

# CITY OF RAMSEY

## FORD BROOK ESTATES STREET RECONSTRUCTIONS

### CITY IMPROVEMENT PROJECT NO. 19-01

## GOVERNING SPECIFICATIONS

THE 2018 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.

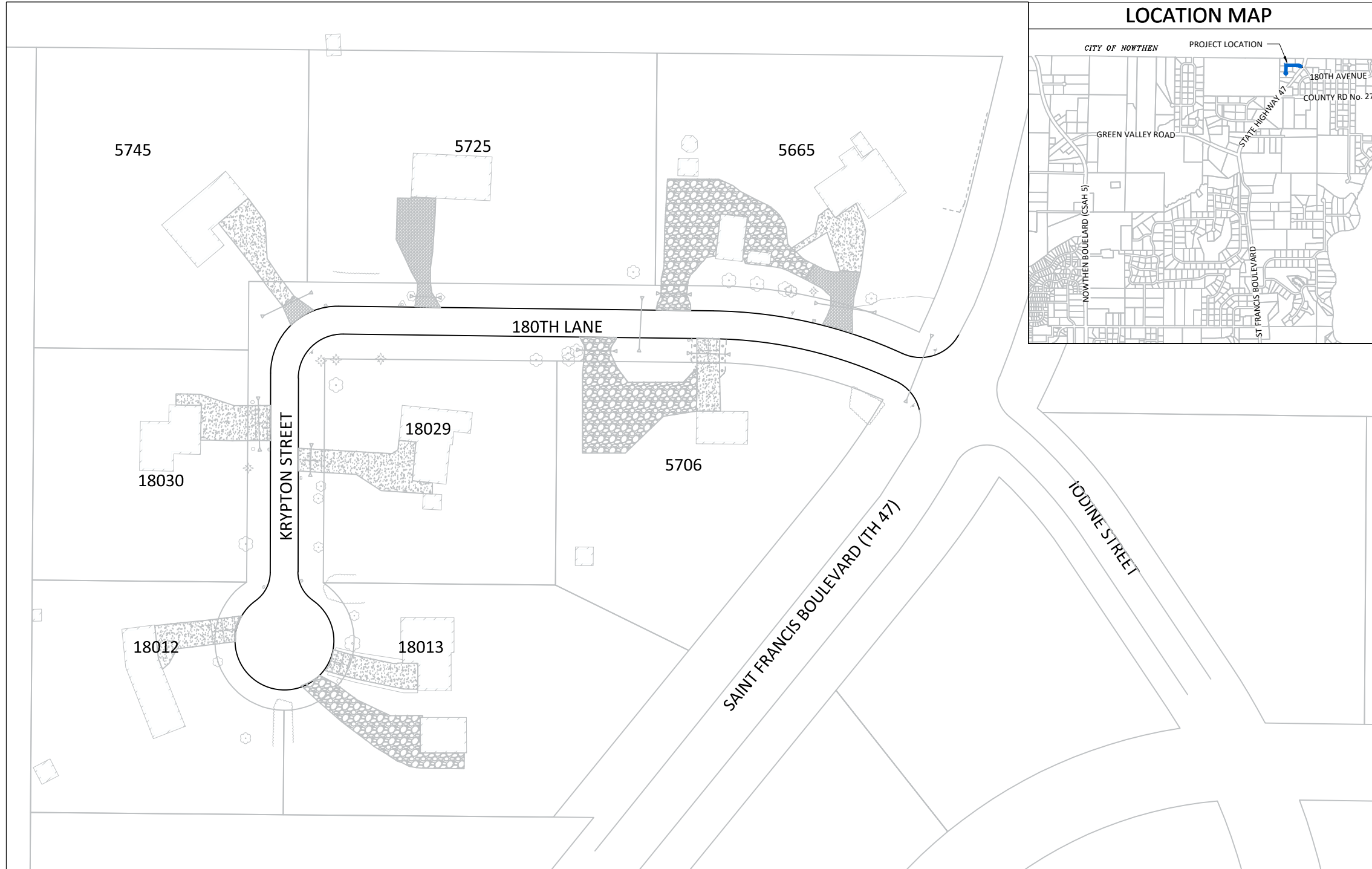
### SHEET INDEX

THIS PLAN CONTAINS 19 SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTION
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### LEGEND

	LIGHT POLE		EASEMENT
	TREE		RIGHT OF WAY
	TREE		ELECTRIC
	SHRUB		OVERHEAD ELECTRIC
	SIGN		GAS
	VALVE		TELECOMMUNICATIONS
	UTILITY PEDESTAL		STORM SEWER
	HAND HOLE		SANITARY SEWER
	REMOVE TREE		WATERMAIN
	3'X2' CATCH BASIN		SAWCUT PAVEMENT
	MANHOLE		TREE LINE
	INLET PROTECTION		FENCE
	HYDRANT		LANDSCAPING
	VALVE		RETAINING WALL
			5' CONTOUR LINE
			1' CONTOUR LINE
			SILT FENCE
			REMOVE BITUMINOUS PAVEMENT
			SODDING TYPE LAWN
			CONCRETE PAVEMENT
			BITUMINOUS PAVEMENT
			GRAVEL SURFACE
			MILL BITUMINOUS PAVEMENT

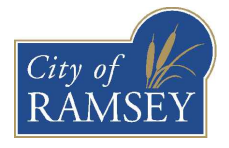
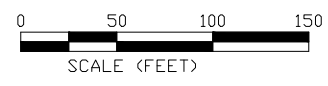


I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

*Bruce Westby*  
 BRUCE WESTBY, P.E.  
 RAMSEY CITY ENGINEER  
 40116 DATE 4/8/19  
 LIC. NO.

DATE	REVISION
5/31/19	REVISE CENTERLINE ALIGNMENT

May 31, 2019 - 2:34pm  
 G:\Engineering\AutoCad Dwg\Projects A-M\Ford Brook Estates 19-01\Plan Drawings\19-01 Cover & Notes.dwg



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



19-01 FORD BROOK ESTATES STREET RECONSTRUCTIONS

STATEMENT OF ESTIMATED QUANTITIES

PAGE No.	NOTE	MNDOT No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
		2021.501	MOBILIZATION	LS	1
5	1	2101.502	CLEARING TREE	TREE	4
5	1	2101.507	GRUBBING TREE	TREE	4
5	1	2104.501	REMOVE PIPE CULVERTS	LF	142
5	1	2104.503	REMOVE CONCRETE PAVEMENT - DRIVEWAYS	SF	1,370
5	1	2104.505	REMOVE BITUMINOUS PAVEMENT - DRIVEWAYS	SY	87
5	1	2104.505	REMOVE BITUMINOUS PAVEMENT - ROADWAY	SY	2,641
5	1	2104.505	REMOVE GRAVEL PAVEMENT - DRIVEWAYS	SY	117
5	1	2104.507	SUBGRADE EXCAVATION, REMOVE UNSUITABLE MATERIAL (EV)	CY	2,097
5	1	2104.511	SAWING CONCRETE PAVEMENT - FULL DEPTH	LF	110
5	1	2104.513	SAWING BITUMINOUS PAVEMENT - FULL DEPTH	LF	113
5	1	2104.521	SALVAGE AND INSTALL RETAINING WALL	LF	52
5	5, 1	2104.523	SALVAGE AND INSTALL MAIL BOX SUPPORT	EA	8
5		2104.523	TEMPORARY MAIL BOX CLUSTER	EA	1
12 - 16	2	2105.501	COMMON EXCAVATION (EV)	CY	175
8 - 9	2	2105.522	SELECT GRANULAR BORROW (CV)	CY	2,430
8 - 9		2105.604	GEOTEXTILE FABRIC TYPE V	SY	3,036
8 - 9		2112.501	SUBGRADE PREPARATION	RDST	8
11	2	2118.502	AGGREGATE SURFACING, CLASS 5 MODIFIED (LV) - DRIVEWAYS	CY	16
8 - 9		2130.501	WATER	MGAL	16
8 - 9		2211.503	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	380
5	1	2232.501	MILL BITUMINOUS PAVEMENT (1.5")	SY	126
11	3	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	200
11	4	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C) (1.5")	TON	230
11	4	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C) DRIVEWAYS (2.0")	TON	10
11	4	2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (SPNWB330C) (2.0")	TON	302
9		2501.511	15" CS PIPE CULVERT	LF	127
9		2501.515	15" CS PIPE APRON	EA	8
8 - 9		2501.602	CLEAN PIPE CULVERT	EA	5
8 - 9		2502.541	4" PERF. PIPE DRAIN	LF	721
9		2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LF	5.3
9		2506.516	FURNISH & INSTALL CASTING ASSEMBLY - STORM	EA	1
9		2506.522	ADJUST FRAME & RING CASTING	EA	1
11		2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SF	1,377
5, 11		2540.601	LANDSCAPE RESTORATION	LS	1
	6	2563.601	TRAFFIC CONTROL	LS	1
6		2572.501	TREE PROTECTION FENCE	LF	155
6		2573.502	SILT FENCE, TYPE MS	LF	220
6		2573.530	STORM DRAIN INLET PROTECTION - MANHOLE	EA	1
6		2573.530	STORM DRAIN INLET PROTECTION - CULVERT	EA	20
11		2574.508	FERTILIZER TYPE 3	LBS	52
11		2574.525	TOPSOIL (LV)	CY	173
11		2575.501	HYDROSEEDING	ACRE	0.52
11		2575.502	SEED MIXTURE 25-151	LBS	63
11		2575.505	SODDING TYPE LAWN	SY	83
11		2575.562	HYDRAULIC MATRIX TYPE MULCH	LBS	1,040

ALT A: KRYPTON STREET CUL-DE-SAC (100' DIAMETER)

PAGE No.	NOTE	MNDOT No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
10	1	2101.502	CLEARING TREE	TREE	1
10	1	2101.507	GRUBBING TREE	TREE	1
10	1	2104.503	REMOVE CONCRETE PAVEMENT - DRIVEWAYS	SF	208
10	1	2104.507	SUBGRADE EXCAVATION, REMOVE UNSUITABLE MATERIAL (EV)	CY	160
10	2	2105.501	COMMON EXCAVATION (EV)	CY	10
10	2	2105.522	SELECT GRANULAR BORROW (CV)	CY	192
10		2105.604	GEOTEXTILE FABRIC TYPE V	SY	240
10	2	2211.503	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	32
10	3	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	17
10	4	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C) (1.5")	TON	20
10	4	2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (SPNWB330C) (2.0")	TON	26
10		2571.502	DECIDUOUS TREE 2.5" CAL. BR	EA	1

PAY ITEM NOTES:

1. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
2. EV TO CV CONVERSION FACTOR = 1.2.
3. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 0.07 GAL/SY.
4. ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 110 LB/SY-IN.
5. PAY ITEM INCLUDES ALL EXISTING MAILBOX SUPPORTS, REGARDLESS OF MATERIAL(S), SIZE, FOOTING TYPE, LOCATION, OR EXISTING ELECTRICAL SERVICE.
6. LUMP SUM QUANTITY SHALL INCLUDE ALL COST REQUIRED FOR MAINTAINING ALL FLAGGING OPERATIONS AS NECESSARY, MAINTAINING PEDESTRIAN ACCESS ROUTES, ANY SIGNAGE AND BARRICADES AS NECESSARY.

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. 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.
3. SALVAGE AND INSTALL MAILBOX SUPPORTS IN THE SAME LOCATION, UNLESS OTHERWISE DIRECTED. THE INSTALLATION WILL BE THE SAME TYPE AS ORIGINAL INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING MAILBOX SUPPORTS WHICH ARE DAMAGED DURING SALVAGE AND/OR INSTALLATION UNLESS CONTRACTOR NOTIFIES CITY OF DAMAGED MAILBOX SUPPORTS BEFORE SALVAGE OPERATIONS BEGIN. SALVAGED MAILBOX SUPPORTS SHALL BE STORED BY CONTRACTOR DURING PROJECT.

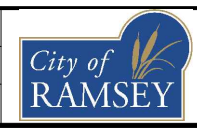
DATE	REVISION

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*Bruce Westby*  
 BRUCE WESTBY  
 Date 4/8/19 Lic. No. 40116

DESIGNED BY:  
JFF  
 DRAWN BY:  
JFF  
 CHECKED BY:  
BRW

DATE:  
4/8/19  
 FILE No.  
19-01

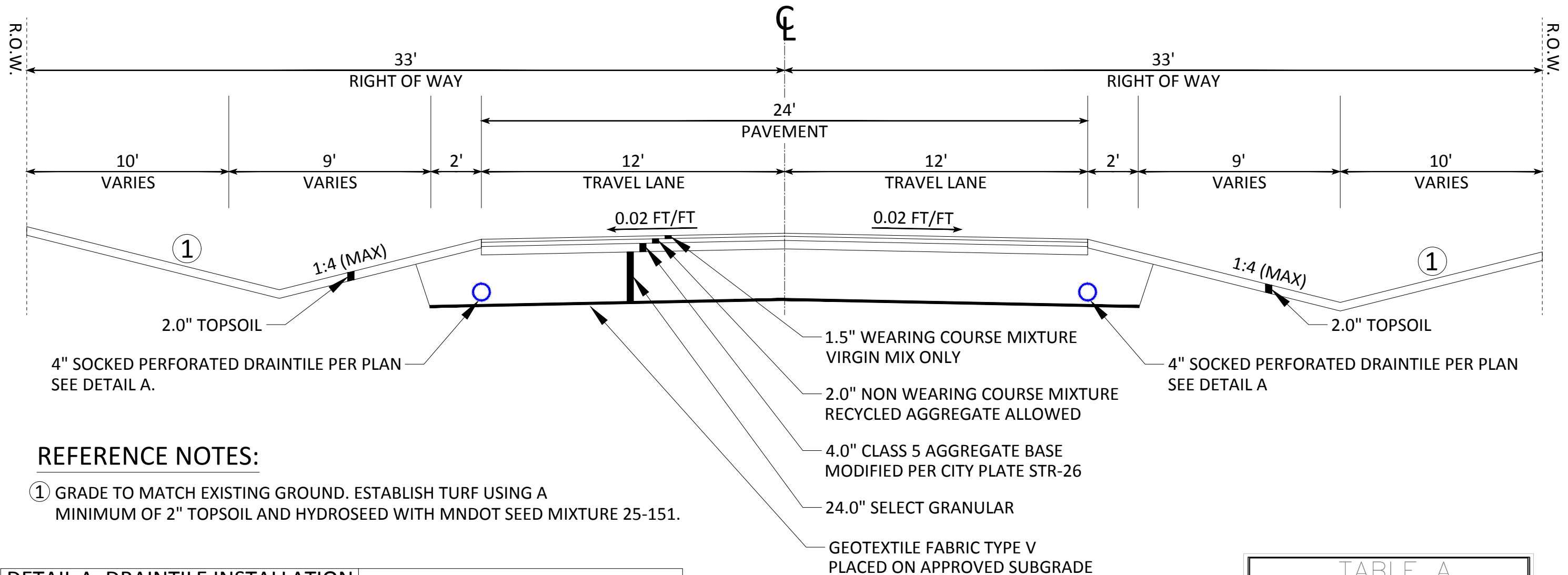


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STATEMENT OF ESTIMATED QUANTITIES

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA

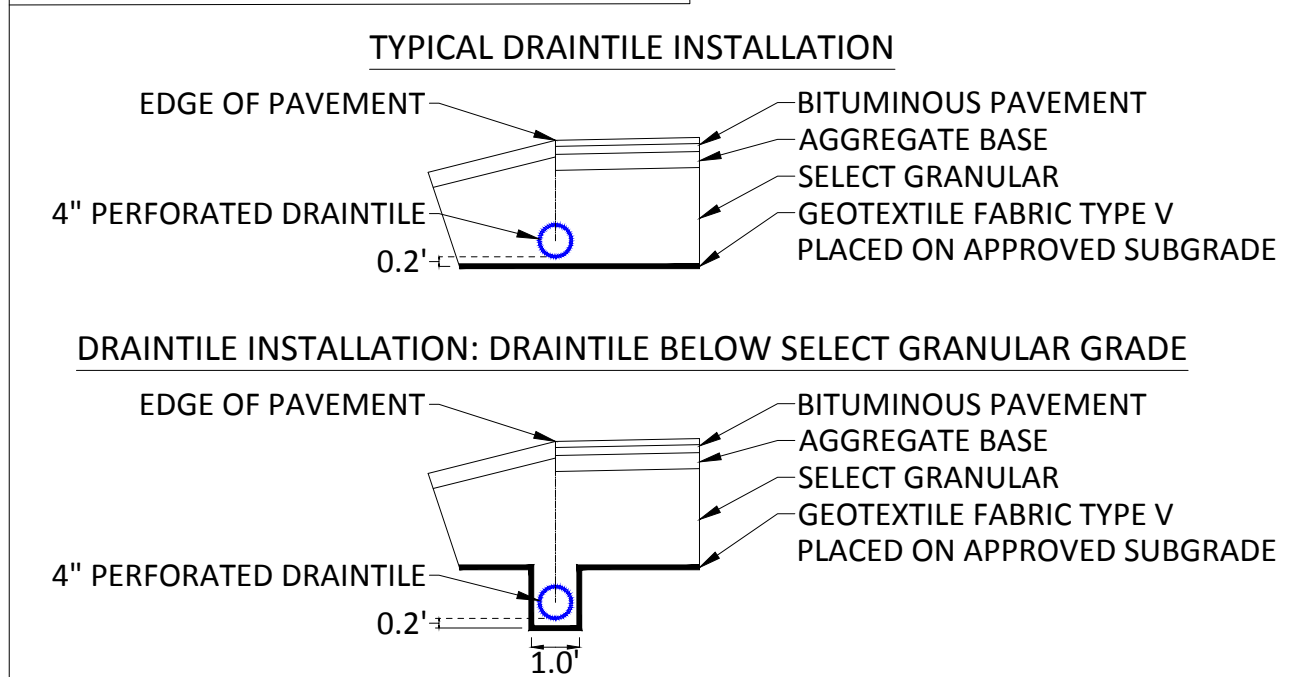
# 180th Lane & Krypton Street Typical Section



## REFERENCE NOTES:

- ① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING A MINIMUM OF 2" TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURE 25-151.

