

LAX

PROJECT ID:

5537-00-71

COUNTY:

VERNON

FEBRUARY 2025
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	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 146

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF BERGEN TO STH 162 (CTH O)

SKYLINE LANE TO SYLVAN GLEN ROAD

CTH O
VERNON

STATE PROJECT NUMBER
5537-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5537-00-71	WISC 2025305	1



DESIGN DESIGNATION 5537-00-00

A.A.D.T.	2022	=	210
A.A.D.T.	2042	=	230
D.H.V.		=	23
D.D.		=	50/50
T.		=	19%
DESIGN SPEED		=	40 MPH
ESALS		=	60,000

CONVENTIONAL SYMBOLS

PLAN

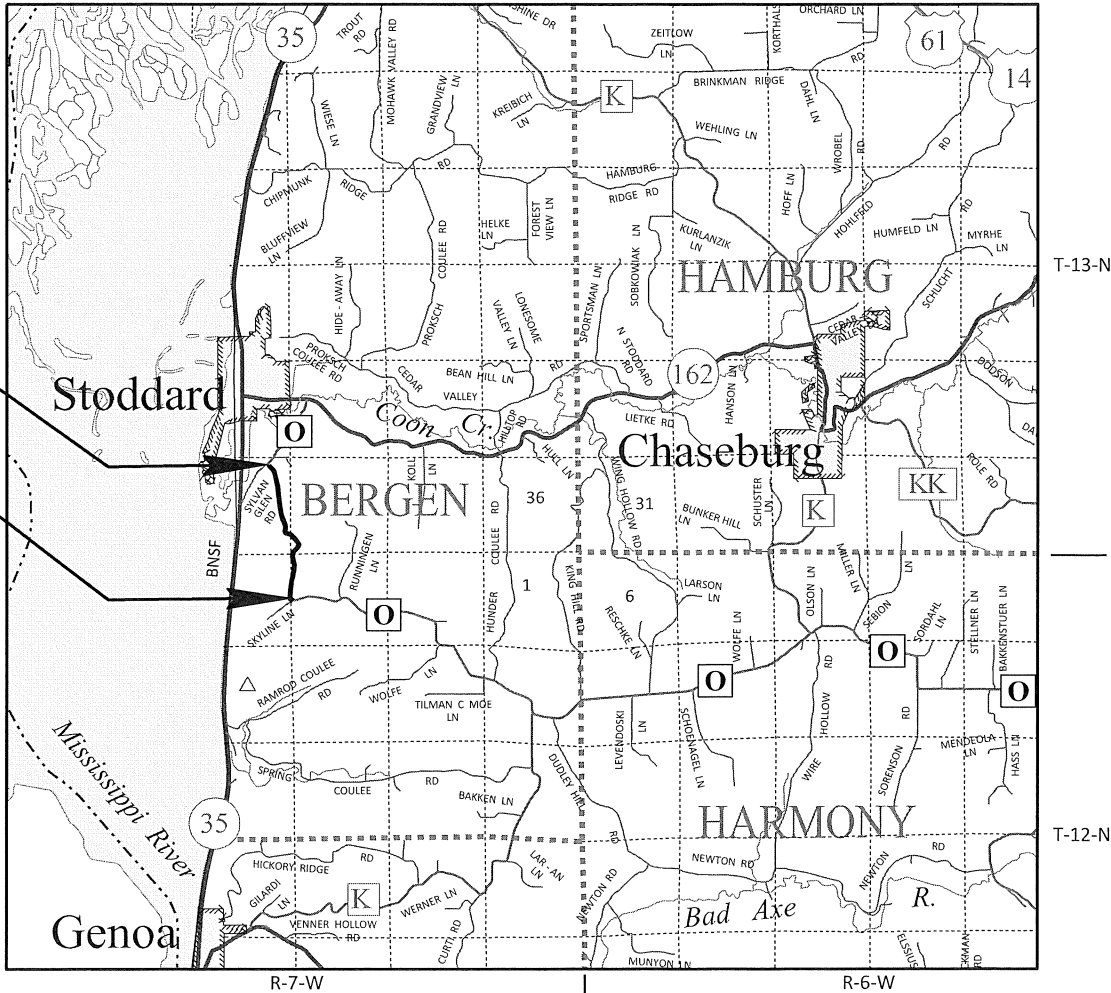
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

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

END PROJECT
STA 183+70'0"

BEGIN PROJECT
STA 100+80'0"
X = 617,607.6604
Y = 176,140.2538



LAYOUT
SCALE 0 2.0 MI
TOTAL NET LENGTH OF CENTERLINE = 1.570 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), VERNON 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 12A

ACCEPTED FOR

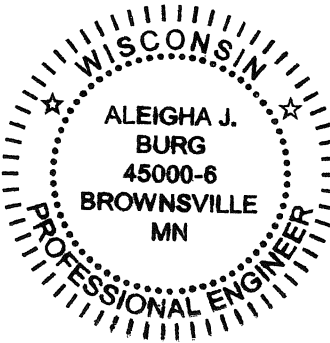
COUNTY of VERNON

10/21/2024 Phil Hewitt

(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

SEH Short Elliott Hendrickson Inc.
329 Jay Street, Suite 301
La Crosse, WI 54601-4007
608.782.3161 main | 888.908.8166 fax
www.sehinc.com



10/21/2024 [Signature]

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	SEH
Designer	SEH
Project Manager	LORRAINE BETZEL
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP

APPROVED FOR THE DEPARTMENT
DATE: 10/21/24 [Signature]
(Signature)

E

STANDARD ABBREVIATIONS:

ABUT	ABUTMENT	ID	INSIDE DIAMETER
AC	ACRE	INV	INVERT
AGG	AGGREGATE	IP	IRON PIPE ON PIN
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	LHF	LEFT-HAND FORWARD
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	L	LENGTH OF CURVE
ASPH	ASPHALTIC	LF	LINEAR FOOT
AVG	AVERAGE	LC	LONG CHORD OF CURVE
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
BF	BACK FACE	MH	MANHOLE
BM	BENCH MARK	MOR	MID POINT OF RADIUS
BR	BRIDGE	NC	NORMAL CROWN
CE	COMMERCIAL ENTRANCE	NO	NUMBER
C/L	CENTER LINE	OBLIT	OBLITERATE
Δ	CENTRAL ANGLE OR DELTA	PAVT	PAVEMENT
COB	CENTER OF BARRIER	PE	PRIVATE ENTRANCE
CONC	CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRC	CULVERT PIPE REINFORCED CONCRETE	QOR	QUARTER POINT OF RADIUS
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	R	RADIUS
CR	CREEK	REQ'D	REQUIRED
CY	CUBIC YARD	RES	RESIDENCE OR RESIDENTIAL
C&G	CURB AND GUTTER	RHF	RIGHT-HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT-OF-WAY
DHV	DESIGN HOUR VOLUME	R	RIVER
DISCH	DISCHARGE	RDWY	ROADWAY
DG	DITCH GRADE	R/L	REFERENCE LINE
DWY	DRIVEWAY	SALV	SALVAGED
X	EAST GRID COORDINATE	SAN	SANITARY SEWER
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD
HYD	HYDRANT		

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 12.6 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.2ACRES

UTILITY CONTACT LIST:

COON VALLEY FARMERS TELEPHONE COMMUNICATION 105 CENTRAL AVE COON VALLEY, WI 54623 ATTENTION: BRADLEY PETERS TELEPHONE: 608.452.3101 EMAIL: BRADLEY.PETERS@COONVALLEYTEL.COM	VERNON ELECTRIC COOPERATIVE ELECTRIC 110 SAUGSTAD ROAD WESTBY, WI 53667 ATTENTION: MATT DAHLEN TELEPHONE: 608.634.7460 EMAIL: MDAHLEN@VERNONELECTRIC.ORG
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DAIRYLAND POWER COOPERATIVE ELECTRIC 3200 EAST AVE SOUTH, PO BOX 817 LA CROSSE, WI 54602 ATTENTION: SARA EDMAN TELEPHONE: 608.787.1483 EMAIL: SARA.EDMAN@DAIRYLANDPOWER.COM	XCEL ENERGY ELECTRIC 3215 COMMERCE STREET LA CROSSE, WI 54603 ATTENTION: JOE MOEN TELEPHONE: 715.566.2495 EMAIL: JOE.J.MOEN@XCELENERGY.COM
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Dial  or (800)242-8511

www.DiggersHotline.com

BORING LOG

BORING NO.	STATION	ASPHALTIC PAVEMENT DEPTH (IN)	BASE DEPTH (IN)	SUBBASE MATERIAL
B-101	179+20	6	18	BROWN CLAY
B-102	173+27	6	18	BROWN SANDY CLAY
B-103	166+68	3	21	BROWN SAND
B-104	161+07	4	20	SAND
B-105	157+45	3	21	BROWN SANDY CLAY
B-106	153+10	6	18	SAND
B-107	145+47	3	21	BROWN SANDY CLAY
B-108	140+98	3	21	GRAY CLAY
B-109	134+15	6	18	TAN SAND
B-110	128+36	3	21	WHITE SAND
B-111	126+10	6	18	BROWN SANDY CLAY
B-112	122+35	6	18	BROWN SANDY CLAY
B-113	118+25	6	18	SAND
B-114	113+61	3	21	TAN SAND
B-115	110+32	3	21	BROWN SILTY CLAY
B-116	103+77	3	21	GRAY/BROWN CLAY

DNR AREA LIAISON:

WI DEPT OF NATURAL REASOURCES
KAREN KALVELAGE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
PHONE: (608) 785-9115
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

VERNON COUNTY:

VERNON COUNTY HIGHWAY COMMISSIONER
PHIL HEWITT
1335 RAILROAD AVENUE
VIROQUA, WI 54665
PHONE: (608) 637-5452
EMAIL: VCHD@VERNONCOUNTY.ORG

WISDOT CONTACT:

WI DEPT OF TRANSPORTATION
LORRAINE BETZEL
2101 WRIGHT ST
MADISON, WI 53704
PHONE: (608) 246-3279
EMAIL: LORRAINE.BETZEL@DOT.WI.GOV

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC.
ALEIGHA BURG
329 JAY STREET, SUITE 301
LA CROSSE, WI 54601
PHONE: (608) 498-4804
EMAIL: ABURG@SEHINC.COM

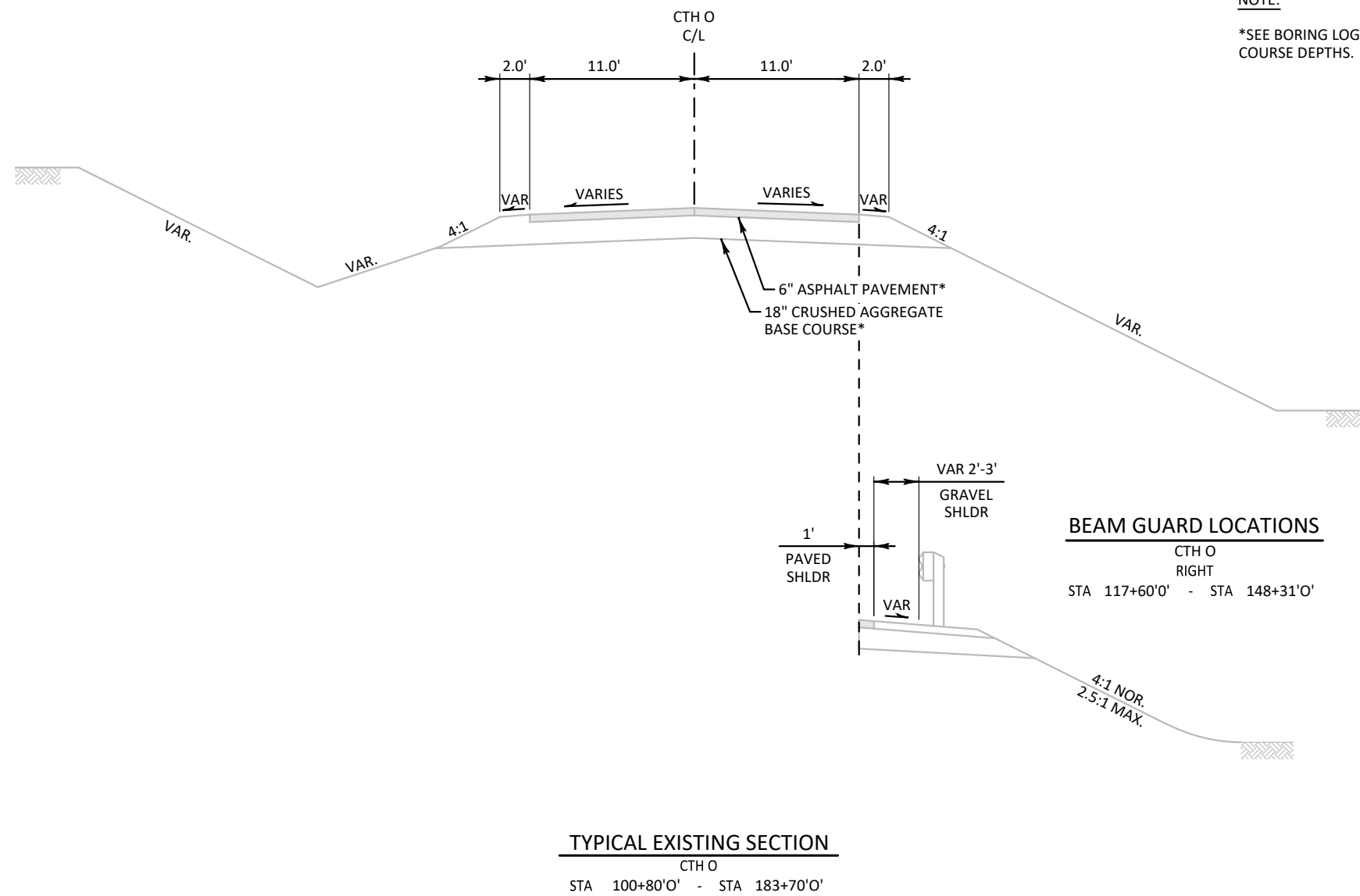
GENERAL NOTES:

- NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS WITH THE ENGINEER.
- WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
- INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
- BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.
- CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.
- THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED AND SEEDED.
- FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
- A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.
- APPLY TACK COAT AT A RATE OF 0.05 GA/SY BETWEEN LAYERS OF HMA PAVEMENT.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN AND TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

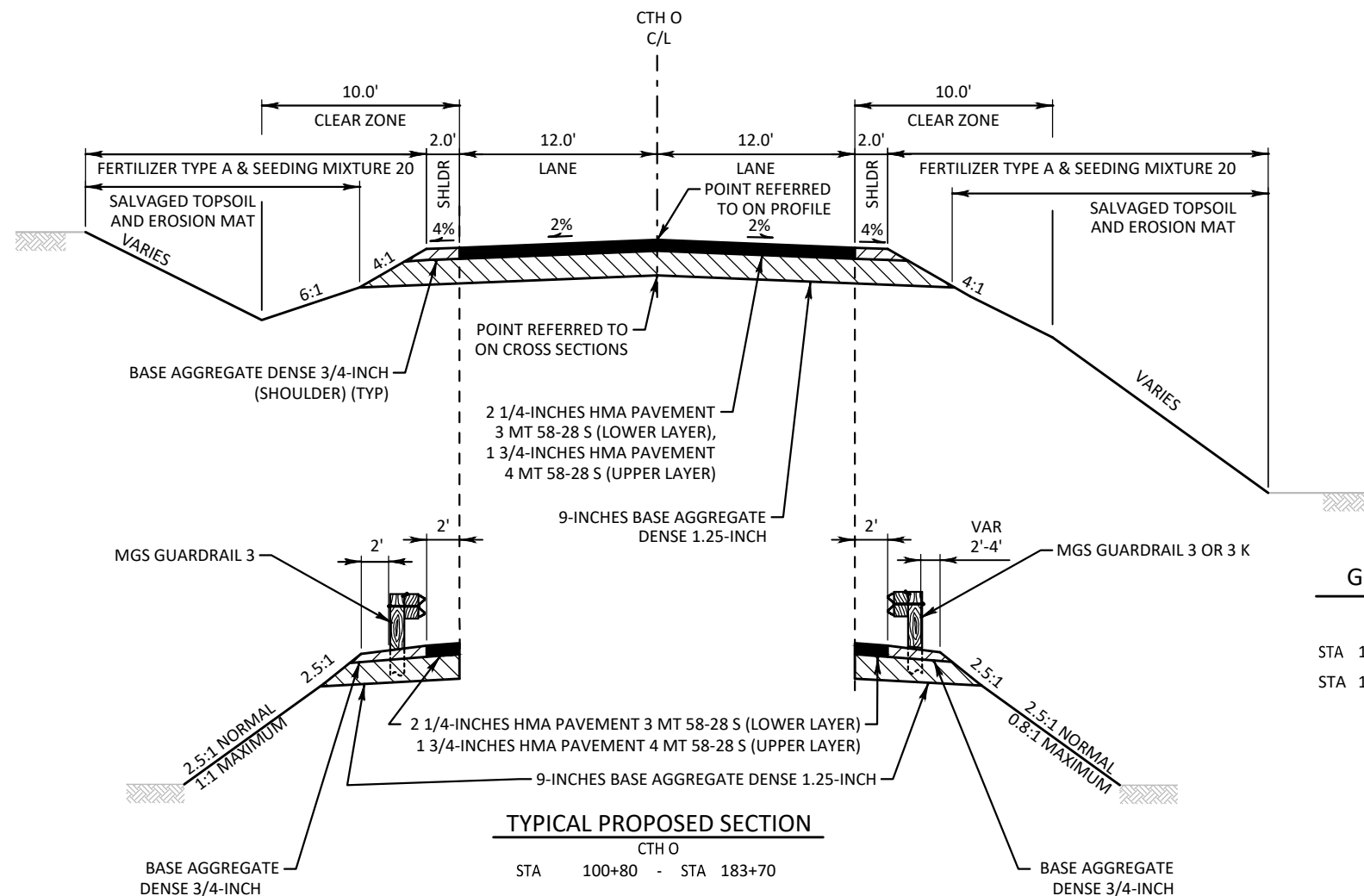
ORDER OF SHEETS - SECTION 2:

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL
- PERMANENT SIGNING & PAVEMENT MARKING
- TRAFFIC CONTROL DETAILS

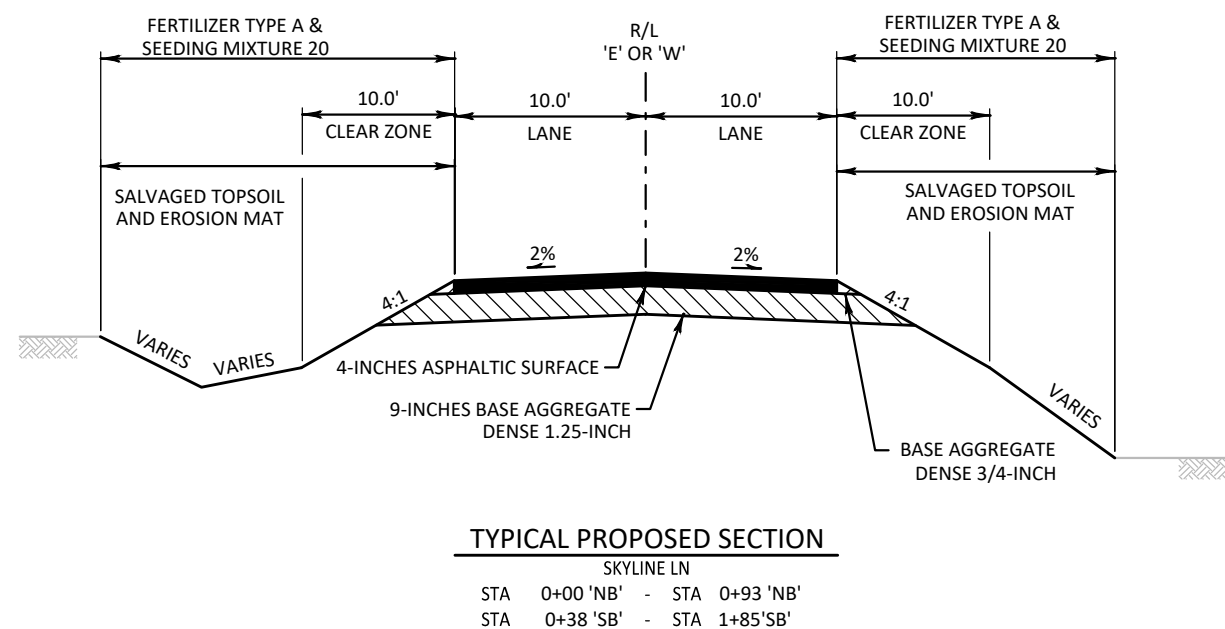


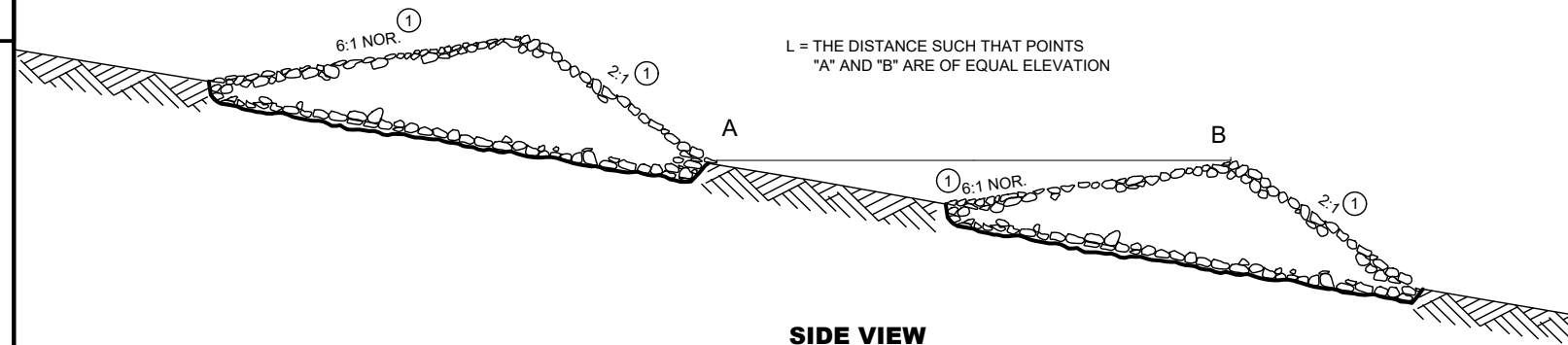


GUARDRAIL LOCATIONS
CTH O
LEFT
STA 172+80.73'O' - STA 175+50.00'O'

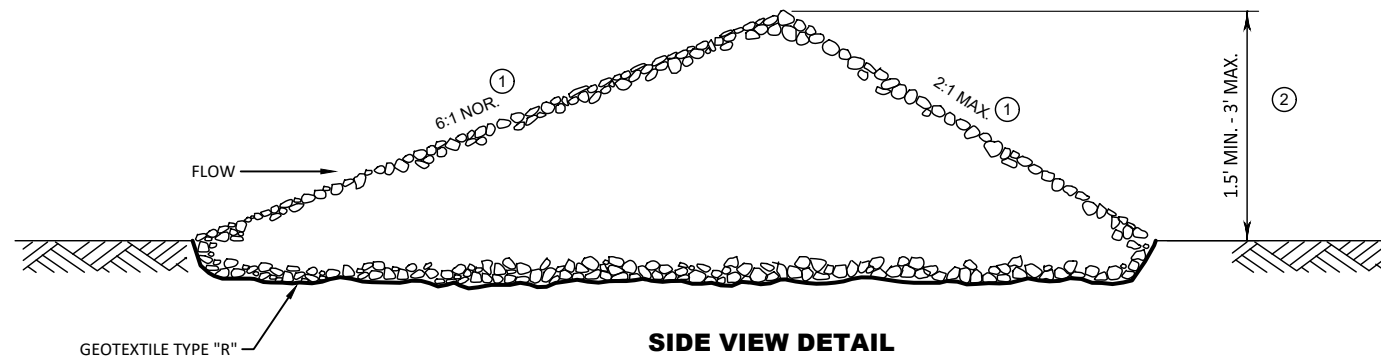


GUARDRAIL LOCATIONS
CTH O
RIGHT
STA 110+64.90'O' - STA 168+43.54'O'
STA 169+95.10'O' - STA 178+45.91'O'

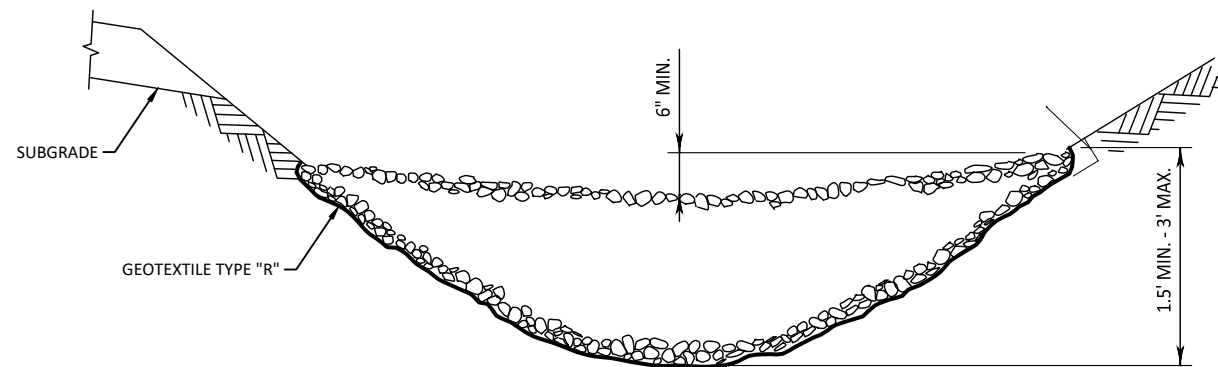




SIDE VIEW



SIDE VIEW DETAIL



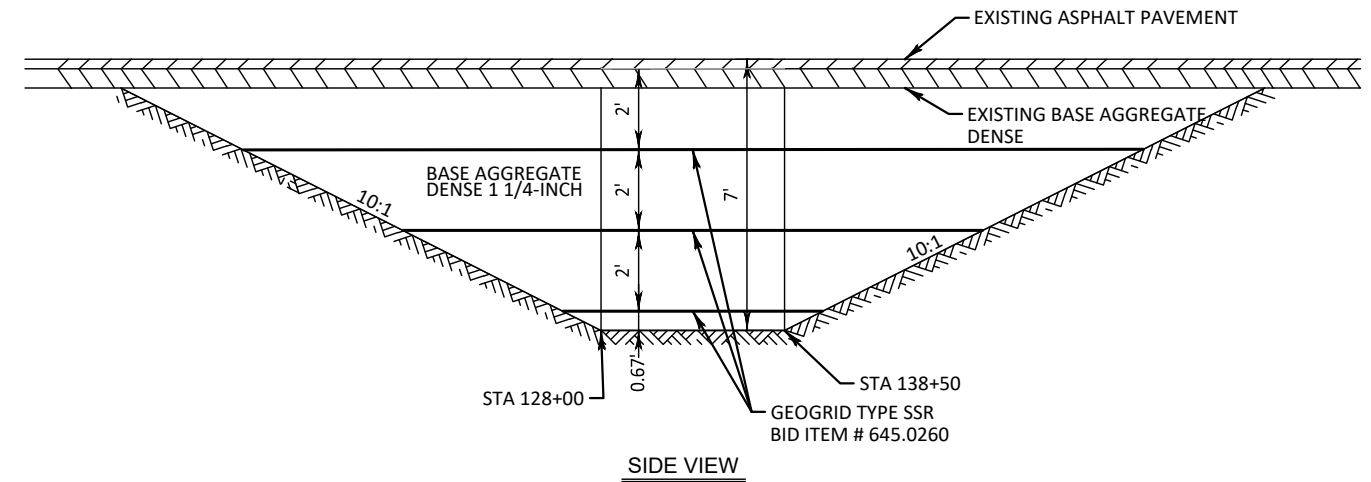
SECTION VIEW

STONE DITCH CHECK

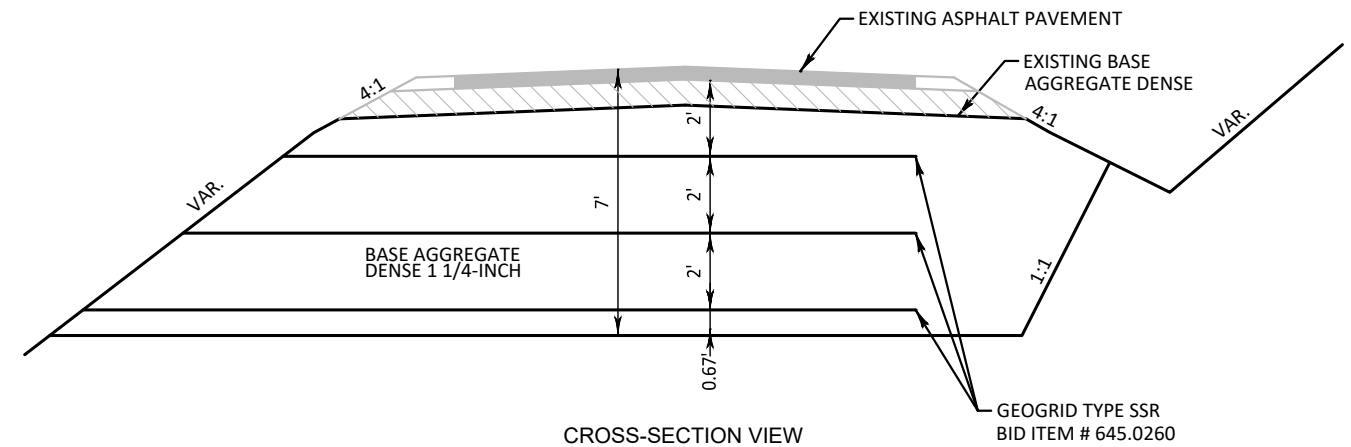
- ① WHEN PLACED WITHIN THE CLEAR ZONE, SLOPED AT 6:1 OR FLATTER.
② MEASURED AT THE CENTER OF THE DITCH CHECK.

EBS WITH GEOGRID (STA 128+00 - 138+50)

NOTE:
WIDTHS NOT TO SCALE



SIDE VIEW



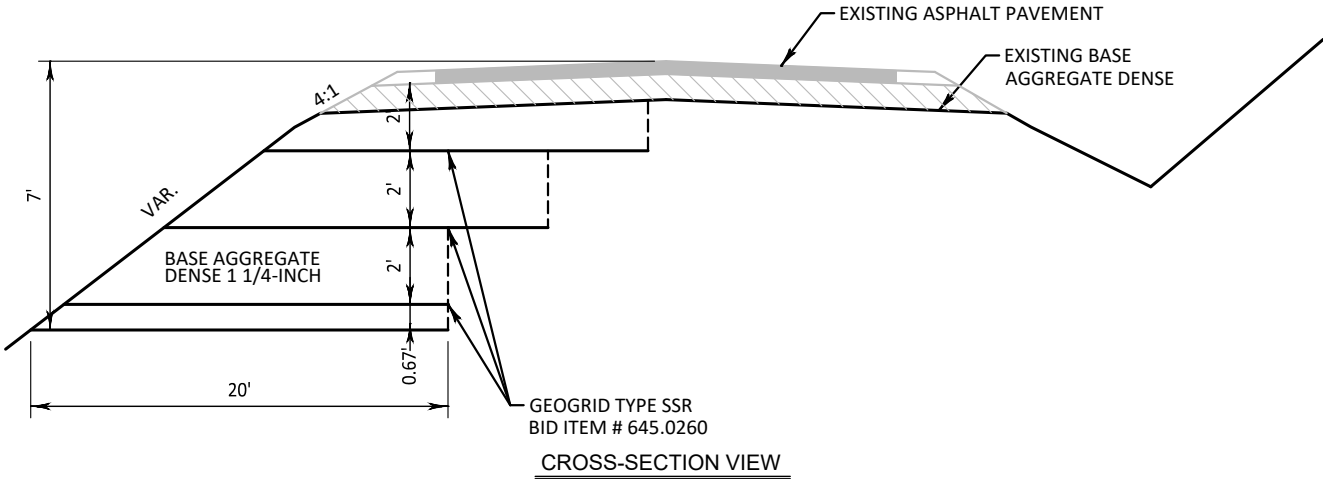
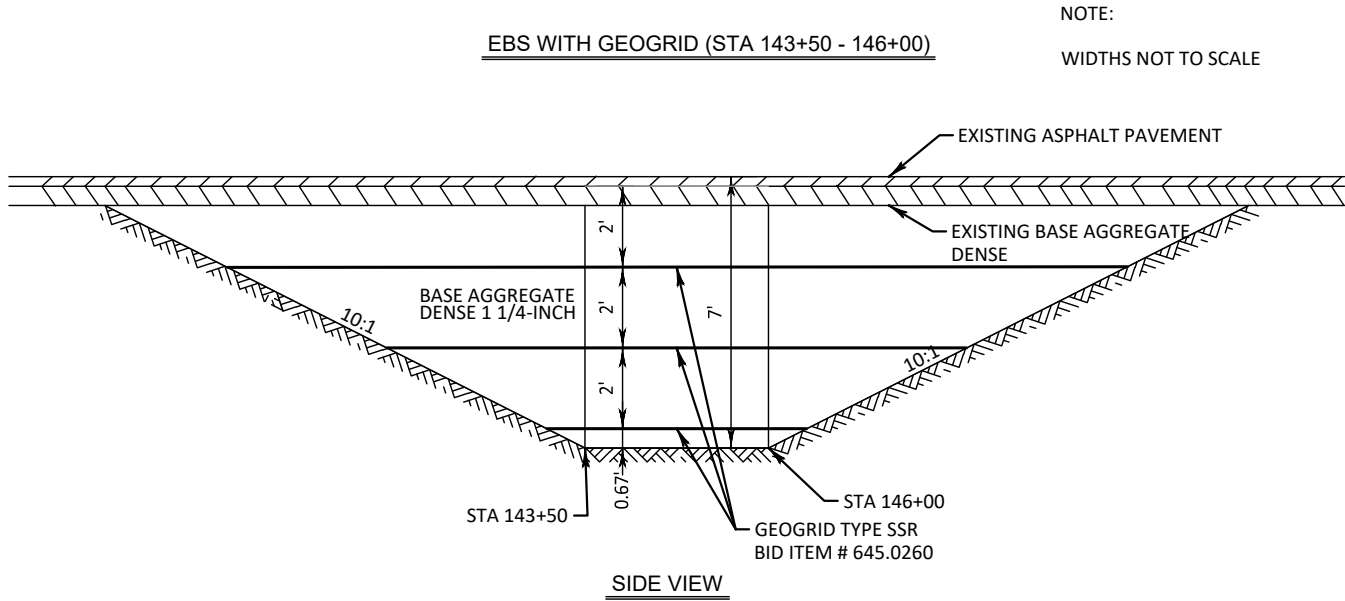
CROSS-SECTION VIEW

NOTE:

WHEN GEOGRID INTERSECTS WITH A CULVERT PIPE,
STOP THE GEOGRID IN CONFLICT WITH THE PIPE 2'
SHORT OF THE CULVERT PIPE.

SEE TYPICAL SECTION FOR PERMANENT EROSION
CONTROL MEASURES.

2

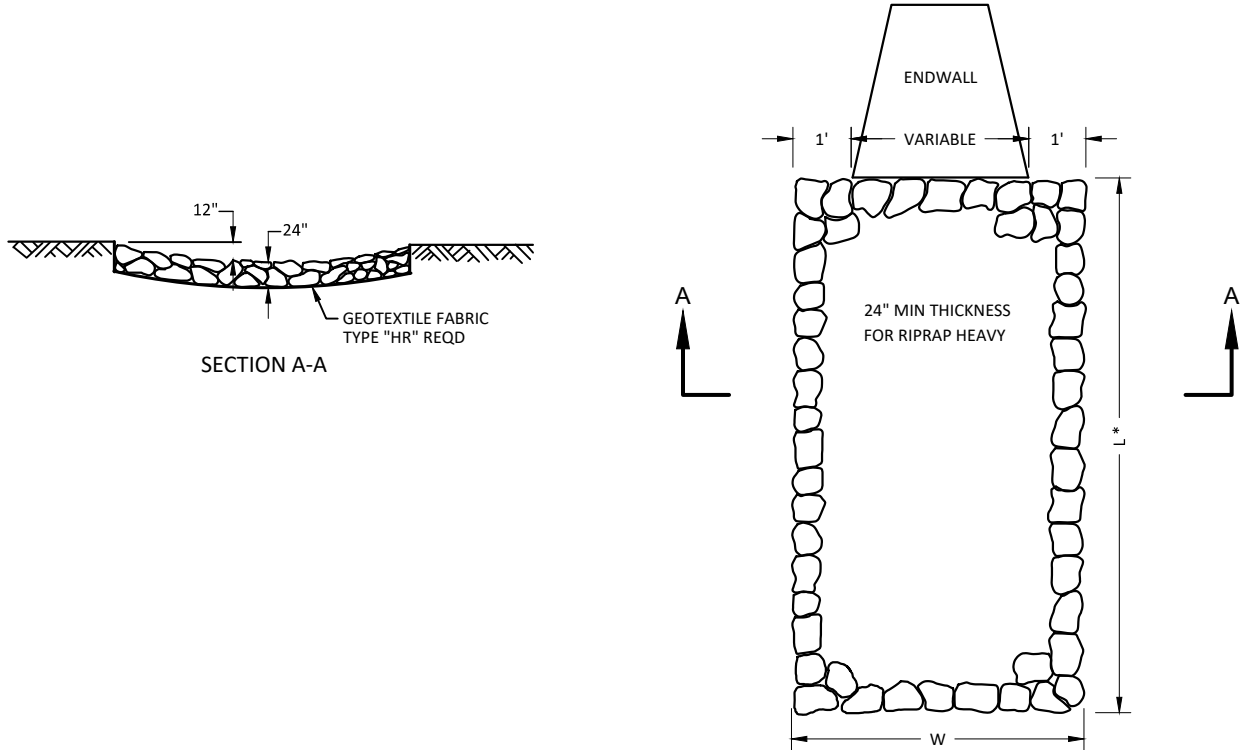


WHEN GEOGRID INTERSECTS WITH A CULVERT PIPE,
STOP THE GEOGRID IN CONFLICT WITH THE PIPE 2'
SHORT OF THE CULVERT PIPE.

ALL GEOGRID 20' LENGTH OFF THE EDGE OF SLOPE.

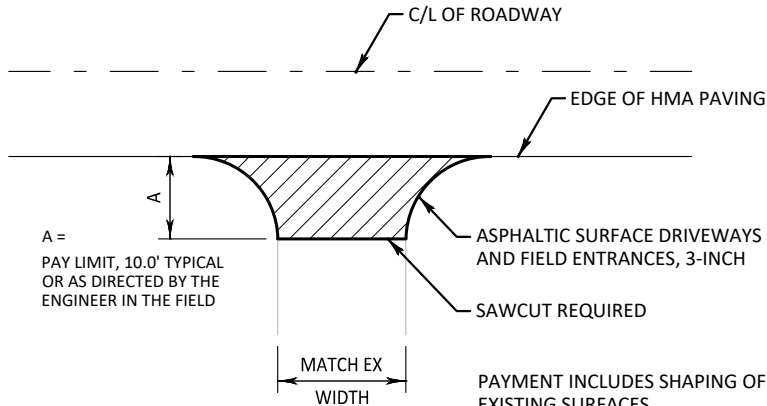
SEE TYPICAL SECTION FOR PERMANENT EROSION CONTROL MEASURES.

NOTE:
WIDTHS NOT TO SCALE



RIPRAP HEAVY TREATMENT AT CULVERTS

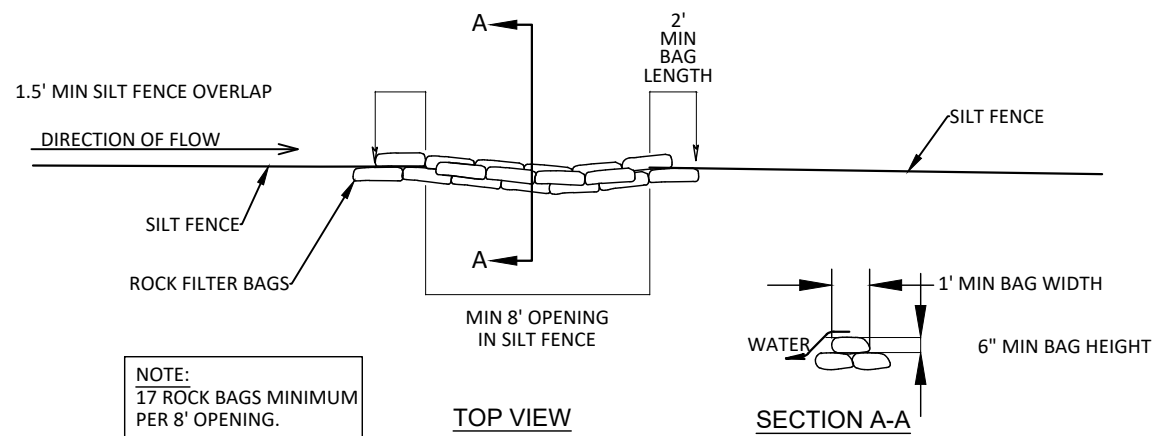
* = DIMENSION SHOWN ON EROSION CONTROL
DETAIL SHEETS.



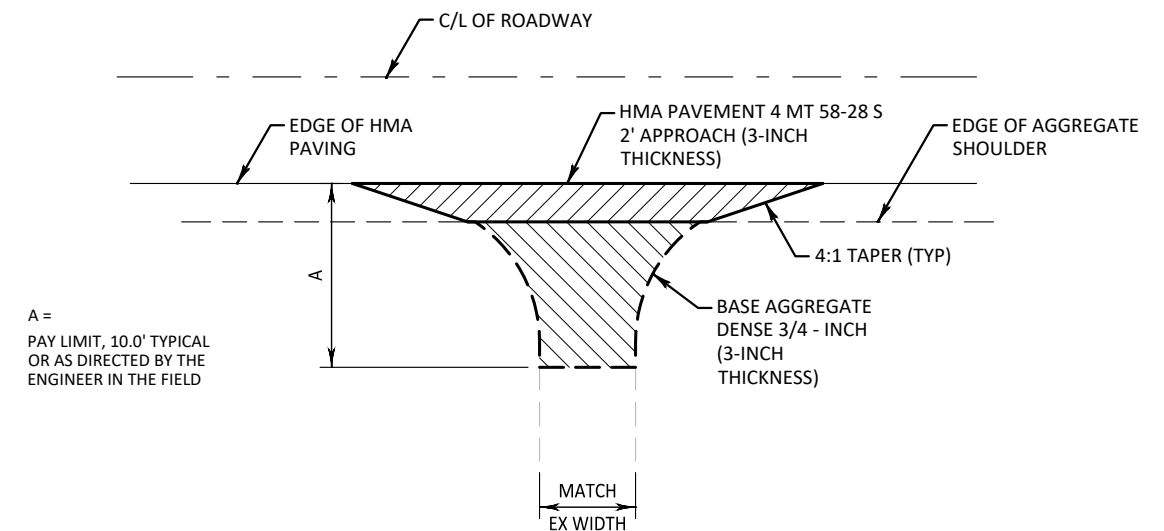
ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (PE,CE, OR FE)

PAYMENT INCLUDES SHAPING OF
EXISTING SURFACES.

ANY ADDITIONAL BASE AGGREGATE
DENSE REQUIRED SHALL BE PAID
UNDER ITEM - "BASE AGGREGATE
DENSE 3/4-INCH".

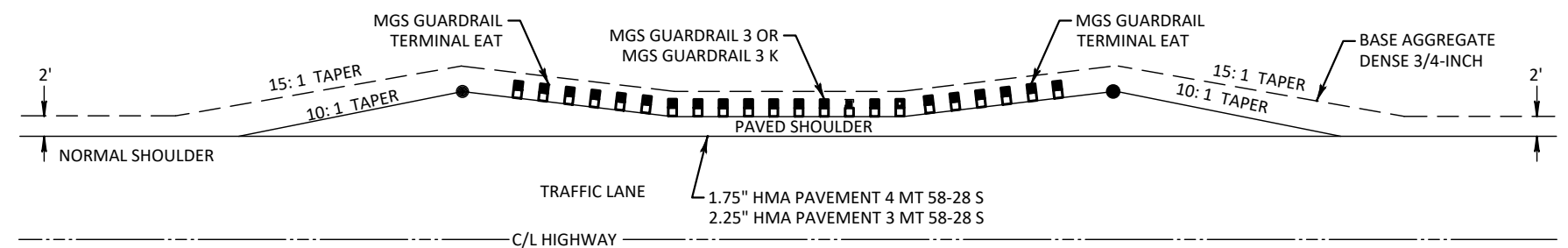
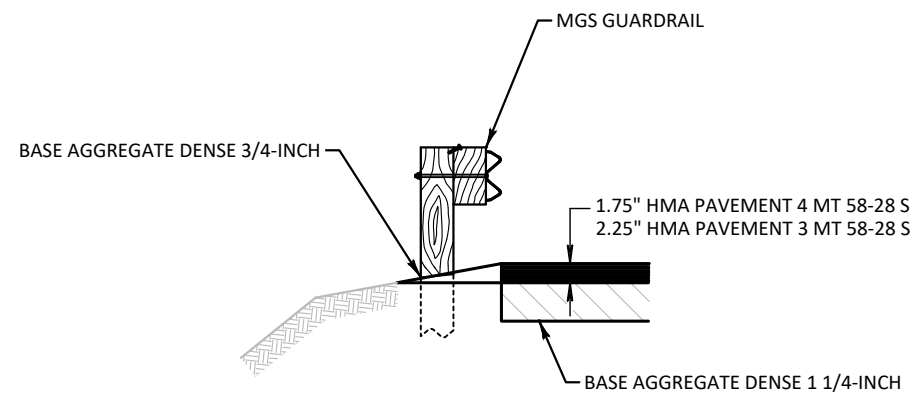


ROCK BAGS USED FOR SILT FENCE RELIEF



NOTE, 2' HMA APPROACH NOT SHOWN ON PLAN SHEETS

RURAL DRIVEWAY OR FIELD ENTRANCE
AGGREGATE (PE, CE OR FE)



GUARDRAIL LAYOUT

NOTE:
SEE PLAN AND PROFILE SHEETS FOR EXACT OFFSETS
AND LAYOUT

LEGEND

EROSION MAT CLASS II, TYPE B

SILT FENCE

STONE DITCH CHECKS

SLOPE INTERCEPT

TRACKING PADS

SURFACE WATER FLOW

INLET PROTECTION

INLET PROTECTION TYPE

TEMPORARY DITCH CHECKS

CULVERT PIPE CHECKS

SILT FENCE RELIEF (ROCK BAGS)

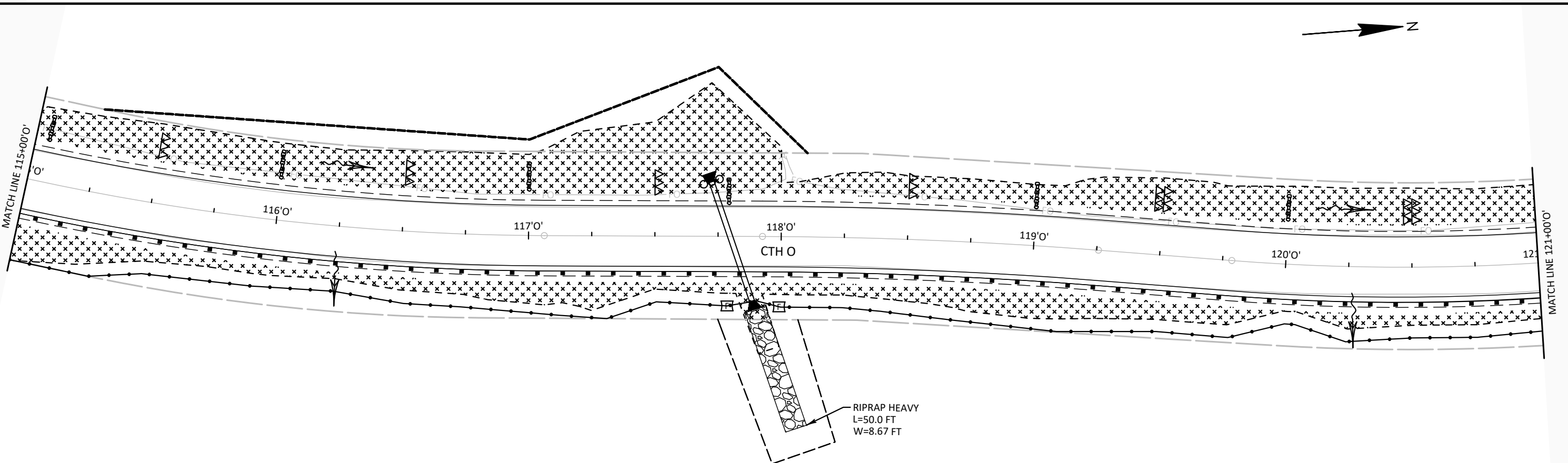
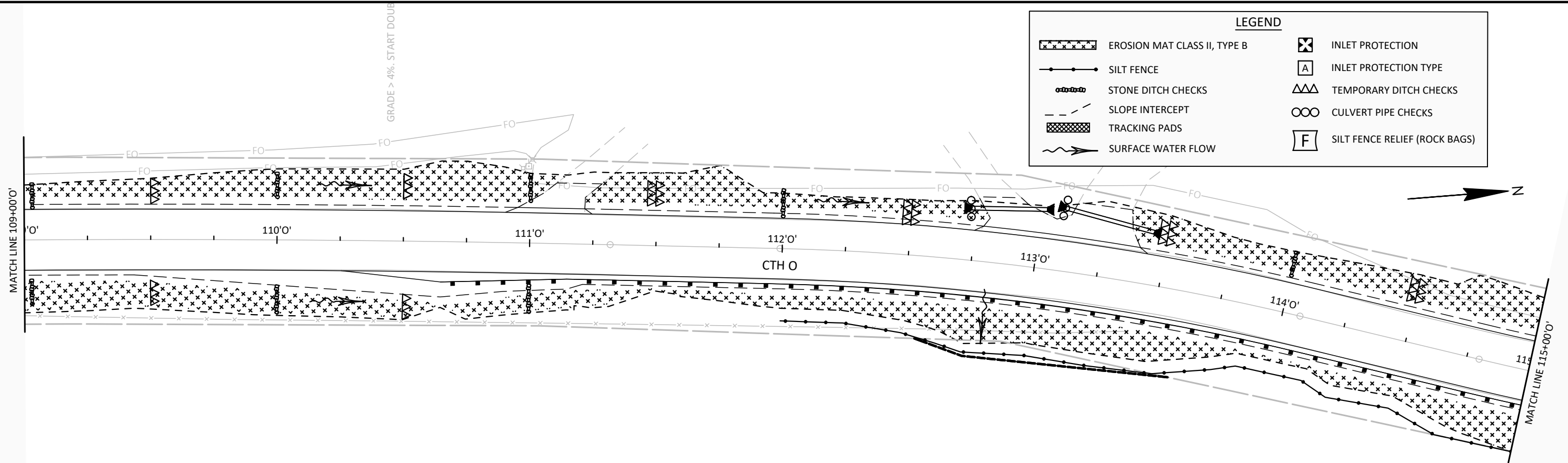
BEGIN PROJECT
STA 100+80.00'0"

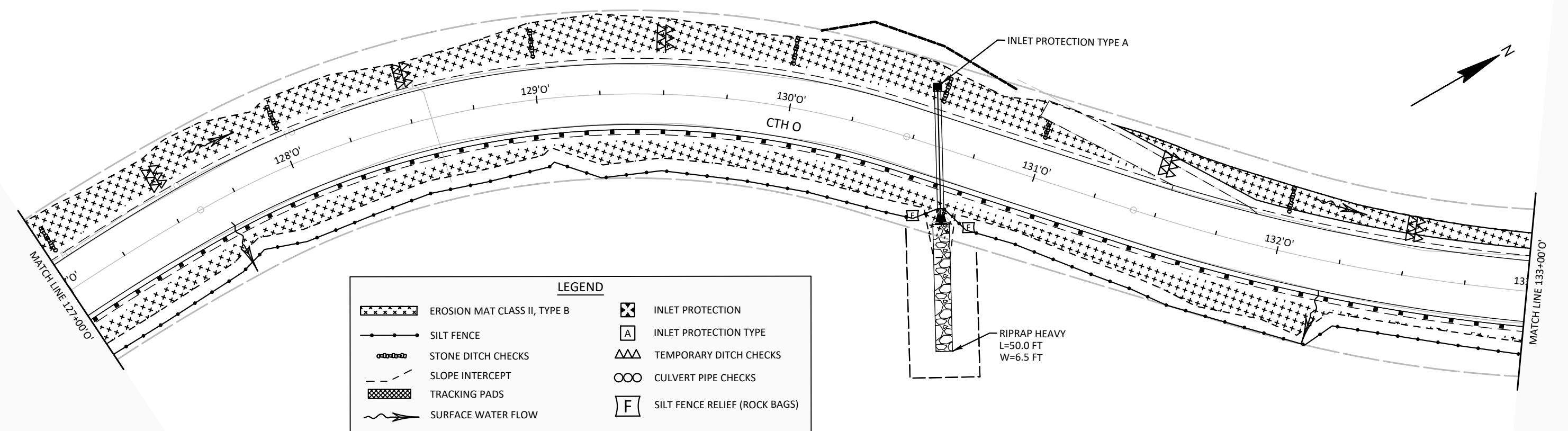
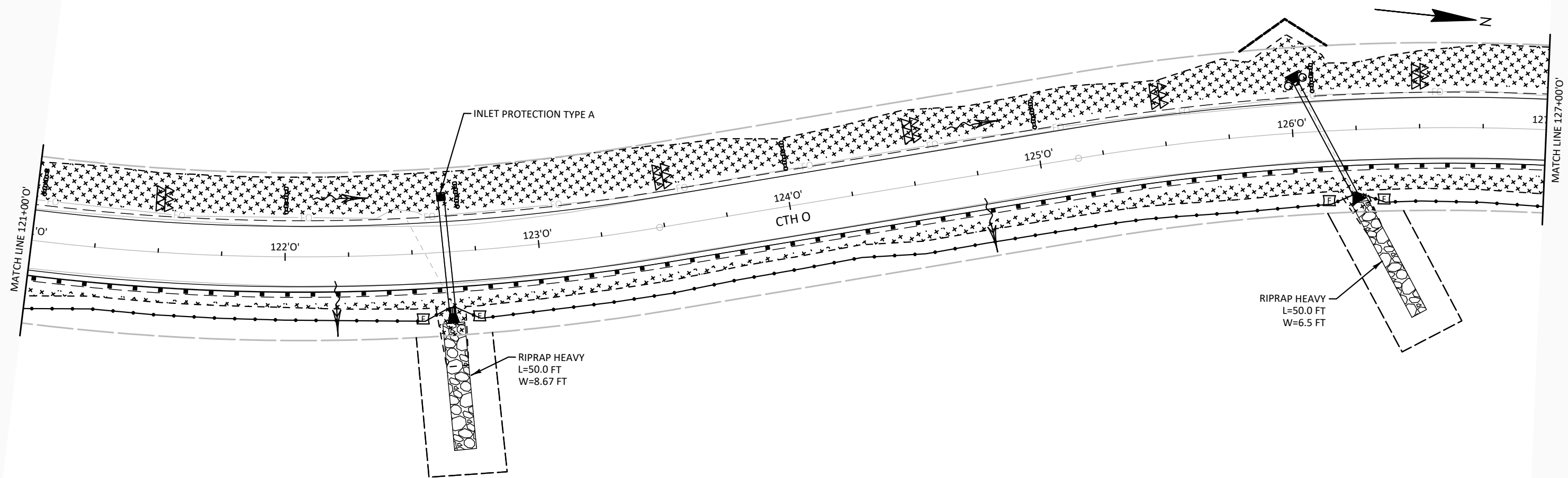
MATCH LINE 103+00'0"

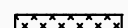
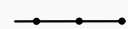
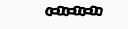
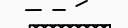
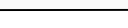


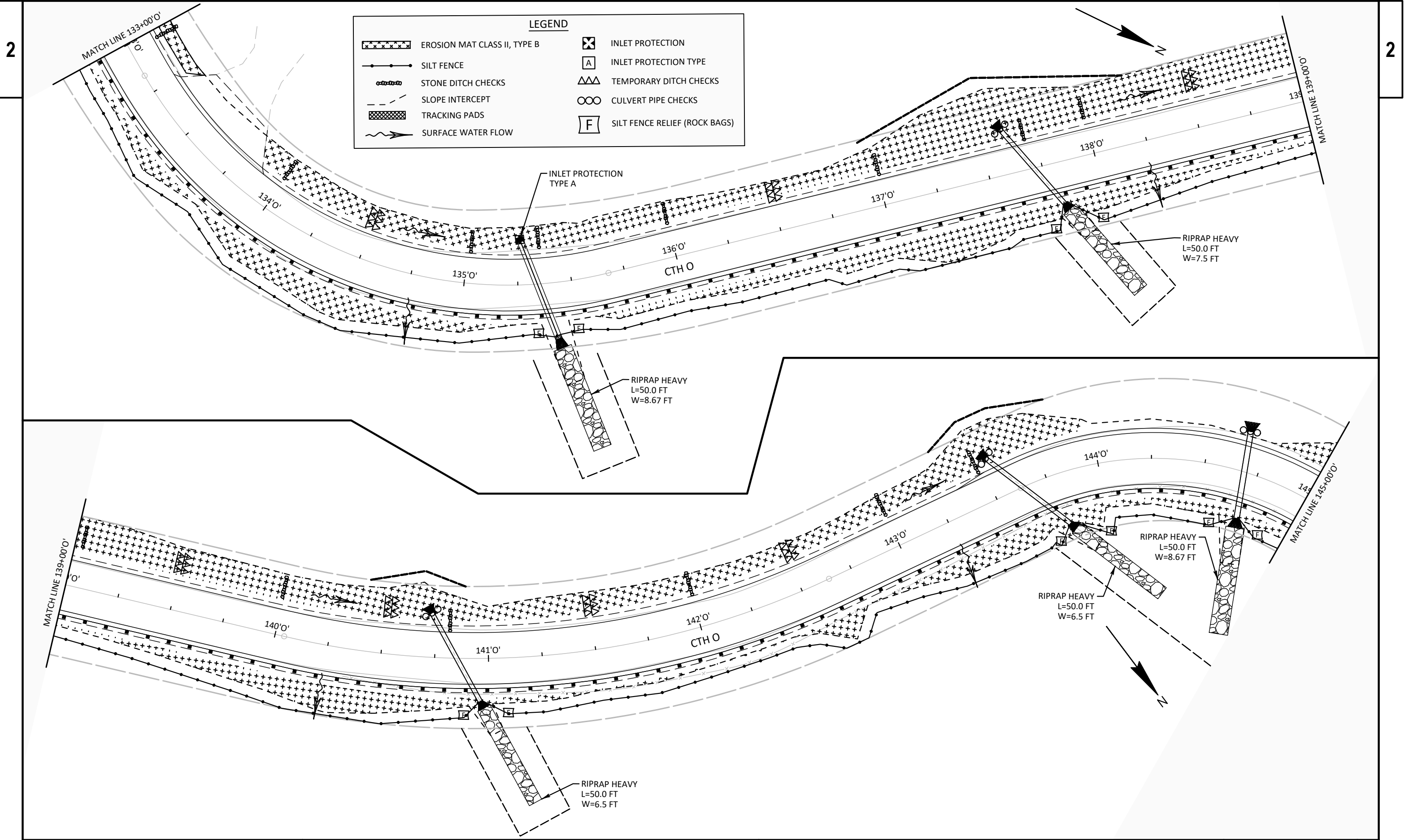
MATCH LINE 103+00'0"

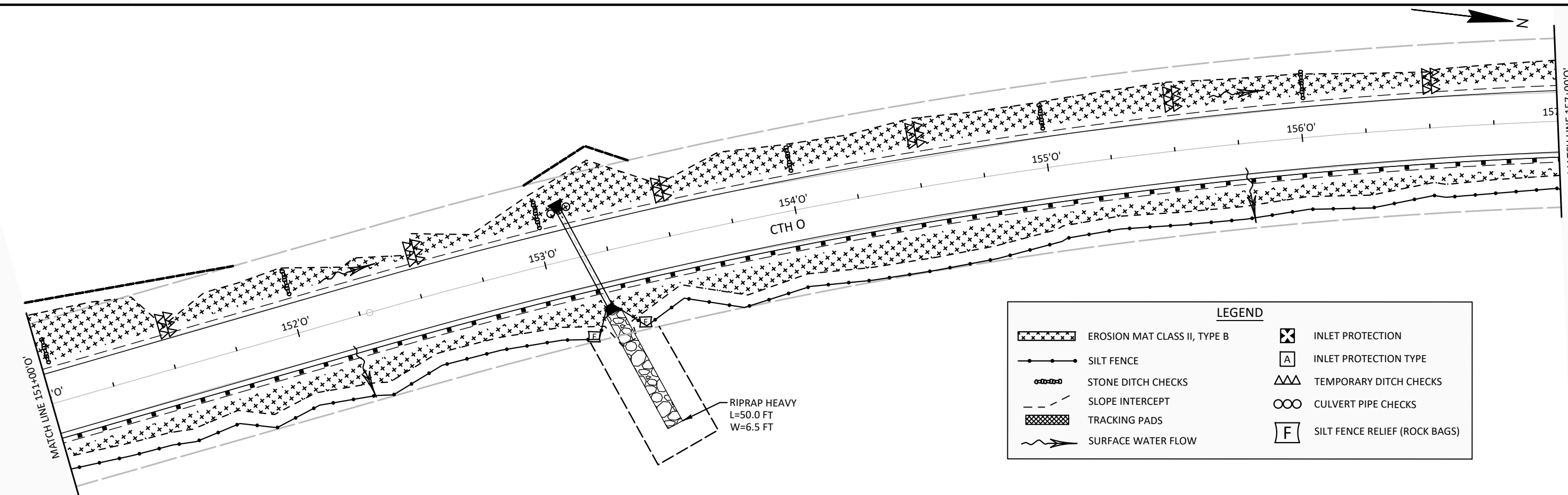
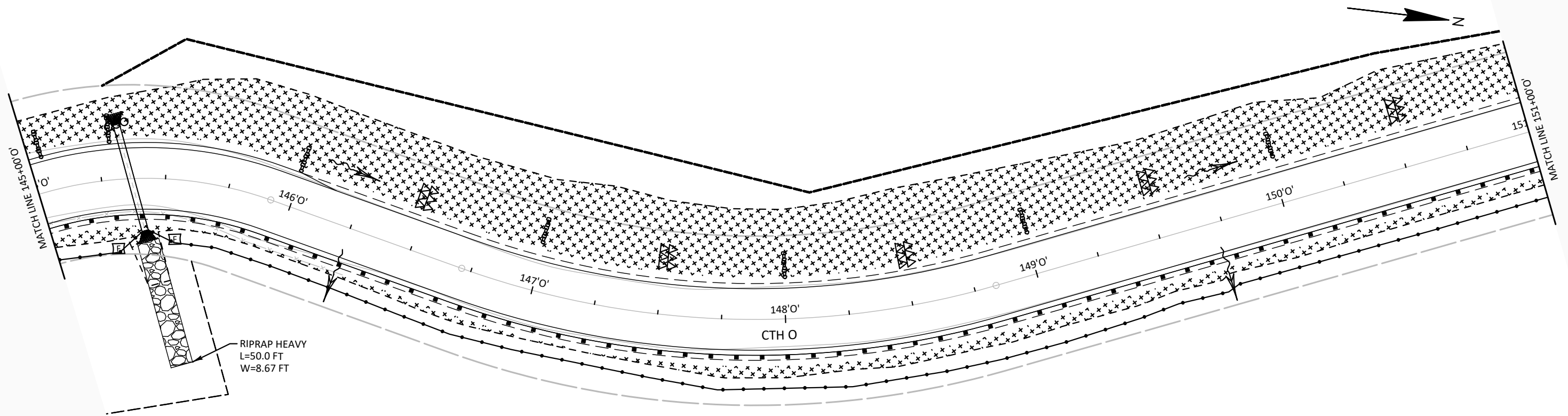
MATCH LINE 109+00'0"



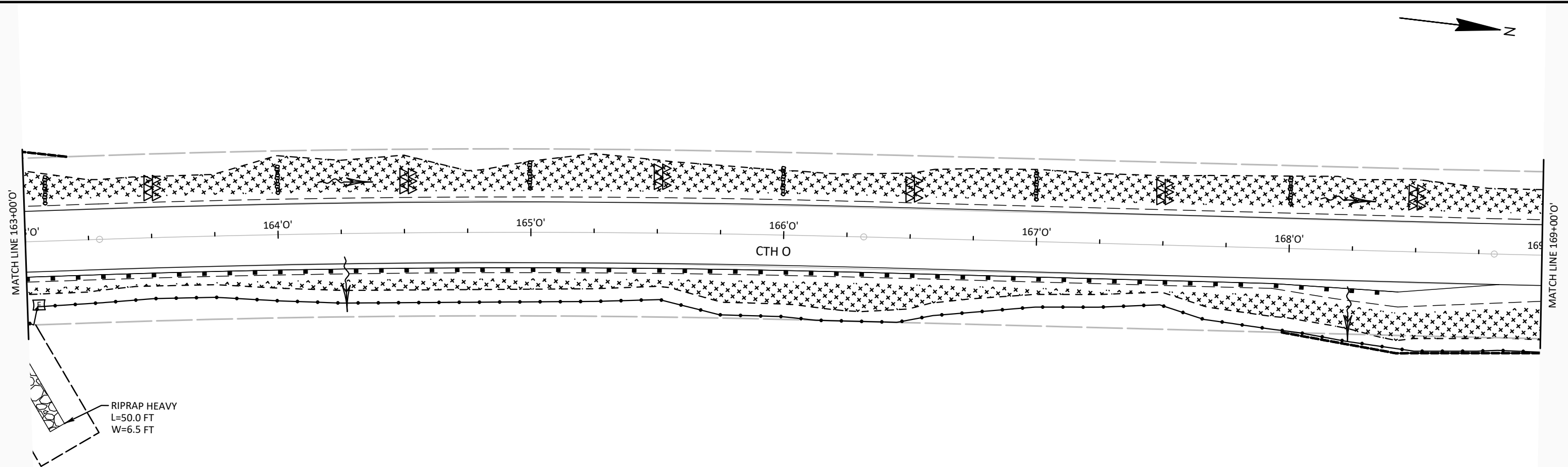
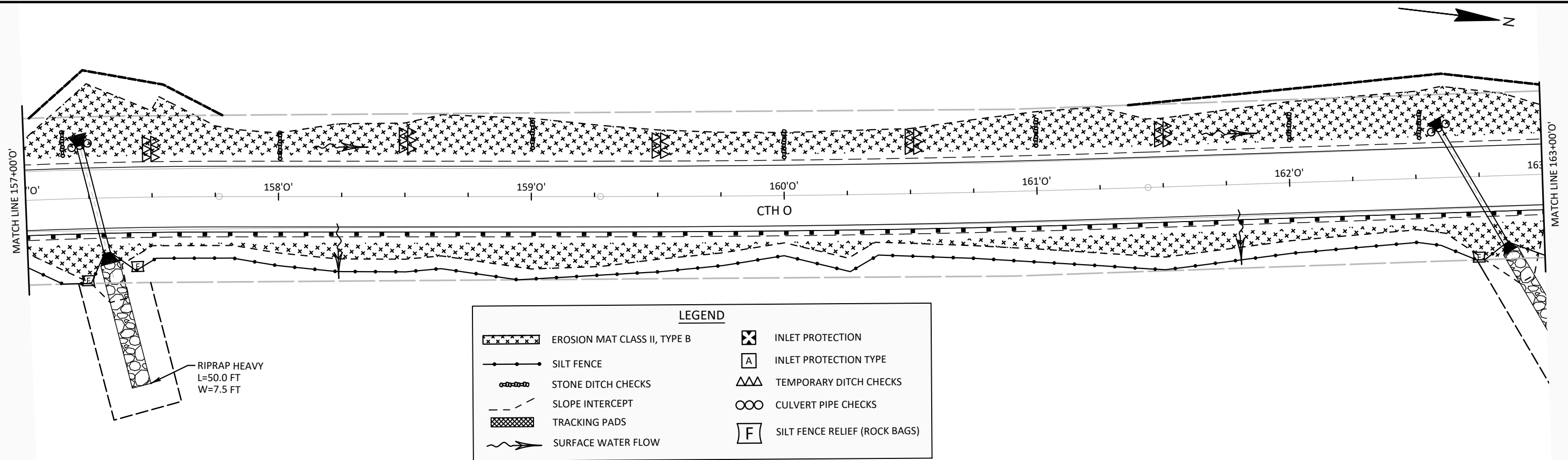
**LEGEND**

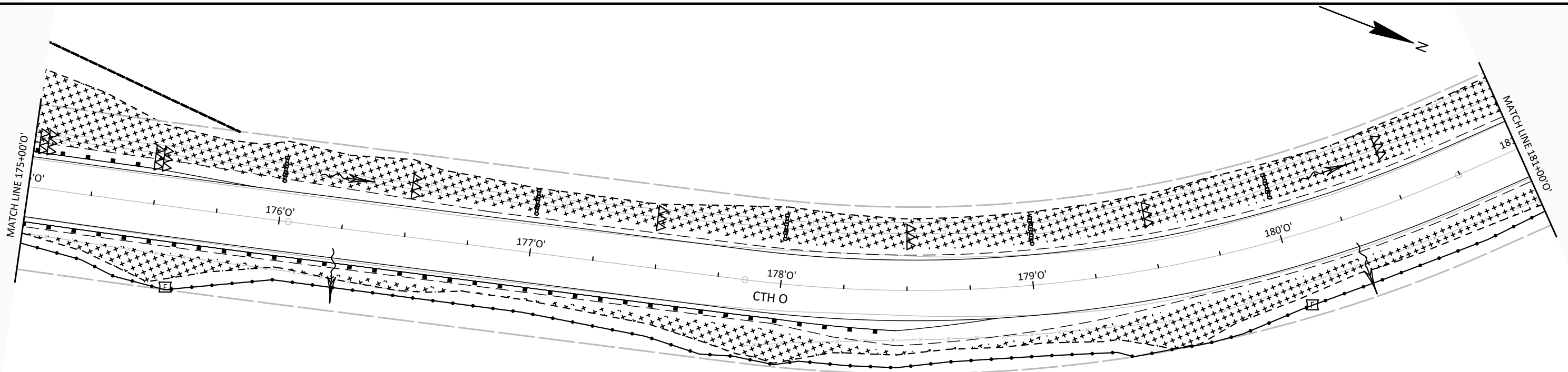
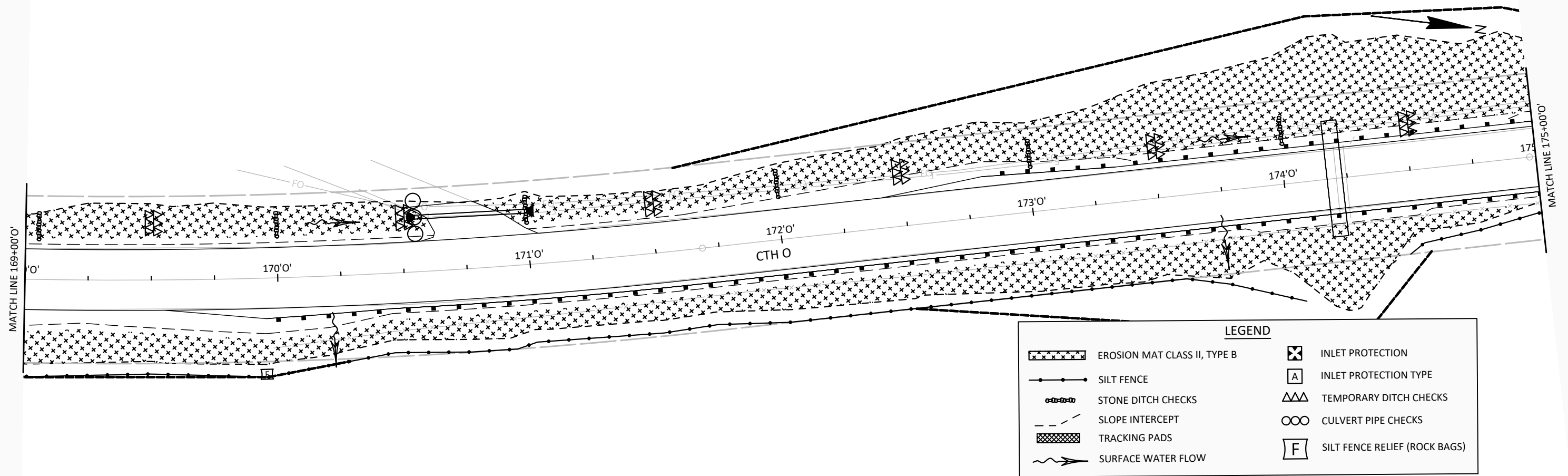
	EROSION MAT CLASS II, TYPE B		INLET PROTECTION
	SILT FENCE		INLET PROTECTION TYPE
	STONE DITCH CHECKS		TEMPORARY DITCH CHECKS
	SLOPE INTERCEPT		CULVERT PIPE CHECKS
	TRACKING PADS		SILT FENCE RELIEF (ROCK BAGS)
	SURFACE WATER FLOW		

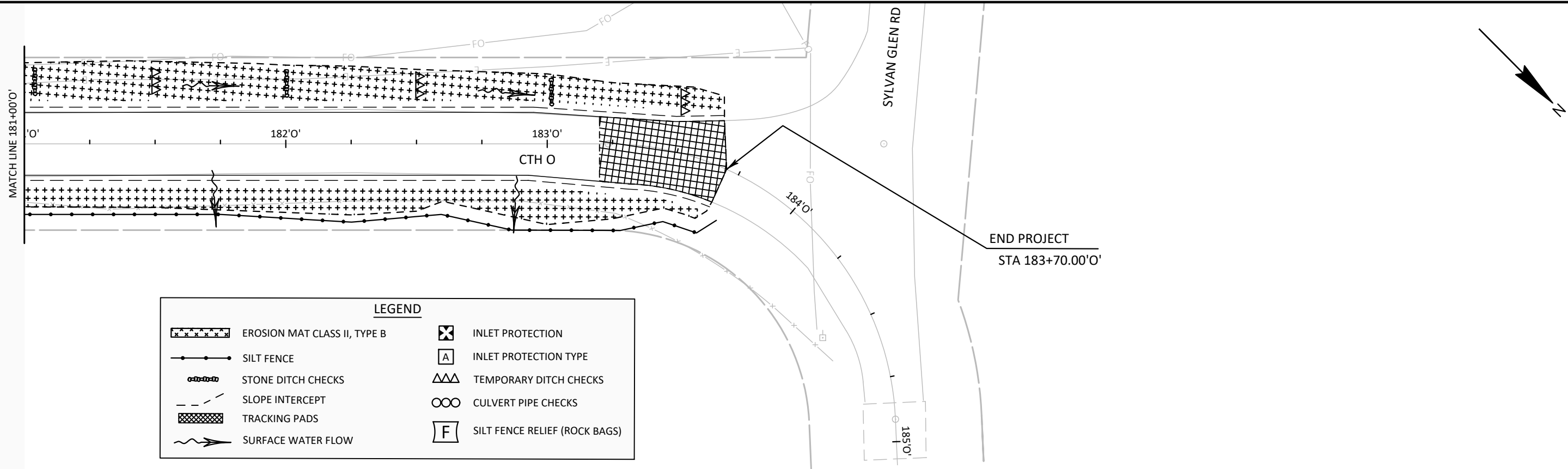


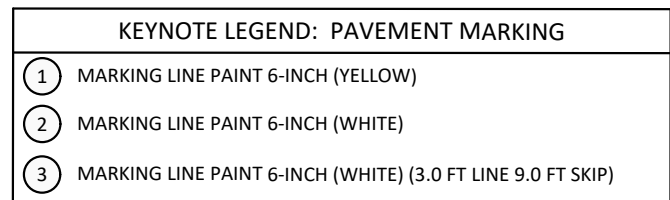
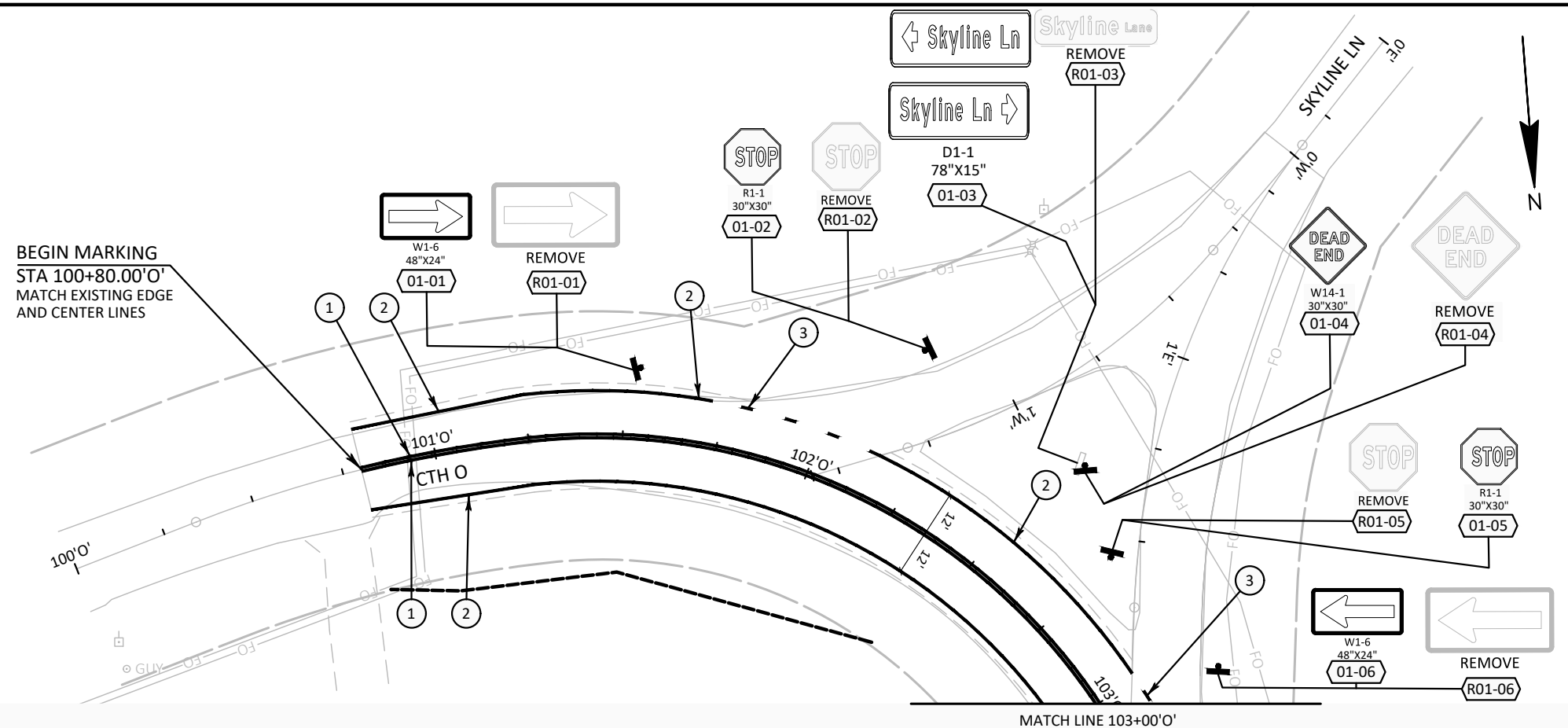


LEGEND	
	EROSION MAT CLASS II, TYPE B
	SILT FENCE
	STONE DITCH CHECKS
	SLOPE INTERCEPT
	TRACKING PADS
	SURFACE WATER FLOW
	INLET PROTECTION
	INLET PROTECTION TYPE
	TEMPORARY DITCH CHECKS
	CULVERT PIPE CHECKS
	SILT FENCE RELIEF (ROCK BAGS)









PERMANENT SIGNING LEGEND



EXISTING SIGN MOUNTED ON POST(S)



PROPOSED SIGN MOUNTED ON POST(S)



DENOTES SIGN NUMBER



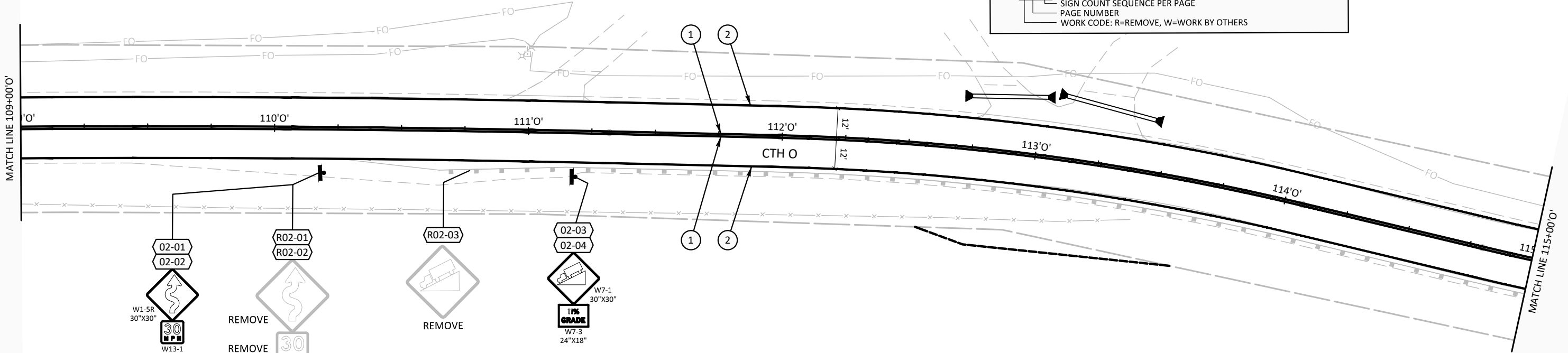
SIGN COUNT SEQUENCE PER PAGE



PAGE NUMBER



WORK CODE: R=REMOVE, W=WORK BY OTHERS



KEYNOTE LEGEND: PAVEMENT MARKING

1

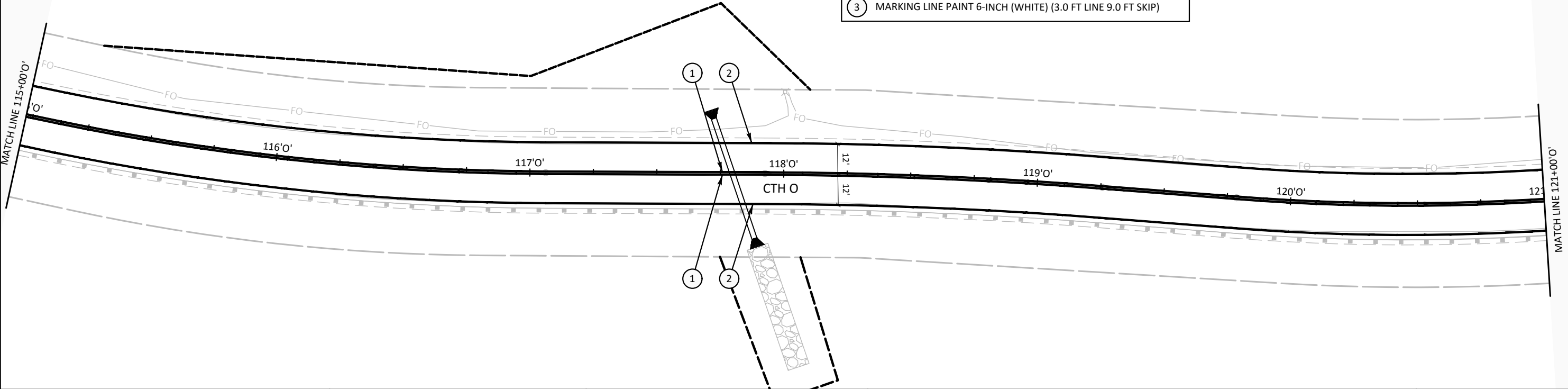
MARKING LINE PAINT 6-INCH (YELLOW)

