

WKE  
PROJECT ID:  
WITH: N/A

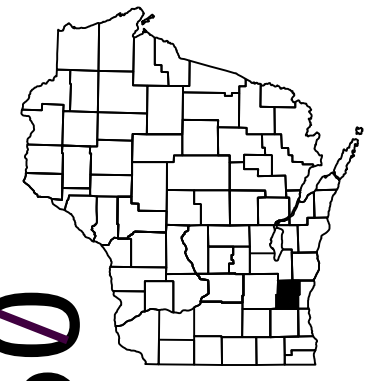
1009-23-72

COUNTY:  
WASHINGTON

MAY 2026  
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Cross Sections

TOTAL SHEETS = 62



09

DESIGN DESIGNATION

A.A.D.T.	=	N/A
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

CONVENTIONAL SYMBOLS

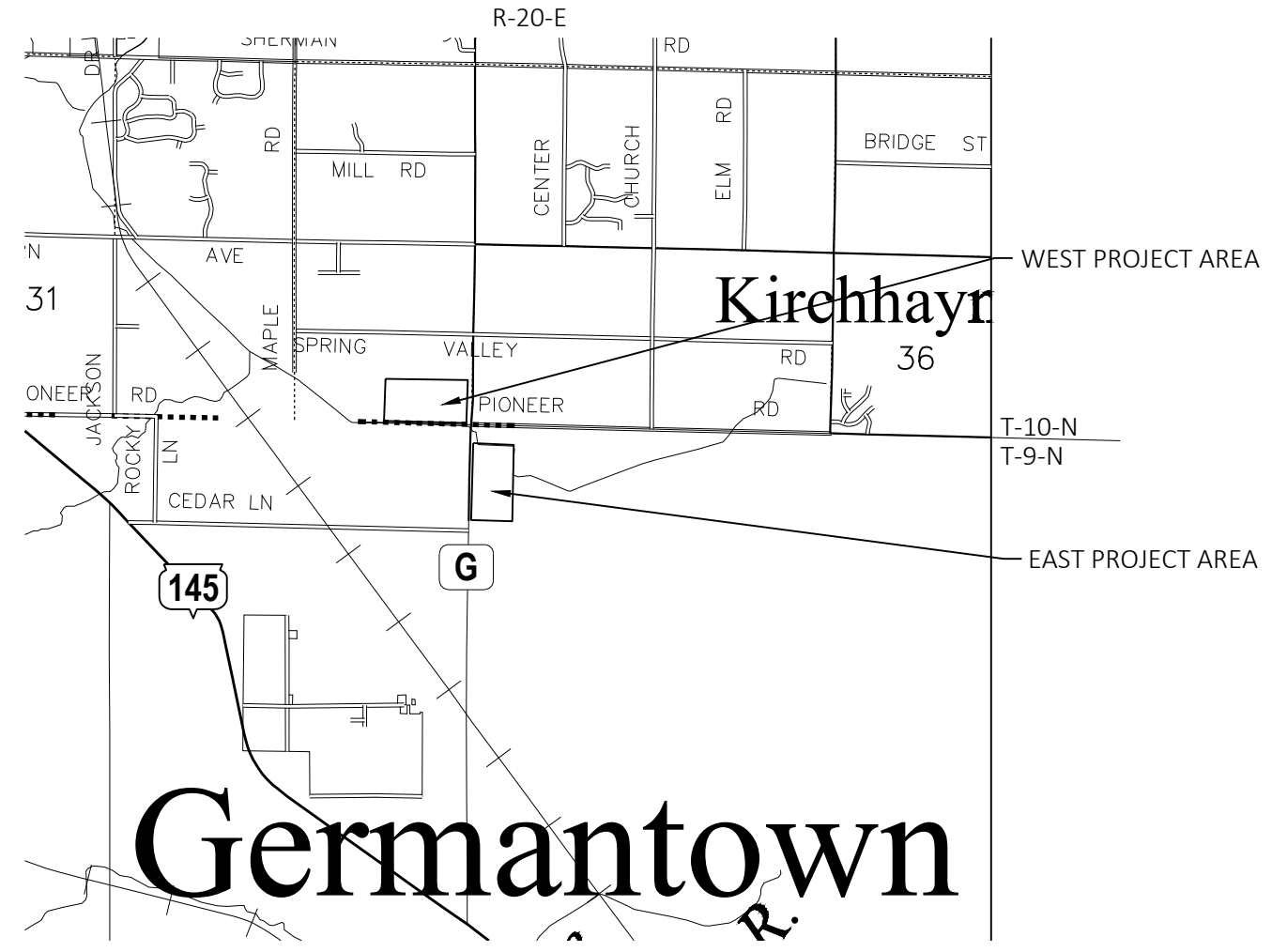
PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
OVERHEAD UTILITY	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

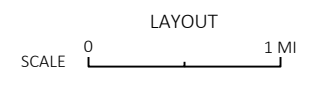
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT

DIVISION RD WETLAND MITIGATION SITE  
CEDAR LANE TO SPRING VALLEY ROAD  
NON HWY  
WASHINGTON COUNTY

STATE PROJECT NUMBER  
1009-23-72



# Germantown



TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WASHINGTON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1009-23-72		

ORIGINAL PLANS PREPARED BY  
STANTEC

DATE: 3/25/2026  
*Matthew Sieracki*  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	STANTEC
Designer	STANTEC
Project Manager	JONATHAN ENGERSON
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	JANET CANNON

APPROVED FOR THE DEPARTMENT

DATE: 3/25/2026  
*Jonathan Engerson*  
(Signature)

E

**GENERAL NOTES**

1. THE LOCATION OF EXISTING UNDERGROUND AND ABOVE GROUND UTILITIES SHOWN ON THE DRAWINGS ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS AND SHALL BE CONSIDERED APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES SHOWN AND NOT SHOWN AND SHALL PROVIDE NECESSARY MEASURES TO PROTECT UTILITIES FROM DAMAGE DUE TO THE CONTRACTOR'S WORK. SHOULD UTILITIES THAT ARE NOT SHOWN ON THE DRAWINGS BE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
2. CALL DIGGERS HOTLINE AT 1-800-242-8511 A MINIMUM OF 3 WORK DAYS PRIOR TO EXCAVATION TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES.
3. TREES WITHIN THE GRADING EXTENTS WILL BE FELLED BY OTHERS PRIOR TO START OF THIS CONTRACT. ALL STUMPS AND LOGS ASSOCIATED WITH FELLING OPERATION WILL NEED TO BE REMOVED AND BURIED WITHIN FILL AREAS. ALL WOOD AND STUMP MATERIAL SHALL BE REMOVED OR BURIED A MINIMUM OF 1 FEET BELOW FINISHED GRADE.
4. ALL UTILITY ELEVATIONS ARE SHOWN AS INVERT ELEVATIONS. UNLESS OTHERWISE NOTED.
5. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
6. ALL EXISTING UTILITIES THAT ARE NOT SHOWN TO BE RELOCATED OR ABANDONED SHALL BE PROTECTED IN-PLACE BY THE CONTRACTOR DURING CONSTRUCTION. ANY DAMAGE TO THESE UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. IF ANY UTILITY IS NEEDED TO BE RELOCATED, AT THE DISCRETION OF THE CONTRACTOR, COORDINATE WITH THE OWNER OF THE UTILITY.
7. THE CONTRACTOR SHALL CONDUCT OPERATIONS IN A MANNER WHICH DOES NOT DESTABILIZE ADJACENT SLOPES. AT A MINIMUM THE CONTRACTOR SHALL:
  - a. AVOID LOADING THE TOP OF THESE SLOPES WITH MATERIALS, EQUIPMENT, OR HAUL TRUCKS.
  - b. MONITOR SLOPE CONDITIONS DAILY THROUGHOUT CONSTRUCTION.
  - c. IMMEDIATELY BRING ANY CONCERNS TO THE ATTENTION OF THE ENGINEER.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. MONUMENTS AND SURVEY MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS REQUIRED TO PROVIDED PROPER DOCUMENTATION TO THE PROPER AGENCIES SHOWING ORIGINAL AND REPLACEMENT MONUMENTS.
11. CONTACT THE PROJECT ENGINEER AND SCOTT M. SCHMIDT, WASHINGTON COUNTY SURVEYOR, AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.
12. NO GRADING WORK SHALL BE DONE BELOW THE TOP OF BANKS ADJACENT TO KRESSIN BRANCH. ANY EXCAVATION WORK DONE FOR CULVERT REMOVAL SHALL BE LIMITED TO THE EXTENT NECESSARY TO REMOVE THE CULVERT. GRADES SHALL BE RESTORED TO EXISTING CONDITIONS.
13. DO NOT GRADE OR ENTER WETLAND LOCATED OUTSIDE OF PROJECT LIMITS.
14. THE CONTRACTOR SHALL CONDUCT OPERATIONS THAT MINIMIZE IMPACT WITHIN NON-GRADING AREAS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF 6 INCHES OF TOPSOIL DEPTH (INCLUDES ORGANIC SOIL TYPES) ACROSS ALL GRADING AREAS. THE SALVAGED TOPSOIL ITEM WILL NOT BE PAID FOR IN AREAS WHERE SUFFICIENT EXISTING TOPSOIL DEPTH REMAINS AFTER GRADING.
16. FENCE TEMPORARY MUST BE INSTALLED ALONG THE OIL PIPELINE EASEMENT WITHIN THE WEST SITE PRIOR TO THE USE OF CONSTRUCTION EQUIPMENT ON SITE.

**ORDER OF SECTION 2 DETAIL SHEETS**

- GENERAL NOTES
- PROJECT OVERVIEW
- CONSTRUCTION DETAILS
- DEMOLITION
- EROSION CONTROL
- TRAFFIC CONTROL
- ALIGNMENT INFORMATION
- GRADING
- SEEDING



**UTILITY CONTACTS**

**AT&T WISCONSIN - COMMUNICATION LINE**

STEVE BURTCH  
 220 WISCONSIN AVE  
 WAUKESHA, WI 53186  
 (262) 506-2849  
 SB7561@ATT.COM

**WE ENERGIES - GAS**

JACOB HULBERT  
 OFFICE: (262) 968-5718  
 (414) 651-1577  
 JACOB.HULBERT@WE-ENERGIES.COM

**SPECTRUM - COMMUNICATION LINE**

MICHAEL KELLY  
 (262) 202-2297  
 MICHAEL.R.KELLY@CHARTER.COM

**WEST SHORE PIPE LINE COMPANY - GAS/PETROLEUM**

CASEY SCHWANDT  
 11115 W COUNTY LINE ROAD  
 MILWAUKEE, WI 53224  
 CELL: (920) 655-1428  
 CSCHWANDT@BUCKEYE.COM

**WE ENERGIES - ELECTRIC**

JOE FELLEENZ  
 OFFICE: (262) 502-6831  
 CELL: (414) 322-8928  
 JOE.FELLEENZ@WE-ENERGIES.COM

**OTHER CONTACTS**

**WISDOT PROJECT MANAGER**

JONATHAN ENGERSON P.E.  
 WISCONSIN DEPARTMENT OF TRANSPORTATION  
 SE REGION  
 141 NW BARSTOW ST.  
 WAUKESHA, WI 53188  
 262-548-8807  
 JONATHAN.ENGERSON@DOT.WI.GOV

**WASHINGTON COUNTY SURVEYOR**

SCOTT M. SCHMIDT, PE, PLS  
 WASHINGTON COUNTY ENGINEER/SURVEYOR  
 WASHINGTON COUNTY HIGHWAY COMMISSIONER  
 VEHICLE MAINTENANCE STORAGE FACILITY  
 900 LANG STREET  
 WEST BEND, WI 53090  
 262-335-6881  
 SCOTT.SCHMIDT@WASHCOWISCO.GOV

**WISDOT SWECE**

DEBRA TARNOW  
 WISCONSIN DEPARTMENT OF TRANSPORTATION  
 SWECE SE REGION  
 141 NW BARSTOW ST.  
 WAUKESHA, WI 53188  
 DEBRA.TARNOW@DOT.WI.GOV

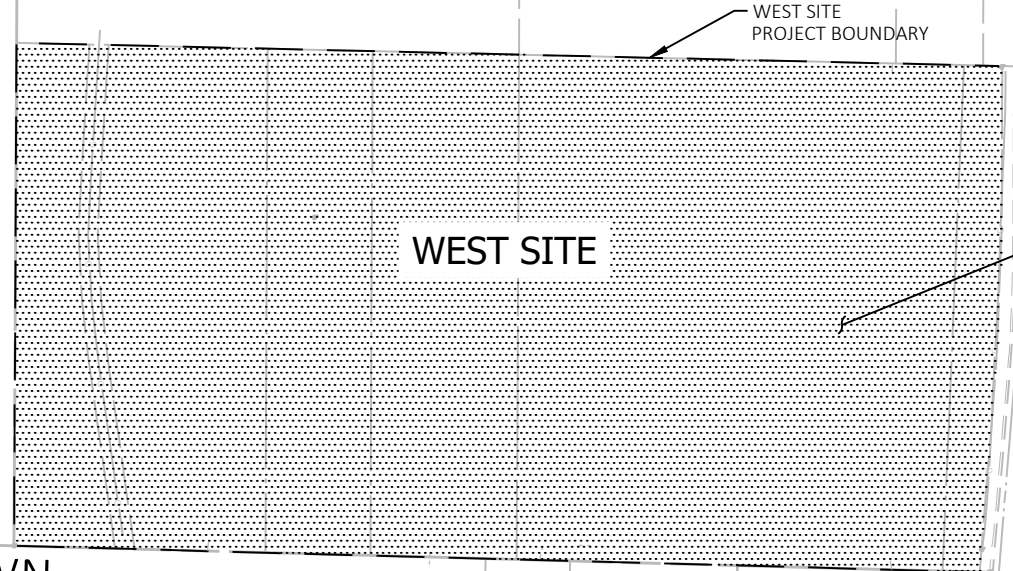
**WDNR**

RYAN PAPAS  
 WISCONSIN DEPARTMENT OF  
 NATURAL RESOURCES  
 RYAN.PAPPAS@WISCONSIN.GOV

**WISDOT REGIONAL ENV COORDINATOR**

THOMAS CURRAN  
 WISCONSIN DEPARTMENT OF TRANSPORTATION  
 SE REGION  
 141 NW BARSTOW ST.  
 WAUKESHA, WI 53188  
 262-548-5682  
 THOMAS1.CURRAN@DOT.WI.GOV

TOWN OF JACKSON  
TOWN OF GERMANTOWN



WEST SITE

WEST SITE  
PROJECT BOUNDARY

WISDOT

PIONEER ROAD

KWK OF SPRING VALLEY LLC

PLE FOR  
INGRESS/EGRESS

KWK OF SPRING VALLEY LLC

TLE FOR  
INGRESS/EGRESS

GERALD SMITH

DIVISION ROAD (CTH G)

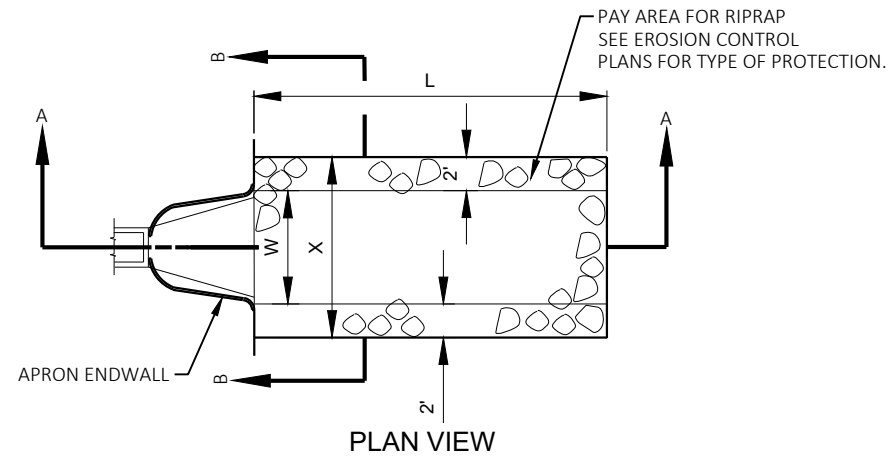
WISDOT

EAST SITE  
PROJECT BOUNDARY

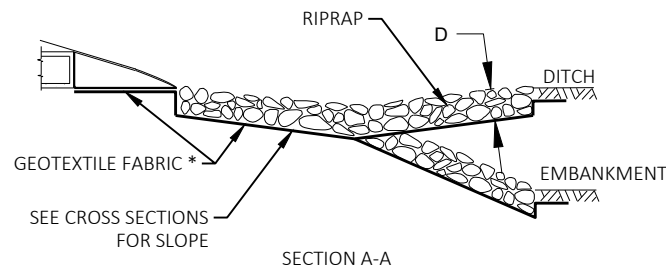
EAST SITE

CEDAR LANE





L = 3 x W (NOR) OR 10' MIN  
OR AS INDICATED IN THE PLANS  
OR AS DIRECTED BY THE ENGINEER



D = 12" FOR RIPRAP MEDIUM

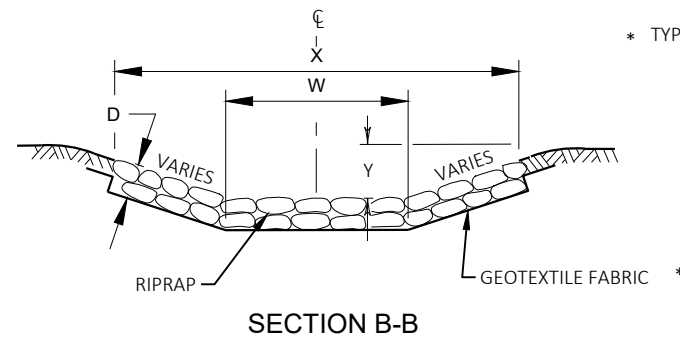
X = W+4' FOR TYPICAL CULVERT  
DISCHARGE INTO DITCH  
W+6' FOR CULVERT DISCHARGE  
DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT  
DISCHARGE INTO DITCH  
6" FOR CULVERT DISCHARGE  
DOWN EMBANKMENT SLOPE

\* TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

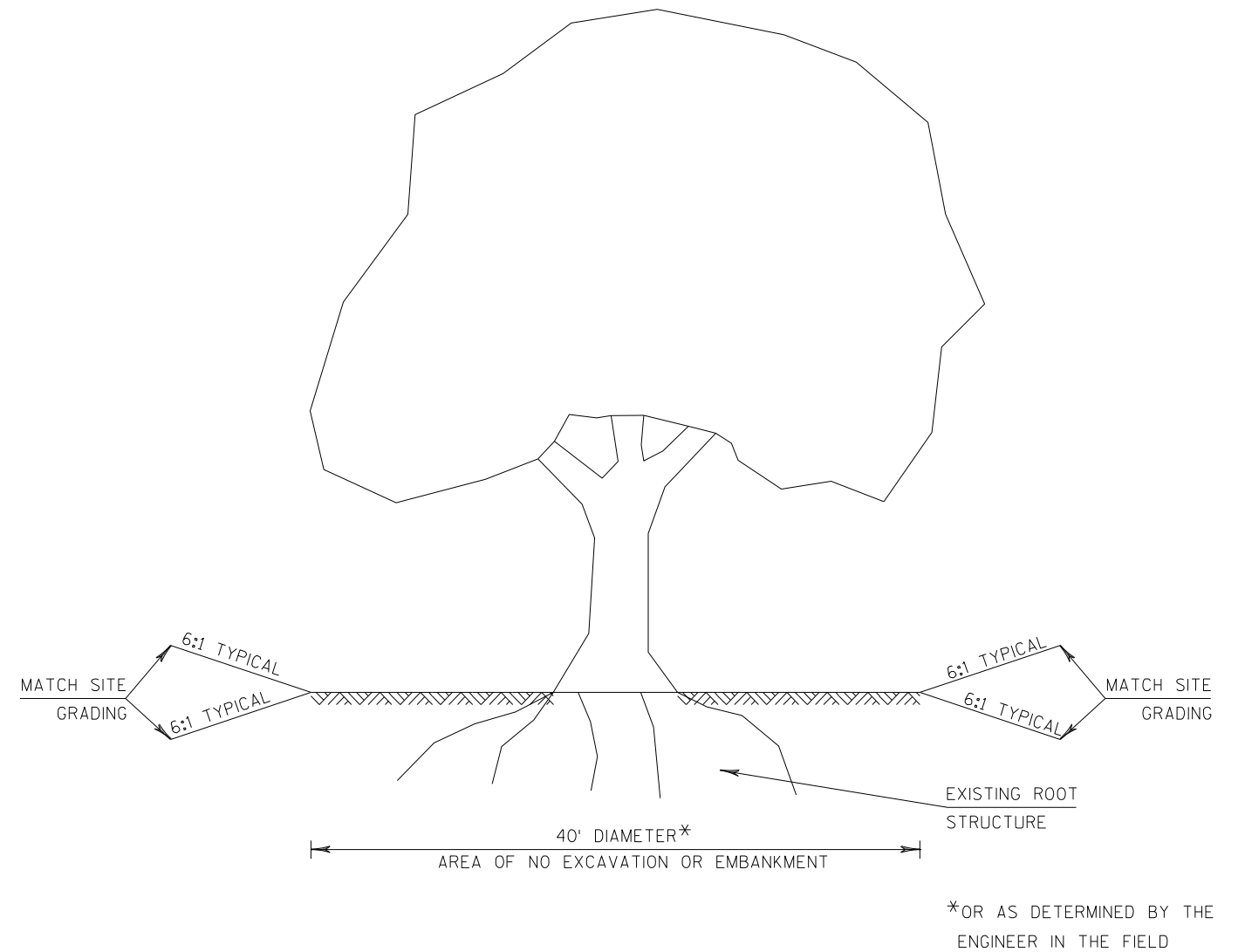
**CONSTRUCTION NOTES:**

1. GEOTEXTILE FABRIC SHALL EXTEND BENEATH THE ENTIRE LENGTH OF THE APRON ENDWALL SECTION. INSTALL ON PREPAVED FOUNDATION. GRADE PRIOR TO END WALL INSTALLATION.
2. COMPLETE GEOTEXTILE FABRIC AND RIPRAP SECTION INSTALLATION PRIOR TO STORM WATER FLOW.



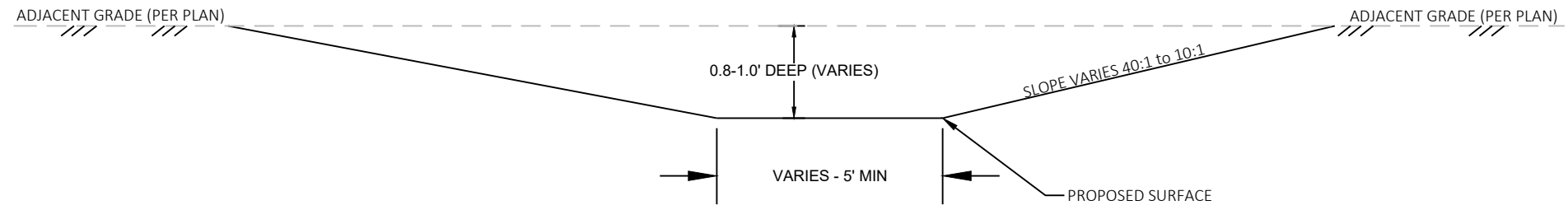
**RIPRAP AND GEOTEXTILE FABRIC DETAIL  
AT APRON ENDWALLS**

SER (20180101)

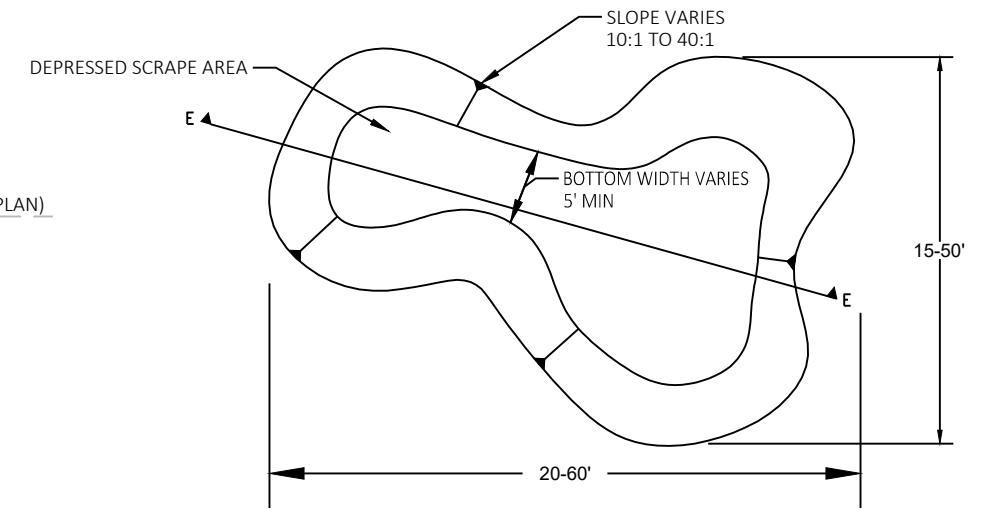


**GRADING DETAIL AROUND TREES TO REMAIN**

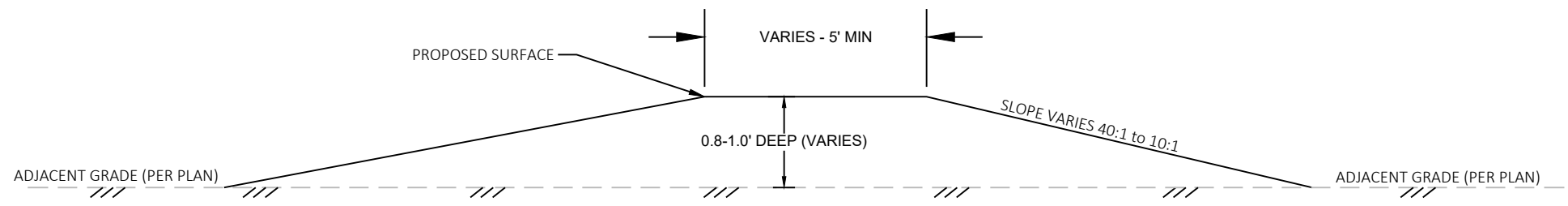
\*OR AS DETERMINED BY THE ENGINEER IN THE FIELD



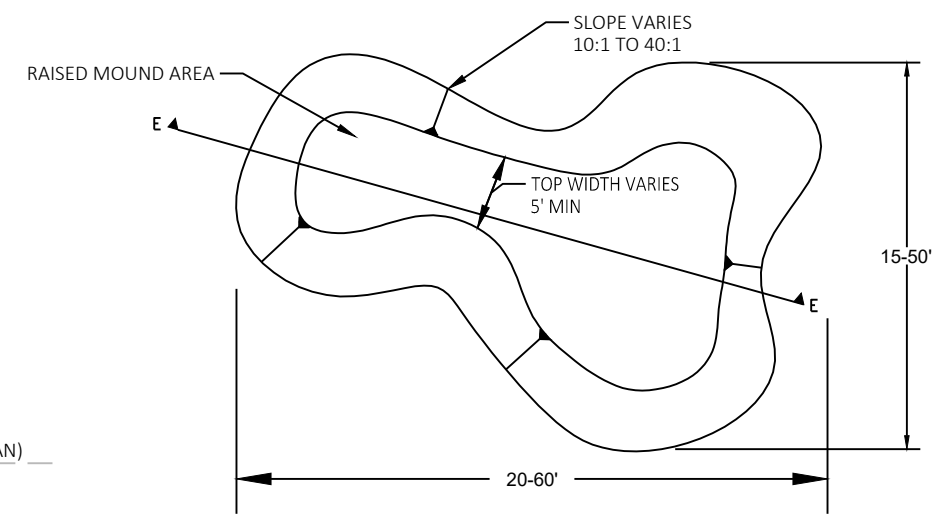
WETLAND DEPRESSION  
SECTION E-E  
NOT TO SCALE



WETLAND DEPRESSION  
PLAN VIEW  
NOT TO SCALE



WETLAND MOUND  
SECTION E-E  
NOT TO SCALE

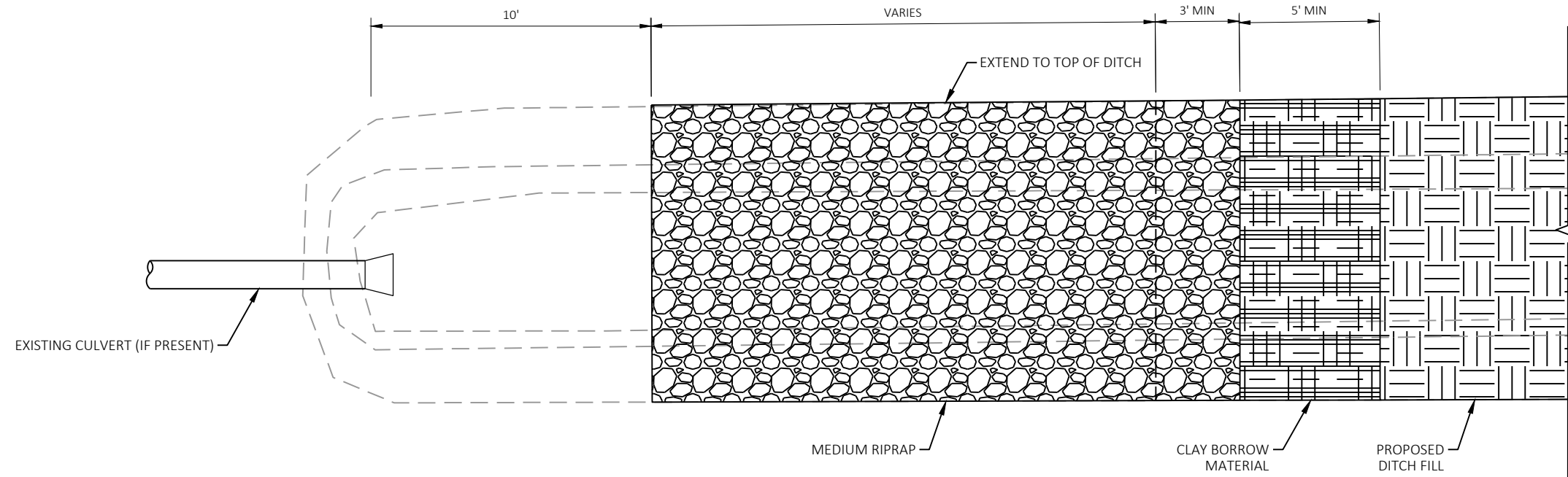


WETLAND MOUND  
PLAN VIEW  
NOT TO SCALE

NOTES:

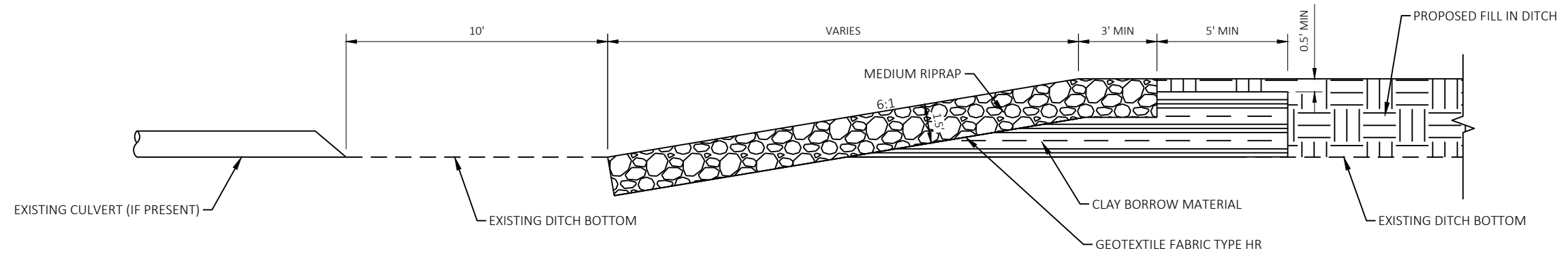
1. PLAN VIEW OF MOUNDS AND DEPRESSIONS ARE SHOWN FOR REFERENCE. IRREGULARITIES AND VARIATIONS IN SHAPE, DIRECTION, AND SIDE SLOPE ARE PREFERRED.
2. SPOILS CREATED BY WETLAND DEPRESSIONS SHALL BE USED TO CREATE WETLAND MOUNDS.
3. REFER TO THE MICROTOPOGRAPHY GRADING SPECIAL PROVISIONS FOR LOCATIONS AND FREQUENCIES OF WETLAND MOUNDS AND WETLAND DEPRESSIONS.