### DETAIL A: DRAINTILE INSTALLATION



### DETAIL B: GEOTEXTILE FABRIC SEAM

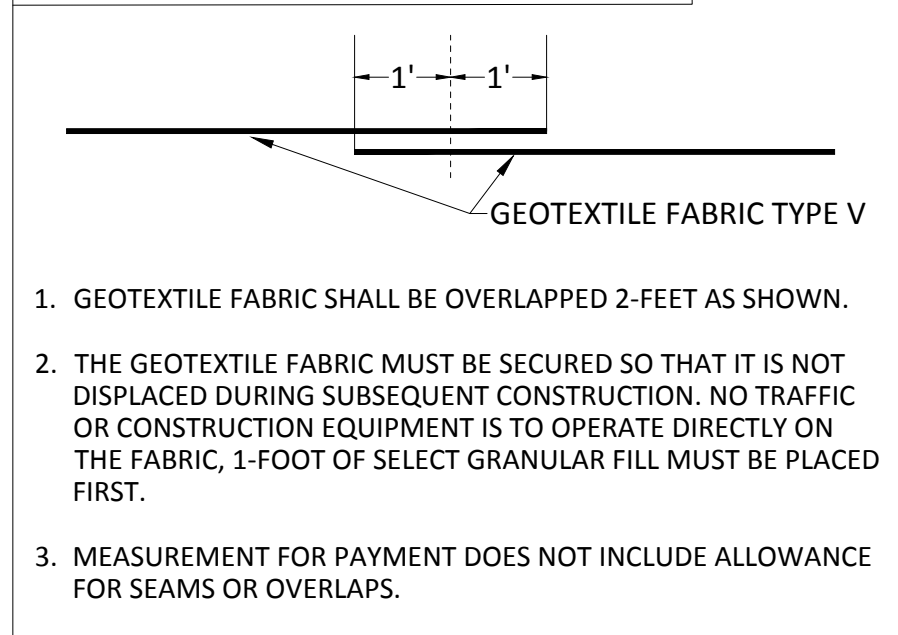


TABLE A MODIFIED CLASS 5 SPECIFICATIONS	
% PASSING	
1"	100
3/4"	90 - 100
3/8"	50 - 80
No.4	35 - 70
No.10	20 - 60
No.40	10 - 35
No.200	5 - 10

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

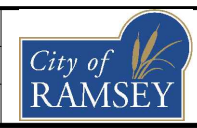
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*Bruce Westby*  
BRUCE WESTBY  
Date 4/8/19 Lic. No. 40116

DESIGNED BY: JJF  
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CHECKED BY: BRW

DATE: 4/8/19  
FILE No. 19-01

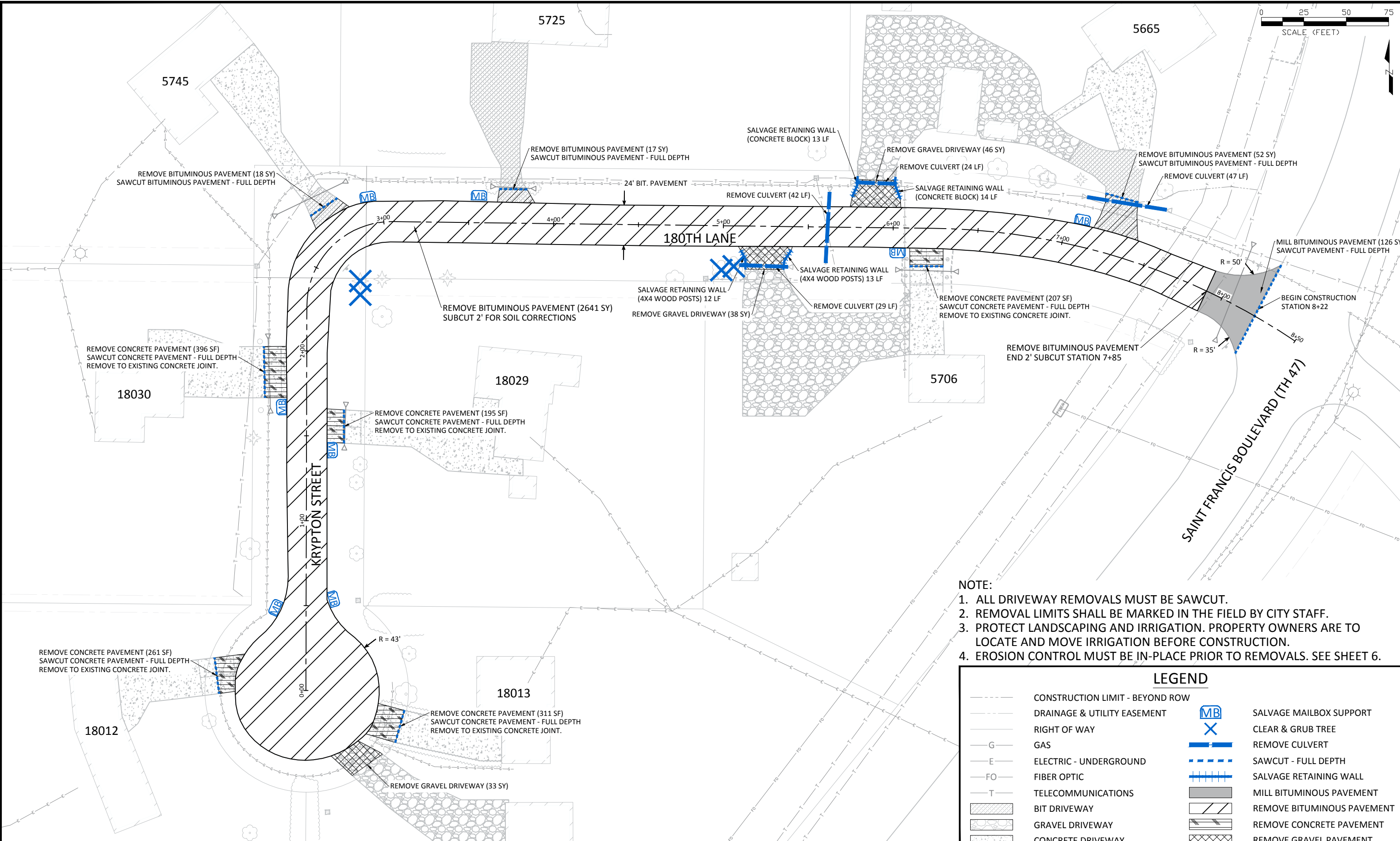


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TYPICAL SECTION

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
CITY PROJECT NO. 19-01  
CITY OF RAMSEY, MINNESOTA





- NOTE:**
1. ALL DRIVEWAY REMOVALS MUST BE SAWCUT.
  2. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
  3. PROTECT LANDSCAPING AND IRRIGATION. PROPERTY OWNERS ARE TO LOCATE AND MOVE IRRIGATION BEFORE CONSTRUCTION.
  4. EROSION CONTROL MUST BE IN-PLACE PRIOR TO REMOVALS. SEE SHEET 6.

LEGEND	
	CONSTRUCTION LIMIT - BEYOND ROW
	DRAINAGE & UTILITY EASEMENT
	RIGHT OF WAY
	GAS
	ELECTRIC - UNDERGROUND
	FIBER OPTIC
	TELECOMMUNICATIONS
	BIT DRIVEWAY
	GRAVEL DRIVEWAY
	CONCRETE DRIVEWAY
	SALVAGE MAILBOX SUPPORT
	CLEAR & GRUB TREE
	REMOVE CULVERT
	SAWCUT - FULL DEPTH
	SALVAGE RETAINING WALL
	MILL BITUMINOUS PAVEMENT
	REMOVE BITUMINOUS PAVEMENT
	REMOVE CONCRETE PAVEMENT
	REMOVE GRAVEL PAVEMENT

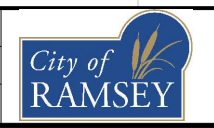
DATE	REVISION
5/31/19	REVISED CENTERLINE ALIGNMENT

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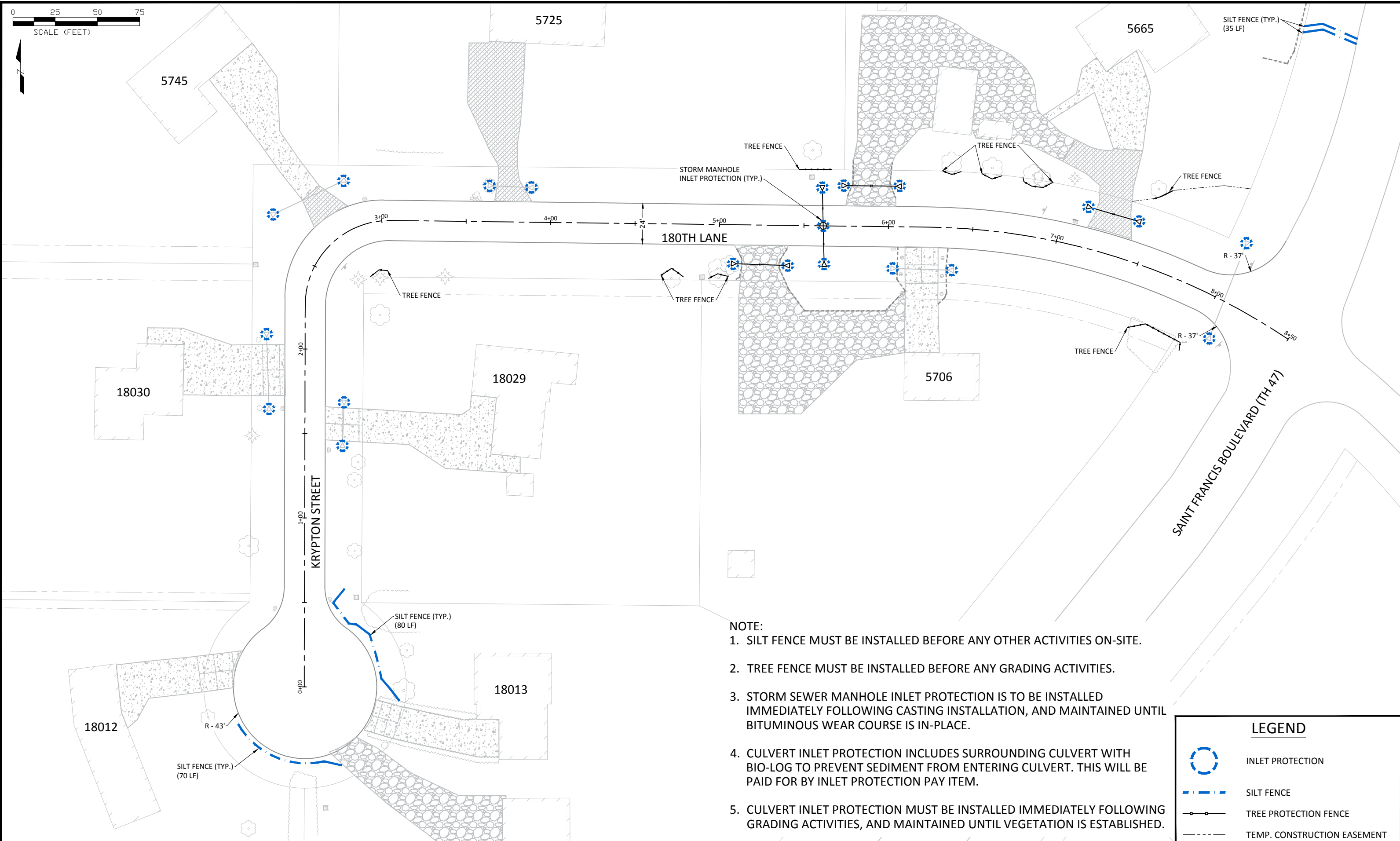
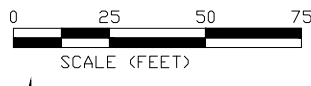
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CITY OF RAMSEY  
7550 SUNWOOD DRIVE  
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EXISTING CONDITIONS AND REMOVALS



- NOTE:**
1. SILT FENCE MUST BE INSTALLED BEFORE ANY OTHER ACTIVITIES ON-SITE.
  2. TREE FENCE MUST BE INSTALLED BEFORE ANY GRADING ACTIVITIES.
  3. STORM SEWER MANHOLE INLET PROTECTION IS TO BE INSTALLED IMMEDIATELY FOLLOWING CASTING INSTALLATION, AND MAINTAINED UNTIL BITUMINOUS WEAR COURSE IS IN-PLACE.
  4. CULVERT INLET PROTECTION INCLUDES SURROUNDING CULVERT WITH BIO-LOG TO PREVENT SEDIMENT FROM ENTERING CULVERT. THIS WILL BE PAID FOR BY INLET PROTECTION PAY ITEM.
  5. CULVERT INLET PROTECTION MUST BE INSTALLED IMMEDIATELY FOLLOWING GRADING ACTIVITIES, AND MAINTAINED UNTIL VEGETATION IS ESTABLISHED.

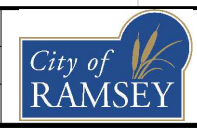
LEGEND	
	INLET PROTECTION
	SILT FENCE
	TREE PROTECTION FENCE
	TEMP. CONSTRUCTION EASEMENT

DATE	REVISION
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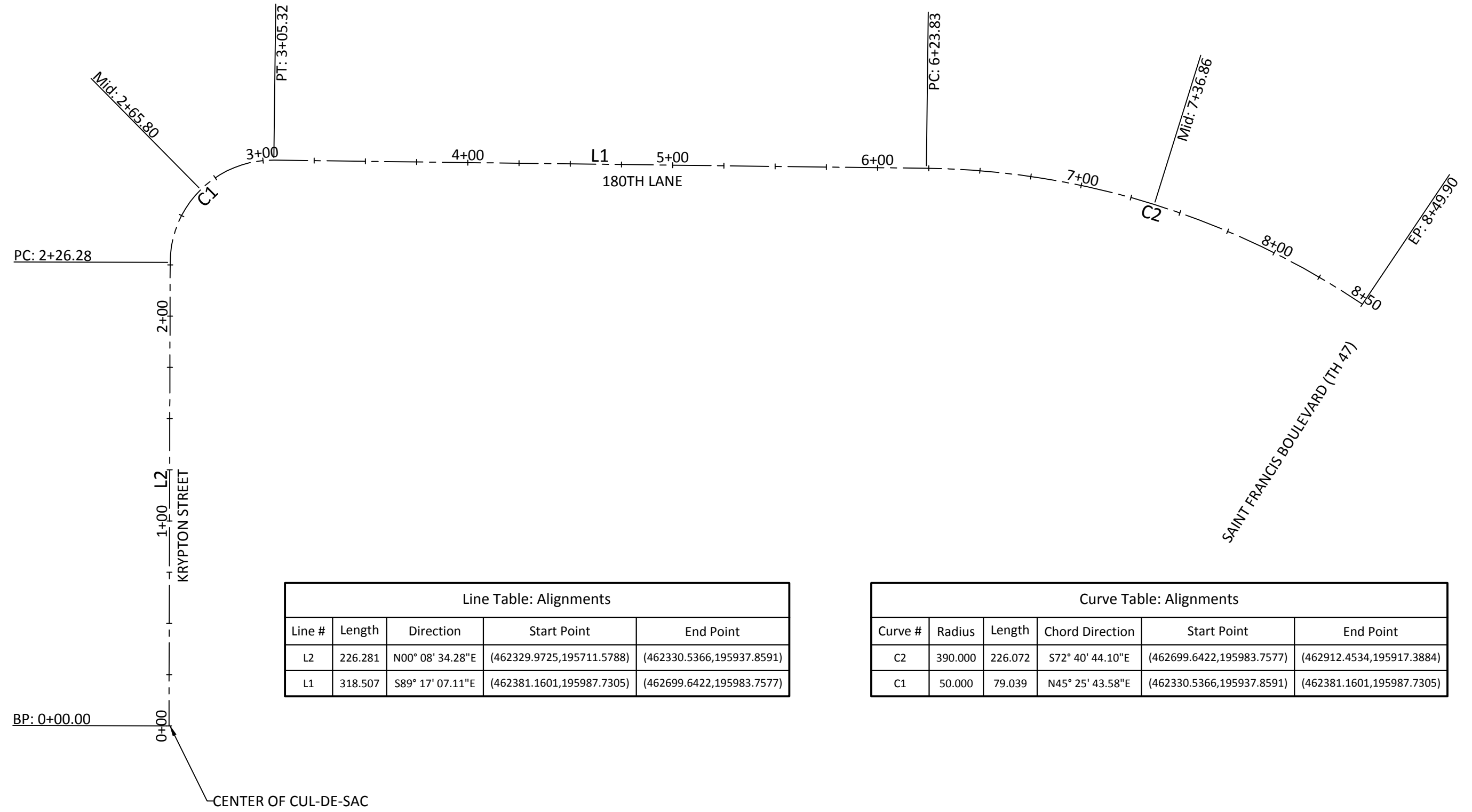
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**EROSION CONTROL**

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
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Line Table: Alignments				
Line #	Length	Direction	Start Point	End Point
L2	226.281	N00° 08' 34.28"E	(462329.9725,195711.5788)	(462330.5366,195937.8591)
L1	318.507	S89° 17' 07.11"E	(462381.1601,195987.7305)	(462699.6422,195983.7577)

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C2	390.000	226.072	S72° 40' 44.10"E	(462699.6422,195983.7577)	(462912.4534,195917.3884)
C1	50.000	79.039	N45° 25' 43.58"E	(462330.5366,195937.8591)	(462381.1601,195987.7305)

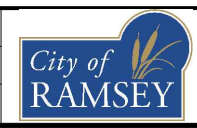
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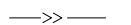

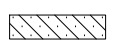
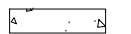



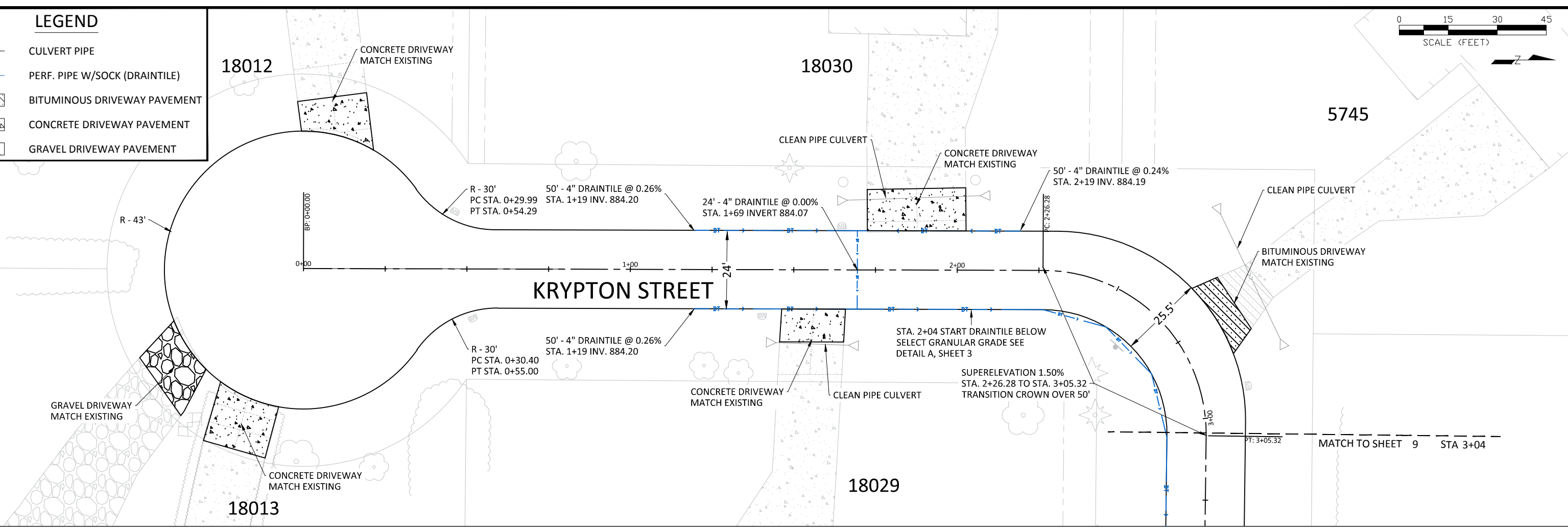
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(763) 427-1410 FAX (763) 433-9898

