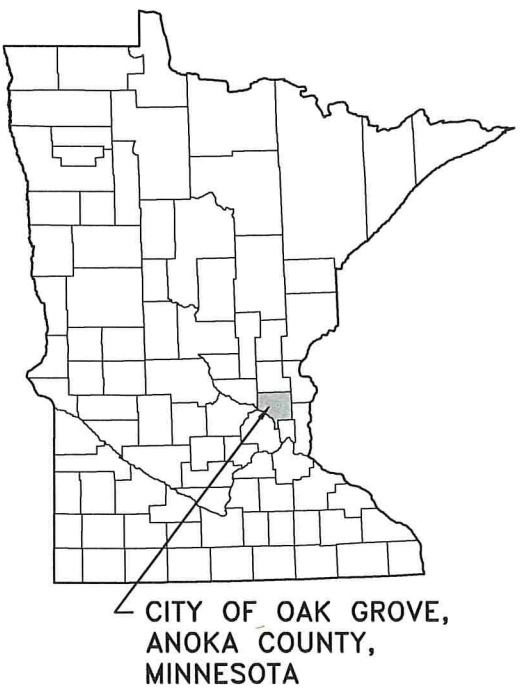
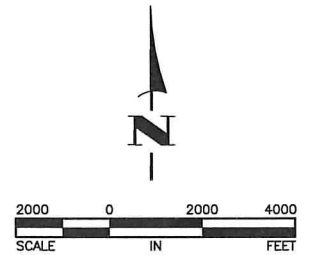
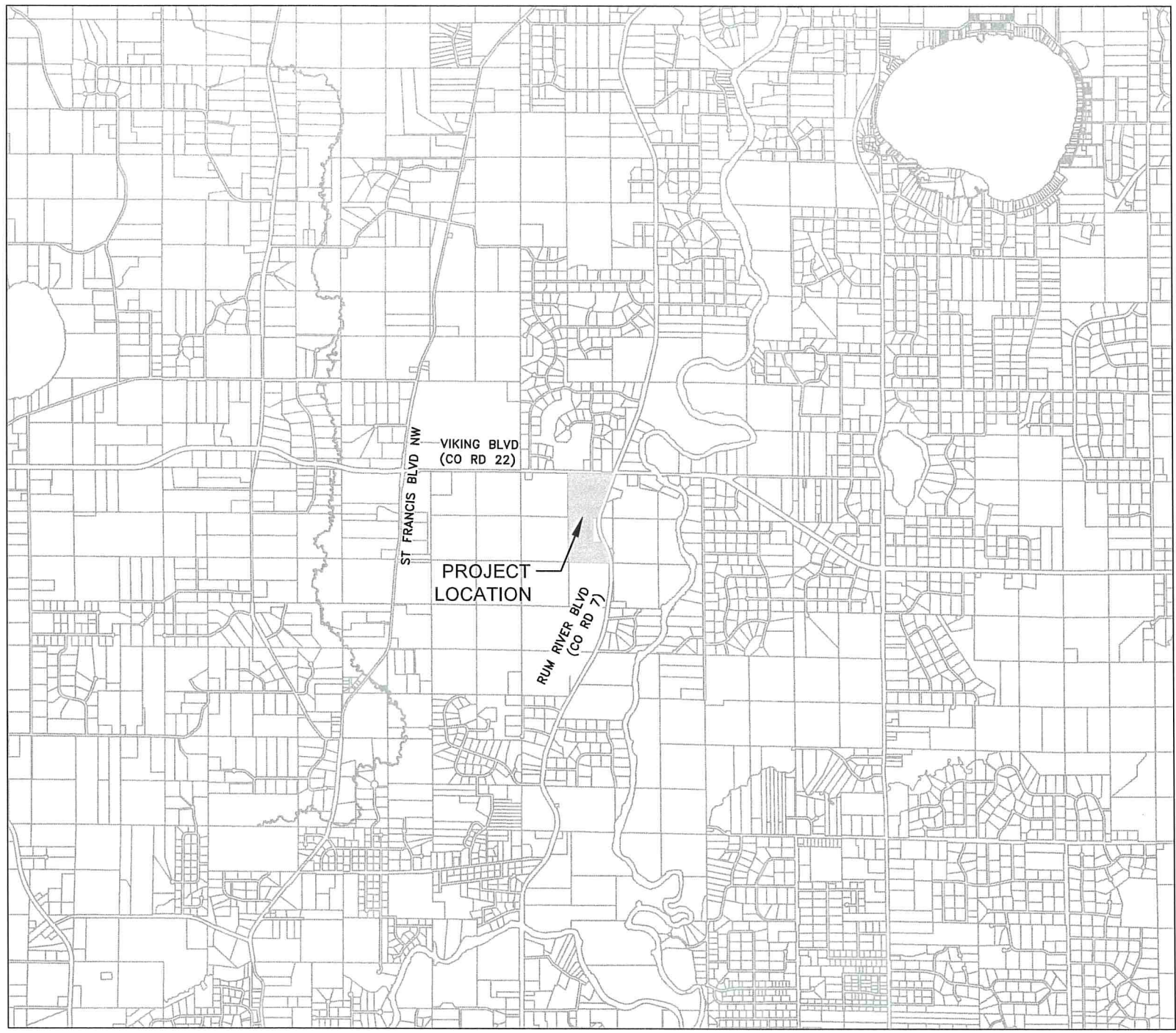


VIKING BLUFFS - PHASE 1
SITE DEVELOPMENT PLANS

CITY OF OAK GROVE, MINNESOTA



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

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL APPLY.

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

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

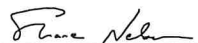
ALL REQUIREMENTS OF THE CITY OF OAK GROVE PUBLIC WORKS DESIGN
MANUAL.

SHEET INDEX

THIS PLAN CONTAINS 41 SHEETS

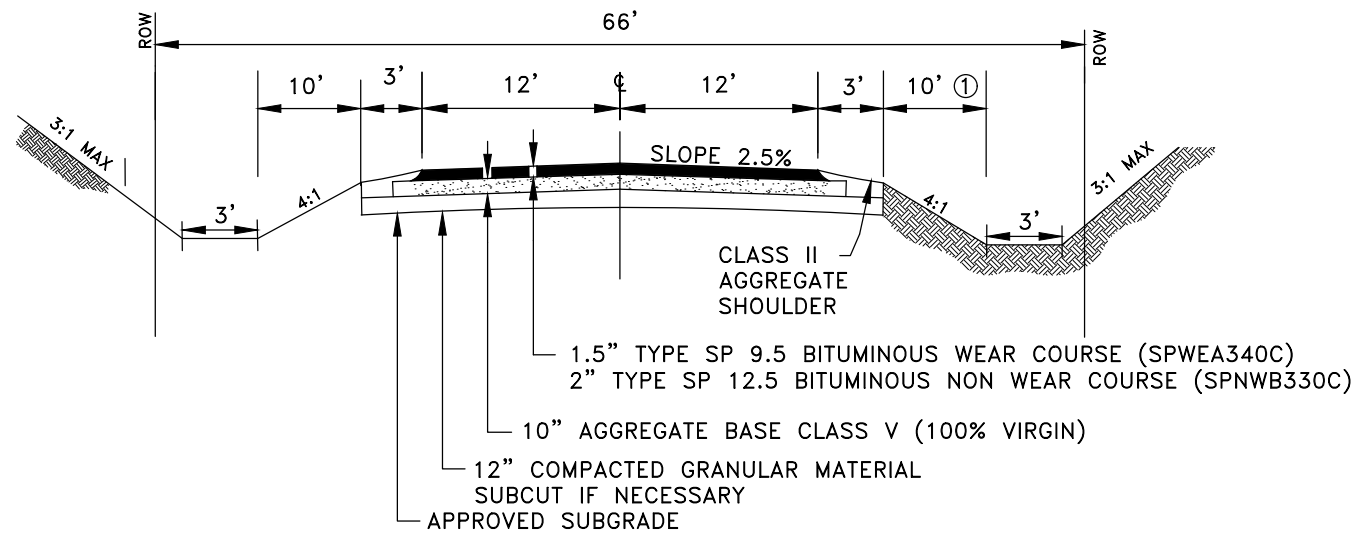
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-4	TYPICAL SECTIONS & DETAILS
5	EXISTING CONDITIONS AND REMOVALS PLAN
6-11	STREET PLANS & PROFILES
12-13	STORM PROFILES
14	OVERALL SIGNAGE PLAN
15-21	TURN LANE PLANS
22	SIGNING AND STRIPING NOTES, DETAILS AND TABULATION
23-26	TRAFFIC CONTROL PLAN
27-28	SIGNAGE DETAILS
X1-X6	KIOWA STREET NW CROSS SECTIONS
X7	PRIVATE DRIVE TURN LANE CROSS SECTIONS
X8-X9	195TH STREET NW TURN LANE CROSS SECTIONS
X10-X12	VIKING BLVD TURN LANE CROSS SECTIONS
X13	195TH LANE NW CROSS SECTIONS

I hereby certify that this plan, specification, or report was prepared
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Professional Engineer under the laws of the State of Minnesota.

 43381 DATE 4/10/20
SHANE M. NELSON, P.E.
HAKANSON ANDERSON
DESIGN ENGINEER
LIC. NO.

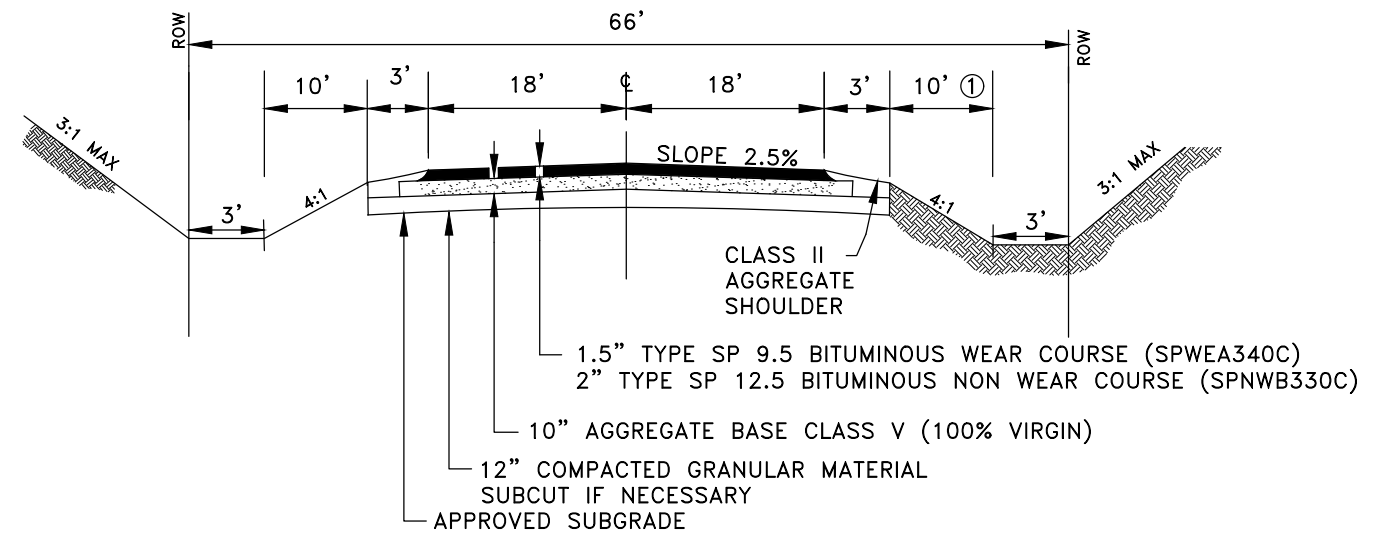
 DATE 7-14-20
APPROVED: ANOKA COUNTY ENGINEER

DATE	REVISION
4/27/20	CITY COMMENTS
5/11/20	REVISED PER CITY COMMENTS
5/14/20	REVISED CULVERT SIZE ON SHEET 11
5/28/20	REVISED PER CITY COMMENTS
6/18/20	REVISED PER COUNTY COMMENTS
7/1/20	REVISED PER COUNTY COMMENTS



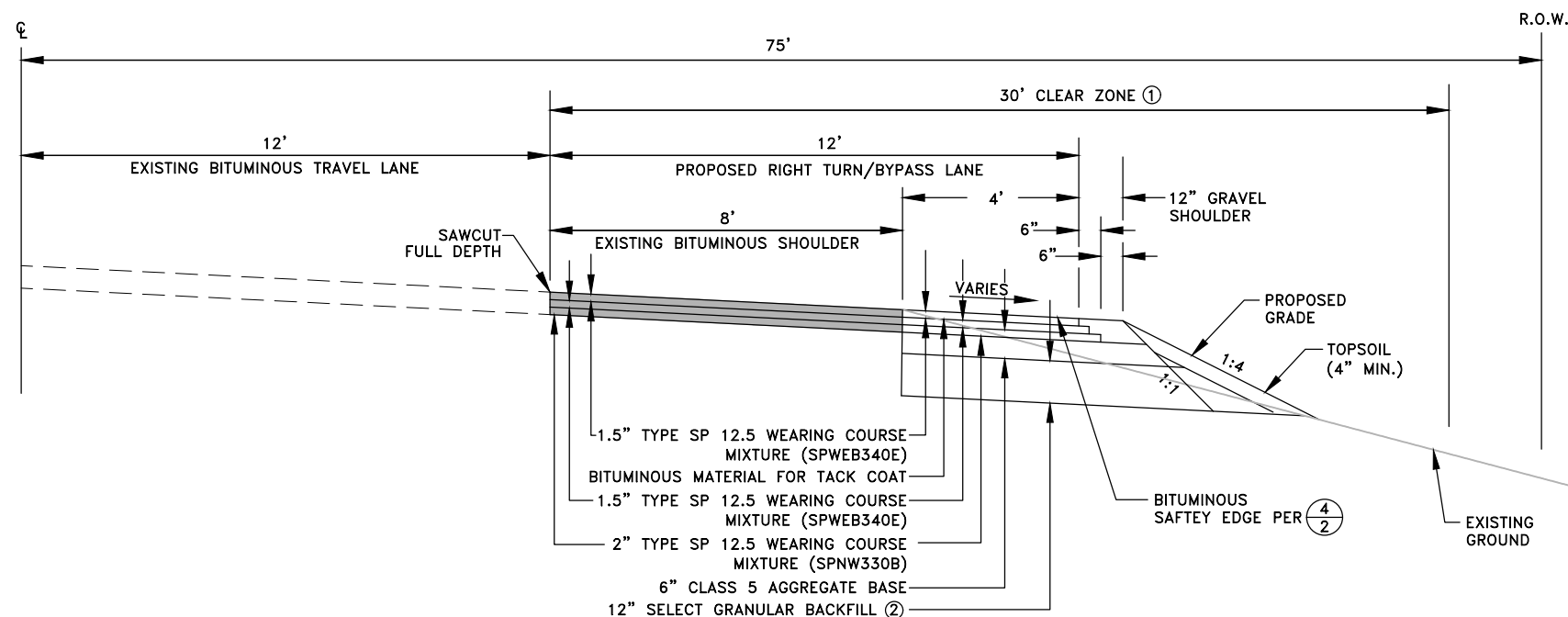
REFERENCE NOTES:
 ① DITCH DEPTH SHALL BE 2.5' MINIMUM. IN FILL AREAS, EXTEND 4:1 SLOPE A MINIMUM OF 10' BEFORE TRANSITIONING TO A MAXIMUM SLOPE OF 3:1.

1 TYPICAL ROAD SECTION - RURAL
 2 NO SCALE



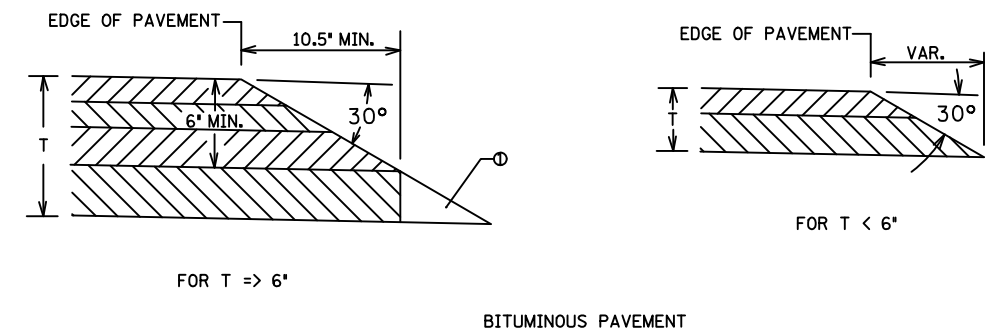
REFERENCE NOTES:
 ① DITCH DEPTH SHALL BE 2.5' MINIMUM. IN FILL AREAS, EXTEND 4:1 SLOPE A MINIMUM OF 10' BEFORE TRANSITIONING TO A MAXIMUM SLOPE OF 3:1.

2 TYPICAL ROAD SECTION
 195TH LANE
 2 NO SCALE



3 TYPICAL SECTION
 VIKING BLVD & RUM RIVER BLVD
 RIGHT TURN LANE/BYPASS LANE
 2 NO SCALE

REFERENCE NOTES:
 ① EXISTING GUARD RAIL ON RUM RIVER BLVD BYPASS LANE DUE TO CLEAR ZONE RESTRICTIONS.



① OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5'. SEE PLAN DESIGN DETAILS.

4 PAVEMENT SAFETY EDGE DETAIL
 2 NO SCALE

Jul 01, 2020 - 3:47pm
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DATE	REVISION
4/27/20	REVISED PER CITY COMMENTS
6/18/20	REVISED PER COUNTY COMMENTS

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DESIGNED BY: SMN
 DRAWN BY: SH
 CHECKED BY: AV



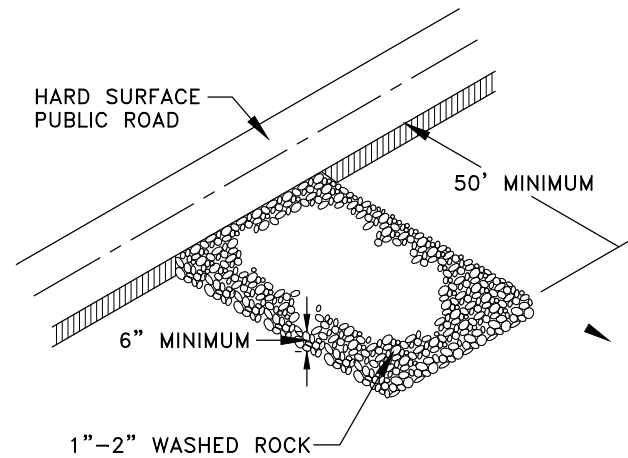
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 763-427-5860 FAX 763-427-0520
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VIKING BLUFFS - PHASE 1

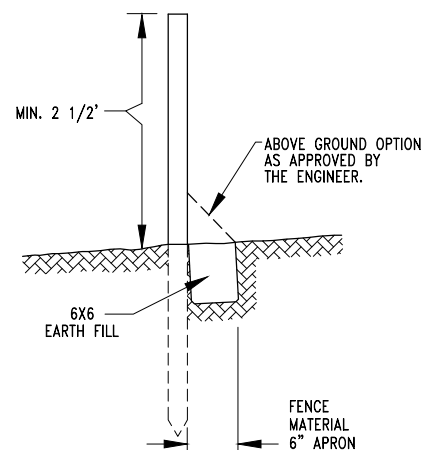
TYPICAL SECTIONS AND DETAILS
 CITY OF OAK GROVE, MINNESOTA

SHEET 2 OF 28
 SHEETS

4443.01



1
3 STABILIZED CONSTRUCTION EXIT
NO SCALE



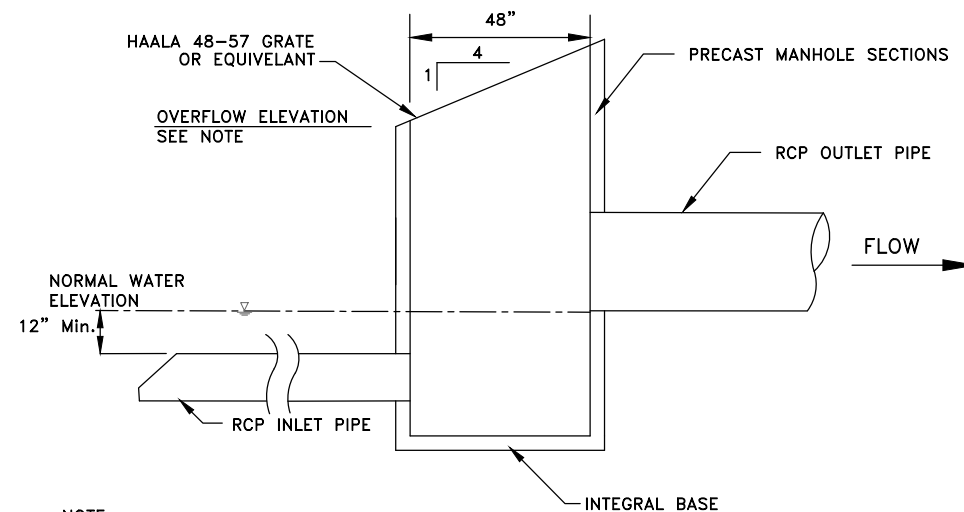
5' POSTS - 8' MAX. ON CENTER
MINIMUM 2' PENETRATION

REF. MnDOT 3886

2
3 SILT FENCE
NO SCALE

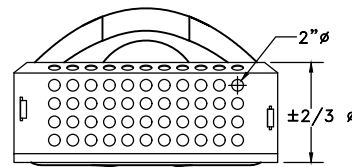
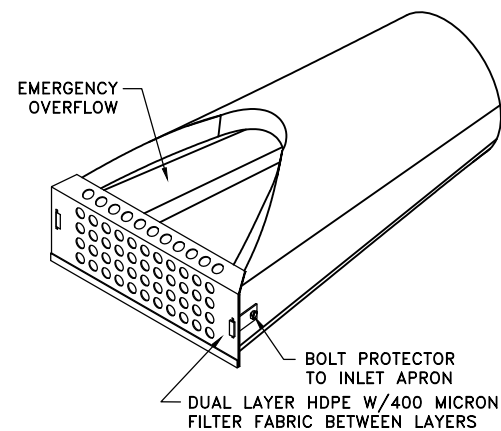
REFERENCE NOTES:

- ① THE INFILTRATION BASIN SHALL NOT BE COMPACTED. ONLY WIDE TRACK, LOW PRESSURE EQUIPMENT SHALL BE USED. CONTRACTOR SHALL SCARIFY THE TOP 3 FEET OF THE INFILTRATION AREA SOIL AFTER GRADING IS COMPLETED.
- ② AFTER CONSTRUCTION, THE DEVELOPER SHALL VERIFY THE INFILTRATION RATES. LRRMO STAFF SHALL BE NOTIFIED PRIOR TO THE TEST.

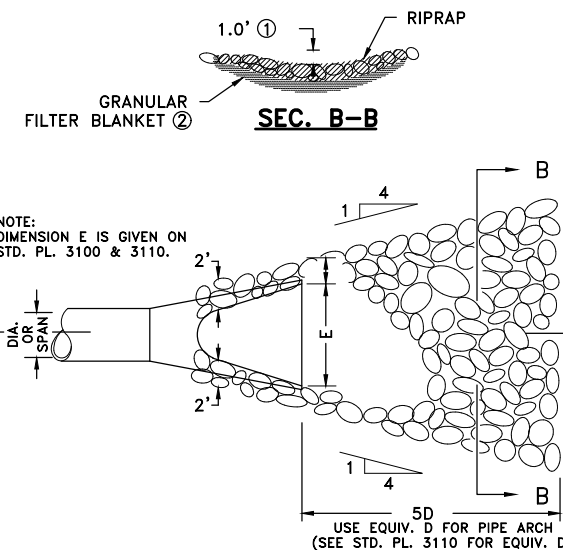


NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR ABOVE THE PEAK 2-YEAR STORM EVENT ELEVATION

3
3 TYPICAL POND SKIMMER
NO SCALE

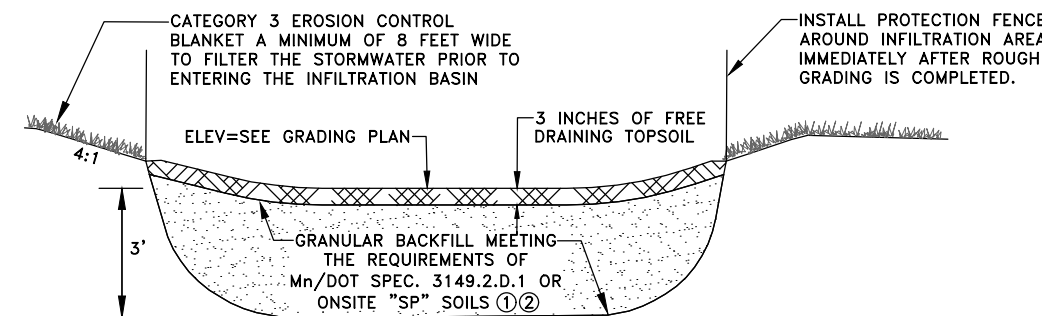


4
3 CULVERT INLET PROTECTION
NO SCALE



- ① FOR PIPES GREATER THAN OR EQUAL TO 48", USE 2.0'
- ② THE CONTRACTOR MAY SUBSTITUTE A GEOTEXTILE FABRIC, SPEC. 3601 FOR THE GRANULAR FILTER BLANKET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.
- ③ QUANTITIES AS PER MnDOT STANDARD PLATE

5
3 RIPRAP AT RCP OUTLET
NO SCALE



6
3 INFILTRATION BASIN
NO SCALE

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SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY: SMN
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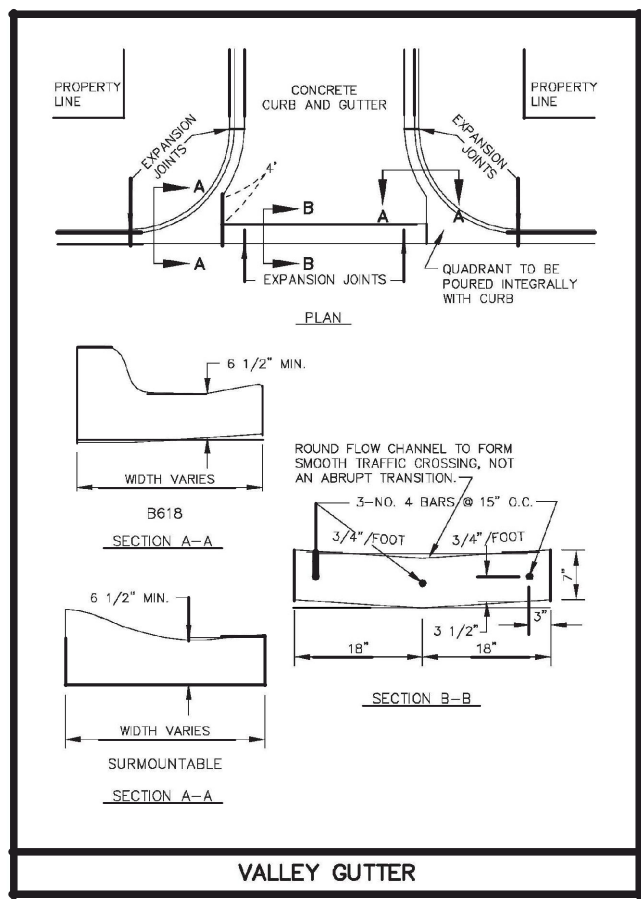
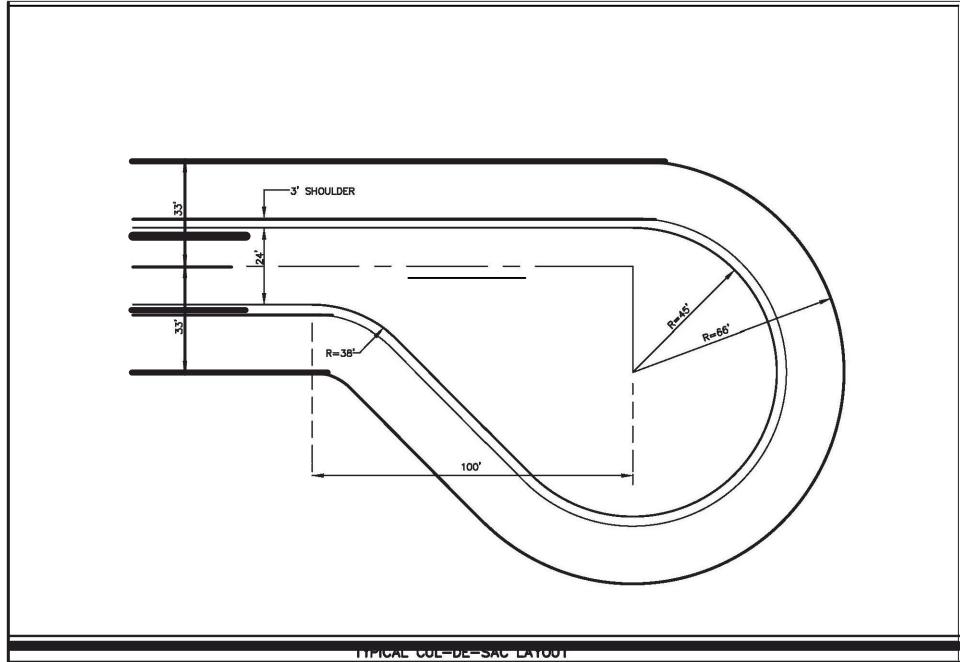
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VIKING BLUFFS - PHASE 1

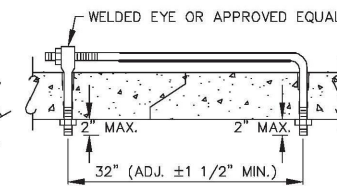
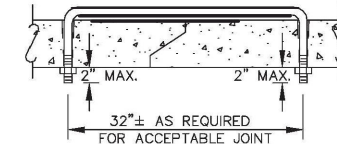
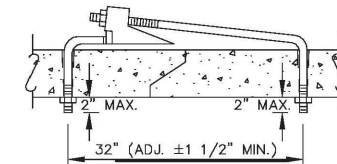
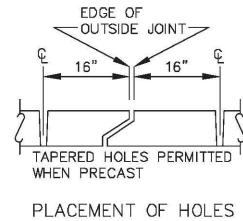
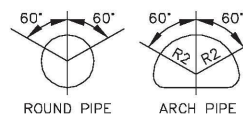
DETAILS
CITY OF OAK GROVE, MINNESOTA

SHEET 3 OF 28
SHEETS

4443.01



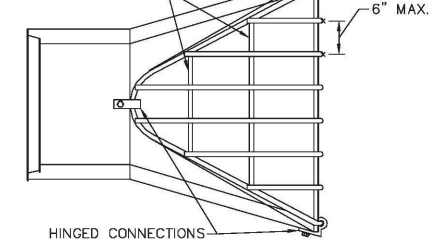
PIPE SIZE	THREAD DIAMETER
12	5/8" ROLLED THREADS (SEE NOTE 4)
15	
18	
21	
24	
27	3/4" CUT OR ROLLED
30	
33	
36	
42	
48	1" CUT OR ROLLED
54	
60	
66	
72	
78	
84	
90	
96	
102	
108	
120	
132	



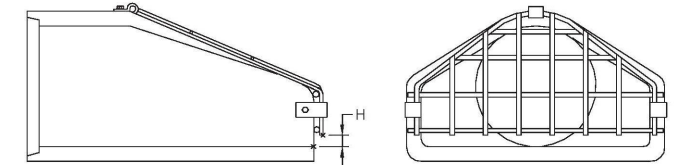
- NOTE:
- HOLES SHALL BE CAST-IN OR DRILLED 16" FROM OUTSIDE EDGE OF JOINT.
 - NUTS AND WASHERS ARE NOT REQUIRED ON INSIDE OF PIPE WITH 27" DIAMETER OR LESS.
 - TIES ARE NOT REQUIRED FOR BELL PIPE 24" AND SMALLER. ON OTHER SIZES, TIE MAY BE INSERTED FROM INSIDE.
 - CUT THREADS MAY BE USED IF WASHER AND NUT ARE USED.
 - PIPE SIZES LISTED ARE INSIDE DIAMETER OF ROUND PIPE OR EQUIVALENT DIAMETER OF PIPE ARCH.

