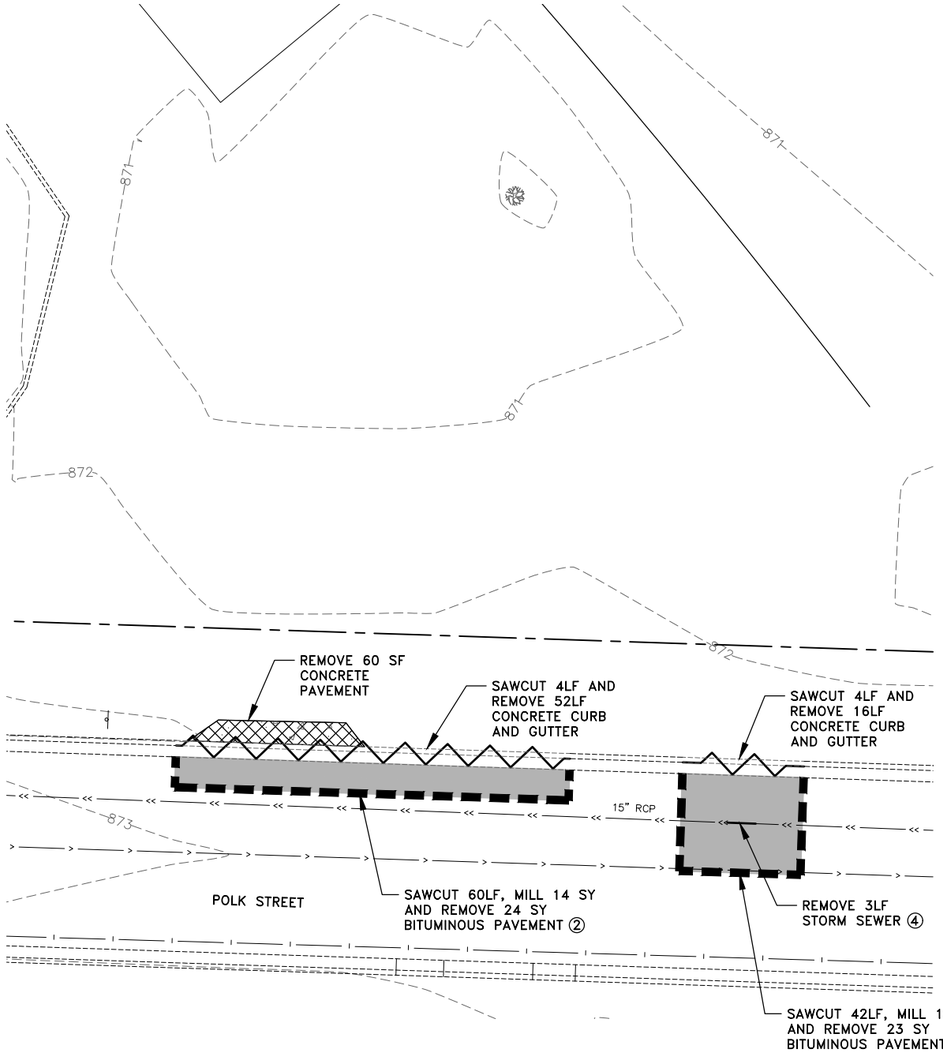
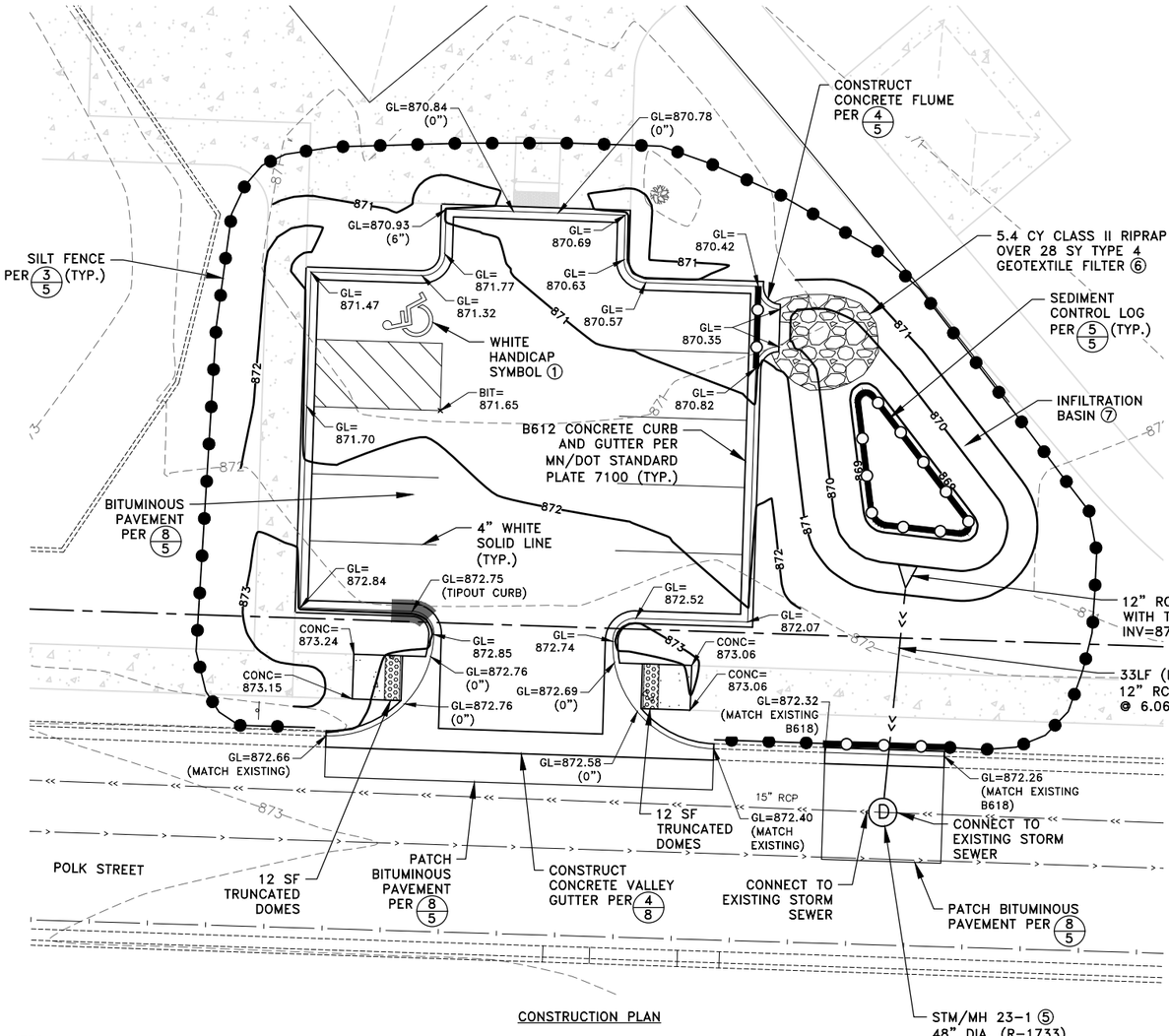


REMOVALS PLAN



CONSTRUCTION PLAN

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GENERAL NOTES:

1. ALL STRIPING MATERIAL SHALL BE MULTI-COMPONENT LIQUID, COLOR WHITE, PER MN/DOT SPECIFICATION 3590.
2. EXPCEPT FOR THE INFILTRATION BASIN, ALL DISTURBED PERVIOUS AREAS SHALL BE RESTORED WITH 4" LOAM TOPSOIL, TYPE 1 FERTILIZER, SEED MIX 25-131 AND HYDRAULIC MULCH MATRIX. THESE ITEMS SHALL BE PAID PER THE INDIVIDUAL PAY ITEMS ON THE BID FORM. SEE (6/5) FOR INFILTRATION BASIN RESTORATION REQUIREMENTS.
3. PEDESTRIAN RAMPS SHALL BE 6" CONCRETE WALK.
4. PROVIDE STORM DRAIN INLET PROTECTION ON THE NORTH CATCH BASIN, APPROXIMATELY 100 FEET EAST OF THE SITE.

REFERENCE NOTES:

(1) HANDICAP SYMBOL SHALL BE PAID PER ITEM 2582-PAVEMENT MESSAGE MULTI-COMPONENT.
(2) SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).
(3) TIE ALL PIPE JOINTS. THIS WORK SHALL BE INCIDENTAL.
(4) THIS WORK SHALL BE INCIDENTAL.
(5) CONSTRUCT MANHOLE PER (1/6).
(6) GEOTEXTILE FILTER SHALL BE INCIDENTAL.
(7) CONSTRUCT INFILTRATION BASIN PER (6/5).

LEGEND

FUTURE SIDEWALK

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

RUDY JOHNSON PARK
CITY OF ANOKA, MINNESOTA

SHEET 23 OF 33 SHEETS

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Mar 04, 2022 - 8:51am
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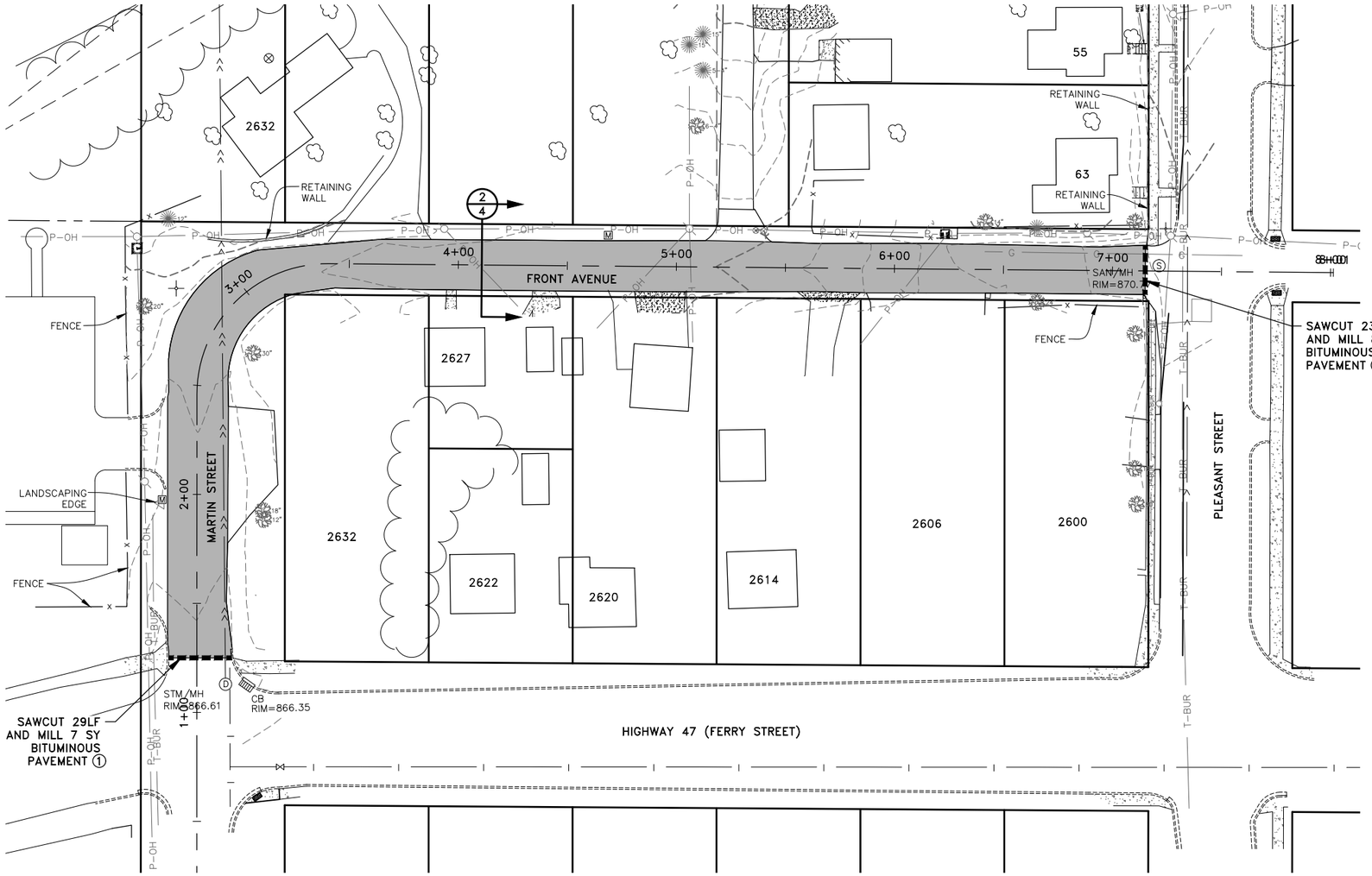

LEGEND

BITUMINOUS PAVEMENT RECLAMATION AREA

REFERENCE NOTES:

(1) SAWING AND MILLING BITUMINOUS PAVEMENT SHALL BE PER (3/8).

SCALE: 30 0 30 60 IN FEET

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

EXISTING TOPOGRAPHY AND REMOVALS PLAN

FRONT AVENUE AND MARTIN STREET
CITY OF ANOKA, MINNESOTA

SHEET 24 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:51am
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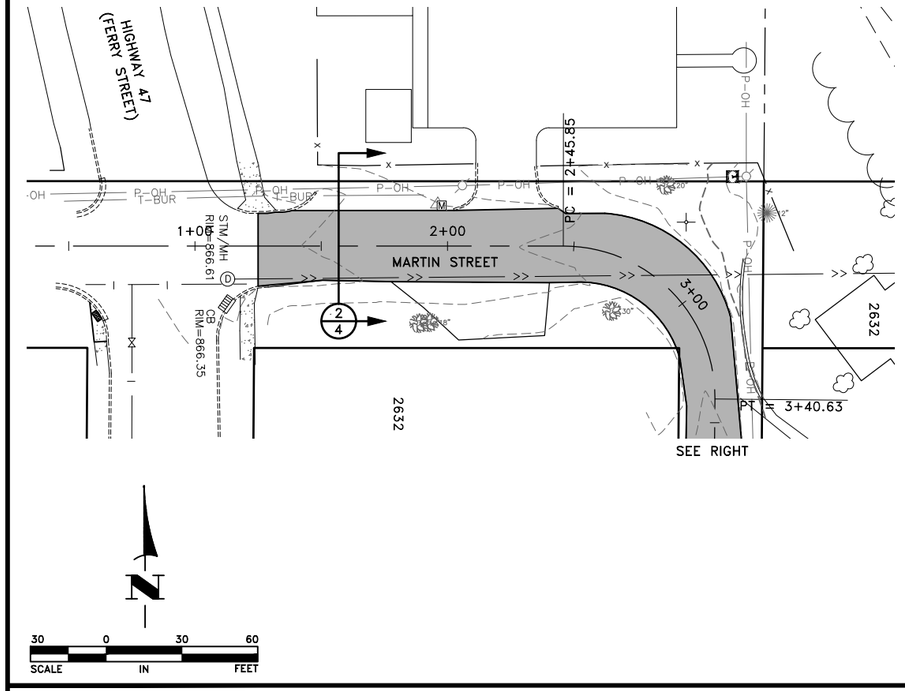
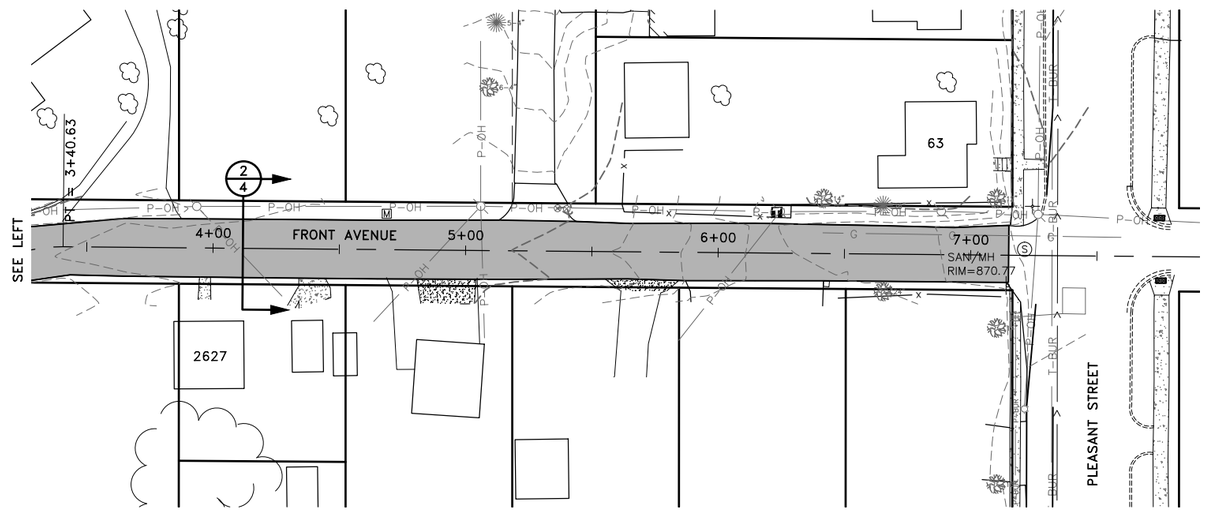
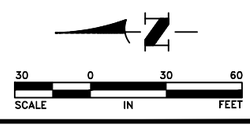
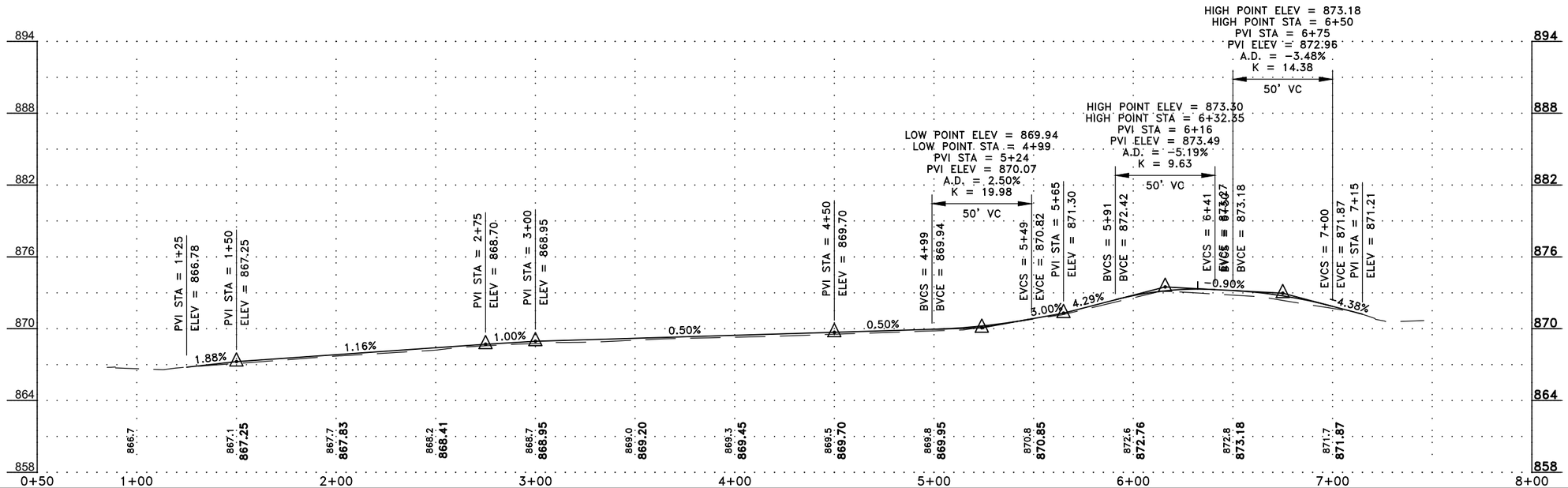