ALIGNMENT LAYOUT

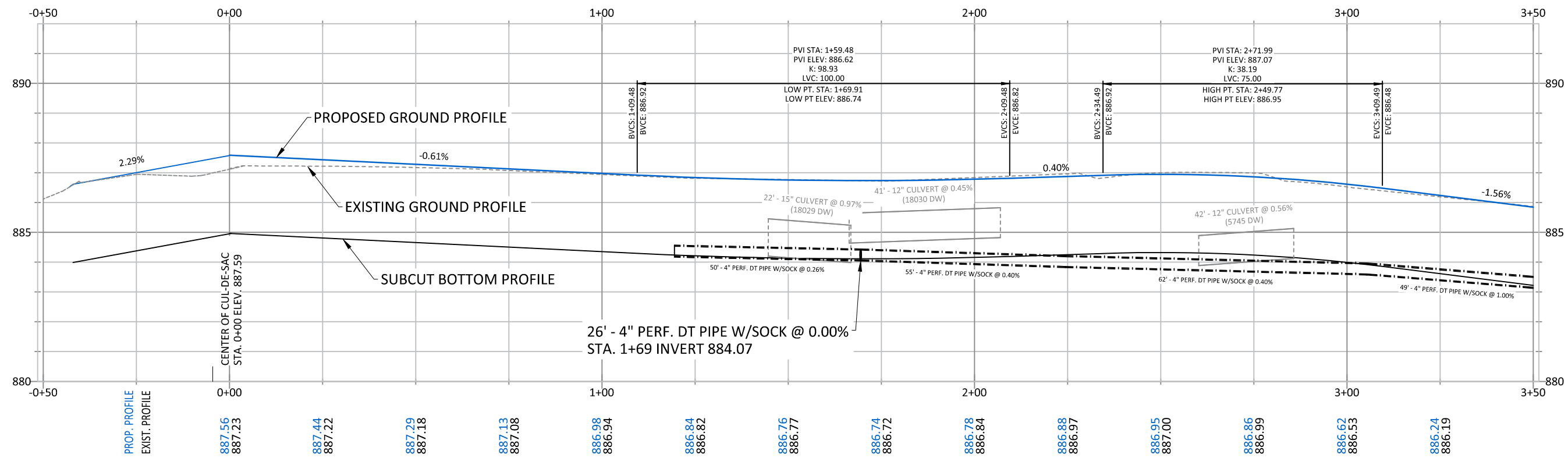
FORD BROOK ESTATES STREET RECONSTRUCTIONS  
CITY PROJECT NO. 19-01  
CITY OF RAMSEY, MINNESOTA

**LEGEND**

-  CULVERT PIPE
-  PERF. PIPE W/SOCK (DRAINTILE)
-  BITUMINOUS DRIVEWAY PAVEMENT
-  CONCRETE DRIVEWAY PAVEMENT
-  GRAVEL DRIVEWAY PAVEMENT



Profile View of Alignment - 19-01 Centerline



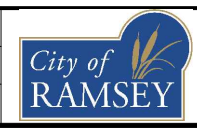
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5/31/19	REVISED CENTERLINE ALIGNMENT

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 Date 4/8/19 Lic. No. 40116

DESIGNED BY: JJF  
 DRAWN BY: JJF  
 CHECKED BY: BRW

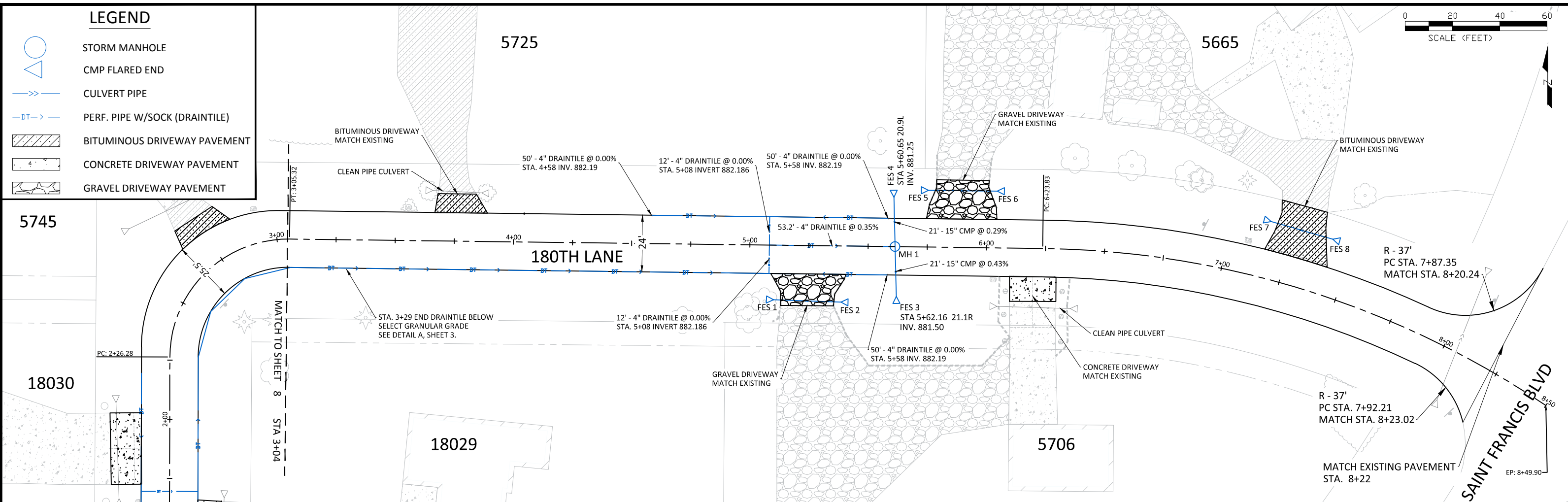
DATE: 4/8/19  
 FILE No. 19-01



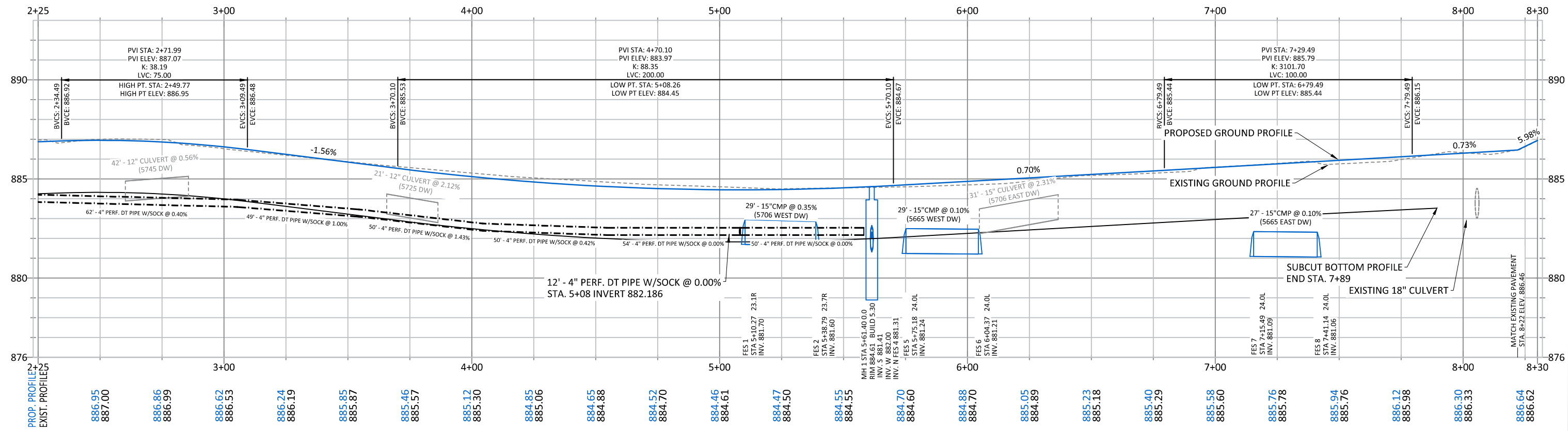
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STREET AND STORM SEWER - KRYPTON STREET

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
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 CITY OF RAMSEY, MINNESOTA



Profile View of Alignment - 19-01 Centerline



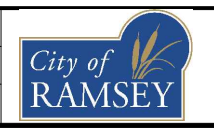
DATE	REVISION
5/31/19	REVISED CENTERLINE ALIGNMENT

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*Bruce Westby*  
 BRUCE WESTBY  
 Date 4/8/19 Lic. No. 40116

DESIGNED BY: JJF  
 DRAWN BY: JJF  
 CHECKED BY: BRW

DATE: 4/8/19  
 FILE No. 19-01



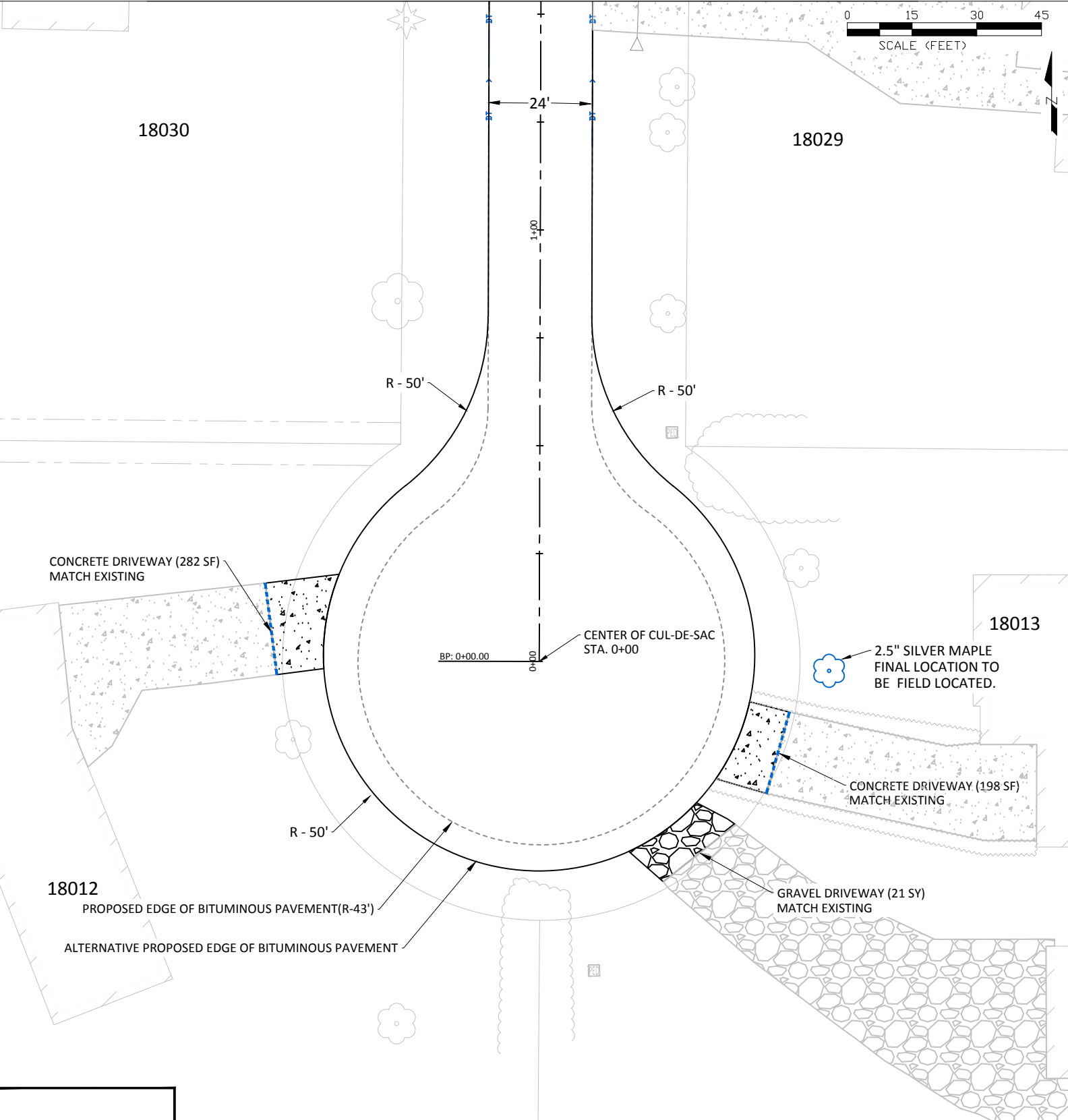
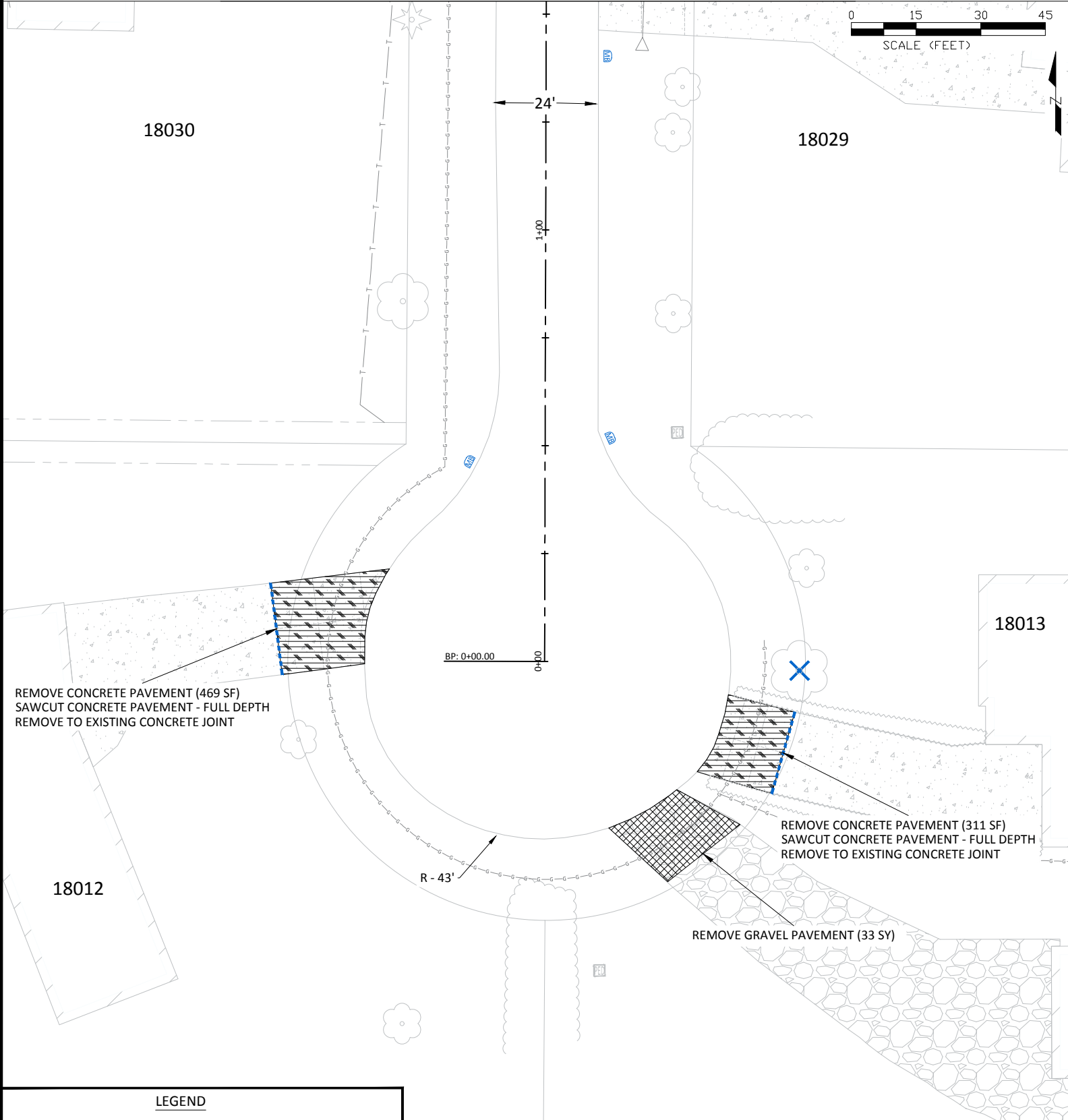
CITY OF RAMSEY  
 7550 SUNWOOD DRIVE  
 RAMSEY, MN 55303  
 (763) 427-1410 FAX (763) 433-9898

STREET AND STORM SEWER - 180TH LANE

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA

ALTERNATIVE CUL-DE-SAC (100-FOOT DIAMETER) REMOVALS

ALTERNATIVE CUL-DE-SAC (100-FOOT DIAMETER) PROPOSED CONDITIONS



**LEGEND**

—	EASEMENT	MB	SALVAGE MAILBOX SUPPORT
—	RIGHT OF WAY	X	CLEAR & GRUB TREE
G	GAS	—	REMOVE CULVERT
E	ELECTRIC - UNDERGROUND	—	SAWCUT - FULL DEPTH
FO	FIBER OPTIC	—	SALVAGE RETAINING WALL
T	TELECOMMUNICATIONS	—	MILL BITUMINOUS PAVEMENT
—	BIT DRIVEWAY	—	REMOVE BITUMINOUS PAVEMENT
—	GRAVEL DRIVEWAY	—	REMOVE CONCRETE PAVEMENT
—	CONCRETE DRIVEWAY	—	REMOVE GRAVEL PAVEMENT

**LEGEND**

—	PROPOSED TREE
—	CULVERT PIPE
—	PERF. PIPE W/SOCK (DRAINTILE)
—	BITUMINOUS DRIVEWAY PAVEMENT
—	CONCRETE DRIVEWAY PAVEMENT
—	GRAVEL DRIVEWAY PAVEMENT

**NOTE:**

1. ALL DRIVEWAY REMOVALS MUST BE SAWCUT.
2. REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
3. PROTECT LANDSCAPING AND IRRIGATION. PROPERTY OWNERS ARE TO LOCATE AND MOVE IRRIGATION BEFORE CONSTRUCTION.
4. EROSION CONTROL MUST BE IN-PLACE PRIOR TO REMOVALS. SEE SHEET 6.