CONCRETE PIPE JOINT TIES

ALL GUARDS TO HAVE (1) CROSS BAR, 60" AND UP TO HAVE (2) BARS EQUALLY SPACED



PIPE SIZE	ROUND
12"	2 1/2"
15"	3"
18"-24"	4"
27"-36"	5"
42"-54"	6"
60"-72"	7"
78"-90"	8"

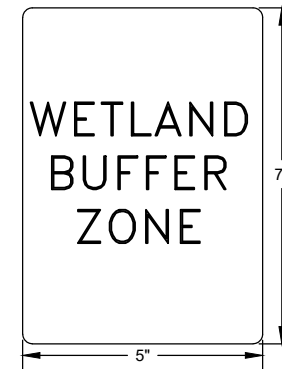


BAR SIZES							
STANDARD DESIGN				HEAVY DESIGN			
PIPE SIZE	HOLE DIA. REQ'D	BOLT DIA.	BAR SIZE	PIPE SIZE	HOLE DIA. REQ'D	BOLT DIA.	BAR SIZE
12"-24"	3/4"	5/8"	5/8"	12"-18"	3/4"	5/8"	3/4"
27"-48"	7/8"	3/4"	3/4"	21"-42"	7/8"	3/4"	1"
54"-90"	1 1/8"	1"	1"	48"-90"	1 1/8"	1"	1 1/4"

Note:
Hot dip galvanized per ASTM A153.

TRASH GUARD

WHITE LETTERING ON BROWN BACKGROUND WITH 3/4" LETTERING



WETLAND BUFFER SIGNS ARE TO BE PLACED ALONG ALL WETLANDS IN RESIDENTIAL AREAS WHERE THE BUFFERS ARE REQUIRED.

SIGNS SHALL BE INSTALLED ON A "U-POST" MOUNTING. (SEE STANDARD PLATE 801)

SIGNS SHALL BE PLACED 20' FROM THE EDGE OF THE DELINEATED OR MITIGATED WETLAND.

4
4
WETLAND BUFFER SIGN
NO SCALE

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SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY: SMN
DRAWN BY: SH
CHECKED BY: AV



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VIKING BLUFFS - PHASE 1

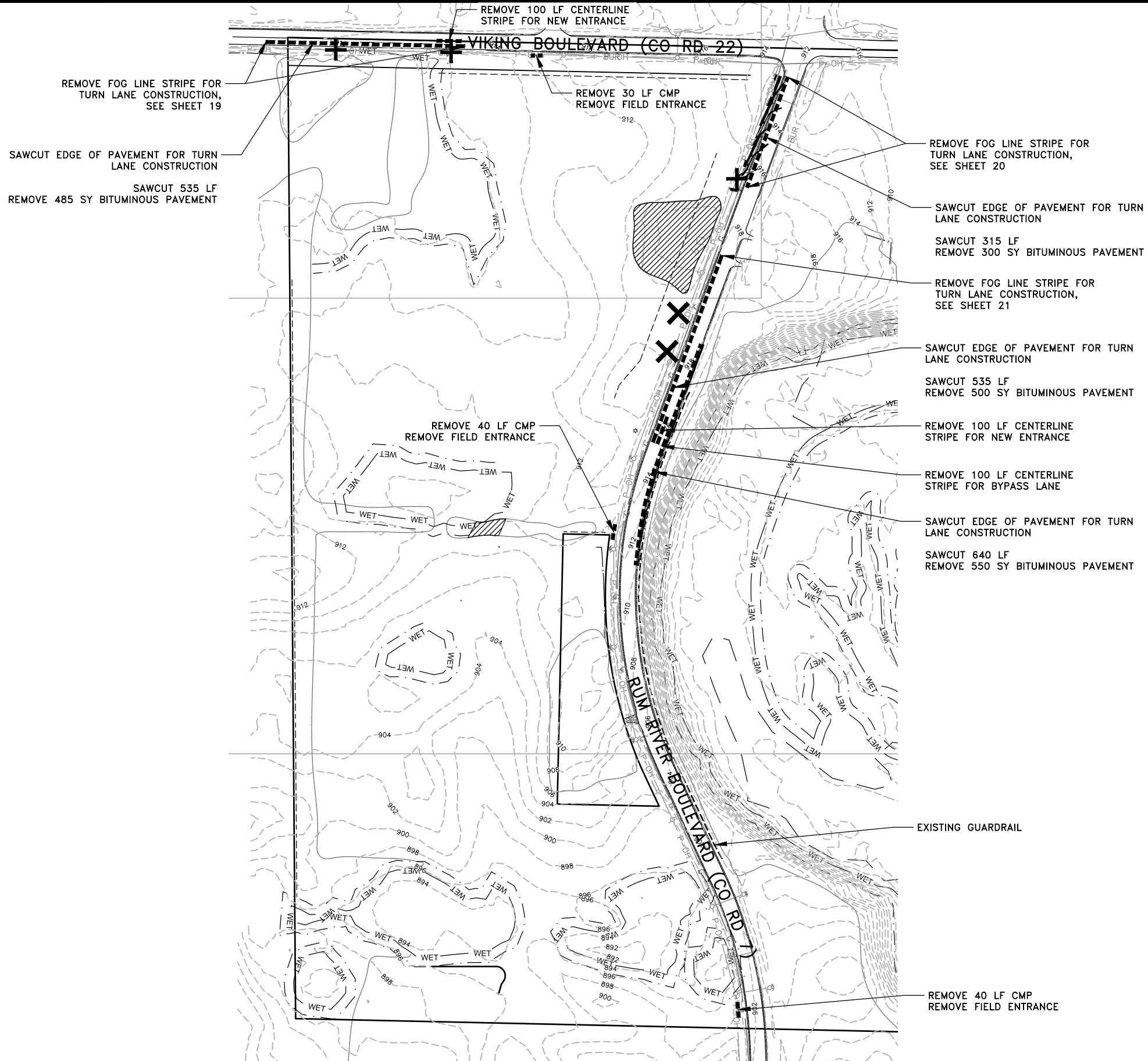
DETAILS

CITY OF OAK GROVE, MINNESOTA

SHEET 4 OF 28
SHEETS

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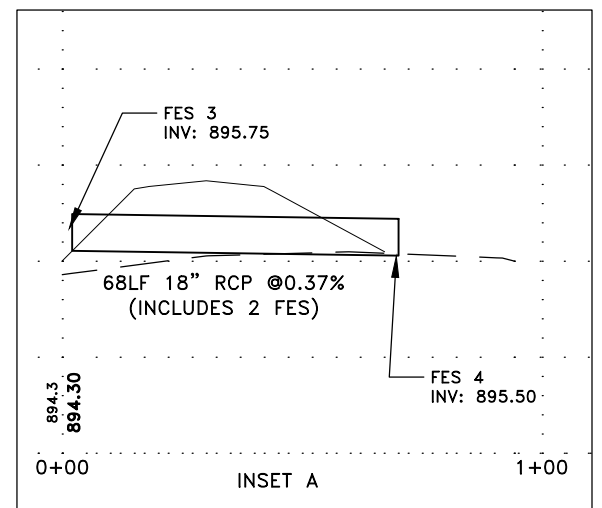
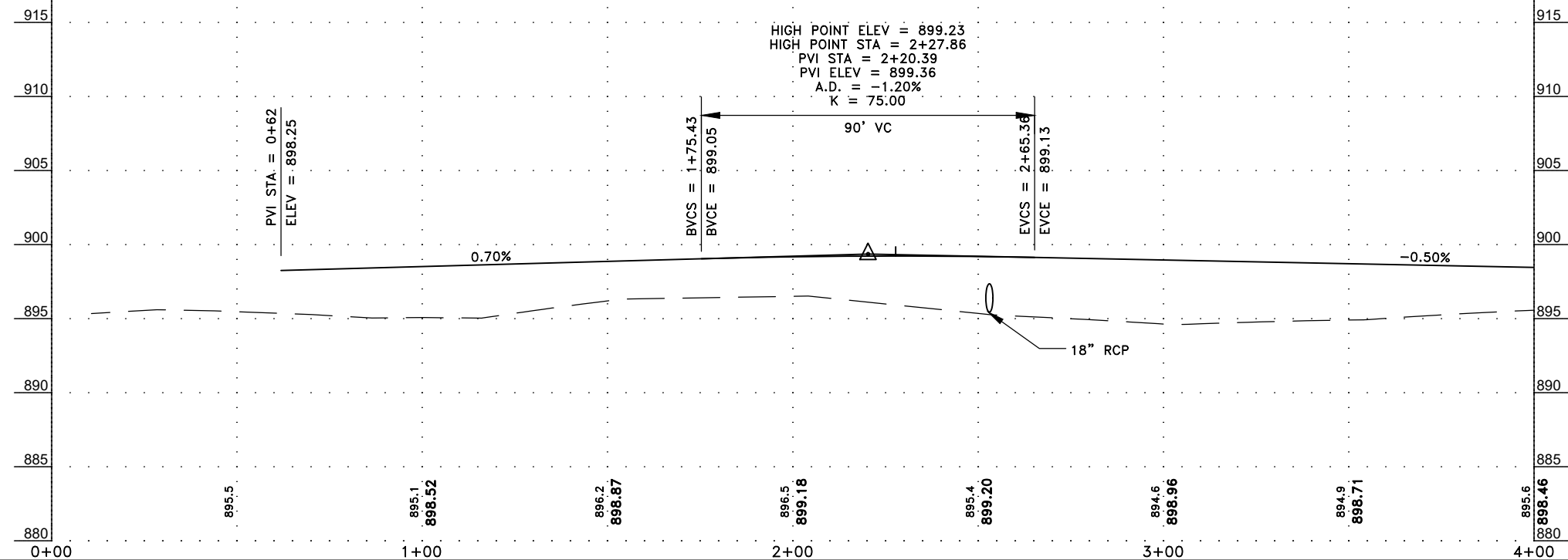
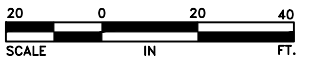
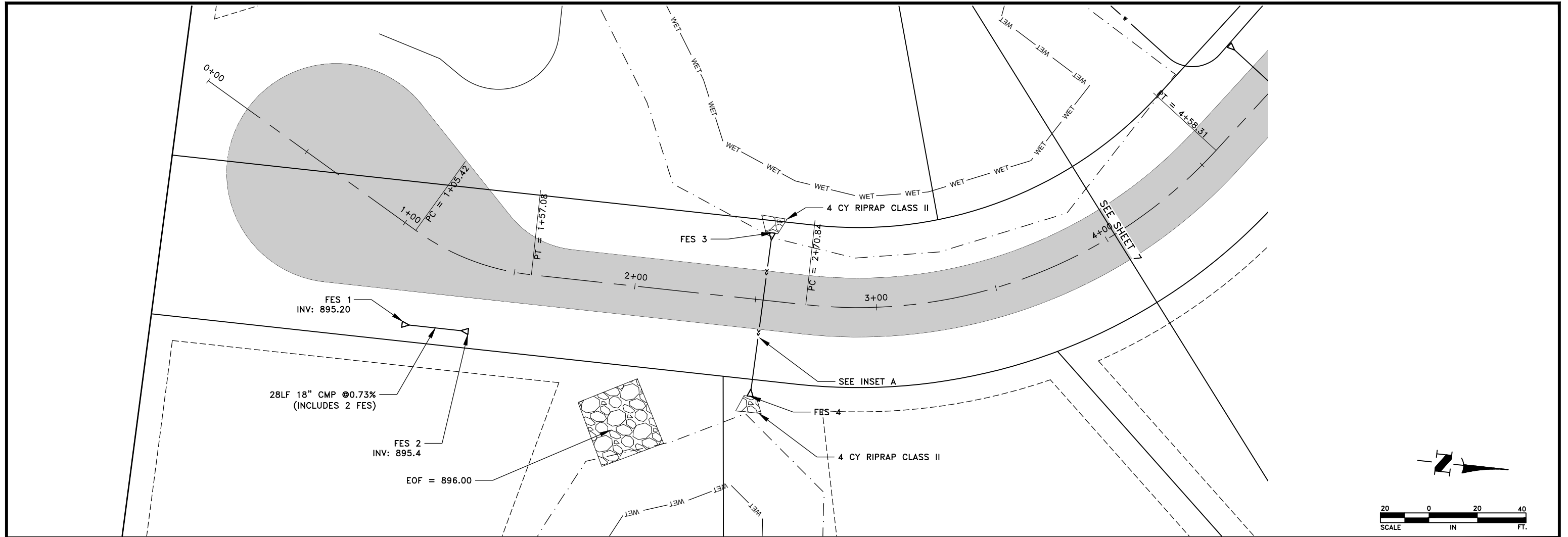
VIKING BLUFFS – PHASE 1

EXISTING CONDITIONS AND
REMOVALS PLAN
CITY OF OAK GROVE, MINNESOTA

SHEET
5
OF
28
SHEETS

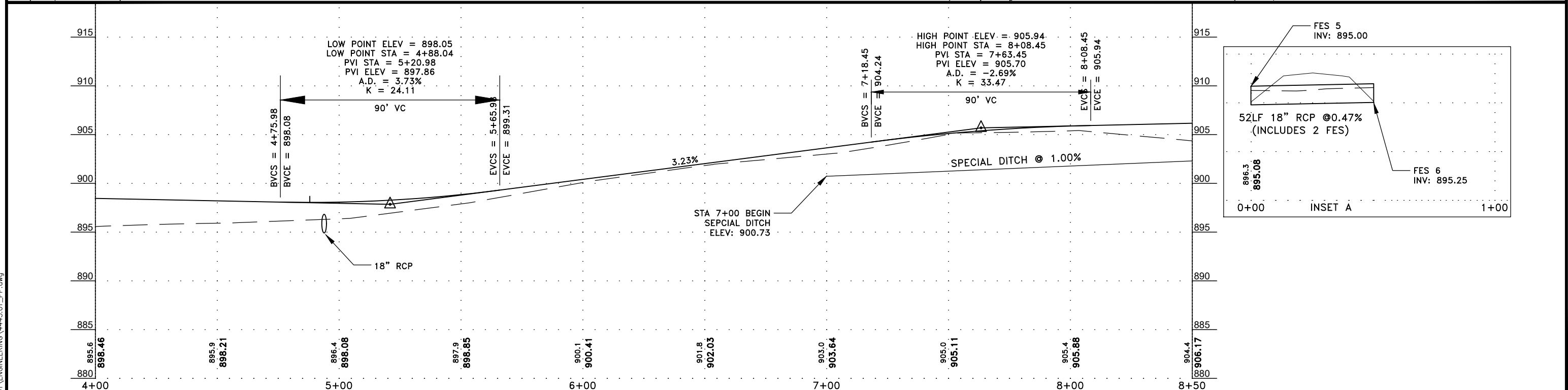
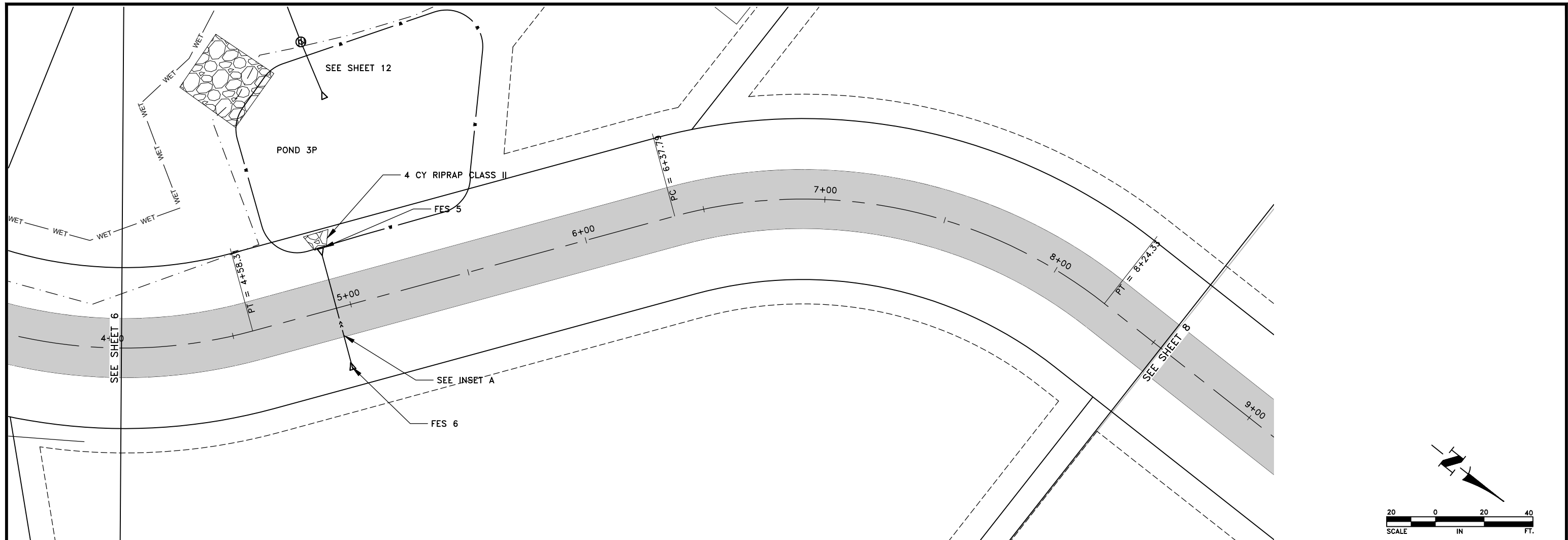
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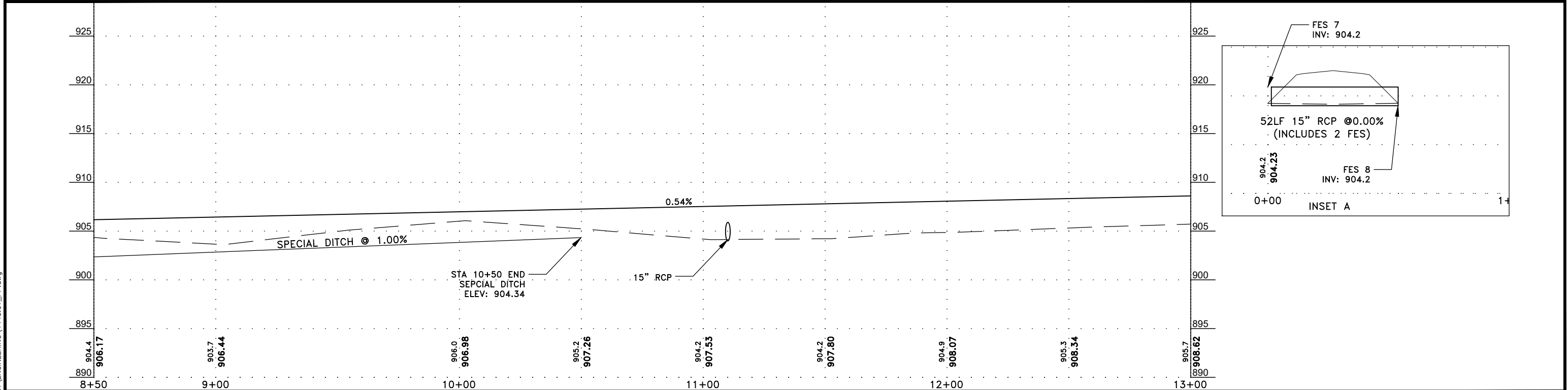
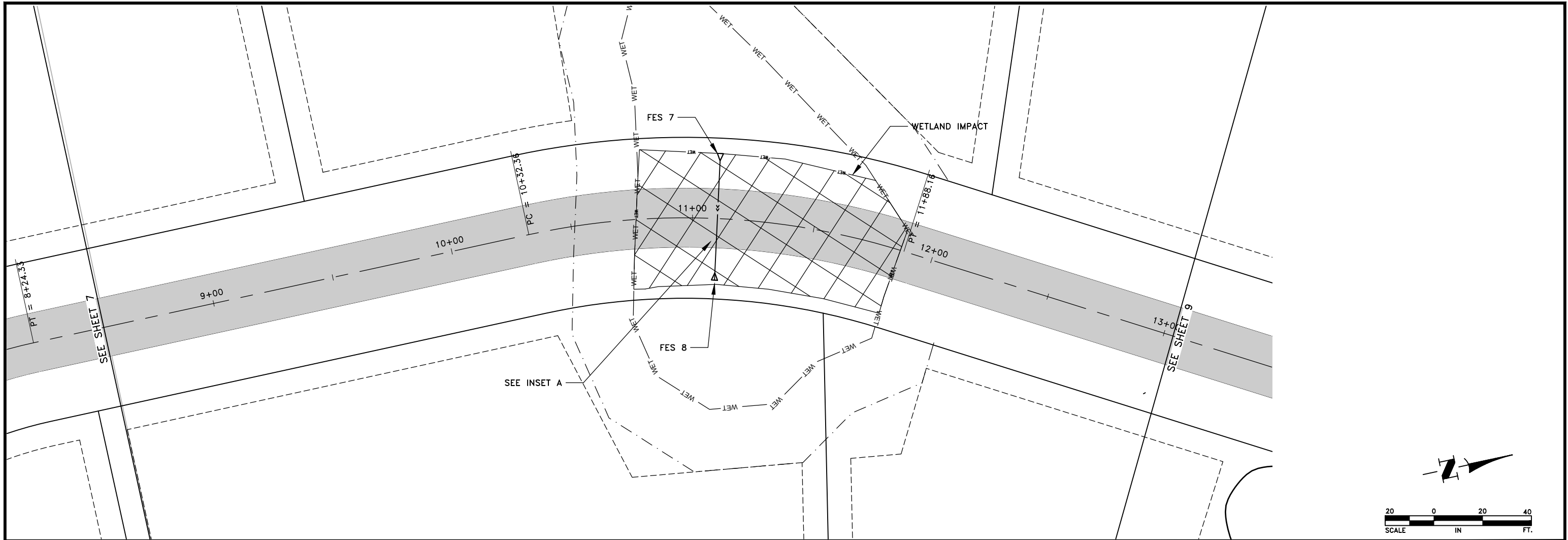
DATE 4/27/20		REVISION CITY COMMENTS		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. <i>Shane M. Nelson</i> SHANE M. NELSON, P.E. Date 4/10/20 Lic. No. 43381	DESIGNED BY: SMN DRAWN BY: SH CHECKED BY: AV		Hakanson Anderson Civil Engineers and Land Surveyors 3601 Thurston Ave., Anoka, Minnesota 55303 763-427-5860 FAX 763-427-0520 www.hakanson-anderson.com	VIKING BLUFFS - PHASE 1	STREET PLAN AND PROFILE KIOWA STREET NW CITY OF OAK GROVE, MINNESOTA	SHEET 6 OF 28 SHEETS

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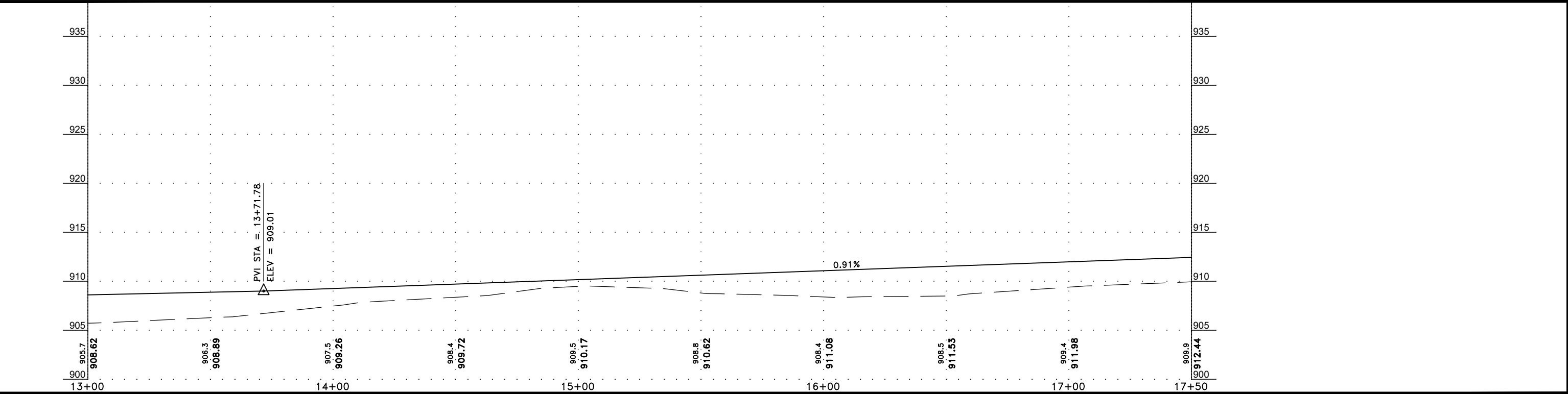
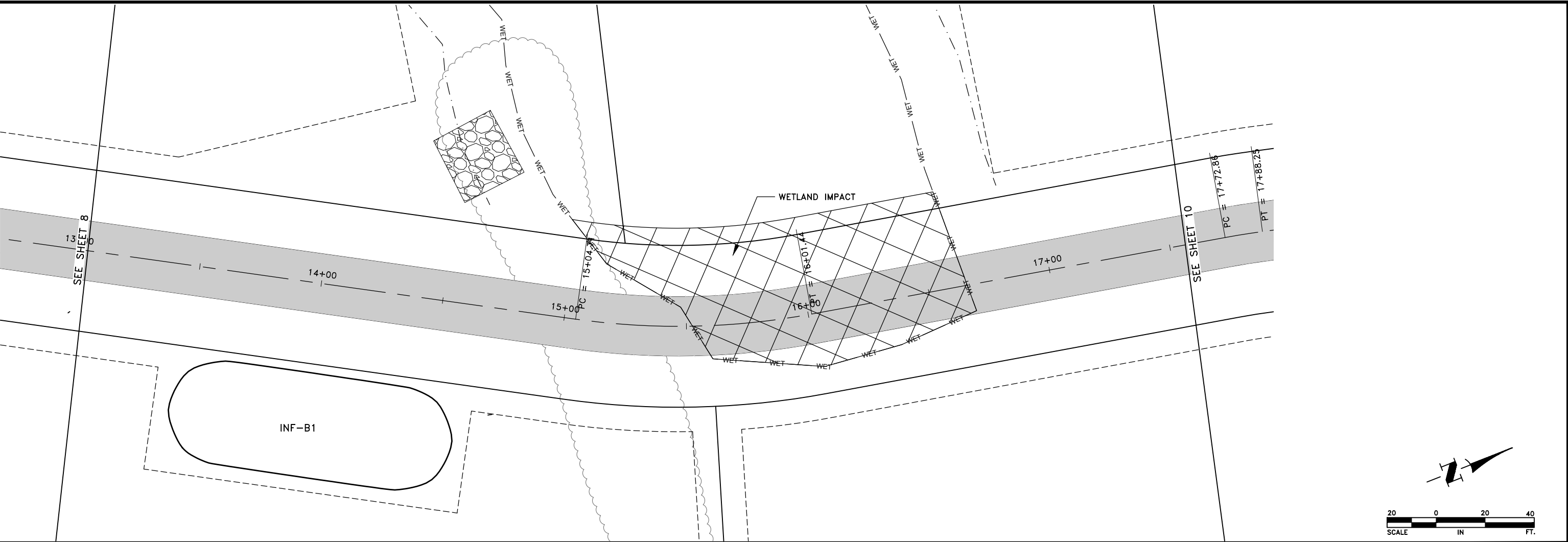
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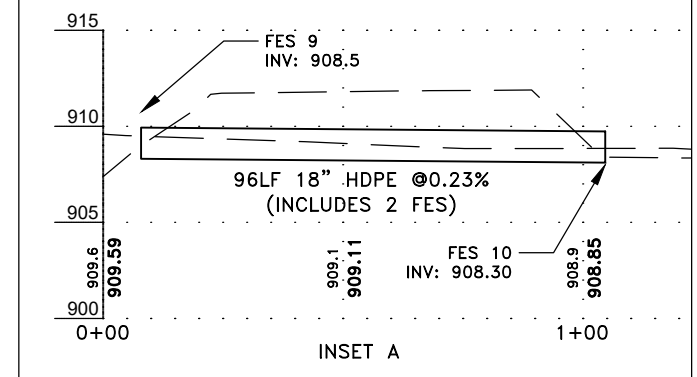
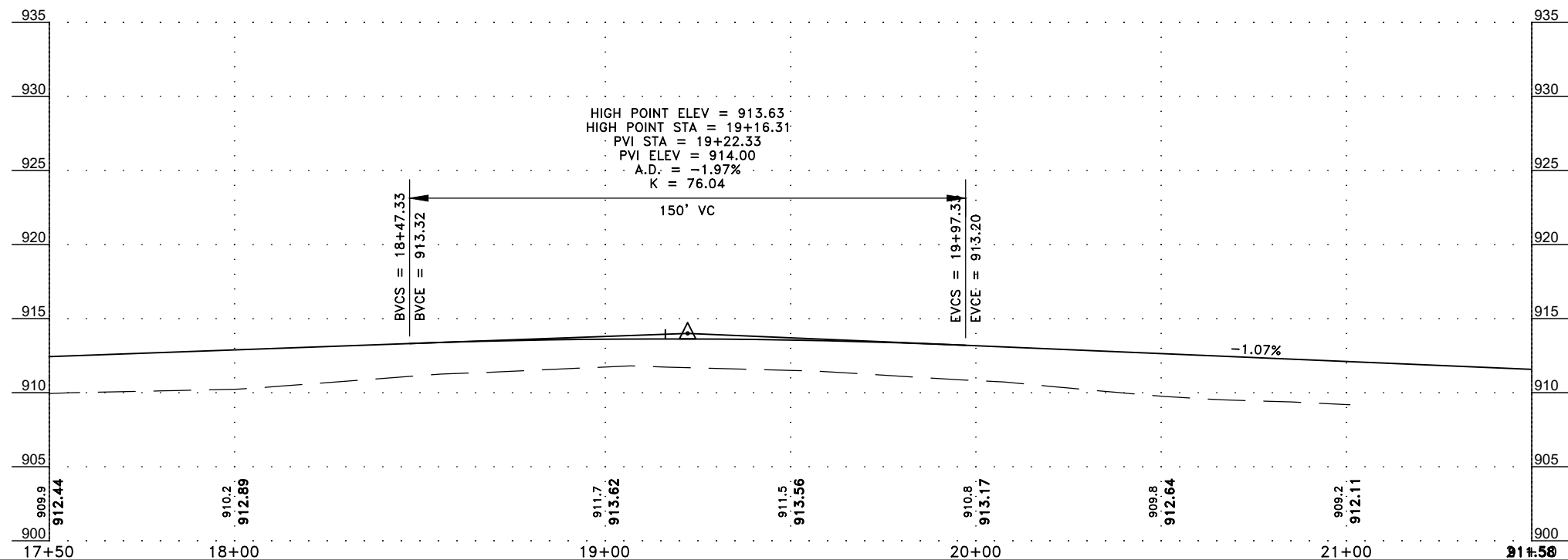
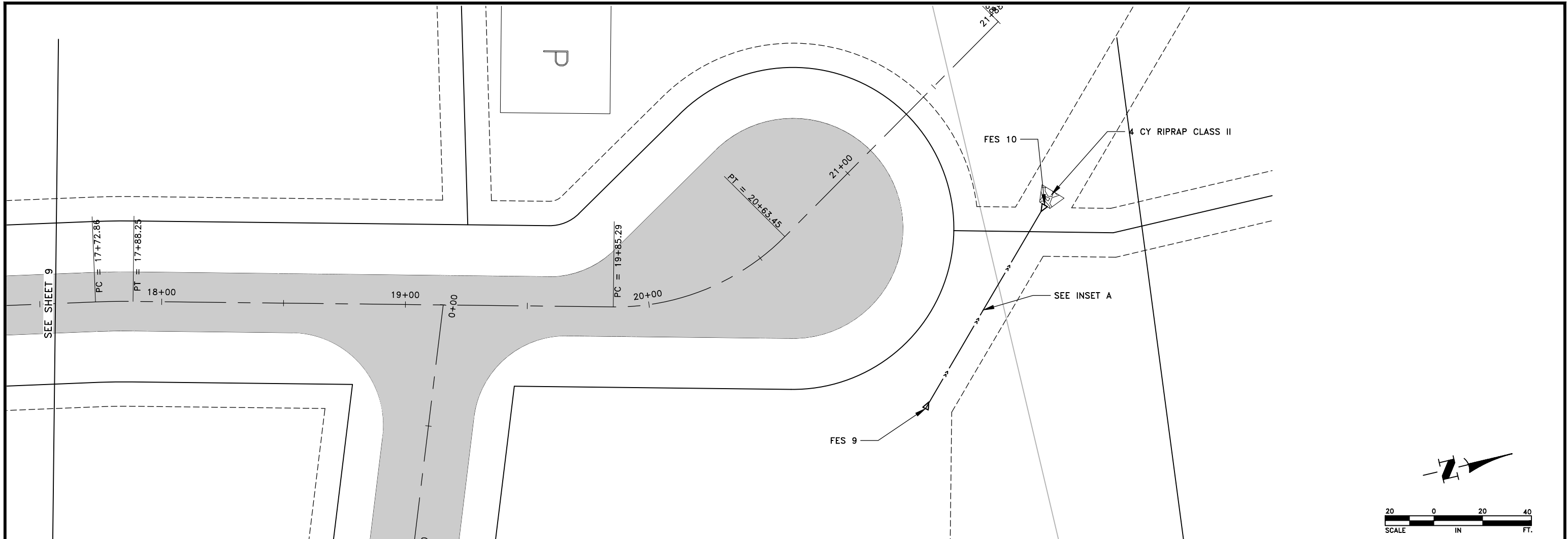
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VIKING BLUFFS – PHASE 1