TYPICAL MICROTOPOGRAPHY DETAIL



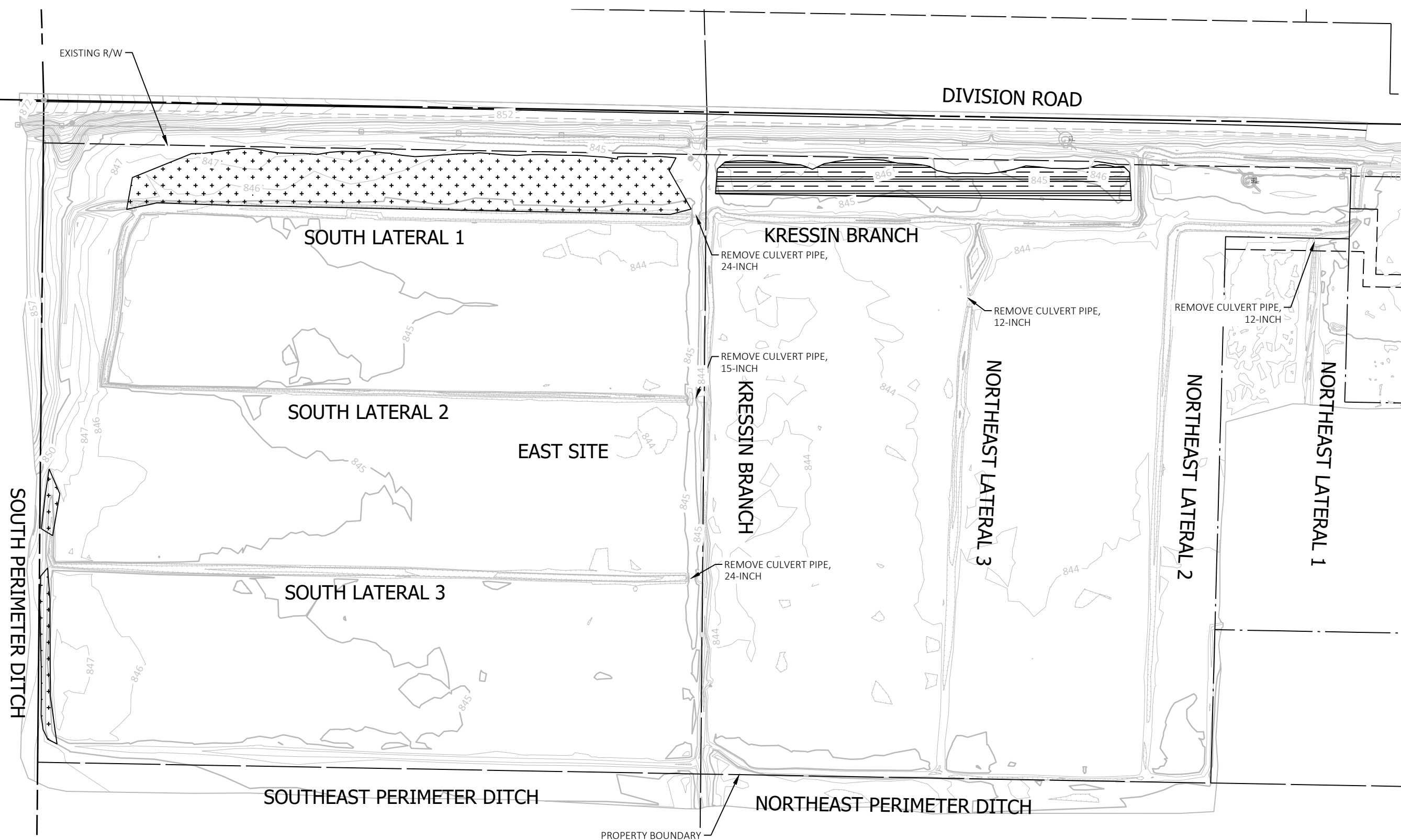
- NOTE:
1. LENGTH OF RIPRAP SLOPE WILL VARY DEPENDING ON DEPTH OF DITCH FILL.
  2. WHEN NO CULVERT IS PRESENT, RIPRAP SLOPE SHALL TERMINATE AT THE GRADING LIMITS.

PLAN VIEW

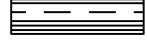
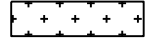


PROFILE VIEW

### RIPRAP SLOPE WITH CLAY PLUG

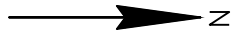


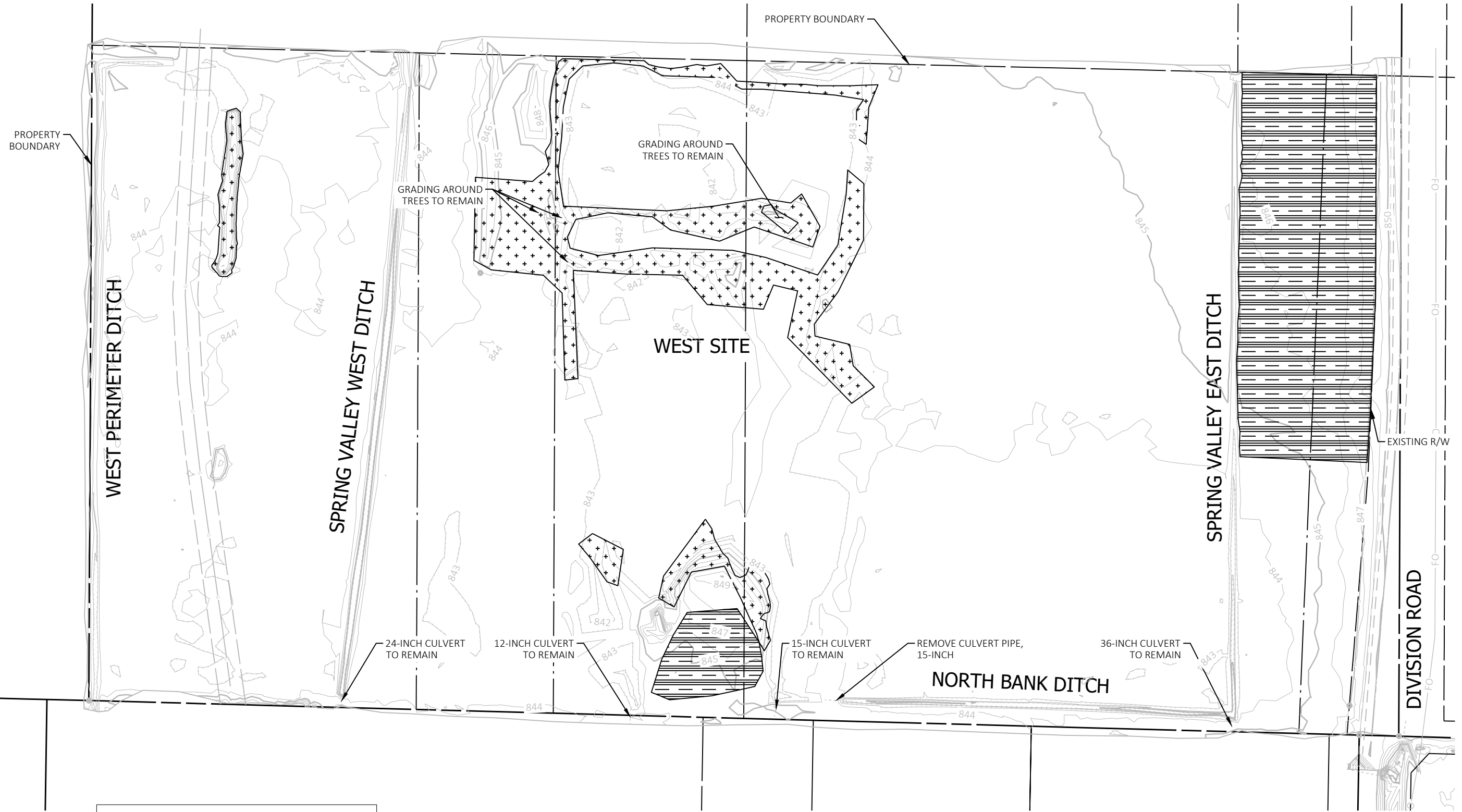
**LEGEND**

	SALVAGED TOPSOIL
	CLEARING/GRUBBING

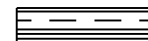
**NOTE:**

1. CONFIRM SALVAGED TOPSOIL AND GRUBBING LIMITS WITH ENGINEER PRIOR TO STARTING WORK.
2. REFER TO THE GENERAL NOTES FOR ADDITIONAL SALVAGED TOPSOIL REQUIREMENTS.

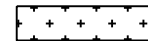




LEGEND



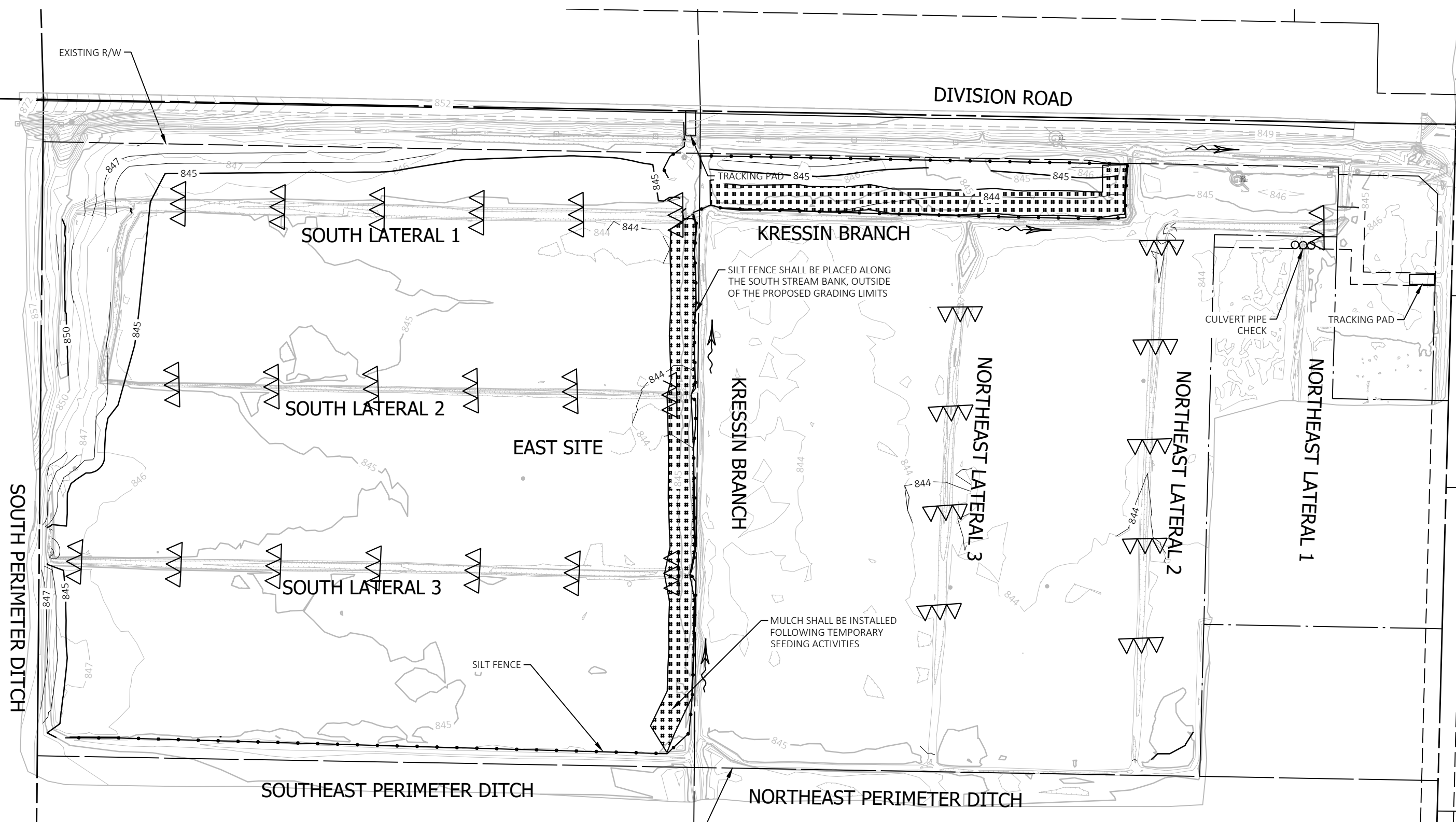
SALVAGED TOPSOIL




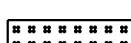


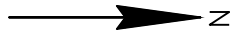
CLEARING/GRUBBING

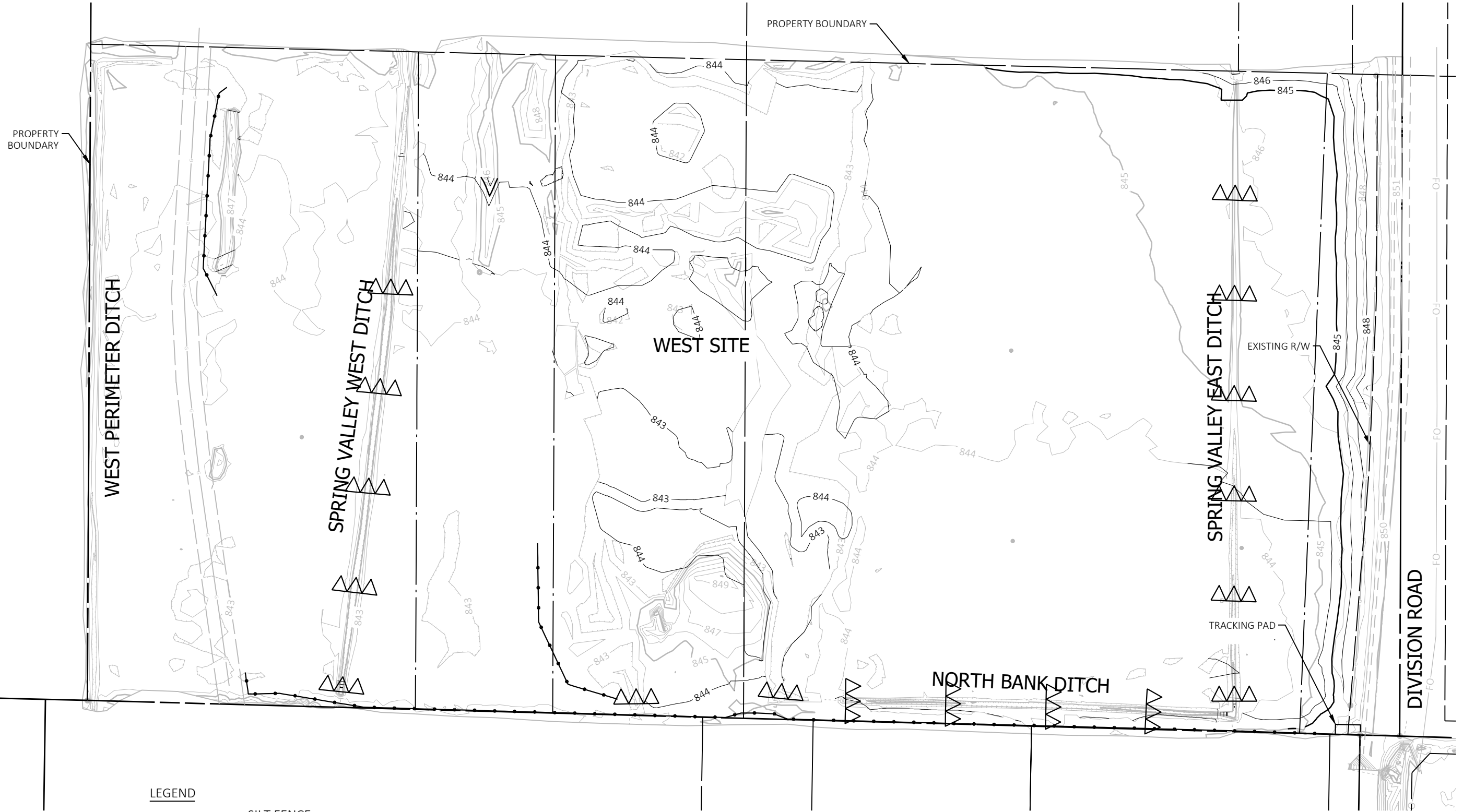
NOTE:

1. CONFIRM SALVAGED TOPSOIL AND GRUBBING LIMITS WITH ENGINEER PRIOR TO STARTING WORK.
2. REFER TO THE GENERAL NOTES FOR ADDITIONAL SALVAGED TOPSOIL REQUIREMENTS.

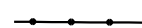





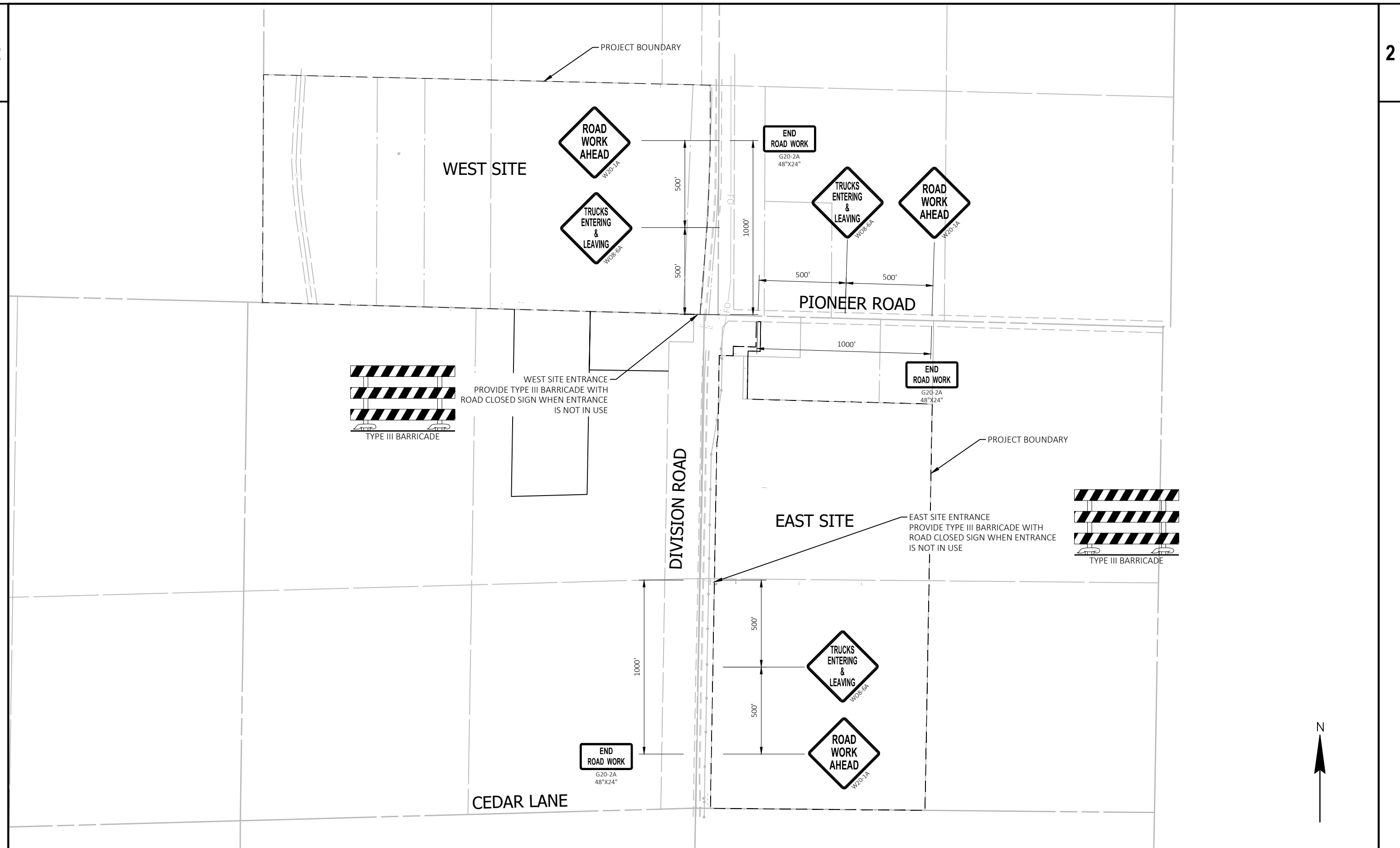
- LEGEND**
-  SILT FENCE
  -  TEMPORARY DITCH CHECK
  -  CULVERT PIPE CHECK
  -  MULCHING

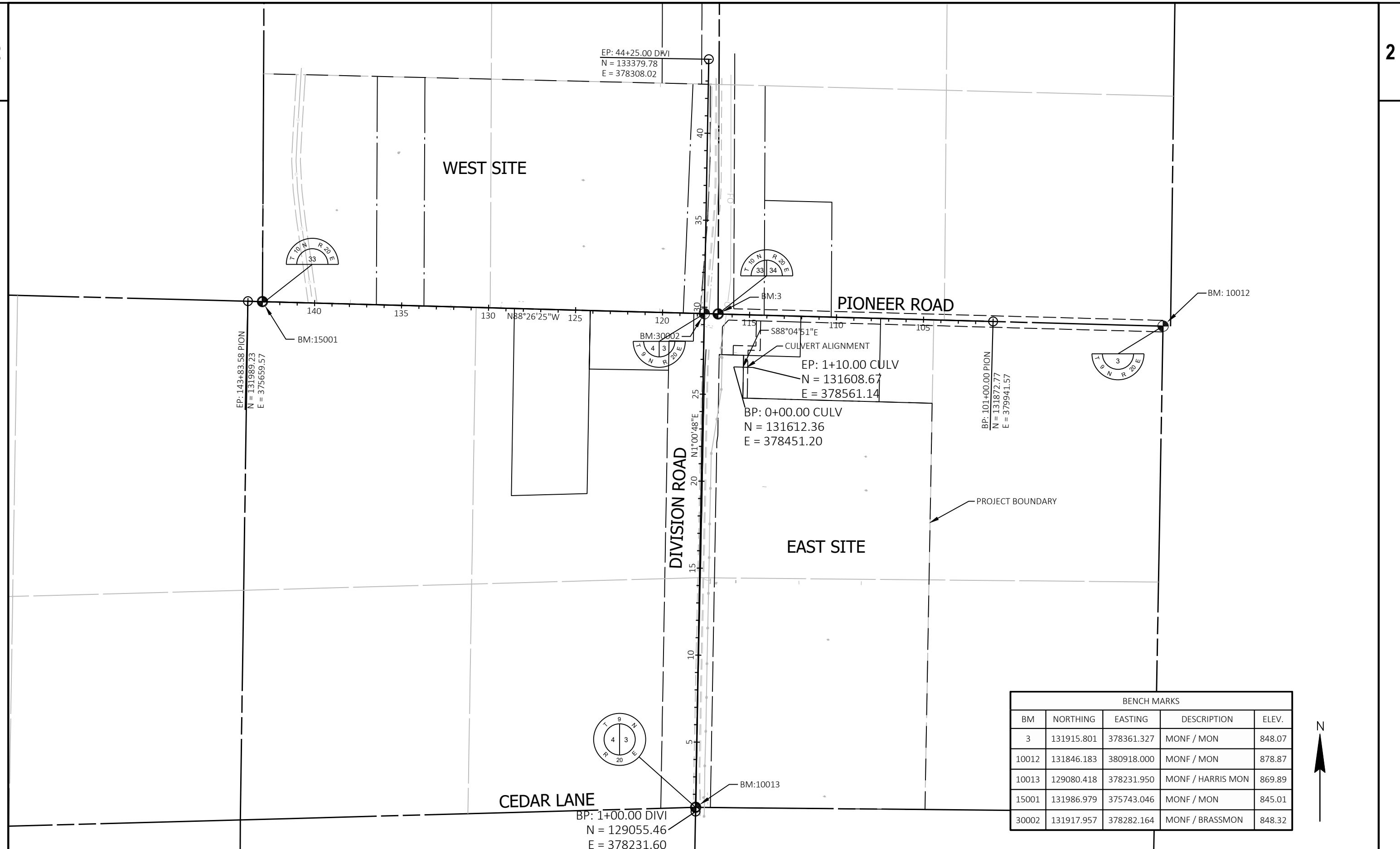




LEGEND

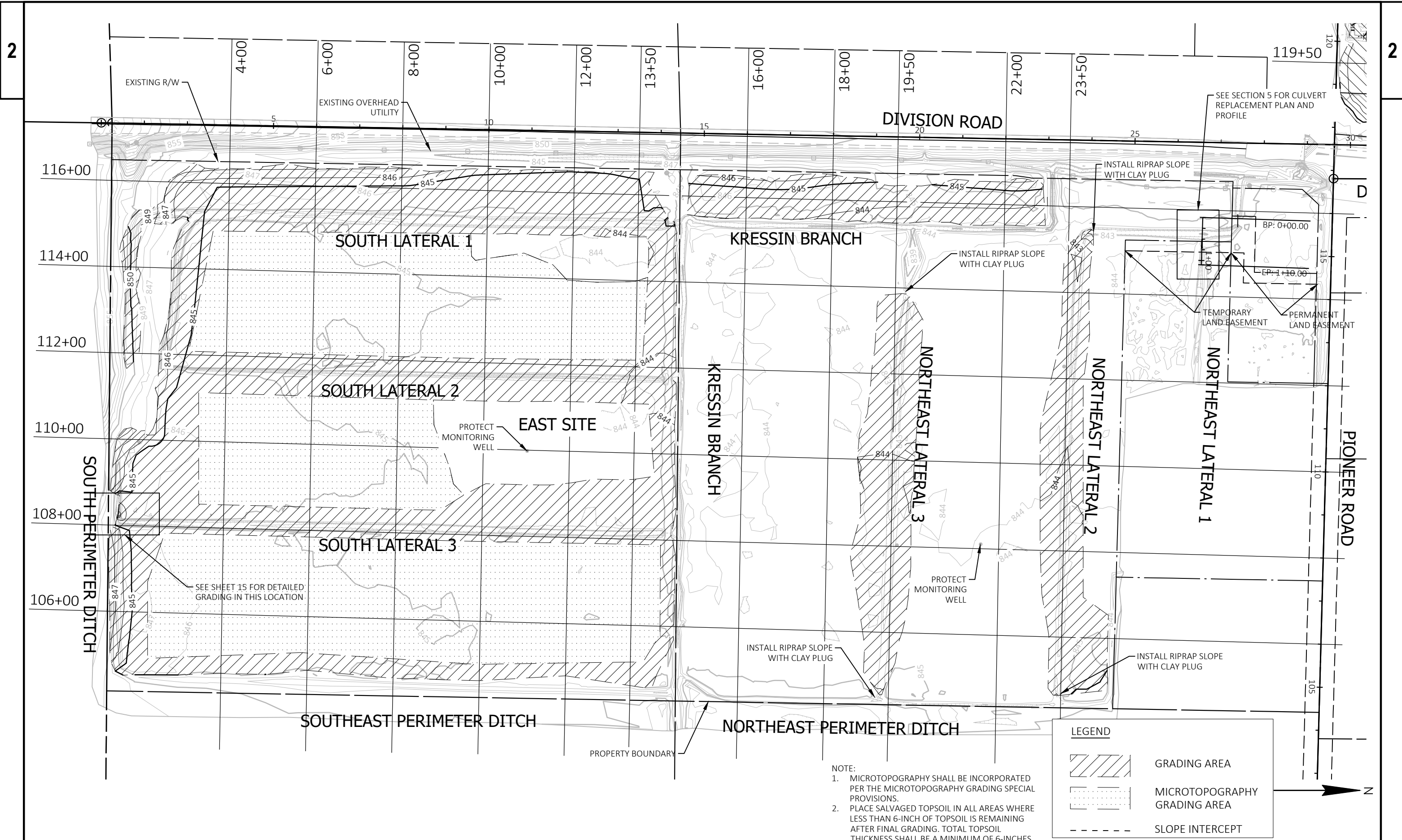
-  SILT FENCE
-  TEMPORARY DITCH CHECK
-  CULVERT PIPE CHECK
-  MULCHING




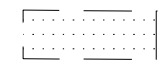



BENCH MARKS				
BM	NORTHING	EASTING	DESCRIPTION	ELEV.
3	131915.801	378361.327	MONF / MON	848.07
10012	131846.183	380918.000	MONF / MON	878.87
10013	129080.418	378231.950	MONF / HARRIS MON	869.89
15001	131986.979	375743.046	MONF / MON	845.01
30002	131917.957	378282.164	MONF / BRASSMON	848.32

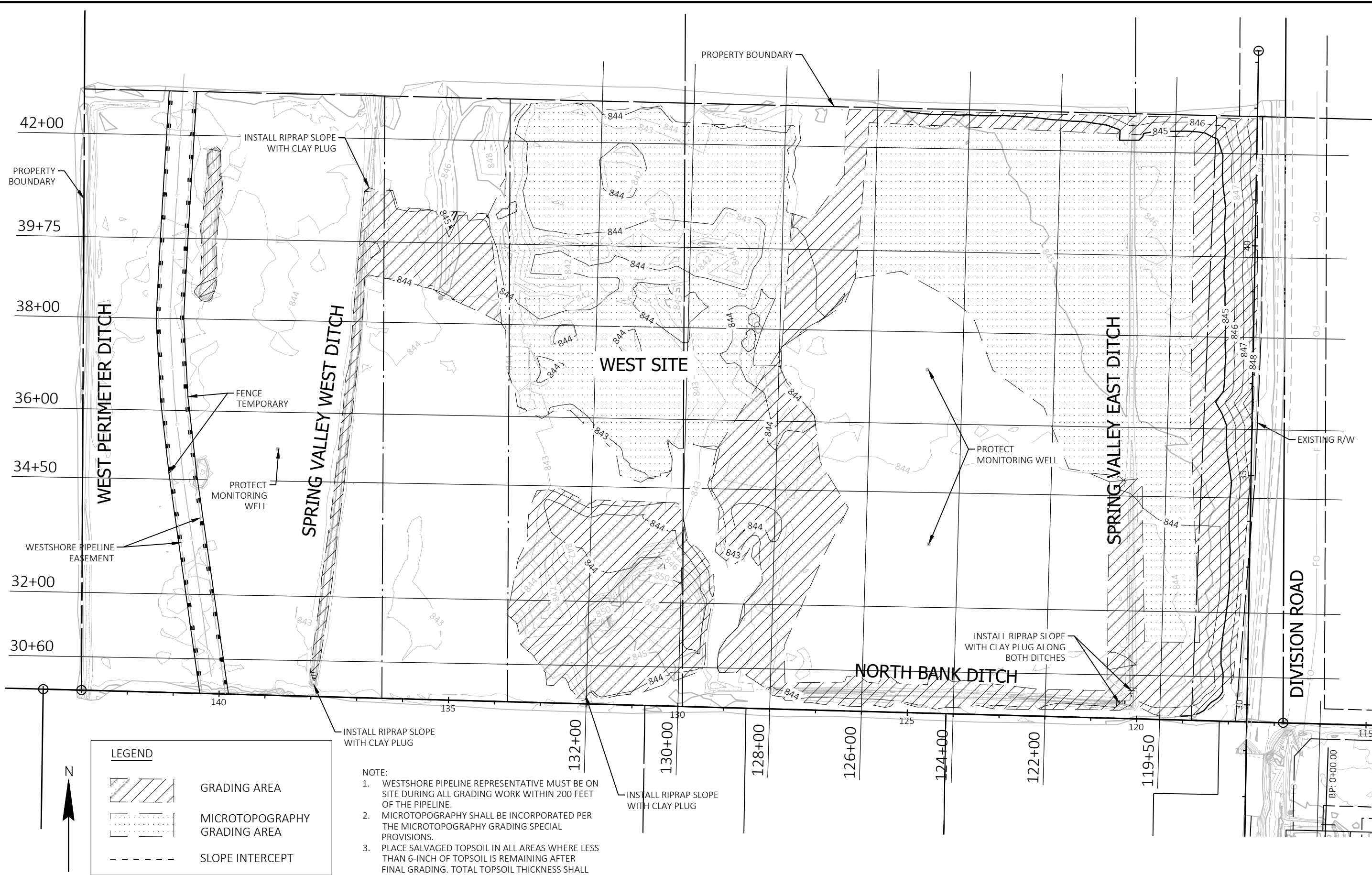







NOTE:  
 1. MICROTOPOGRAPHY SHALL BE INCORPORATED PER THE MICROTOPOGRAPHY GRADING SPECIAL PROVISIONS.  
 2. PLACE SALVAGED TOPSOIL IN ALL AREAS WHERE LESS THAN 6-INCH OF TOPSOIL IS REMAINING AFTER FINAL GRADING. TOTAL TOPSOIL THICKNESS SHALL BE A MINIMUM OF 6-INCHES.