LEGEND

PROPOSED BITUMINOUS PAVEMENT



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2022 STREET SURFACE IMPROVEMENT PROJECT

CONSTRUCTION PLAN

FRONT AVENUE AND MARTIN STREET
CITY OF ANOKA, MINNESOTA

SHEET 25 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:51am
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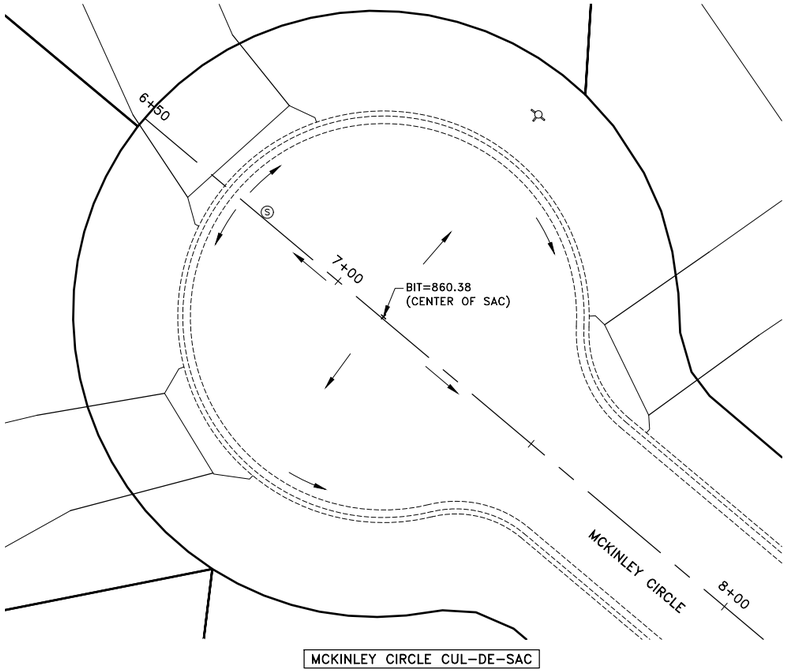
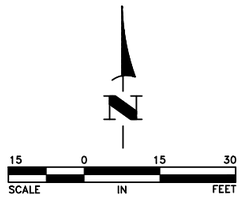


MCKINLEY CIRCLE CUL-DE-SAC



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Hakanson Anderson
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3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 26 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:52am
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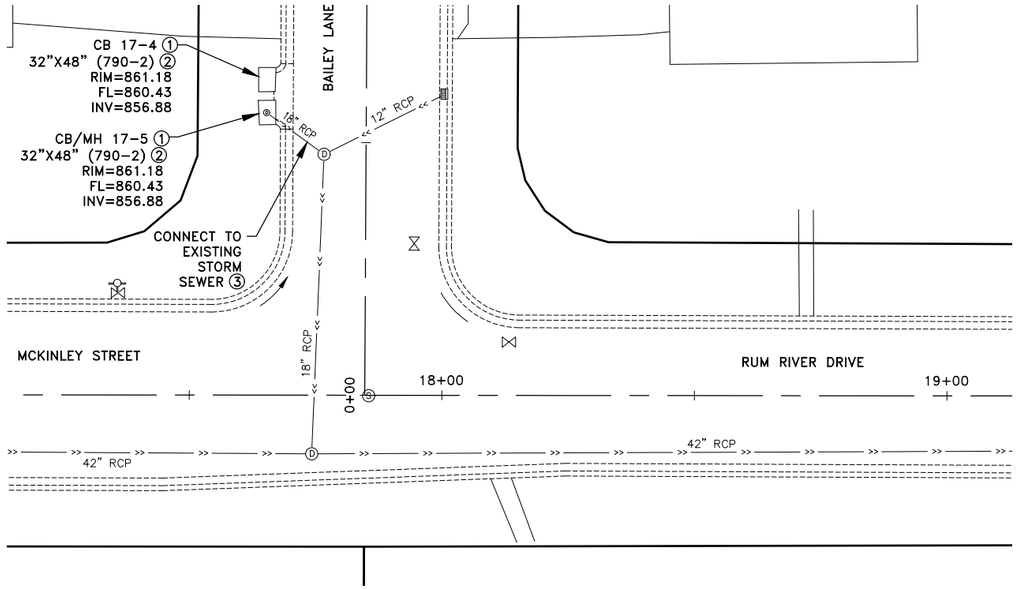
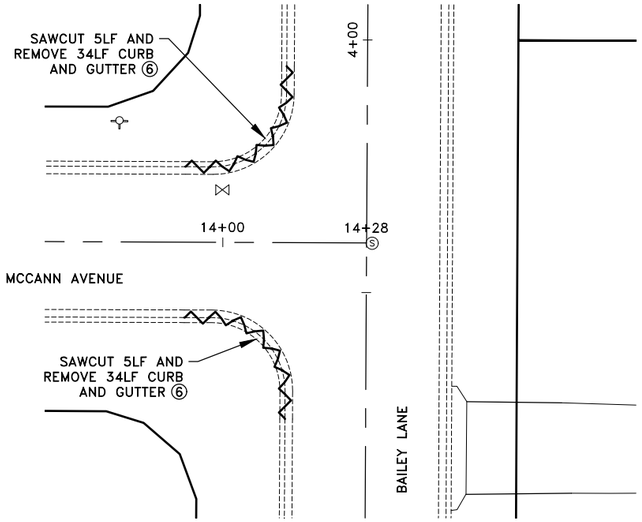
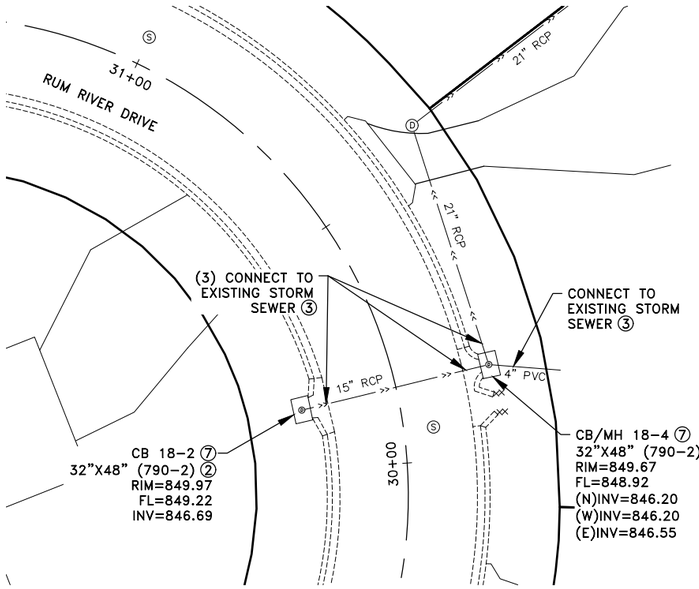


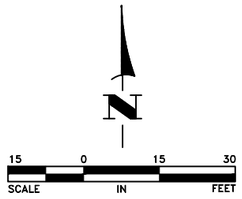
RUM RIVER DRIVE AND BAILEY LANE



REMOVALS PLAN



RUM RIVER DRIVE



REFERENCE NOTES:

① STRUCTURE SHALL BE CONSTRUCTED PER MN/DOT STANDARD PLATE 4021. THE BASE AND LOWER WALL SECTION SHALL BE CONSTRUCTED AS ONE STRUCTURE FOR STRUCTURES 17-4 AND 17-5. REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.

② CASTING SHALL BE PRECAST IN THE STRUCTURE PER MN/DOT STANDARD PLATE 4021.

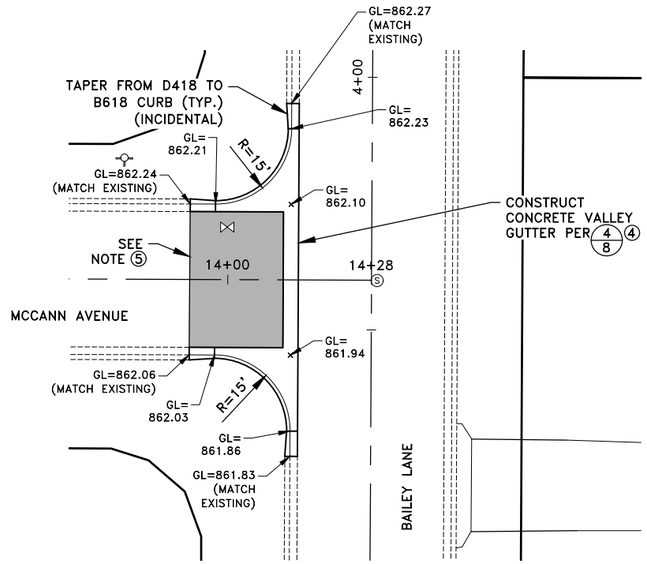
③ CONTRACTOR SHALL REMOVE STORM SEWER AS NECESSARY TO COMPLETE CONNECTION. STORM SEWER REQUIRED TO COMPLETE THE CONNECTION SHALL BE PAID PER ITEM 2503-__" RC PIPE SEWER DESIGN 3006 CLASS __ OR ITEM 2503-4" PVC PIPE SEWER. STORM SEWER REMOVAL SHALL BE INCIDENTAL.

④ CONCRETE VALLEY GUTTERS SHALL BE CONSTRUCTED IN TWO PHASES TO ALLOW FOR TRAFFIC TO PASS. CONTRACTOR SHALL PROTECT THE CONCRETE WITH BARRICADES AND FLASHERS AS NECESSARY FOR A MINIMUM OF 7 DAYS PRIOR TO ALLOWING TRAFFIC ON THE NEW CONCRETE.

⑤ TAPER BITUMINOUS IN THE SHADED AREA TO MATCH INTO THE CONCRETE VALLEY GUTTER.

⑥ SAWCUTTING CURB AND GUTTER SHALL BE PAID PER ITEM 2104-SAWING CONCRETE PAVEMENT-FULL DEPTH.

⑦ STRUCTURE SHALL BE CONSTRUCTED PER MN/DOT STANDARD PLATE 4021. REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.



CONSTRUCTION PLAN

MCCANN AVENUE AND BAILEY LANE

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 27 OF 33 SHEETS

AN393

Mar 04, 2022 - 8:56am
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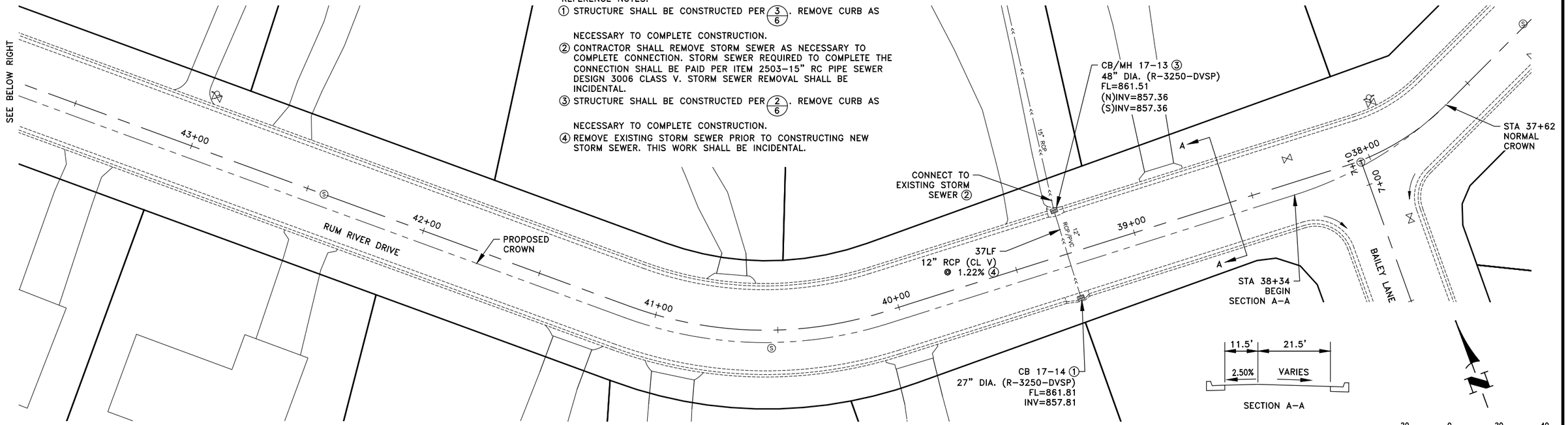
REFERENCE NOTES:

① STRUCTURE SHALL BE CONSTRUCTED PER (3/6). REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.

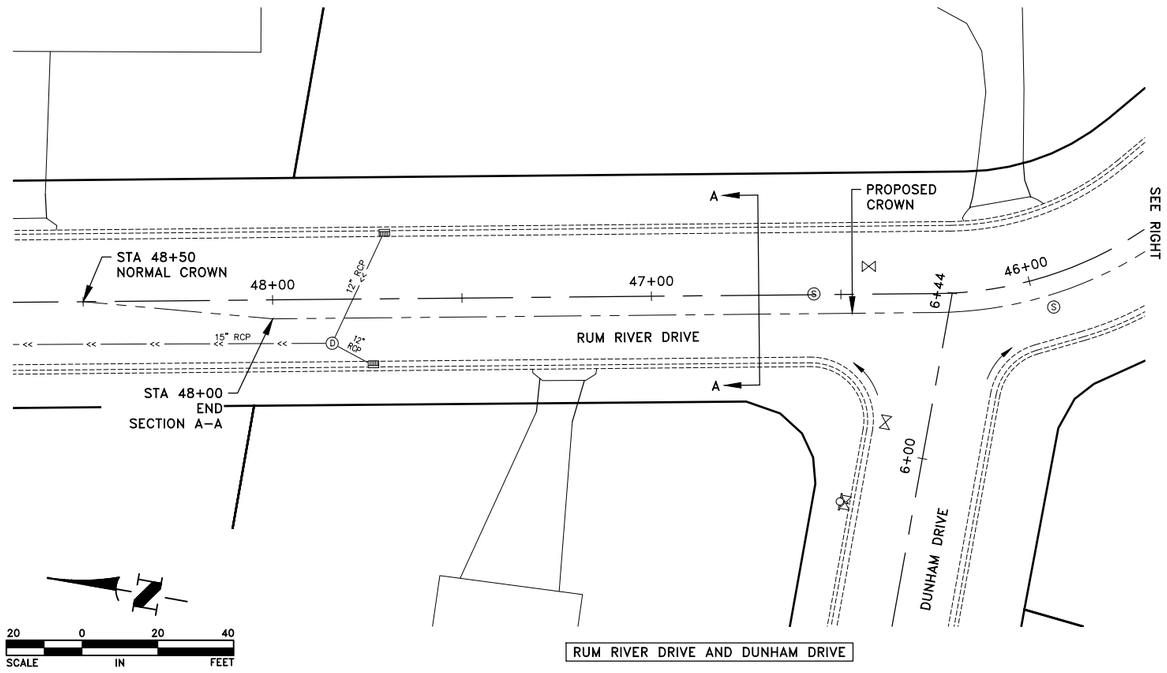
② CONTRACTOR SHALL REMOVE STORM SEWER AS NECESSARY TO COMPLETE CONNECTION. STORM SEWER REQUIRED TO COMPLETE THE CONNECTION SHALL BE PAID PER ITEM 2503–15" RC PIPE SEWER DESIGN 3006 CLASS V. STORM SEWER REMOVAL SHALL BE INCIDENTAL.

