

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details (Inc. Erosion Contrl)
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 = 220

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

REEDSVILLE - MANITOWOC

EAST VILLAGE LIMITS - BRANCH RIVER

USH 10

MANITOWOC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1500-33-71	WISC 2024068	1

STATE PROJECT NUMBER
1500-33-71



22

DESIGN DESIGNATION

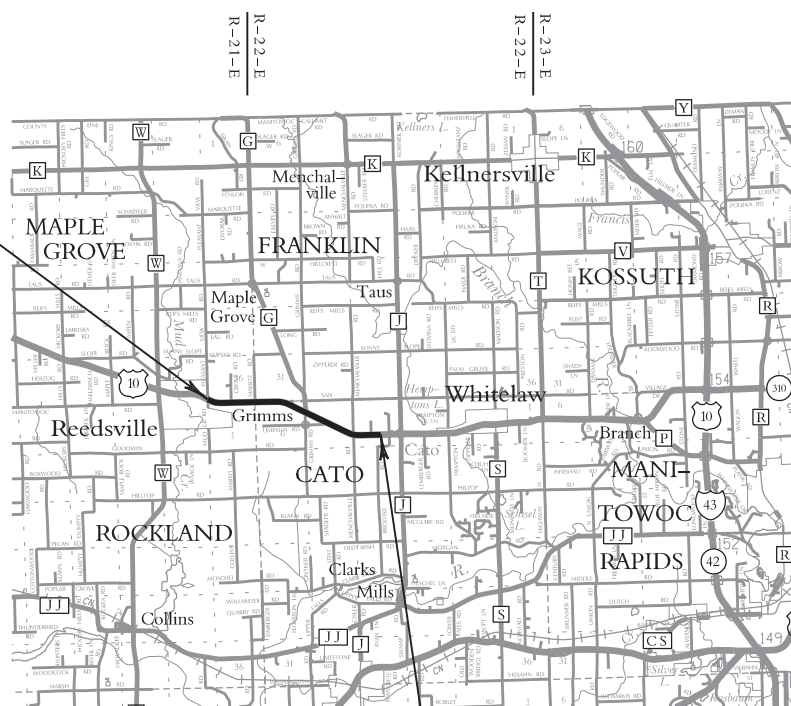
A.A.D.T. 2023	=	5,240 - 7,760
A.A.D.T. 2043	=	6,300 - 8,560
D.H.V.	=	790 - 1,070
D.D.	=	60/40
T.	=	22.5%
DESIGN SPEED	=	60 MPH
ESALS	=	3,385,000 - 4,787,000

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)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT
STA 61+00
Y=323,533.48
X=159,518.39



END PROJECT
STA 252+00

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 3.617 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), 'MANITOWOC' COUNTY, HORIZONTAL DATUM NAD 83, (2011). ALL DISTANCES ARE GROUND. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 1988, (2012).

ORIGINAL PLANS PREPARED BY
emcs, inc.
500 North 17th Avenue
Wausau, WI 54401
715.845.1081 Fax 715.845.1099



5-12-2017 *Stephanie G. Christensen*
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS, INC.
Designer	EMCS, INC.
Project Manager	BRIAN HAEN
Regional Examiner	
Regional Supervisor	CHAD DEGRAVE

APPROVED FOR THE DEPARTMENT
DATE: 5/12/17 *Brian Haen*
(Signature)

E

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.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE ALLOWED IN WETLANDS.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

EXISTING RIGHT-OF-WAY WEST OF BRODTKE ROAD IS BASED ON AVAILABLE RW PLATS.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- EROSION CONTROL
- MARKING AND SIGNING
- TRAFFIC CONTROL
- ALIGNMENT DETAIL

AS-BUILTS USED FOR PLAN DEVELOPMENT

PROJECT NO: 1500-03-71, CONSTRUCTION YEAR: 1987
PROJECT NO: 1500-08-72, CONSTRUCTION YEAR: 1994

UTILITIES

COMMUNICATIONS

FRONTIER COMMUNICATIONS OF WI LLC
TYLER COFFMAN
113 OAKES STREET
BLUFFS, IL 62621
(217) 491-7186
TYLER.COFFMAN@JSITEL.COM

SPECTRUM

VINCE ALBIN
3520 E. DESTINATION DR
APPLETON, WI 54915
(920) 378-0444
VINCE.ALBIN@CHARTER.COM

ELECTRIC - DISTRIBUTION

WISCONSIN PUBLIC SERVICE CORPORATION
CHUCK WINDUS
2850 S ASHLAND AVE
GREEN BAY, WI 54307
(920) 606-1141
CHARLES.WINDUS@WISCONSINPUBLICSERVICE.COM

ELECTRIC - TRANSMISSION

ATC MANAGEMENT, INC.
CHRIS DAILEY
P.O. BOX 47
WAUKESHA, WI 53187
(262) 506 - 8664
CDAILEY@ATCLLC.COM

GAS/PETROLEUM

WISCONSIN PUBLIC SERVICE CORPORATION
JOEL SAWICKI
800 COLUMBUS ST
P.O. BOX 236
TWO RIVERS, WI 54241-0236
(920) 657-1862
JOEL.SAWICKI@WISCONSINPUBLICSERVICE.COM

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 = 94 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 23 ACRES

DIGGERS HOTLINE

 Dial **811** or (800) 242-8511
www.DiggersHotline.com

OTHER CONTACTS

DNR LIAISON

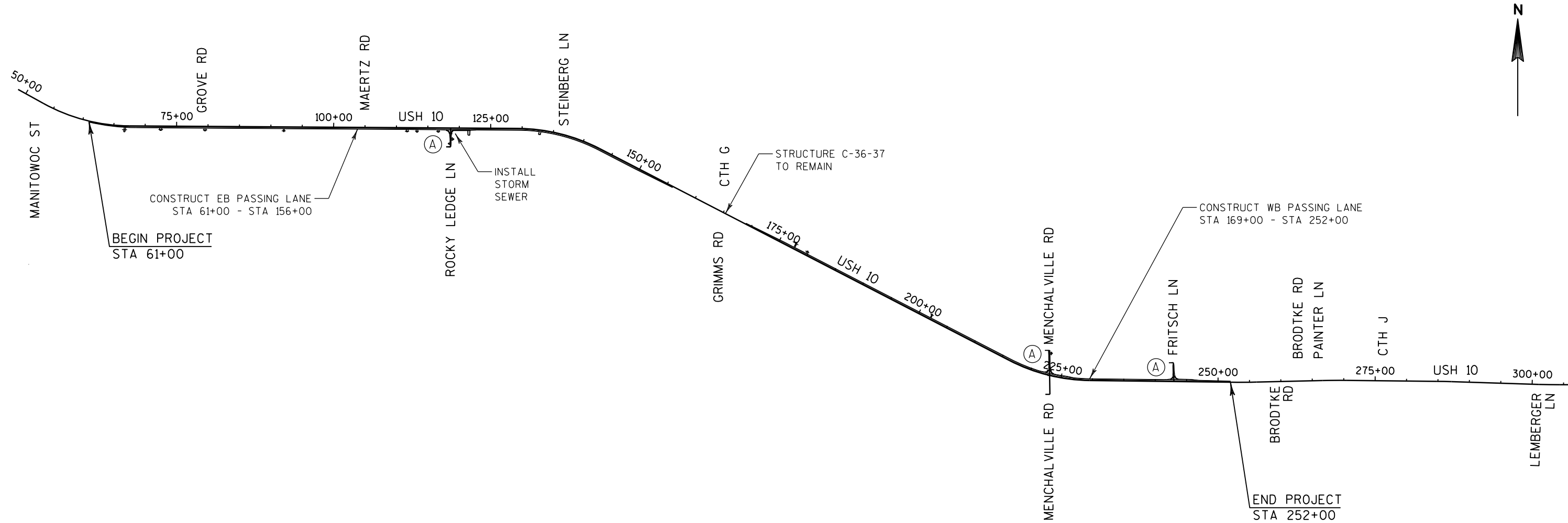
MATT SHAEVE
DNR NORTHEAST REGIONAL HO
2984 SHAWANO AVE
GREEN BAY, WI 54313
MATTHEW.SCHAEVE@WISCONSIN.GOV

US CORPS OF ENGINEERS

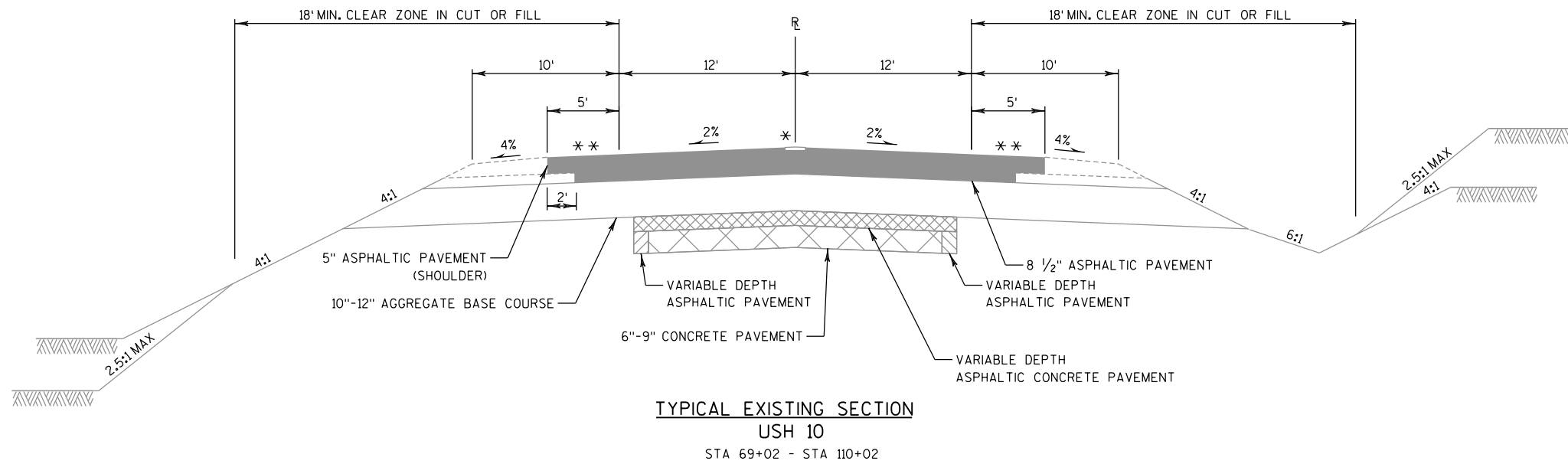
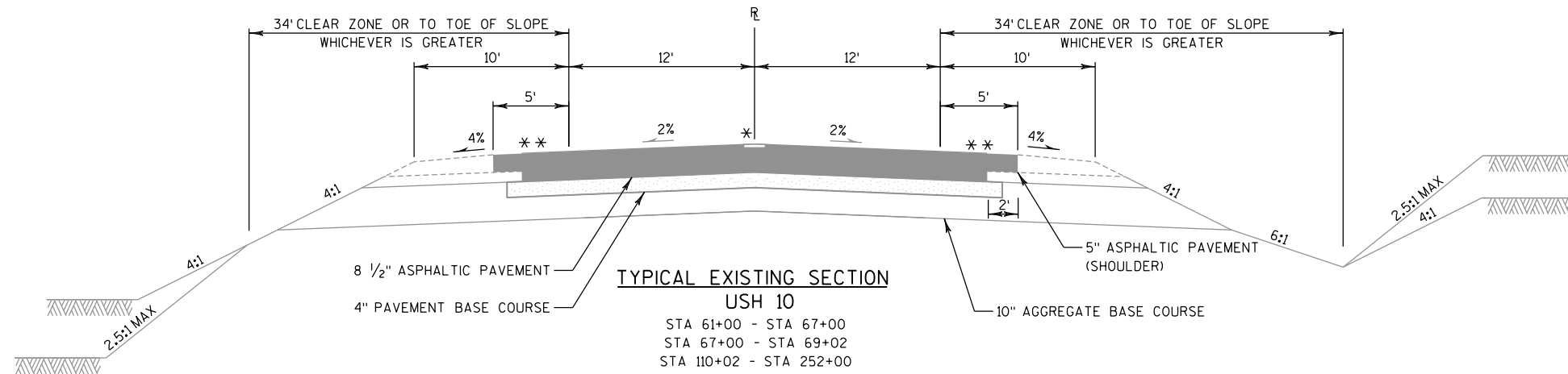
JOEY SHOEMAKER
OLD FORT SQUARE
211 N. BROADWAY, SUITE 221
GREEN BAY, WI 54303

DESIGNER

STEPHANIE CHRISTENSEN, PE
EMCS, INC.
500 NORTH 17TH AVENUE
WAUSAU, WI 54401
SCHRISTENSEN@EMCSINC.COM



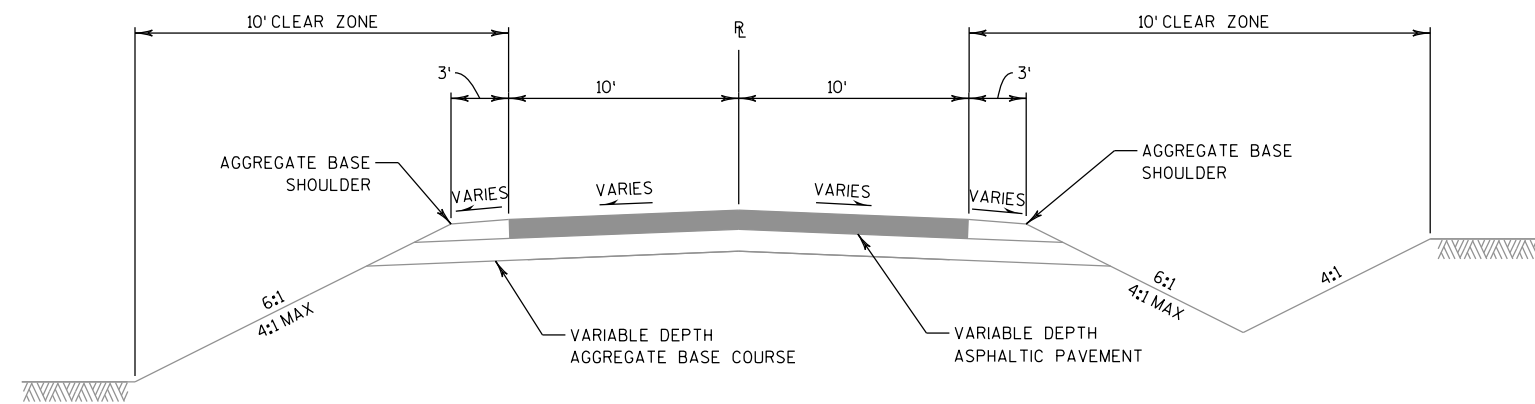
(A) RECONSTRUCT INTERSECTION



NOTES

- * ASPHALTIC CENTERLINE RUMBLE STRIP
- ** ASPHALTIC SHOULDER RUMBLE STRIP

PAVEMENT CROSS SLOPES VARY DUE TO SUPER ELEVATION.
(SEE ALIGNMENT DETAIL SHEET FOR SUPERELEVATION DATA)

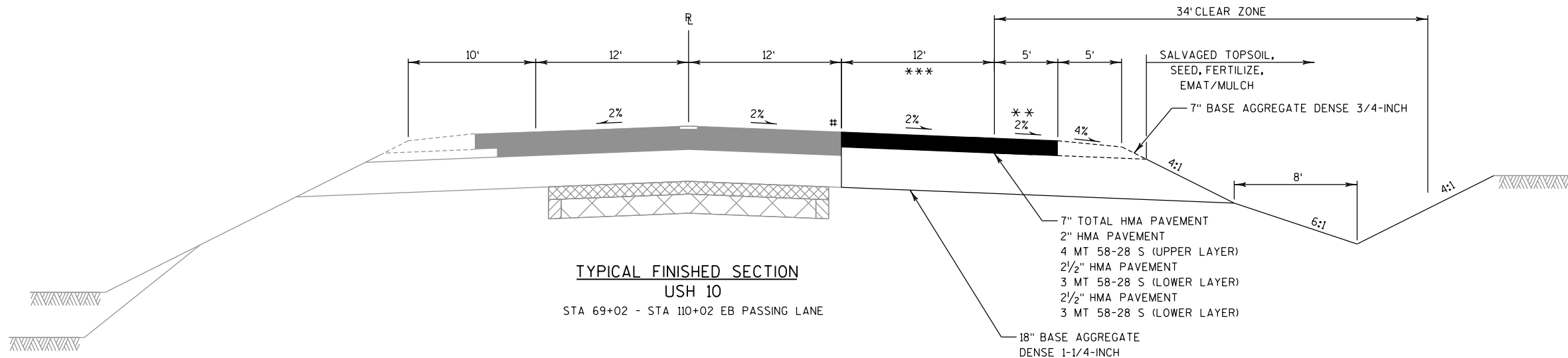
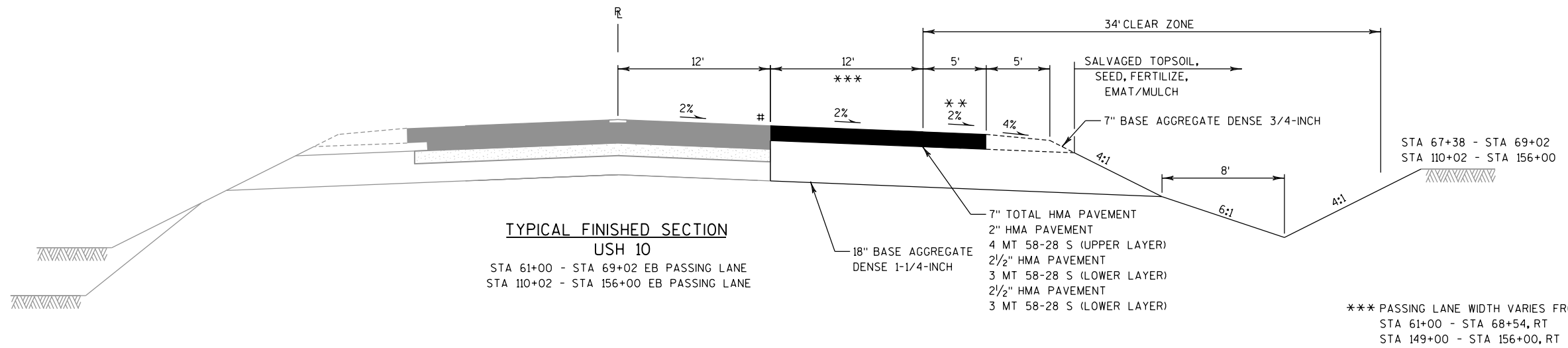


TYPICAL EXISTING SECTION

ROCKY LEDGE LN
 STA 7+20 - STA 10+00
 MENCHALVILLE RD
 STA 20+00 - STA 24+00
 FRITSCH LN
 STA 30+00 - STA 32+75

NOTES

- * ASPHALTIC CENTERLINE RUMBLE STRIP
- ** 5'HMA SHOULDER
- PAVEMENT CROSS SLOPES VARY DUE TO SUPER ELEVATION.
(SEE ALIGNMENT DETAIL SHEET FOR SUPERELEVATION DATA)



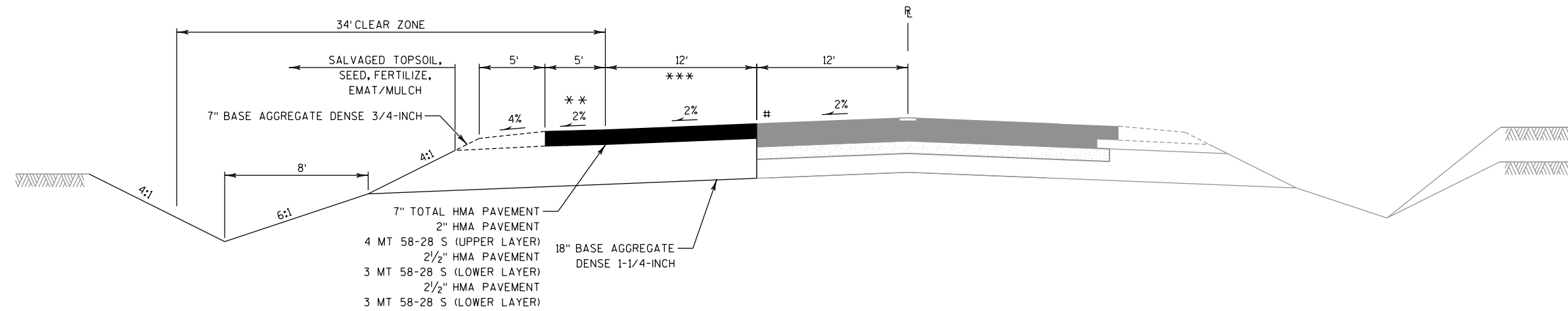
NOTES

#SAWING ASPHALT AT 12' RT

** ASPHALTIC SHOULDER RUMBLE STRIP

PAVEMENT CROSS SLOPES VARY DUE TO SUPERELEVATION.
(SEE ALIGNMENT DETAIL SHEET FOR SUPERELEVATION DATA)