LEGEND	
	GRADING AREA
	MICROTOPOGRAPHY GRADING AREA
	SLOPE INTERCEPT



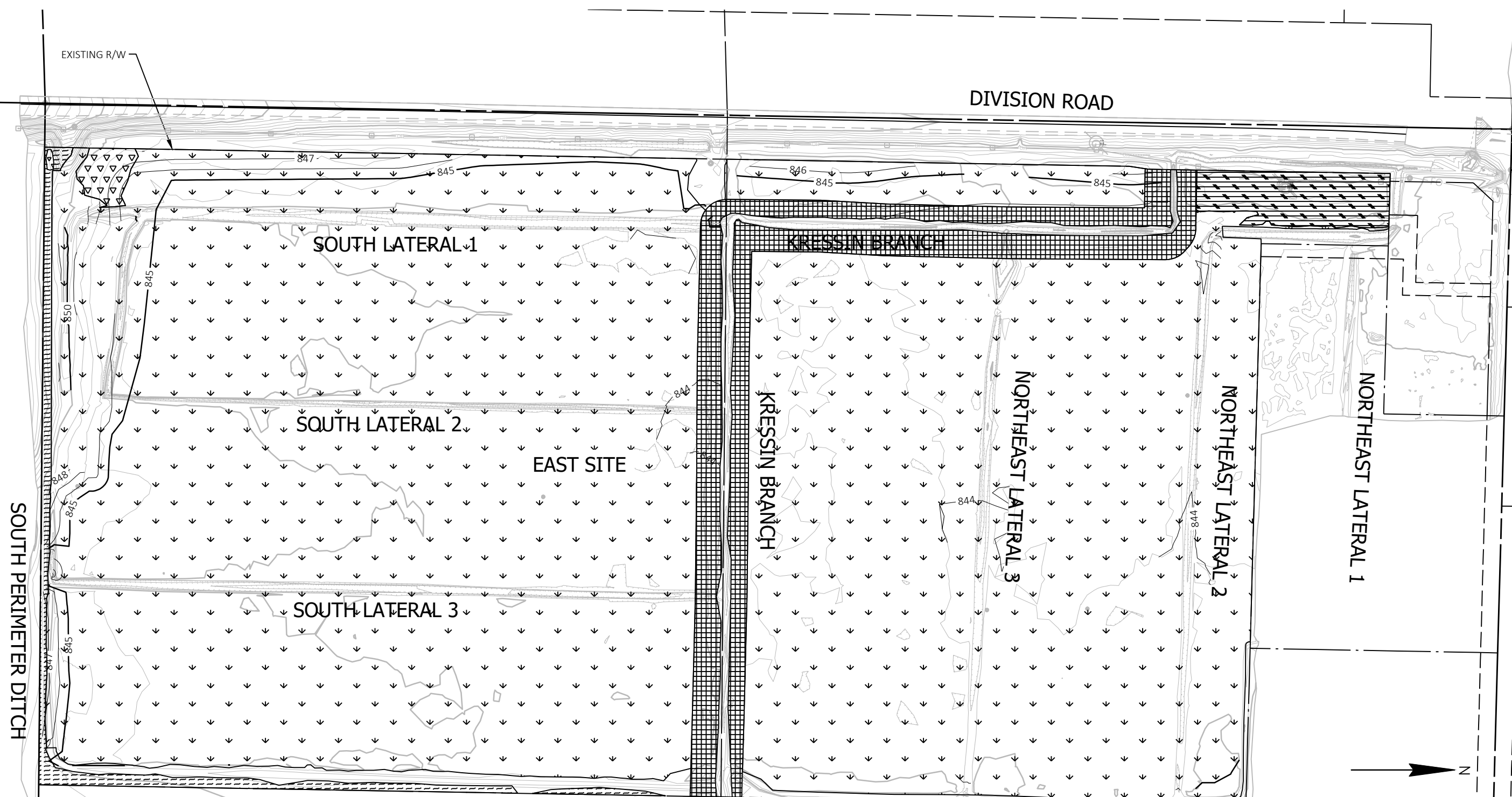


LEGEND

-  GRADING AREA
-  MICROTOPOGRAPHY GRADING AREA
-  SLOPE INTERCEPT

NOTE:

1. WESTSHORE PIPELINE REPRESENTATIVE MUST BE ON SITE DURING ALL GRADING WORK WITHIN 200 FEET OF THE PIPELINE.
2. MICROTOPOGRAPHY SHALL BE INCORPORATED PER THE MICROTOPOGRAPHY GRADING SPECIAL PROVISIONS.
3. PLACE SALVAGED TOPSOIL IN ALL AREAS WHERE LESS THAN 6-INCH OF TOPSOIL IS REMAINING AFTER FINAL GRADING. TOTAL TOPSOIL THICKNESS SHALL BE A MINIMUM OF 6-INCHES.

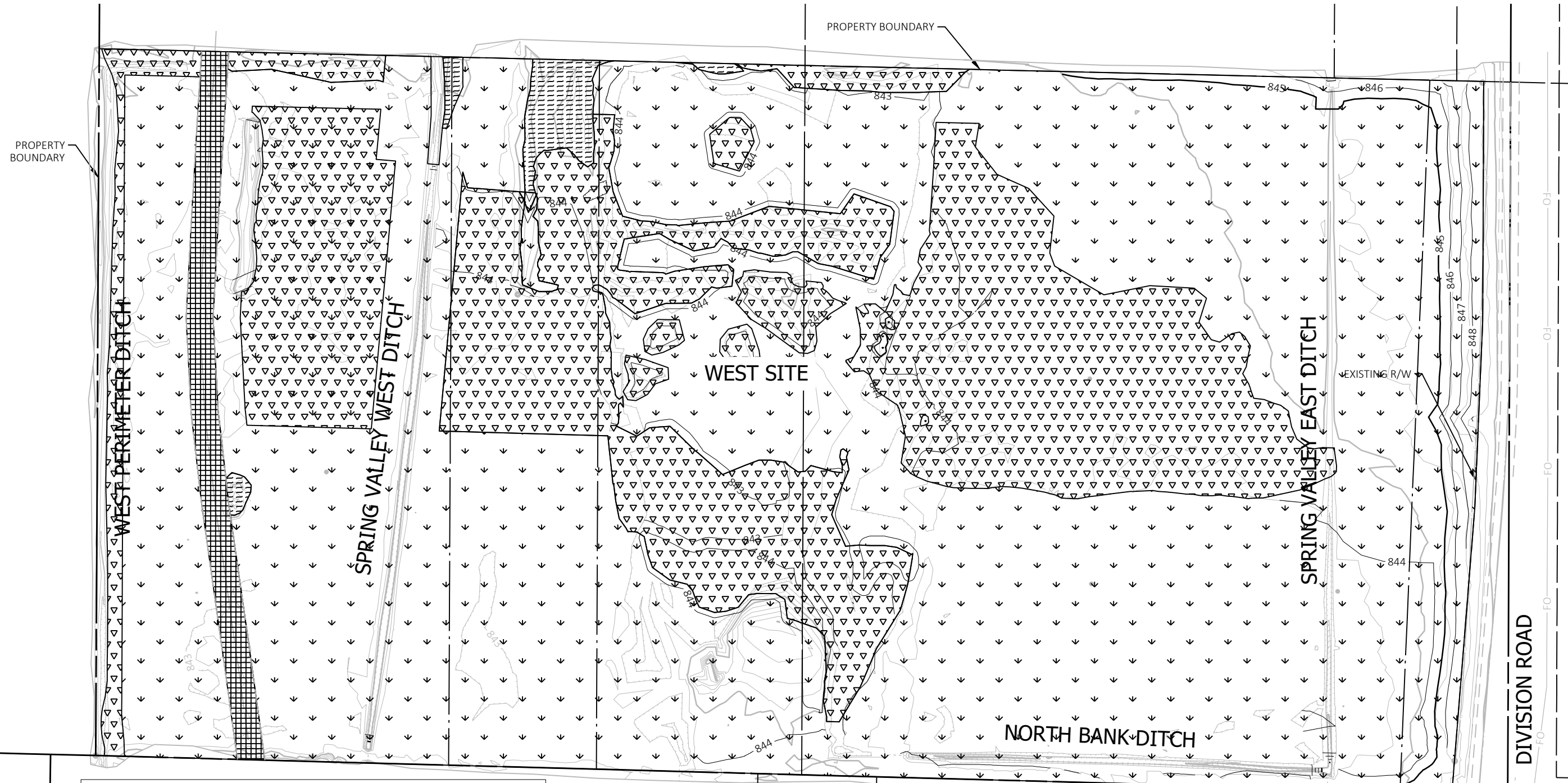


**LEGEND**

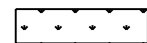
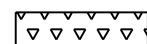

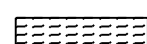

	SEEDING MIX A (WET MEADOW)
	SEEDING MIX B (WOODED SWAMP & SHRUB SWAMP)
	SEEDING MIX C (UPLAND BUFFER PRAIRIE)
	SEEDING MIX D (UPLAND BUFFER FOREST)
	SEEDING MIX E (WET MEADOW - NO CREDIT AREAS)

**NOTE:**

1. ALL DISTURBED AREAS SHALL BE SEEDED WITH TEMPORARY SEED FOLLOWING COMPLETION OF GRADING ACTIVITIES IN THAT AREA.
2. INSTALL PERMANENT SEED MIX AFTER COMPLETION OF ALL GRADING ACTIVITIES. NO NATIVE SEEDING MAY BE INSTALLED PRIOR TO OCTOBER 15TH.



LEGEND

-  SEEDING MIX A (WET MEADOW)
-  SEEDING MIX B (WOODED SWAMP & SHRUB SWAMP)
-  SEEDING MIX C (UPLAND BUFFER PRAIRIE)
-  SEEDING MIX D (UPLAND BUFFER FOREST)
-  SEEDING MIX E (WET MEADOW - NO CREDIT AREAS)

NOTE:

1. ALL DISTURBED AREAS SHALL BE SEEDDED WITH TEMPORARY SEED FOLLOWING COMPLETION OF GRADING ACTIVITIES IN THAT AREA.
2. INSTALL PERMANENT SEED MIX AFTER COMPLETION OF ALL GRADING ACTIVITIES. NO NATIVE SEEDING MAY BE INSTALLED PRIOR TO OCTOBER 15TH.



Estimate Of Quantities

1009-23-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0115	Clearing	ACRE	6.800	6.800
0004	201.0215	Grubbing	ACRE	6.800	6.800
0006	203.0100	Removing Small Pipe Culverts	EACH	6.000	6.000
0008	205.0100	Excavation Common	CY	49,000.000	49,000.000
0010	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0012	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	19.000	19.000
0014	606.0200	Riprap Medium	CY	143.000	143.000
0016	616.0600.S	Fence Temporary	LF	2,674.000	2,674.000
0018	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1009-23-72	EACH	1.000	1.000
0020	619.1000	Mobilization	EACH	1.000	1.000
0022	625.0500	Salvaged Topsoil	SY	32,100.000	32,100.000
0024	627.0200	Mulching	SY	12,900.000	12,900.000
0026	628.1504	Silt Fence	LF	8,426.000	8,426.000
0028	628.1520	Silt Fence Maintenance	LF	8,426.000	8,426.000
0030	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0032	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0034	628.7504	Temporary Ditch Checks	LF	920.000	920.000
0036	628.7555	Culvert Pipe Checks	EACH	1.000	1.000
0038	628.7560	Tracking Pads	EACH	3.000	3.000
0040	642.5201	Field Office Type C	EACH	1.000	1.000
0042	643.0420	Traffic Control Barricades Type III	DAY	184.000	184.000
0044	643.0900	Traffic Control Signs	DAY	828.000	828.000
0046	643.5000	Traffic Control	EACH	1.000	1.000
0048	645.0120	Geotextile Type HR	SY	219.000	219.000
0050	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0052	650.9911	Construction Staking Supplemental Control (project) 01. 1009-23-72	EACH	1.000	1.000
0054	SPV.0035	Special 01. Clay Borrow Material	CY	102.000	102.000
0056	SPV.0035	Special 02. Removal of Unsuitable Materials	CY	40.000	40.000
0058	SPV.0060	Special 01. Construction Staking Wetland Site	EACH	1.000	1.000
0060	SPV.0085	Special 01. Seeding Temporary	LB	9,800.000	9,800.000
0062	SPV.0085	Special 02. Wetland Meadow Native Seeding Mixture A	LB	650.000	650.000
0064	SPV.0085	Special 03. Wooded Swamp/Shrub Swamp Native Seeding Mixture B	LB	111.000	111.000
0066	SPV.0085	Special 04. Upland Buffer Prairie Native Seeding Mixture C	LB	9.000	9.000
0068	SPV.0085	Special 05. Upland Buffer Forest Native Seeding Mixture D	LB	9.000	9.000
0070	SPV.0085	Special 06. Wetland Meadow No Credit Areas Native Seeding Mixture E	LB	37.000	37.000
0072	SPV.0180	Special 01. Microtopography Grading	SY	178,950.000	178,950.000

3

<u>GRUBBING</u>		
<u>201.0215</u>		
LOCATION	ACRE	REMARKS
WEST SITE	4.2	
EAST SITE	2.9	
<b>TOTAL</b>	<b>7.1</b>	

<u>REMOVING SMALL PIPE CULVERTS</u>		
<u>203.0100</u>		
LOCATION	EACH	REMARKS
WEST SITE	1	15-inch (PLASTIC)
EAST SITE	5	12-inch (METAL), 12-inch (METAL), 15-inch (METAL), 24-inch (METAL), 24-inch (METAL)
<b>TOTAL</b>	<b>6</b>	

<u>APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH</u>		
<u>521.1012</u>		
LOCATION	EACH	REMARKS
EAST SITE	2	
<b>TOTAL</b>	<b>2</b>	

<u>CULVERT PIPE CORRUGATED STEEL 12-INCH</u>		
<u>521.3112</u>		
LOCATION	LF	REMARKS
EAST SITE	19	CULVERT REPLACEMENT, 0.064-INCH MIN. WALL THICKNESS
<b>TOTAL</b>	<b>19</b>	

<u>REMOVAL OF UNSUITABLE MATERIALS</u>		
<u>SPV.0035.02</u>		
LOCATION	CY	REMARKS
WEST SITE	40	
<b>TOTAL</b>	<b>40</b>	

1) REMOVAL OF MATERIALS WILL OCCUR WITHIN THE CENTER LOCATION OF THE WEST SITE WHERE UNNATURAL MATERIAL IS PRESENT.

<u>RIPRAP MEDIUM</u>		
<u>606.0200</u>		
LOCATION	CY	REMARKS
WEST SITE	54	RIPRAP SLOPES
EAST SITE	81	RIPRAP SLOPES
EAST SITE	8	CULVERT ENDWALLS
<b>TOTAL</b>	<b>143</b>	

<u>GEOTEXTILE, TYPE HR</u>		
<u>645.0120</u>		
LOCATION	SY	REMARKS
WEST SITE	85	RIPRAP SLOPES
EAST SITE	118	RIPRAP SLOPES
EAST SITE	16	CULVERT ENDWALLS
<b>TOTAL</b>	<b>219</b>	

<u>FENCE TEMPORARY</u>		
<u>616.0600</u>		
LOCATION	LF	REMARKS
WEST SITE	2640	PIPELINE EXCLUSIONARY FENCE
EAST SITE	34	GROUNDWATER SPRING EXCLUSIONARY FENCE
<b>TOTAL</b>	<b>2674</b>	

<u>TRAFFIC CONTROL SUMMARY</u>		
	<u>643.0420</u>	<u>643.0900</u>
	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL SIGNS
LOCATION	DAY	DAY
PROJECT	184	828
<b>TOTAL</b>	<b>184</b>	<b>828</b>

3

CONSTRUCTION STAKING SUMMARY			
	650.6000	650.9911	SPV. 0060.01
	CONSTRUCTION STAKING PIPE CULVERTS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)	CONSTRUCTION STAKING WETLAND SITE
LOCATION	EACH	EACH	EACH
WEST SITE	-	-	-
EAST SITE	1	-	-
PROJECT	-	1	1
<b>TOTAL</b>	<b>1</b>	<b>1</b>	<b>1</b>

EROSION CONTROL ITEMS										
				628.1504	628.1520	628.1905	628.1910	628.7504	628.7555	628.7560
				SILT FENCE	SILT FENCE MAINTENANCE	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL	TEMPORARY DITCH CHECK	CULVERT PIPE CHECKS	TRACKING PADS
STATION	TO	STATION	LOCATION	LF	LF	EACH	EACH	LF	EACH	EACH
			WEST SITE	3044	3044	-	-	340	-	1
			EAST SITE	4332	4332	-	-	580	1	2
			TOPSOIL STOCKPILE	1050	1050	-	-	-	-	-
			PROJECT			2	3			
<b>TOTAL</b>				<b>8426</b>	<b>8426</b>	<b>2</b>	<b>3</b>	<b>920</b>	<b>1</b>	<b>3</b>

EARTHWORK TOTALS								COMMENT:
	SPV.0035.01	SPV.0180.01	205.0100		UNEXPANDED FILL	EXPANDED FILL (2)	MASS ORDINATE +/- (3)	
	CLAY BORROW MATERIAL	MICROTOPOGRAPHY GRADING	COMMON EXCAVATION (1)	EBS EXCAVATION		FACTOR: 1.35		
LOCATION	CY	SY	CUT	CY	CY	CY	CY	
WEST SITE	41	96990	27300	0	24300	32805	-5505	
EAST SITE	61	81960	21700	0	11900	16065	5635	
<b>TOTAL</b>	<b>102</b>	<b>178950</b>	<b>49000</b>	<b>0</b>	<b>36200</b>	<b>48900</b>	<b>130</b>	

- 1) EXCAVATION COMMON IS THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- 2) EXPANDED FILL FACTOR = 1.35. EXPANDED FILL = UNEXPANDED FILL \* FILL FACTOR
- 3) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE LOCATION. PLUS INDICATES AN EXCESS OF MATERIAL WITHIN THE LOCATION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE PROJECT.
- 4) EARTHWORK WILL BE ADJUSTED AS NECESSARY TO BALANCE THE CUT AND FILL VOLUMES, IN EFFORT TO AVOID THE NEED FOR BORROW.

RESTORATION ITEMS											
				627.0200	625.0500	SPV.0085.01	SPV.0085.02	SPV.0085.03	SPV.0085.04	SPV.0085.05	SPV.0085.06
				MULCHING	SALVAGED TOPSOIL	SEEDING TEMPORARY	WETLAND MEADOW NATIVE SEEDING MIXTURE A	WOODED SWAMP/SHRUB SWAMP NATIVE SEEDING MIXTURE B	UPLAND BUFFER PRAIRIE NATIVE SEEDING MIXTURE C	UPLAND BUFFER FOREST NATIVE SEEDING MIXTURE D	WETLAND MEADOW NO CREDIT AREA NATIVE SEEDING MIXTURE E
STATION	TO	STATION	LOCATION	SY	SY	LB	LB	LB	LB	LB	LB
			WEST SITE	-	26390	4,839	310	110	-	4	9
			EAST SITE	10,700	5710	4,856	340	1	9	5	28
			TOPSOIL STOCKPILE			100					
			UNDISTRIBUTED	2,200							
<b>TOTAL</b>				<b>12,900</b>	<b>32,100</b>	<b>9,800</b>	<b>650</b>	<b>111</b>	<b>9</b>	<b>9</b>	<b>37</b>

R/W PROJECT NUMBER 1009-22-22	SHEET NUMBER 4.01	TOTAL SHEETS
FEDERAL PROJECT NUMBER		
<b>PLAT OF RIGHT OF WAY REQUIRED FOR WETLAND MITIGATION CTH G &amp; PIONEER DRIVE</b>		
CTH G	WASHINGTON COUNTY	
DESIGN PROJECT NUMBER: 1009-21-02		

### CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP ●
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT			
NEW R/W LINE	---	SIGN		OFF-PREMISE SIGN	
EXISTING R/W OR HE LINE	---				
PROPERTY LINE	---				
LOT, TIE & OTHER MINOR LINES	---				
SLOPE INTERCEPT	---				
CORPORATE LIMITS	---				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED	---				
BRIDGE	---				
CULVERT	---				

### CONVENTIONAL UTILITY SYMBOLS

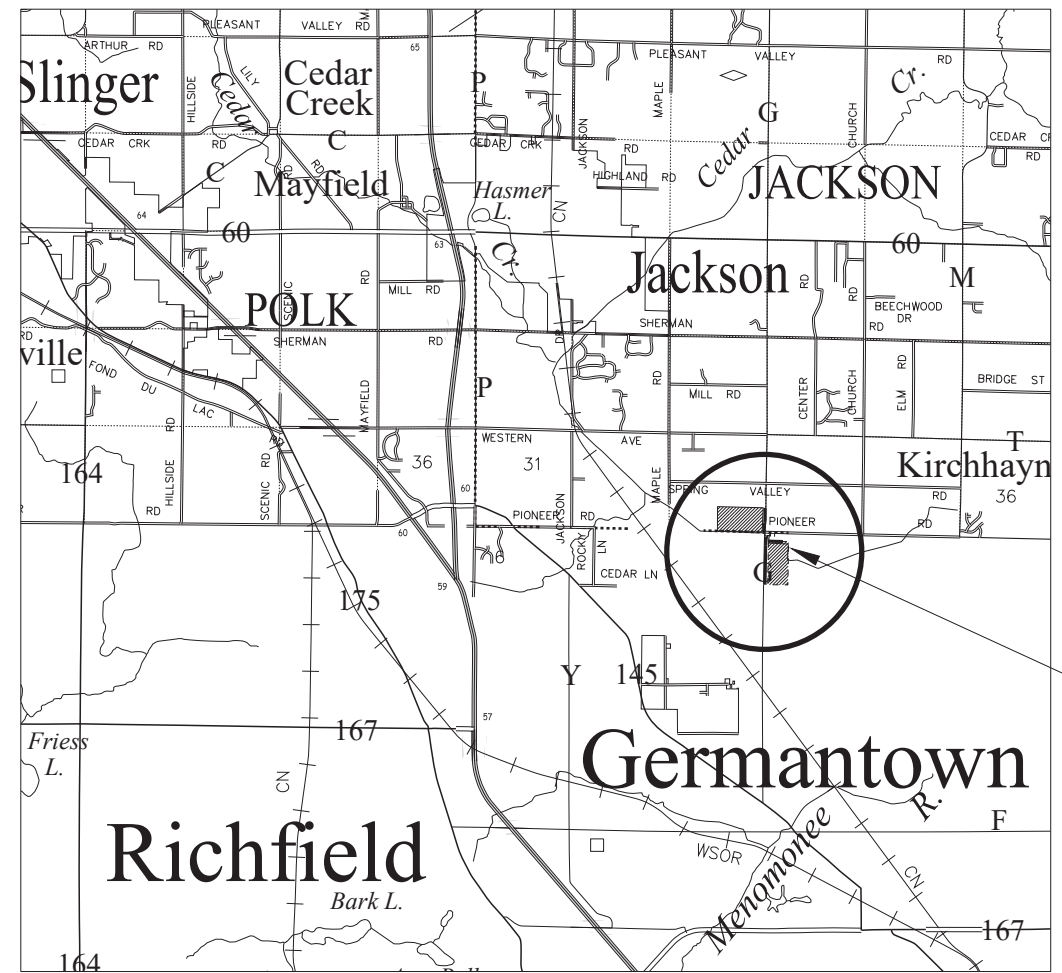
WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
ELECTRIC TOWER	---

### CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS (100')	
AND OTHERS	ET AL	REEL / IMAGE	R/I
BACK	BK	REFERENCE LINE	R/L
BLOCK	BLK	REMAINING	REM
CENTERLINE	C/L	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CERTIFIED SURVEY MAP	CSM		
CONCRETE	CONC	RIGHT	RT
COUNTY	CO	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
DISTANCE	DIST	SEPTIC VENT	SEPV
CORNER	COR	SQUARE FEET	SF
DOCUMENT NUMBER	DOC	STATE TRUNK HIGHWAY	STH
EASEMENT	EASE	STATION	STA
EXISTING	EX	TELEPHONE PEDESTAL	TP
GAS VALVE	GV	TEMPORARY LIMITED EASEMENT	TLE
GRID NORTH	GN		
HIGHWAY EASEMENT	HE	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

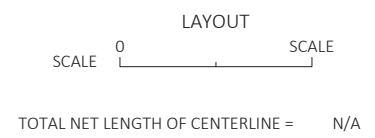
### CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB



PROJECT LOCATION

**NOTES:**  
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WASHINGTON COUNTY, NAD83 2011 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.  
 RIGHT-OF-WAY MONUMENTS ARE ARE TYPE 2 (3/4" REBAR TYPICAL) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.  
 RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.



REVISION DATE	<b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b>
	APPROVED FOR THE DEPARTMENT DATE: 07/01/2024 <i>Robert A. Duffield</i> (Signature)


# SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	*OWNER	INTEREST REQUIRED	R/W ACRE(S) REQUIRED (ACRES)			PLE AREA	TLE AREA	PARCEL NUMBER
				NEW	EXISTING	TOTAL			
1	4.05	KWK OF SPRING VALLEY, LLC	FEE, TLE	58.6	--	--	--	0.141	1
2	4.05	SPRING VALLEY, LLC	FEE	8.2	--	--	--	--	2
3	4.04, 4.05	WASHINGTON COUNTY	FEE	--	11.9	--	--	--	3
4	4.05	KWK OF SPRING VALLEY, LLC	PLE		--	--	0.230	--	4
5	4.04	KWK OF SPRING VALLEY, LLC	FEE	45.7	--	--	--	--	5
6	4.04	KWK OF SPRING VALLEY, LLC	FEE	19.7	--	--	--	--	6

4

4

REVISION DATE	DATE	SCALE, FEET	HWY: CTH G	STATE R/W PROJECT NUMBER	1009-22-22	PLAT SHEET	4.02
	GRID FACTOR		COUNTY: WASHINGTON	DESIGN PROJECT NUMBER	1009-21-02	PS&E SHEET	<b>E</b>

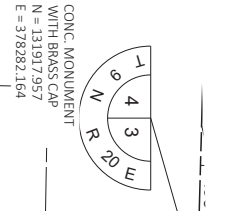
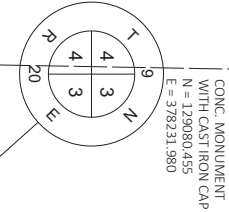


4

4

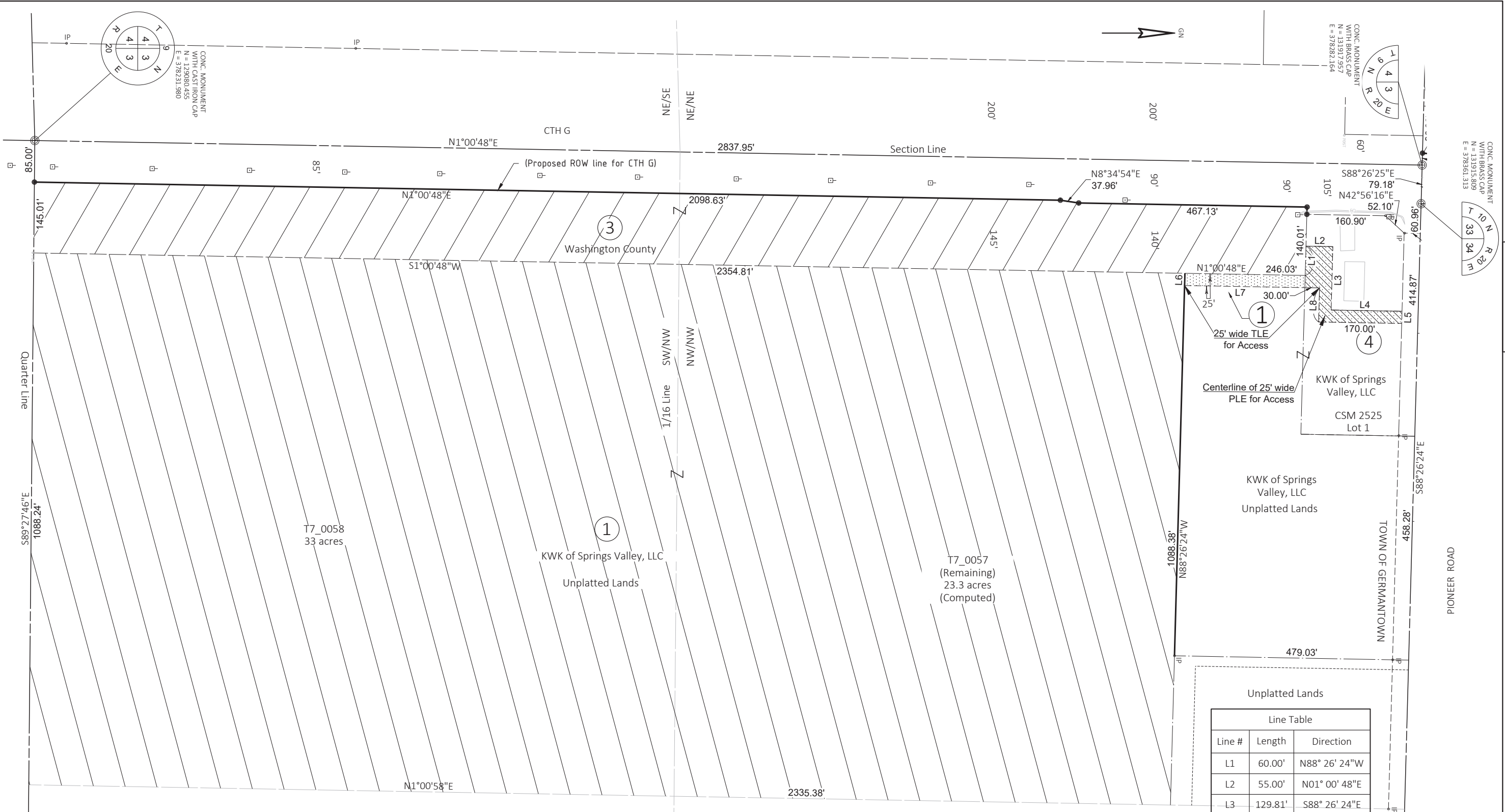
REVISION DATE	DATE 07/01/2024	SCALE, FEET	HWY: CTH G	STATE R/W PROJECT NUMBER	1009-22-22	PLAT SHEET	4.03
	GRID FACTOR	0 200' 400'	COUNTY: WASHINGTON	DESIGN PROJECT NUMBER	1009-21-02	PS&E SHEET	

E



4

4



ROAD NAME	BASIS OF EXISTING R/W AND ACCESS	YEAR	WIDTH
CTH G	2744-2-71	1973	460'
CHT G	2744-1-70	1970	VARIES

Line Table		
Line #	Length	Direction
L1	60.00'	N88° 26' 24"W
L2	55.00'	N01° 00' 48"E
L3	129.81'	S88° 26' 24"E
L4	145.00'	N01° 00' 48"E
L5	25.00'	N88° 26' 24"W
L6	25.00'	N88° 26' 24"W
L7	246.03'	S01° 00' 48"W
L8	69.81'	N88° 26' 24"W

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WASHINGTON COUNTY, NAD83 2011 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

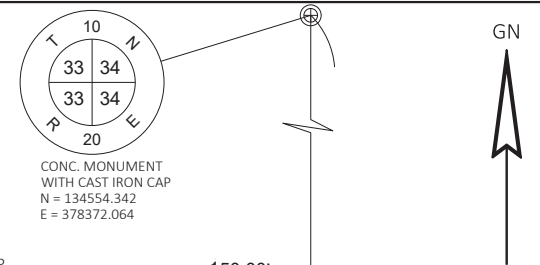
RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4"x24" REBAR) AND WILL BE PLACED PRIOR TO COMPLETION OF THE PROJECT.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

