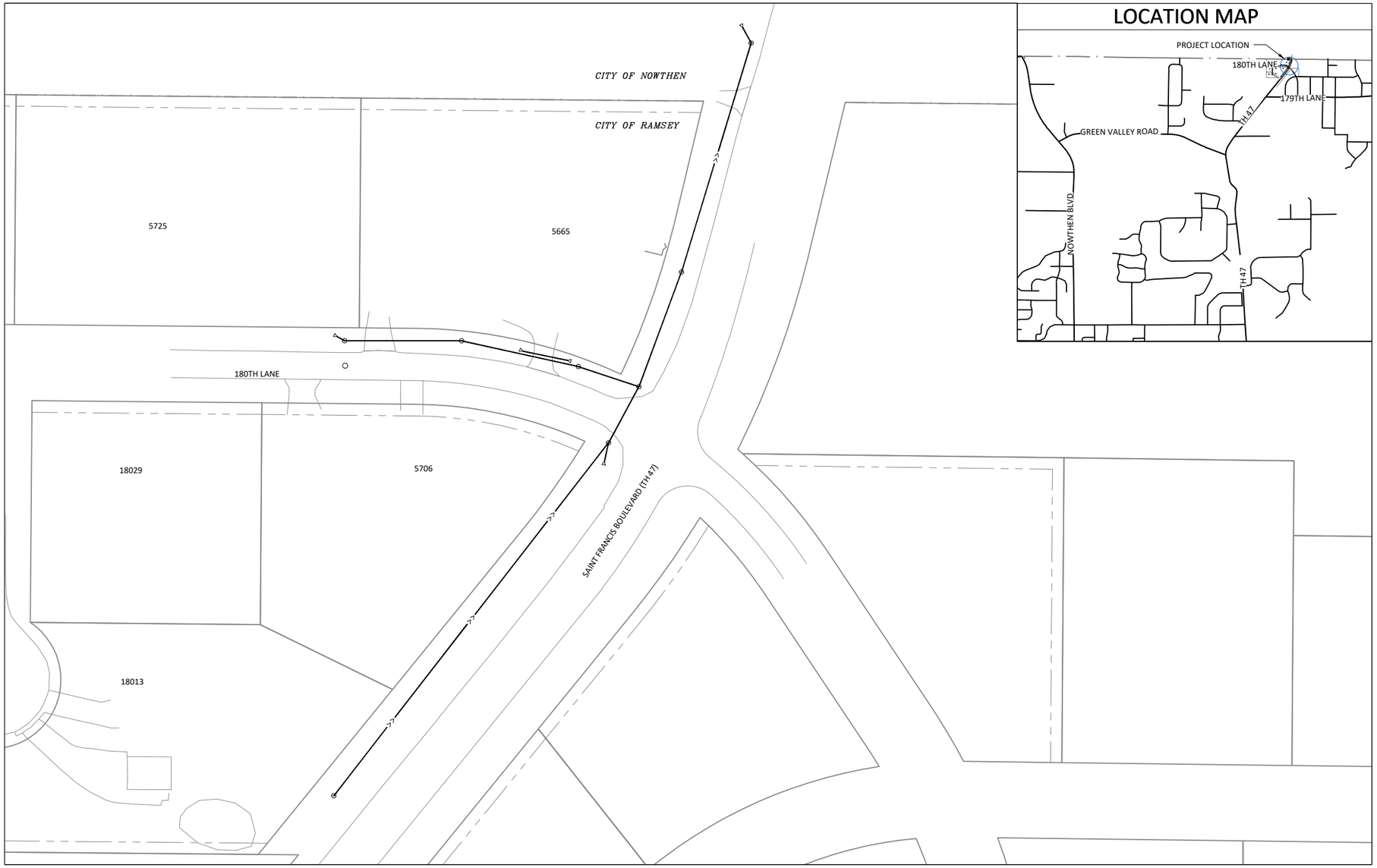
CITY OF RAMSEY
FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY IMPROVEMENT PROJECT NO. 24-04



LOCATION MAP

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

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 MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

SHEET INDEX

THIS PLAN CONTAINS 11 SHEETS

LEGEND

SANITARY MANHOLE	Easement - Drainage & Utility
STORM SEWER MANHOLE	Easement - Roadway
CATCH BASIN MANHOLE	LOT LINE
CATCH BASIN	ELECTRIC LINE
CATCH BASIN - GROUT	ELECTRIC LINE - BURIED
CATCH BASIN - RESET	ELECTRIC LINE - OVERHEAD
FLARED END SECTION	GAS LINE
CULVERT END SECTION	TELECOMMUNICATION LINE
HYDRANT	TELECOMM - OVERHEAD
VALVE	FIBER OPTIC LINE
TREE - CONIFEROUS	TREE LINE
TREE - DECIDUOUS	LANDSCAPE
SHRUB	RETAINING WALL
LIGHT POLE	FENCE
SIGN	SILT FENCE
MAILBOX	WATERMAIN
PEDESTAL - TELECOM	SANITARY SEWER
PEDESTAL - ELECTRIC	STORM SEWER
HAND HOLE	DRAIN TILE

0 50 100 150
SCALE (FEET)

N

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL 1-800-252-1166 OR 651-454-0002

Call before you dig
811
651 454-0002 Metro
800 252-1166 Outstate
www.gopherstateonecall.org

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.

JOE FERIANCEK, P.E.
ASSISTANT CITY ENGINEER

57095 LIC. NO.

DATE 06/10/24

DATE	REVISION

SHEET 01 OF 11 SHEETS

Jun 10, 2024 - 12:06pm
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STATEMENT OF ESTIMATED QUANTITIES					
24-04 180TH LANE DRAINAGE IMPROVEMENTS					
NOTES	ITEM NO.	MNDOT NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
	1	2021.501	MOBILIZATION	LS	1
1	2	2104.502	REMOVE PIPE APRON	EA	4
1	3	2104.502	SALVAGE PIPE APRON	EA	2
1	4	2104.503	REMOVE CULVERT	LF	92
1	5	2104.503	SALVAGE CULVERT	LF	40
1	6	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	170
1	7	2104.504	REMOVE BITUMINOUS PAVEMENT	SY	220
1	8	2104.504	REMOVE GRAVEL PAVEMENT	SY	53
10	9	2106.507	EXCAVATION - COMMON (EV)	CY	150
10, 2	10	2106.507	SELECT GRANULAR BORROW (LV)	CY	190
2	11	2118.507	AGGEGATE SURFACE CLASS 5 MODIFIED (CV)	CY	9
2	12	2211.507	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	25
3	13	2357.506	BITMINOUS MATERIAL FOR TACK COAT	GAL	9
4	14	2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,C)	TON	15
4	15	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	26
	16	2501.502	12" RC PIPE APRON	EA	1
	17	2501.502	12" RC SAFETY APRON	EA	1
	18	2501.502	INSTALL SALVAGED 15" CMP APRON	EA	2
	19	2501.502	18" RC SAFETY APRON	EA	1
	20	2503.503	12" RCP PIPE SEWER CLASS III	LF	21
	21	2503.503	INSTALL SALVAGED 15" CM PIPE SEWER	LF	40
	22	2503.503	18" RCP PIPE SEWER CLASS III	LF	1034
	23	2503.603	CLEAN & VIDEO PIPE SEWER	LF	1055
	24	2506.502	CASTING ASSEMBLY (STORM)	EA	8
	25	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LF	42.2
12	26	2511.509	RANDOM RIP RAP CLASS III	CY	7
9	27	2563.601	TRAFFIC CONTROL	LS	1
	28	2573.502	STORM DRAIN INLET PROTECTION	EA	3
	29	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	LF	240
	30	2573.503	SILT FENCE, TYPE MS	LF	110
11, 2	31	2574.507	TOPSOIL (LV)	CY	418
5	32	2574.508	FERTILIZER TYPE 3	LBS	124
	33	2575.504	ROLLED EROSION PREVENTION CATEGORY 20	SY	183
	34	2575.505	SEEDING	ACRE	0.62
8	35	2575.508	HYDRAULIC MULCH MATRIX	LBS	2320
6	36	2575.508	SEED MIXTURE 25-141	LBS	5
7	37	2575.508	SEED MIXTURE 25-151	LBS	116

PAY ITEM NOTES:

1. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
2. EV TO CV CONVERSION FACTOR = 1.25.
3. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 0.07 GAL/SY.
4. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 113 LB/SY-IN.
5. ESTIMATED QUANTITY BASED ON 200 LB/ACRE.
6. ESTIMATED QUANTITY BASED ON 59 LB/ACRE.
7. ESTIMATED QUANTITY BASED ON 200 LB/ACRE.
8. ESTIMATED QUANTITY BASED ON 4000 LB/ACRE.
9. CONTRACTOR SHALL SUPPLY A TRAFFIC CONTROL LAYOUT FOR CITY APPROVAL MINIMUM 1 WEEK PRIOR TO INSTALL. LUMP SUM QUANTITY SHALL INCLUDE ALL COST REQUIRED FOR MAINTAINING ALL FLAGGING OPERATIONS AS NECESSARY, ANY SIGNAGE, CONCRETE BARRIERS, AND/OR BARRICADES AS NECESSARY.
10. REMOVAL OF TURF AND THE EXCAVATION REQUIRED FOR UTILITY INSTALLATION IS INCIDENTAL TO THE UTILITY PAY ITEM. IF SUBGRADE MATERIAL IS DETERMINED TO BE UNUSABLE BY THE ENGINEER, PAYMENT SHALL BE BY THE COMMON EXCAVATION PAY ITEM. REPLACEMENT MATERIAL SHALL BE SELECT GRANULAR AND PAYMENT SHALL BE BY THE SELECT GRANULAR PAY ITEM.
11. SALVAGED TOPSOIL MEETING REQUIREMENTS OF CITY DETAIL ERO-6 MAY BE USED ON-SITE.
12. GEOTEXTILE FABRIC IS INCIDENTAL TO THE PAY ITEM.

GENERAL NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED ANY OR ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL ACQUIRE THE MPCA CONSTRUCTION STORM WATER GENERAL PERMIT. THE CONTRACTOR SHALL FILE NOTICE OF TERMINATION (NOT) WITH THE MPCA AFTER FINAL STABILIZATION HAS BEEN APPROVED. THE CITY SHALL BE PROVIDED WITH A COPY OF THE NOT PRIOR TO SUBMITTAL TO THE MPCA.
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING IRRIGATION SYSTEMS WITHIN THE PROJECT CONSTRUCTION LIMITS BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING DAMAGE TO IRRIGATION SYSTEMS WHERE POSSIBLE.
4. PERMANENT SIGN REMOVAL AND INSTALLATION IS TO BE PERFORMED BY CITY OF RAMSEY PUBLIC WORKS DEPARTMENT.

STORM SEWER TABULATION														
STRUCTURE	ALIGNMENT	STATION, OFFSET	STRUCTURE SIZE DIA. (IN.)	CASTING TYPE	RIM ELEV.	INVERT ELEV.	SUMP ELEV.	BUILD HEIGHT	INVERT DIRECTION	PIPE DIA. (IN.)	PIPE MATERIAL	PIPE GRADE (%)	PIPE LENGTH (LF)	STRUCTURE CONNECTED TO:
FES 100	180TH LANE DITCH	7+42.61, 0.0	SAFETY APRON	N/A	N/A	873.00	N/A	N/A	SE	18	RCP	2.59	15.4	STMH 101
STMH 101	180TH LANE DITCH	7+27.20, 0.0	48	R-1733	878.14	873.40	873.40	4.73	NW	18	RCP	-2.59	15.4	FES 100
						873.40			S	18	RCP	1.01	208.0	STMH 102
STMH 102	180TH LANE DITCH	5+19.18, 0.0	48	R-1733	881.52	875.50	875.50	6.02	N	18	RCP	-1.01	208.0	STMH 101
						875.50			S	18	RCP	1.68	106.4	STMH 103
STMH 103	180TH LANE DITCH	4+12.76, 0.0	48	R-1733	885.39	877.29	877.29	8.10	N	18	RCP	-1.68	106.4	STMH 102
						877.29			S	18	RCP	1.73	55.5	STMH 201
						877.29			W	18	RCP	0.25	55.5	STMH 104
STMH 104	180TH LANE DITCH	3+57.30, 0.0	48	R-2570	881.68	877.43	877.43	4.25	E	18	RCP	-0.25	55.5	STMH 103
						877.43			W	18	RCP	0.25	104.1	STMH 105
STMH 105	180TH LANE DITCH	2+53.25, 0.0	48	R-2570	881.13	877.69	877.69	3.44	E	18	RCP	-0.25	104.1	STMH 104
						877.69			W	18	RCP	0.25	101.6	STMH 106
STMH 106	180TH LANE DITCH	1+51.61, 0.0	48	R-1733	884.00	877.94	877.94	6.06	E	18	RCP	-0.25	101.6	STMH 105
						880.70			NW	12	RCP	7.05	4.3	FES 107
						881.16			S	15	CMP	0.72	N/A	EXISTING
FES 107	180TH LANE DITCH	1+47.36, 0.0	RC APRON	N/A	N/A	881.00	N/A	N/A	SE	12	RCP	-7.05	4.3	STMH 106
STMH 200	TH 47 DITCH	0+18.74, 0.0	48	R-2570	882.23	879.23	879.23	4.00	NE	18	RCP	-0.25	388.9	STMH 201
STMH 201	TH 47 DITCH	4+07.66, 0.0	48	R-1733	883.85	878.25	878.25	5.60	SW	18	RCP	0.25	388.9	STMH 200
						878.25			NE	18	RCP	-1.73	55.5	STMH 103
						881.60			S	12	RCP	11.45	16.7	FES 202
FES 202	TH 47 DITCH	3+92.68, R 7.1	SAFETY APRON	N/A	N/A	883.50	N/A	N/A	N	12	RCP	-11.45	16.7	STMH 201
FES 300	180TH LANE DITCH	3+07.36, L 2.8	CMP APRON	N/A	N/A	881.00	N/A	N/A	E	15	CMP	-0.35	39.6	FES 301
FES 301	180TH LANE DITCH	3+46.95, L 3.2	CMP APRON	N/A	N/A	880.86	N/A	N/A	W	15	CMP	0.35	39.6	FES 300

DATE	REVISION

Jun 10, 2024 - 12:07pm
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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

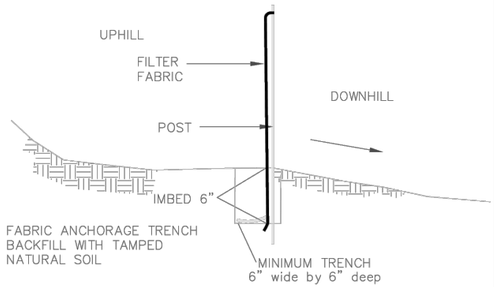
JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF		
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STATEMENT OF ESTIMATED QUANTITIES

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

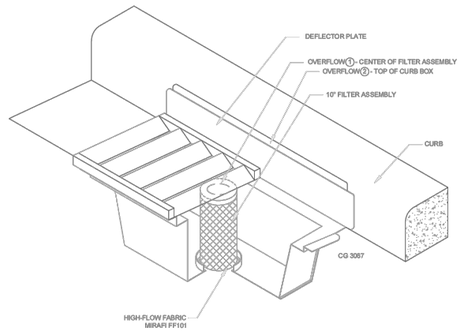


INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: SILT FENCE
		CITY PLATE No. ERO–1

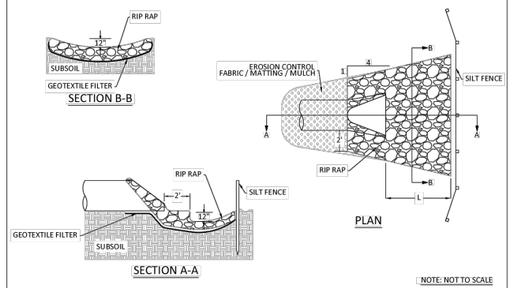


INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: INLET PROTECTION
		CITY PLATE No. ERO–2



NOTES:
1. ON SLOPES 4:1 OR GREATER, ANCHOR OR STRAIGHT DISKED STRAW MULCH, SEEDED NETTING, GABRIC, OR MATTING SUCH AS EXCELSIOR SHALL BE USED TO STABILIZE DISTURBED SOILS. THESE EXPOSED SOILS MUST BE STABILIZED IMMEDIATELY AFTER GRADING OF SOIL IS COMPLETE.
2. A SKIRTING OF EROSION CONTROL FABRIC OR MULCH MUST BE USED TO PROTECT OUTLETS AS ILLUSTRATED REGARDLESS OF SLOPE.
3. RIP RAP IS CLASS III PLACED 18" THICK.
4. FOR PIPE GREATER THAN 48" DIAMETER OR 58" SPAN, QUANTITY OF GEOTEXTILE FABRIC AND RIP RAP WILL BE HANDLED IN A CASE BY CASE MANNER.
5. GEOTEXTILE FABRIC SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIP RAP MATERIAL.