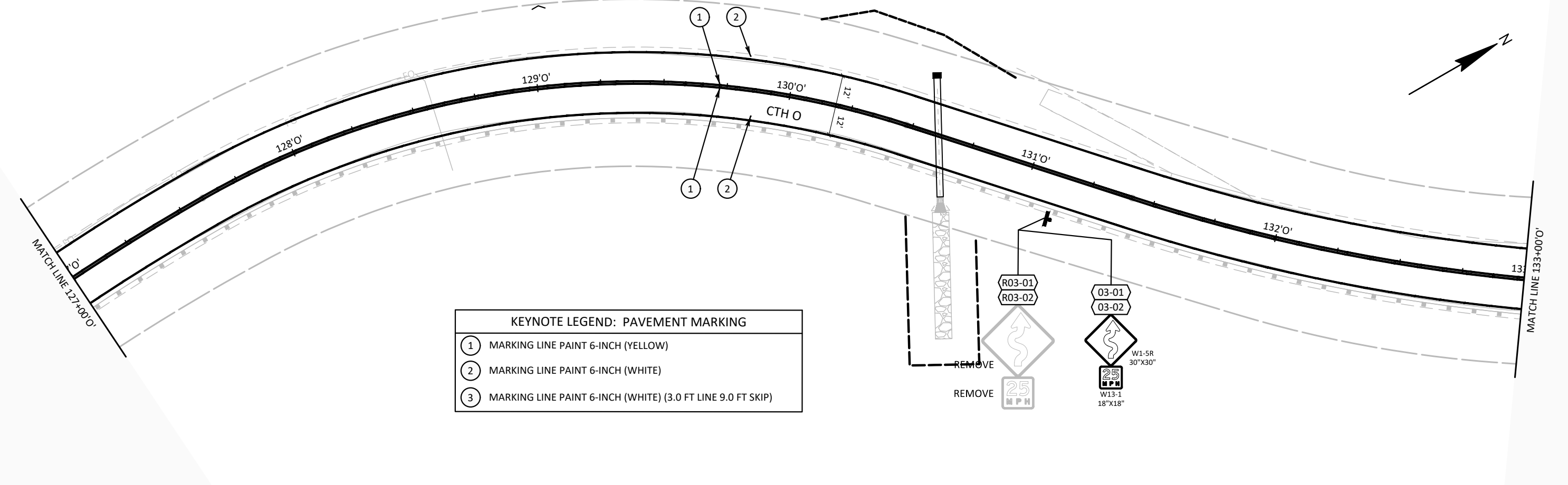
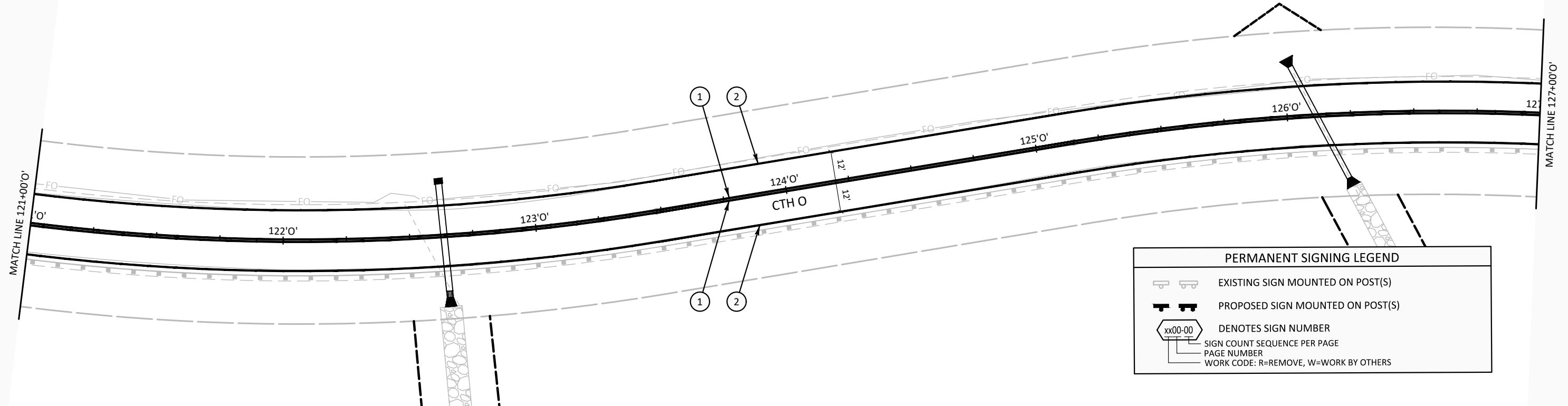
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MARKING LINE PAINT 6-INCH (WHITE)

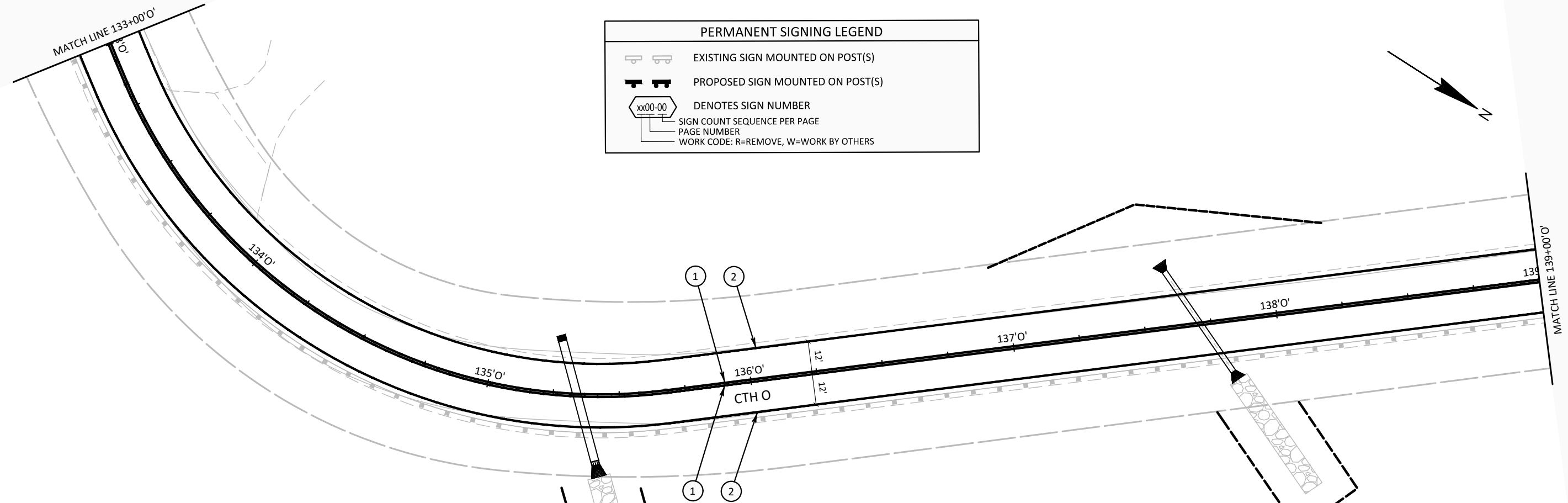
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MARKING LINE PAINT 6-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)

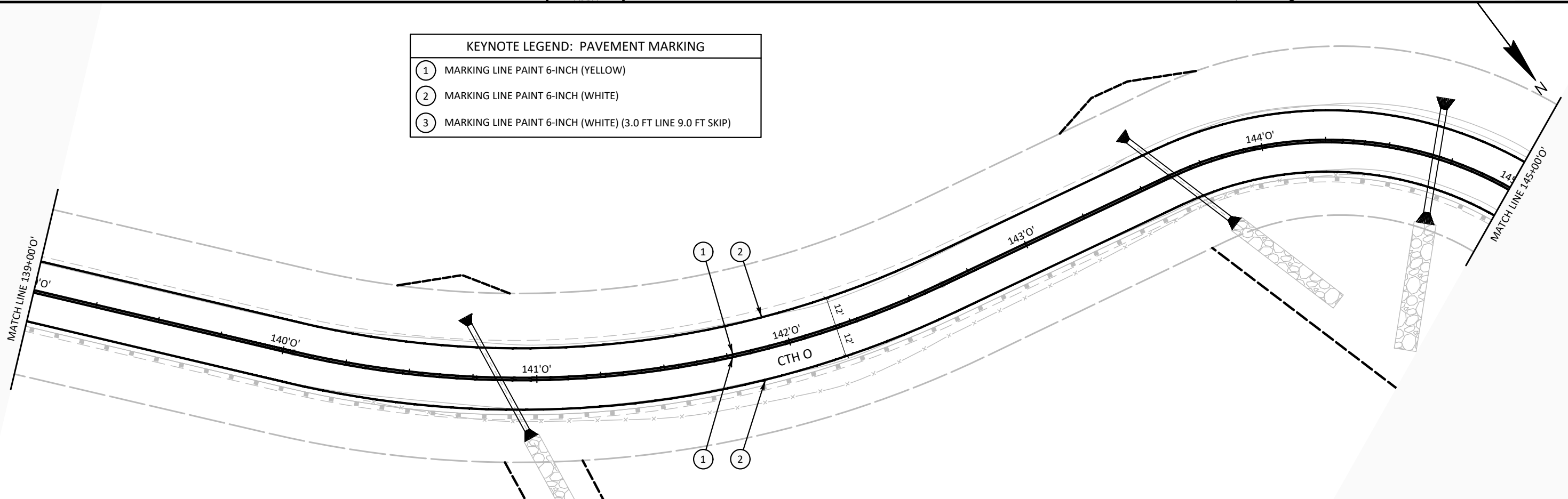




PERMANENT SIGNING LEGEND	
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
	DENOTES SIGN NUMBER
	SIGN COUNT SEQUENCE PER PAGE
	PAGE NUMBER
	WORK CODE: R=REMOVE, W=WORK BY OTHERS



KEYNOTE LEGEND: PAVEMENT MARKING	
①	MARKING LINE PAINT 6-INCH (YELLOW)
②	MARKING LINE PAINT 6-INCH (WHITE)
③	MARKING LINE PAINT 6-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)



PERMANENT SIGNING LEGEND



EXISTING SIGN MOUNTED ON POST(S)



PROPOSED SIGN MOUNTED ON POST(S)



DENOTES SIGN NUMBER



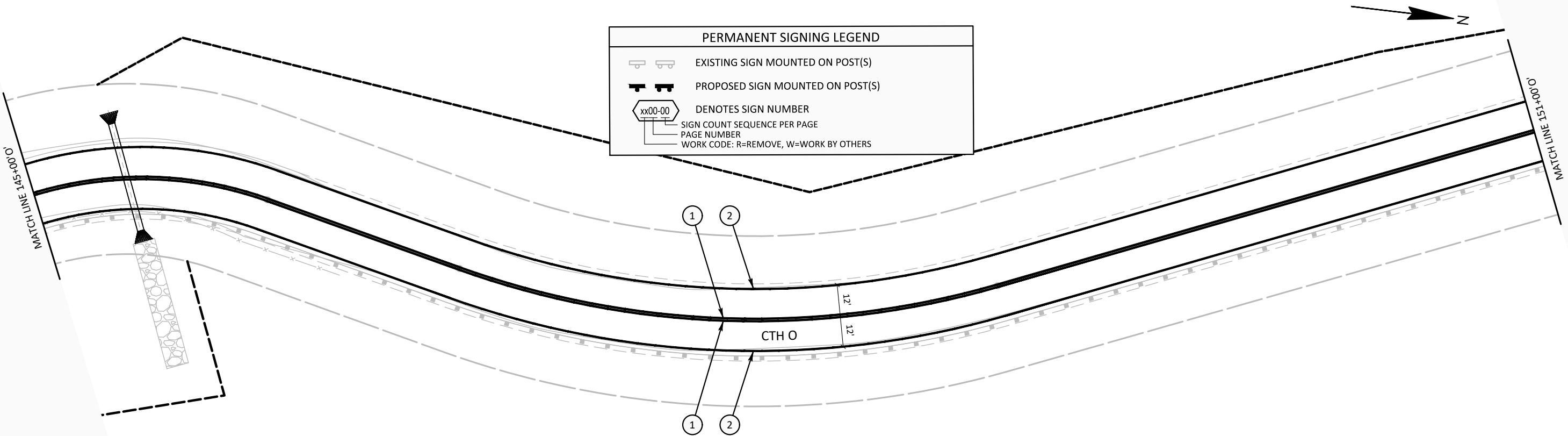
SIGN COUNT SEQUENCE PER PAGE



PAGE NUMBER



WORK CODE: R=REMOVE, W=WORK BY OTHERS



MATCH LINE 157+00.0'

KEYNOTE LEGEND: PAVEMENT MARKING

1

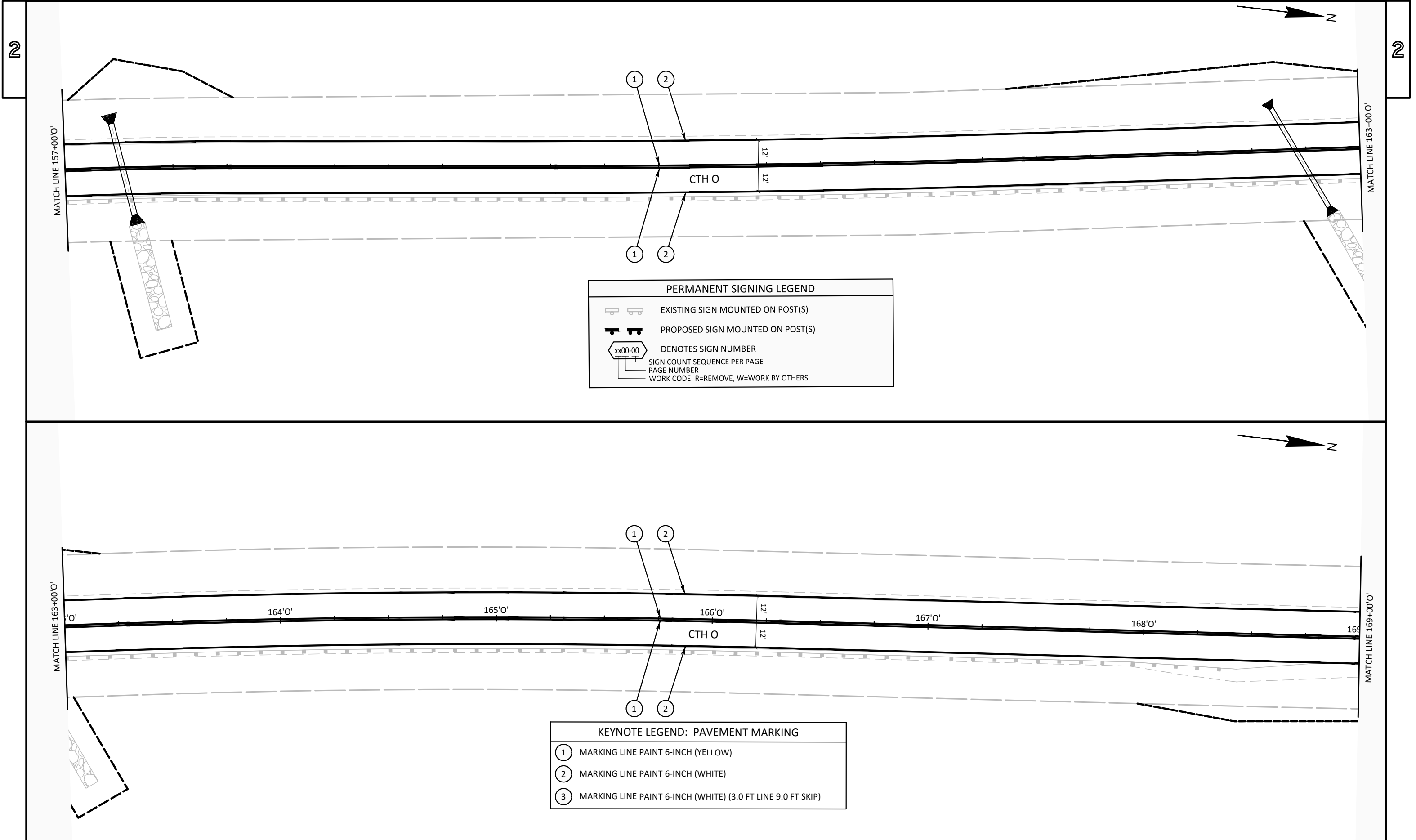
MARKING LINE PAINT 6-INCH (YELLOW)

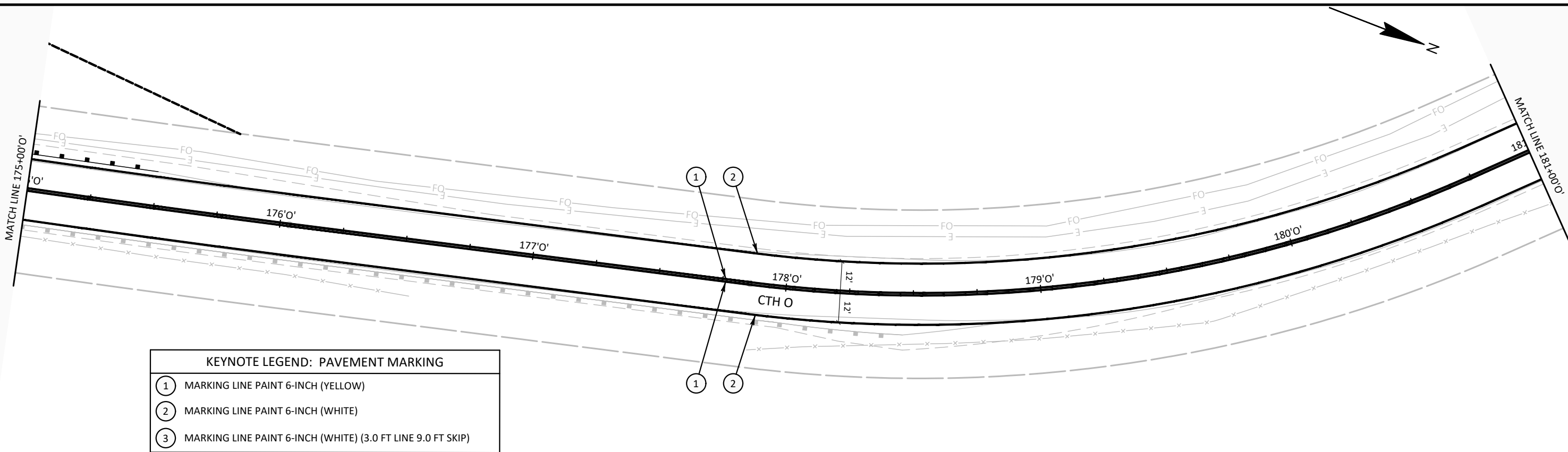
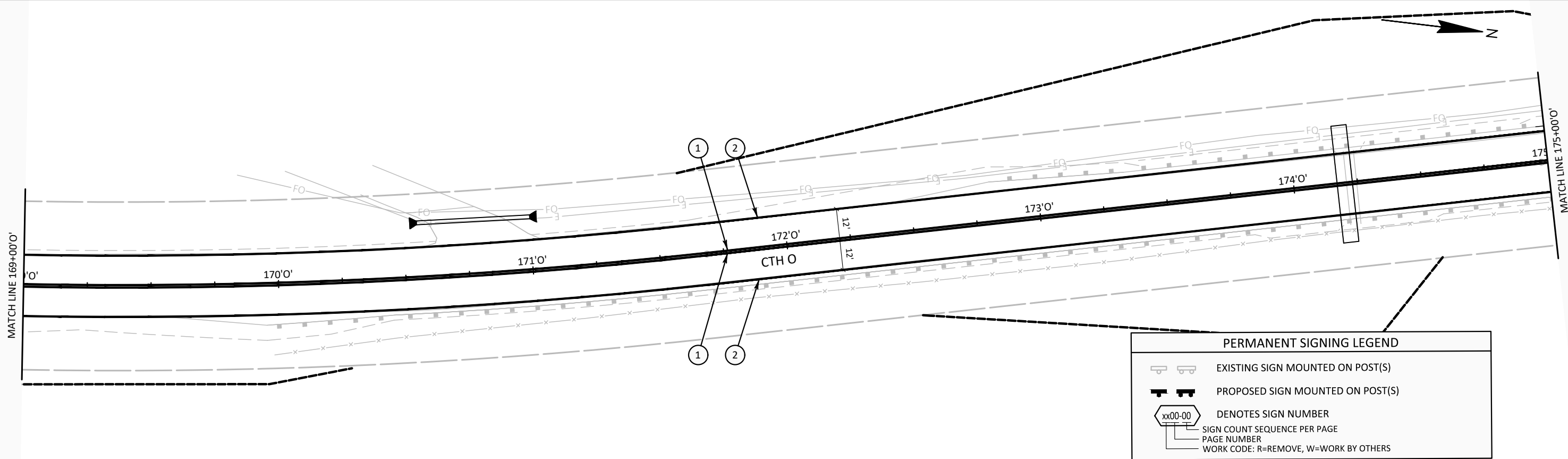
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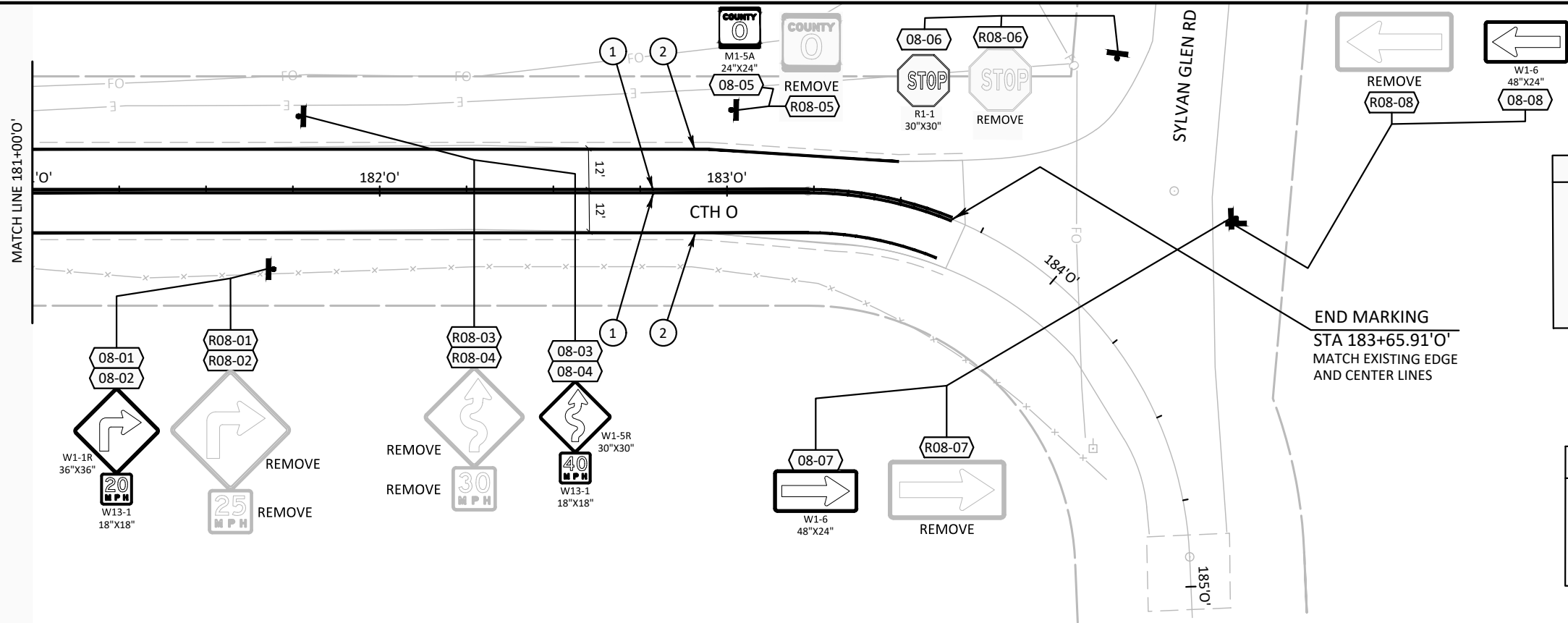
MARKING LINE PAINT 6-INCH (WHITE)

3

MARKING LINE PAINT 6-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)







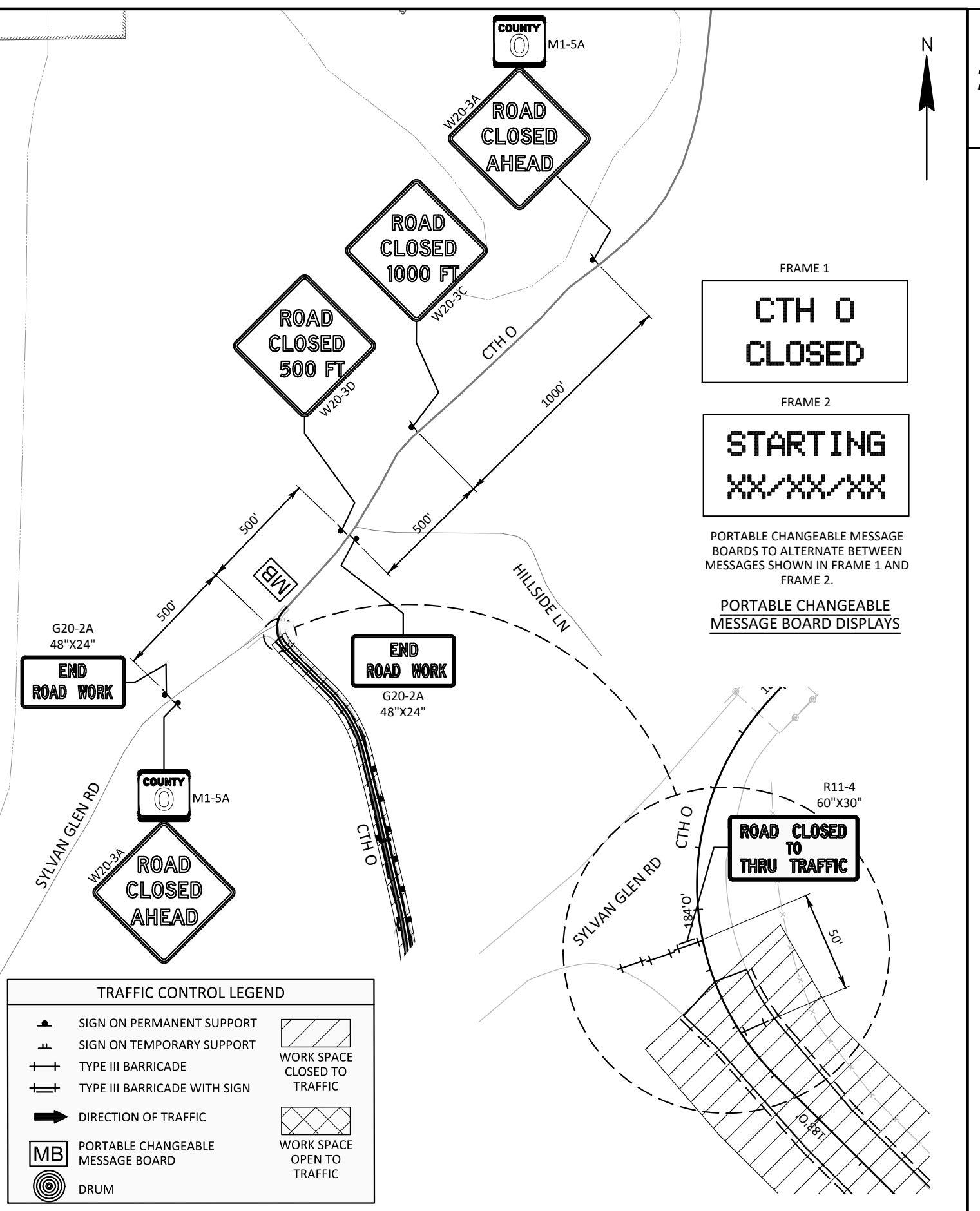
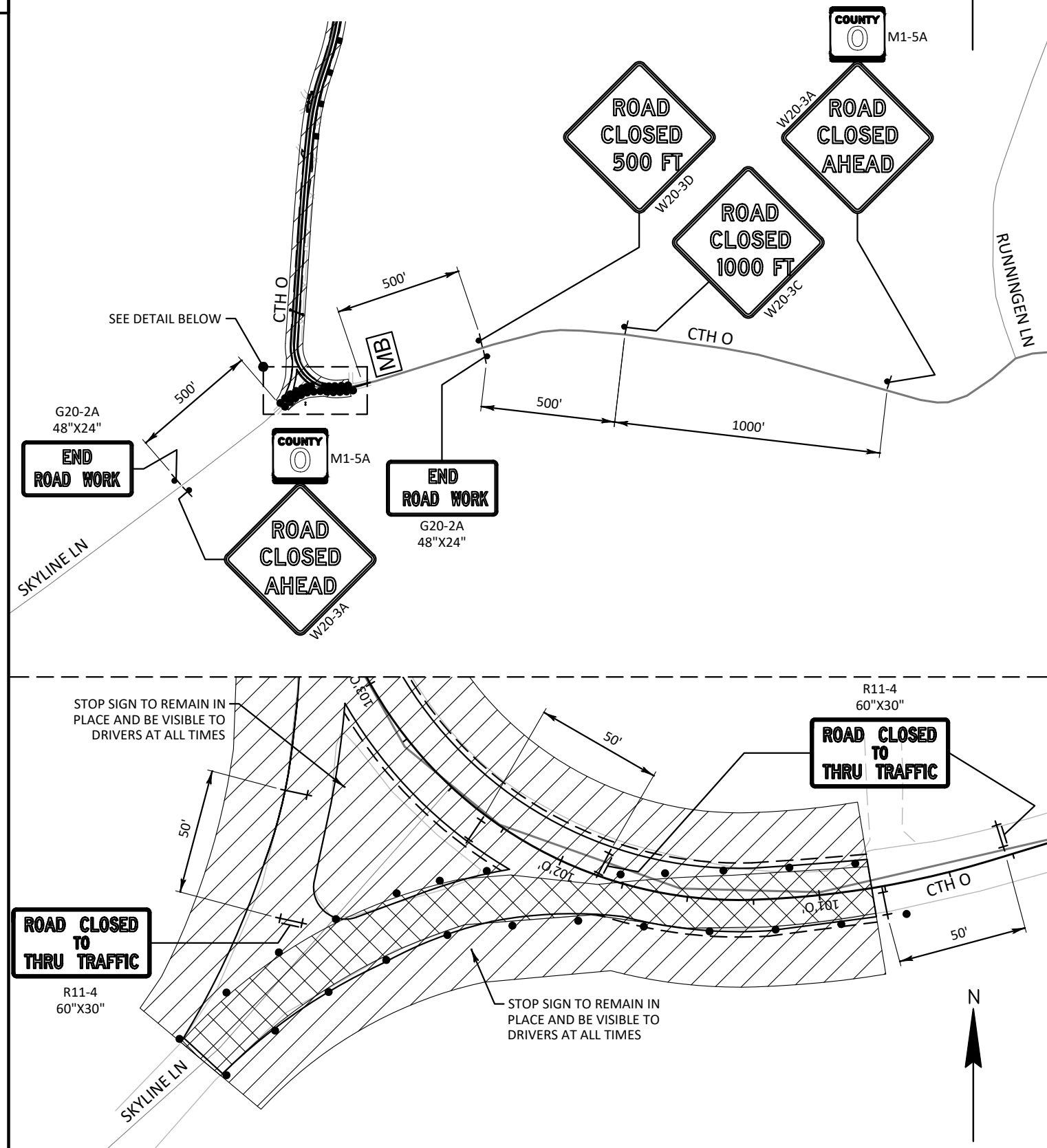
PERMANENT SIGNING LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
	DENOTES SIGN NUMBER
	SIGN COUNT SEQUENCE PER PAGE
	PAGE NUMBER
	WORK CODE: R=REMOVE, W=WORK BY OTHERS

KEYNOTE LEGEND: PAVEMENT MARKING

1	MARKING LINE PAINT 6-INCH (YELLOW)
2	MARKING LINE PAINT 6-INCH (WHITE)
3	MARKING LINE PAINT 6-INCH (WHITE) (3.0 FT LINE 9.0 FT SKIP)

DRAWING NOTES:
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF STANDARD DETAIL DRAWING "BARRICADES AND SIGNS FOR VARIOUS CLOSURE, DETAIL E" (15C02).



SUPERELEVATION TABLE FOR CTH O						
LOCATION	STATION	DESCRIPTION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER
CURVE 2	100+80.00	Manual	0.018	0.018	-0.006	-0.006
CURVE 2	100+90.66	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 2	101+59.33	BeginFullSuper	0.06	0.06	-0.06	-0.06
CURVE 2	103+58.06	EndFullSuper	0.06	0.06	-0.06	-0.06
CURVE 2	104+26.72	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 2	104+61.06	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 2	104+95.39	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 2	104+95.39	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 4	111+19.66	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 4	111+19.66	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 4	111+55.77	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 4	111+91.88	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 4	112+20.77	BeginFullSuper	0.036	0.036	-0.036	-0.036
CURVE 4	113+85.34	EndFullSuper	0.036	0.036	-0.036	-0.036
CURVE 4	114+14.23	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 5	114+72.70	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 5	115+01.59	BeginFullSuper	-0.036	-0.036	0.036	0.036
CURVE 5	116+84.55	EndFullSuper	-0.036	-0.036	0.036	0.036
CURVE 5	117+13.44	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 6	117+99.91	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 6	118+07.24	BeginFullSuper	0.024	0.024	-0.024	-0.024
CURVE 6	119+11.00	EndFullSuper	0.024	0.024	-0.024	-0.024
CURVE 6	119+18.33	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 7	119+68.94	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 7	120+01.63	BeginFullSuper	-0.038	-0.038	0.038	0.038
CURVE 7	123+25.05	EndFullSuper	-0.038	-0.038	0.038	0.038
CURVE 7	123+57.73	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 8	125+05.44	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 8	125+38.12	BeginFullSuper	0.038	0.038	-0.038	-0.038
CURVE 8	127+61.46	EndFullSuper	0.038	0.038	-0.038	-0.038
CURVE 9	127+93.86	BeginFullSuper	0.056	0.056	-0.056	-0.056
CURVE 9	130+13.45	EndFullSuper	0.056	0.056	-0.056	-0.056
CURVE 9	130+79.02	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 10	131+35.49	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 10	131+61.20	BeginFullSuper	-0.035	-0.035	0.035	0.035
CURVE 10	133+10.29	EndFullSuper	-0.035	-0.035	0.035	0.035
CURVE 11	133+49.39	BeginFullSuper	-0.058	-0.058	0.058	0.058
CURVE 11	135+34.54	EndFullSuper	-0.058	-0.058	0.058	0.058
CURVE 11	136+67.68	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 11	136+67.68	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 12	139+20.17	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 12	139+20.17	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 12	139+54.26	LevelCrown	-0.02	-0.02	0.00	0.00
CURVE 12	139+88.35	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 12	140+29.26	BeginFullSuper	-0.044	-0.044	0.044	0.044
CURVE 12	142+38.69	EndFullSuper	-0.044	-0.044	0.044	0.044
CURVE 12	142+79.60	ReverseCrown	-0.02	-0.02	0.02	0.02

SUPERELEVATION TABLE FOR CTH O						
CURVE 13	143+27.93	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 13	143+96.60	BeginFullSuper	0.06	0.06	-0.06	-0.06
CURVE 13	145+57.73	EndFullSuper	0.06	0.06	-0.06	-0.06
CURVE 13	146+26.39	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 14	146+50.75	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 14	146+98.58	BeginFullSuper	-0.048	-0.048	0.048	0.048
CURVE 14	148+56.12	EndFullSuper	-0.048	-0.048	0.048	0.048
CURVE 14	149+72.28	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 14	149+72.28	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 15	151+41.05	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 15	151+41.05	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 15	151+82.23	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 15	152+23.41	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 15	152+52.23	BeginFullSuper	0.034	0.034	-0.034	-0.034
CURVE 15	157+53.23	EndFullSuper	0.034	0.034	-0.034	-0.034
CURVE 15	157+82.05	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 15	158+23.23	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 15	158+64.41	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 15	158+64.41	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 17	162+61.02	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 17	162+61.02	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 17	163+02.02	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 17	163+43.02	BeginFullSuper	0.02	0.02	-0.02	-0.02
CURVE 17	163+43.02	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 17	166+17.98	EndFullSuper	0.02	0.02	-0.02	-0.02
CURVE 17	166+17.98	ReverseCrown	0.02	0.02	-0.02	-0.02
CURVE 17	166+58.98	LevelCrown	0.00	0.00	-0.02	-0.02
CURVE 17	166+99.98	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 17	166+99.98	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 18	167+95.89	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 18	167+95.89	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 18	168+37.14	LevelCrown	-0.02	-0.02	0.00	0.00
CURVE 18	168+78.39	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 18	169+03.14	BeginFullSuper	-0.032	-0.032	0.032	0.032
CURVE 18	171+46.41	EndFullSuper	-0.032	-0.032	0.032	0.032
CURVE 18	171+71.16	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 18	172+12.41	LevelCrown	-0.02	-0.02	0.00	0.00
CURVE 18	172+53.66	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 18	172+53.66	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 20	176+61.73	EndNormalShoulder	-0.04	-0.02	-0.02	-0.04
CURVE 20	176+61.73	EndNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 20	177+03.07	LevelCrown	-0.02	-0.02	0.00	0.00
CURVE 20	177+44.40	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 20	178+27.07	BeginFullSuper	-0.06	-0.06	0.06	0.06
CURVE 20	180+33.14	EndFullSuper	-0.06	-0.06	0.06	0.06
CURVE 20	181+15.81	ReverseCrown	-0.02	-0.02	0.02	0.02
CURVE 20	181+57.14	LevelCrown	-0.02	-0.02	0.00	0.00
CURVE 20	181+98.48	BeginNormalCrown	-0.04	-0.02	-0.02	-0.04
CURVE 20	181+98.48	BeginNormalShoulder	-0.04	-0.02	-0.02	-0.04

Estimate Of Quantities

5537-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	50.000	50.000
0004	203.0100	Removing Small Pipe Culverts	EACH	14.000	14.000
0006	203.0220	Removing Structure (structure) 01. STA 174+23, Reinforced Concrete Cattle Pass	EACH	1.000	1.000
0008	204.0110	Removing Asphaltic Surface	SY	51.000	51.000
0010	204.0165	Removing Guardrail	LF	3,372.000	3,372.000
0012	205.0100	Excavation Common	CY	35,791.000	35,791.000
0014	205.0200	Excavation Rock	CY	1,329.000	1,329.000
0016	213.0100	Finishing Roadway (project) 01. 5537-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	969.000	969.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	44,060.000	44,060.000
0022	455.0605	Tack Coat	GAL	1,145.000	1,145.000
0024	460.2000	Incentive Density HMA Pavement	DOL	3,170.000	3,170.000
0026	460.6223	HMA Pavement 3 MT 58-28 S	TON	2,800.000	2,800.000
0028	460.6224	HMA Pavement 4 MT 58-28 S	TON	2,180.000	2,180.000
0030	465.0105	Asphaltic Surface	TON	65.000	65.000
0032	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	9.000	9.000
0034	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	6.000	6.000
0036	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	16.000	16.000
0038	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	6.000	6.000
0040	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	110.000	110.000
0042	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	383.000	383.000
0044	521.3130	Culvert Pipe Corrugated Steel 30-Inch	LF	128.000	128.000
0046	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0048	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0050	522.1500	Pipe Cattle Pass Reinforced Concrete	LF	46.000	46.000
0052	606.0300	Riprap Heavy	CY	361.000	361.000
0054	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	92.000	92.000
0056	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	48.000	48.000
0058	611.0642	Inlet Covers Type MS	EACH	6.000	6.000
0060	611.3902	Inlets Median 2 Grate	EACH	3.000	3.000
0062	614.2300	MGS Guardrail 3	LF	225.000	225.000
0064	614.2330	MGS Guardrail 3 K	LF	6,366.500	6,366.500
0066	614.2610	MGS Guardrail Terminal EAT	EACH	6.000	6.000
0068	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5537-00-71	EACH	1.000	1.000
0070	619.1000	Mobilization	EACH	1.000	1.000
0072	624.0100	Water	MGAL	450.000	450.000
0074	625.0500	Salvaged Topsoil	SY	20,630.000	20,630.000
0076	628.1504	Silt Fence	LF	9,800.000	9,800.000
0078	628.1520	Silt Fence Maintenance	LF	9,800.000	9,800.000
0080	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0084	628.2023	Erosion Mat Class II Type B	SY	20,630.000	20,630.000
0086	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0088	628.7504	Temporary Ditch Checks	LF	1,310.000	1,310.000
0090	628.7515.S	Stone Ditch Checks	CY	560.000	560.000
0092	628.7555	Culvert Pipe Checks	EACH	42.000	42.000
0094	628.7560	Tracking Pads	EACH	2.000	2.000
0096	628.7570	Rock Bags	EACH	800.000	800.000
0098	629.0205	Fertilizer Type A	CWT	13.000	13.000

Estimate Of Quantities

5537-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	630.0120	Seeding Mixture No. 20	LB	560.000	560.000
0102	630.0200	Seeding Temporary	LB	560.000	560.000
0104	630.0500	Seed Water	MGAL	460.000	460.000
0106	633.5200	Markers Culvert End	EACH	27.000	27.000
0108	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000
0110	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	8.000	8.000
0112	637.2210	Signs Type II Reflective H	SF	27.670	27.670
0114	637.2230	Signs Type II Reflective F	SF	91.500	91.500
0116	638.2602	Removing Signs Type II	EACH	23.000	23.000
0118	638.3000	Removing Small Sign Supports	EACH	16.000	16.000
0120	642.5001	Field Office Type B	EACH	1.000	1.000
0122	643.0300	Traffic Control Drums	DAY	3,150.000	3,150.000
0124	643.0420	Traffic Control Barricades Type III	DAY	2,270.000	2,270.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	4,540.000	4,540.000
0128	643.0900	Traffic Control Signs	DAY	2,650.000	2,650.000
0130	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0132	643.5000	Traffic Control	EACH	1.000	1.000
0134	645.0120	Geotextile Type HR	SY	541.000	541.000
0136	645.0130	Geotextile Type R	SY	2,360.000	2,360.000
0138	645.0260	Geogrid Type SSR	SY	18,900.000	18,900.000
0140	646.2005	Marking Line Paint 6-Inch	LF	33,068.000	33,068.000
0142	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000
0144	650.4500	Construction Staking Subgrade	LF	8,290.000	8,290.000
0146	650.5000	Construction Staking Base	LF	8,290.000	8,290.000
0148	650.6000	Construction Staking Pipe Culverts	EACH	14.000	14.000
0150	650.9911	Construction Staking Supplemental Control (project) 01. 5537-00-71	EACH	1.000	1.000
0152	650.9920	Construction Staking Slope Stakes	LF	8,290.000	8,290.000
0154	690.0150	Sawing Asphalt	LF	100.000	100.000
0156	740.0440	Incentive IRI Ride	DOL	6,280.000	6,280.000
0158	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0160	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000
0162	SPV.0060	Special 01. Utility Line Opening	EACH	5.000	5.000

REMOVING STRUCTURE

203.0220 REMOVING (01. STA 174+23, REINFORCED CONCRETE CATTLE PASS)			
STATION	LOCATION	EACH	REMARKS
100+80 - 183+70	ML	1	-
PROJECT TOTALS		1	

REMOVING GUARDRAIL

204.0165 REMOVING GUARDRAIL			
STATION	LOCATION	LF	REMARKS
117+60 - 148+31	RT	3372	-
PROJECT TOTALS		3372	

GRUBBING

201.0205 GRUBBING			
STATION	LOCATION	STA	REMARKS
115+00 - 116+00	LT	1	-
119+00 - 131+00	LT	12	-
136+00 - 150+00	LT&RT	14	-
150+00 - 168+00	LT	18	-
171+00 - 176+00	RT	5	-
PROJECT TOTALS		50	

REMOVING SMALL PIPE CULVERTS

203.0100 REMOVING SMALL PIPE CULVERTS			
STATION	LOCATION	EACH	REMARKS
105+13	LT&RT	1	CMCP 18-INCH
112+88	LT	1	CMCP 18-INCH
113+28	LT	1	CMCP 18-INCH
122+55	LT&RT	1	CMCP 18-INCH
126+11	LT&RT	1	CMCP 18-INCH
130+61	LT&RT	1	CMCP 18-INCH
137+71	LT&RT	1	CMCP 30-INCH
140+85	LT&RT	1	CMCP 24-INCH
143+63	LT&RT	1	CMCP 24-INCH
145+37	LT&RT	1	CMCP 36-INCH
153+15	LT&RT	1	CMCP 18-INCH
157+27	LT&RT	1	CMCP 18-INCH
162+70	LT&RT	1	CMCP 18-INCH
170+82	LT	1	CMCP 18-INCH
PROJECT TOTALS		14	

REMOVING ASPHALTIC PAVEMENT

204.0110 REMOVING ASPHALTIC SURFACE			
STATION	LOCATION	SY	REMARKS
170+82	RT	51	ASPH PE
PROJECT TOTALS		51	

DRIVEWAYS AND FIELD ENTRANCES

*305.0110 BASE AGGREGATE DENSE 3/4-INCH					465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES				
STATION	LOCATION	(TON)	(TON)	REMARKS	STATION	LOCATION	(TON)	(TON)	REMARKS
111+10	LT	2	-	AGG, FE					
112+88	LT	4	-	AGG, PE					
113+28	LT	5	-	AGG, PE					
133+50	LT	7	-	AGG, PE					
		-	9	ASPH, PE					
PROJECT TOTALS		19	9						

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE ON PLANS

EARTHWORK SUMMARY (PROJECT ID 5537-00-71)										
FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) (CY)		SALVAGED / UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	205.0200 EXCAVATION ROCK (CY)	REDUCED EBS IN FILL (6)	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (7)
		CUT (2)	EBS EXCAVATION (3)				FACTOR 0.80		FACTOR 1.25	
100+80 - 183+70	PROJECT	21,384	14,180	3,863	31,701	729	11,344	2,014	2,518	28,455
SKYLINE LANE (8)	PROJECT	227	0	1,840	-1,613	0	0	2	3	-1,616
UNDISTRIBUTED						600				
PROJECT TOTAL		35,791				1,329				

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH BASE AGGREGATE DENSE 1 1/4-INCH.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
- (6) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE.
- (7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (8) THE CUT AND FILL VALUES WERE OBTAINED FROM A SURFACE TO SURFACE VOLUME COMPARISON

BASE AGGREGATE ITEMS						
*305.0110 305.0120 624.0100 645.0260						
		BASE AGGREGATE	BASE AGGREGATE			
		DENSE	DENSE	GEOGRID		
		3/4-INCH	1 1/4-INCH	WATER	TYPE SSR	
STATION	LOCATION	TON	TON	MGAL	SY	REMARKS
100+80 - 183+70	LT&RT	950	15380	160	-	-
127+30 - 139+20	LT&RT	-	21730	220	14830	EBS SECTION
142+90 - 146+60	LT&RT	-	6630	70	4070	EBS SECTION
SKYLINE LANE	LT&RT	-	320	0	-	-
PROJECT TOTALS		950	44,060	450	18,900	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE ON PLANS

ASPHALTIC ITEMS						
455.0605 460.6223 460.6224 465.0105						
		TACK	HMA PAVEMENT	HMA PAVEMENT	ASPHALTIC	
		COAT	3 MT 58-28 S	4 MT 58-28 S	SURFACE	
STATION	LOCATION	GAL	TON	TON	TON	REMARKS
100+80 - 183+70	LT&RT	1112	2800	2180	-	-
SKYLINE ROAD	LT&RT	33	-	-	65	-
PROJECT TOTALS		1145	2800	2180	65	

CULVERT PIPES

									521.3118	521.3124	521.3130	521.1018	521.1024	521.1030	522.1500	*633.5200	
									CULVERT PIPE	CULVERT PIPE	CULVERT PIPE	APRON ENDWALLS	APRON ENDWALLS	APRON ENDWALLS	PIPE CATTLE PASS		
									CORRUGATED	CORRUGATED	CORRUGATED	FOR CULVERT	FOR CULVERT	FOR CULVERT	REINFORCED	MARKERS	
									STEEL	STEEL	STEEL	PIPE STEEL	PIPE STEEL	PIPE STEEL	CONCRETE	CULVERT	
***INLET			***OUTLET			PIPE			18-INCH	24-INCH	30-INCH	18-INCH	24-INCH	30-INCH		END	
STATION	OFFSET	ELEV. (FT)	STATION	OFFSET	ELEV. (FT)	SLOPE (%)	THICKNESS	LOCATION	LF	LF	LF	EACH	EACH	EACH	LF	EACH	REMARKS
105+06	21.7 RT	1153.60	105+19	21.4 LT	1153.24	0.80%	0.064"	LT&RT	-	45	-	-	2	-	-	2	-
112+73	20.6 LT	1132.20	113+02	23.4 LT	1129.20	9.98%	0.064"	LT	30	-	-	2	-	-	-	-	-
113+09	24.9 LT	1129.00	113+45	20.9 LT	1126.00	8.24%	0.064"	LT	36	-	-	2	-	-	-	-	-
117+72	21.6 LT	1094.73	117+88	25.7 RT	1091.96	5.54%	0.064"	LT&RT	-	50	-	-	2	-	-	2	-
126+02	20.1 LT	1035.20	126+24	25.2 RT	1031.75	6.91%	0.064"	LT&RT	-	50	-	-	2	-	-	2	-
137+60	21.4 LT	952.47	137+81	19.5 RT	950.95	3.30%	0.064"	LT&RT	-	46	-	-	2	-	-	2	-
140+73	20.7 LT	932.72	140+96	20.0 RT	931.19	3.26%	0.064"	LT&RT	-	47	-	-	2	-	-	2	-
143+53	19.6 LT	911.55	143+79	24.0 RT	906.60	9.90%	0.064"	LT&RT	-	50	-	-	2	-	-	2	-
144+66	18.9 LT	901.20	144+72	21.8 RT	898.36	6.92%	0.079"	LT&RT	-	-	41	-	-	2	-	2	-
145+32	21.5 LT	896.99	145+41	20.5 RT	893.79	7.44%	0.079"	LT&RT	-	-	43	-	-	2	-	2	-
153+10	19.7 LT	843.00	153+21	20.9 RT	840.38	6.24%	0.064"	LT&RT	-	42	-	-	2	-	-	2	-
157+22	20.9 LT	810.95	157+32	21.8 RT	808.50	5.58%	0.079"	LT&RT	-	-	44	-	-	2	-	2	-
162+59	19.7 LT	771.50	162+85	26.8 RT	768.80	5.10%	0.064"	LT&RT	-	53	-	-	2	-	-	2	-
170+55	21.6 LT	720.00	171+00	21.0 LT	716.75	7.29%	0.064"	LT	44	-	-	2	-	-	-	-	-
174+20	23.0 LT	688.23	174+20	23.0 RT	687.77	1.00%	-	LT&RT	-	-		-	-	-	46	2	-
*ADDITIONAL ITEMS SHOWN ELSEWHERE IN PLANS									110	383	128	6	16	6	46	24	

*** PIPE INVERT AND STATION/OFFSET AT END OF PIPE

RIPRAP

		606.0300	645.0120		
		RIPRAP	GEOTEXTILE		
		HEAVY	TYPE HR		
STATION	LOCATION	CY	SY	REMARKS	
117+80	RT	32	48	-	
122+62	RT	32	48	-	
126+13	RT	24	36	-	
130+61	RT	24	36	-	
135+34	RT	32	48	-	
137+71	RT	28	42	-	
140+84	RT	24	36	-	
143+63	RT	24	36	-	
144+69	RT	32	48	-	
145+37	RT	32	48	-	
153+15	RT	24	36	-	
157+27	RT	28	42	-	
162+70	RT	24	36	-	
PROJECT TOTALS		361	541		

GUARDRAIL ITEMS

		614.2300	614.2330	614.2610		
		MGS	MGS	MGS GUARDRAIL		
		GUARDRAIL 3	GUARDRAIL 3 K	TERMINAL EAT		
STATION	LOCATION	LF	LF	EACH	REMARKS	
110+65 - 168+43	RT	-	5678.0	2	-	
172+81 - 175+50	LT	162.5	-	2	-	
169+95 - 178+46	RT	62.5	688.5	2	-	
PROJECT TOTALS		225.0	6366.5	6		

PAVEMENT MARKING

		646.2005				
		MARKING				
		LINE PAINT 6-INCH				
		SOLID	SOLID	3' LINE 9' SKIP		
		WHITE	YELLOW	WHITE		
STATION	LOCATION	LF	LF	LF	REMARKS	
100+80 - 183+70	ML	16,475	16,572	21	-	
PROJECT TOTALS		33,068				

FINISHING ITEMS

		630.0120				
		625.0500	629.0205	SEEDING	630.0200	630.0500
		SALVAGED	FERTILIZER	MIXTURE	SEEDING	SEED
		TOPSOIL	TYPE A	NO. 20	TEMPORARY	WATER
STATION - STATION	SY	CWT	LB	LB	MGAL	
ENTIRE PROJECT	16500	10	450	450	370	
UNDISTRIBUTED QTY	4130	3	110	110	90	
PROJECT TOTALS	20630	13	560	560	460	

EROSION CONTROL

628.2023											628.1910			
		628.1504	628.1520	EROSION	628.7005	628.7504	628.7515.S	628.7555			628.1905	MOBILIZATONS		
		SILT	SILT FENCE	MAT	INLET	TEMPORARY	STONE	CULVERT	628.7560	628.7570	MOBILIZATIONS	EMERGENCY	645.0130	
		FENCE	MAINTENANCE	CLASS II	PROTECTION	DITCH	DITCH	PIPE	TRACKING	ROCK	EROSION	EROSION	GEOTEXTILE	
				TYPE B	TYPE A	CHECKS	CHECKS	CHECKS	PADS	BAGS	CONTROL	CONTROL	TYPE R	
STATION	LT/RT	LF	LF	SY	EACH	LF	CY	EACH	EACH	EACH	EACH	EACH	SY	REMARKS
PROJET LENGTH		7840	7840	16500	3	1050	450	42	2	640	10	5	1890	-
UNDISTRIBUTED		1960	1960	4130	-	260	110	-	-	160	-	-	470	-
PROJECT TOTAL		9800	9800	20630	3	1310	560	42	2	800	10	5	2360	

STORM SEWER ITEMS

													608.0324	608.0330	522.1024	522.1030	611.0642	611.3902	*633.5200				
													STORM SEWER PIPE	STORM SEWER PIPE	APRON ENDWALLS	APRON ENDWALLS							
													REINFORCED	REINFORCED	FOR CULVERT PIPE	FOR CULVERT PIPE	INLET	INLETS					
													CONCRETE	CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE	COVERS	MEDIAN	MARKERS				
STRUCTURE		INLET		INLET	INLET INVERT	INLET RIM	STRUCTURE	OUTLET	OUTLET	OUTLET	PIPE		CLASS III 24-INCH	CLASS III 30-INCH	24-INCH	30-INCH	TYPE MS	2 GRATE	CULVERT END				
NUMBER	STATION	LOCATION	STATION	OFFSET	ELEVATION	ELEVATION	DEPTH	STATION	OFFSET	ELEVATION	THICKNESS	SLOPE	LF	LF	EACH	EACH	EACH	EACH	EACH	REMARKS			
1-1	122+62	LT&RT	122+63	-21.7	1057.00	1060.21	3.21	122+64	21.9	1056.55	3.0"	1.02%	44	-	1	-	2	1	1	SINGLE SLOPE - DITCH DIKE BEHIND			
1-2	130+61	LT&RT	130+53	-22.4	1006.20	1010.32	4.12	130+69	22.9	1004.50	3.0"	3.54%	48	-	1	-	2	1	1	SINGLE SLOPE - DITCH DIKE BEHIND			
1-3	135+34	LT&RT	135+26	-21.1	970.85	975.03	4.18	135+41	24.7	970.35	3.5"	1.04%	-	48	-	1	2	1	1	SINGLE SLOPE - DITCH DIKE BEHIND			
PROJECT TOTALS													92	48	2	1	6	3	3				

*ADDITIONAL ITEMS SHOWN ELSEWHERE IN PLANS

3

PERMANENT SIGNING

						637.2210	637.2230	634.0616	634.0618
						SIGNS	SIGNS	POSTS	POSTS
						TYPE II	TYPE II	WOOD	WOOD
								4X6-INCH	4X6-INCH
SIGN NO.	LT/RT	SIGN CODE	SIGN MESSAGE	SIZE W" X H"	REFLECTIVE H (SF)	REFLECTIVE F (SF)	16-FT (EACH)	18-FT (EACH)	
01-01	LT	W1-6	RIGHT ARROW	48"x24"	-	6.00	1	-	
01-02	LT	R1-1	STOP SIGN	30"x30"	5.18	-	1	-	
01-03	LT	D1-1	SKYLINE LANE	78"x15"	8.13	-	-	-	
01-04	LT	W14-1	DEAD END	30"x30"		6.25	-	1	
01-05	LT	R1-1	STOP SIGN	30"x30"	5.18	-	1	-	
01-06	LT	W1-6	LEFT ARROW	48"x24"	-	6.00	1	-	
01-07	LT	W13-1	ROADWAY TURNS LEFT	36"x36"	-	9.00	-	1	
01-08	LT	W13-1	20 MPH	18"x18"	-	2.25	-	-	
02-01	RT	W1-5R	CURVES IN ROADWAY AHEAD	30"x30"	-	6.25	-	1	
02-02	RT	W13-1	30 MPH	18"x18"	-	2.25	-	-	
02-03	RT	W7-1	STEEP GRADE	30"x30"	-	6.25	-	1	
02-04	RT	W7-3	11% GRADE	24"x18"	-	3.00	-	-	
03-01	RT	W1-5R	CURVES IN ROADWAY AHEAD	30"x30"	-	6.25	-	1	
03-02	RT	W13-1	25 MPH	18"x18"	-	2.25	-	-	
08-01	RT	W1-1R	ROADWAY TURNS RIGHT	36"x36"		9.00	-	1	
08-02	RT	W13-1	20 MPH	18"x18"	-	2.25	-	-	
08-03	LT	W1-5R	CURVES IN ROADWAY AHEAD	30"x30"	-	6.25	-	1	
08-04	LT	W13-1	40 MPH	18"x18"	-	2.25	-	-	
08-05	LT	M1-5A	CTH O	24"x24"	4.00	-	1	-	
08-06	LT	R1-1	STOP SIGN	30"x30"	5.18	-	1	-	
08-07	LT	W1-6	RIGHT ARROW	48"x24"	-	8.00	-	1	
08-08	LT	W1-6	LEFT ARROW	48"x24"	-	8.00	-	-	
PROJECT TOTALS					27.67	91.50	6.00	8.00	

REMOVING SIGNS

				638.2602	638.3000	REMARKS
				REMOVING	REMOVING	
				SIGNS TYPE II	SMALL SIGN SUPPORTS	
SIGN #	SIGN MESSAGE	LOCATION	(EACH)	(EACH)		
R01-01	RIGHT ARROW	CTH O	1	1		
R01-02	STOP SIGN	SKYLINE LN	1	1		
R01-03	STREET SIGN	SKYLINE LN	1	1		
R01-04	DEAD END	SKYLINE LN	1	-		
R01-05	STOP SIGN	SKYLINE LN	1	1		
R01-06	LEFT ARROW	SKYLINE LN	1	1		
R01-07	ROADWAY TURNS LEFT	CTH O	1	1		
R01-08	20 MPH	CTH O	1	-		
R02-01	CURVES IN ROADWAY	CTH O	1	1		
R02-02	30 MPH	CTH O	1	-		
R02-03	STEEP GRADE	CTH O	1	1		
R03-01	CURVES IN ROADWAY	CTH O	1	1		
R03-02	25 MPH	CTH O	1	-		
R05-01	CURVES IN ROADWAY	CTH O	1	1		
R05-02	25 MPH	CTH O	1	-		
R08-01	ROADWAY TURNS RIGHT	CTH O	1	1		
R08-02	25 MPH	CTH O	1	1		
R08-03	CURVES IN ROADWAY	CTH O	1	1		
R08-04	30 MPH	CTH O	1	-		
R08-05	CTH O	CTH O	1	1		
R08-06	STOP SIGN	CTH O	1	1		
R08-07	RIGHT ARROW	CTH O	1	1		
R08-08	LEFT ARROW	CTH O	1	-		
PROJECT TOTALS			23	16		

3

TRAFFIC CONTROL

				643.0420		643.0705				643.1050		
		APPROX.	643.0300	TRAFFIC CONTROL		TRAFFIC CONTROL		643.0900		TRAFFIC		
		SERVICE	TRAFFIC CONTROL	BARRICADES		WARNING LIGHTS		TRAFFIC CONTROL		CONTROL		
		PERIOD	DRUMS	TYPE III		TYPE A		SIGNS		SIGNS PCMS		
LOCATION	DAYS	QTY.	DAYS	QTY.	DAYS	QTY.	DAYS	QTY.	DAYS	QTY.	DAYS	NOTES
PRE-WARNING	7	0	0	0	0	0	0	0	0	2	14	PRE-WARN PRIOR TO CONSTRUCTION
ENTIRE PROJECT	105	25	2625	18	1890	36	3780	21	2205	0	0	-
			2625	1890		3780		2205		14		
UNDISTRIBUTED			525	380		760		445		0		-
PROJECT TOTALS			3150	2270		4540		2650		14		

SAWING ASPHALT

				690.0150	REMARKS
				SAWING ASPHALT	
STATION	LOCATION	LF			
100+80	ML	22			BEGIN PROJECT
0+38'W'	ML	20			SKYLINE LN
170+82	LT	27			PE
183+70	ML	31			END PROJECT
PROJECT TOTALS		100			

CONSTRUCTION STAKING

		650.4000	650.4500	650.5000	650.6000	650.9911	650.9920	
		CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	
		STAKING STORM SEWER	STAKING SUBGRADE	STAKING BASE	STAKING PIPE CULVERTS	STAKING	STAKING	
STATION	LOCATION	EACH	LF	LF	EACH	SUPPLEMENTAL CONTROL	SLOPE STAKES	REMARKS
100+80 - 183+70	LT&RT	3	8290	8290	14	1	8290	-
PROJECT TOTALS		3	8290	8290	14	1	8290	

UTILITY LINE OPENING

				SPV.0060.01	REMARKS
				UTILITY LINE OPENING	
STATION	LOCATION	EACH			
100+80 - 183+70	ML	5			-
PROJECT TOTALS		5			

PROJECT NO: 5537-00-71

HWY: CTH O

COUNTY: VERNON

MISCELLANEOUS QUANTITIES

SHEET

E

CONVENTIONAL SYMBOLS			
SECTION LINE		SECTION CORNER SYMBOL	
QUARTER LINE		SIXTEENTH LINE	
SIXTEENTH LINE		NEW R/W LINE	
NEW R/W LINE		EXISTING R/W OR HE LINE	
EXISTING R/W OR HE LINE		PROPERTY LINE	
PROPERTY LINE		LOT, TIE & OTHER MINOR LINES	
LOT, TIE & OTHER MINOR LINES		SLOPE INTERCEPT	
SLOPE INTERCEPT		CORPORATE LIMITS	
CORPORATE LIMITS		UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)		NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)		TEMPORARY LIMITED EASEMENT AREA	
TEMPORARY LIMITED EASEMENT AREA		EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)		TRANSMISSION STRUCTURES	
TRANSMISSION STRUCTURES		BUILDING TO BE REMOVED	
BUILDING TO BE REMOVED		BRIDGE	
BRIDGE		CULVERT	
CULVERT		PARALLEL OFFSETS	
PARALLEL OFFSETS		SECTION CORNER MONUMENT	
SECTION CORNER MONUMENT		GEODETIC SURVEY MONUMENT	
GEODETIC SURVEY MONUMENT		SIXTEENTH CORNER MONUMENT	
SIXTEENTH CORNER MONUMENT		SIGN	
SIGN		OFF-PREMISE SIGN	
OFF-PREMISE SIGN		COMPENSABLE	
COMPENSABLE		NON-COMPENSABLE	
NON-COMPENSABLE		ELECTRIC POLE	
ELECTRIC POLE		TELEPHONE POLE	
TELEPHONE POLE		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		ACCESS RESTRICTED BY ACQUISITION	
ACCESS RESTRICTED BY ACQUISITION		NO ACCESS (BY STATUTORY AUTHORITY)	
NO ACCESS (BY STATUTORY AUTHORITY)		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)		NO ACCESS (NEW HIGHWAY)	
NO ACCESS (NEW HIGHWAY)		PARCEL NUMBER	
PARCEL NUMBER		UTILITY NUMBER	
UTILITY NUMBER			

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	RDE
CERTIFIED SURVEY MAP	CSM	EASEMENT	
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	NGS		
NUMBER	NO		
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		

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), VERNON 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.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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".

DIMENSIONING FOR THE NEW MEASURED RIGHT-OF-WAY IS ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

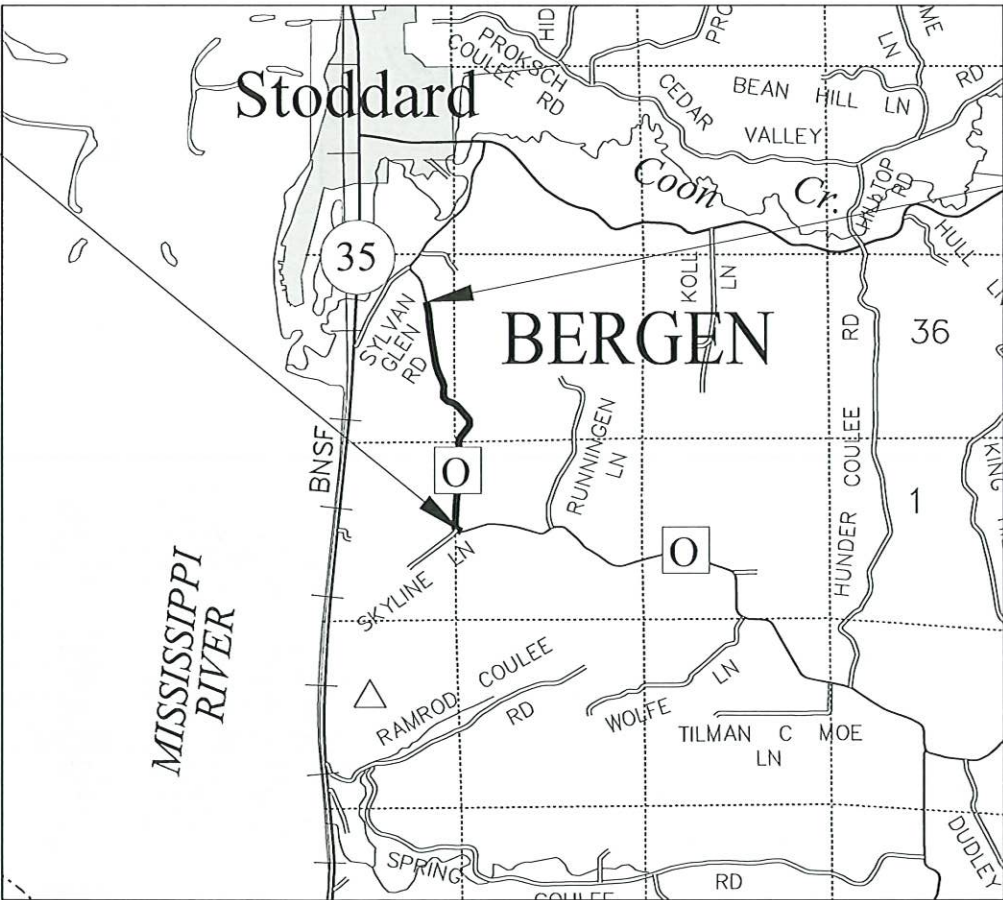
A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

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

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE VERNON COUNTY HIGHWAY DEPARTMENT.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.



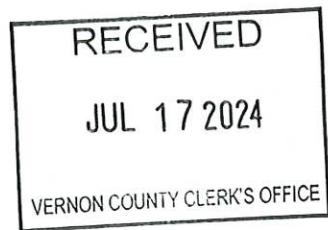
BEGIN RELOCATION
STA 100+00.00
Y = 176160.101
X = 617682.558
2495.789 FEET NORTH AND
260.430 FEET EAST OF THE
SOUTHWEST CORNER OF
SECTION 3, T13N, R7W

END RELOCATION
STA 177+00.00
Y = 183014.368
X = 616503.352
1667.332 FEET NORTH AND
996.959 FEET WEST OF THE
EAST QUARTER CORNER
OF SECTION 33, T14N, R7W

LAYOUT
SCALE 0 1.0 MILES
TOTAL NET LENGTH OF CENTERLINE = 1.458 MILES

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

R/W PROJECT NUMBER 5537-00-00	SHEET NUMBER 4.01	TOTAL SHEETS 5
FEDERAL PROJECT NUMBER 5537-00-00		
PLAT OF RIGHT OF WAY REQUIRED FOR TOWN OF BERGEN - STH 162 (CTH O) SKYLINE LANE TO SYLVAN GLEN ROAD		
CTH O	VERNON COUNTY	
CONSTRUCTION PROJECT NUMBER 5537-00-00		



Original Plat Prepared by

SEH

WISCONSIN

JASON L. CANCE
S-2688
CHIPPWA FALLS, WI

LAND SURVEYOR

Signature: *Jason L. Cance* Date: 1-3-2024 (Date)

REVISION DATE 07-15-2024

ACCEPTED FOR

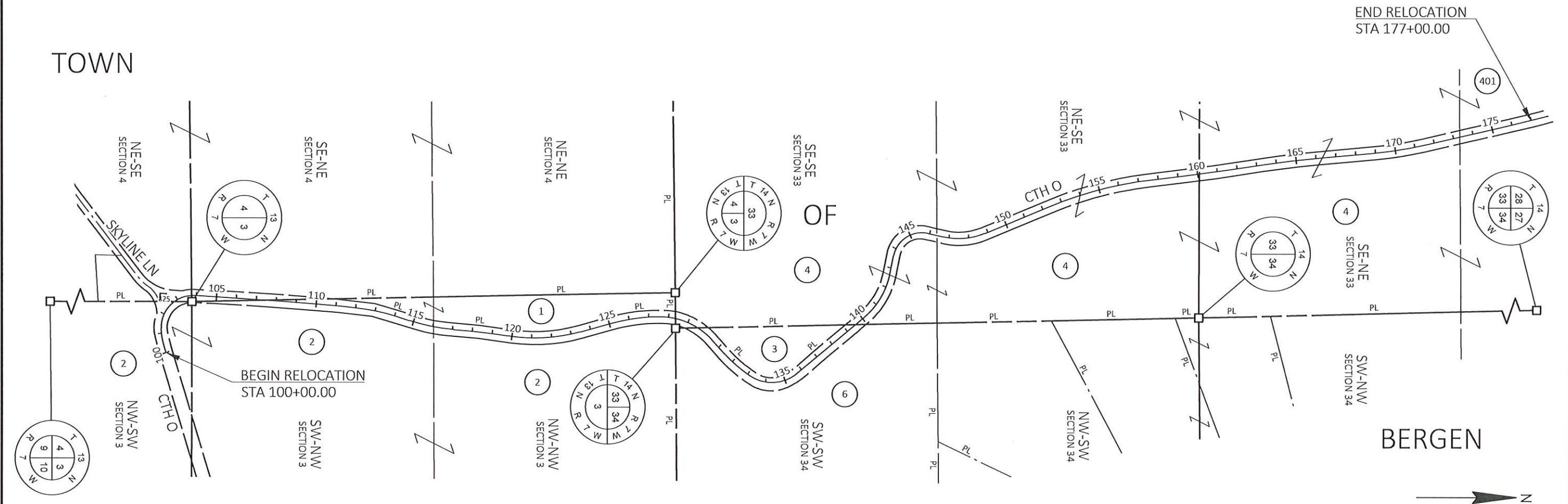
COUNTY OF VERNON

DATE: 1-4-24 *Phil Newitt* (Signature)

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE COUNTY.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE ACRES	TLE ACRES
				NEW	EXISTING	TOTAL		
1	4.03	JEFFERY L. & STEPHANIE L. UMBERGER	TLE	-	-	-	-	0.08
2	4.03	JOHN A. ZERNIA	PLE / TLE	-	-	-	0.11	0.06
3	4.04	MELVIN & ALMA OLSON	TLE	-	-	-	-	0.03
4	4.04, 4.05	ZINK FAMILY FARM TRUST	PLE / TLE	-	-	-	0.27	0.35
6	4.04	NOWHERESVILLE ACRES, LLC.	PLE	-	-	-	0.10	-
7	4.03	DOUBLE W ENTERPRISES, LLC.	TLE	-	-	-	-	0.01
401	4.05	ZINK FAMILY FARM TRUST	TLE	-	-	-	-	0.24
50	4.03	VERNON ELECTRIC COOPERATIVE	RELEASE OF RIGHTS					
51	4.03, 4.04	DAIRYLAND POWER COOPERATIVE	RELEASE OF RIGHTS					
52	4.04, 4.05	XCEL ENERGY	RELEASE OF RIGHTS					
53	4.05	XCEL ENERGY	RELEASE OF RIGHTS					



TLE STATION & OFFSET TABLE					
POINT	STATION	OFFSET	POINT	STATION	OFFSET
418	130+06.52	32.07' LT	431	143+83.83	34.93' LT
419	130+24.26	39.98' LT	432	145+28.75	36.95' LT
420	130+50.62	38.41' LT	433	145+53.82	54.93' LT
421	130+82.73	31.10' LT	434	148+12.88	48.78' LT
422	136+94.16	31.08' LT	435	150+50.36	46.21' LT
423	137+52.11	47.79' LT	436	151+82.61	32.21' LT
424	138+20.98	32.05' LT	437	152+99.34	32.38' LT
425	140+40.80	33.28' LT	438	153+25.56	41.70' LT
426	140+68.23	39.87' LT	439	153+40.37	32.54' LT
427	140+89.02	33.42' LT	440	157+02.44	32.39' LT
428	143+30.48	33.56' LT	441	157+23.74	50.72' LT
429	143+47.54	40.85' LT	442	157+54.87	44.44' LT
430	143+62.86	40.68' LT	443	157+77.77	32.19' LT

PLE AND COMPUTED POINTS STATION & OFFSET TABLE					
POINT	STATION	OFFSET	POINT	STATION	OFFSET
330	130+58.28	34.54' RT	382	153+52.00	78.00' RT
331	130+78.00	90.00' RT	383	153+38.00	33.47' RT
332	131+04.00	81.00' RT	390	157+20.00	33.69' RT
333	130+87.65	34.99' RT	391	157+33.00	88.00' RT
340	135+30.46	35.23' RT	392	157+61.00	81.00' RT
341	135+44.00	92.00' RT	393	157+49.00	33.83' RT
342	135+63.00	86.00' RT	806	129+94.12	29.19' LT
343	135+55.79	35.49' RT	807	130+19.66	0.00'
350	137+73.20	33.93' LT	808	137+06.44	197.24' LT
351	137+98.00	82.00' RT	809	135+49.49	0.00'
352	138+22.00	69.00' RT	810	138+59.92	74.62' LT
353	138+04.24	33.94' RT	811	138+00.30	0.00'
360	140+88.00	32.58' RT	812	140+27.01	62.61' RT
361	141+11.00	83.00' RT	813	140+88.00	0.00'
362	141+31.00	72.00' RT	814	141+47.02	277.55' RT
363	141+16.00	32.53' RT	816	150+89.29	560.22' RT
370	143+66.00	32.23' RT	817	153+10.00	0.00'
371	146+02.00	77.00' RT	818	155+86.60	685.46' RT
372	145+65.00	30.93' RT	819	157+20.00	0.00'
380	153+10.00	33.58' RT	823	139+53.32	0.00'
381	153+25.00	86.00' RT	824	129+57.26	0.00'

SECTION LINE - COURSE TABLE		
COURSE	BEARING	DISTANCE
44-45	N 89° 21' 33" E	179.52'
45-46	N 01° 14' 56" W	2629.19'
45-824	N 01° 14' 56" W	111.60'
824-806	N 01° 14' 56" W	48.21'
806-808	N 01° 14' 56" W	429.42'
808-810	N 01° 14' 56" W	196.45'
810-823	N 01° 14' 56" W	119.54'
823-812	N 01° 14' 56" W	99.05'
812-814	N 01° 14' 56" W	273.47'
814-816	N 01° 14' 56" W	682.41'
816-818	N 01° 14' 56" W	398.48'

PI STA = 132+29.24
Y = 179020.524
X = 617748.231
DELTA = 13°56'28" LT
D = 7°57'28"
T = 88.03'
L = 175.19'
R = 720.00'
PC STA = 131+41.21
PT STA = 133+16.39

PI STA = 141+39.12
Y = 179766.075
X = 617418.768
DELTA = 38°36'29" LT
D = 14°52'55"
T = 134.86'
L = 259.43'
R = 385.00'
PC STA = 140+04.26
PT STA = 142+63.69

PI STA = 147+80.93
Y = 180170.130
X = 617120.788
DELTA = 35°45'33" LT
D = 16°51'06"
T = 109.68'
L = 212.20'
R = 340.00'
PC STA = 146+71.25
PT STA = 148+83.44

PI STA = 155+04.53
Y = 180843.759
X = 616837.504
DELTA = 16°03'02" RT
D = 2°55'51"
T = 275.64'
L = 547.66'
R = 1955.00'
PC STA = 152+28.90
PT STA = 157+76.56

PI STA = 160+35.69
Y = 181374.811
X = 616774.576
DELTA = 1°54'35" LT
D = 0°52'53"
T = 108.34'
L = 216.65'
R = 6500.00'
PC STA = 159+27.35
PT STA = 161+44.01

BERGEN

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

FOUND MONUMENTS INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE VERNON COUNTY HIGHWAY DEPARTMENT.

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
45-806	N 01° 14' 56" W	159.81'
806-807	N 88° 45' 04" E	39.48'
807-330	N 88° 45' 04" E	51.06'
330-331	S 61° 42' 41" E	58.86'
331-332	N 28° 46' 02" E	27.51'
332-333	N 61° 42' 21" W	48.83'
333-330	S 48° 43' 48" W	29.37'

FOUND BRASS CAP
STA 128+13.30, 127.59' LT
Y = 178716.462
X = 617378.102

FOUND BRASS CAP
STA 128+48.19, 47.89' RT
Y = 178718.470
X = 617557.611

FOUND BRASS CAP
Y = 181347.036
X = 617500.311

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
45-808	N 01° 14' 56" W	589.23'
808-809	N 88° 45' 04" E	251.40'
809-340	N 88° 45' 04" E	40.85'
340-341	N 41° 28' 07" E	59.51'
341-342	N 47° 58' 20" W	28.30'
342-343	S 41° 54' 42" W	51.38'
343-340	SEE CURVE TABLE 3	

CURVE TABLE 3				
CURVE	RADIUS	ARC LENGTH	LONG CHORD BEARING	LONG CHORD
343-340	431.98'	29.91'	S 32°12'54" E	29.90'

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
45-810	N 01° 14' 56" W	785.68'
810-811	N 88° 45' 04" E	95.51'
811-350	N 88° 45' 04" E	43.43'
350-351	N 22° 50' 03" E	54.09'
351-352	N 68° 18' 54" W	27.29'
352-353	S 23° 15' 59" W	39.30'
353-350	S 39° 50' 38" E	31.05'

CURVE TABLE 4				
CURVE	RADIUS	ARC LENGTH	LONG CHORD BEARING	LONG CHORD
363-360	423.00'	30.37'	S 54°30'15" E	30.36'

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
45-812	N 01° 14' 56" W	1004.27'
812-813	S 88° 45' 04" W	90.74'
813-360	N 37° 39' 59" E	32.58'
360-361	N 08° 15' 55" E	56.92'
361-362	N 81° 50' 23" W	26.42'
362-363	S 09° 01' 59" W	42.98'
363-360	SEE CURVE TABLE 4	

CURVE TABLE 5				
CURVE	RADIUS	ARC LENGTH	LONG CHORD BEARING	LONG CHORD
372-709	102.00'	152.14'	S 36°02'07" E	138.43'

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
45-814	N 01° 14' 56" W	1277.74'
814-622	S 88° 45' 04" W	451.41'
622-372	S 44° 21' 54" E	39.11'
372-709	SEE CURVE TABLE 5	
709-370	S 78° 46' 01" E	6.53'
370-371	N 15° 50' 38" W	138.88'
371-372	S 67° 46' 40" W	53.92'

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
46-816	S 01° 14' 56" E	669.04'
816-817	S 88° 45' 04" W	600.56'
817-380	N 69° 34' 07" E	33.58'
380-381	N 54° 17' 04" E	54.40'
381-382	N 36° 46' 52" W	27.08'
382-383	S 53° 36' 35" W	46.56'
383-380	SEE CURVE TABLE 6	

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
46-818	S 01° 14' 56" E	270.56'
818-819	S 88° 45' 04" W	693.84'
819-390	N 81° 35' 04" E	33.69'
390-391	N 68° 43' 08" E	55.75'
391-392	N 22° 16' 03" W	27.69'
392-393	S 68° 44' 21" W	48.58'
393-390	SEE CURVE TABLE 6	

REVISION DATE	7-15-2024 N.C.	DATE		SCALE, FEET	0 100 200	HWY: CTH O	R/W PROJECT NUMBER	5537-00-00	PLAT SHEET	4.04
GRID FACTOR	N/A					COUNTY: VERNON	CONSTRUCTION PROJECT NUMBER	5537-00-00	PS&E SHEET	E

FILE NAME: 040101-RP.DWG

PLOT DATE: 7/15/2024 12:14 PM

PLOT BY: NICK ENGH

PLOT NAME:

WISDOT/CADDSS SHEET 75

PI STA = 100+79.73
Y = 176136.998
X = 617606.252
DELTA = 14°54'24" RT
D = 16°22'13"
T = 45.79'
L = 91.06'
R = 350.00'
PC STA = 100+33.94
PT STA = 101+25.00

PI STA = 103+01.92
Y = 176129.467
X = 617383.665
DELTA = 95°45'07" RT
D = 35°48'36"
T = 176.93'
L = 267.39'
R = 160.00'
PC STA = 101+25.00
PT STA = 103+92.39

PI STA = 109+90.95
Y = 176903.239
X = 617435.250
DELTA = 2°01'07" RT
D = 0°42'58"
T = 140.94'
L = 281.85'
R = 8000.00'
PC STA = 108+50.01
PT STA = 111+31.86

PI STA = 115+93.58
Y = 177490.750
X = 617557.151
DELTA = 13°17'53" LT
D = 5°52'35"
T = 113.66'
L = 226.29'
R = 975.00'
PC STA = 114+79.92
PT STA = 117+06.21

PI STA = 121+66.20
Y = 178059.764
X = 617627.219
DELTA = 24°28'10" LT
D = 6°37'26"
T = 187.57'
L = 369.42'
R = 865.00'
PC STA = 119+78.63
PT STA = 123+48.04

PI STA = 126+38.25
Y = 178520.206
X = 617499.693
DELTA = 15°34'49" RT
D = 6°21'58"
T = 123.13'
L = 244.73'
R = 900.00'
PC STA = 125+15.13
PT STA = 127+59.86

PI STA = 129+12.60
Y = 178796.075
X = 617500.172
DELTA = 47°45'40" RT
D = 16°36'27"
T = 152.74'
L = 287.59'
R = 345.00'
PC STA = 127+59.86
PT STA = 130+47.45

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

FOUND MONUMENTS INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

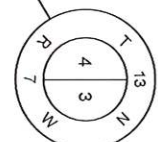
FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE VERNON COUNTY HIGHWAY DEPARTMENT.