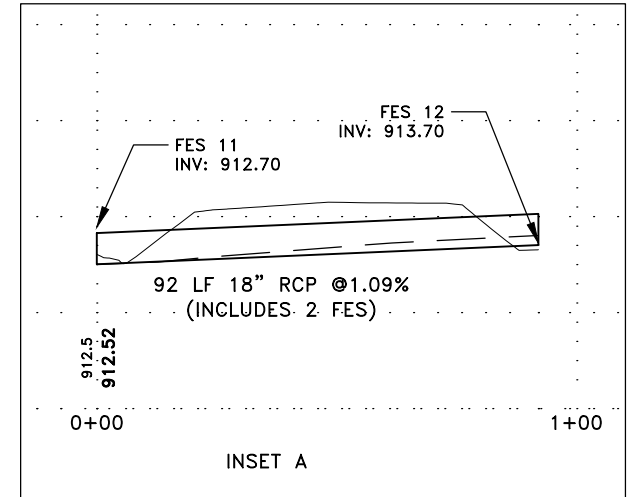
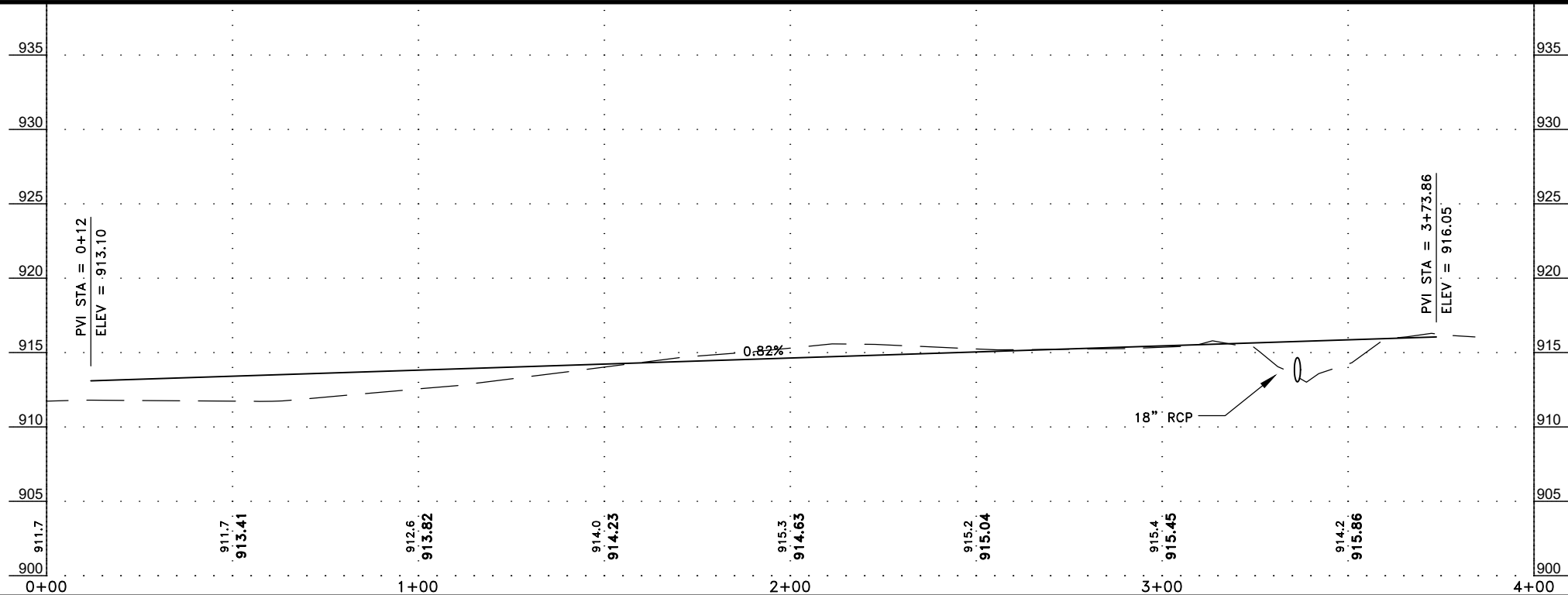
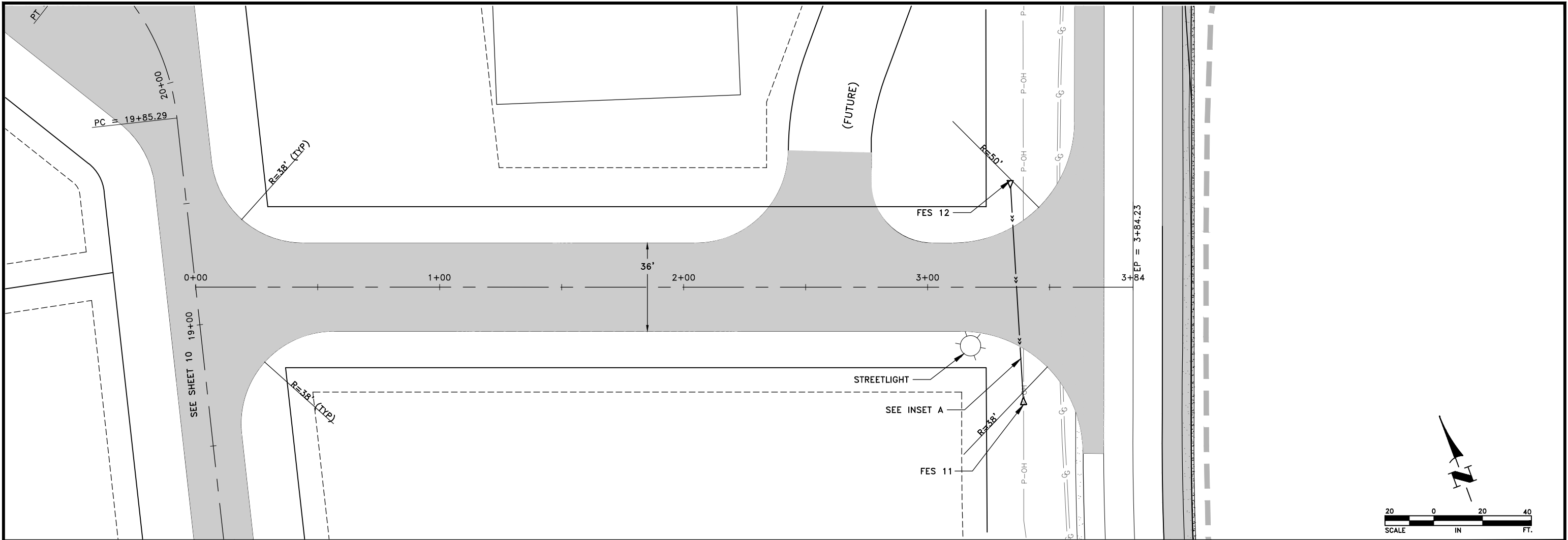
STREET PLAN AND PROFILE

KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
10
OF
28
SHEETS

4443.01

Jul 01, 2020 -- 3:48pm
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DATE	REVISION
4/27/20	CITY COMMENTS
5/11/20	DEPICT STREET LIGHT
5/14/20	REVISED CULVERT SIZE

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.

Shane M. Nelson
SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY: SMN
DRAWN BY: SH
CHECKED BY: AV



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

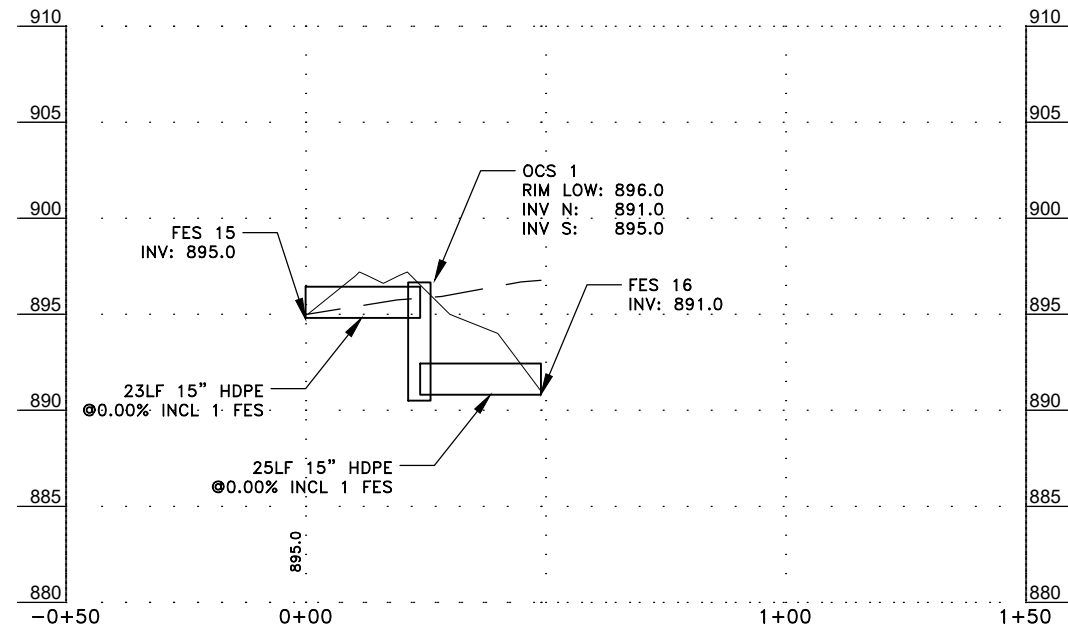
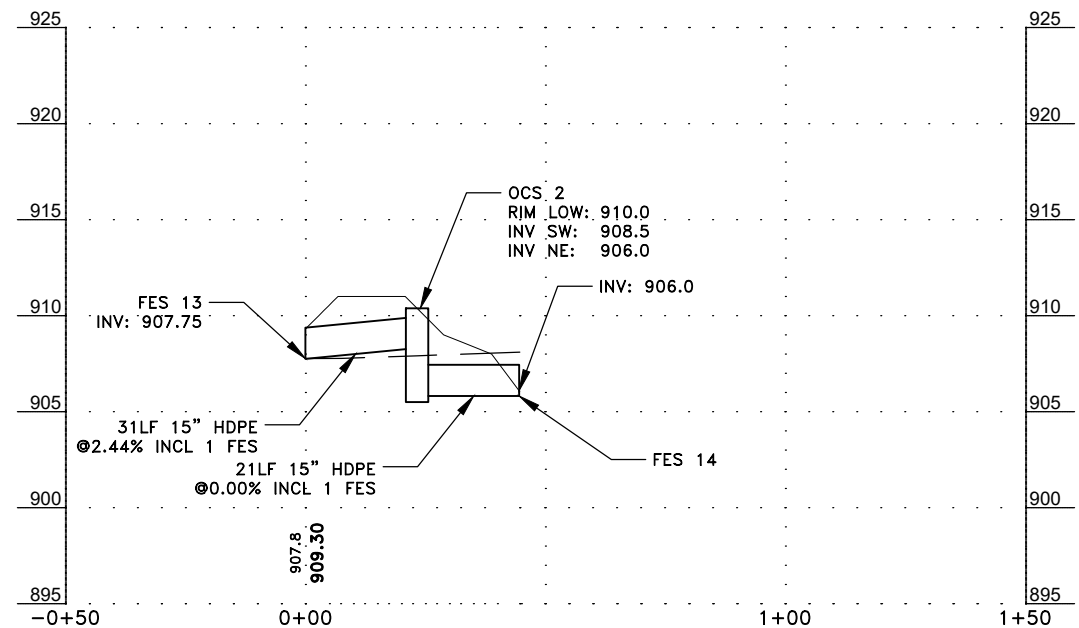
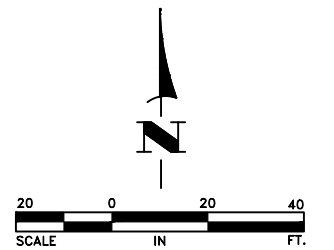
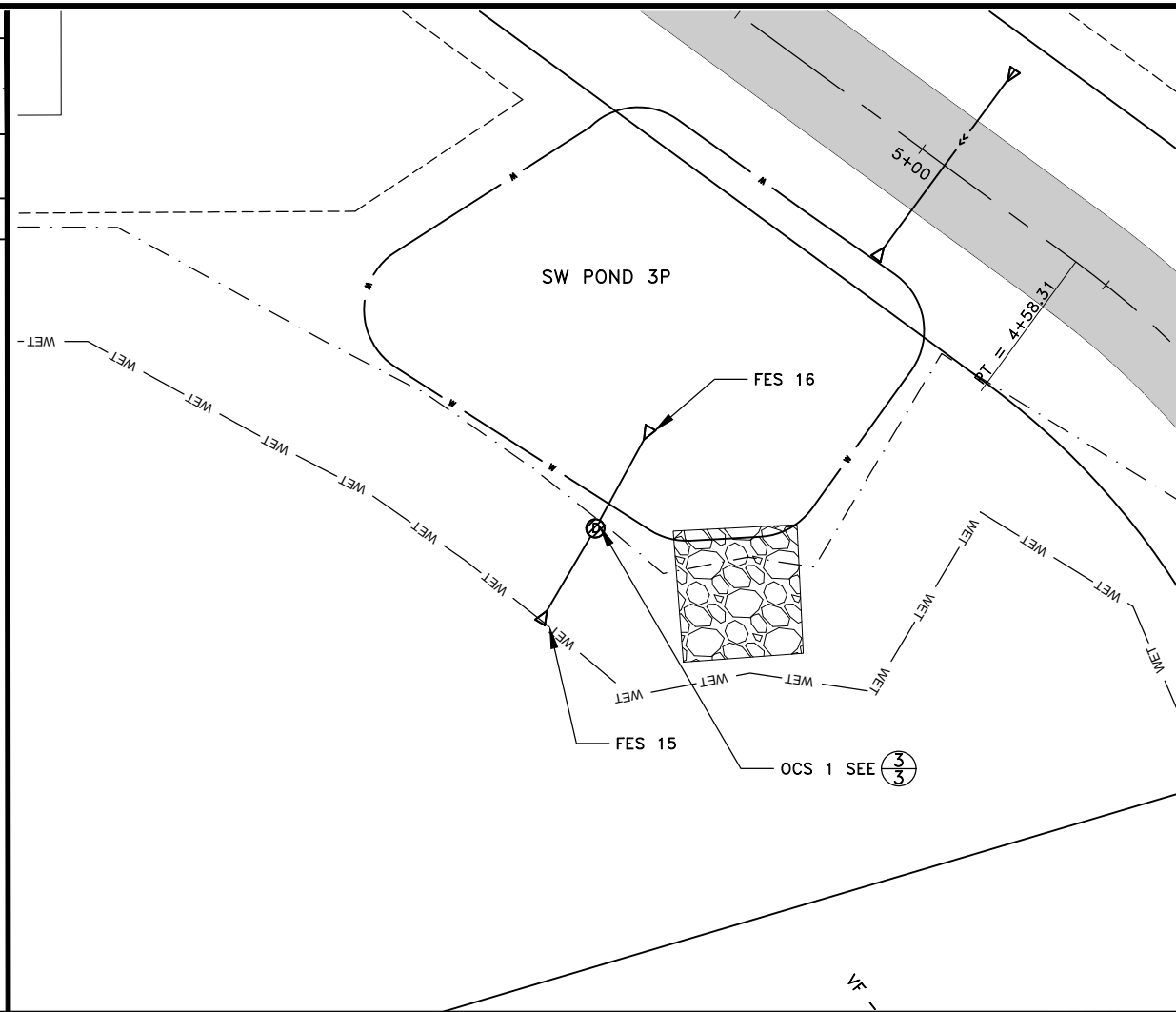
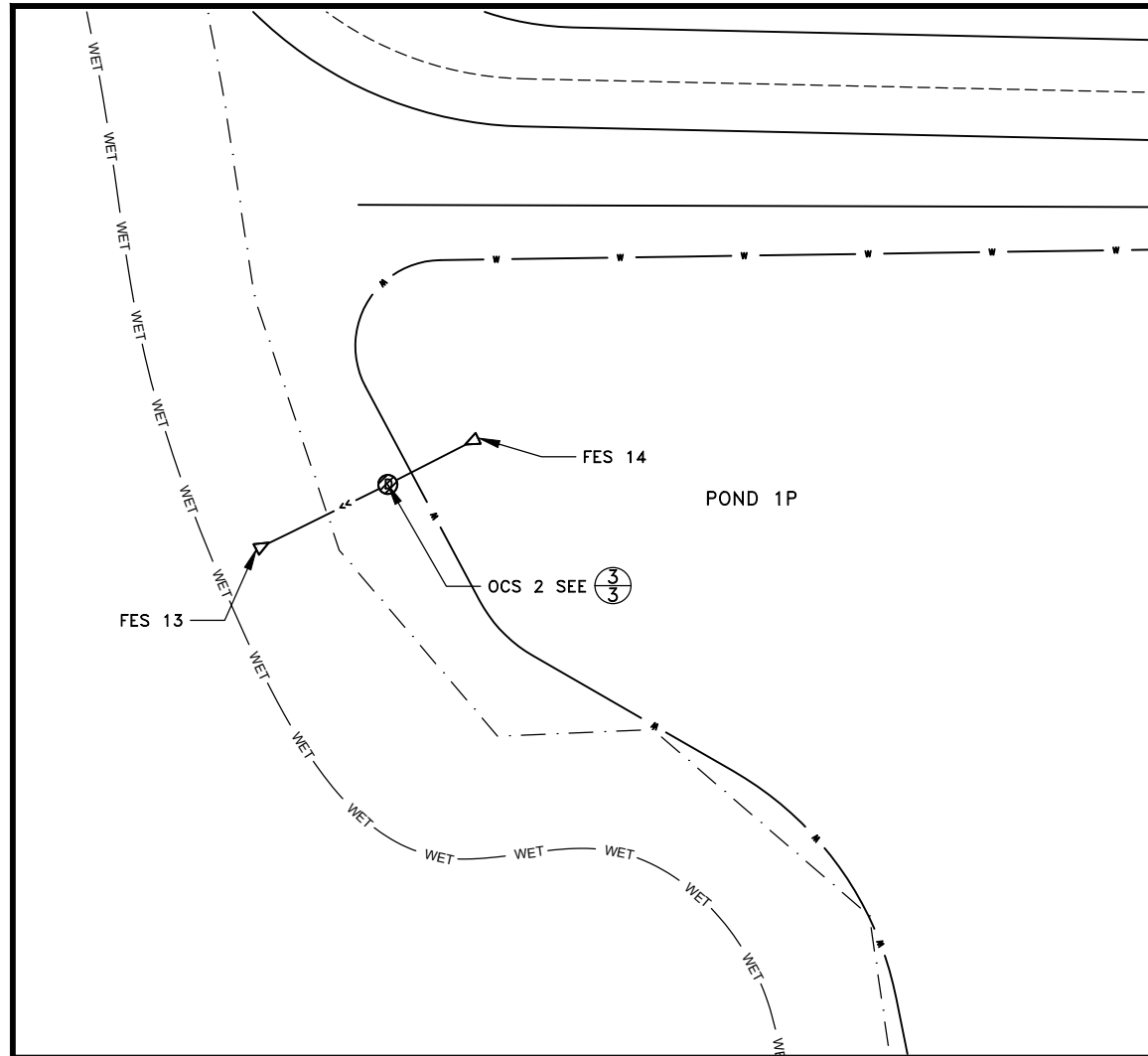
VIKING BLUFFS - PHASE 1

STREET PLAN AND PROFILE

195TH LANE NW
CITY OF OAK GROVE, MINNESOTA

SHEET
11
OF
28
SHEETS

Jul 01, 2020 - 3:48pm
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DATE	REVISION
4/27/20	CITY COMMENTS
6/23/20	UPDATE OCS 1 RIM ELEVATION

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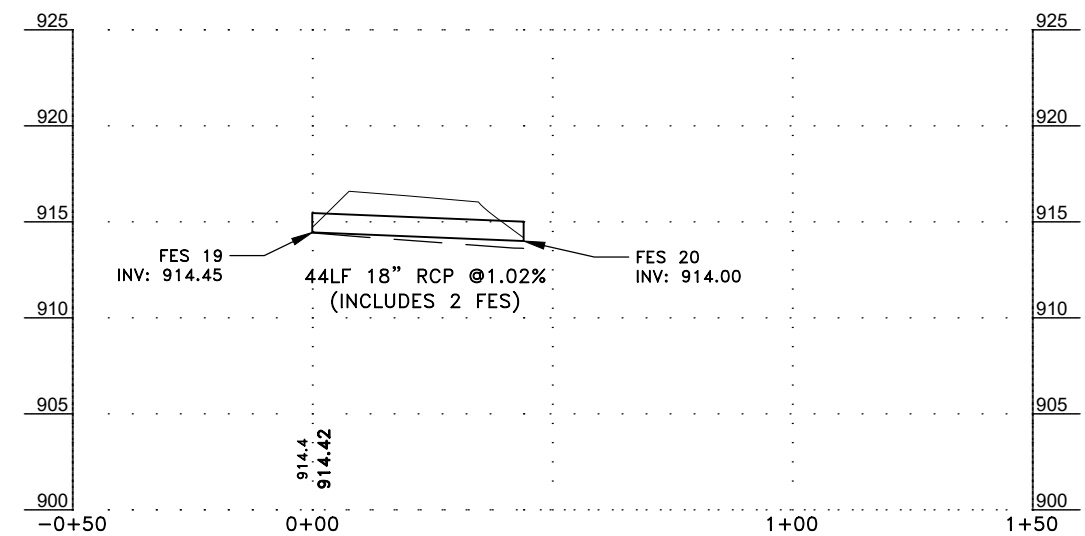
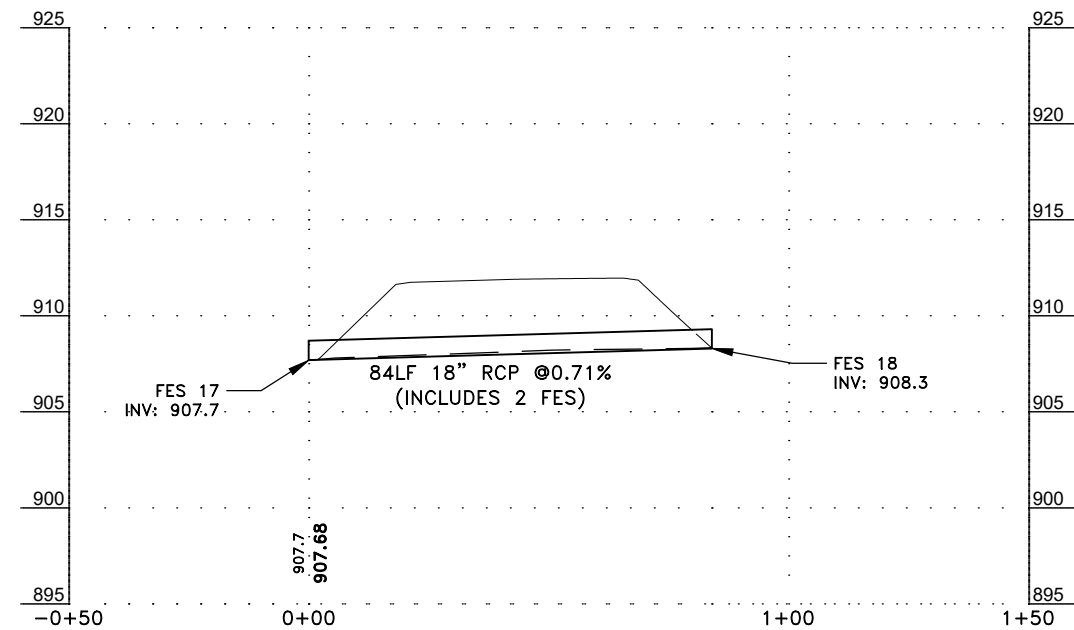
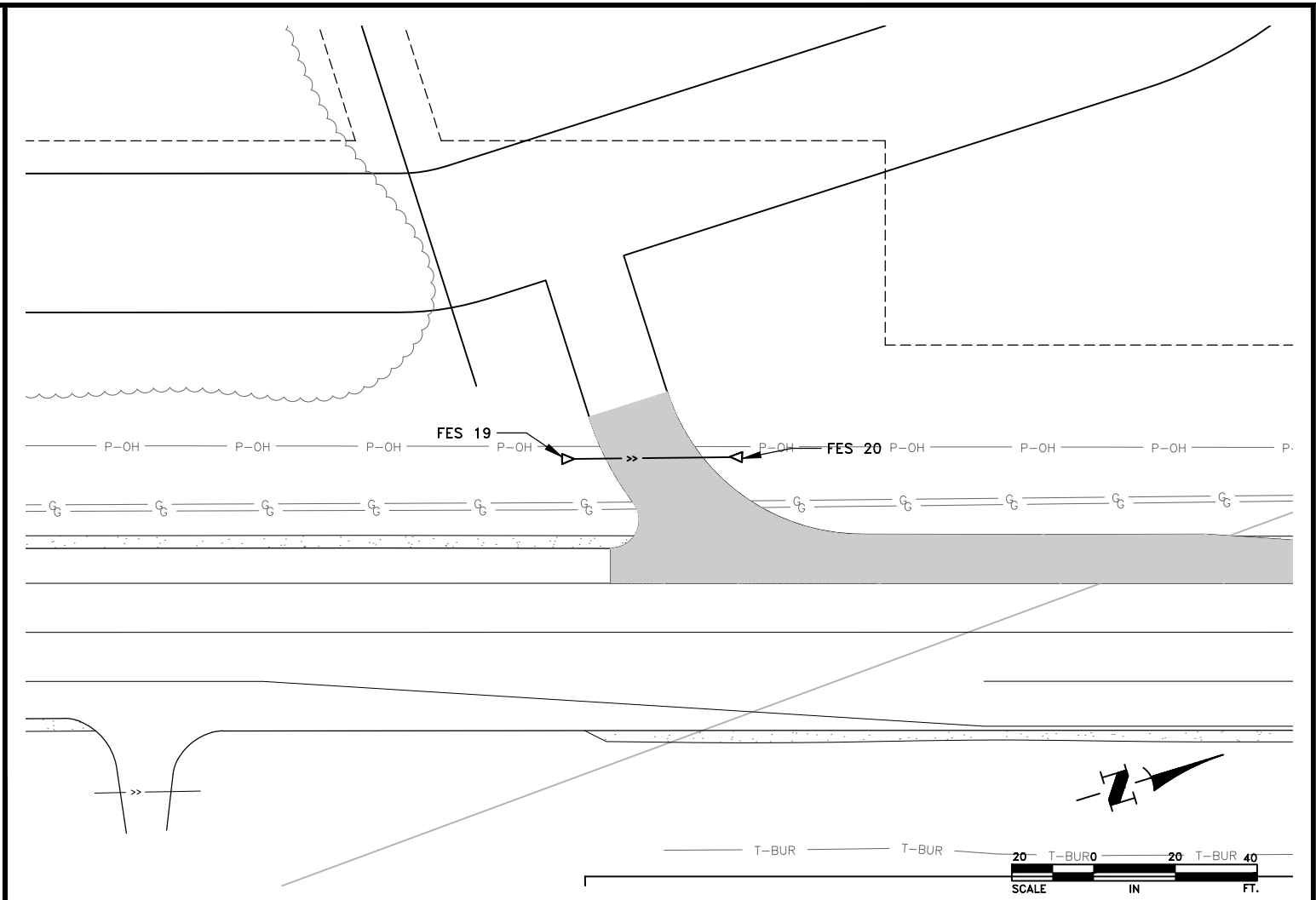
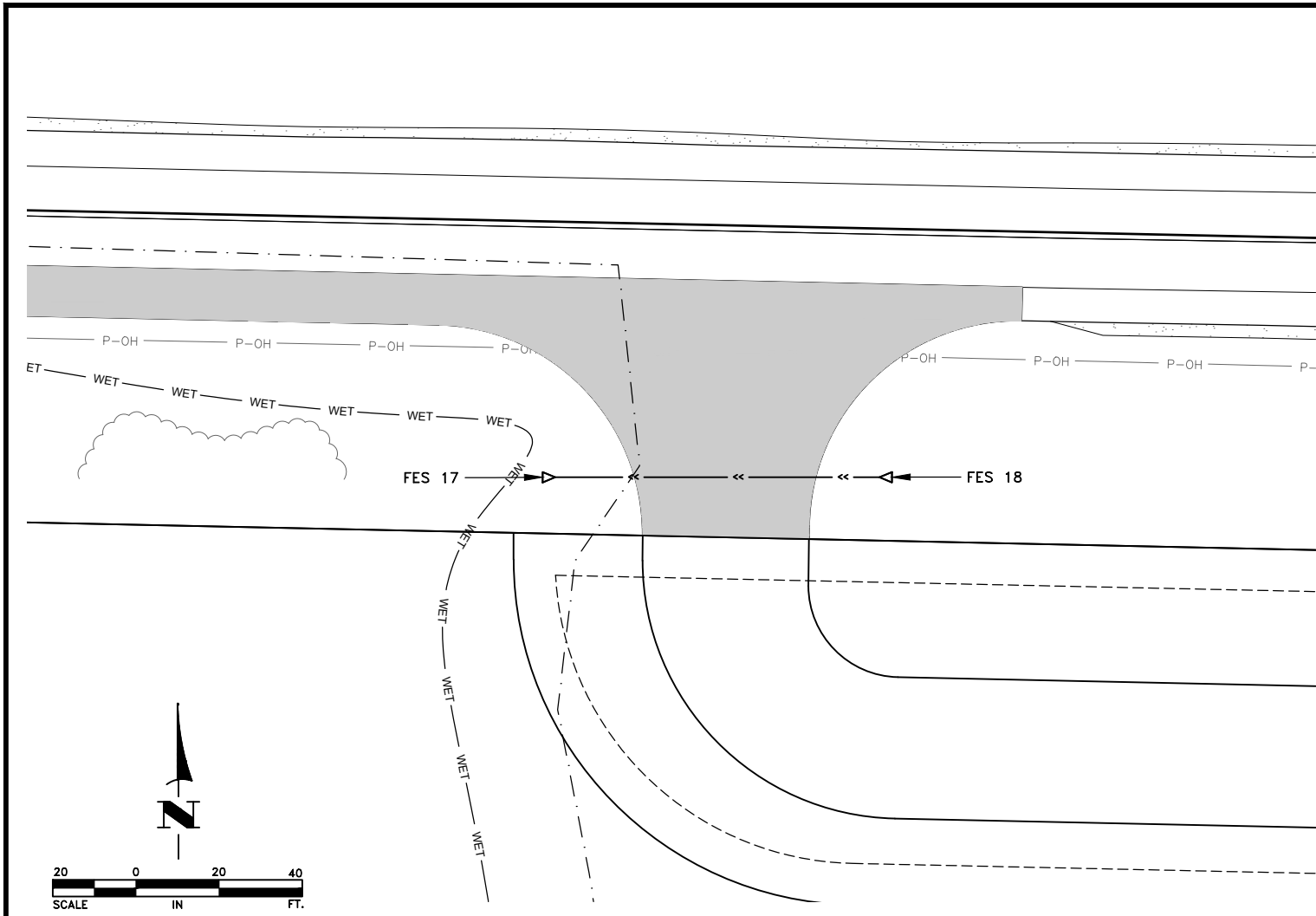
VIKING BLUFFS - PHASE 1