RIP RAP AT RCP OUTLETS

DIA. OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
12	8	19.6	4.4
15	8	20.8	4.8
18	10	25.6	6.4
21	10	27.4	7.1
24	12	33.4	9.2
27	12	35.2	9.9
30	14	41.6	12.3
36	16	50.5	15.8
42	18	57.8	18.7
48	20	66.5	22.2

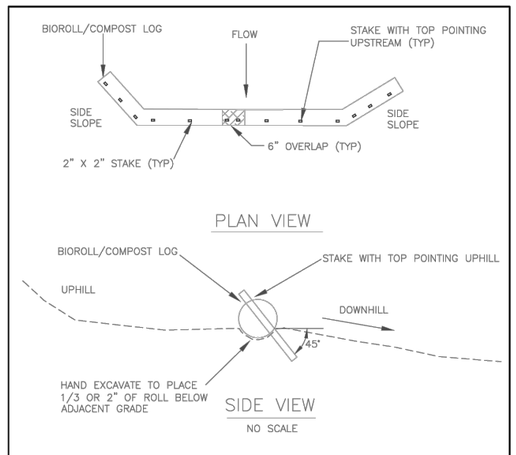
RIP RAP AT RCP-A OUTLETS

SPAN OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
22	10	25.6	6.1
28	12	33.2	8.5
36	14	41.5	11.2
43	16	50.5	14.3
51	18	57.5	16.9
58	20	65.2	19.8

APPROVED: 9 – 2016	City of RAMSEY	STANDARD DETAILS: RIP–RAP
		CITY PLATE No. ERO–3

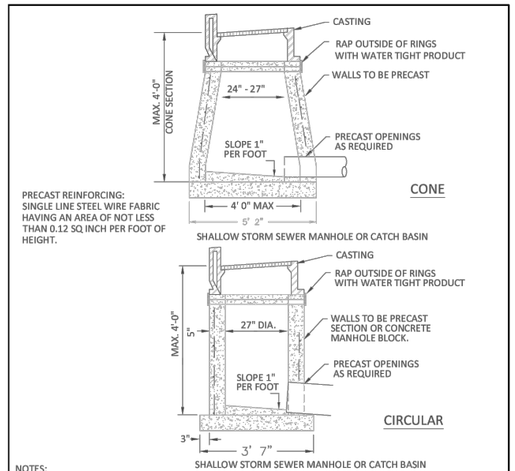
Notes:
1. INSTALLATION OF 4" OF TOPSOIL REQUIRED ACROSS ALL DISTURBED AREAS.
2. TOPSOIL IS DEFINED AS BLACK DIRT COMPOSED OF UNCONSOLIDATED MATERIAL, LARGELY UNDECOMPOSED ORGANIC MATTER WHICH IS SUITABLE FOUNDATION FOR VEGETATIVE GROWTH.
3. THE COMPOSITION OF TOPSOIL SHOULD CONTAIN NO MORE THAN THIRTY-FIVE PERCENT (35%) SAND CONTENT.

APPROVED: 7 – 2019	City of RAMSEY	STANDARD DETAILS: TOPSOIL REQUIREMENTS
		CITY PLATE No. ERO–6



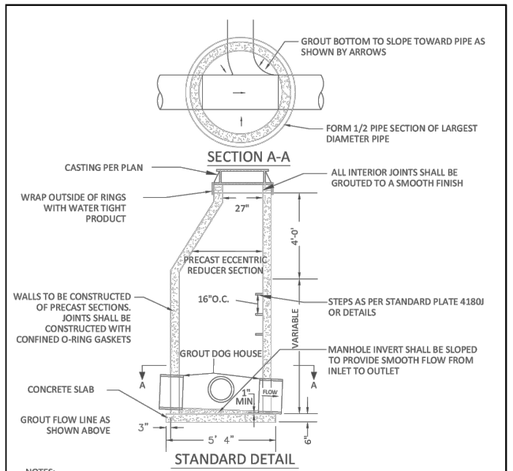
NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 6" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

APPROVED: 3 – 2016	City of RAMSEY	STANDARD DETAILS: BIO ROLL (COMPOST LOG)
		CITY PLATE No. ERO–4



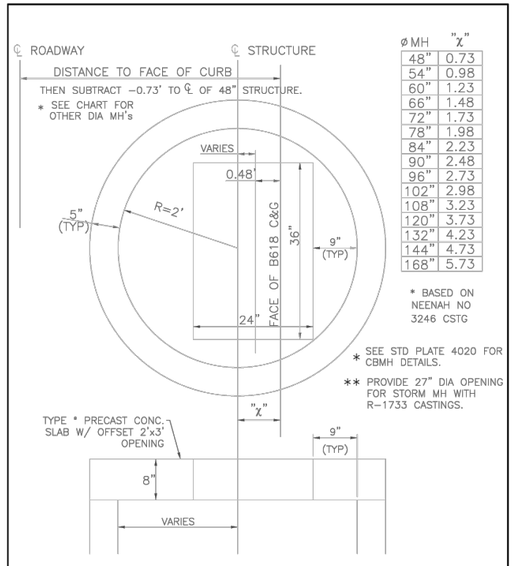
NOTES:
1. MANHOLE INVERT SHALL BE SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB
3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX 7-2" RINGS, MIN 2-2" RINGS
4. GROUT BETWEEN RINGS, SHIMS SHALL BE METAL, CONCRETE OR PLASTIC
5. SHIMS USED FOR LEVELING SHALL BE METAL OR CONCRETE
6. A 12 GAUGE COPPER CLAD STEEL TRACER WIRE IS REQUIRED WITH ALL STORM LINES
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
8. TRACER WIRED ARE TO END IN STRUCTURES, AT FINIHED GRADE ON ALL SERVICES AND STUBS

APPROVED: 1 - 2024	City of RAMSEY	STANDARD DETAILS: STORM AREA INLET
		CITY PLATE No. STO-2



NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
2. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
3. ALL INLET INVERTS TO BE 0.10 ABOVE OUTLET INVERTS UNLESS OTHERWISE NOTED
4. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX 7-2" RINGS, MIN 2-2" RINGS
5. GROUT BETWEEN RINGS, SHIMS SHALL BE METAL, CONCRETE OR PLASTIC
6. A 12 GAUGE COPPER CLAD STEEL TRACER WIRE IS REQUIRED WITH ALL STORM LINES
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
8. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
9. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

APPROVED: 1 - 2024	City of RAMSEY	STANDARD DETAILS: STORM MANHOLE
		CITY PLATE No. STO-3



APPROVED: 4 – 2005	City of RAMSEY	STANDARD DETAILS: SLAB TOP MANHOLE COVER
		CITY PLATE No. STO–5

DATE	REVISION

Jun 11, 2024 - 12:09pm
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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

JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF		
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

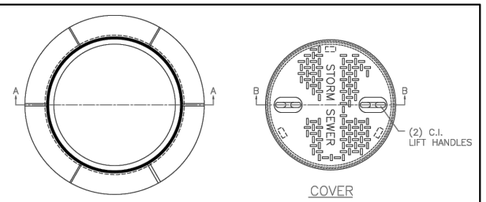
City of RAMSEY

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

DETAILS

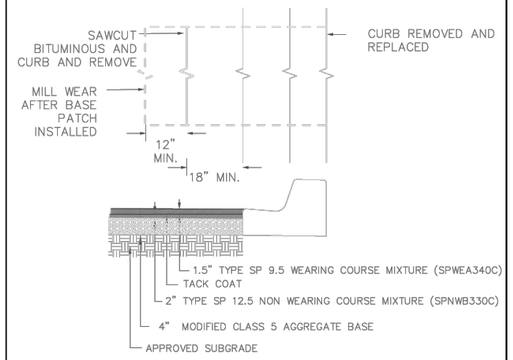
FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 03 OF 11 SHEETS



NOTE: NOT TO SCALE

APPROVED: 2 – 2019	City of RAMSEY	STANDARD DETAILS: WATER TIGHT CASTING
		CITY PLATE No. STO–14



NOTES:
1. BITUMNOUS SHALL BE SAWCUT AND REMOVED AFTER CURB IS REPLACED.
2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHNICALLY COMPACTED.
3. SEE CITY PLATE STR–26 FOR MODIFIED CLASS 5 SPECIFICATIONS.