PLAT OF SURVEY
BY MICHAEL J. HARDING,
RLS 2296, 4/29/2010

FOUND BRASS CAP
STA 103+75.20, 30.41' RT
Y = 176290.062
X = 617425.603

TOWN



PI 103+01.92

APPROXIMATE SECTION LINE

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI 100+79.73

PC 100+33.94

PI STA = 113+03.45
Y = 177214.152
X = 617467.011
DELTA = 12°13'03" RT
D = 5°52'35"
T = 104.35'
L = 207.90'
R = 975.00'
PC STA = 111+99.10
PT STA = 114+07.01

PI STA = 118+59.15
Y = 177756.429
X = 617579.237
DELTA = 4°14'11" RT
D = 3°10'59"
T = 66.57'
L = 133.09'
R = 1800.00'
PC STA = 117+92.58
PT STA = 119+25.66

PLAT OF SURVEY
BY MICHAEL J. HARDING,
RLS 2296, 4/29/2010

SECTION 4

SECTION 4

SECTION 4

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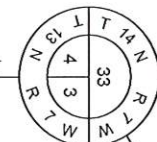
SECTION 4

SECTION 4

SECTION 4

PLAT OF SURVEY
BY MICHAEL J. HARDING,
RLS 2296, 4/29/2010

FOUND BRASS CAP
STA 128+13.30, 127.59' LT
Y = 178716.462
X = 617378.102



PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

PC 127+59.86

PI 128+13.30

BERGEN

APPROXIMATE SECTION LINE

APPROXIMATE SECTION LINE

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APPROXIMATE SECTION LINE

PLE AND COMPUTED POINTS
STATION & OFFSET TABLE

POINT	STATION	OFFSET
300	117+75.00	32.85' RT
301	117+97.00	90.00' RT
302	118+23.00	81.00' RT
303	118+07.00	32.87' RT
310	122+50.00	32.93' RT
311	122+52.00	88.00' RT
312	122+80.00	88.00' RT
313	122+79.00	32.91' RT
320	126+12.00	32.34' RT
321	126+41.00	88.00' RT
322	126+67.00	76.00' RT
323	126+43.00	32.44' RT
800	117+53.88	172.44' LT
801	117+71.62	0.00'
802	122+93.29	205.18' LT
803	122+54.55	-0.00'
804	126+58.01	124.47' LT
805	126+46.53	0.00'
822	107+39.35	0.00'
825	102+81.46	0.00'

TLE STATION & OFFSET TABLE

POINT	STATION	OFFSET	POINT	STATION	OFFSET
400	100+80.00	32.72' RT	412	117+00.00	38.00' LT
401	101+00.00	37.00' RT	413	117+75.00	67.00' LT
402	101+50.00	36.00' RT	414	118+10.00	33.15' LT
403	102+40.00	31.90' RT	415	125+82.00	33.69' LT
404	105+14.00	47.00' RT	416	126+00.00	45.00' LT
405	105+50.00	38.00' RT	417	126+15.00	33.65' LT
406	107+00.00	38.00' RT	451	104+85.00	47.00' RT
407	107+25.00	32.81' RT	452	104+85.00	34.05' RT
408	112+55.00	32.81' RT	453	104+57.00	31.46' LT
409	112+75.00	38.00' RT	454	104+57.00	39.00' LT
410	113+60.00	34.66' RT	455	105+22.00	39.00' LT
411	115+25.00	33.05' LT	456	105+22.00	32.14' LT

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31(2)	

SECTION LINE - COURSE TABLE

COURSE	BEARING	DISTANCE
44 - 43	S 01° 07' 17" E	2426.86'
44 - 804	S 01° 07' 17" E	188.65'
804 - 802	S 01° 07' 17" E	382.74'
802 - 800	S 01° 07' 17" E	479.47'
800 - 822	S 01° 07' 17" E	1013.80'
822 - 43	S 01° 07' 17" E	362.20'
43 - 57	S 00° 04' 33" W	2625.75'
43 - 825	S 00° 04' 33" W	88.54'
825 - 57	S 00° 04' 33" W	2537.21'
44 - 45	N 89° 21' 33" E	179.52'

PLE - COURSE TABLE

COURSE	BEARING	DISTANCE
44 - 800	S 01° 07' 17" E	1050.86'
800 - 801	N 88° 52' 43" E	173.35'
801 - 300	N 88° 52' 43" E	33.03'
300 - 301	N 73° 33' 32" E	61.16'
301 - 302	N 14° 39' 53" W	26.35'
302 - 303	S 77° 37' 19" W	50.56'
303 - 300	S 04° 53' 03" W	31.74'

CURVE	RADIUS	ARC LENGTH	LONG CHORD BEARING	LONG CHORD
313 - 310	883.00'	30.10'	S 09° 59' 16" E	30.10'

COURSE	BEARING	DISTANCE
44 - 802	S 01° 07' 17" E	571.39'
802 - 803	N 88° 52' 43" E	207.95'
803 - 310	N 88° 52' 43" E	33.25'
310 - 311	N 78° 43' 19" E	55.11'
311 - 312	N 10° 02' 47" W	30.85'
312 - 313	S 77° 37' 19" W	55.10'
313 - 310	SEE CURVE TABLE 1	

CURVE	RADIUS	ARC LENGTH	LONG CHORD BEARING	LONG CHORD
323 - 320	812.00'	29.88'	S 08° 08' 06" E	29.88'

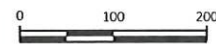
COURSE	BEARING	DISTANCE
804 - 805	N 88° 52' 43" E	125.07'
805 - 323	N 88° 52' 43" E	32.63'
323 - 320	SEE CURVE TABLE 2	
320 - 321	N 55° 40' 45" E	61.88'
321 - 322	N 33° 33' 36" W	26.50'
322 - 323	S 56° 02' 55" W	49.05'

REVISION DATE 7-15-2024 N.C.

DATE

GRID FACTOR N/A

SCALE, FEET



HWY: CTH O

COUNTY: VERNON

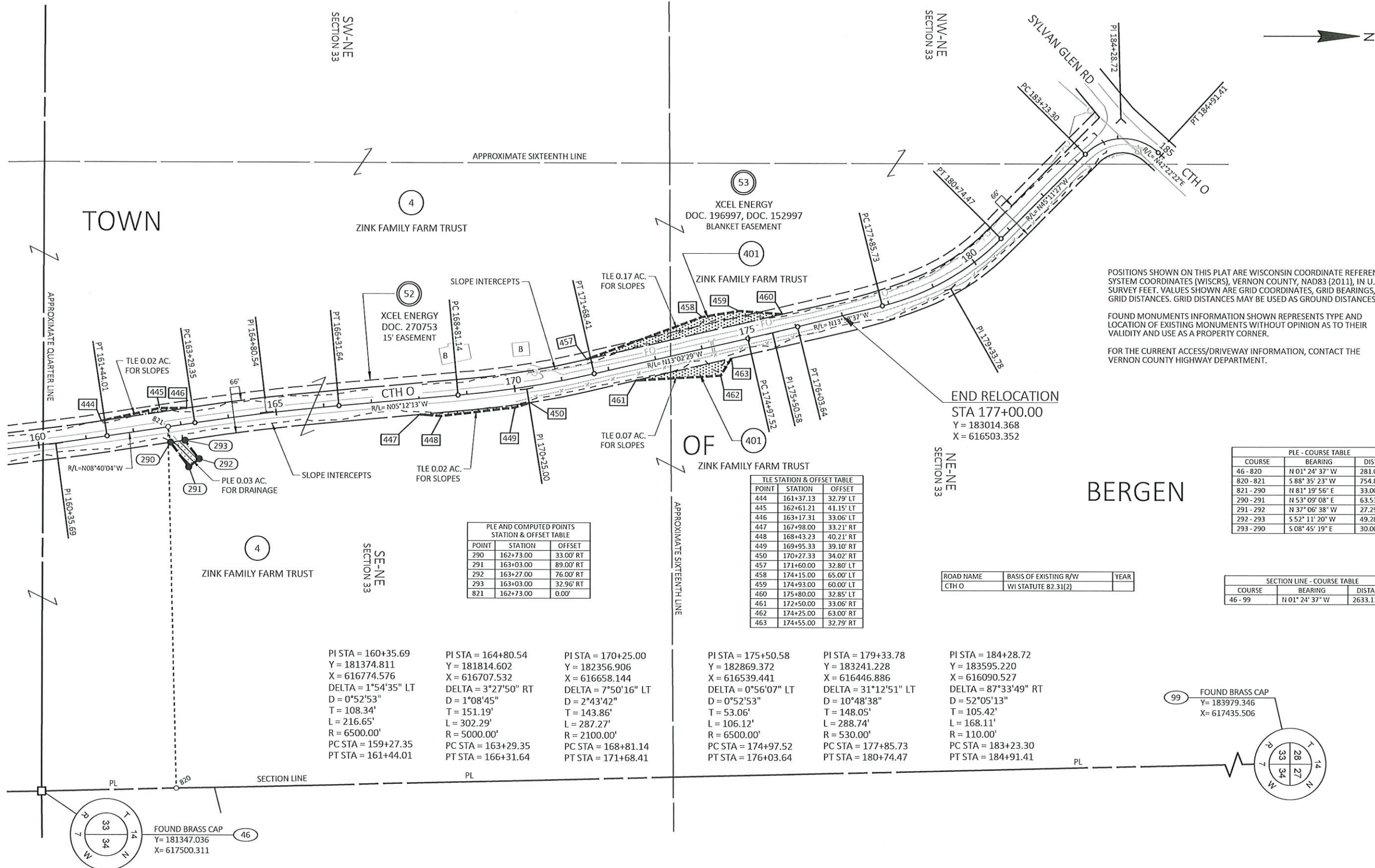
R/W PROJECT NUMBER 5537-00-00

CONSTRUCTION PROJECT NUMBER 5537-00-00

PLAT SHEET 4.03

PS&E SHEET

E



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

FOUND MONUMENTS INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE VERNON COUNTY HIGHWAY DEPARTMENT.

PLE - COURSE TABLE		
COURSE	BEARING	DISTANCE
46 - 820	N 01° 24' 37" W	281.06'
820 - 821	S 88° 35' 23" W	754.81'
821 - 290	N 81° 19' 56" E	33.00'
290 - 291	N 53° 09' 08" E	63.53'
291 - 292	N 37° 06' 38" W	27.29'
292 - 293	S 52° 11' 20" W	49.28'
293 - 290	S 08° 45' 19" E	30.00'

TLE STATION & OFFSET TABLE		
POINT	STATION	OFFSET
444	161+37.13	32.79' LT
445	162+61.21	41.15' LT
446	163+17.31	33.06' LT
447	167+98.00	33.21' RT
448	168+43.23	40.21' RT
449	169+95.33	39.10' RT
450	170+27.33	34.02' RT
457	171+60.00	32.80' LT
458	174+15.00	65.00' LT
459	174+93.00	60.00' LT
460	175+80.00	32.85' LT
461	172+50.00	33.06' RT
462	174+25.00	63.00' RT
463	174+55.00	32.79' RT

PLE AND COMPUTED POINTS STATION & OFFSET TABLE		
POINT	STATION	OFFSET
290	162+73.00	33.00' RT
291	163+03.00	89.00' RT
292	163+27.00	76.00' RT
293	163+03.00	32.96' RT
821	162+73.00	0.00'

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH O	WI STATUTE 82.31(2)	

SECTION LINE - COURSE TABLE		
COURSE	BEARING	DISTANCE
46 - 99	N 01° 24' 37" W	2633.11'

PI STA = 160+35.69
Y = 181374.811
X = 616774.576
DELTA = 1°54'35" LT
D = 0°52'53"
T = 108.34'
L = 216.65'
R = 6500.00'
PC STA = 159+27.35
PT STA = 161+44.01

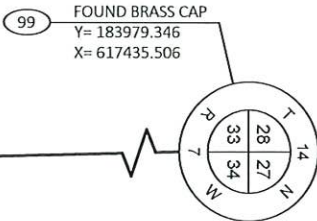
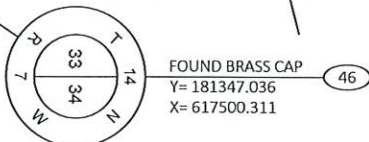
PI STA = 164+80.54
Y = 181814.602
X = 616707.532
DELTA = 3°27'50" RT
D = 1°08'45"
T = 151.19'
L = 302.29'
R = 5000.00'
PC STA = 163+29.35
PT STA = 166+31.64

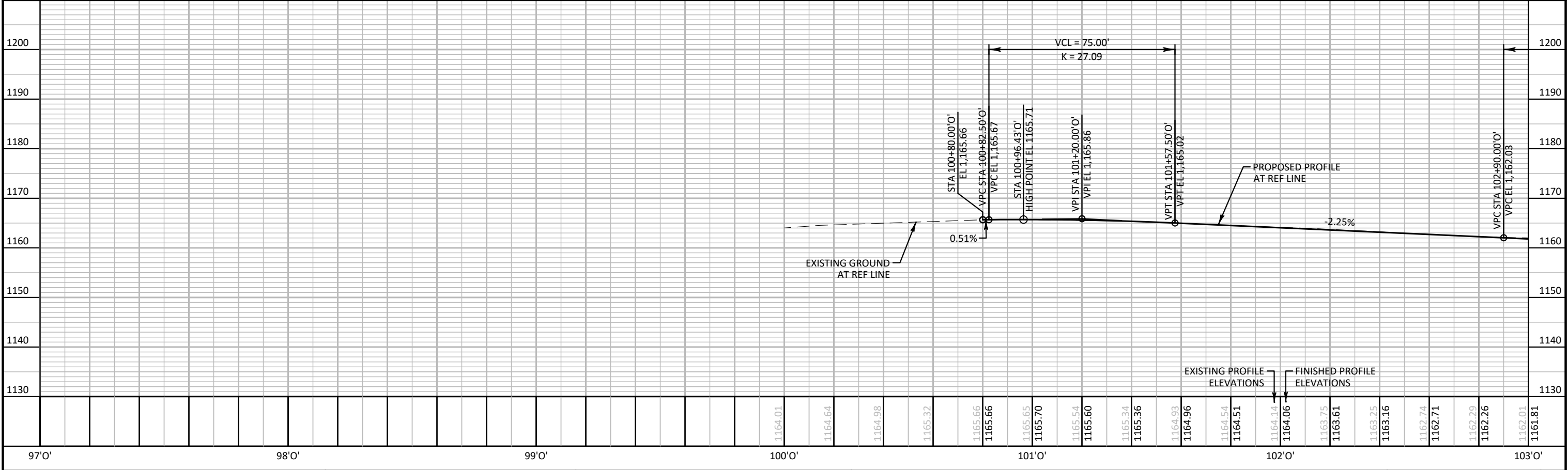
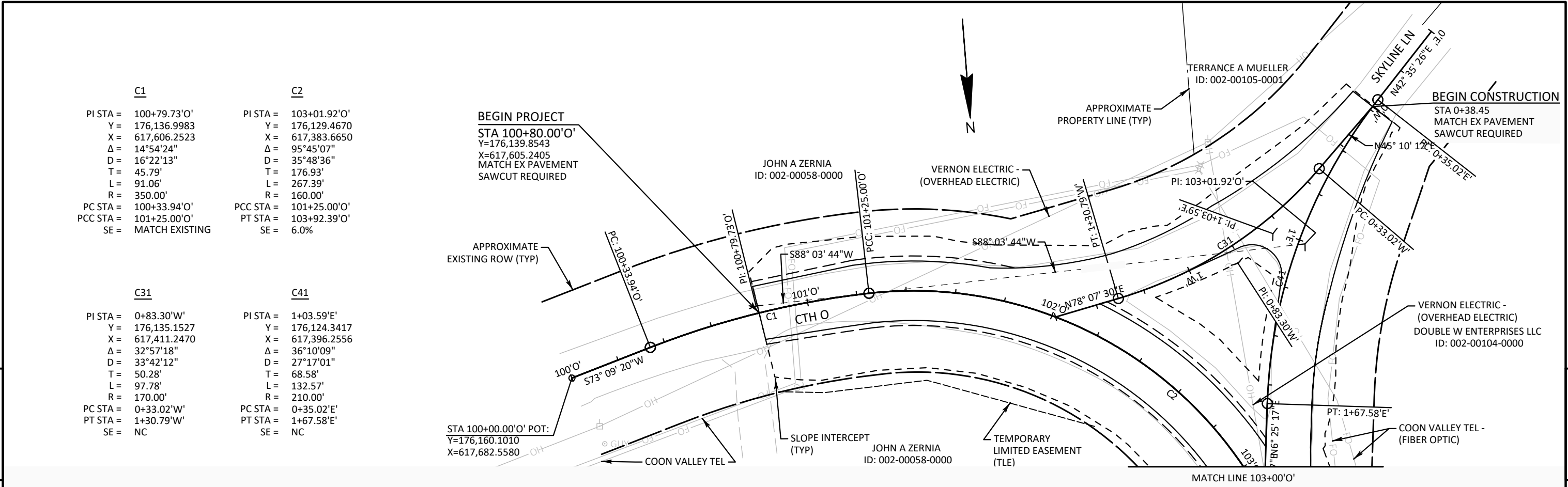
PI STA = 170+25.00
Y = 182356.906
X = 616658.144
DELTA = 7°50'16" LT
D = 2°43'42"
T = 143.86'
L = 287.27'
R = 2100.00'
PC STA = 168+81.14
PT STA = 171+68.41

PI STA = 175+50.58
Y = 182869.372
X = 616539.441
DELTA = 0°56'07" LT
D = 0°52'53"
T = 53.06'
L = 106.12'
R = 6500.00'
PC STA = 174+97.52
PT STA = 176+03.64

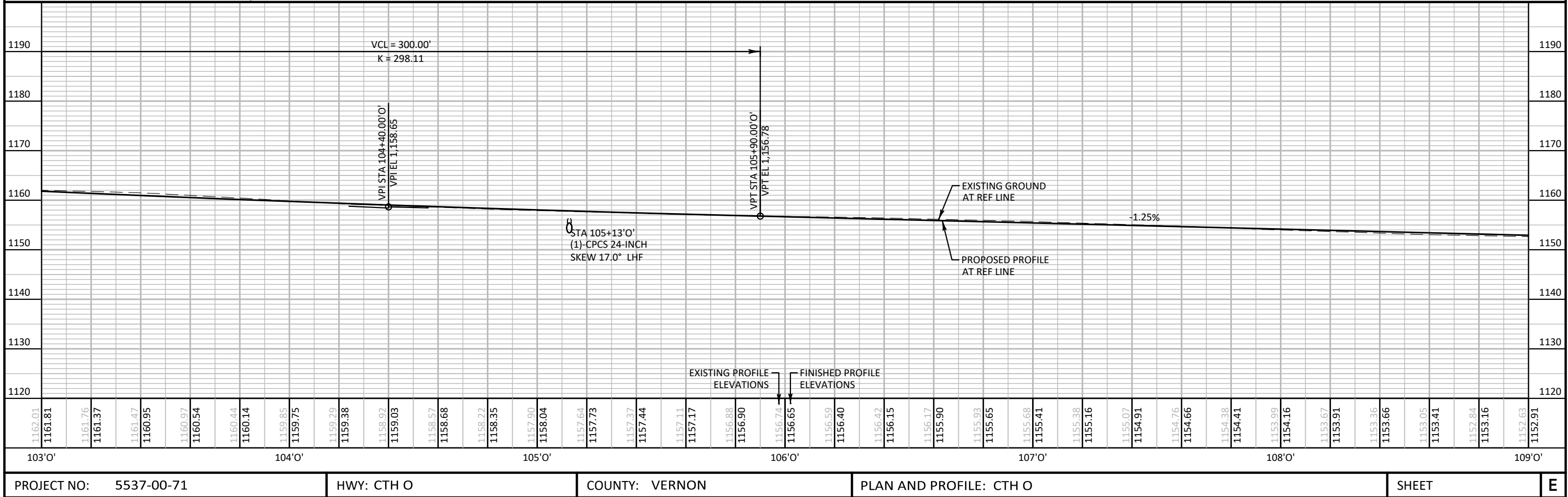
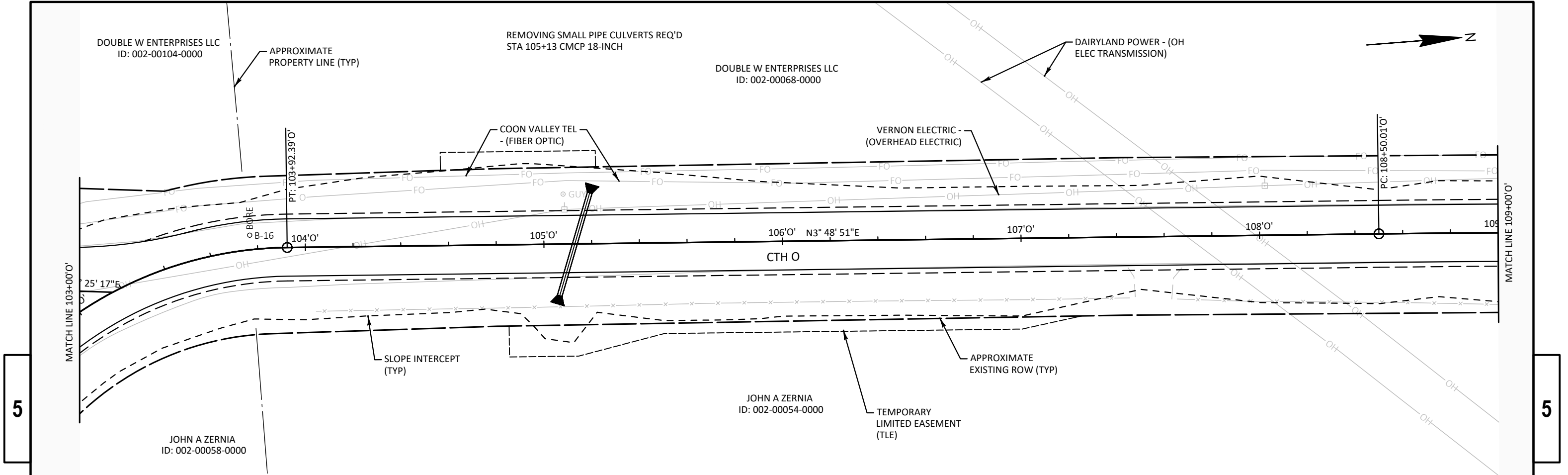
PI STA = 179+33.78
Y = 183241.228
X = 616446.886
DELTA = 31°12'51" LT
D = 10°48'38"
T = 148.05'
L = 288.74'
R = 530.00'
PC STA = 177+85.73
PT STA = 180+74.47

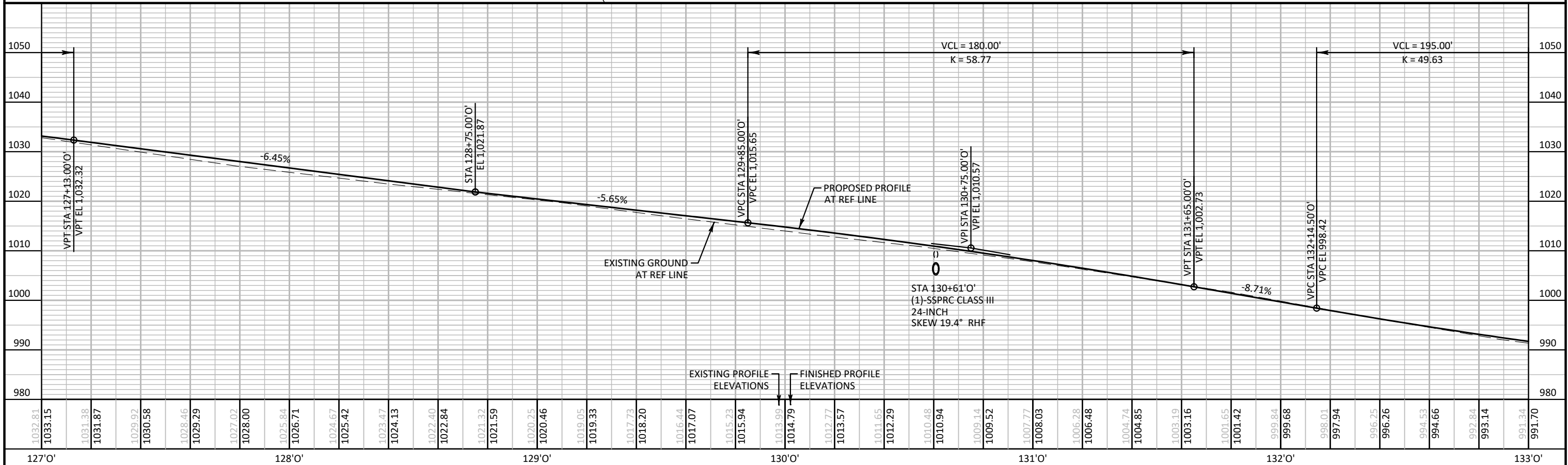
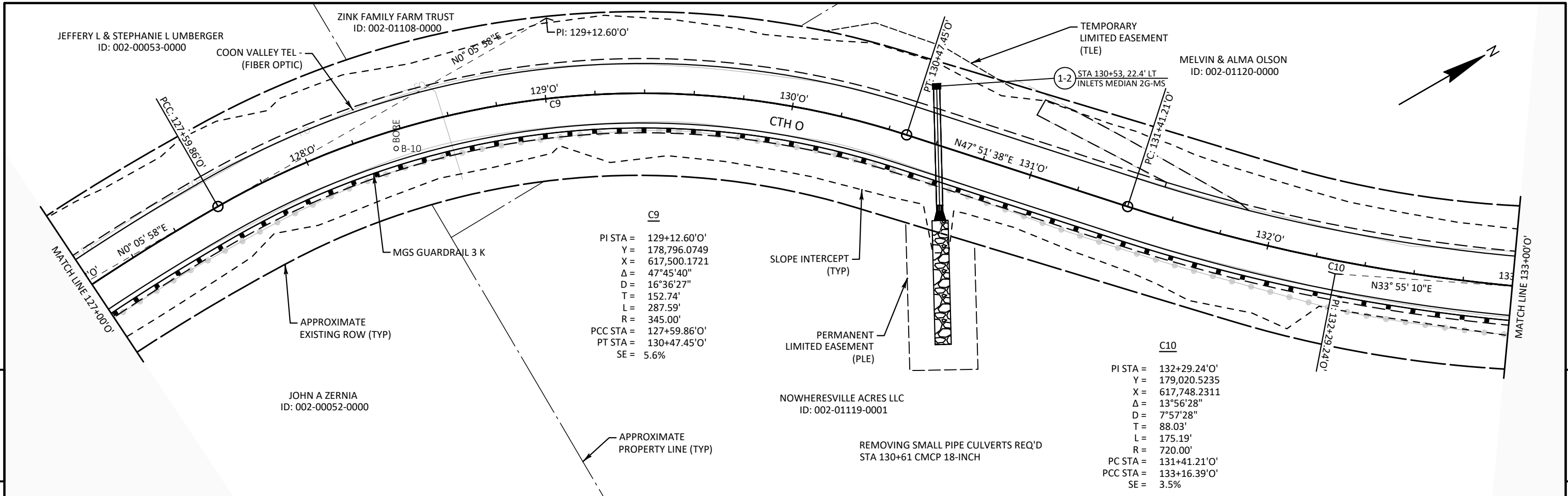
PI STA = 184+28.72
Y = 183595.220
X = 616090.527
DELTA = 87°33'49" RT
D = 52°05'13"
T = 105.42'
L = 168.11'
R = 110.00'
PC STA = 183+23.30
PT STA = 184+91.41



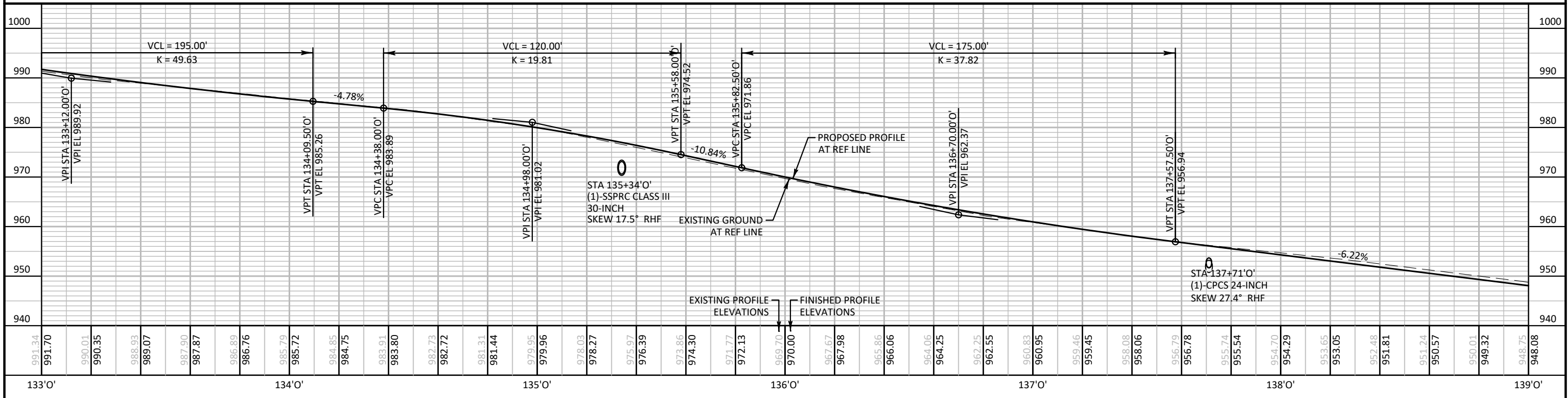
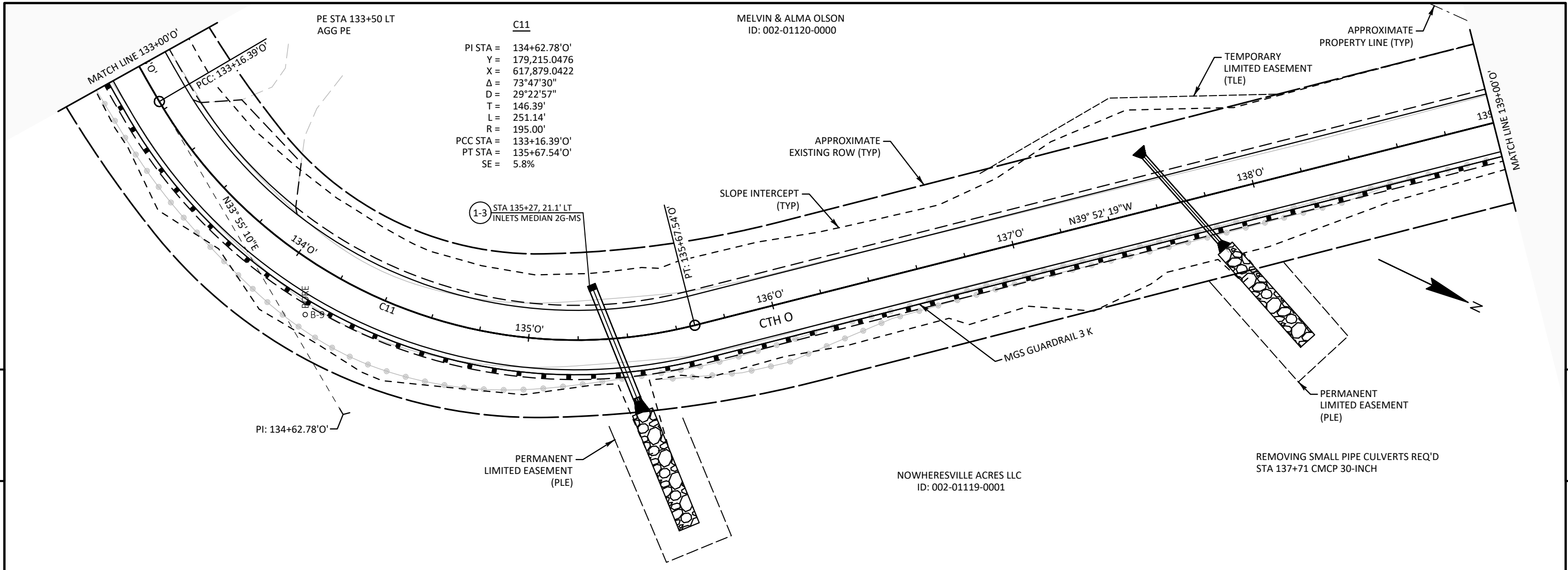


PROJECT NO:	5537-00-71	HWY:	CTH O	COUNTY:	VERNON	PLAN AND PROFILE:	CTH O	SHEET	E
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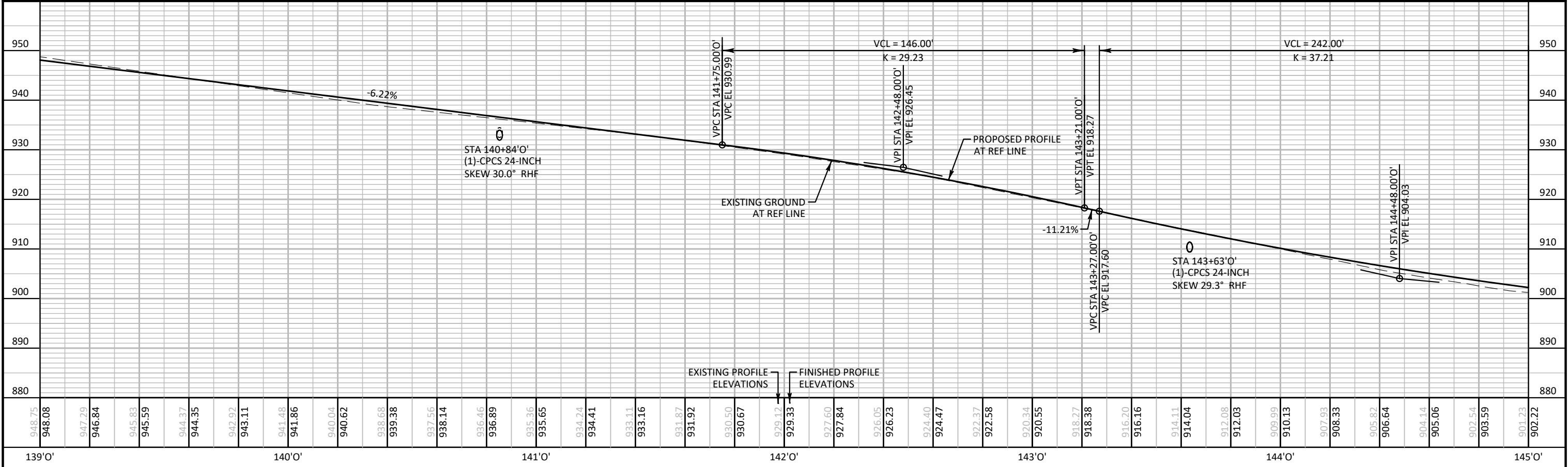
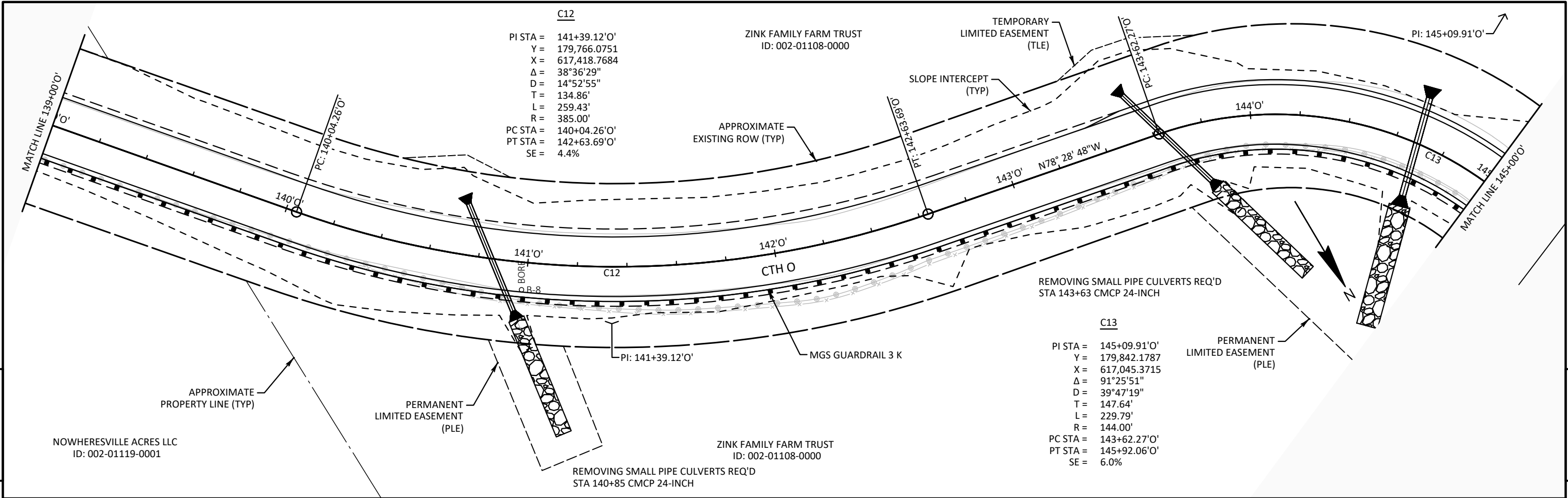


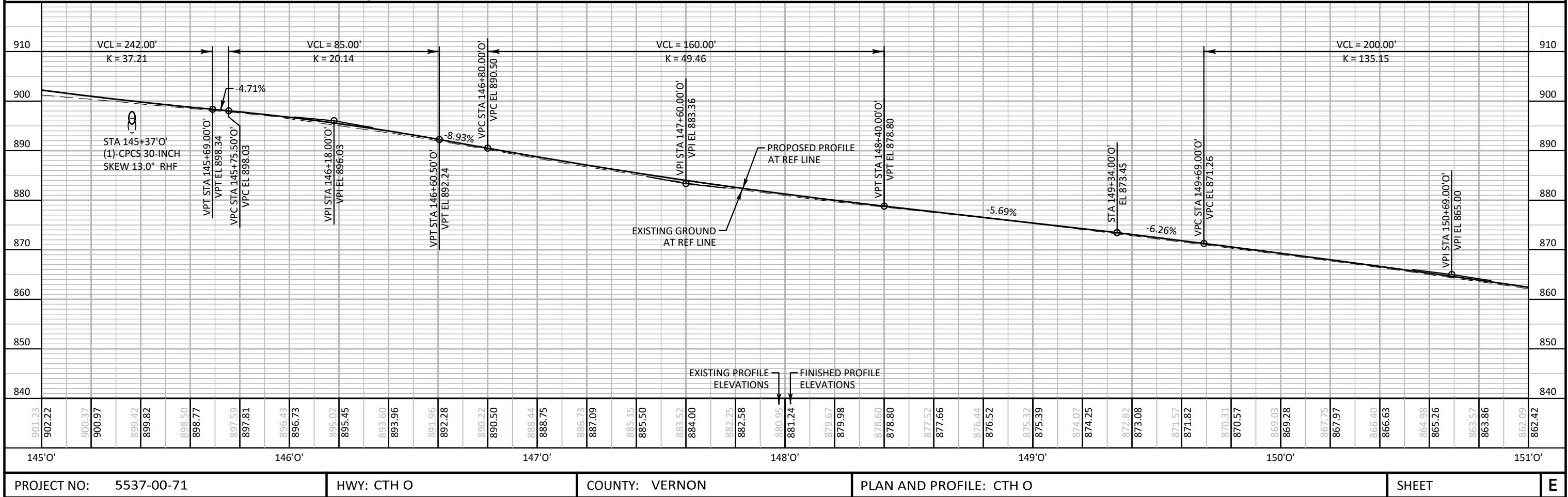
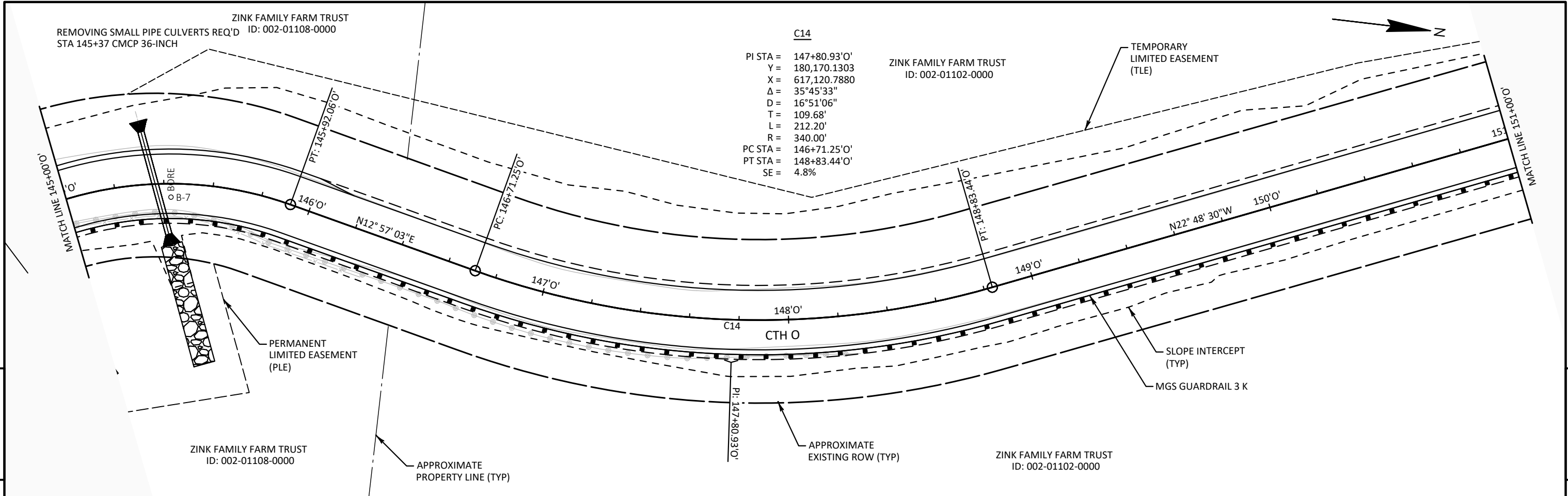


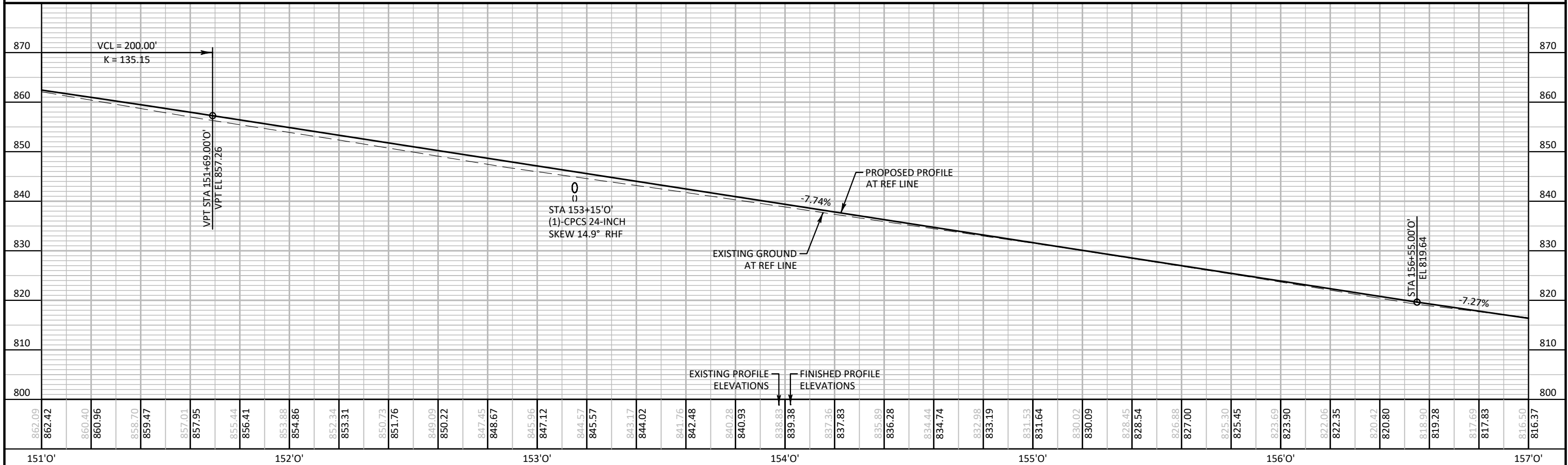
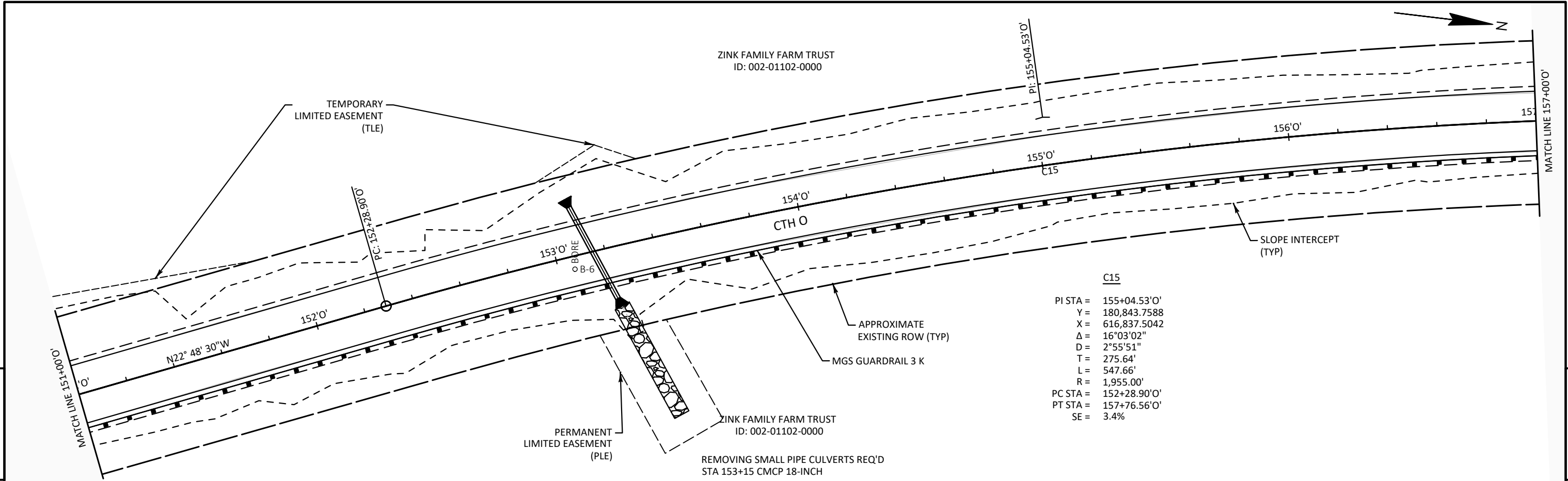
PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	PLAN AND PROFILE: CTH O	SHEET	E
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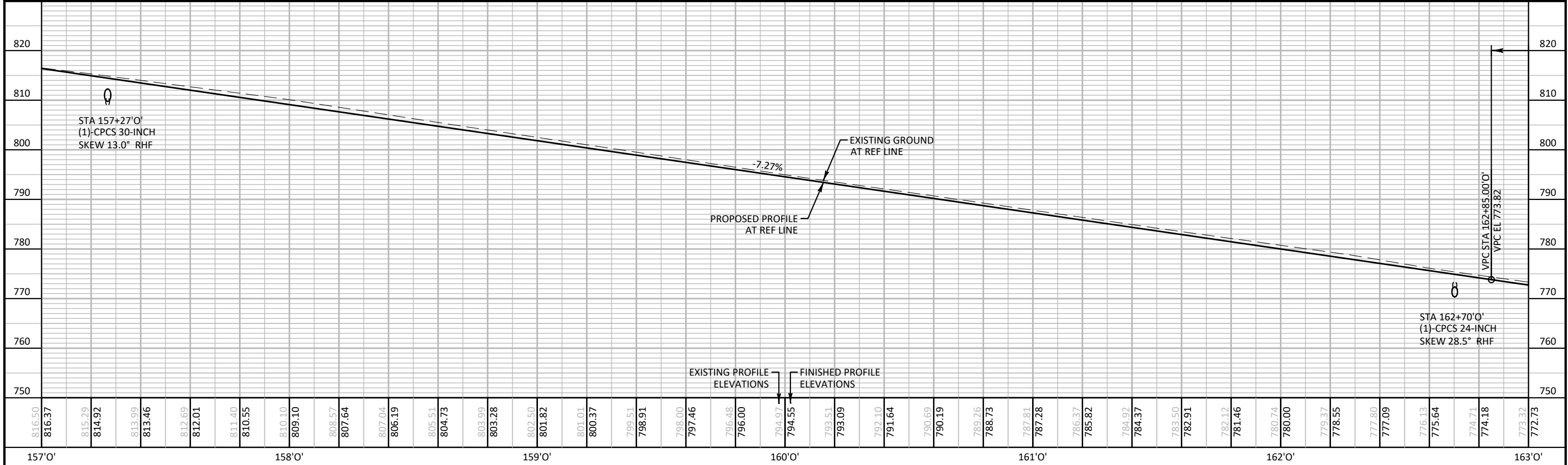
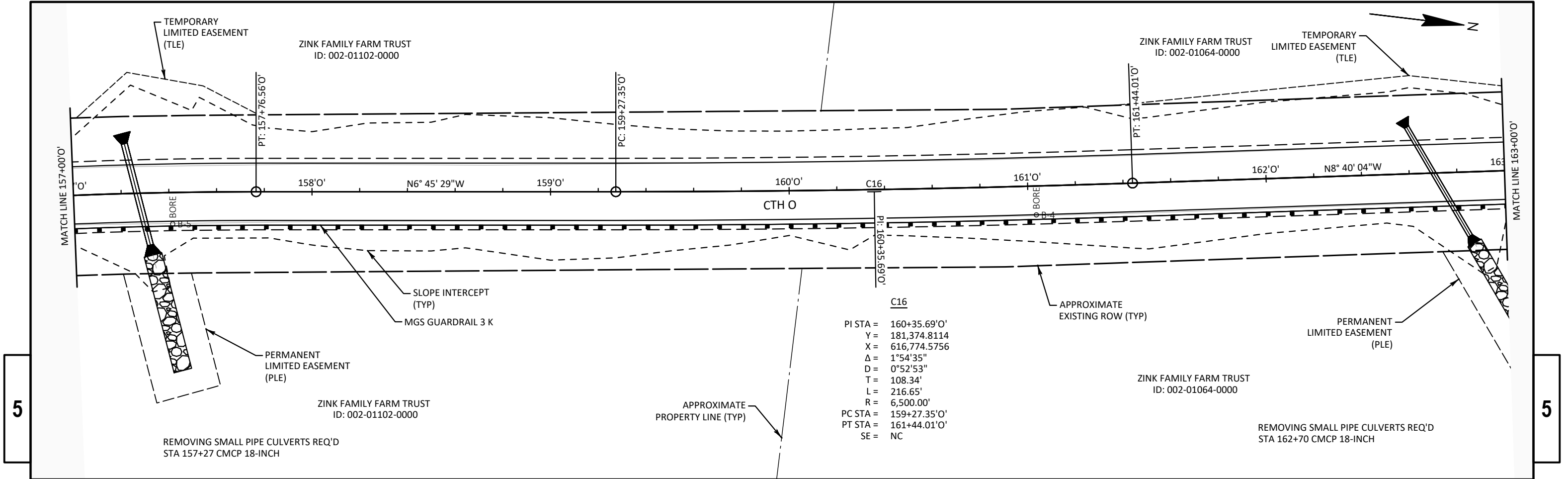


PROJECT NO:	5537-00-71	HWY:	CTH O	COUNTY:	VERNON	PLAN AND PROFILE:	CTH O	SHEET	E
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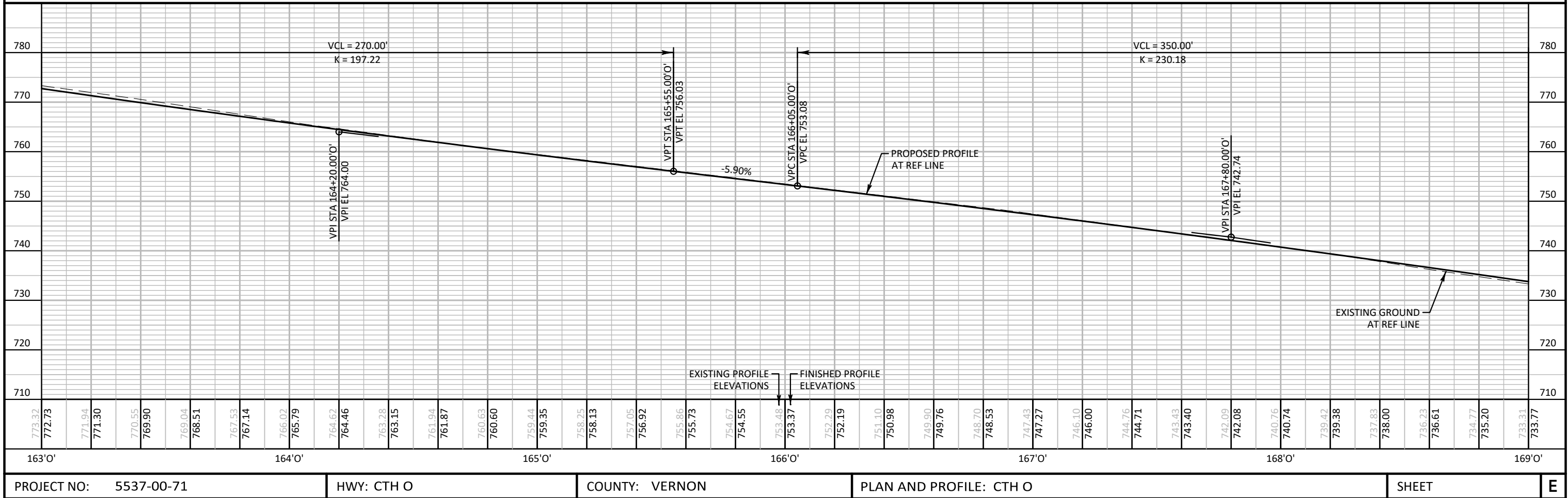
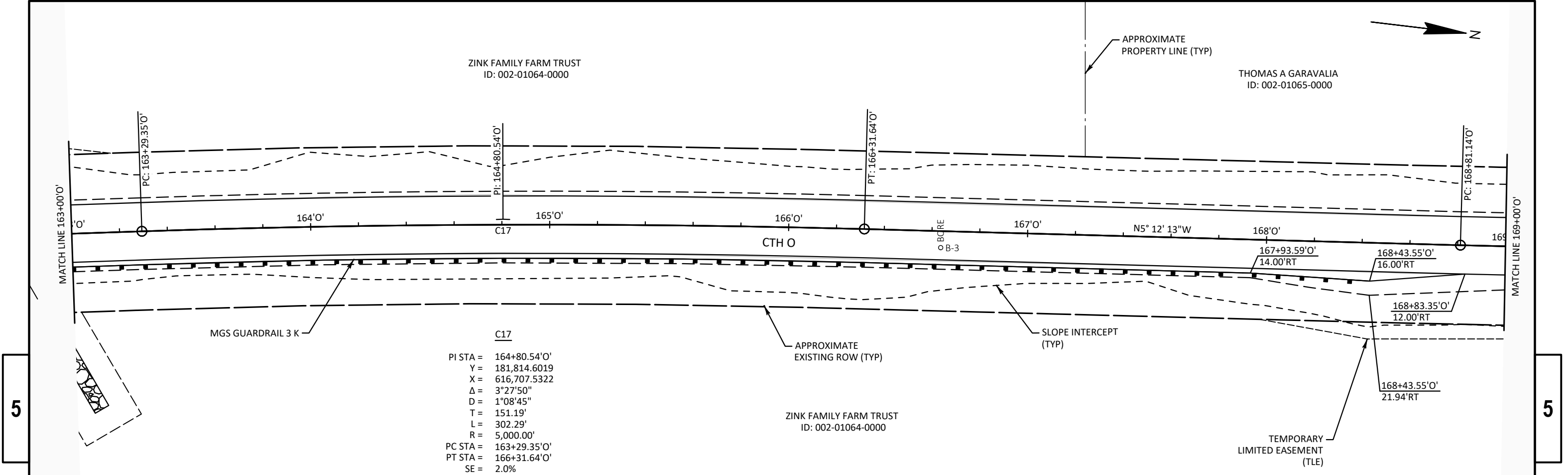


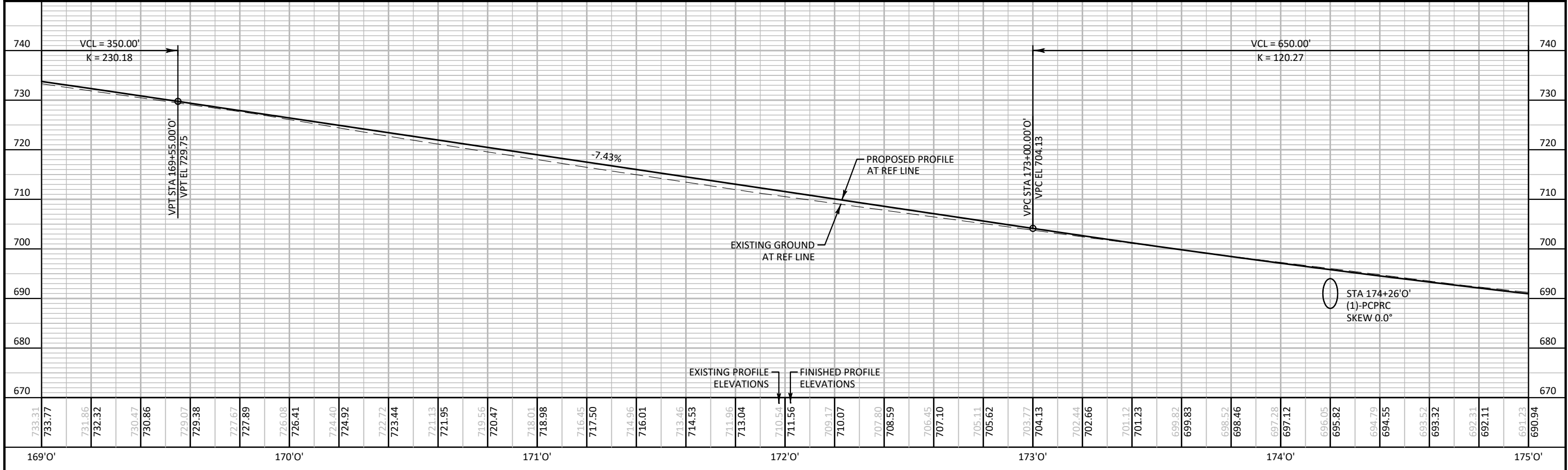
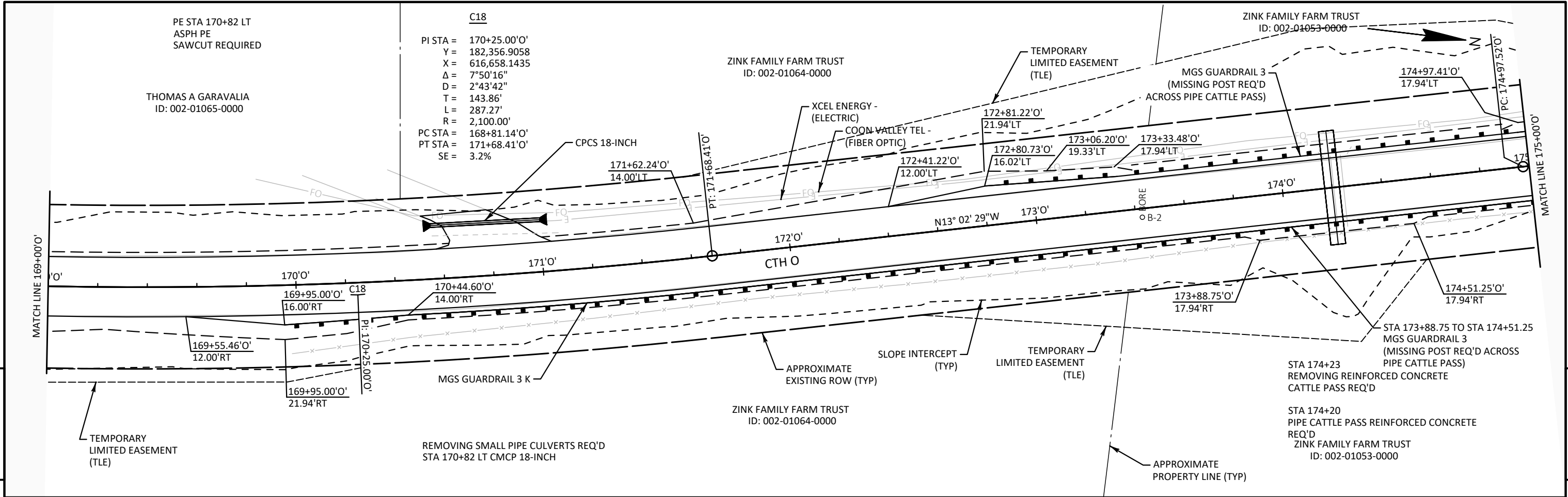




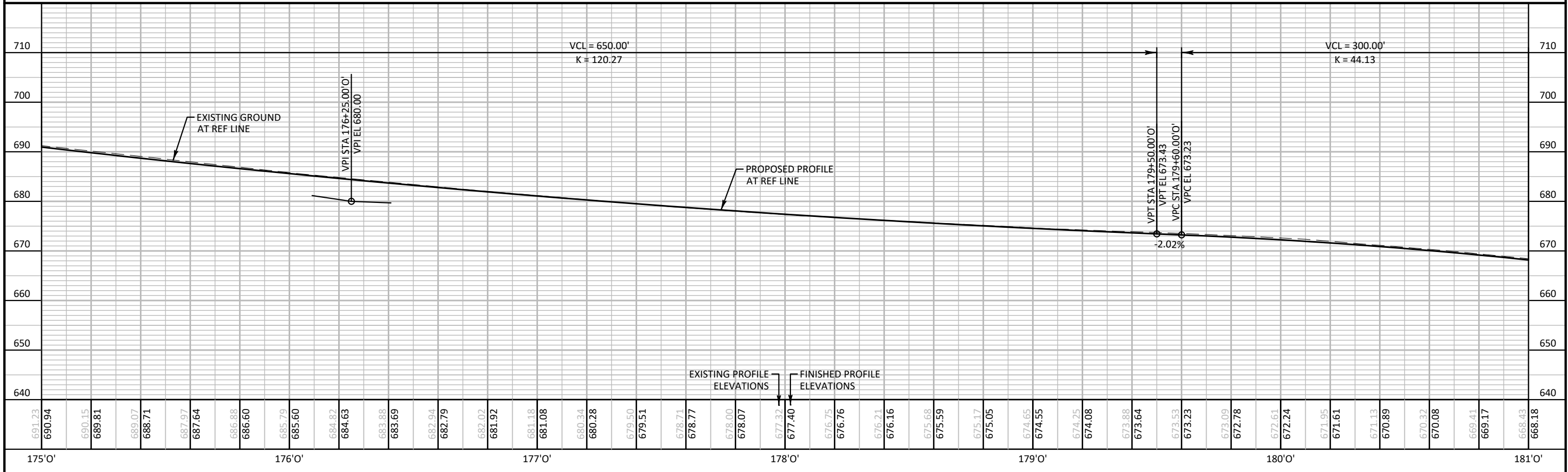
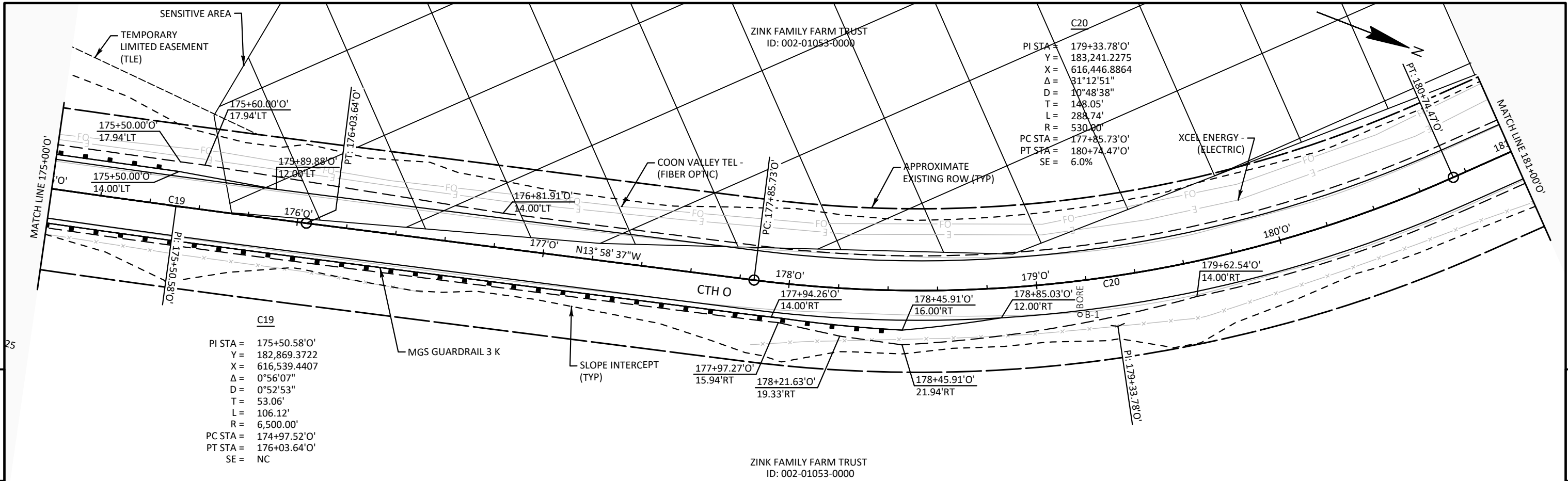


PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	PLAN AND PROFILE: CTH O	SHEET	E
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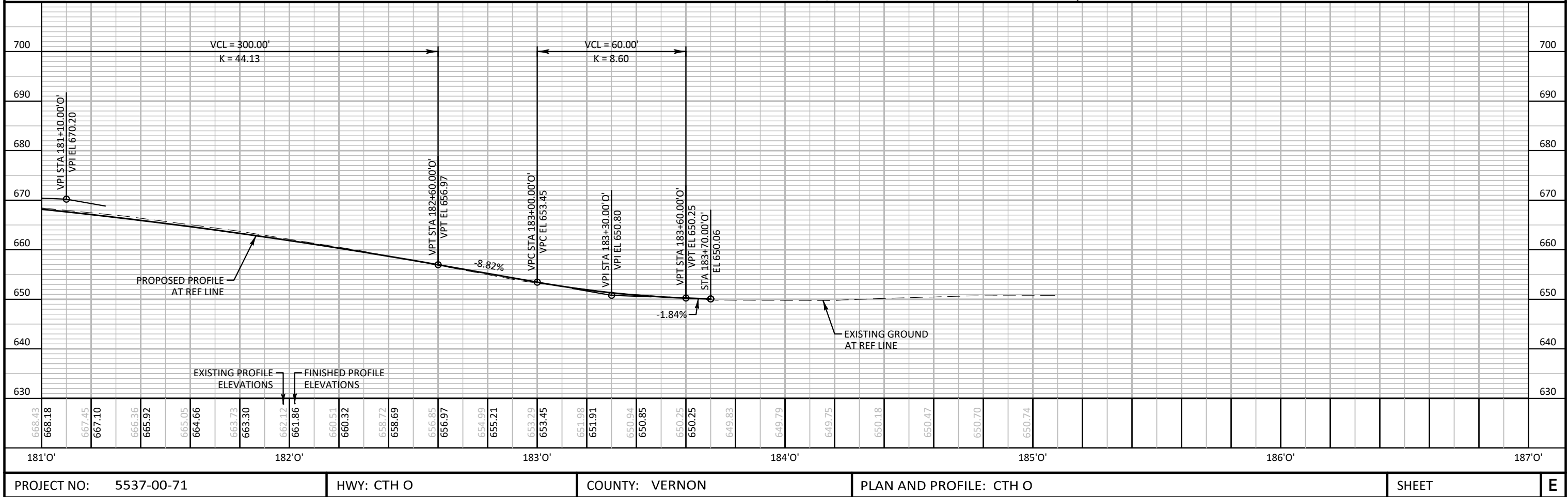
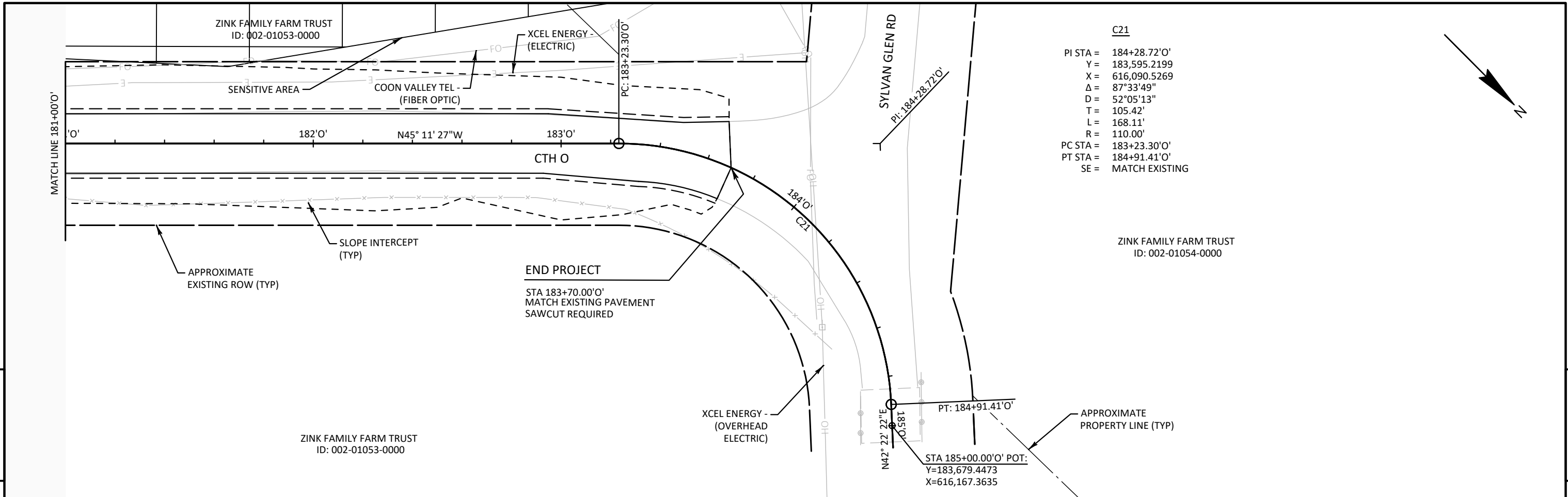




PROJECT NO:	5537-00-71	HWY:	CTH O	COUNTY:	VERNON	PLAN AND PROFILE:	CTH O	SHEET	E
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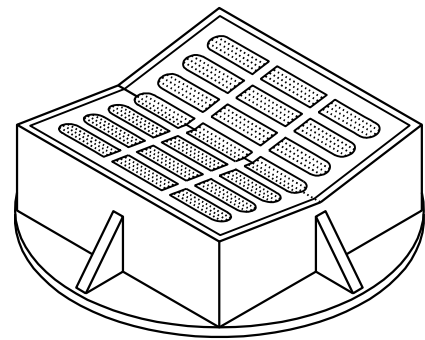
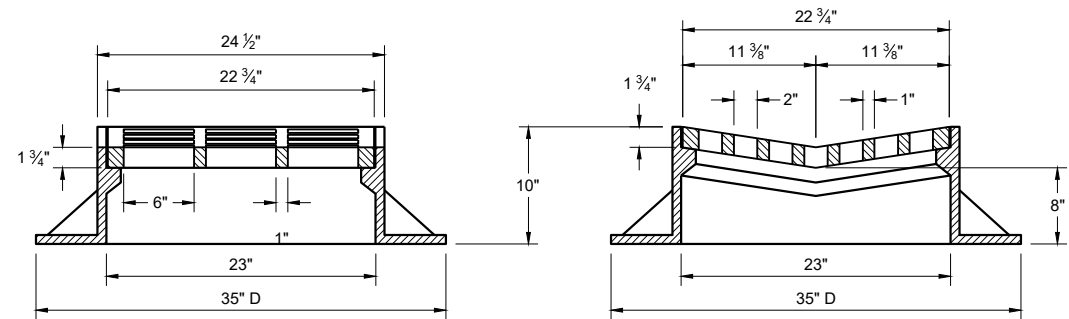


PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	PLAN AND PROFILE: CTH O	SHEET	E
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Standard Detail Drawing List

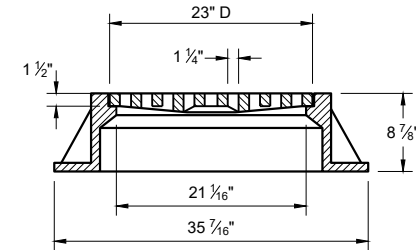
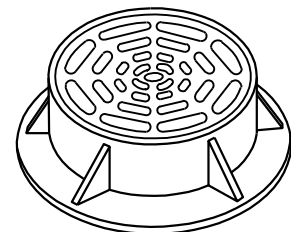
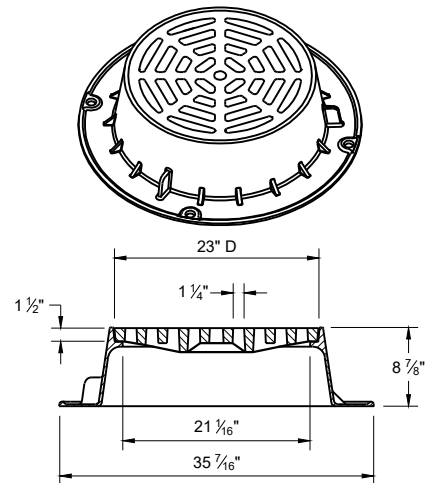
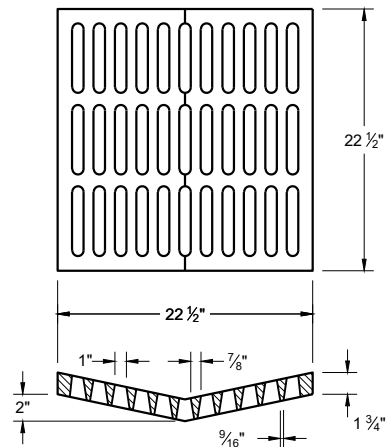
08A05-21B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F03-03	DETAILS FOR PIPE CATTLE PASS, CONCRETE ENDWALLS AND STEPS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS



TYPE "B"

**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE
NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

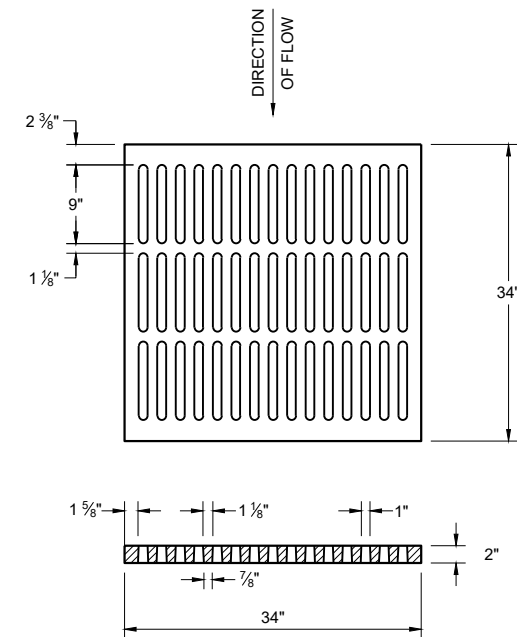
NOTE: EITHER CASTING IS ACCEPTABLE

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.