STORM PROFILES
195TH LANE NW
CITY OF OAK GROVE, MINNESOTA

SHEET 12 OF 28 SHEETS

4443.01

Jul 01, 2020 - 3:49pm
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DATE	REVISION
4/27/20	CITY COMMENTS
5/4/20	ADDED CULVERT PROFILES

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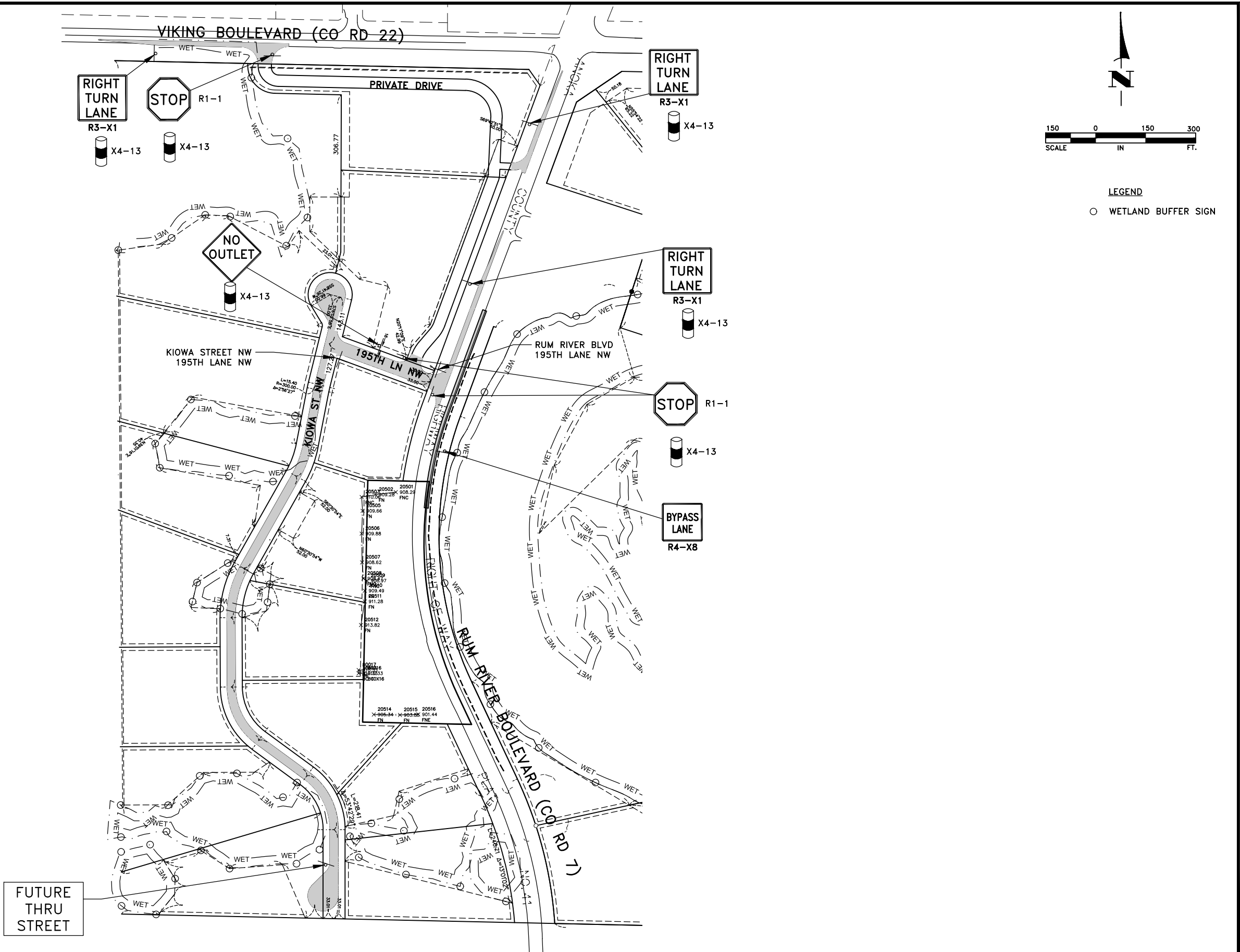
VIKING BLUFFS - PHASE 1

STORM PROFILES
195TH LANE NW
CITY OF OAK GROVE, MINNESOTA

SHEET 13 OF 28 SHEETS

4443.01

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DATE	REVISION
4/27/20	CITY COMMENTS
5/11/20	ADJUST SIGN LOCATION

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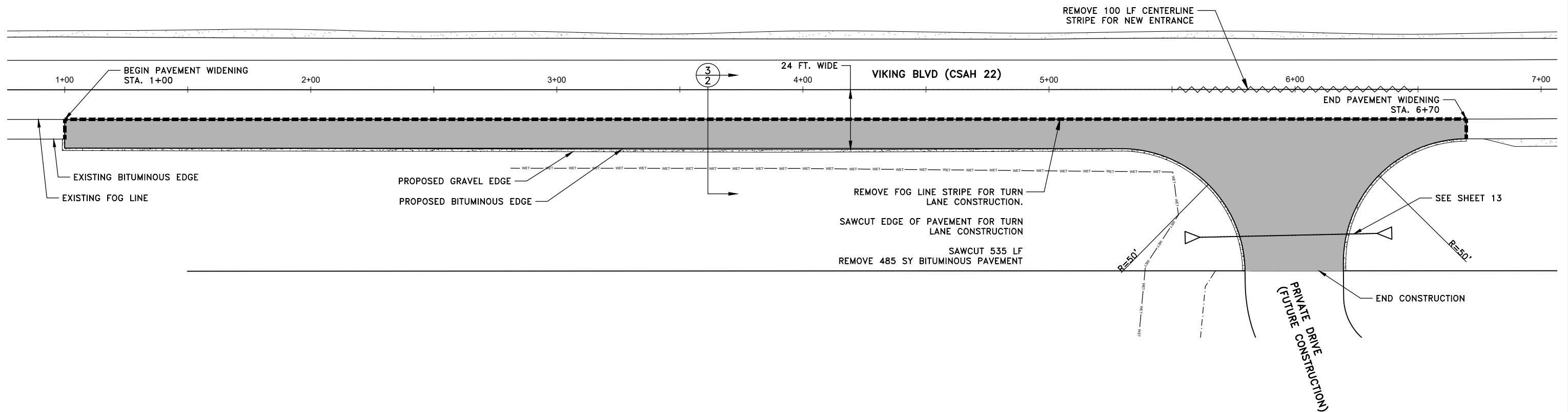
VIKING BLUFFS - PHASE 1

OVERALL SIGNAGE PLAN
CITY OF OAK GROVE, MINNESOTA

SHEET
14
OF
28
SHEETS

4443.01

CAUTION
OVERHEAD ELECTRIC

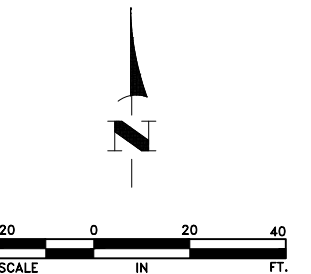


GENERAL NOTES:

1. TURN LANE TO BE CONSTRUCTED CONCURRENT WITH BILL'S SUPERETTE CONSTRUCTION OR CSAH 22 / CSAH 7 INTERSECTION IMPROVEMENTS.
2. CONTRACTOR SHALL TIE ALL CULVERT JOINTS.
3. CULVERT BEDDING SHALL BE PER MNDOT STANDARD SPECIFICATIONS.
4. ALL WORK WITHIN THE ANOKA COUNTY HIGHWAY DEPARTMENT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE 2018 MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
5. ALL DISTURBED AREAS SHALL BE RESTORED. SEE GRADING PLAN.
6. CULVERT AND APRON SHALL MEET THE REQUIREMENTS OF MNDOT STANDARD PLATE 3006 AND 3100, RESPECTIVELY.
7. SEE SHEET 19 FOR SIGNING AND STRIPING.
8. SEE SHEET 23 FOR TRAFFIC CONTROL PLAN.

LEGEND

- RIGHT TURN LANE PAVEMENT WIDENING
- RIPRAP OVER FLOW
- PAVEMENT STRIPE REMOVAL
- FULL DEPTH SAWCUT



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DATE	REVISION
4/27/20	CITY COMMENTS
5/4/20	ADDED CULVERT PROFILES
6/18/20	REVISED PER COUNTY COMMENTS

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VIKING BLUFFS - PHASE 1

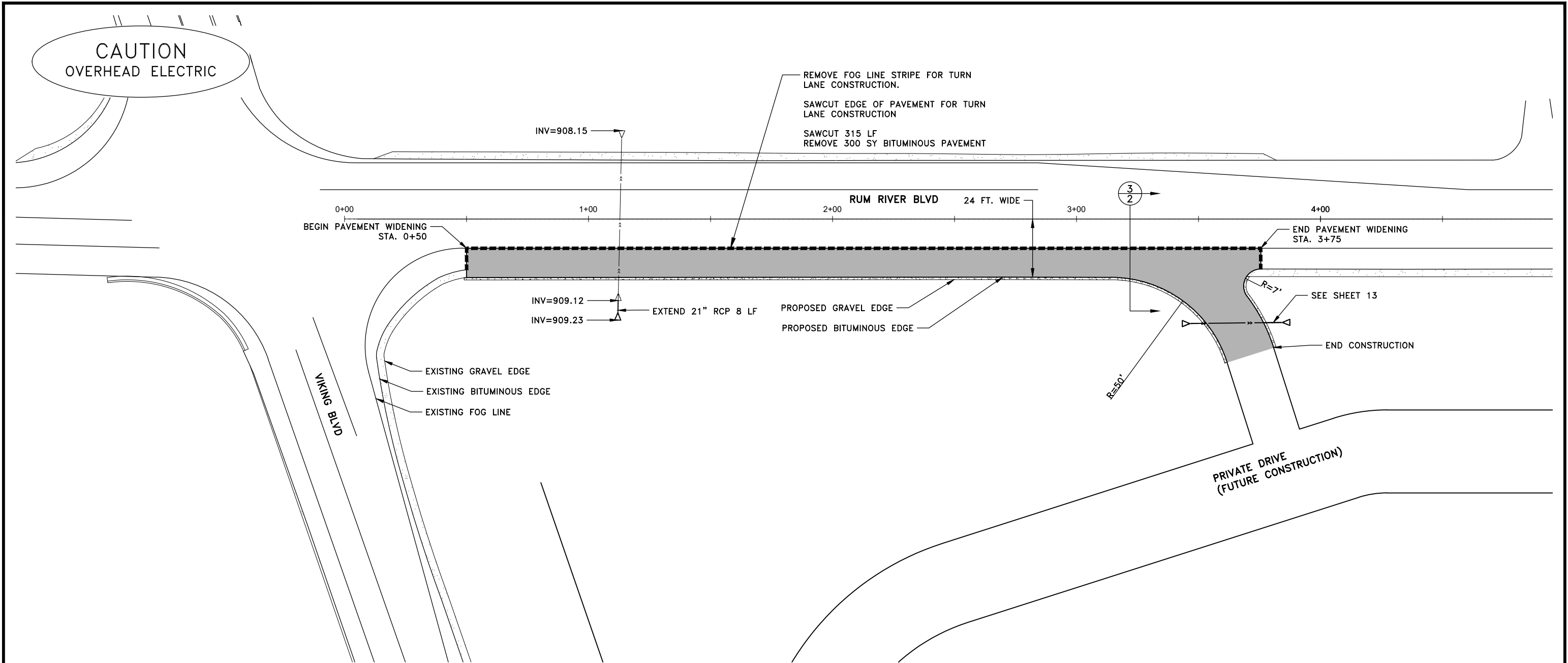
TURN LANE CONSTRUCTION PLAN

VIKING BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET 15
OF 28
SHEETS

4443.01

Jul 01, 2020 - 3:49pm
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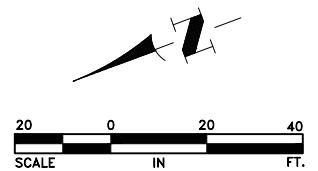


GENERAL NOTES:

1. CONTRACTOR SHALL TIE ALL CULVERT JOINTS.
2. CULVERT BEDDING SHALL BE PER MNDOT STANDARD SPECIFICATIONS.
3. ALL WORK WITHIN THE ANOKA COUNTY HIGHWAY DEPARTMENT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE 2018 MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. ALL DISTURBED AREAS SHALL BE RESTORED. SEE GRADING PLAN.
5. CULVERT AND APRON SHALL MEET THE REQUIREMENTS OF MNDOT STANDARD PLATE 3006 AND 3100, RESPECTIVELY.
6. SEE SHEET 20 FOR SIGNING AND STRIPING.
7. SEE SHEET 24 FOR TRAFFIC CONTROL PLAN.

LEGEND

- RIGHT TURN LANE
PAVEMENT WIDENING
- RIPRAP OVER FLOW
- FULL DEPTH SAWCUT



DATE	REVISION
4/27/20	CITY COMMENTS
5/4/20	ADDED CULVERT PROFILES
6/18/20	REVISED PER COUNTY COMMENTS
7/1/20	REVISED PER COUNTY COMMENTS

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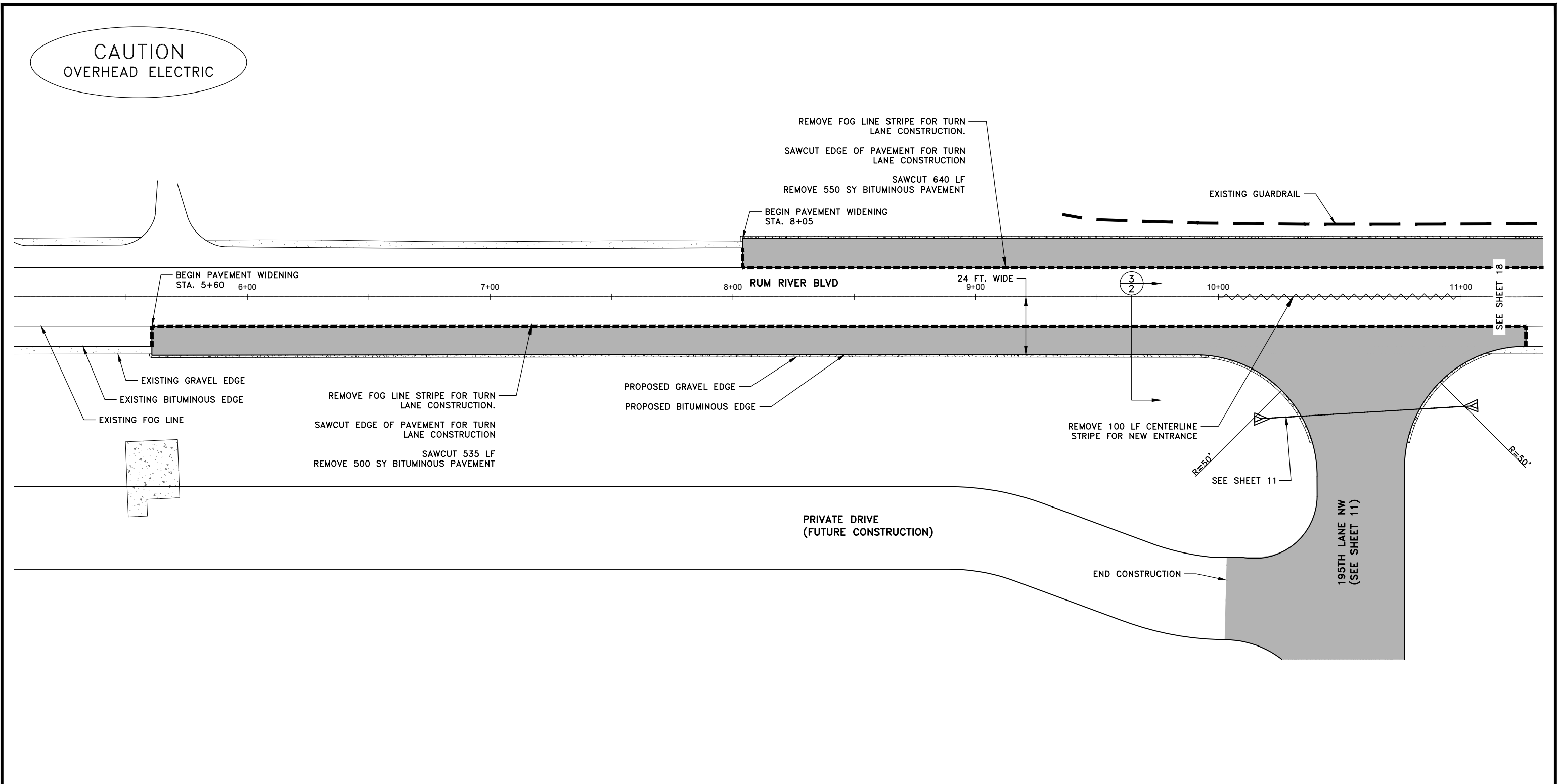
VIKING BLUFFS - PHASE 1

TURN LANE CONSTRUCTION PLAN

RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
16
OF
28
SHEETS

Jul 01, 2020 - 3:49pm
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- GENERAL NOTES:
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 4. ALL DISTURBED AREAS SHALL BE RESTORED. SEE GRADING PLAN.
 5. CULVERT AND APRON SHALL MEET THE REQUIREMENTS OF MNDOT STANDARD PLATE 3006 AND 3100, RESPECTIVELY.
 6. SEE SHEET 19 FOR SIGNING AND STRIPING.
 7. SEE SHEET 23 FOR TRAFFIC CONTROL PLAN.

- LEGEND
- [Solid Gray Box] RIGHT TURN/BYPASS LANE PAVEMENT WIDENING
 - [Stippled Box] RIPRAP OVER FLOW
 - [Wavy Line] PAVEMENT STRIPE REMOVAL
 - [Dashed Line] FULL DEPTH SAWCUT

DATE	REVISION
4/27/20	CITY COMMENTS
5/4/20	ADDED CULVERT PROFILES
6/18/20	REVISED PER COUNTY COMMENTS
7/1/20	REVISED PER COUNTY COMMENTS

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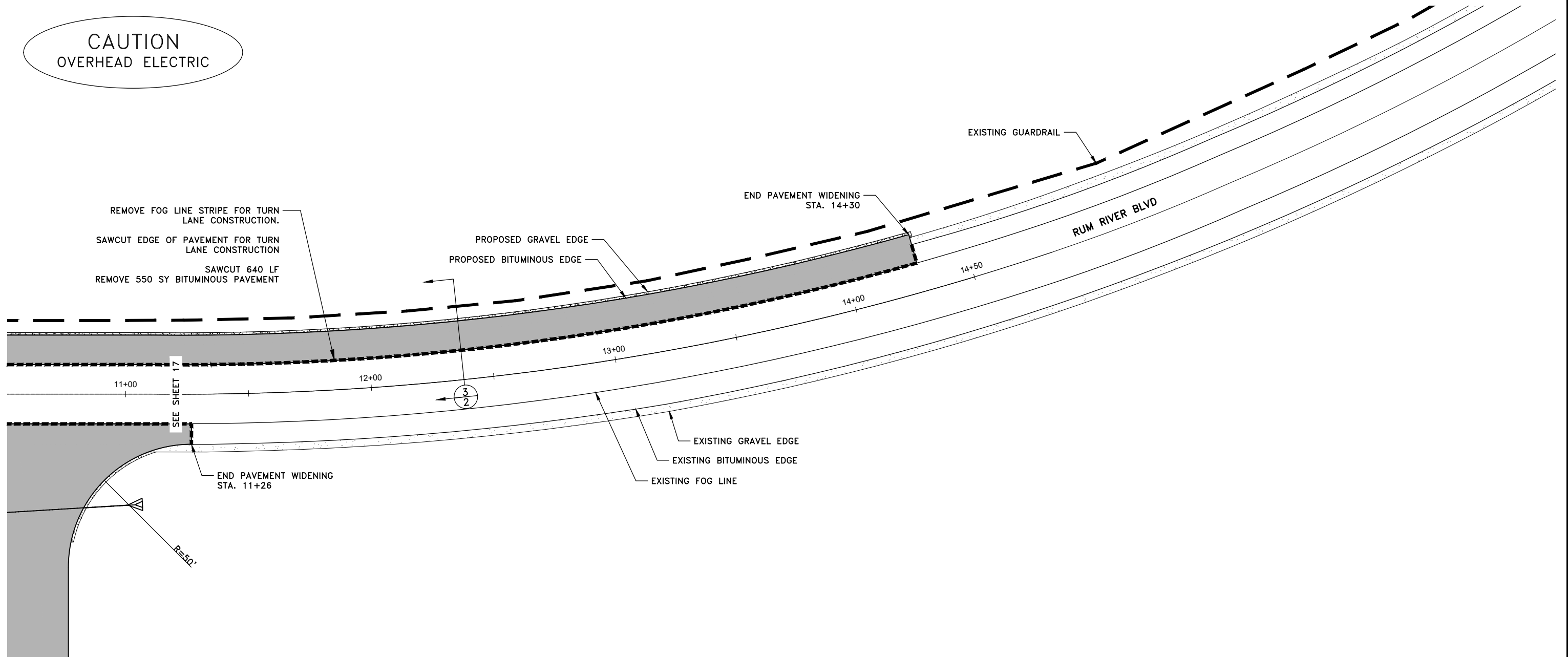
VIKING BLUFFS - PHASE 1

**TURN AND BYPASS LANE
CONSTRUCTION PLAN**
RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET 17
OF 28
SHEETS

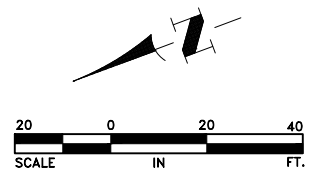
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CAUTION
OVERHEAD ELECTRIC



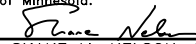
- GENERAL NOTES:
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 2. CULVERT BEDDING SHALL BE PER MnDOT STANDARD SPECIFICATIONS.
 3. ALL WORK WITHIN THE ANOKA COUNTY HIGHWAY DEPARTMENT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE 2018 MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
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 6. SEE SHEET 19 FOR SIGNING AND STRIPING.
 7. SEE SHEET 23 FOR TRAFFIC CONTROL PLAN.

- LEGEND
- RIGHT TURN/BYPASS LANE PAVEMENT WIDENING
 - RIPRAP OVER FLOW
 - PAVEMENT STRIPE REMOVAL
 - FULL DEPTH SAWCUT



DATE	REVISION
4/27/20	CITY COMMENTS
6/18/20	REVISED PER COUNTY COMMENTS
7/1/20	REVISED PER COUNTY COMMENTS

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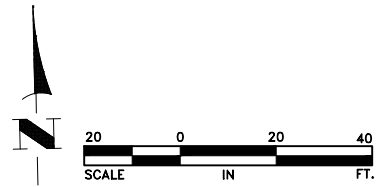
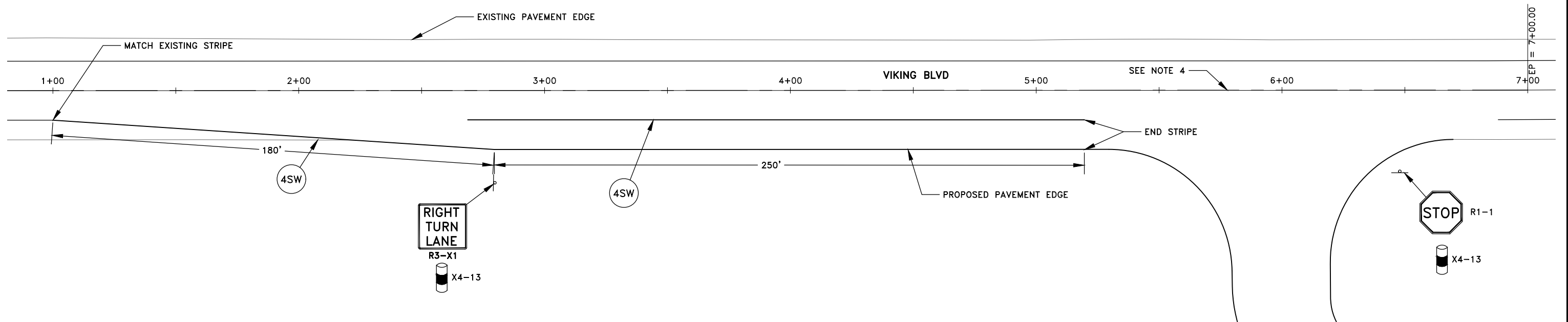
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VIKING BLUFFS – PHASE 1

TURN AND BYPASS LANE
CONSTRUCTION PLAN
RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
18
OF
28
SHEETS

Jul 01, 2020 - 3:49pm
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- GENERAL NOTES:
1. THIS PLAN ASSUMES THE ANOKA COUNTY HIGHWAY DEPARTMENT WILL COMPLETE THE STRIPING OF VIKING BOULEVARD NW. IF THE COUNTY DOES NOT COMPLETE THE STRIPING, THE CONTRACTOR WILL BE REQUIRED TO STRIPE THE ROAD AS SHOWN.
 2. SEE SHEETS 27-28 FOR ADDITIONAL NOTES AND DETAILS.
 3. COORDINATE THE SIGN INSTALLATION WITH THE ANOKA COUNTY HIGHWAY DEPARTMENT.
 4. SEE SHEET 5 FOR STRIPING REMOVAL.

DATE	REVISION
4/27/20	CITY COMMENTS

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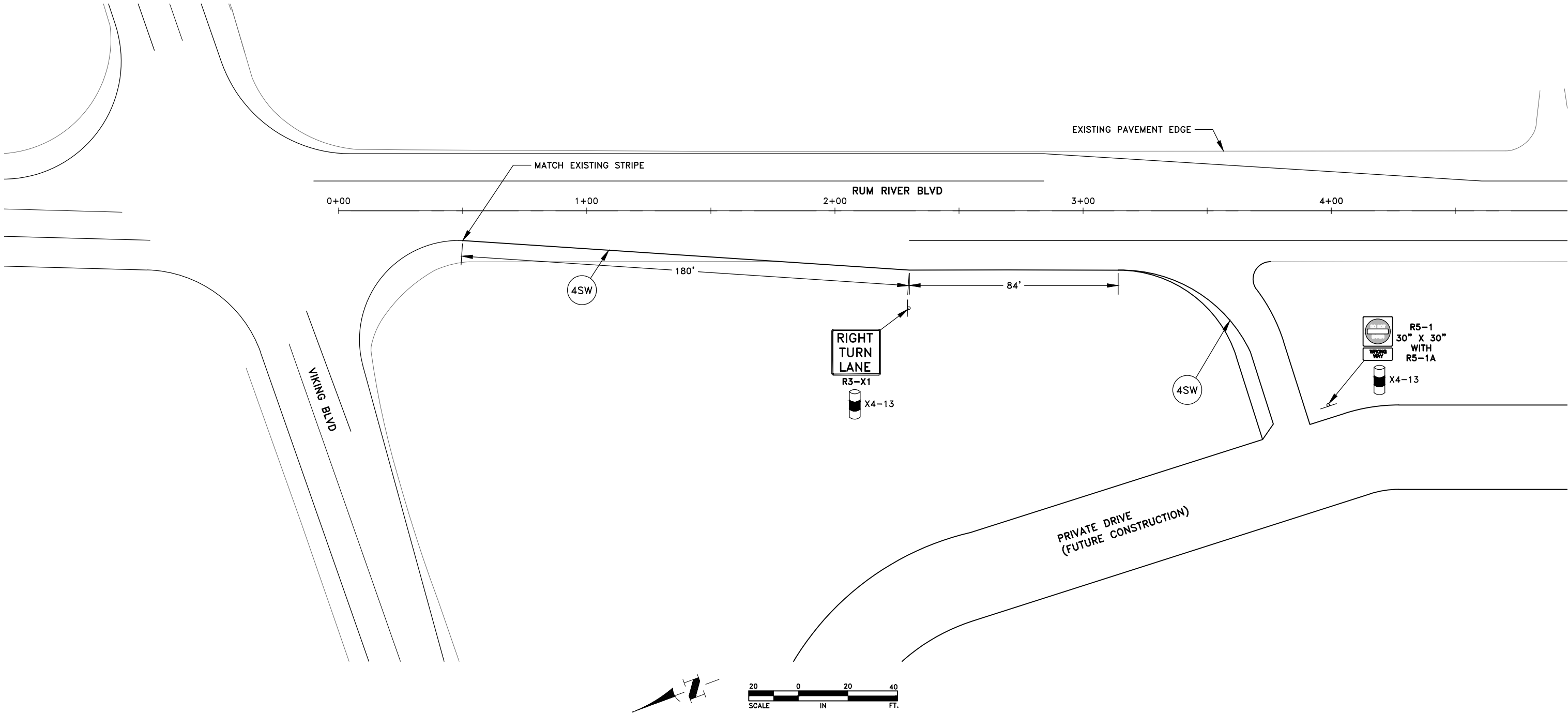
VIKING BLUFFS - PHASE 1

SIGNING AND STRIPING PLAN

VIKING BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
19
OF
28
SHEETS

Jul 01, 2020 -- 3:49pm
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- GENERAL NOTES:
1. THIS PLAN ASSUMES THE ANOKA COUNTY HIGHWAY DEPARTMENT WILL COMPLETE THE STRIPING OF RUM RIVER BOULEVARD NW. IF THE COUNTY DOES NOT COMPLETE THE STRIPING, THE CONTRACTOR WILL BE REQUIRED TO STRIPE THE ROAD AS SHOWN.
 2. SEE SHEETS 27-28 FOR ADDITIONAL NOTES AND DETAILS.
 3. COORDINATE THE SIGN INSTALLATION WITH THE ANOKA COUNTY HIGHWAY DEPARTMENT.

DATE	REVISION
4/27/20	CITY COMMENTS

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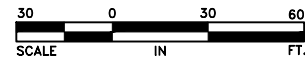
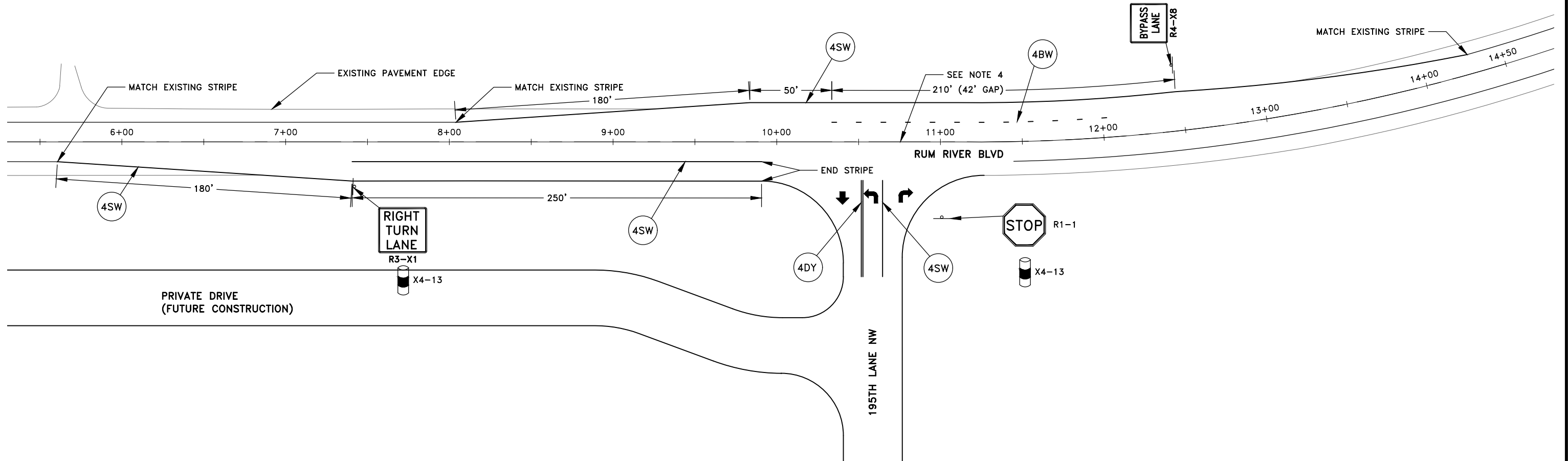
VIKING BLUFFS - PHASE 1

SIGNING AND STRIPING PLAN

RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET 20 OF 28
SHEETS

Jul 01, 2020 - 3:49pm
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GENERAL NOTES:

1. THIS PLAN ASSUMES THE ANOKA COUNTY HIGHWAY DEPARTMENT WILL COMPLETE THE STRIPING OF RUM RIVER BOULEVARD NW. IF THE COUNTY DOES NOT COMPLETE THE STRIPING, THE CONTRACTOR WILL BE REQUIRED TO STRIPE THE ROAD AS SHOWN.
2. SEE SHEETS 27-28 FOR ADDITIONAL NOTES AND DETAILS.
3. COORDINATE THE SIGN INSTALLATION WITH THE ANOKA COUNTY HIGHWAY DEPARTMENT.
4. SEE SHEET 5 FOR STRIPING REMOVAL.