SEE INTERSECTION DETAILS FOR LOCATION OF CURB &
GUTTER NEAR ROCKY LEDGE LANE



*** PASSING LANE WIDTH VARIES FROM 0' TO 12' IN TAPERS
 STA 169+00 - STA 176+00, LT
 STA 245+00 - STA 252+00, LT

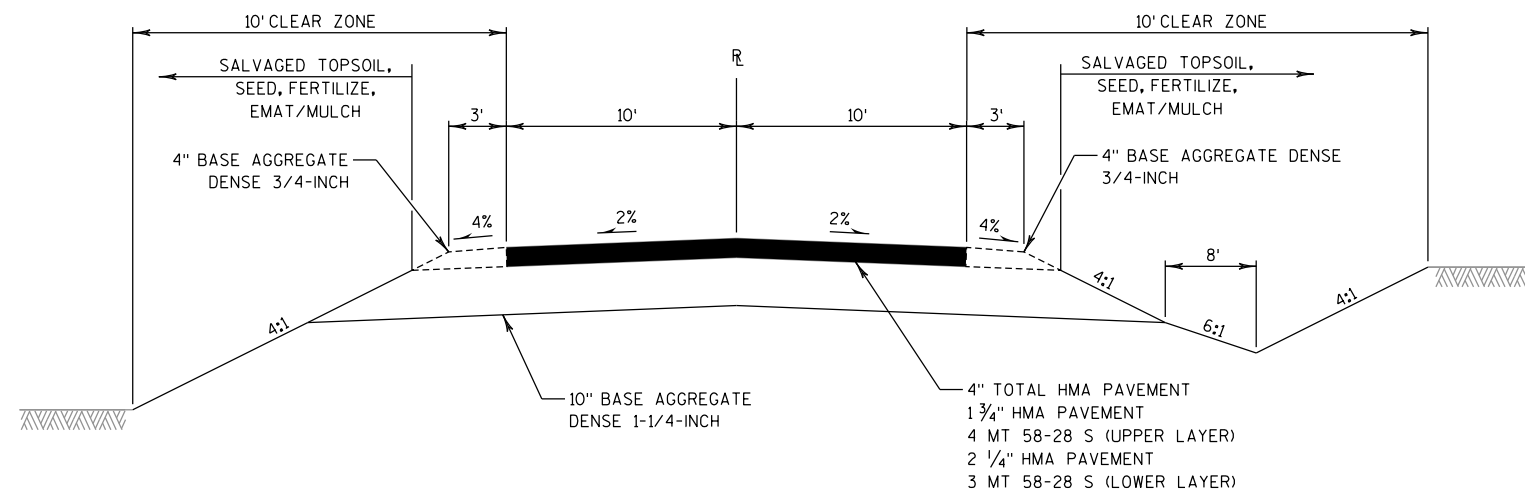
TYPICAL FINISHED SECTION
 USH 10
 STA 169+00 - STA 252+00 WB PASSING LANE

NOTES

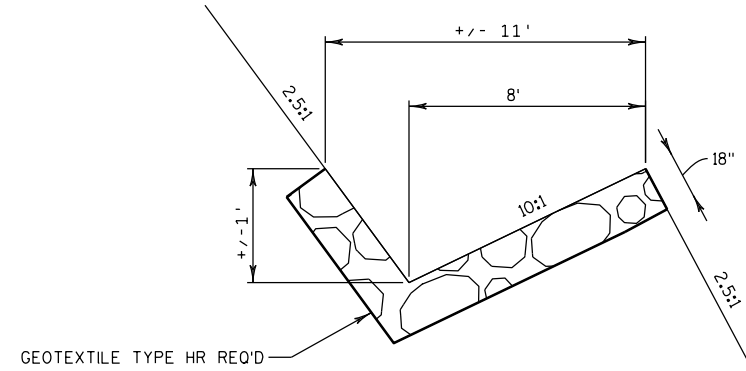
#SAWING ASPHALT AT 12' RT

** ASPHALTIC SHOULDER RUMBLE STRIP

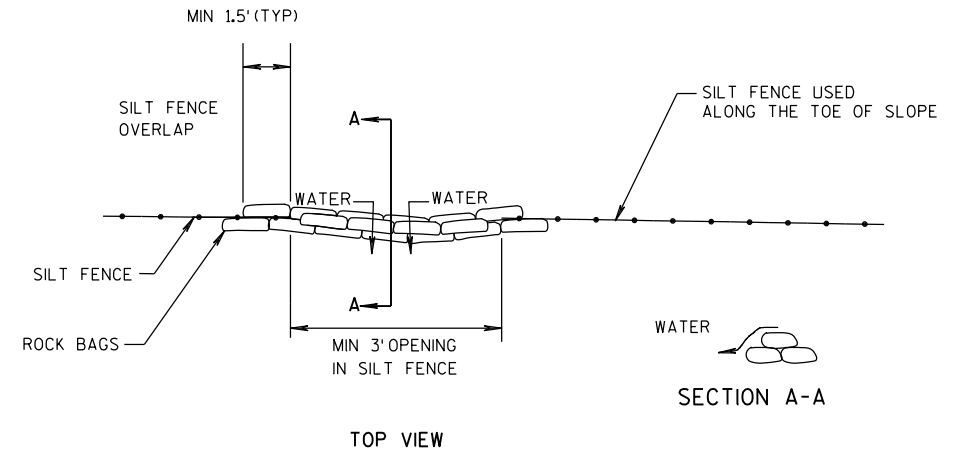
PAVEMENT CROSS SLOPES VARY DUE TO SUPERELEVATION.
 (SEE ALIGNMENT DETAIL SHEET FOR SUPERELEVATION DATA)



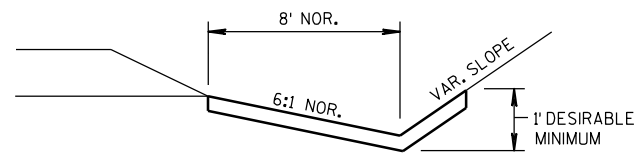
TYPICAL FINISHED SECTION
 ROCKY LEDGE LN
 STA 7+20 - STA 10+00
 MENCHALVILLE RD
 STA 20+00 - STA 24+00
 FRITSCH LN
 STA 30+00 - STA 32+75



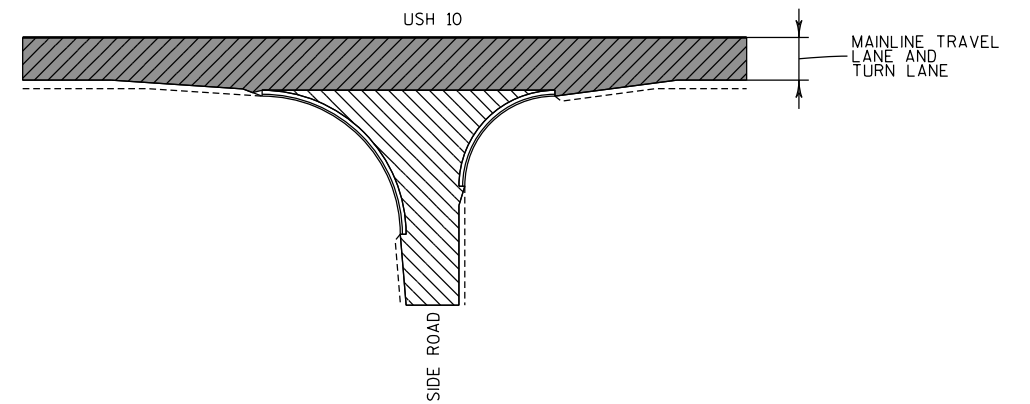
MEDIUM RIPRAP DETAIL FOR INTERCEPTOR DITCHES
 (SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION)





ROCK BAGS SILT FENCE RELIEF DETAIL
 PAID AS ROCK BAGS
 (SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION)



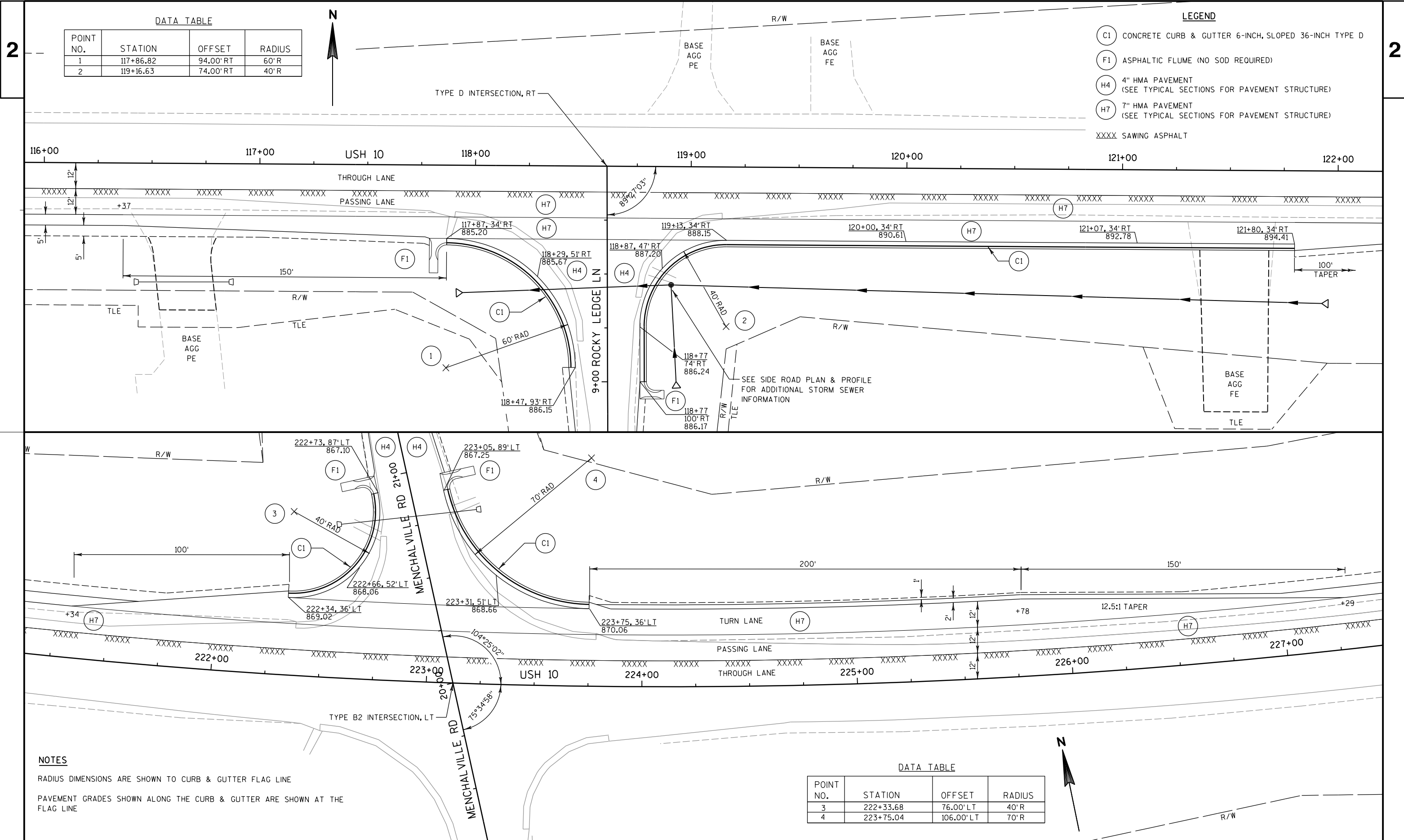
EROSION MAT DETAIL FOR DITCHES
 (SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION)



SIDE ROAD CONSTRUCTION LIMITS

-  7" HMA PAVEMENT
-  4" HMA PAVEMENT

ROCKY LEDGE LANE
 MENCHALVILLE ROAD
 FRITSCH LANE



DATA TABLE

POINT NO.	STATION	OFFSET	RADIUS
1	117+86.82	94.00' RT	60' R
2	119+16.63	74.00' RT	40' R

- LEGEND
- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
 - (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
 - (H4) 4" HMA PAVEMENT (SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE)
 - (H7) 7" HMA PAVEMENT (SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE)
 - XXXX SAWING ASPHALT

NOTES

RADIUS DIMENSIONS ARE SHOWN TO CURB & GUTTER FLAG LINE

PAVEMENT GRADES SHOWN ALONG THE CURB & GUTTER ARE SHOWN AT THE FLAG LINE

DATA TABLE

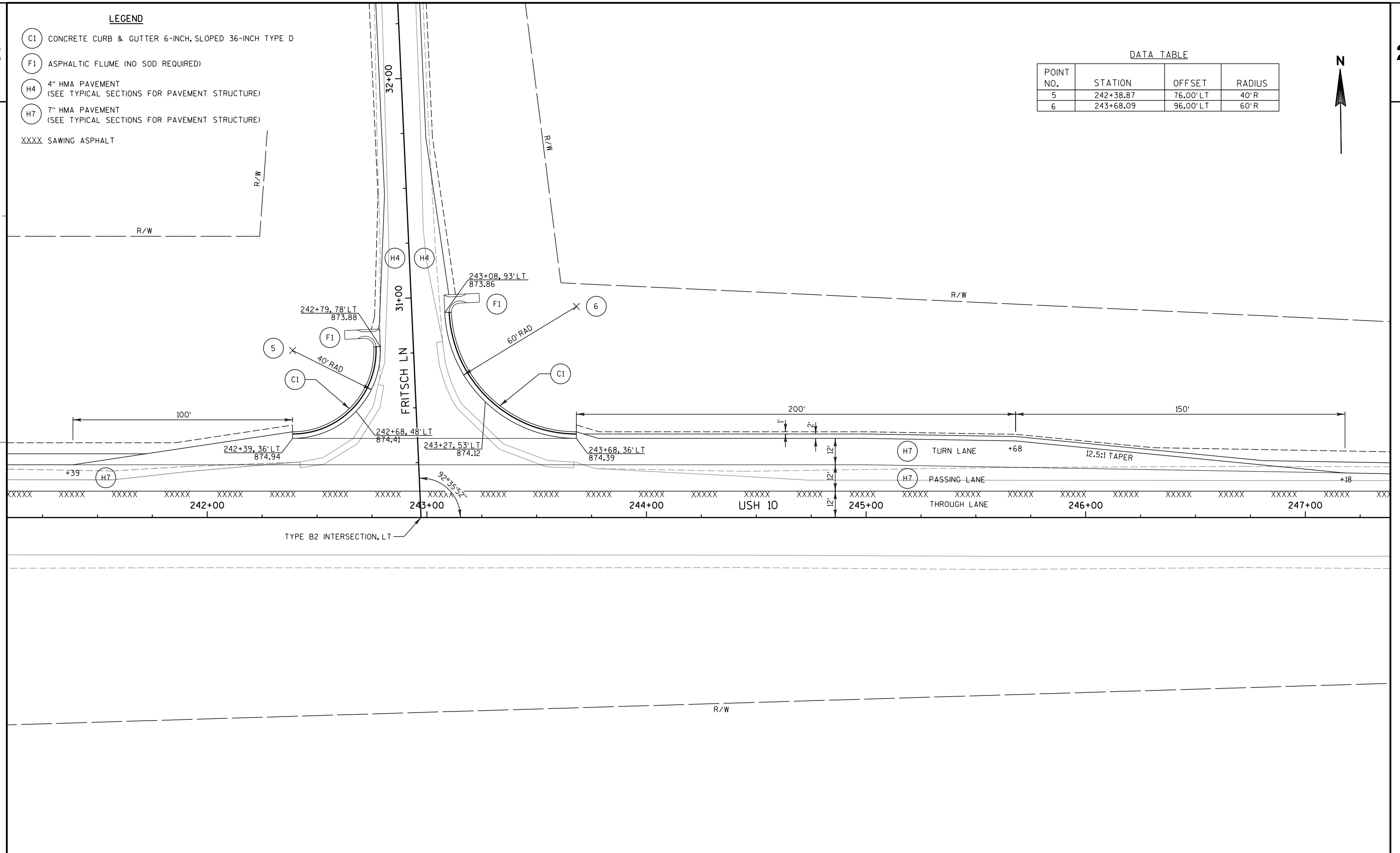
POINT NO.	STATION	OFFSET	RADIUS
3	222+33.68	76.00' LT	40' R
4	223+75.04	106.00' LT	70' R

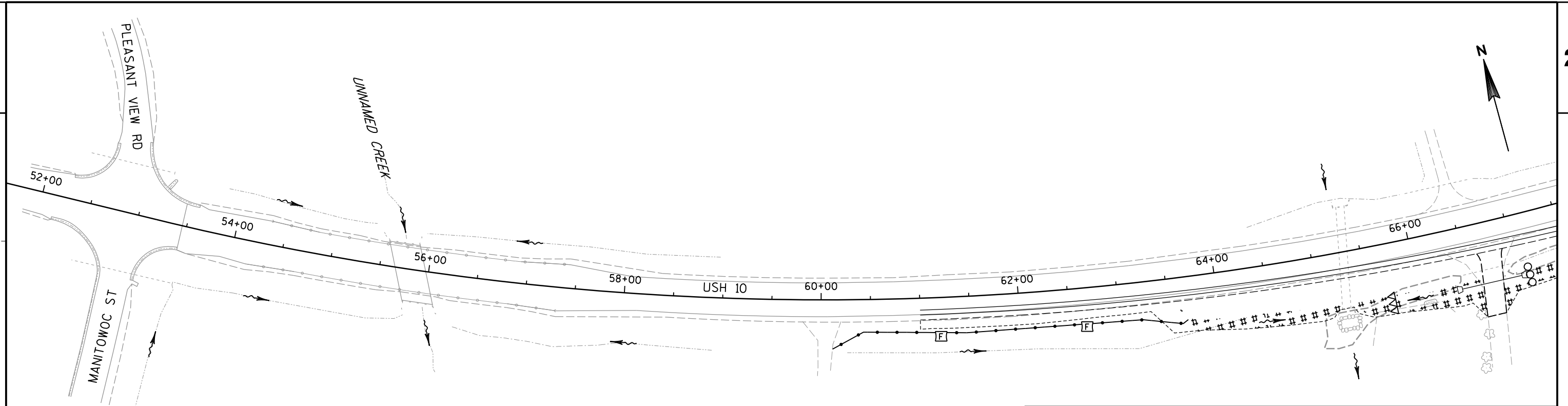
LEGEND

- (C1) CONCRETE CURB & GUTTER 6-INCH, SLOPED 36-INCH TYPE D
- (F1) ASPHALTIC FLUME (NO SOD REQUIRED)
- (H4) 4" HMA PAVEMENT (SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE)
- (H7) 7" HMA PAVEMENT (SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE)
- XXXX SAWING ASPHALT

DATA TABLE

POINT NO.	STATION	OFFSET	RADIUS
5	242+38.87	76.00' LT	40' R
6	243+68.09	96.00' LT	60' R

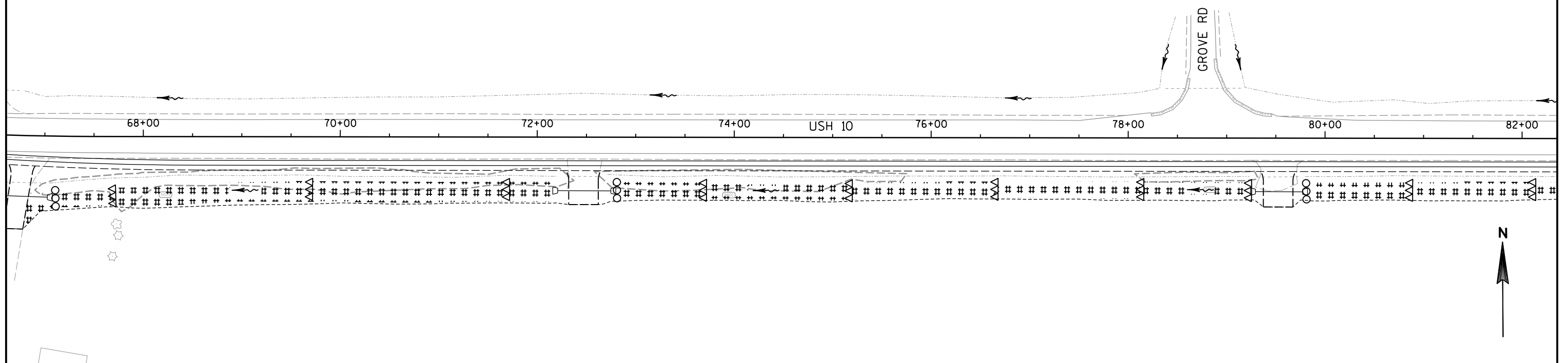


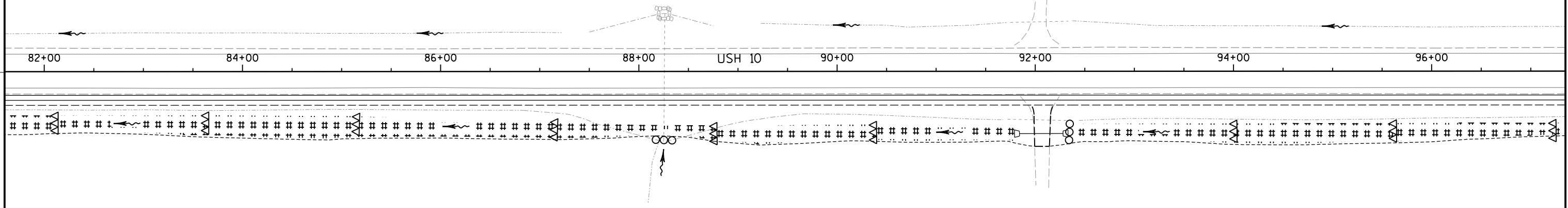


LEGEND

#####	EROSION MAT CLASS I TYPE B	o-o-o	RIPRAP MEDIUM
—●—	SILT FENCE	- - -	DELINEATED WETLAND BOUNDARY
- - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[F]	SILT FENCE RELIEF (ROCK BAGS)		
△△△	TEMPORARY DITCH CHECKS		
○○	CULVERT PIPE CHECK		