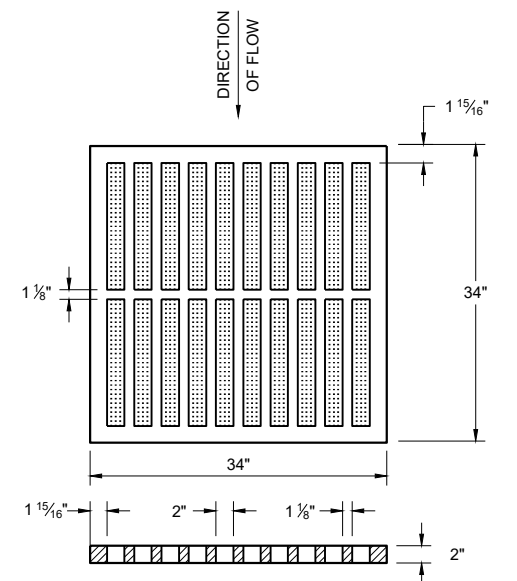
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



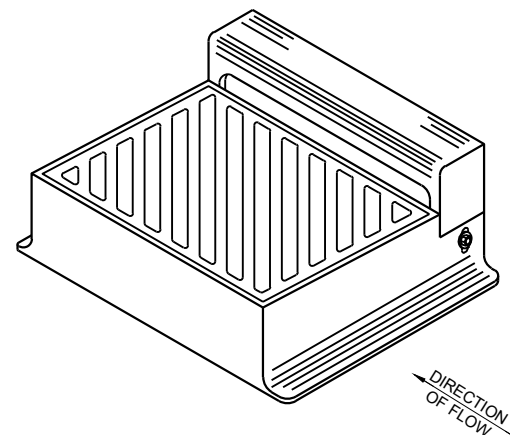
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

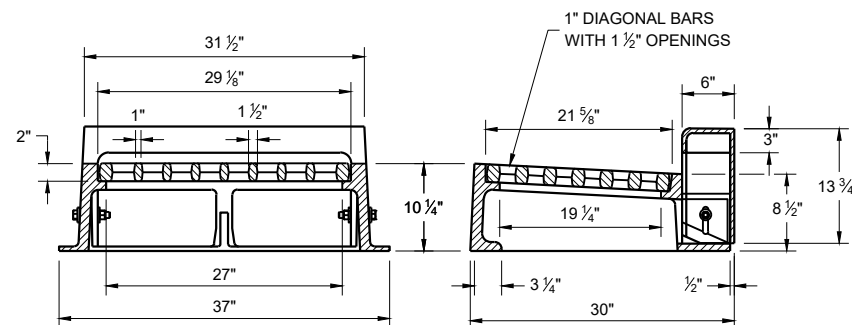


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON THE DRAINAGE TABLE



DIAGONAL SLOTS SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



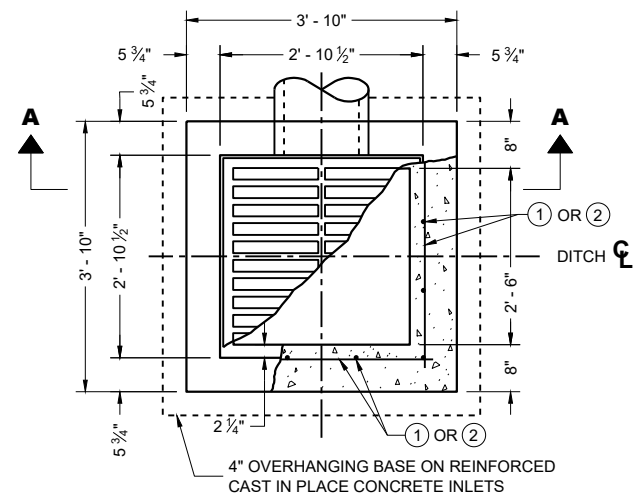
TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

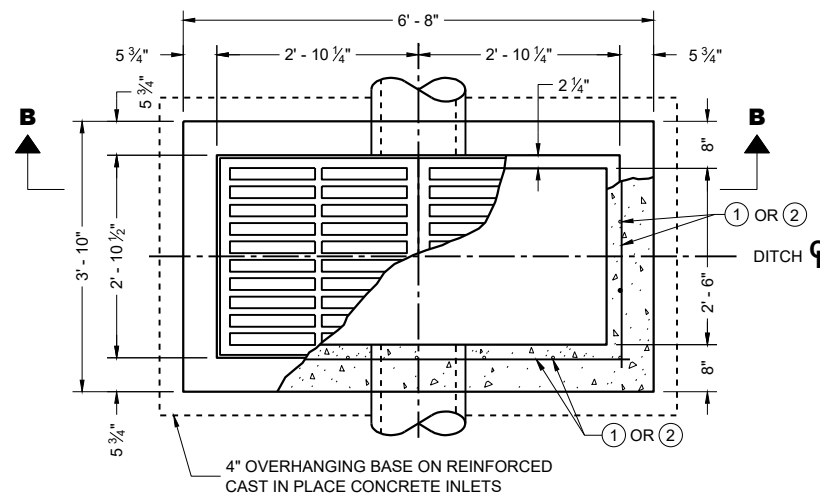
**INLET COVERS
TYPES B, B-A, C,
MS, MS-A AND WM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

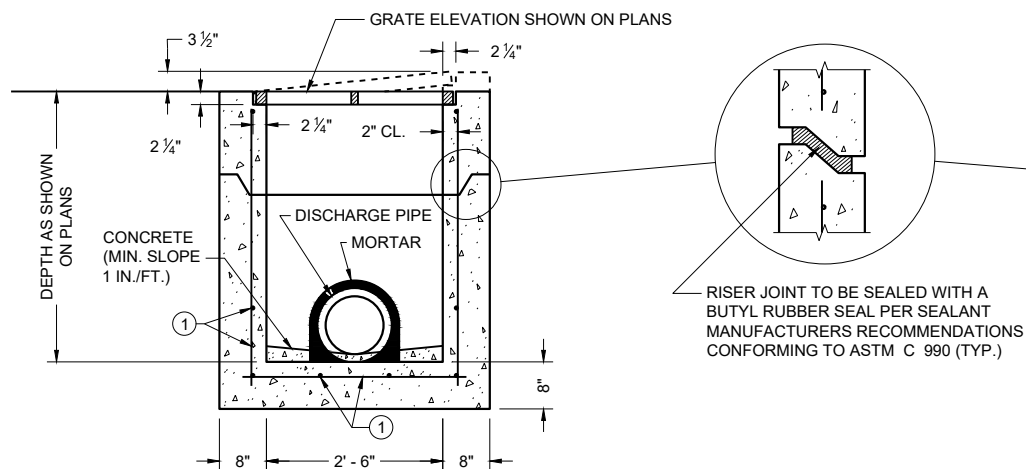
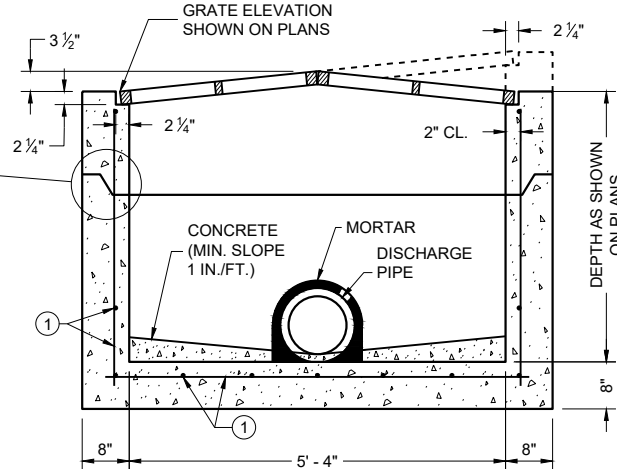
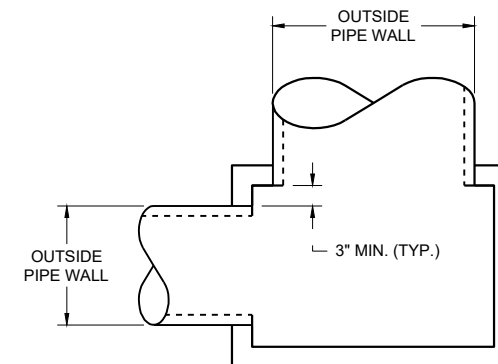
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



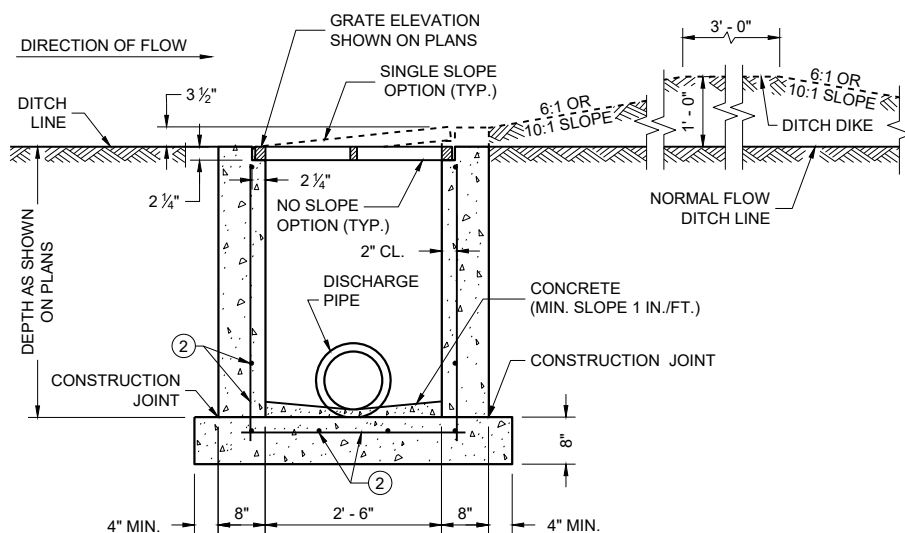
PLAN VIEW



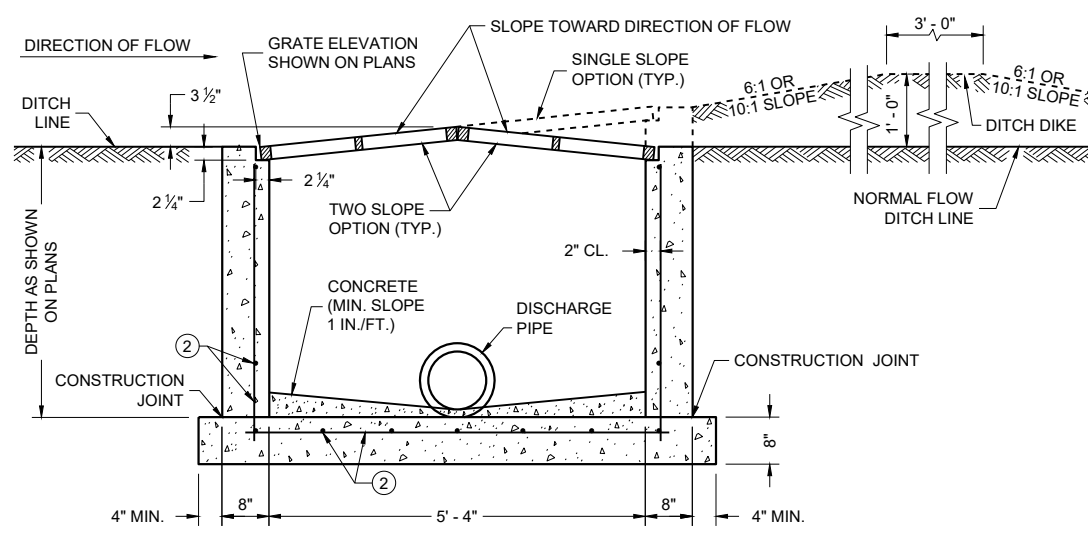
PLAN VIEW

PRECAST REINFORCED CONCRETE
SECTION A - APRECAST REINFORCED CONCRETE
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE
SECTION B - B

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

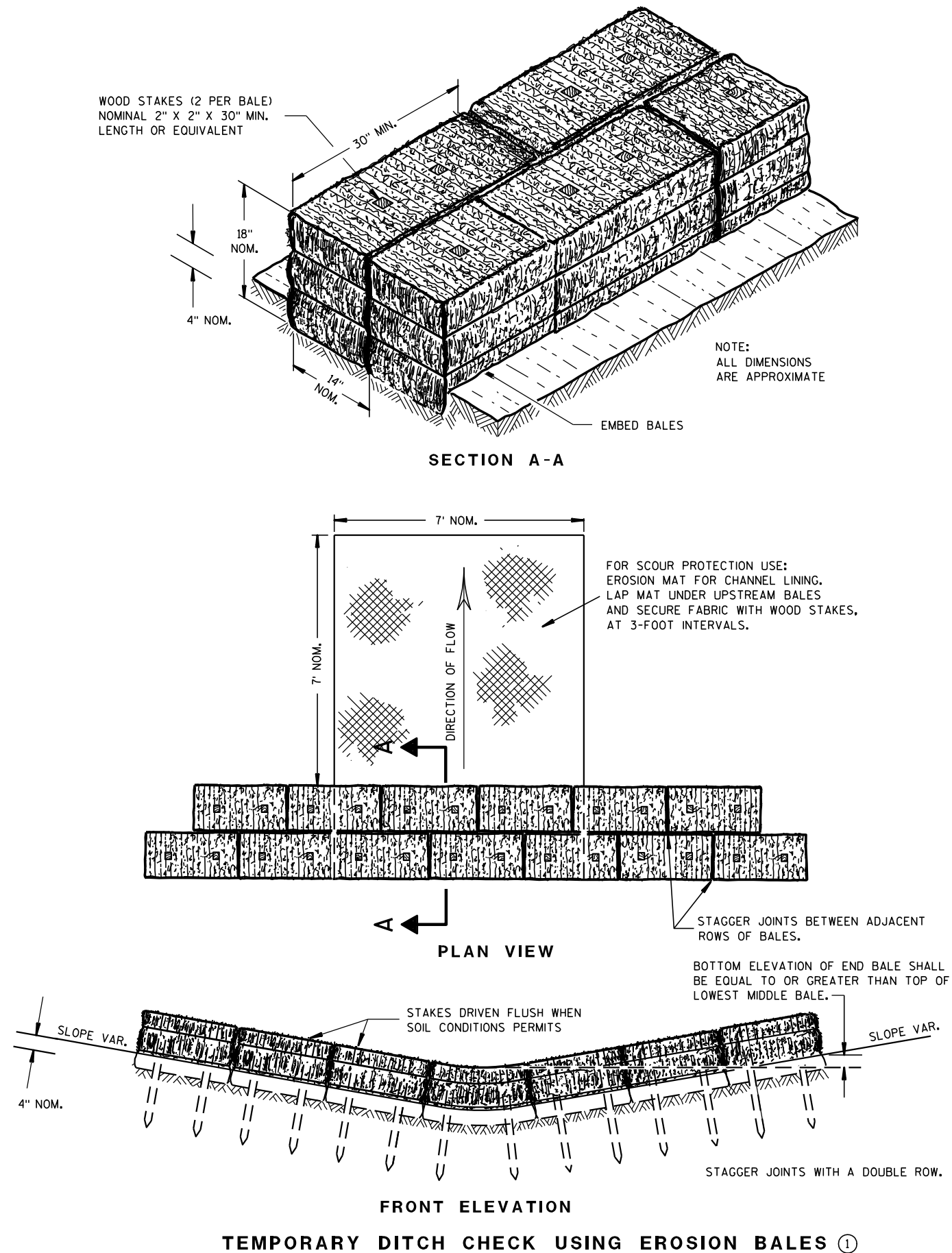
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

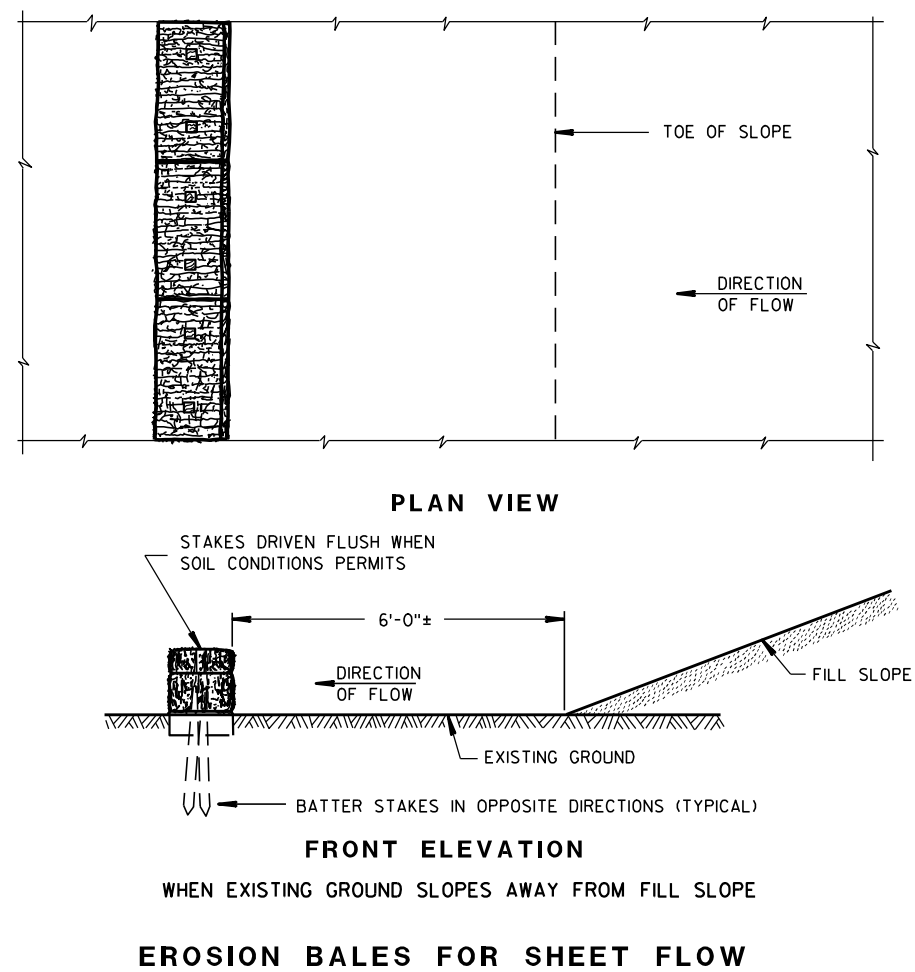
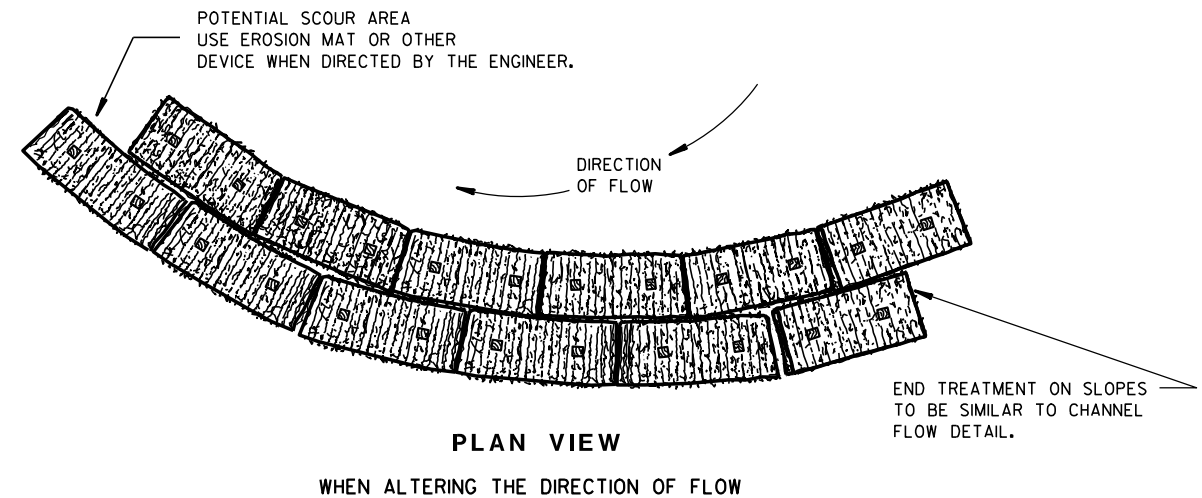
FHWA



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

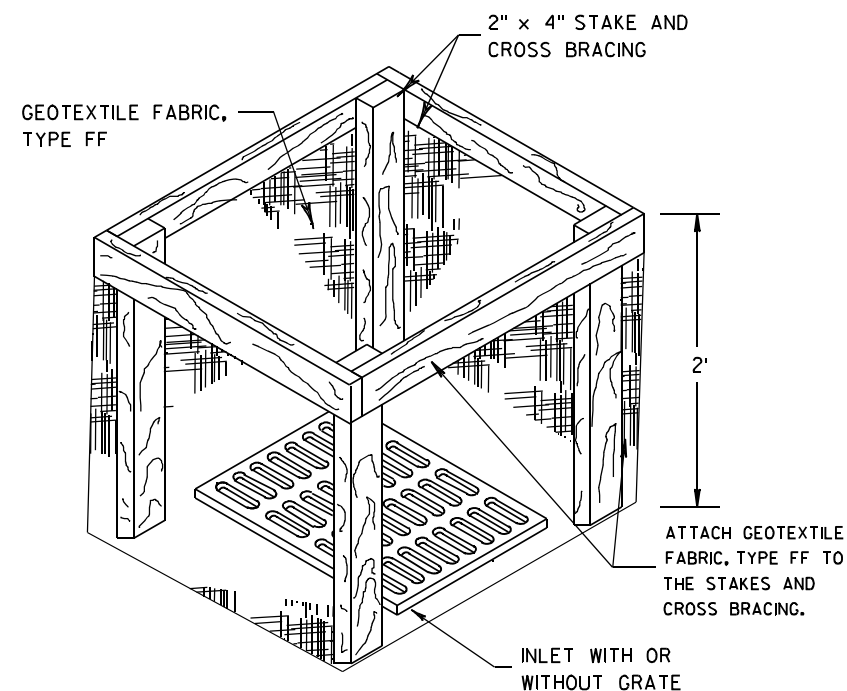
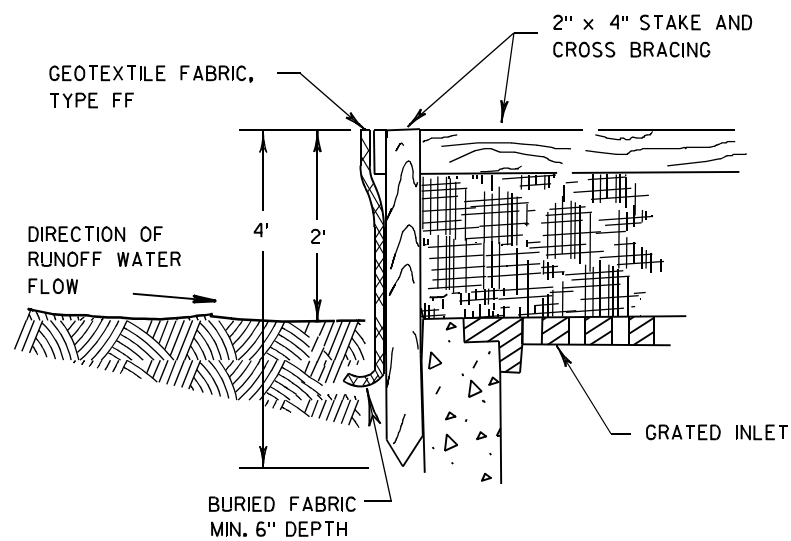
FHWA



- 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 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/s/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

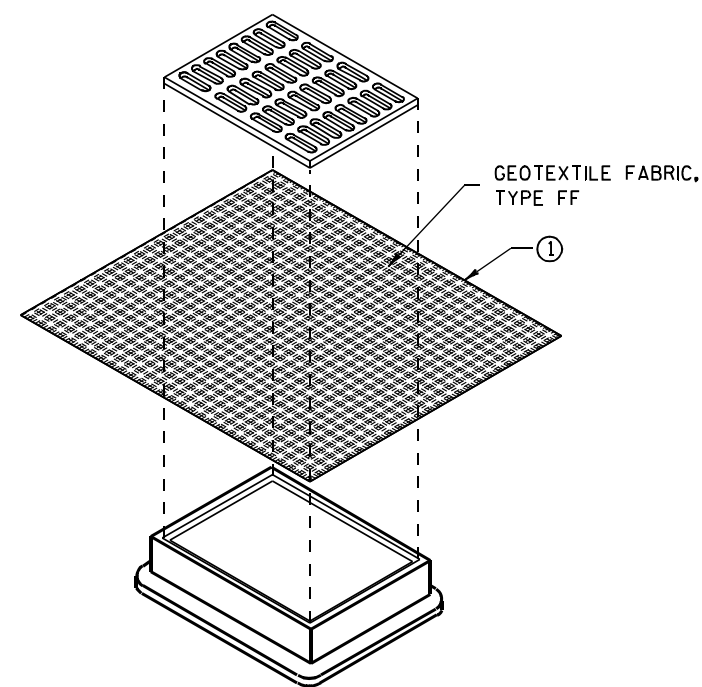
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

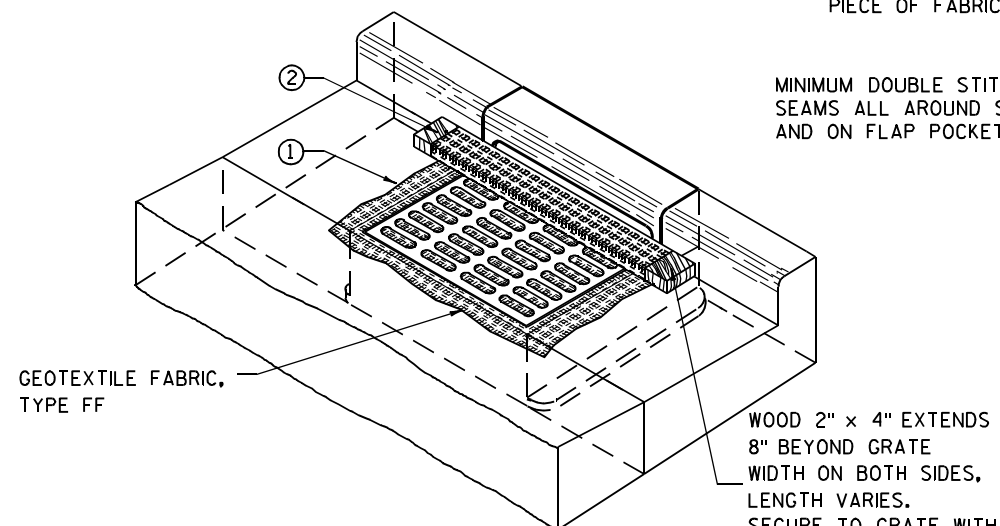
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

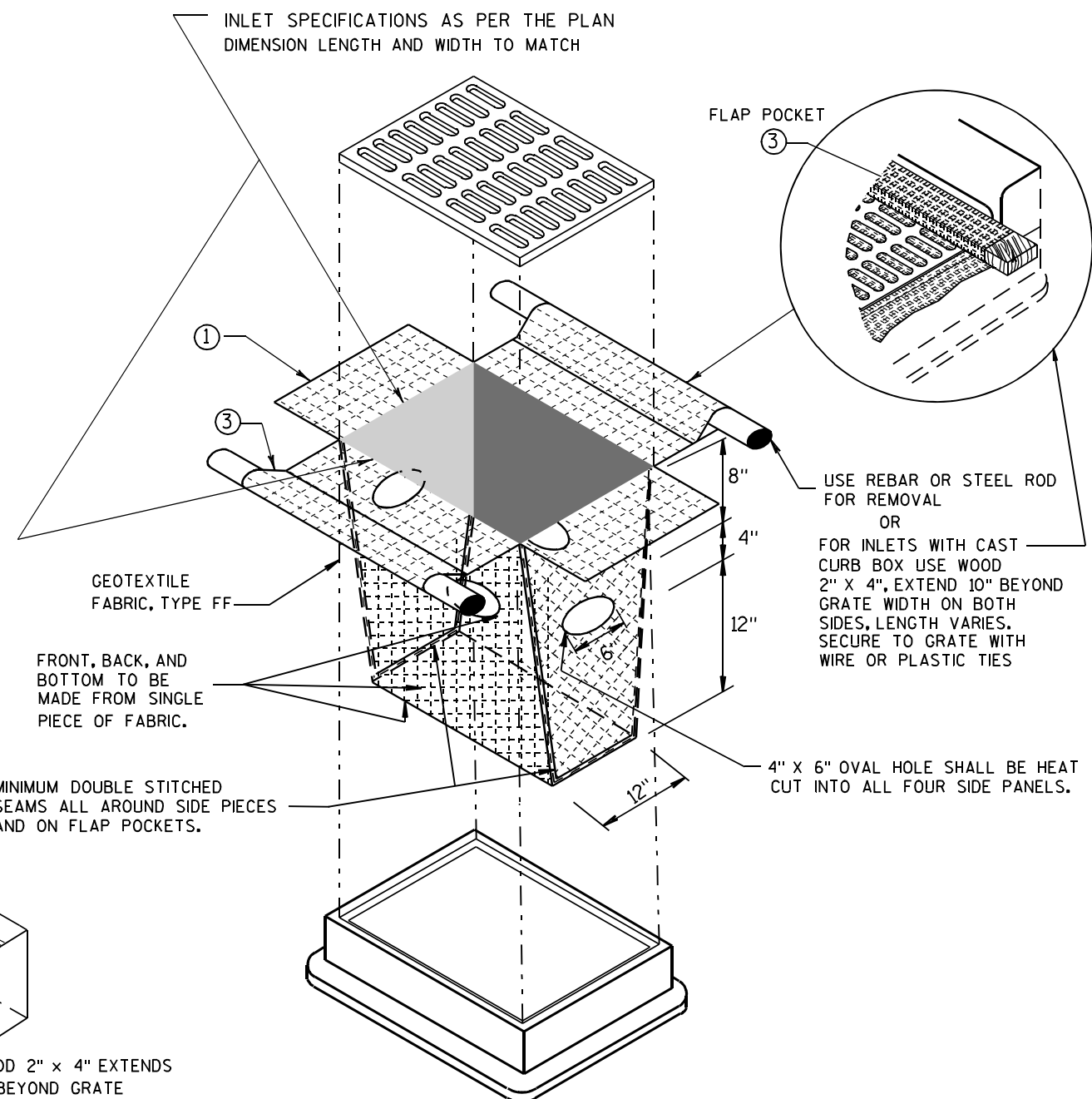
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



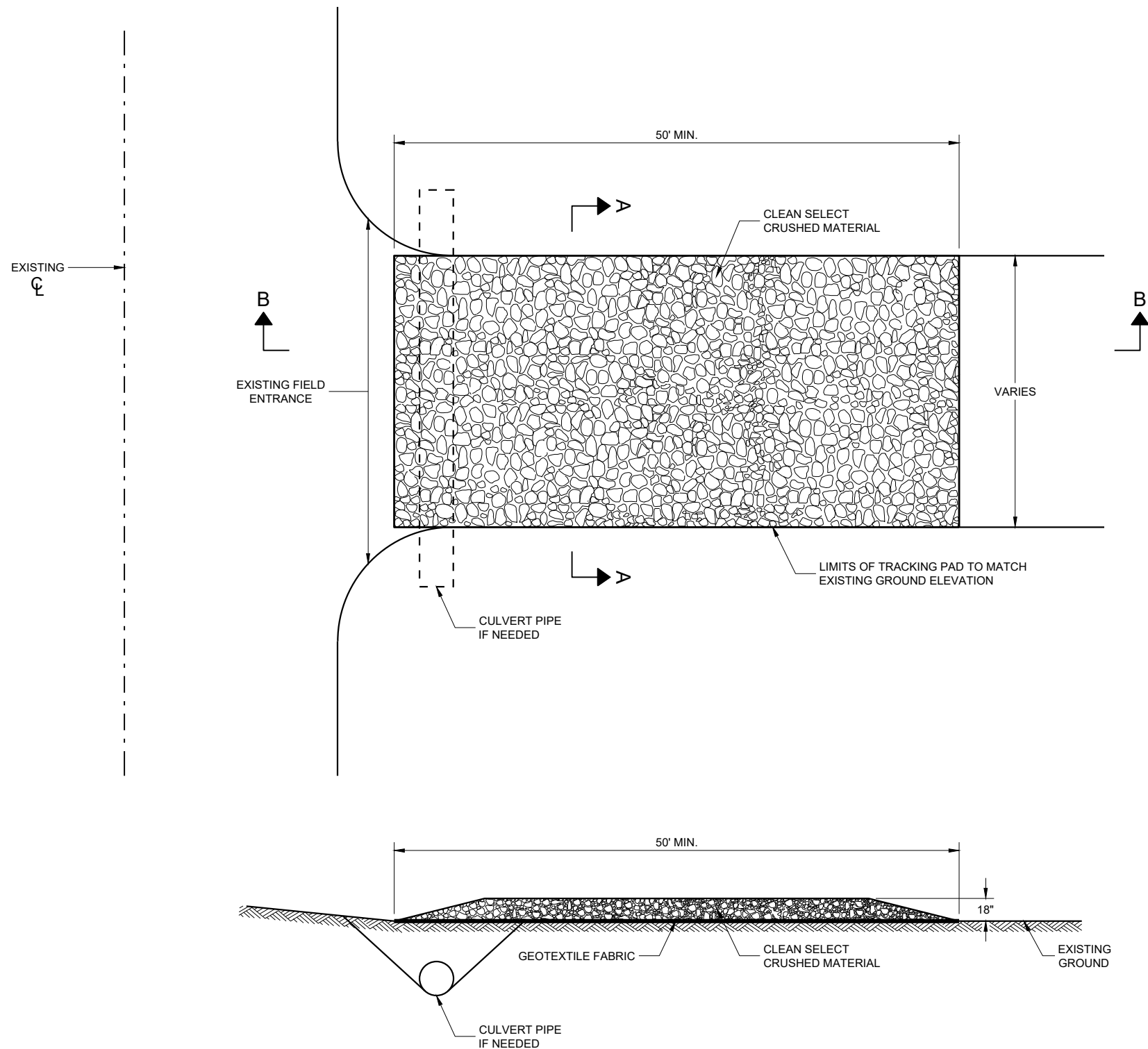
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA 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.

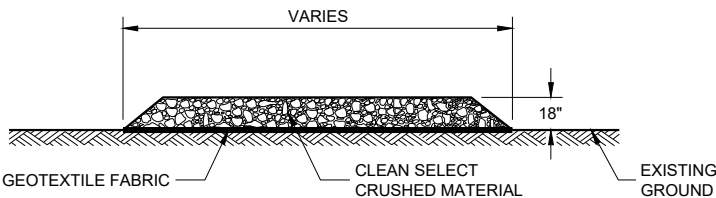
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

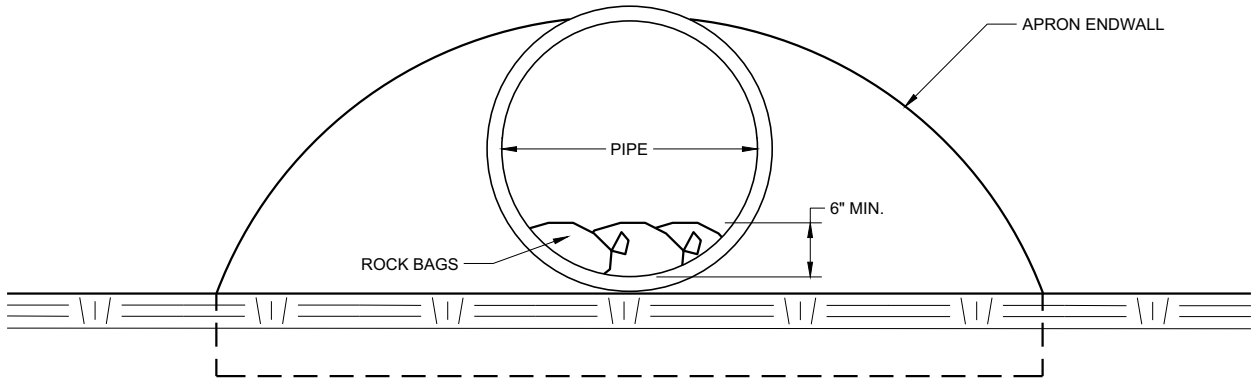
3/24/2011

DATE

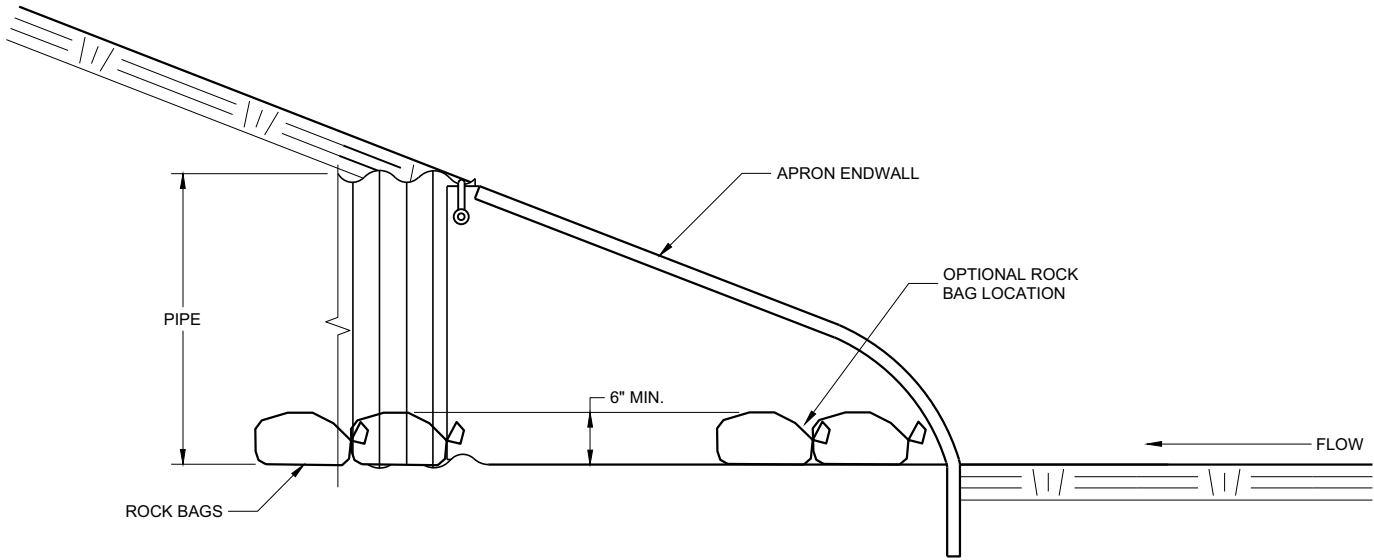
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



END VIEW



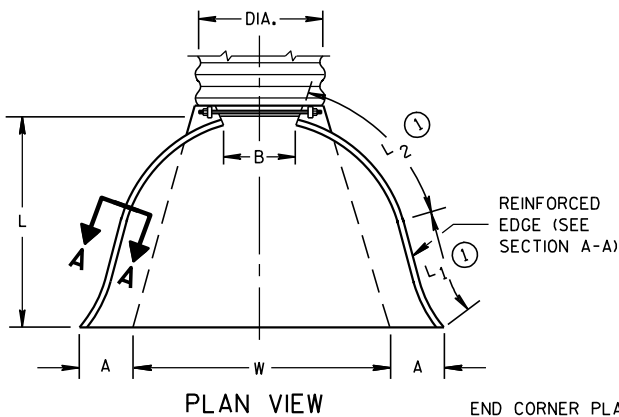
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
FHWA	

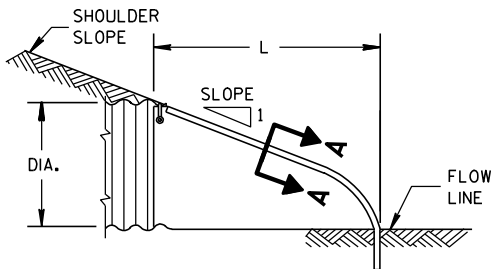
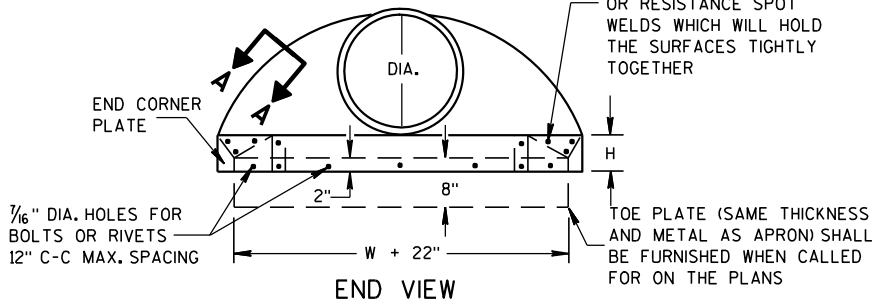
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064	.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



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

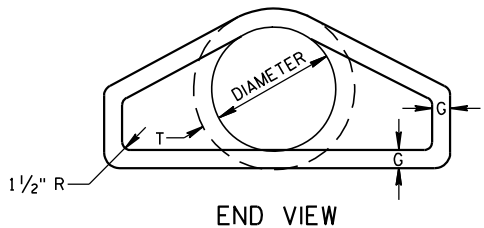
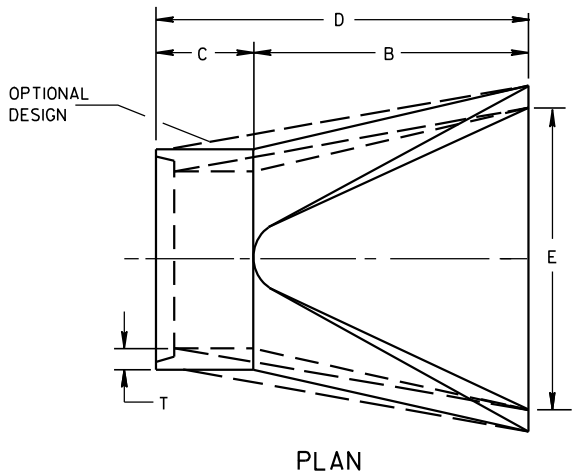
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



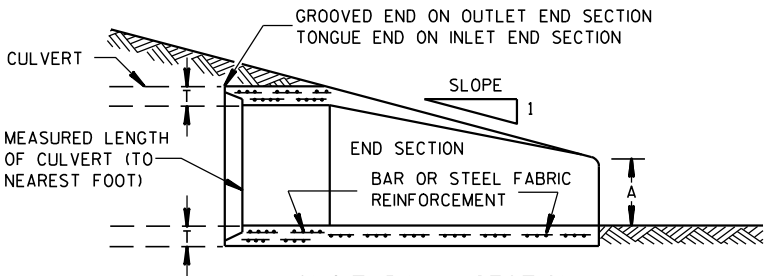
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	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 2/5 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				

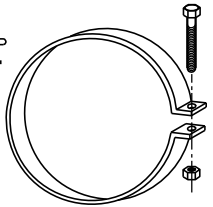
* MINIMUM
** MAXIMUM



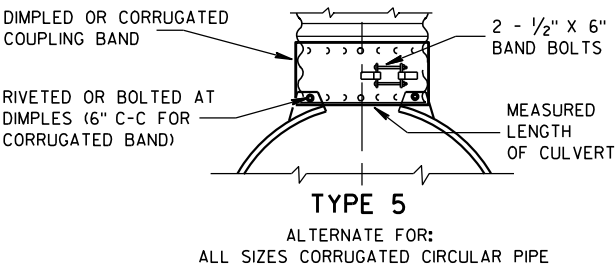
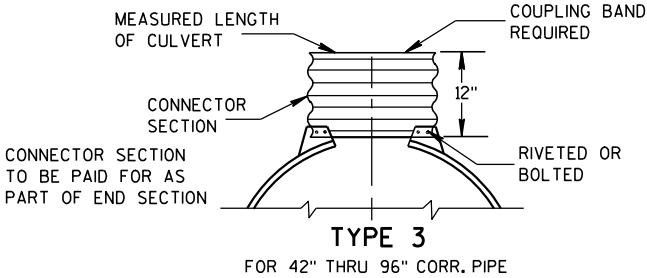
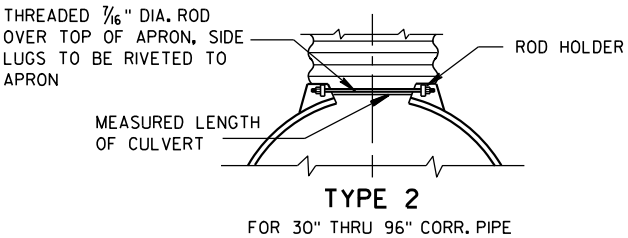
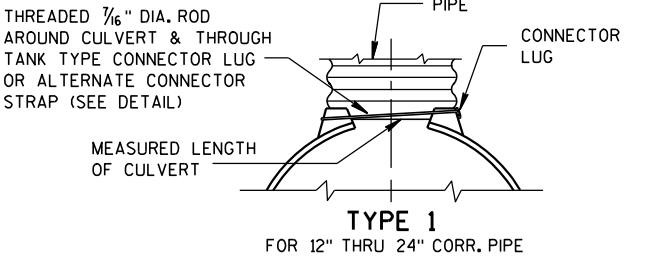
LONGITUDINAL SECTION
CONCRETE ENDWALLS



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



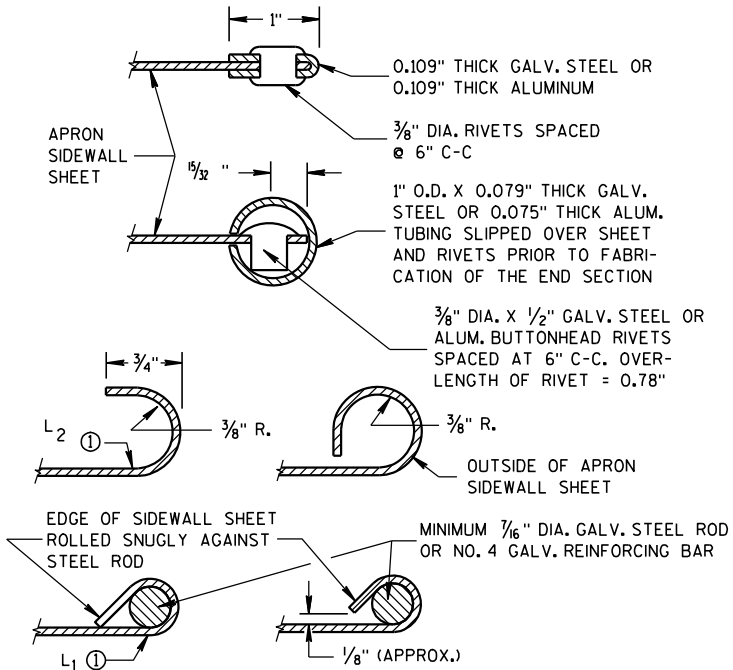
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VISE 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.

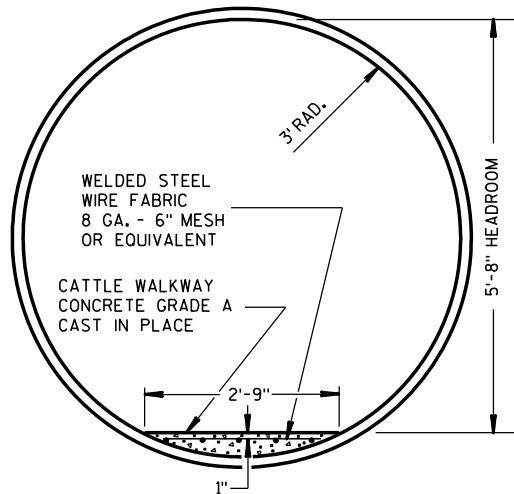
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

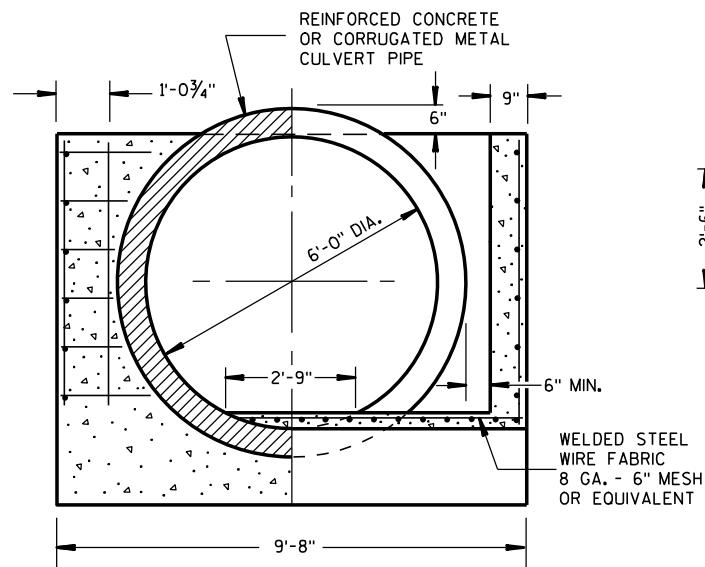
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

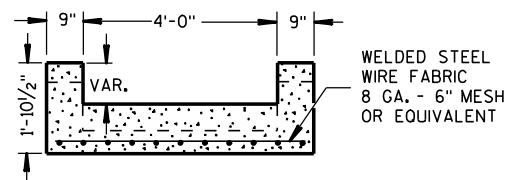
APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



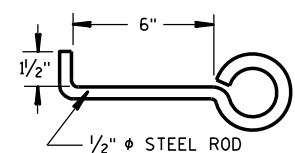
CROSS SECTION
CORRUGATED METAL PIPE
CATTLE PASS



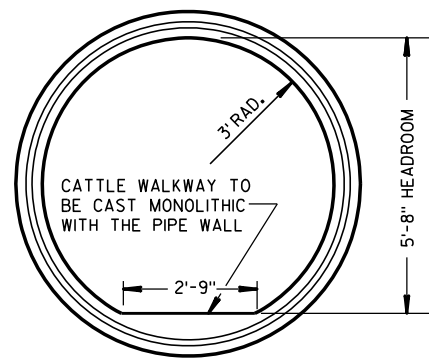
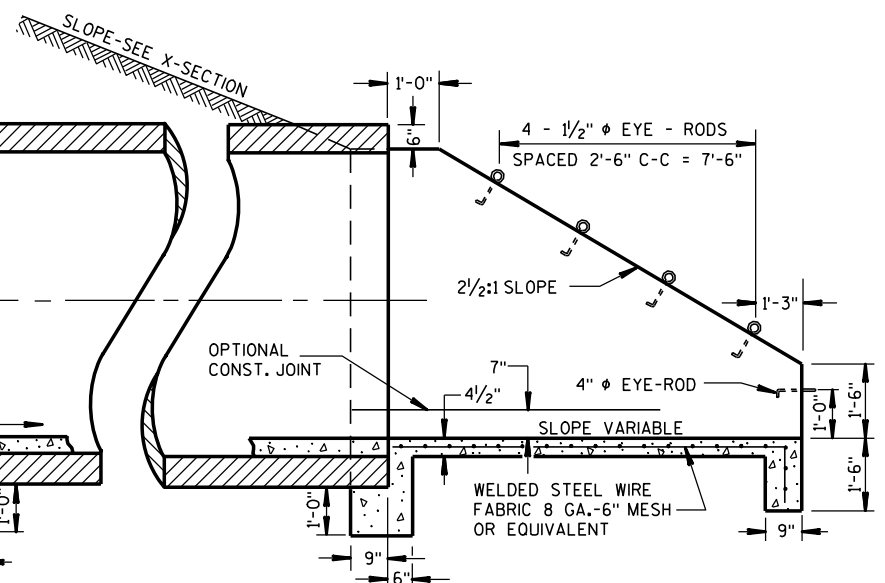
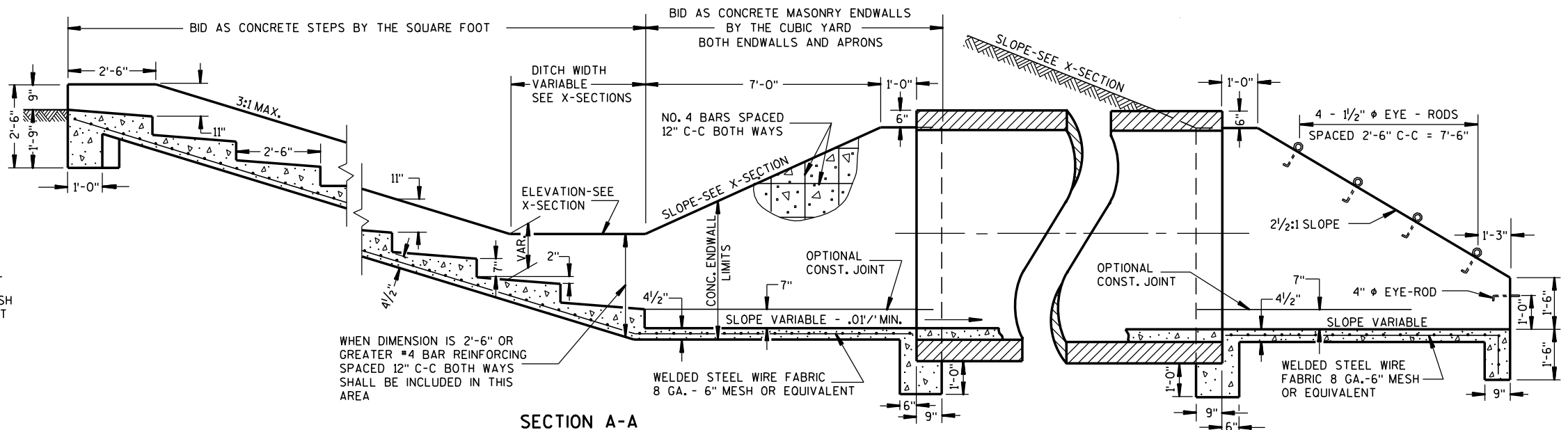
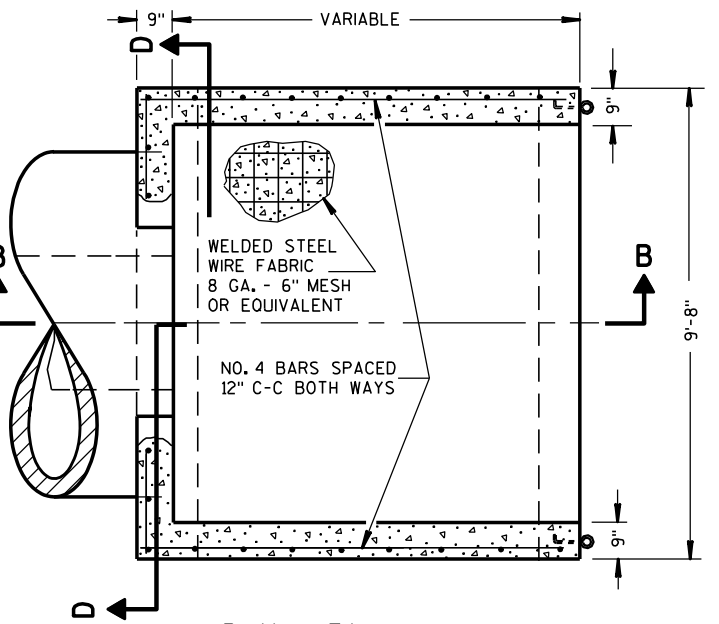
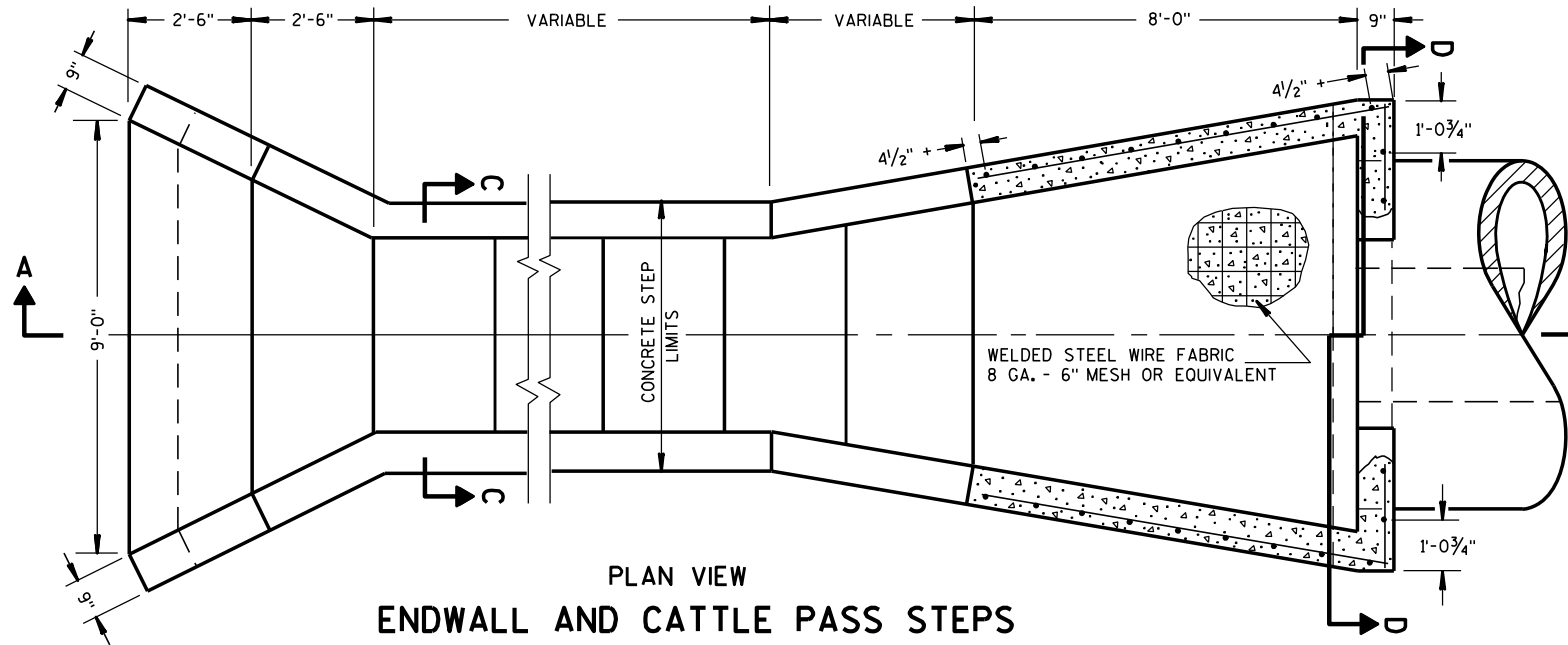
SECTION D-D



SECTION C-C



EYE-ROD ANCHOR



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.

ALL STEEL REINFORCEMENT IN ENDWALLS AND CATTLE PASS STEPS SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

ALL STEEL REINFORCEMENT OR FABRIC USED AS SHOWN ABOVE SHALL BE INCIDENTAL TO THE BID ITEM OF WHICH IT IS AN INTEGRAL PART.

EYE-RODS FOR FENCE CONNECTIONS SHALL BE PROVIDED BY THE CONTRACTOR AS AN INCIDENTAL TO THE BID ITEM OF CONCRETE MASONRY, ENDWALLS AND SHALL BE GALVANIZED.

CONCRETE USED FOR THE CATTLE WALKWAY WITHIN THE PIPE SHALL BE INCIDENTAL TO THE BID ITEM OF PIPE CATTLE PASS.

DETAILS FOR PIPE CATTLE PASS, CONCRETE ENDWALL AND STEPS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

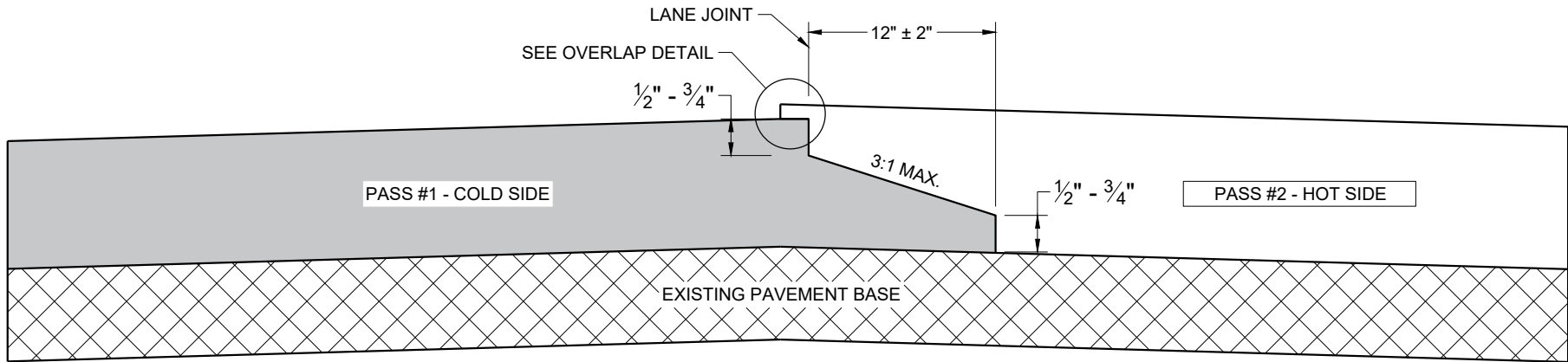
APPROVED

6/6/75

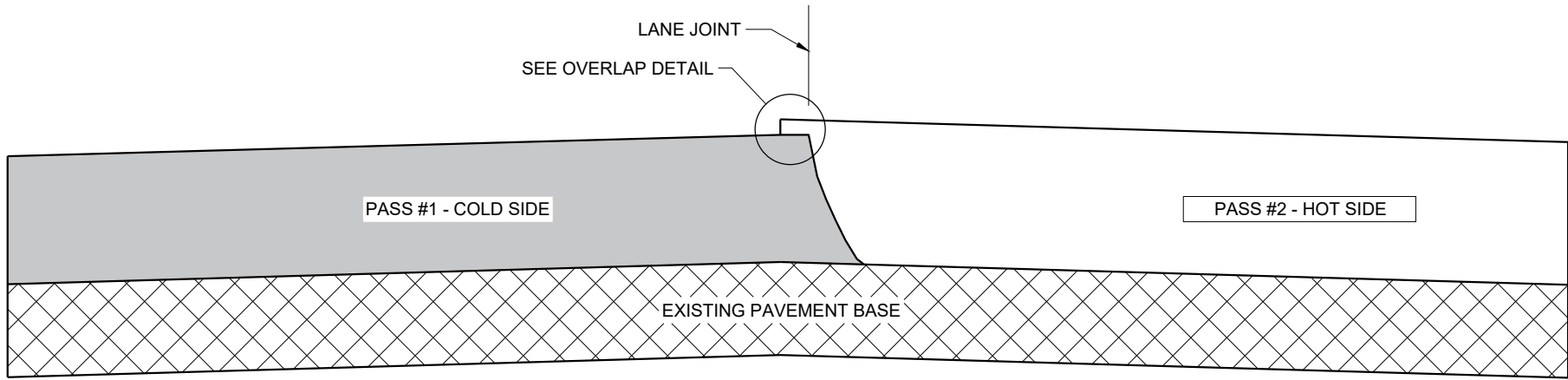
DATE

FHWA

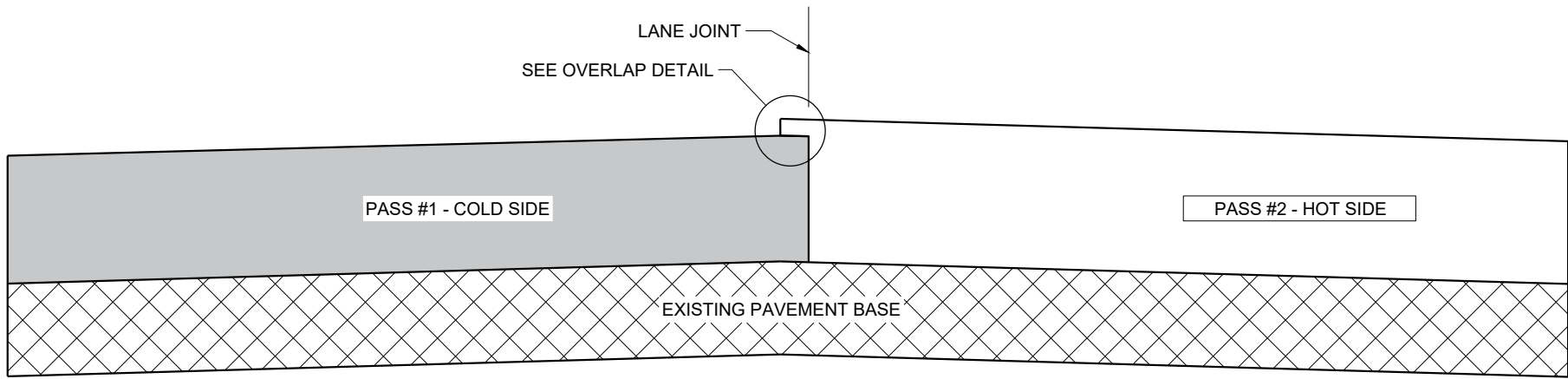
/S/ Harold Fielder
STATE DESIGN ENGINEER FOR HWYS



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

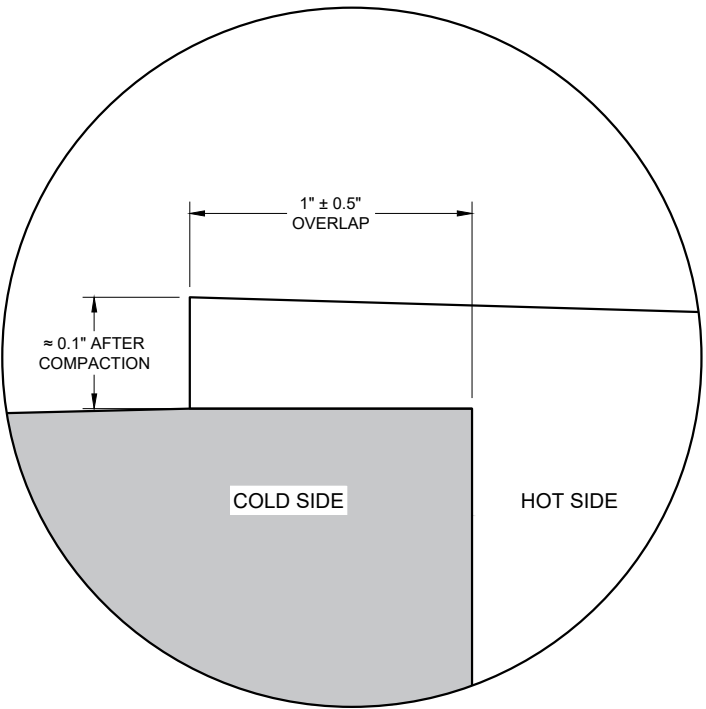
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.

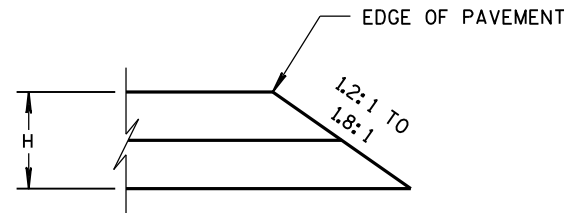


OVERLAP DETAIL (TYPICAL)

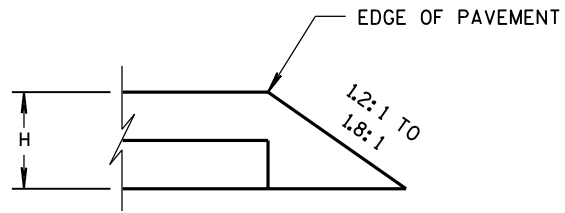
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

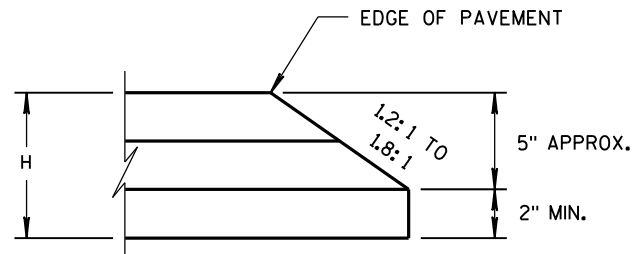
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



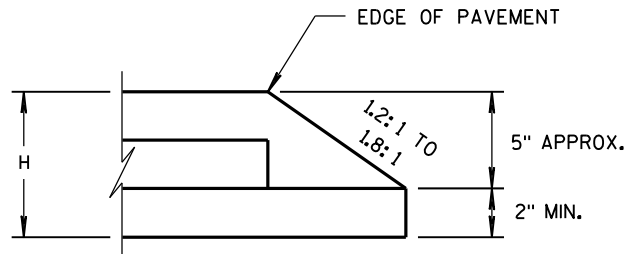
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

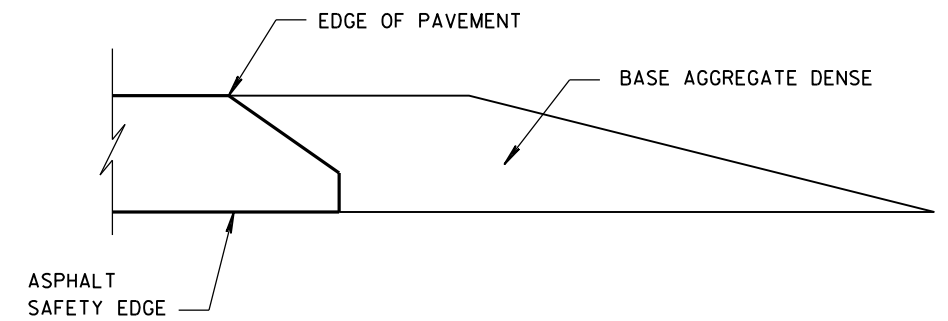


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

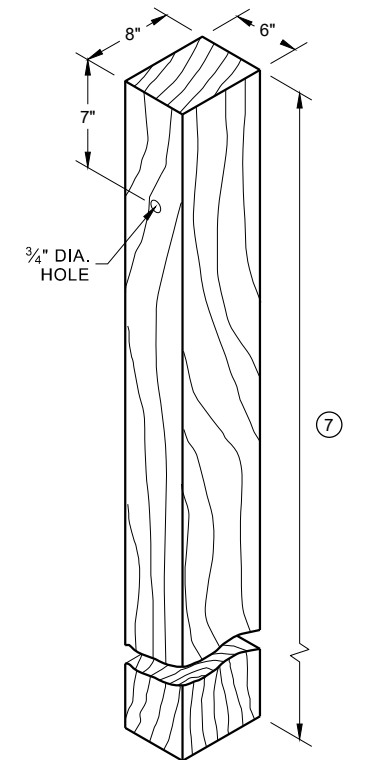
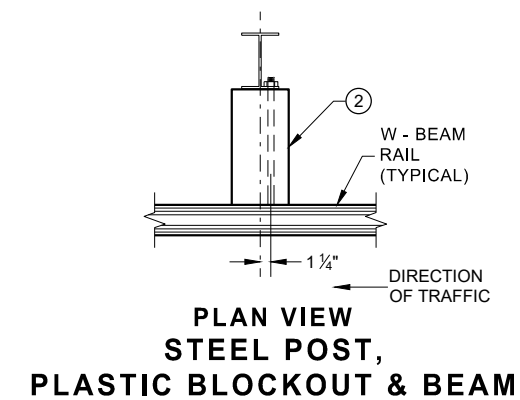
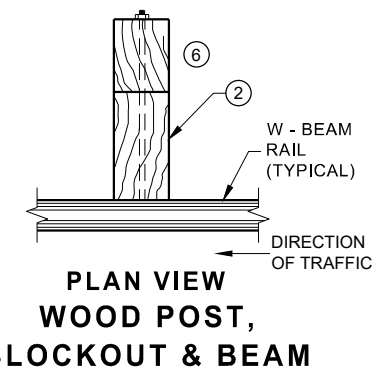
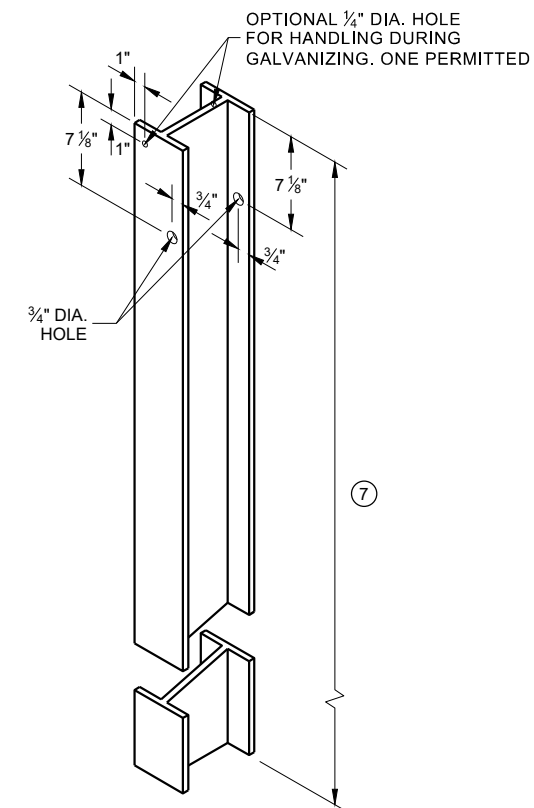
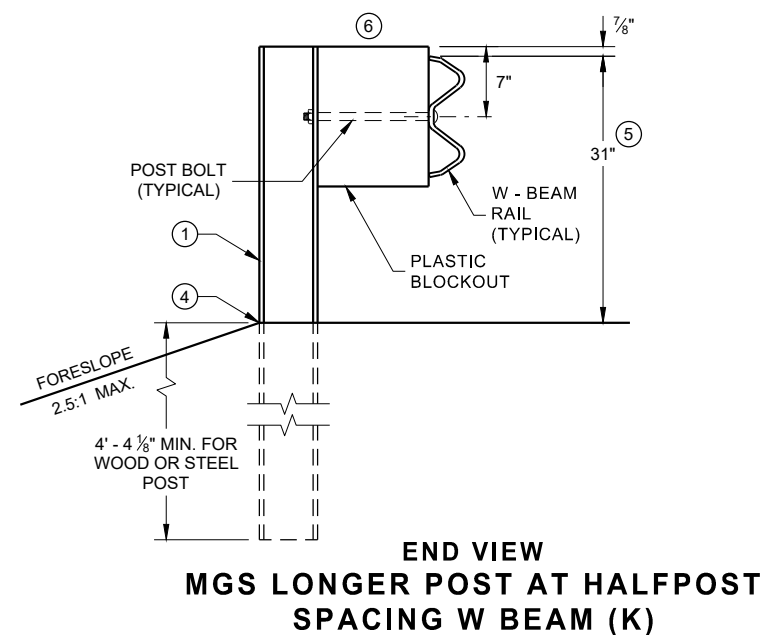
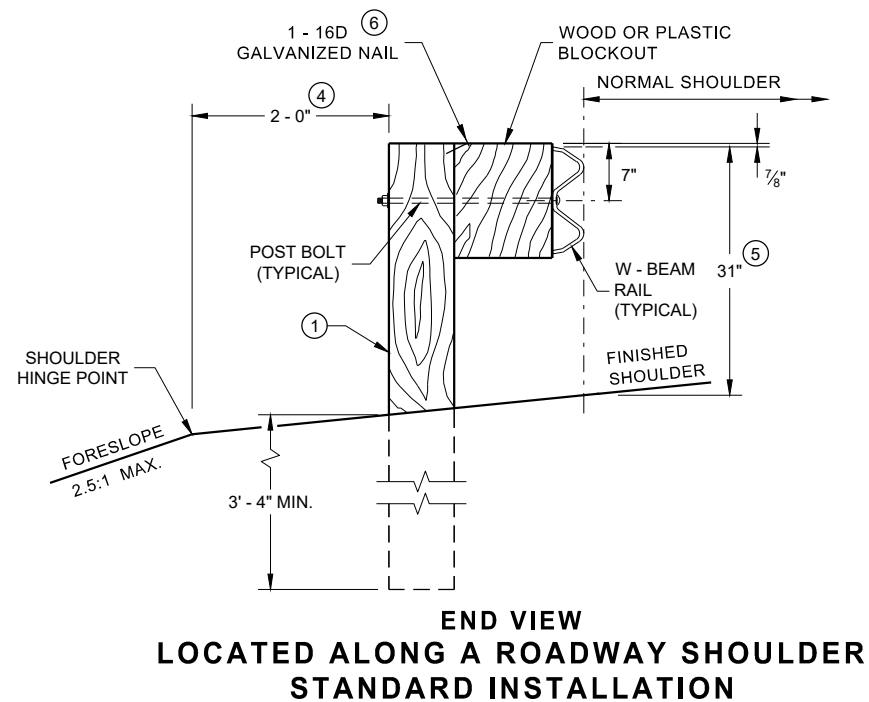
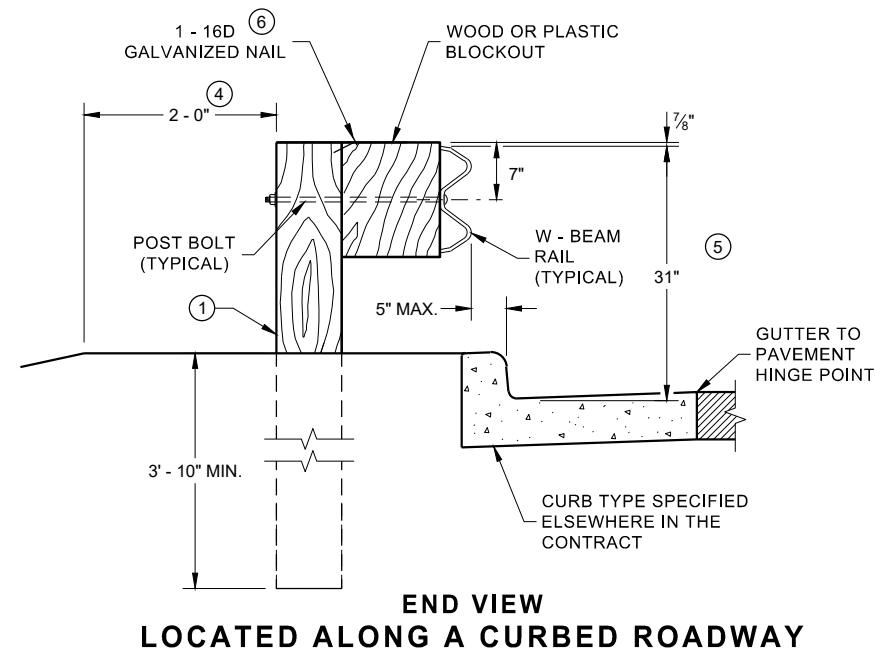
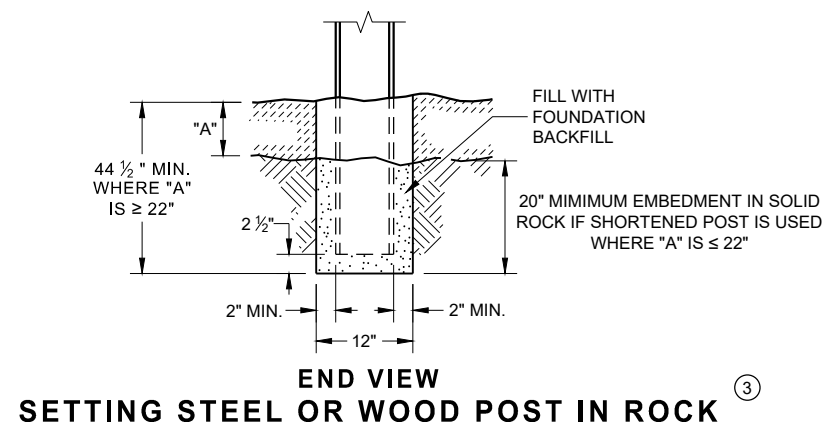
APPROVED

11/30/2012
DATE

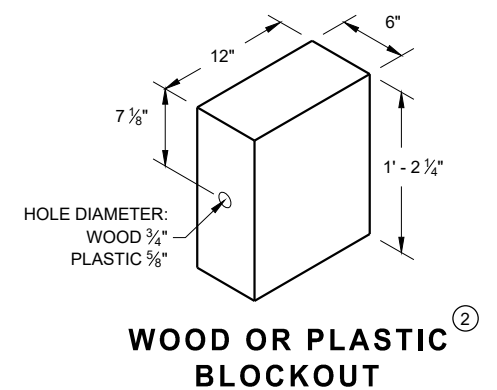
FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

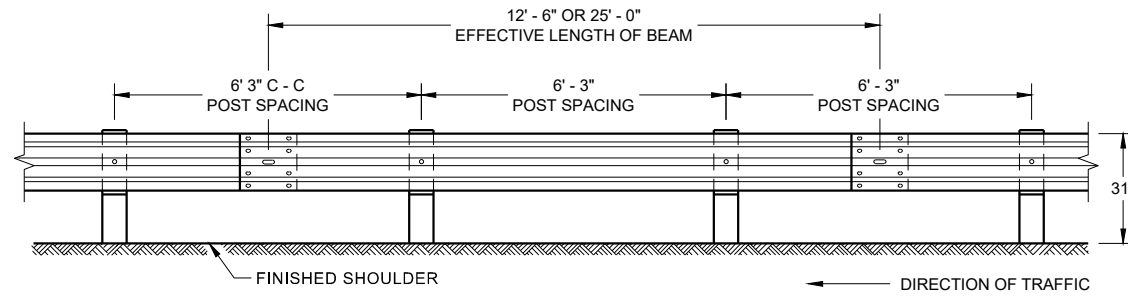
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



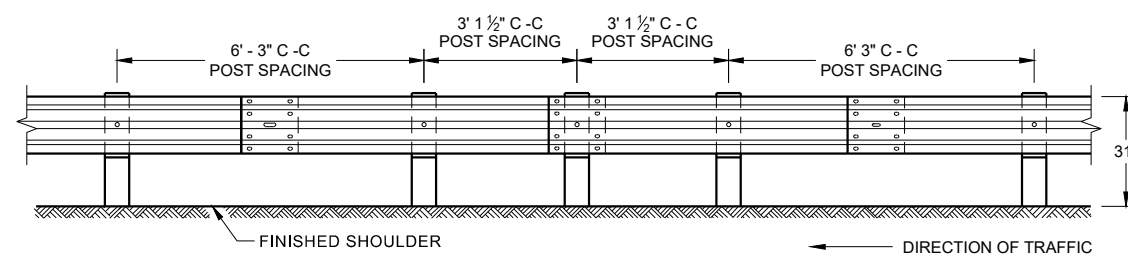
WOOD POST (6" X 8") NOMINAL ⁽¹⁾



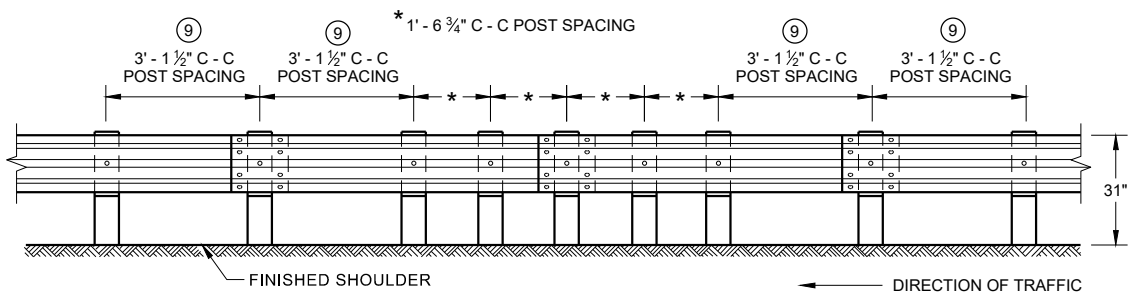
**WOOD OR PLASTIC
BLOCKOUT**



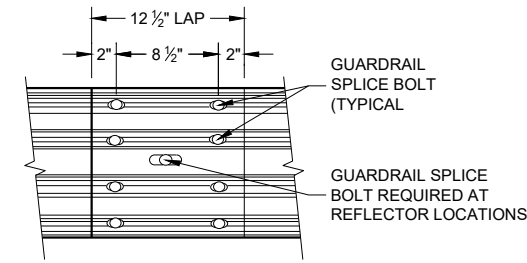
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



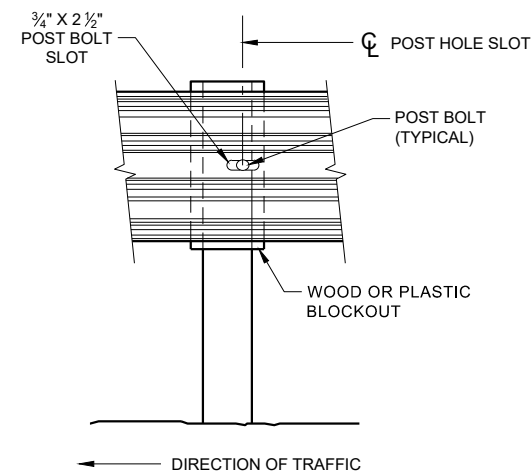
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



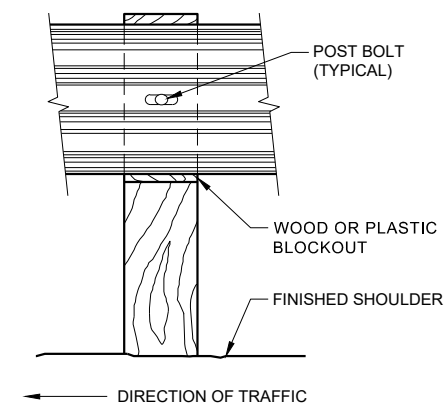
**FRONT VIEW
QUARTER POST SPACING (QS)**



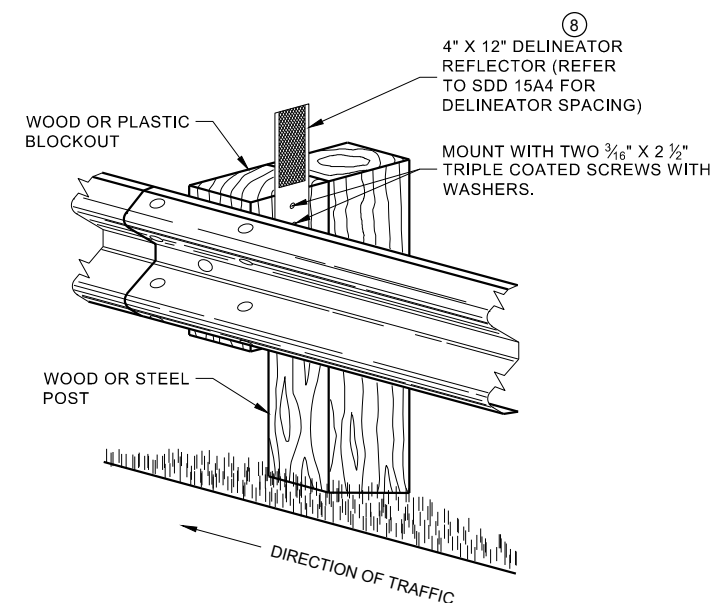
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



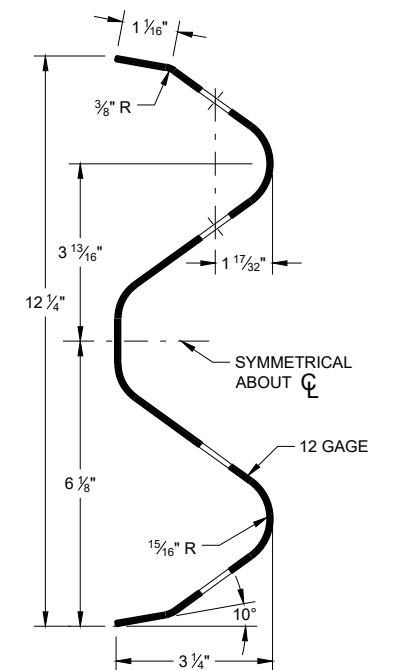
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