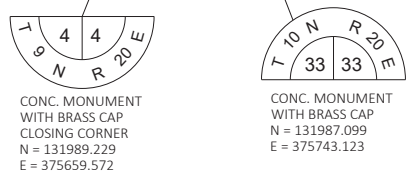
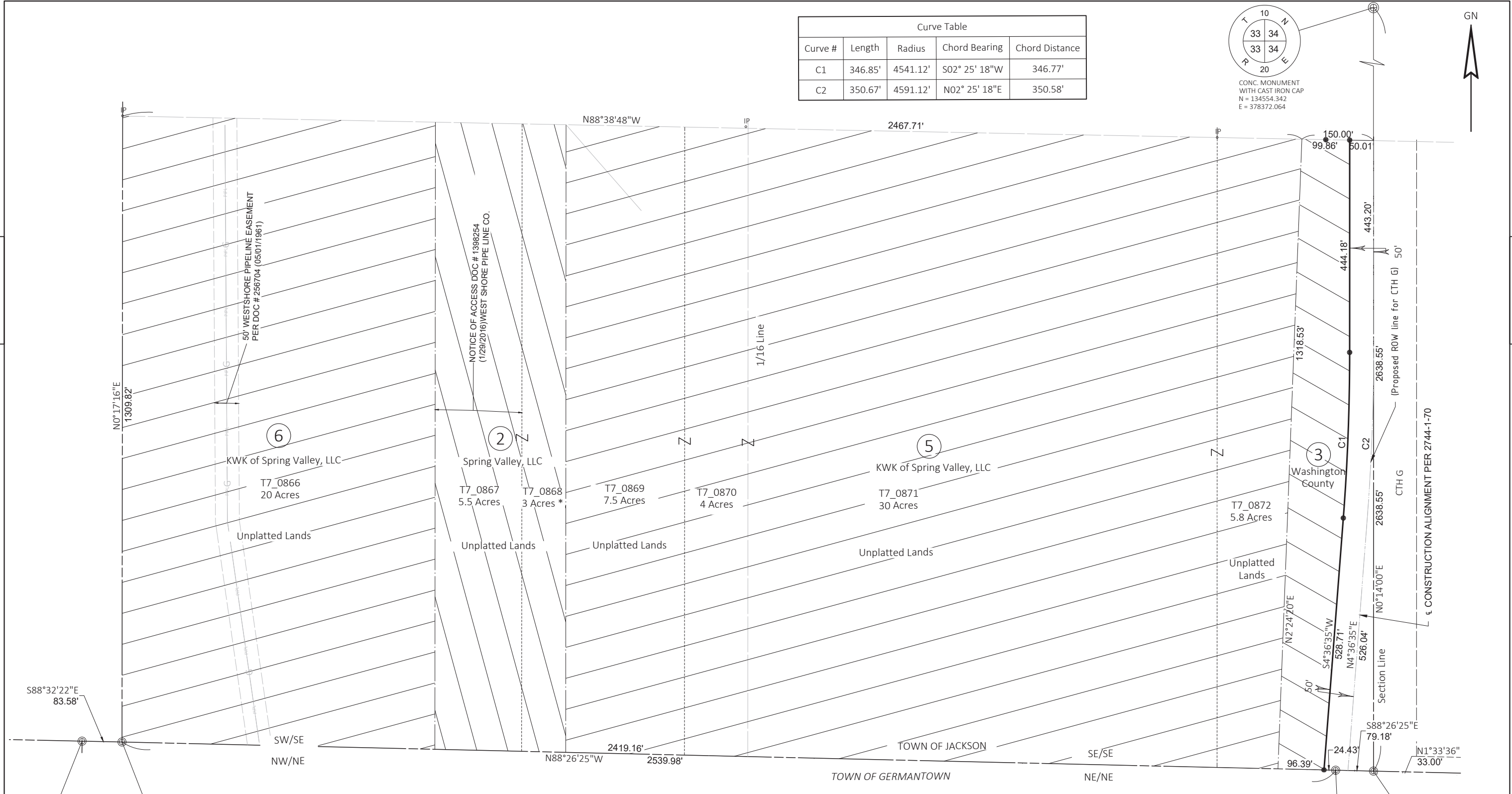
REVISION DATE	DATE <u>07/01/2024</u>	SCALE, FEET 0 50' 100'	HWY: CTH G	STATE R/W PROJECT NUMBER 1009-22-22	PLAT SHEET 4.04
	GRID FACTOR		COUNTY: WASHINGTON COUNTY	DESIGN PROJECT NUMBER 1009-21-02	PS&E SHEET

Curve Table				
Curve #	Length	Radius	Chord Bearing	Chord Distance
C1	346.85'	4541.12'	S02° 25' 18"W	346.77'
C2	350.67'	4591.12'	N02° 25' 18"E	350.58'



4

4

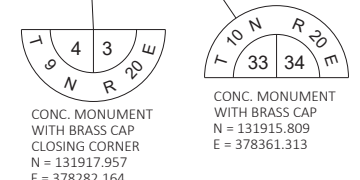


POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WASHINGTON COUNTY, NAD83 2011 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

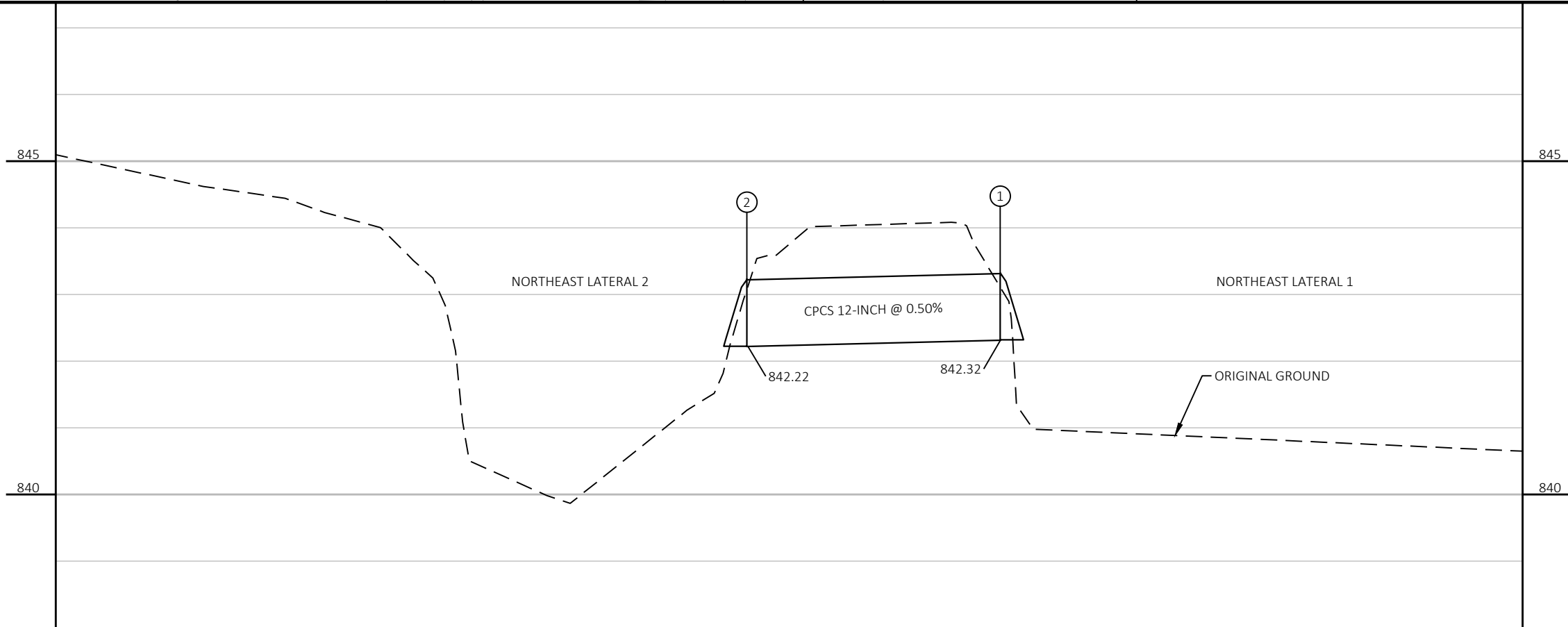
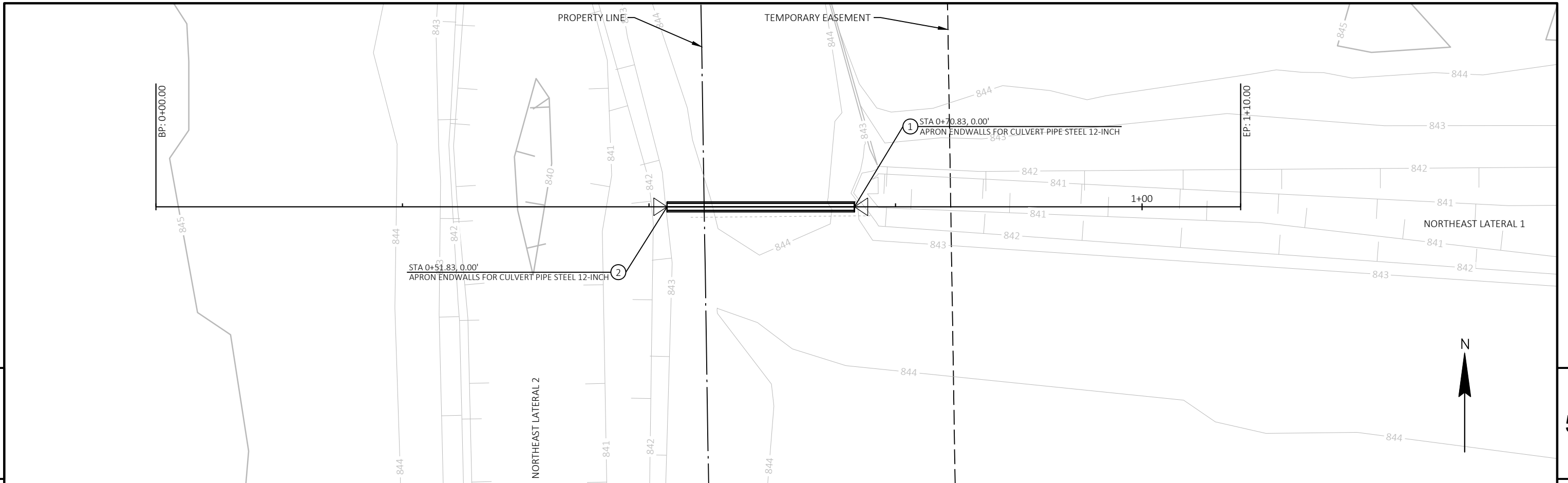
RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4"x24" REBAR) AND WILL BE PLACED PRIOR TO COMPLETION OF THE PROJECT.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.



REVISION DATE	DATE <u>07/01/2024</u>	SCALE, FEET 0 50' 100'	HWY: CTH G	STATE R/W PROJECT NUMBER 1009-22-22	PLAT SHEET 4.05
	GRID FACTOR		COUNTY: WASHINGTON	DESIGN PROJECT NUMBER 1009-21-02	PS&E SHEET



PROJECT NO: 1009-23-72

HWY: NON-HWY

COUNTY: WASHINGTON

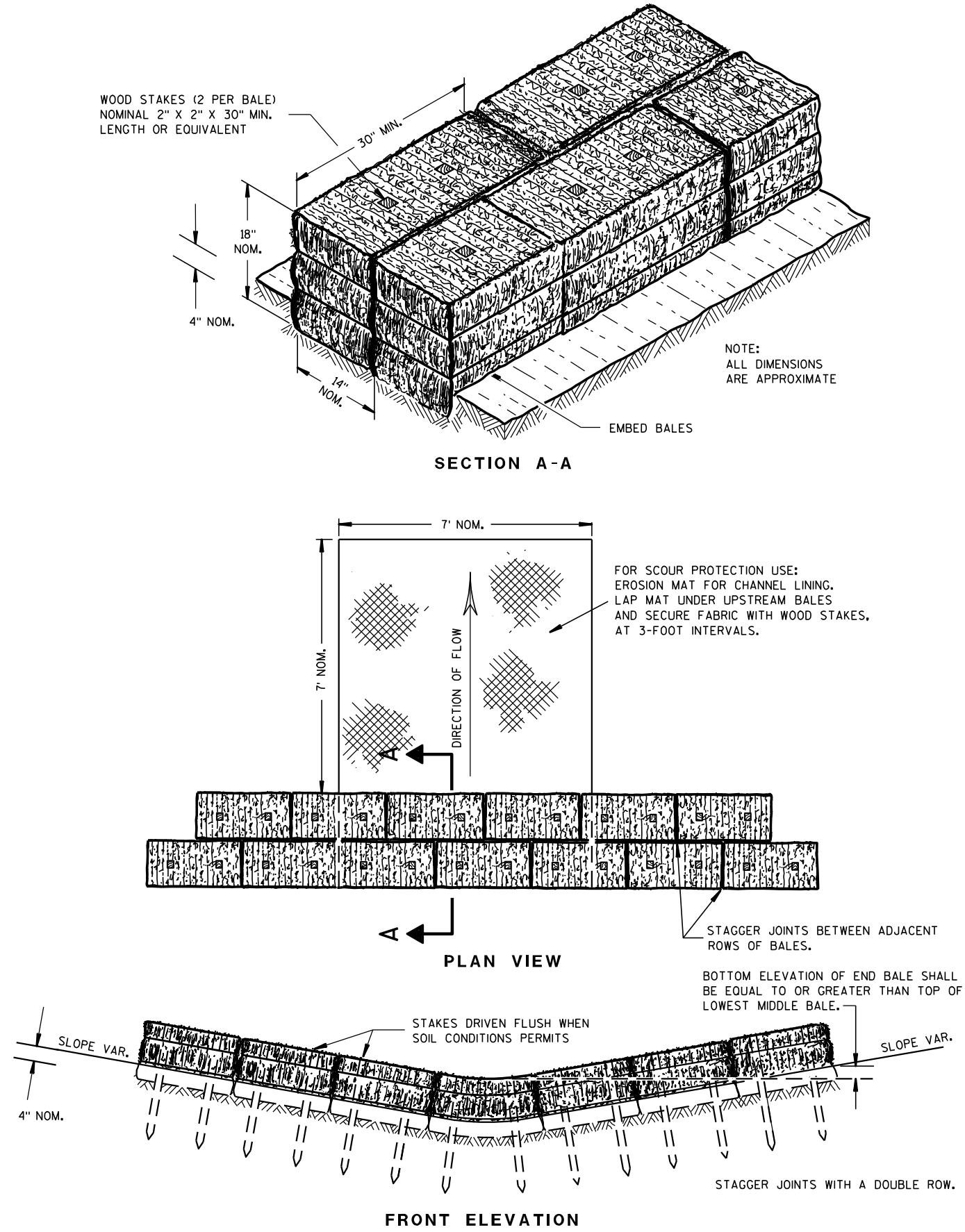
CULVERT PLAN AND PROFILE

SHEET

E

## Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

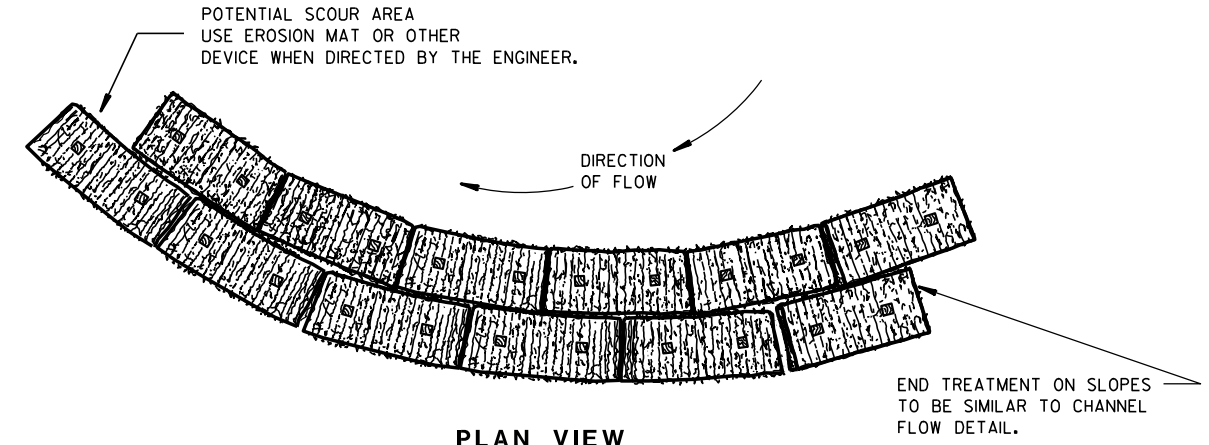


TEMPORARY DITCH CHECK USING EROSION BALES ①

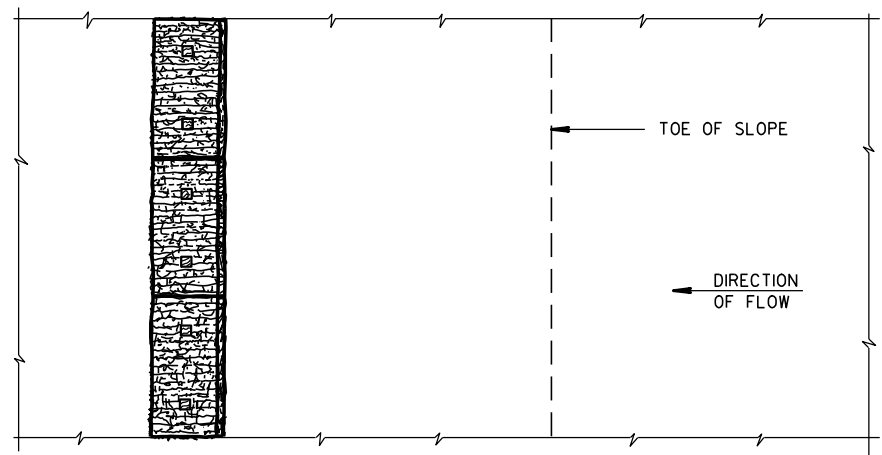
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

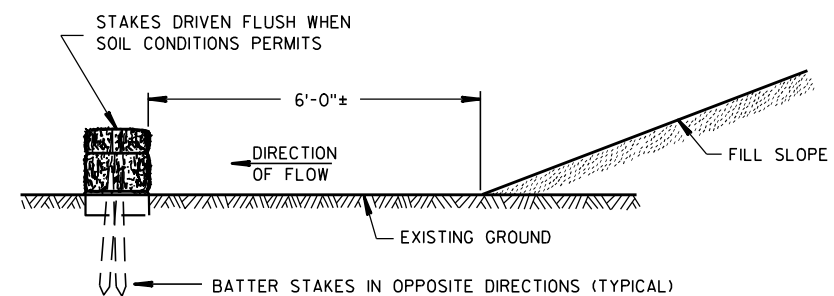
- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



PLAN VIEW WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW

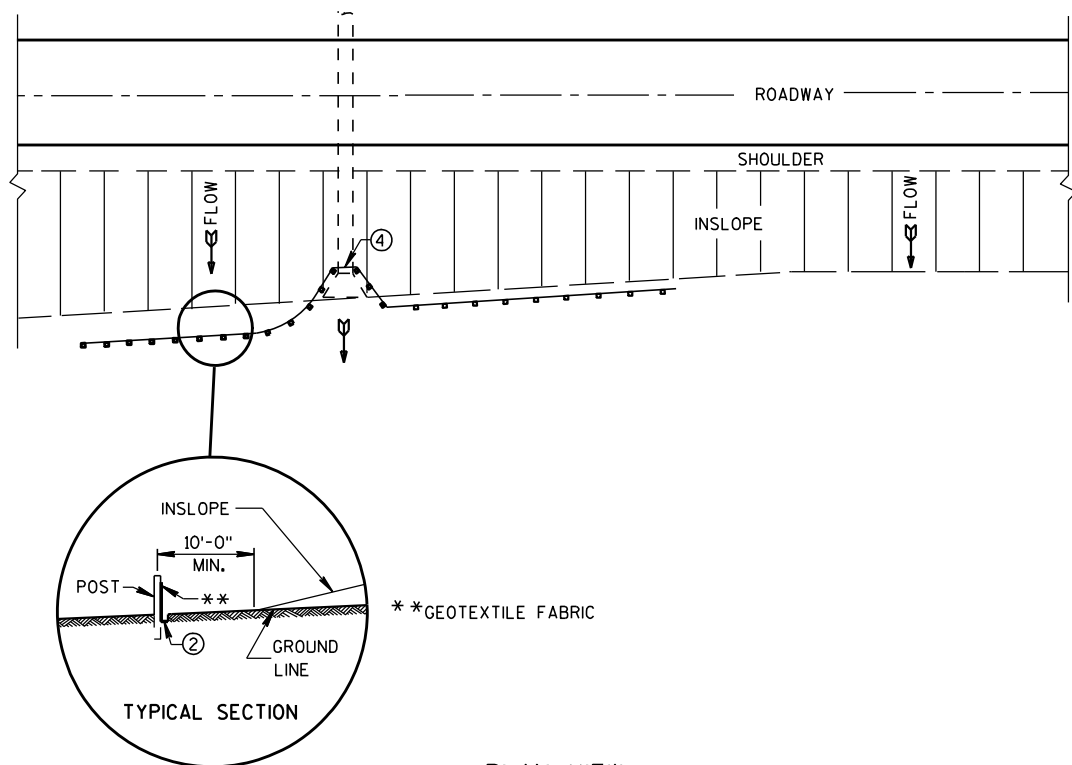


FRONT ELEVATION WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE EROSION BALES FOR SHEET FLOW

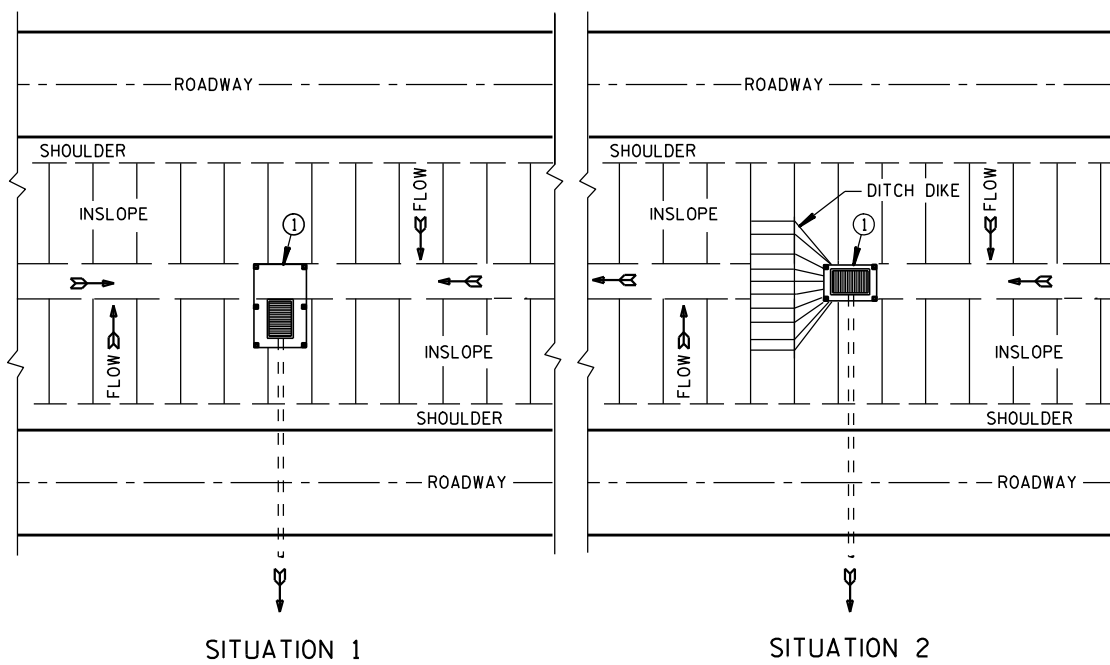
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED  
 6/04/02 /S/ Beth Canestra  
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

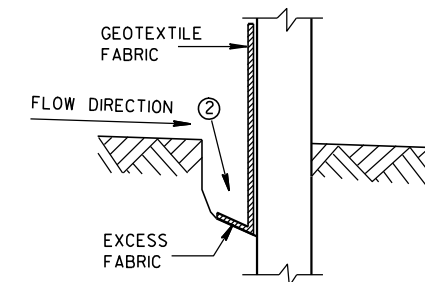


SITUATION 1                      SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

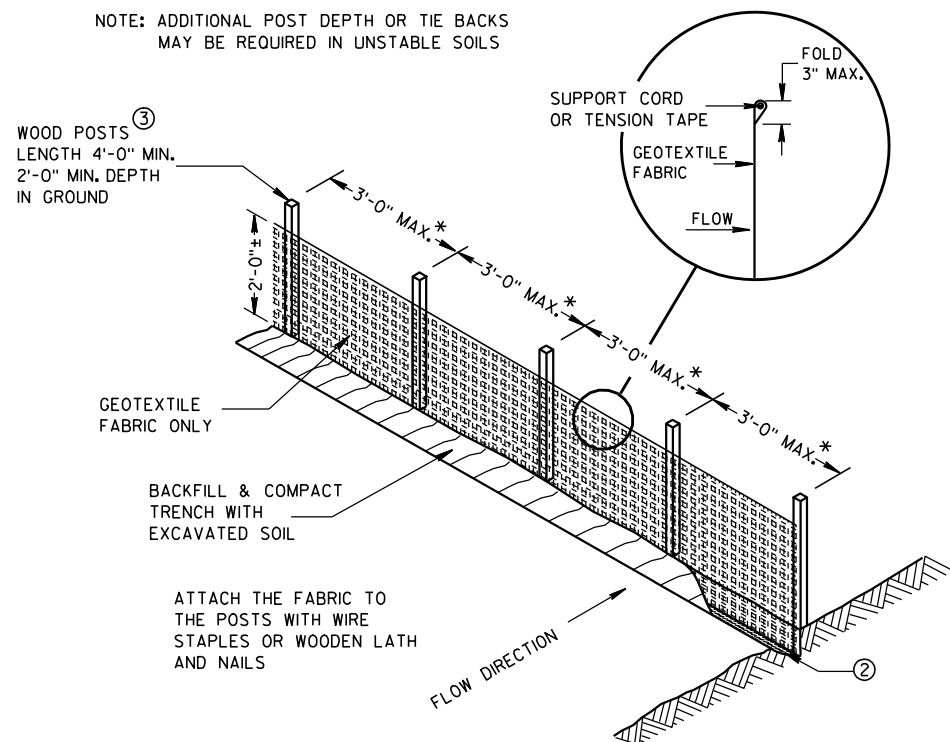
**GENERAL NOTES**

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

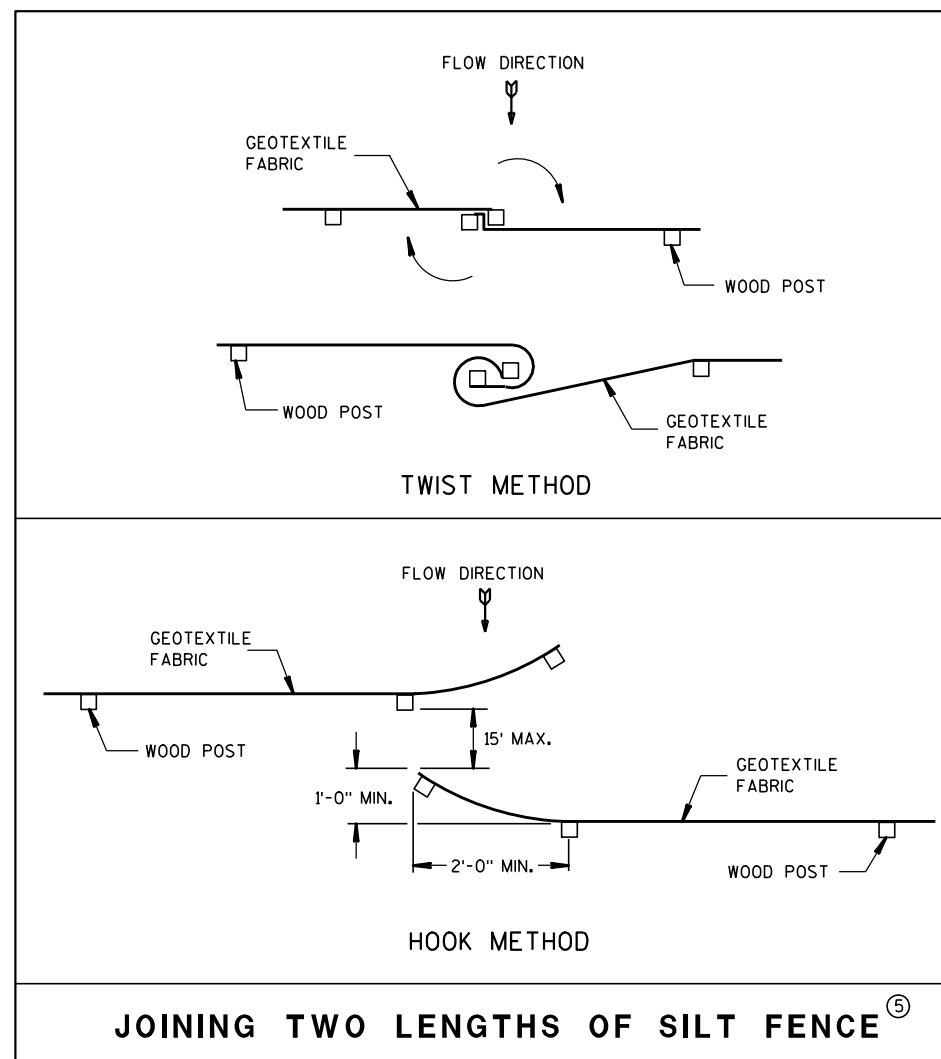
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



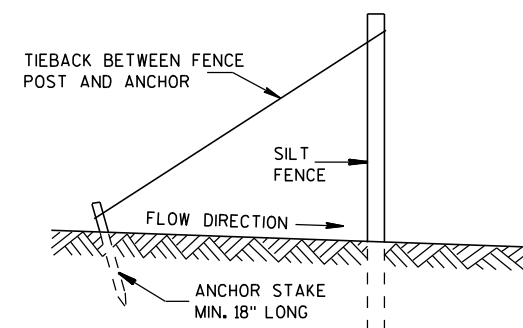
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05  
DATE

FHWA

/S/ Beth Cannestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

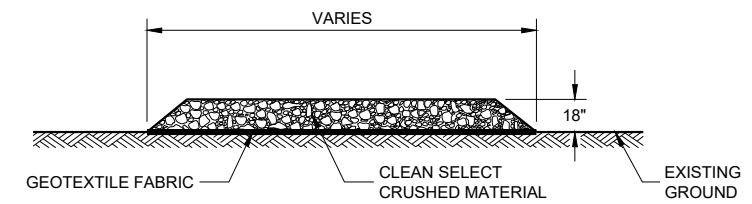
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