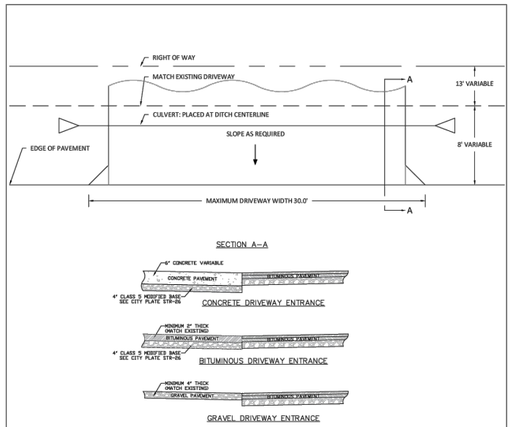
APPROVED: 3 - 2022	City of RAMSEY	STANDARD DETAILS: STREET PATCHING STANDARDS
		CITY PLATE No. STR–25

TABLE A
MODIFIED CLASS 5 SPECIFICATIONS
% PASSING

1"	100
3/4"	90 – 100
3/8"	50 – 80
No.4	35 – 70
No.10	20 – 60
No.40	10 – 35
No.200	5 – 10

NOTES:
1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2 - 2003	City of RAMSEY	STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS
		CITY PLATE No. STR–26



NOTES:
1. PANEL WIDTH SHALL NOT EXCEED 10 FT. WITHOUT A CENTERLINE CONSTRUCTION JOINT.
2. CONCRETE DRIVEWAY TO BE ONE COURSE CONCRETE PAVEMENT. (SEE SPECIAL PROVISIONS FOR CLASS OF CONCRETE.)
3. CONCRETE DRIVEWAYS TO BE 6" THICK.
4. ½" EXPANSION JOINT, ½" PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPERATELY.)
5. BITUMINOUS DRIVEWAYS MINIMUM 2" THICK, MATCH EXISTING BITUMINOUS PAVEMENT THICKNESS.
6. GRAVEL DRIVEWAYS USE MODIFIED BASE PER CITY PLATE STR-26, UNLESS SPECIFIED ELSEWHERE.
7. CULVERTS ARE REQUIRED TO BE MINIMUM 15" DIAMETER, REINFORCED CONCRETE PIPE OR CORRUGATED METAL PIPE.
8. PLACE CULVERT AT THE DITCH CENTERLINE AND AS PER PLAN.
9. CULVERTS MUST BE PLACED FAR ENOUGH FROM DRIVEWAY PAVEMENT EDGE FOR MAX 1:3 GRADING SLOPE.

APPROVED: 2 - 2019	City of RAMSEY	STANDARD DETAILS: RESIDENTIAL DRIVEWAY - RURAL SECTION
		CITY PLATE No. STR–33

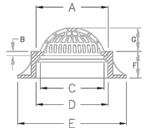
R–2560 Series or Approved Equal.
Beehive Grates with Frames

SUITABLE FOR DRAINAGE ON CIRCUMSTANCES WHERE CLOGGING OF A FLAT GRATING IS A PROBLEM. EXCELLENT FOR ROADSIDE OR EARTH DITCH CATCH BASINS.

Illustrating R–2560–E

Catalog No.	Dimensions in Inches A	B	C	D	E	F	G	Wt. LBS
R–2560–A	12	1	11	12 1/2	19	4	4	80
R–2560–B	15 1/2	1 1/4	15	15	21	5	3	120
R–2560–C	18	1 1/4	16 1/2	20 1/2	30	8	4	190
R–2560–C1	22	1 1/2	20	23	28	4	4 1/2	195
R–2560–C2	22	1 1/2	20 1/2	24	28 1/4	6	4 1/2	270
R–2560–D	22	1 1/2	20	24 1/2	35	9	4 1/2	315
R–2560–D1	22	1 1/2	20	23	28 1/4	4	7	210
R–2560–D2	22	1 1/2	20 1/2	24	35	6	7	285
R–2560–D3	22	1 1/2	20	24 1/2	36	9	7	345
R–2560–E	23	1 1/2	21	25 1/2	35 1/2	9	7	340
R–2560–EA	25 3/4	7/8	24 1/8	26 1/2	35 1/2	4	6	235
R–2560–EB	25 3/4	7/8	24 1/8	26 1/2	35 1/2	4	9	255
R–2560–E1	25 3/4	7/8	24 1/8	26 1/2	35 1/2	7	6	285
R–2560–E2	25 3/4	7/8	24 1/8	26 1/2	35 1/2	7	9	300
R–2560–E3	25 3/4	7/8	24 1/8	26 1/2	35 1/2	8	6	345
R–2560–E6	25 3/4	7/8	24 1/8	26 1/2	35 1/2	8	9	365
R–2560–E7	25 3/4	7/8	24 1/8	26 1/2	35 1/2	9	6	350
R–2560–E8	25 3/4	7/8	24 1/8	26 1/2	35 1/2	9	9	365
R–2560–E9	25 3/4	7/8	24 1/8	26 1/2	35 1/2	10	6	360
R–2560–E10	25 3/4	7/8	24 1/8	26 1/2	35 1/2	10	9	385
R–2560–G	32	1 1/2	30	36	46	7	4	535

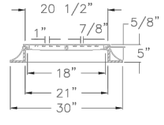
Furnished standard with ground bearing surfaces.



R–2570 Catch Basin Frame, Grate

Light Duty

Total Weight 170 Pounds

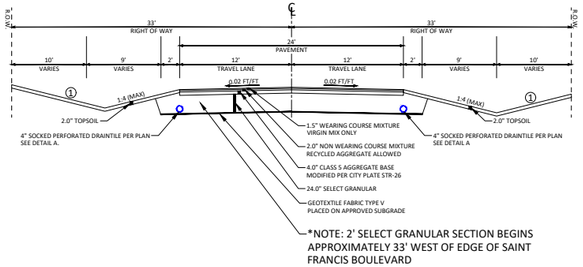


Furnished standard with ground bearing surfaces.

STORM CASTINGS FOR NON–TRAFFIC AREAS
NTS

APPROVED: 9 – 2011	City of RAMSEY	STANDARD DETAILS: STORM CASTING – NON TRAFFIC AREAS
		CITY PLATE No. STO–6

Existing 180th Lane Typical Section



*NOTE: 2' SELECT GRANULAR SECTION BEGINS APPROXIMATELY 33' WEST OF EDGE OF SAINT FRANCIS BOULEVARD

DATE	REVISION

Jun 11, 2024 - 12:09pm
C:\engineering\autocad dwgs\Projects A-M\Ford Brook Estates Drainage Improvements 24-04\Plan Drawings\24-04 Details.dwg

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

JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF		
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

City of RAMSEY
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

DETAILS

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

0 40 80 120
SCALE (FEET)

N

CITY OF NOWTHEN

CITY OF RAMSEY

MNDOT RIGHT OF WAY

MNDOT RIGHT OF WAY

STORM SEWER
TH 47 DITCH NORTH
SEE SHEET 07

STORM SEWER
180TH LANE
SEE SHEET 06

STORM SEWER
TH 47 DITCH SOUTH
SEE SHEET 08

FES 100
STMH 101
STMH 102
STMH 103
STMH 104
FES 301
FES 300
STMH 105
FES 107
STMH 106
STMH 201
FES 202
STMH 200

7+56
7+00
6+00
5+00
4+00
3+00
2+00
1+00
0+00
2+00
1+00
0+00

180TH LANE

SAINT FRANCIS BOULEVARD (TH 47)

KRYPTON STREET

5725
5665
5745
18030
18029
5706
18013
18012

DATE	REVISION

Jun 11, 2024 - 12:10pm
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CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STORM SEWER INDEX SHEET

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 05 OF 11 SHEETS

0 50 100 150
SCALE (FEET)

N

ABANDONED GAS MAIN
(PER CENTERPOINT AS-BUILTS)

REMOVE EXISTING CULVERT AND PIPE APRONS

4' - 12" RCP @ 7.05%

FES 107

STMH 106

2+00

102' - 18" RCP @ 0.25%

STMH 105

FES 300

3+00

104' - 18" RCP @ 0.25%

SALVAGE & REPLACE CULVERT AND PIPE APRONS

40' - 15" CMP @ 0.35%

FES 301

STMH 104

55' - 18" RCP @ 0.25%

4+00

STMH 103

MATCH TO SHEET 7 STA 4+25

MATCH TO SHEET 8 STA 4+25

REMOVE EXISTING PIPE APRON
PLACE STORM MANHOLE OVER EXISTNG PIPE

180TH LANE

Profile View of 180TH LN NORTH DITCH

1+25 2+00 3+00 4+00 4+25

885 880 876

FES 107 (SAFETY APRON)
STA 1+47.36 0.0
INV. SE (STMH 106) 881.00

4' - 12" RCP @ 7.05%

FES 300
STA 3+07.36 2.8L
INV. E (FES 301) 881.00

40' - 15" CMP @ 0.35%

FES 301
STA 3+46.95 3.2L
INV. W (FES 300) 880.86

102' - 18" RCP @ 0.25%

104' - 18" RCP @ 0.25%

55' - 18" RCP @ 0.25%

STMH 106 STA 1+51.61 0.0
RIM 884.00 BUILD 6.06
INV. E STMH 105 877.94
INV. NW (ES 107) 880.70
INV. S (EX. 15" CMP) 881.16