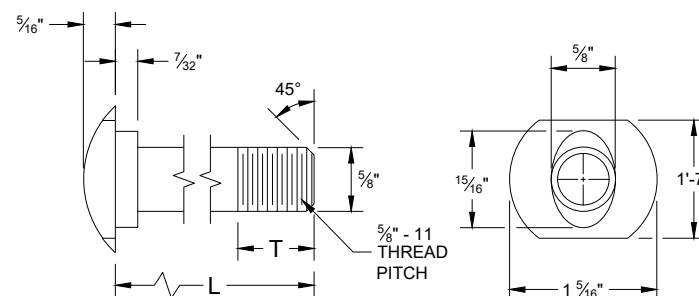


NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

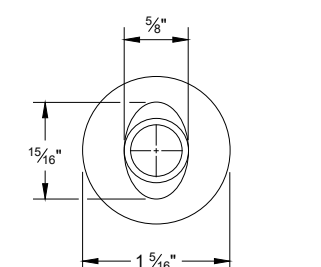
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

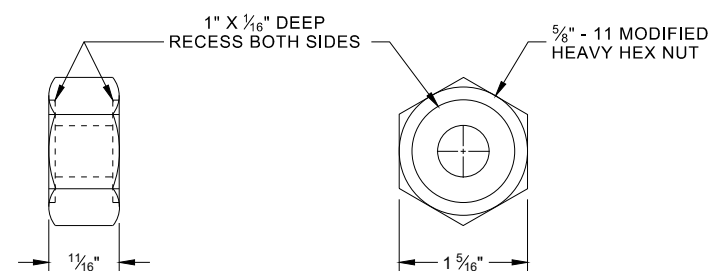


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅝"
2"	1 ¾"
10"	4"
14"	4 ⅙"
18"	4"
21"	4 ⅙"
25"	4"

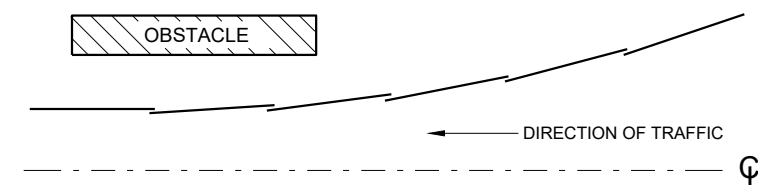


ALTERNATE BOLT HEAD

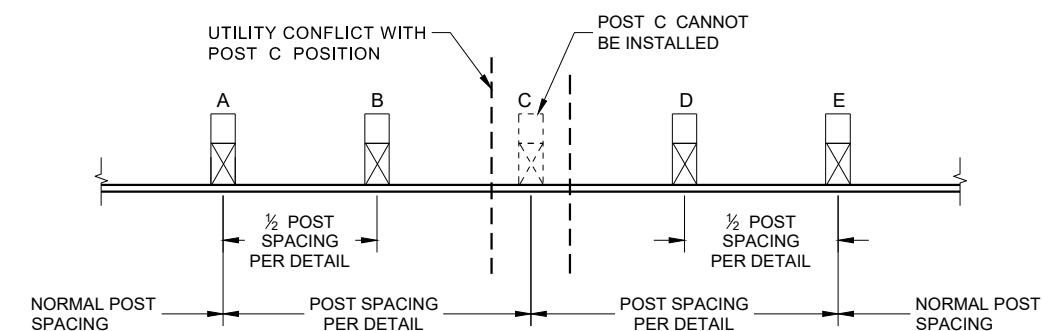


POST BOLT, SPLICE BOLT AND RECESS NUT

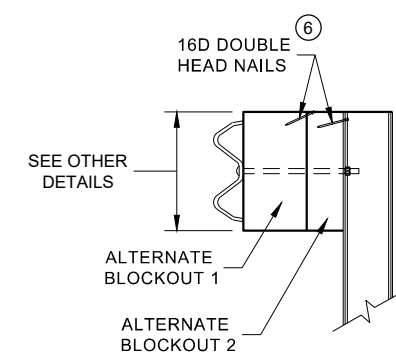
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



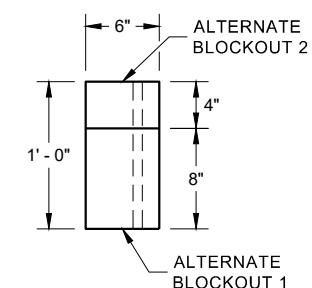
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

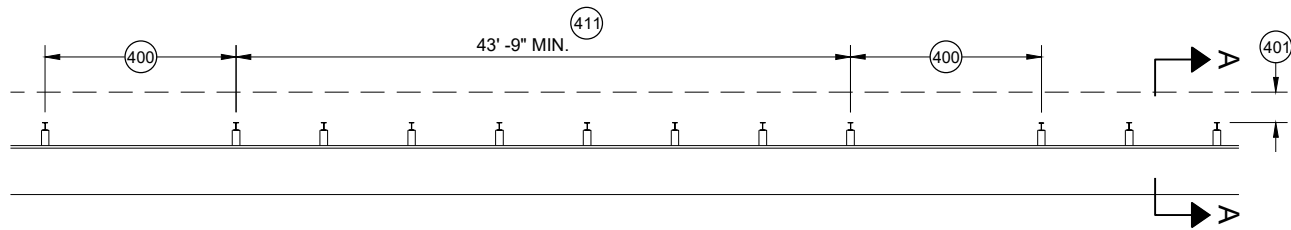


PLAN VIEW

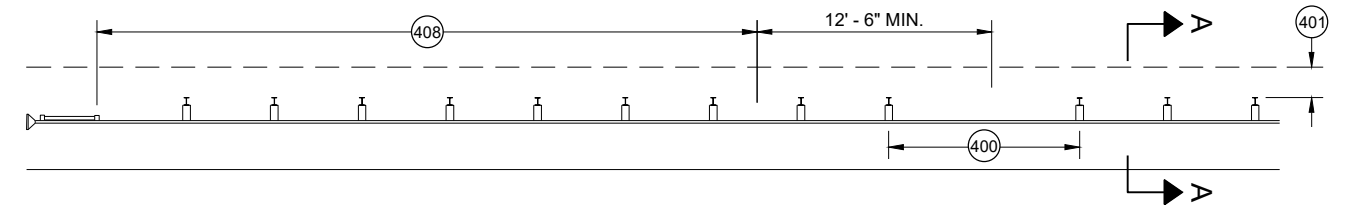
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

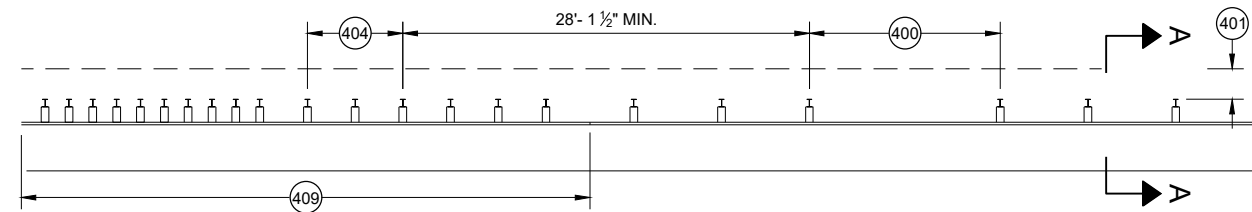
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



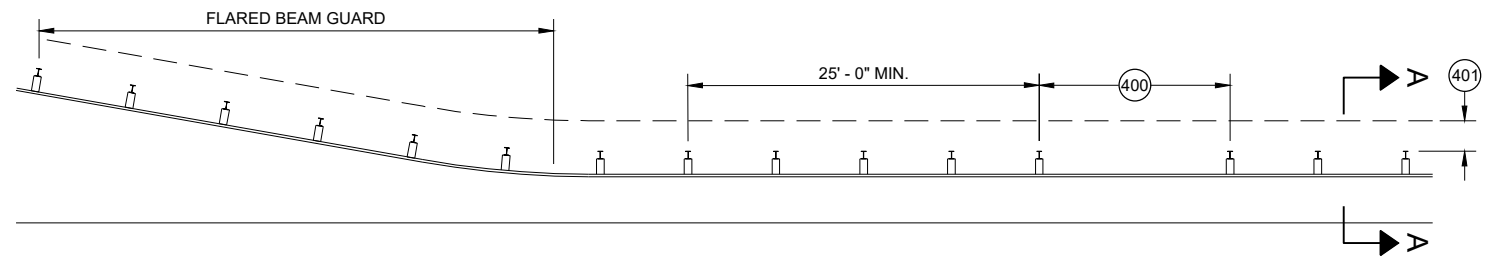
MISSING POST IN MGS GUARDRAIL



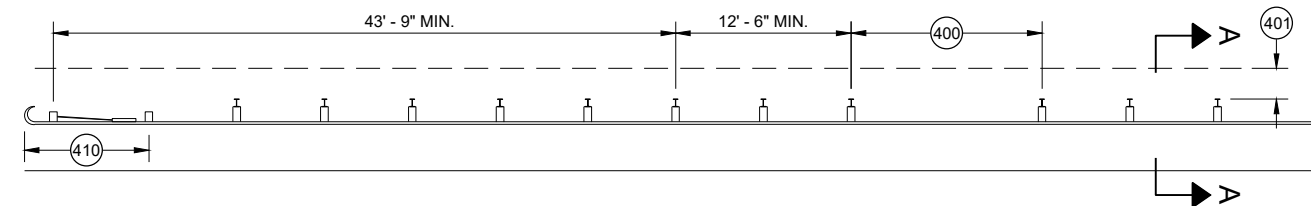
MISSING POST IN MGS GUARDRAIL NEAR EAT



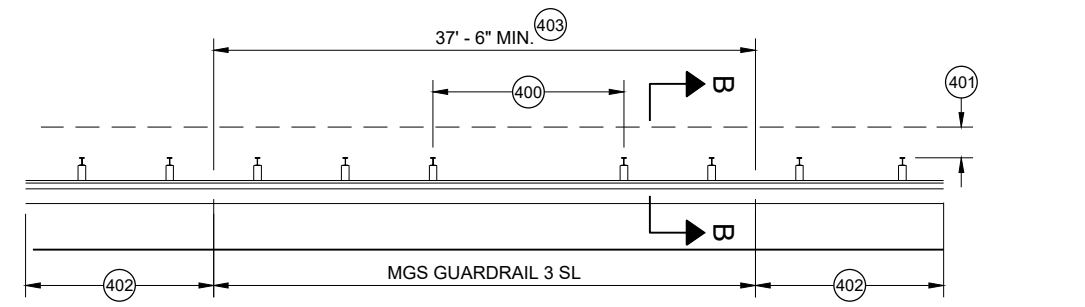
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

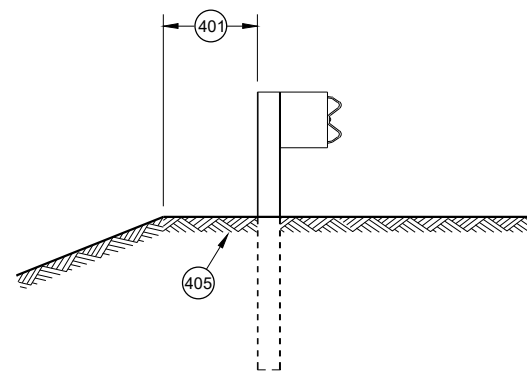


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

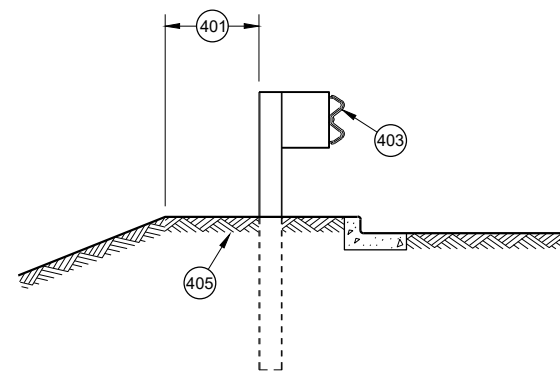


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

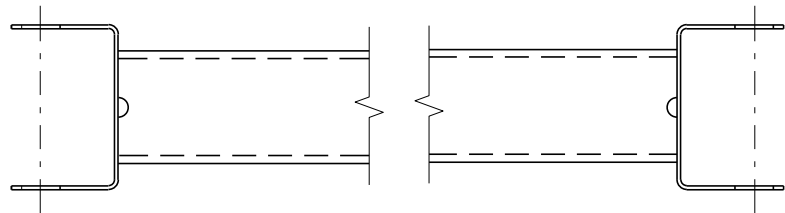
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

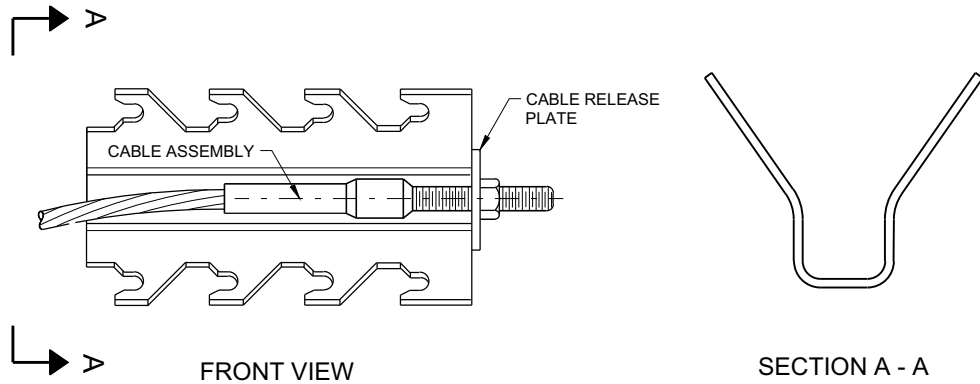


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

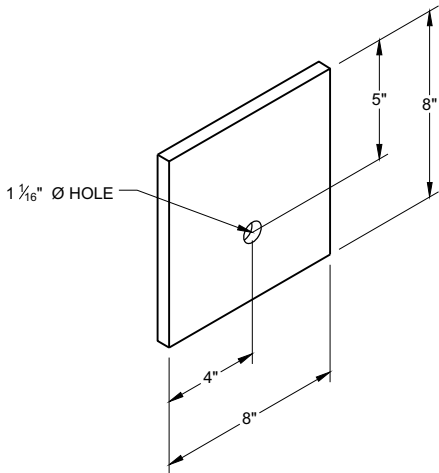


GENERIC GROUND STRUT^⑨ [Ⓔ]

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



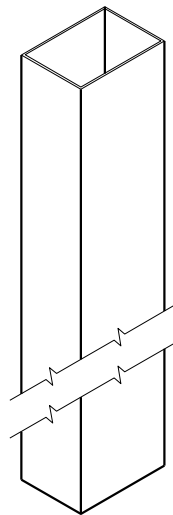
GENERIC ANCHOR CABLE BOX^⑨ [Ⓔ]



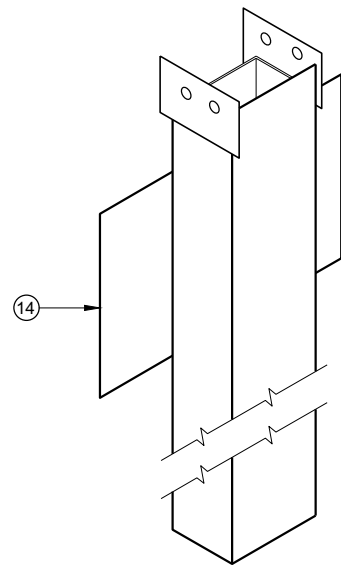
BEARING PLATE^⑥ [Ⓔ]

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

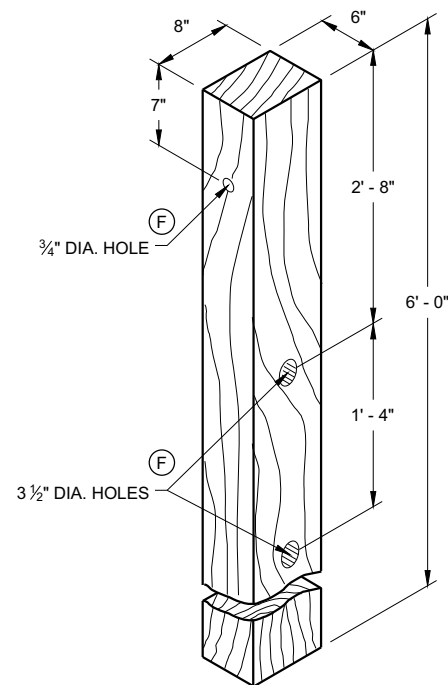
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



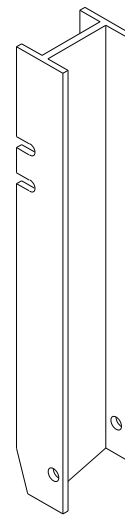
UPPER POST NO. 1 ⁽¹⁾ (E)



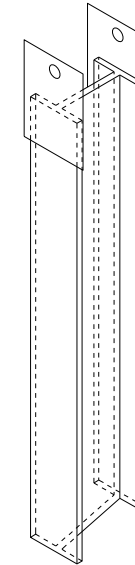
LOWER POST NO. 1 ⁽²⁾ (E)



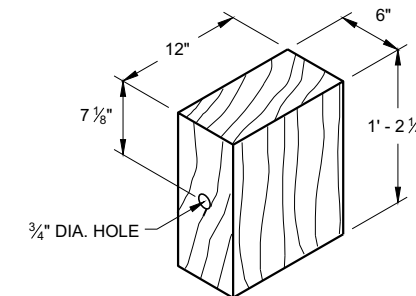
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



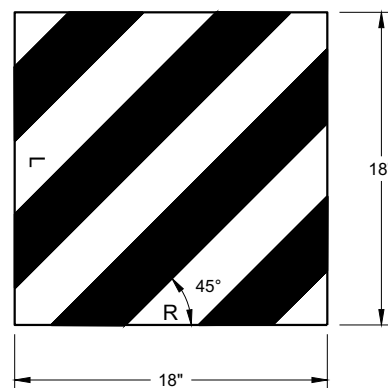
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



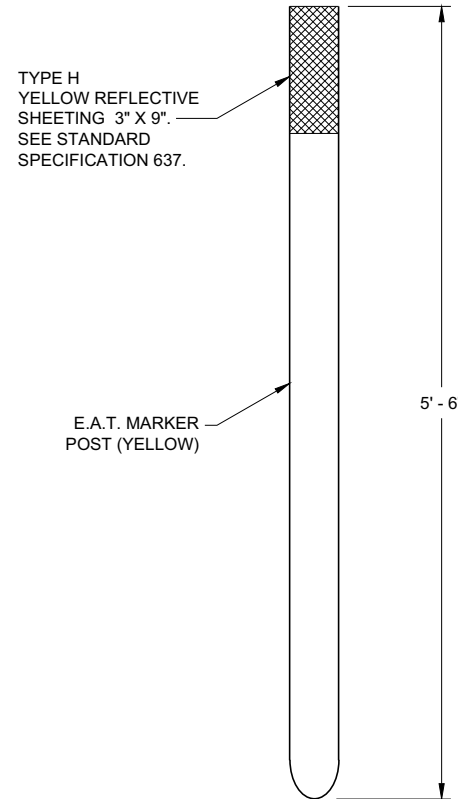
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



REFLECTIVE SHEETING DETAIL ^(E)

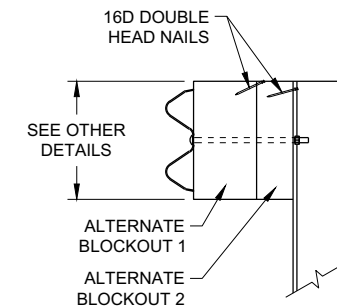


FRONT VIEW

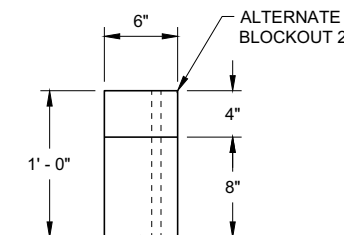


SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



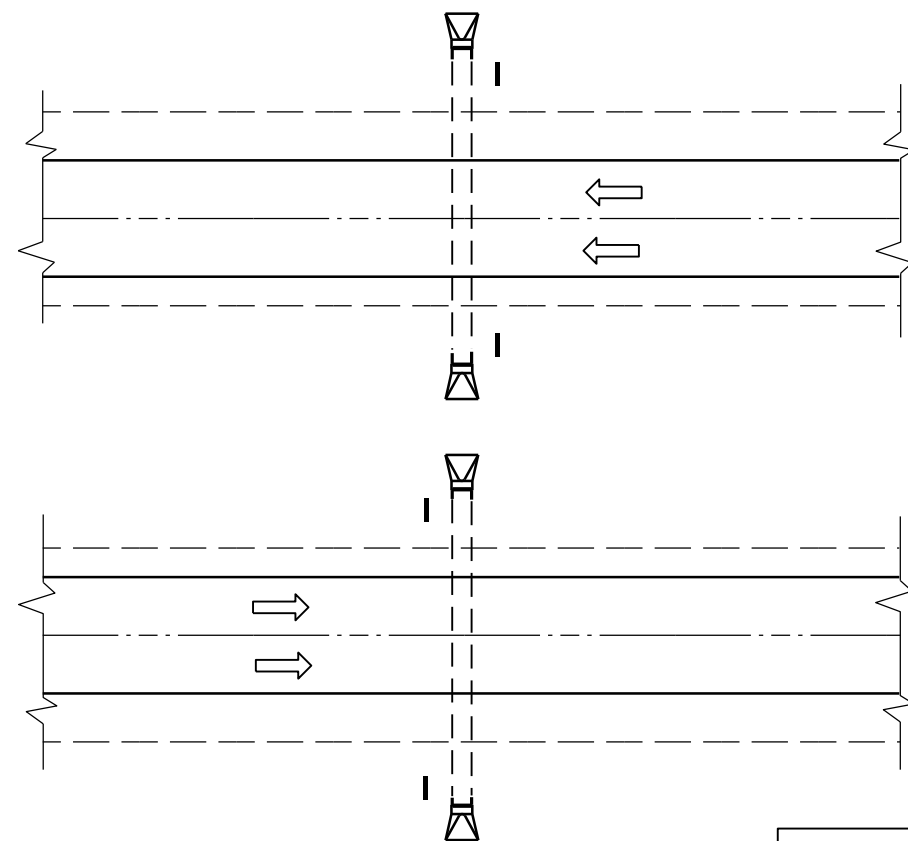
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

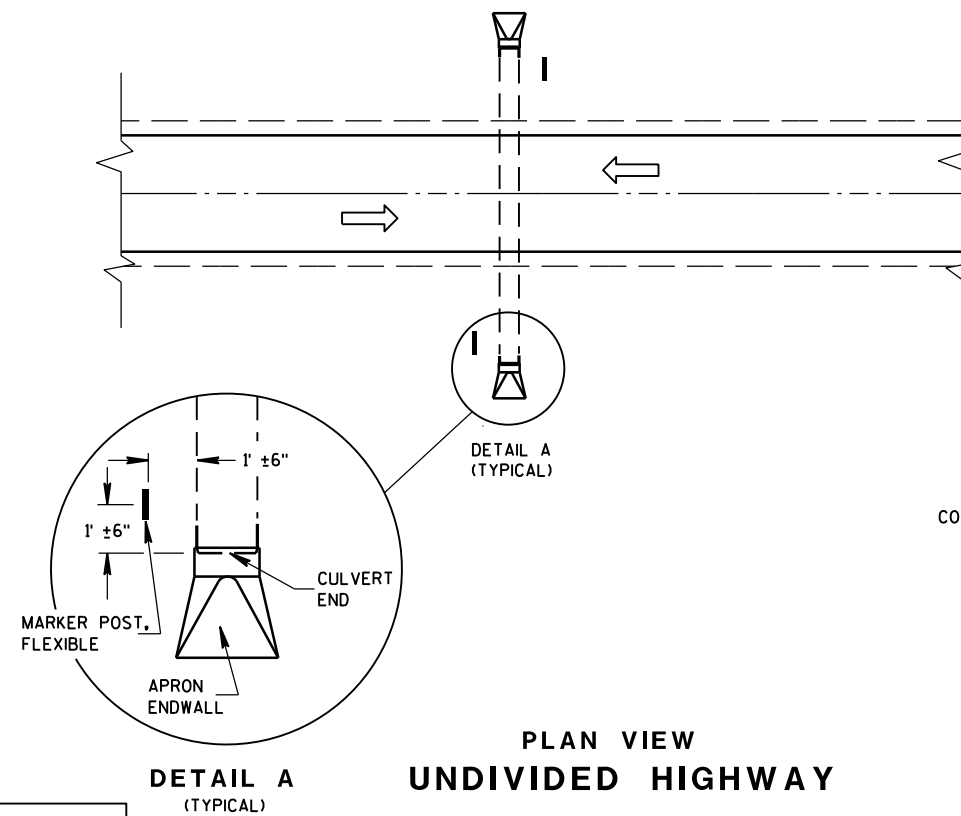
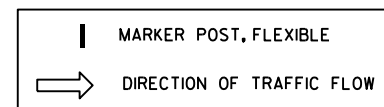
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



PLAN VIEW
DIVIDED HIGHWAY

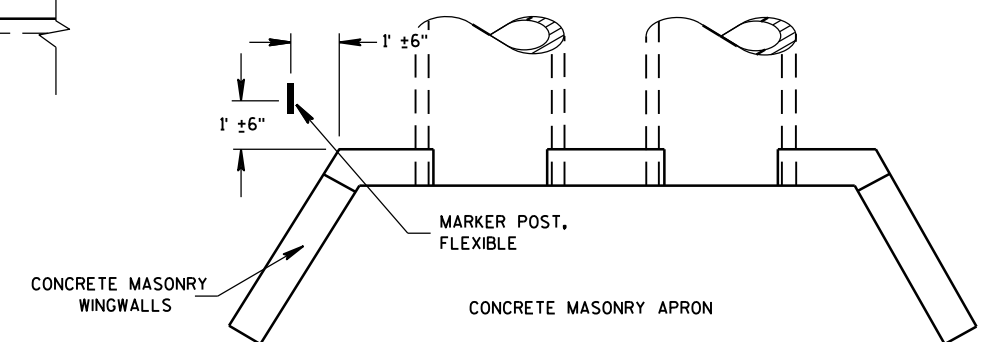


PLAN VIEW
UNDIVIDED HIGHWAY

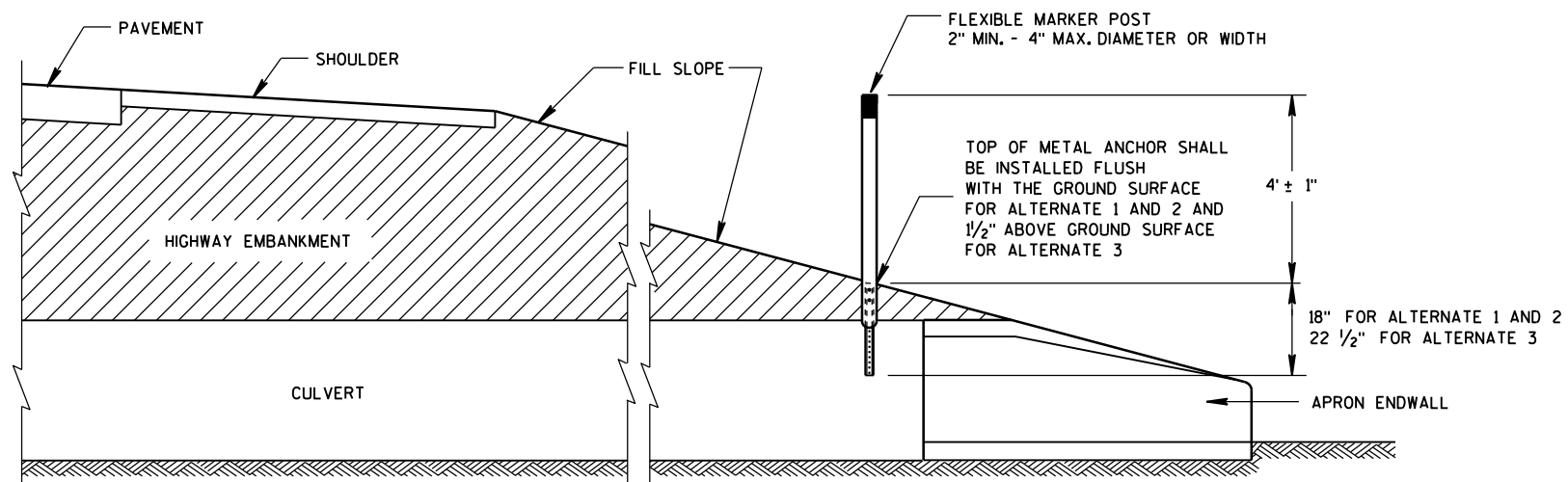
FLEXIBLE MARKER POST LOCATION

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.



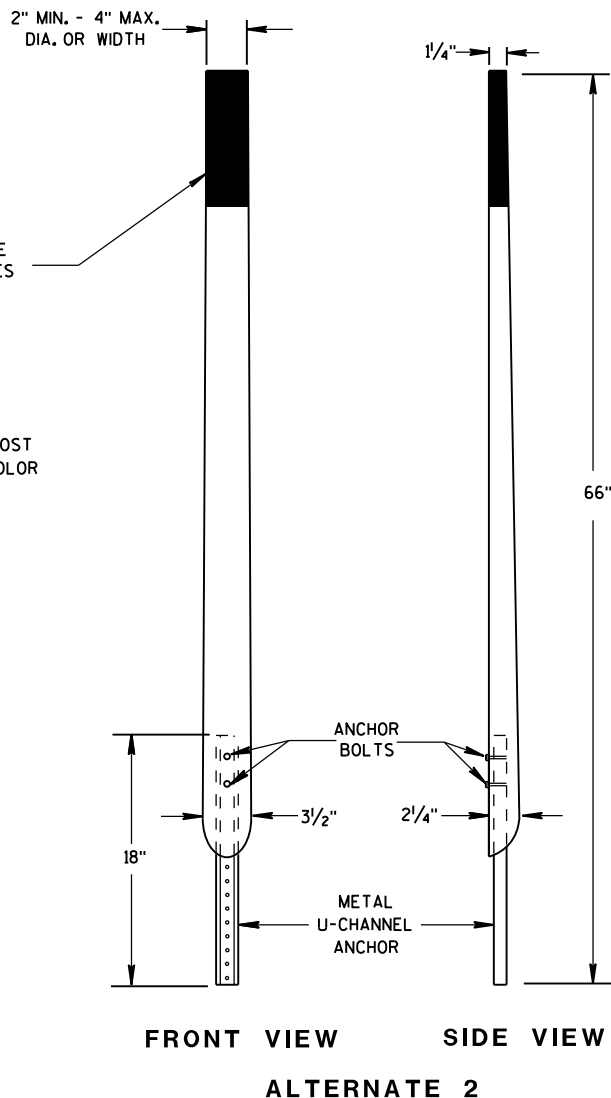
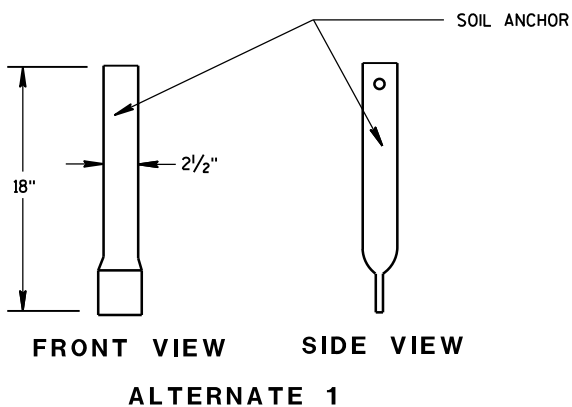
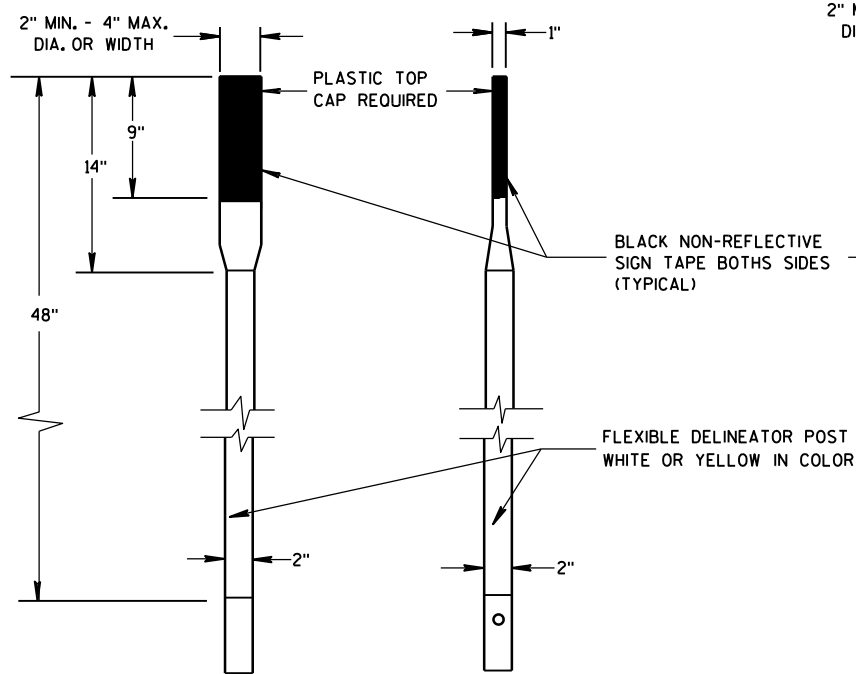
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



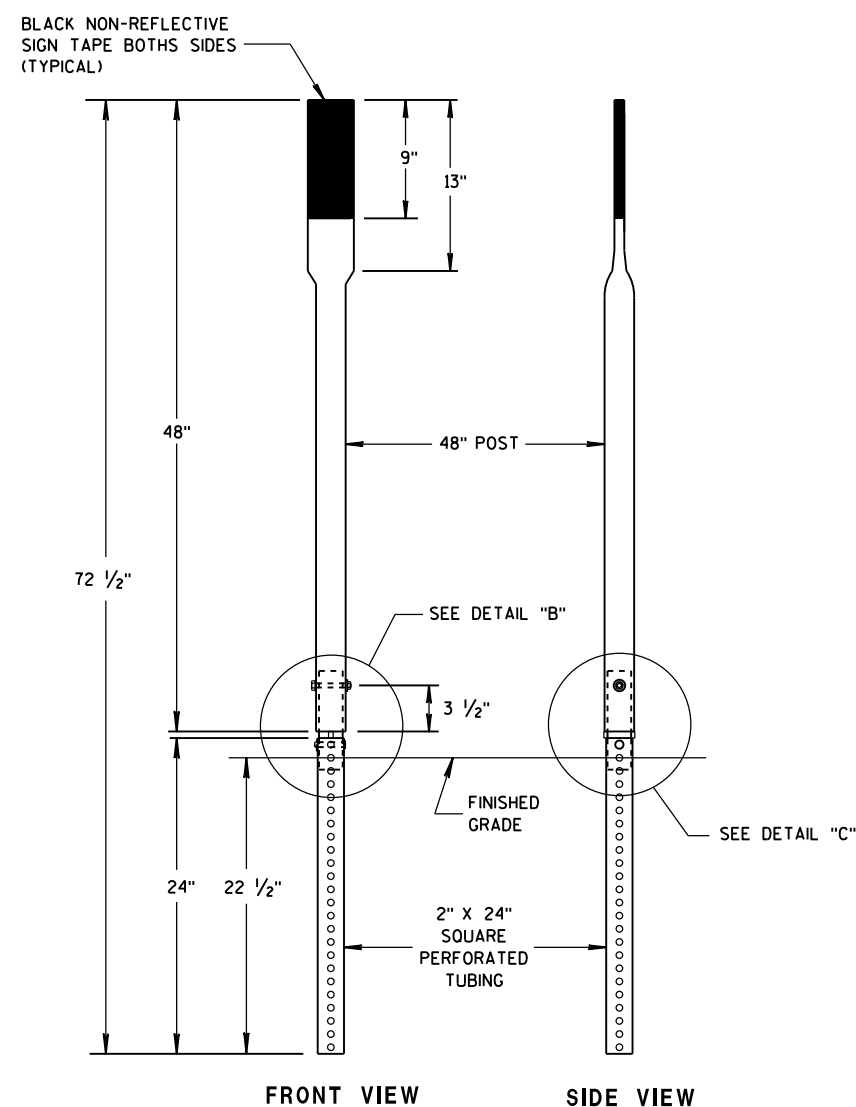
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

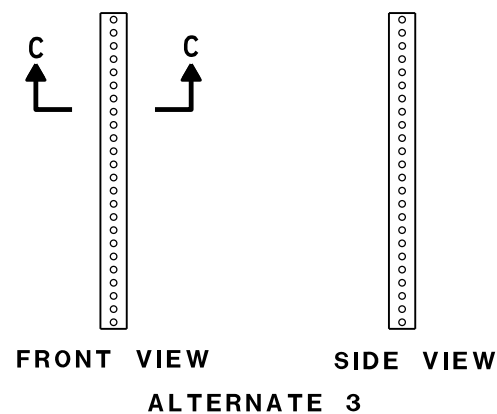
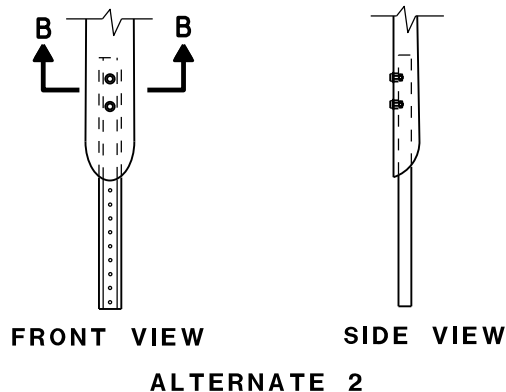
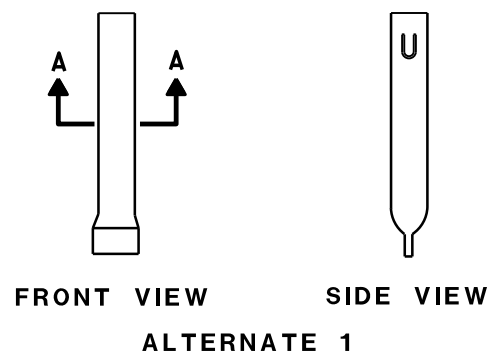
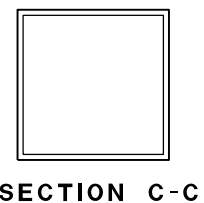
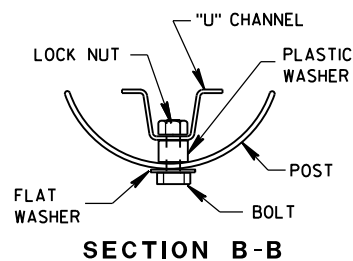
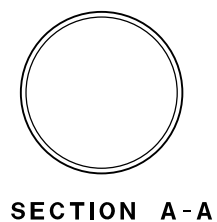
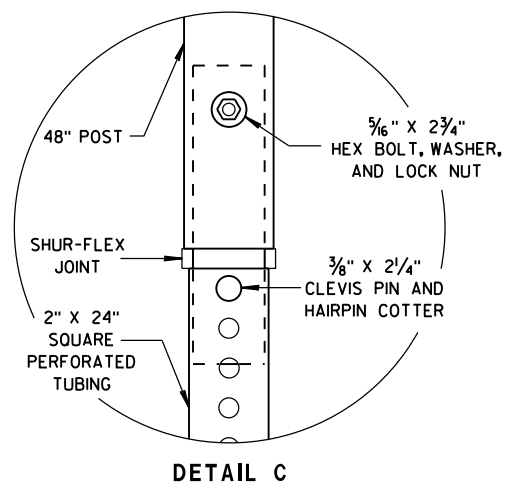
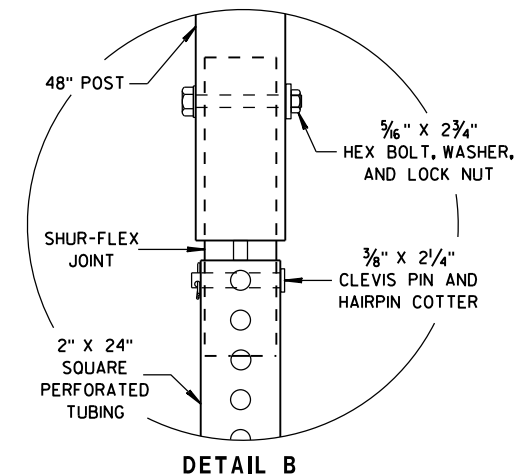
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



ALTERNATE 3

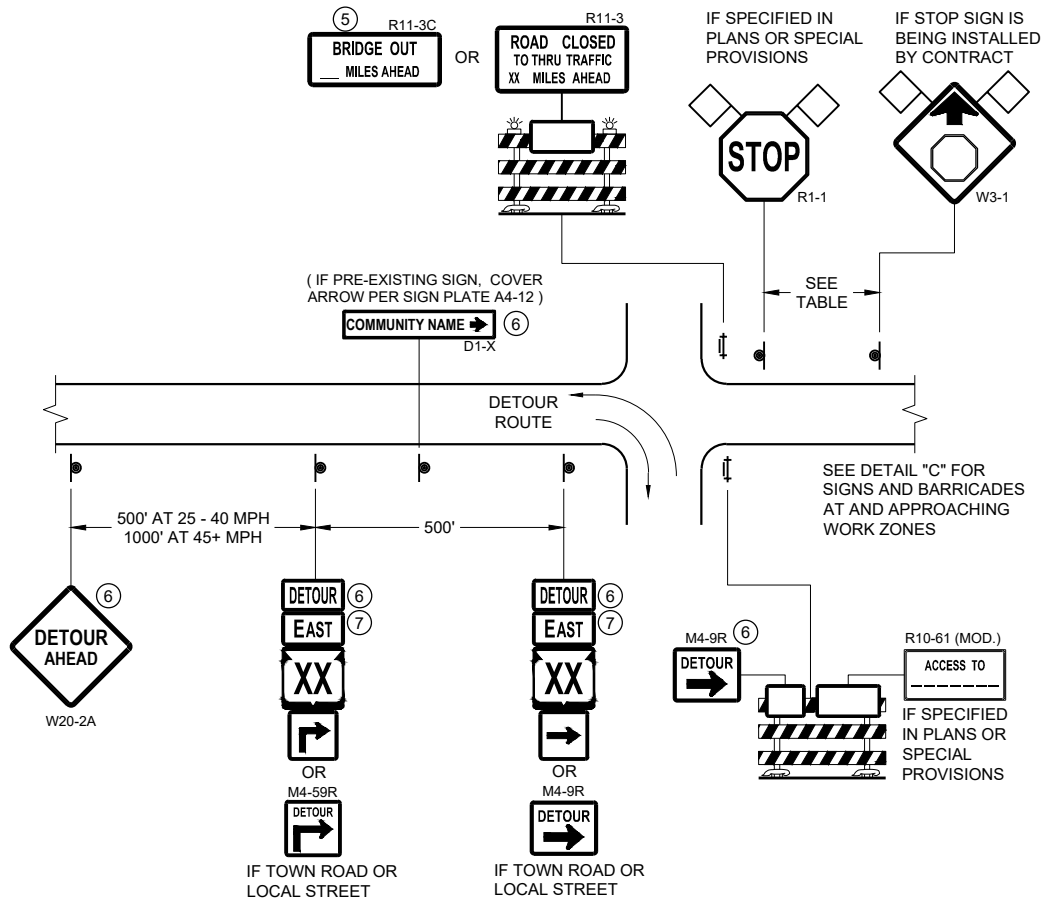


FLEXIBLE MARKER POST ANCHORS

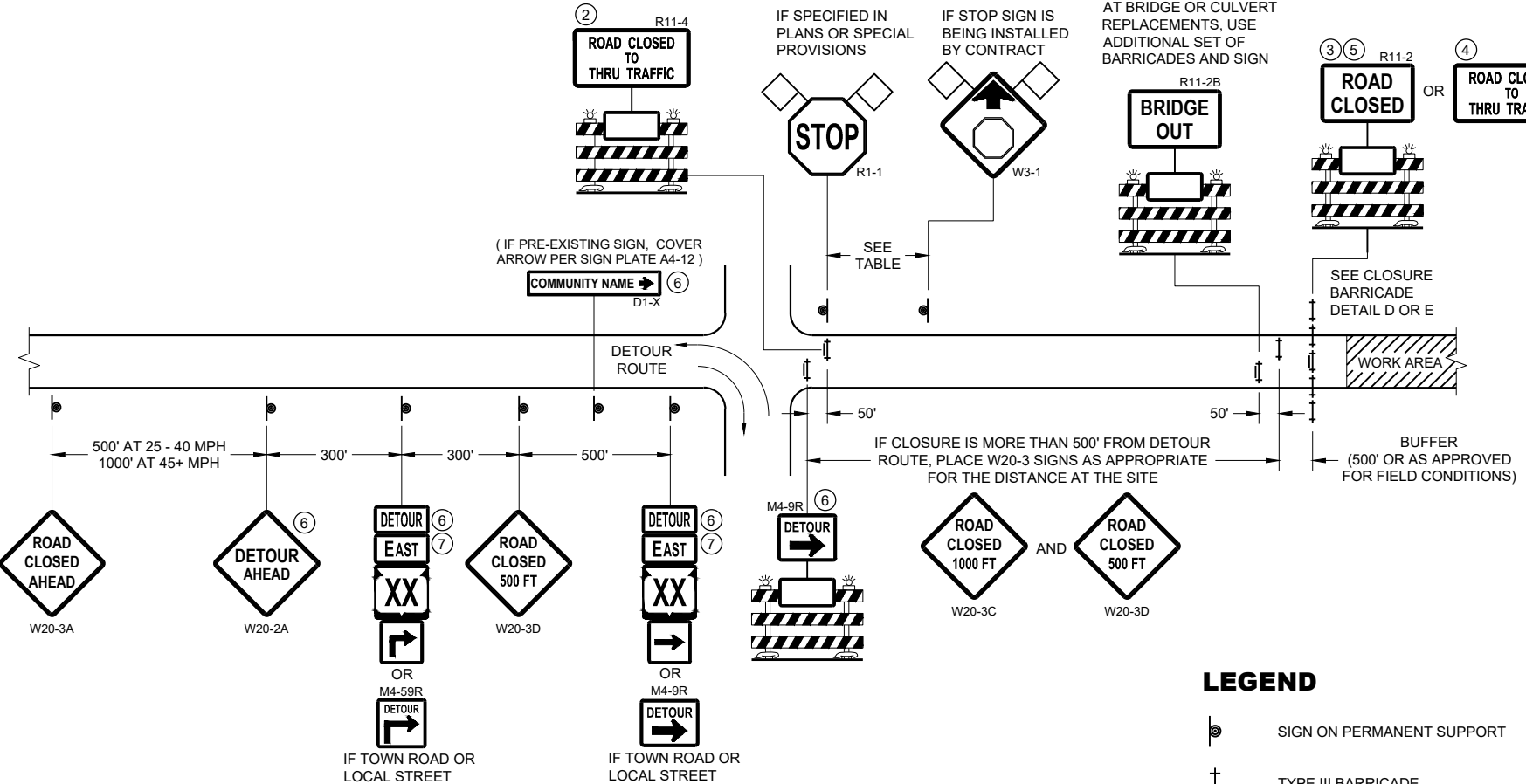
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

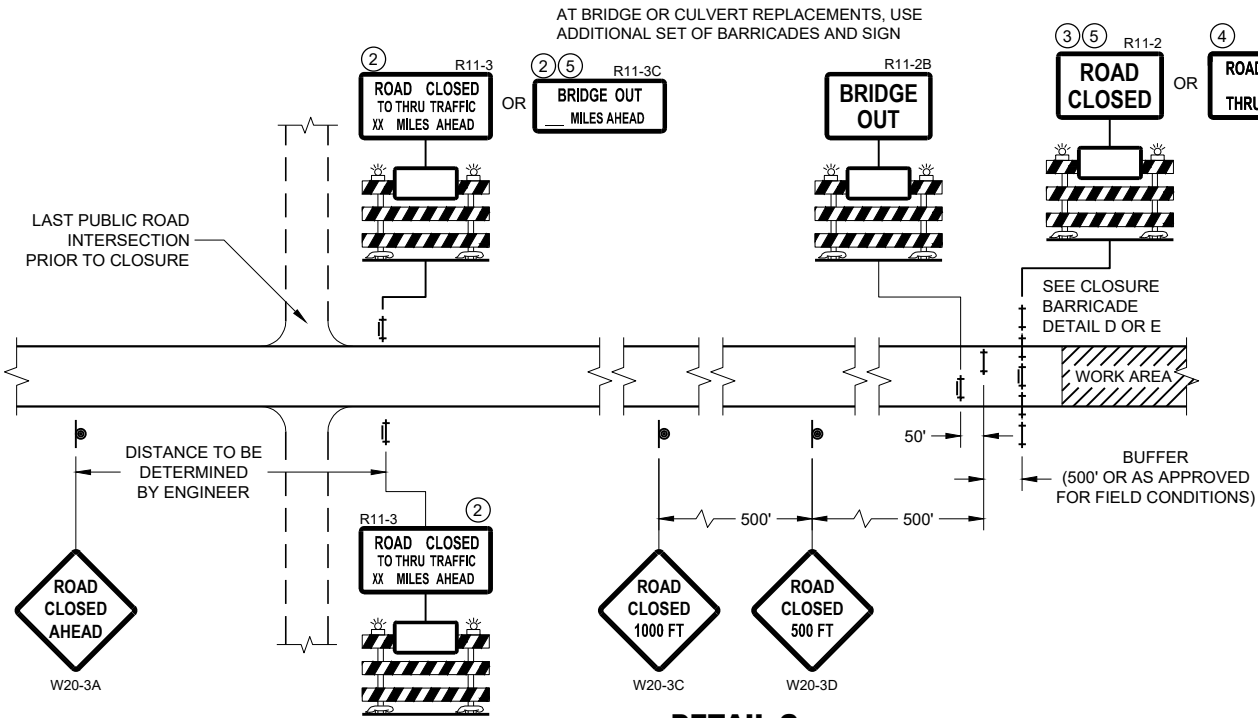
APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

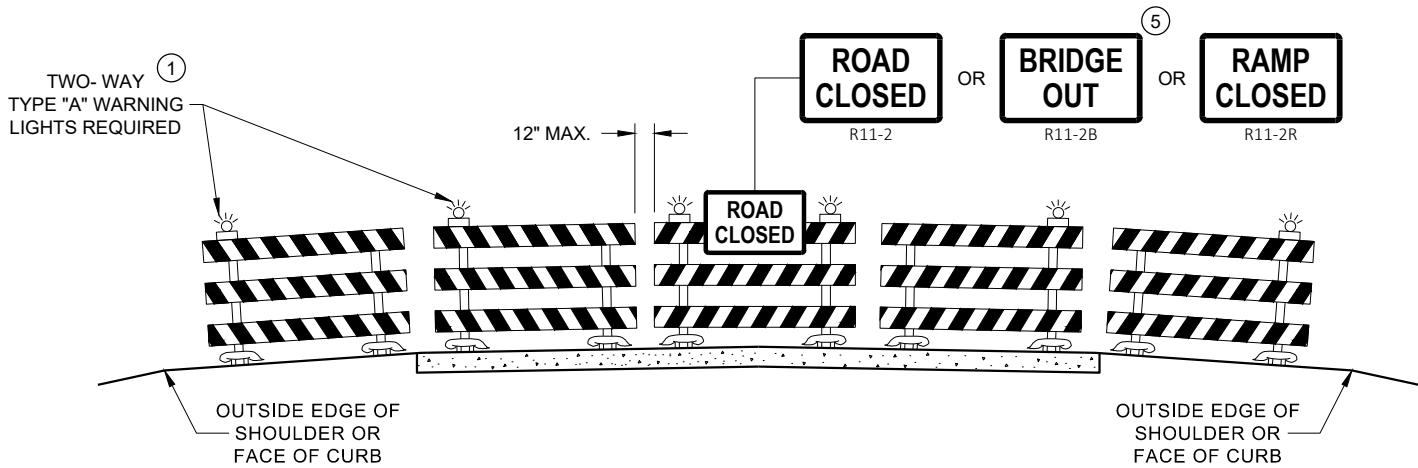
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

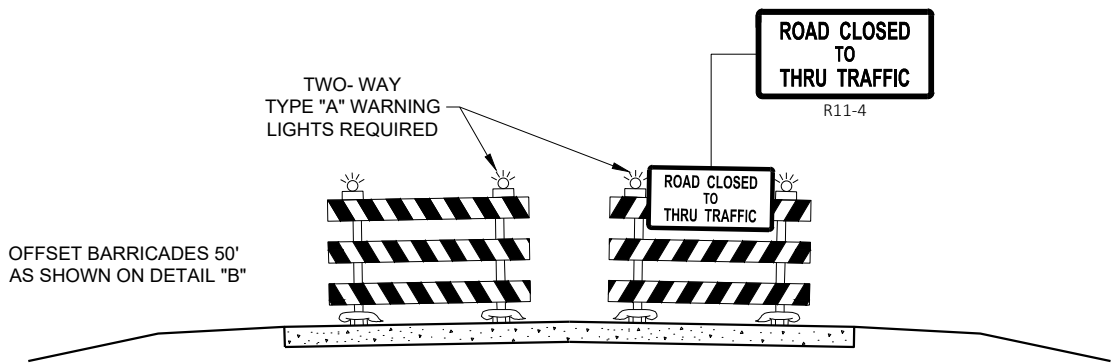
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

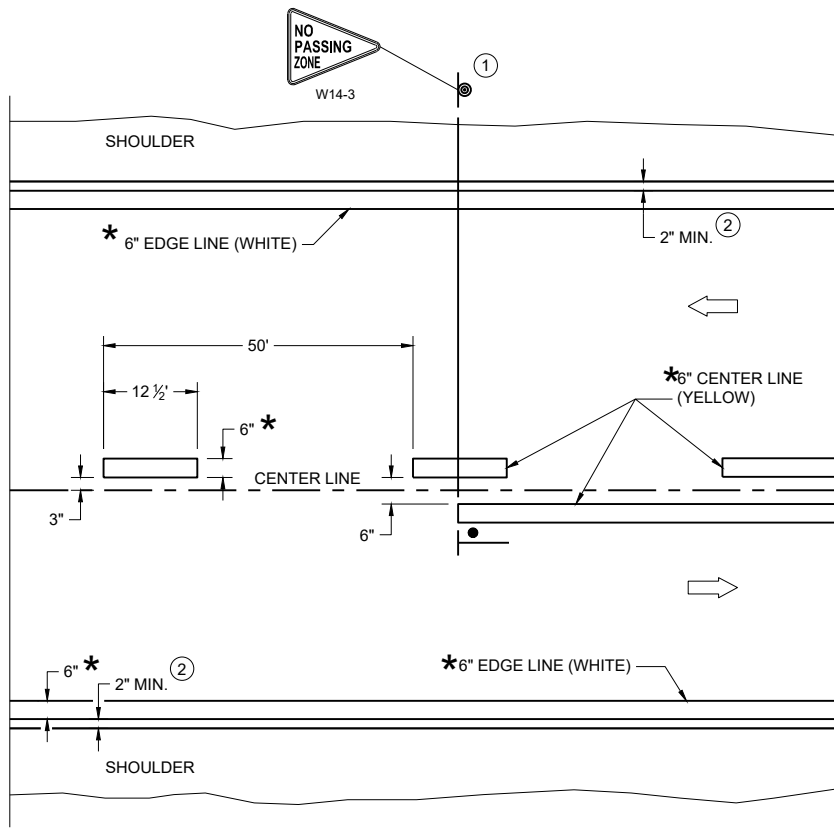
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

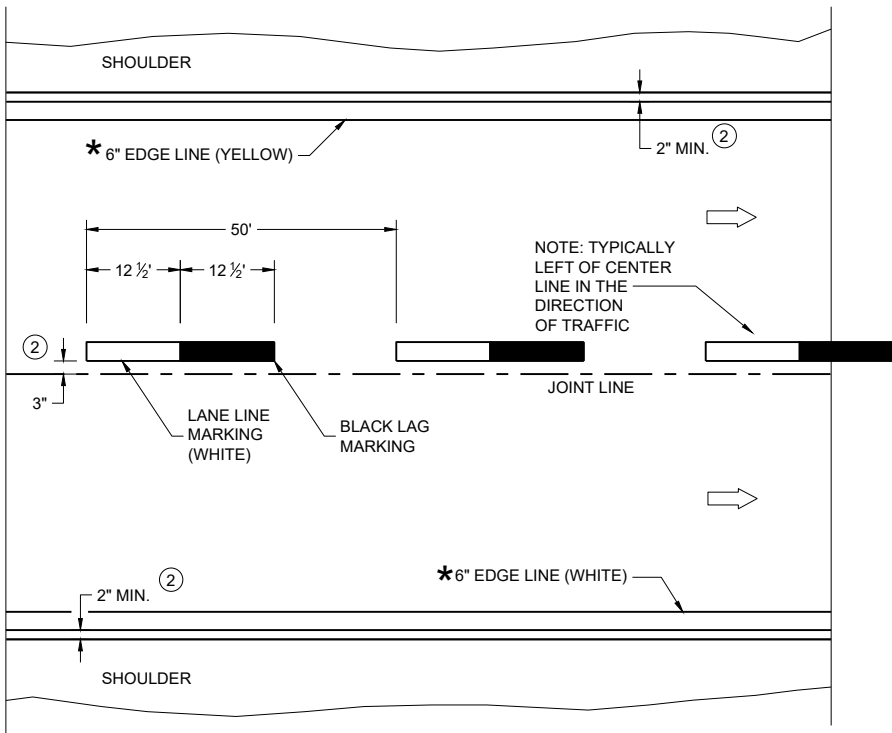
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

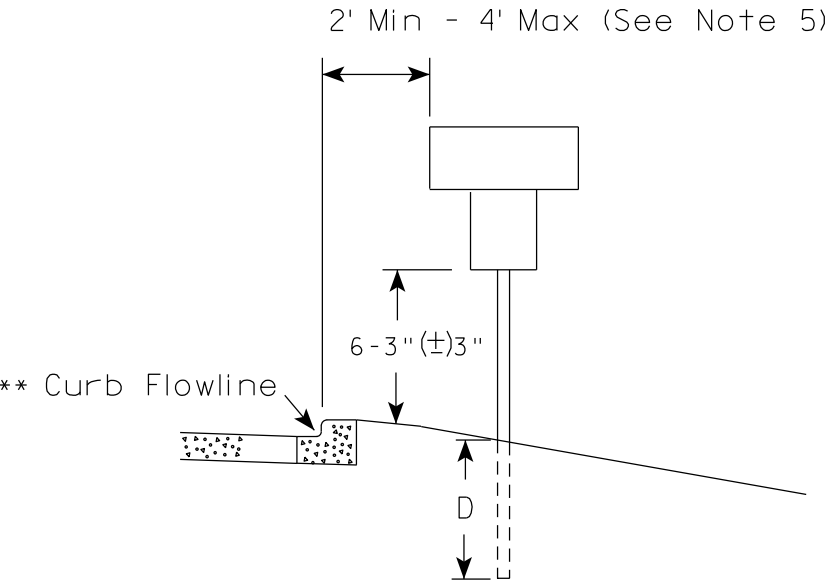
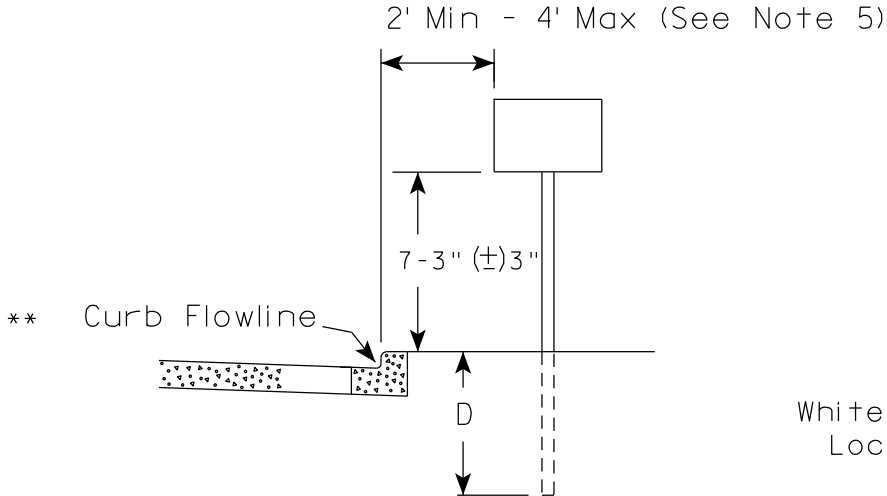
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

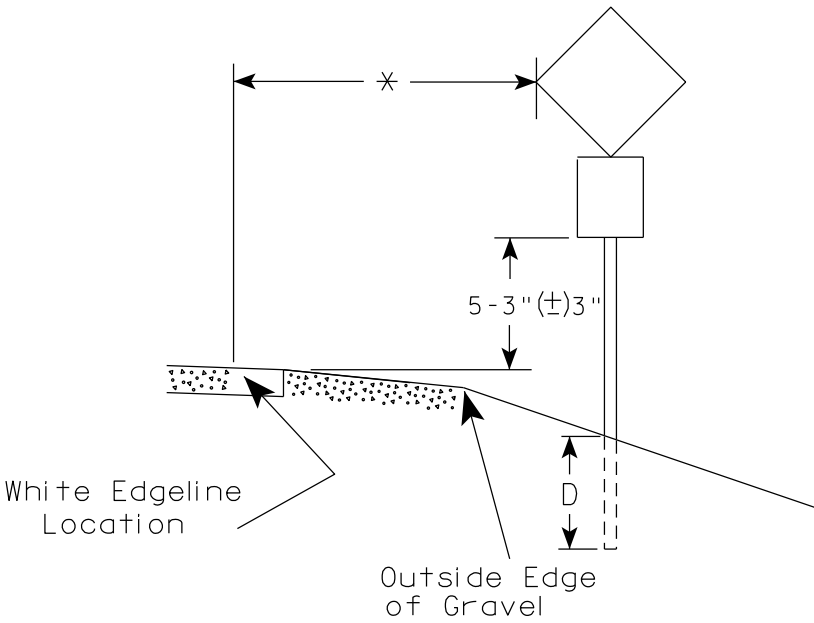
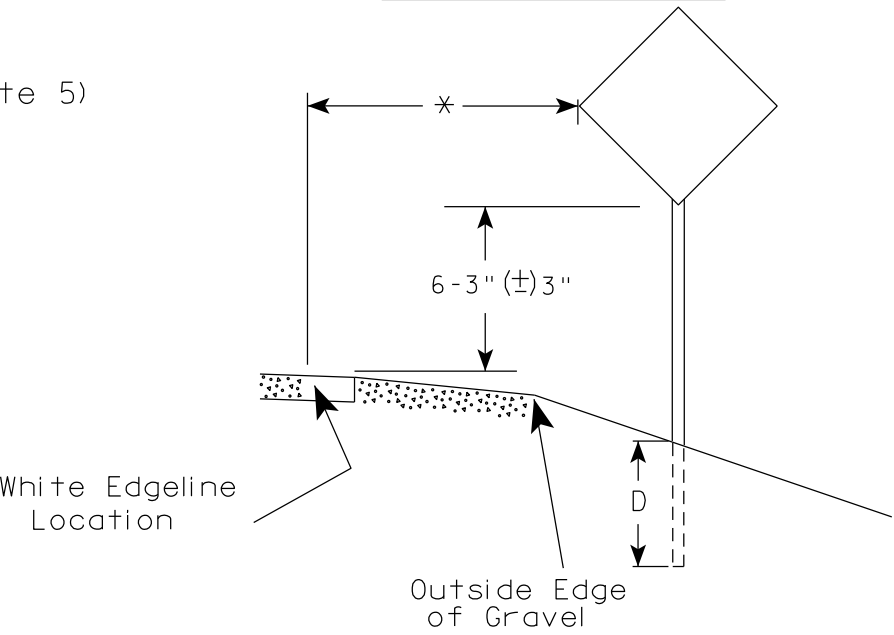
APPROVED
May 2023 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

FHWA

URBAN AREA



RURAL AREA (See Note 2)



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.

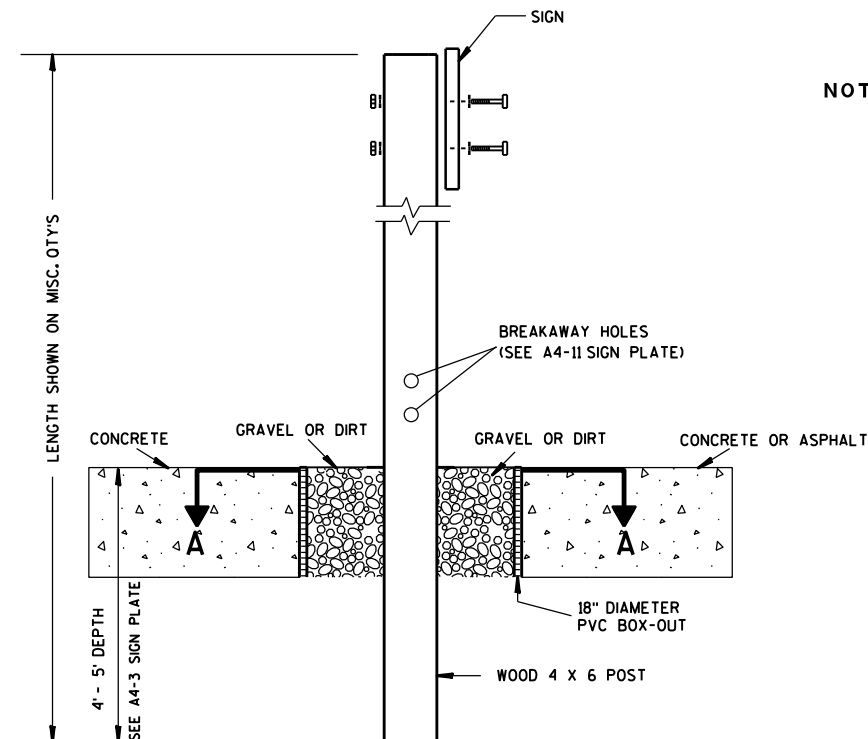
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

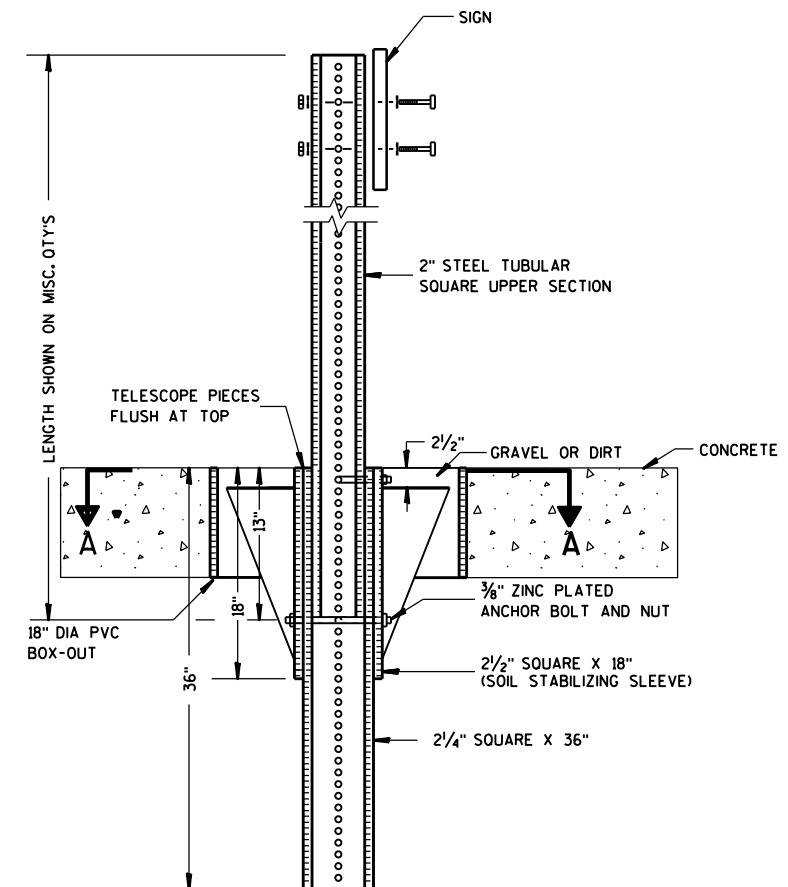
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

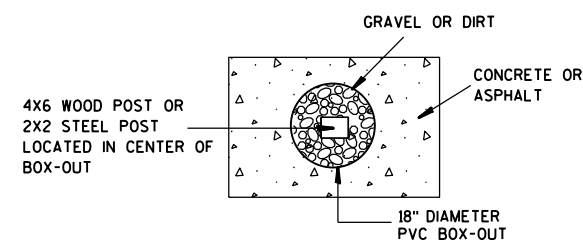
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

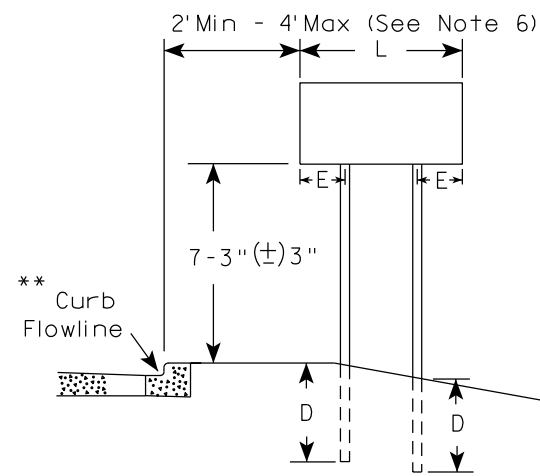
- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height 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" (±) 3" or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.

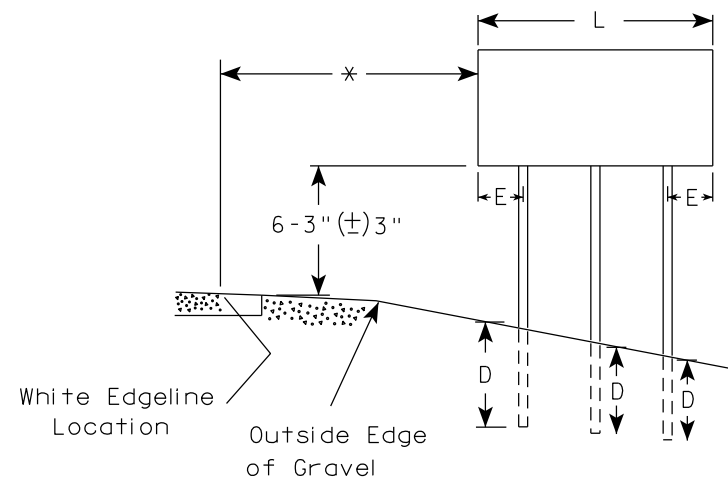
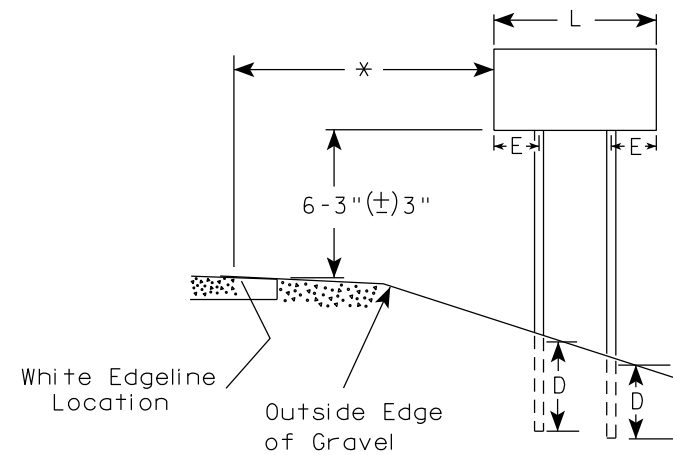
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

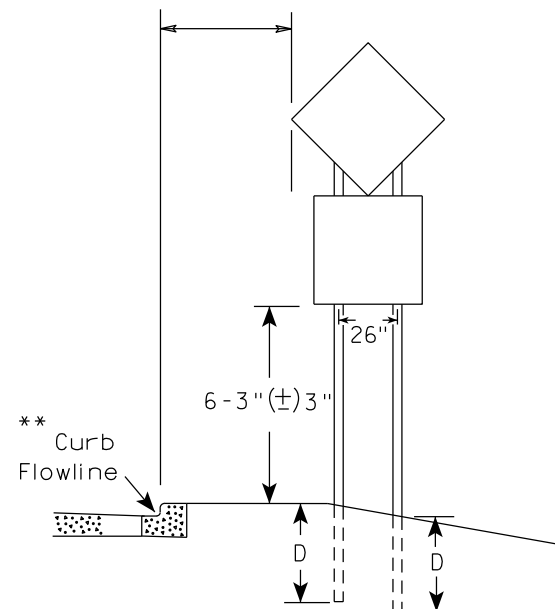
URBAN AREA



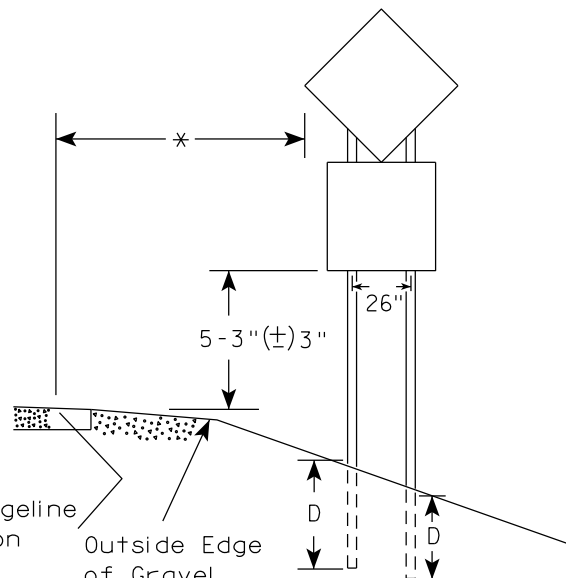
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

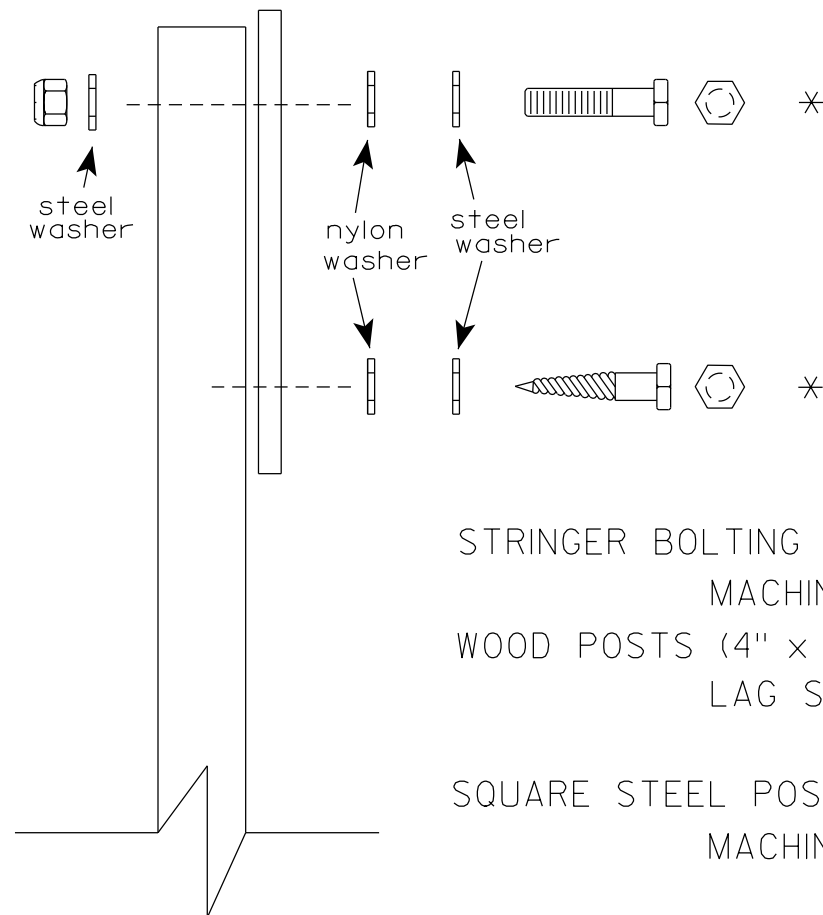
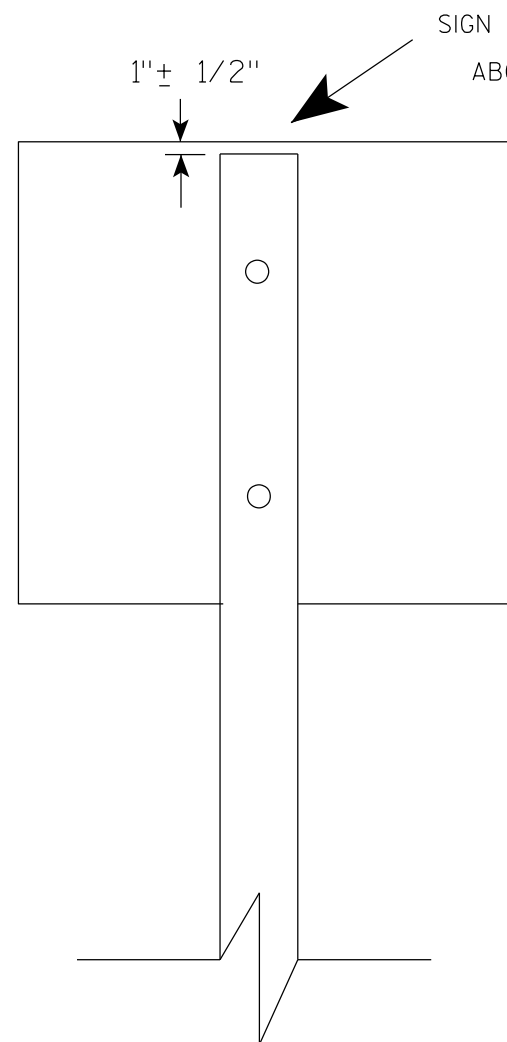
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

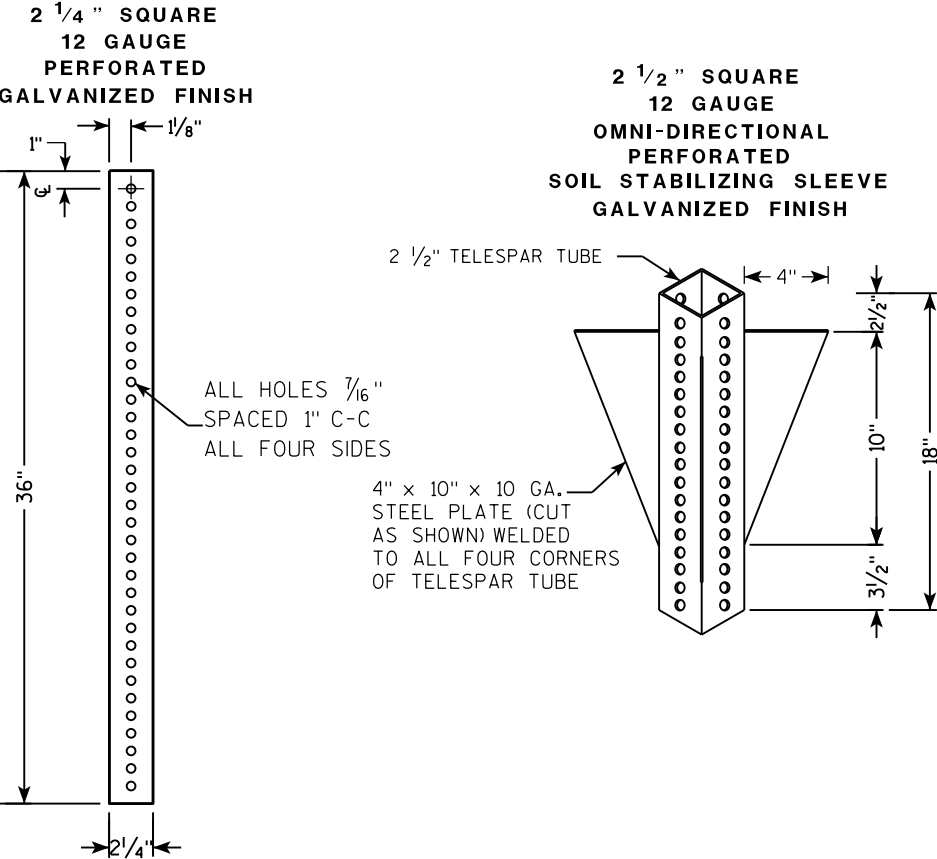
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

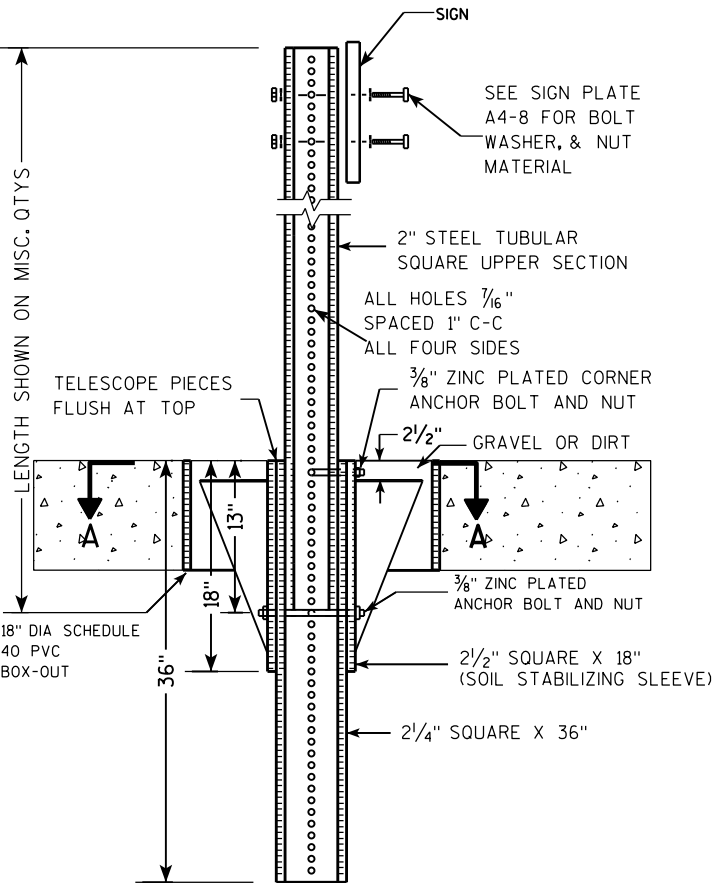
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

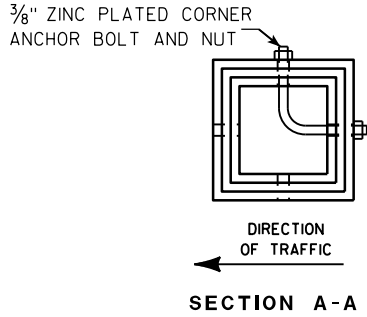
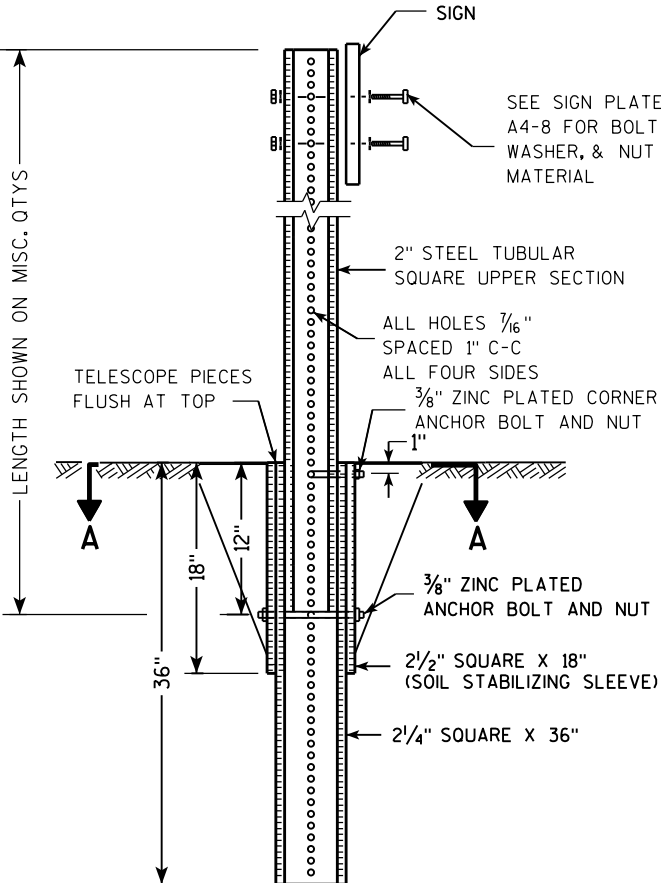
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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).