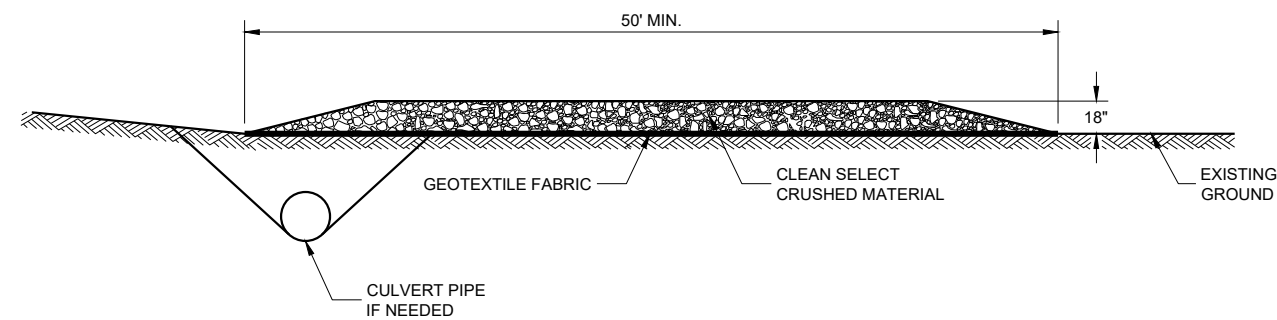
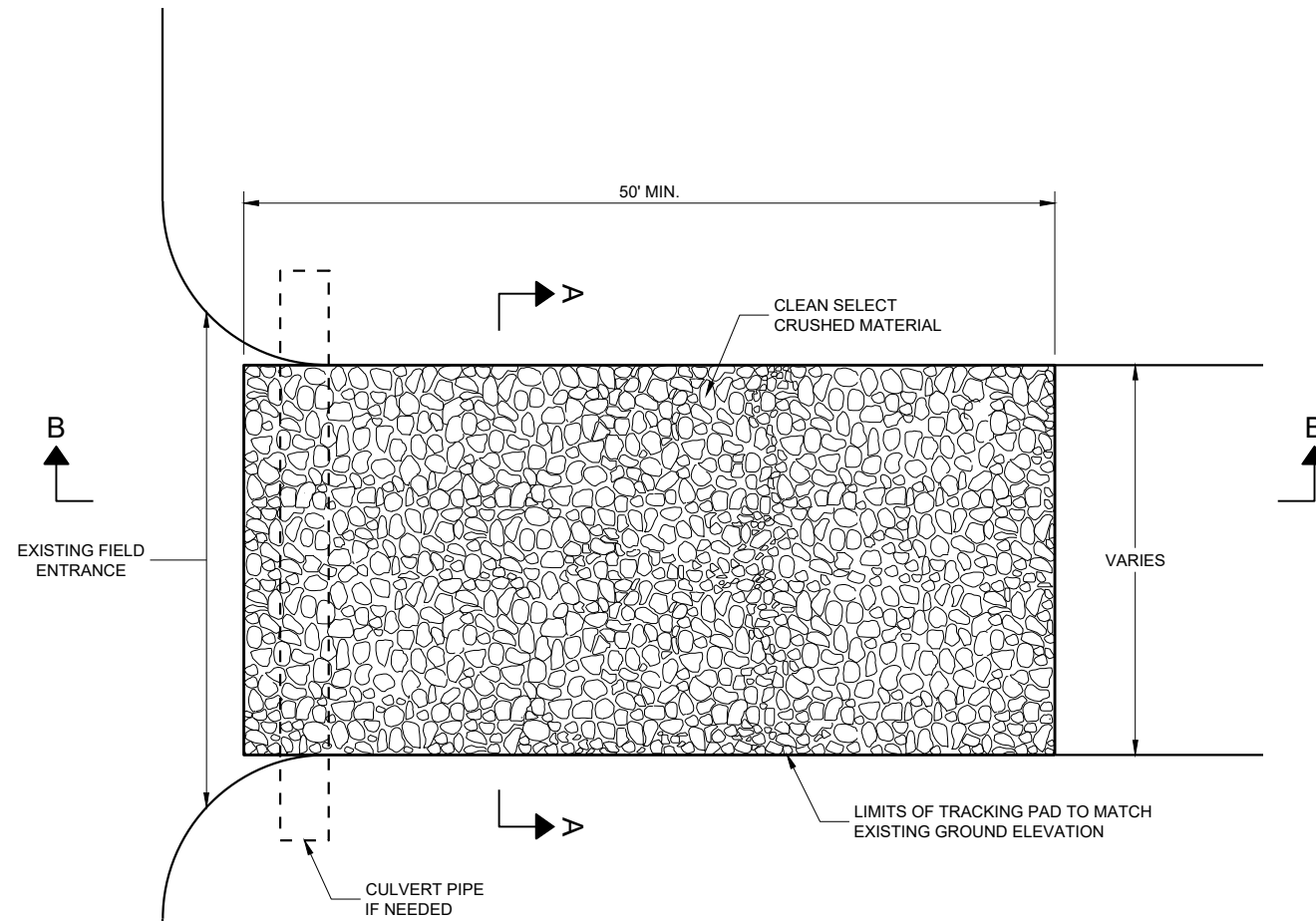
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**



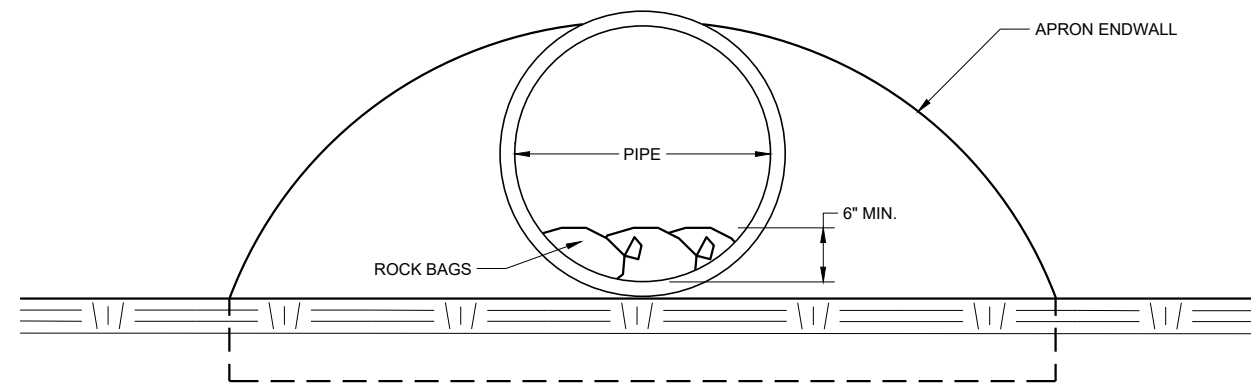
**SECTION B - B**

**TRACKING PAD**

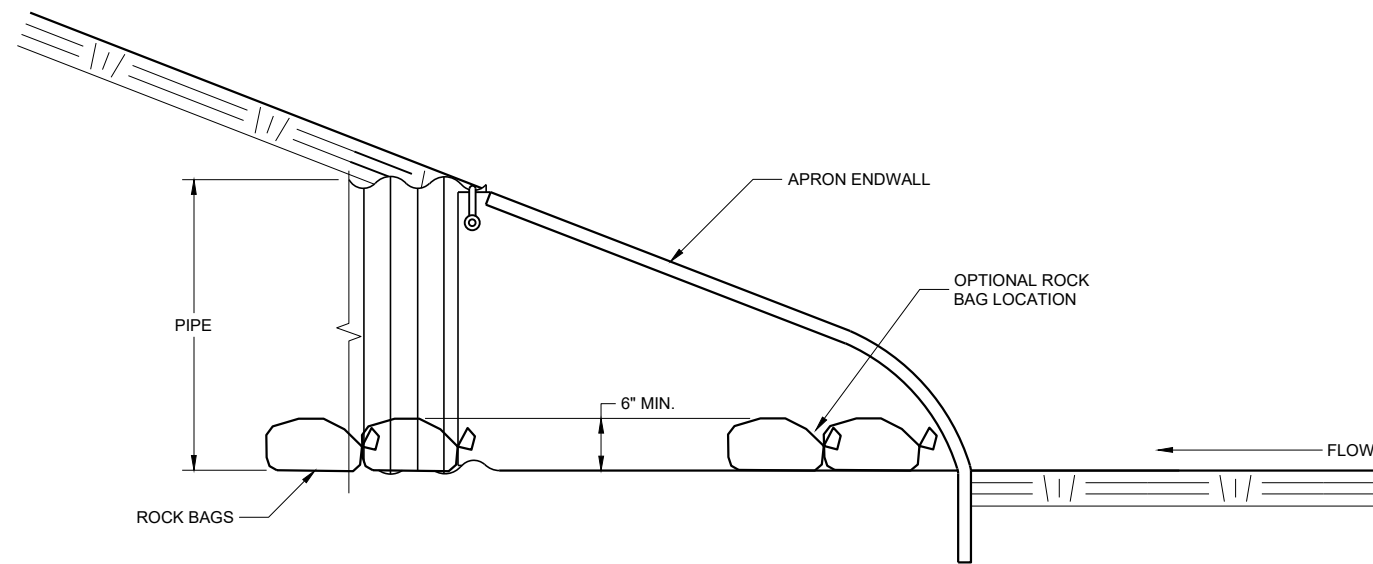
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



**END VIEW**



**SIDE VIEW**

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Daniel Schave  
DATE EROSION CONTROL ENGINEER

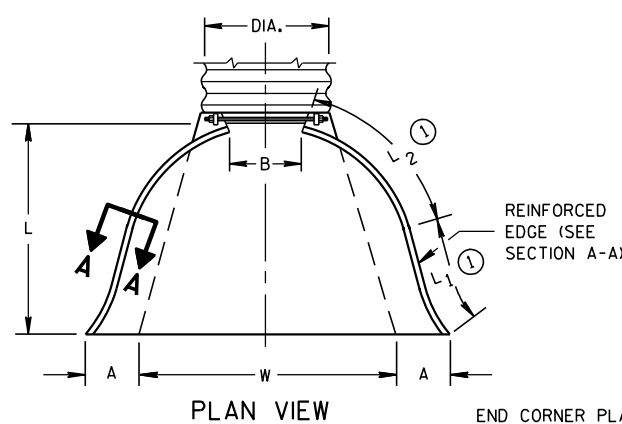
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

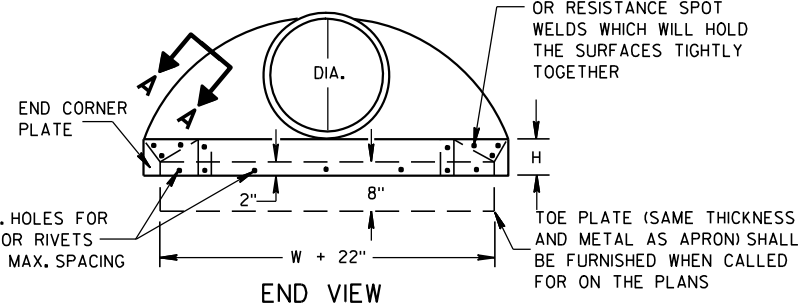
\* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	24-36	78	21	99	108	6	2 to 1	
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

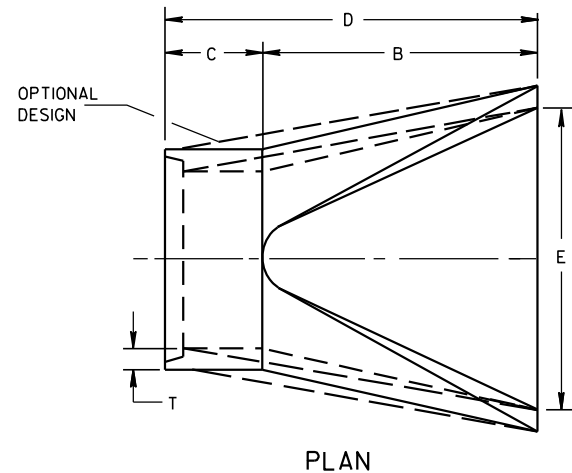
\* MINIMUM  
\*\* MAXIMUM



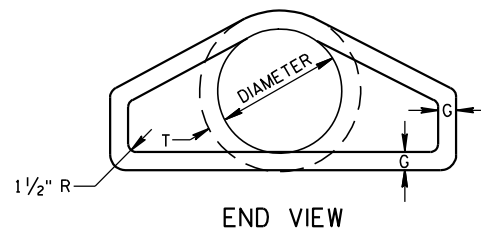
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



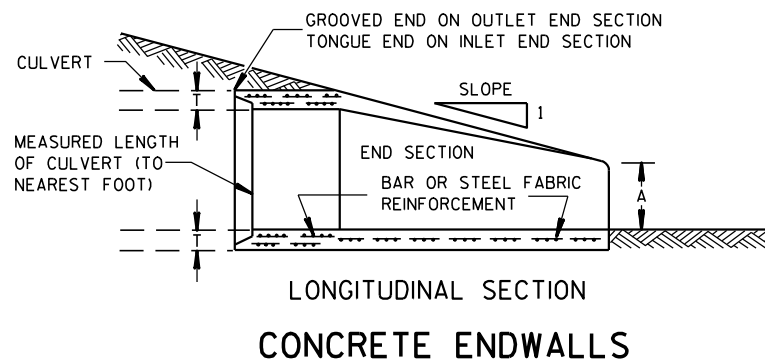
SIDE ELEVATION  
METAL ENDWALLS



PLAN

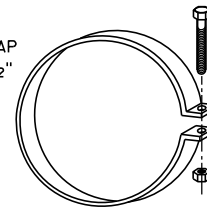


END VIEW

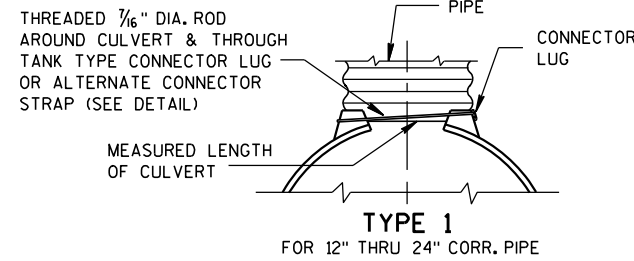


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

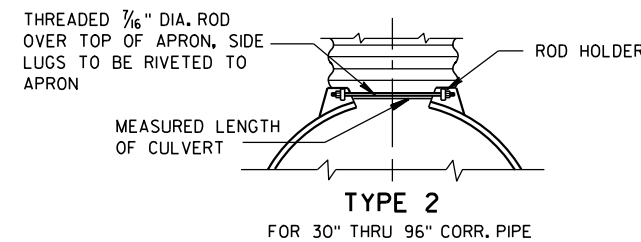
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



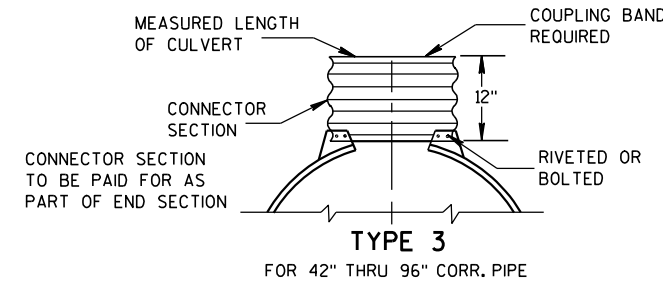
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



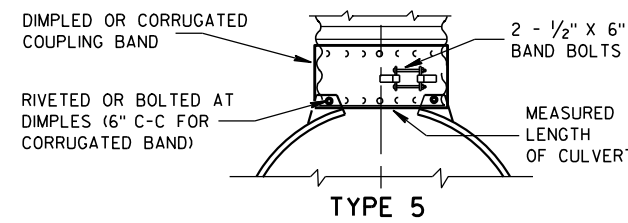
TYPE 1  
FOR 12" THRU 24" CORR. PIPE



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

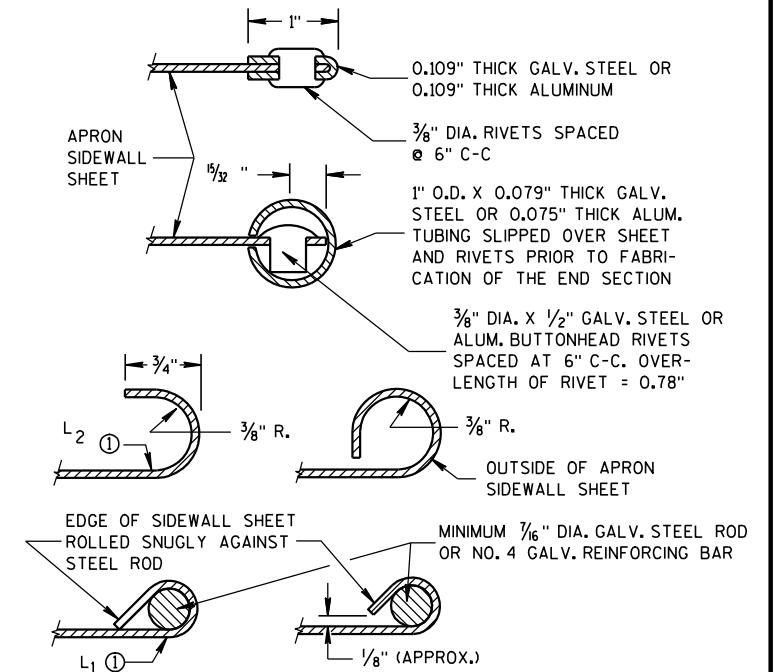
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.








① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
CULVERT PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/94 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA

**LEGEND**

-  SIGN ON TEMPORARY SUPPORT
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

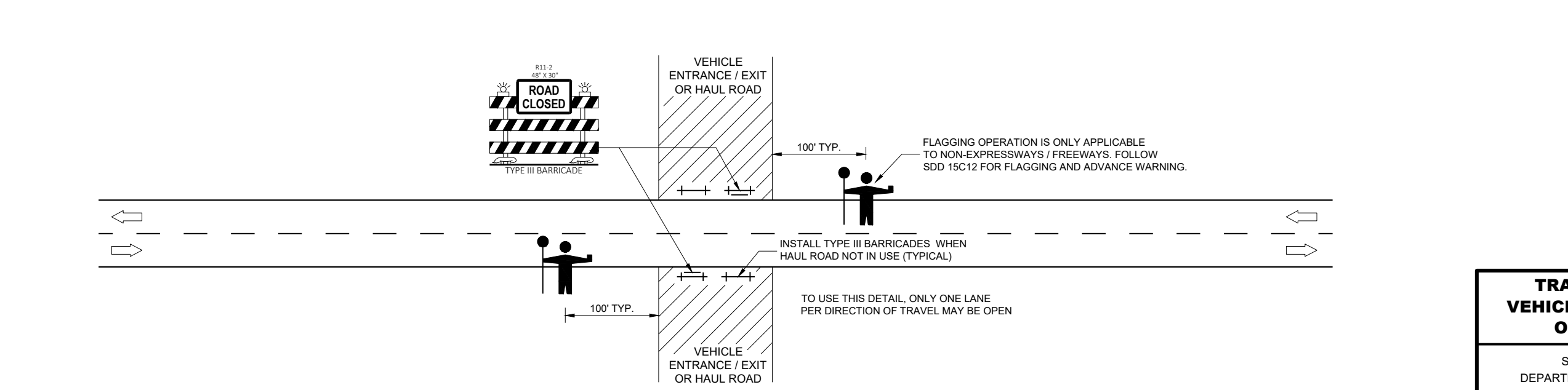
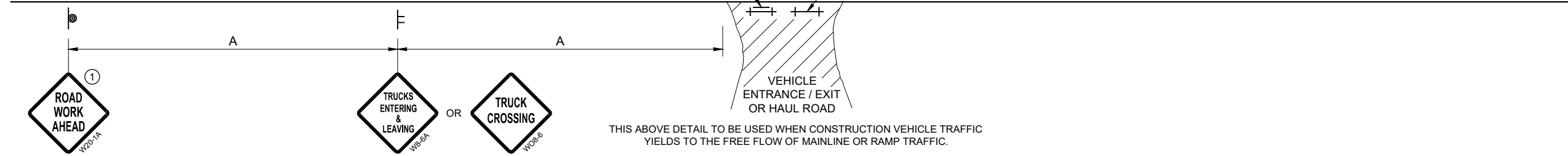
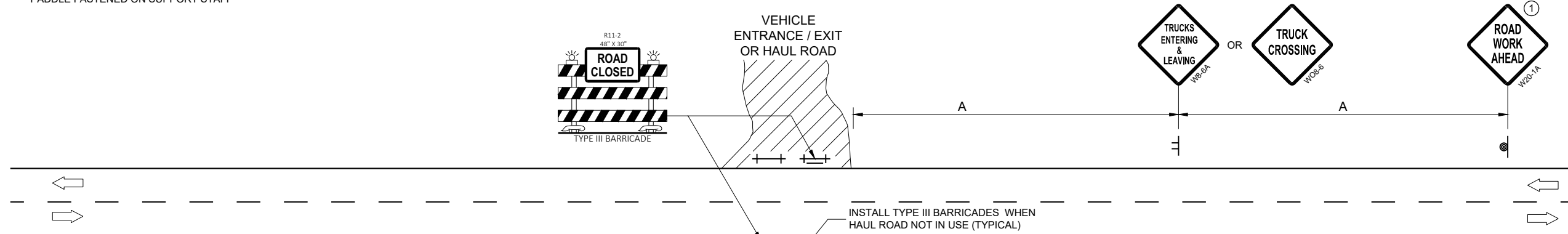
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

**GENERAL NOTES**

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- "WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.
- WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
- PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.
- ① THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

6

6



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

FLAGGING OPERATION IS ONLY APPLICABLE TO NON-EXPRESSWAYS / FREEWAYS. FOLLOW SDD 15C12 FOR FLAGGING AND ADVANCE WARNING.

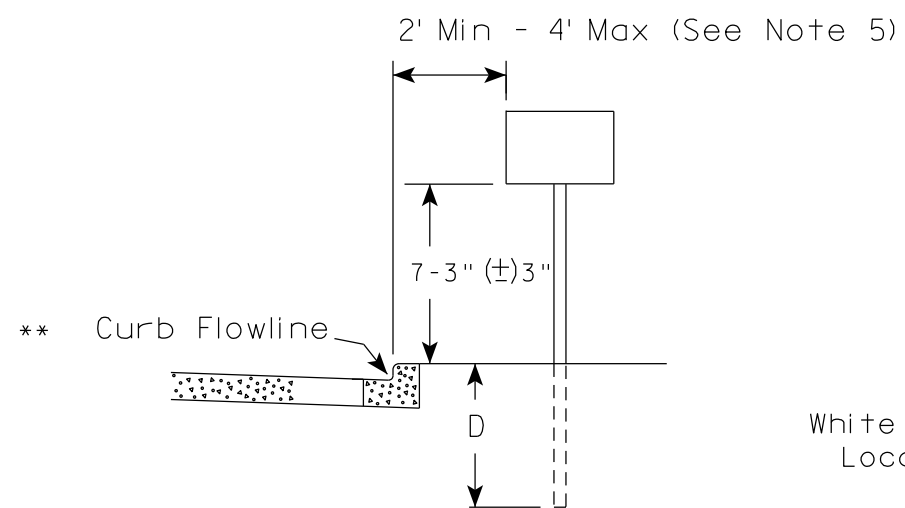
SDD 15D29 - 06

SDD 15D29 - 06

<b>TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

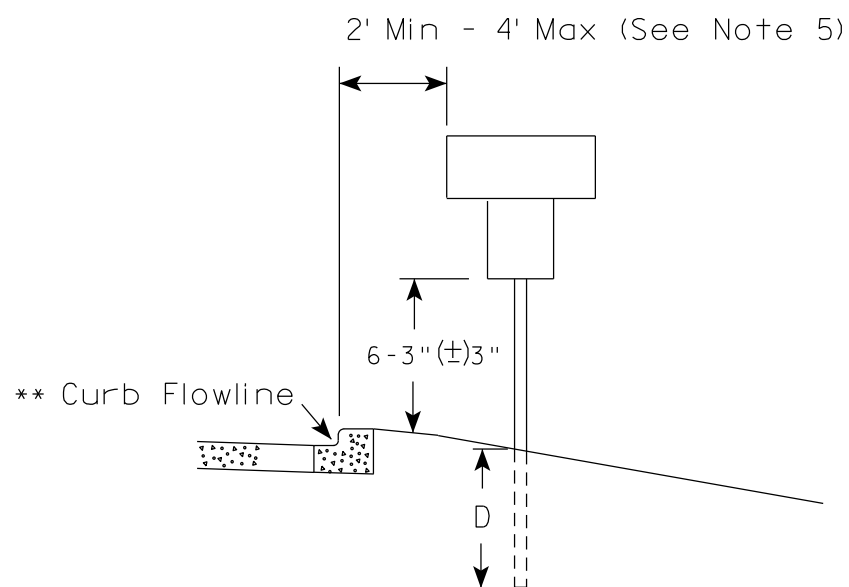
URBAN AREA

RURAL AREA (See Note 2)



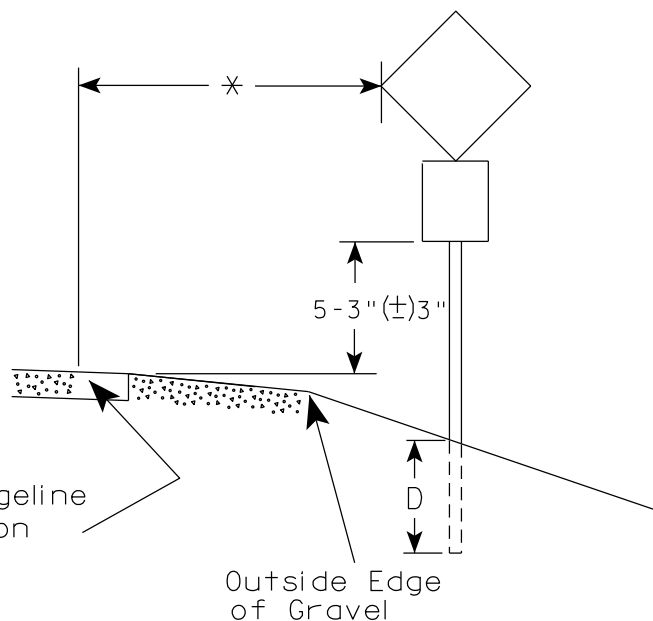
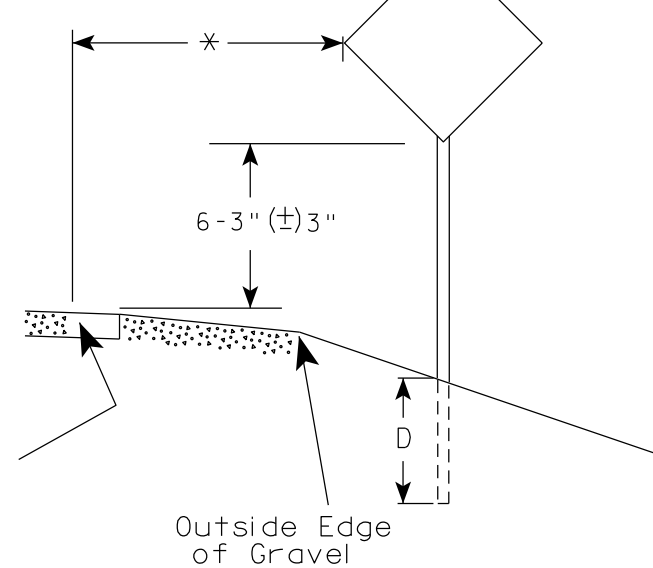
White Edgeline Location

Outside Edge of Gravel



White Edgeline Location

Outside Edge of Gravel



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

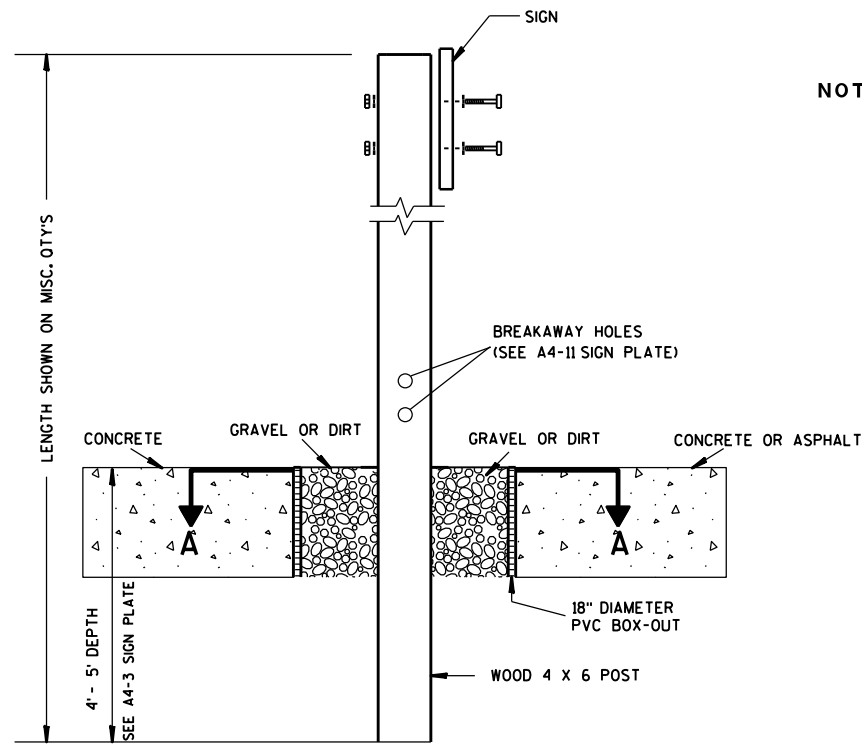
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Raub*  
for State Traffic Engineer

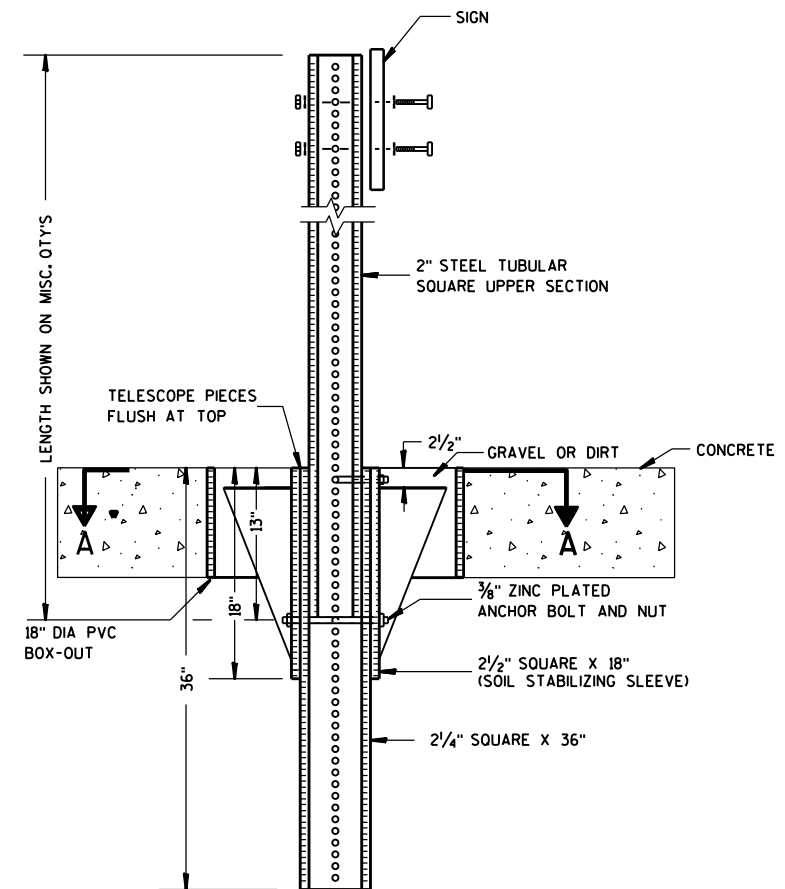
DATE 12/6/23 PLATE NO. A4-3.23



**ELEVATION VIEW**

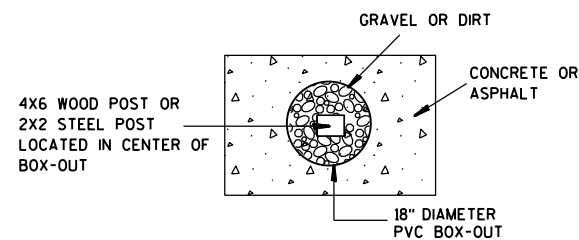
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

GENERAL NOTES

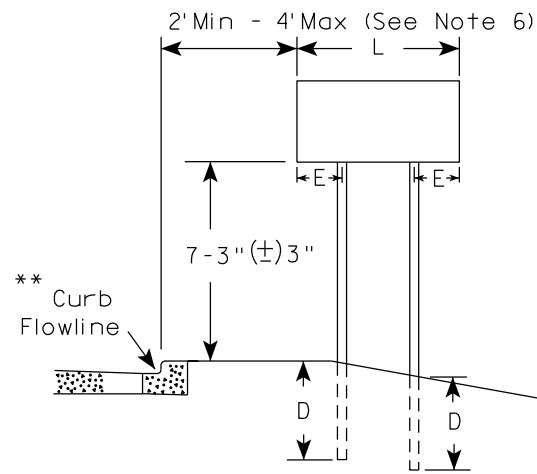
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" ( $\pm$  3") or 6'-3" ( $\pm$  3") depending upon existence of sub-sign.
4. The ( $\pm$ ) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" ( $\pm$  3") or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" ( $\pm$  3"). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" ( $\pm$  3").