**NOTE:**

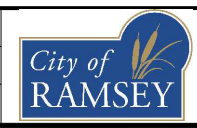
1. PROPOSED CUL-DE-SAC RADIUS ENLARGED TO 50-FEET, EXISTING 43-FEET.
2. ASSUMED DRIVEWAY MATCHES ARE SHOWN 8-FEET BEHIND PROPOSED EDGE OF PAVEMENT.
3. 2-FOOT SUBCUT WILL BE EXTENDED TO ACCOMMODATE THE ENLARGED CUL-DE-SAC DIAMETER.

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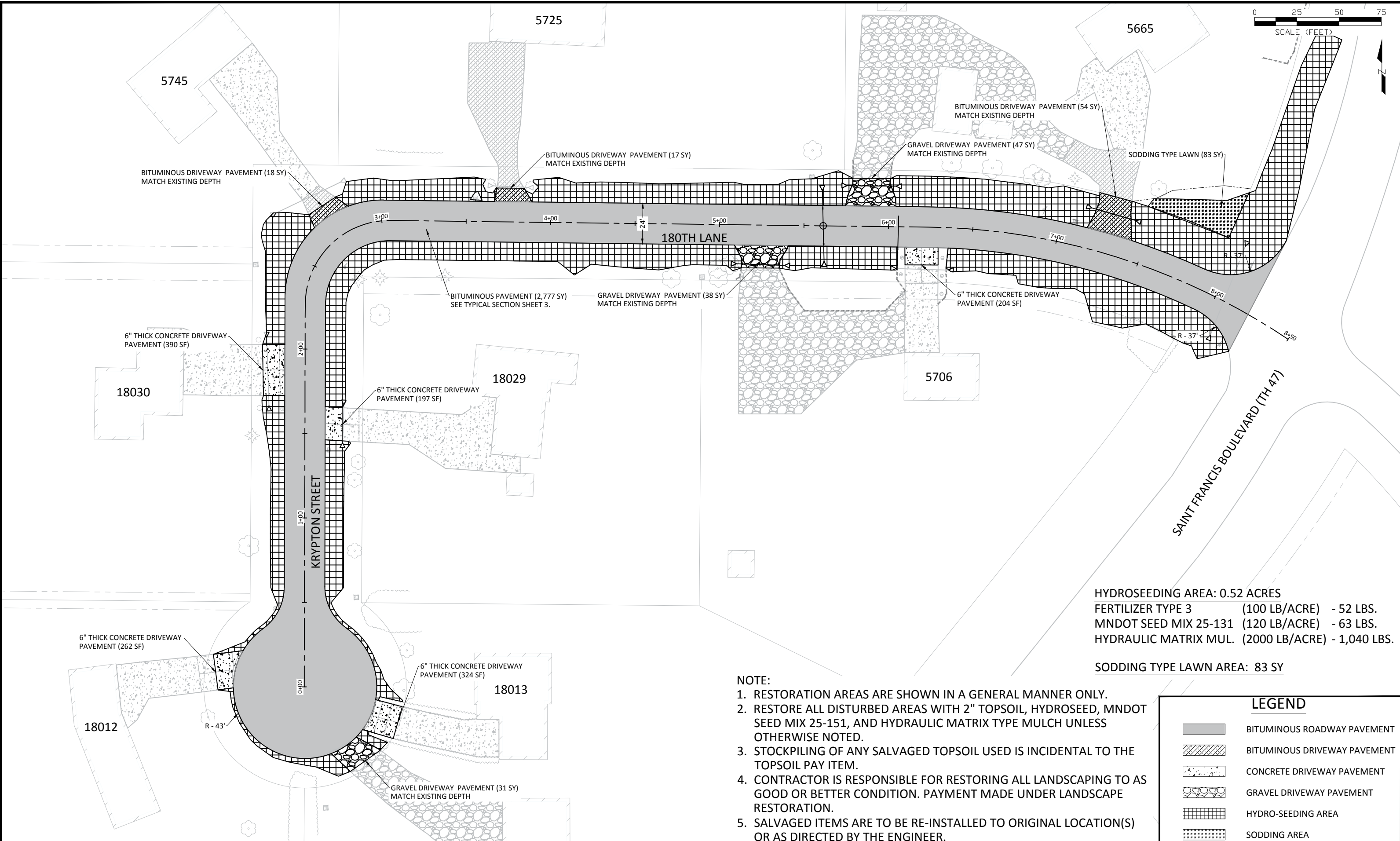
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DRAWN BY: JJF	FILE No. 19-01
CHECKED BY: BRW	



**CITY OF RAMSEY**  
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**ALT A - KRYPTON STREET CUL-DE-SAC**

**FORD BROOK ESTATES STREET RECONSTRUCTIONS**  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA



HYDROSEEDING AREA: 0.52 ACRES  
 FERTILIZER TYPE 3 (100 LB/ACRE) - 52 LBS.  
 MNDOT SEED MIX 25-131 (120 LB/ACRE) - 63 LBS.  
 HYDRAULIC MATRIX MUL. (2000 LB/ACRE) - 1,040 LBS.

SODDING TYPE LAWN AREA: 83 SY

- NOTE:**
1. RESTORATION AREAS ARE SHOWN IN A GENERAL MANNER ONLY.
  2. RESTORE ALL DISTURBED AREAS WITH 2" TOPSOIL, HYDROSEED, MNDOT SEED MIX 25-151, AND HYDRAULIC MATRIX TYPE MULCH UNLESS OTHERWISE NOTED.
  3. STOCKPILING OF ANY SALVAGED TOPSOIL USED IS INCIDENTAL TO THE TOPSOIL PAY ITEM.
  4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL LANDSCAPING TO AS GOOD OR BETTER CONDITION. PAYMENT MADE UNDER LANDSCAPE RESTORATION.
  5. SALVAGED ITEMS ARE TO BE RE-INSTALLED TO ORIGINAL LOCATION(S) OR AS DIRECTED BY THE ENGINEER.

LEGEND	
	BITUMINOUS ROADWAY PAVEMENT
	BITUMINOUS DRIVEWAY PAVEMENT
	CONCRETE DRIVEWAY PAVEMENT
	GRAVEL DRIVEWAY PAVEMENT
	HYDRO-SEEDING AREA
	SODDING AREA

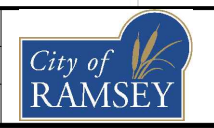
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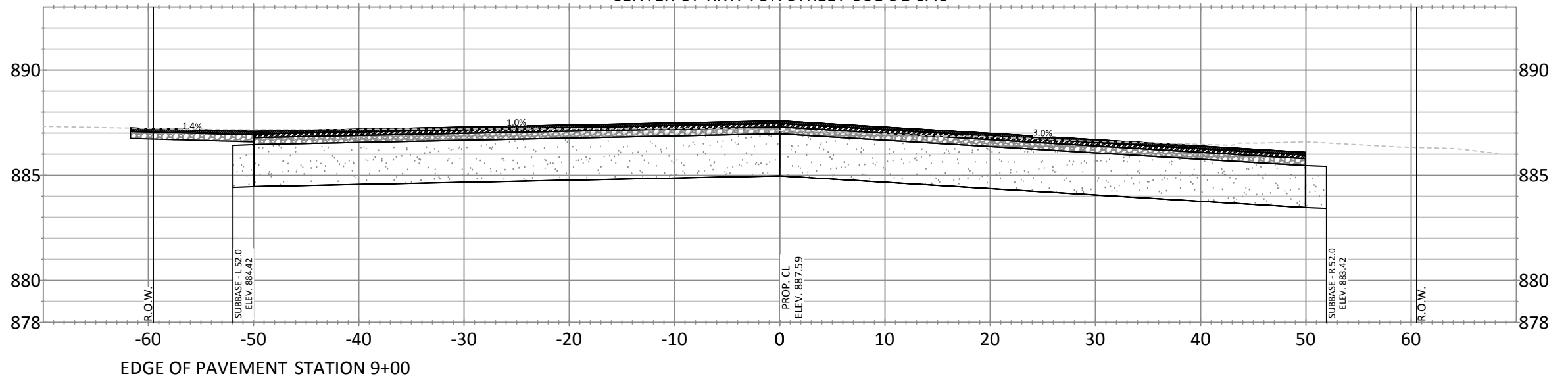


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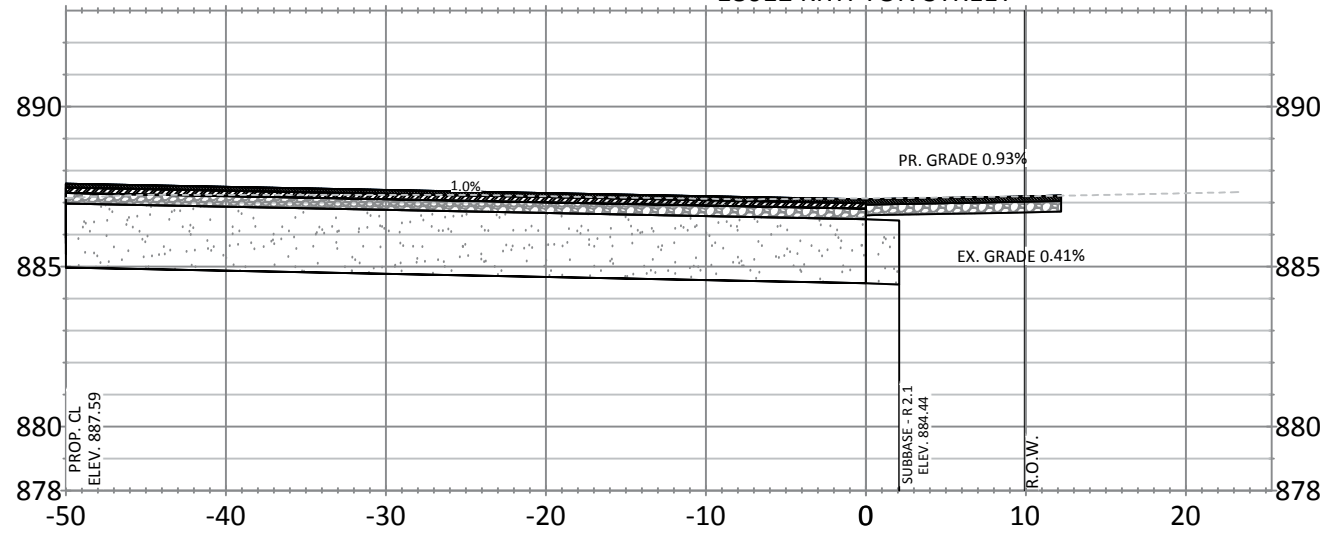
RESTORATION

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA

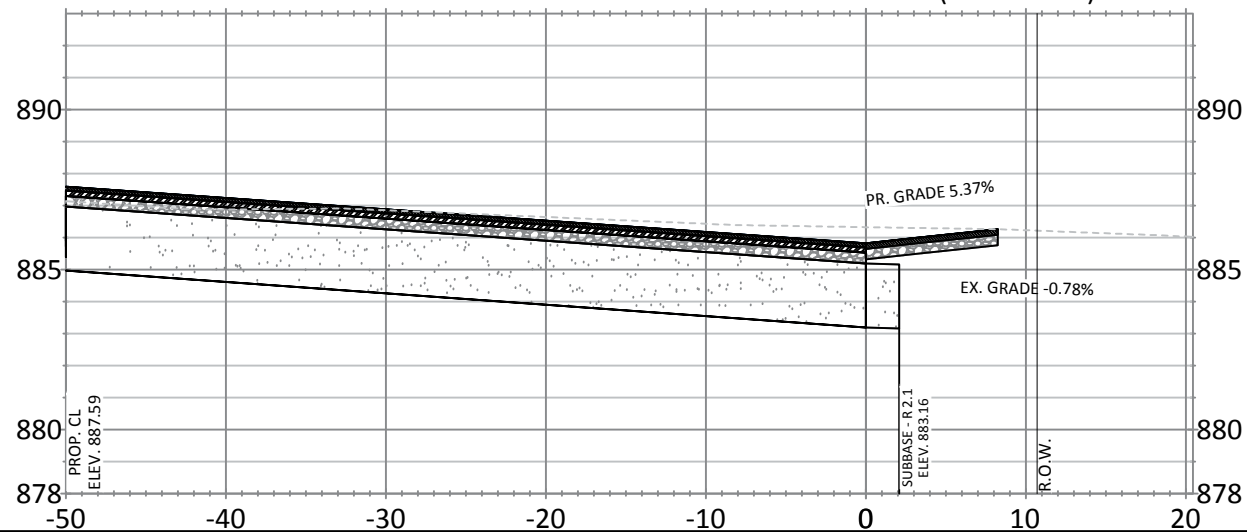
STATION 0+00  
CENTER OF KRYPTON STREET CUL-DE-SAC



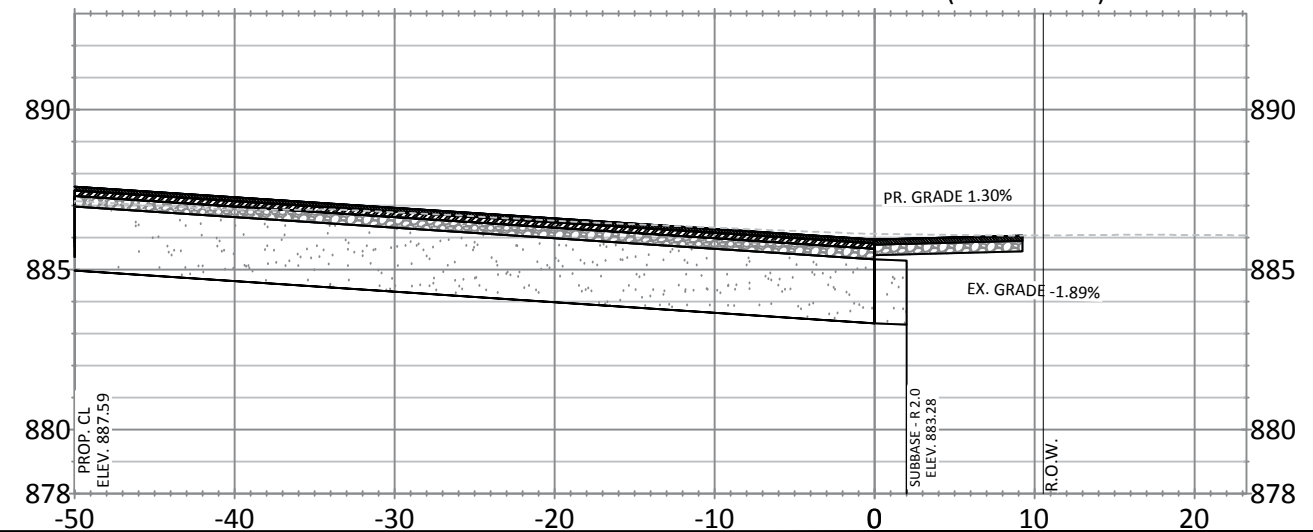
EDGE OF PAVEMENT STATION 9+00  
18012 KRYPTON STREET



EDGE OF PAVEMENT STATION 10+19  
18013 KRYPTON STREET (SOUTH DW)



EDGE OF PAVEMENT STATION 10+47  
18013 KRYPTON STREET (NORTH DW)



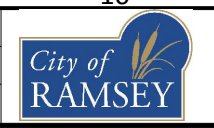
DATE	REVISION
5/31/19	REVISED CENTERLINE ALIGNMENT
5/31/19	ALTERNATIVE A CDS DIAMETER - 100'
Jun 03, 2019 - 10:36am	

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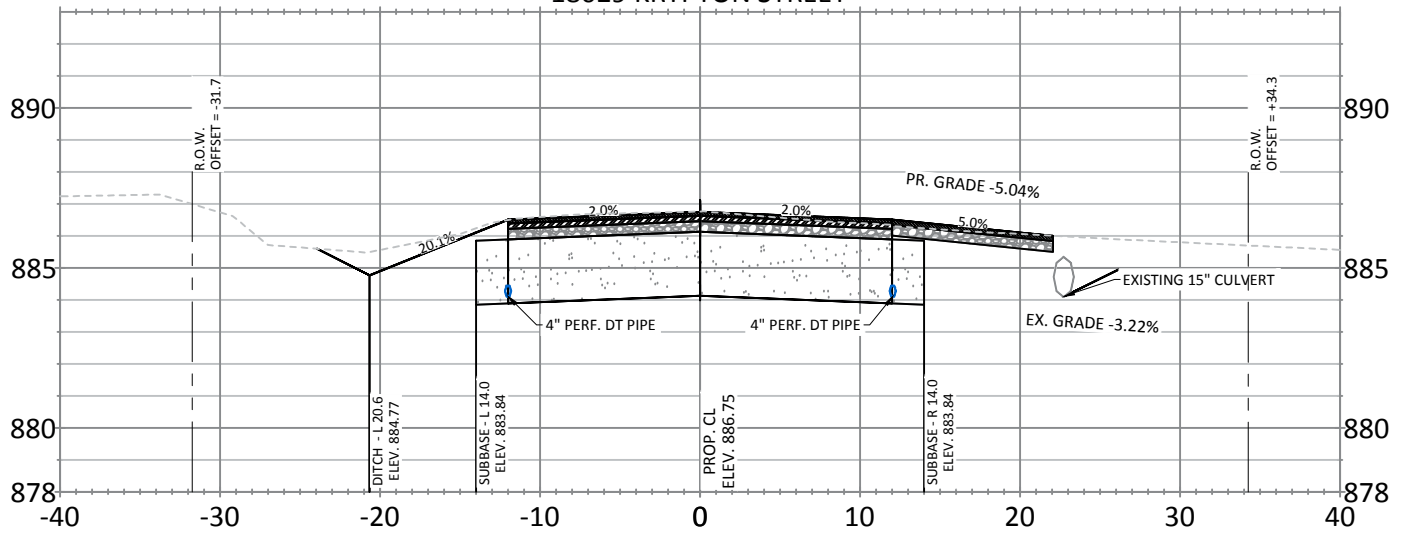