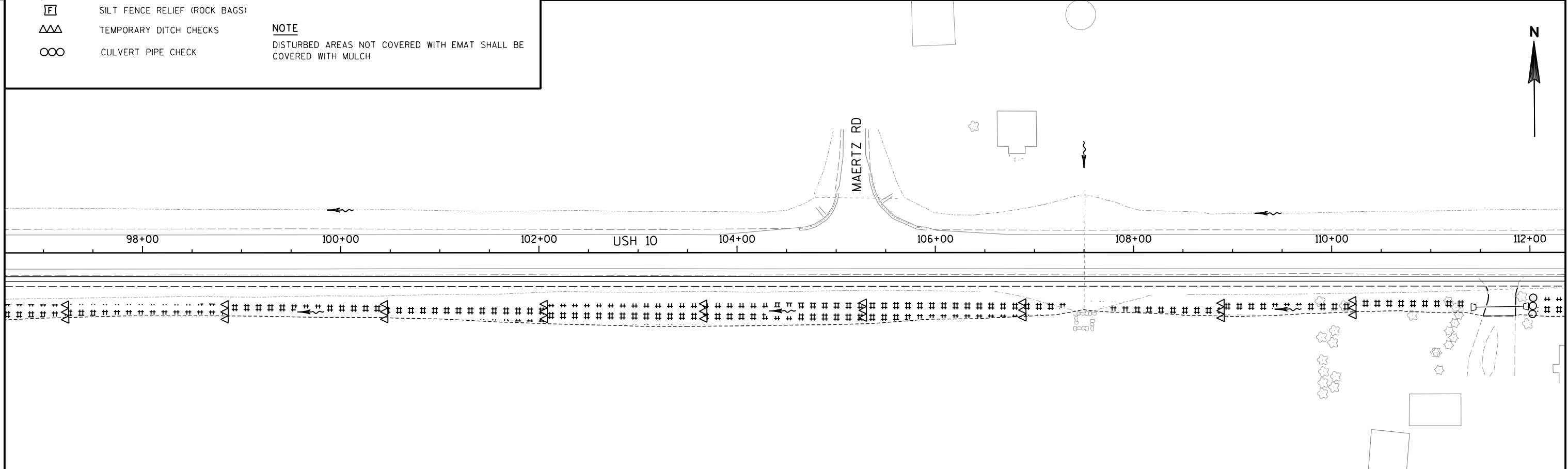
NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH





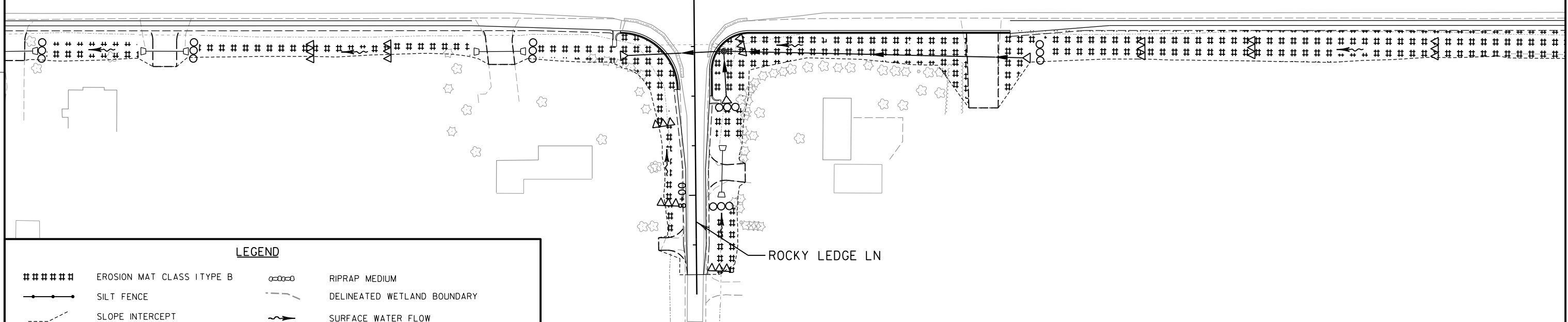
LEGEND

#####	EROSION MAT CLASS I TYPE B	o-o-o-o	RIPRAP MEDIUM
— — —	SILT FENCE	- - - -	DELINEATED WETLAND BOUNDARY
- - - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[F]	SILT FENCE RELIEF (ROCK BAGS)		
△△△	TEMPORARY DITCH CHECKS	NOTE	DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH
OO	CULVERT PIPE CHECK		





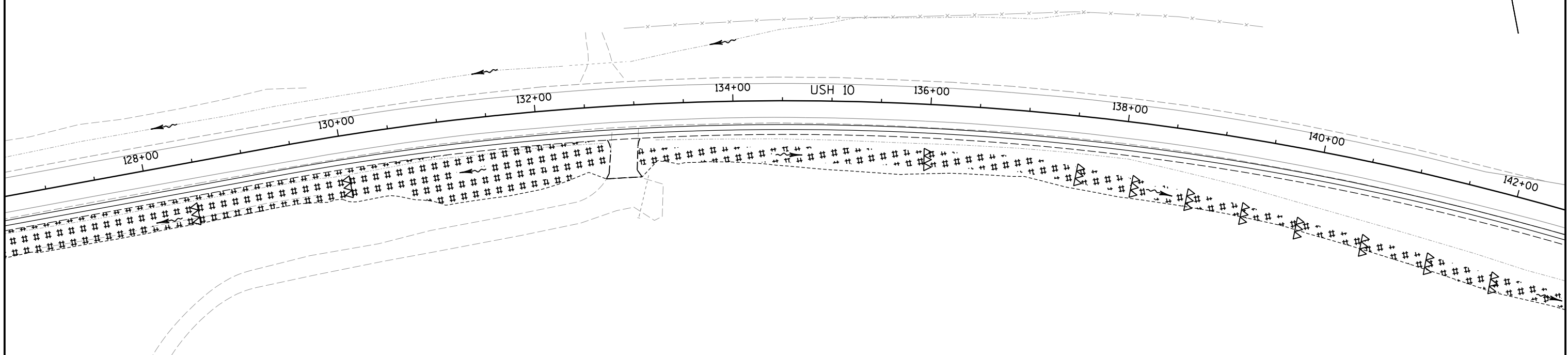
112+00 114+00 116+00 118+00 120+00 USH 10 122+00 124+00 126+00

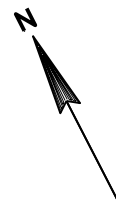
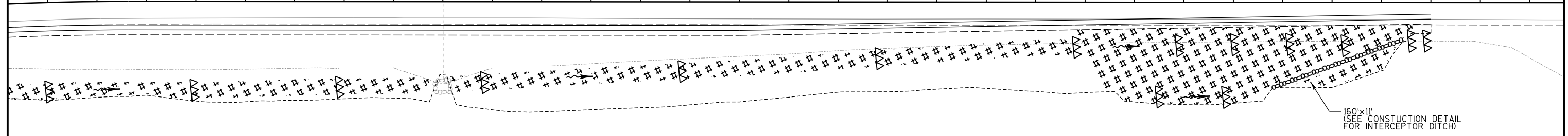
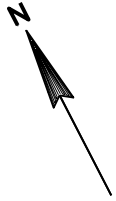
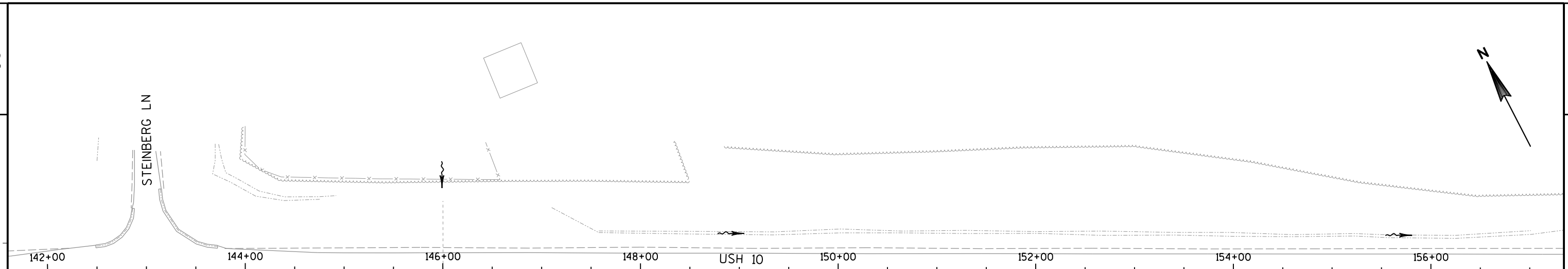


LEGEND

- ##### EROSION MAT CLASS I TYPE B
- SILT FENCE
- - - SLOPE INTERCEPT
- [F] SILT FENCE RELIEF (ROCK BAGS)
- △△△ TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECK
- RIPRAP MEDIUM
- - - DELINEATED WETLAND BOUNDARY
- ~ ~ ~ SURFACE WATER FLOW

NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH



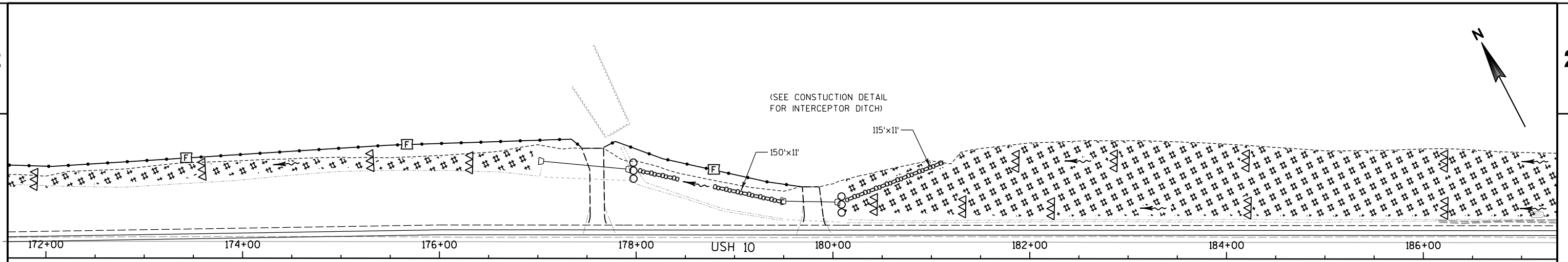


LEGEND

#####	EROSION MAT CLASS I TYPE B	o-o-o-o	RIPRAP MEDIUM
—●—●—●	SILT FENCE	- - - -	DELINEATED WETLAND BOUNDARY
- - - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[E]	SILT FENCE RELIEF (ROCK BAGS)		
△△	TEMPORARY DITCH CHECKS		
○○	CULVERT PIPE CHECK		

NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH

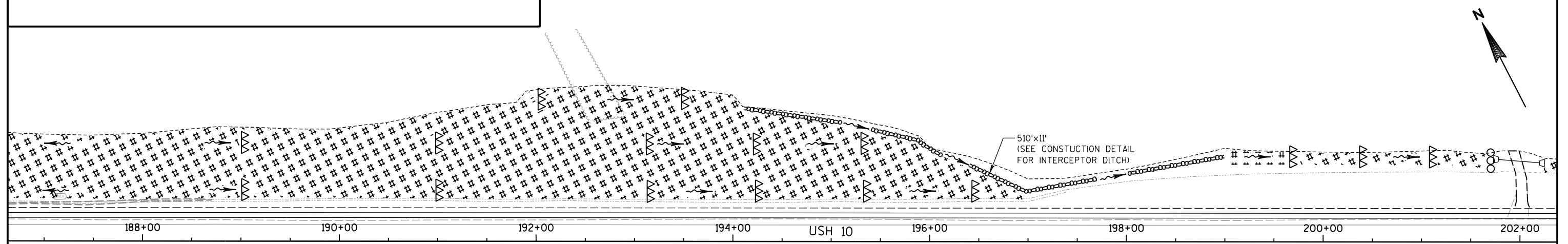
160'x11'
(SEE CONSTRUCTION DETAIL FOR INTERCEPTOR DITCH)

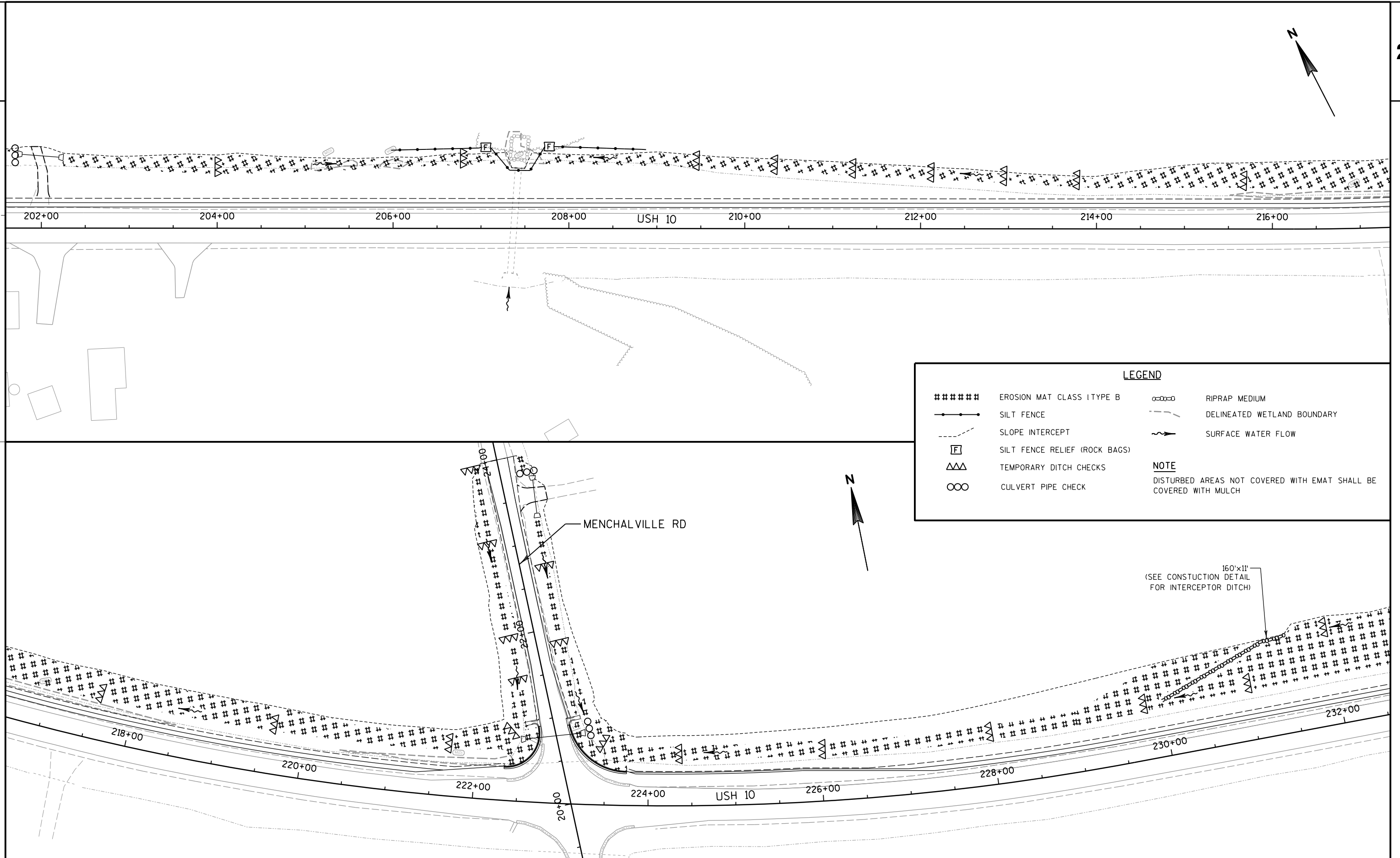


LEGEND

#####	EROSION MAT CLASS I TYPE B	o-o-o-o	RIPRAP MEDIUM
—●—●—●—	SILT FENCE	- - - -	DELINEATED WETLAND BOUNDARY
- - - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[F]	SILT FENCE RELIEF (ROCK BAGS)		
△△△	TEMPORARY DITCH CHECKS		
OO	CULVERT PIPE CHECK		

NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH

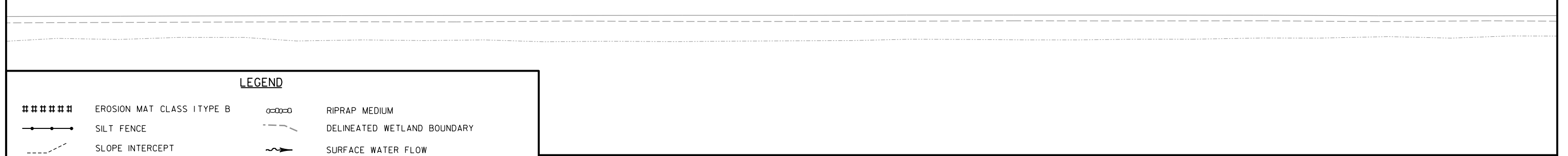
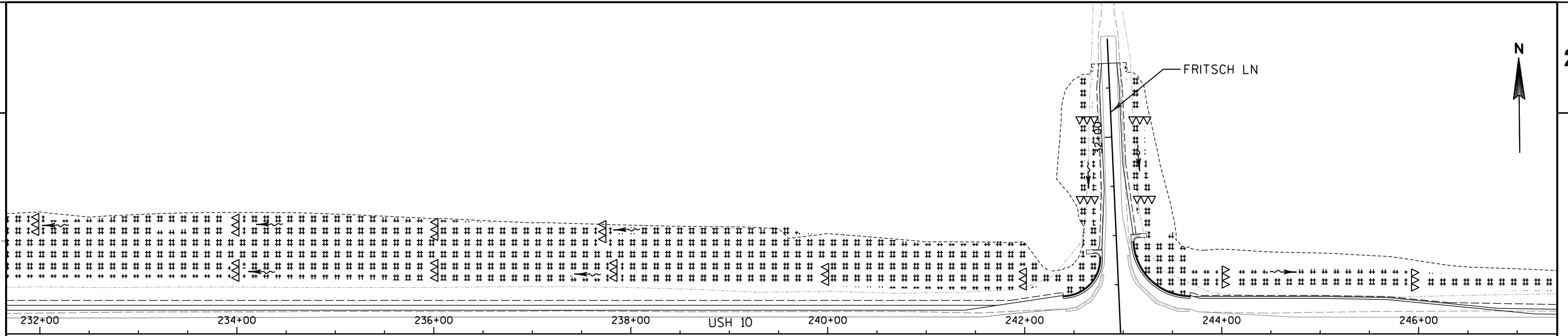




LEGEND

#####	EROSION MAT CLASS I TYPE B	○-○-○	RIPRAP MEDIUM
—●—●—●	SILT FENCE	- - -	DELINEATED WETLAND BOUNDARY
- - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[F]	SILT FENCE RELIEF (ROCK BAGS)		
△△	TEMPORARY DITCH CHECKS		
○○	CULVERT PIPE CHECK		

NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH



LEGEND

#####	EROSION MAT CLASS I TYPE B	o-o-o-o	RIPRAP MEDIUM
—●—●—●—	SILT FENCE	- - - -	DELINEATED WETLAND BOUNDARY
- - - -	SLOPE INTERCEPT	~>	SURFACE WATER FLOW
[E]	SILT FENCE RELIEF (ROCK BAGS)		
△△	TEMPORARY DITCH CHECKS		
OO	CULVERT PIPE CHECK		

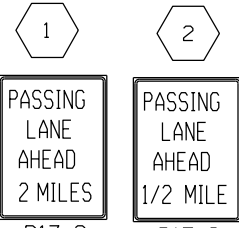
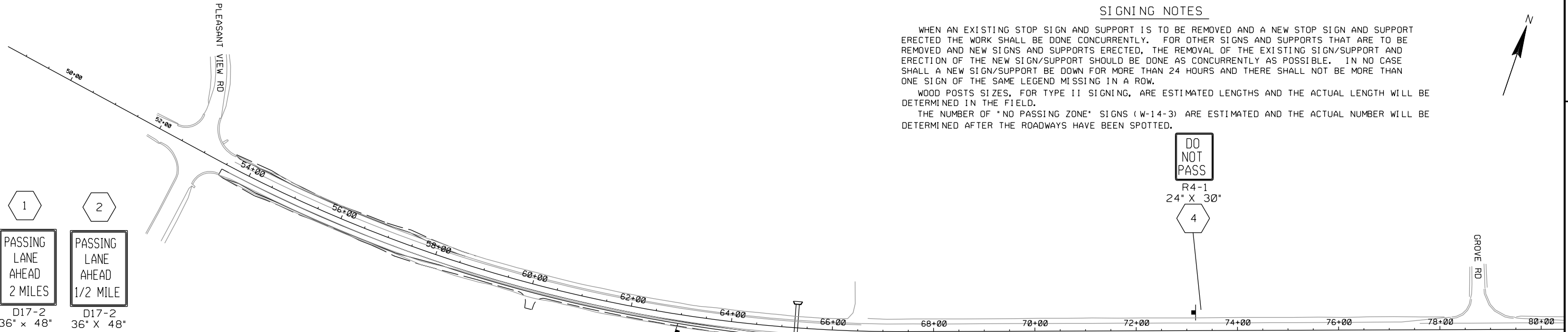
NOTE
DISTURBED AREAS NOT COVERED WITH EMAT SHALL BE COVERED WITH MULCH

SIGNING NOTES

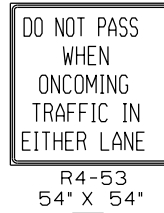
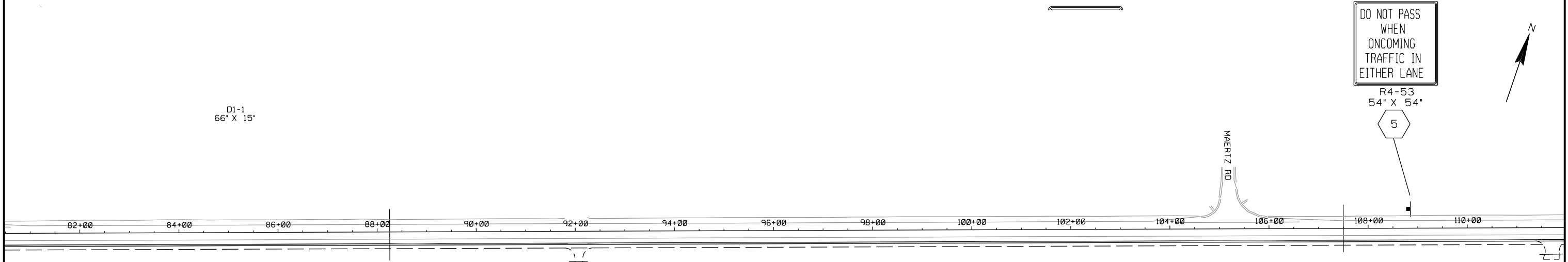
WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