STMH 105 STA 2+53.25 0.0
RIM 881.13 BUILD 3.44
INV. E STMH 104 877.69
INV. W STMH 106 877.69

STMH 104 STA 3+57.30 0.0
RIM 881.68 BUILD 4.25
INV. W STMH 105 877.43
INV. E STMH 103 877.43

STMH 103 STA 4+12.76 0.0
RIM 885.39 BUILD 8.10
INV. N STMH 102 877.29
INV. W STMH 104 877.29
INV. SW STMH 201 877.29

DATE	REVISION

Jun 11, 2024 - 12:16pm
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JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

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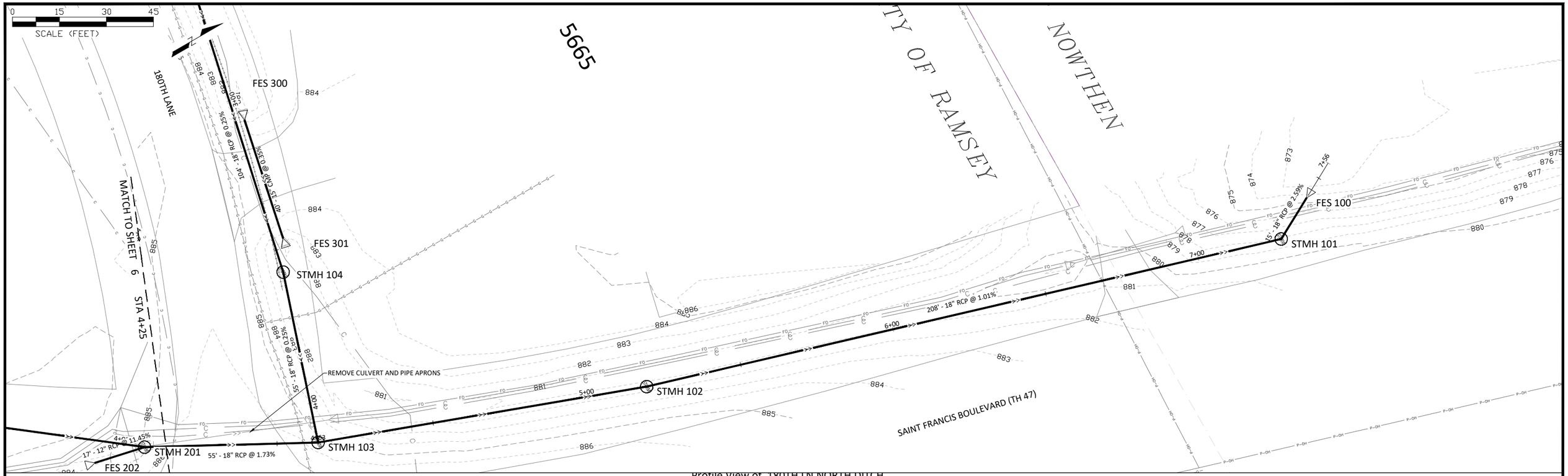
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

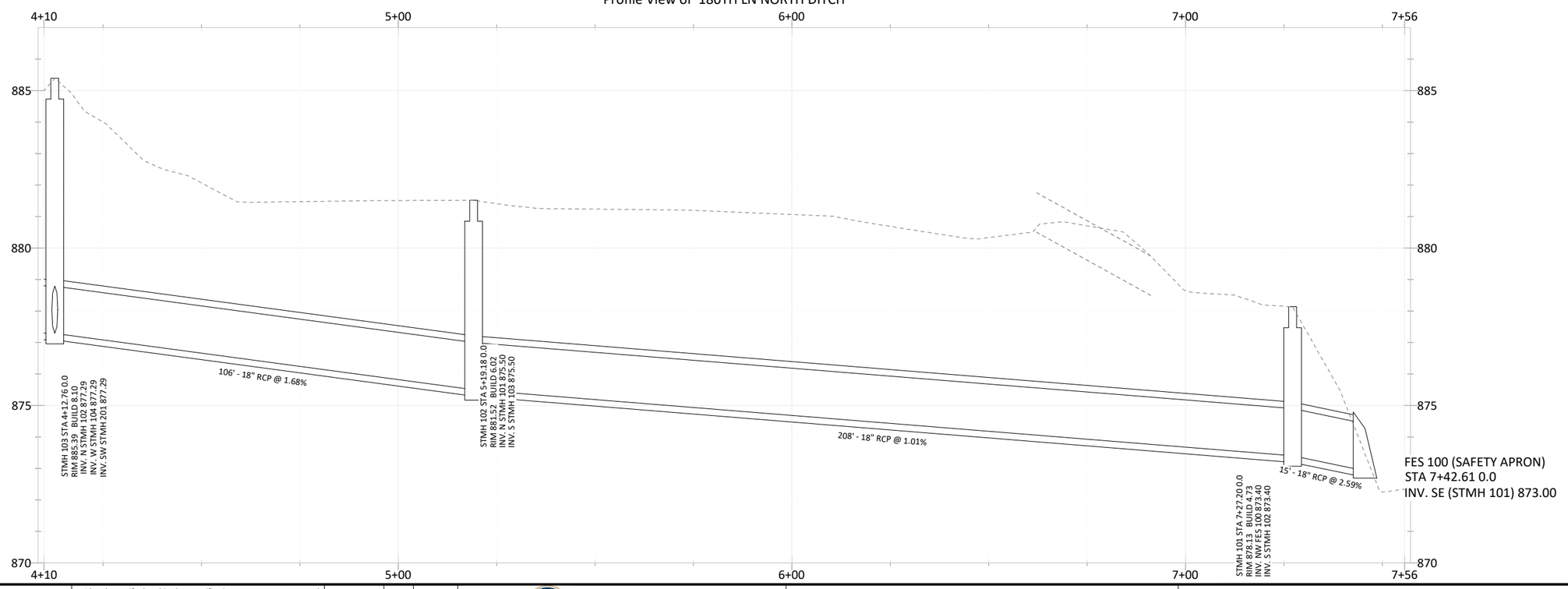
STORM SEWER
180TH LANE

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 06 OF 11 SHEETS



Profile View of 180TH LN NORTH DITCH



DATE	REVISION

Jun 11, 2024 - 12:26pm
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JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF		
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