③ STRUCTURE SHALL BE CONSTRUCTED PER (2/6). REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.

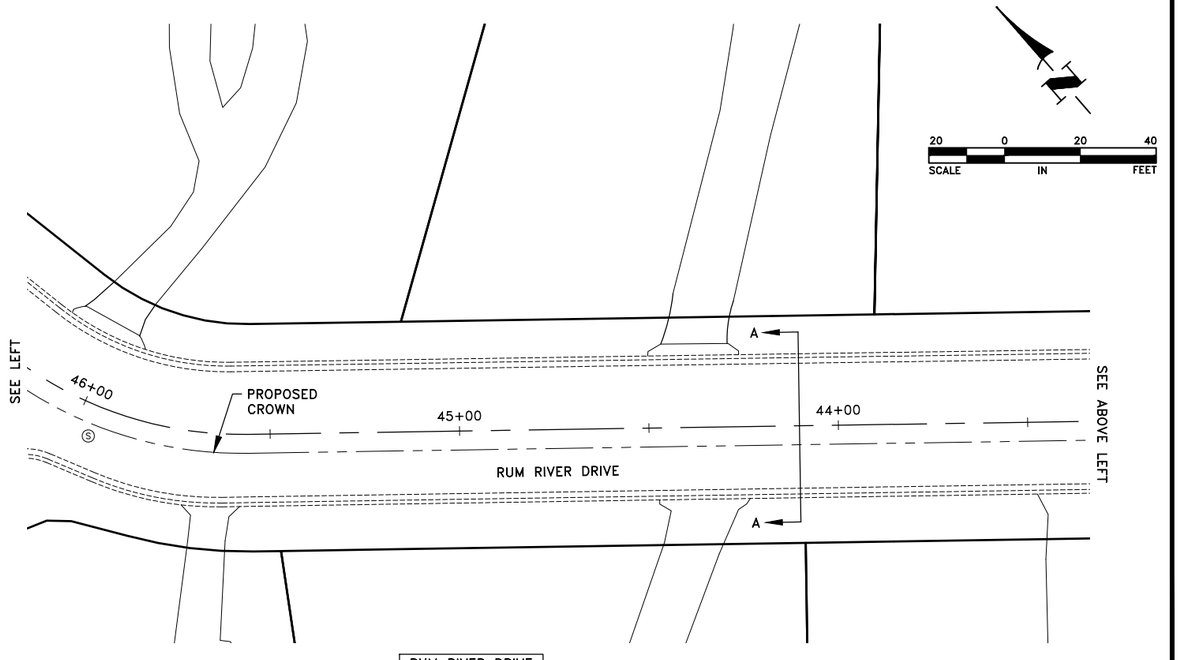
④ REMOVE EXISTING STORM SEWER PRIOR TO CONSTRUCTING NEW STORM SEWER. THIS WORK SHALL BE INCIDENTAL.



RUM RIVER DRIVE AND BAILEY LANE



RUM RIVER DRIVE AND DUNHAM DRIVE



RUM RIVER DRIVE

DATE	REVISION

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CHECKED BY: CJJ

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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 28 OF 33 SHEETS

AN393

Mar 04, 2022 – 9:03am
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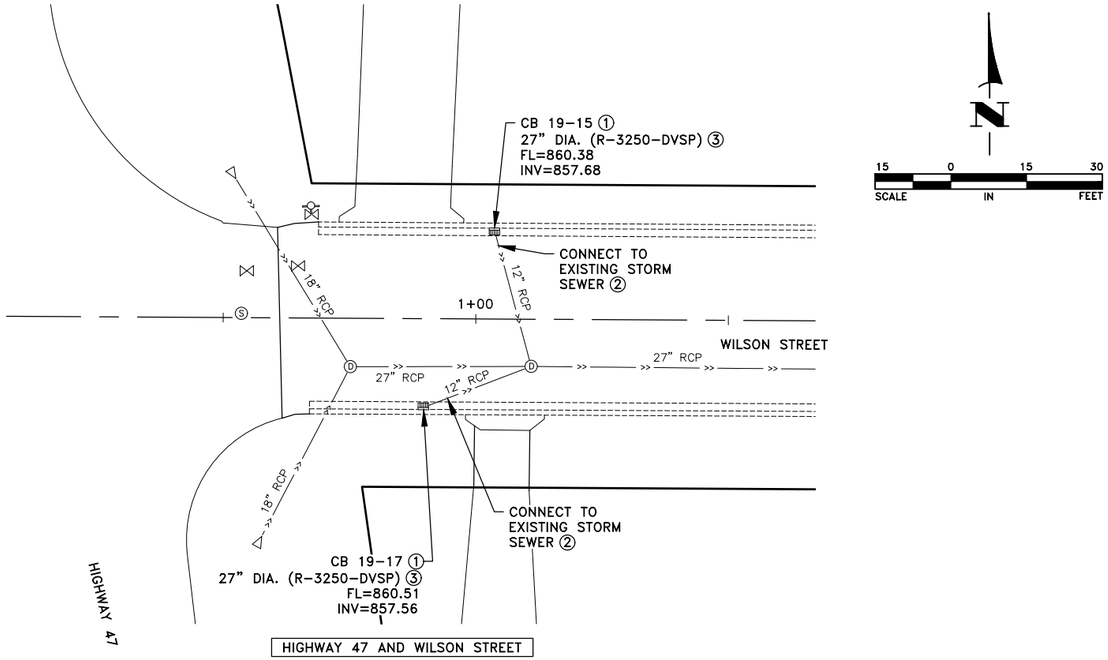

HIGHWAY 47 AND WILSON STREET

REFERENCE NOTES:

① STRUCTURE SHALL BE CONSTRUCTED PER 3/6. REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.

② CONTRACTOR SHALL REMOVE STORM SEWER AS NECESSARY TO COMPLETE CONNECTION. STORM SEWER REQUIRED TO COMPLETE THE CONNECTION SHALL BE PAID PER ITEM 2503-12" RC PIPE SEWER DESIGN 3006 CLASS V. STORM SEWER REMOVAL SHALL BE INCIDENTAL.

③ CASTING SHALL HAVE A 4" FRAME.

DATE	REVISION

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CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 29 OF 33 SHEETS

AN393

Mar 04, 2022 - 9:04am
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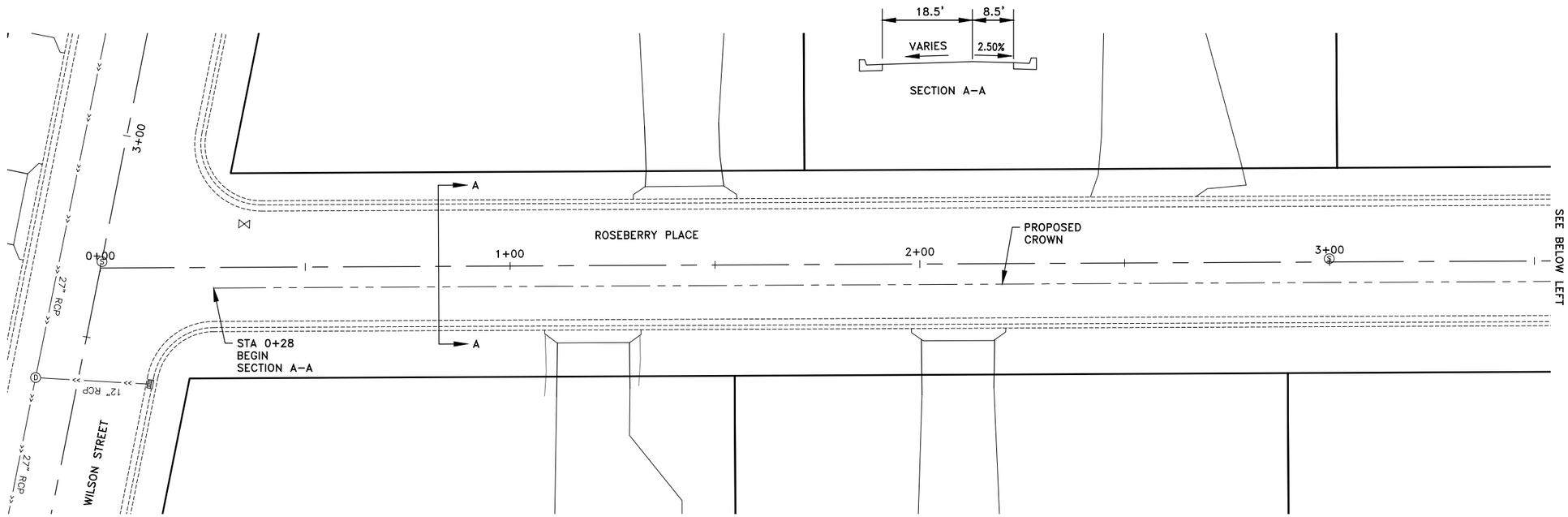
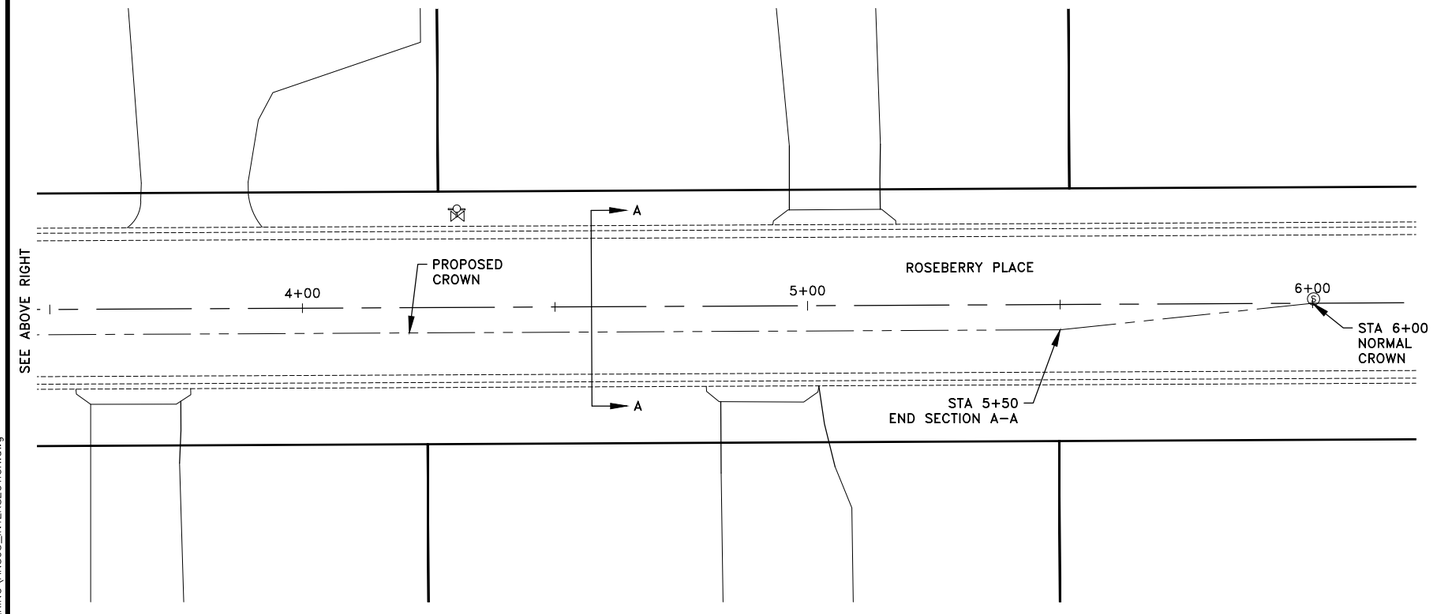


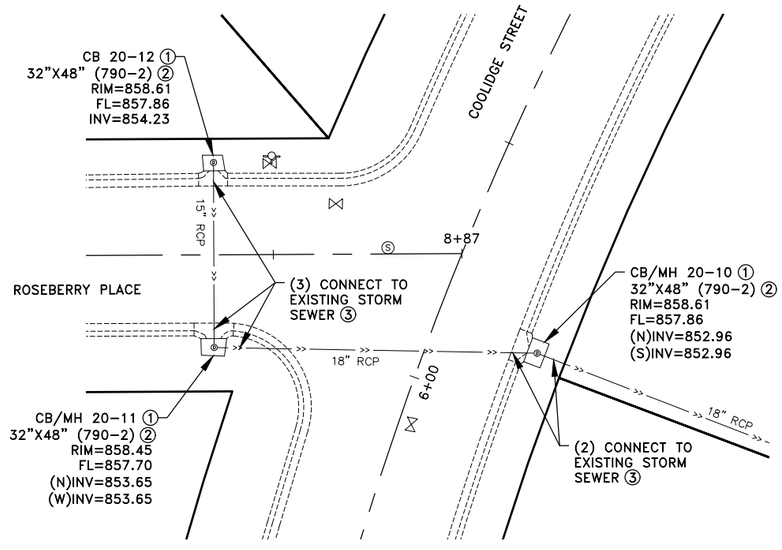
REFERENCE NOTES:

1. STRUCTURE SHALL BE CONSTRUCTED PER MN/DOT STANDARD PLATE 4021. REMOVE CURB AS NECESSARY TO COMPLETE CONSTRUCTION.
2. CASTING SHALL BE PRECAST IN THE STRUCTURE PER MN/DOT STANDARD PLATE 4021.
3. CONTRACTOR SHALL REMOVE STORM SEWER AS NECESSARY TO COMPLETE CONNECTION. STORM SEWER REQUIRED TO COMPLETE THE CONNECTION SHALL BE PAID PER ITEM 2503-__" RC PIPE SEWER DESIGN 3006 CLASS V. STORM SEWER REMOVAL SHALL BE INCIDENTAL.