PLACE SIGNS AT APPROPRIATE DISTANCES FROM THE START OF THE PASSING LANE



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

DO NOT PASS
WHEN
ONCOMING
TRAFFIC IN
EITHER LANE

D1-1
102" X 15"

R4-53
54" X 54"

PLACE AT END OF
NO PASSING ZONE



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERRECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERRECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERRECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

114+00 116+00 118+00 120+00 122+00 124+00 126+00 128+00 130+00 132+00 134+00 136+00 138+00 140+00 142+00

ROCKY LEDGE LN

STEINBERG RD



R1-1
30" X 30"

- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- ⬡ SIGN-PLACE NEW



W9-1R
36" X 36"



W4-2R
36" X 36"

DO NOT PASS

R4-1
24" X 30"



D1-1
90" X 15"

STEINBERG RD

CTH G

GRIMMS RD

144+00 146+00 148+00 150+00 152+00 154+00 156+00 158+00 160+00 162+00 164+00 166+00 168+00 170+00 172+00



W4-2R
36" X 36"



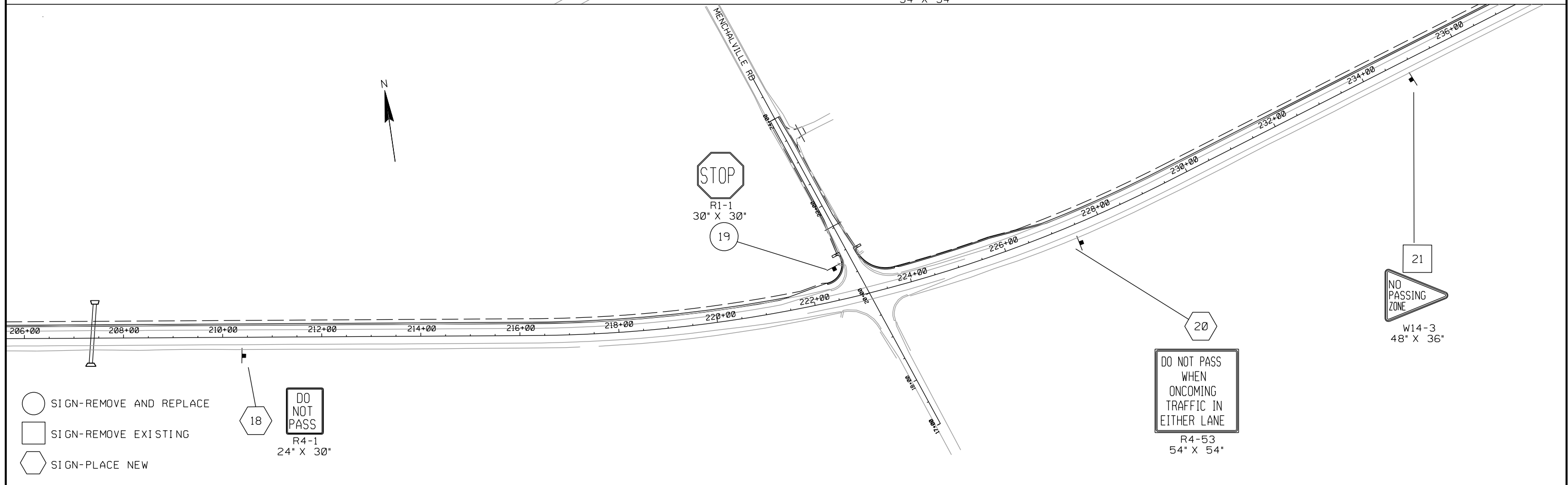
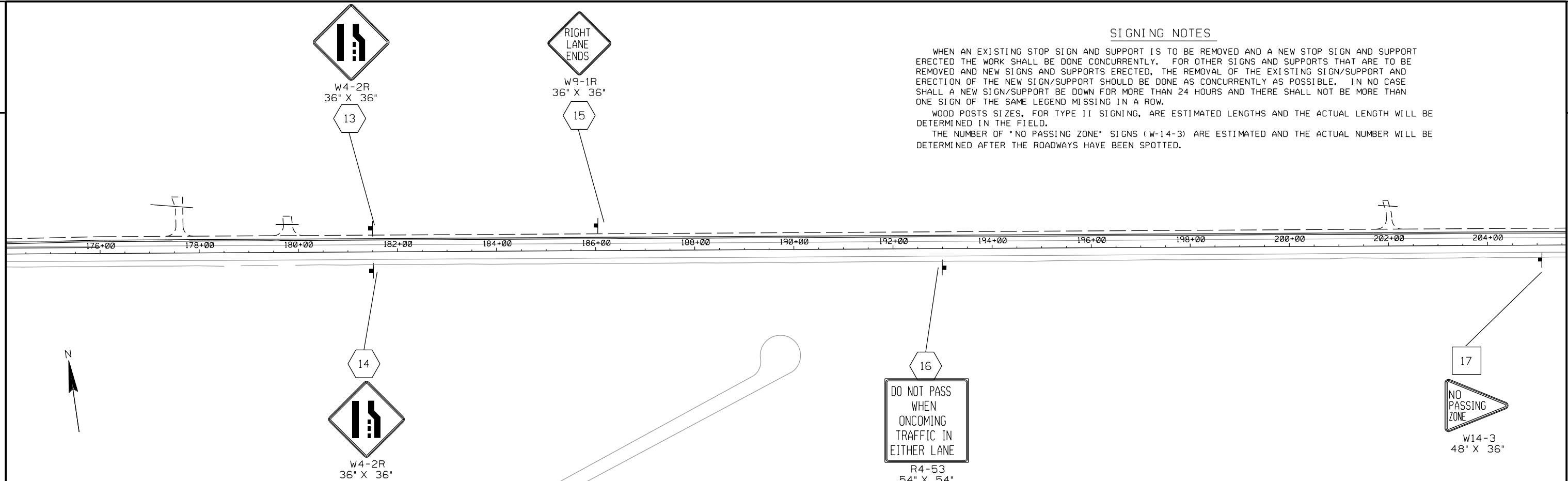
DO NOT PASS
R4-1
24" X 30"

SIGNING NOTES

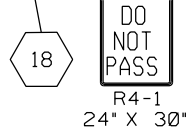
WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

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- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- ⬡ SIGN-PLACE NEW



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- ⬡ SIGN-PLACE NEW



R1-1
30" X 30"

22



R4-3
24" X 30"

23



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

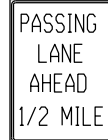
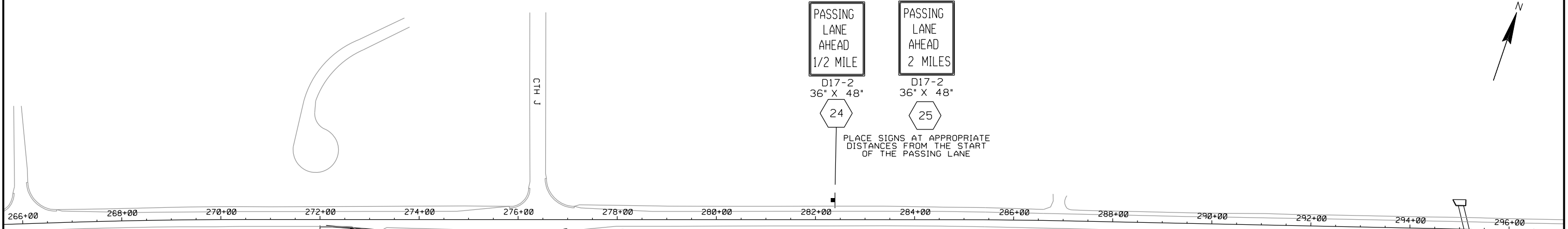
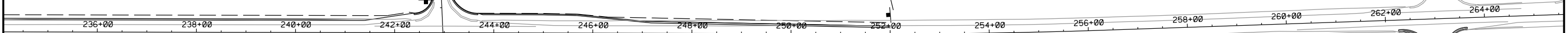
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

FRITSCH LN

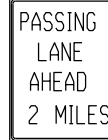
LAMBRECHT LN

BRODTKE RD



D17-2
36" X 48"

24



D17-2
36" X 48"

25

PLACE SIGNS AT APPROPRIATE DISTANCES FROM THE START OF THE PASSING LANE

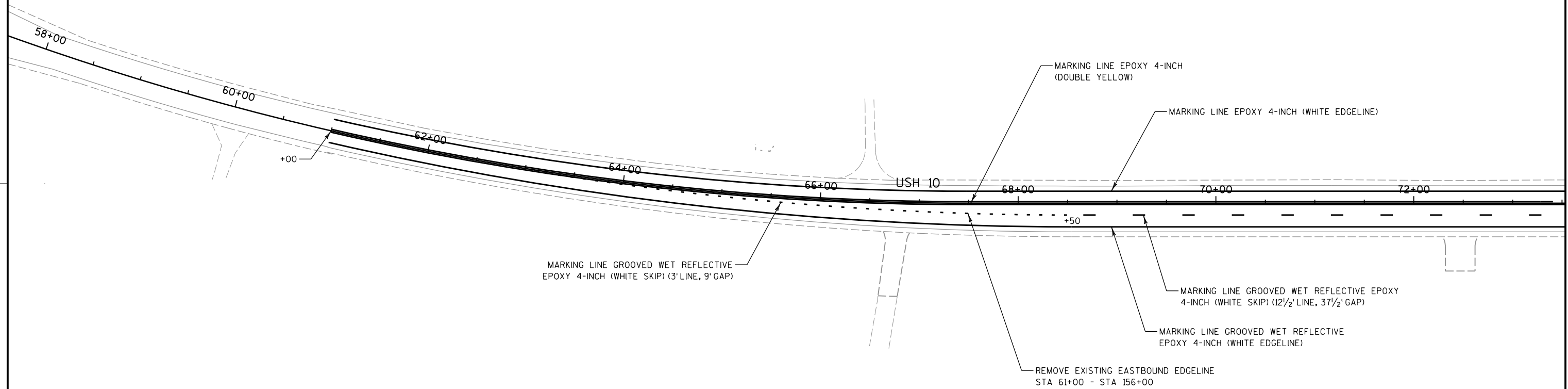


NOTES

SEE STANDARD DETAILS FOR ADDITIONAL INFORMATION ON EDGELINE AND PASSING LANE MARKING

REMARK CENTERLINE AND OPPOSITE EDGELINE THROUGHOUT PASSING LANES AND CENTERLINE AND EDGELINES BETWEEN PASSING LANE SEGMENTS (SEE MISCELLANEOUS QUANTITIES)

USE THE LOCATING NO-PASSING ZONE ITEM TO SET THE FINAL LOCATION OF ALL PASSING ZONES



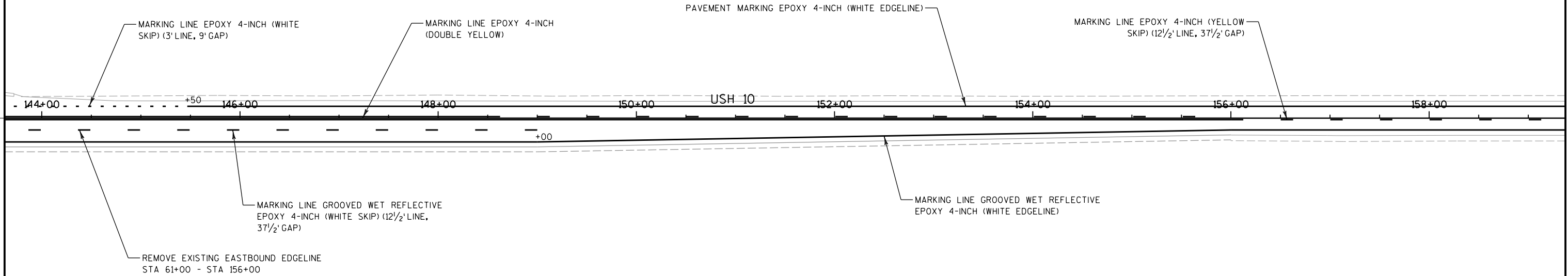


NOTES

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USE THE LOCATING NO-PASSING ZONE ITEM TO SET THE FINAL LOCATION OF ALL PASSING ZONES



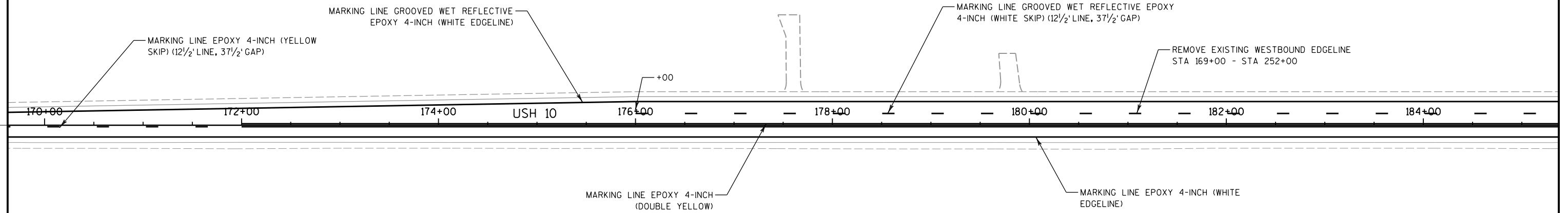
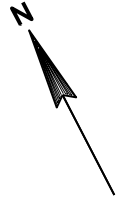
PROJECT NO: 1500-33-71	HWY: USH 10	COUNTY: MANITOWOC	MARKING - EB PASSING LANE DROP	SHEET	E
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NOTES

SEE STANDARD DETAILS FOR ADDITIONAL INFORMATION ON EDGELINE AND PASSING LANE MARKING

REMARK CENTERLINE AND OPPOSITE EDGELINE THROUGHOUT PASSING LANES AND CENTERLINE AND EDGELINES BETWEEN PASSING LANE SEGMENTS (SEE MISCELLANEOUS QUANTITIES)

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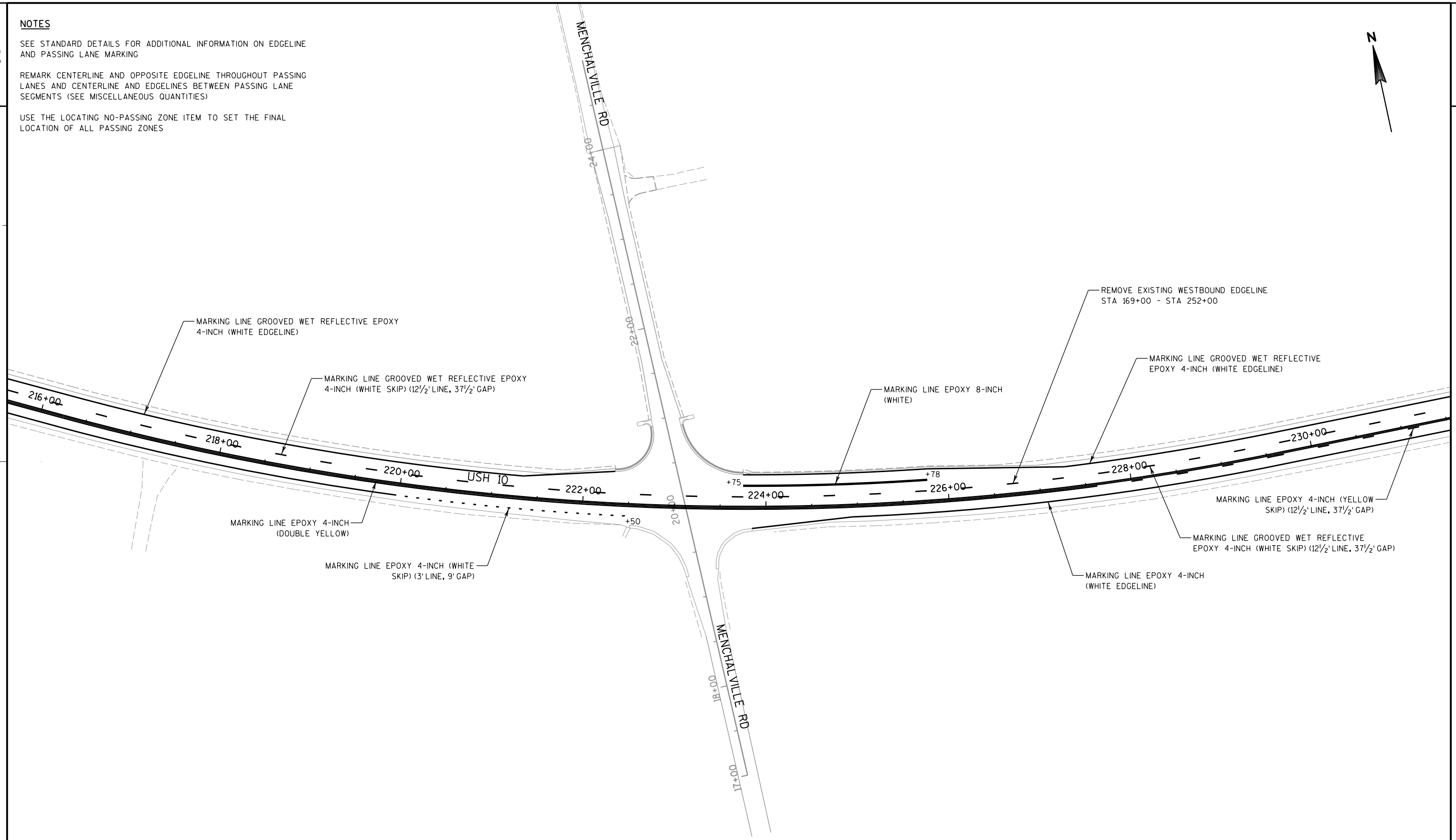


NOTES

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REMARK CENTERLINE AND OPPOSITE EDGELINE THROUGHOUT PASSING LANES AND CENTERLINE AND EDGELINES BETWEEN PASSING LANE SEGMENTS (SEE MISCELLANEOUS QUANTITIES)