CITY OF RAMSEY
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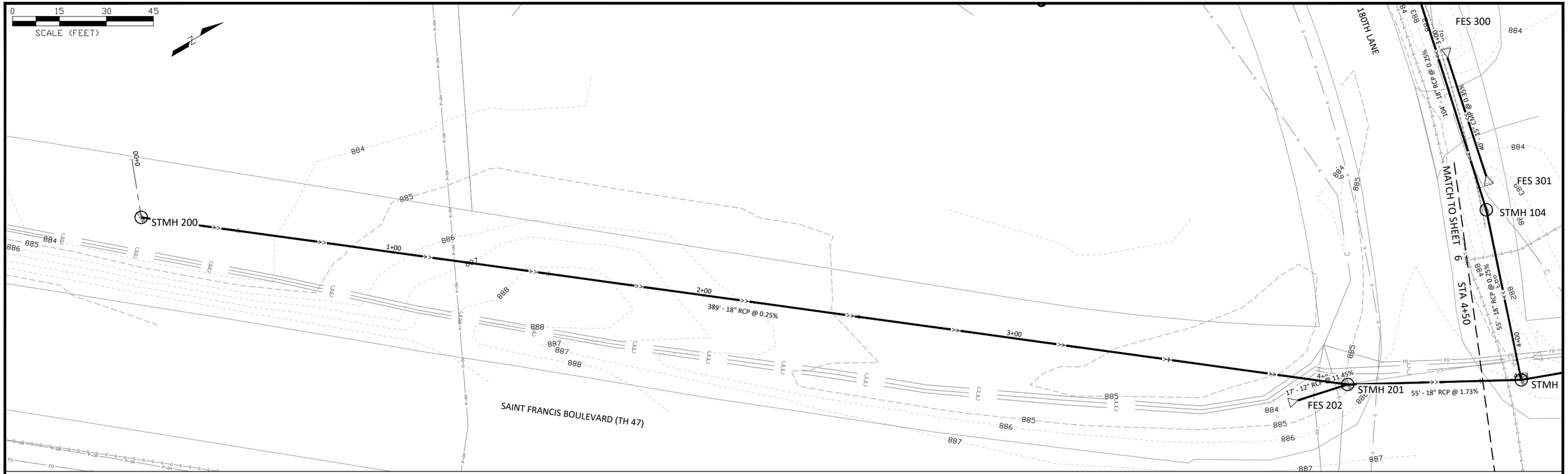
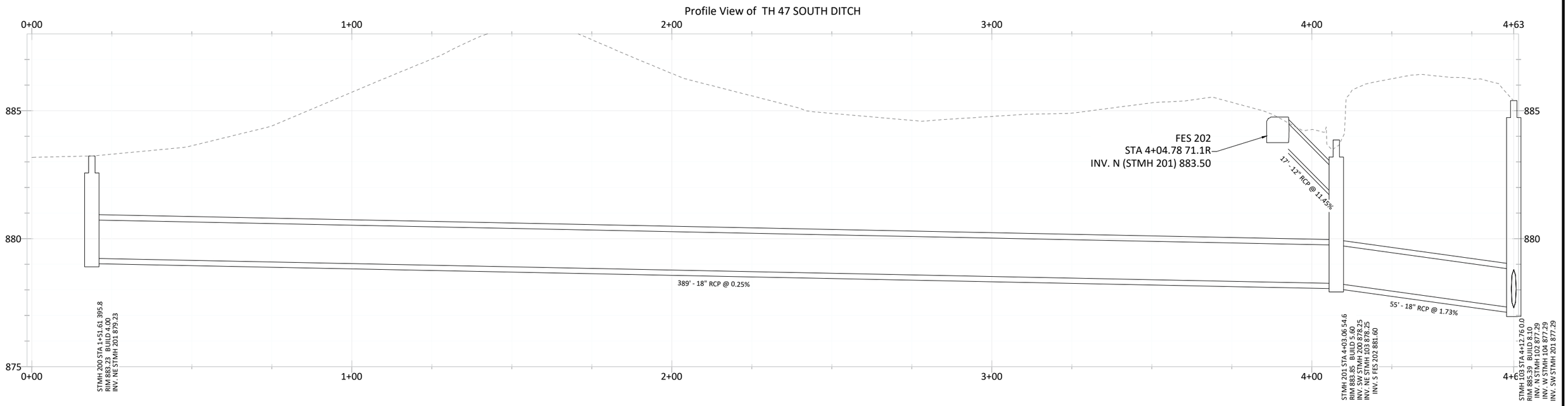
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STORM SEWER
TH 47 DITCH NORTH

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 07 OF 11 SHEETS





DATE	REVISION

Jun 11, 2024 - 12:30pm
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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

Joe Feriancek

JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF	
DRAWN BY:	JJF	DATE: 05/16/24
CHECKED BY:	BRW	FILE: 24-04

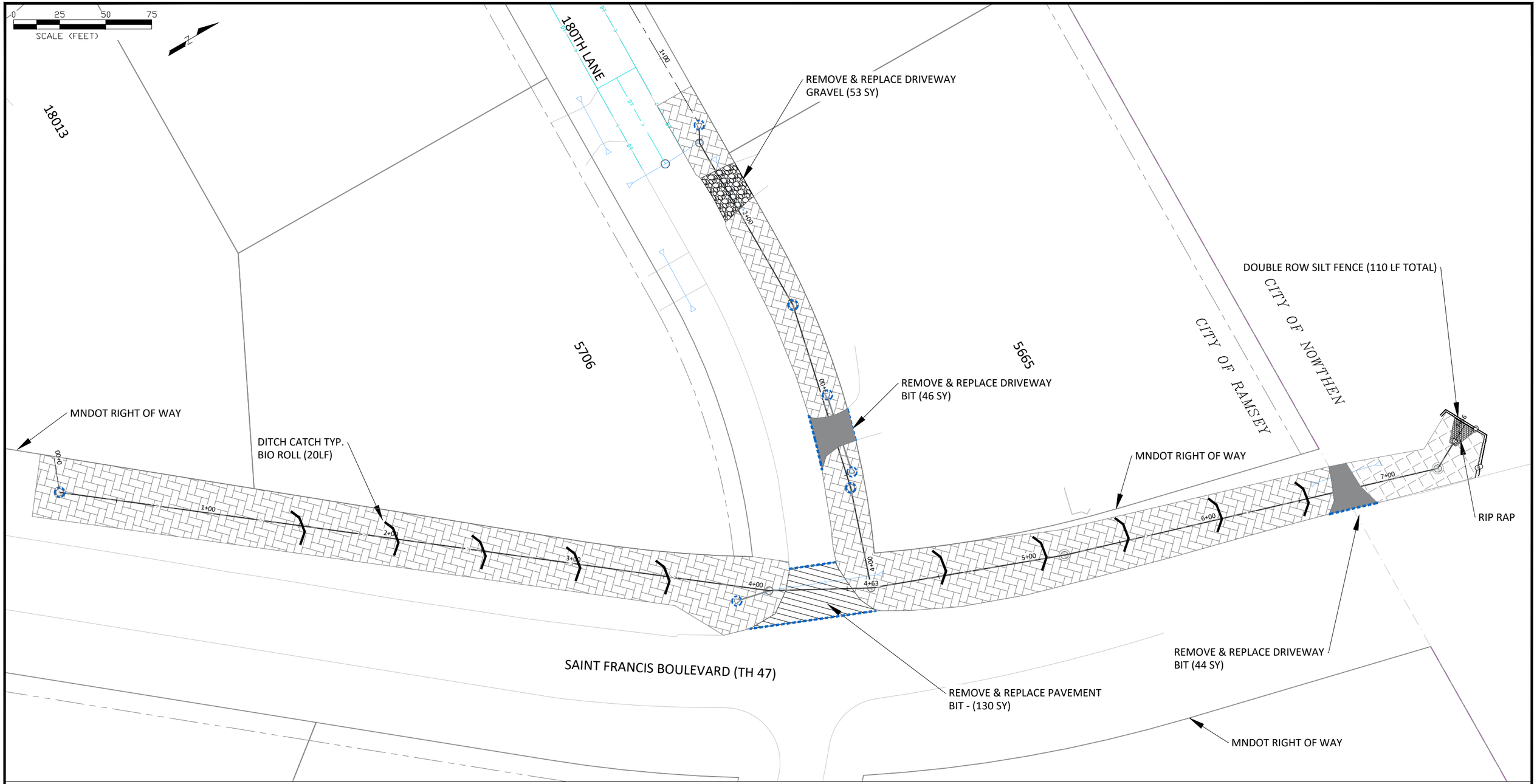
City of RAMSEY

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STORM SEWER
TH 47 DITCH SOUTH

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 08 OF 11 SHEETS



LEGEND

- DRIVEWAY - BITUMINOUS
- DRIVEWAY - GRAVEL
- PAVEMENT PATCH
- DRAINAGE & UTILITY EASEMENT
- RIGHT OF WAY LINE
- SECTION LINE
- RANDOM RIP RAP CLASS III
- SEEDING AREA - HYDRO-MULCH
- EROSION CONTROL BLANKET CAT. 20
- INLET PROTECTION
- EROSION CONTROL LOG
- SILT FENCE
- SAW CUT PAVEMENT

NOTE:

1. SILT FENCE MUST BE INSTALLED BEFORE ANY OTHER ACTIVITIES ON-SITE. WHERE USED FOR LONGITUDINAL PROTECTION, EROSION CONTROL LOG MUST BE INSTALLED PRIOR TO ANY REMOVAL ACTIVITIES.
2. STORM SEWER INLET PROTECTION IS TO BE INSTALLED IMMEDIATELY FOLLOWING CASTING INSTALLATION. FOR EXISTING INLETS, MUST BE INSTALLED PRIOR TO ANY REMOVAL ACTIVITIES. INLET PROTECTION MUST BE MAINTAINED UNTIL BITUMINOUS WEAR COURSE IS IN-PLACE.
3. CULVERT INLET PROTECTION INCLUDES SURROUNDING CULVERT WITH EROSION CONTROL LOG TO PREVENT SEDIMENT FROM ENTERING CULVERT. THIS WILL BE PAID FOR PER LINEAL FOOT. FOR NEW CULVERTS EROSION CONTROL LOG MUST BE INSTALLED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. EROSION CONTROL LOG MUST BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED.