15 0 15 30
SCALE IN FEET



ROSEBERRY PLACE



ROSEBERRY PLACE AND COOLIDGE STREET

DATE	REVISION

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CRAIG J. JOCHUM, P.E.
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2022 STREET SURFACE IMPROVEMENT PROJECT

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HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 30 OF 33 SHEETS

AN393

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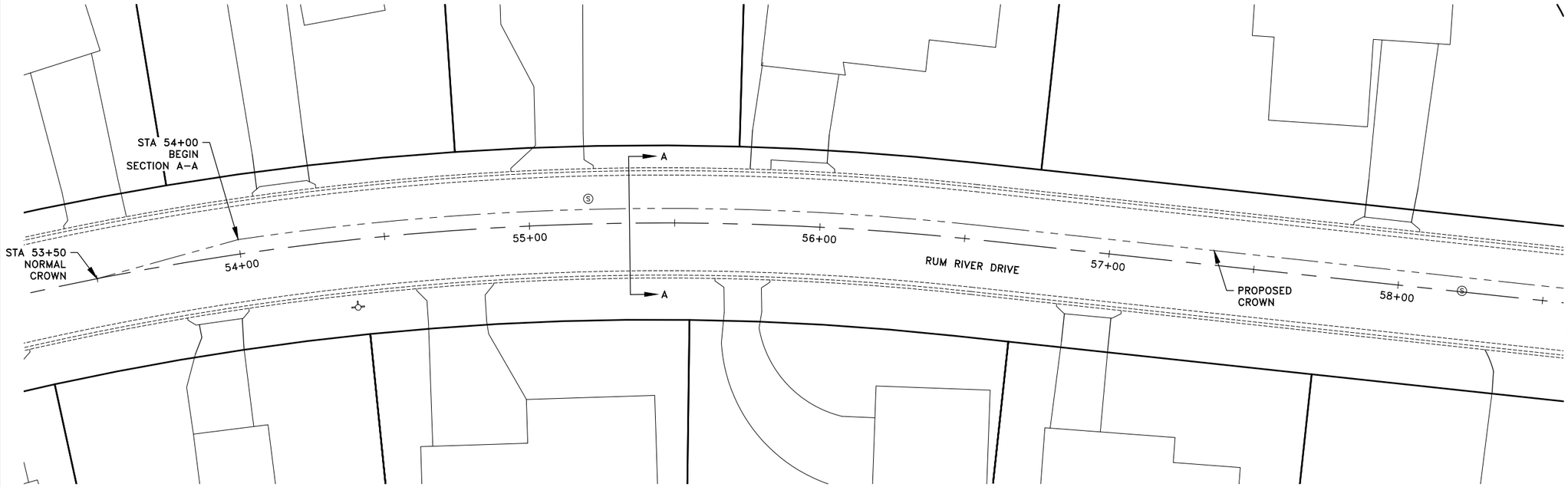
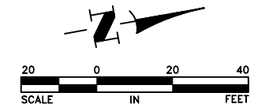
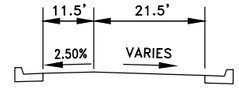
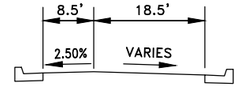






SECTION A–A



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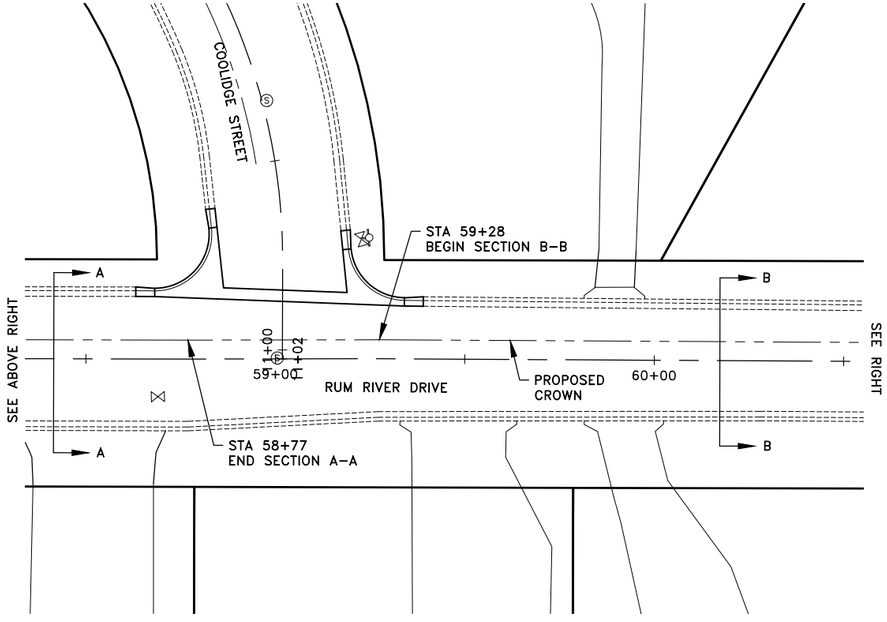

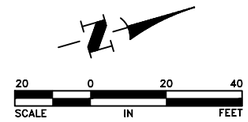

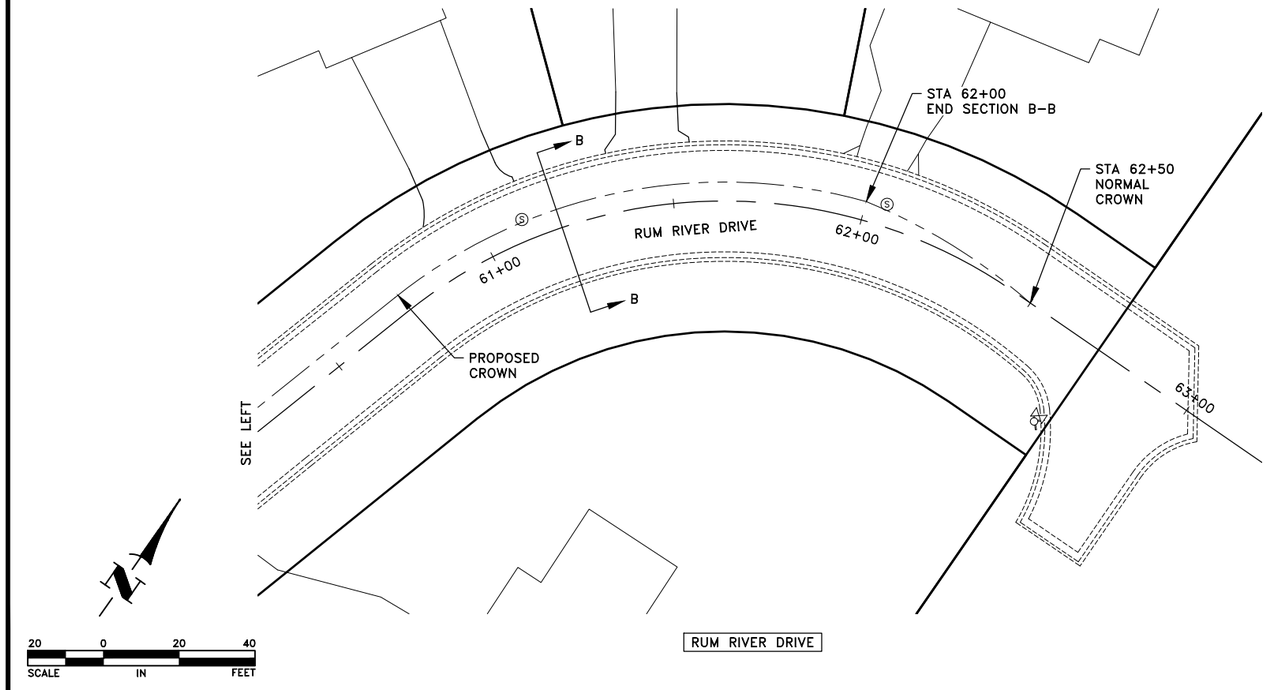

DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 31 OF 33 SHEETS

AN393

Mar 04, 2022 – 9:09am
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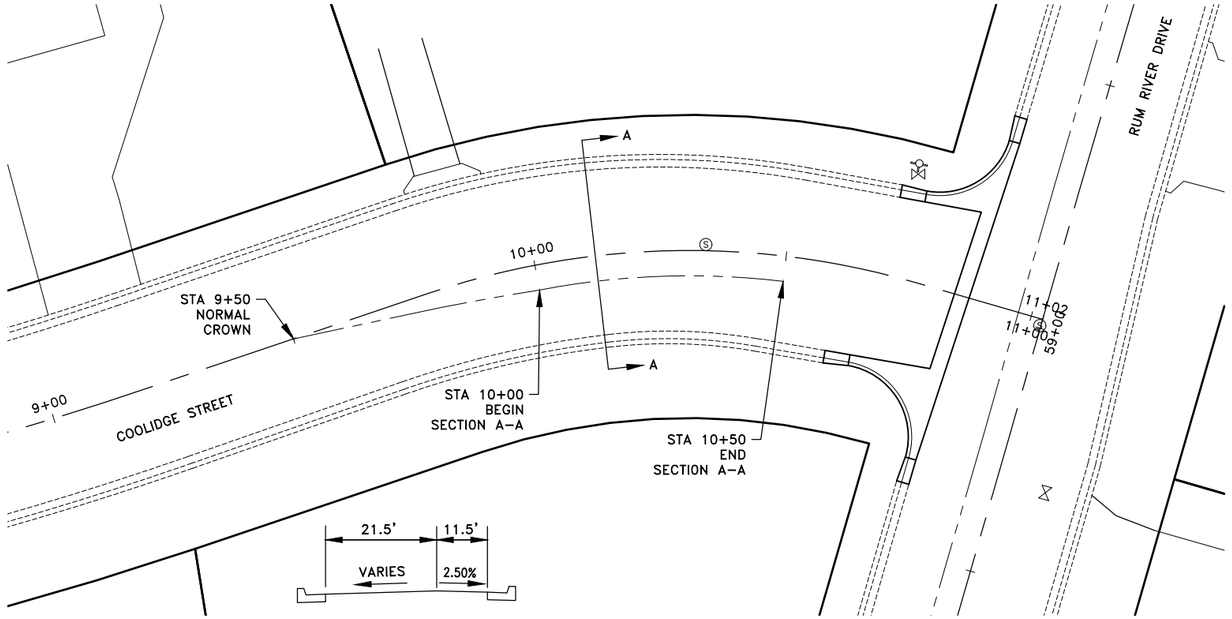
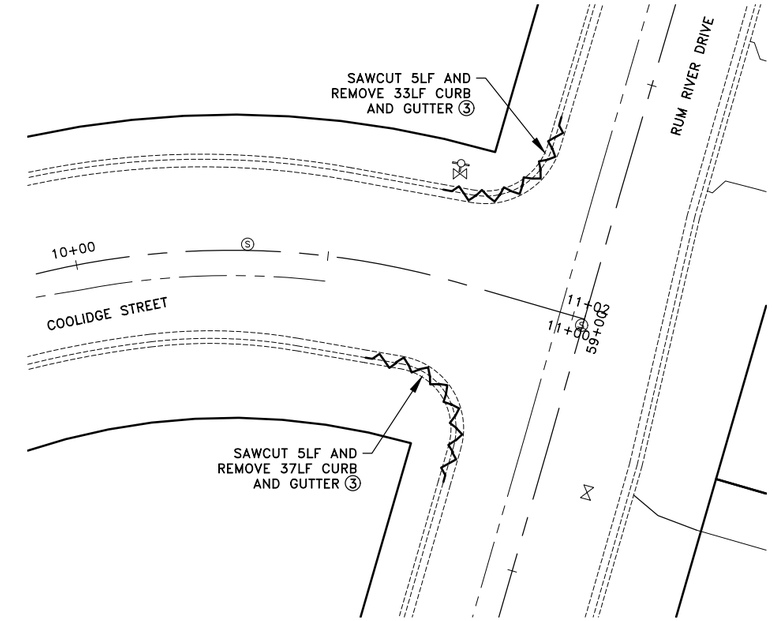
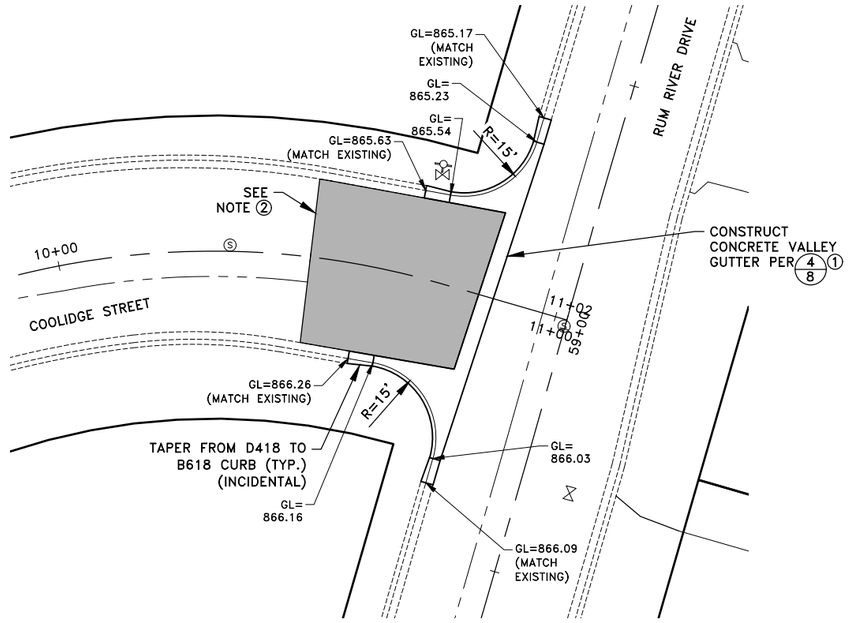


SECTION A-A

RUM RIVER DRIVE AND COOLIDGE STREET

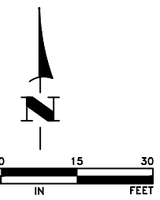


REMOVALS PLAN



CONSTRUCTION PLAN

RUM RIVER DRIVE AND COOLIDGE STREET



REFERENCE NOTES:

(1) CONCRETE VALLEY GUTTERS SHALL BE CONSTRUCTED IN TWO PHASES TO ALLOW FOR TRAFFIC TO PASS. CONTRACTOR SHALL PROTECT THE CONCRETE WITH BARRICADES AND FLASHERS AS NECESSARY FOR A MINIMUM OF 7 DAYS PRIOR TO ALLOWING TRAFFIC ON THE NEW CONCRETE.

(2) TAPER BITUMINOUS IN THE SHADED AREA TO MATCH INTO THE CONCRETE VALLEY GUTTER.

(3) SAWCUTTING CURB AND GUTTER SHALL BE PAID PER ITEM 2104-SAWING CONCRETE PAVEMENT-FULL DEPTH.

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 3/3/22 Lic. No. 23461

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

HIGHWAY 47 PROJECT AREA
CITY OF ANOKA, MINNESOTA

SHEET 32 OF 33 SHEETS

AN393

Mar 04, 2022 - 9:12am
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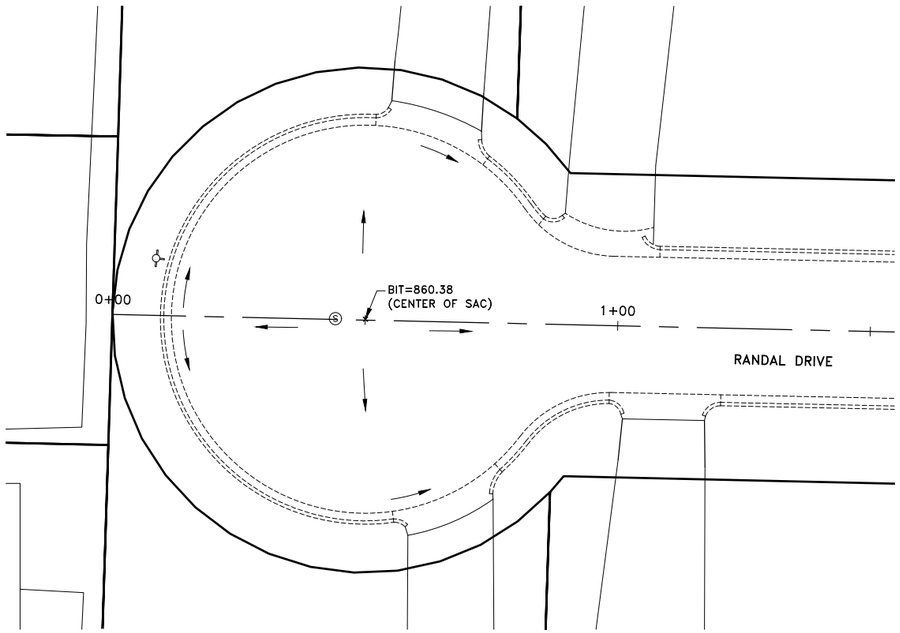
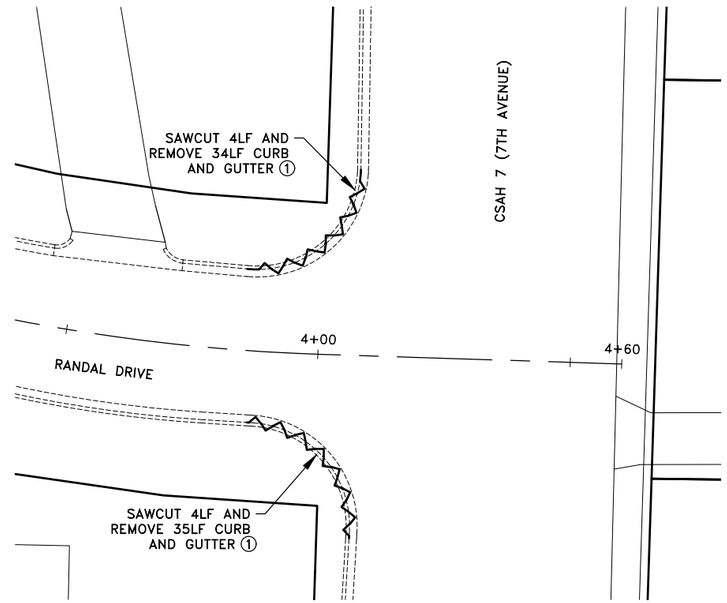


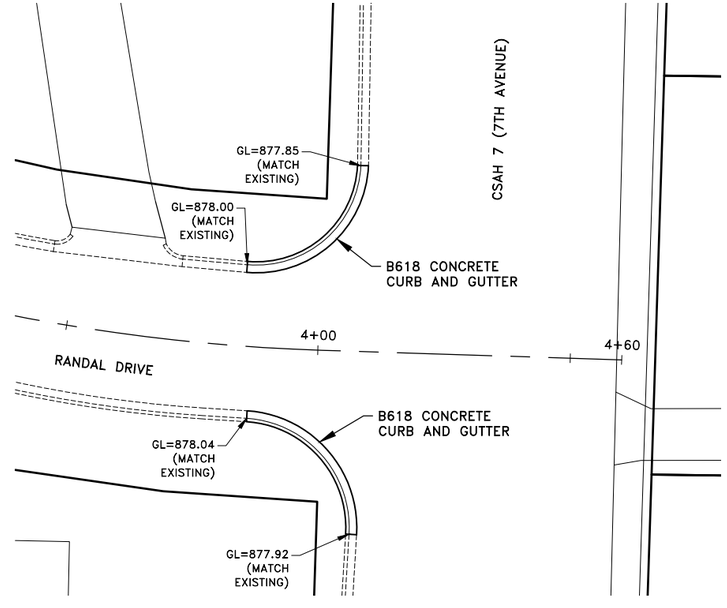
RANDAL DRIVE

REFERENCE NOTES:

① SAWCUTTING CURB AND GUTTER SHALL BE PAID PER ITEM 2104–SAWING CONCRETE PAVEMENT–FULL DEPTH.