USE THE LOCATING NO-PASSING ZONE ITEM TO SET THE FINAL LOCATION OF ALL PASSING ZONES

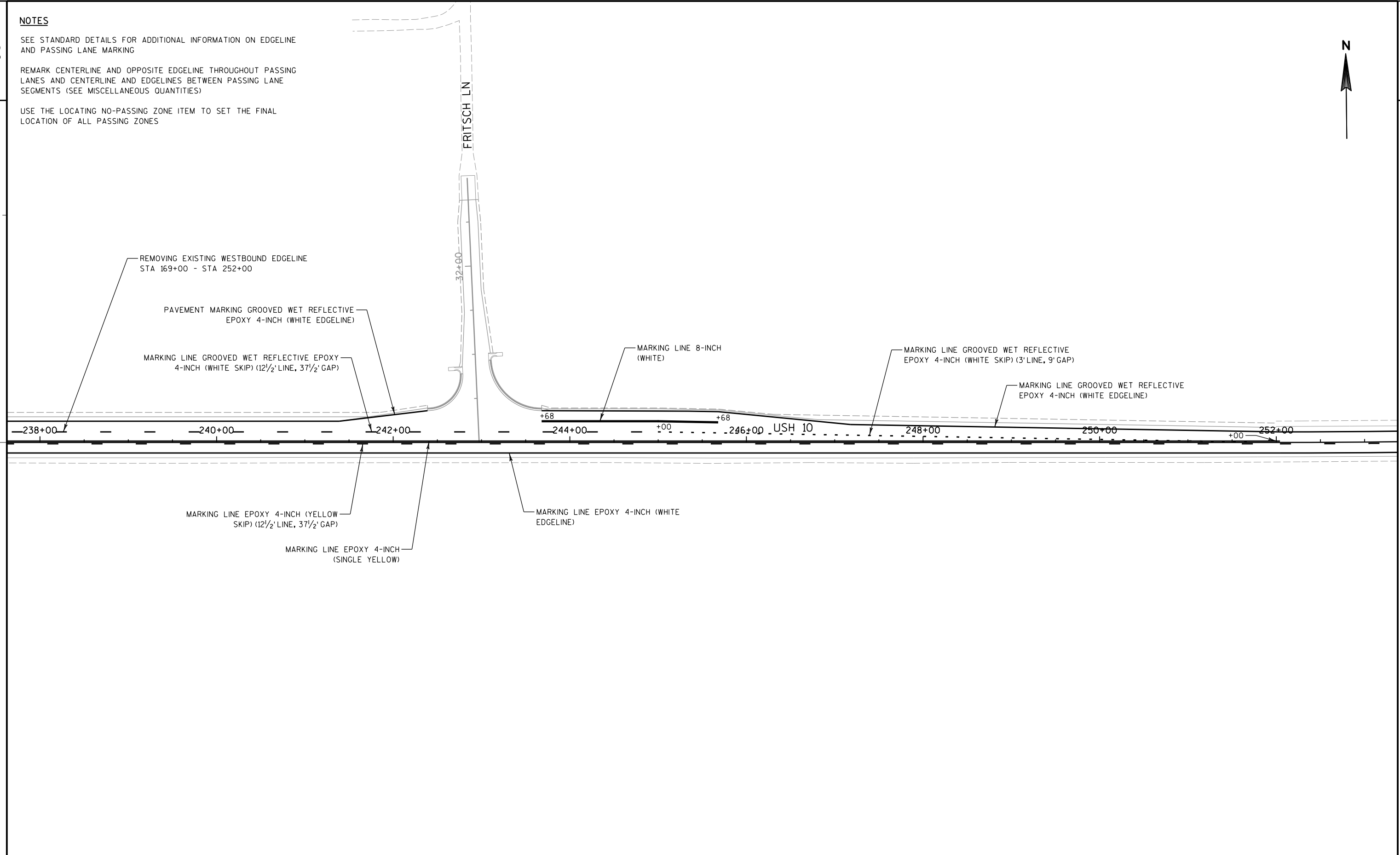


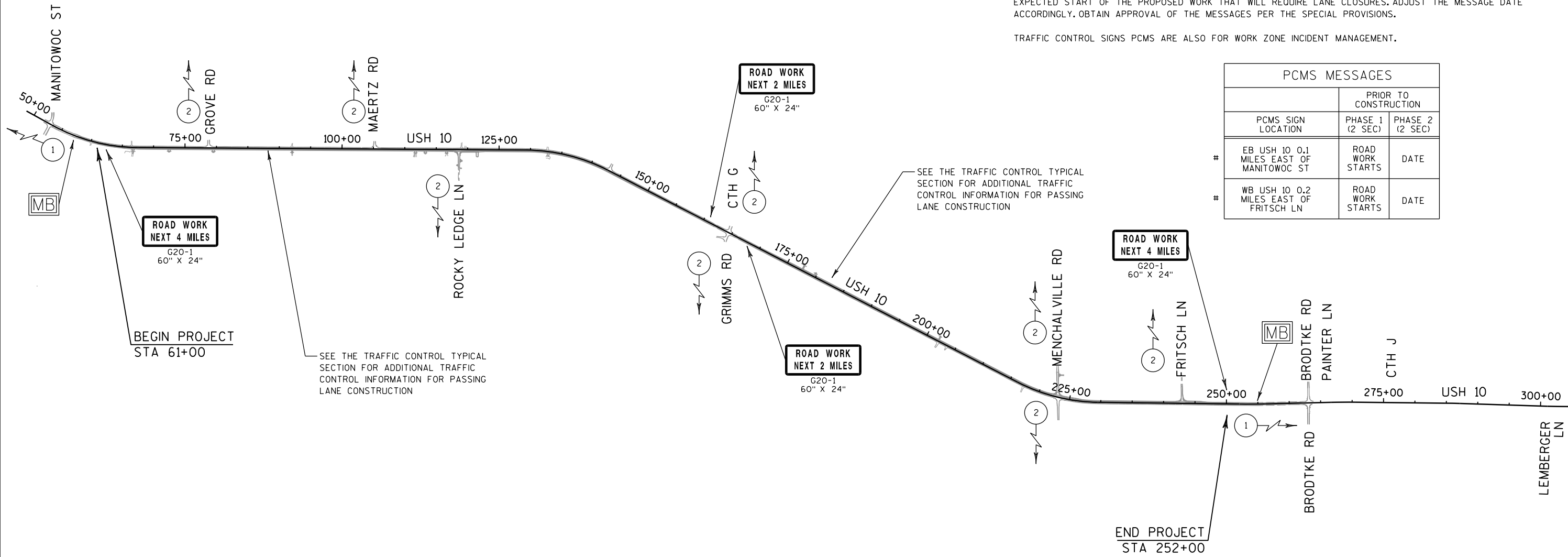
NOTES

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USE THE LOCATING NO-PASSING ZONE ITEM TO SET THE FINAL LOCATION OF ALL PASSING ZONES





NOTES

ADJUST TRAFFIC CONTROL PCMS MESSAGE AS NEEDED BASED ON WORK ZONE AREAS AND CONSTRUCTION SCHEDULE.

CONSIDER GEOMETRICS WHEN LOCATING MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE MESSAGE BOARD.

PLACE MESSAGE BOARDS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF INTERSTATE CONSTRUCTION PROJECTS THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PLACE TRAFFIC CONTROL SIGNS PCMS AND DISPLAY THE "PRIOR TO CONSTRUCTION" MESSAGE 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK THAT WILL REQUIRE LANE CLOSURES. ADJUST THE MESSAGE DATE ACCORDINGLY. OBTAIN APPROVAL OF THE MESSAGES PER THE SPECIAL PROVISIONS.

TRAFFIC CONTROL SIGNS PCMS ARE ALSO FOR WORK ZONE INCIDENT MANAGEMENT.

PCMS MESSAGES		
PCMS SIGN LOCATION	PRIOR TO CONSTRUCTION	
	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
# EB USH 10 0.1 MILES EAST OF MANTOWOC ST	ROAD WORK STARTS	DATE
# WB USH 10 0.2 MILES EAST OF FRITSCH LN	ROAD WORK STARTS	DATE

LEGEND

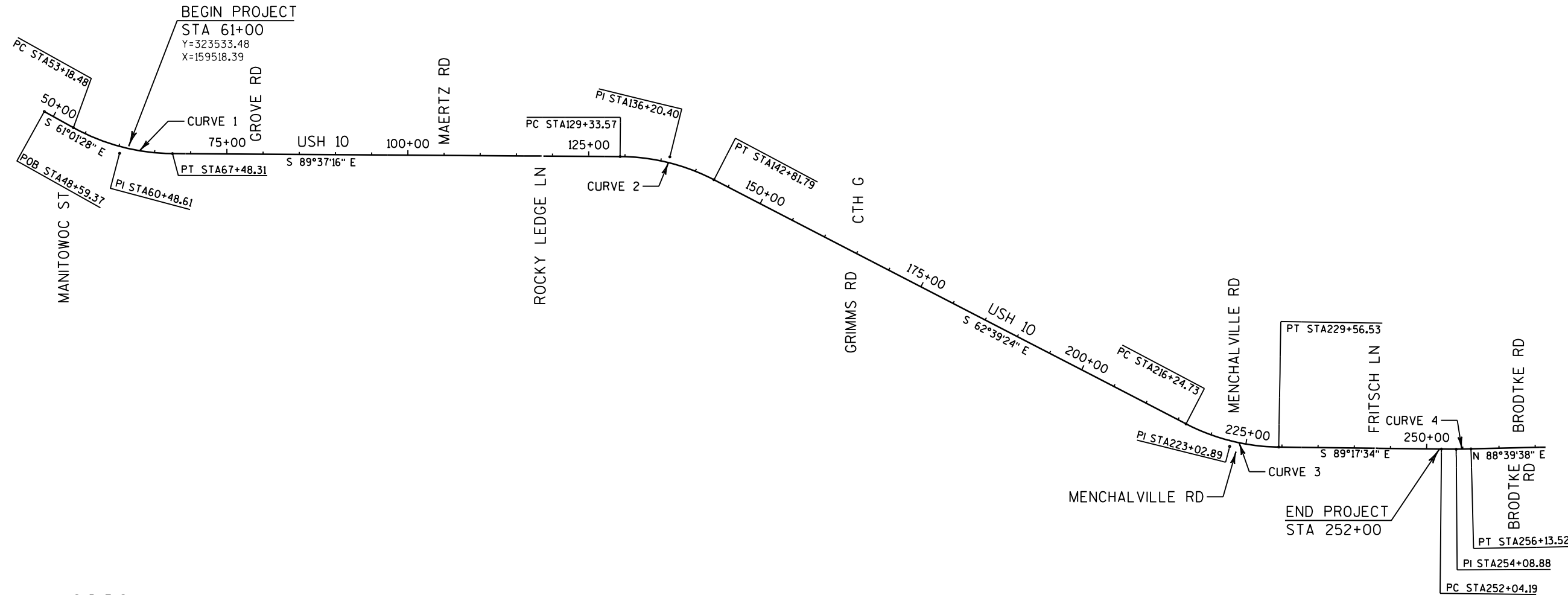
- 1) PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".
- 2) PLACE SIGNING PER THE "TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL" IN SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

TRAFFIC CONTROL SIGNS PCMS

TRAFFIC CONTROL GENERAL NOTES

- 1) THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- 2) ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- 3) "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- 4) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED. EQUIP WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS PER SDDS.
- 5) MAINTAIN ALL EXISTING STOP SIGNS AT ALL TIMES.
- 6) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER.

NOTE
 FOR SIDE ROAD ALIGNMENT INFORMATION
 SEE SECTION 5 PLAN SHEETS ON SIDE ROADS



CURVE 1	CURVE 2	CURVE 3	CURVE 4
PI = STA 60+48.61	PI = STA 136+20.40	PI = STA 223+02.89	PI = STA 254+08.88
Y = 323461.02	Y = 323410.73	Y = 319410.99	Y = 319372.35
X = 159430.56	X = 167032.62	X = 174767.61	X = 177897.88
PC = STA 53+18.48	PC = STA 129+33.57	PC = STA 216+24.73	PC = STA 252+04.19
Y = 323814.72	Y = 323415.28	Y = 319722.49	Y = 319374.87
X = 158791.82	X = 166345.80	X = 174165.23	X = 177693.21
PT = STA 67+48.31	PT = STA 142+81.79	PT = STA 229+56.53	PT = STA 256+13.52
Y = 323456.19	Y = 323095.26	Y = 319402.62	Y = 319377.13
X = 160160.68	X = 167642.72	X = 175445.72	X = 178102.52
DELTA = 28°35'47" LT.	DELTA = 26°57'52" RT.	DELTA = 26°38'10" LT.	DELTA = 2°02'48" LT.
T = 730.13'	T = 686.83'	T = 678.16'	T = 204.69'
L = 1429.82'	L = 1348.22'	L = 1331.80'	L = 409.33'
R = 2864.79'	R = 2864.79'	R = 2864.79'	R = 11459.16'
EXISTING SE = 5.0%	EXISTING SE = 5.0%	EXISTING SE = 5.0%	EXISTING SE = NC
PROPOSED SE = 5.0%	PROPOSED SE = 5.0%	PROPOSED SE = 5.0%	PROPOSED SE = NC

Estimate Of Quantities

1500-33-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	375.000	375.000
0004	201.0220	Grubbing	ID	375.000	375.000
0006	203.0100	Removing Small Pipe Culverts	EACH	14.000	14.000
0008	204.0150	Removing Curb & Gutter	LF	460.000	460.000
0010	205.0100	Excavation Common	CY	74,050.000	74,050.000
0012	205.0200	Excavation Rock	CY	5,582.000	5,582.000
0014	213.0100	Finishing Roadway (project) 01. 1500-33-71	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	5,420.000	5,420.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	54,360.000	54,360.000
0020	371.2000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	EACH	36.000	36.000
0022	450.4000	HMA Cold Weather Paving	TON	3,350.000	3,350.000
0024	455.0605	Tack Coat	GAL	3,400.000	3,400.000
0026	460.2000	Incentive Density HMA Pavement	DOL	8,550.000	8,550.000
0028	460.6223	HMA Pavement 3 MT 58-28 S	TON	9,450.000	9,450.000
0030	460.6224	HMA Pavement 4 MT 58-28 S	TON	3,910.000	3,910.000
0032	465.0315	Asphaltic Flumes	SY	65.000	65.000
0034	465.0520	Asphaltic Rumble Strips, Shoulder	LF	15,750.000	15,750.000
0036	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0038	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	12.000	12.000
0040	521.1524	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 24-Inch 6 to 1	EACH	10.000	10.000
0042	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	52.000	52.000
0044	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	542.000	542.000
0046	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	38.000	38.000
0048	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	5.000	5.000
0050	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	680.000	680.000
0052	606.0200	Riprap Medium	CY	670.000	670.000
0054	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	453.000	453.000
0056	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0058	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1500-33-71	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	623.0200	Dust Control Surface Treatment	SY	60,100.000	60,100.000
0066	624.0100	Water	MGAL	1,500.000	1,500.000
0068	625.0500	Salvaged Topsoil	SY	120,200.000	120,200.000
0070	627.0200	Mulching	SY	48,700.000	48,700.000
0072	628.1504	Silt Fence	LF	2,260.000	2,260.000
0074	628.1520	Silt Fence Maintenance	LF	2,260.000	2,260.000
0076	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0080	628.2004	Erosion Mat Class I Type B	SY	71,500.000	71,500.000
0082	628.7504	Temporary Ditch Checks	LF	2,175.000	2,175.000
0084	628.7555	Culvert Pipe Checks	EACH	100.000	100.000
0086	628.7560	Tracking Pads	EACH	2.000	2.000
0088	628.7570	Rock Bags	EACH	170.000	170.000
0090	629.0210	Fertilizer Type B	CWT	76.000	76.000
0092	630.0120	Seeding Mixture No. 20	LB	2,445.000	2,445.000
0094	630.0130	Seeding Mixture No. 30	LB	670.000	670.000
0096	630.0500	Seed Water	MGAL	2,700.000	2,700.000
0098	633.5200	Markers Culvert End	EACH	12.000	12.000

Estimate Of Quantities

1500-33-71

Line	Item	Item Description	Unit	Total	Qty
0100	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	9.000	9.000
0102	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	16.000	16.000
0104	637.2210	Signs Type II Reflective H	SF	174.540	174.540
0106	637.2230	Signs Type II Reflective F	SF	54.000	54.000
0108	638.2602	Removing Signs Type II	EACH	5.000	5.000
0110	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0112	642.5201	Field Office Type C	EACH	1.000	1.000
0114	643.0300	Traffic Control Drums	DAY	24,386.000	24,386.000
0116	643.0900	Traffic Control Signs	DAY	3,014.000	3,014.000
0118	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0120	643.5000	Traffic Control	EACH	1.000	1.000
0122	645.0120	Geotextile Type HR	SY	1,725.000	1,725.000
0124	646.1020	Marking Line Epoxy 4-Inch	LF	46,350.000	46,350.000
0126	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	21,130.000	21,130.000
0128	646.3020	Marking Line Epoxy 8-Inch	LF	400.000	400.000
0130	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	6,800.000	6,800.000
0132	646.9000	Marking Removal Line 4-Inch	LF	17,410.000	17,410.000
0134	648.0100	Locating No-Passing Zones	MI	3.620	3.620
0136	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0138	650.4500	Construction Staking Subgrade	LF	18,755.000	18,755.000
0140	650.5000	Construction Staking Base	LF	18,755.000	18,755.000
0142	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	680.000	680.000
0144	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0146	650.9911	Construction Staking Supplemental Control (project) 01. 1500-33-71	EACH	1.000	1.000
0148	650.9920	Construction Staking Slope Stakes	LF	18,755.000	18,755.000
0150	690.0150	Sawing Asphalt	LF	17,865.000	17,865.000
0152	740.0440	Incentive IRI Ride	DOL	13,500.000	13,500.000
0154	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0156	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000

CLEARING AND GRUBBING ITEMS

LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
CAT 0010 PROJECT	375	375
TOTALS	375	375

NOTES:
SEE PLANS FOR LOCATIONS OF TREE REMOVAL.
APPROXIMATELY 20 TREES TO BE REMOVED.

REMOVING SMALL PIPE CULVERTS

203.0100 REMOVING SMALL PIPE CULVERTS			
STATION	OFFSET	EACH	COMMENTS
CAT 0010			
66+73	RT	1	24" X 48' CPCS
72+47	RT	1	18" X 54' CPCS
92+07	RT	1	24" X 40' CPCS
111+71	RT	1	18" X 54' CPCS
113+27	RT	1	18" X 55' CPCS
116+67	RT	1	18" X 48' CPCS
118+60	RT	1	18" X 89' CPCS
121+53	RT	1	18" X 47' CPCS
177+60	LT	1	24" X 86' CPCS
179+80	LT	1	24" X 54' CPCS
202+02	LT	1	18" X 42' CPCS
223+12	LT	1	18" X 82' CPCS
8+23	RT	1	12" X 32' CPCS
23+51	RT	1	18" X 26' CPCS
TOTAL		14	

REMOVAL ITEMS

204.0150 REMOVING CURB & GUTTER					
STATION TO	STATION	OFFSET	LF	COMMENTS	
CAT 0010					
117+87	-	118+47	RT	92	ROCKY LEDGE LN SW
118+77	-	119+13	RT	60	ROCKY LEDGE LN SE
222+38	-	222+78	LT	65	MENCHALVILLE RD NW
223+08	-	223+78	LT	95	MENCHALVILLE RD NE
242+42	-	242+80	LT	57	FRITSCH LN NW
243+04	-	243+67	LT	91	FRITSCH LN NE
TOTAL				460	

3

3

EARTHWORK SUMMARY																
DIVISION	STATION TO	STATION	LOCATION	205.0100 EXCAVATION COMMON (CY)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (CY)	AVAILABLE MATERIAL (3)	205.0200 EXCAVATION ROCK (CY)	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	EXPANDED MARSH BACKFILL	EXPANDED EBS BACKFILL	EXPANDED ROCK	UNEXPANDED FILL	EXPANDED FILL FACTOR	MASS ORDINATE +/- (6)	COMMENTS
								FACTOR 0.60	FACTOR 0.80	FACTOR 1.00	FACTOR 1.00	FACTOR 1.10	FACTOR 1.35			
				(1)	(2)	(3)						(4)		(5)		
1	61+00 -	156+00	RT	20,549	671	19,878	3,276	--	--	--	--	3,604	8,415	6,495	13,383	EB PASSING LANE
	169+00 -	252+00	LT	48,361	594	47,767	2,306					2,537	8,857	8,533	39,234	WB PASSING LANE
	7+20 -	9+65	LT & RT	1,025	103	922	--					--	172	232	690	ROCKY LEDGE LANE
	20+20 -	24+00	LT & RT	3,131	162	2,969	--					--	58	78	2,891	MENCHALVILLE ROAD
	30+33 -	32+75	LT & RT	984	98	886	--					--	34	46	840	FRITSCH LANE
PROJECT TOTAL				74,050	1,628	72,422	5,582	--	--	--	--	6,140	17,536	15,384	57,038	

- NOTES:
 (1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
 (2) SALVAGED/UNUSABLE PAVEMENT WAS CALCULATED BY PAVEMENT WIDTH * DEPTH
 (3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT AREA
 (4) EXPANDED ROCK EQUALS ROCK EXCAVATION * EXPANDED ROCK FACTOR
 (5) EXPANDED FILL EQUALS (UNEXPANDED FILL-EXPANDED ROCK) * EXPANDED FILL FACTOR
 (6) MASS ORDINATE EQUALS AVAILABLE MATERIAL - EXPANDED FILL

BASE AGGREGATE ITEMS						
STATION TO	STATION OFFSET	TON	305.0110*	305.0120	COMMENTS	
			BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH		
CAT 0010	61+00 -	156+00	RT	2,515	27,595	EB PASSING LANE
	169+00 -	252+00	LT	2,150	24,646	WB PASSING LANE
	7+20 -	10+00	LT & RT	37	678	ROCKY LEDGE LN
	20+00 -	24+00	LT & RT	64	854	MENCHALVILLE RD
	30+00 -	32+75	LT & RT	34	587	FRITSCH LN
TOTALS				4,800	54,360	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

DRIVEWAYS				
STATION	OFFSET	TON	305.0110*	
			BASE AGGREGATE DENSE 3/4-INCH	COMMENTS
CAT 0010	66+73	RT	70	EB PASSING LANE
	72+47	RT	45	EB PASSING LANE
	92+07	RT	31	EB PASSING LANE
	111+71	RT	49	EB PASSING LANE
	113+27	RT	40	EB PASSING LANE
	116+67	RT	48	EB PASSING LANE
	121+53	RT	112	EB PASSING LANE
	132+86	RT	50	EB PASSING LANE
	177+60	LT	52	WB PASSING LANE
	179+80	LT	31	WB PASSING LANE
	202+02	LT	31	WB PASSING LANE
	7+51	LT	8	ROCKY LEDGE LN
	8+23	RT	28	ROCKY LEDGE LN
	23+51	RT	25	MENCHALVILLE RD
TOTAL			620	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ASPHALTIC ITEMS									
STATION TO STATION OFFSET		450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0315 ASPHALTIC FLUMES SY	465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF	COMMENTS	
CAT 0010									
61+00	- 156+00 RT	--	1,714	4,769	1,912	--	8,675	EB PASSING LANE	
169+00	- 252+00 LT	--	1,554	4,350	1,740	--	7,075	WB PASSING LANE	
7+20	- 10+00 LT & RT	--	40	100	78	19	--	ROCKY LEDGE LN	
20+00	- 24+00 LT & RT	--	54	136	106	23	--	MENCHALVILLE RD	
30+00	- 32+75 LT & RT	--	38	95	74	23	--	FRITSCH LN	
PROJECT		3,350	--	--	--	--	--		
TOTALS		3,350	3,400	9,450	3,910	65	15,750		

CONCRETE CURB & GUTTER									
STATION TO STATION OFFSET		601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D		LF		COMMENTS			
CAT 0010									
117+87	- 118+47 RT	92		ROCKY LEDGE LN SW					
118+77	- 121+07 RT	276		ROCKY LEDGE LN SE					
222+34	- 222+73 LT	70		MENCHALVILLE RD NW					
223+05	- 223+75 LT	91		MENCHALVILLE RD NE					
242+39	- 242+79 LT	62		FRITSCH LN NW					
243+08	- 243+68 LT	89		FRITSCH LN NE					
TOTAL		680							