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

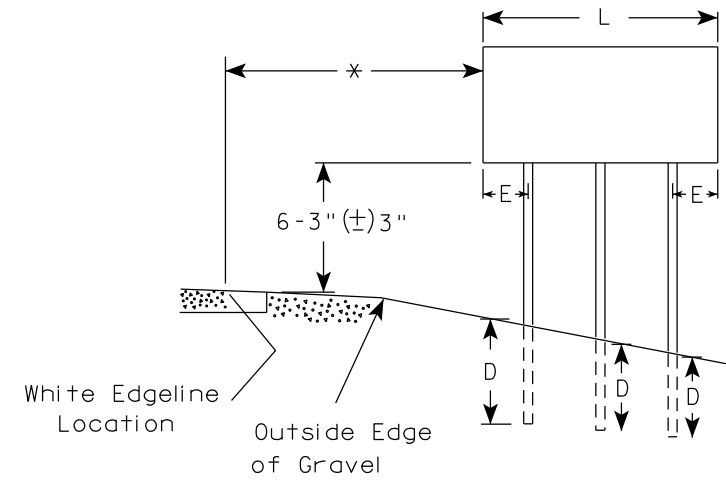
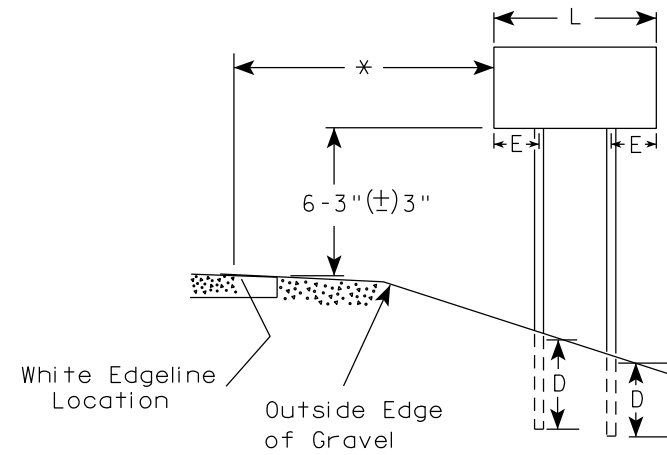
\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

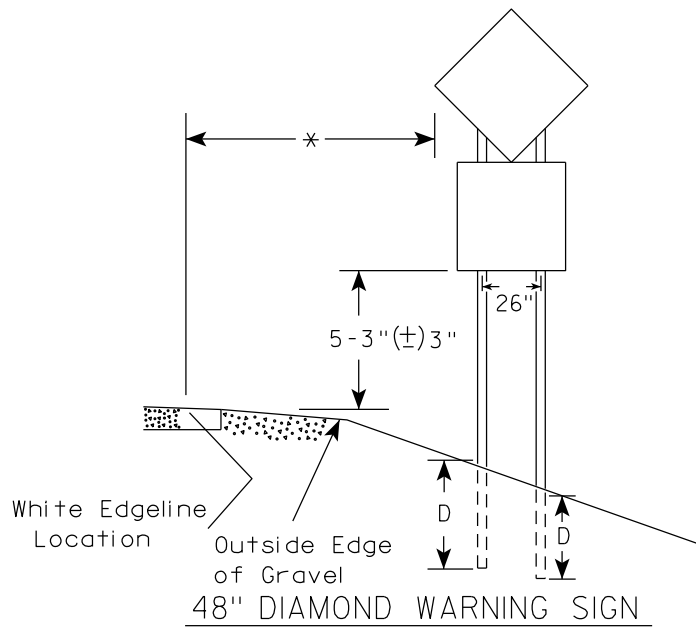
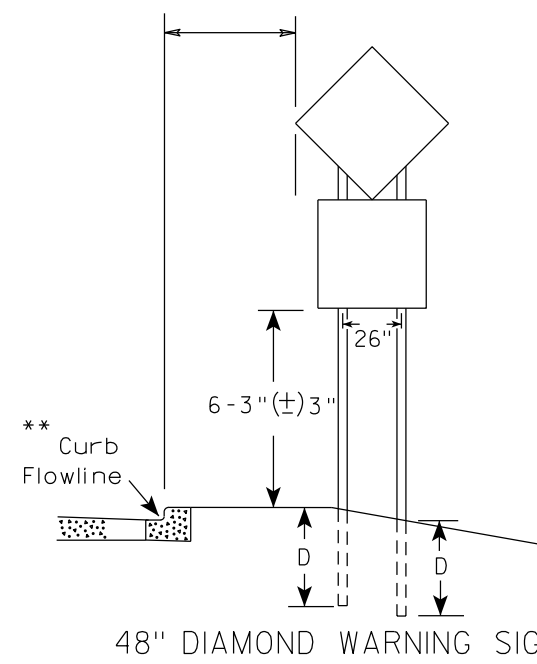
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

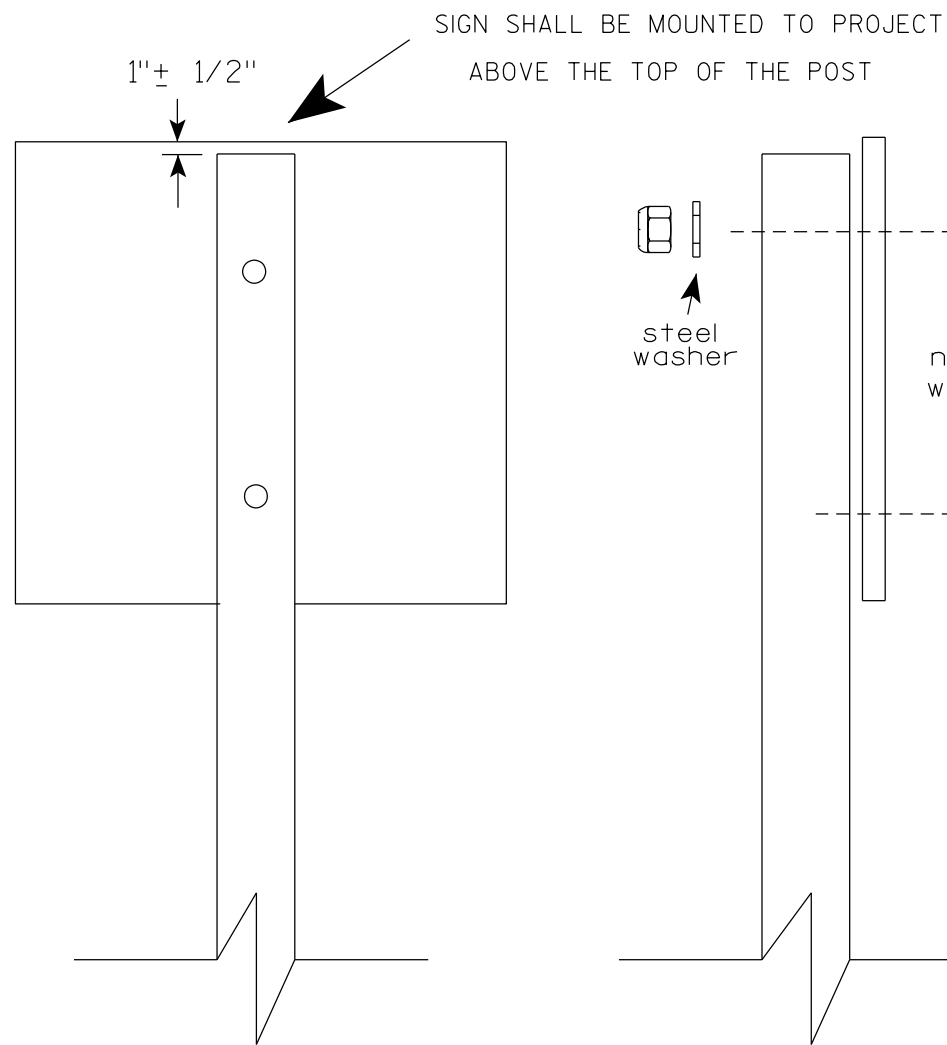
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R Rauch*  
For State Traffic Engineer  
DATE 12/6/23 PLATE NO. A4-4.16



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

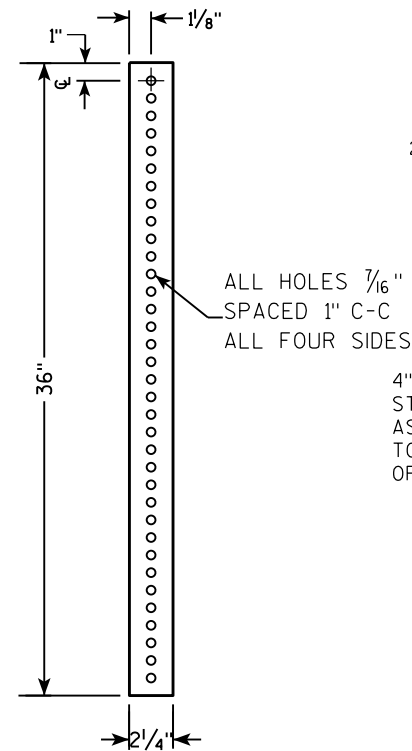
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
  - 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

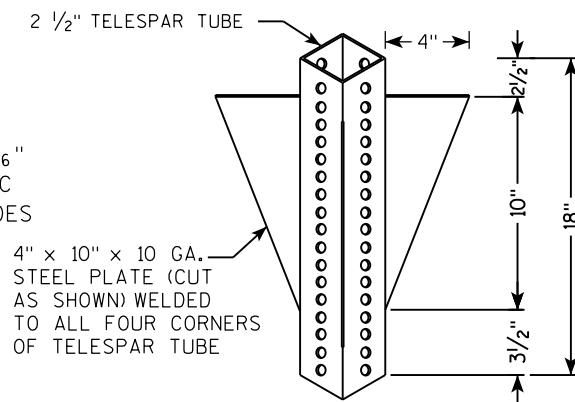
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

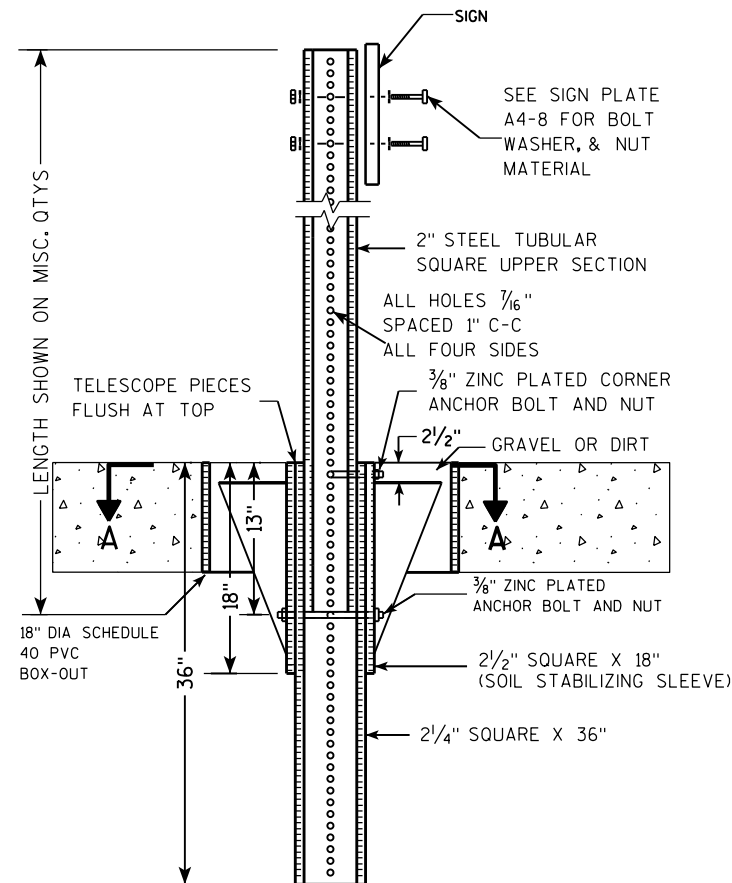
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



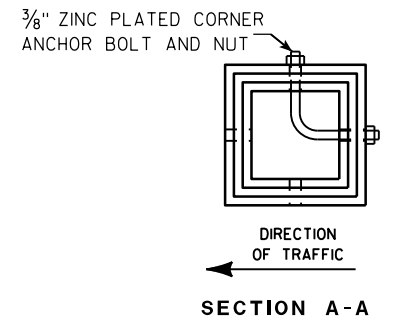
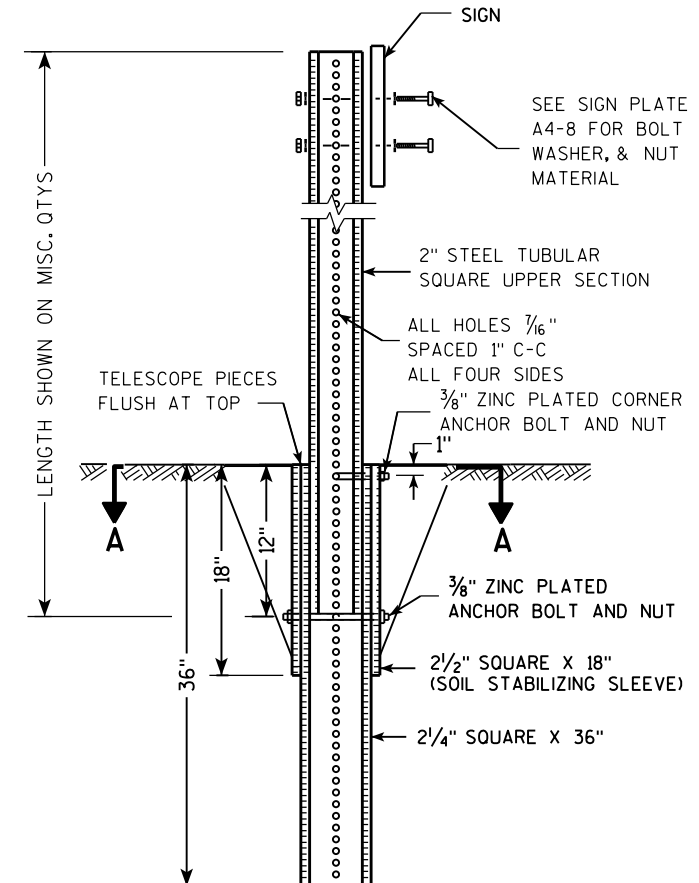
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

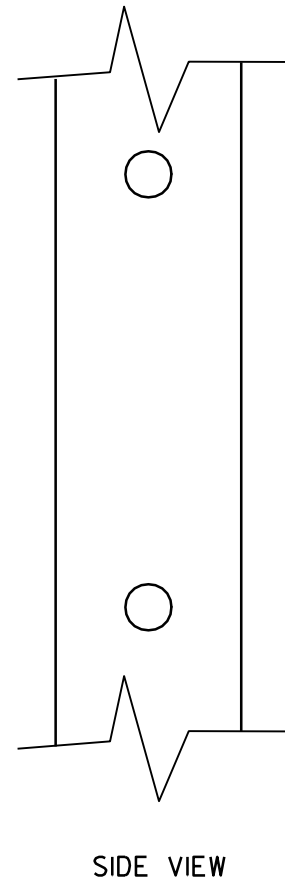
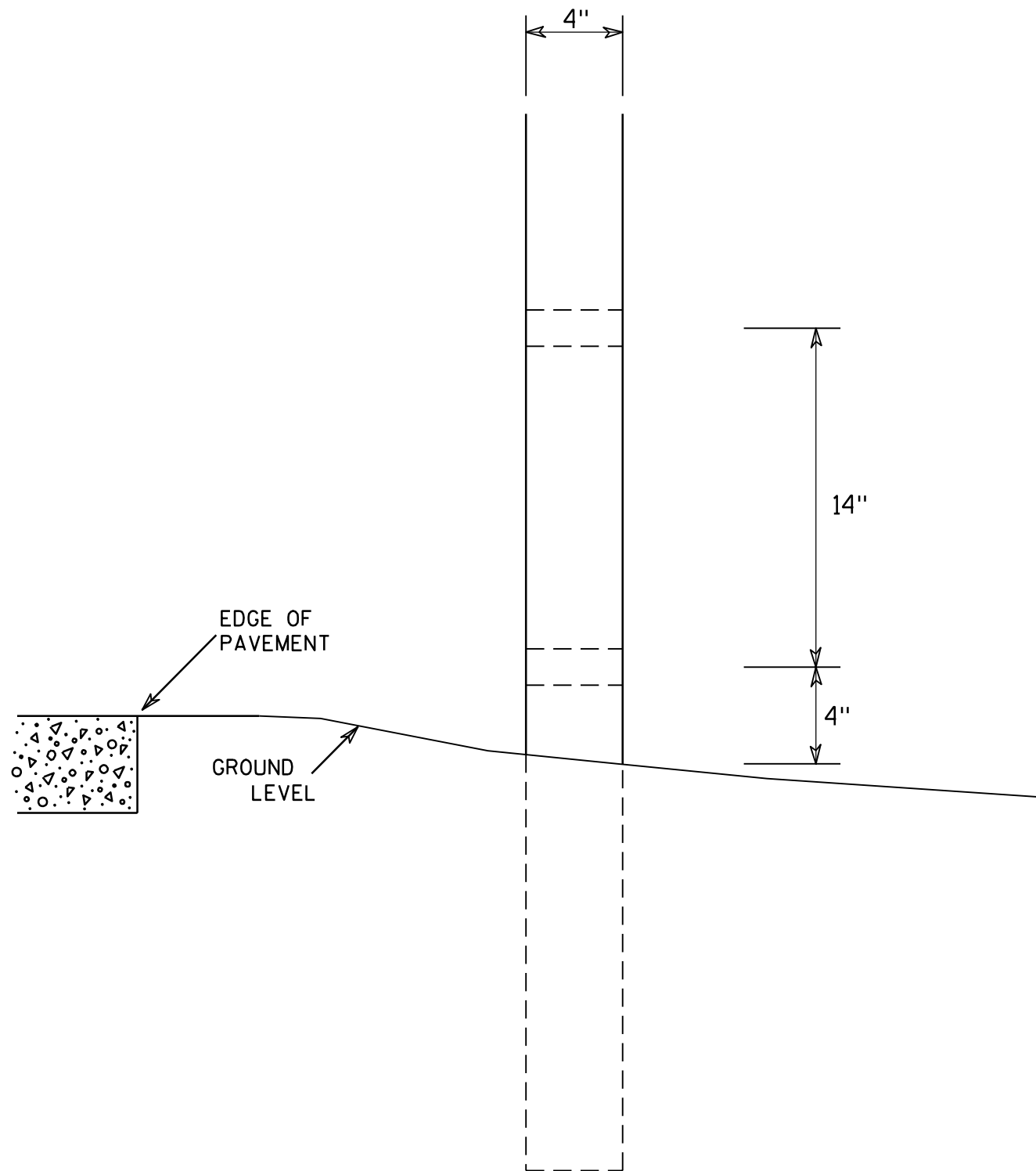
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

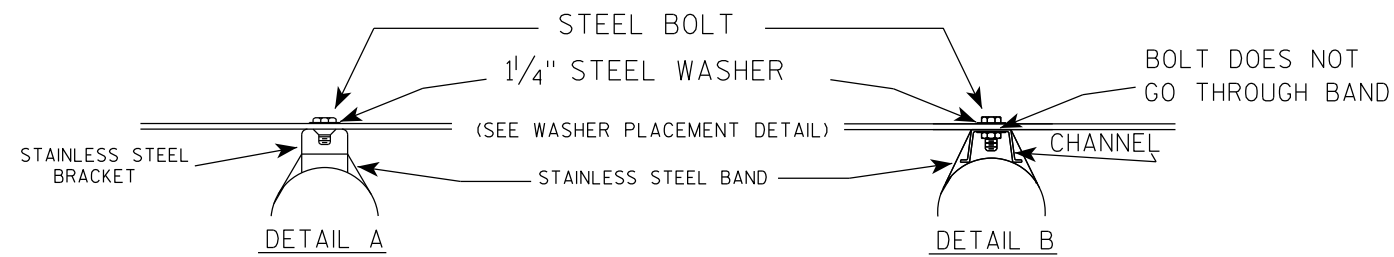
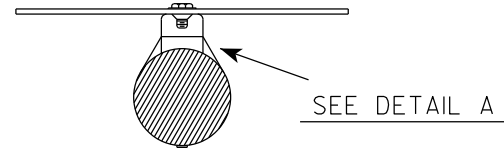
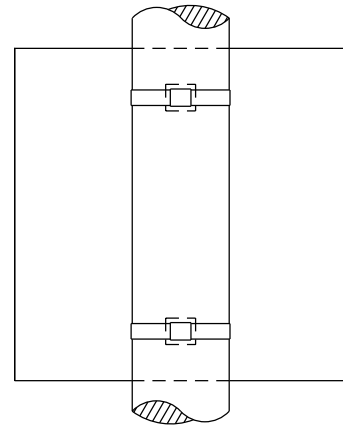
7

7

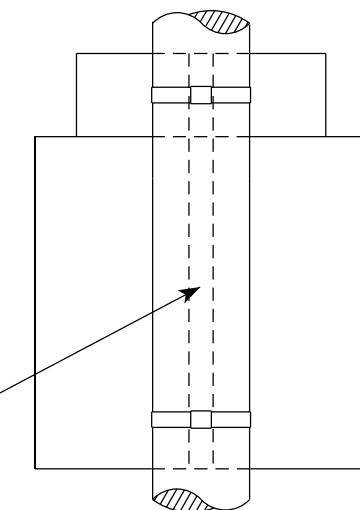
4 X 6 WOOD POST MODIFICATIONS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

# BANDING

SINGLE SIGN



"J" ASSEMBLY

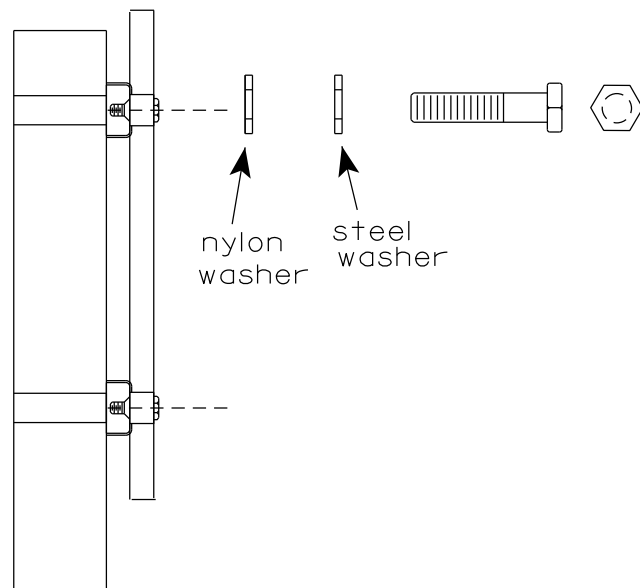


CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



- GENERAL NOTES**
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
  2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
  3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
  4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
    - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
    - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



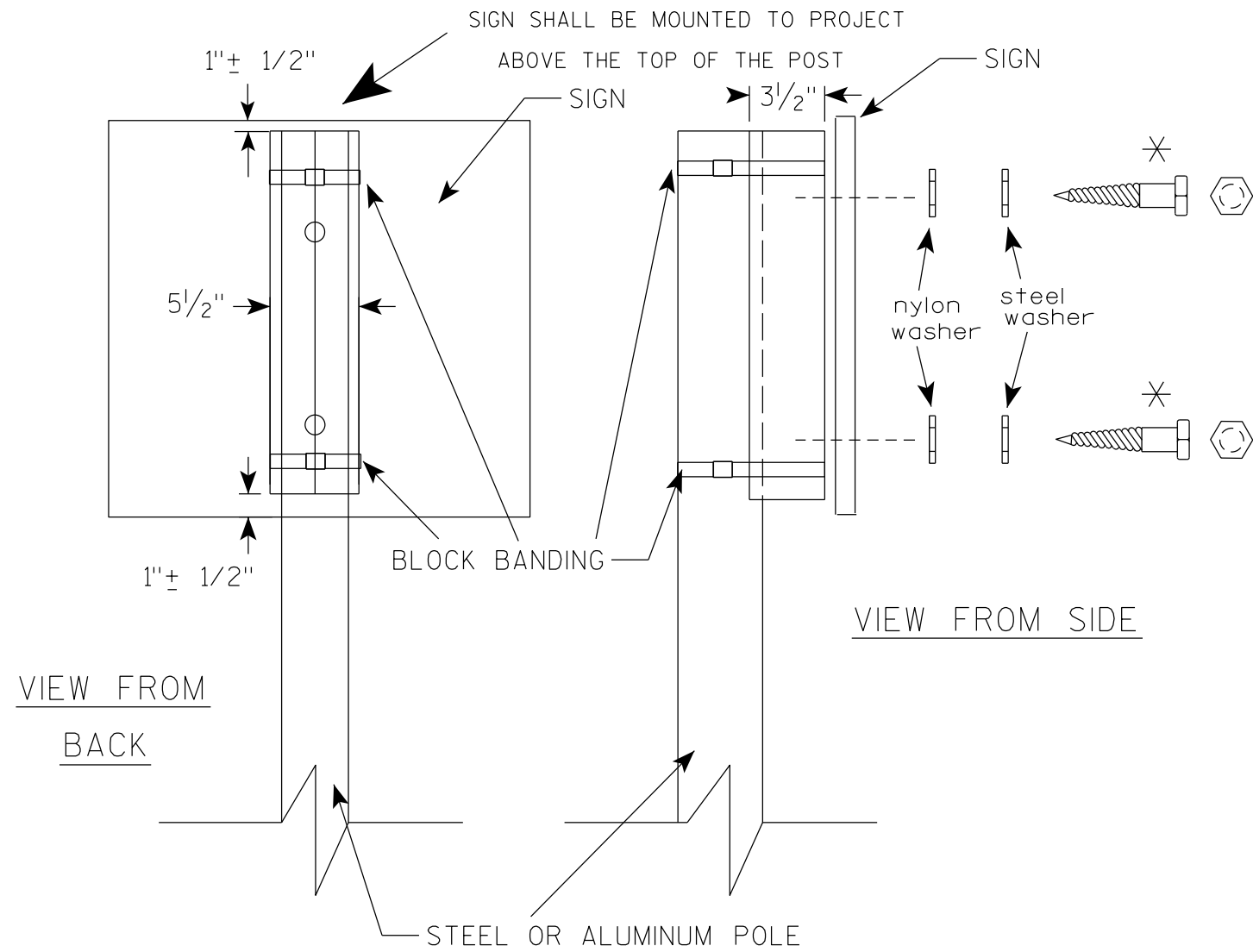
WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

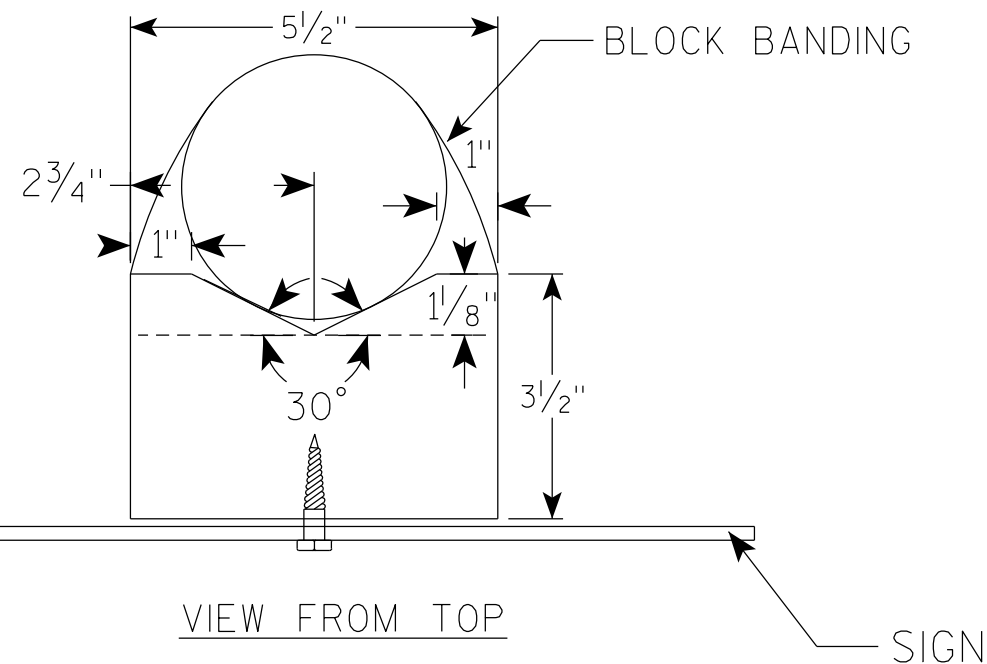
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

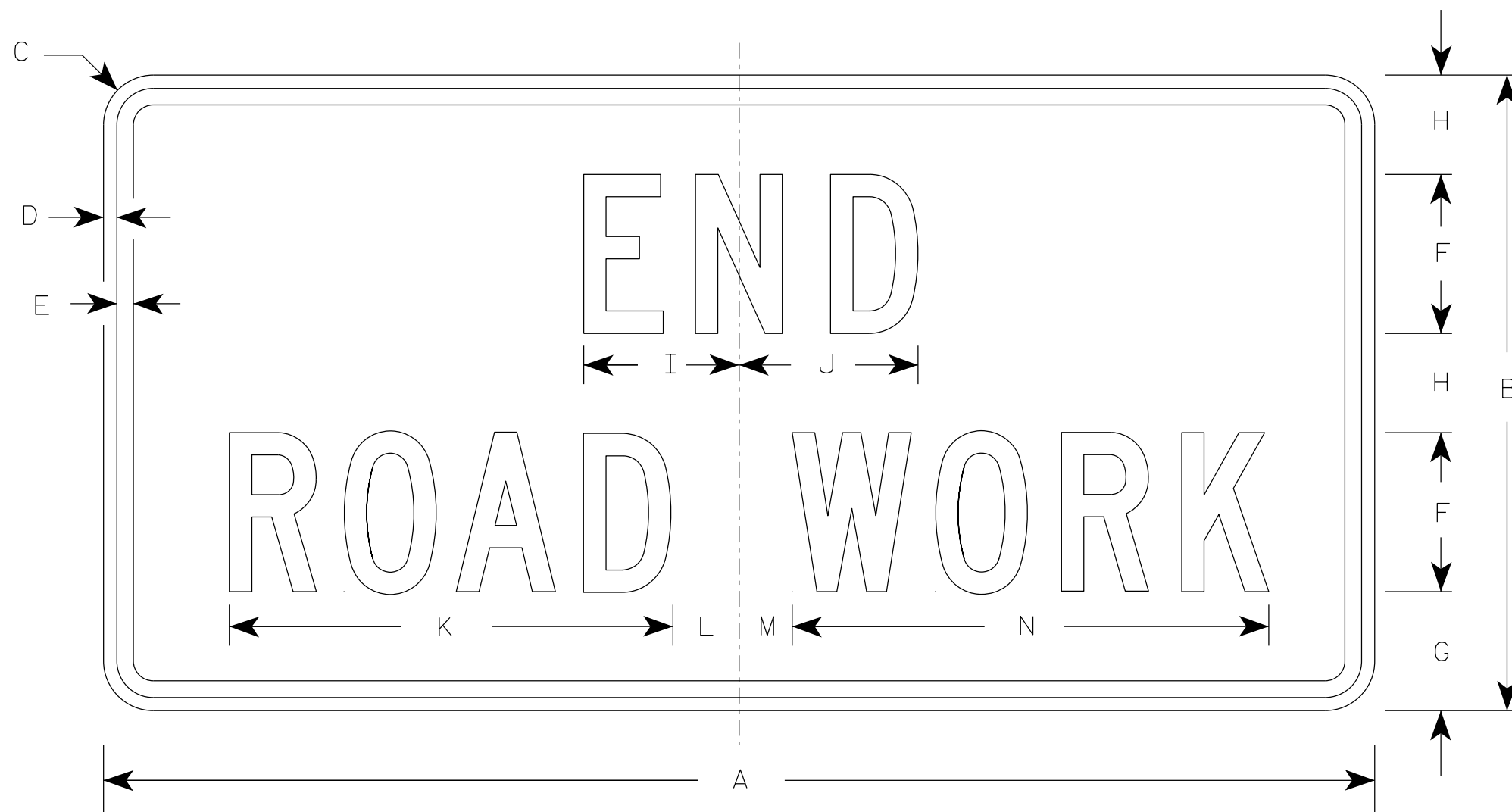
PROJECT NO:

SHEET NO:

**E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN  
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

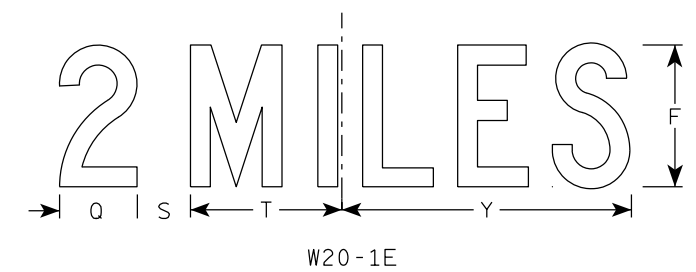
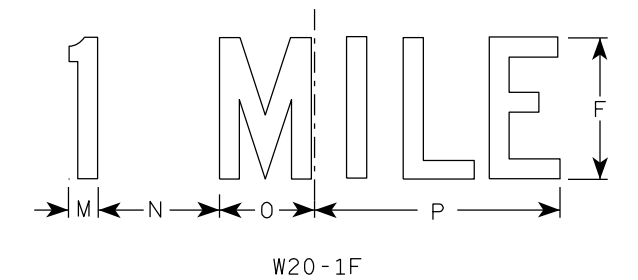
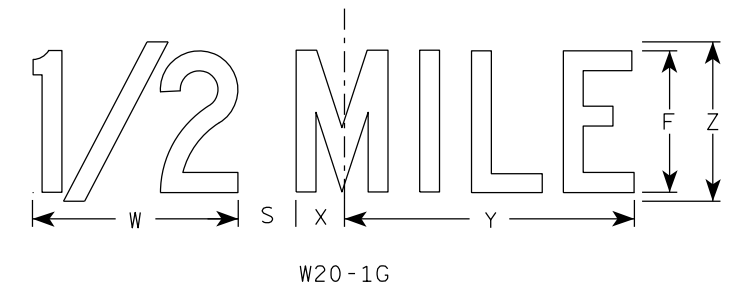
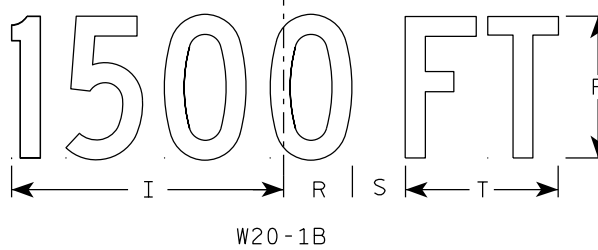
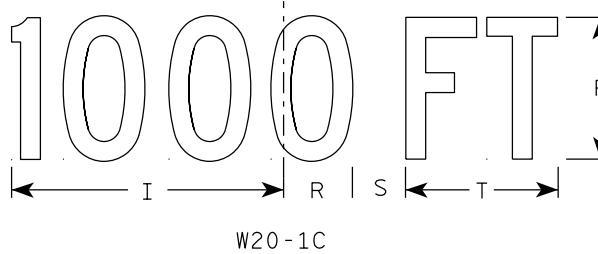
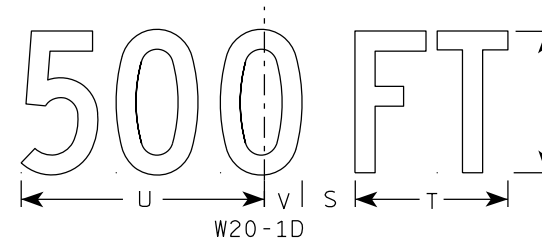
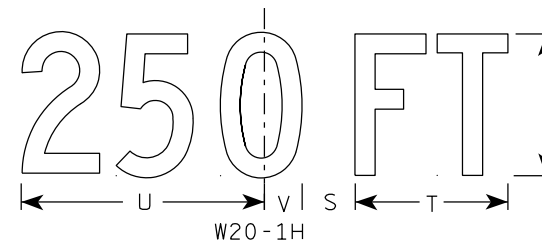
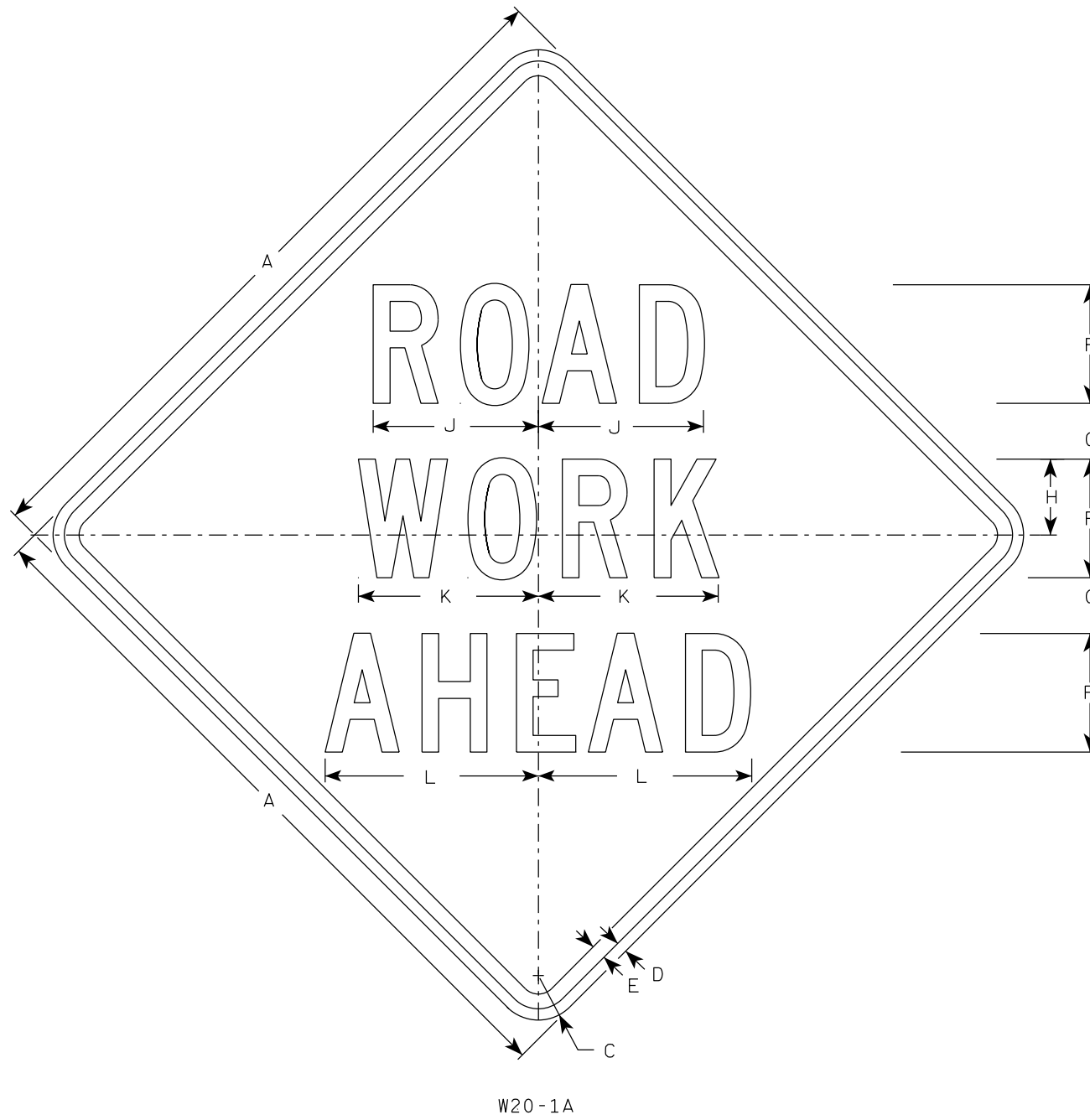
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



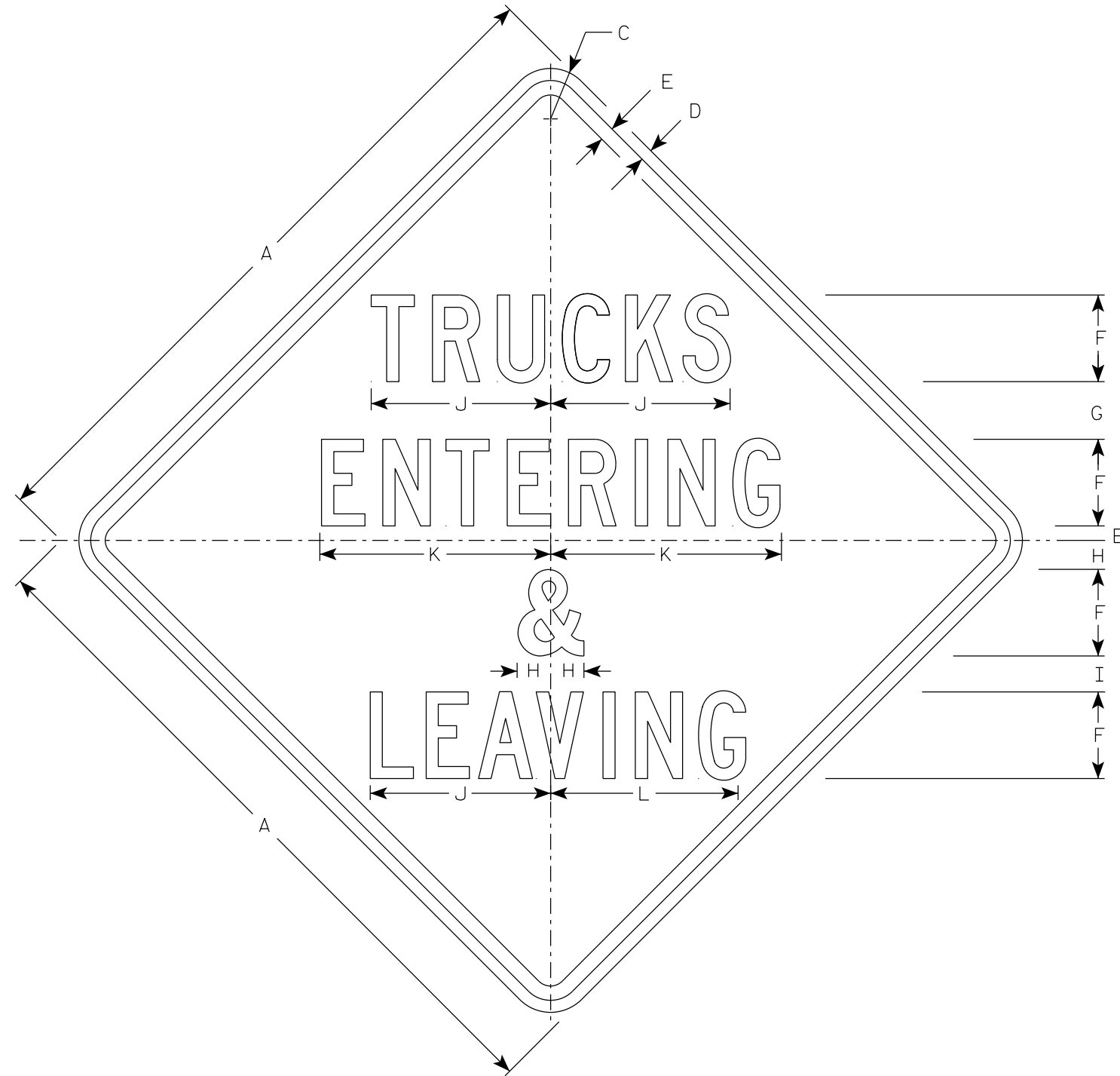
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12



W08-6A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	1/2	5/8	4 1/2	3	1 1/2	1 7/8	9 3/8	12	9 3/4														9.0	
2S	48		3	3/4	1	6	4	2	2 1/2	12 1/2	16	13														16.0	
2M	48		3	3/4	1	6	4	2	2 1/2	12 1/2	16	13														16.0	
3	48		3	3/4	1	6	4	2	2 1/2	12 1/2	16	13														16.0	
4	48		3	3/4	1	6	4	2	2 1/2	12 1/2	16	13														16.0	
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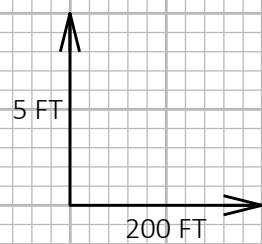
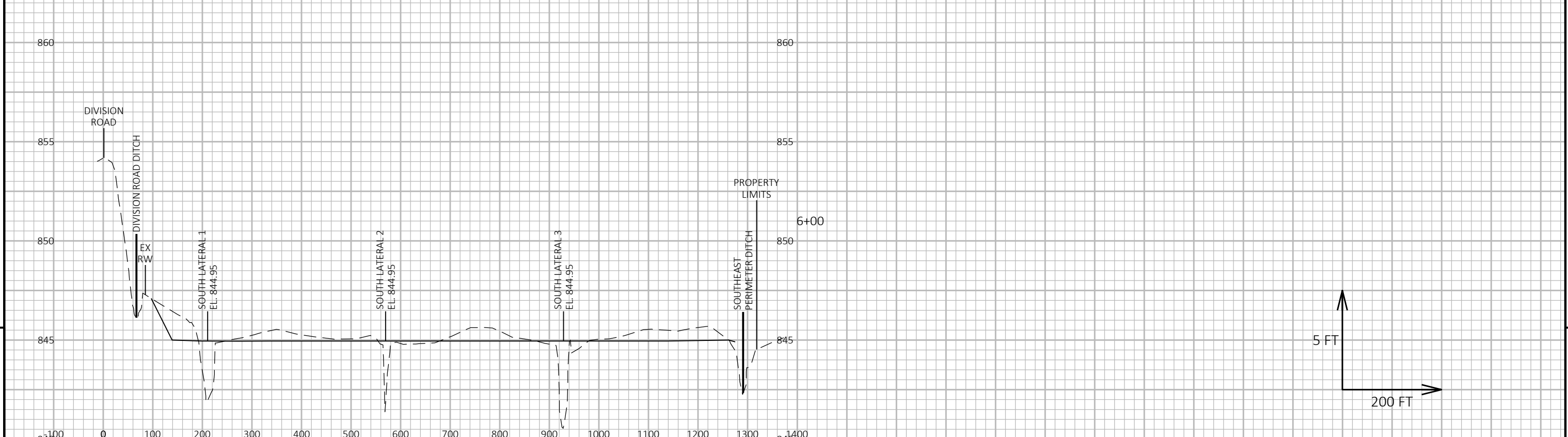
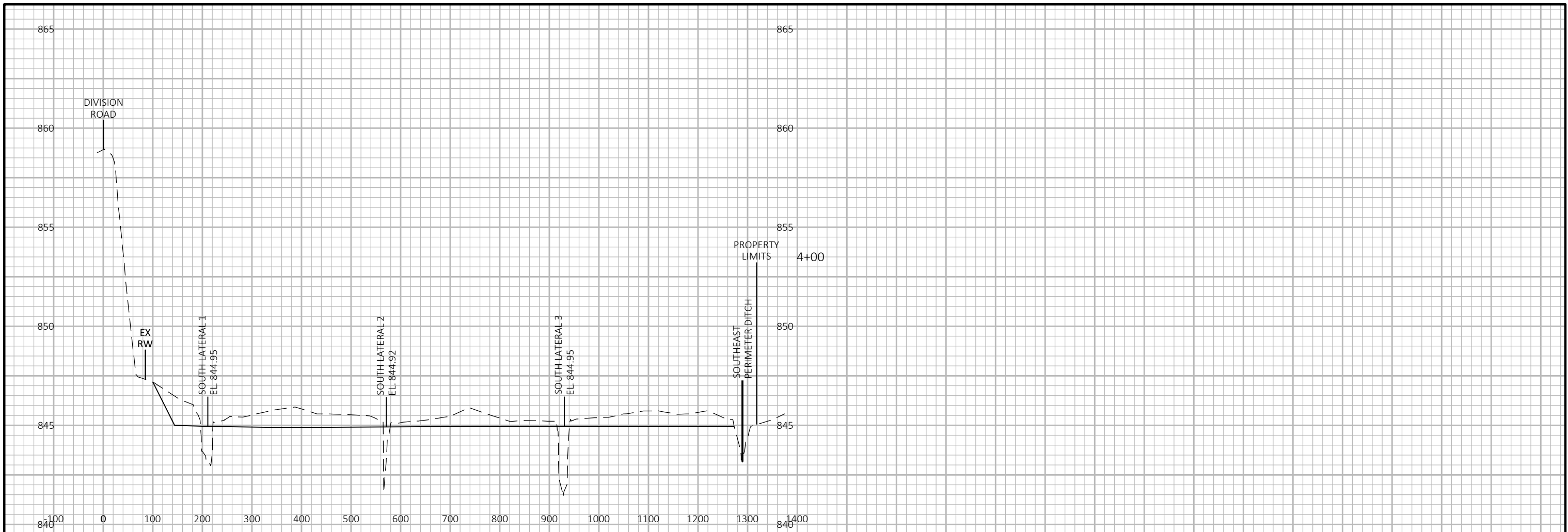
STANDARD SIGN  
W08-6A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/31/2024 PLATE NO. W08-6A.2

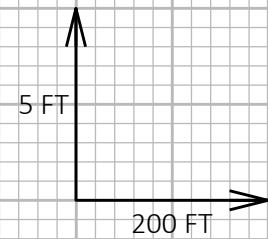
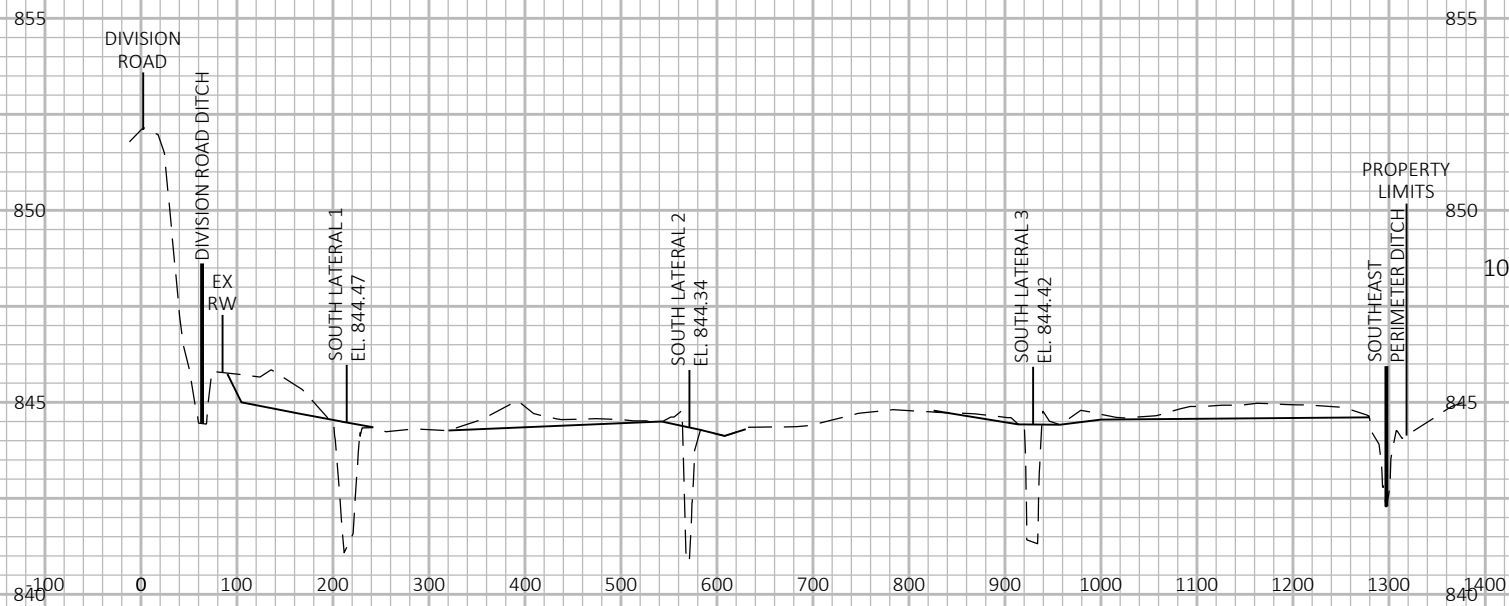
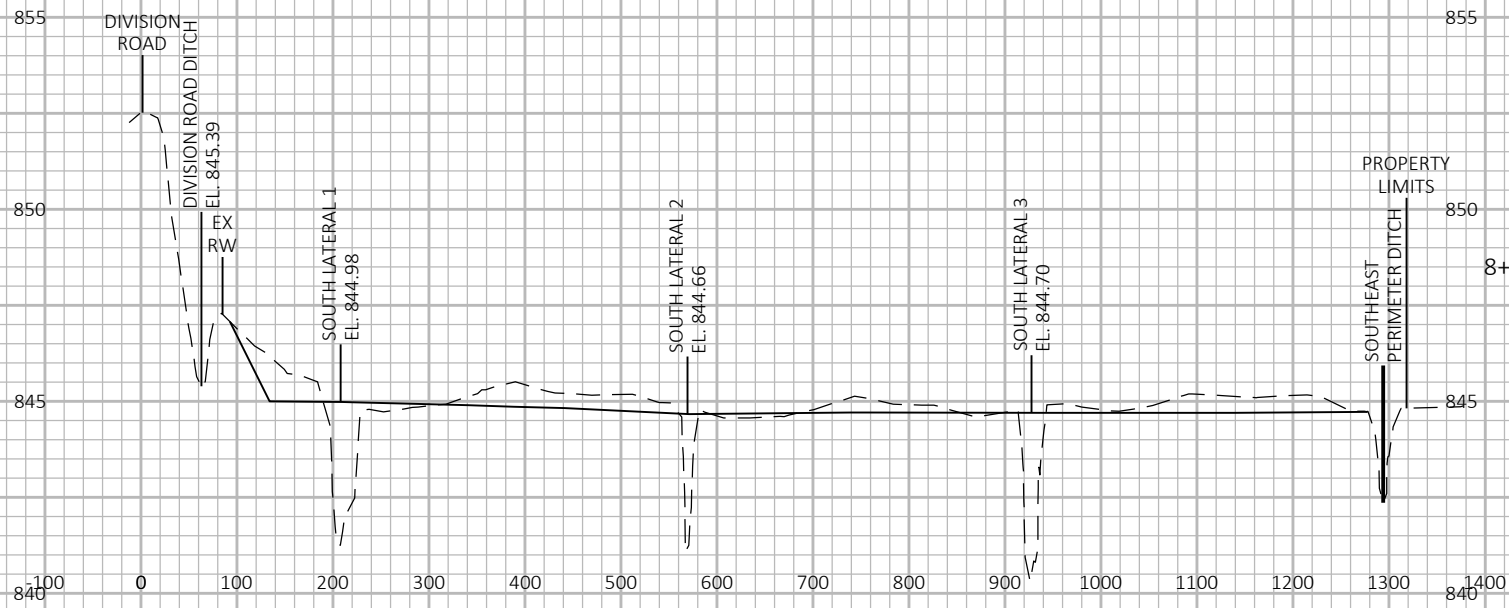
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**



9

9

PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: DIVISION ROAD	SHEET	E
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9

9

PROJECT NO: 1009-23-72

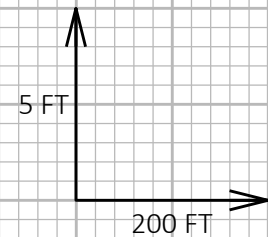
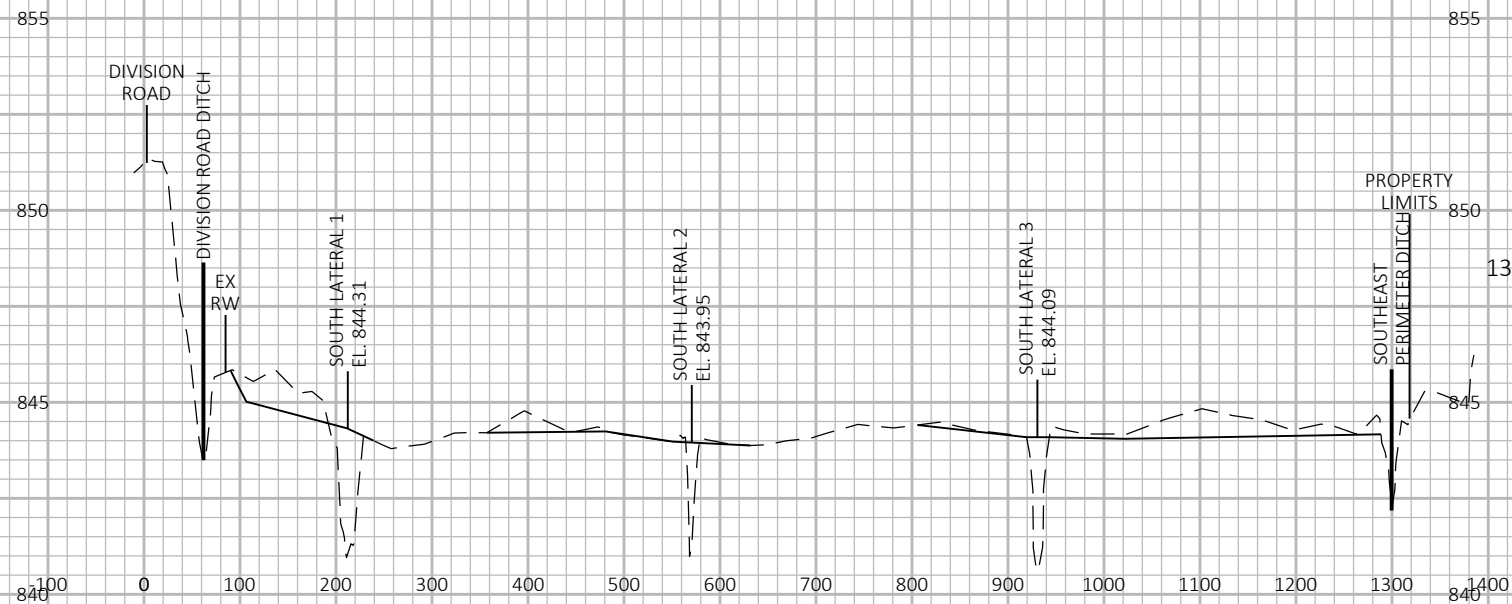
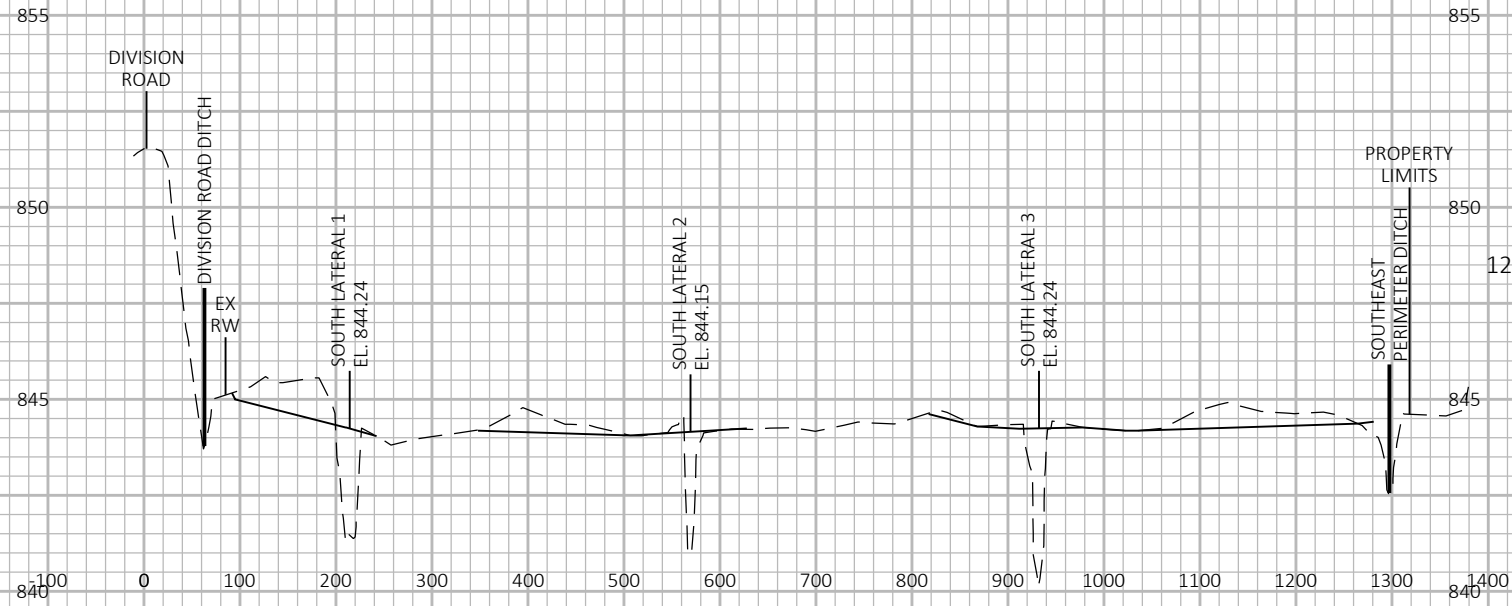
HWY: NON-HWY

COUNTY: WASHINGTON

CROSS SECTIONS: DIVISION ROAD

SHEET

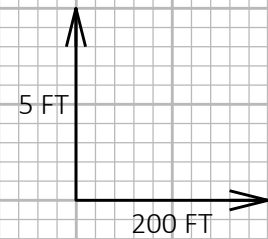
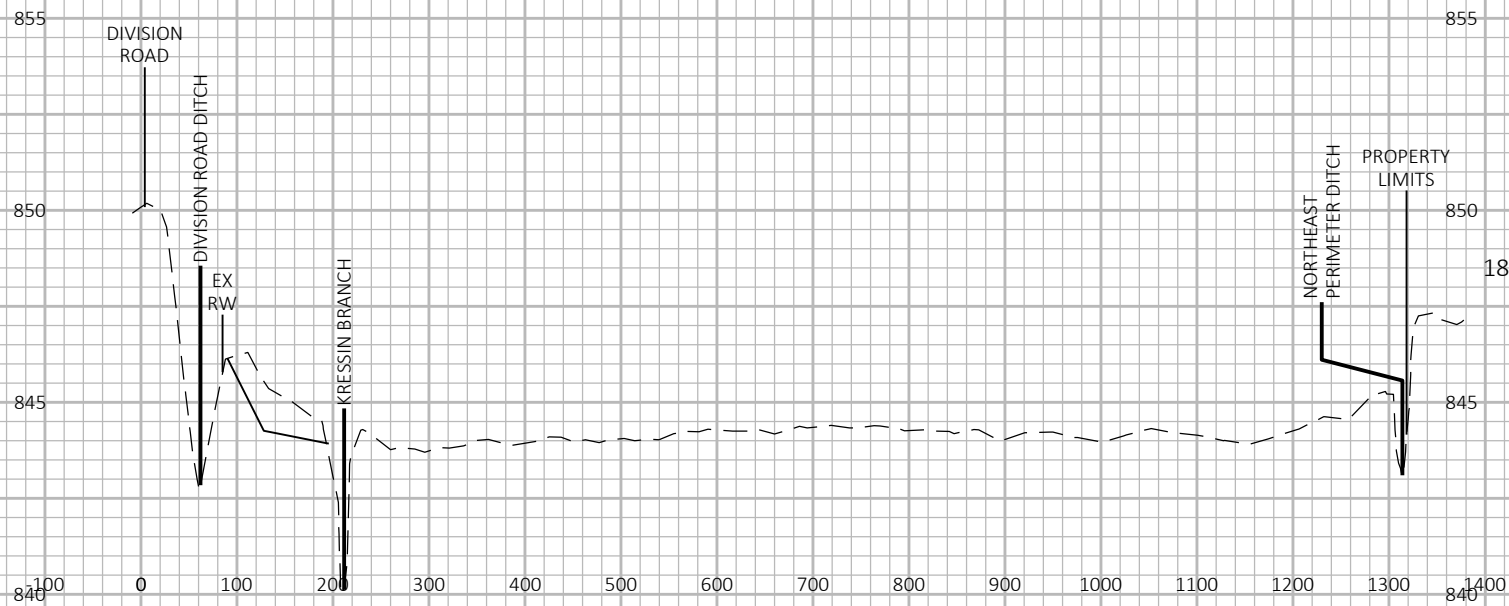
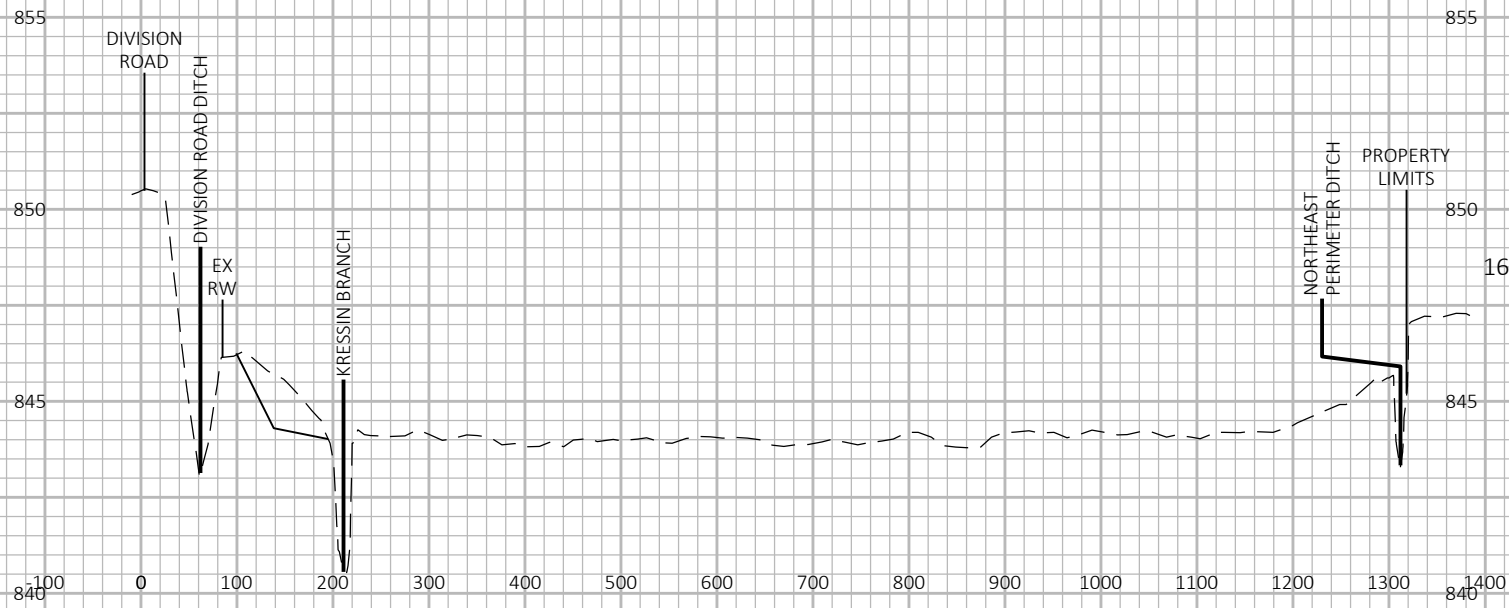
E