DATE	REVISION
4/27/20	CITY COMMENTS
6/18/20	REVISED PER COUNTY COMMENTS

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VIKING BLUFFS - PHASE 1

SIGNING AND STRIPING PLAN

RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
21
OF
28
SHEETS

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SIGN LEGEND	SIGN NUMBER	SIGN SIZE	SIGN COLOR ①	POSTS		REMARKS	ESTIMATED QUANTITY
				NUMBER AND TYPE	NUMBER OF KNEE BRACES		
	R1-1	30"X30"		1-U			2
	R3-X1	30"X30"		1-U			3
	R1-2	36"X36"		1-U			1
	R5-1 R5-1A	30"X30"		1-U			1
	X4-13	9" HIGH 6" DIA.	WHITE ON BLACK				10
	R4-X8	30"X30"		1-U			1
							1

GENERAL NOTES:

1. ALL SIGNS SHALL HAVE TYPE XI SHEETING UNLESS NOTED.
2. SIGNS SHALL BE PAID PER ITEM 2564-SIGN PANELS TYPE C, UNLESS NOTED.
3. SEE SHEET 27-28 FOR ADDITIONAL SIGN DETAILS.

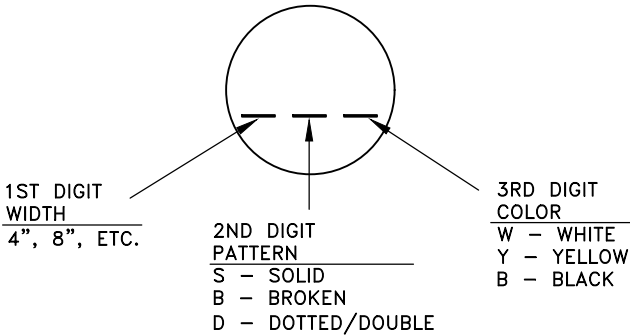
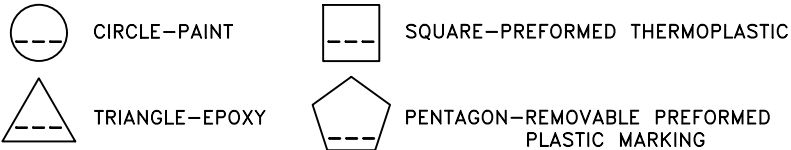
REFERENCE NOTES:

- 1 SIGN COLOR SHALL BE AS SHOWN IN THE MN/DOT STANDARD SIGNS SUMMARY, 2016 EDITION, UNLESS NOTED.

PERMANENT PAVEMENT MARKING GENERAL NOTES AND GUIDELINES:

1. THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.
2. EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.
3. A TOLERANCE OF 1/4 INCH UNDER OR 1/4 OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.
4. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. THIS WORK SHALL BE INCIDENTAL.
5. OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES (°F) OR GREATER.

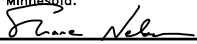
STRIPING KEY



EXAMPLE: (4SW) = 4" SOLID LINE WHITE-EPOXY

DATE	REVISION
4/27/20	CITY COMMENTS

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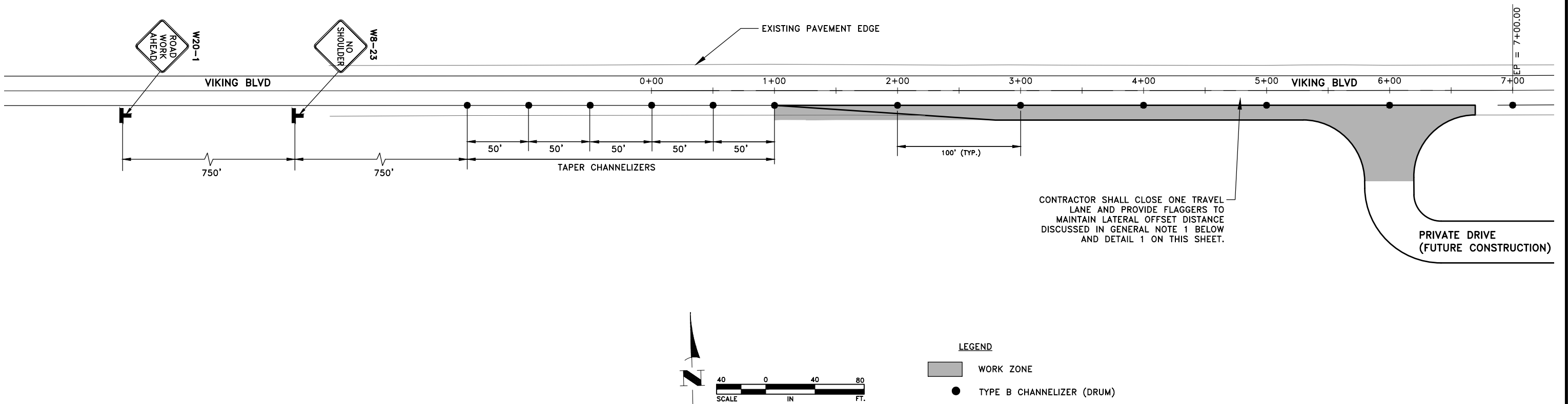
VIKING BLUFFS - PHASE 1

**SIGNING AND STRIPING NOTES,
DETAILS AND TABULATION**

CITY OF OAK GROVE, MINNESOTA

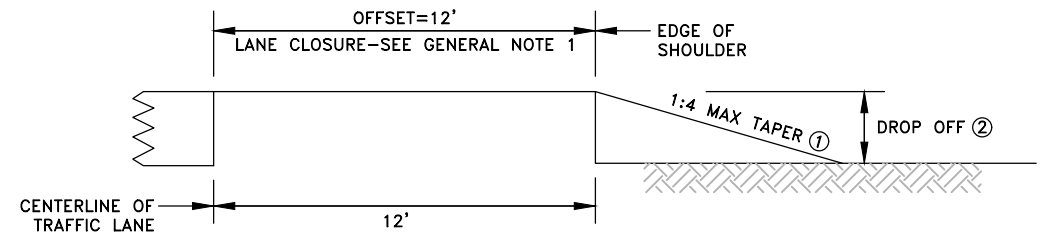
SHEET 22	OF	28 SHEETS
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Jul 01, 2020 - 3:49pm
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1
23

DROP OFF DETAIL

NO SCALE

DATE	REVISION
4/27/20	CITY COMMENTS

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Shane M. Nelson
SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY:
SMN

DRAWN BY:
SH

CHECKED BY:
AV



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VIKING BLUFFS - PHASE 1

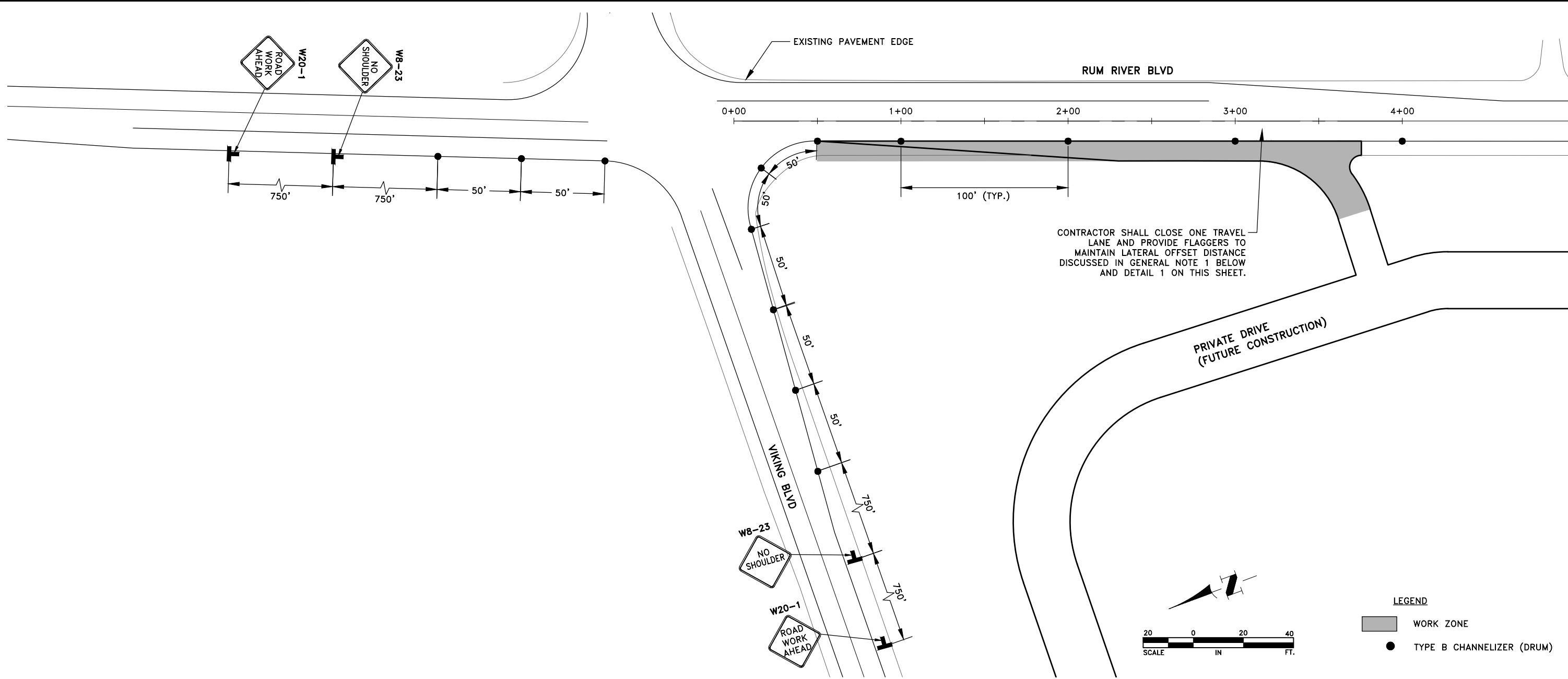
TRAFFIC CONTROL PLAN

VIKING BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
23
OF
28
SHEETS

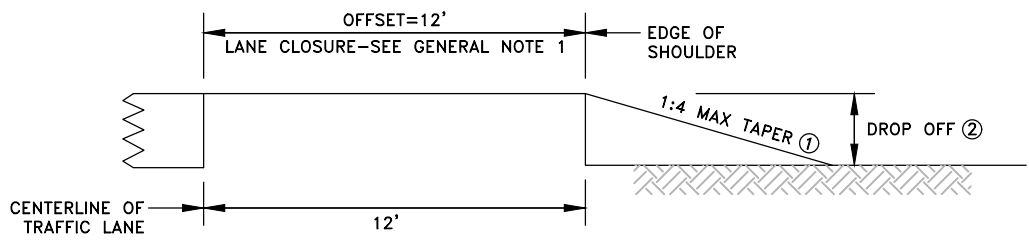
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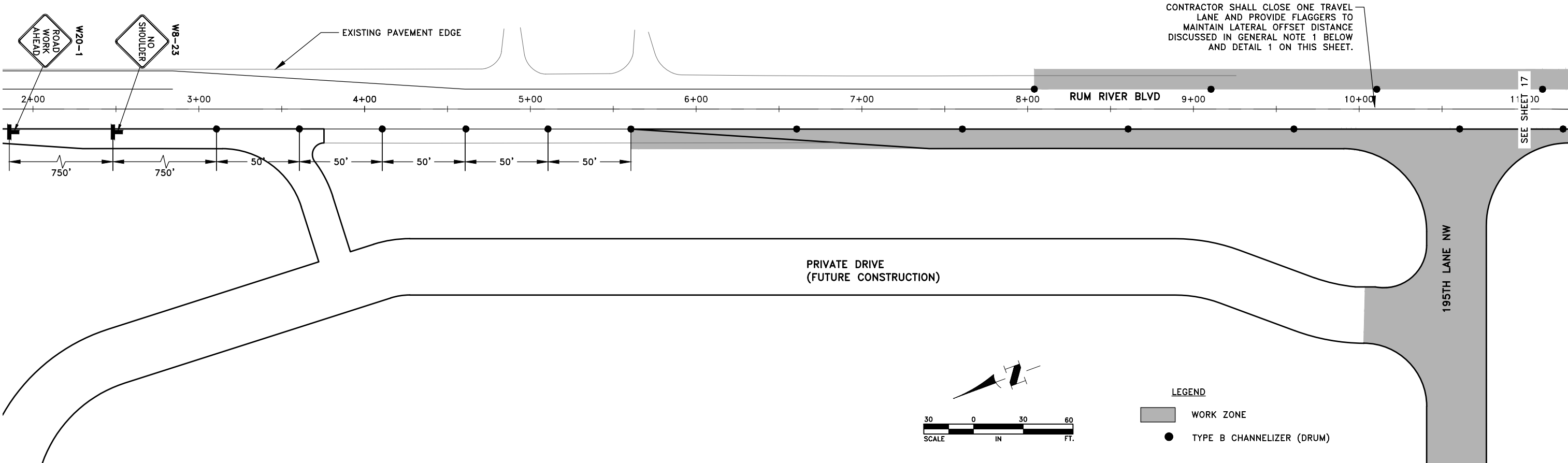
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1
24 DROP OFF DETAIL
NO SCALE

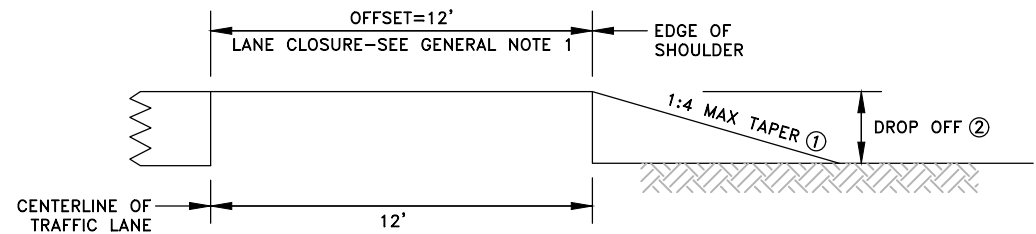
DATE 4/27/20	REVISION CITY COMMENTS	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. SHANE M. NELSON, P.E. Date 4/10/20 Lic. No. 43381	DESIGNED BY: SMN DRAWN BY: SH CHECKED BY: AV	 Hakanson Anderson Civil Engineers and Land Surveyors 3601 Thurston Ave., Anoka, Minnesota 55303 763-427-5860 FAX 763-427-0520 www.hakanson-anderson.com	VIKING BLUFFS - PHASE 1	TRAFFIC CONTROL PLAN RUM RIVER BLVD CITY OF OAK GROVE, MINNESOTA	SHEET 24 OF 28 SHEETS
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1
25

DROP OFF DETAIL

NO SCALE

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7/1/20	REVISED PER COUNTY COMMENTS

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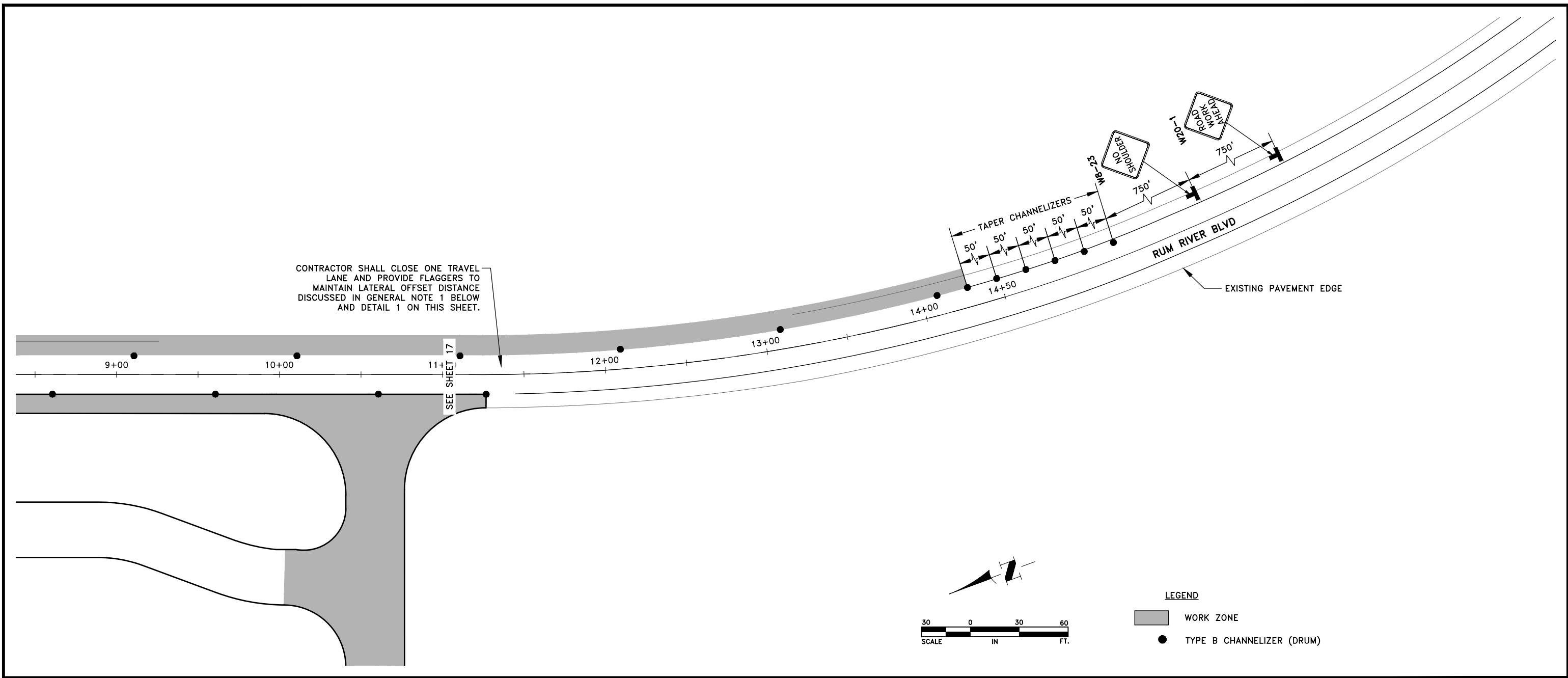
VIKING BLUFFS - PHASE 1

TRAFFIC CONTROL PLAN
RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET
25
OF
28
SHEETS

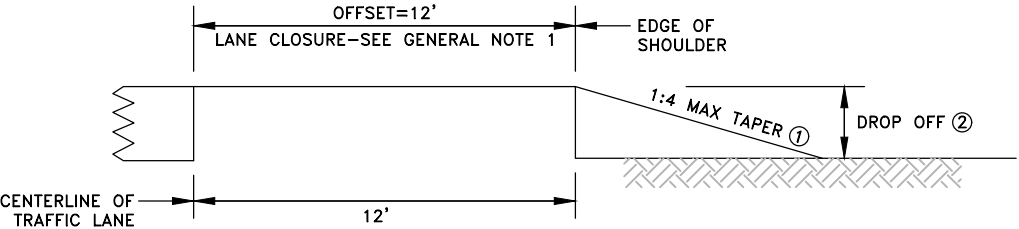
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Shane M. Nelson
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Date 4/10/20 Lic. No. 43381

DESIGNED BY: SMN
DRAWN BY: SH
CHECKED BY: AV



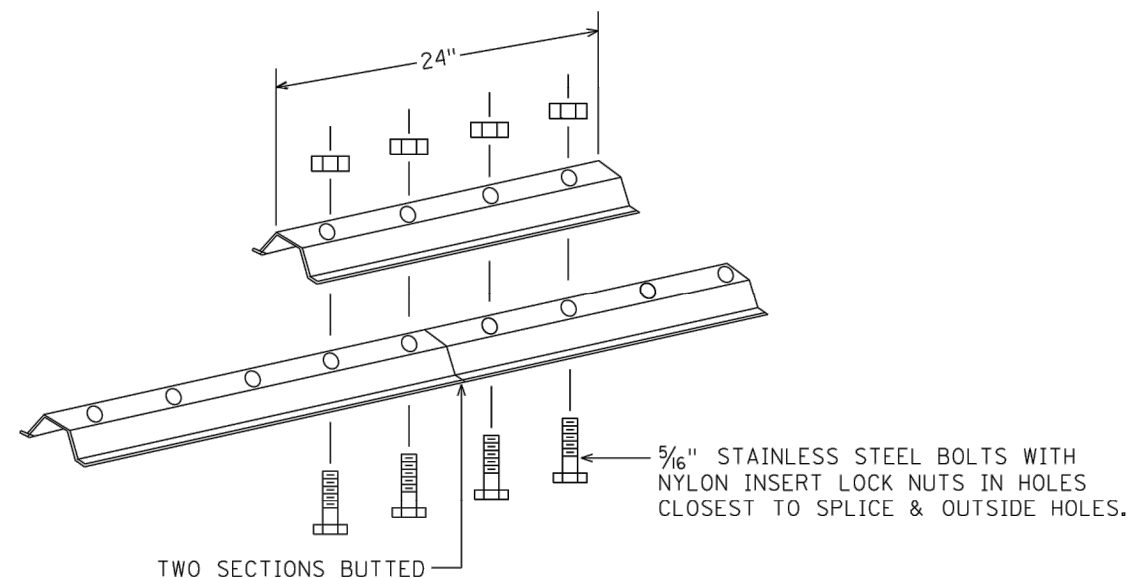
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VIKING BLUFFS - PHASE 1

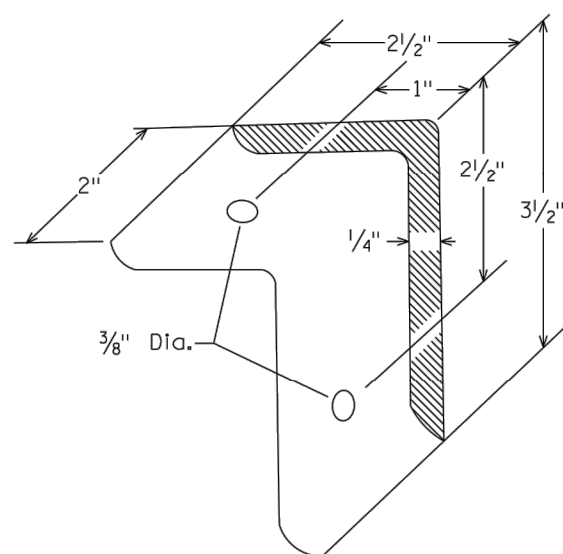
TRAFFIC CONTROL PLAN
RUM RIVER BLVD
CITY OF OAK GROVE, MINNESOTA

SHEET 26
OF 28
SHEETS

U POST MOUNTING
TYPE C SIGNS

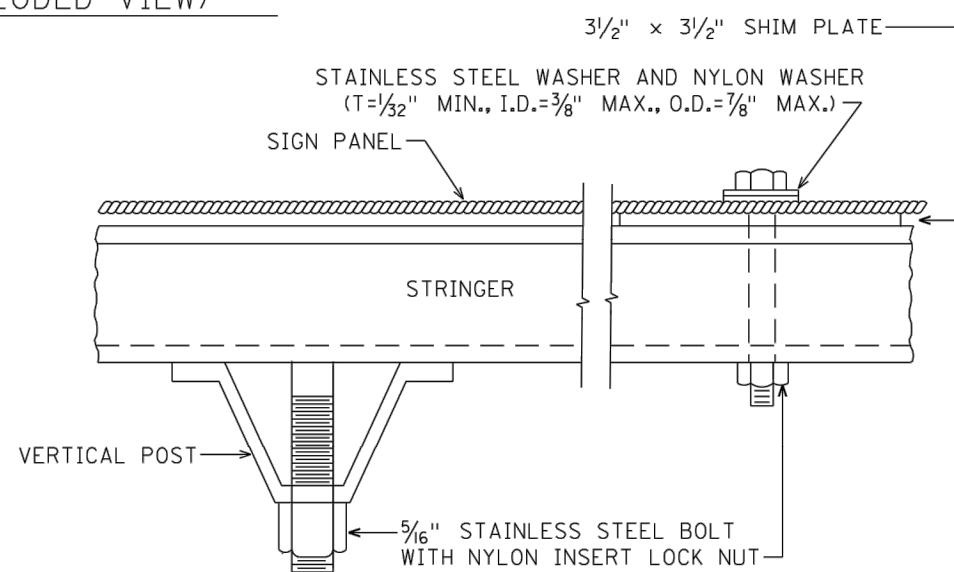


LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)

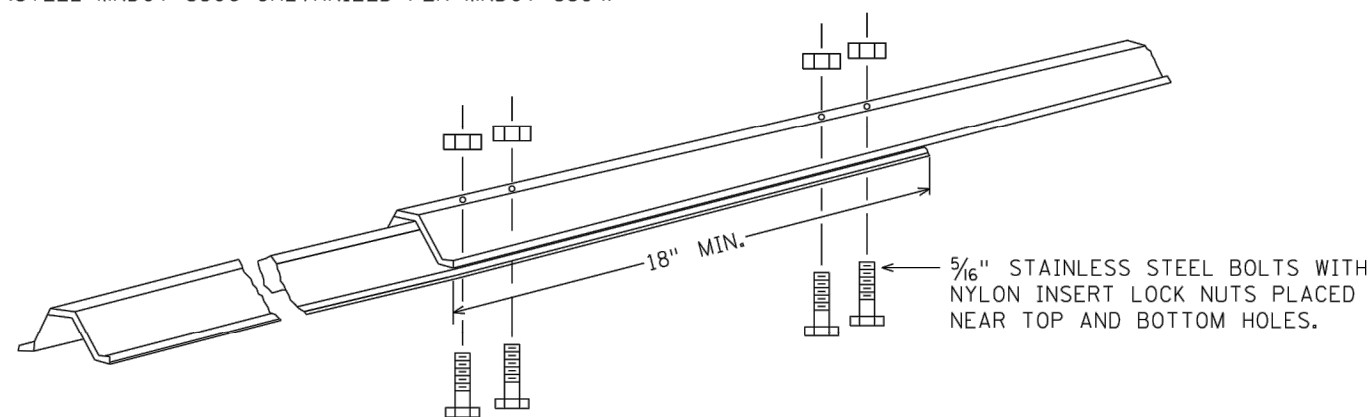


A-FRAME BRACKET

(STEEL MNDOT 3306 GALVANIZED PER MNDOT 3394)

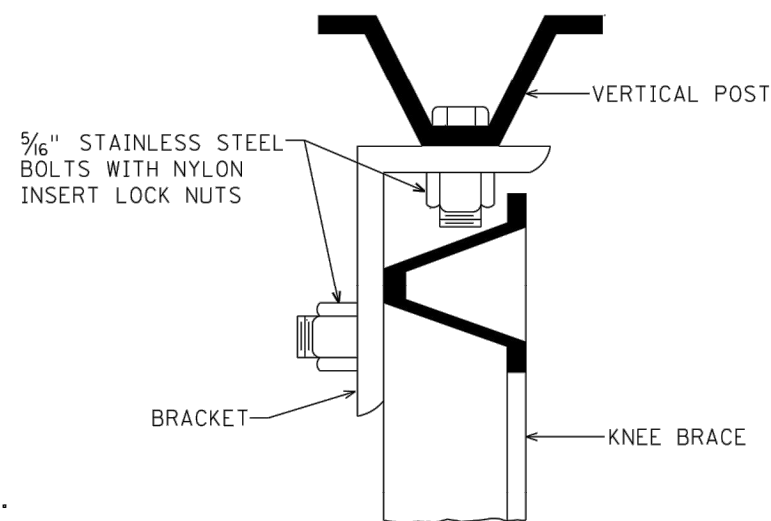


SECTION B-B

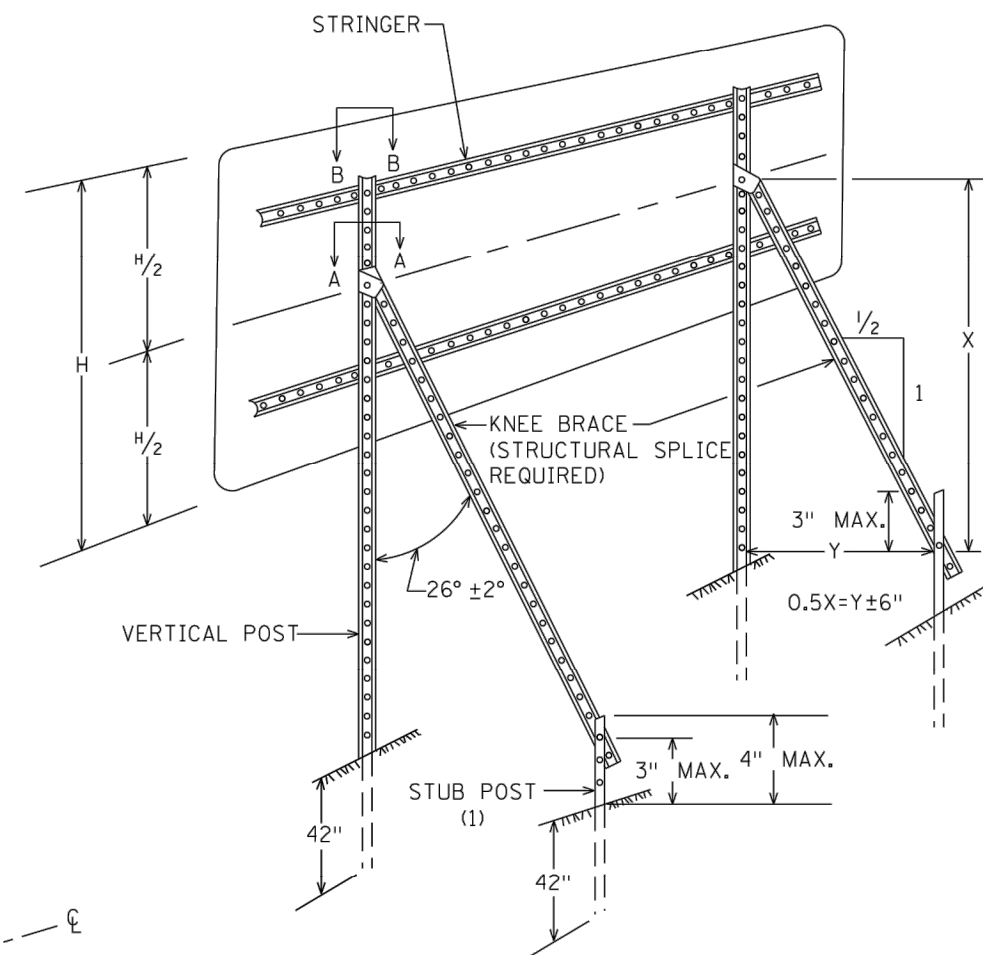


STRUCTURAL SPLICE

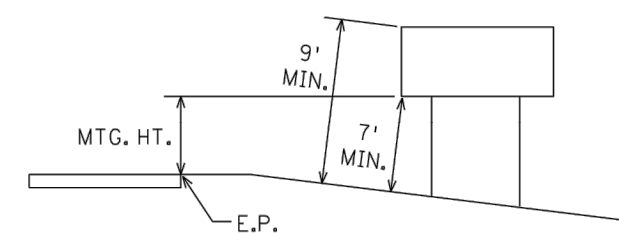
(USE WHEN IT IS NECESSARY TO FABRICATE THE CORRECT LENGTH OF POST FROM TWO PIECES)