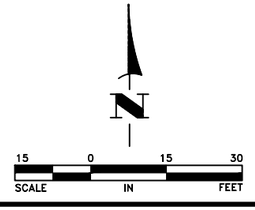


REMOVALS PLAN



CONSTRUCTION PLAN

CSAH 7 AND RANDAL DRIVE



DATE	REVISION

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2022 STREET SURFACE IMPROVEMENT PROJECT

STREET AND INTERSECTION DETAILS

RANDAL DRIVE
CITY OF ANOKA, MINNESOTA

SHEET 33 OF 33 SHEETS

AN393

Mar 04, 2022 - 9:15am
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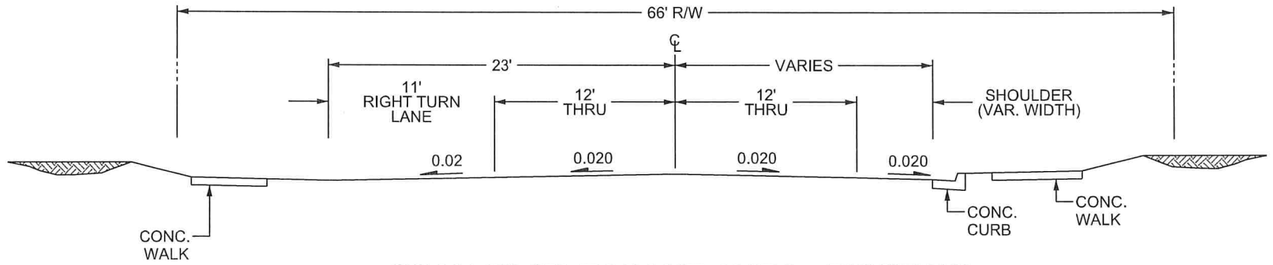
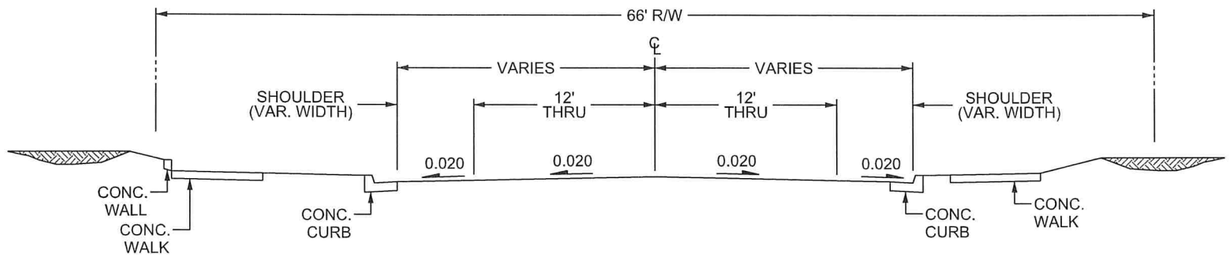
CSAH 30 (PLEASANT AVE.) - EXISTING

STA. 11+59.01 - 12+25.40



CSAH 30 (PLEASANT AVE.) - EXISTING

STA. 12+25.40 - 14+44.78



CSAH 30 (PLEASANT AVE.) - PROPOSED

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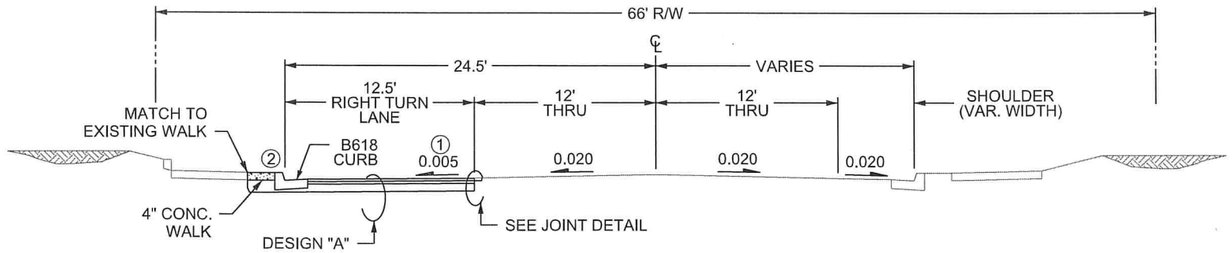
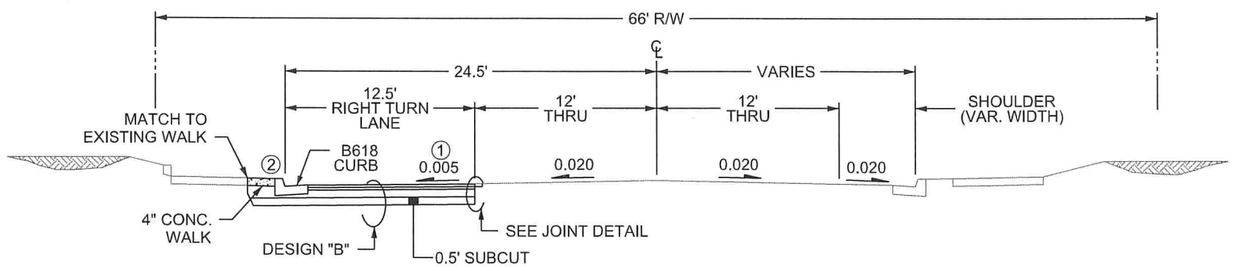
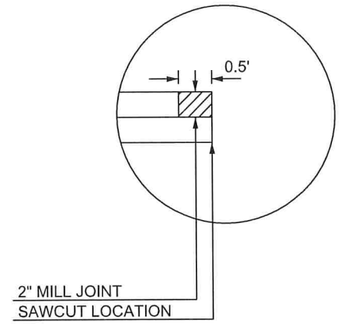


CSAH 30 (PLEASANT AVE.) - PROPOSED

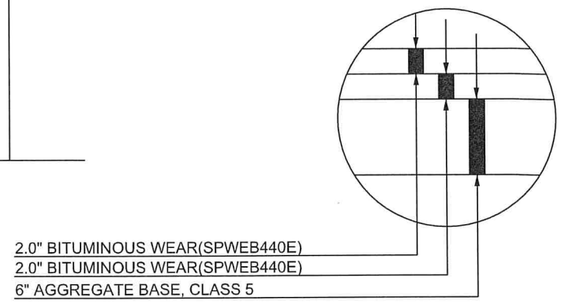
STA. 12+24.78 - 14+44.78



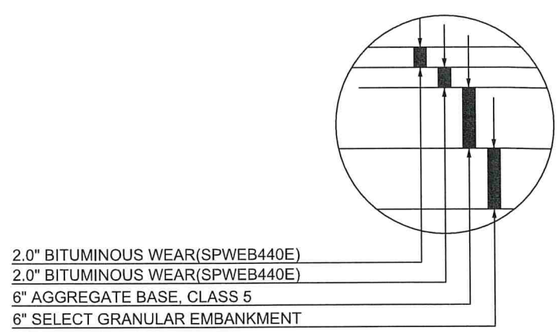
JOINT DETAIL



DESIGN "A" RIGHT TURN LANE



DESIGN "B" RIGHT TURN LANE



NOTES

① PROVIDE MINIMAL CROSS SLOPE

② HEIGHT OF CURB TO MATCH EXISTING SIDEWALK ELEVATION. CURB SHALL BE PAID AS B618 CURB & GUTTER.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_30 (TH47-RumRiver)\Plan\Pleasant47_TYP.dgn

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.

PRINT NAME: NICHOLAS DUGDA

SIGNATURE:

DATE: 3/9/22 LICENSE NO. 49046

DRAWN BY MP DATE 02/16/22

DESIGN BY MP DATE 02/16/22

CHECKED BY JF DATE 02/16/22

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

TYPICAL SECTIONS

Sheet C1 of C3 Sheets

NOTES

GRAVEL UNDER BITUMINOUS SHOULDER SHALL BE SALVAGED AND RE-USED FOR WIDENING PURPOSES.

AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF MnDOT SPEC. 3138, CLASS 5.

ONCE RIGHT TURN LANE WIDTH IS ACHIEVED, EXCESS GRAVEL TO BE HAULED OFF AND PAID AS COMMON EXCAVATION.

0.5' STEP JOINT TO BE MILLED AFTER BASE LIFT OF ASPHALT IS PAVED.

CONSTRUCT PEDESTRIAN CURB RAMPS PER MnDOT STANDARD PLAN 5-297.250.

ALL TRAFFIC CONTROL AND LONGITUDINAL DROPOFFS SHALL CONFORM TO THE MINNESOTA TEMPORARY TRAFFIC CONTROL FIELD MANUAL 2018.

APPROX. RIGID PVC LOOP DETECTOR LOCATION. CONTACT MIKE DITTEL, 651-775-9493 (MnDOT), FOR COORDINATION BEFORE PAVEMENT REMOVAL. MUST BE FIELD VERIFIED.

RELOCATE SIGN (BY OTHERS)

BEGIN RTL
STA. 11+59.01

0.5' STEP JOINT

END RTL
STA. 14+44.68

TH NO. 47

PLEASANT ST.

C.S.A.H. NO. 30

FERRY STREET

FRONT AVE.

MAPLE AVE.

#55

#33

10

15

LEGEND

- REMOVE CONCRETE CURB
- REMOVE BITUMINOUS PAVING
- REMOVE CONCRETE WALK
- SAWCUT
- R / W

SCALE 0 IN 50 FEET

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_30 (TH47-RumRiver)\Plan\Pleasant47_RM_P1.dgn

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.

PRINT NAME: NICHOLAS DOBDA

SIGNATURE:

DATE: 3/8/22 LICENSE NO. 49046

DRAWN BY MP DATE 03/08/2022

DESIGN BY MP DATE 03/08/2022

CHECKED BY JF DATE 03/08/2022

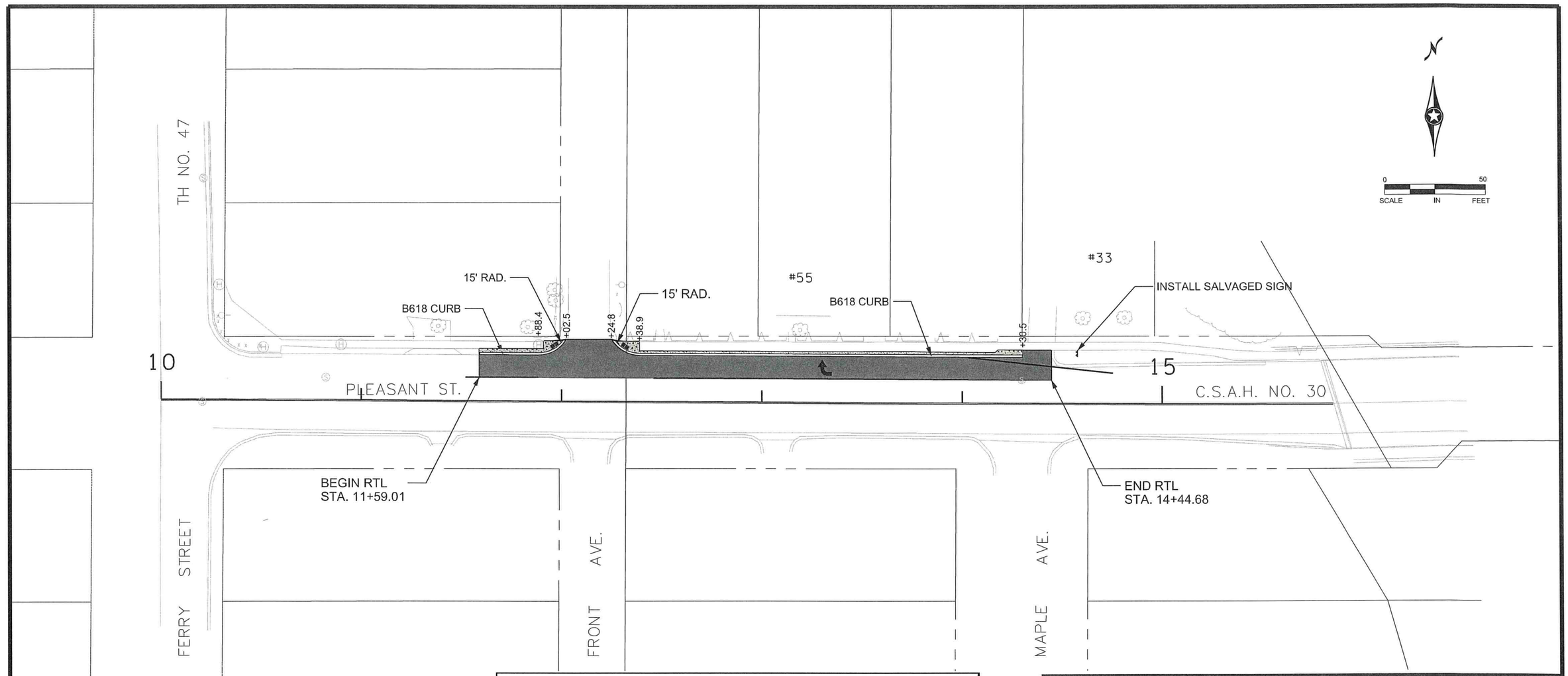
ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

REMOVAL PLAN

STA 11+59.01 TO 14+44.68

Sheet C2 of C3 Sheets



PROPOSED CURB ELEVATIONS					
STATION	SAWCUT ELEVATION	DISTANCE TO LIP/CURB	LIP/CURB ELEVATION	GUTTER ELEVATION	EXISTING SIDEWALK ELEVATION
11+75.00	871.37	11'	871.35	871.26	872.1
12+00.00	871.23	17.4'	MATCH EXISTING EM		N/A
12+50.00	870.45	11'	870.43	870.34	871.0
12+75.00	869.99	11'	869.97	869.88	870.6
13+00.00	869.53	11'	869.51	869.42	870.1
13+25.00	869.07	11'	869.05	868.96	869.7
13+50.00	868.60	11'	868.58	868.49	869.2
13+75.00	868.18	11'	868.16	868.07	868.8
14+00.00	867.77	11'	867.75	867.66	868.3
14+25.00	867.32	11'	867.3	867.21	867.8

NOTE: HEIGHT OF CURB TO MATCH EXISTING SIDEWALK ELEVATION.
CURB SHALL BE PAID AS B618 CURB & GUTTER

LEGEND

- BITUMINOUS PAVING (SPWEB440C)
- 4" CONCRETE WALK
- R / W

NOTES

GRAVEL UNDER BITUMINOUS SHOULDER SHALL BE SALVAGED AND RE-USED FOR WIDENING PURPOSES.

AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF MnDOT SPEC. 3138, CLASS 5.

ONCE RIGHT TURN LANE WIDTH IS ACHIEVED, EXCESS GRAVEL TO BE HAULED OFF AND PAID AS COMMON EXCAVATION.

0.5' STEP JOINT TO BE MILLED AFTER BASE LIFT OF ASPHALT IS PAVED.

CONSTRUCT PEDESTRIAN CURB RAMPS PER MnDOT STANDARD PLAN 5-297.250. PAID AS 6" CONCRETE WALK.

INSTALL STORM DRAIN INLET PROTECTION AS NEEDED IN STRUCTURES ON BRIDGE DECK.

ALL TRAFFIC CONTROL AND LONGITUDINAL DROPOFFS SHALL CONFORM TO THE MINNESOTA TEMPORARY TRAFFIC CONTROL FIELD MANUAL 2018.

NO	DATE	BY	CKD	APPR	REVISION		
						03/07/2022	8:43:53 AM

NAME: P:\22-01-00\CSAH_30 (TH47-RumRiver)\Plan\Pleasant47_CP_P1.dgn

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.