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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: DIVISION ROAD	SHEET	E
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PROJECT NO: 1009-23-72

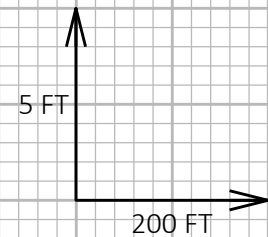
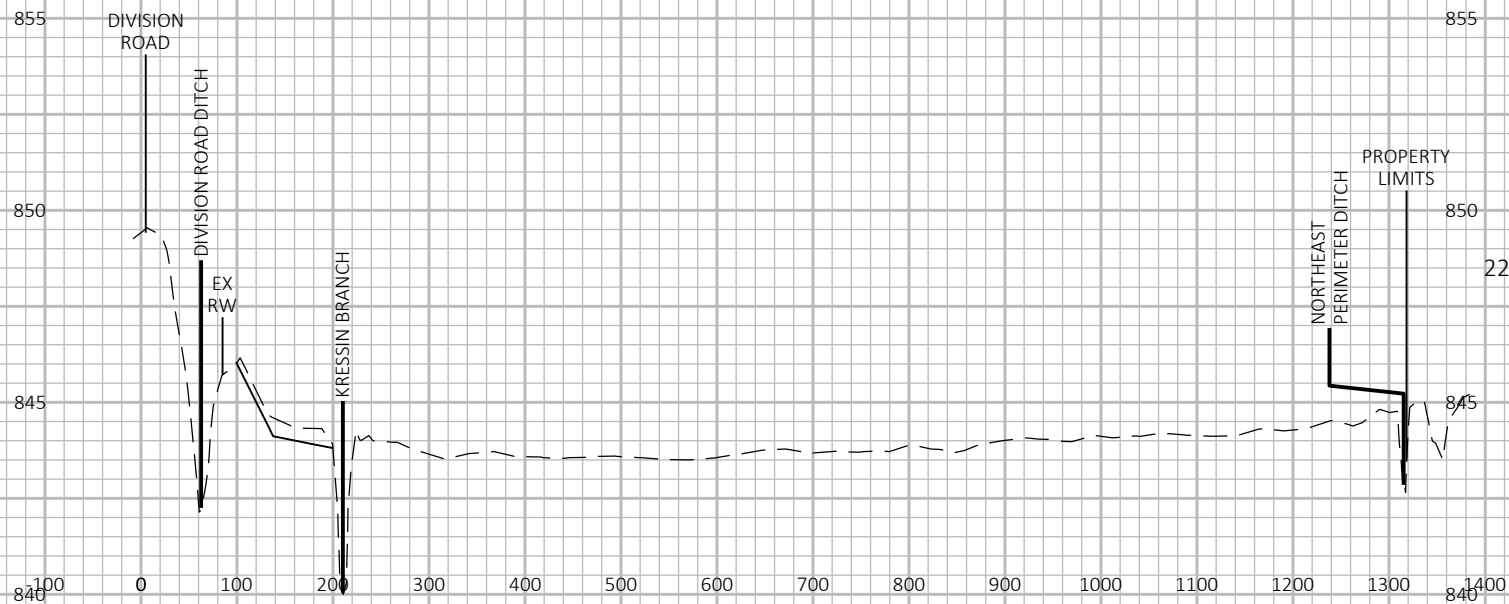
HWY: NON-HWY

COUNTY: WASHINGTON

CROSS SECTIONS: DIVISION ROAD

SHEET

E



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PROJECT NO: 1009-23-72

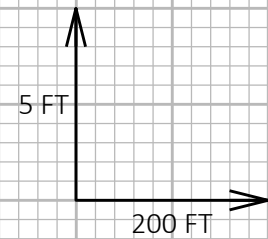
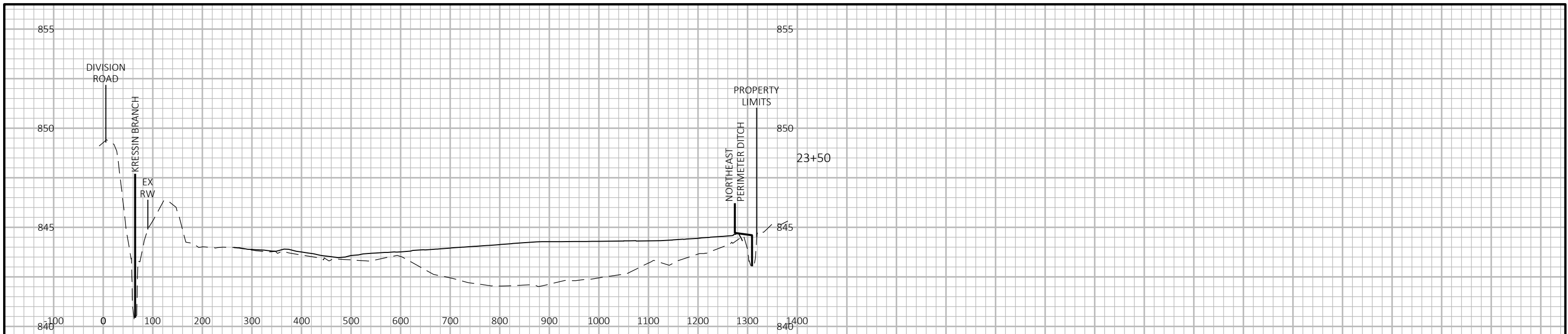
HWY: NON-HWY

COUNTY: WASHINGTON

CROSS SECTIONS: DIVISION ROAD

SHEET

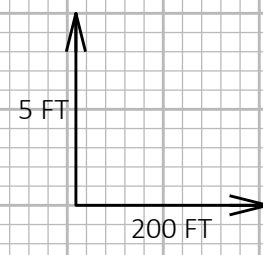
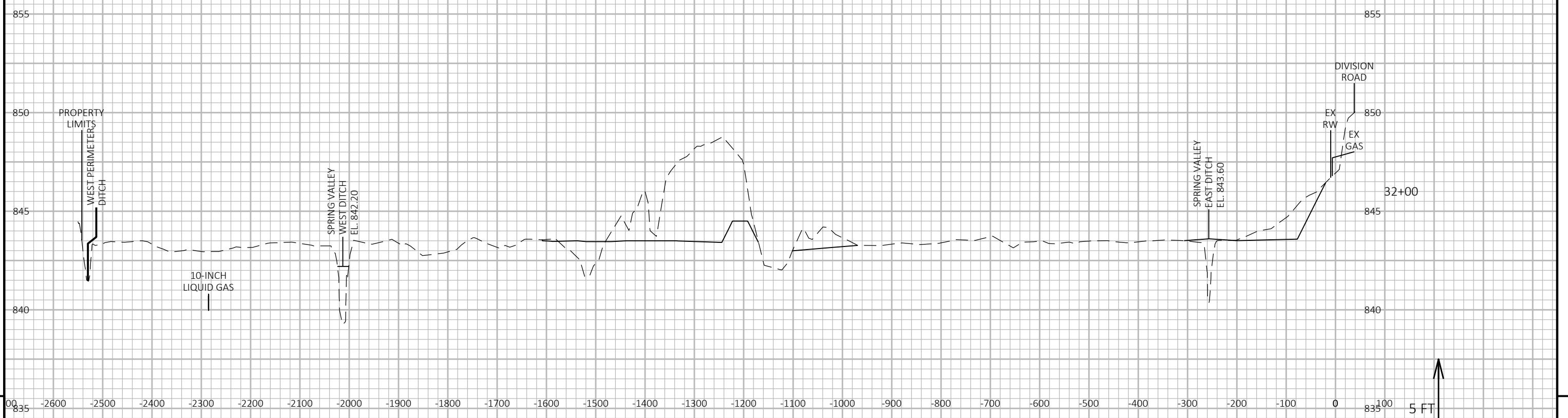
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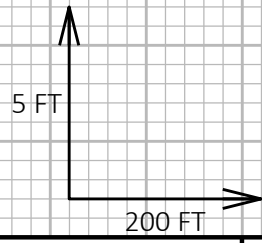
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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: DIVISION ROAD	SHEET	E
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PROJECT NO: 1009-23-72
HWY: NON-HWY
COUNTY: WASHINGTON
CROSS SECTIONS: DIVISION ROAD
SHEET
E

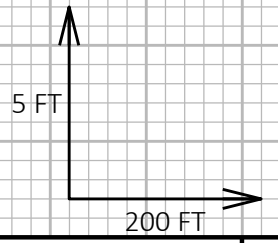
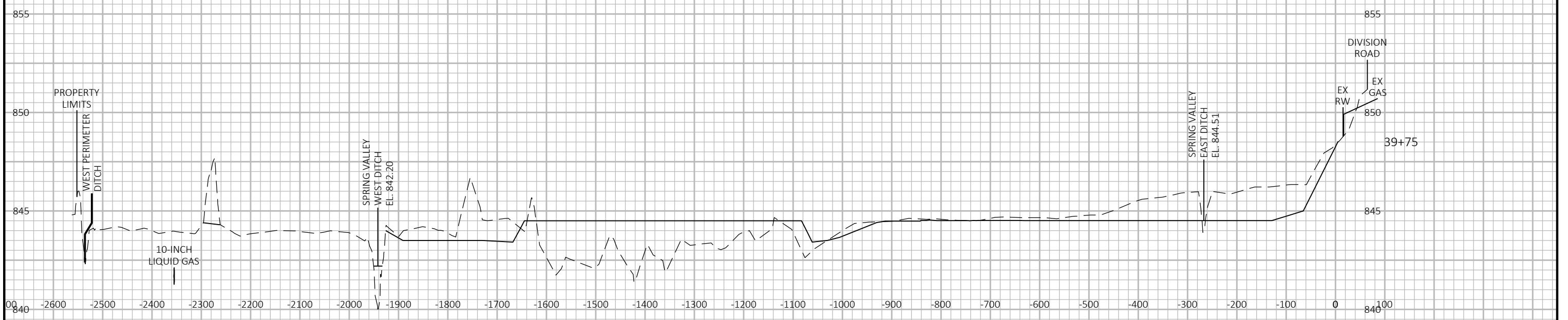


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PROJECT NO: 1009-23-72      HWY: NON-HWY      COUNTY: WASHINGTON      CROSS SECTIONS: DIVISION ROAD      SHEET      E

FILE NAME : C:\AUTODESK\ACCDOS\STANTEC CONSULTING\193711342\_WISDOT\_DIVISION\_ROAD\_WETLAND\PROJECT FILES\10092102\SHEETS\090201-XS.DWG      PLOT DATE : 3/25/2026 4:23 PM      PLOT BY : SIERACKI, MATT      PLOT NAME :      PLOT SCALE : 1 IN:200 FT HORZ. / 1 IN:5 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 34+00 - 36+00



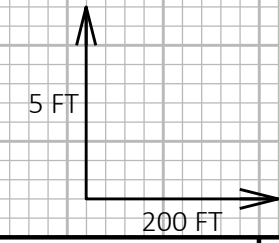
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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: DIVISION ROAD	SHEET E
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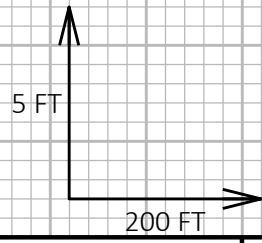
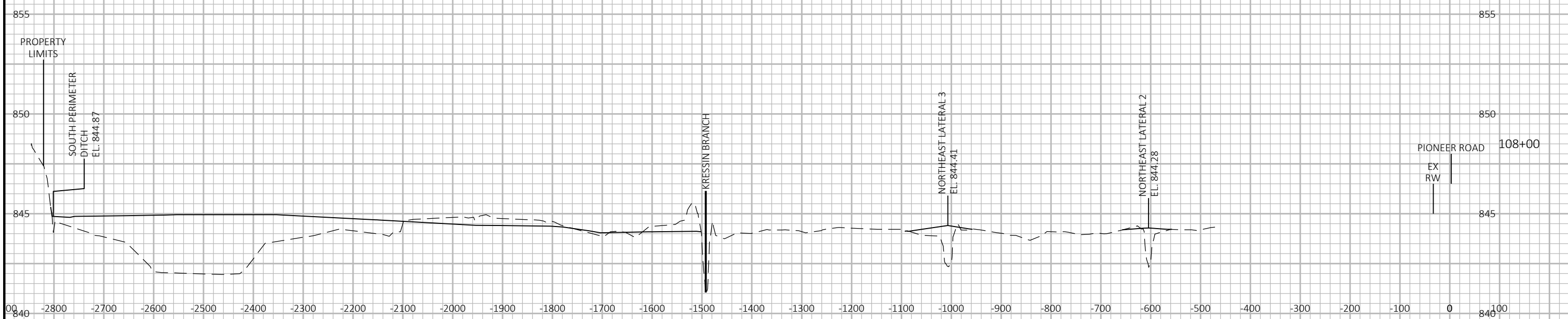
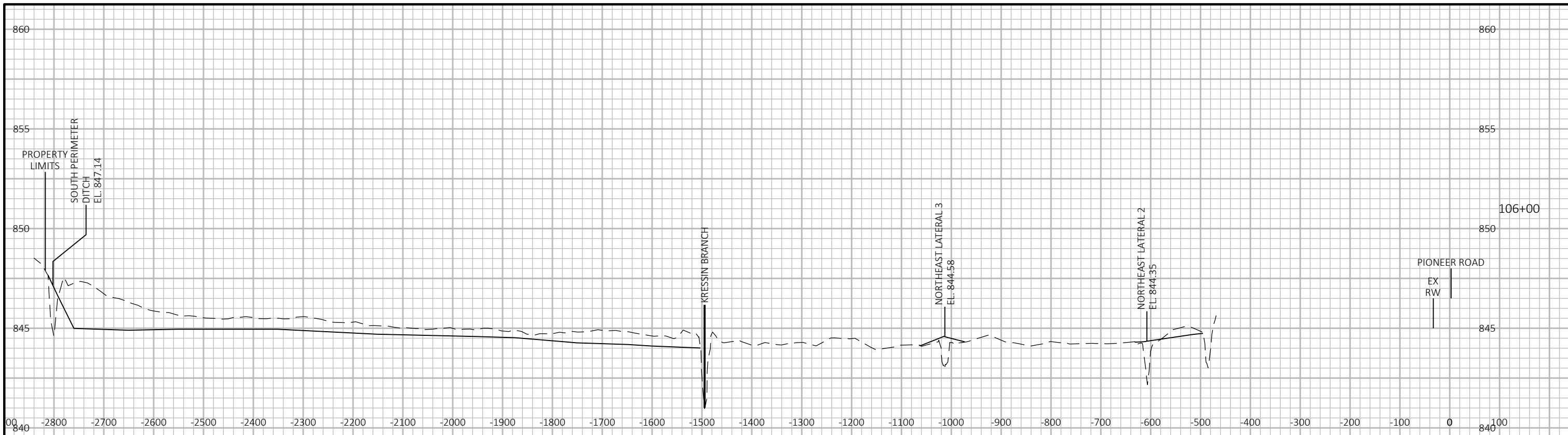


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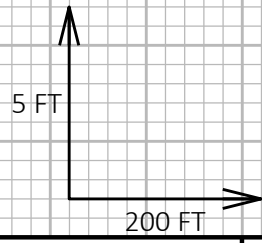
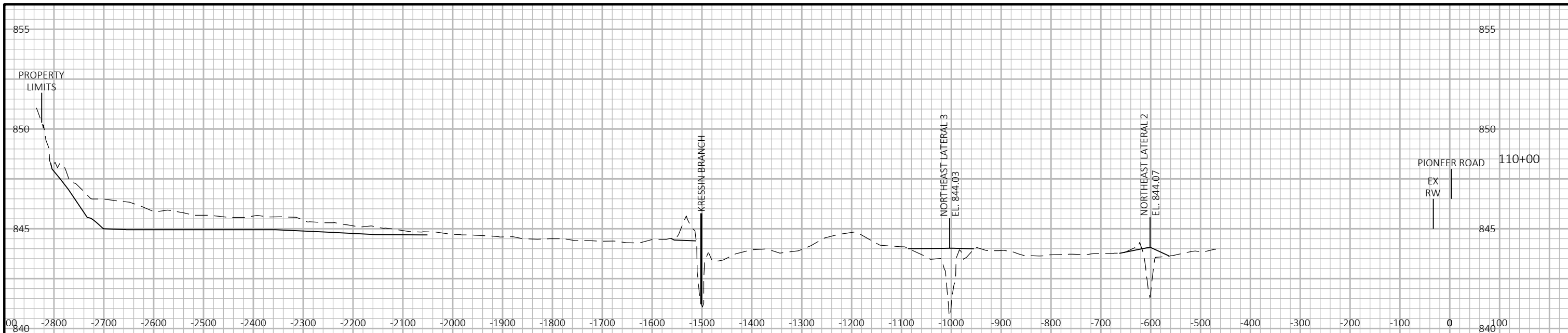
PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: DIVISION ROAD	SHEET E
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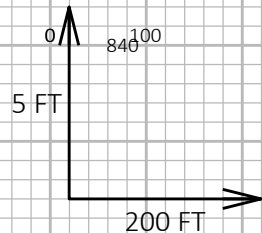
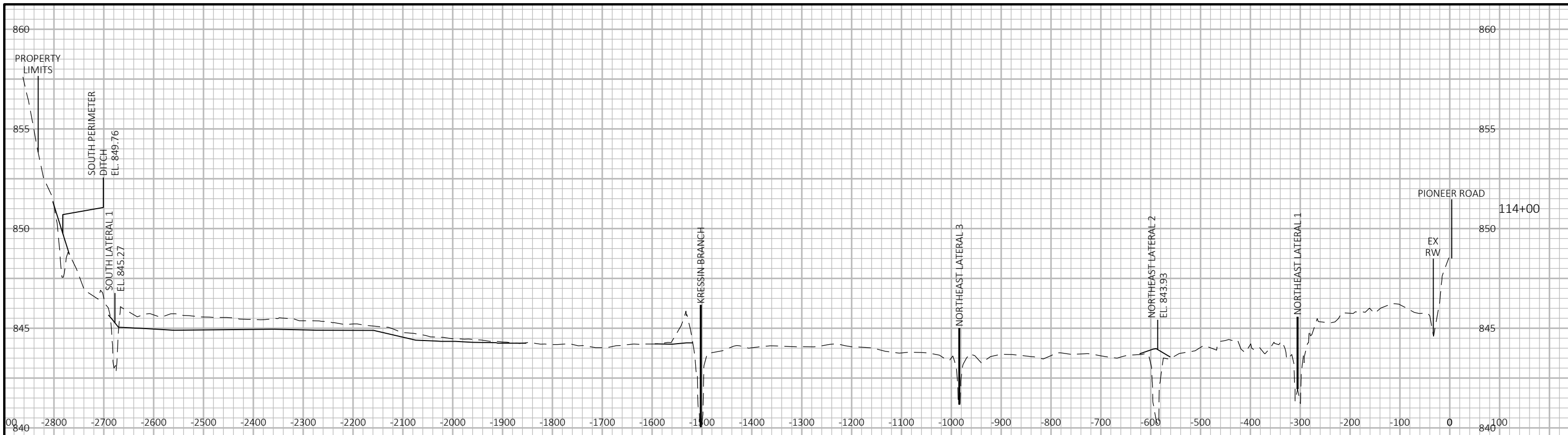
PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET	E
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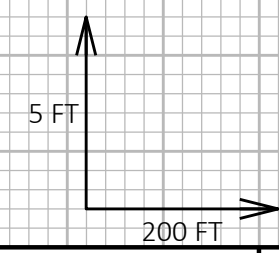
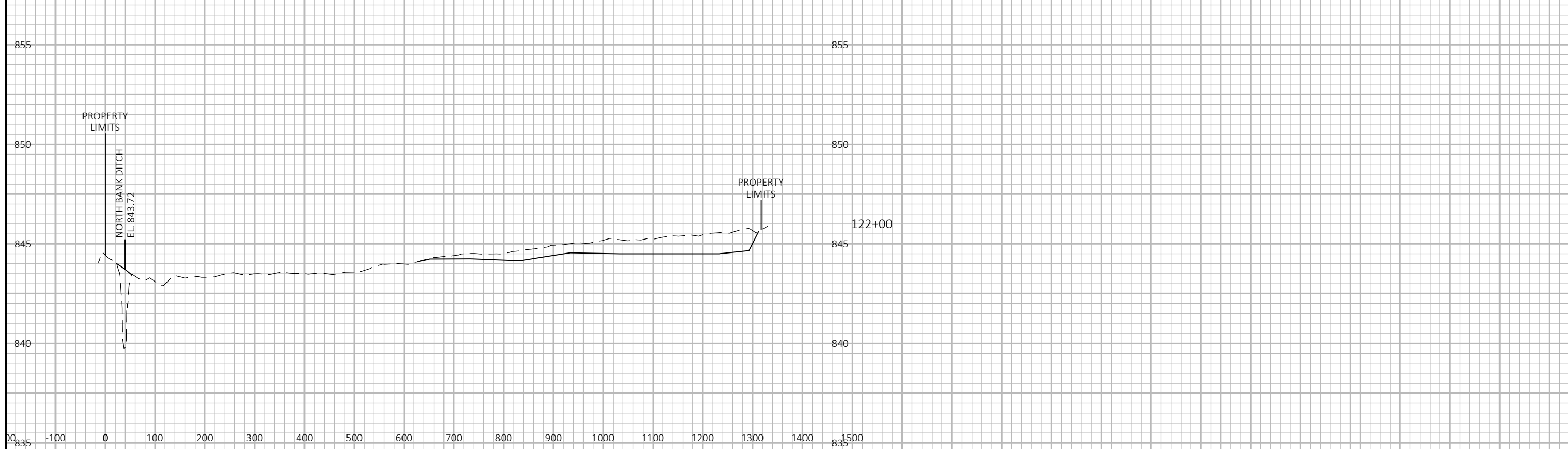
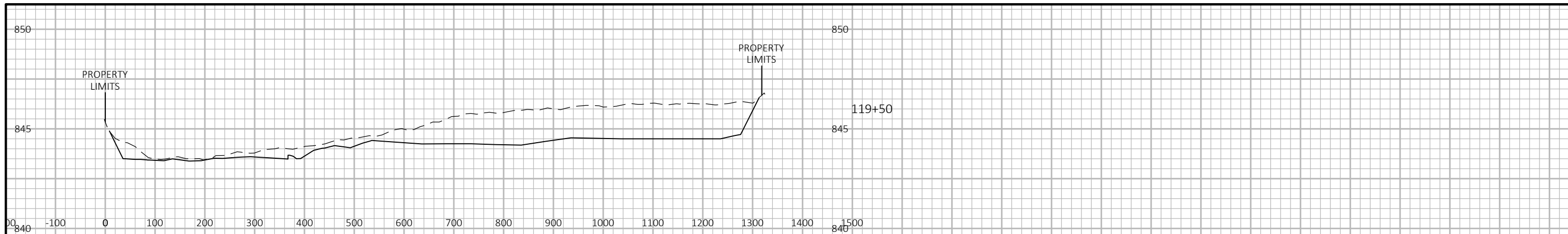
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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET	E
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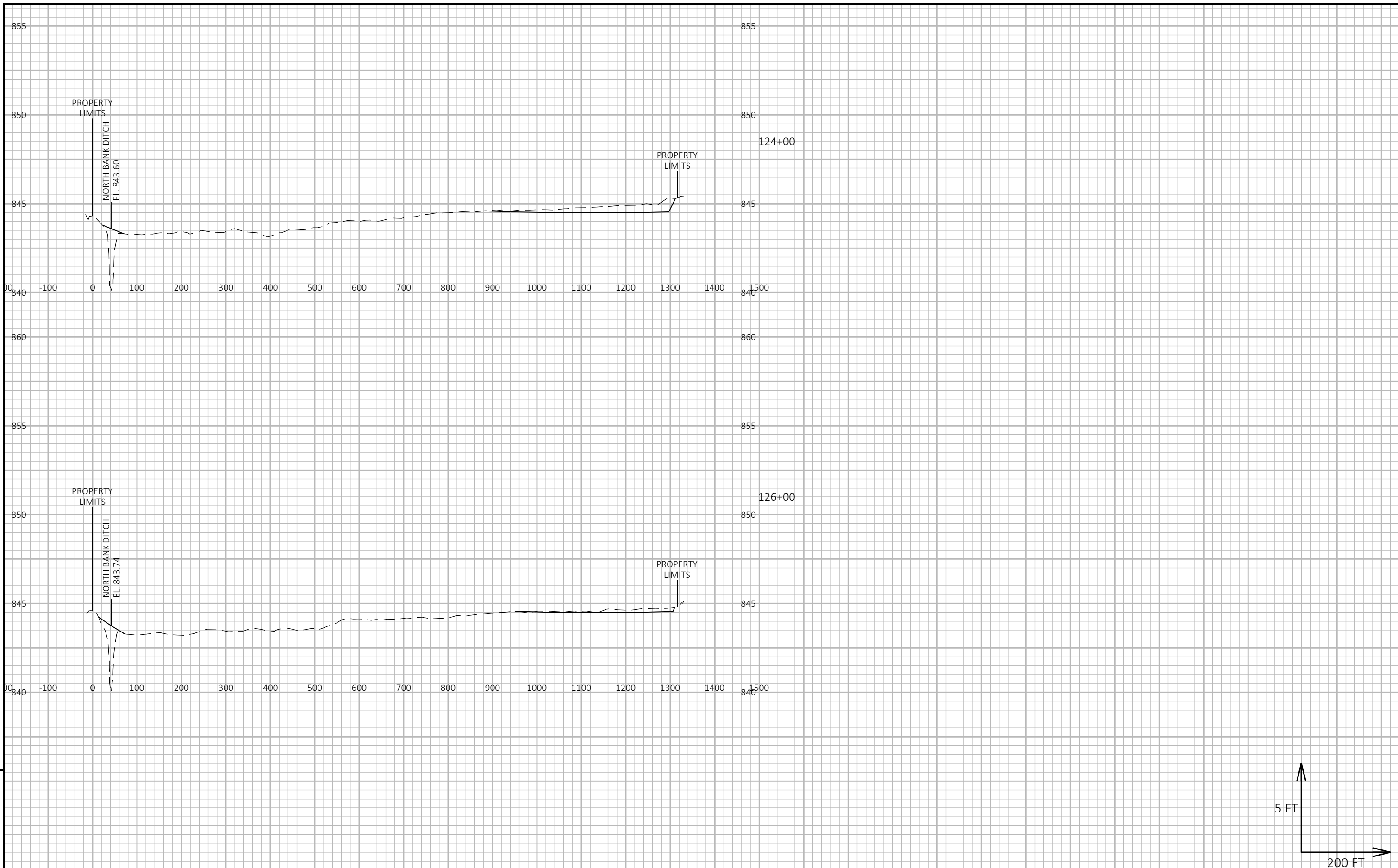
PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET <b>E</b>
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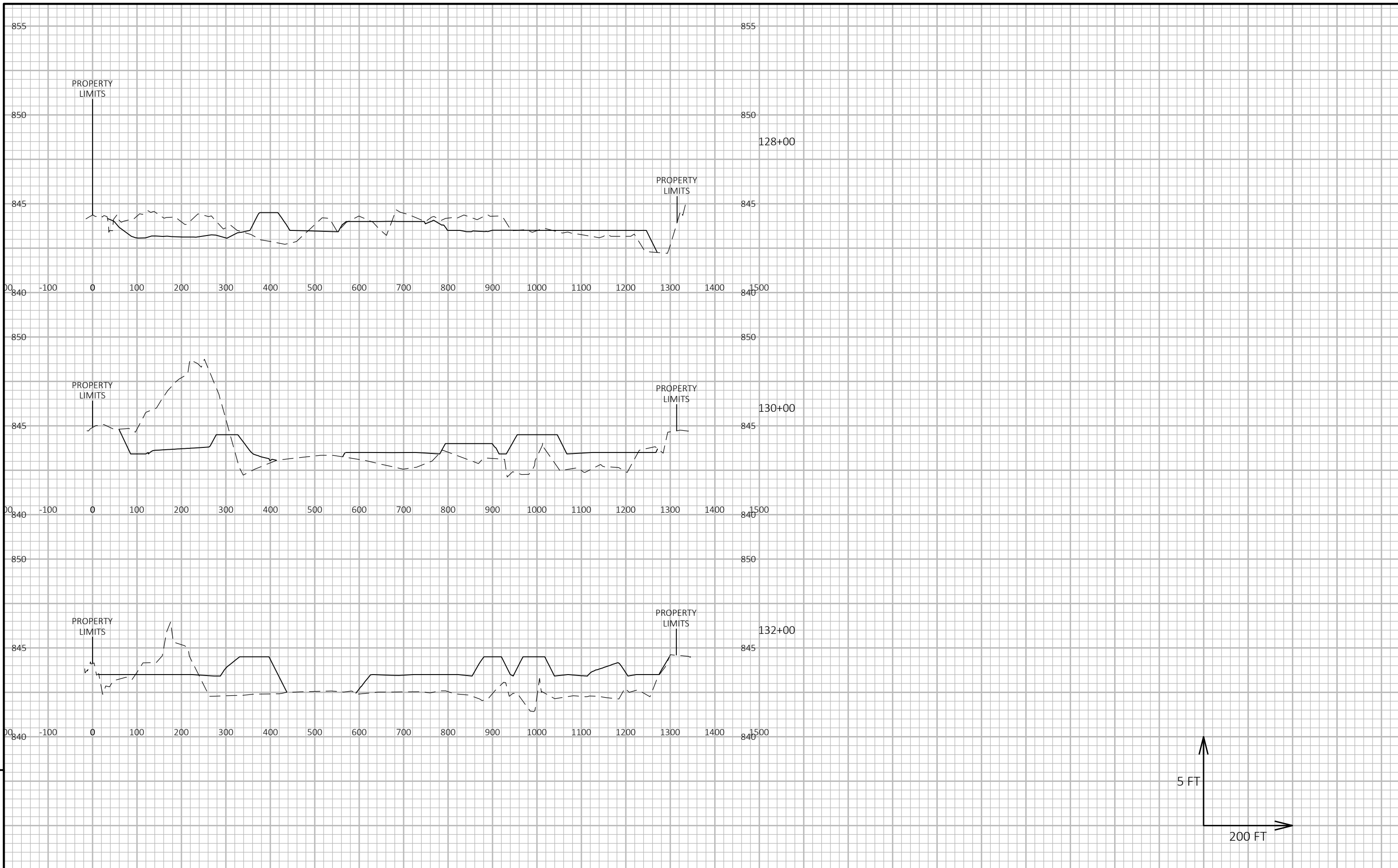
PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET	E
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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET E
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PROJECT NO: 1009-23-72	HWY: NON-HWY	COUNTY: WASHINGTON	CROSS SECTIONS: PIONEER ROAD	SHEET ----	E
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Notes



## *Wisconsin Department of Transportation*

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