SECTION A-A



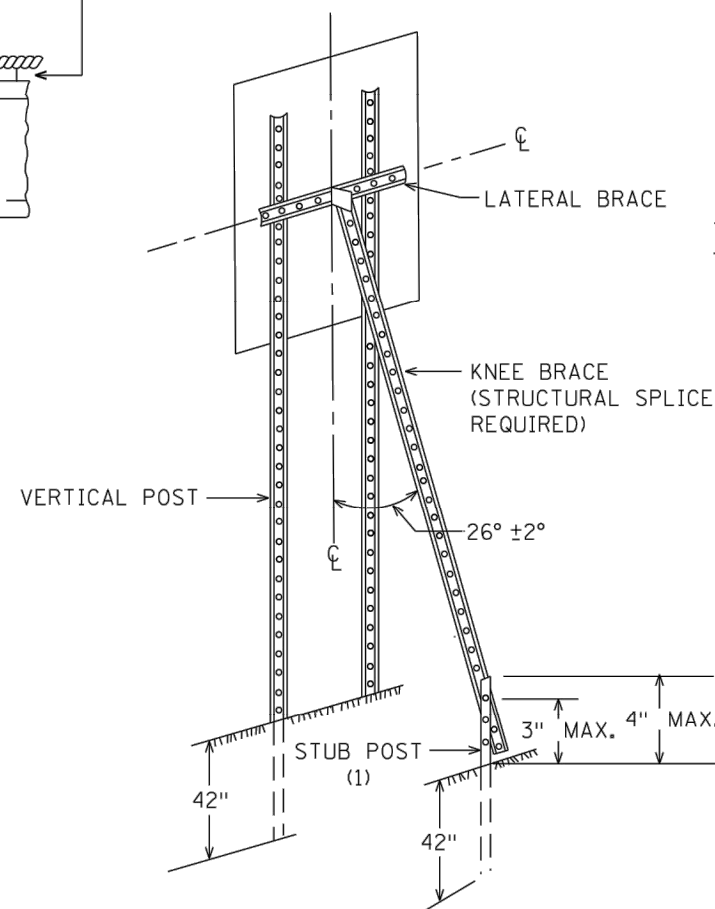
TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS



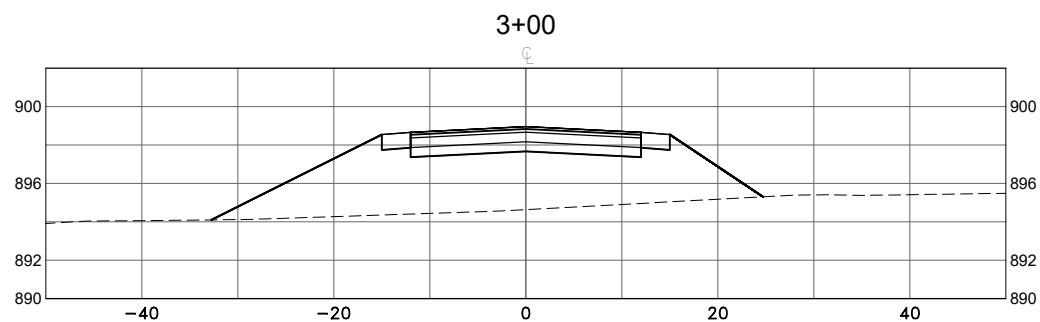
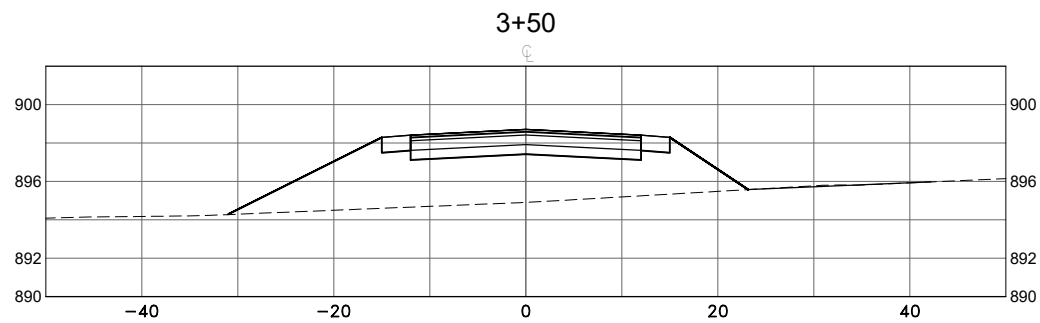
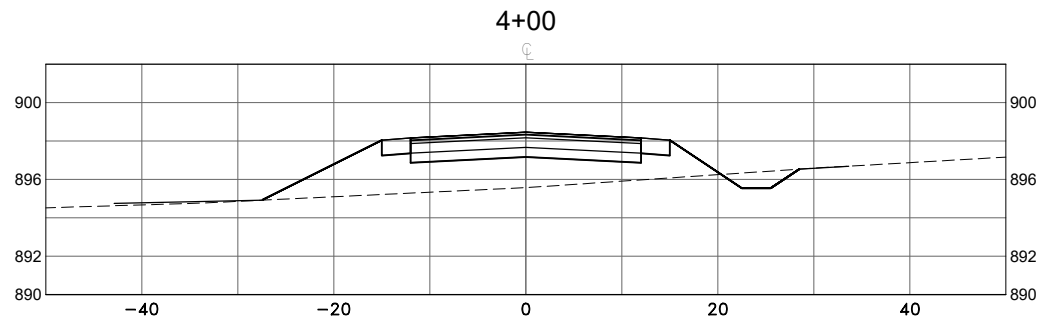
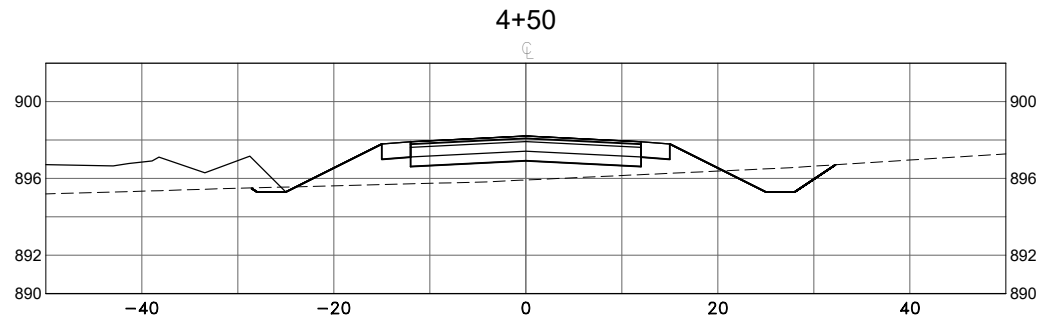
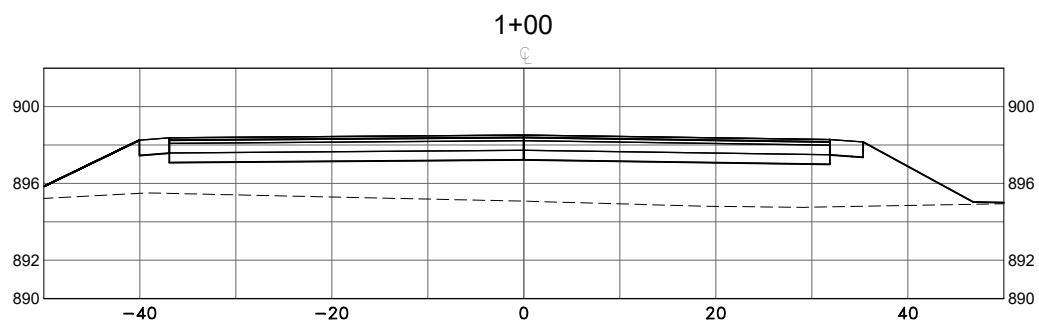
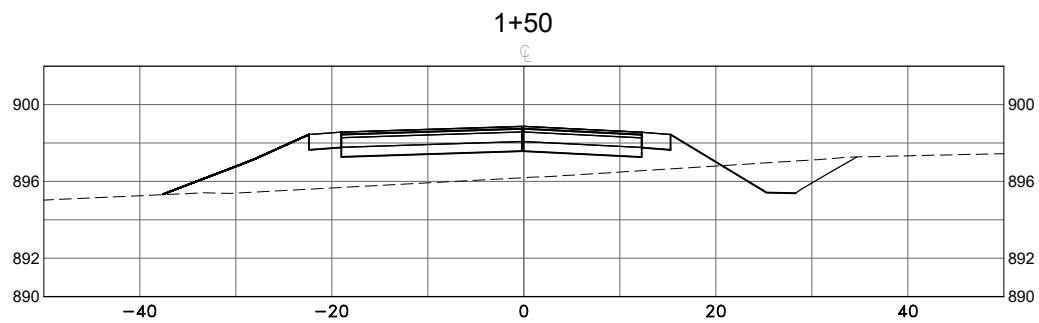
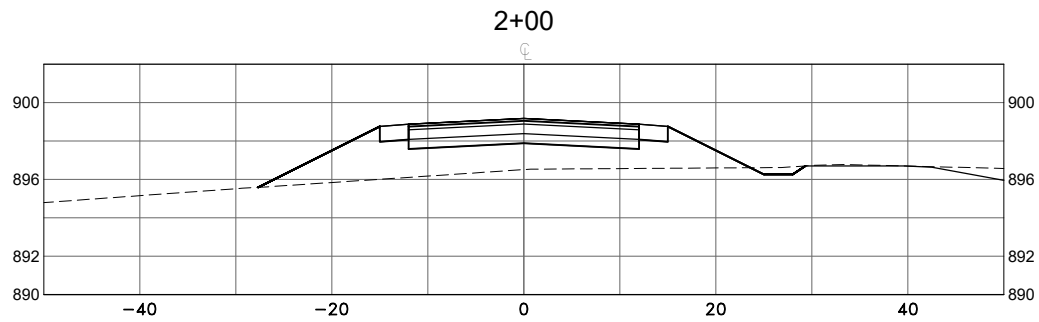
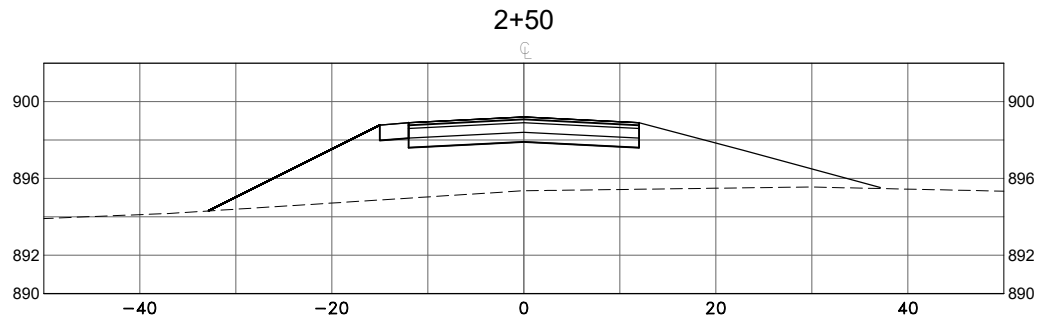
TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST. ATTACH STUB
POST AND KNEE BRACE BACK TO BACK.

TYPICAL "A-FRAME" INSTALLATION TYPE "C" SIGNS



Jul 01, 2020 -- 3:49pm
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CHECKED BY: AV



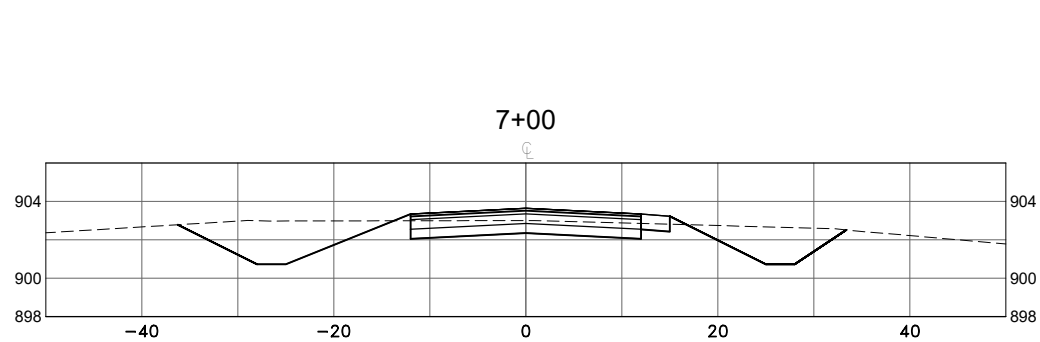
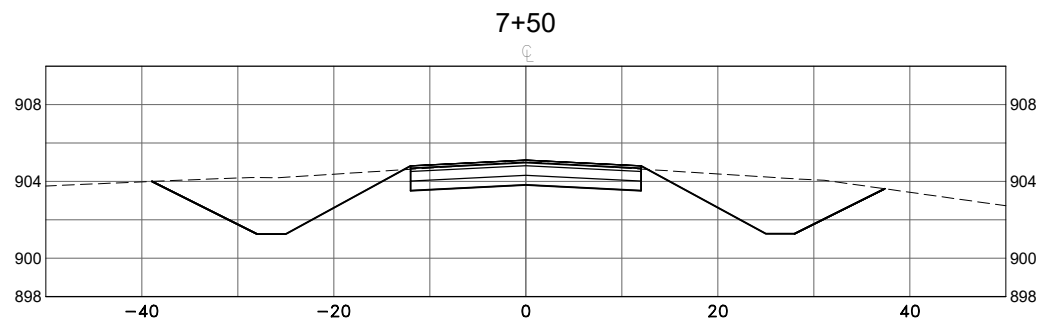
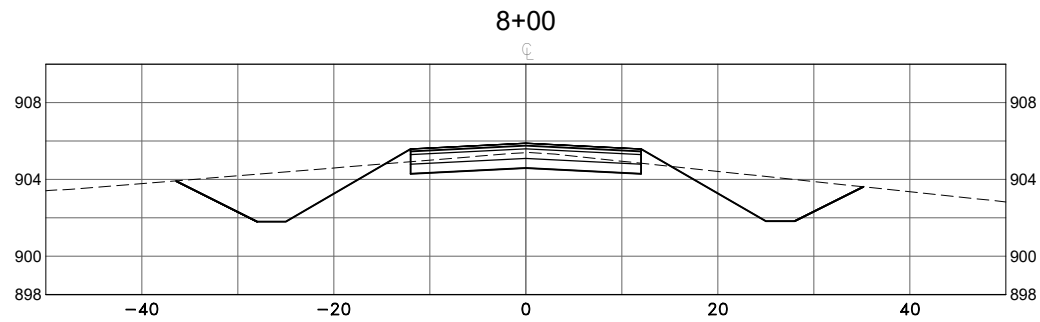
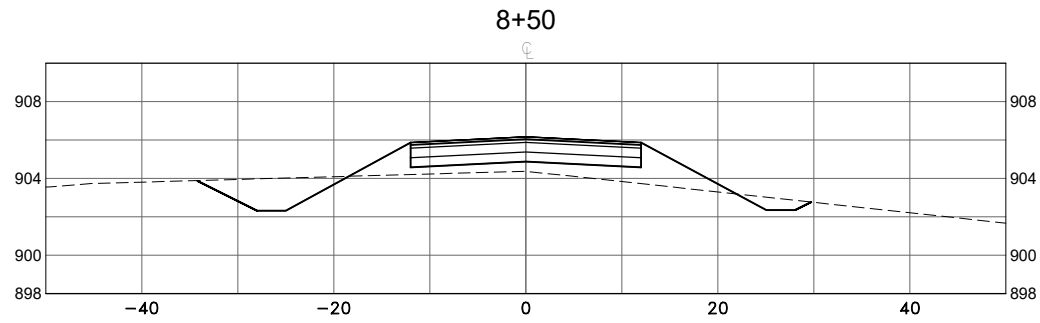
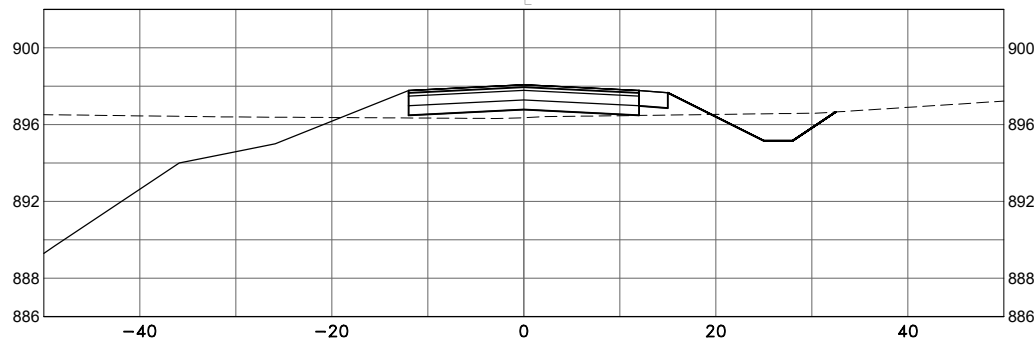
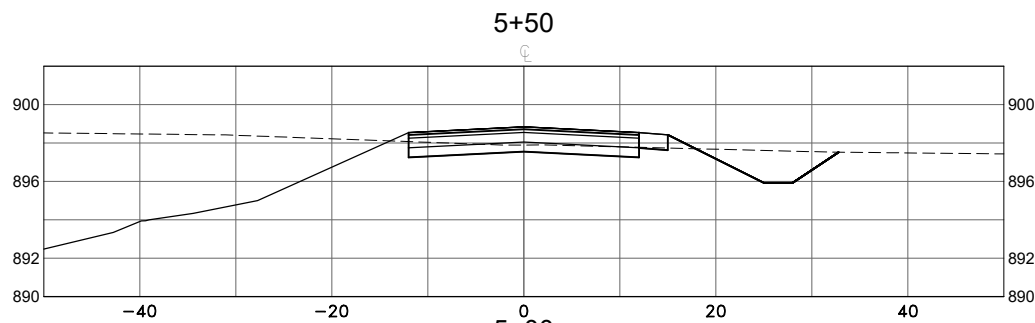
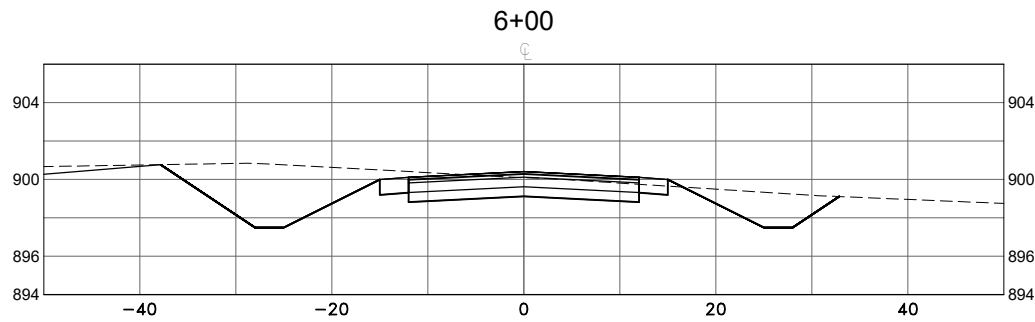
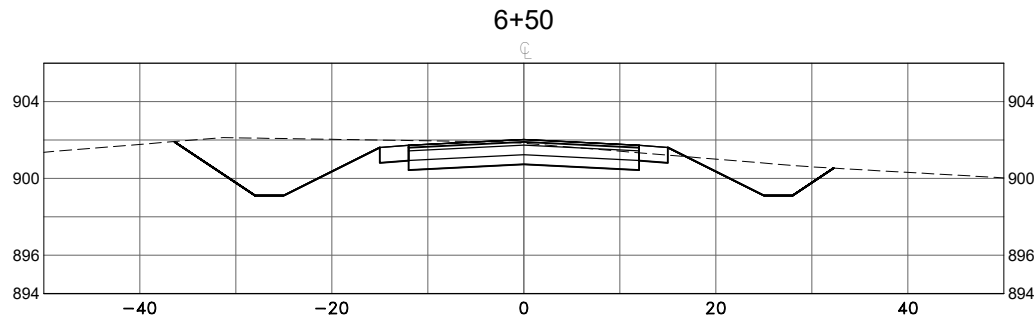
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VIKING BLUFFS – PHASE 1

CROSS SECTIONS
KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-1
OF
X-13
SHEETS

Jul 01, 2020 - 3:49pm
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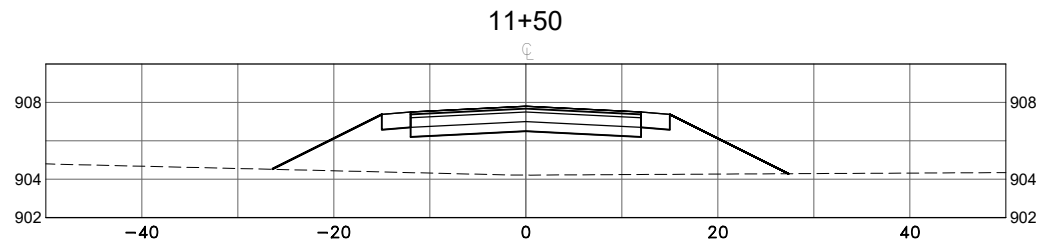
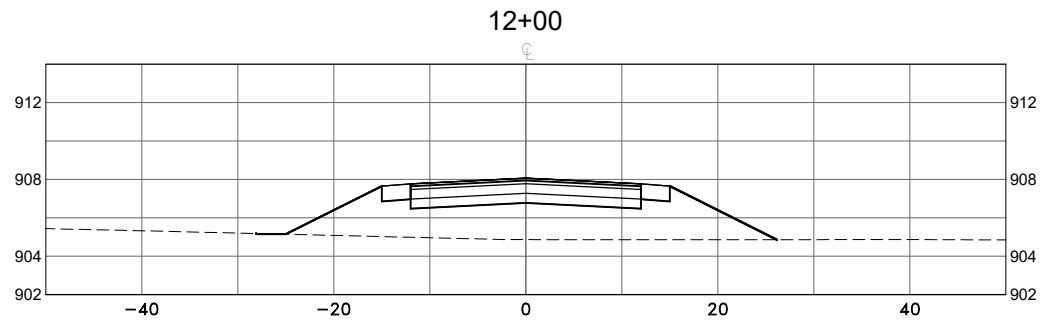
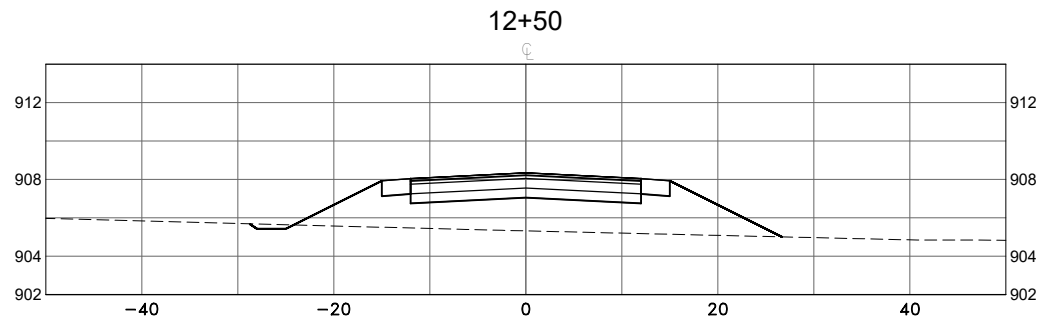
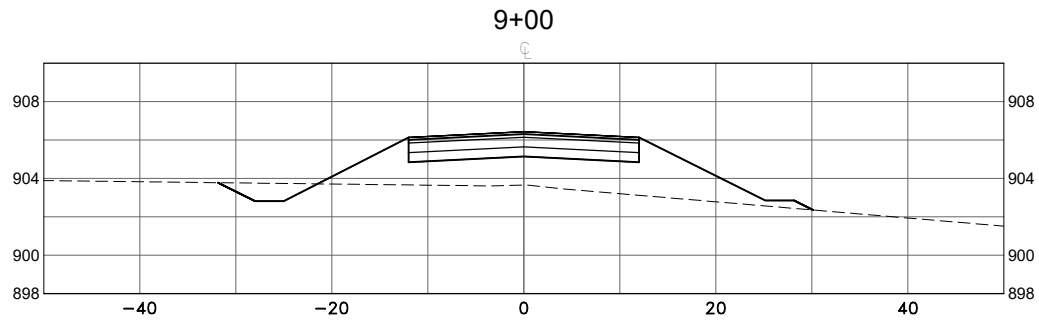
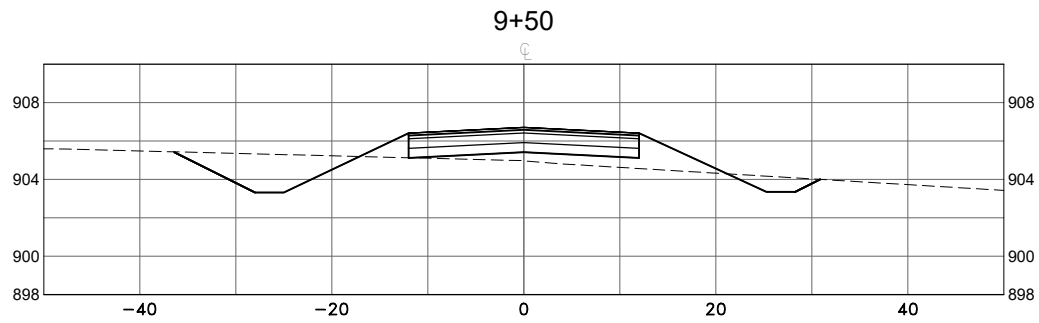
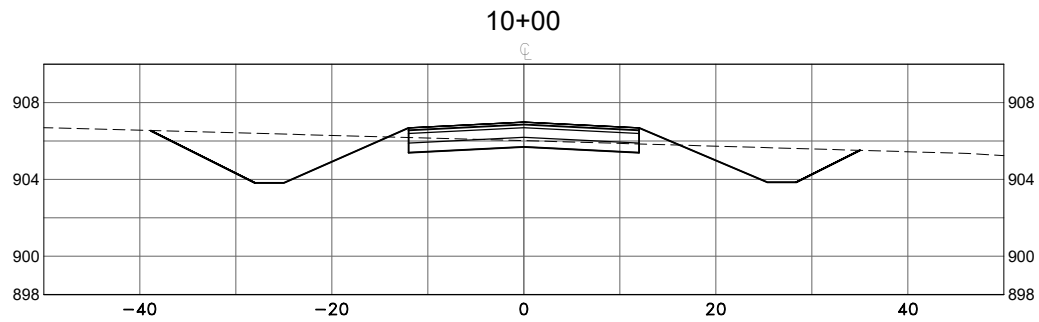
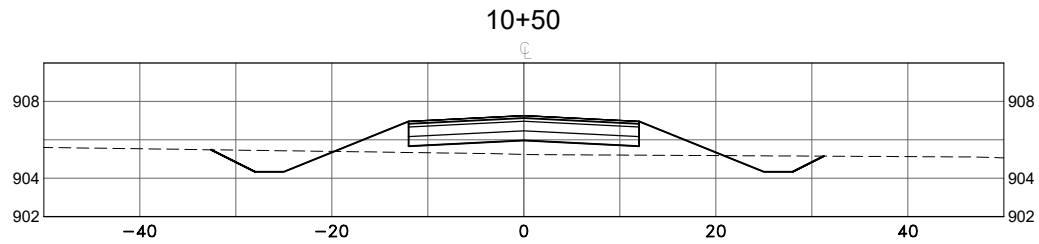
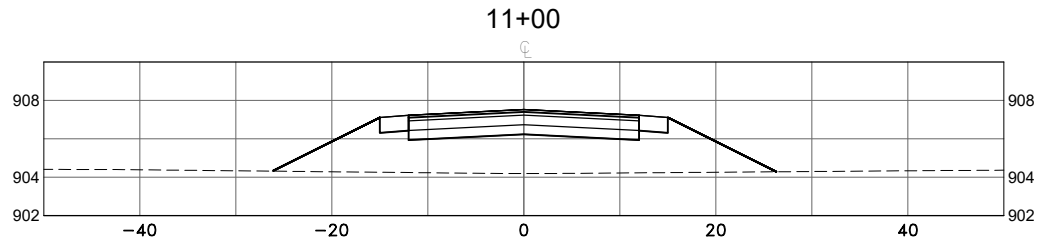
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SHEET
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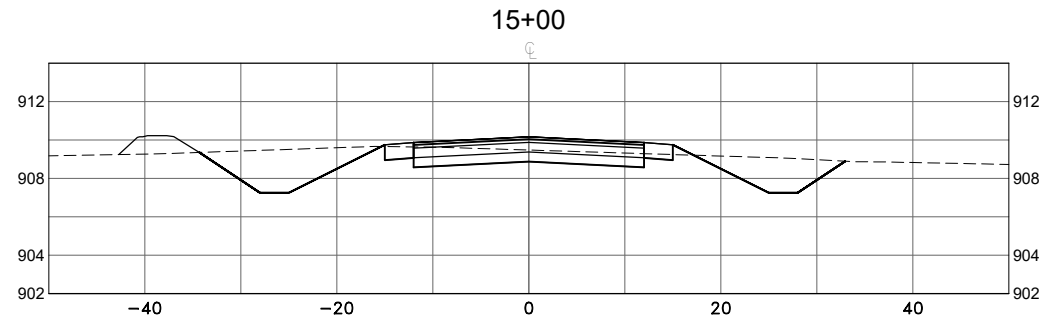
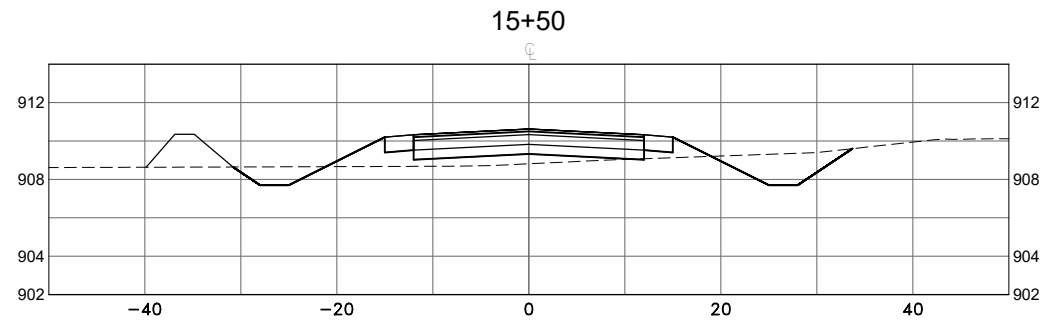
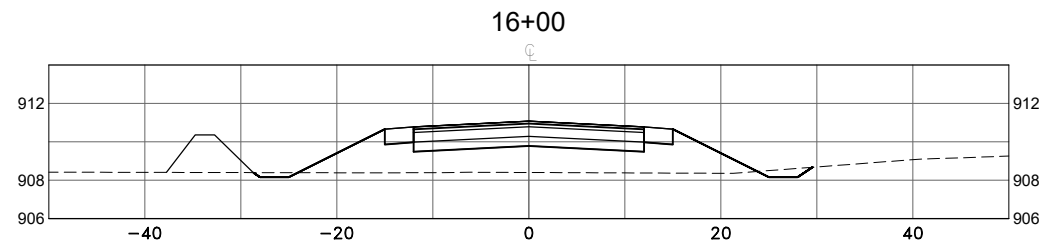
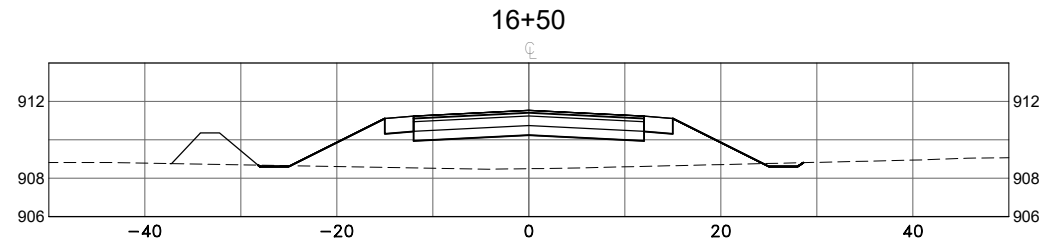
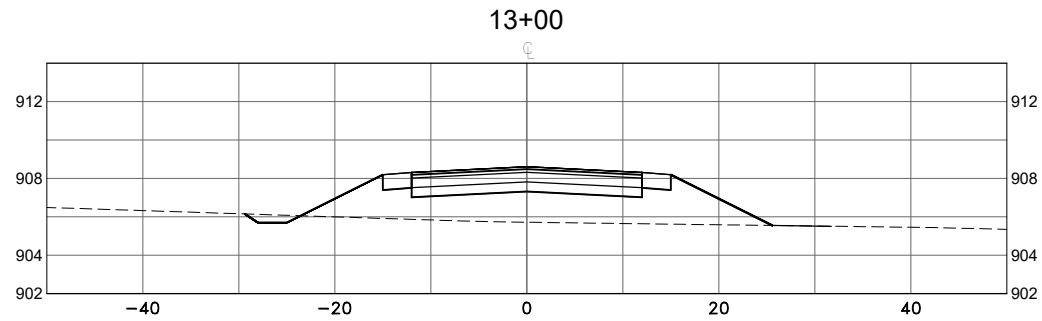
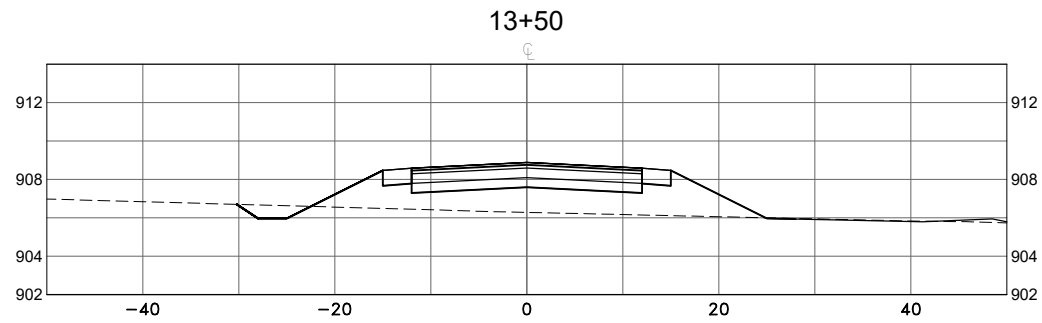
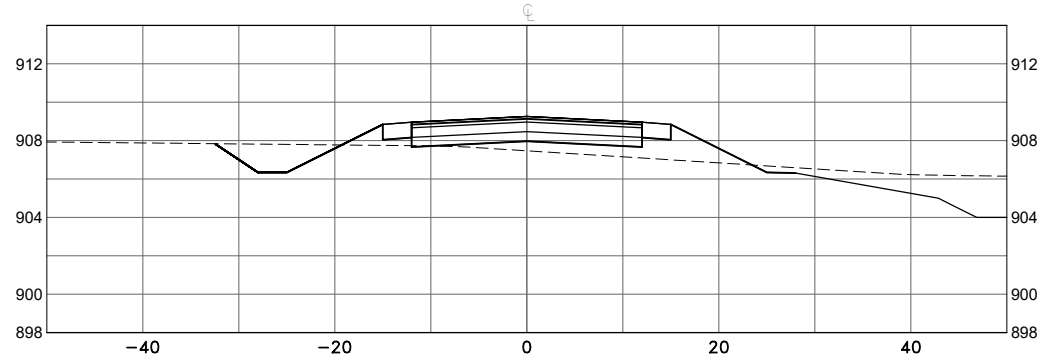
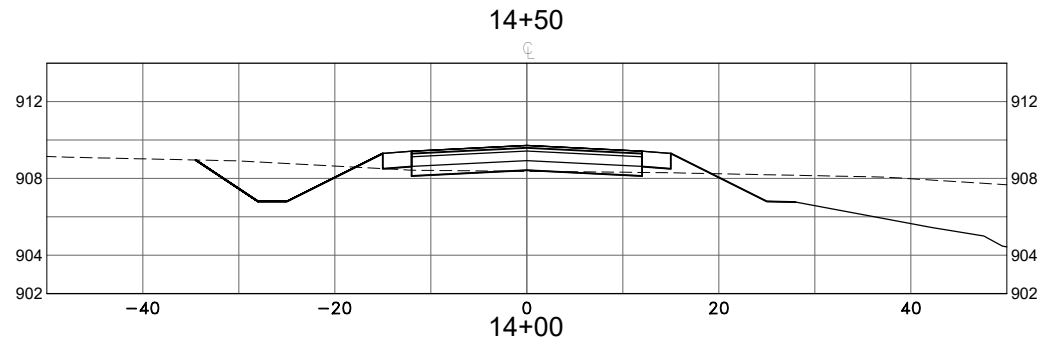
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-3
OF
X-13
SHEETS