PRINT NAME: NICHOLAS DOBDA

SIGNATURE:

DATE: 3/8/22 LICENSE NO. 49046

DRAWN BY MP DATE 03/07/2022

DESIGN BY MP DATE 03/07/2022

CHECKED BY JF DATE 03/07/2022

ANOKA COUNTY

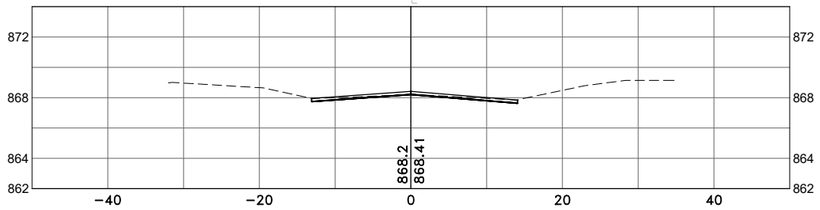
ANOKA COUNTY HIGHWAY DEPT.

CONSTRUCTION PLAN

STA 11+59.01 TO 14+44.68

Sheet C3 of C3 Sheets

2+50



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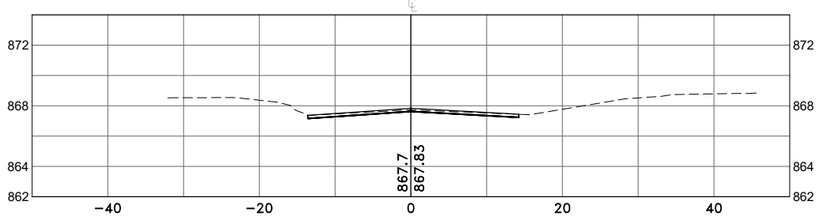

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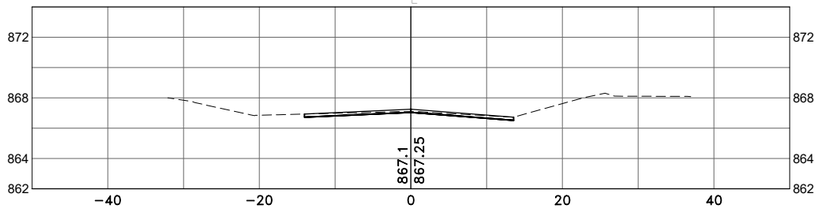

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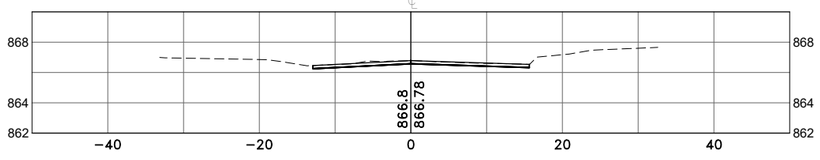

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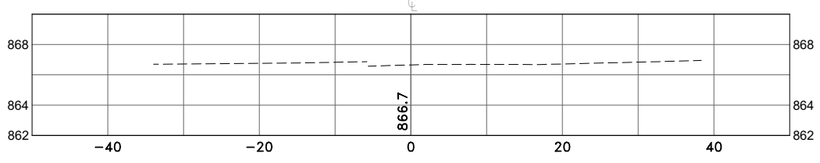

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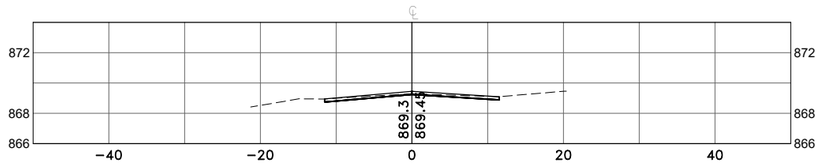

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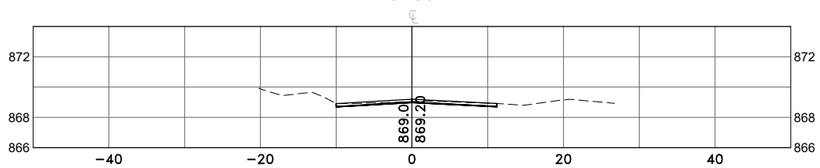

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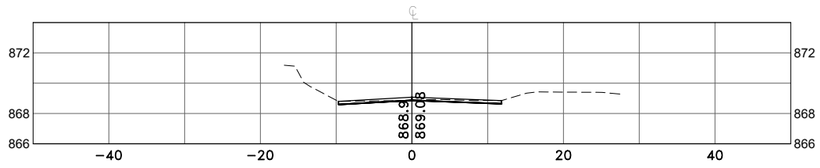

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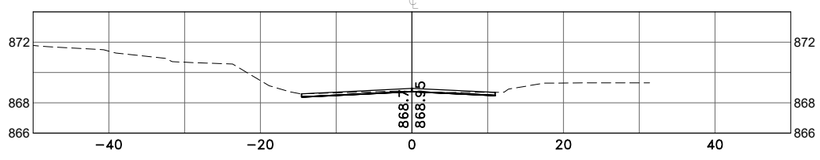

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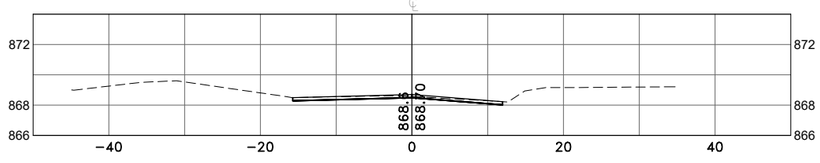

DATE	REVISION

DESIGNED BY: TAE
DRAWN BY: TAE
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

CROSS SECTIONS

FRONT AVENUE AND MARTIN STREET
CITY OF ANOKA, MINNESOTA

SHEET X1 OF X2 SHEETS

AN393

Mar 04, 2022 - 9:16am
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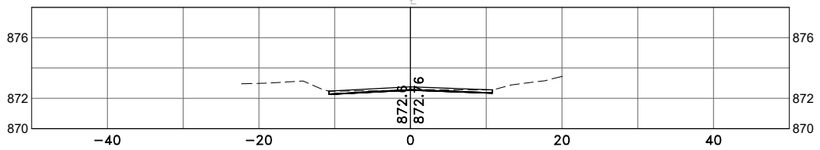
6+00



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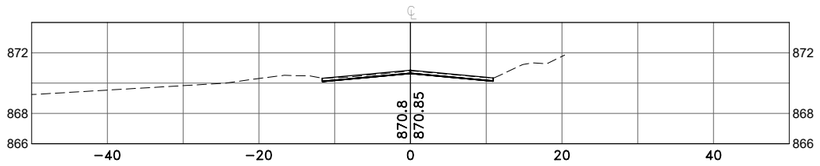

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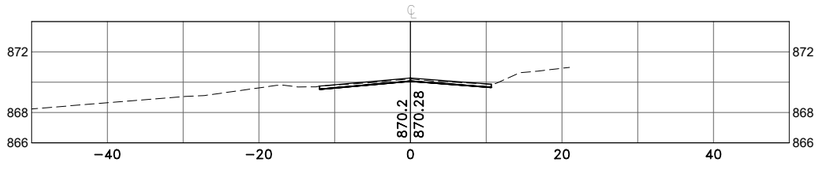

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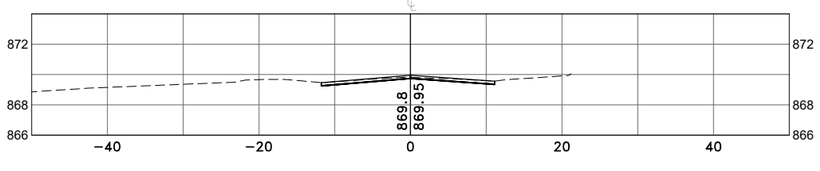

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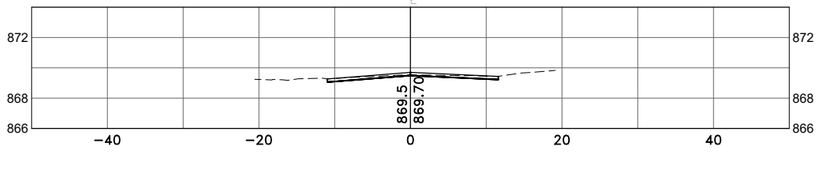

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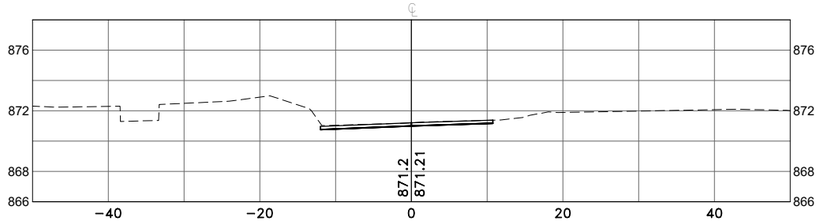

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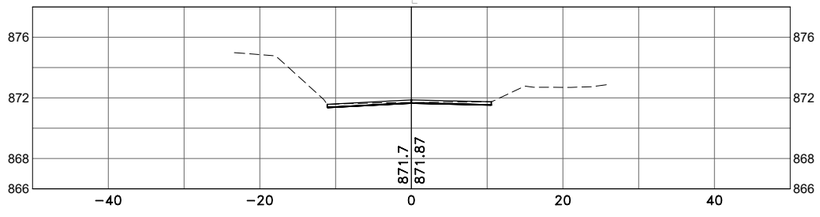

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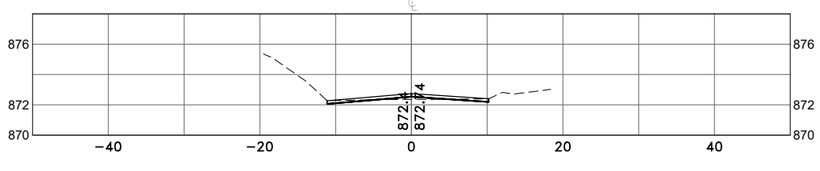

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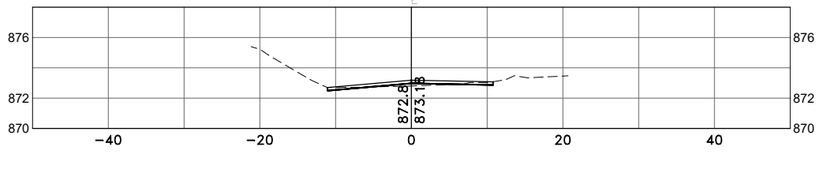

DATE	REVISION

DESIGNED BY: TAE
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www.hakanson-anderson.com

2022 STREET SURFACE IMPROVEMENT PROJECT

CROSS SECTIONS

FRONT AVENUE AND MARTIN STREET
CITY OF ANOKA, MINNESOTA

SHEET X2 OF X2 SHEETS

AN393

Mar 04, 2022 - 9:17am
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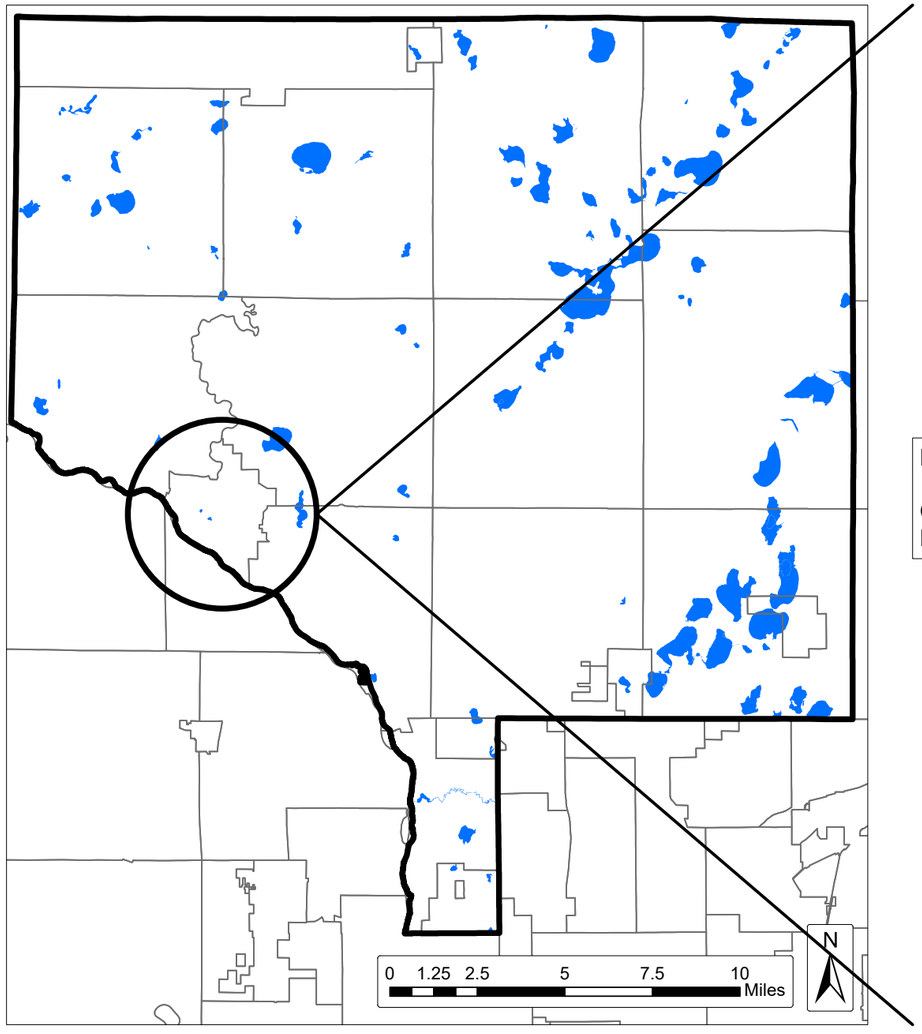
CITY OF ANOKA RAIN GARDEN PROJECTS
4 BIOINFILTRATION BASINS
ANOKA, MN



ANOKA, ANOKA COUNTY

PROJECT LOCATIONS

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
RG1	PROJECT LOCATIONS MAP
RG2	INLET DETAIL
RG3	RAIN GUARDIAN BUNKER PRETREATMENT CHAMBER DETAIL
RG4	EXISTING/PROPOSED CONDITIONS
RG5	FRENCH DRAIN INSTALLATION DETAIL
RG6	PLANTING PLAN
RG7	ESTIMATED SCHEDULES AND QUANTITIES

PROJECT SUMMARY

Curb-cut bioinfiltration basins (4) will improve water quality in the Rum River.

ANOKA CONSERVATION DISTRICT
1318 MCKAY DR. NE, SUITE 300
HAM LAKE, MN 55304
763-434-2030
www.AnokaSWCD.org

PROJECT: TYPICAL RAIN GARDEN
LOCATION:
PROPERTY ADDRESS
ANOKA, MN 55303

CLIENT: LANDOWNER

DESIGNER: MITCH HAUSTEIN
DATE: 03/03/2022
REVISION:
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY:

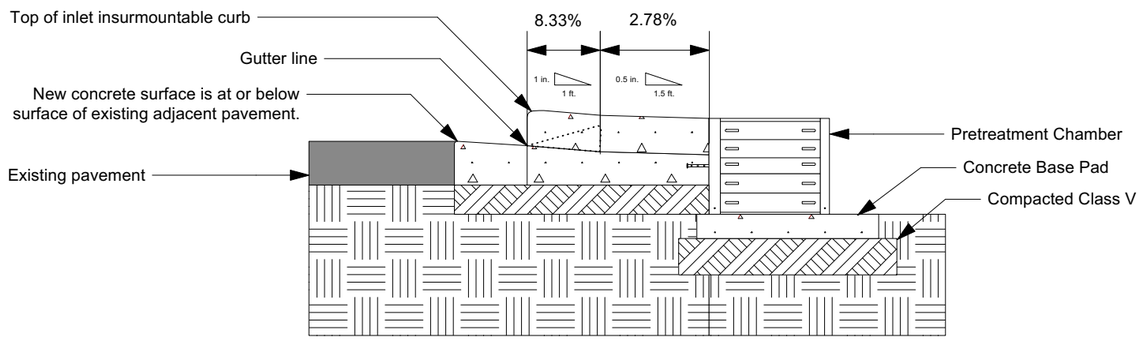
NOTES:
1. Contact Gopher One at least 48 hours prior to digging at 651-454-0002 to have utilities marked.
2. Follow design details. If there are issues or questions, contact the Anoka Conservation District (763-434-2030) piror to making any changes.