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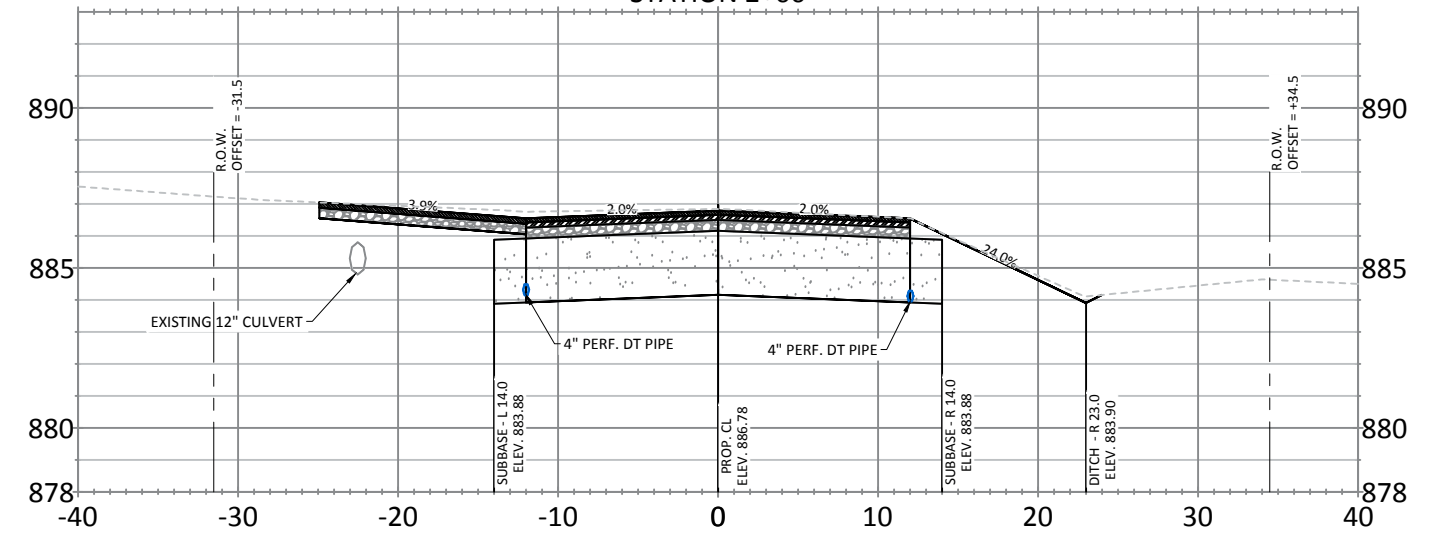
CROSS SECTIONS - KRYPTON STREET CUL-DE-SAC

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
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CITY OF RAMSEY, MINNESOTA