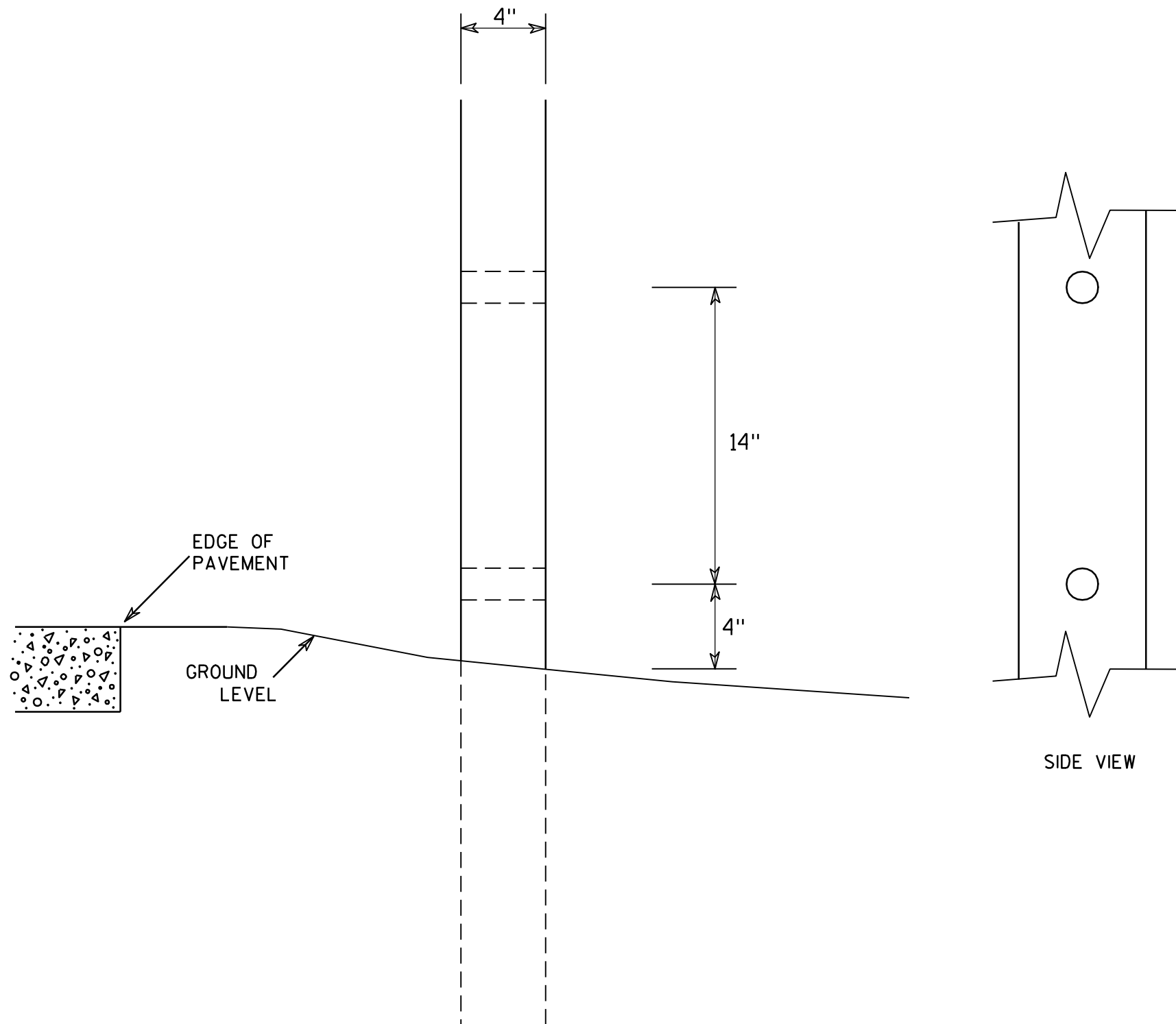
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

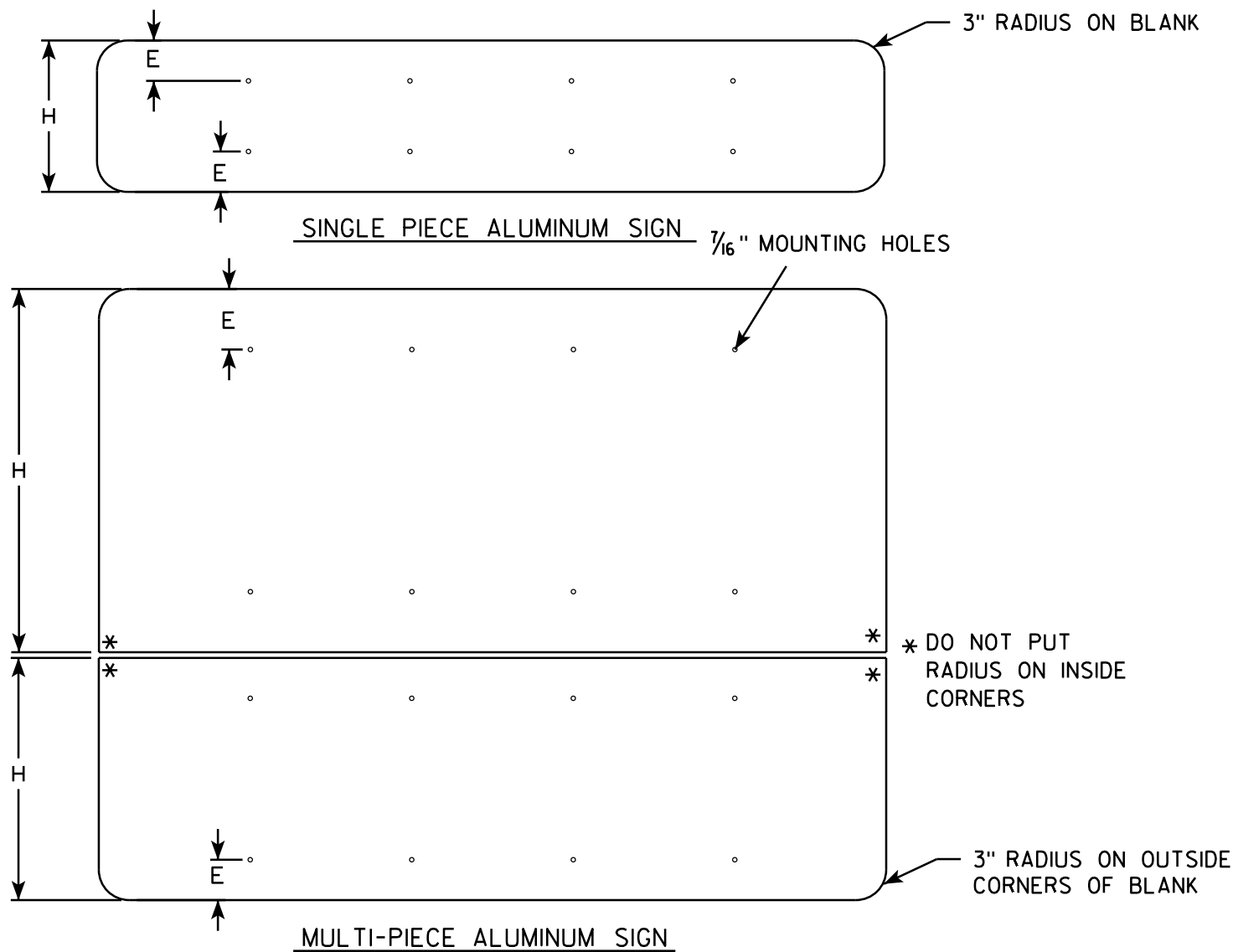
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

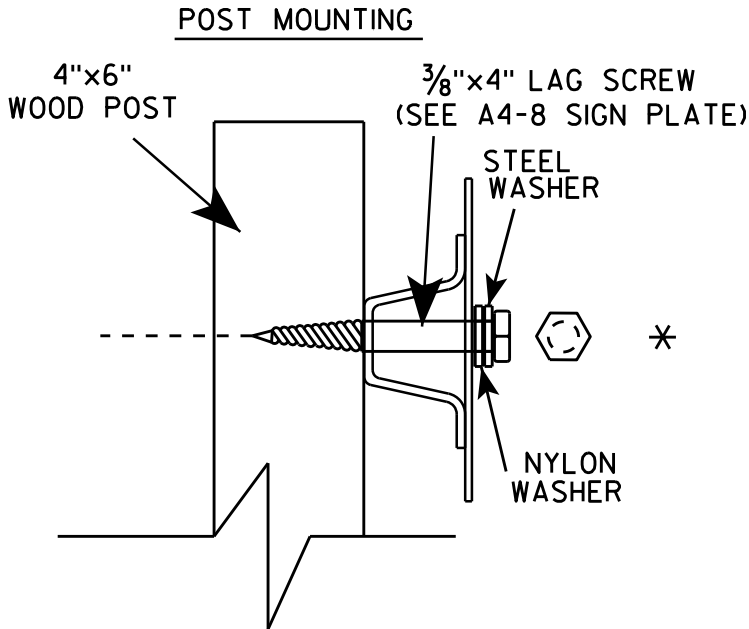
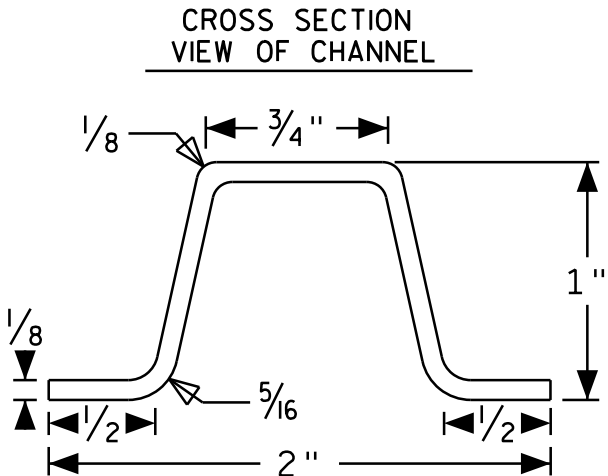
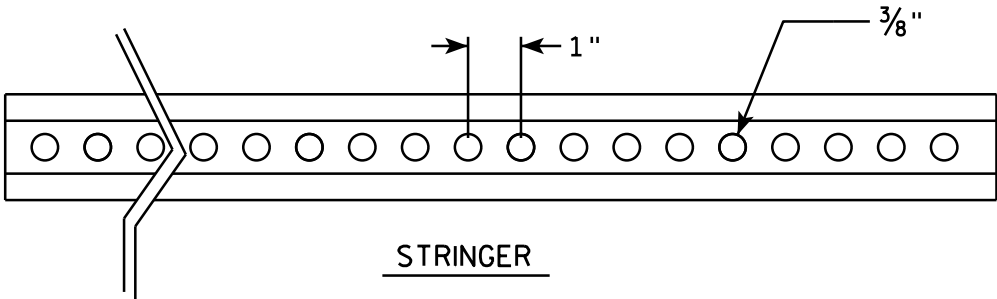
E



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"

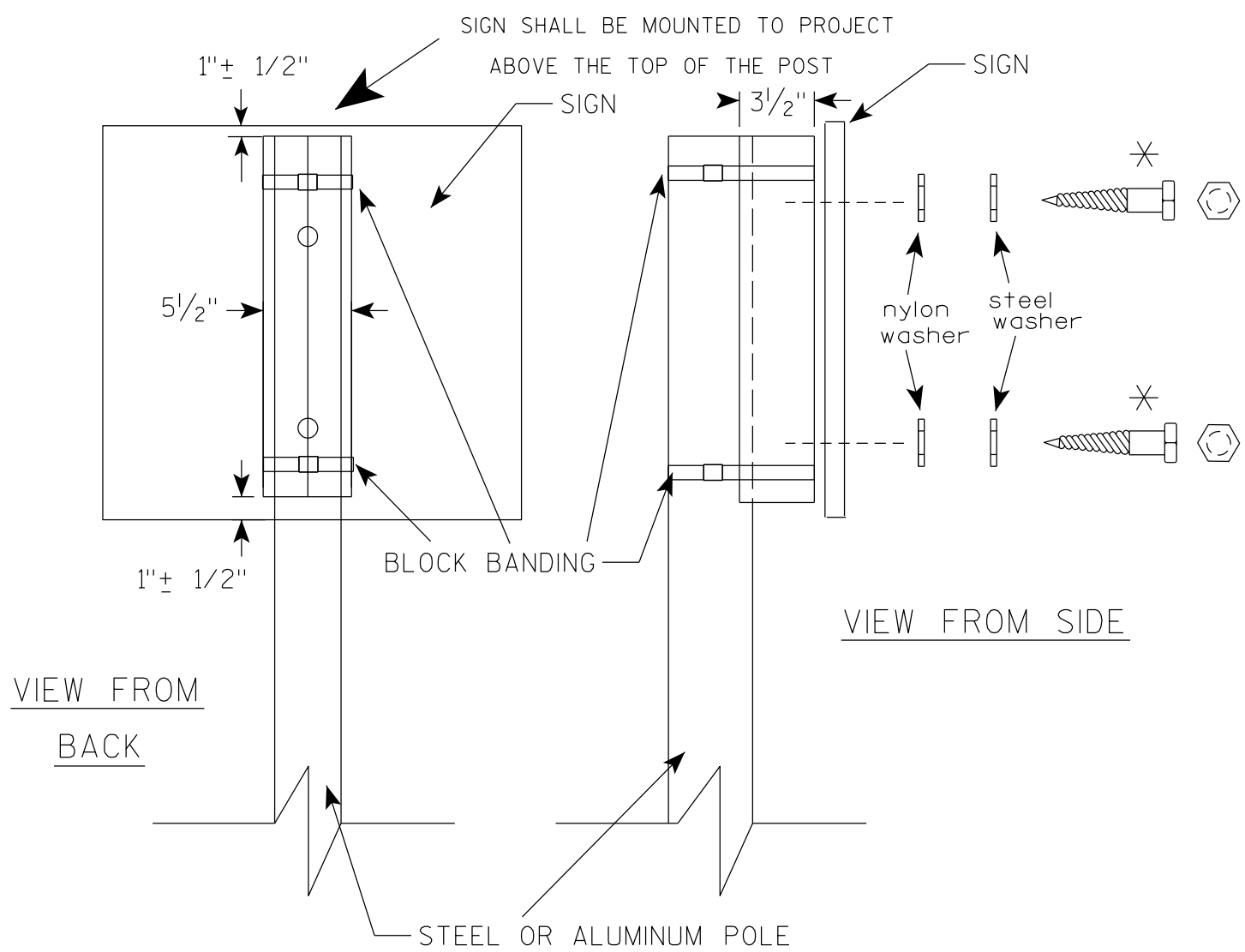


SIGN STRINGER
MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

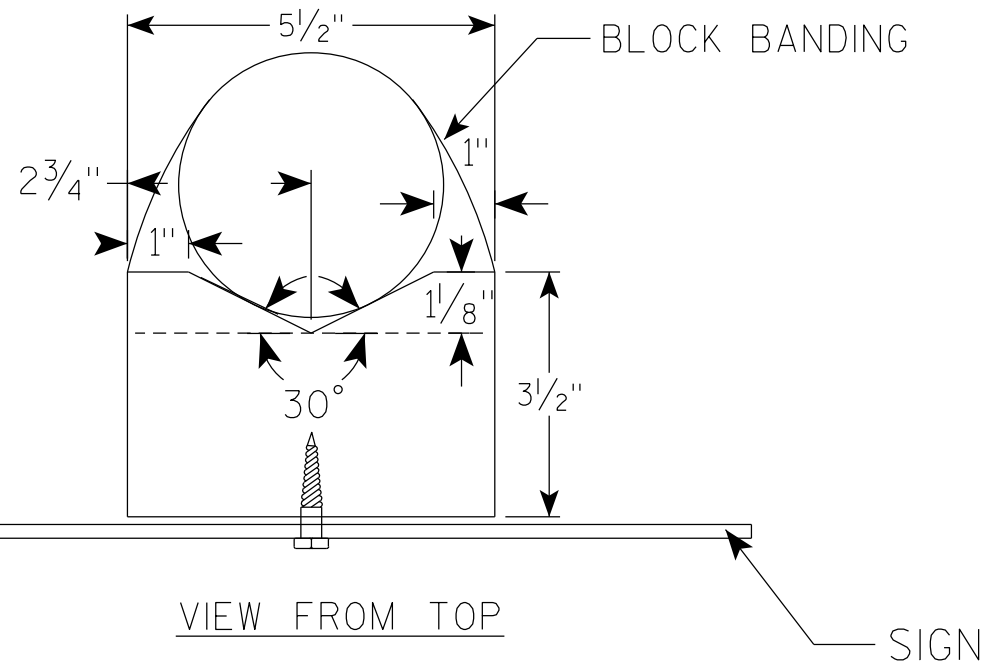
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

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, $\frac{3}{4}$ " 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 $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

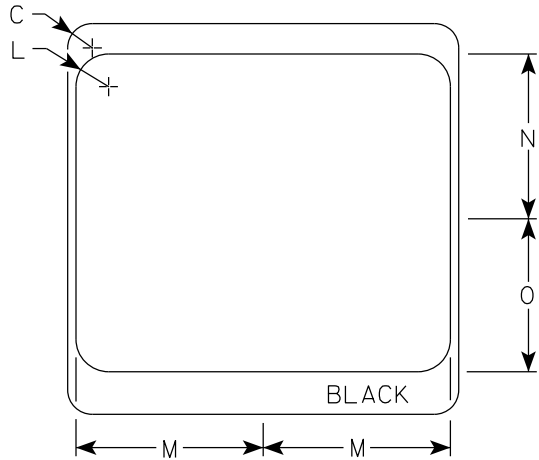
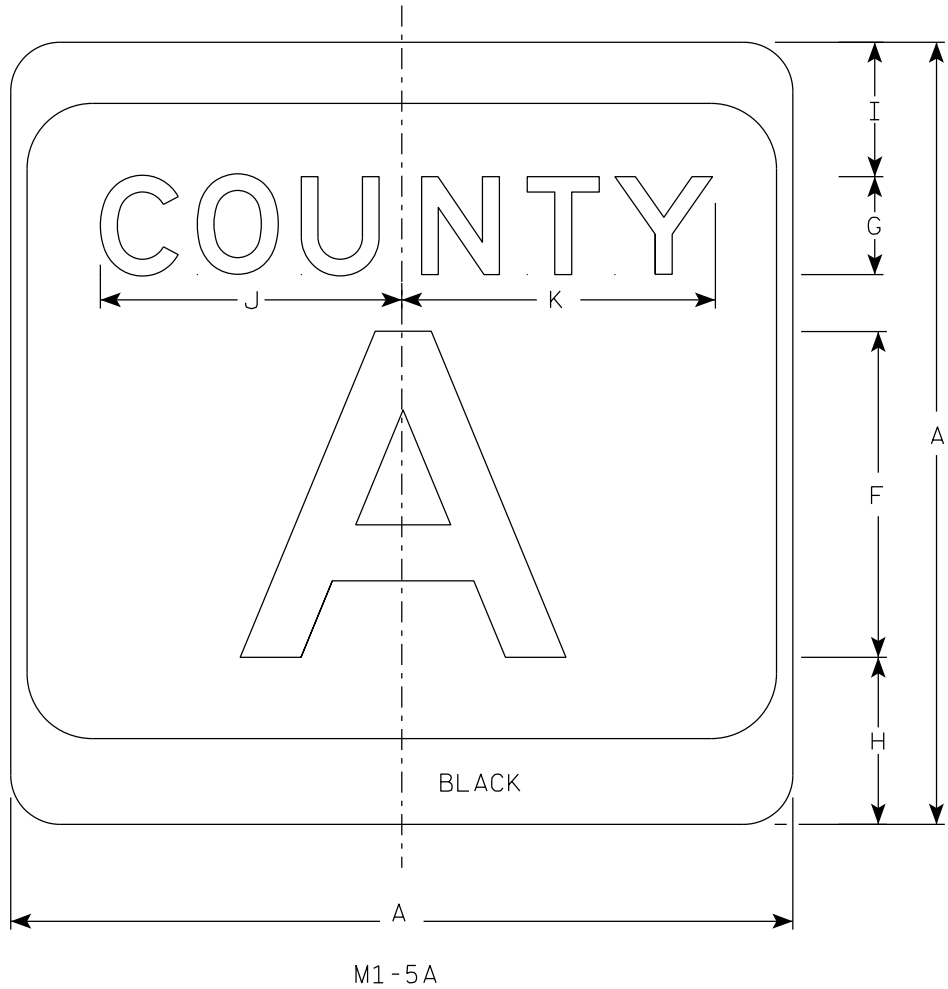
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO:

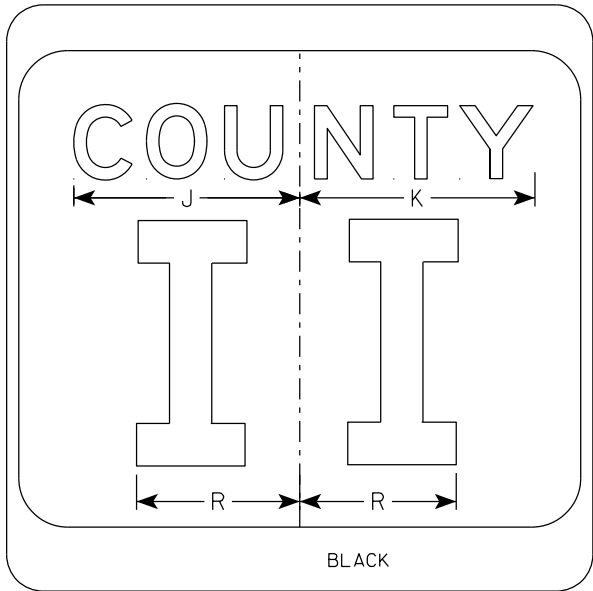
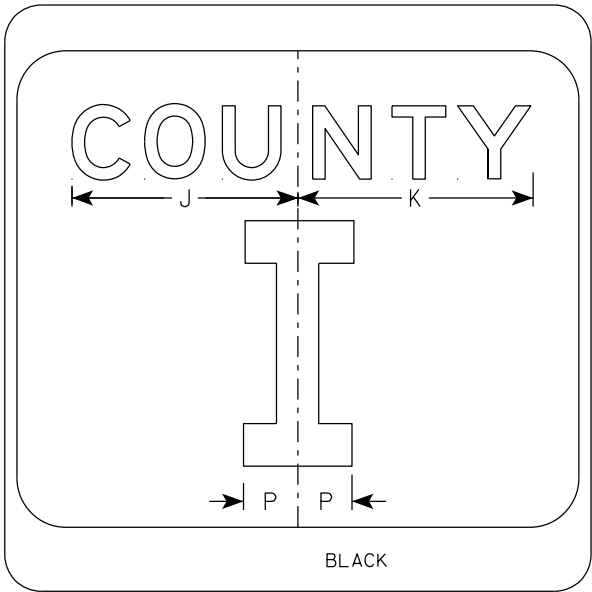
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White & Black
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
Message Series D for 2 letters unless
message is too big then Series C.
Message Series C for 3 letters unless
message is too big then Series B.
5. Substitute appropriate letters & optically
center to achieve proper balance.



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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

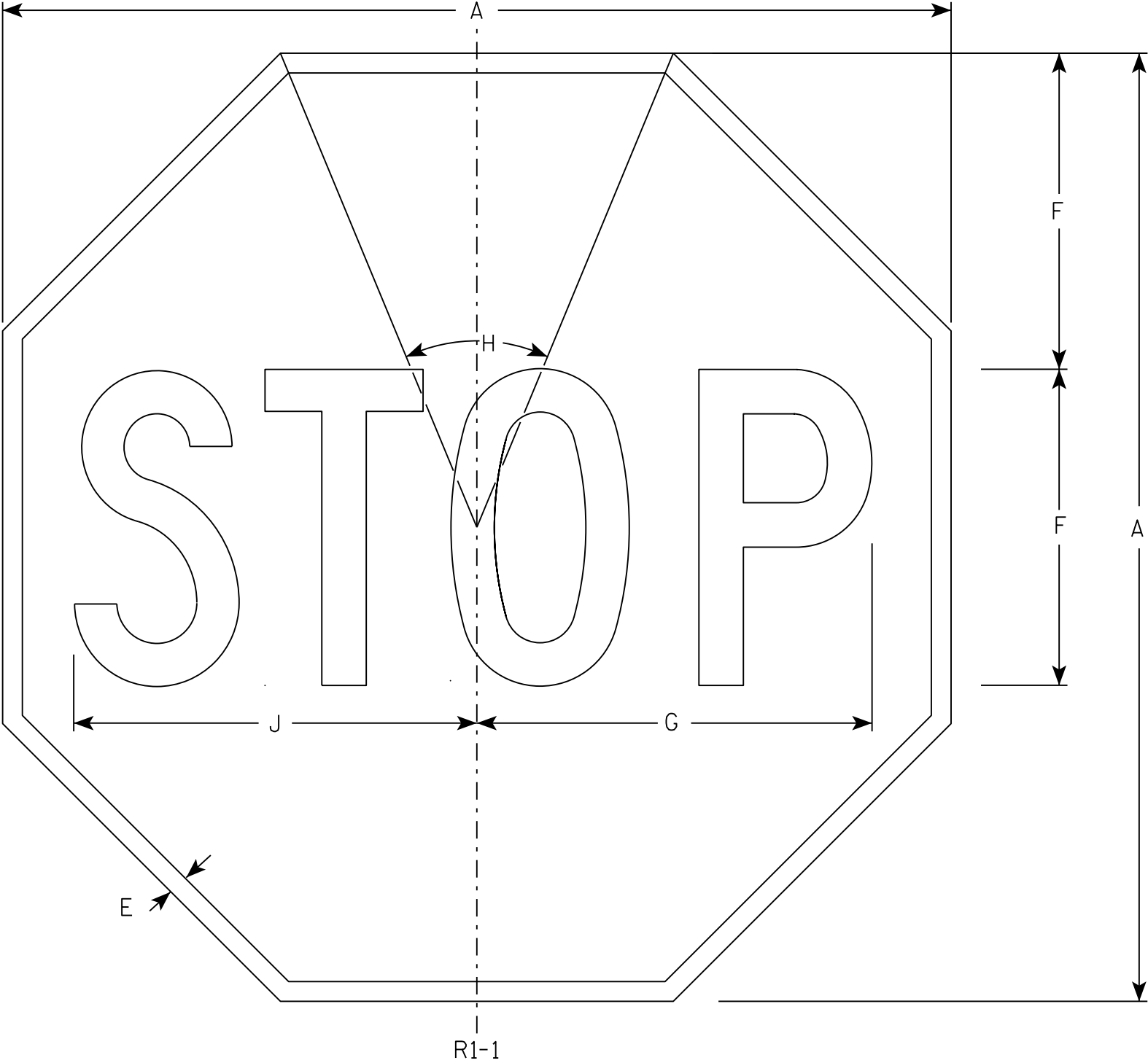
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

7

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

R1-1

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

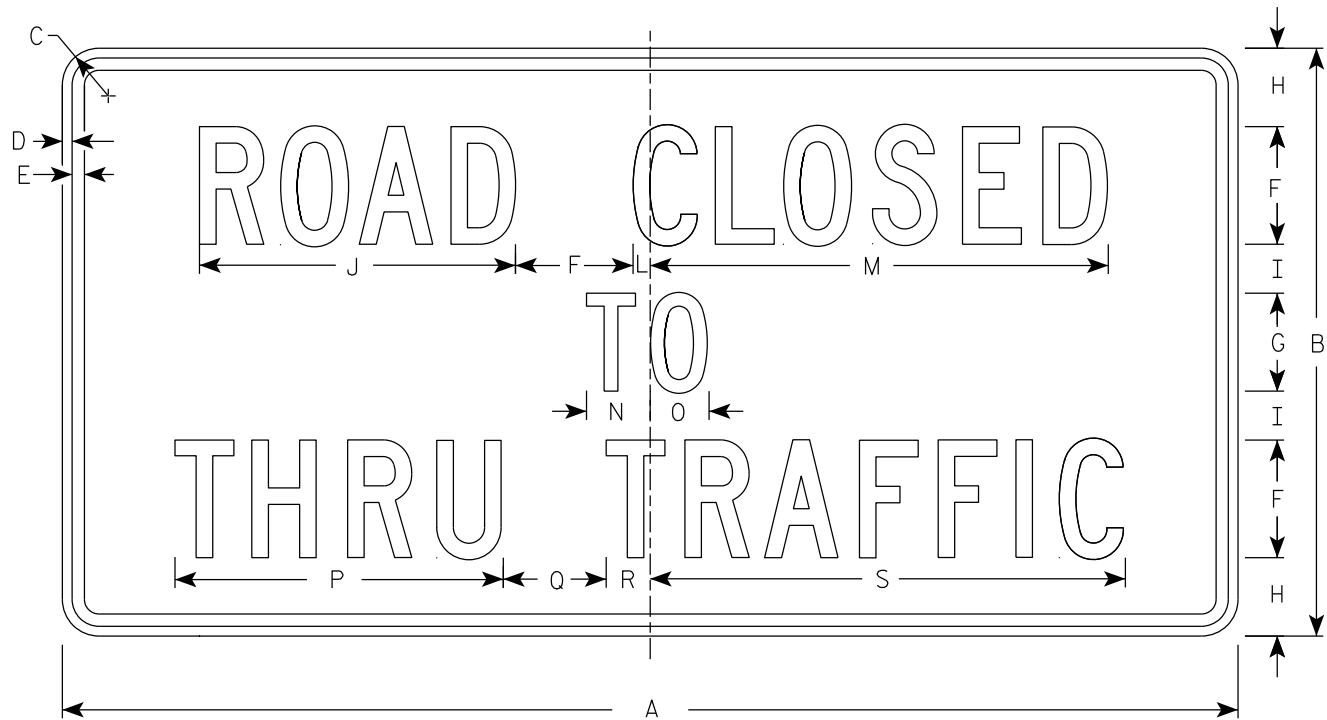
STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

7



R11-4

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
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

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																											
2S	60	30	1 7⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
2M	60	30	1 7⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
3																											
4																											
5																											

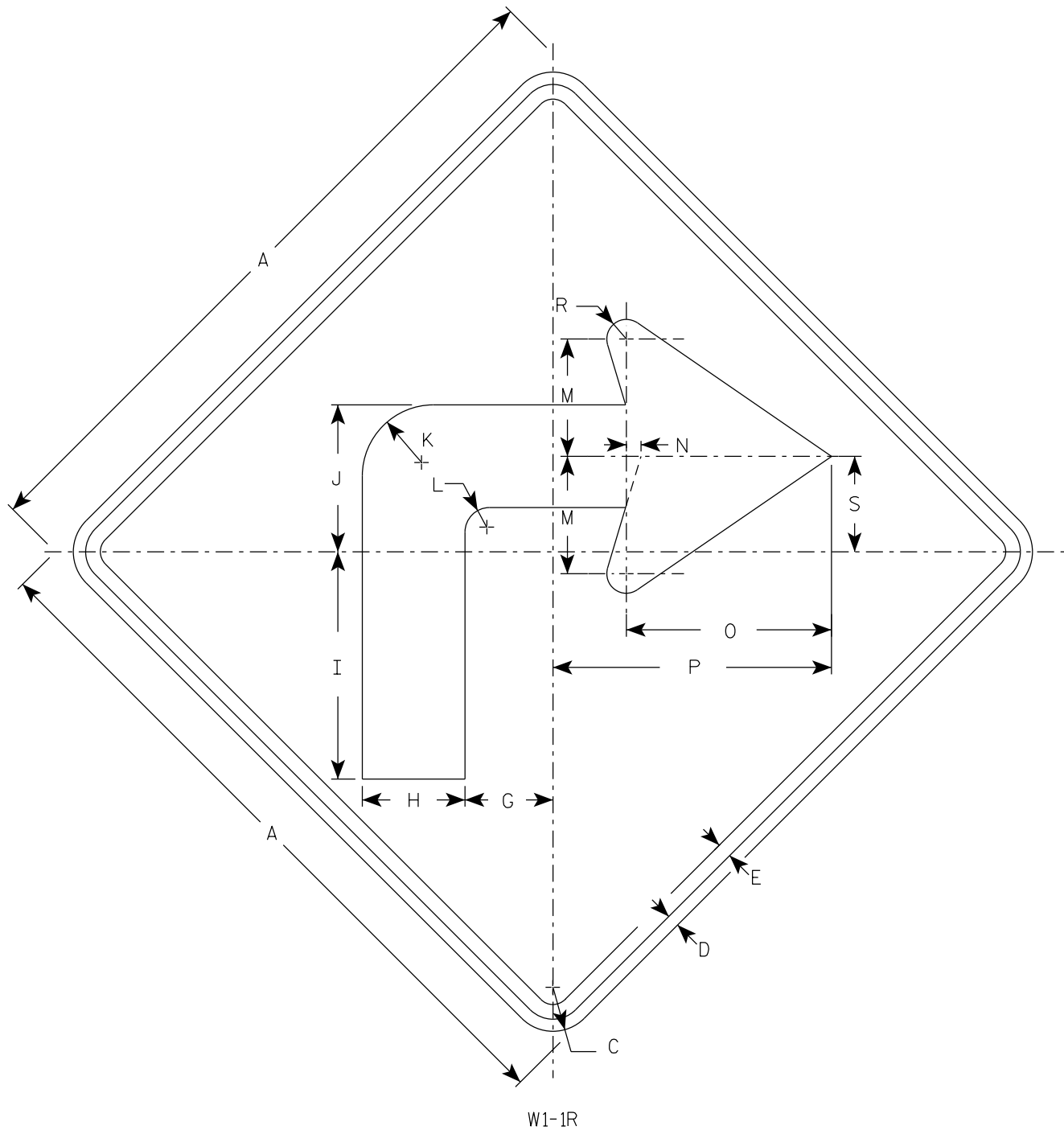
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

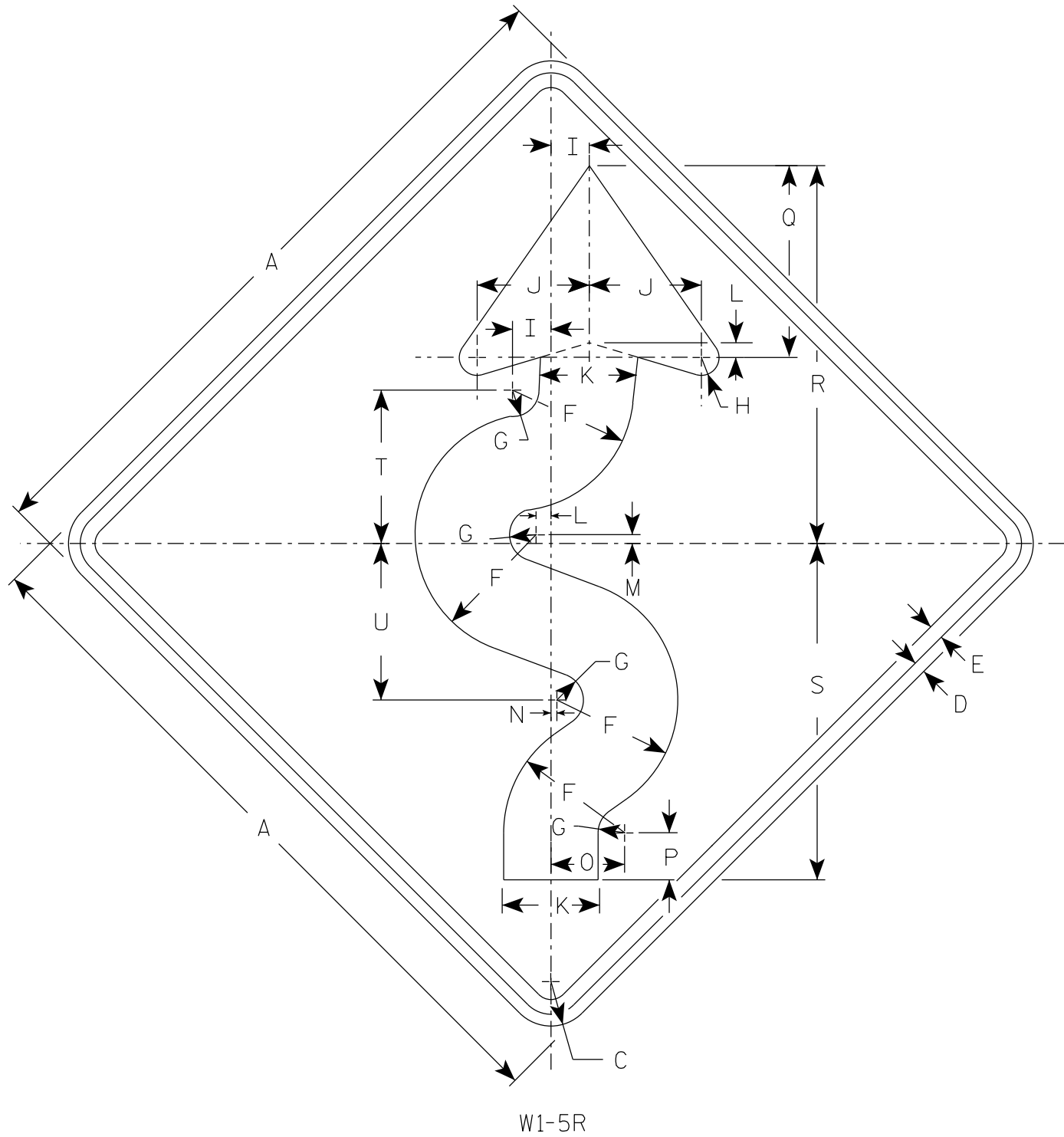
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/2023 PLATE NO. W1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:		E
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NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W1-5L is the same as W1-5R except the arrow is reversed along the vertical centerline.
4. If used with W13-1 of 30 MPH or less, use 36" sign for Size 2S.

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	24		1 1/2	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 7/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		3	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

STANDARD SIGN
W1-5

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/11/2023 PLATE NO. W1-5.10

PROJECT NO: HWY: COUNTY: SHEET NO: E

7

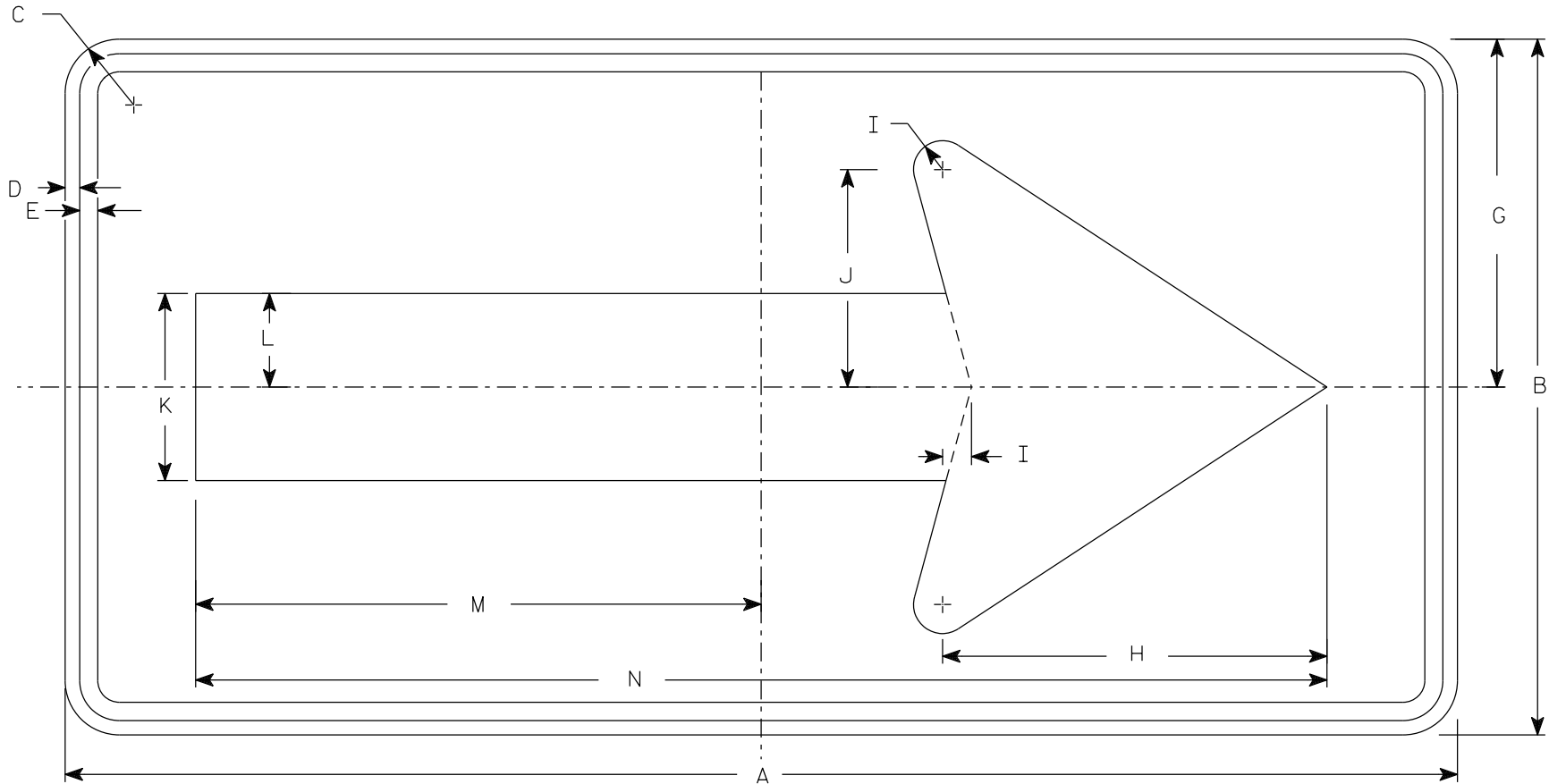
7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:

Background - Yellow

Message - Black



W1-6

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	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	3	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

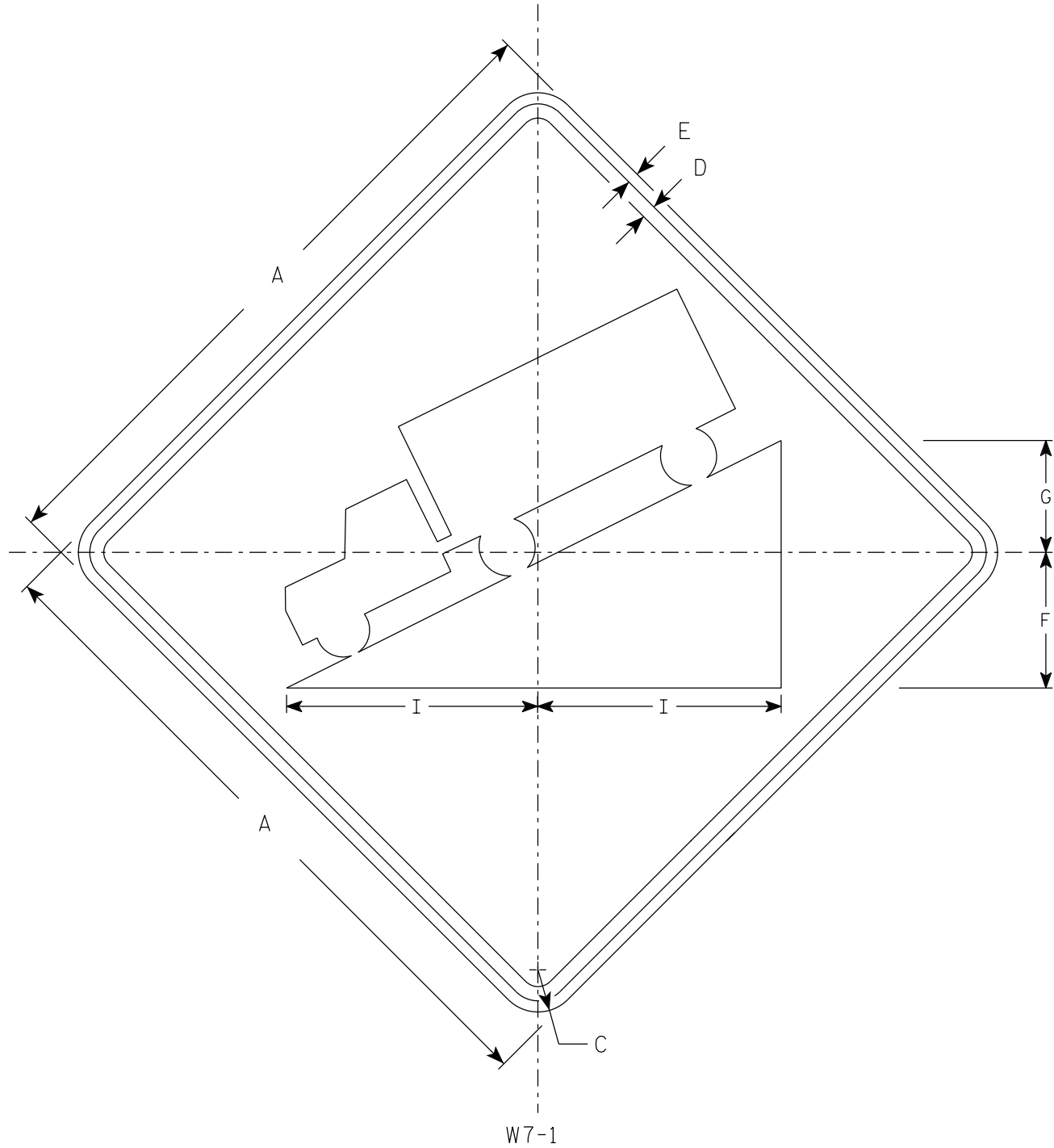
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthae R Rauch*
for State Traffic Engineer

DATE 4/13/2023

PLATE NO. W1-6.9



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - D

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	24		1 1/2	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 7/8	1/2	5/8	6	5		11																		6.25
2M	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		3	3/4	1	9 3/4	8		17 1/2																		16.0

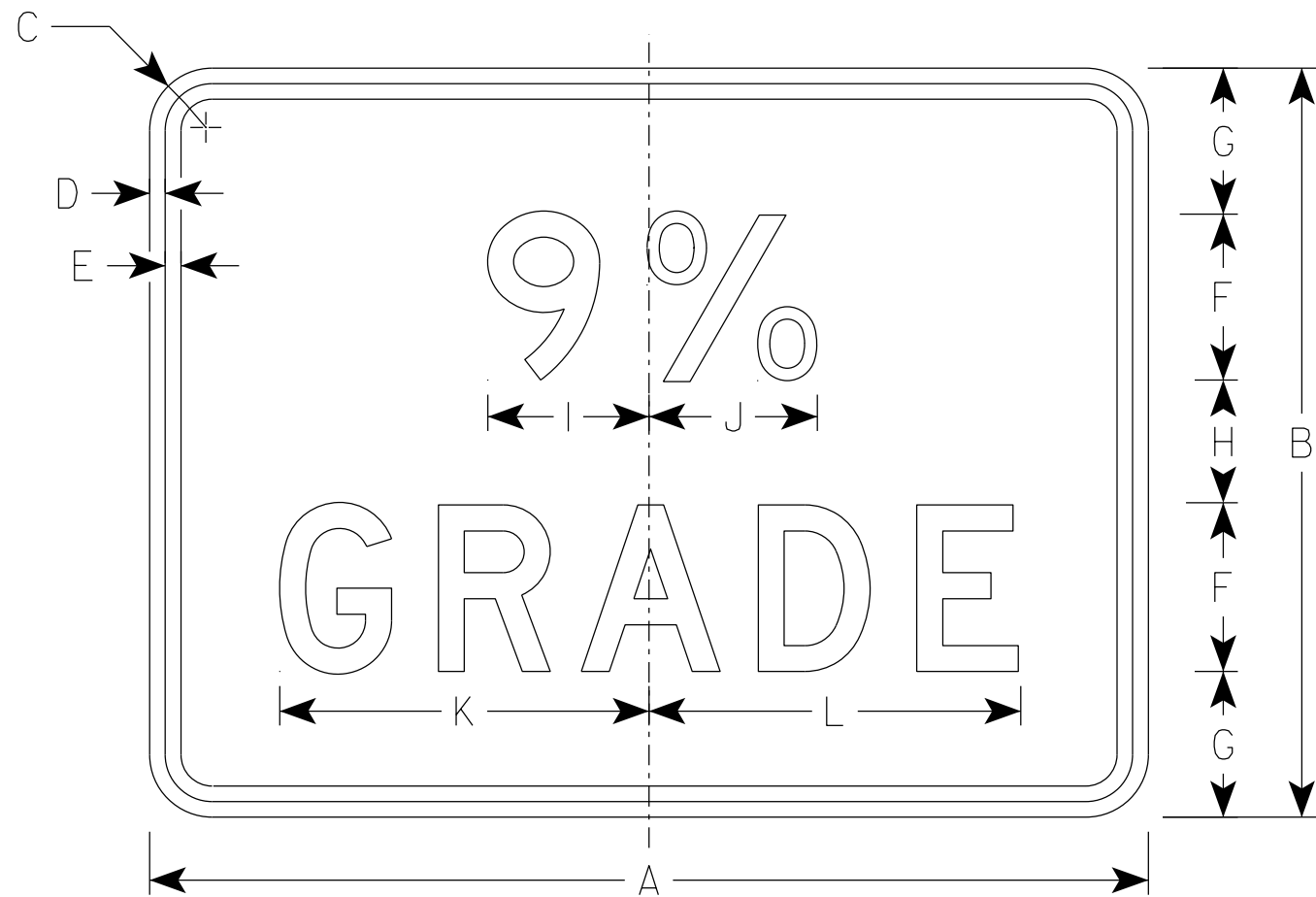
STANDARD SIGN
W7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/6/2023 PLATE NO. W7-1.14

7



W7-3

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - D
- 4. Substitute appropriate numeral and optically adjust spacing to achieve proper balance.

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																											
2S	24	18	1 1/2	3/8	3/8	4	3 1/2	3	3 7/8	4	8 7/8	9															3.0
2M	24	18	1 1/2	3/8	3/8	4	3 1/2	3	3 7/8	4	8 7/8	9															3.0
3																											
4																											
5																											

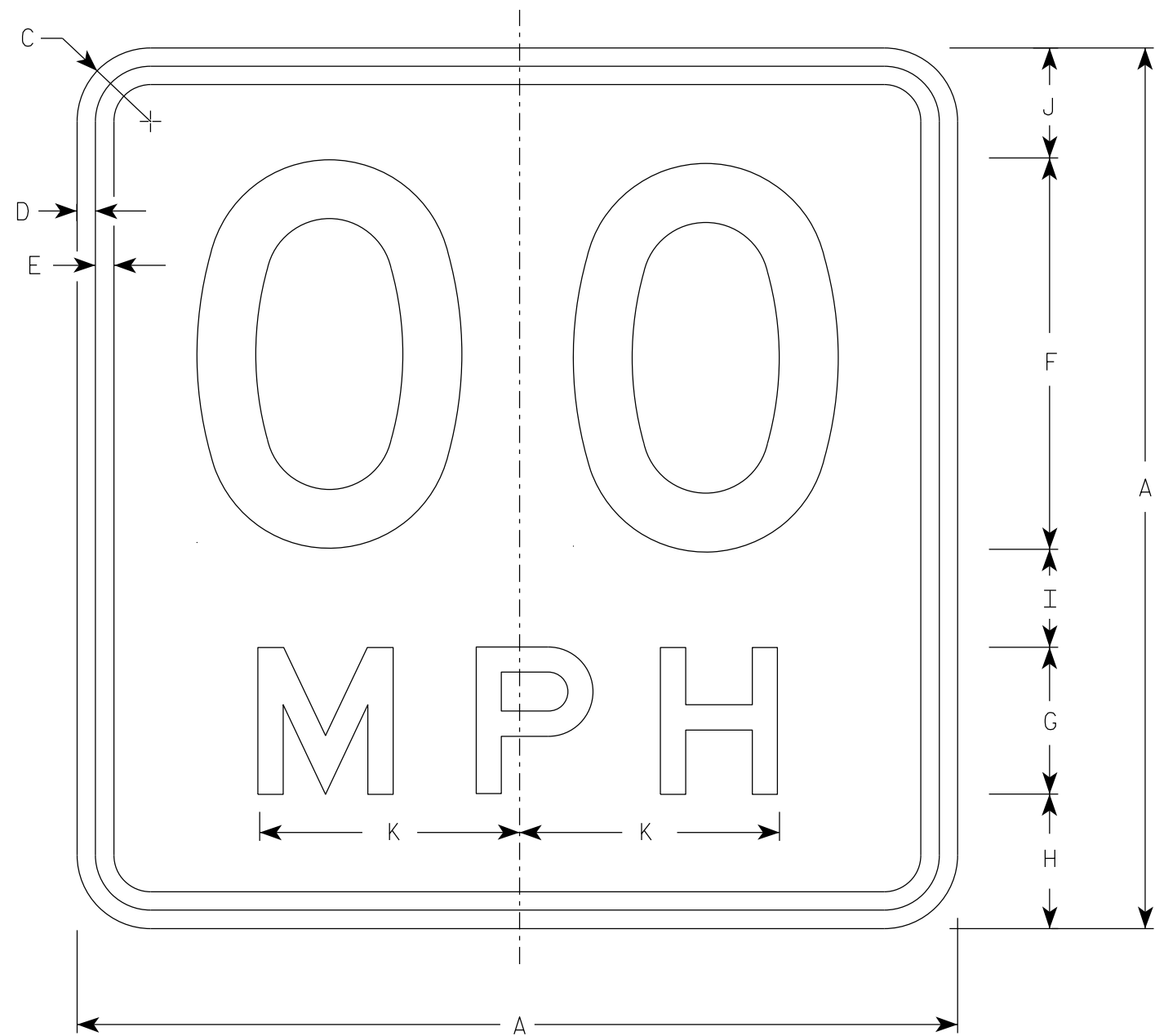
STANDARD SIGN

W7-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/19/2023 PLATE NO. W7-3.6



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
Line 2 is Series E

W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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.
✱ 2S	1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	2	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
✱ 2M	3	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	4	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8															4.00
	5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00
	6	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00

STANDARD SIGN W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

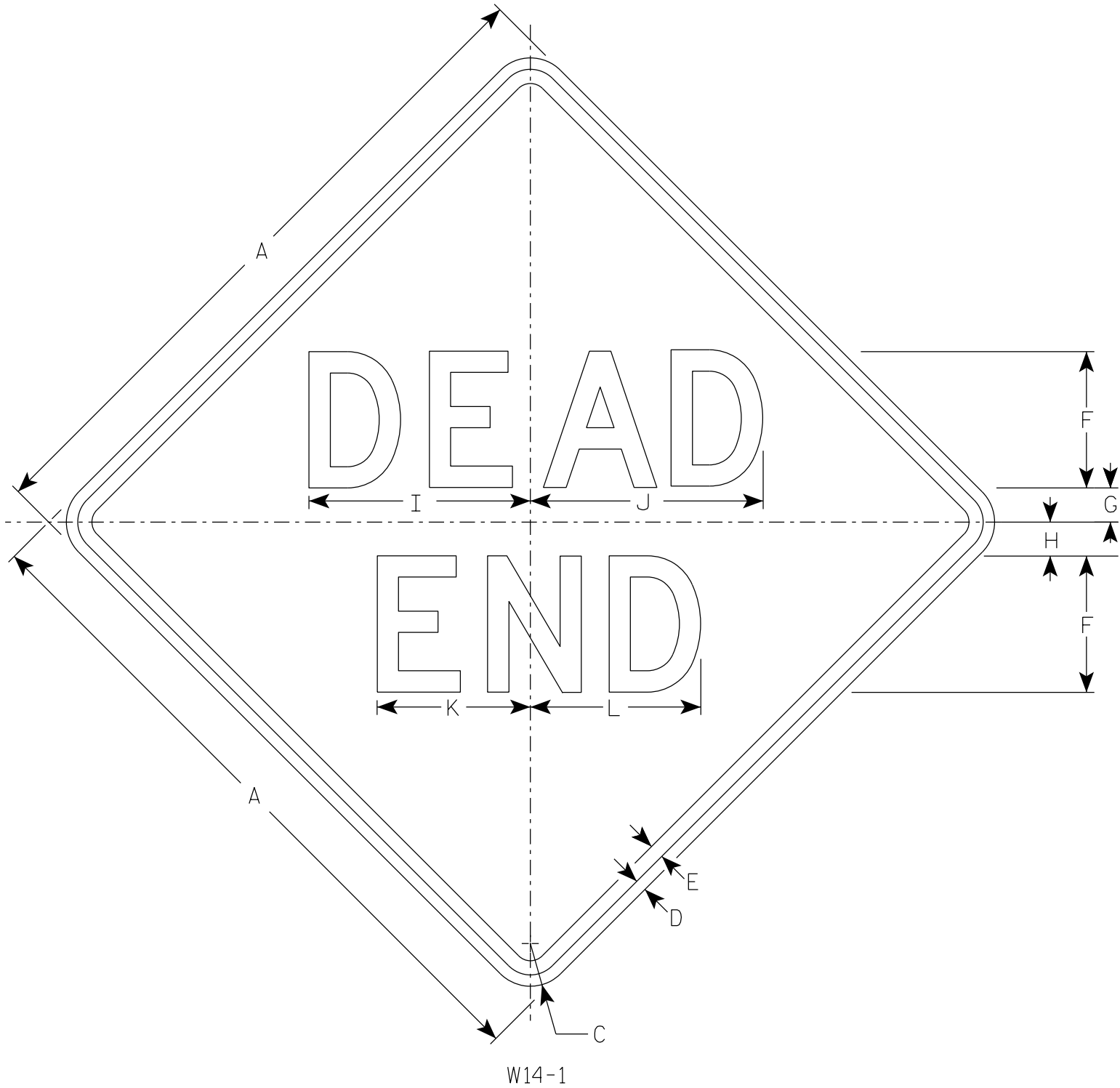
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Message - Black
- 3. Message Series - D

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	Areq. sq. ft.
1	24		1 1/2	3/8	1/2	5	1	2	8 1/4	8 5/8	5 5/8	6 1/4															4.0
2S	30		1 7/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
2M	30		1 7/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
3	36		2 1/4	5/8	3/4	7	2	3	11 3/8	12	7 7/8	8 3/4															9.0
4																											
5																											

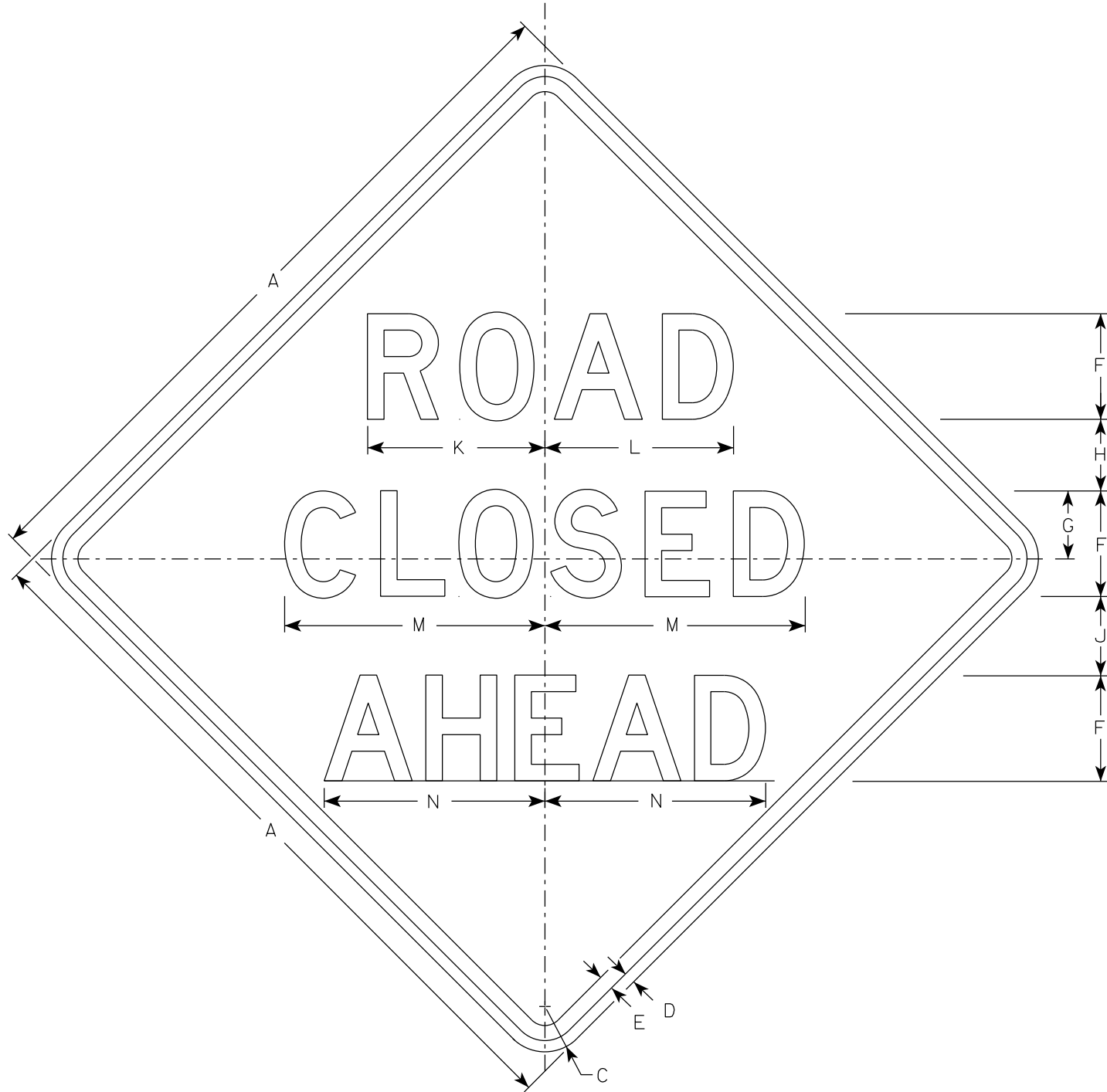
STANDARD SIGN

W14-1

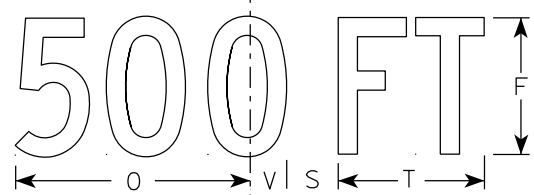
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

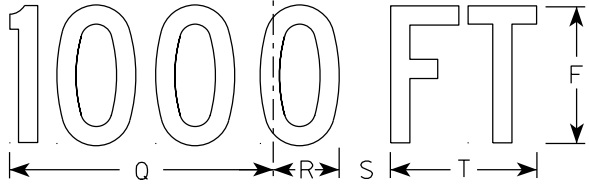
DATE 1/8/2024 PLATE NO. W14-1.8



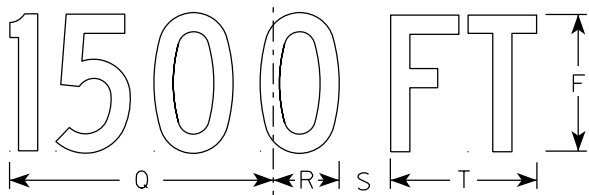
W20-3A



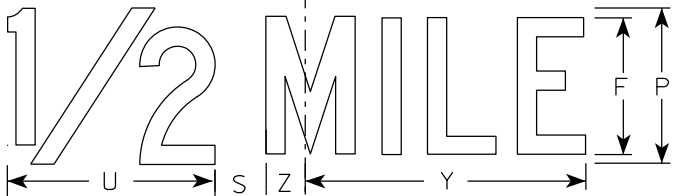
W20-3D



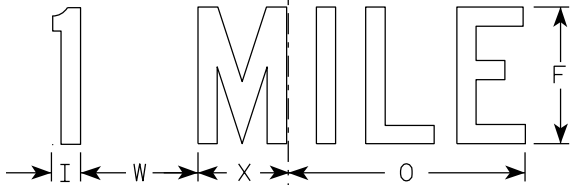
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
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.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

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	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

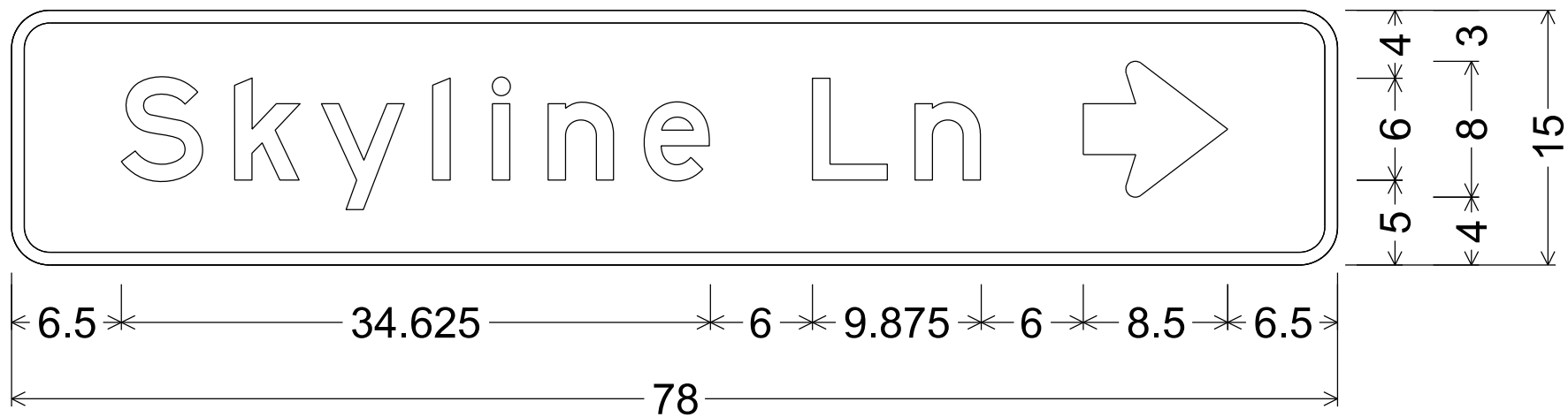
DATE 1/10/2024 PLATE NO. W20-3.8

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border

EARTHWORK DATA																			
STATION	REAL STATION	DISTANCE	AREA (SF)					INCREMENTAL VOL (CY) (UNADJUSTED)					CUMULATIVE VOL (CY)						
			SALVAGED/UNUSABLE PAVEMENT MATERIAL			ROCK EXCAVATION	EBS	SALVAGED/UNUSABLE PAVEMENT MATERIAL			ROCK EXCAVATION	EBS	CUT	EXPANDED FILL	ROCK EXCAVATION	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE	
			CUT	E PAVEMENT	FILL	CUT	E PAVEMENT	FILL	CUT	E PAVEMENT	FILL								
			NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1							NOTE 4
100+80	10080	0	46.52	11.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0
101+00	10100	20	71.08	11.00	0.00	0.00	0.00	44	8	0	0	0	0	44	0	0	0	0	35
102+00	10200	100	67.38	11.00	0.00	0.00	0.00	256	41	0	0	0	0	300	0	0	0	0	251
103+00	10300	100	59.52	11.00	0.00	0.00	0.00	235	41	0	0	0	0	535	0	0	0	0	445
104+00	10400	100	52.88	11.00	6.93	0.00	0.00	208	41	13	0	0	0	743	16	0	0	0	597
105+00	10500	100	51.79	11.00	23.90	0.00	0.00	194	41	57	0	0	0	937	87	0	0	0	678
105+06	10506.35	6	60.29	11.00	24.62	0.00	0.00	13	3	6	0	0	0	950	95	0	0	0	682
105+19	10519.47	13	39.59	11.00	21.21	0.00	0.00	24	5	11	0	0	0	974	108	0	0	0	687
106+00	10600	81	62.41	11.00	2.25	0.00	0.00	152	33	35	0	0	0	1,127	152	0	0	0	762
107+00	10700	100	71.80	11.00	0.00	0.00	0.00	249	41	4	0	0	0	1,375	157	0	0	0	965
108+00	10800	100	37.14	11.00	0.06	0.00	0.00	202	41	0	0	0	0	1,577	158	0	0	0	1,126
109+00	10900	100	33.28	11.00	0.00	0.00	0.00	130	41	0	0	0	0	1,707	158	0	0	0	1,215
109+43	10943.47	43	36.58	11.00	0.00	0.00	0.00	56	18	0	0	0	0	1,763	158	0	0	0	1,254
110+00	11000	57	56.96	11.00	0.00	0.00	0.00	98	23	0	0	0	0	1,861	158	0	0	0	1,329
110+65	11064.9	65	44.50	11.00	0.09	0.00	0.00	122	26	0	0	0	0	1,983	158	0	0	0	1,424
110+90	11089.93	25	33.74	11.00	0.00	0.00	0.00	36	10	0	0	0	0	2,020	158	0	0	0	1,450
111+00	11100	10	32.30	11.00	0.00	0.00	0.00	12	4	0	0	0	0	2,032	158	0	0	0	1,458
111+15	11114.95	15	35.48	11.00	0.00	0.00	0.00	19	6	0	0	0	0	2,051	158	0	0	0	1,471
112+00	11200	85	0.00	11.00	43.92	0.00	0.00	56	35	69	0	0	0	2,107	244	0	0	0	1,406
113+00	11300	100	29.12	11.00	12.08	0.00	0.00	54	41	104	0	0	0	2,160	374	0	0	0	1,289
114+00	11400	100	63.12	11.00	0.00	0.00	0.00	171	41	22	0	0	0	2,331	402	0	0	0	1,392
115+00	11500	100	49.49	11.00	9.76	0.00	0.00	209	41	18	0	0	0	2,540	425	0	0	0	1,537
116+00	11600	100	65.99	11.00	1.23	0.00	0.00	214	41	20	0	0	0	2,754	450	0	0	0	1,684
117+00	11700	100	78.50	11.00	3.05	0.00	0.00	268	41	8	0	0	0	3,021	460	0	0	0	1,901
117+72	11772.39	72	152.73	11.00	1.67	0.00	0.00	310	29	6	0	0	0	3,331	468	0	0	0	2,174
117+89	11788.56	16	73.04	11.00	3.31	0.00	0.00	68	7	1	0	0	0	3,399	470	0	0	0	2,233
118+00	11800	11	30.19	11.00	4.05	0.00	0.00	22	5	2	0	0	0	3,421	472	0	0	0	2,248
119+00	11900	100	61.71	11.00	0.00	0.00	0.00	170	41	8	0	0	0	3,591	481	0	0	0	2,368
120+00	12000	100	84.47	11.00	0.02	0.00	0.00	271	41	0	0	0	0	3,862	481	0	0	0	2,598
121+00	12100	100	72.34	11.00	0.00	0.00	0.00	290	41	0	0	0	0	4,152	481	0	0	0	2,848
122+00	12200	100	64.21	11.00	1.50	0.00	0.00	253	41	3	0	0	0	4,405	485	0	0	0	3,057
122+48	12248.24	48	63.06	11.00	6.57	0.00	0.00	114	20	7	0	0	0	4,519	494	0	0	0	3,142
122+64	12264.31	16	69.26	11.00	3.23	0.00	0.00	39	7	3	0	0	0	4,558	497	0	0	0	3,171
123+00	12300	36	86.96	11.00	2.13	0.00	0.00	103	15	4	0	0	0	4,661	502	0	0	0	3,255
124+00	12400	100	40.92	11.00	1.19	0.00	0.00	237	41	6	0	0	0	4,898	509	0	0	0	3,443
125+00	12500	100	43.80	11.00	0.00	0.00	0.00	157	41	2	0	0	0	5,055	512	0	0	0	3,557
126+00	12600	100	136.99	11.00	0.00	0.00	0.00	335	41	0	0	0	0	5,390	512	0	0	0	3,851
126+02	12602.41	2	140.65	11.00	0.00	0.00	0.00	12	1	0	0	0	0	5,402	512	0	0	0	3,862
126+24	12623.53	21	53.69	11.00	0.00	0.00	0.00	76	9	0	0	0	0	5,478	512	0	0	0	3,930
127+00	12700	76	70.43	11.00	0.00	0.00	0.00	176	31	0	0	0	0	5,654	512	0	0	0	4,074
127+30	12730	30	45.74	11.00	0.06	0.00	0.00	65	12	0	0	0	0	5,718	512	0	0	0	4,127
128+00	12800	70	19.01	11.00	1.40	0.00	309.08	84	29	2	0	401		5,802	514	0	521	321	4,580
129+00	12900	100	59.68	11.00	2.12	0.00	257.78	146	41	7	0	1050		5,948	523	0	1,886	1,160	5,727

CONTINUED ON NEXT PAGE

EARTHWORK DATA																		
STATION	REAL STATION	DISTANCE	AREA (SF)					INCREMENTAL VOL (CY) (UNADJUSTED)					CUMULATIVE VOL (CY)					
			SALVAGED/UNUSABLE PAVEMENT MATERIAL			ROCK EXCAVATION	EBS	SALVAGED/UNUSABLE PAVEMENT MATERIAL			ROCK EXCAVATION	EBS	CUT	EXPANDED FILL	ROCK EXCAVATION	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
			CUT	E PAVEMENT	FILL	CUT	E PAVEMENT	FILL	CUT	E PAVEMENT	FILL							
			NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1						
130+00	13000	100	34.79	11.00	0.00	0.00	310.85	175	41	4	0	1053	6,123	528	0	3,254	2,003	6,909
130+53	13052.96	53	52.83	11.00	0.21	0.00	295.51	86	22	0	0	595	6,209	528	0	4,028	2,478	7,568
130+69	13068.91	16	20.88	11.00	0.00	0.00	243.70	22	6	0	0	159	6,231	528	0	4,235	2,606	7,742
131+00	13100	31	27.79	11.00	0.05	0.00	232.15	28	13	0	0	274	6,259	528	0	4,591	2,825	8,032
132+00	13200	100	56.51	11.00	0.00	0.00	247.61	156	41	0	0	888	6,415	528	0	5,746	3,536	9,035
133+00	13300	100	22.56	11.00	1.45	0.00	260.61	146	41	3	0	941	6,561	531	0	6,969	4,289	10,079
134+00	13400	100	49.40	11.00	0.00	0.00	252.50	133	41	3	0	950	6,694	535	0	8,204	5,049	11,118
135+00	13500	100	40.63	11.00	0.00	0.00	254.99	167	41	0	0	940	6,861	535	0	9,426	5,801	12,184
135+27	13526.55	27	31.29	11.00	2.36	0.00	246.69	35	11	1	0	247	6,897	536	0	9,747	5,998	12,454
135+41	13540.98	14	26.55	11.00	3.48	0.00	252.94	15	6	2	0	134	6,912	538	0	9,920	6,105	12,595
136+00	13600	59	31.73	11.00	3.59	0.00	263.62	64	24	8	0	565	6,976	548	0	10,654	6,557	13,190
137+00	13700	100	48.56	11.00	9.29	0.00	236.01	149	41	24	0	925	7,124	578	0	11,857	7,297	14,193
137+60	13759.96	60	165.06	11.00	13.65	0.00	227.07	237	24	25	0	514	7,362	609	0	12,526	7,708	14,888
137+81	13781.12	21	128.79	11.00	10.52	0.00	220.30	115	9	9	0	175	7,477	621	0	12,754	7,848	15,158
138+00	13800	19	112.64	11.00	6.40	0.00	214.22	84	8	6	0	152	7,561	629	0	12,951	7,970	15,379
138+50	13850	50	124.46	11.00	1.16	0.00	203.11	220	20	7	0	386	7,781	637	0	13,453	8,279	15,956
139+00	13900	100	151.49	11.00	0.22	0.00	0.00	480	41	10	0	515	8,260	649	0	14,123	8,691	16,898
139+20	13920	20	134.74	11.00	0.86	0.00	0.00	106	8	0	0	0	8,366	650	0	14,123	8,691	16,996
140+00	14000	80	68.18	11.00	19.42	0.00	0.00	301	33	30	0	0	8,667	687	0	14,123	8,691	17,226
140+73	14072.56	73	79.24	11.00	20.73	0.00	0.00	198	30	54	0	0	8,865	755	0	14,123	8,691	17,327
140+96	14096.09	24	46.83	11.00	8.63	0.00	0.00	55	10	13	0	0	8,920	771	0	14,123	8,691	17,357
141+00	14100	4	36.70	11.00	8.53	0.00	0.00	6	2	1	0	0	8,926	772	0	14,123	8,691	17,359
142+00	14200	100	44.87	11.00	0.02	0.00	0.00	151	41	16	0	0	9,077	792	0	14,123	8,691	17,450
143+00	14300	100	45.16	11.00	2.19	0.00	144.76	167	41	4	0	268	9,244	797	0	14,472	8,906	17,839
143+53	14353.26	53	95.12	11.00	11.37	0.00	265.72	138	22	13	0	405	9,382	814	0	14,998	9,230	18,344
143+80	14379.6	26	54.09	11.00	0.00	0.00	262.34	73	11	6	0	258	9,455	821	0	15,333	9,436	18,656
144+00	14400	20	23.30	11.00	0.46	0.00	239.90	29	8	0	0	190	9,484	821	0	15,579	9,587	18,867
144+66	14466.49	66	2.92	11.00	9.17	0.00	256.82	32	27	12	0	612	9,517	836	0	16,375	10,077	19,469
144+72	14472.18	6	2.40	11.00	9.71	0.00	257.31	1	2	2	0	54	9,517	839	0	16,445	10,120	19,519
145+00	14500	28	16.03	11.00	10.31	0.00	296.00	9	11	10	0	285	9,527	851	0	16,816	10,348	19,789
145+32	14532.25	32	43.90	11.00	9.60	0.00	268.01	36	13	12	0	337	9,562	866	0	17,253	10,618	20,134
145+42	14541.97	10	36.35	11.00	2.60	0.00	264.16	14	4	2	0	96	9,577	869	0	17,378	10,694	20,237
146+00	14600	58	31.71	11.00	0.15	0.00	180.66	73	24	3	0	478	9,650	873	0	17,999	11,077	20,761
147+00	14700	100	142.97	11.00	0.86	0.00	0.00	323	41	2	0	335	9,973	875	0	18,434	11,344	21,376
148+00	14800	100	68.46	11.00	10.10	0.00	0.00	392	41	20	0	0	10,365	900	0	18,434	11,344	21,701
149+00	14900	100	80.97	11.00	7.15	0.00	0.00	277	41	32	0	0	10,642	940	0	18,434	11,344	21,898
150+00	15000	100	91.47	11.00	2.06	0.00	0.00	319	41	17	0	0	10,961	962	0	18,434	11,344	22,155
151+00	15100	100	52.94	11.00	1.25	0.00	0.00	267	41	6	0	0	11,228	969	0	18,434	11,344	22,374
152+00	15200	100	10.87	11.00	14.64	0.00	0.00	118	41	29	0	0	11,347	1,006	0	18,434	11,344	22,414
153+00	15300	100	0.62	11.00	29.29	0.00	0.00	21	41	81	0	0	11,368	1,108	0	18,434	11,344	22,293
153+10	15309.94	10	2.24	11.00	29.17	0.00	0.00	1	4	11	0	0	11,368	1,121	0	18,434	11,344	22,276
153+21	15320.74	11	14.62	11.00	24.94	0.00	0.00	3	4	11	0	0	11,372	1,135	0	18,434	11,344	22,262
154+00	15400	1100	36.28	11.00	0.19	0.00	0.00	1736	448	357	0	0	13,108	1,581	0	18,434	11,344	23,104
155+00	15500	100	65.71	11.00	0.00	0.00	0.00	189	41	0	0	0	13,297	1,581	0	18,434	11,344	23,252