DATE	REVISION

Jun 11, 2024 - 1:58pm
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JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF	
DRAWN BY:	JJF	DATE: 05/16/24
CHECKED BY:	BRW	FILE: 24-04

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

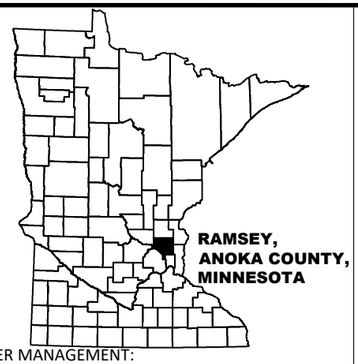
EROSION CONTROL & RESTORATION

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 09 OF 11 SHEETS

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
IMPROVEMENT PROJECT 24-04
CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA



DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:

Construction activities include; Site Grading, Storm Sewer Construction, Temporary Erosion and Sediment Control and Permanent Stabilization.

Project Description: The project consists of construction of 261 linear feet of storm sewer along 180th Lane and 740 linear feet of storm sewer along TH 47, to drainage existing low points.The drainage for the existing low areas ultimately overflow to Ford Brook to the north. The storm sewer inlets and piping will drain the low areas quicker, and reduce the risk of standing water. There is no change to the outfall location of the storm water runoff proposed with this project.

RESPONSIBLE PARTIES:

The Contractor and Owner must apply for coverage under the MPCA's General Storm Water Permit for Construction Activity as required by the National Pollution Discharge Elimination System (NPDES) Phase II program. Coverage under the permit will begin automatically 7 calendar days after the electronic submittal date or after the postmarked date of a complete application. (Longer time frames will apply to areas disturbing 50 acres or discharge within 1 mile of a special water).

	COMPANY	CONTACT PERSON	PHONE
OWNER:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825
SWPPP DESIGNER:	CITY OF RAMSEY	JOE FERIANCEK, PE	763-433-9893
CONTRACTOR:			
STIE MANAGER:			
PARTY RESPONSIBLE FOR LONG TERM O&M:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825

Individuals listed above, including the SWPPP preparer, individual overseeing implementation of, revising and amending the SWPPP, Individuals performing or supervising the installation, maintenance and repair of BMP's must be trained. At least one individual present on the permitted project, or available within 72 hours shall be trained in the applicable job duties. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Copies of the SWPPP preparer information is included in the Project Manual. The Contractor shall provide information for the individual(s) overseeing implementation, supervising installation, maintenance, and repair of BMP's to be included in the Project Manual prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

Documentation shall include:

a. Names of trained personnel associated with this project.
b. Dates of training, names of instructor(s) and entity providing training.
c. Content of training course or workshop including the number of hours trained.
d. As an alternative to a, b, and c listed above, a photocopy of the current Erosion and Stormwater Management card issued by the University of Minnesota can be attached to the SWPPP as suitable documentation of training.

DOCUMENTATION RETENTION:

The following documentation will be retained for a period of not less than 3-years from the date of submittal of the NOT.

1. The final SWPPP.
2. Copies of all stormwater related permits required for the project.
3. Records of all inspection and maintenance conducted during construction.
4. Copies of all permanent operation and maintenance agreements; including all right-of-way, contracts, covenants and other binding requirements regarding perpetual maintenance.
5. All required calculations for design of temporary and permanent BMP's.

IMPLEMENTATION SCHEDULE AND PHASING:

1. Furnish & Install perimeter sediment control and inlet protection.
2. Construction of storm sewer
3. Rough grade site.
4. Furnish & install bituminous pavement patches.
5. Add additional temporary BMP's as necessary during construction based on inspection reports.
6. Submit Notice of Termination (NOT) to MPCA within 30 days of final stabilization.

FINAL STABILIZATION:

The permittee(s) must ensure final stabilization of the site. The permittee(s) must submit a NOT within 30 days after final stabilization is complete, or another owner/operator (permittee) has assumed control over all areas of the site which have not undergone final stabilization. Final stabilization can be achieved in one of the following ways:

1. All soil disturbing activities at the site have been completed and all soils must be stabilized by a uniform perennial vegetative cover with a density of 70 percent over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions and;
   a. All drainage ditches, constructed to drain water from the site after construction is complete, must be stabilized to preclude erosion;
   b. All temporary synthetic, and structural erosion prevention and sediment control BMP's (such as silt fence) must be removed as part of the site final stabilization; and
   c. The permittee(s) must clean out all sediment from conveyances and from temporary sedimentation basins to be used as permanent water quality management basins. Sediment must be stabilized to prevent it from being washed back into the basin, conveyances or drainage ways discharging off-site or to surface waters. The cleanout of permanent basins must be sufficient to return the basin to design capacity.
2. Final vegetation cover shall be in the Project Specifications.
3. For residential construction only, final stabilization has been achieved when temporary erosion protection and down gradient perimeter control for individual lots has been completed and the residence has been transferred to the homeowner. Additionally, the permittee must distribute the MPCA "Homeowner fact sheet" to the homeowner to inform the homeowner of the need for, and benefits of, final stabilization.

SPECIAL ENVIRONMENTAL CONSIDERATIONS:

Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
Does any portion of the site have the potential to affect threatened or endangered species?	NO
Does any portion of this site discharge to a Calcareous Fen and the letter of approval from the DNR is located in the Project Manual?	NO
Will any portion of this site potentially affect properties listed on the National Register of Historic Places or a Known or Discovered Archeological site?	NO
Have any Karst features been identified in the project vicinity?	NO
Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO

POLLUTION PREVENTION MANAGEMENT MEASURES:

The permittee(s) shall implement the following pollution prevention management measures on the site:

1. Solid waste: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal regulations.
2. Hazardous materials: oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
3. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

GENERAL STORMWATER DISCHARGE REQUIREMENTS:

All requirements listed in Part 15 of the permit for the design of permanent stormwater treatment system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site.
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

RECEIVING WATERS:

Recieving waters, including surface water, wetlands, Public Waters, and stormwater ponds are identified on the USGS 7.5min quad map within 1 mile of the project boundary. Receiving waters that are impaired, the impairment and WLA are listed as follows. All specific BMP's relative to construction activities listed in this permit for special and impaired waters have been incorporated into this plan. All specific BMP's listed in approved TMDLs and those BMP's listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (DITCH, POND, WETLAND, LAKE, ETC.)	APPENDIX A SPECIAL WATER?	FLOWS TO IMPAIRED WATER WITHIN 1 MILE?	USEPA APPROVED TMDL?
RUM RIVER	RIVER	YES	YES	YES
DO; FISHESBIO; INVERTBIO				

PROJECT AREAS:

Total project size (disturbed area) =	0.68 ACRES
Existing area of impervious surface =	0.06 ACRES
Post construction area of impervious surface =	0.06 ACRES
New impervious surface area created =	0.0 ACRES

Planned construction start date: July 2024
Planned construction completion date: October 2024

PROJECT LOCATION:

County: ANOKA Township: 32 Range: 25 Section: 2 Latitude: 45.298295 Longitude: -93.410848

PERMANENT STORMWATER MANAGEMENT SYSTEM:

Type of storm water management used if more than 1 acre of new impervious surface is created:

a. Wet Sedimentation Pond
b. Infiltration / Filtration
c. Regional Pond
d. Permanent Stormwater Management Not Required

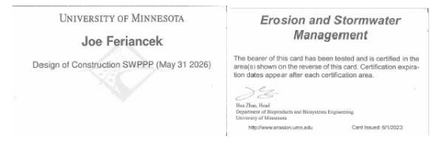
LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN:

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS No.
FINAL STABILIZATION	9
STORM SEWER TABULATION	5 - 8
EROSION AND SEDIMENT CONTROL DETAILS	3

EROSION AND SEDIMENT CONTROL QUANTITIES:

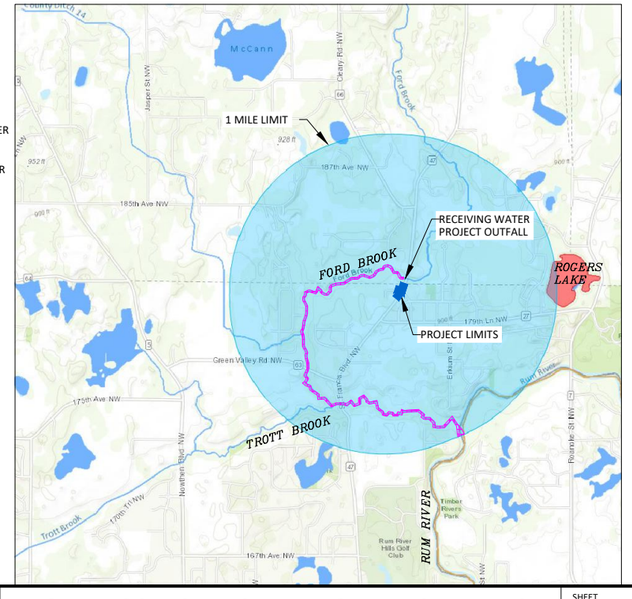
DESCRIPTION	QUANTITY
SILT FENCE TYPE MS	110 LF
SEDIMENT CONTROL LOG	240 LF
INLET PROTECTION	3 EA
ROLLED EROSION PREVENTION CATEGORY 20	183 SY