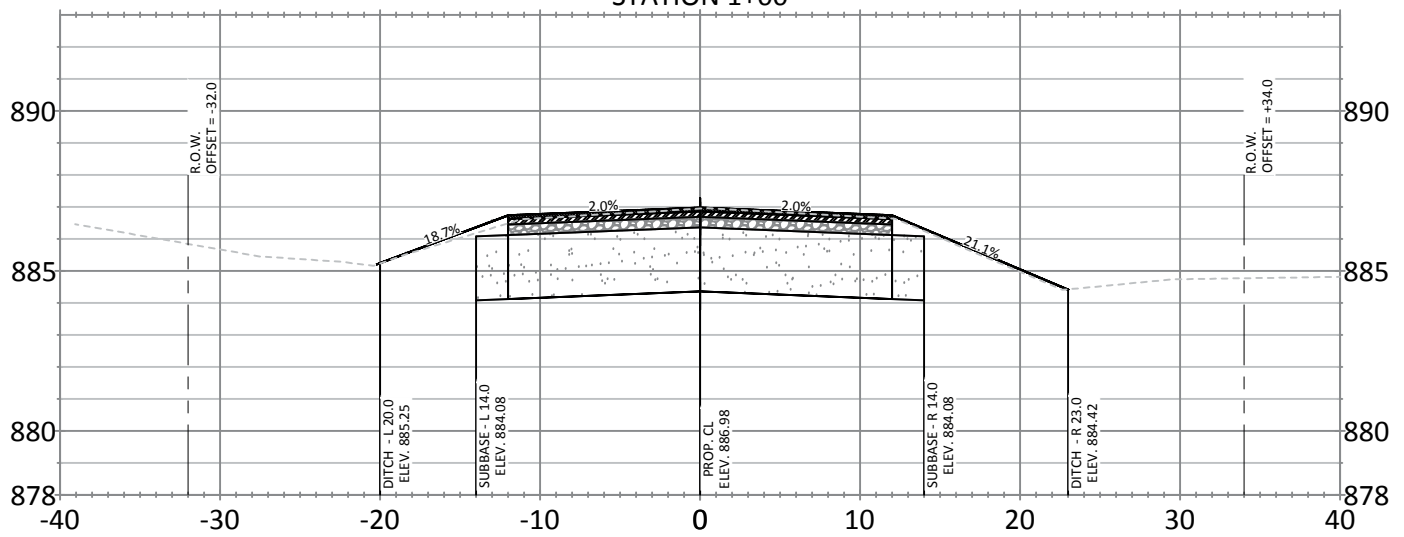
STATION 1+56  
18029 KRYPTON STREET



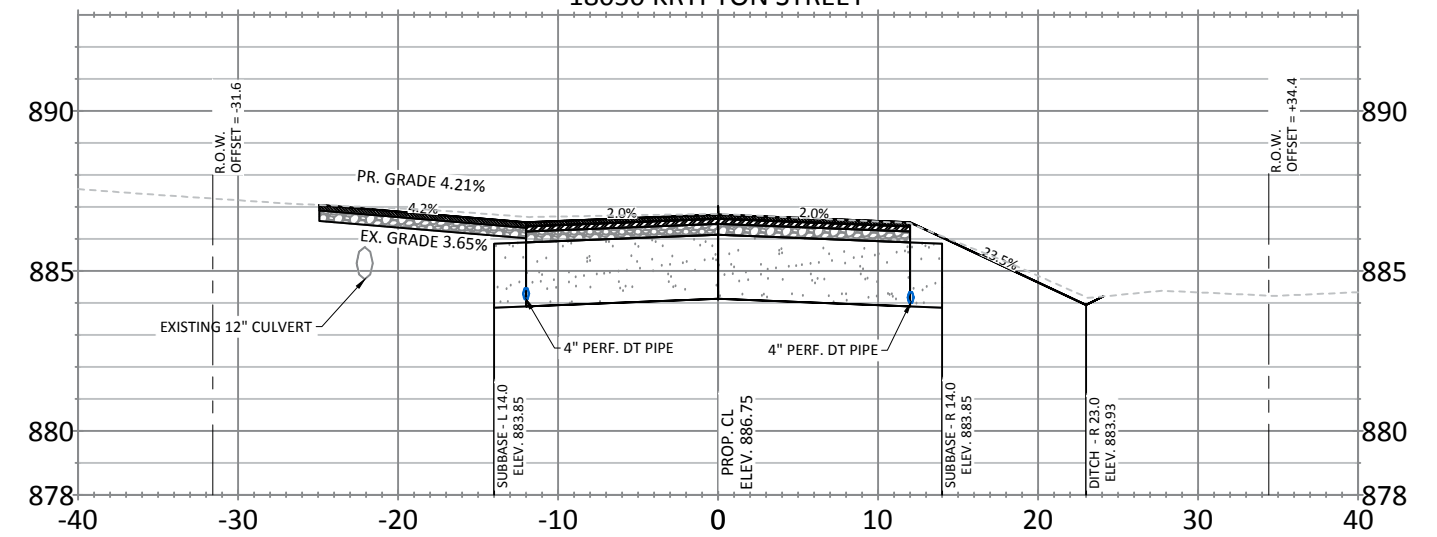
STATION 2+00



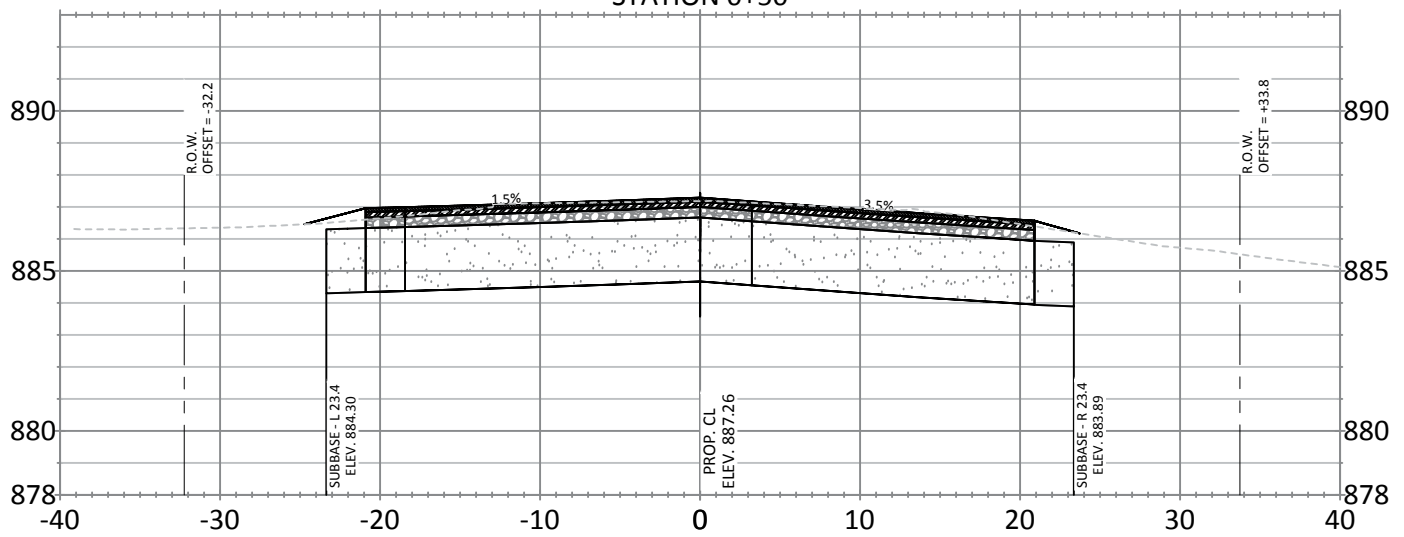
STATION 1+00



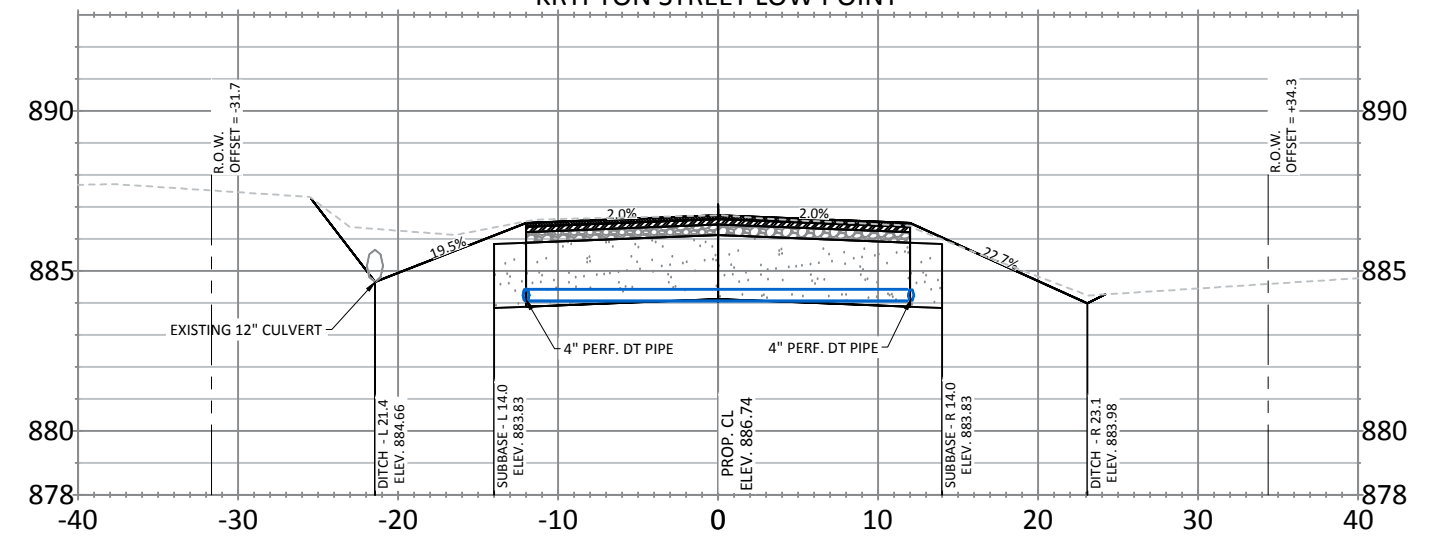
STATION 1+88  
18030 KRYPTON STREET



STATION 0+50



STATION 1+69  
KRYPTON STREET LOW POINT



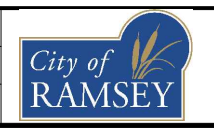
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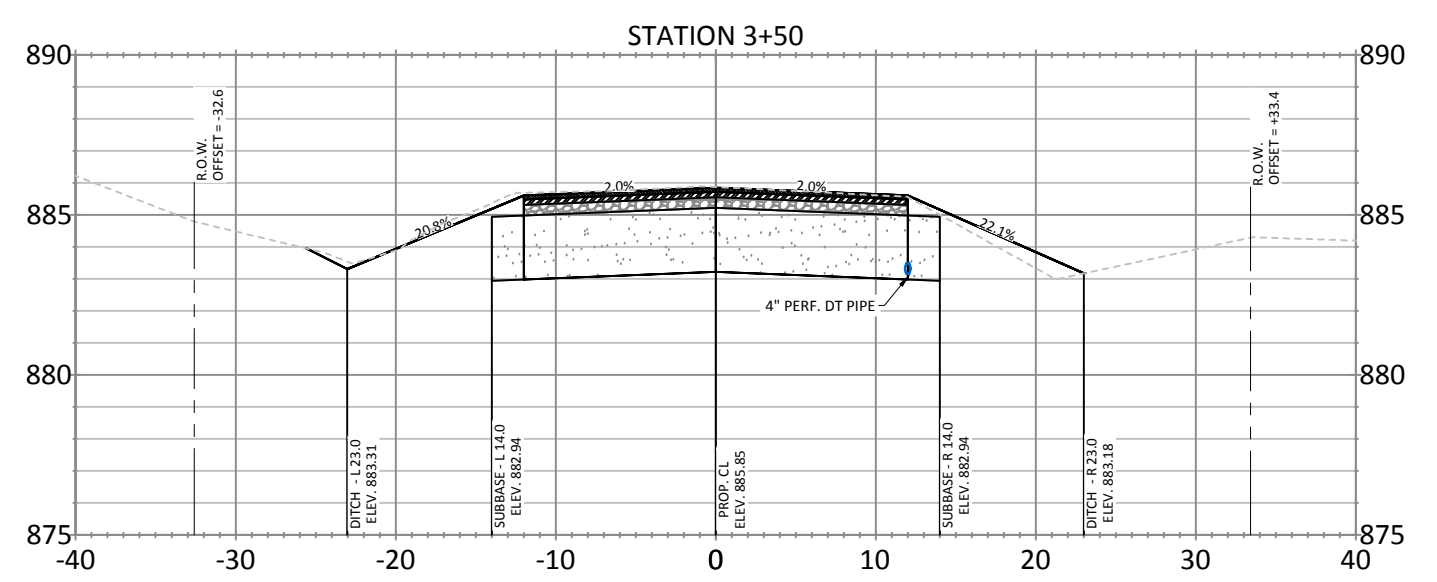
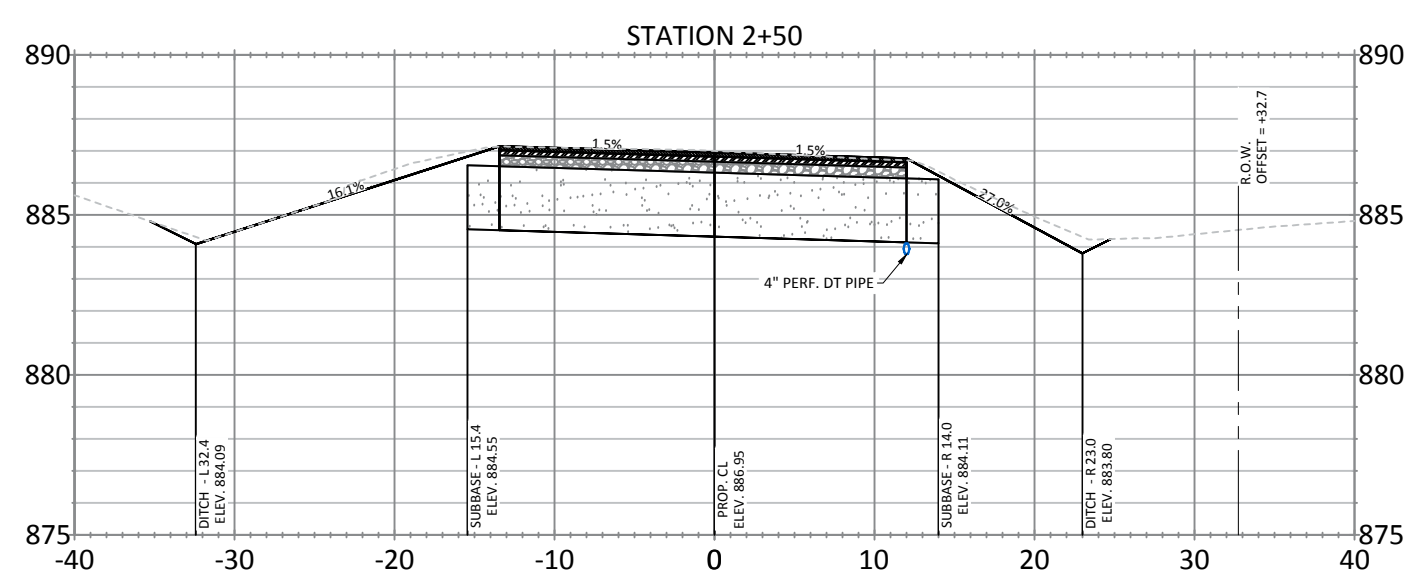
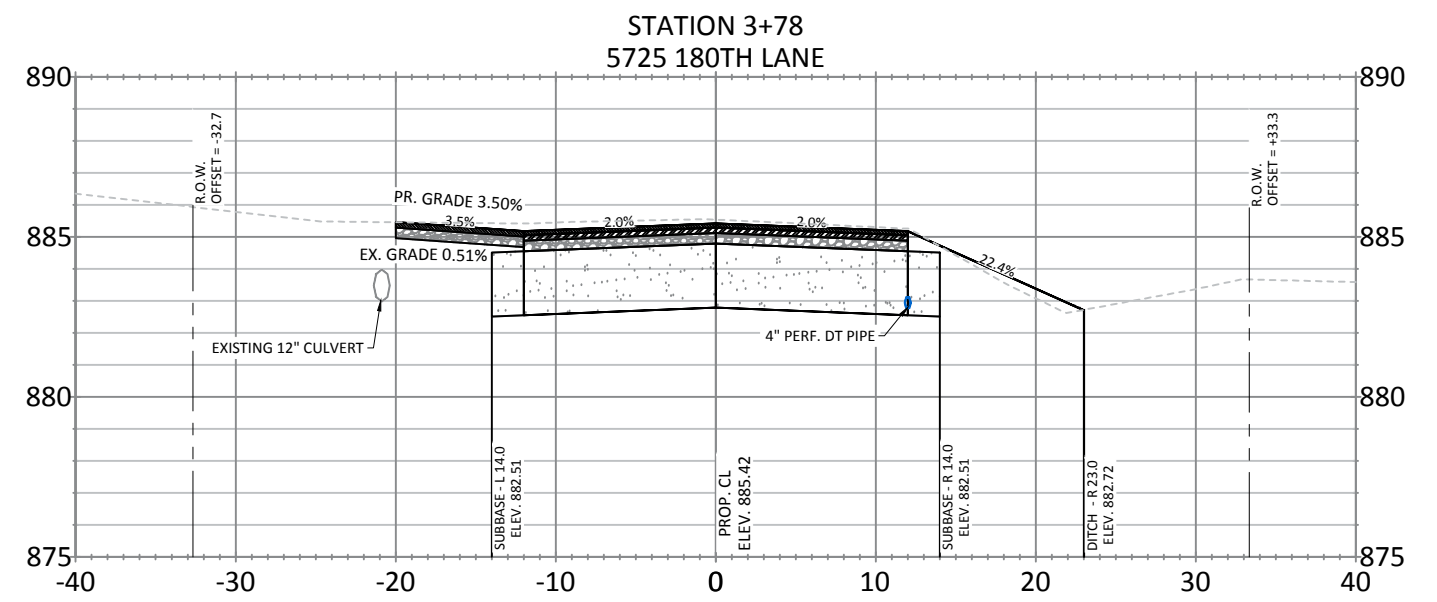
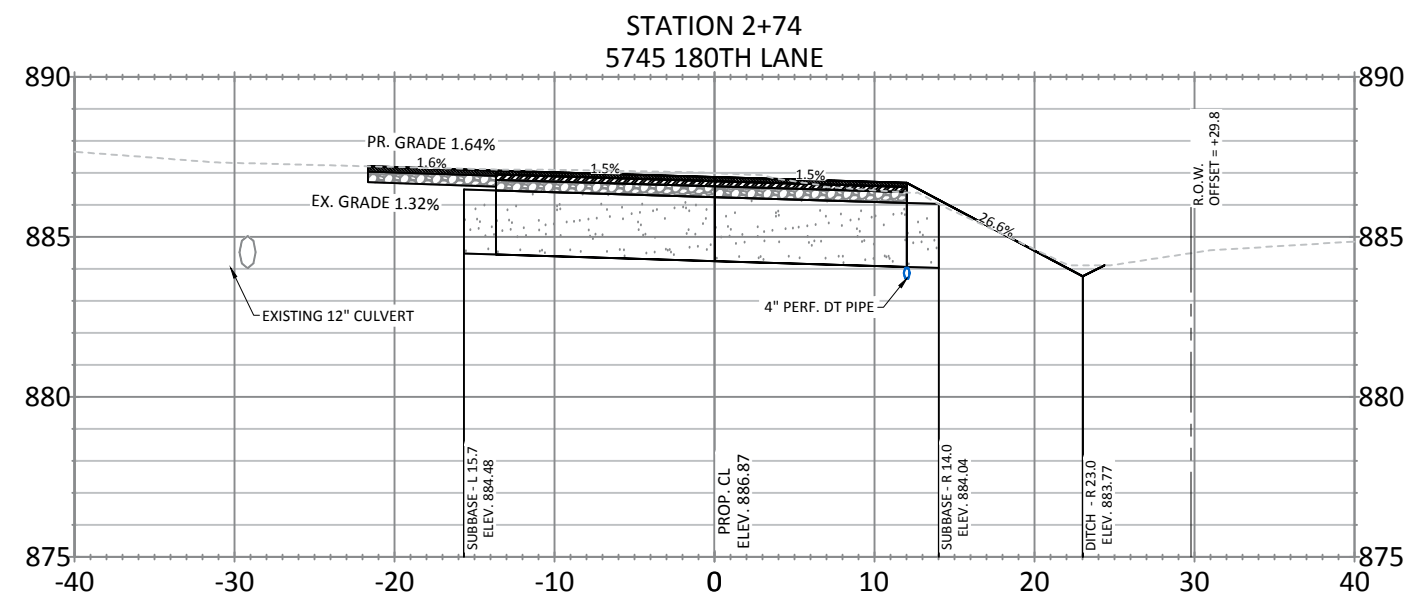
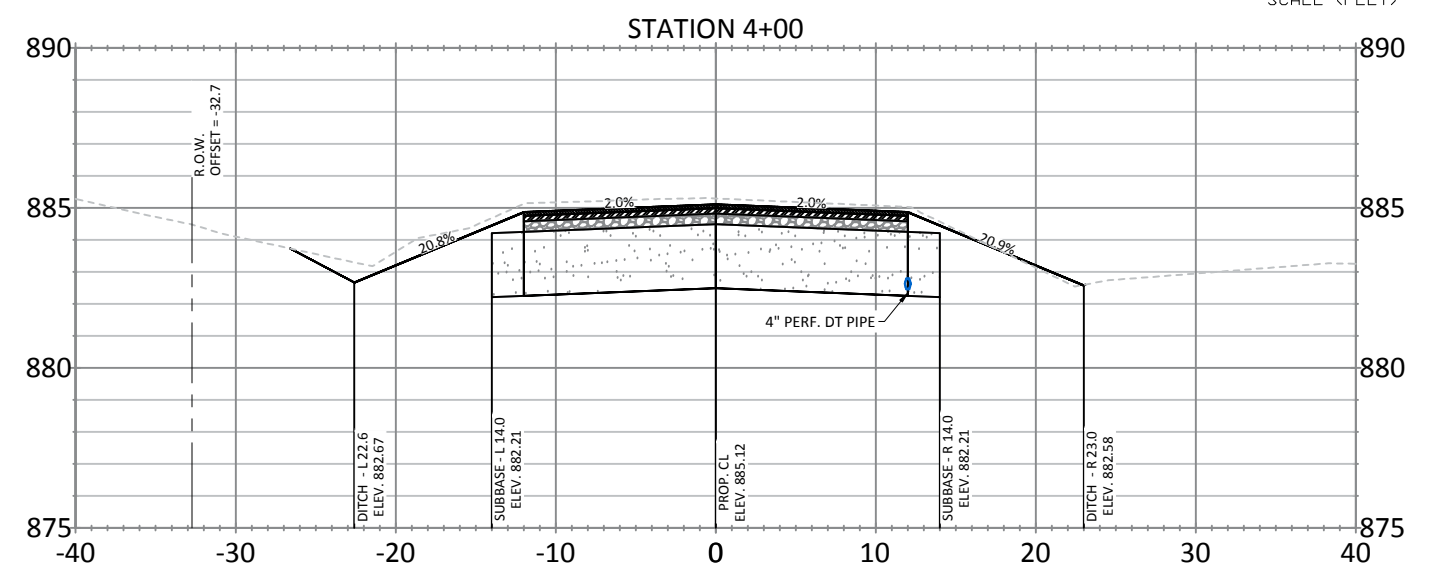
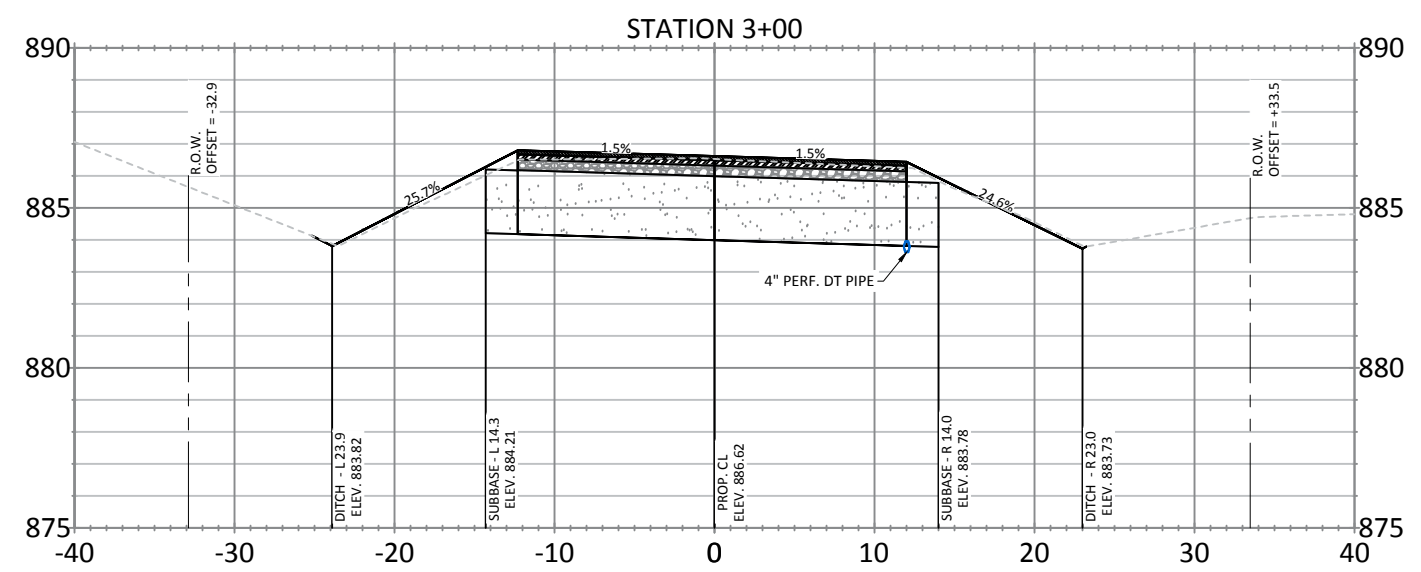
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CROSS SECTIONS - STA. 0+50 TO 2+00

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CITY OF RAMSEY, MINNESOTA



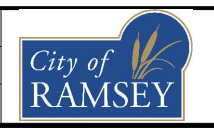
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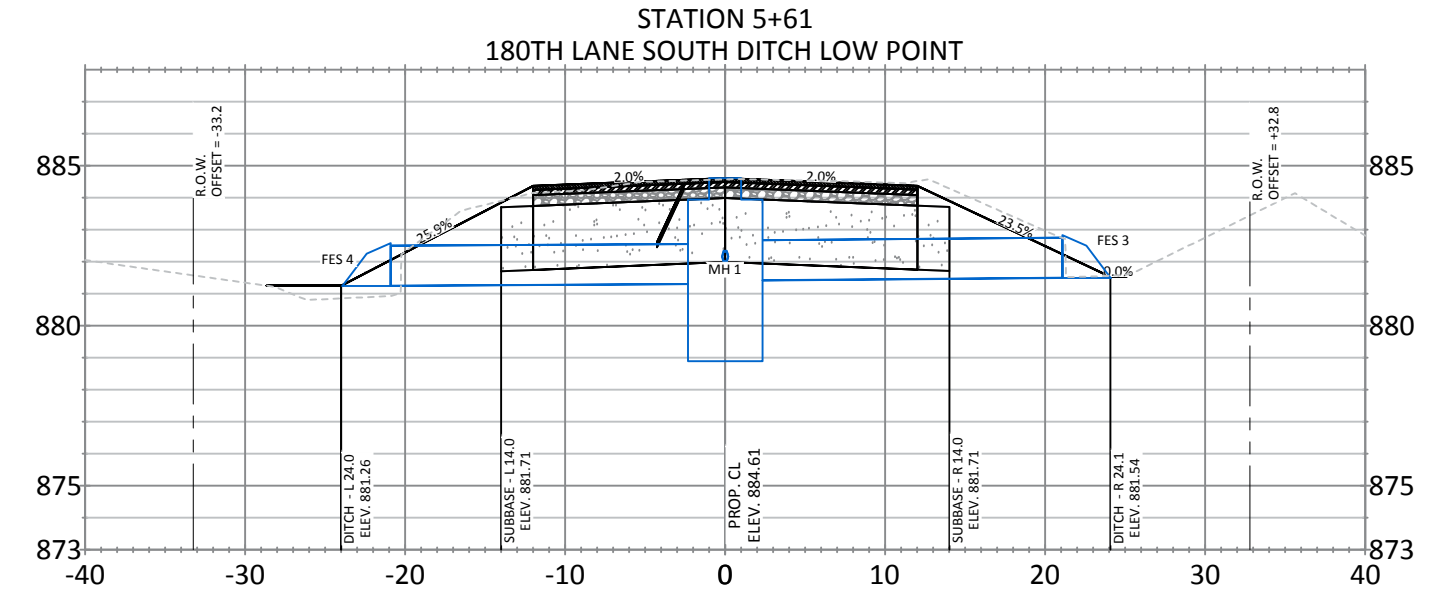
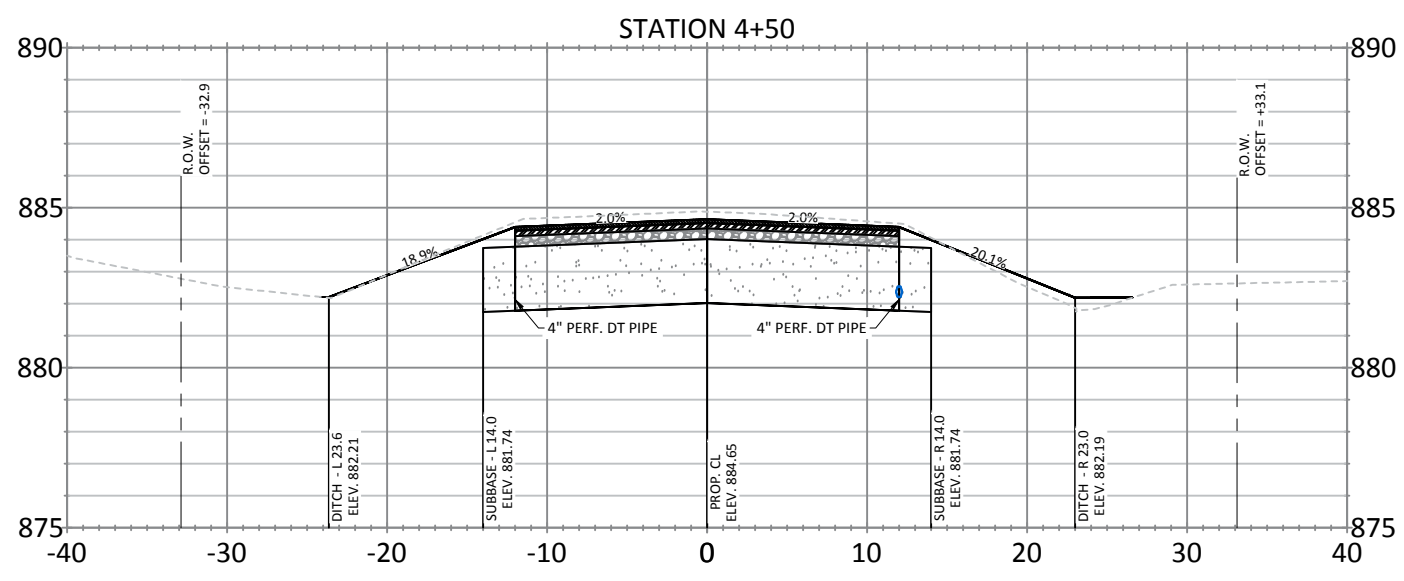
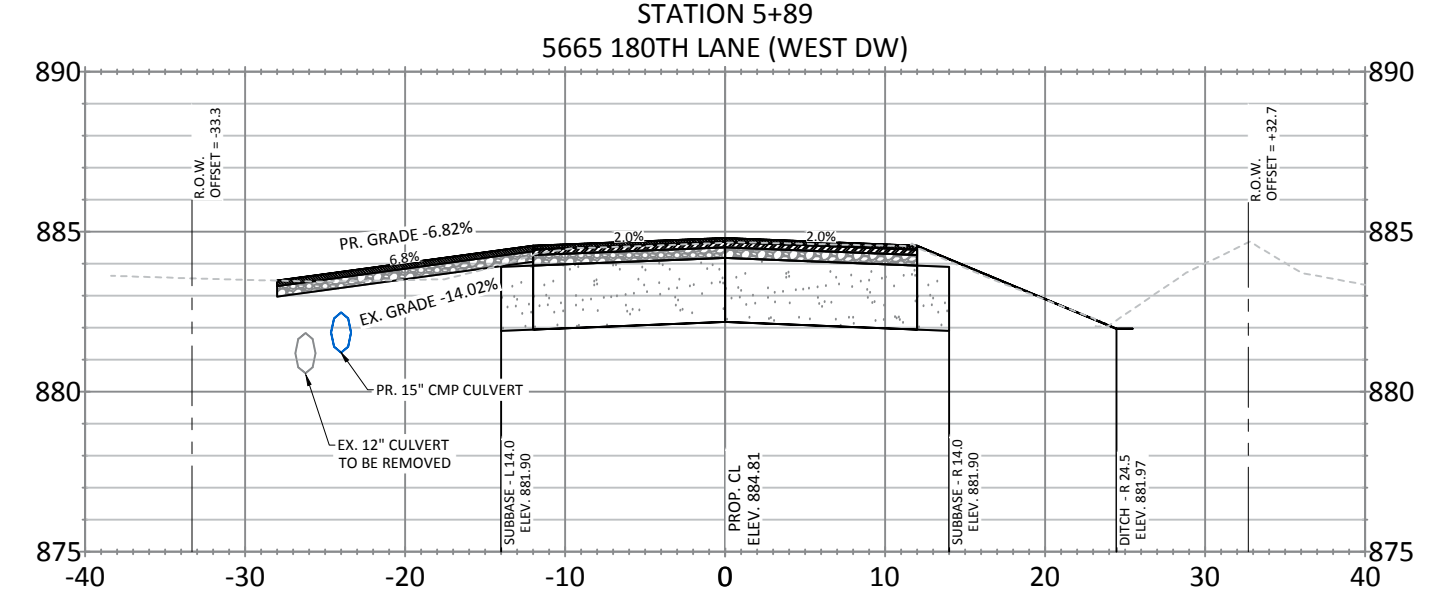
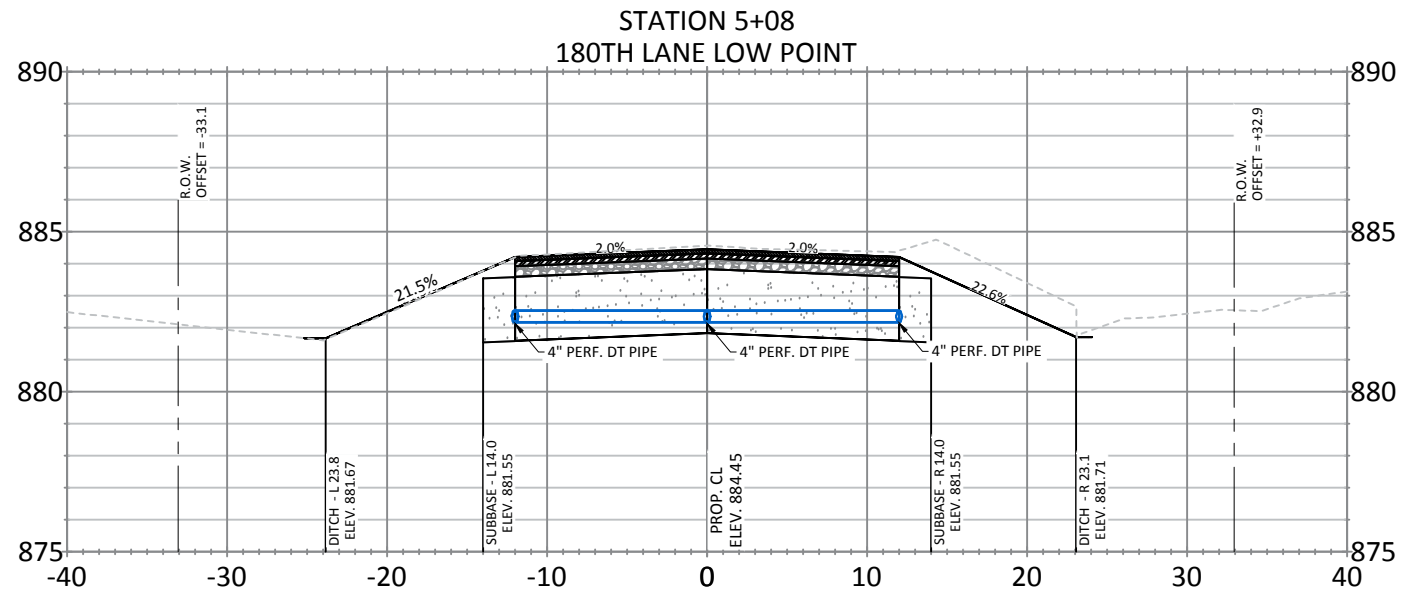
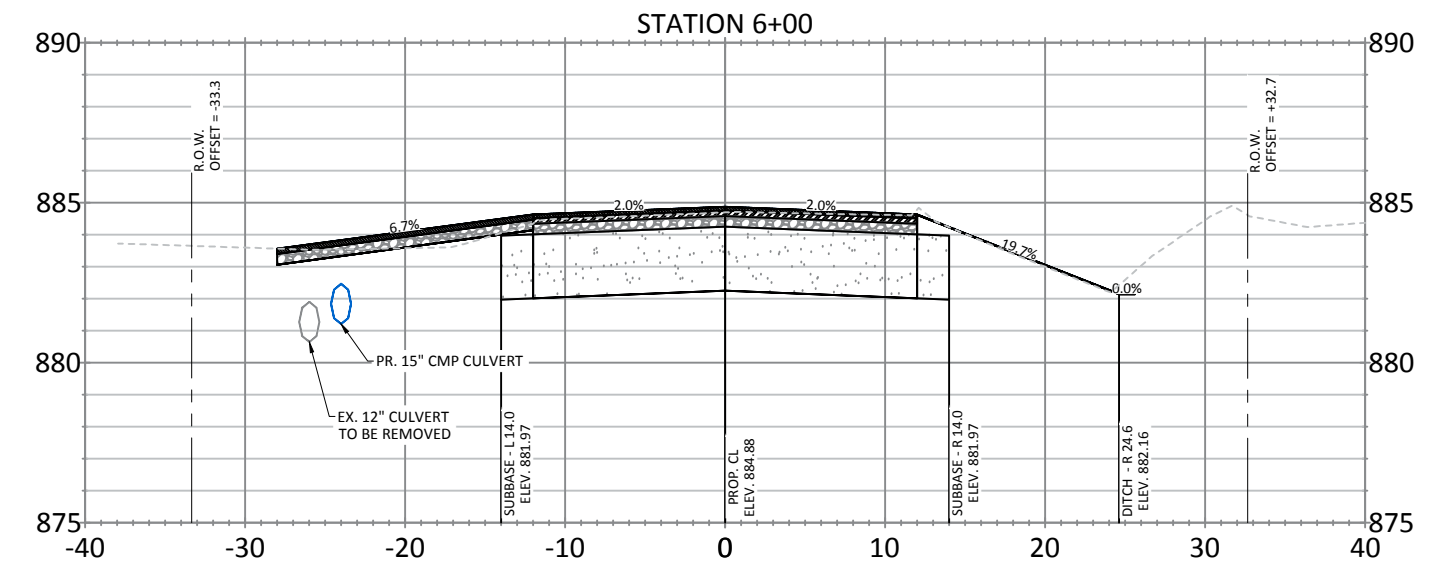
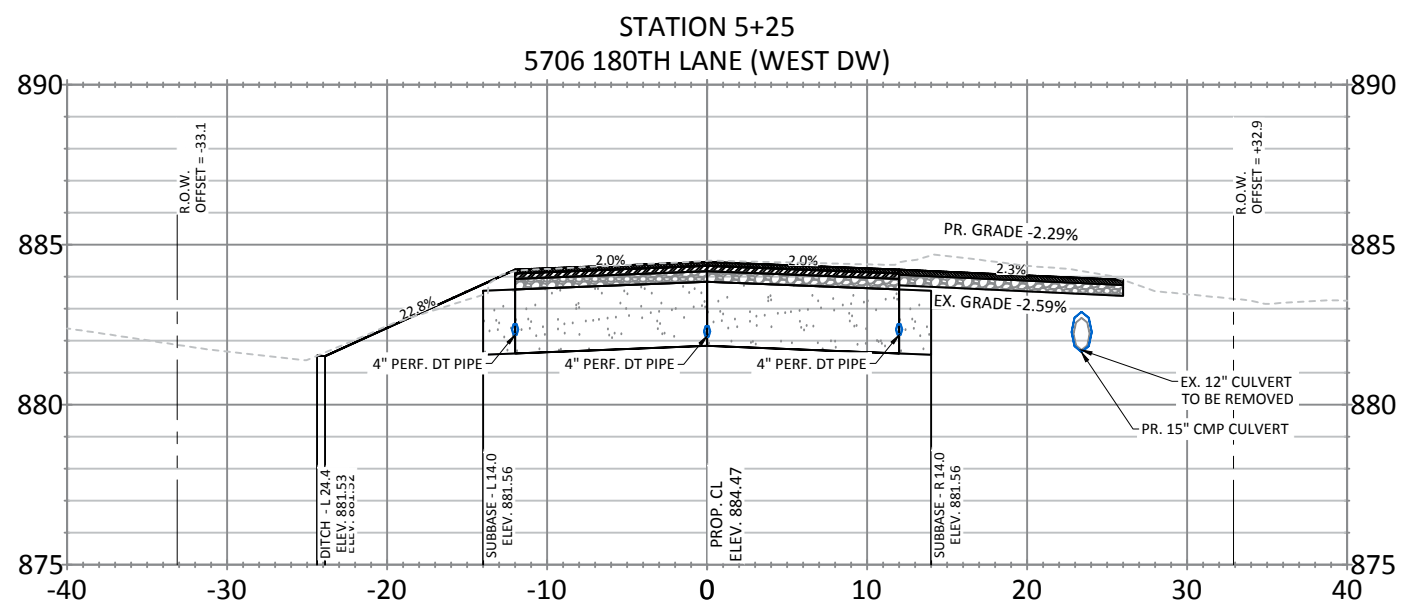
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CROSS SECTIONS - STA. 2+50 TO 4+00