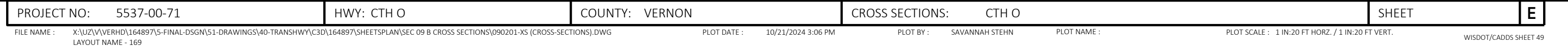
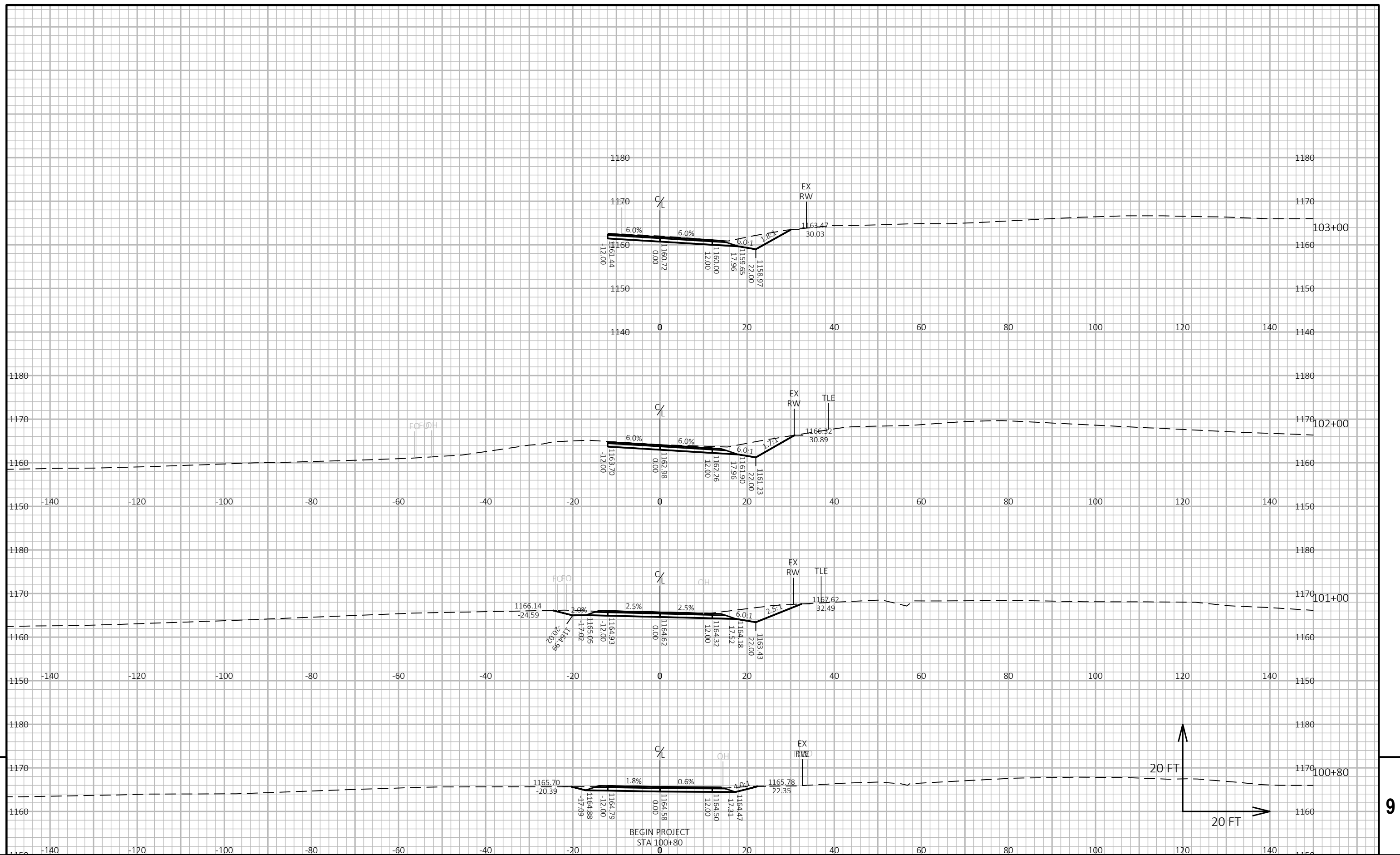
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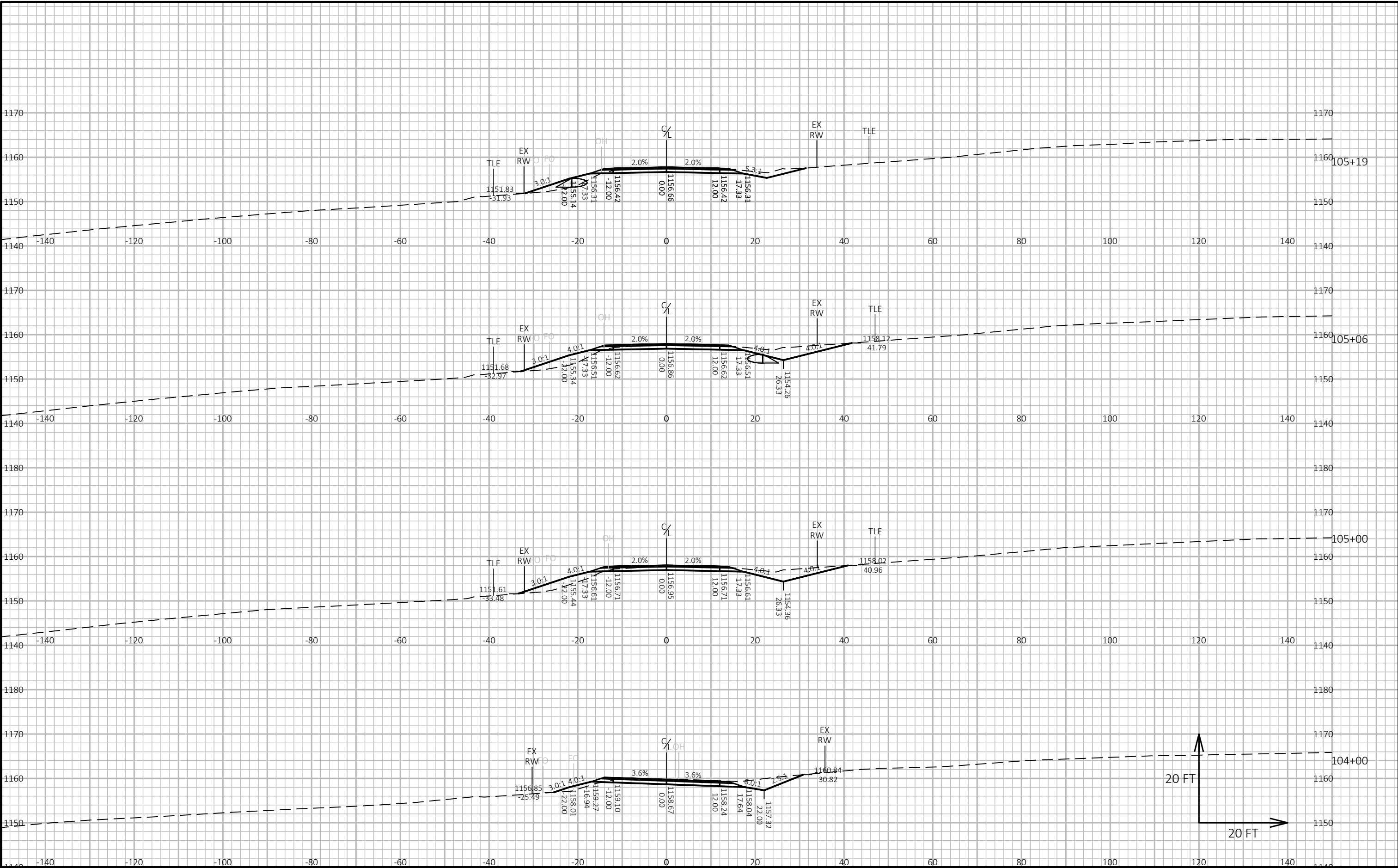
EARTHWORK DATA																		
STATION	REAL STATION	DISTANCE	AREA (SF)					INCREMENTAL VOL (CY) (UNADJUSTED)					CUMULATIVE VOL (CY)					
			SALVAGED/UNUSABLE PAVEMENT MATERIAL					SALVAGED/UNUSABLE PAVEMENT MATERIAL					CUT	EXPANDED FILL	ROCK EXCAVATION	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
			CUT	E PAVEMENT	FILL	ROCK EXCAVATION	EBS	CUT	E PAVEMENT	FILL	ROCK EXCAVATION	EBS						
			NOTE 1	NOTE 2	NOTE 3			NOTE 1	NOTE 2	NOTE 3								
156+00	15600	100	36.81	11.00	0.10	0.00	0.00	190	41	0	0	0	13,487	1,582	0	18,434	11,344	23,400
157+00	15700	100	31.18	11.00	1.40	0.00	0.00	126	41	3	0	0	13,613	1,585	0	18,434	11,344	23,482
157+22	15721.88	22	68.74	11.00	4.14	0.00	0.00	40	9	2	0	0	13,653	1,588	0	18,434	11,344	23,511
157+32	15731.79	10	97.98	11.00	18.70	0.00	0.00	31	4	4	0	0	13,684	1,593	0	18,434	11,344	23,532
158+00	15800	68	79.25	11.00	0.00	0.00	0.00	224	28	24	0	0	13,908	1,623	0	18,434	11,344	23,699
159+00	15900	100	99.75	11.00	0.00	0.00	0.00	331	41	0	0	0	14,239	1,623	0	18,434	11,344	23,990
160+00	16000	100	60.54	11.00	0.00	0.00	0.00	297	41	0	0	0	14,536	1,623	0	18,434	11,344	24,246
161+00	16100	100	84.47	11.00	0.00	0.00	0.00	269	41	0	0	0	14,805	1,623	0	18,434	11,344	24,473
162+00	16200	100	82.40	11.00	0.00	0.00	0.00	309	41	0	0	0	15,114	1,623	0	18,434	11,344	24,742
162+60	16259.52	60	110.91	11.00	0.44	0.00	0.00	213	24	0	0	0	15,327	1,623	0	18,434	11,344	24,930
162+85	16284.79	25	86.96	11.00	0.00	0.00	0.00	93	10	0	0	0	15,419	1,624	0	18,434	11,344	25,012
163+00	16300	100	72.94	11.00	0.00	0.00	0.00	327	41	1	0	0	15,746	1,625	0	18,434	11,344	25,297
164+00	16400	100	61.11	11.00	0.71	0.00	0.00	248	41	1	0	0	15,995	1,626	0	18,434	11,344	25,504
165+00	16500	100	42.15	11.00	2.32	0.00	0.00	191	41	0	0	0	16,186	1,626	0	18,434	11,344	25,654
166+00	16600	100	38.08	11.00	11.09	0.00	0.00	149	41	1	0	0	16,334	1,627	0	18,434	11,344	25,760
167+00	16700	100	62.84	11.00	0.81	0.00	0.00	187	41	6	0	0	16,521	1,634	0	18,434	11,344	25,900
167+94	16793.58	94	75.64	11.00	0.83	0.00	0.00	240	38	23	0	0	16,761	1,663	0	18,434	11,344	26,072
168+00	16800	6	74.96	11.00	2.17	0.00	0.00	18	3	1	0	0	16,779	1,665	0	18,434	11,344	26,086
168+19	16818.57	19	66.34	11.00	8.67	0.00	0.00	49	8	1	0	0	16,828	1,666	0	18,434	11,344	26,126
168+44	16843.55	25	44.84	11.00	26.06	0.00	0.00	51	10	1	0	0	16,879	1,667	0	18,434	11,344	26,166
169+00	16900	56	46.00	11.00	33.89	0.00	0.00	95	23	11	0	0	16,974	1,682	0	18,434	11,344	26,224
169+22	16922.47	22	45.01	11.00	32.49	0.00	0.00	38	9	14	0	0	17,012	1,700	0	18,434	11,344	26,234
170+00	17000	78	40.58	11.00	27.58	0.00	0.00	123	32	86	0	0	17,135	1,807	0	18,434	11,344	26,218
171+00	17100	100	10.95	11.00	14.62	0.00	0.00	95	41	123	0	0	17,230	1,961	0	18,434	11,344	26,119
171+62	17162.24	62	8.42	11.00	17.81	0.00	0.00	22	25	69	0	0	17,253	2,047	0	18,434	11,344	26,029
172+00	17200	38	16.44	11.00	21.43	50.00	0.00	17	15	28	35	0	17,270	2,083	35	18,434	11,344	25,961
172+81	17281.22	81	95.47	11.00	21.09	50.00	0.00	168	33	64	150	0	17,438	2,163	185	18,434	11,344	25,866
173+00	17300	19	86.02	11.00	24.70	50.00	0.00	63	8	16	35	0	17,502	2,183	220	18,434	11,344	25,866
173+06	17306.2	6	93.43	11.00	26.21	50.00	0.00	21	3	6	11	0	17,522	2,190	232	18,434	11,344	25,866
173+31	17331.22	25	127.70	11.00	23.24	50.00	0.00	102	10	23	46	0	17,625	2,219	278	18,434	11,344	25,883
174+00	17400	69	262.17	11.00	4.97	50.00	0.00	497	28	36	127	0	18,121	2,264	405	18,434	11,344	26,179
174+20	17420	20	407.42	11.00	27.77	50.00	0.00	248	8	12	37	0	18,369	2,279	442	18,434	11,344	26,367
175+00	17500	80	265.94	11.00	0.00	50.00	0.00	998	33	41	148	0	19,367	2,330	591	18,434	11,344	27,132
175+25	17525	25	181.44	11.00	0.65	50.00	0.00	207	10	0	46	0	19,574	2,331	637	18,434	11,344	27,283
175+50	17550	25	85.27	11.00	5.97	50.00	0.00	123	10	3	46	0	19,697	2,335	683	18,434	11,344	27,346
176+00	17600	50	47.65	11.00	0.00	0.00	0.00	123	20	6	46	0	19,820	2,341	729	18,434	11,344	27,395
176+74	17674.14	74	38.91	11.00	0.00	0.00	0.00	119	30	0	0	0	19,939	2,341	729	18,434	11,344	27,484
177+00	17700	26	36.31	11.00	0.01	0.00	0.00	36	11	0	0	0	19,975	2,342	729	18,434	11,344	27,509
177+97	17797.27	97	41.34	11.00	10.48	0.00	0.00	140	40	19	0	0	20,115	2,365	729	18,434	11,344	27,586
178+00	17800	3	41.10	11.00	11.20	0.00	0.00	4	1	1	0	0	20,119	2,366	729	18,434	11,344	27,588
178+22	17821.63	22	47.47	11.00	10.82	0.00	0.00	35	9	9	0	0	20,155	2,378	729	18,434	11,344	27,603
178+46	17845.91	24	49.75	11.00	3.65	0.00	0.00	44	10	7	0	0	20,199	2,386	729	18,434	11,344	27,629
179+00	17900	54	50.47	11.00	1.21	0.00	0.00	100	22	5	0	0	20,299	2,392	729	18,434	11,344	27,701
179+63	17962.55	63	63.53	11.00	12.49	0.00	0.00	132	25	16	0	0	20,431	2,412	729	18,434	11,344	27,788
180+00	18000	37	61.94	11.00	1.22	0.00	0.00	87	15	10	0	0	20,518	2,423	729	18,434	11,344	27,848
181+00	18100	137	60.34	11.00	0.00	0.00	0.00	315	56	23	0	0	20,833	2,453	729	18,434	11,344	28,078

CONTINUED ON NEXT PAGE

EARTHWORK DATA																	
STATION	REAL STATION	DISTANCE	AREA (SF)					INCREMENTAL VOL (CY) (UNADJUSTED)					CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXCAVATION	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXCAVATION	EBS	CUT	EXPANDED FILL	ROCK EXCAVATION	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL
			NOTE 1	NOTE 2	NOTE 3			NOTE 1	NOTE 2	NOTE 3			NOTE 1	1.25		1.30	0.80
																	MASS ORDINATE
182+00	18200	100	78.62	11.00	0.00	0.00	0.00	257	41	0	0	0	21,091	2,453	729	18,434	11,344
183+00	18300	100	32.86	11.00	16.60	0.00	0.00	206	41	31	0	0	21,297	2,491	729	18,434	11,344
183+70	18370	70	34.05	11.00	0.02	0.00	0.00	87	29	22	0	0	21,384	2,518	729	18,434	11,344
								21384	3863	2014	729	14180					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED EBS	WILL BE BACKFILLED WITH BASE AGGREGATE DENSE 1 1/4-INCH
5 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
6 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH BASE AGGREGATE: [CUT - SALVAGED PAVT - ROCK EXCAVATION - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL) * FILL FACTOR)]





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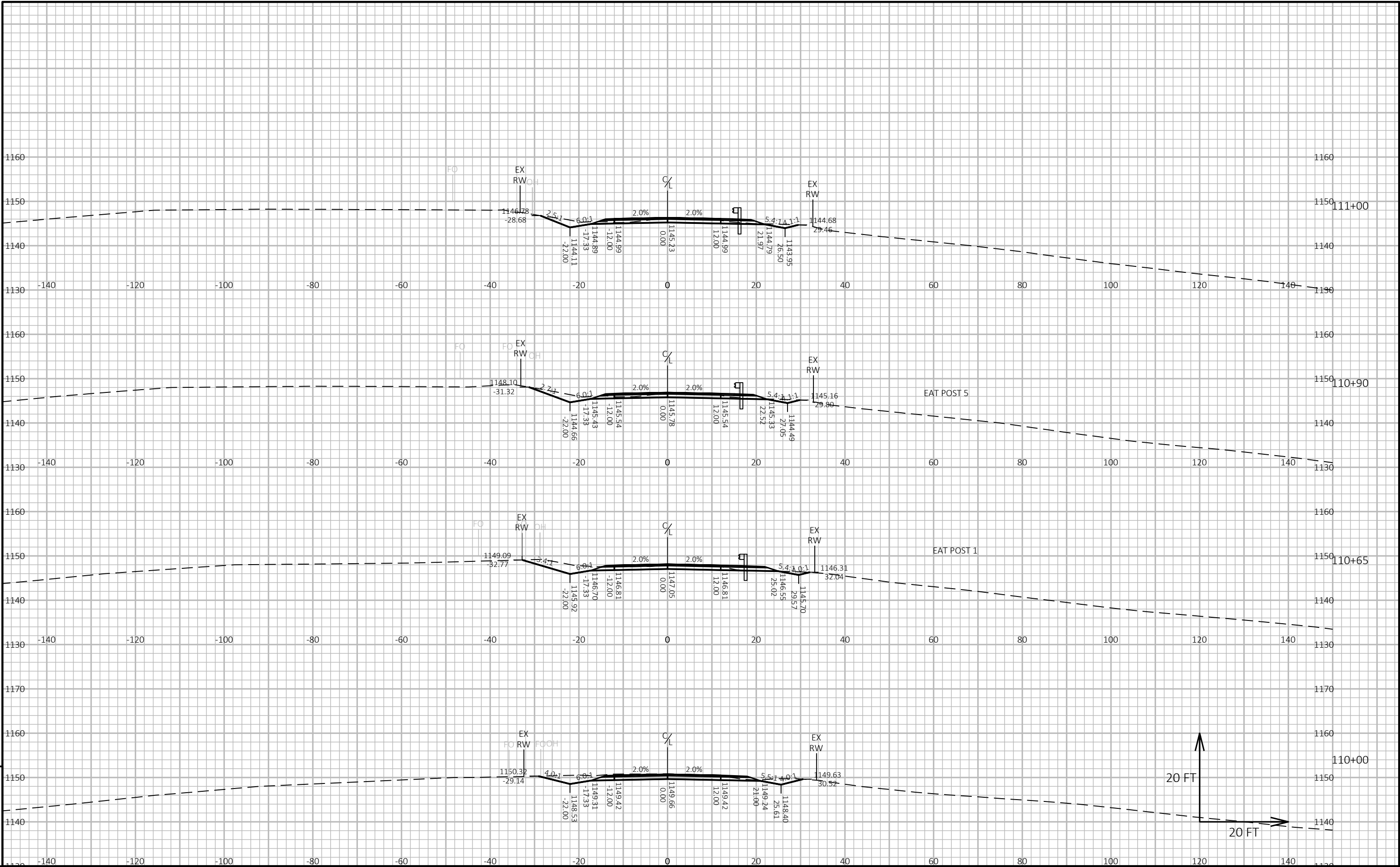
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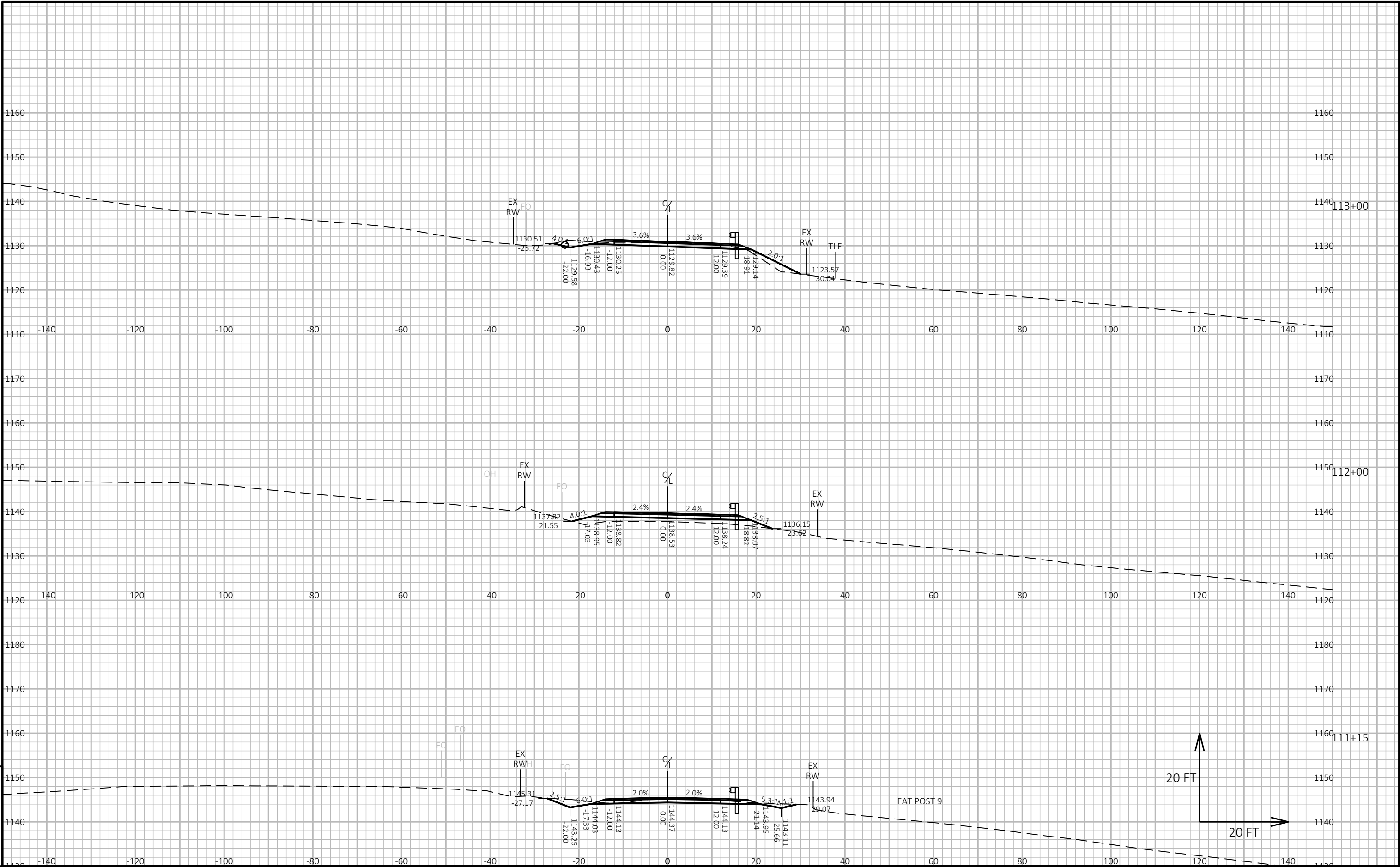
PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	CROSS SECTIONS: CTH O	SHEET E
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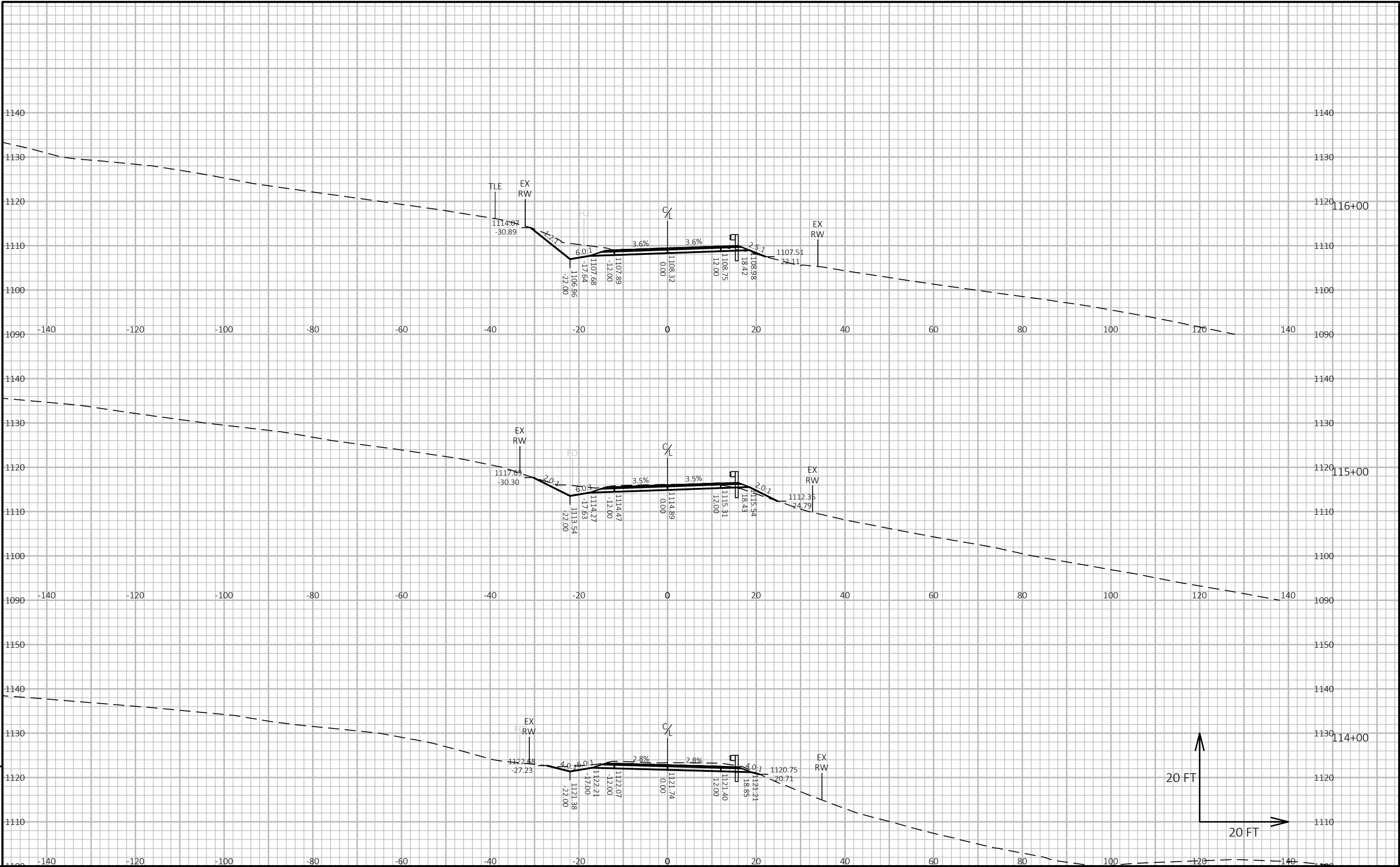


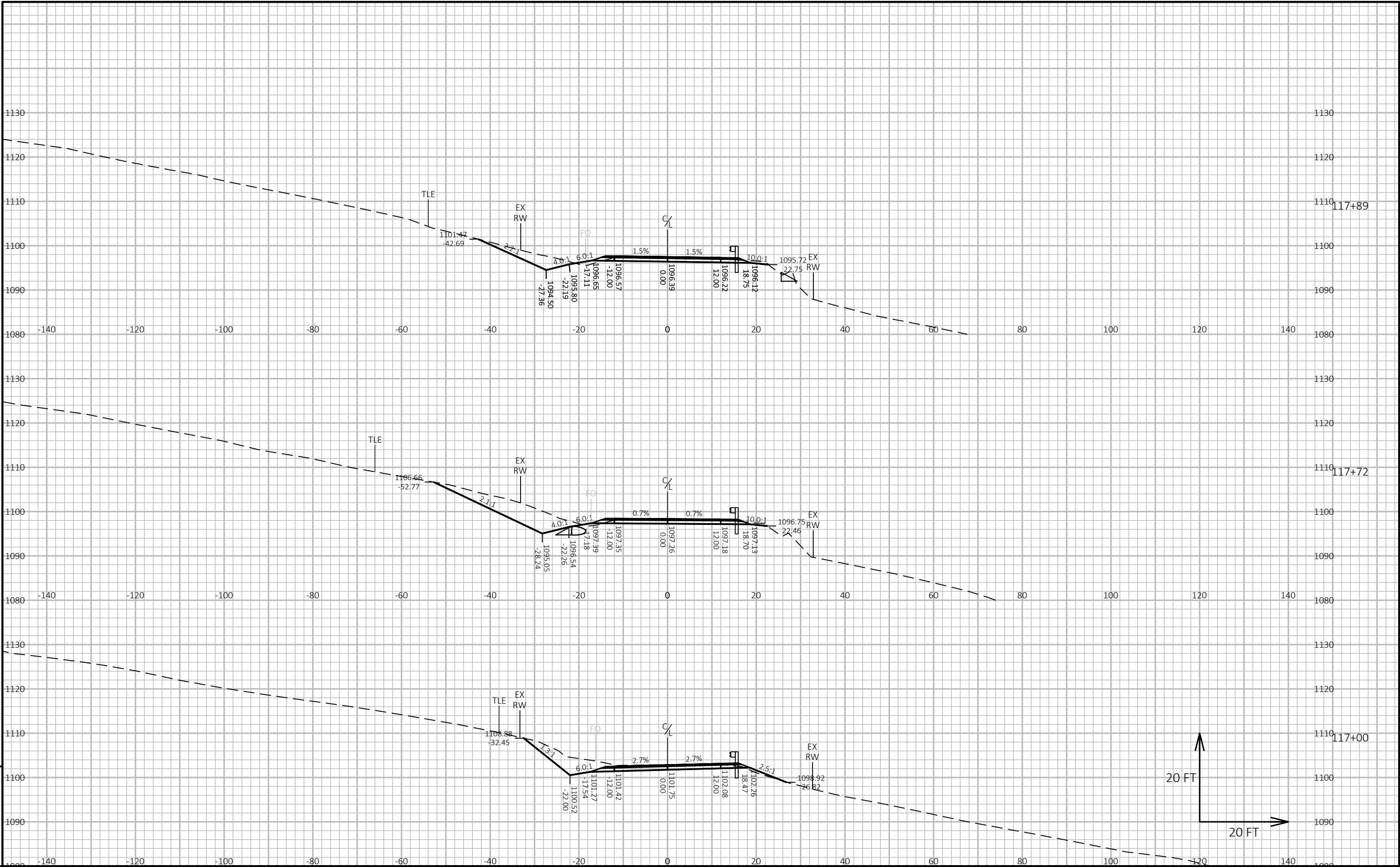
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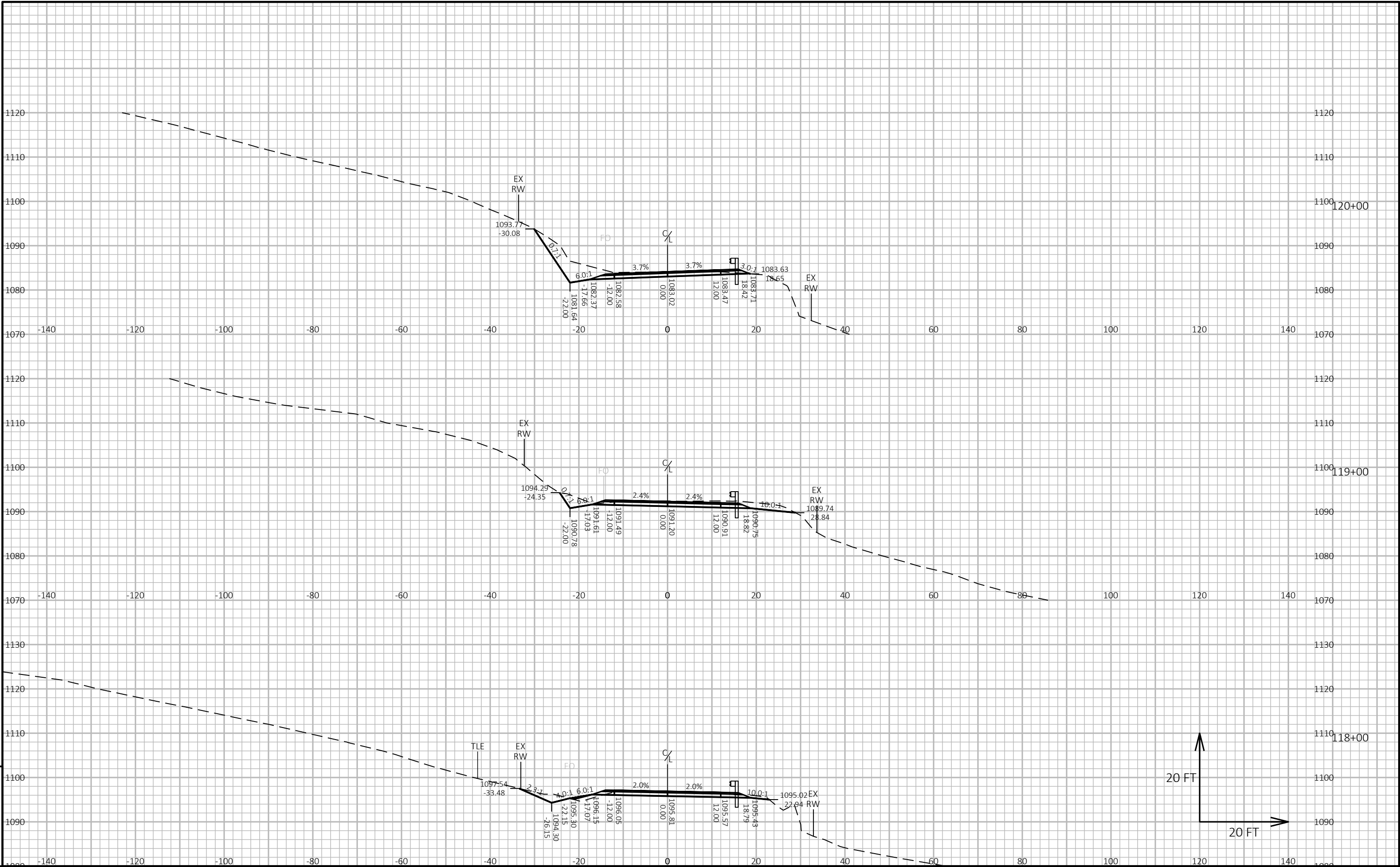
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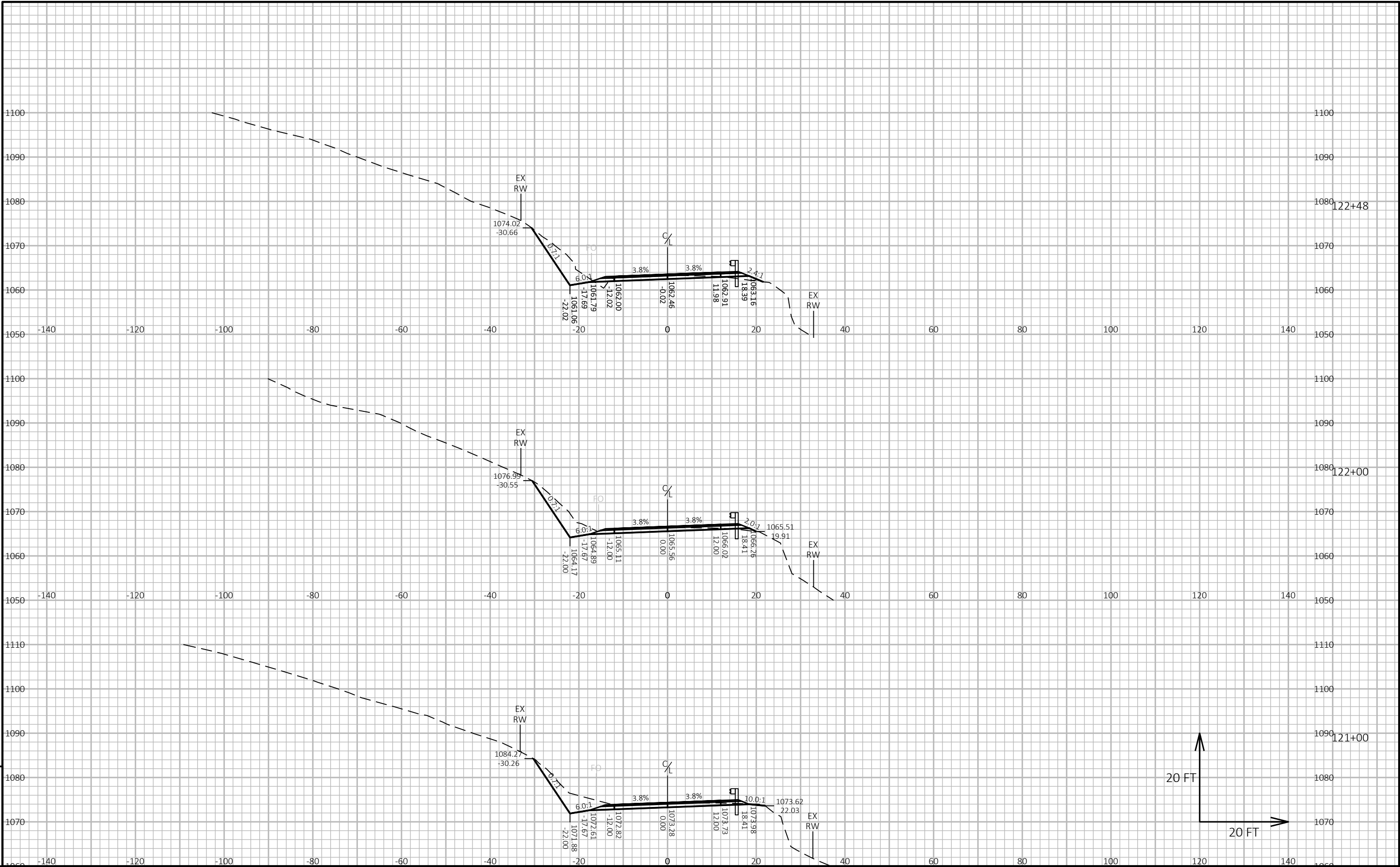


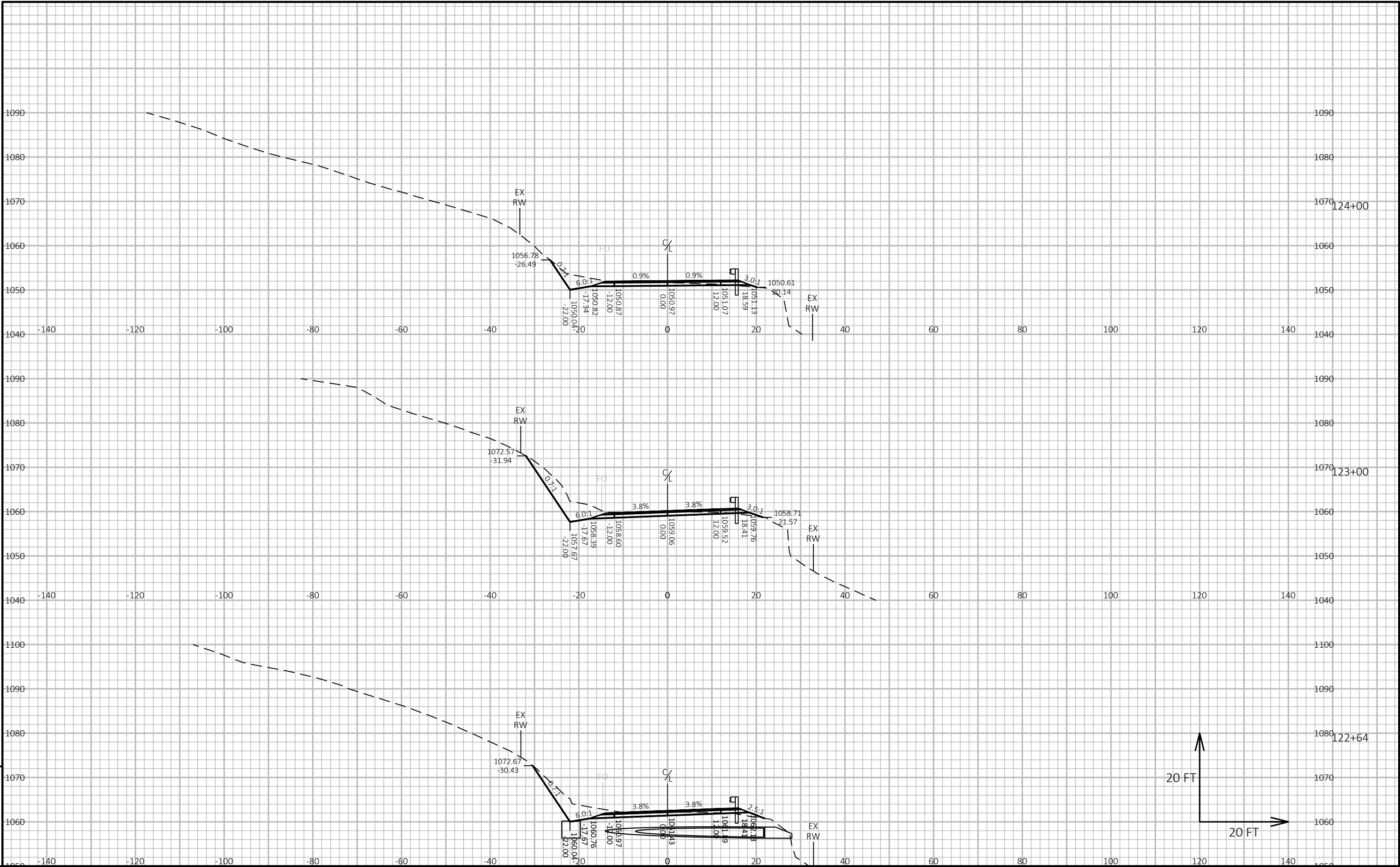


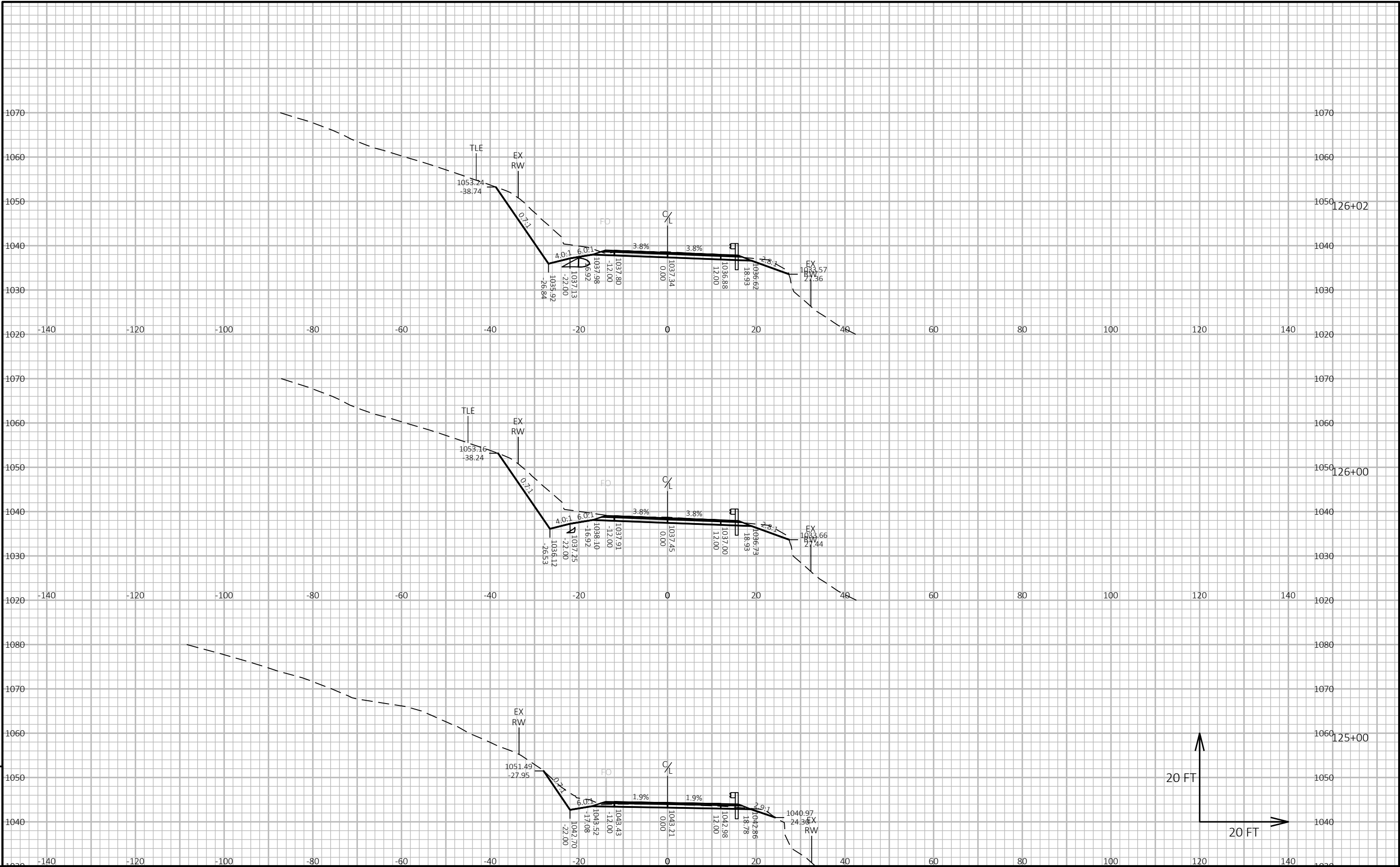


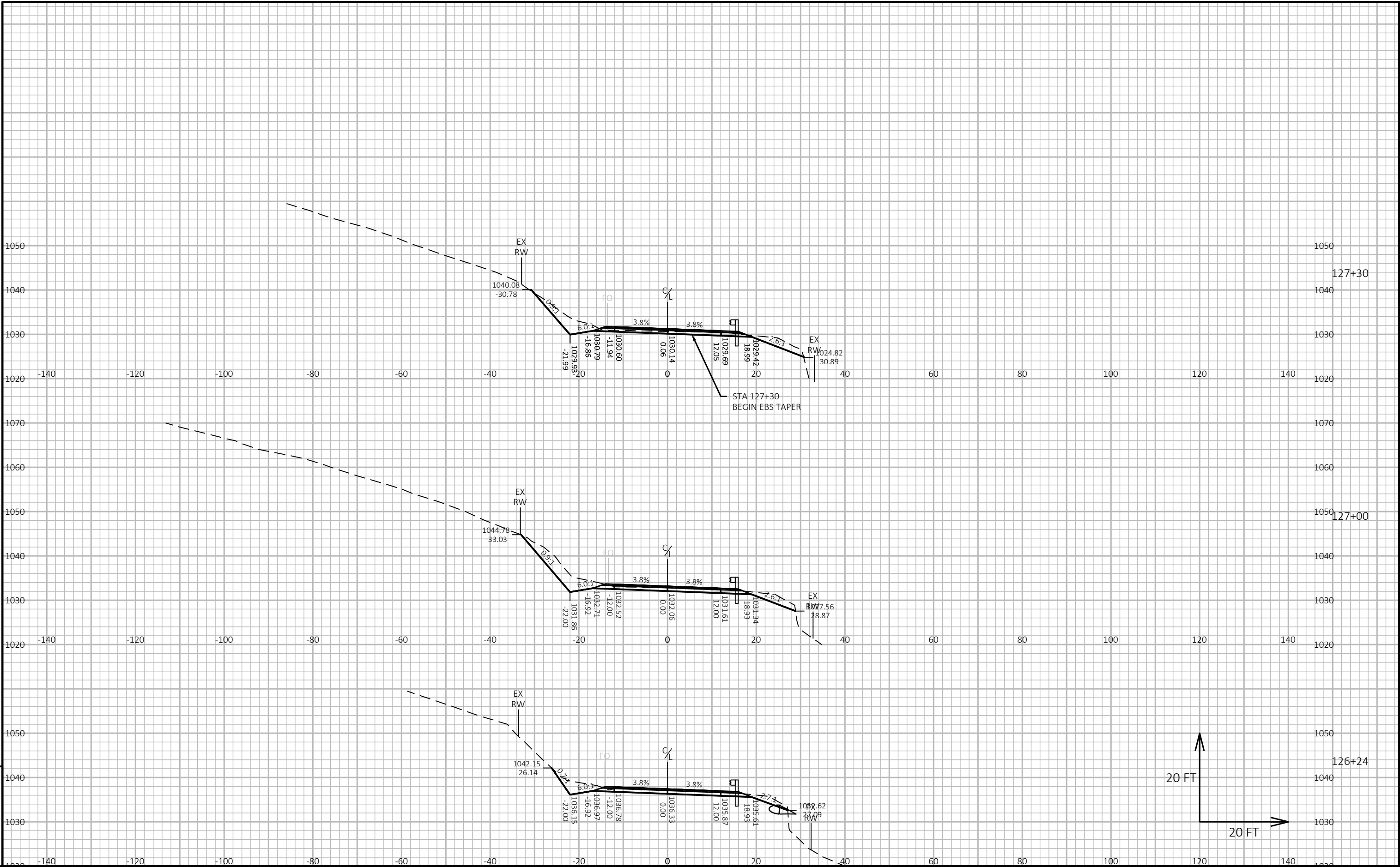


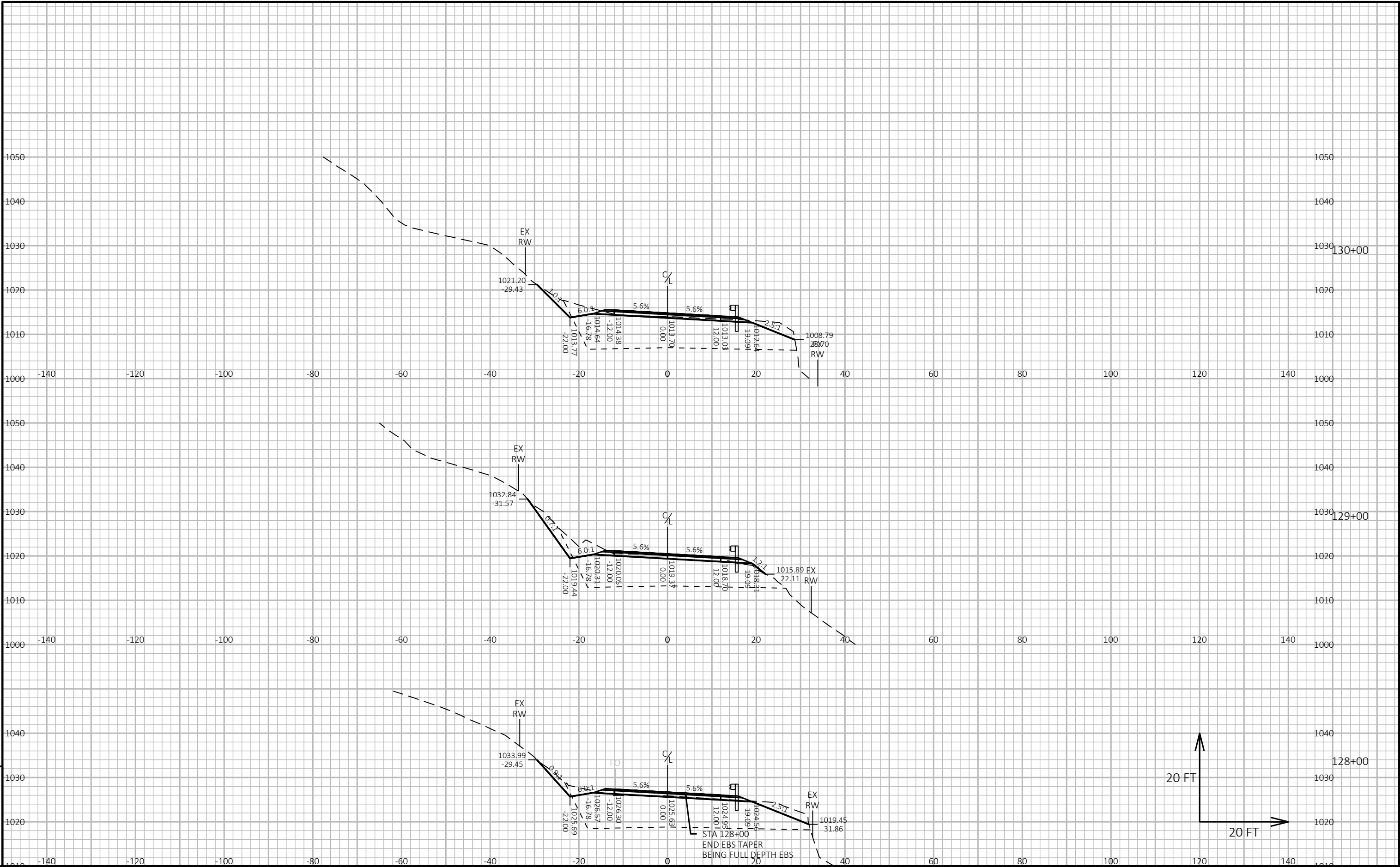


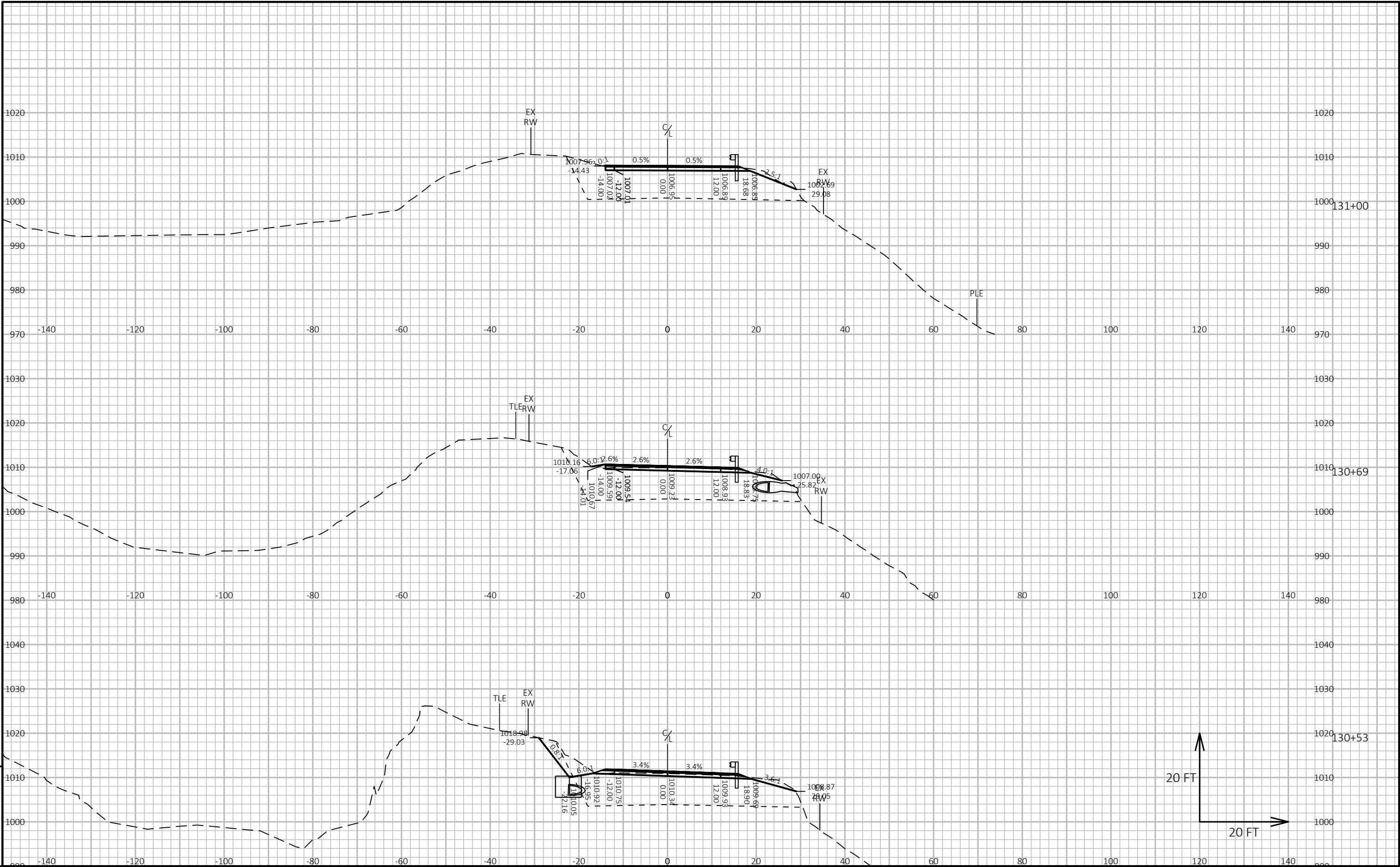


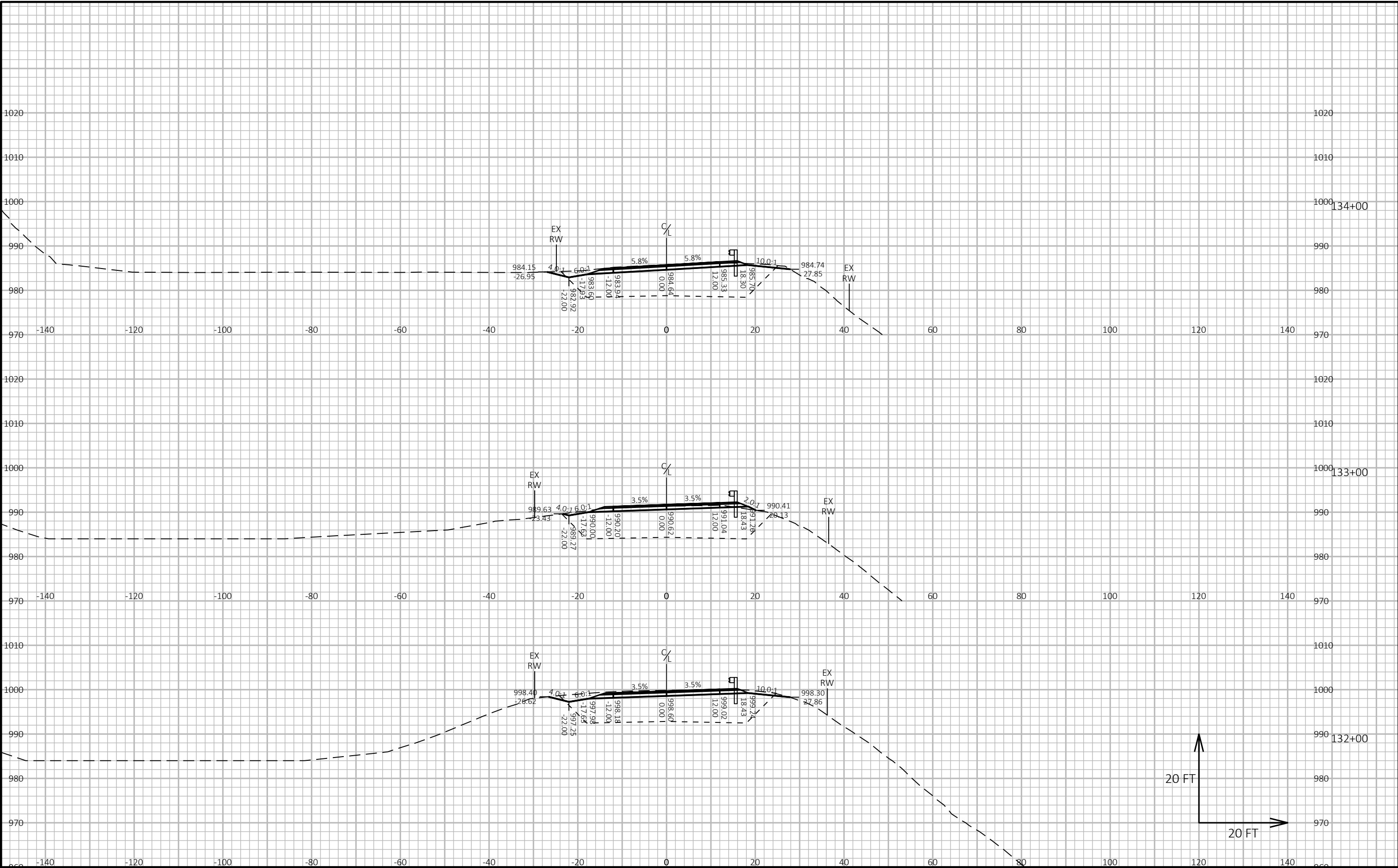


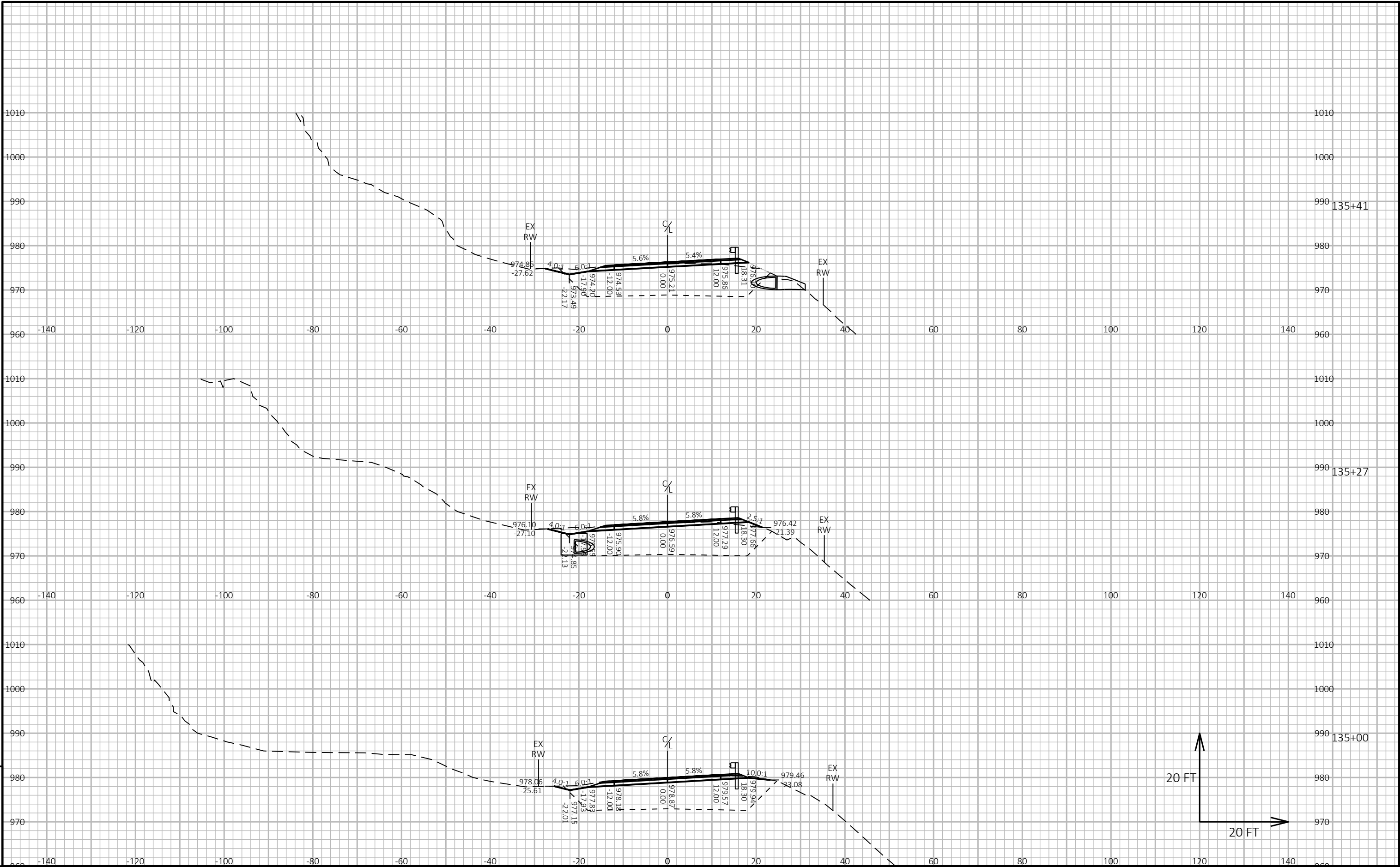


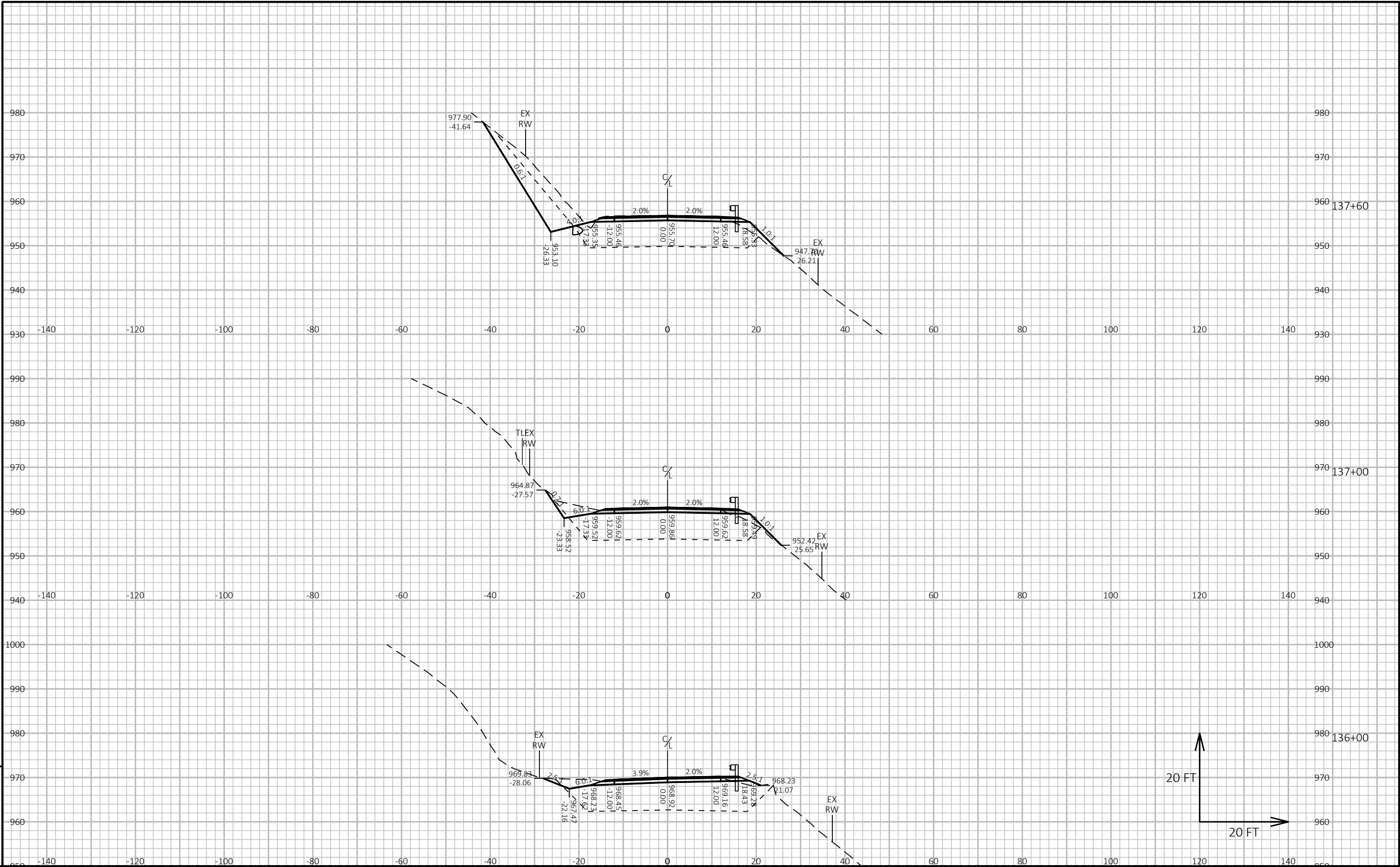


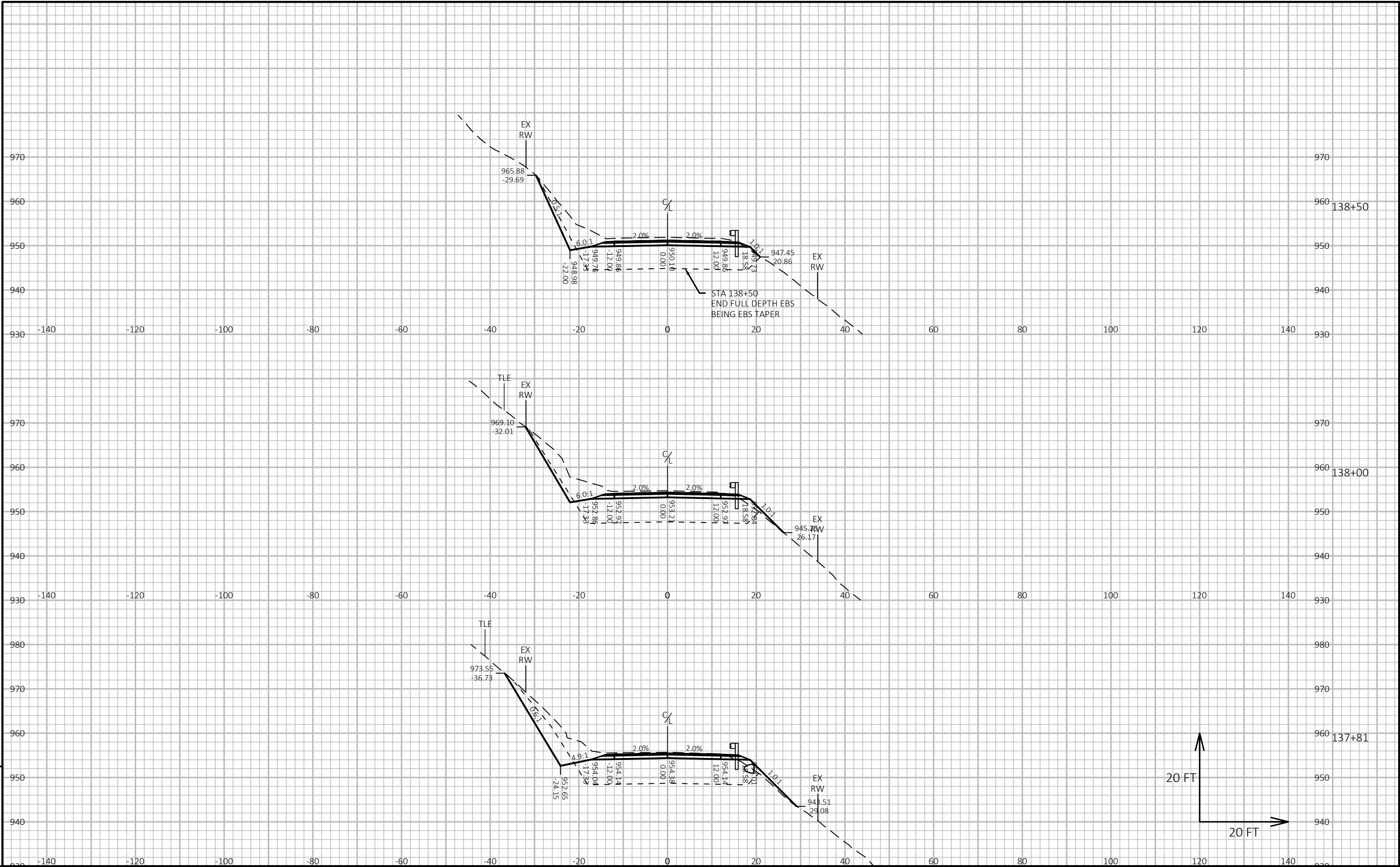


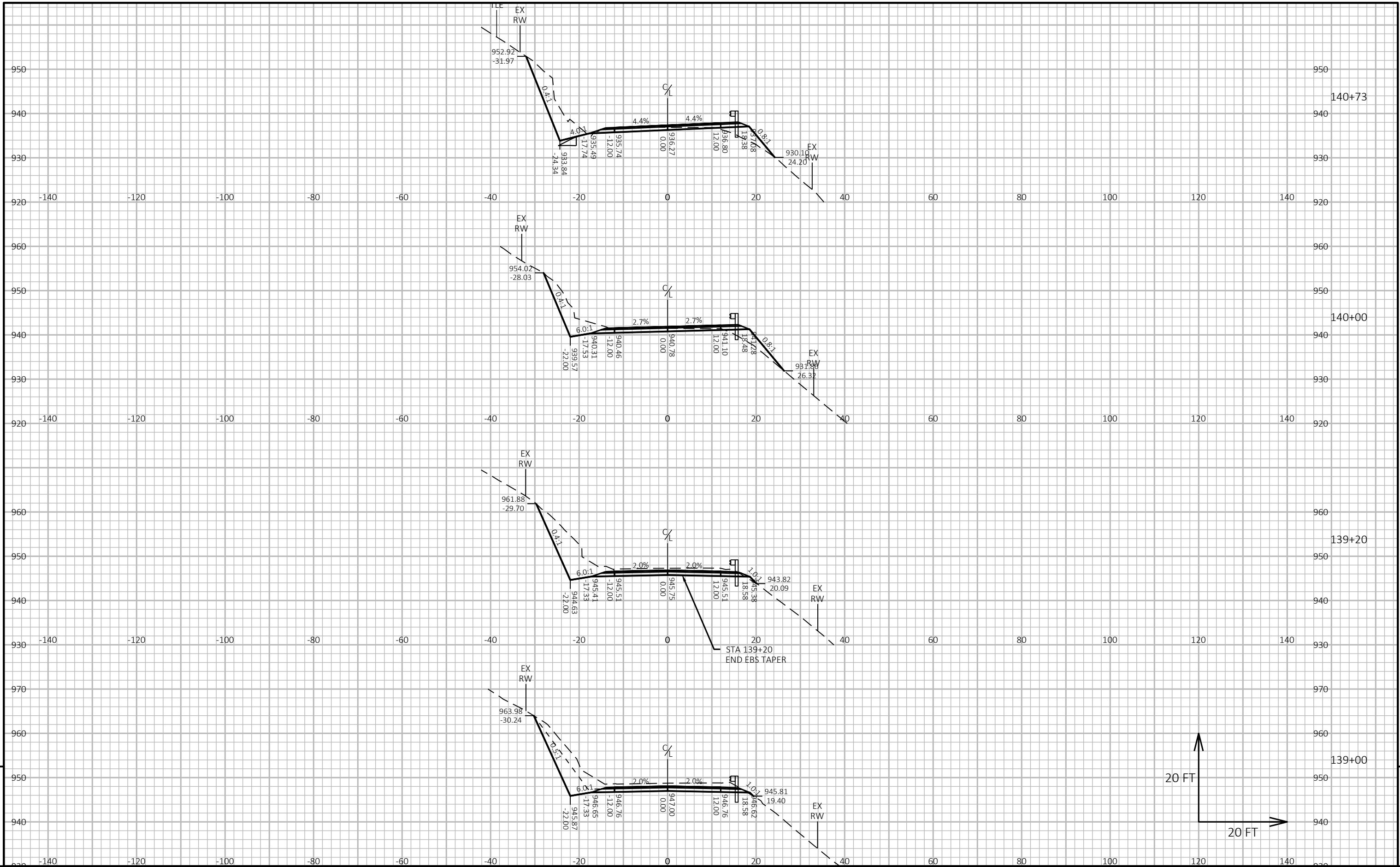


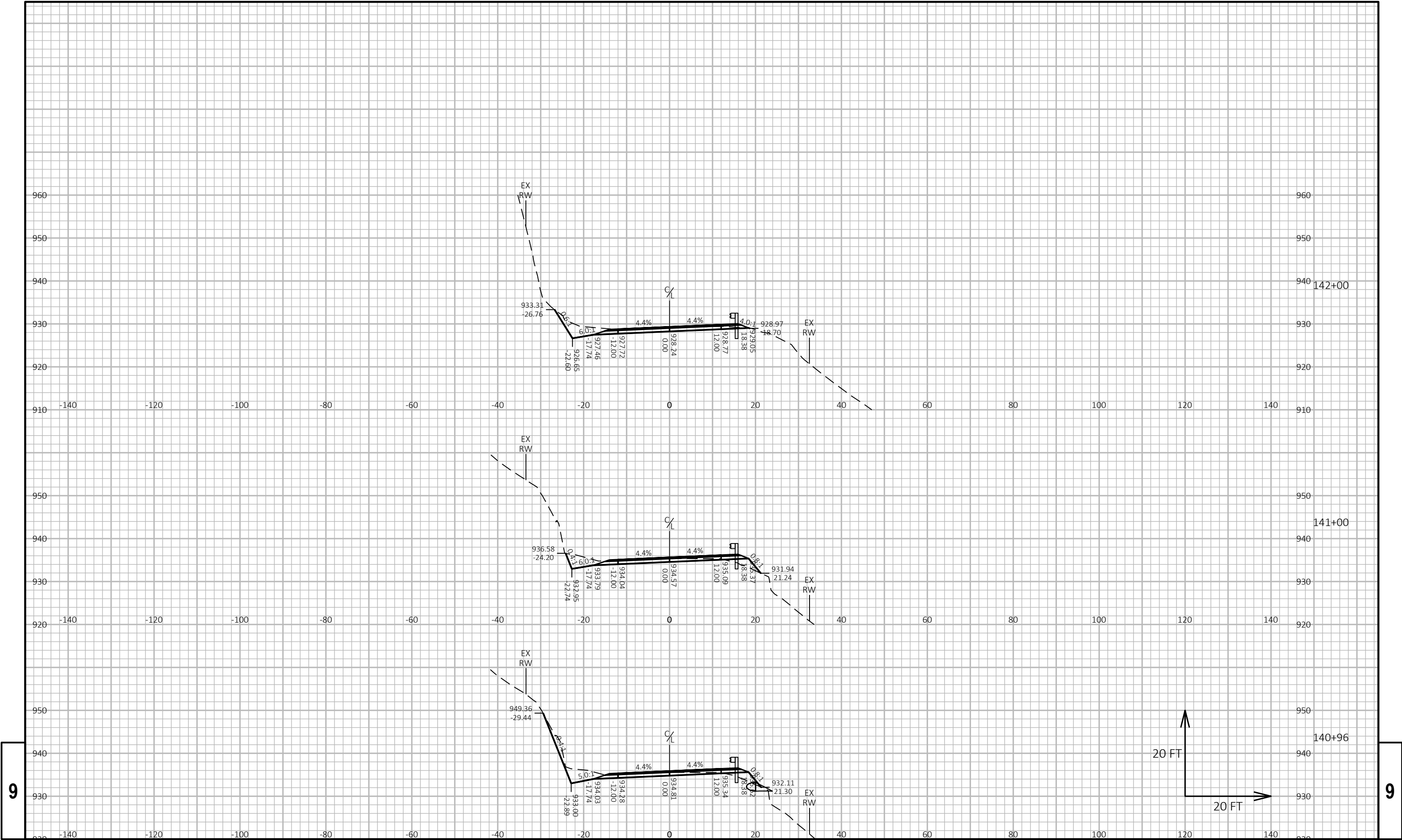






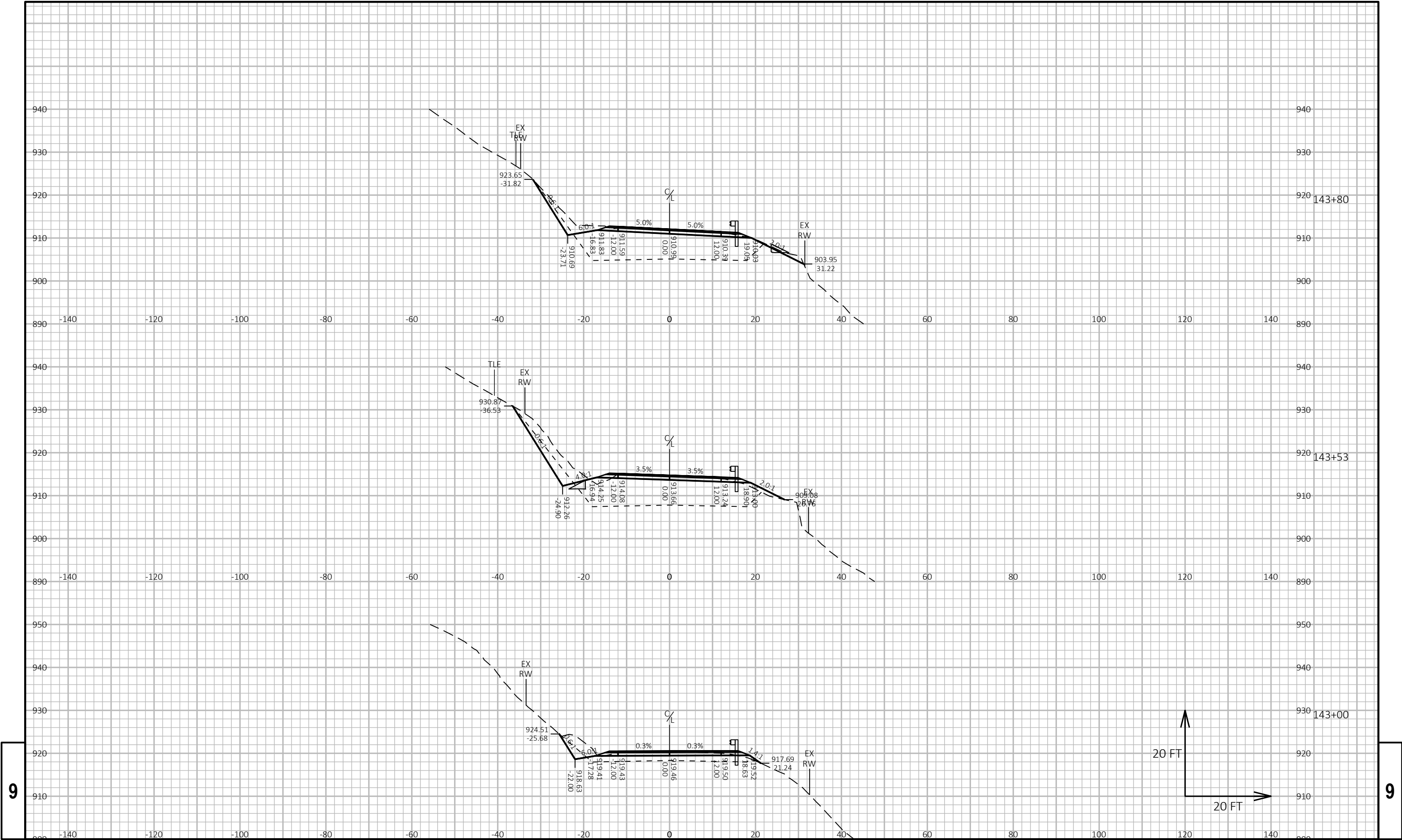






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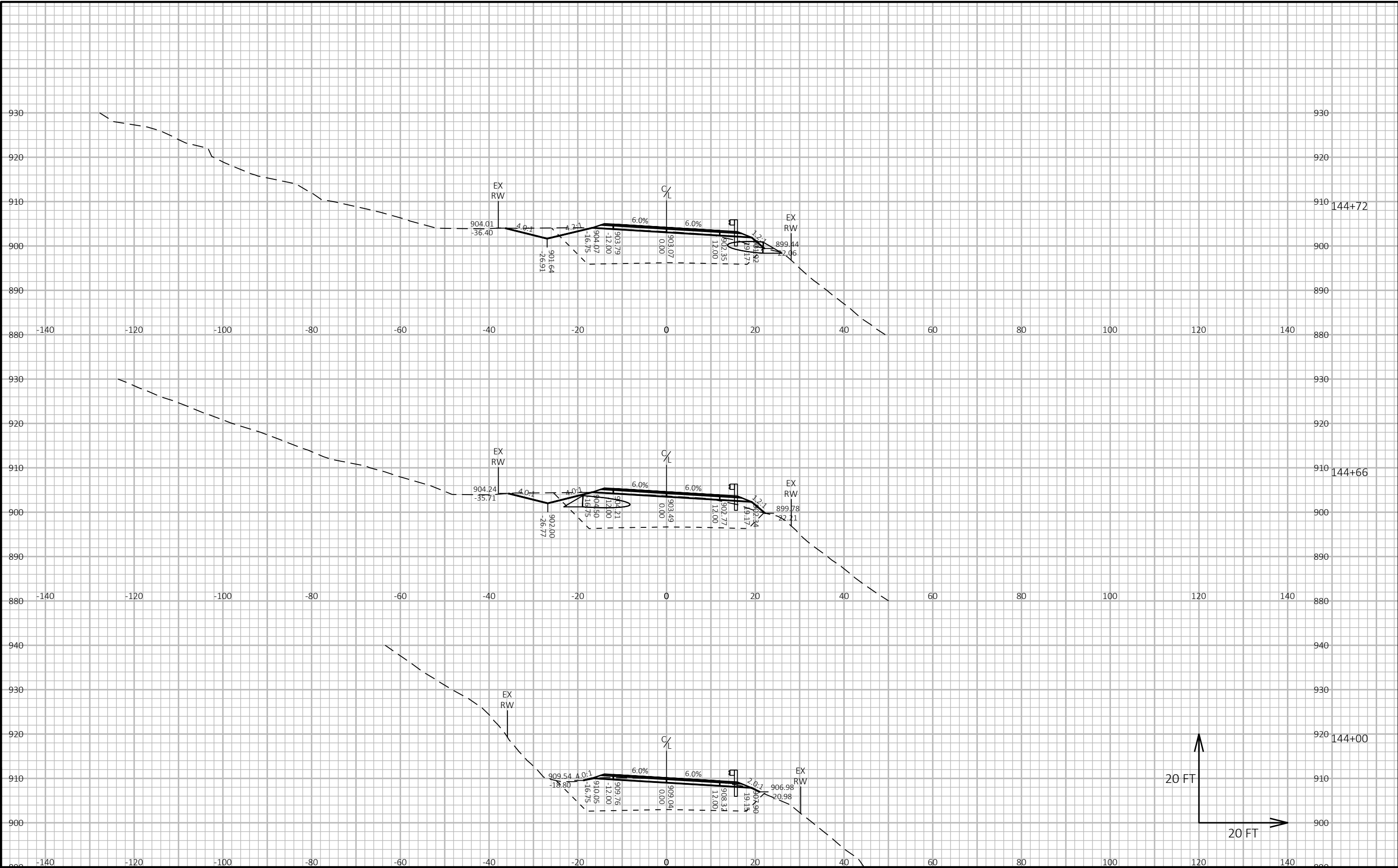
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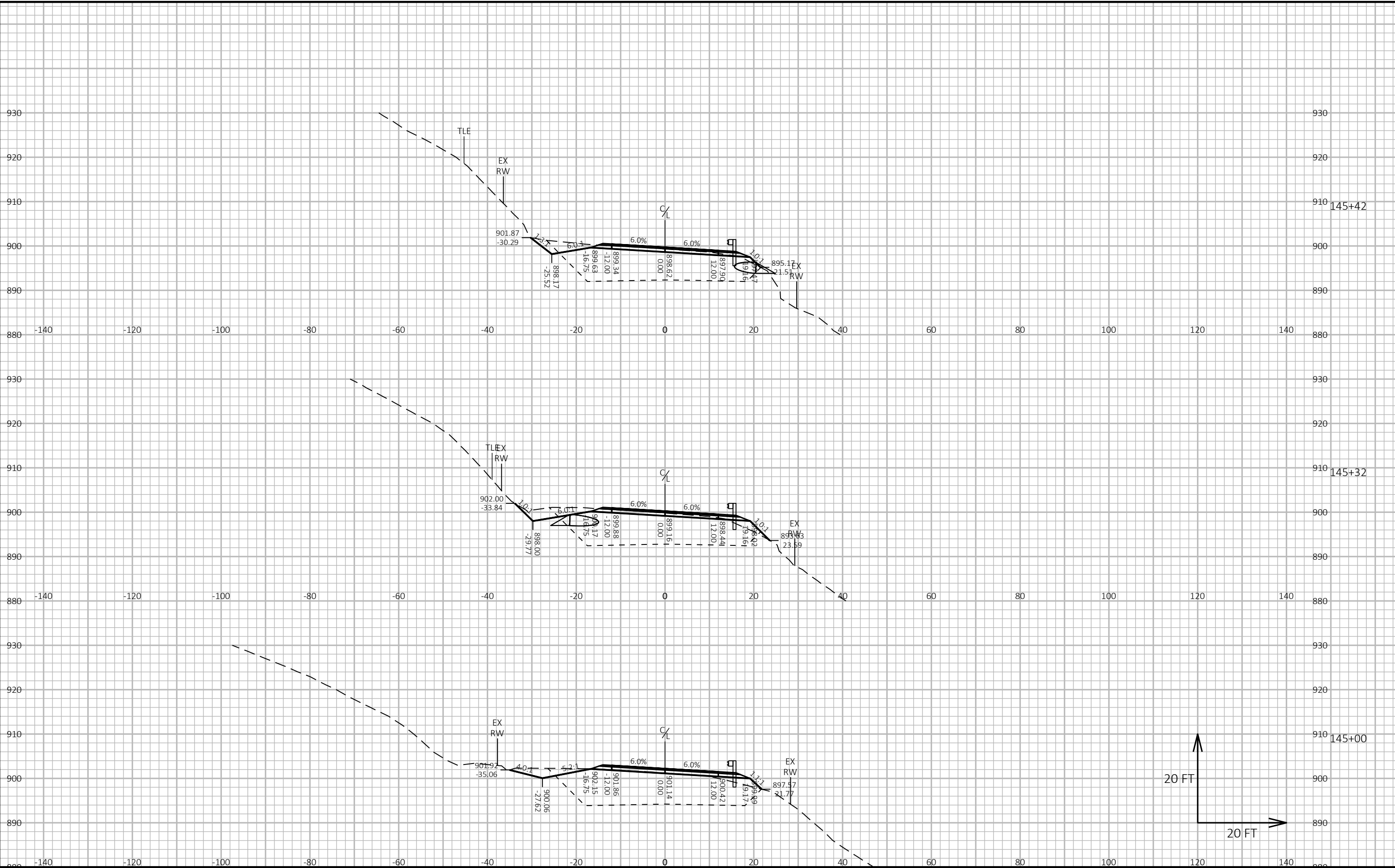