Jul 01, 2020 - 3:49pm
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DATE	REVISION
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5/4/20	ADDED GUARDRAIL LOCATION
6/18/20	REVISED PER COUNTY COMMENTS

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Shane M. Nelson
SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY: SMN
DRAWN BY: SH
CHECKED BY: AV



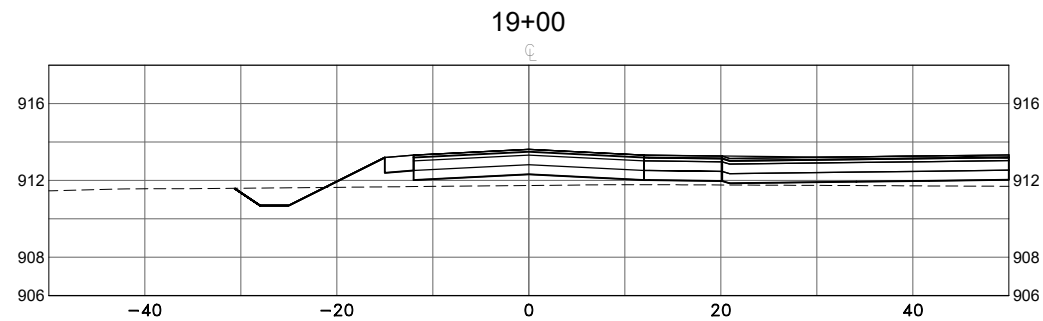
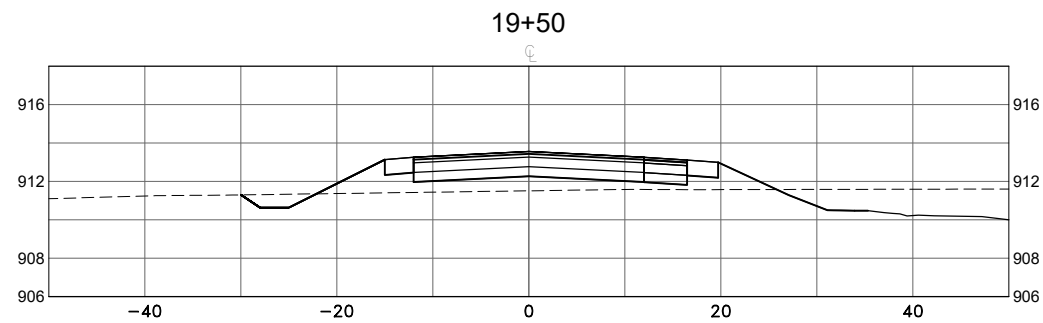
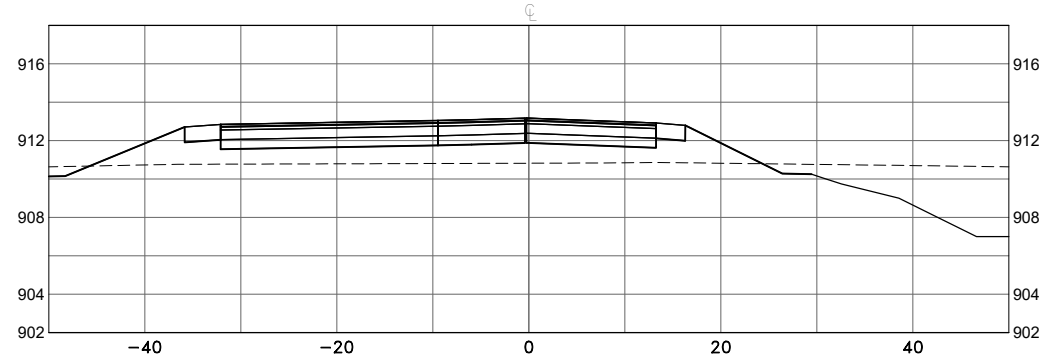
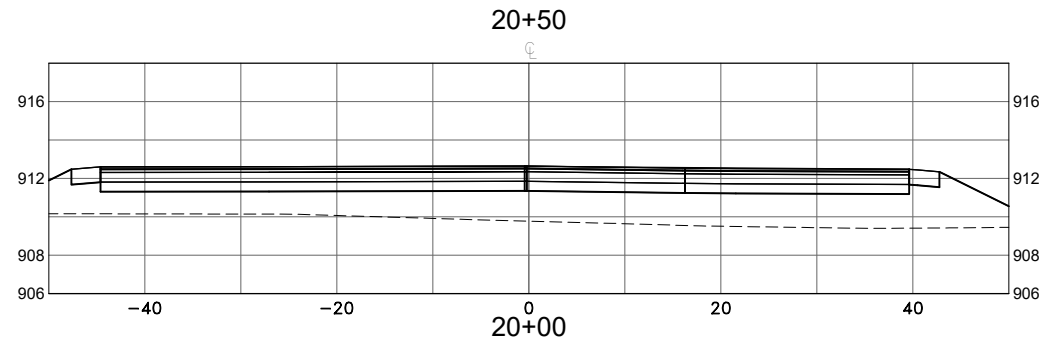
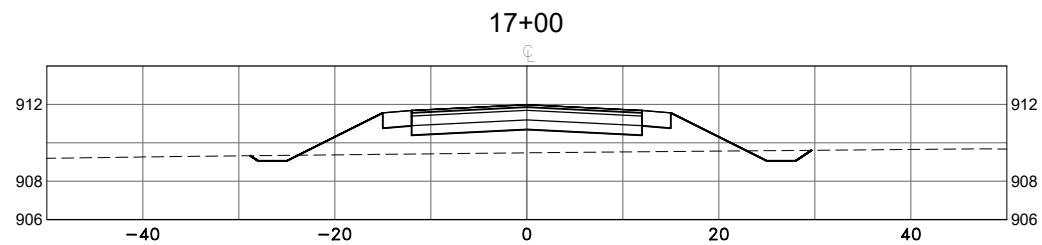
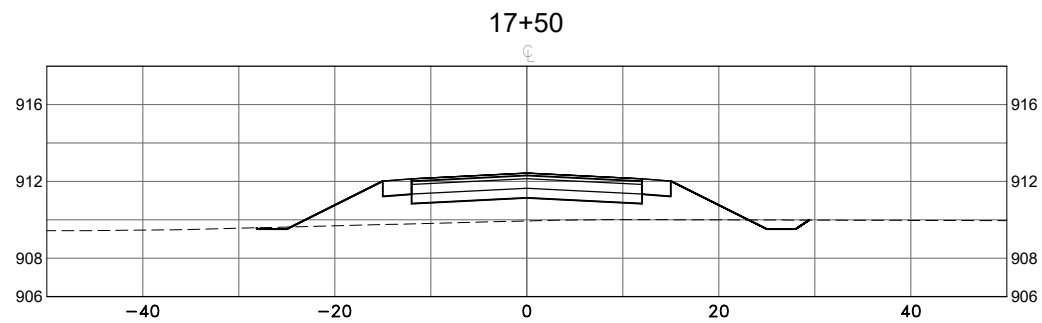
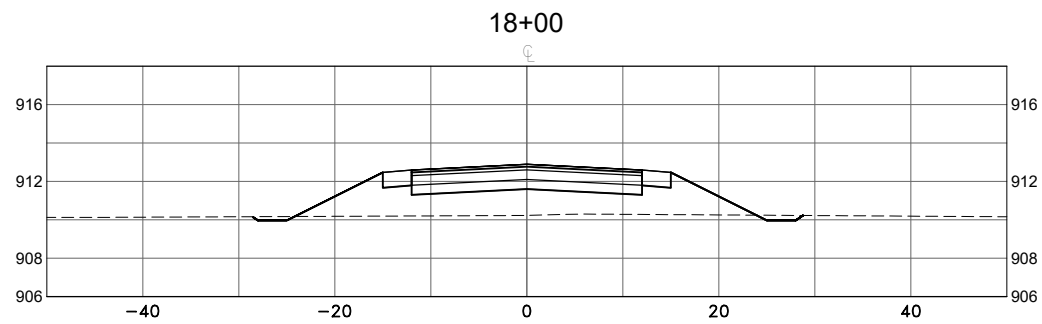
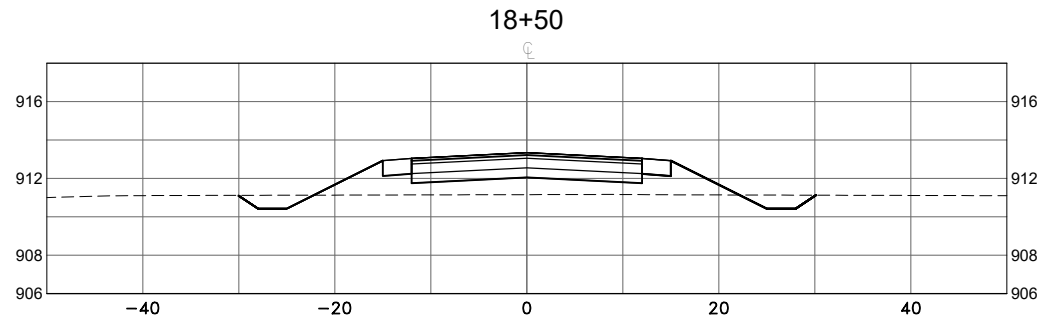
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-4
OF
X-13
SHEETS

Jul 01, 2020 - 3:50pm
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Shane M. Nelson
SHANE M. NELSON, P.E.
Date 4/10/20 Lic. No. 43381

DESIGNED BY:
SMN
DRAWN BY:
SH
CHECKED BY:
AV



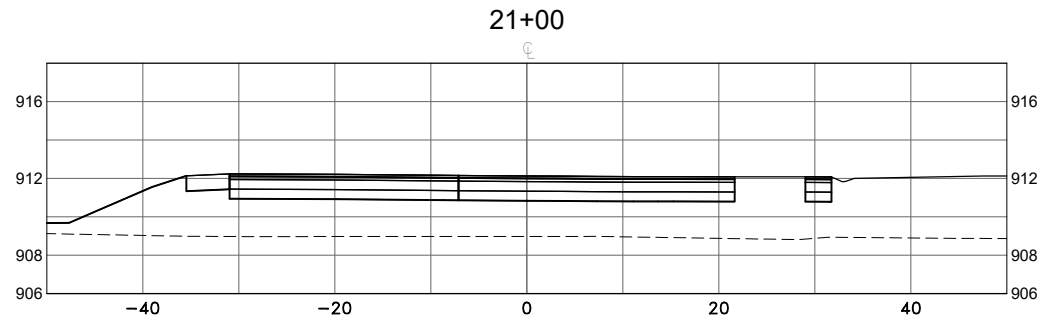
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-5
OF
X-13
SHEETS

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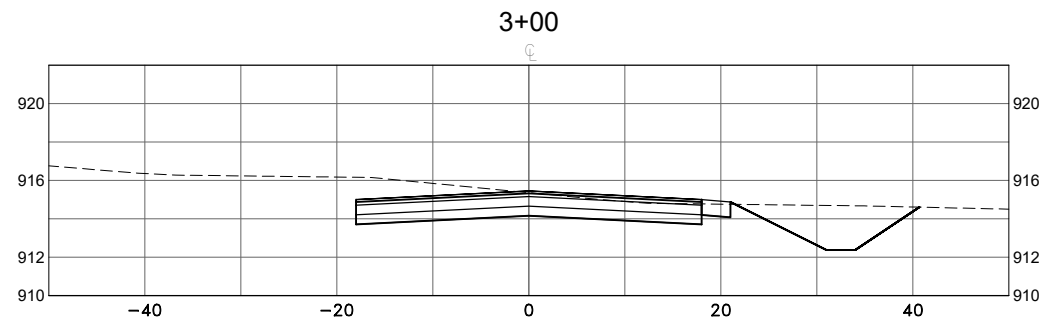
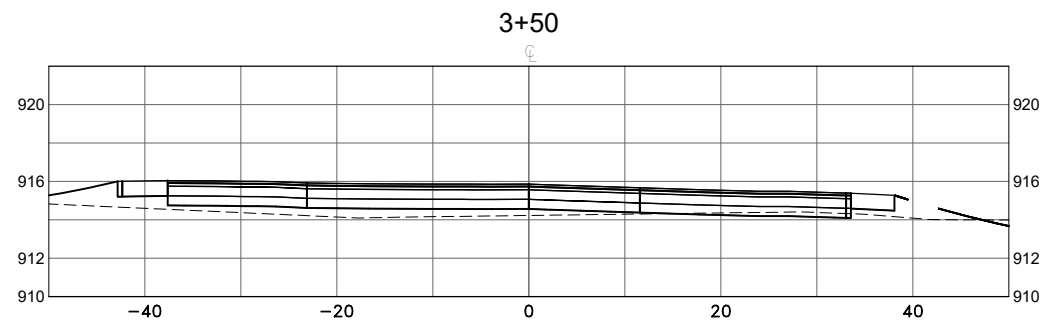
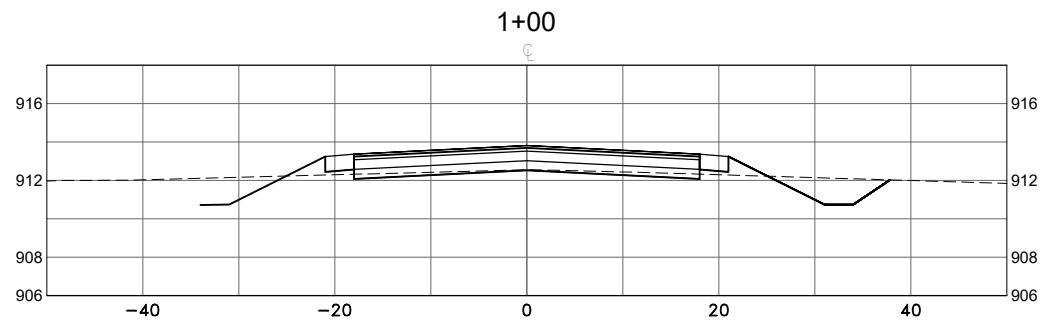
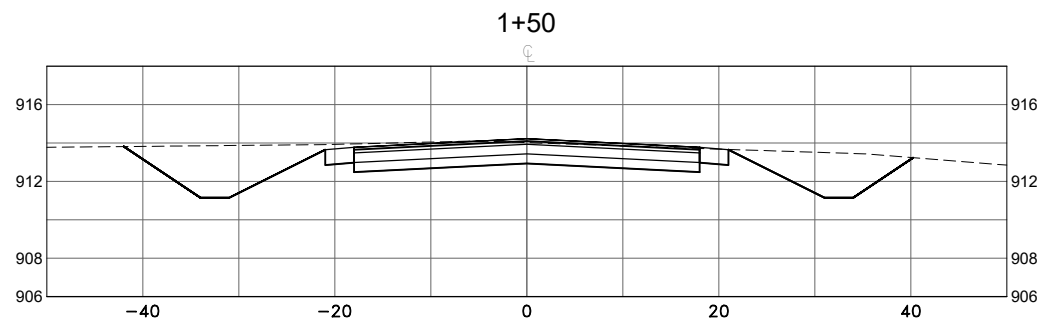
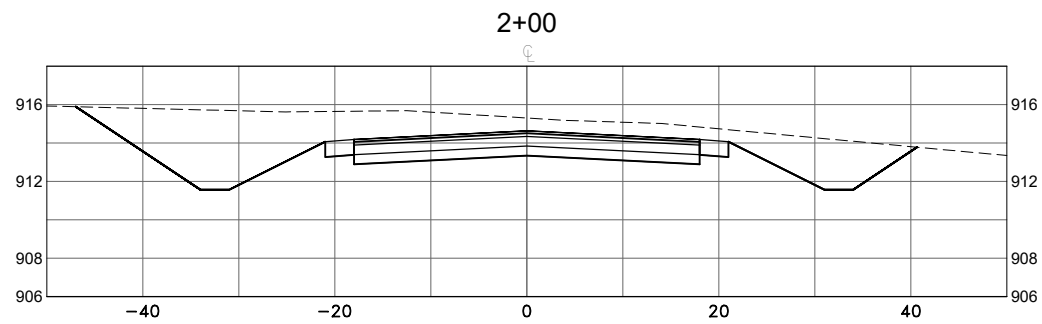
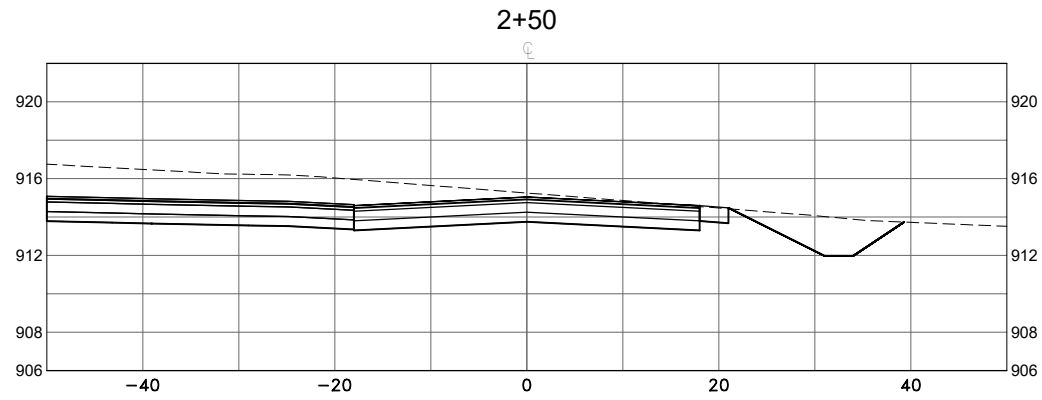
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
KIOWA STREET NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-6
OF
X-13
SHEETS

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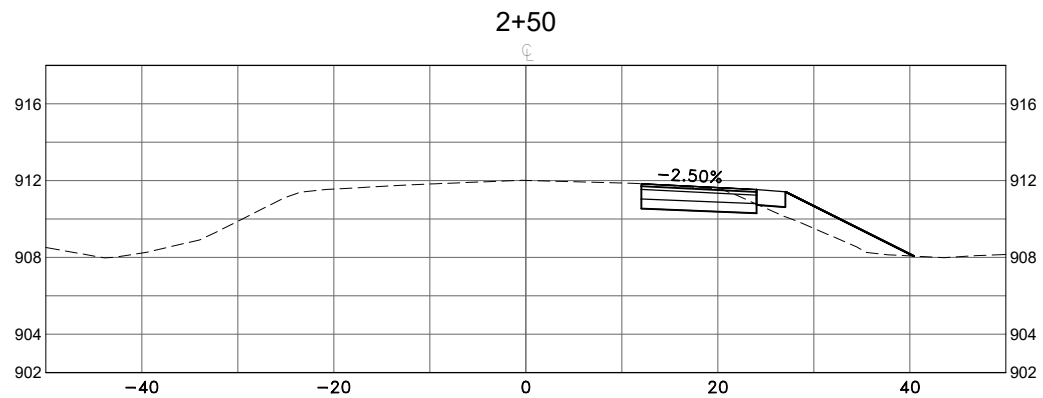
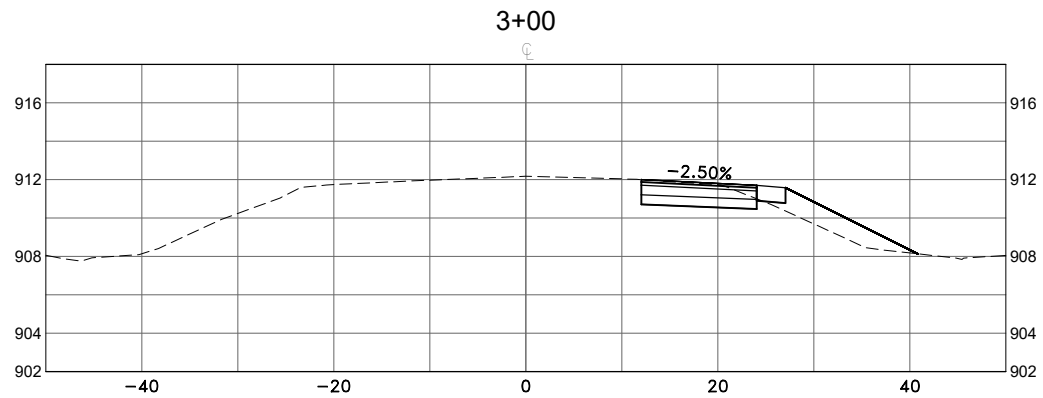
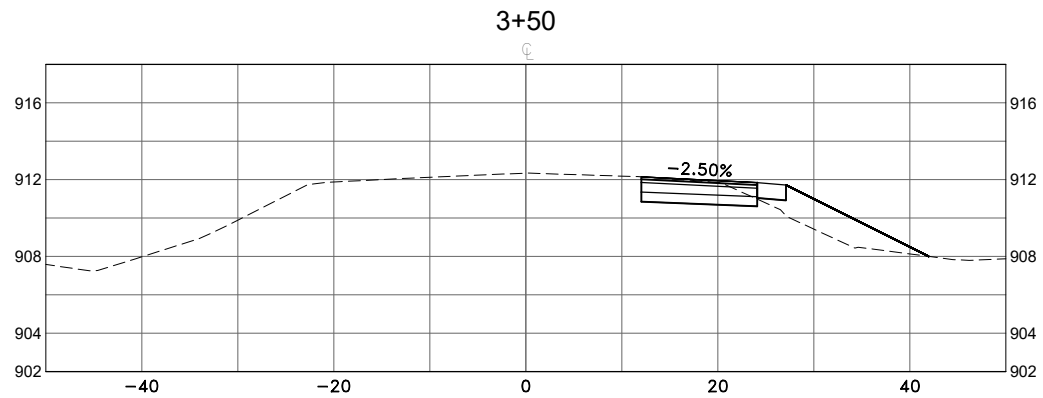
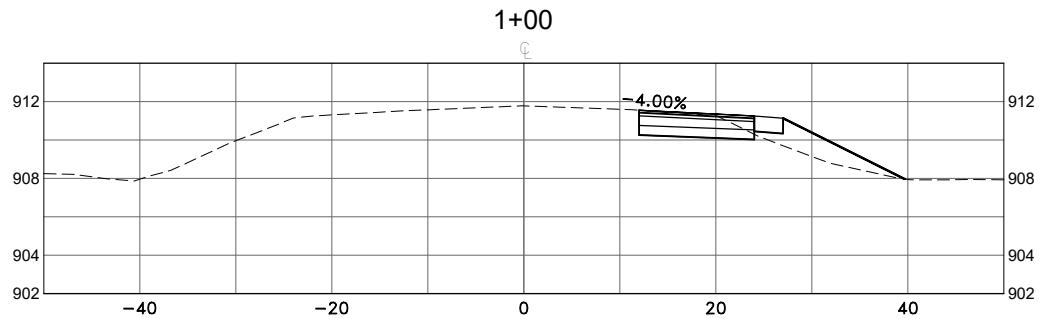
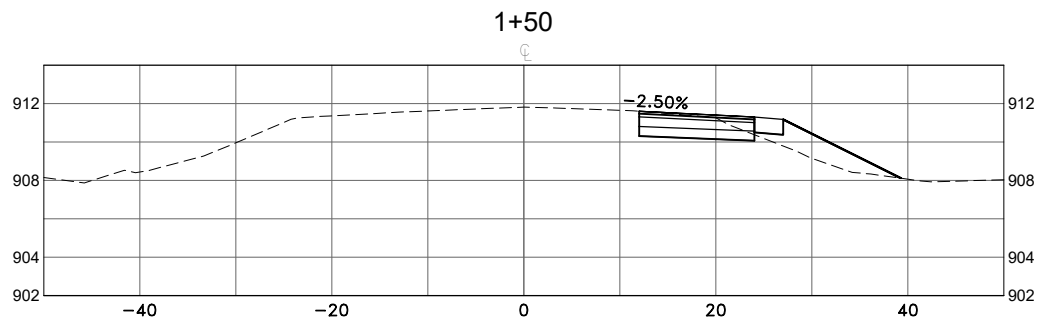
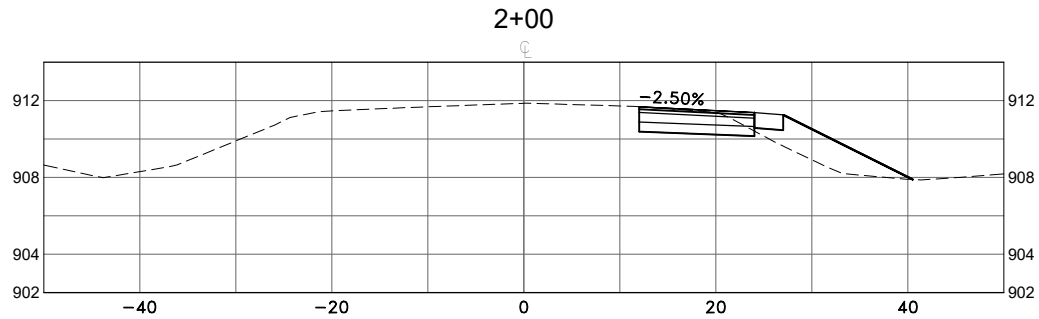
VIKING BLUFFS - PHASE 1