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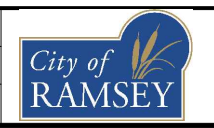


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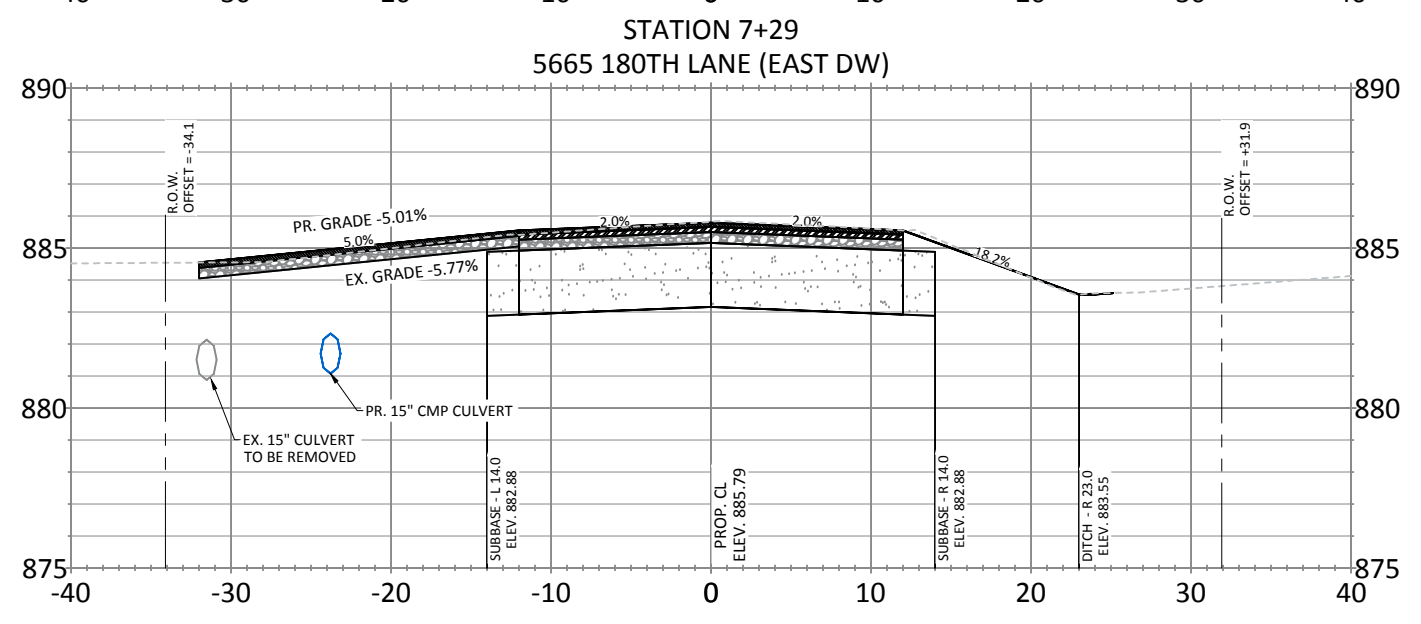
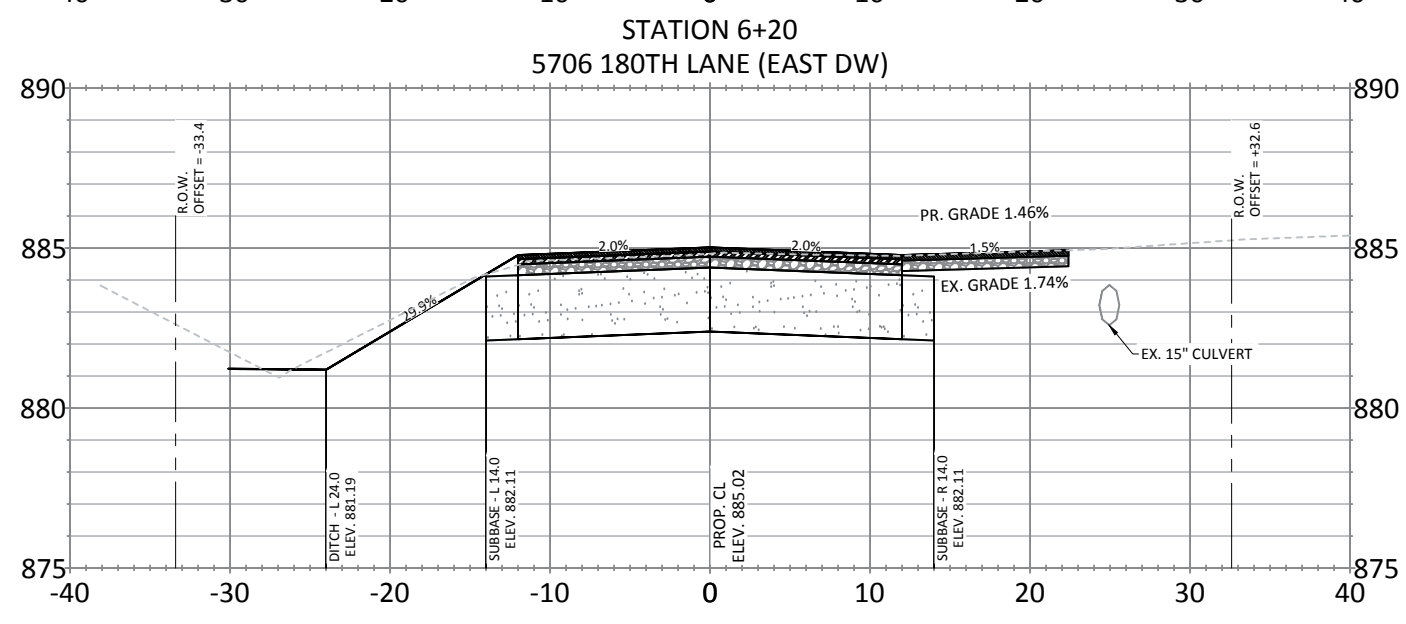
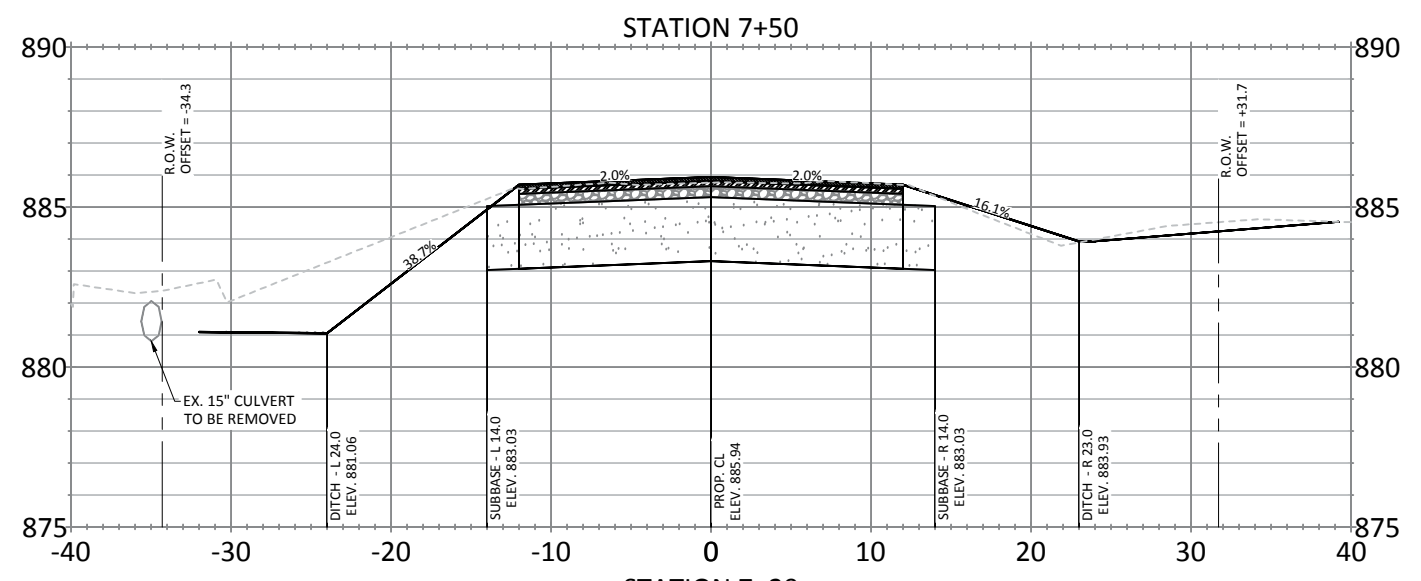
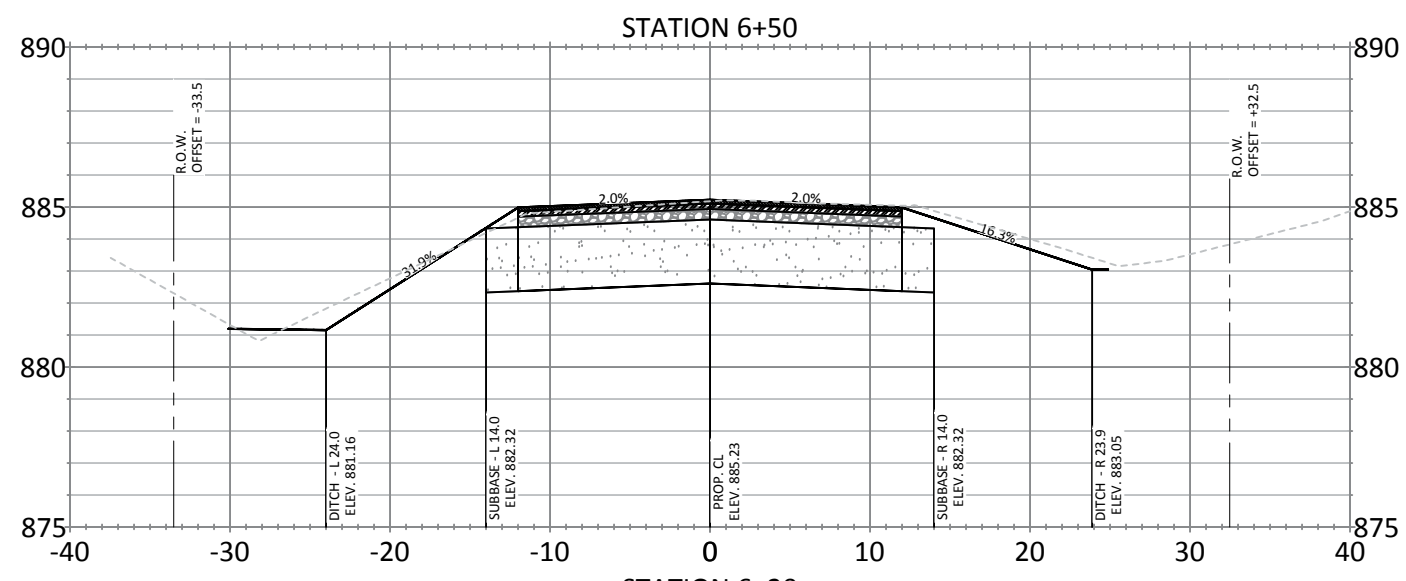
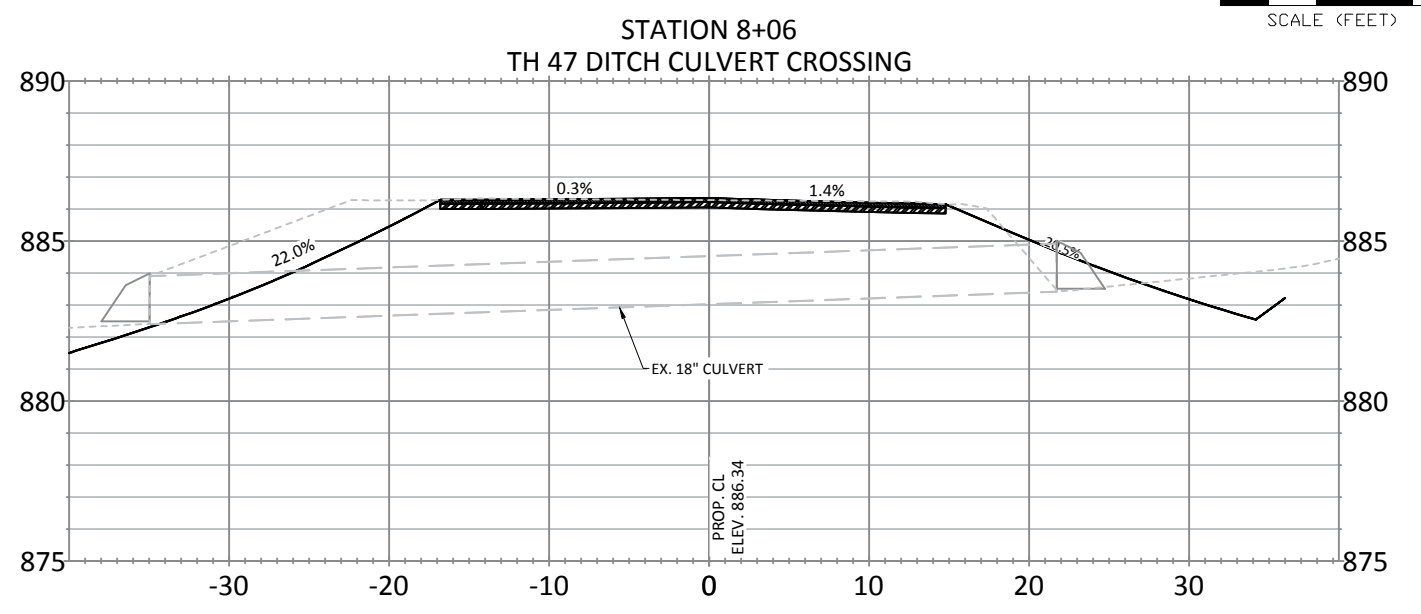
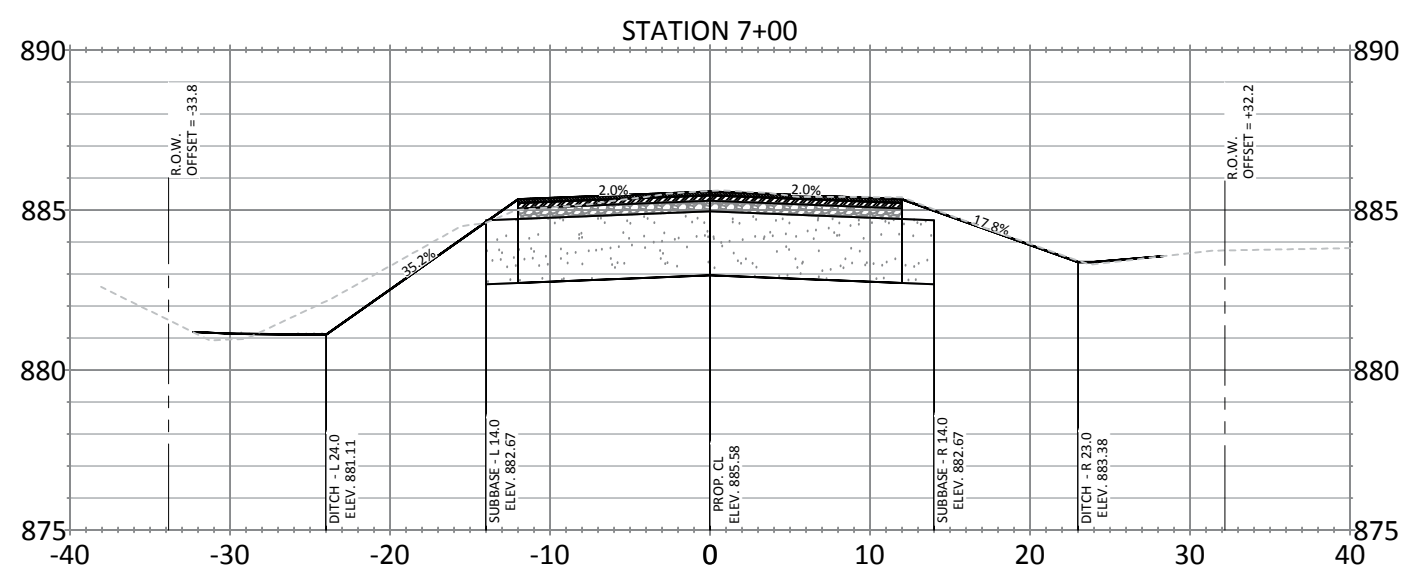
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CROSS SECTIONS - STA. 4+50 TO 6+00