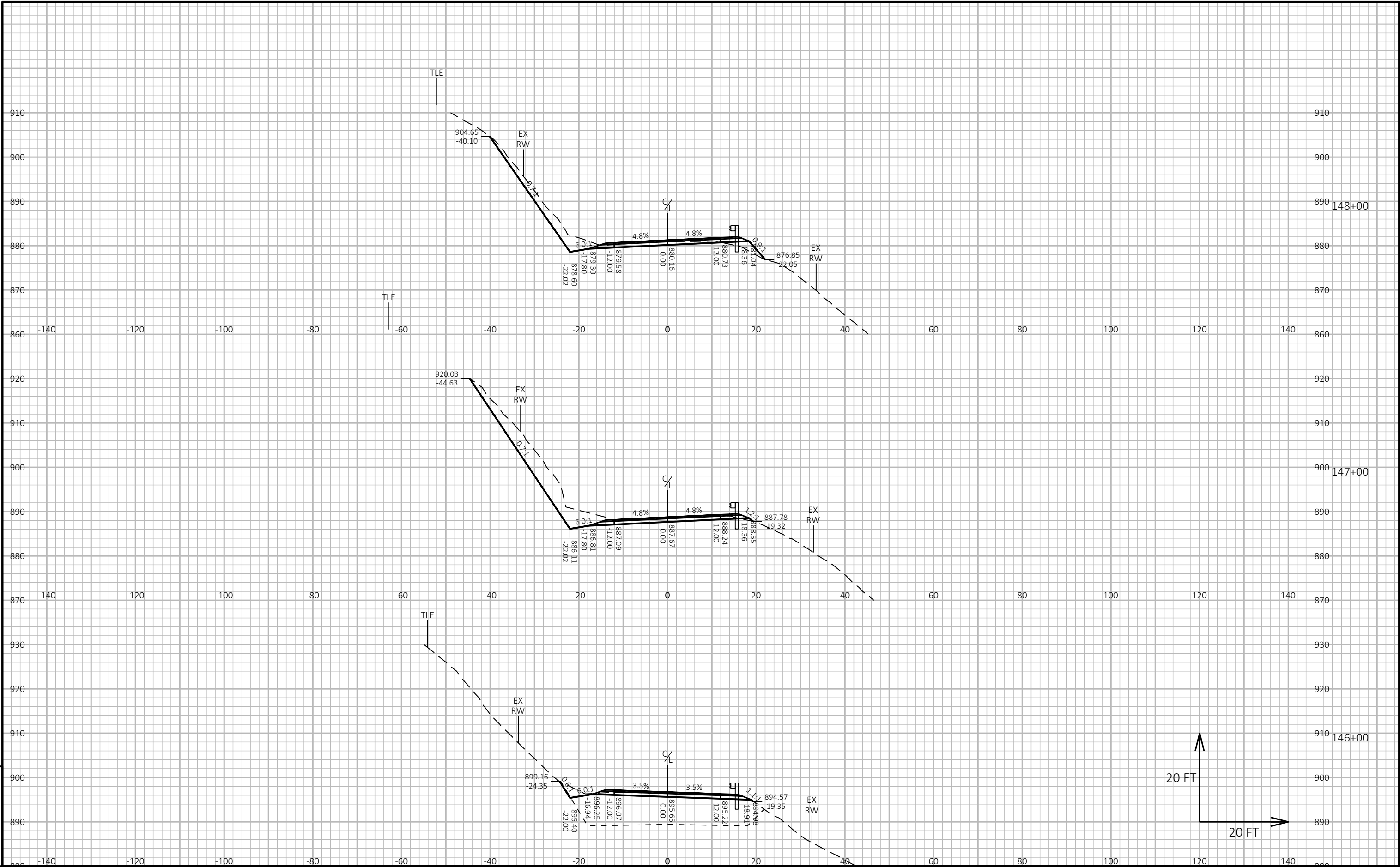
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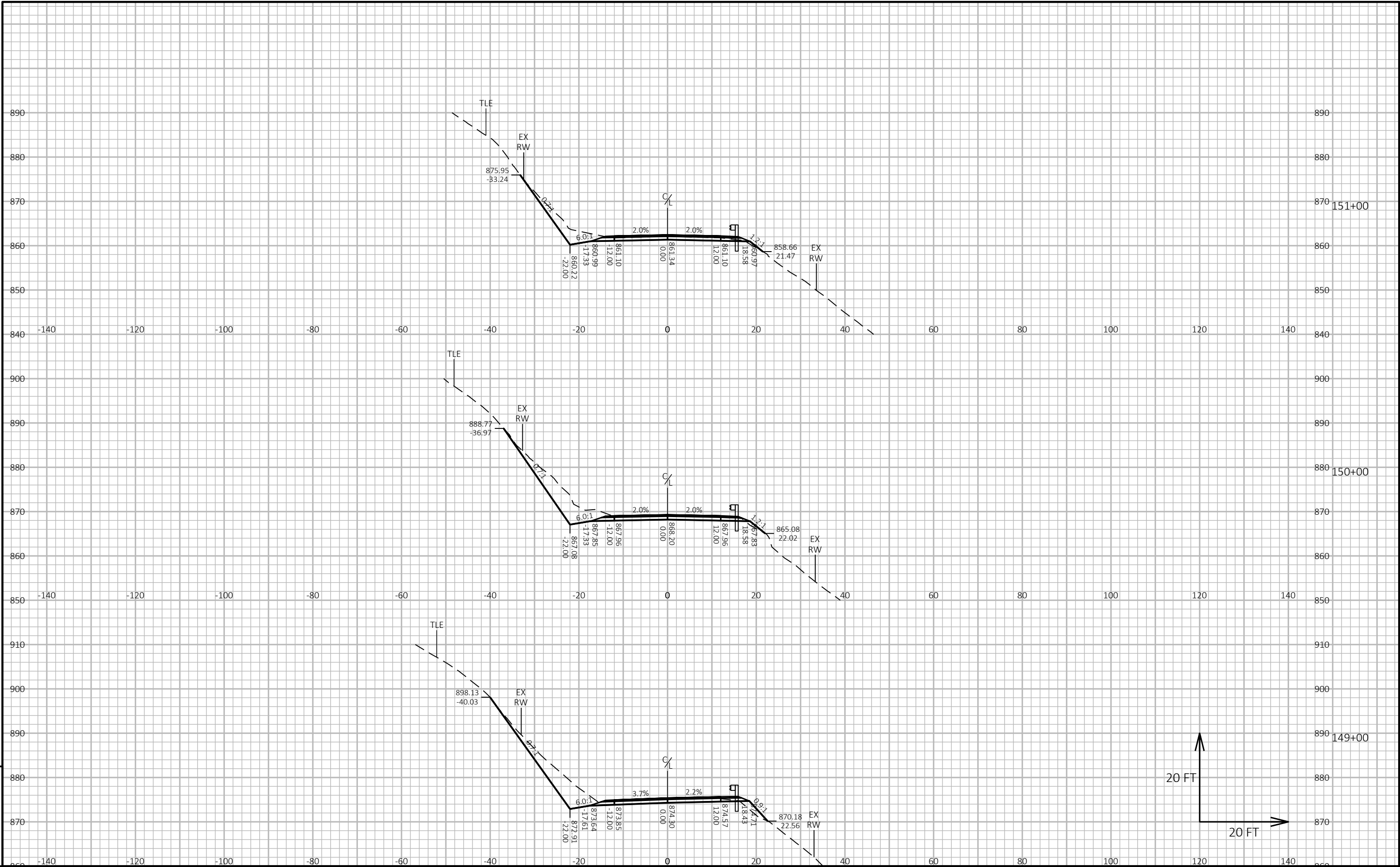
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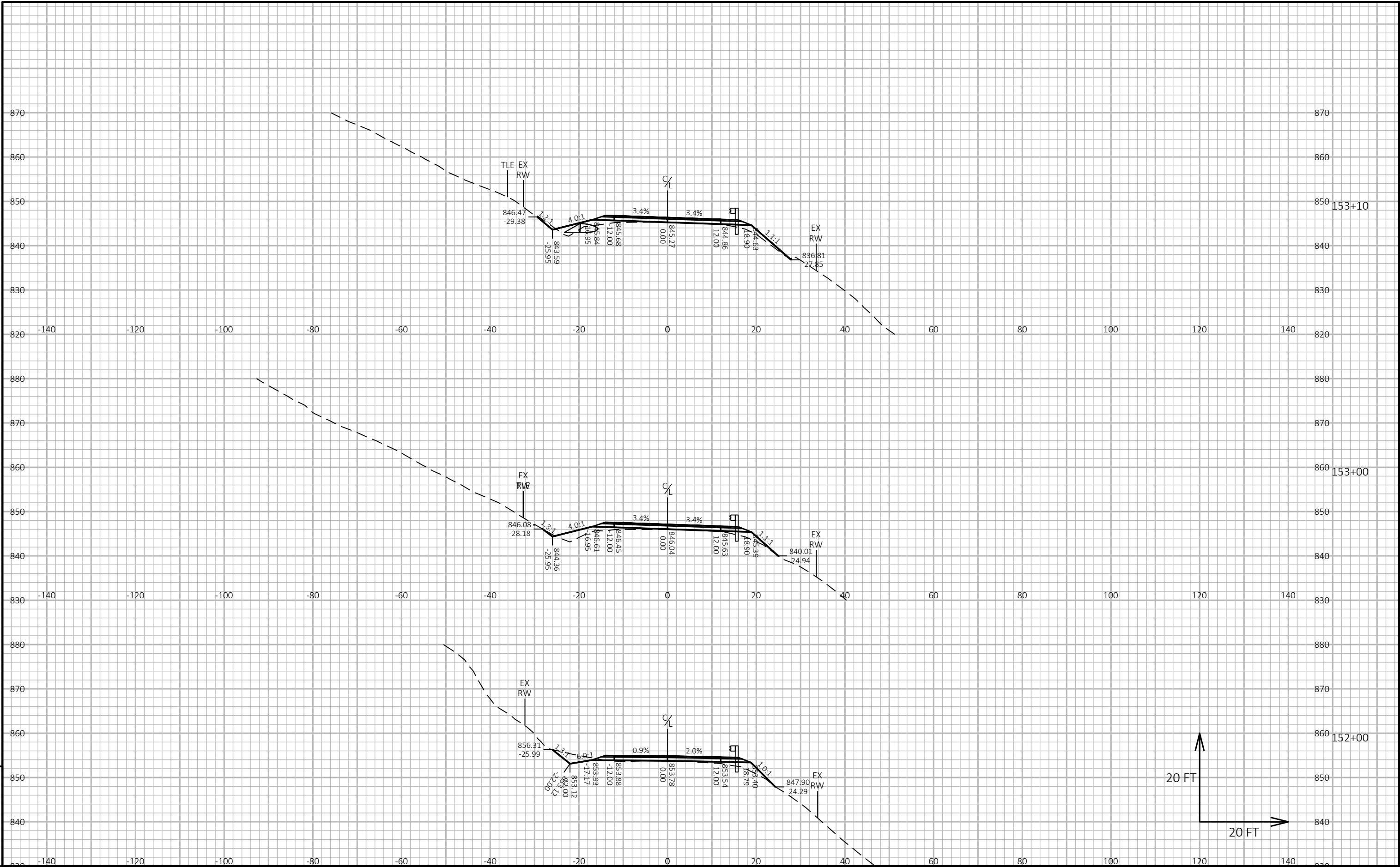
PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	CROSS SECTIONS: CTH O	SHEET E
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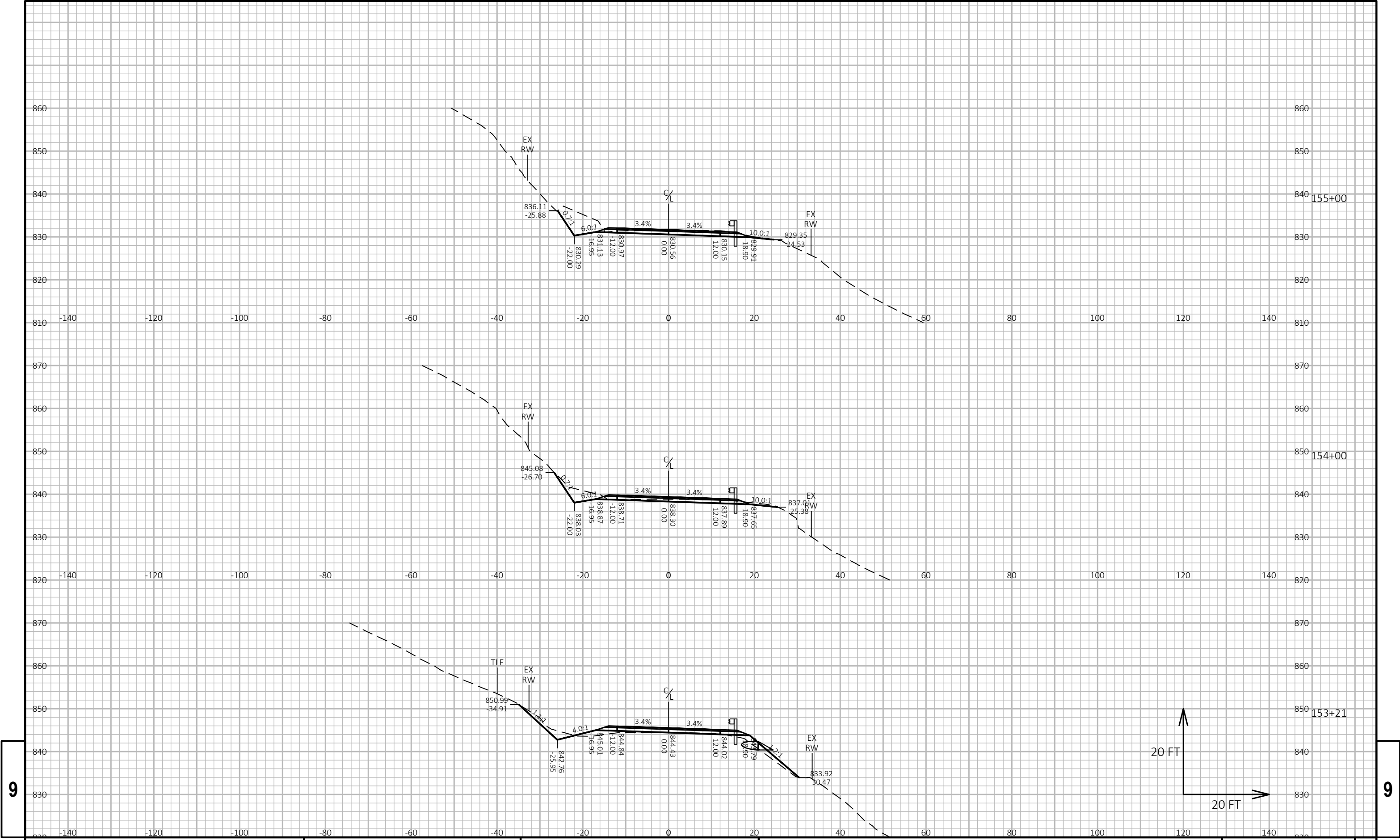






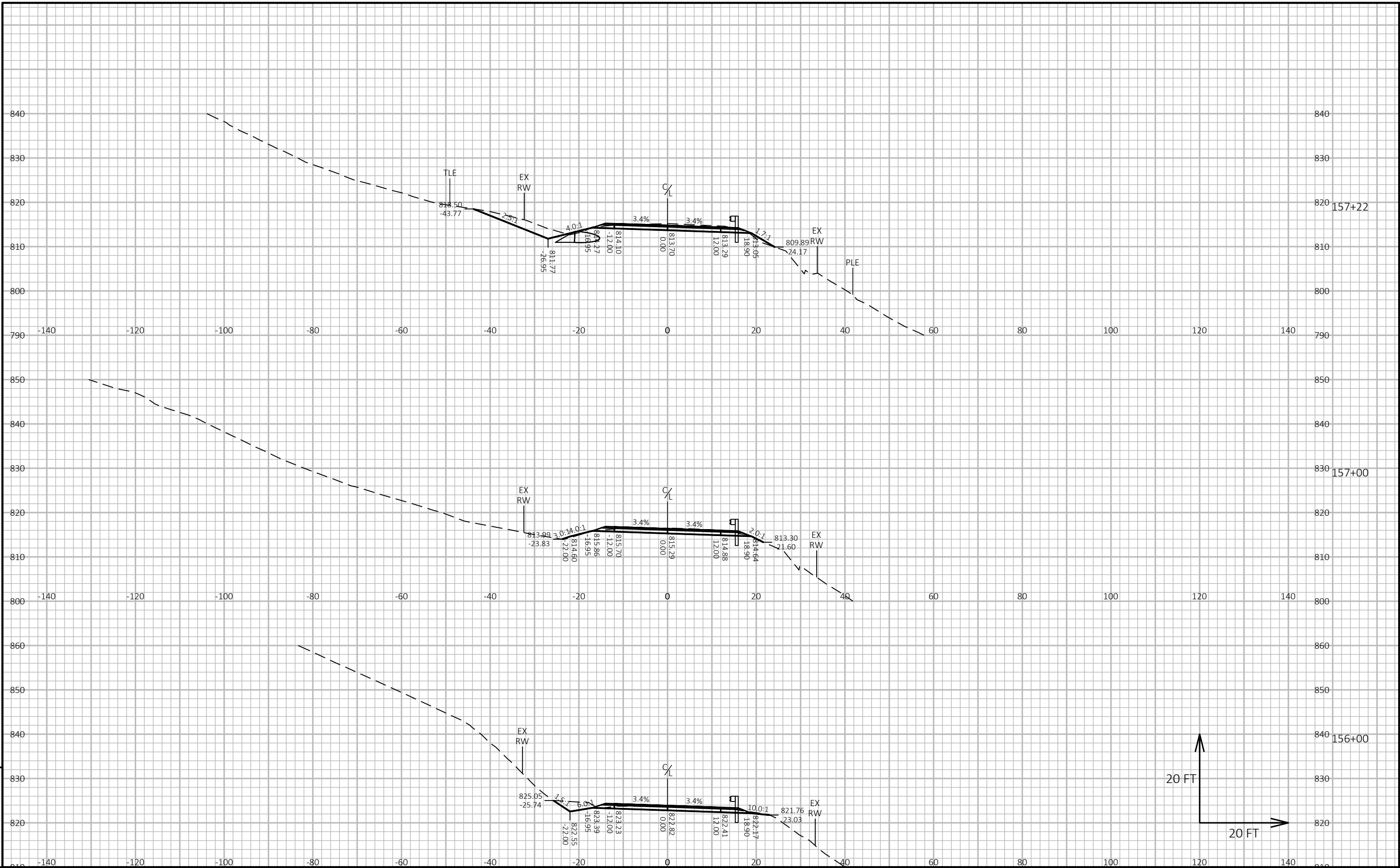


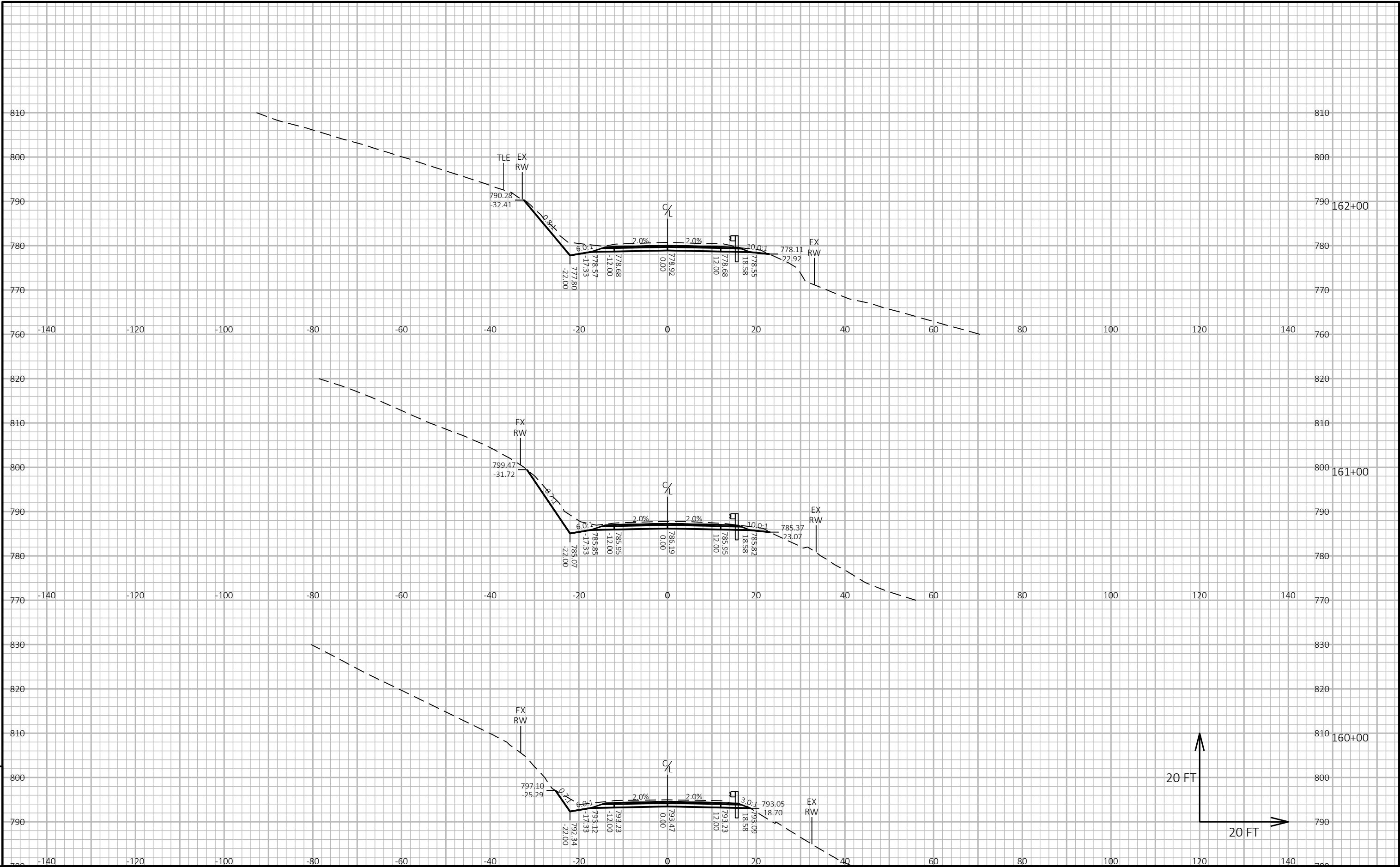


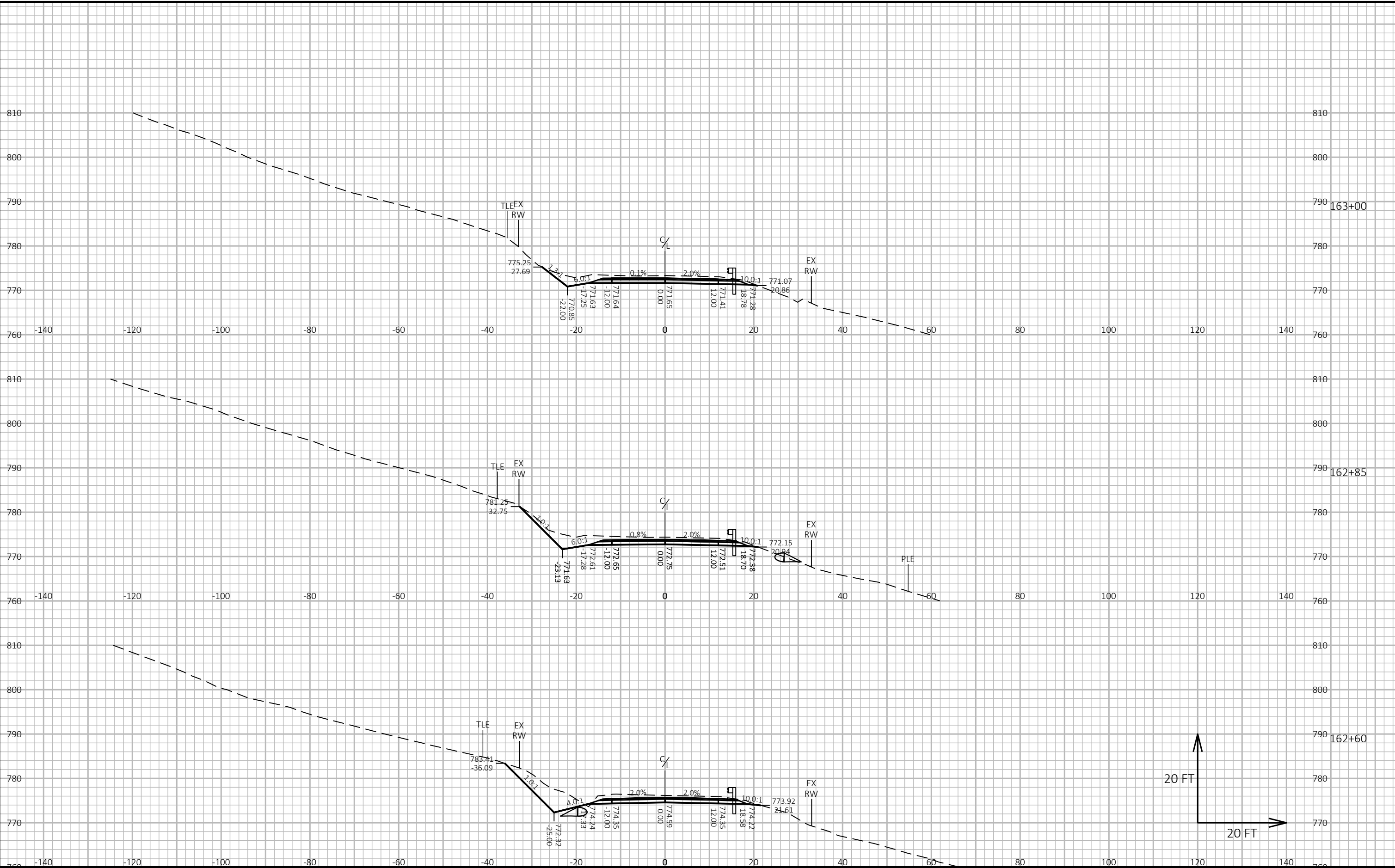


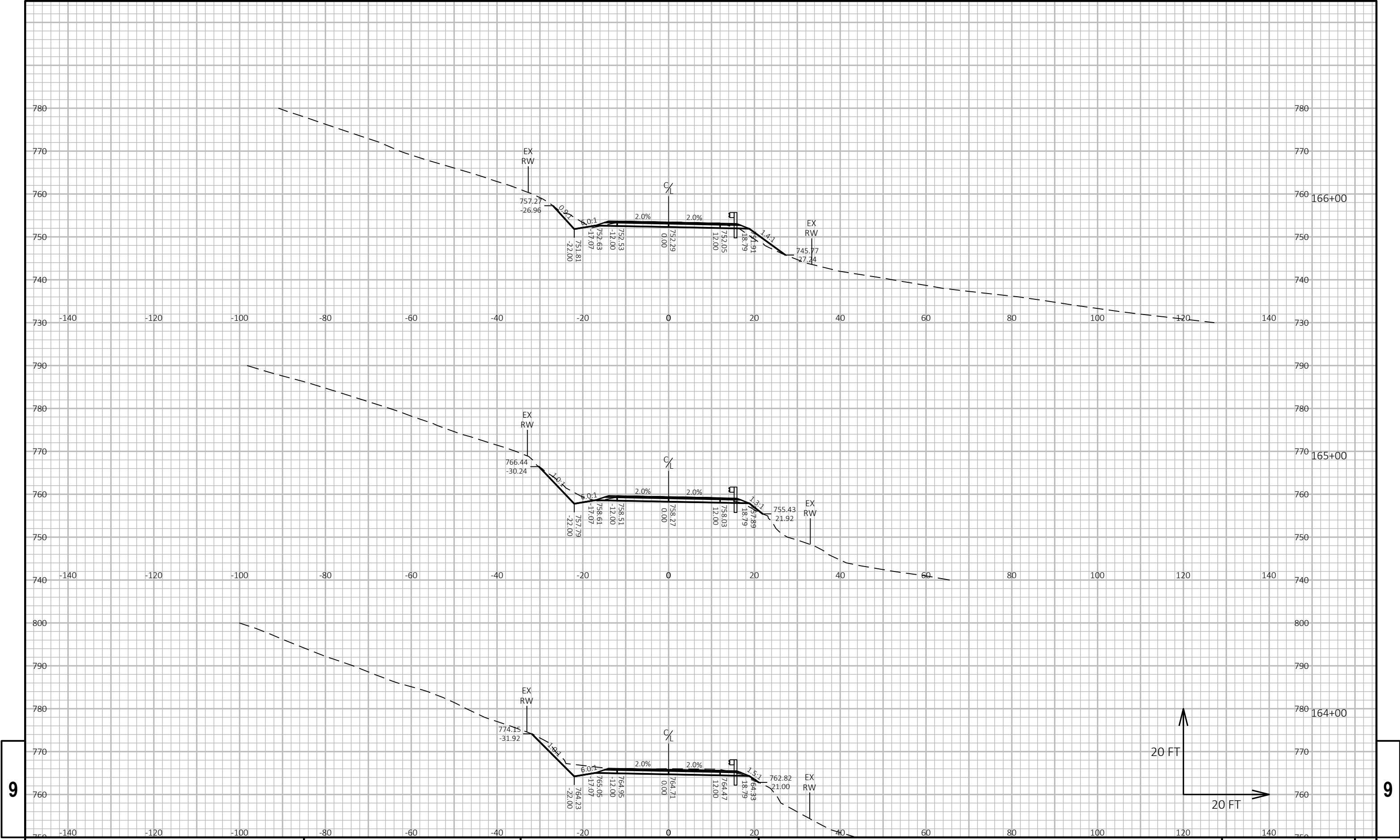
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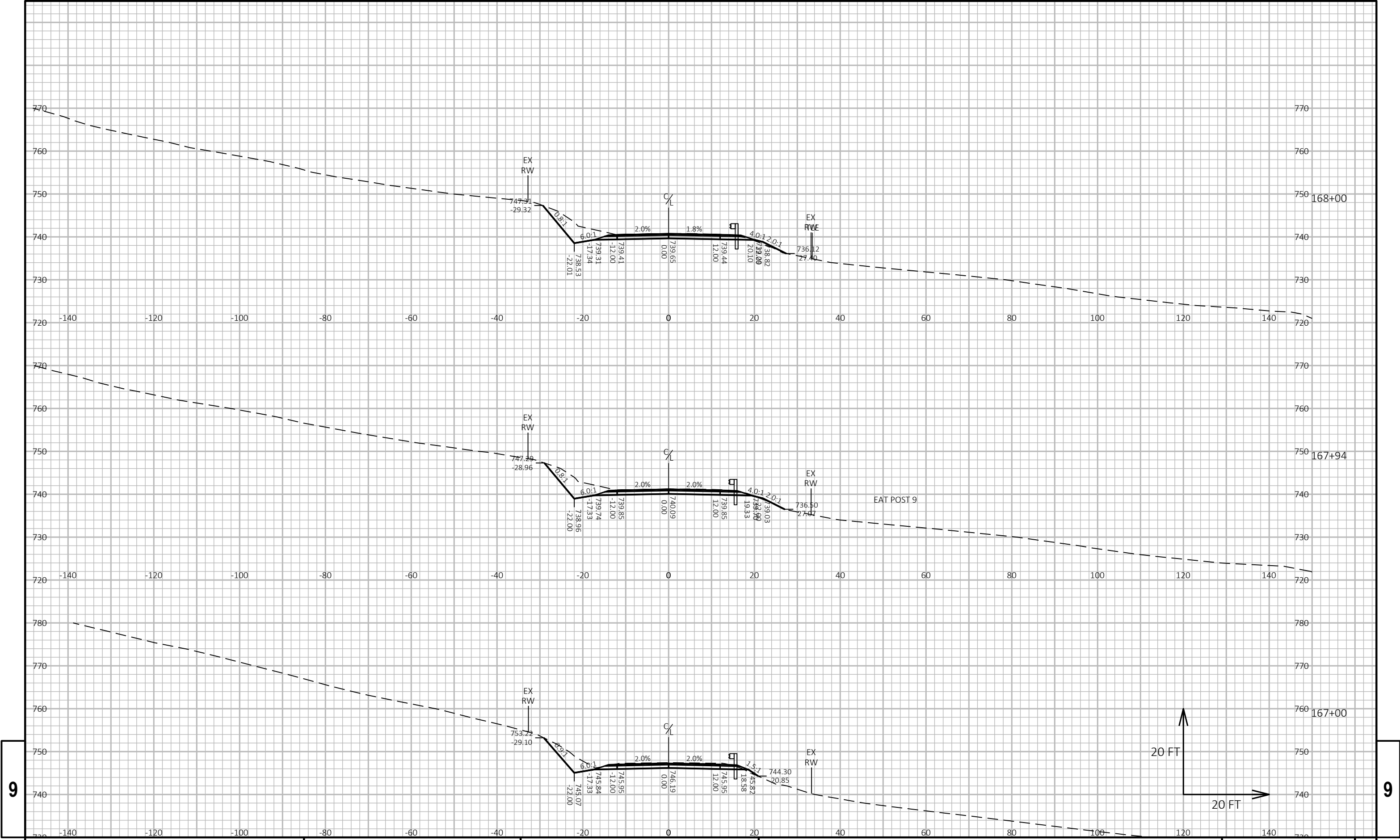






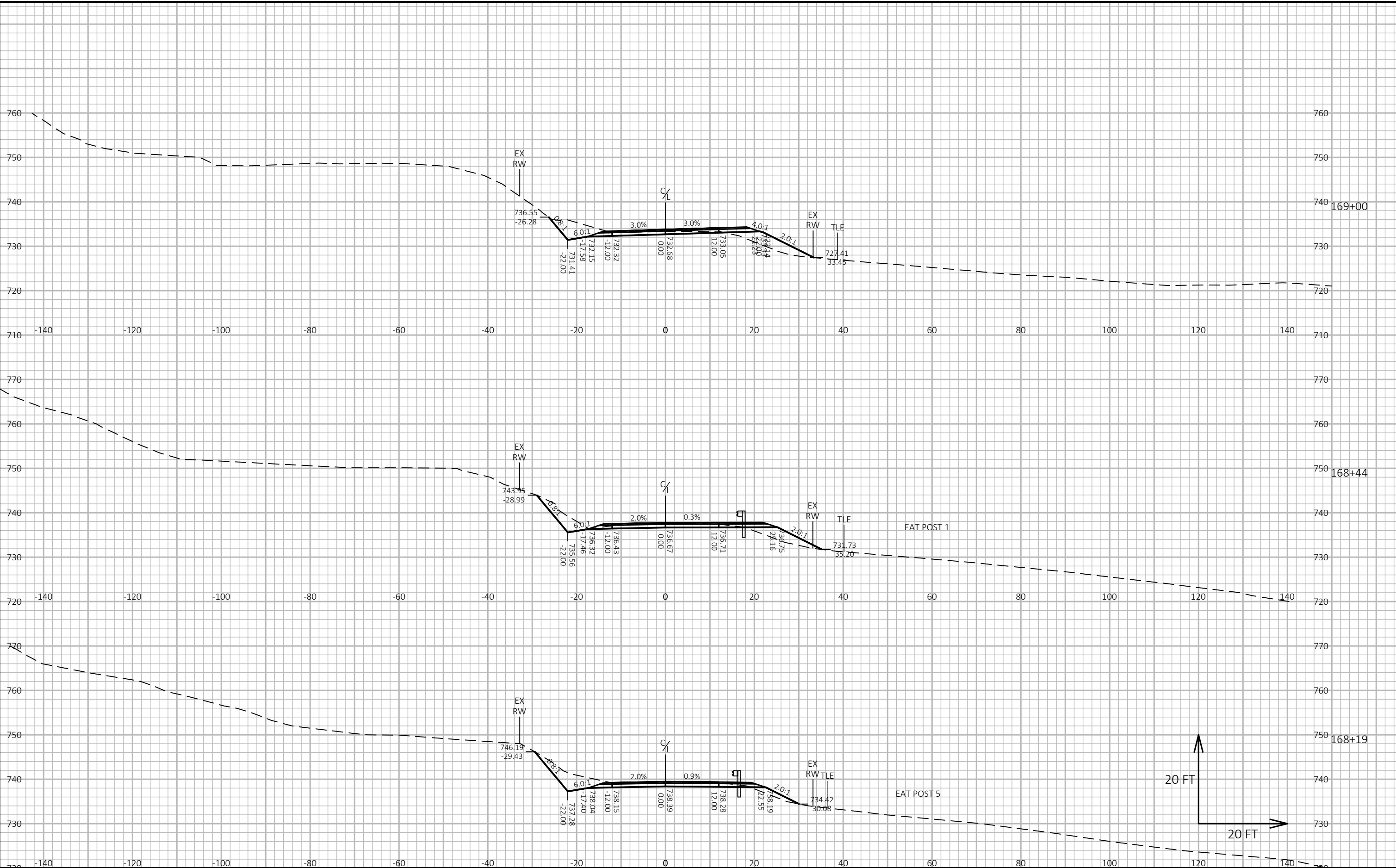
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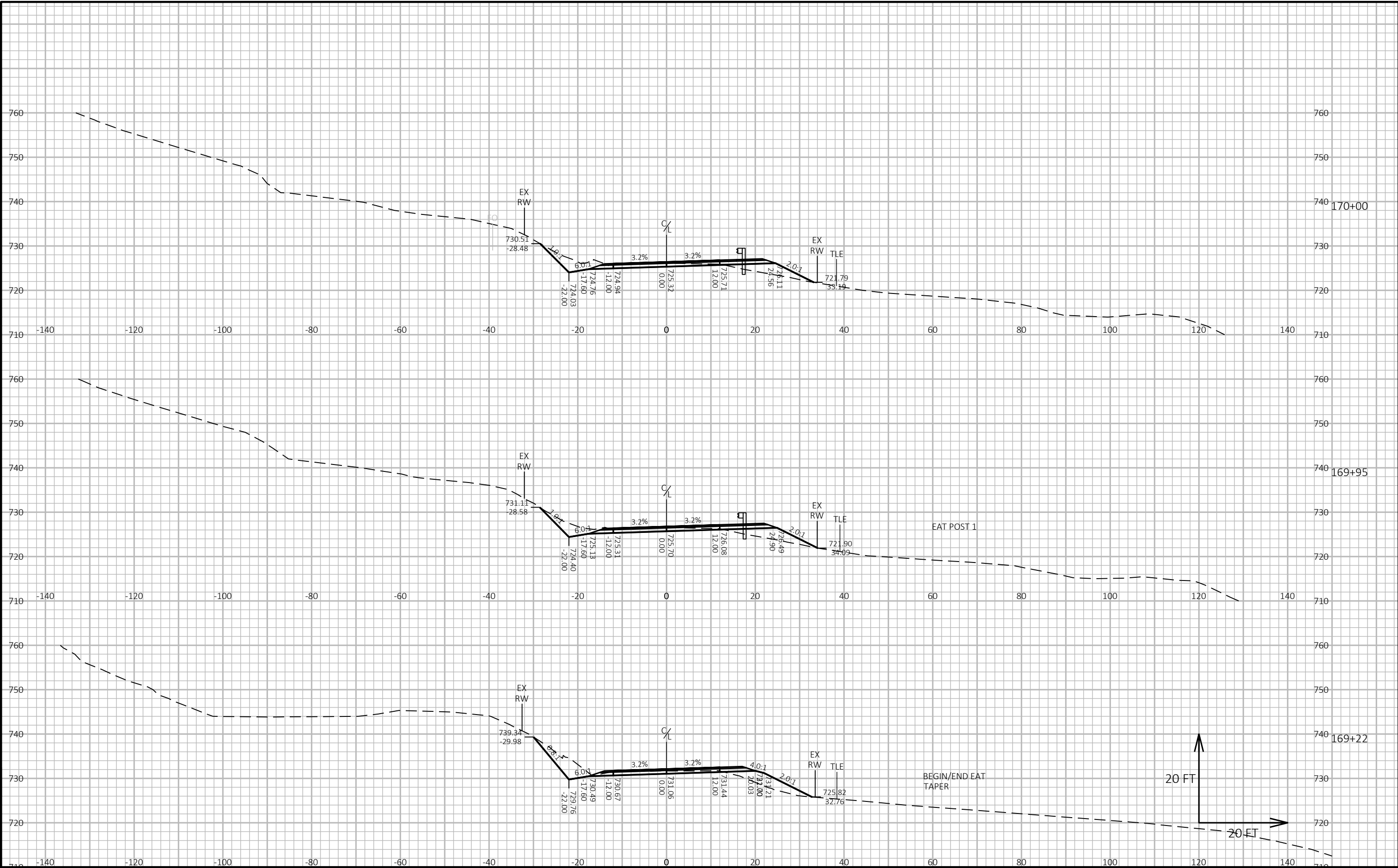
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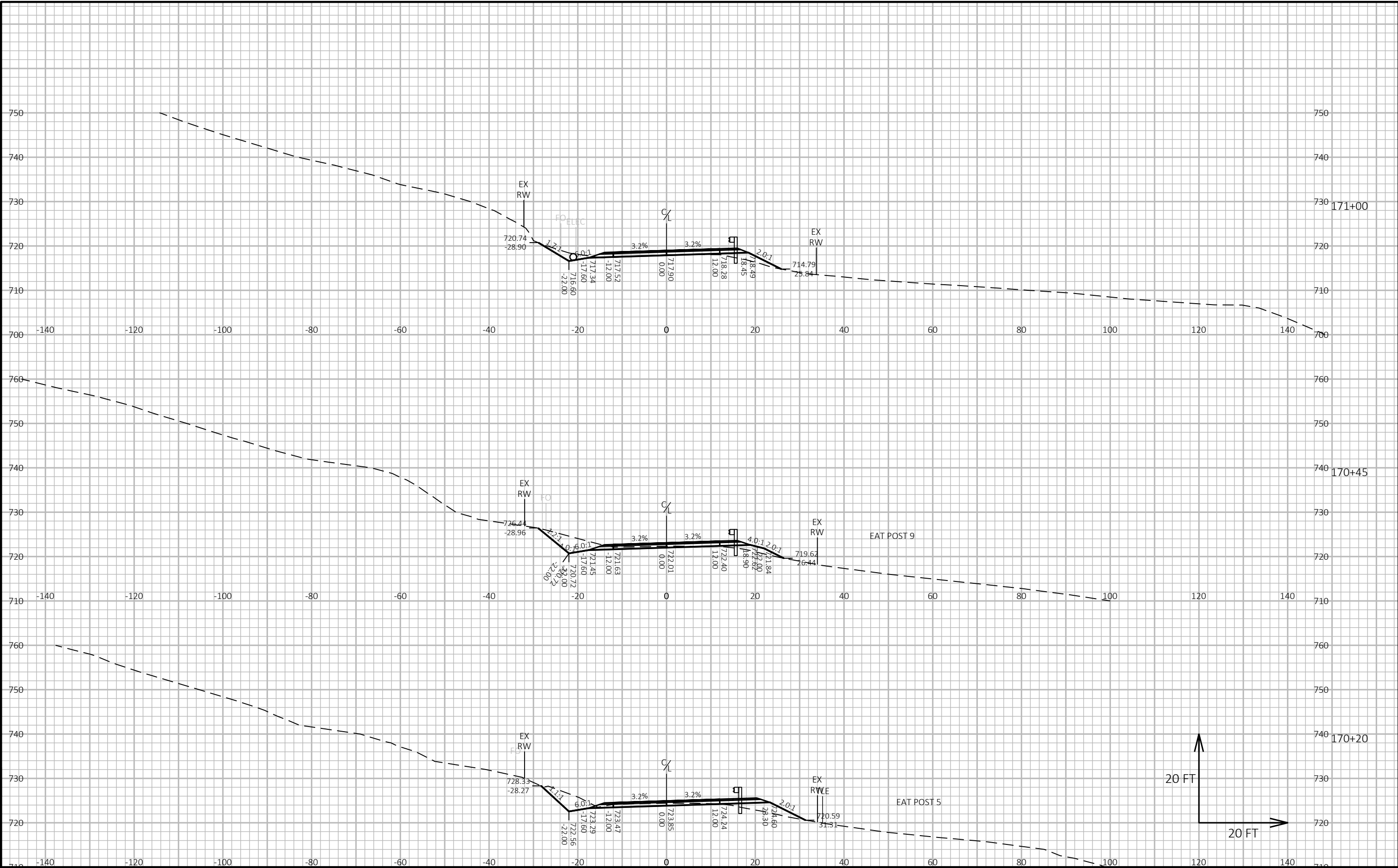
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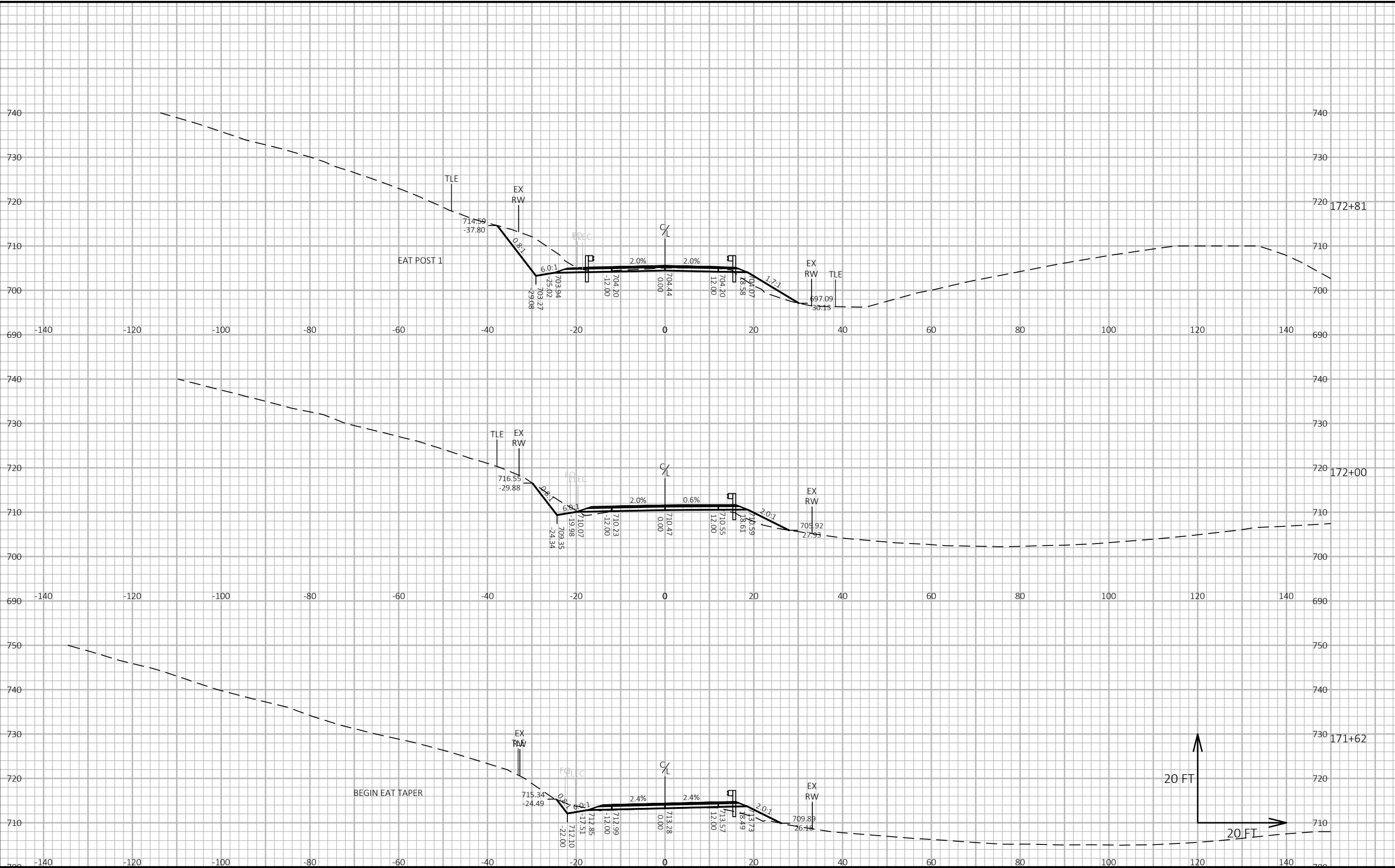


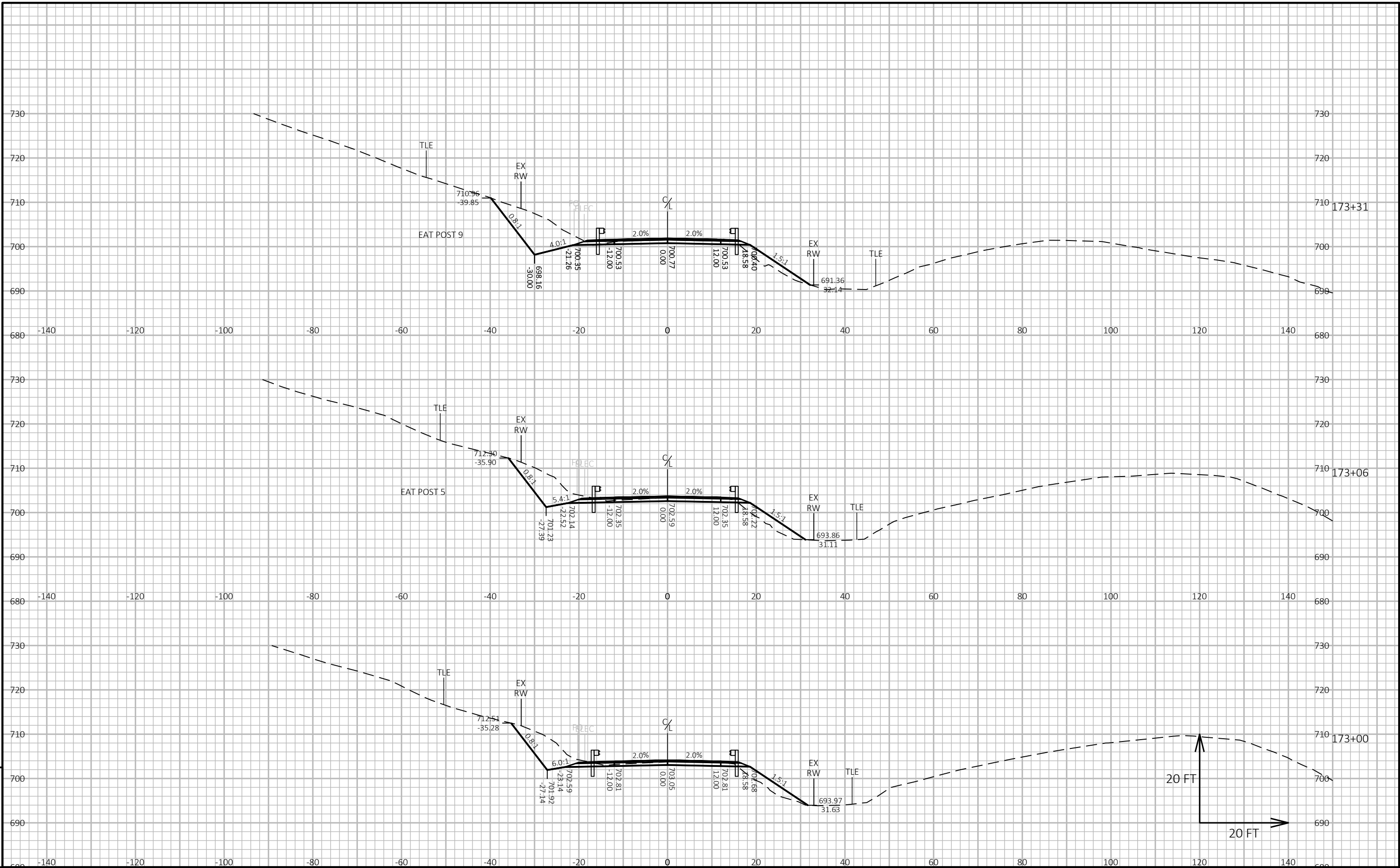


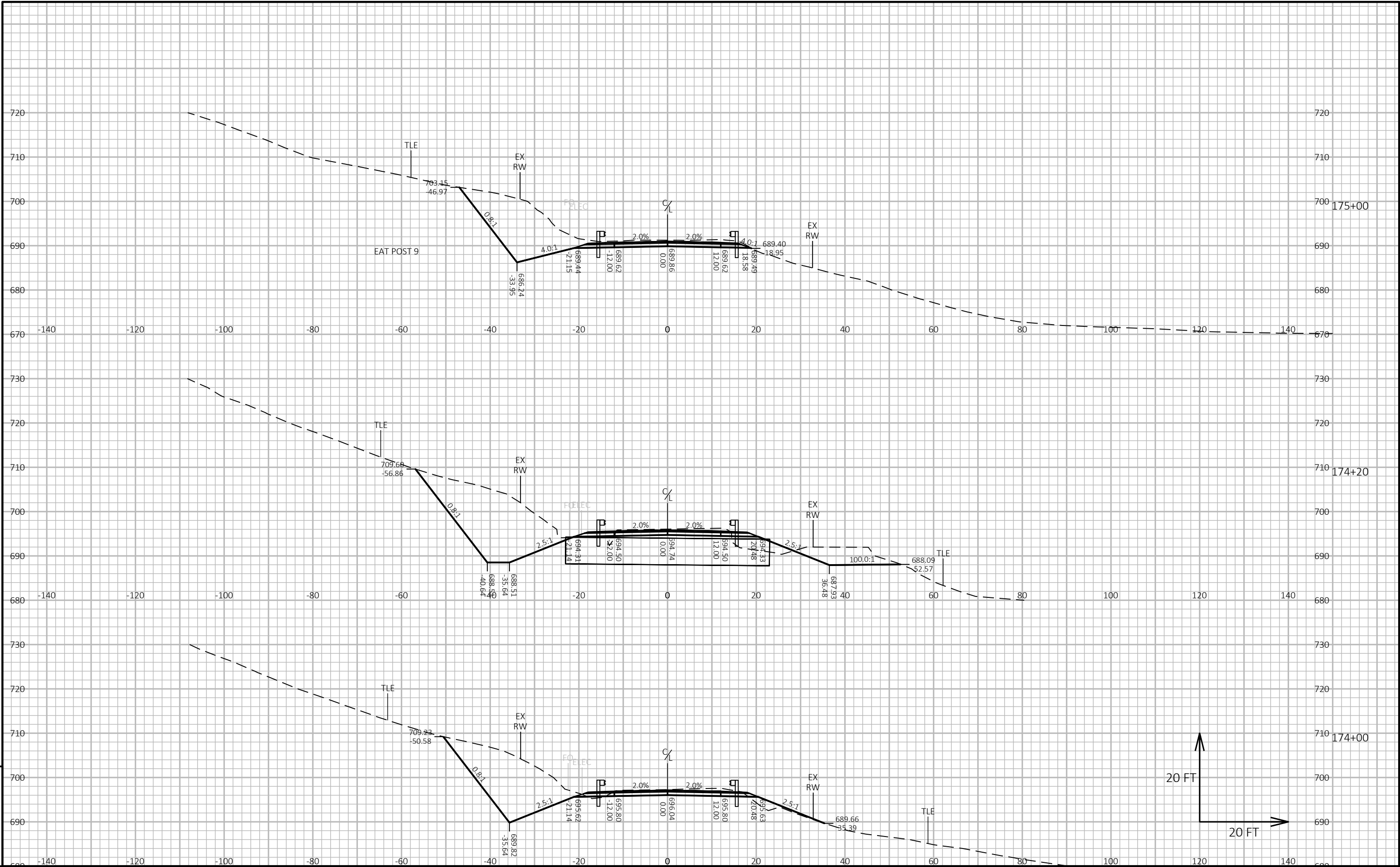
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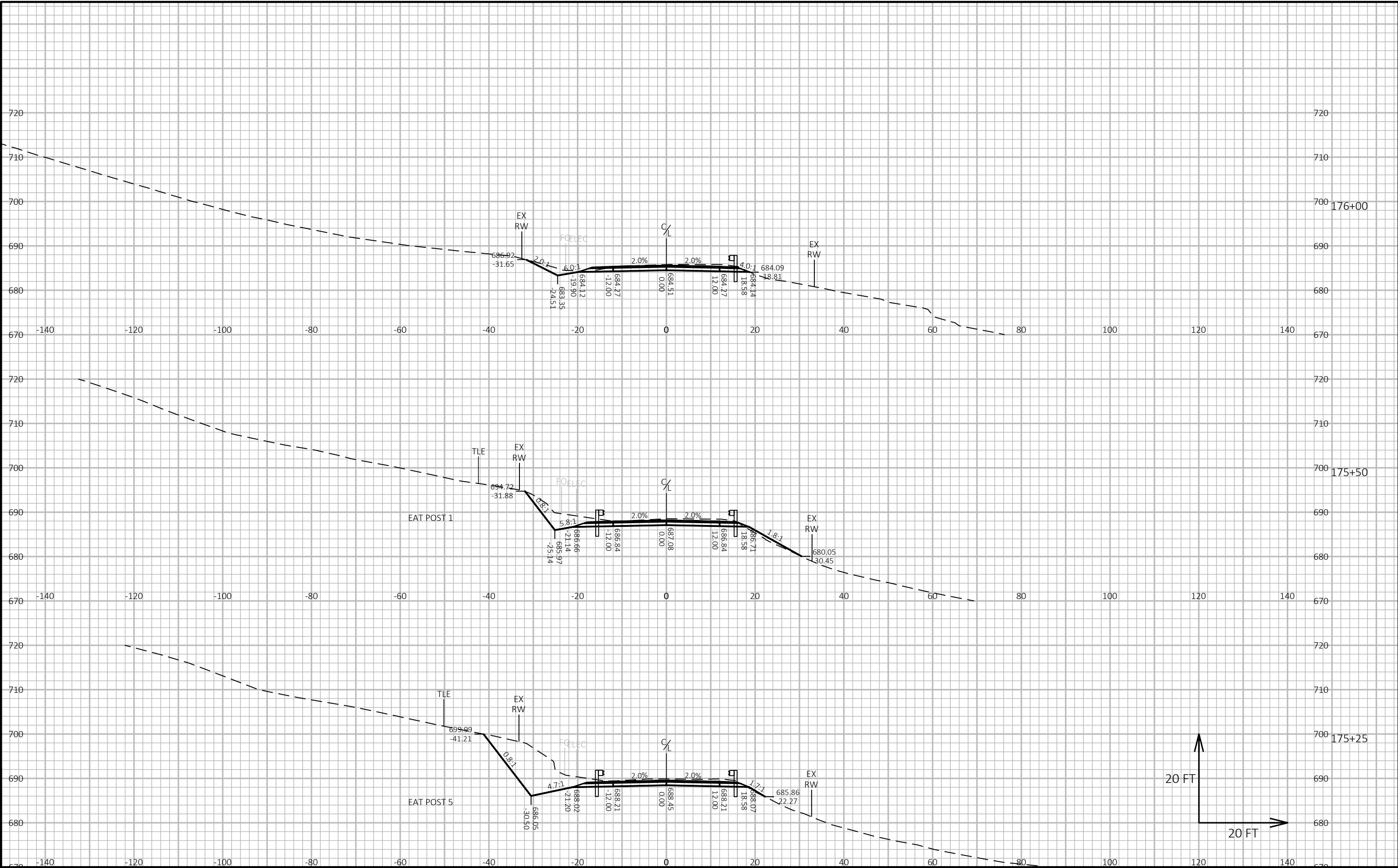
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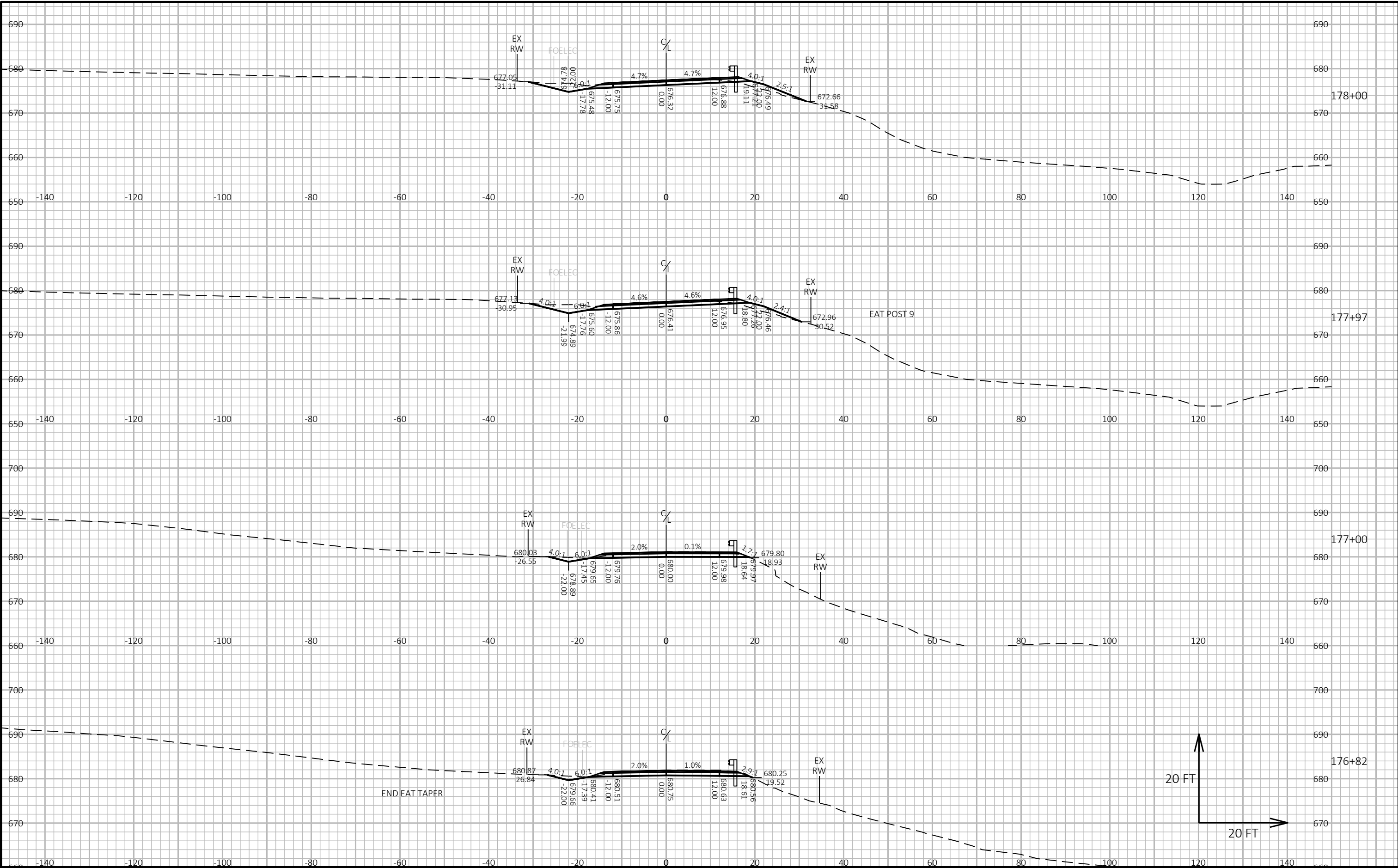


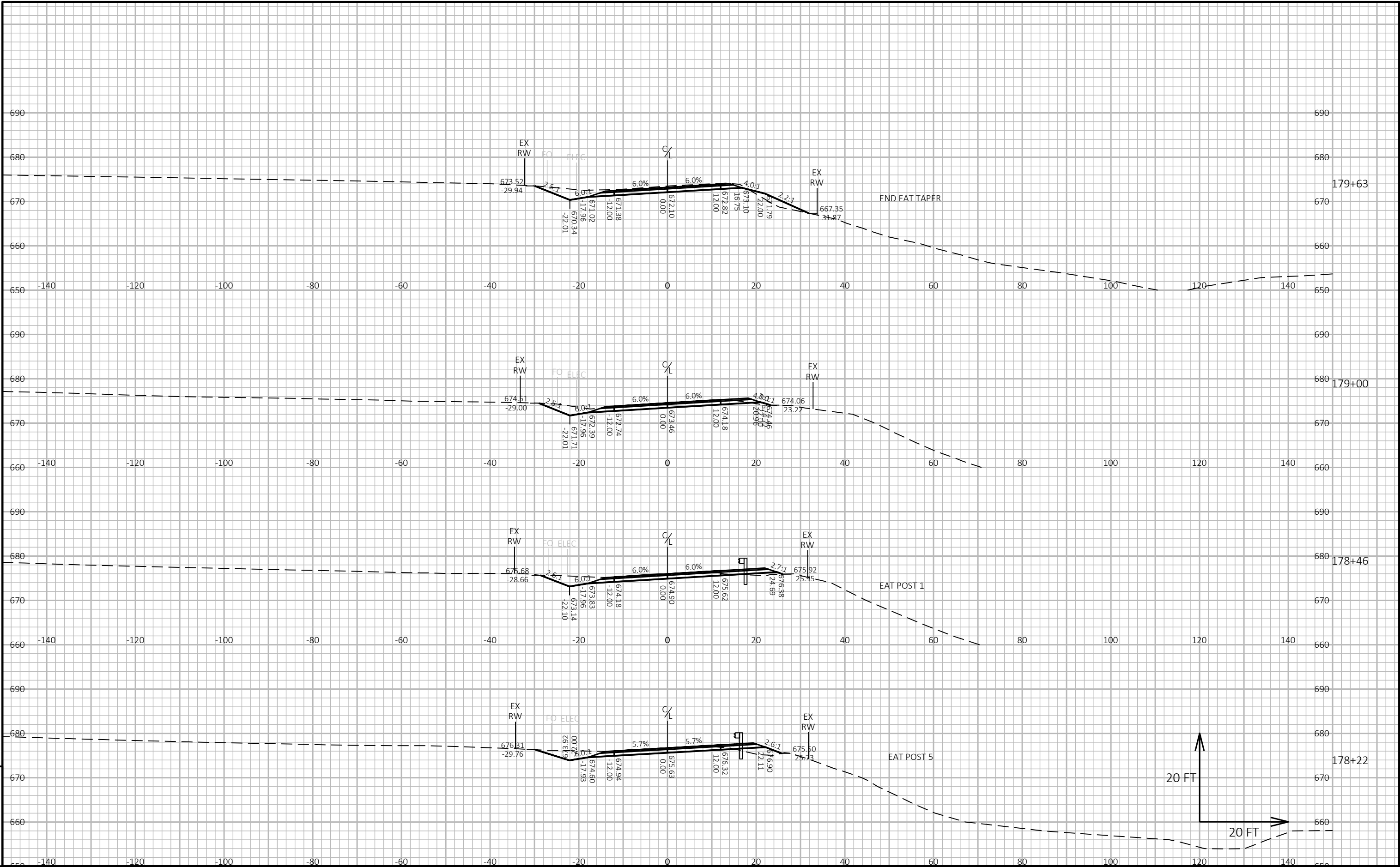


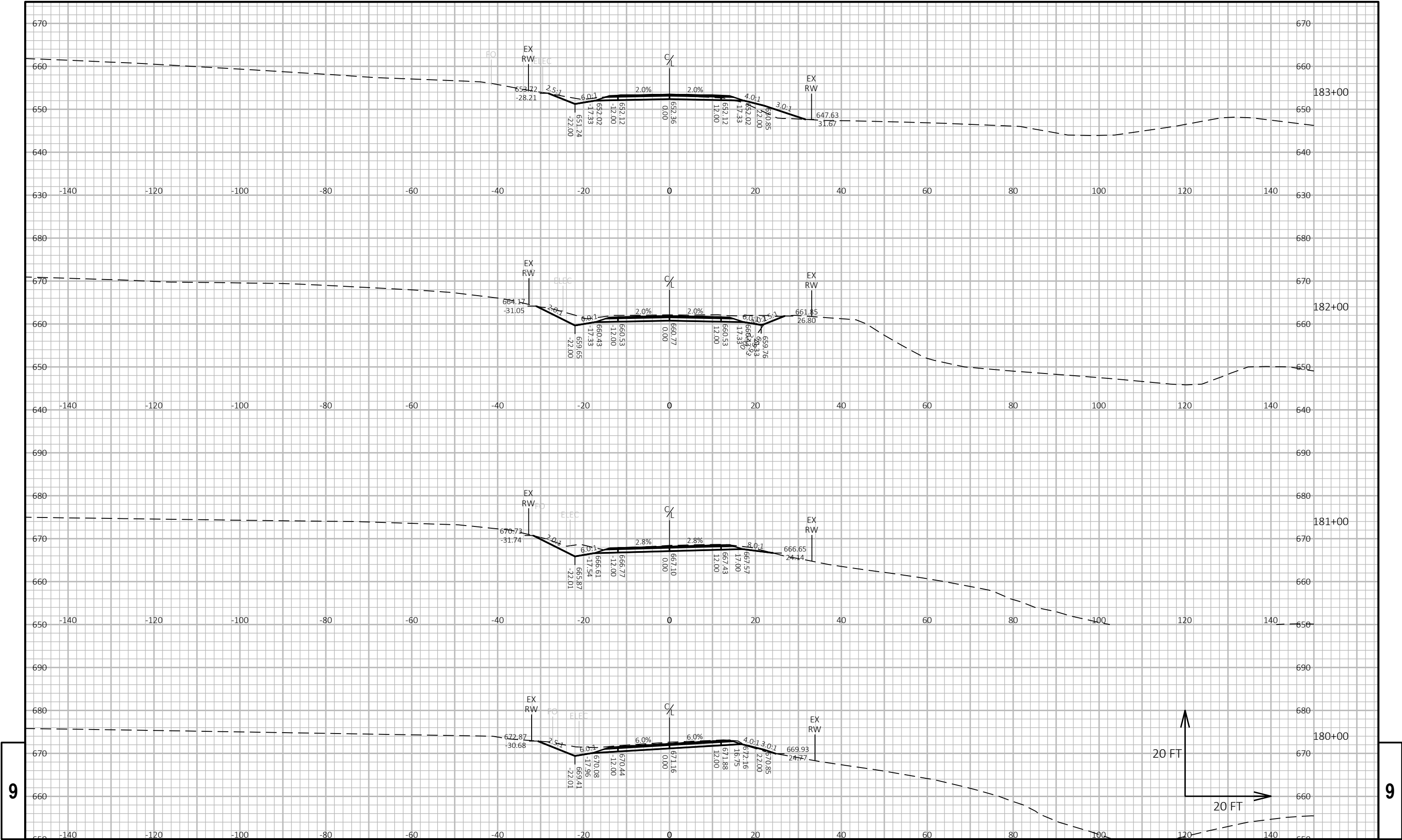




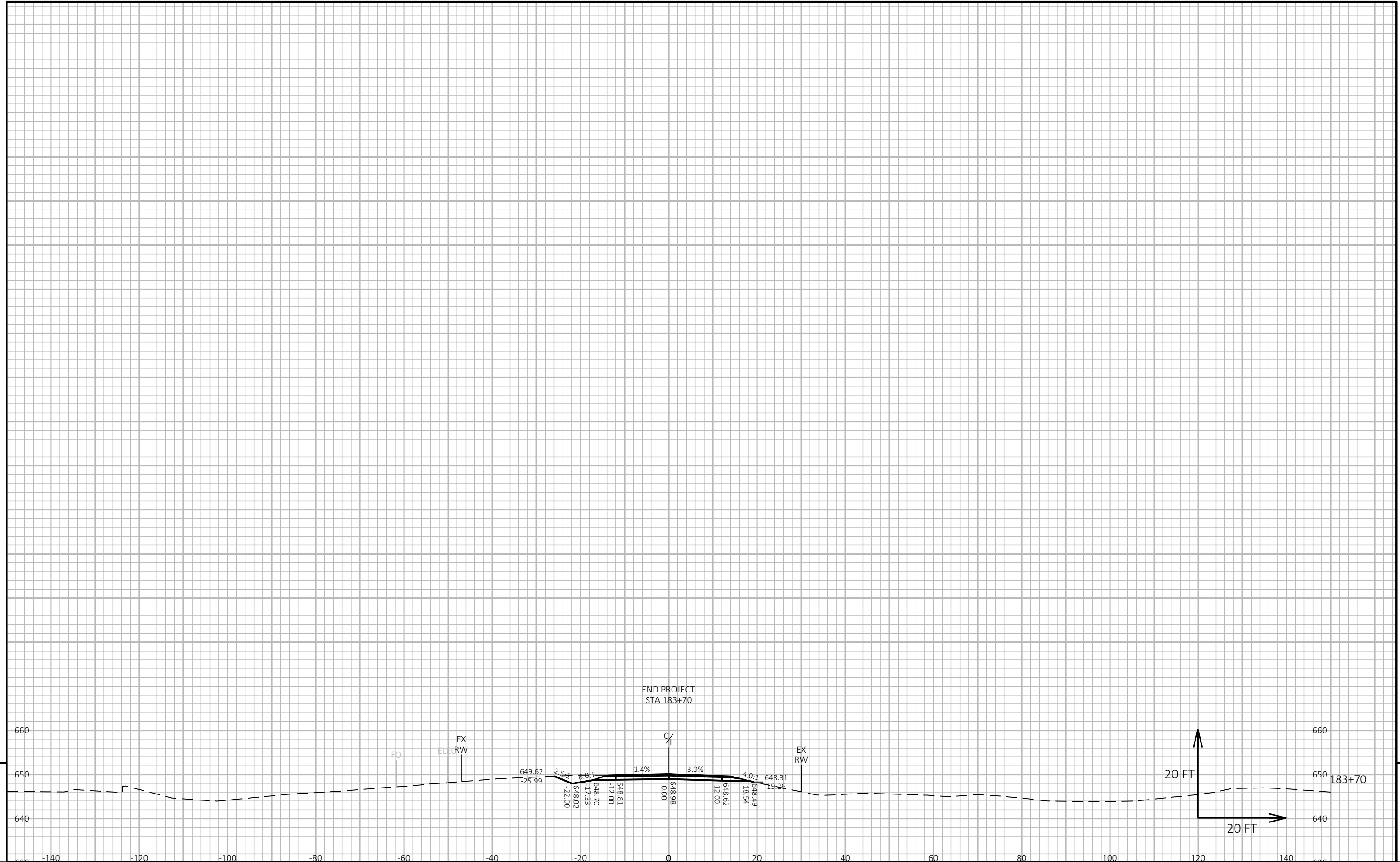








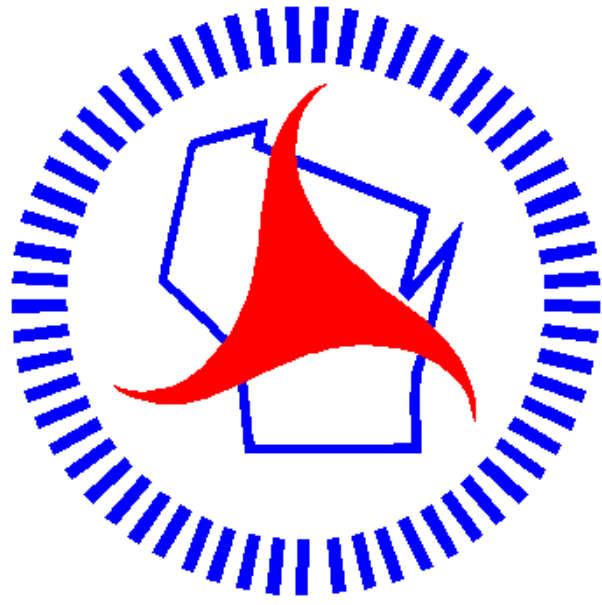
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PROJECT NO: 5537-00-71	HWY: CTH O	COUNTY: VERNON	CROSS SECTIONS: CTH O	SHEET E
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Notes



Wisconsin Department of Transportation

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