3

MINOR SIDE ROAD, PRIVATE ENTRANCE, AND SLOPE DRAINS											
STATION OFFSET		521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	521.1524 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1 EACH	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	633.5200* MARKERS CULVERT END EACH	COMMENTS	
CAT 0010											
65+25	RT	--	--	--	--	--	--	--	1	CROSS DRAIN	
65+31	RT	--	--	--	--	--	--	--	1	CROSS DRAIN	
66+73	RT	--	2	--	--	60	0.064	--	--	DRIVEWAY	
72+47	RT	--	--	2	--	48	0.064	--	--	FIELD ENTRANCE	
79+53	RT	--	--	2	--	48	0.064	--	--	FIELD ENTRANCE	
88+25	RT	--	--	--	--	--	--	--	1	CROSS DRAIN	
92+07	RT	--	2	--	--	38	0.064	--	--	DRIVEWAY	
107+50	RT	--	--	--	--	--	--	--	1	CROSS DRAIN	
111+71	RT	--	--	2	--	48	0.064	--	--	DRIVEWAY	
113+27	RT	--	--	2	--	40	0.064	--	--	FIELD ENTRANCE	
116+67	RT	--	--	2	--	48	0.064	--	--	DRIVEWAY	
146+00	RT	--	--	--	--	--	--	--	1	CROSS DRAIN	
177+60	LT	--	2	--	--	86	0.064	--	--	FIELD ENTRANCE	
179+80	LT	--	2	--	--	46	0.064	--	--	FIELD ENTRANCE	
202+02	LT	--	2	--	--	40	0.064	--	--	FIELD ENTRANCE	
207+34	LT	--	--	--	--	--	--	--	1	CROSS DRAIN	
207+41	LT	--	--	--	--	--	--	--	1	CROSS DRAIN	
8+23	RT	2	--	--	52	--	0.064	--	--	ROCKY LEDGE LN	
20+79	LT & RT	--	--	--	--	--	--	38	2	MENCHALVILLE RD	
23+51	RT	--	2	--	--	40	0.064	--	--	MENCHALVILLE RD	
TOTALS		2	12	10	52	542		38	2	9	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER ITEMS

STATION	OFFSET	STRUCTURE NUMBER	522.1024*	608.0424	611.0530	611.2005	633.5200*	650.4000	COMMENTS
			APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	MANHOLE COVERS TYPE J EACH	MANHOLES 5-FT DIAMETER EACH	MARKERS CULVERT END EACH	CONSTRUCTION STAKING STORM SEWER EACH	
CAT 0010	122+01	61.5' RT	1	309	--	--	1	1	APRON ENDWALL, JOINT TIES REQUIRED
	118+91	54.8' RT	2	102	1	1	--	1	
	8+93.9	32.1' RT	3	42	--	--	1	1	APRON ENDWALL, JOINT TIES REQUIRED
	117+80.7	56.3' RT	4	--	--	--	1	1	APRON ENDWALL, JOINT TIES REQUIRED
TOTALS			3	453	1	1	3	4	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

RIPRAP ITEMS

STATION TO STATION OFFSET			606.0200	645.0120
			RIPRAP MEDIUM CY	GEOTEXTILE TYPE HR SY
CAT 0010	154+40 - 155+90	RT	98	253
	178+00 - 179+50	LT	92	237
	180+10 - 181+20	LT	70	183
	194+10 - 199+00	LT	312	799
	230+00 - 231+50	LT	98	253
TOTALS			670	1,725

RESTORATION ITEMS

STATION TO STATION OFFSET			625.0500	627.0200	628.2004	629.0210	630.0120	630.0130	630.0500
			SALVAGED TOPSOIL SY	MULCHING SY	EROSION MAT CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEEDING MIXTURE NO. 30 LB	SEED WATER MGAL
CAT 0010	61+00 - 92+00	RT	10,177	5,224	4,953	6.5	135	93	231
	92+00 - 118+60	RT	9,082	4,093	4,989	5.7	126	80	204
	118+60 - 156+00	RT	20,140	9,023	11,117	12.8	375	112	452
	169+00 - 202+00	LT	25,974	7,533	18,430	16.5	554	100	583
	202+00 - 223+10	LT	10,437	5,275	5,162	6.6	187	63	234
	223+10 - 252+00	LT	20,315	7,766	12,549	12.9	418	87	456
UNDISTRIBUTED			24,075	9,786	14,300	15.0	650	135	540
TOTALS			120,200	48,700	71,500	76.0	2,445	670	2,700

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 SY
CAT 0010 PROJECT	60,100
TOTAL	60,100

3

EROSION CONTROL ITEMS

STATION TO STATION OFFSET	628.1504		628.1520		628.7504		628.7555		628.7570	
	SILT FENCE		SILT FENCE		TEMPORARY		CULVERT PIPE		ROCK BAGS	
	LF	LF	LF	LF	LF	CHECKS	CHECKS	EACH	EACH	
CAT 0010										
61+00 - 92+00 RT	370	370	200	20	30					
92+00 - 118+60 RT	--	--	188	20	--					
118+60 - 156+00 RT	--	--	375	15	--					
169+00 - 202+00 LT	1,090	1,090	413	15	75					
202+00 - 223+10 LT	350	350	213	--	30					
223+10 - 252+00 LT	--	--	350	10	--					
UNDISTRIBUTED	450	450	436	20	35					
TOTALS	2,260	2,260	2,175	100	170					

EROSION CONTROL MOBILIZATION

LOCATION	628.1905		628.1910	
	MOBILIZATIONS	EROSION	MOBILIZATIONS	EMERGENCY
	CONTROL	EACH	CONTROL	CONTROL
CAT 0010				
PROJECT	6	4	4	
TOTALS	6	4	4	

WATER

LOCATION	624.0100
	MGAL
CAT 0010	
PROJECT-BASE COMPACTION	1,172
PROJECT-SUBGRADE PREPARATION	328
TOTAL	1,500

3

TRAFFIC CONTROL ITEMS

LOCATION	DURATION	643.0300		643.0900		643.1050	
		TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC		
	DAYS	CONTROL	CONTROL	CONTROL	CONTROL	SIGNS	SIGNS
		NO.	DAY	NO.	DAY	PCMS	PCMS
CAT 0010							
EB PASSING LANES	137	95	13,015	7	959	--	--
WB PASSING LANES		83	11,371	7	959	--	--
SIDERoads		--	--	8	1,096	--	--
PROJECT	7	--	--	--	--	2	14
TOTALS			24,386		3,014		14

TYPE II SIGNS AND SUPPORTS

SIGN NUMBER	LOCATION	SIGN CODE	SIGN DIMENSION		634.0614		634.0616		637.2210	637.2230	638.2602	638.3000	COMMENTS
			W	H	4X6-INCH	4X6-INCH	SIGNS TYPE II	SIGNS TYPE II	REMOVING	SMALL SIGN			
			IN	X	IN	EACH	EACH	REFLECTIVE H	REFLECTIVE F	SIGNS TYPE II	SUPPORTS		
								SF	SF	EACH	EACH		
CAT 0010													
1	USH 10, WEST OF PROJECT LIMITS	D17-2	36	X	48	--	1	12.00	--	--	--	2 MILES WEST OF START OF EB PASSING LANE	
2	"	D17-2	36	X	48	--	--	12.00	--	--	--	1/2 MILE WEST OF START OF EB PASSING LANE	
3	USH 10, EAST OF PLEASANT VALLEY RD	R4-3	24	X	30	1	--	5.00	--	--	--		
4	"	R4-3	24	X	30	1	--	5.00	--	--	--		
5	USH 10, EAST OF MAERTZ RD	R4-53	54	X	54	--	2	20.25	--	--	--		
6	ROCKY LEDGE LN	R1-1	30	X	30	1	--	5.18	--	1	1		
7	USH 10, EAST OF ROCKY LEDGE LN	R4-53	54	X	54	--	2	20.25	--	--	--		
8	"	W9-1R	36	X	36	--	1	--	9.00	--	--		
9	USH 10, EAST OF STEINBERG RD	W4-2R	36	X	36	--	1	--	9.00	--	--		
10	"	W4-2R	36	X	36	--	1	--	9.00	--	--		
11	"	R4-1	24	X	30	1	--	5.00	--	--	--		
12	USH 10, EAST OF CTH G	R4-1	24	X	30	1	--	5.00	--	--	--		
13	"	W4-2R	36	X	36	--	1	--	9.00	--	--		
14	"	W4-2R	36	X	36	--	1	--	9.00	--	--		
15	"	W9-1R	36	X	36	--	1	--	9.00	--	--		
16	"	R4-53	54	X	54	--	2	20.25	--	--	--		
17	"	W14-3	--	X	--	--	--	--	--	1	1		
18	"	R4-1	24	X	30	1	--	5.00	--	--	--		
19	MENCHALVILLE RD	R1-1	30	X	30	1	--	5.18	--	1	1		
20	USH 10, EAST OF MENCHALVILLE RD	R4-53	54	X	54	--	2	20.25	--	--	--		
21	"	W14-3	--	X	--	--	--	--	--	1	1		
22	FRITSCH LN	R1-1	30	X	30	1	--	5.18	--	1	1		
23	USH 10, EAST OF FRITSCH LN	R4-3	24	X	30	1	--	5.00	--	--	--		
24	USH 10, EAST OF CTH J	D17-2	36	X	48	--	1	12.00	--	--	--	1/2 MILE EAST OF START OF WB PASSING LANE	
25	"	D17-2	36	X	48	--	--	12.00	--	--	--	2 MILES EAST OF START OF WB PASSING LANE	
TOTALS						9	16	174.54	54.00	5	5		

3

3

TRAFFIC CONTROL

LOCATION	643.5000 EACH
CAT 0010 PROJECT	1
TOTAL	1

LONG LINE PAVEMENT MARKING ITEMS

STATION TO STATION	646.1020 MARKING LINE EPOXY 4-INCH				646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH			646.3020 MARKING LINE EPOXY 8-INCH	646.6464 COLD WEATHER MARKING EPOXY 4-INCH	648.0100 LOCATING NO-PASSING ZONES	COMMENTS
	3' LINE 9' SKIP WHITE	12.5' LINE 37.5' SKIP YELLOW	SOLID WHITE	SOLID YELLOW	3' LINE 9' SKIP WHITE	12.5' LINE 37.5' SKIP WHITE	SOLID WHITE	SOLID WHITE	LF	MI	
	LF	LF	LF	LF	LF	LF	LF	LF	LF	MI	
CAT 0010											
61+00 - 156+00	120	1,592	8,647	12,628	179	2,011	9,023	--	--	--	EB PASSING LANE
156+00 - 169+00	99	325	1,969	--	--	--	--	--	--	--	BETWEEN PASSING LANES
169+00 - 252+00	125	1,126	7,919	11,800	168	1,724	8,025	400	--	--	WB PASSING LANE
PROJECT	--	--	--	--	--	--	--	--	6,800	3.62	
TOTALS	344	3,043	18,535	24,428	347	3,735	17,048	400	6,800	3.62	
			46,350				21,130				

REMOVING PAVEMENT MARKING ITEMS

STATION TO STATION	OFFSET	LF	COMMENTS
CAT 0010			
61+00 - 156+00	RT	9,375	EB PASSING LANE
169+00 - 252+00	LT	8,035	WB PASSING LANE
TOTAL		17,410	

TRACKING PADS

LOCATION	628.7560 EACH
CAT 0010 PROJECT	2
TOTAL	2

CONSTRUCTION STAKING ITEMS

STATION TO STATION	OFFSET	650.4500 CONSTRUCTION STAKING SUBGRADE	650.5000 CONSTRUCTION STAKING BASE	650.5500 CONSTRUCTION STAKING CURB GUTTER AND	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1500-33-71)	650.9920 CONSTRUCTION STAKING SLOPE STAKES	COMMENTS
		LF	LF	LF	EACH	EACH	LF	
CAT 0010								
61+00 - 156+00	RT	9,500	9,500	--	--	--	9,500	EB PASSING LANE
169+00 - 252+00	LT	8,300	8,300	--	--	--	8,300	WB PASSING LANE
7+20 - 10+00	LT&RT	280	280	368	--	--	280	ROCKY LEDGE LN
20+00 - 24+00	LT&RT	400	400	161	1	--	400	MENCHALVILLE RD
30+00 - 32+75	LT&RT	275	275	151	--	--	275	FRITSCH LN
PROJECT		--	--	--	--	1	--	PROJECT
TOTALS		18,755	18,755	680	1	1	18,755	

SAWING

STATION TO STATION	OFFSET	LF	COMMENTS
CAT 0010			
61+00 - 156+00	RT	9,506	EB PASSING LANE
169+00 - 252+00	LT	8,301	WB PASSING LANE
7+20	LT&RT	16	ROCKY LEDGE LN
24+00	LT&RT	26	MENCHALVILLE RD
32+75	LT&RT	16	FRITSCH LN
TOTAL		17,865	

R/W PROJECT NUMBER 1500-33-22	SHEET NUMBER 4.01	TOTAL SHEETS 4
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR
REEDSVILLE - MANITOWOC
 EAST VILLAGE LIMITS - BRANCH RIVER
 USH 10 MANITOWOC COUNTY
 CONSTRUCTION PROJECT NUMBER

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	CURVE DATA	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	LC	R
PAGE	P.	RADIUS	R
PERMANENT LIMITED EASEMENT	PLE	DEGREE OF CURVE	D
PROPERTY LINE	PL	CENTRAL ANGLE OR DELTA	DELTA
RECORDED AS	(100')	LENGTH OF CURVE	L
		TANGENT	TAN

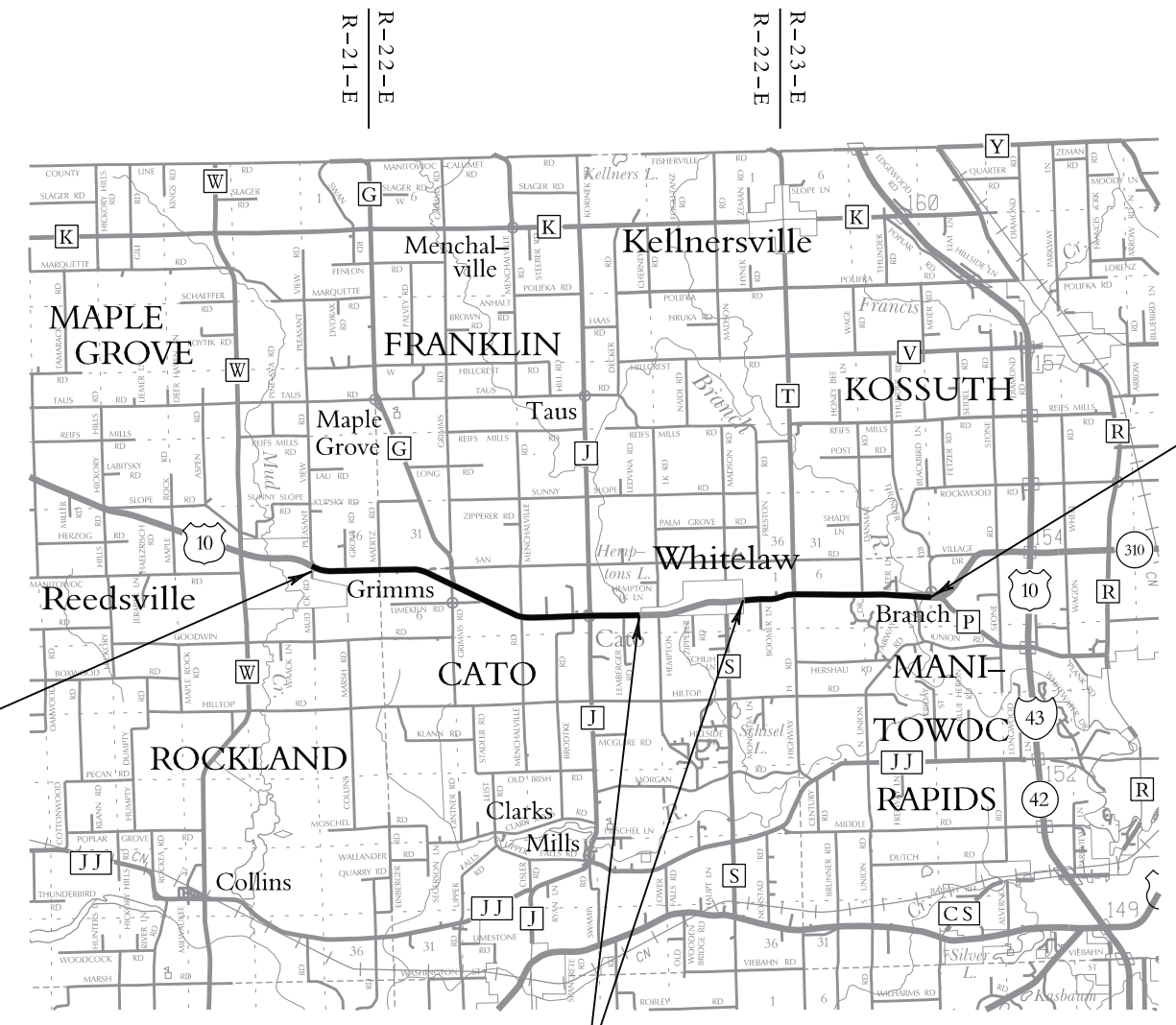
CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	UP (IF UNLESS NOTED)	PROPOSED R/W LINE	—————
R/W MONUMENT	• (ISET)	EXISTING H.E. LINE	—————
R/W STANDARD	▲ (ISET)	PROPERTY LINE	—————
SIGN	ISIGN	LOT & TIE LINES	—————
SECTION CORNER MONUMENT	●	SLOPE INTERCEPTS	—————
SECTION CORNER SYMBOL	⊙	CORPORATE LIMITS	—————
FEE (HATCH VARIES)	⊘	ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	—————
TEMPORARY LIMITED EASEMENT	⊘	ACCESS RESTRICTED (BY ACQUISITION)	—————
PERMANENT LIMITED EASEMENT	⊘	NO ACCESS (BY STATUTORY AUTHORITY)	—————
R/W BOUNDARY POINT	⊘	SECTION LINE	—————
PARCEL NUMBER	⊘	QUARTER LINE	—————
UTILITY PARCEL NUMBER	⊘	SIXTEENTH LINE	—————
SIGN NUMBER (OFF PREMISE)	⊘	EXISTING CENTERLINE	—————
BUILDING	⊘	PROPOSED REFERENCE LINE	—————
		PARALLEL OFFSET	—————

CONVENTIONAL UTILITY SYMBOLS

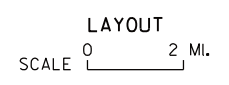
WATER	W	NON COMPENSABLE	⊘
GAS	G	COMPENSABLE	⊘
TELEPHONE	T	POWER POLE	⊘
OVERHEAD TRANSMISSION LINES	OH	TELEPHONE POLE	⊘
ELECTRIC	E	TELEPHONE PEDESTAL	⊘
CABLE TELEVISION	TV	ELECTRIC TOWER	⊘
FIBER OPTIC	FO		
SANITARY SEWER	SAN		
STORM SEWER	SS		

NOTES:
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MANITOWOC 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.
 RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
 RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".
 PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.
 SECTION LINE NOT COINCIDENT WITH REFERENCE LINE.
 EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
 EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 10 ESTABLISHED FROM PREVIOUS PROJECTS 1500-33-21, CSM V 8 P 187, CSM V 11 P 289, CSM V 7 P 395, CSM V 8 P 625, CSM V 8 P 637, AND EXISTING CENTERLINE.
 EXISTING HIGHWAY RIGHT-OF-WAY FOR ROCKY LEDGE LN ESTABLISHED FROM PREVIOUS PROJECT 1500-33-21, CSM V 7 P 395, CSM V 8 P 625, CSM V 8 P 623 AND EXISTING CENTERLINE.
 EXISTING HIGHWAY RIGHT-OF-WAY FOR PLEASANT VIEW RD, MUD CREEK RD, MANITOWOC ST, GROVE RD, MAERTZ RD, MENCHALVILLE RD & FRITSCH LN, ESTABLISHED FROM PREVIOUS PROJECTS 1500-33-21 AND EXISTING CENTERLINE.
 EXISTING ACCESS CONTROL ALONG USH 10 ESTABLISHED FROM PREVIOUS PROJECTS 1500-8-21 AND 1500-8-22.
 A **TEMPORARY LIMITED EASEMENT (TLE)** IS A RIGHT FOR CONSTRUCTION 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 NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.



BEGIN RELOCATION ORDER
 PROJECT 1500-33-22
 STA 53+45.50

EXCEPTION TO NET R/L LENGTH
 STA 323+50.00-STA 395+61.49



TOTAL NET LENGTH OF CENTERLINE = 7.655 MI.

T-21-N
 T-20-N
 T-20-N
 T-19-N
 T-19-N
 T-18-N

END RELOCATION ORDER
 PROJECT 1500-33-22
 STA 529+73.80

emcs inc
 PREPARED BY EMCS, INC.