SCALE: VARIABLE

TYPICAL RAIN GARDEN
PROJECT LOCATIONS

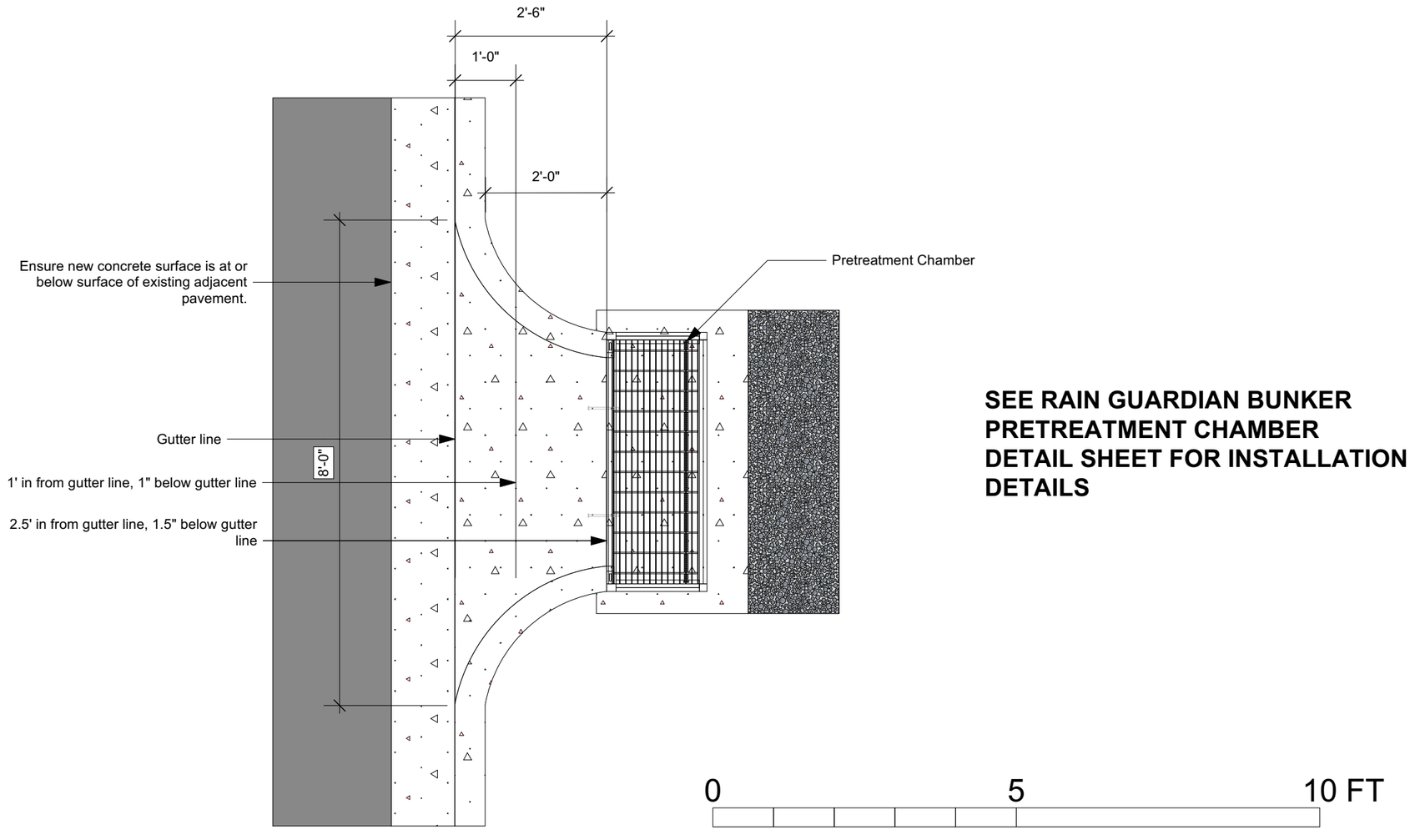
SHEET RG1/RG7

ELEVATION VIEW



SEE RAIN GUARDIAN BUNKER PRETREATMENT CHAMBER DETAIL SHEET FOR INSTALLATION DETAILS

PLAN VIEW



SEE RAIN GUARDIAN BUNKER PRETREATMENT CHAMBER DETAIL SHEET FOR INSTALLATION DETAILS

ANOKA CONSERVATION DISTRICT
1318 MCKAY DR. NE, SUITE 300
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LOCATION:
PROPERTY ADDRESS
ANOKA, MN 55303

CLIENT: LANDOWNER

DESIGNER: MITCH HAUSTEIN
DATE: 03/03/2022
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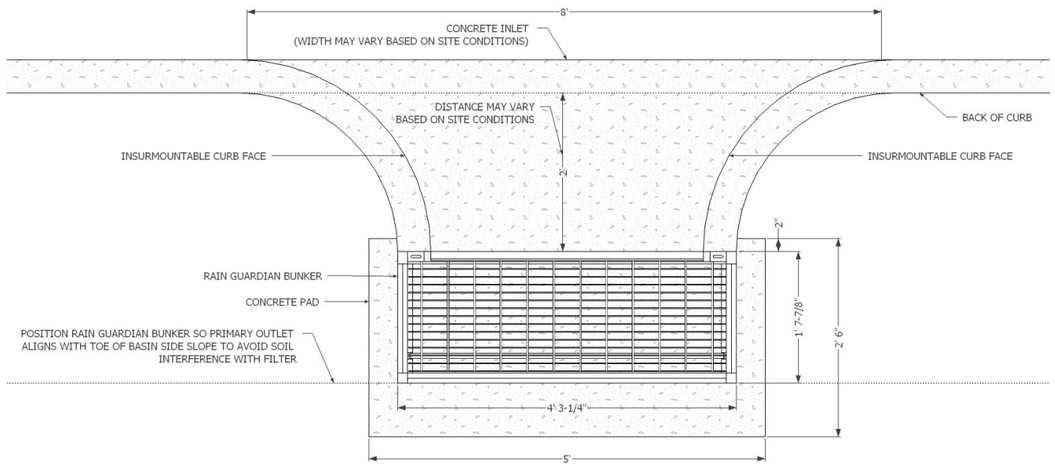
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY:

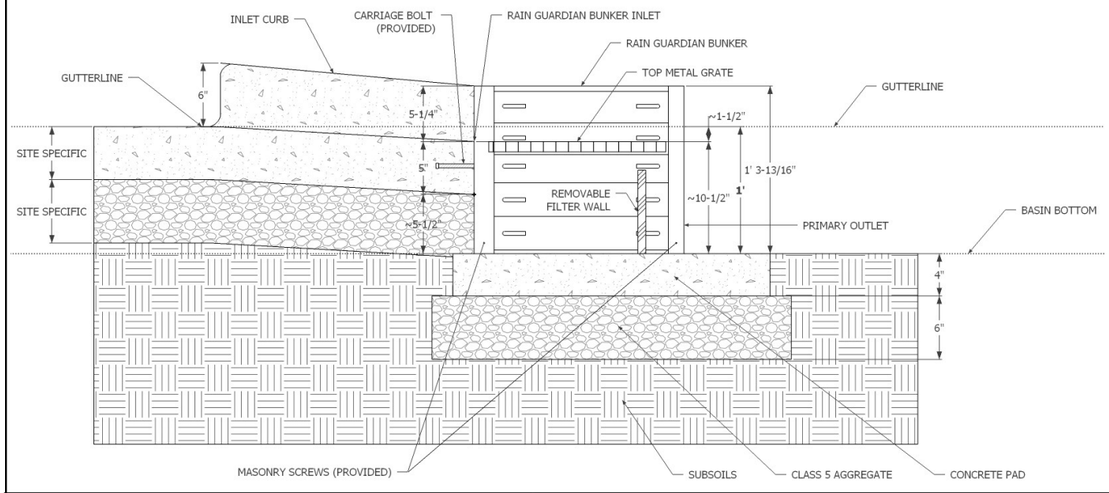
NOTES:
1. Contact Gopher One at least 48 hours prior to digging at 651-454-0002 to have utilities marked.
2. Follow design details. If there are issues or questions, contact the Anoka Conservation District (763-434-2030) piror to making any changes.

SCALE: VARIABLE

TYPICAL RAIN GARDEN
INLET DETAIL

SHEET RG2/RG7



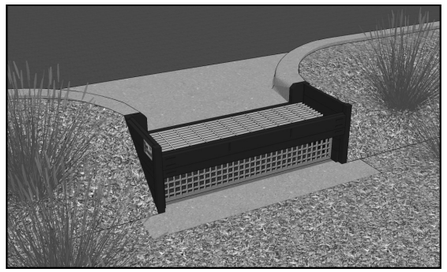


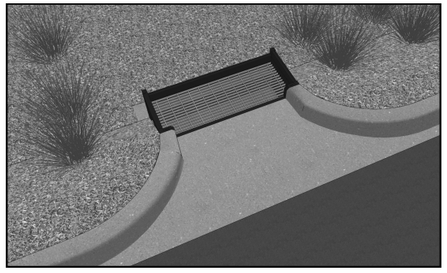
PLAN VIEW NOTES

1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN BUNKER MAY VARY WITH SITE CONDITIONS. INSTALLATION FLUSH WITH THE BACK OF THE CURB CAN ALSO BE COMPLETED WITH THE RAIN GUARDIAN BUNKER.

2. CONCRETE PAD EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN BUNKER TO SERVE AS A SPLASH DISSIPATOR.

INSTALLED VIEWS





CROSS-SECTION VIEW NOTES

1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1'4" BELOW THE GUTTERLINE ELEVATION.

2. THE TOP OF THE CONCRETE PAD IS PRECISELY 1' BELOW THE GUTTERLINE.

INSTALLATION NOTES

1. INSTALL THE CONCRETE PAD WITH A 1' 10" OFFSET FROM THE BACK OF THE CURB TO ACCOMMODATE THE CONCRETE INLET. THIS DISTANCE MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN BUNKER. POSITION RAIN GUARDIAN BUNKER SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. THE CONCRETE PAD SHOULD BE REINFORCED WITH REBAR.

2. EXCAVATE 1' 10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" CONCRETE PAD TO WHICH THE RAIN GUARDIAN BUNKER WILL BE SECURED. THEREFORE, THE TOP OF THE FINISHED CONCRETE PAD IS PRECISELY 1' BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN BUNKER METAL GRATE WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE PAD AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN BUNKER.

3. THE RAIN GUARDIAN BUNKER SHOULD BE POSITIONED 2" FROM THE EDGE OF THE CONCRETE PAD CLOSEST TO THE BACK OF THE CURB. THEREFORE, THE RAIN GUARDIAN BUNKER WILL BE 2' FROM THE BACK OF THE CURB.

4. USING THE PILOT HOLE IN EACH OF THE FOUR CORNER POSTS, PREDRILL 5/32" HOLES INTO THE CONCRETE PAD WITH A 4-1/2" MASONRY BIT AND HAMMER DRILL.

5. SECURE RAIN GUARDIAN BUNKER TO CONCRETE PAD WITH FOUR 3/16" X 2-3/4" MASONRY SCREWS (PROVIDED).

6. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN BUNKER AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN BUNKER ON THE BIORETENTION SIDE.

7. WHEN POURING THE CONCRETE INLET, ENSURE THE CARRIAGE BOLTS ON THE RAIN GUARDIAN BUNKER ARE SURROUNDED BY AT LEAST 2" OF CONCRETE ON ALL SIDES.

8. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.

9. WRAP CABLE THROUGH TOP METAL GRATE AND SECURE WITH PROVIDED CLAMP. ENSURE SUFFICIENT SLACK EXISTS IN CABLE TO ALLOW FOR GRATE REMOVAL AND PLACEMENT IN CONCRETE INLET DURING CLEANING. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN BUNKER INLET.

RAIN GUARDIAN
U.S. PATENT NO. 8,501,016

PRETREATMENT FOR BIORETENTION

Rain Gardens • Swales • Filtration Basins • Infiltration Basins

www.RainGuardian.biz

RAIN GUARDIAN BUNKER
PRETREATMENT CHAMBER
BIORETENTION PONDING DEPTH: 1'
TYPICAL DETAIL

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	MDH	12/1/15	BUNKER—1'
SCALE		VARIABLE	
U.S. PATENT		8,501,016	

ANOKA CONSERVATION DISTRICT

Anoka Conservation District
1318 McKay Dr. NE, Suite 300
Ham Lake, MN 55304
763-434-2030

ANOKA CONSERVATION DISTRICT
1318 MCKAY DR. NE, SUITE 300
HAM LAKE, MN 55304
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www.AnokaSWCD.org

PROJECT: TYPICAL RAIN GARDEN
LOCATION:
PROPERTY ADDRESS
ANOKA, MN 55303

CLIENT: LANDOWNER

DESIGNER: MITCH HAUSTEIN
DATE: 03/03/2022
REVISION:
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY:

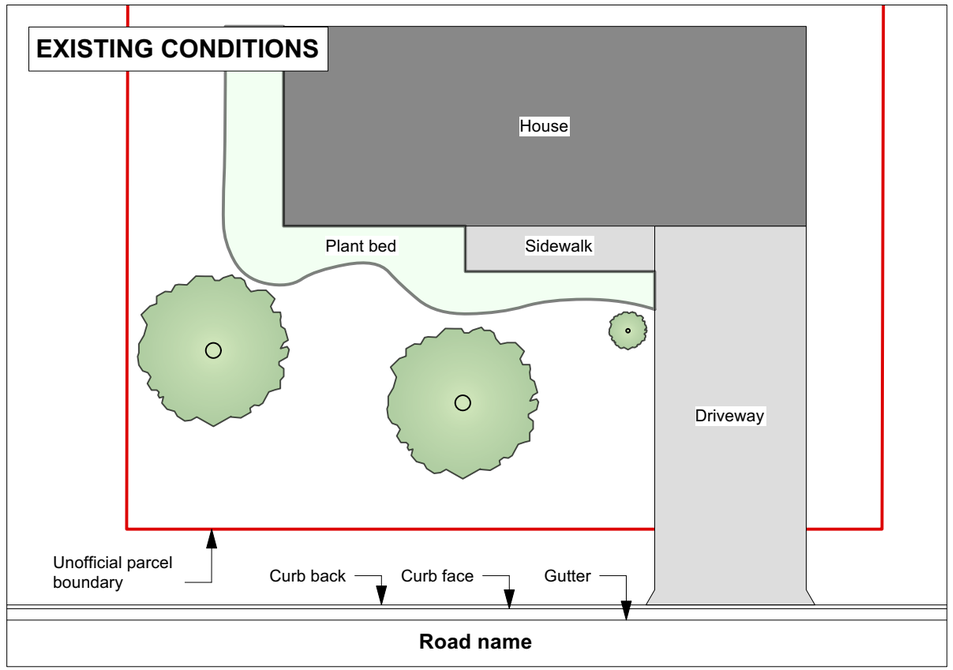
NOTES:
1. Contact Gopher One at least 48 hours prior to digging at 651-454-0002 to have utilities marked.
2. Follow design details. If there are issues or questions, contact the Anoka Conservation District (763-434-2030) piror to making any changes.