CERTIFICATION:



LEGEND

1 MILE LIMIT
RECEIVING WATER
IMPAIRED WATER



DATE	REVISION

Jun 11, 2024 - 3:02pm
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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

JOE FERIANCEK
Date 06/10/24 Lic. No. 57095

DESIGNED BY:	JJF		
DRAWN BY:	JJF	DATE:	05/16/24
CHECKED BY:	BRW	FILE:	24-04

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

SWPPP

FORD BROOK ESTATES DRAINAGE IMPROVEMENTS
CITY PROJECT NO. 24-04
CITY OF RAMSEY, MINNESOTA

SHEET 10 OF 11 SHEETS

SEQUENCE OF CONSTRUCTION:

Construction shall proceed in the following sequence:

1. Contractor shall schedule and conduct a pre-construction meeting with the City.
2. Contractor shall secure all necessary permits and licenses.
3. Furnish & install erosion control measures.
4. Maintain erosion control measures, i.e. silt fence, inlet protection.
5. Remove existing bituminous pavement..
6. Install utilities; backfill excavation, grade and compact as required.
7. Furnish & install aggregate base, base course of bituminous pavement
8. Install restoration per plan.
9. Furnish & install wear course of bituminous pavement.
10. Remove erosion control after vegetation is established.

ADDITIONAL STORMWATER POLLUTION PREVENTION, GRADING PLAN, AND SCHEDULE NOTES:

1. All slopes to be 1:4 unless approved by the city engineer.
2. Below grade structures shall be protected and meet drainage requirements per the city engineer.
3. Construction operation hours are from 7:00 a.m. - 10:00 p.m. Monday through Saturday.
4. Call Gopher State One Call for utility locations prior to any work at 1-800-252-1166.
5. Permittee may need to modify SWPPP if the general objectives of controlling pollutants is not being met.
6. Operator shall implement these and any other BMP's that may be required to meet the general permit requirements.
7. Site is not in karst area or pollution or remediation site.
8. Silt fence to be installed downhill from any grading activity.
9. If tracking onto adjacent streets occurs a street sweeper shall be used to clean streets within 8 hours or as directed by the engineer.
10. Dust control may be necessary during rough grading. No grading can take place if wind speed exceeds 25 mph.
11. Solid waste shall be collected and disposed of properly and must comply with MPCA disposal requirements.
12. Hazardous materials shall be stored properly to prevent spills and vandalism.
13. No engine degreasing is allowed on site. External washing of vehicles shall be limited to a defined area (bone yard) on site.
14. Permittee(s) shall adhere to all SWPPP specifications on the plan and other MPCA permit requirements.

EROSION PREVENTION PRACTICES:

1. The permittee(s) must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion, so that the inspection and maintenance requirements are complied with. The location of areas not to be disturbed must be delineated (e.g. with flags, stakes, signs, silt fence, etc.) on the development site before work begins.
2. All exposed soil areas must be stabilized as soon as practical, but in no case later than 7 days after the construction area has temporarily or permanently ceased.
   These areas include constructed stormwater management pond side slopes, and any exposed soil areas with a positive slope to a stormwater conveyance system, such as a curb and gutter system, storm sewer inlet, temporary or permanent drainage ditch or other natural or man made systems that discharge to a surface water.
3. The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water.
4. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.
5. All disturbed areas, except roadways, building areas, parking areas, islands and sidewalk, shall be restored with minimum 4 inches topsoil, seeded and mulched within 7 days of completion of site grading. Seeding shall be in accordance with MnDOT Specification 2575. Where side slopes exceed or equal 1:3 and running slope is greater than 1:50, a polypropylene netting or wood fiber blanket shall be provided and staked over the mulched area. Seed and mulch types and applications rates are per plan and specification.
6. Refer to restoration plan for areas to be seeded or sodded for erosion control.

DEWATERING AND BASIN DRAINING:

1. Dewatering or basin draining (e.g. pumped discharges, trench/ditch cuts for drainage) related to the construction activity that may have turbid or sediment laden discharge water must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible. If the water cannot be discharged to a sedimentation basin prior to entering the surface water, it must be treated with the appropriate BMP's, such that the discharge does not adversely affect the receiving water or downstream landowners. The permittee(s) must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock rip rap, sand bags, plastic sheeting or other accepted energy dissipation measures. Adequate sedimentation control measures are required for discharge water that contains suspended solids.
2. All water from dewatering or basin draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in wetlands causing significant adverse impact to the wetland.

SEDIMENT CONTROL PRACTICES:

1. Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets.
   a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system (e.g. ditches with rock check dams) require sediment control practices only as appropriate for site conditions.
   b. If the down gradient treatment system is overloaded, additional upgradient sediment control practices must be installed to eliminate the overloading, and the SWPPP must be amended to identify these additional practices.
   c. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 1:3 or steeper.
2. Sediment control practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until final stabilization has been established.
3. The timing of the installation of sediment control practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the sediment control practices must be installed immediately after the activity is completed. However, sediment control practices must be installed before the next precipitation event even if the activity is not complete.
4. All storm drain inlets must be protected by appropriate BMP's during construction until all sources with potential for discharging to the inlet have been stabilized.
5. Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches.
6. Stockpile areas which remain on the site for more than seven days shall be seeded, mulched, and surrounded by silt fence.
7. Vehicle tracking of sediment from the construction site must be minimized by BMP's such as stone pads, concrete or steel wash racks, or equivalent systems. Street sweeping must be used if such BMPs are not adequate to prevent sediment from being tracked onto the street.
8. The permittee must install temporary sedimentation basins as required.

INSPECTIONS AND MAINTENANCE:

1. The permittee(s) (either the owner or operator, whoever is identified in the SWPPP) must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5-inches in 24 hours. Following an inspection that occurs within 24 hours after a rainfall event, the next inspection must be conducted within 7 days.
2. All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the SWPPP. Records of each inspection and maintenance activity shall include:

a. Date and time of inspections;
b. Name of persons conducting inspections;
c. Accurate findings of inspections, including the specific location where corrective actions are needed;
d. Corrective actions taken (including dates, times, and party completing maintenance activities);
e. Date of all rainfall events greater than ½ inches in 24 hours, and the amount of rainfall for each event. Permittee(s) must obtain rainfall amounts by either a properly maintained rain gauge installed onsite, a weather station that is within one (1) mile of your location, or a weather reporting system that provides site specific rainfall data from radar summaries;
f. If permittee(s) observe a discharge (i.e., color, odor, settled or suspended solids, oil sheen, and other obvious indicators of pollutant(s);
g. Any amendments to the SWPPP proposed as a result of the inspection must be documented as required in Section 6 of the general permit within seven (7) calendar days.

3. Where parts of the construction site have undergone final stabilization, but work remains on other parts of the site, inspections of the stabilized areas may be reduced to once per month. Where work has been suspended due to frozen ground conditions, the required inspections and maintenance must take place within 24 hours after runoff occurs at the site or 24 hours prior to resuming construction, whichever occurs first.
4. All erosion prevention and sediment control BMP's must be inspected to ensure integrity and effectiveness. All nonfunctional BMP's must be repaired, replaced, or supplemented with functional BMP's. The permittee(s) must investigate and comply with the following inspection and maintenance requirements:

a. All silt fence must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches ⅓ of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
b. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches ½ the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access.
c. Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of sediment being deposited by erosion. The permittee(s) must remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The permittee shall use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. The permittee is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.
d. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces within 3 hours after notification by the City that sweeping is required.
   e.The permittee(s) are responsible for the operation and maintenance of temporary and permanent water quality management BMP's as well as all erosion prevention and sediment control BMP's, for the duration of the construction work at the site. The permittee(s) are responsible until another permittee has assumed control over all areas of the site that have not been finally stabilized or the site has undergone final stabilization, and a NOT has been submitted to the MPCA.
e. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g. fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).

5. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.
6. Storm sewer pipes and structures to be inspected and cleaned out.

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