Kevin C. Boyer
 KEVIN C. BOYER, RLS - 2675
 DATE: 9/14/2017

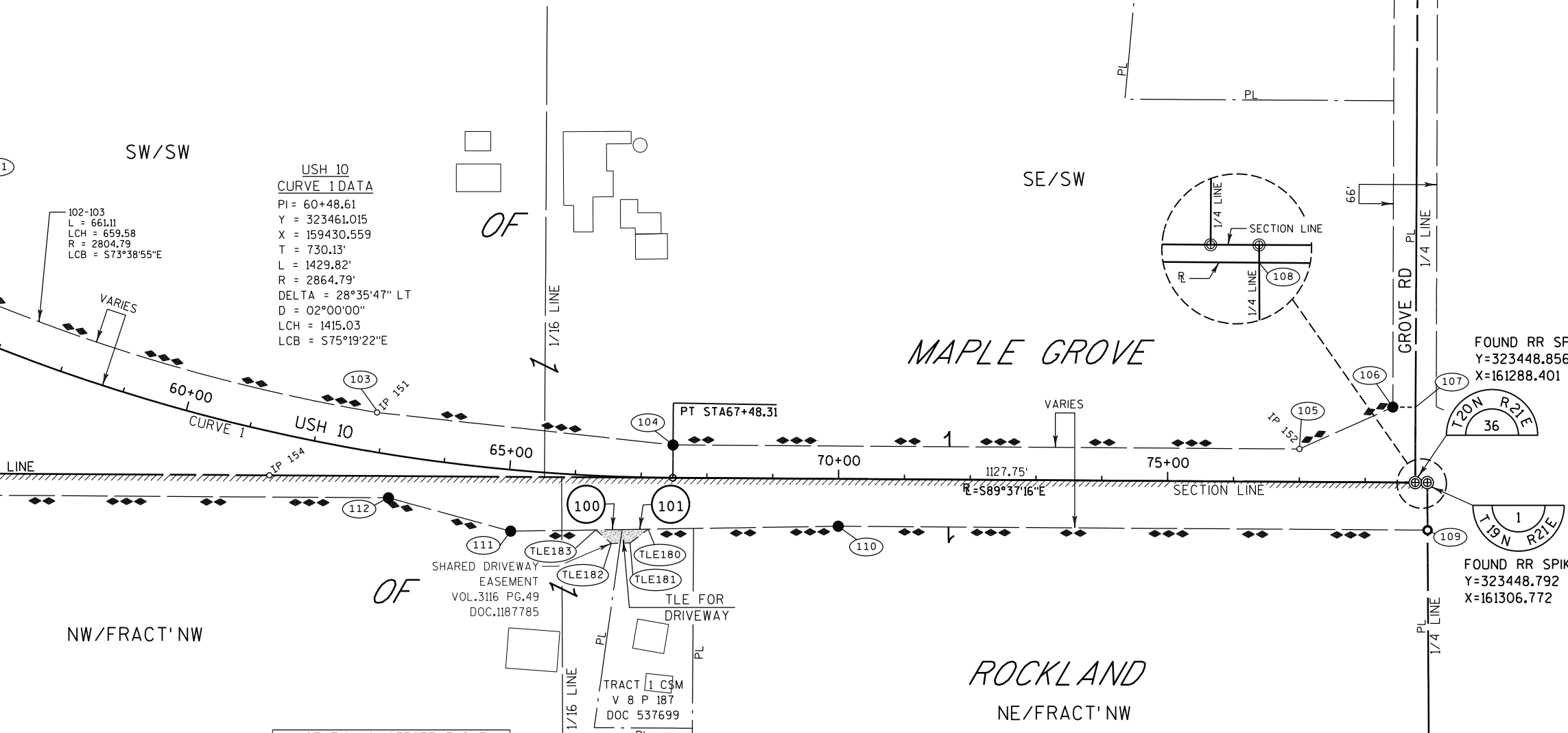
REVISION DATE 8/3/2022 NC 4/3/2023 NC

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED FOR THE DEPARTMENT DATE: 9/14/2017 <i>Curt Van Een</i> (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED
 OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W NEW	ACRES EXISTING	ACRES REQUIRED TOTAL	TLE ACRES
100	CAMP 10 CAMPGROUND, LLC	TLE	---	---	---	0.013
101	DANIEL P AND KRISTIE R KALIES	TLE	---	---	---	0.013

USH 10
 CURVE 1 DATA
 PI = 60+48.61
 Y = 323461.015
 X = 159430.559
 T = 730.13'
 L = 1429.82'
 R = 2864.79'
 DELTA = 28°35'47" LT
 D = 02°00'00"
 LCH = 1415.03
 LCB = S75°19'22"E

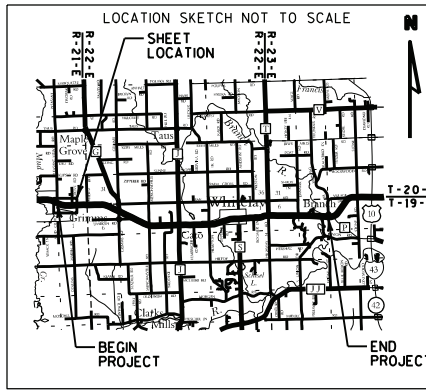


ESTABLISHED FROM TIES
 Y=323465.585
 X=158642.997

FOUND 60D NAIL
 Y=323465.409
 X=158676.698

FOUND RR SPIKE
 Y=323448.856
 X=161288.401

FOUND RR SPIKE
 Y=323448.792
 X=161306.772



COURSE	BEARING	DISTANCE
SW SEC 36-100	N 00°23'05" E	429.95'
100-101	S 89°36'55" E	433.51'
101-102	S 00°23'05" W	151.75'
102-103	SEE CURVE DATA ON SHEET	
103-104	S 83°45'13" E	452.27'
104-105	S 89°37'53" E	951.52'
105-106	N 65°55'36" E	155.61'
106-107	S 89°44'01" E	34.50'
107-S 1/4 SEC 36	S 00°16'00" W	114.31'
S 1/4 SEC 36-N 1/4 SEC 1	S 89°48'01" E	18.37'
N 1/4 SEC 1-108	S 00°19'01" E	0.19'
108-109	S 00°19'01" E	72.01'
109-110	N 89°37'16" W	895.30'
110-111	S 89°08'18" W	497.57'
111-112	N 74°44'11" W	192.59'
112-113	N 89°38'19" W	861.49'
113-114	N 00°46'16" W	266.28'
114-115	N 62°56'11" W	43.61'
115-116	S 87°01'22" W	35.74'
116-117	S 24°00'05" W	54.03'
117-118	SEE CURVE DATA ON SHEET	
118-119	SEE CURVE DATA ON SHEET	
119-SW SEC 36	N 89°42'03" W	28.14'

POINT NO.	STATION	OFFSET
SW SEC 36	53+52.88	377.76'
NW SEC 1	53+79.31	362.08'
100	51+51.67	0.00'
101	55+48.51	-198.87'
102	56+11.52	-59.55'
103	62+86.69	-59.69'
104	67+48.16	-49.79'
105	76+99.68	-49.96'
106	78+41.34	-114.38'
107	78+75.83	-114.44'
S 1/4 SEC 36	78+76.06	-0.13'
N 1/4 SEC 1	78+94.43	-0.19'
108	78+94.43	0.00'
109	78+95.30	72.00'
110	70+00.00	72.00'
111	65+10.00	93.00'
112	63+24.51	65.31'
113	55+45.48	309.05'
114	54+35.20	70.30'
115	53+92.63	70.31'
116	53+62.75	88.59'
117	53+66.42	142.49'
118	53+39.59	339.07'
119	53+74.93	364.65'

POINT NO.	STATION	OFFSET
TLE180	67+12.47	78.48'
TLE181	66+86.22	100.11'
TLE182	66+58.65	101.72'
TLE183	66+34.91	82.28'

POINT	Y (NORTHING)	X (EASTING)	DESCRIPTION
IP 150	323741.206	159078.153	1.25" OD IP
IP 151	323555.375	159711.302	1.25" OD IP
IP 152	323499.897	161112.575	1.25" OD IP
IP 154	323459.865	159547.806	1.25" OD IP
IP 155	323697.430	158863.527	0.75" IRON ROD
IP 156	323717.113	158824.543	0.75" IRON ROD
IP 157	323715.188	158788.698	0.75" IRON ROD
IP 158	323666.095	158766.870	0.75" IRON ROD
IP 159	323713.234	158661.534	0.75" IRON ROD
IP 160	323753.742	158679.945	0.75" IRON ROD



FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY

REVISION DATE 8/3/2022 4/3/2023 NC	DATE 9/14/2017	1"=200'	HWY: USH 10	STATE R/W PROJECT NUMBER 1500-33-22	PLAT SHEET 4.02
			COUNTY: MANITOWOC	CONSTRUCTION PROJECT NUMBER	PS&E SHEET

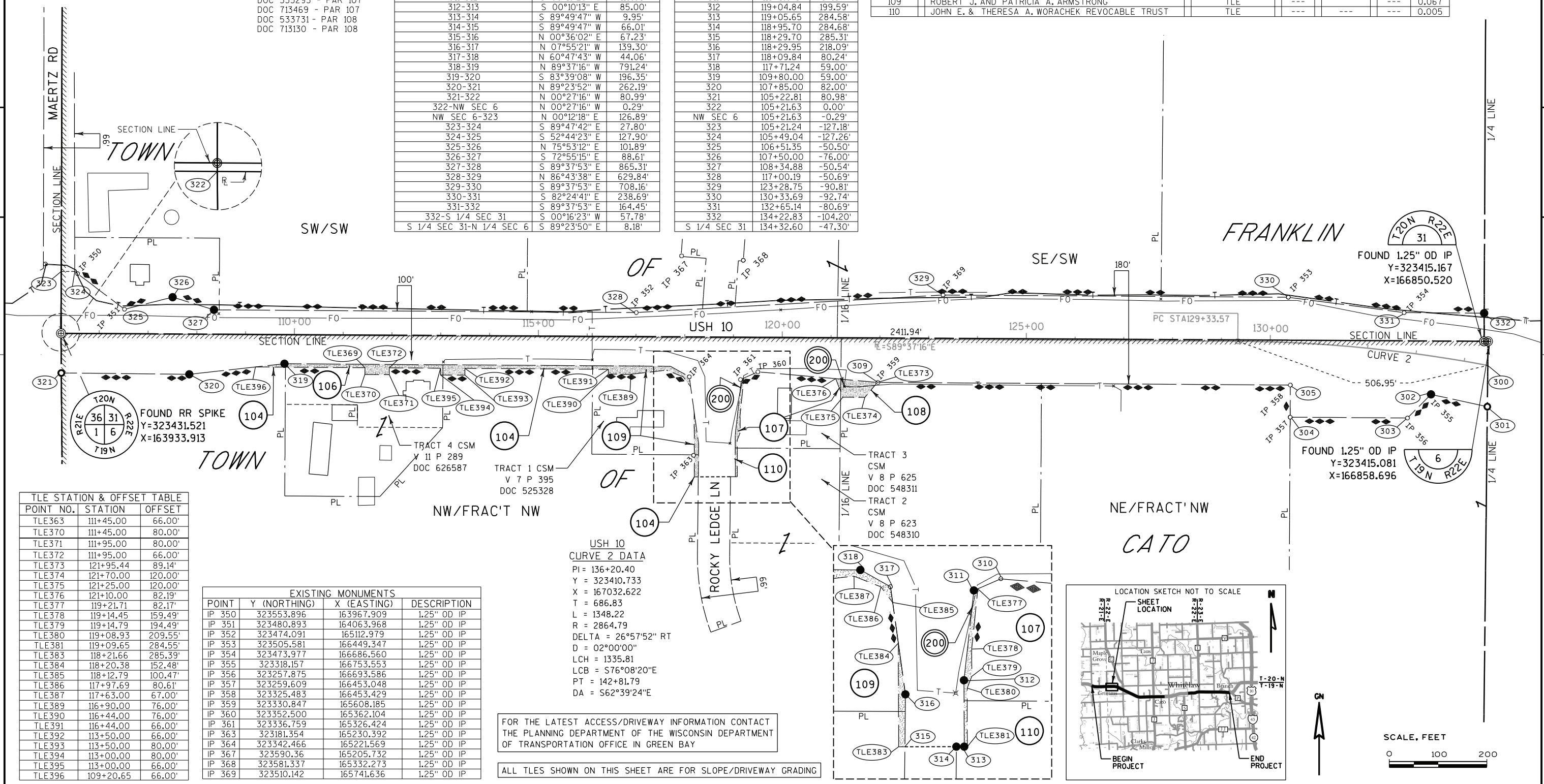
UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
200	FRONTIER NORTH INC.	RELEASE OF RIGHTS

(200) FRONTIER NORTH INC.
 DOC 533296 - PAR 104, 106
 DOC 714108 - PAR 104, 109
 DOC 533297 - PAR 109
 DOC 533295 - PAR 107
 DOC 713469 - PAR 107
 DOC 533731 - PAR 108
 DOC 713130 - PAR 108

COURSE TABLE		
COURSE	BEARING	DISTANCE
N 1/4 SEC 6-300	S 00°37'12" W	49.44'
300-301	S 00°37'12" W	84.50'
301-302	N 77°43'17" W	118.27'
302-303	S 44°48'45" W	68.25'
303-304	N 89°35'13" W	240.54'
304-305	N 00°19'53" E	65.89'
305-309	N 89°37'53" W	845.42'
309-310	N 84°58'23" W	246.26'
310-311	S 66°31'40" W	37.37'
311-312	S 06°16'26" W	115.83'
312-313	S 00°10'13" E	85.00'
313-314	S 89°49'47" W	9.95'
314-315	S 89°49'47" W	66.01'
315-316	N 00°36'02" E	67.23'
316-317	N 07°55'21" W	139.30'
317-318	N 60°47'43" W	44.06'
318-319	N 89°37'16" W	791.24'
319-320	S 83°39'08" W	196.35'
320-321	N 89°23'52" W	262.19'
321-322	N 00°27'16" W	80.99'
322-NW SEC 6	N 00°27'16" W	0.29'
NW SEC 6-323	N 00°12'18" E	126.89'
323-324	S 89°47'42" E	27.80'
324-325	S 52°44'23" E	127.90'
325-326	N 75°53'12" E	101.89'
326-327	S 72°55'15" E	88.61'
327-328	S 89°37'53" E	865.31'
328-329	N 86°43'38" E	629.84'
329-330	S 89°37'53" E	708.16'
330-331	S 82°24'41" E	238.69'
331-332	S 89°37'53" E	164.45'
332-S 1/4 SEC 31	S 00°16'23" W	57.78'
S 1/4 SEC 31-N 1/4 SEC 6	S 89°23'50" E	8.18'

STATION & OFFSET TABLE		
POINT NO.	STATION	OFFSET
N 1/4 SEC 6	134+40.52	-48.70'
300	134+49.02	0.00'
301	134+64.24	83.16'
302	133+42.65	78.00'
303	133+00.34	132.74'
304	130+47.97	152.79'
305	130+45.20	86.95'
309	121+96.37	86.95'
310	119+50.91	69.26'
311	119+16.73	84.37'
312	119+04.84	199.59'
313	119+05.65	284.58'
314	118+95.70	284.68'
315	118+29.70	285.31'
316	118+29.95	218.09'
317	118+09.84	80.24'
318	117+71.24	59.00'
319	109+80.00	59.00'
320	107+85.00	82.00'
321	105+22.81	80.98'
322	105+21.63	0.00'
NW SEC 6	105+21.63	-0.29'
323	105+21.24	-127.18'
324	105+49.04	-127.26'
325	106+51.35	-50.50'
326	107+50.00	-76.00'
327	108+34.88	-50.54'
328	117+00.19	-50.69'
329	123+28.75	-90.81'
330	130+33.69	-92.74'
331	132+65.14	-80.69'
332	134+22.83	-104.20'
S 1/4 SEC 31	134+32.60	-47.30'

SCHEDULE OF LANDS & INTERESTS REQUIRED					
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.					
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W		TLE ACRES
			NEW	EXISTING	
104	BRYAN D. BERKHOLTZ, LISA M. NATE & ERIN B. CLAUSEN, AS TRUSTEES OF THE DANIEL H. & MARGARET N. BERKHOLTZ IRREVOCABLE TRUST DATED JULY 16, 2015	TLE	---	---	0.077
106	ROBERT J AND RICHELLE BRUETTE	TLE	---	---	0.069
107	DANIEL J. & ANGELA M. SCHAMBURECK	TLE	---	---	0.022
108	L&S FARMS, LTD.	TLE	---	---	0.049
109	ROBERT J. AND PATRICIA A. ARMSTRONG	TLE	---	---	0.067
110	JOHN E. & THERESA A. WORACHEK REVOCABLE TRUST	TLE	---	---	0.005



TLE STATION & OFFSET TABLE		
POINT NO.	STATION	OFFSET
TLE363	111+45.00	66.00'
TLE370	111+45.00	80.00'
TLE371	111+95.00	80.00'
TLE372	111+95.00	66.00'
TLE373	121+95.44	89.14'
TLE374	121+70.00	120.00'
TLE375	121+25.00	120.00'
TLE376	121+10.00	82.19'
TLE377	119+21.71	82.17'
TLE378	119+14.45	159.49'
TLE379	119+14.79	194.44'
TLE380	119+08.93	209.55'
TLE381	119+09.65	284.55'
TLE383	118+21.66	285.39'
TLE384	118+20.38	152.48'
TLE385	118+12.79	100.47'
TLE386	117+97.69	80.61'
TLE387	117+63.00	67.00'
TLE389	116+90.00	76.00'
TLE390	116+44.00	76.00'
TLE391	116+44.00	66.00'
TLE392	113+50.00	66.00'
TLE393	113+50.00	80.00'
TLE394	113+00.00	80.00'
TLE395	113+00.00	66.00'
TLE396	109+20.65	66.00'

EXISTING MONUMENTS			
POINT	Y (NORTHING)	X (EASTING)	DESCRIPTION
IP 350	323553.896	163967.909	1.25" OD IP
IP 351	323480.893	164063.968	1.25" OD IP
IP 352	323474.091	165112.979	1.25" OD IP
IP 353	323505.581	166449.347	1.25" OD IP
IP 354	323473.977	166686.560	1.25" OD IP
IP 355	323318.157	166753.553	1.25" OD IP
IP 356	323257.875	166693.586	1.25" OD IP
IP 357	323259.609	166453.048	1.25" OD IP
IP 358	323325.483	166453.429	1.25" OD IP
IP 359	323330.847	165608.185	1.25" OD IP
IP 360	323352.500	165362.104	1.25" OD IP
IP 361	323336.759	165326.424	1.25" OD IP
IP 363	323181.354	165230.392	1.25" OD IP
IP 364	323342.466	165221.569	1.25" OD IP
IP 367	323590.36	165205.732	1.25" OD IP
IP 368	323581.337	165332.273	1.25" OD IP
IP 369	323510.142	165741.636	1.25" OD IP

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY

ALL TLES SHOWN ON THIS SHEET ARE FOR SLOPE/DRIVEWAY GRADING

REVISION DATE 8/3/2022 4/3/2023	DATE 9/14/2017	1"=200'	HWY: USH 10	STATE R/W PROJECT NUMBER 1500-33-22	PLAT SHEET 4.03
			COUNTY: MANITOWOC	CONSTRUCTION PROJECT NUMBER	PS&E SHEET
					E

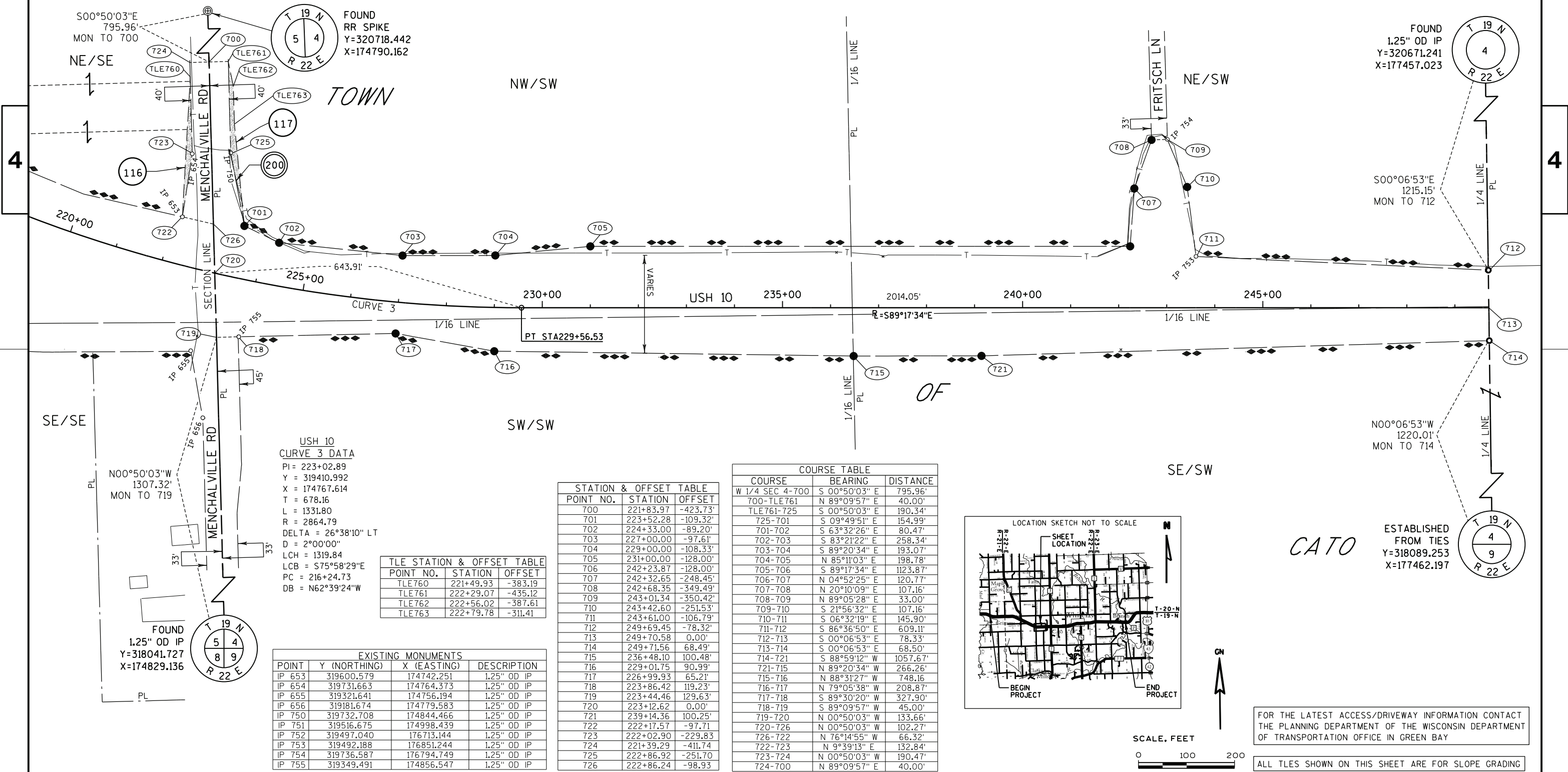
SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W NEW	ACRES REQUIRED EXISTING	TOTAL	TLE ACRES
116	RANDALL J. & LINDA E. MEYER	TLE	---	---	---	0.045
117	WILLIAM J. & ELIZABETH FRITSCH	TLE	---	---	---	0.061