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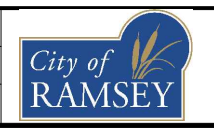
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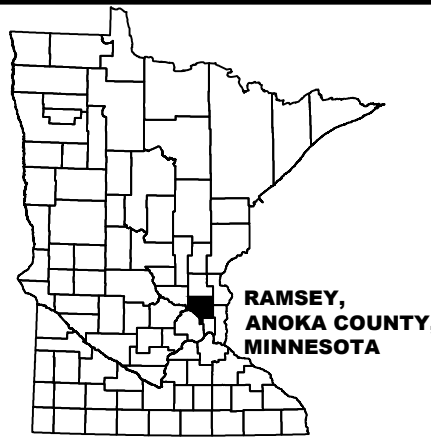
CROSS SECTIONS - STA. 6+15 TO 8+01

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
CITY PROJECT NO. 19-01  
CITY OF RAMSEY, MINNESOTA

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

## FORD BROOK ESTATES STREET RECONSTRUCTIONS

### 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, Roadway Construction, and Permanent Stabilization.

#### Project Description:

This project consists of reconstruction of 0.16 miles of existing bituminous streets with drainage ditches, replacing with bituminous street to the existing width and grade, with the addition of a 2-foot soil correction. The drainage for the existing street flows to drainage swales to the northeast end of the project, eventually reaching the Ford Brook to the north. The construction will include the addition of drain tile to properly drain the subsoil corrections, minor improvements will be made to the drainage ditches to improve the drainage of the site. There is no change to the outfall location of the storm water runoff.

#### 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	LEONARD LINTON, PE	763-433-9834
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:

- Names of trained personnel associated with this project.
- Dates of training, names of instructor(s) and entity providing training.
- Content of training course or workshop including the number of hours trained.
- 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.

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

#### IMPLEMENTATION SCHEDULE AND PHASING:

- Furnish & Install perimeter sediment control and inlet protection.
- Removal of existing bituminous street.
- Rough grade site.
- Furnish & install bituminous pavement.
- Add additional temporary BMP's as necessary during construction based on inspection reports.
- 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:

- 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;
  - All drainage ditches, constructed to drain water from the site after construction is complete, must be stabilized to preclude erosion;
  - 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
  - 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.
- Final vegetation cover shall be in the Project Specifications.
- 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:
- 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.
  - 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.
  - 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:

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

#### RECEIVING WATERS:

Receiving 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

IMPAIRMENTS: NOT FOR CONSTRUCTION, MERCURY AND FISH CONSUMPTION

#### PROJECT AREAS:

Total project size (disturbed area) =	1.15 acres
Existing area of impervious surface =	0.64 acres
Post construction area of impervious surface =	0.64 acres
New impervious surface area created =	0.00 acres

Planned construction start date: June 2019  
Planned construction completion date: September 2019

#### PROJECT LOCATION:

County: ANOKA Township: 32 Range: 25 Section: 2 Latitude: 45.2980 Longitude: -93.4124

#### PERMANENT STORMWATER MANAGEMENT SYSTEM:

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

- Wet Sedimentation Pond
- Infiltration / Filtration
- Regional Pond
- Permanent Stormwater Management Not Required

#### LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN:

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS No. 6
FINAL STABILIZATION	SHEETS No. 10
STORM SEWER TABULATION	SHEETS No. 8 - 9
EROSION AND SEDIMENT CONTROL DETAILS	SHEETS No. 4

#### EROSION AND SEDIMENT CONTROL QUANTITIES:

DESCRIPTION	QUANTITY
SILT FENCE TYPE MS	235 LF
INLET PROTECTION - MANHOLE	1 EA.
INLET PROTECTION - CULVERT	20 EA.

#### CERTIFICATION:

UNIVERSITY OF MINNESOTA

**Joe Feriancek**

Design of Construction SWPPP (May 31 2020)

**Erosion and Stormwater Management**

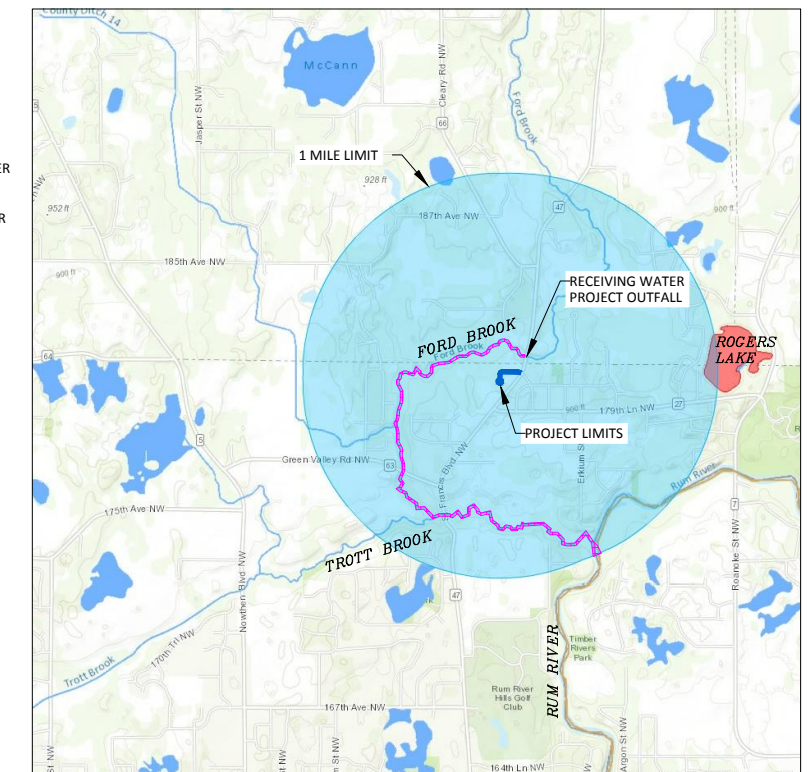
The bearer of this card has been tested and is certified in the area(s) shown on the reverse of this card. Certification expiration dates appear after each certification area.

*Joe Feriancek*

Joe Feriancek, Head  
Department of Engineering and Bioscience Engineering  
University of Minnesota  
http://www.erosion.umn.edu Card issued: 8/12/18

#### LEGEND

- PROJECT LIMITS
- 1 MILE LIMIT
- RECEIVING WATER
- IMPAIRED WATER



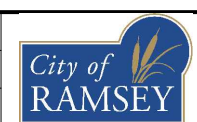
DATE	REVISION
Apr 09, 2019 - 11:20am	

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

*Bruce Westby*  
BRUCE WESTBY  
Date: 4/8/19 Lic. No. 40116

DESIGNED BY: JJF  
DRAWN BY: JJF  
CHECKED BY: BRW

DATE: 4/8/19  
FILE NO: 19-01



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

SWPPP - NOTES

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
CITY PROJECT NO. 19-01  
CITY OF RAMSEY, MINNESOTA

**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 and base.
6. Remove undesirable subcut material.
7. Prepare subbase, finish and install geotextile fabric, select granular base material, and draitile.
8. Furnish and install class 5 aggregate base, grade and compact aggregate.
9. Furnish & install base course of bituminous pavement
10. Grade and compact drainage ditches to final grades, install restoration per plan.
11. Furnish & install wear course of bituminous pavement.
12. 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:**

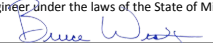
1. Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets.
  - a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system (e.g. ditches with rock check dams) require sediment 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 ½ 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.

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

  
 BRUCE WESTBY  
 Date 4/8/19 Lic. No. 40116

DESIGNED BY: JJF	DATE: 4/8/19
DRAWN BY: JJF	FILE NO. 19-01
CHECKED BY: BRW	

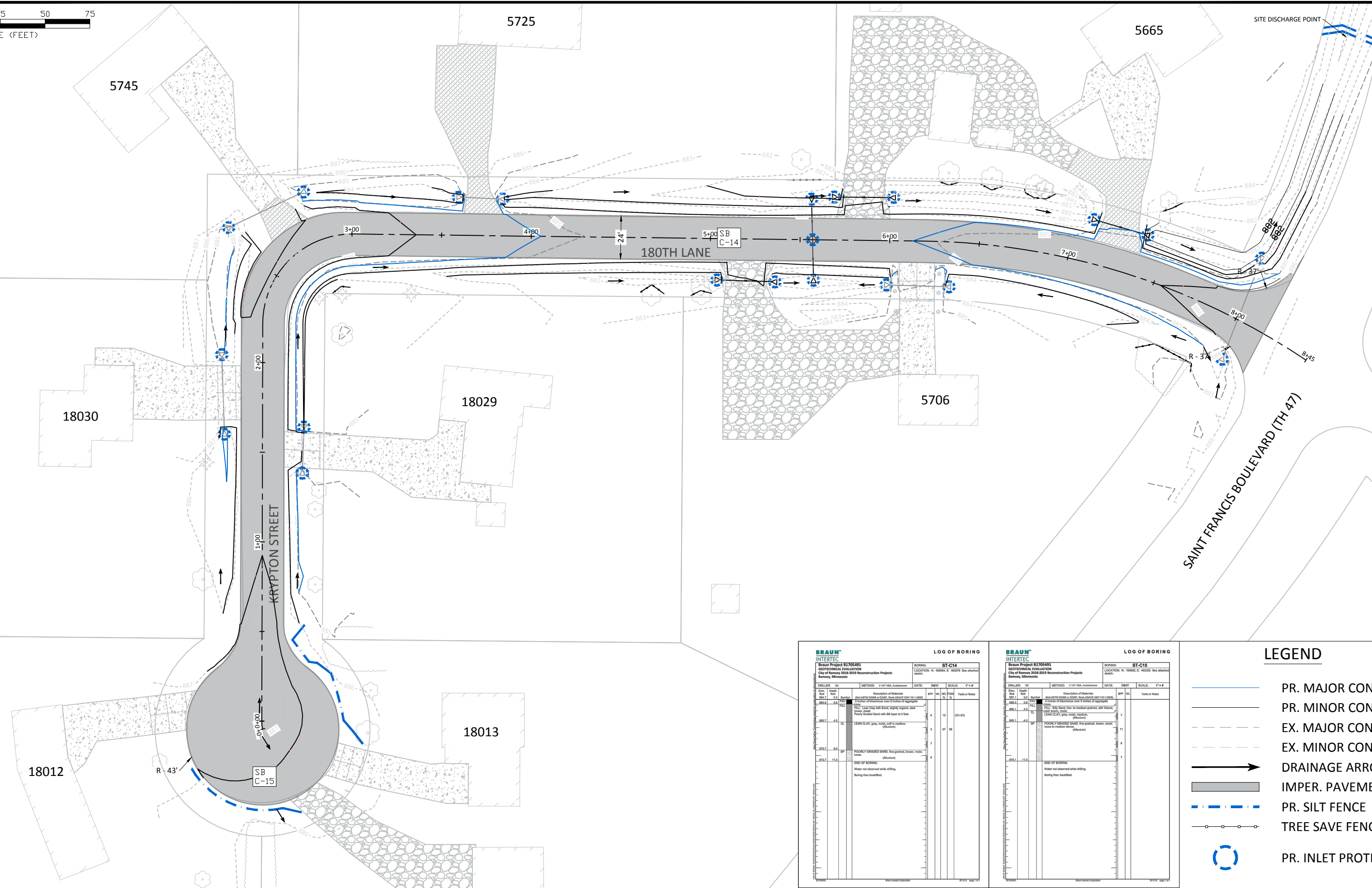


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SWPPP - NOTES

**FORD BROOK ESTATES STREET RECONSTRUCTIONS**  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA

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**BRAUN INTERTEC**  
 Braum Project B1705491  
 GEOTECHNICAL EVALUATION  
 City of Ramsey 2018-2019 Reconstruction Projects  
 Ramsey, Minnesota

LOG OF BORING  
 BORING: ST-C14  
 LOCATION: N 48994, E 42228 (See attached sheet)

DATE	DEPTH	SYMBOL	DESCRIPTION OF MATERIAL	DATE	DEPTH	SYMBOL	DESCRIPTION OF MATERIAL
889.3	3.0	1	LEAN CLAY, gray, moist, well to medium (plastic)	887.0	3.0	1	LEAN CLAY, gray, moist, well to medium (plastic)
887.0	4.0	2	POORLY GRADED SAND, brownish, brown, moist	879.2	3.0	2	POORLY GRADED SAND, brownish, brown, moist
879.2	3.0	3	POORLY GRADED SAND, brownish, brown, moist	879.2	11.0	4	END OF BORING
879.2	11.0	4	END OF BORING				

**BRAUN INTERTEC**  
 Braum Project B1705491  
 GEOTECHNICAL EVALUATION  
 City of Ramsey 2018-2019 Reconstruction Projects  
 Ramsey, Minnesota

LOG OF BORING  
 BORING: ST-C15  
 LOCATION: N 19992, E 41232 (See attached sheet)

DATE	DEPTH	SYMBOL	DESCRIPTION OF MATERIAL	DATE	DEPTH	SYMBOL	DESCRIPTION OF MATERIAL
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887.0	4.0	2	POORLY GRADED SAND, brownish, brown, moist	879.2	3.0	2	POORLY GRADED SAND, brownish, brown, moist
879.2	3.0	3	POORLY GRADED SAND, brownish, brown, moist	879.2	11.0	4	END OF BORING
879.2	11.0	4	END OF BORING				

- LEGEND**
- PR. MAJOR CONTOUR
  - PR. MINOR CONTOUR
  - EX. MAJOR CONTOUR
  - EX. MINOR CONTOUR
  - DRAINAGE ARROW
  - IMPER. PAVEMENT
  - PR. SILT FENCE
  - TREE SAVE FENCE
  - PR. INLET PROTECTION

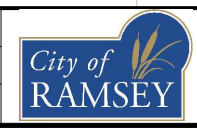
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*Bruce Westby*  
 BRUCE WESTBY  
 Date 4/8/19 Lic. No. 40116

DESIGNED BY: JJF  
 DRAWN BY: JJF  
 CHECKED BY: BRW

DATE: 4/8/19  
 FILE No. 19-01



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

SWPPP - SITE PLAN

FORD BROOK ESTATES STREET RECONSTRUCTIONS  
 CITY PROJECT NO. 19-01  
 CITY OF RAMSEY, MINNESOTA