CROSS SECTIONS

195TH LANE NW
CITY OF OAK GROVE, MINNESOTA

SHEET
X-7
OF
X-13
SHEETS

Jul 01, 2020 - 3:50pm
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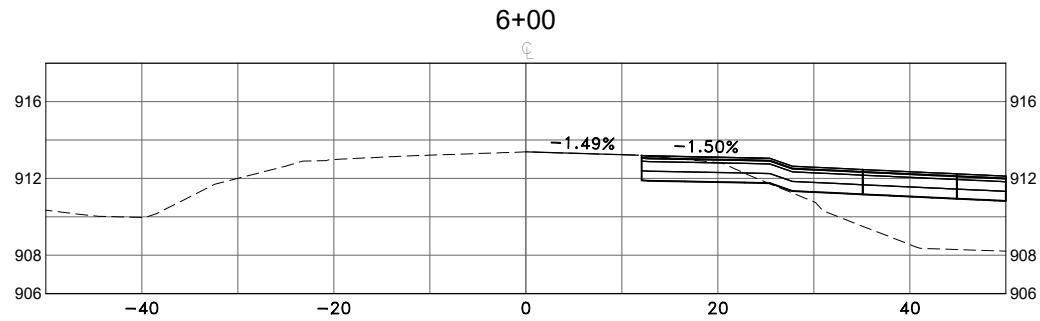
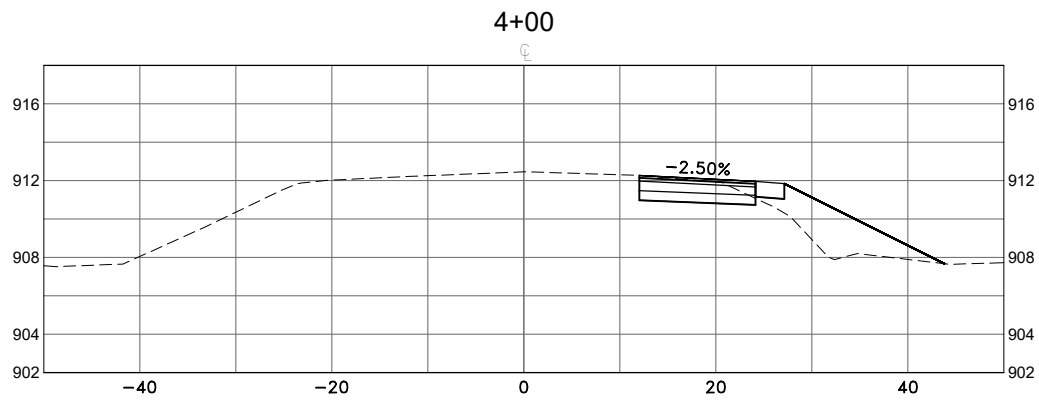
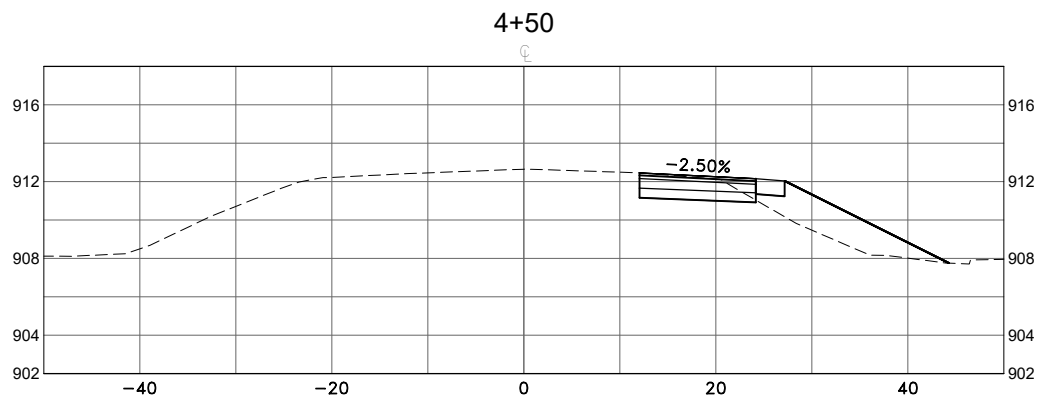
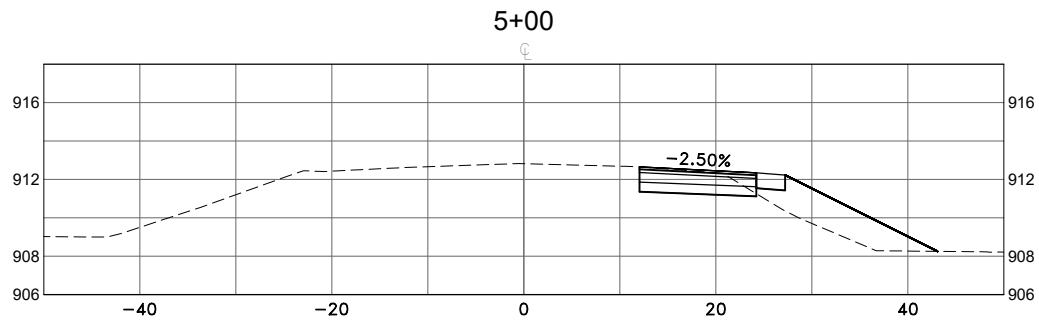
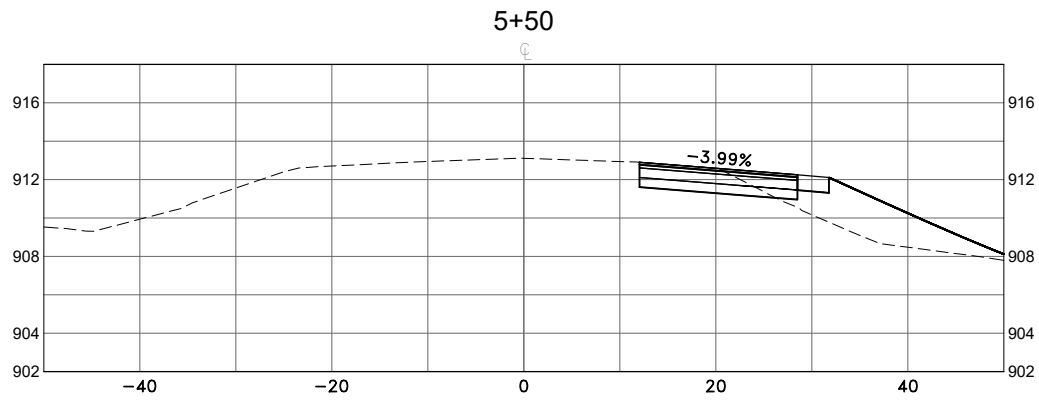
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
VIKING BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
X-8
OF
X-13
SHEETS

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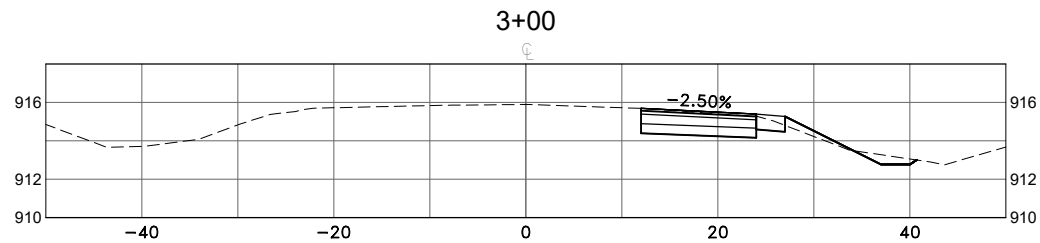
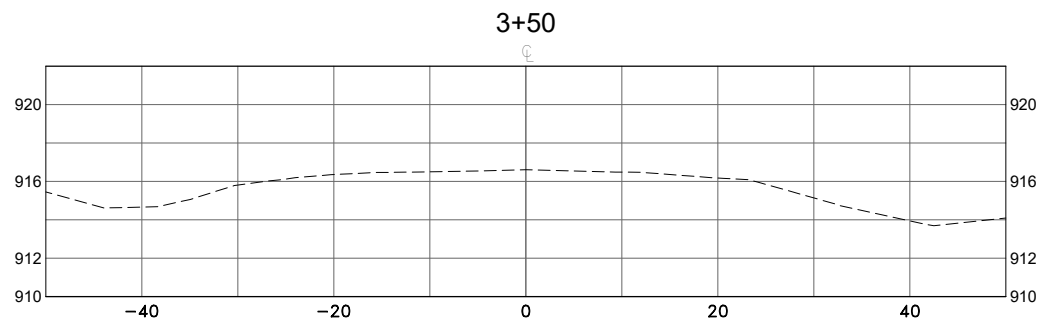
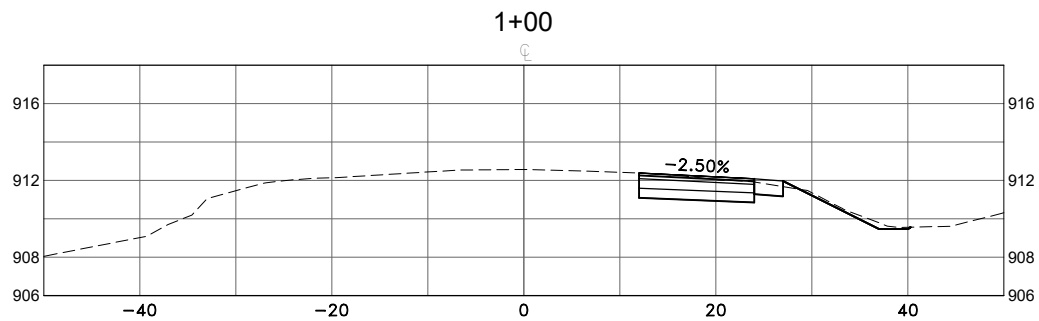
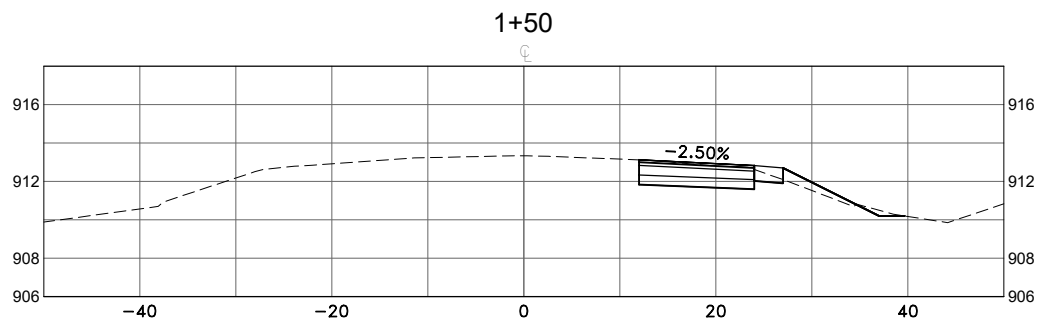
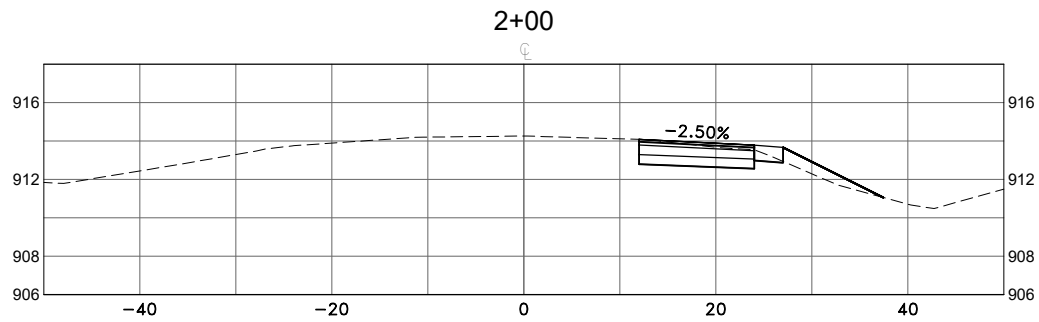
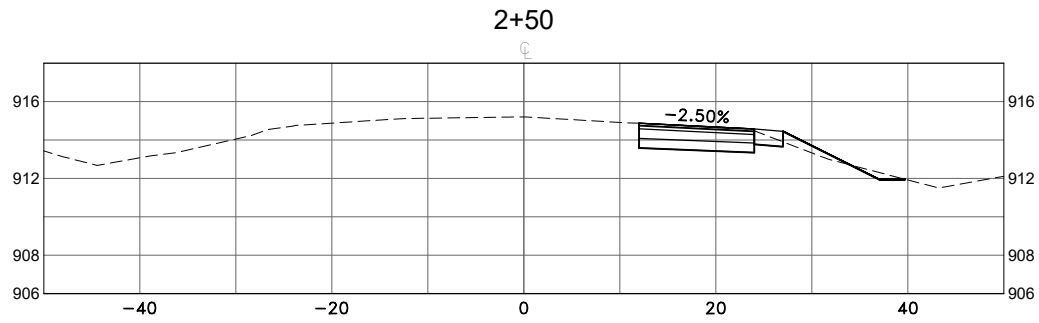
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
VIKING BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
X-9
OF
X-13
SHEETS

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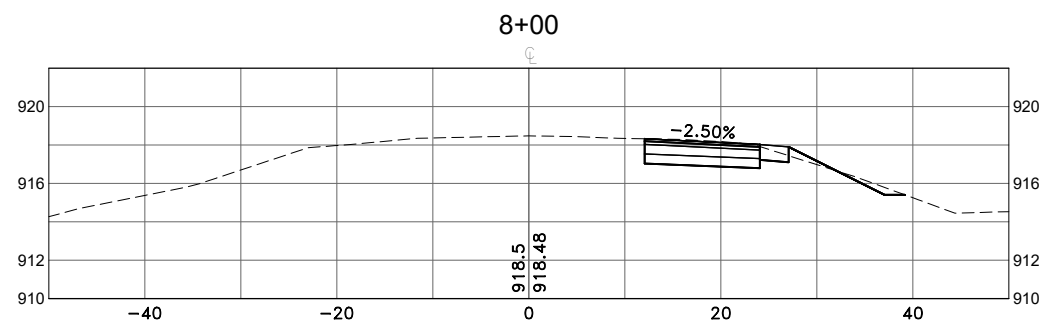
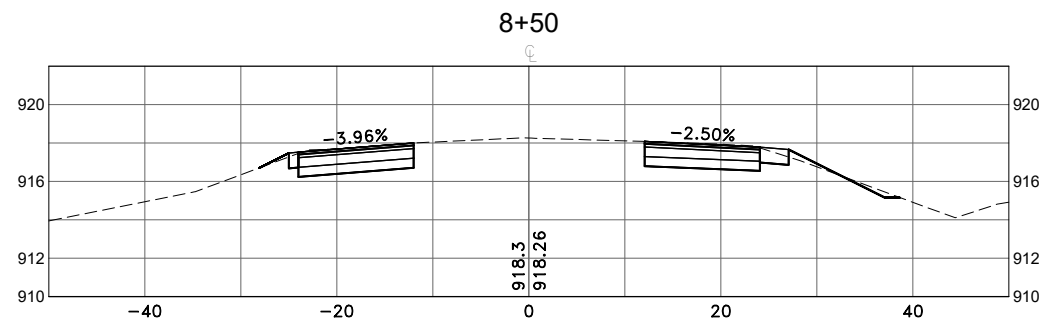
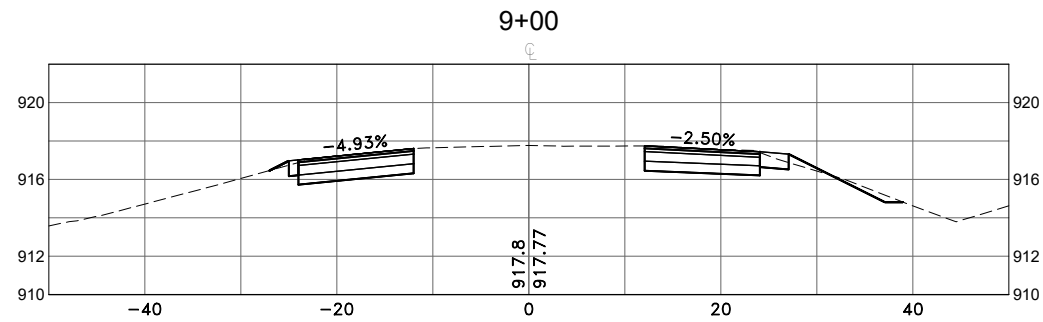
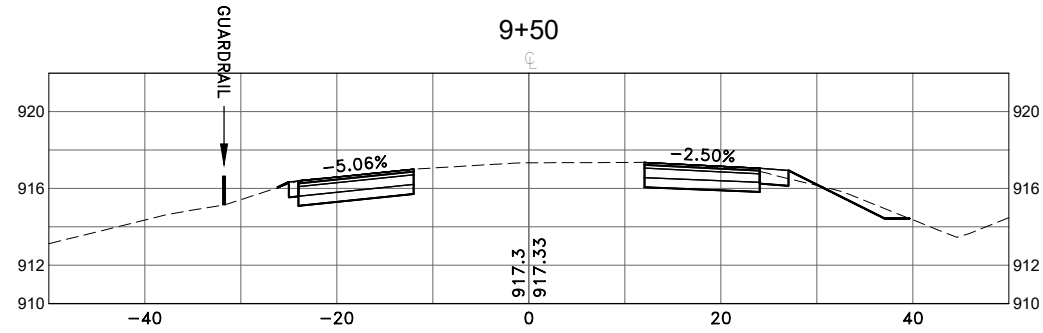
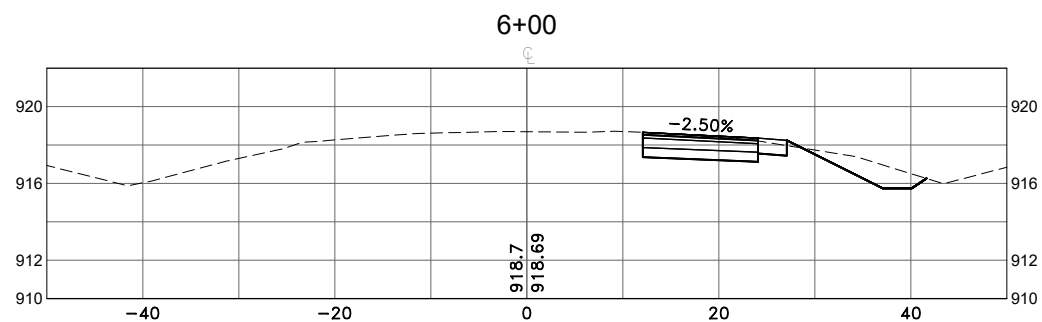
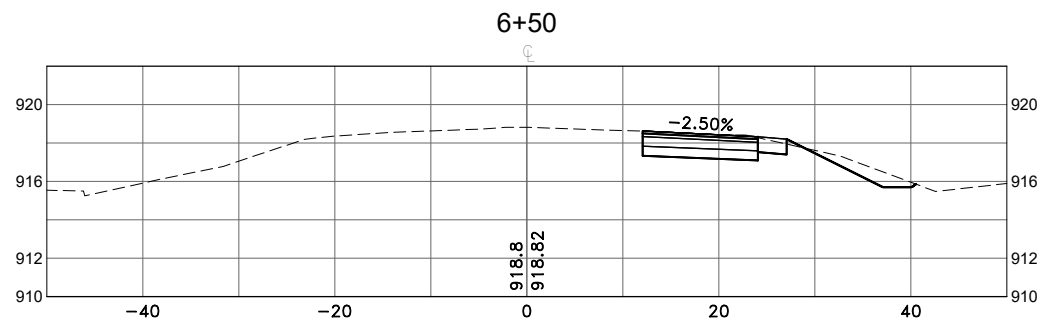
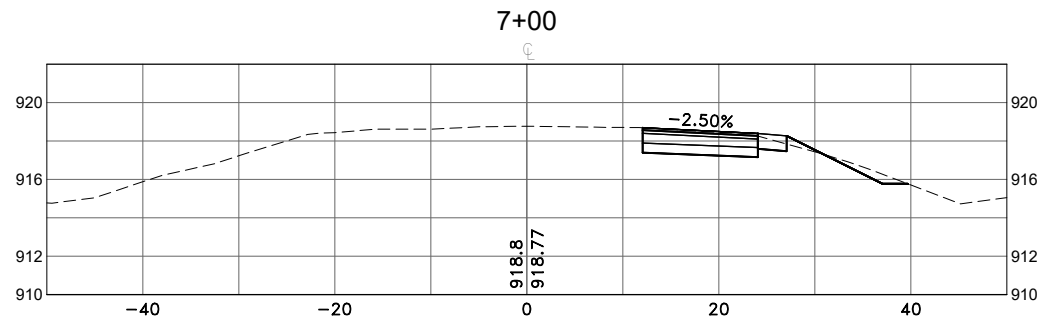
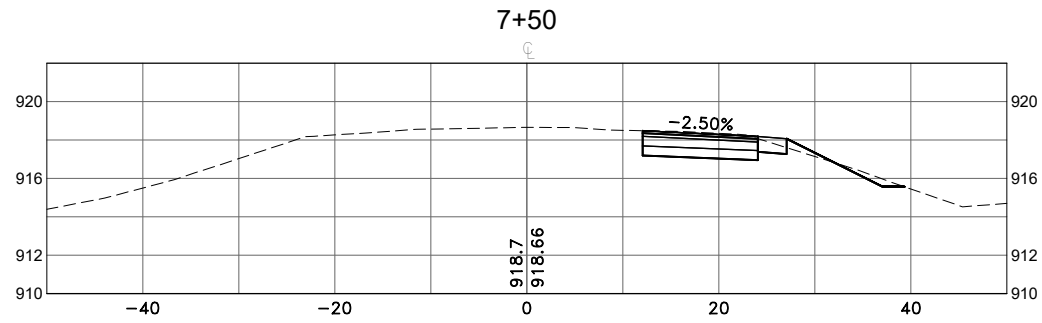
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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
RUM RIVER BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
X-10
OF
X-13
SHEETS

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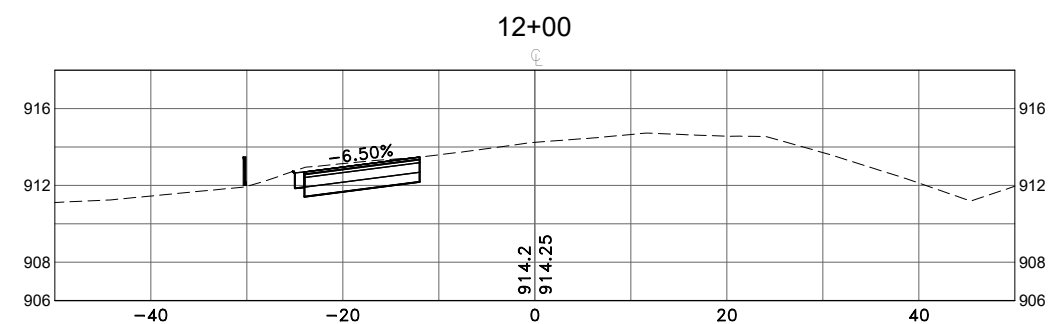
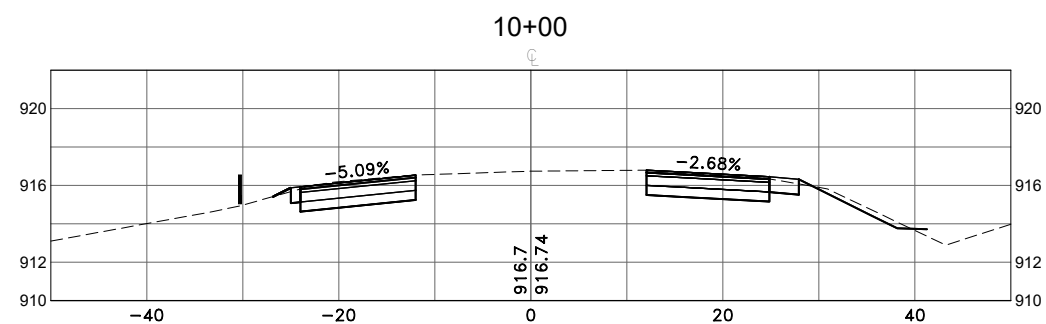
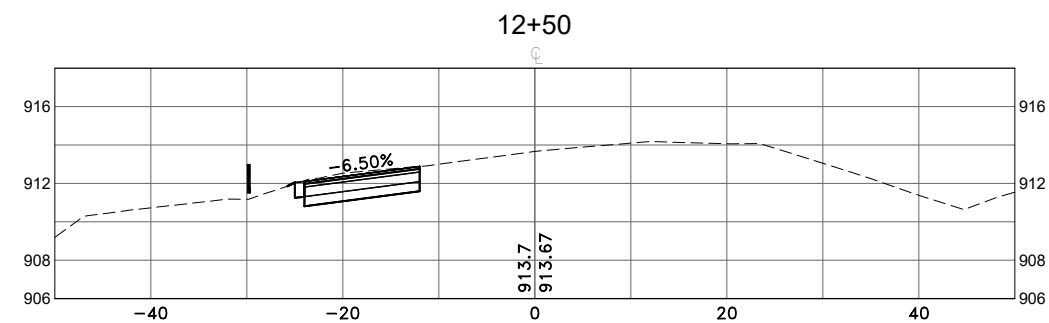
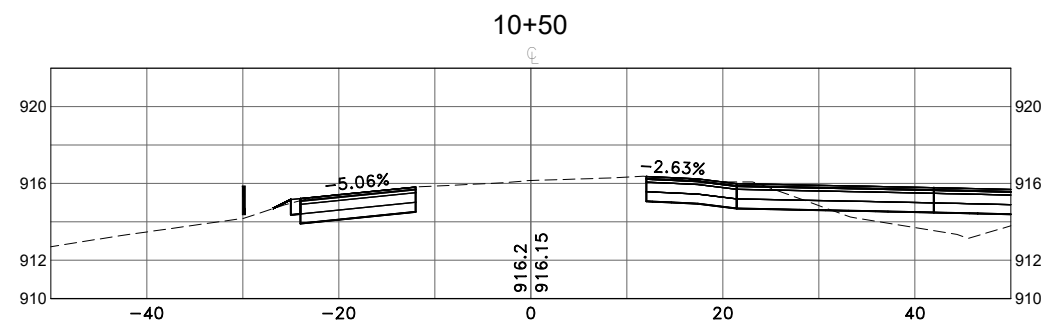
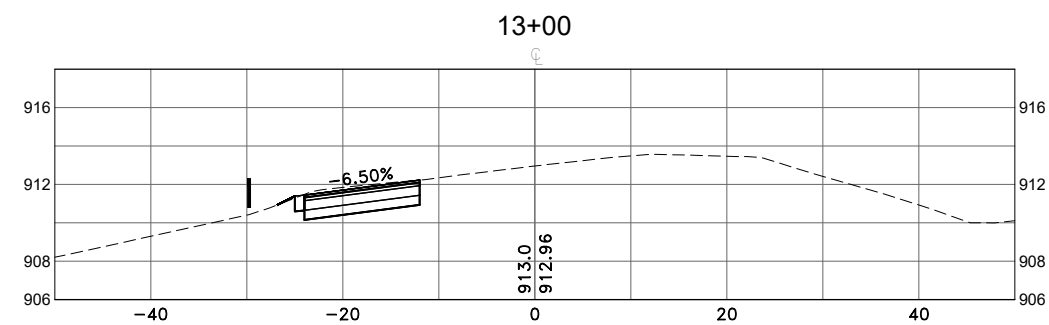
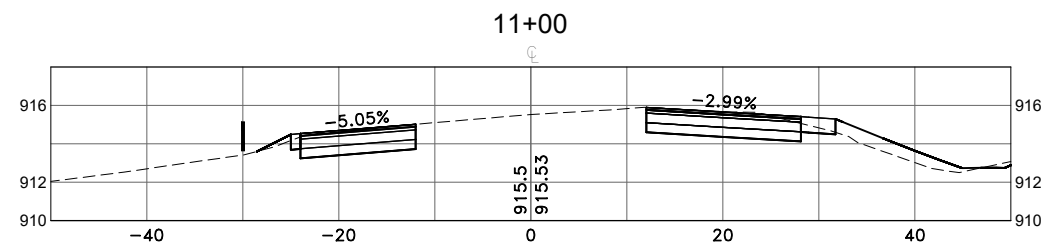
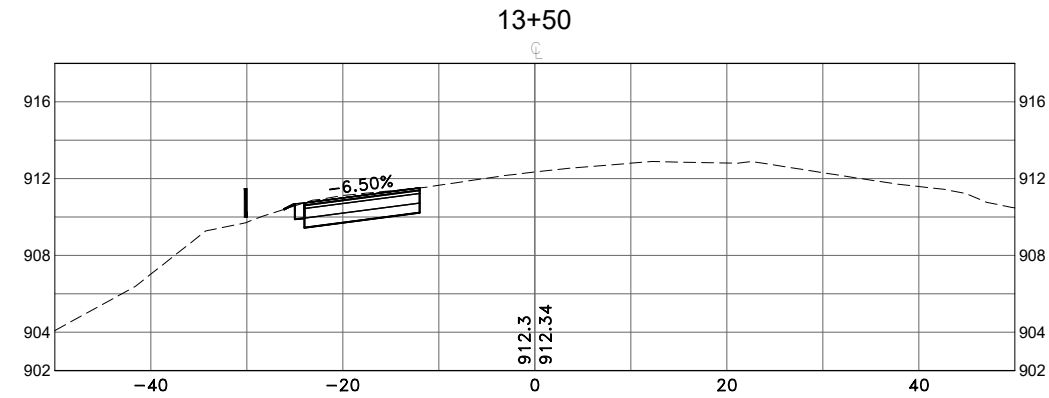
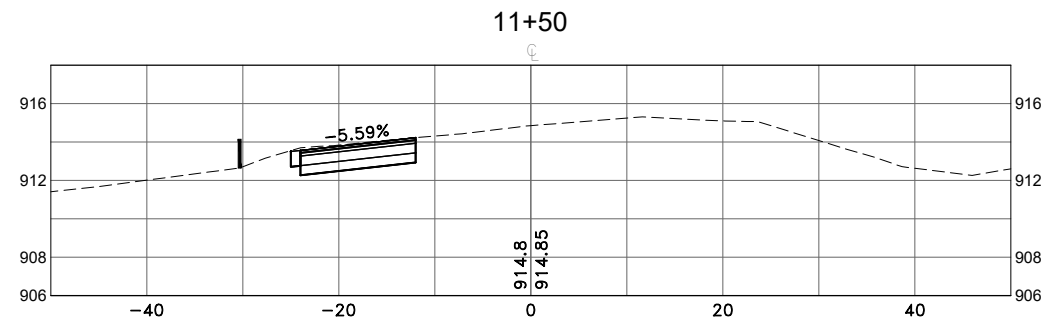


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VIKING BLUFFS - PHASE 1

CROSS SECTIONS
RUM RIVER BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
X-11
OF
X-13
SHEETS

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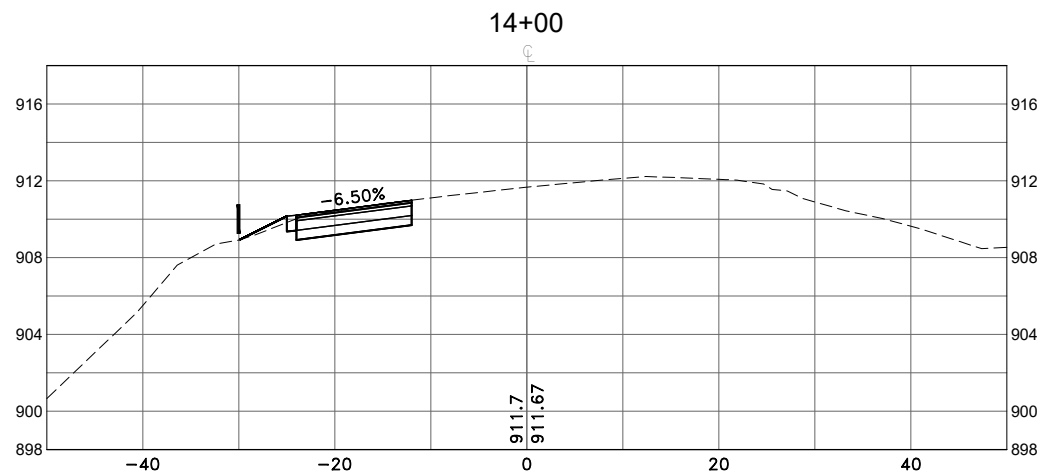
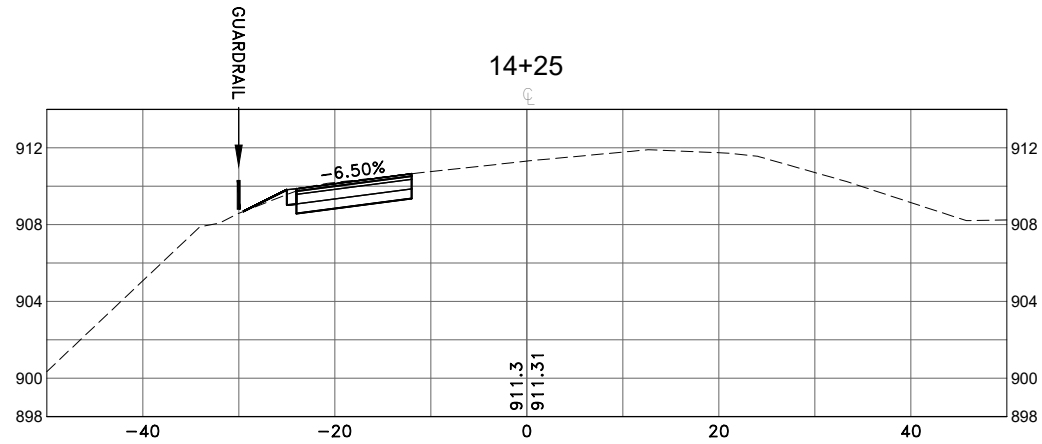
VIKING BLUFFS – PHASE 1

CROSS SECTIONS

RUM RIVER BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
-12
OF
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RUM RIVER BLVD TURN LANE
CITY OF OAK GROVE, MINNESOTA

SHEET
X-13
OF
X-13
SHEETS