SCALE: VARIABLE

TYPICAL RAIN GARDEN
RAIN GUARDIAN BUNKER PRETREATMENT CHAMBER DETAIL

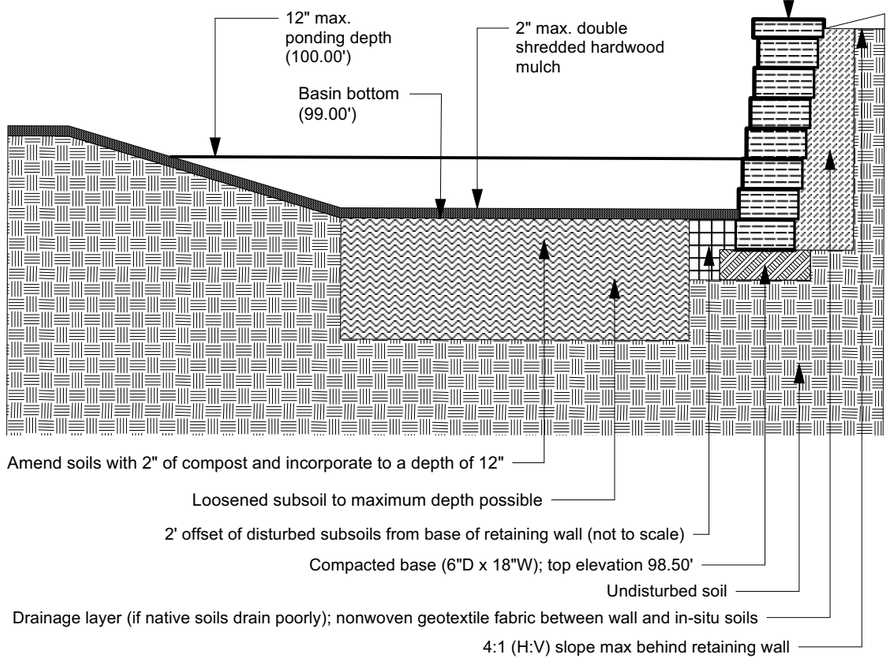
SHEET RG3/RG7

EXISTING CONDITIONS

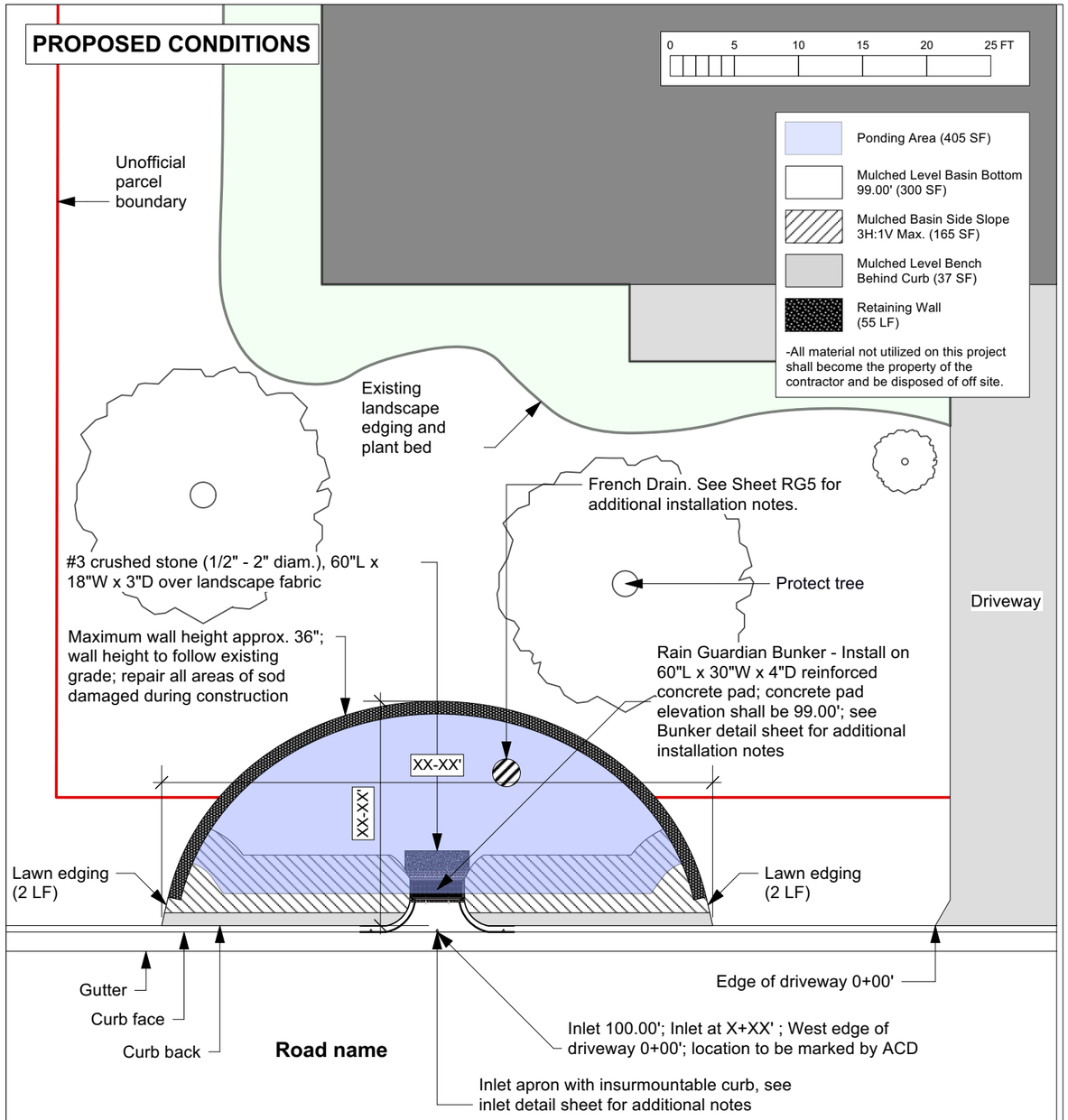


BASIN CROSS-SECTION

Retaining wall - diamond straight face block, with capstone secured with landscape block adhesive; centered on compacted Class V base (6" depth, 6" wider than base block); set bottom of base block 6" below rain garden basin finish grade; step wall to follow lawn elevation



PROPOSED CONDITIONS



PROJECT NOTES

1. All elevations are relative to gutter at curb-cut. It is critical that the top of the concrete pretreatment chamber pad be precisely 1' below the curb gutter.
2. Limit non-tracked equipment over BMP area. Use backhoe with tooth bucket for cell excavation to avoid compacting or smearing soils. Use excavator bucket to loosely place materials. Leveling and final grading within the cell must be completed by hand. Do not use skid steer for excavation or to place or spread materials within cell. Avoid equipment traffic on driveways and walkways.
3. Level basin bottom represents finished elevation with compost. Over excavate basin by 2" to accommodate compost. Rip subsoils after excavation to maximum depth possible. Remove soils with reduced infiltration if found during ripping.
4. Amend soils with 2" of compost and incorporate to a depth of 12".
5. Side slopes should be 3H:1V up to ground level. Slope behind retaining wall not to exceed 4H:1V.
6. Cover rain garden area with no more than 2" of double shredded hardwood mulch.
7. Contractor shall repair any damage to the curb that occurs during construction. Plywood or other protection must be used under ramps, tracks, and outriggers. Contractor is not to damage existing roadway section for necessary curb work.

ANOKA CONSERVATION DISTRICT
1318 MCKAY DR. NE, SUITE 300
HAM LAKE, MN 55304
763-434-2030
www.AnokaSWCD.org

PROJECT: TYPICAL RAIN GARDEN
LOCATION:
PROPERTY ADDRESS
ANOKA, MN 55303

CLIENT: LANDOWNER

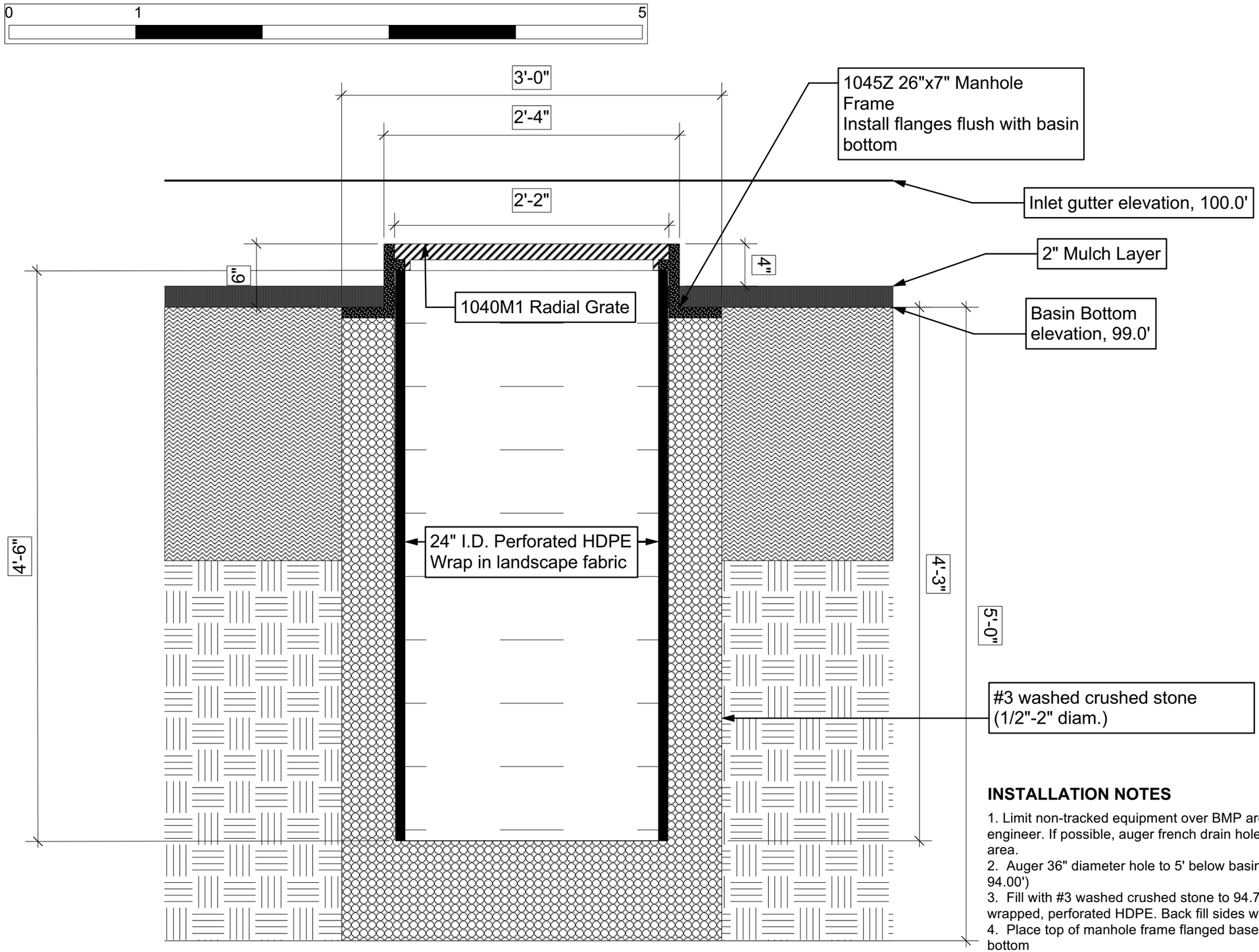
DESIGNER: MITCH HAUSTEIN
DATE: 03/03/2022
REVISION:
REVISION:
REVISION:
REVISION:
REVISION:
CHECKED BY:

NOTES:
1. Contact Gopher One at least 48 hours prior to digging at 651-454-0002 to have utilities marked.
2. Follow design details. If there are issues or questions, contact the Anoka Conservation District (763-434-2030) piror to making any changes.

SCALE: VARIABLE

TYPICAL RAIN GARDEN
EXISTING/PROPOSED CONDITIONS

SHEET RG4/RG7



INSTALLATION NOTES

1. Limit non-tracked equipment over BMP area as directed by engineer. If possible, auger french drain hole from outside of BMP area.
2. Auger 36" diameter hole to 5' below basin bottom (elevation 94.00')
3. Fill with #3 washed crushed stone to 94.75'. Place 4.5' fabric wrapped, perforated HDPE. Back fill sides with washed rock.
4. Place top of manhole frame flanged base level with basin bottom
5 Cover disturbed area with 2" of double shredded hardwood mulch.

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CLIENT: LANDOWNER

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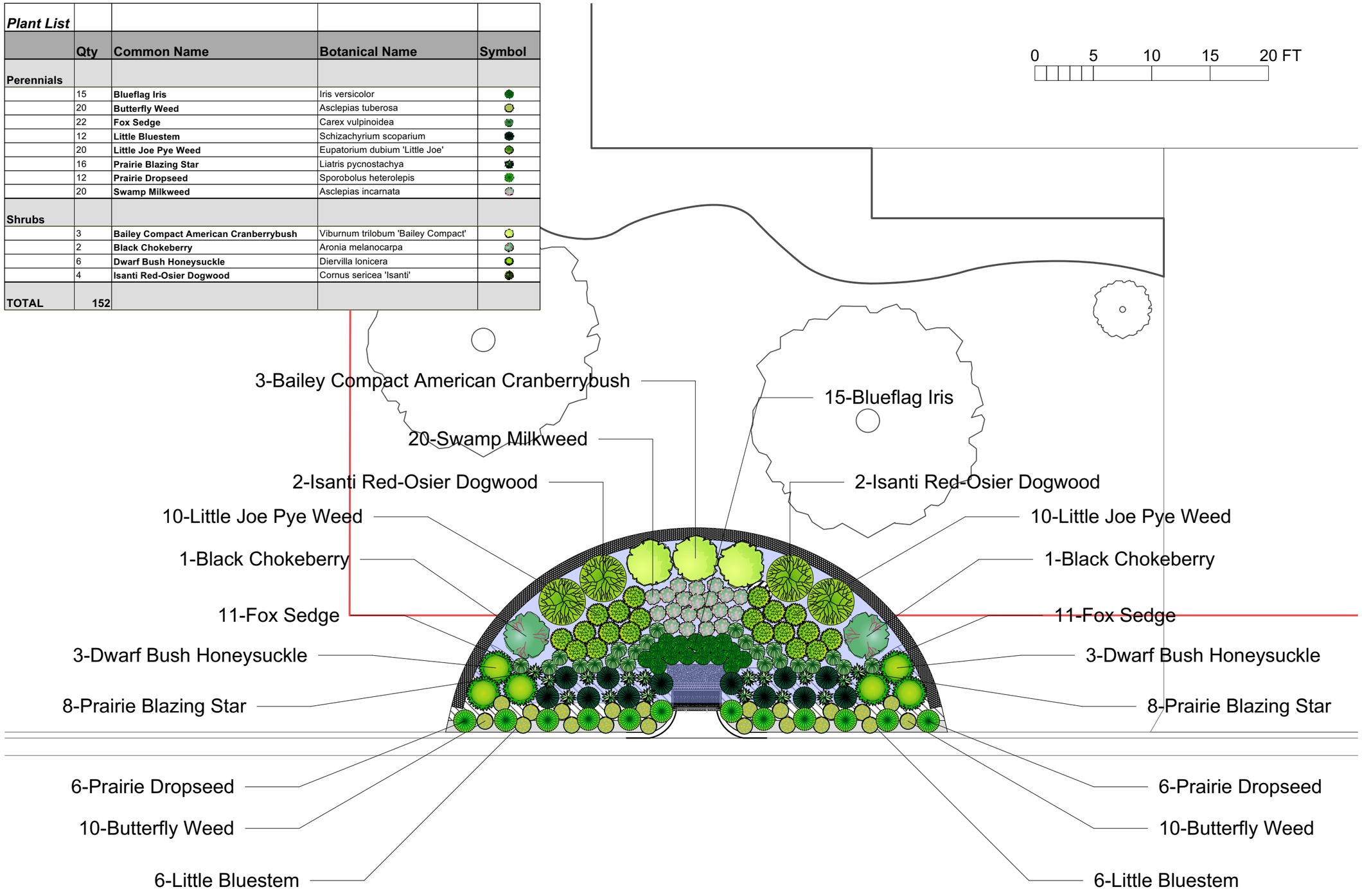
SCALE: VARIABLE

TYPICAL RAIN GARDEN FRENCH DRAIN INSTALLATION DETAIL

SHEET RG5/RG7

Plant List				
	Qty	Common Name	Botanical Name	Symbol
Perennials				
	15	**Blueflag Iris**	Iris versicolor	
	20	**Butterfly Weed**	Asclepias tuberosa	
	22	**Fox Sedge**	Carex vulpinoidea	
	12	**Little Bluestem**	Schizachyrium scoparium	
	20	**Little Joe Pye Weed**	Eupatorium dubium 'Little Joe'	
	16	**Prairie Blazing Star**	Liatris pycnostachya	
	12	**Prairie Dropseed**	Sporobolus heterolepis	
	20	**Swamp Milkweed**	Asclepias incarnata	
Shrubs				
	3	**Bailey Compact American Cranberrybush**	Viburnum trilobum 'Bailey Compact'	
	2	**Black Chokeberry**	Aronia melanocarpa	
	6	**Dwarf Bush Honeysuckle**	Diervilla lonicera	
	4	**Isanti Red-Osier Dogwood**	Cornus sericea 'Isanti'	
TOTAL	152			



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ANOKA, MN 55303

CLIENT: LANDOWNER

DESIGNER: MITCH HAUSTEIN
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SCALE: VARIABLE

TYPICAL RAIN GARDEN
PLANTING PLAN

SHEET RG6/RG7

PLANT SPECIES, SIZES, AND QUANTITIES (QUANTITIES SHOWN ARE FOR ONE RAIN GARDEN)

SPECIES		PLANT SIZE AND QUANTITY			
COMMON NAME	SCIENTIFIC NAME	1" PLUG	4" POT	1-GALLON POT	GRAND TOTAL
Bailey Compact American Cranberrybush	Viburnum trilobum 'Bailey Compact'			3	**3**
Black Chokeberry	Aronia melanocarpa			2	**2**
Isanti Red-Osier Dogwood	Cornus sericea 'Isanti'			4	**4**
Blueflag Iris	Iris versicolor		15		**15**
Dwarf Bush Honeysuckle	Diervilla lonicera		6		**6**
Butterfly Weed	Asclepias tuberosa	20			**20**
Fox Sedge	Carex vulpinoidea	22			**22**
Little Bluestem	Schizachyrium scoparium	12			**12**
Little Joe Pye Weed	Eupatorium dubium 'Little Joe'	20			**20**
Prairie Blazing Star	Liatris pycnostachya	16			**16**
Prairie Dropseed	Sporobolus heterolepis	12			**12**
Swamp Milkweed	Asclepias incarnata	20			**20**
	GRAND TOTAL	**122**	**21**	**9**	**152**

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SCALE: VARIABLE

TYPICAL RAIN GARDEN
ESTIMATED QUANTITIES AND SCHEDULES

SHEET RG7/RG7