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
200	FRONTIER NORTH INC.	RELEASE OF RIGHTS

(200) FRONTIER NORTH INC.
NO EASEMENT OF RECORD - PAR 117



USH 10 CURVE 3 DATA
 PI = 223+02.89
 Y = 319410.992
 X = 174767.614
 T = 678.16
 L = 1331.80
 R = 2864.79
 DELTA = 26°38'10" LT
 D = 2°00'00"
 LCH = 1319.84
 LCB = S75°58'29"E
 PC = 216+24.73
 DB = N62°39'24"W

TLE STATION & OFFSET TABLE

POINT NO.	STATION	OFFSET
TLE760	221+49.93	-383.19
TLE761	222+29.07	-435.12
TLE762	222+56.02	-387.61
TLE763	222+79.78	-311.41

EXISTING MONUMENTS

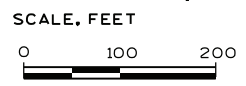
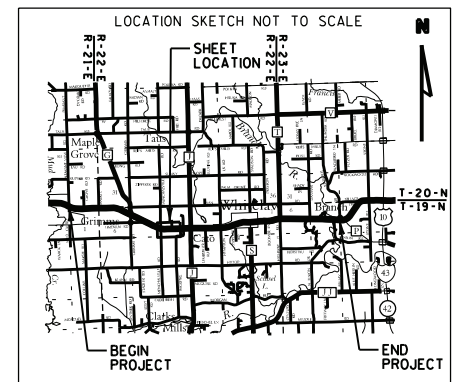
POINT	Y (NORTHING)	X (EASTING)	DESCRIPTION
IP 653	319600.579	174742.251	1.25" OD IP
IP 654	319731.663	174764.373	1.25" OD IP
IP 655	319321.641	174756.194	1.25" OD IP
IP 656	319181.674	174779.583	1.25" OD IP
IP 750	319732.708	174844.466	1.25" OD IP
IP 751	319516.675	174998.439	1.25" OD IP
IP 752	319497.040	176713.144	1.25" OD IP
IP 753	319492.188	176851.244	1.25" OD IP
IP 754	319736.587	176794.749	1.25" OD IP
IP 755	319349.491	174856.547	1.25" OD IP

STATION & OFFSET TABLE

POINT NO.	STATION	OFFSET
700	221+83.97	-423.73'
701	223+52.28	-109.32'
702	224+33.00	-89.20'
703	227+00.00	-97.61'
704	229+00.00	-108.33'
705	231+00.00	-128.00'
706	242+23.87	-128.00'
707	242+32.65	-248.45'
708	242+68.35	-349.49'
709	243+01.34	-350.42'
710	243+42.60	-251.53'
711	243+61.00	-106.79'
712	249+69.45	-78.32'
713	249+70.58	0.00'
714	249+71.56	68.49'
715	236+48.10	100.48'
716	229+01.75	90.99'
717	226+99.93	65.21'
718	223+86.42	119.23'
719	223+44.46	129.63'
720	223+12.62	0.00'
721	239+14.36	100.25'
722	222+17.57	-97.71'
723	222+02.90	-229.83'
724	221+39.29	-411.74'
725	222+86.92	-251.70'
726	222+86.24	-98.93'

COURSE TABLE

COURSE	BEARING	DISTANCE
W 1/4 SEC 4-700	S 00°50'03" E	795.96'
700-TLE761	N 89°09'57" E	40.00'
TLE761-725	S 00°50'03" E	190.34'
725-701	S 09°49'51" E	154.99'
701-702	S 63°32'26" E	80.47'
702-703	S 83°21'22" E	258.34'
703-704	S 89°20'34" E	193.07'
704-705	N 85°11'03" E	198.78'
705-706	S 89°17'34" E	1123.87'
706-707	N 04°52'25" E	120.77'
707-708	N 20°10'09" E	107.16'
708-709	N 89°05'28" E	33.00'
709-710	S 21°56'32" E	107.16'
710-711	S 06°32'19" E	145.90'
711-712	S 86°36'50" E	609.11'
712-713	S 00°06'53" E	78.33'
713-714	S 00°06'53" E	68.50'
714-721	S 88°59'12" W	1057.67'
721-715	N 89°20'34" W	266.26'
715-716	N 88°31'27" W	748.16'
716-717	N 79°05'38" W	208.87'
717-718	S 89°30'20" W	327.90'
718-719	S 89°09'57" W	45.00'
719-720	N 00°50'03" W	133.66'
720-726	N 00°50'03" W	102.27'
726-722	N 76°14'55" W	66.32'
722-723	N 9°39'13" E	132.84'
723-724	N 00°50'03" W	190.47'
724-700	N 89°09'57" E	40.00'



FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY

ALL TLES SHOWN ON THIS SHEET ARE FOR SLOPE GRADING

REVISION DATE 8/3/2022 4/3/2023 NC	DATE 9/14/2017	1"=200'	HWY: USH 10	STATE R/W PROJECT NUMBER 1500-33-22	PLAT SHEET 4.04
			COUNTY: MANITOWOC	CONSTRUCTION PROJECT NUMBER	PS&E SHEET

PROPOSED WORK
 STA 61+00 - STA 75+00
 CONSTRUCT EB PASSING LANE

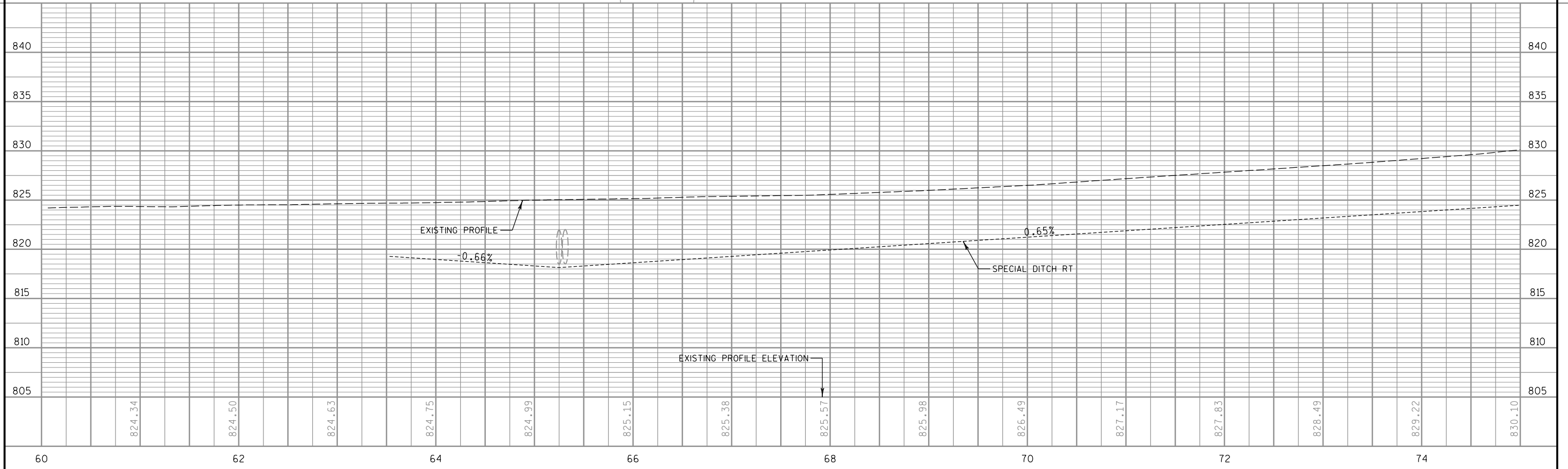
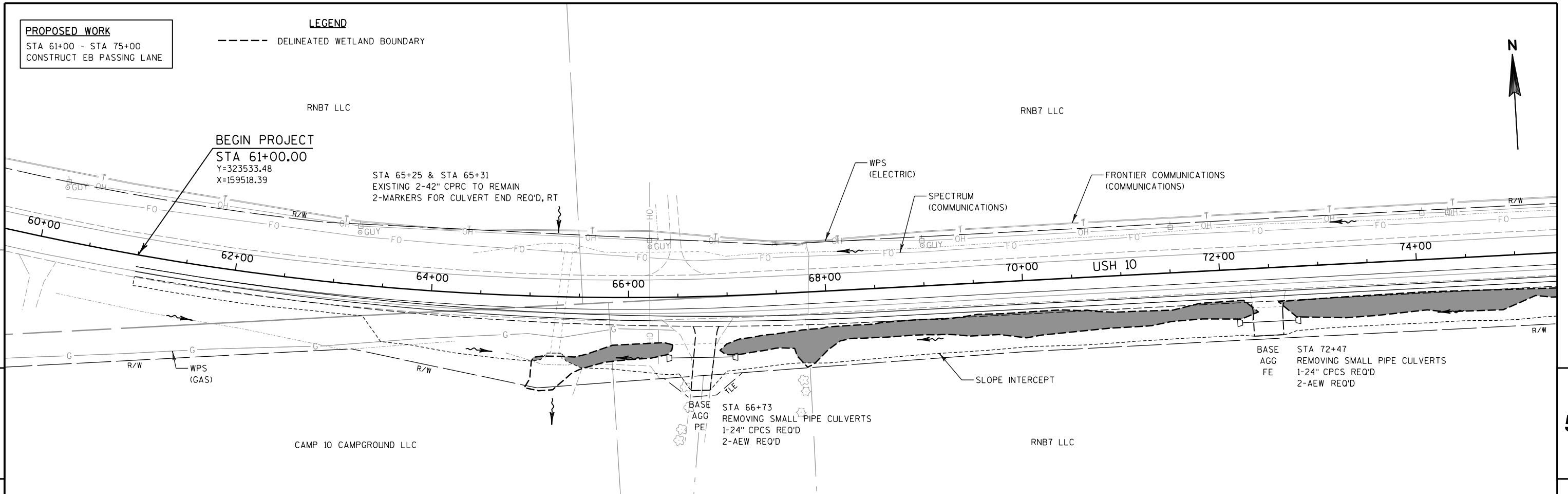
LEGEND

----- DELINEATED WETLAND BOUNDARY



5

5



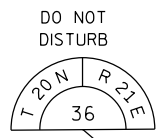
PROJECT NO: 1500-33-71	HWY: USH 10	COUNTY: MANITOWOC	PLAN & PROFILE	SHEET	E
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PROPOSED WORK
 STA 75+00 - STA 90+00
 CONSTRUCT EB PASSING LANE

RNB7 LLC

CONTROL POINT 200
 Y=323751.18
 X=161303.81
 1" IRON PIPE WITH
 RED D.O.T. CAP

DVORACHEK FAMILY FARMS LLC

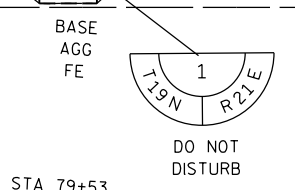
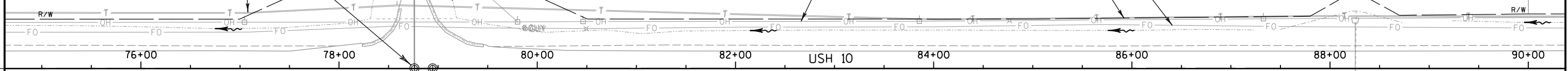


DO NOT DISTURB

FRONTIER COMMUNICATIONS (COMMUNICATIONS)

WPS (ELECTRIC)

SPECTRUM (COMMUNICATIONS)
 FRONTIER COMMUNICATIONS (COMMUNICATIONS)



DO NOT DISTURB

STA 79+53
 1-24" CPCS REQ'D
 2-AEW REQ'D

RNB7 LLC

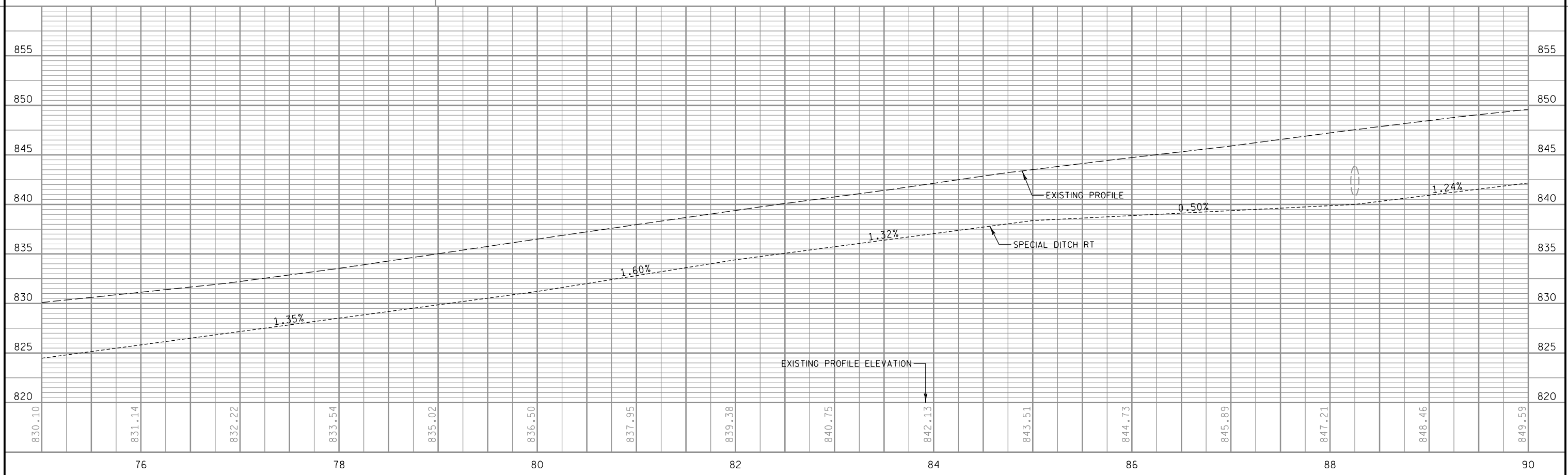
WALLACE A. & FAYE A. RUSCH

STA 88+25
 EXISTING 36" CIRCULAR PIPE TO REMAIN
 1-MARKERS FOR CULVERT END REQ'D, RT

SLOPE INTERCEPT

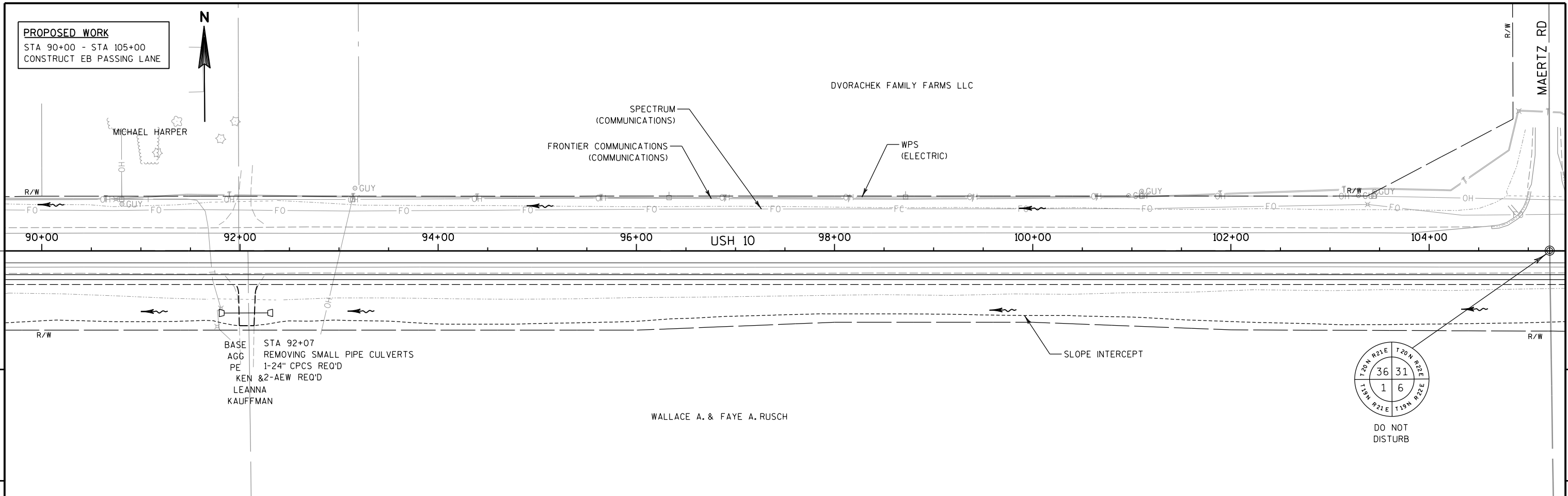
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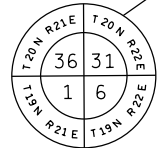


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

PROPOSED WORK
 STA 90+00 - STA 105+00
 CONSTRUCT EB PASSING LANE

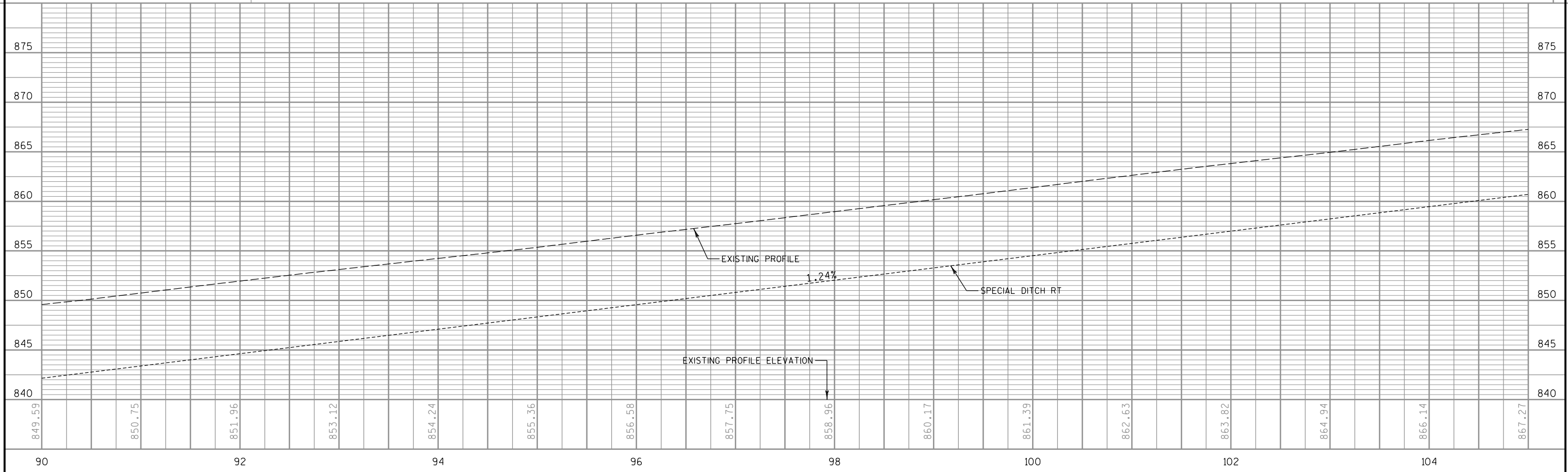


BASE STA 92+07
 AGG REMOVING SMALL PIPE CULVERTS
 PE 1-24" CPCS REQ'D
 KEN &2-AEW REQ'D
 LEANNA
 KAUFFMAN

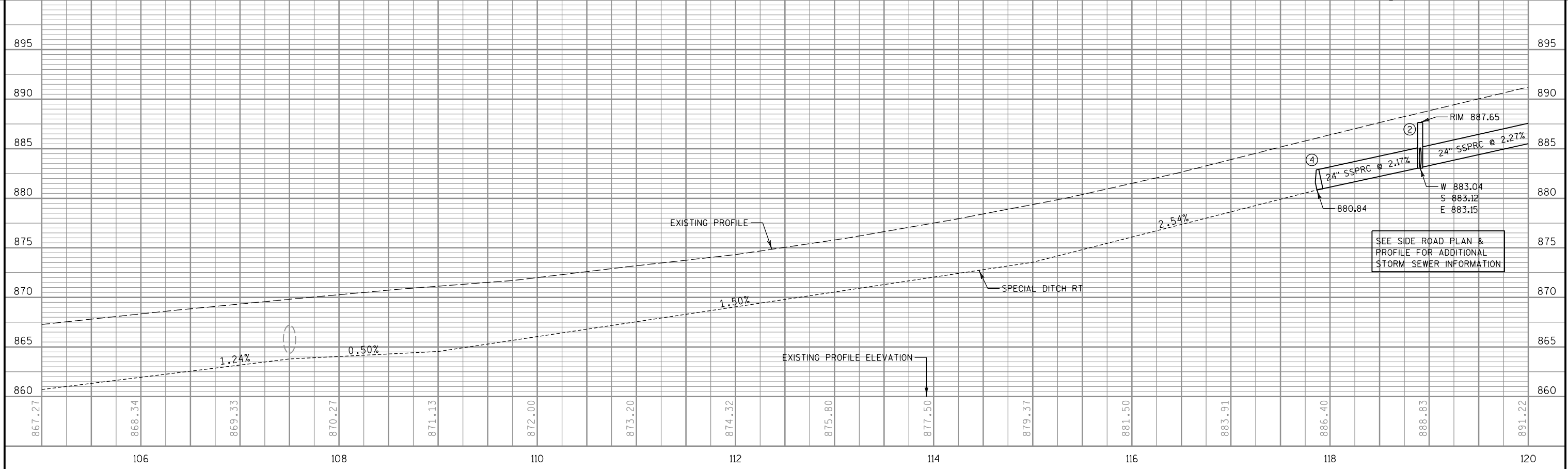
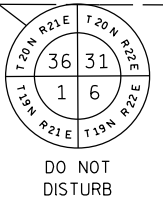
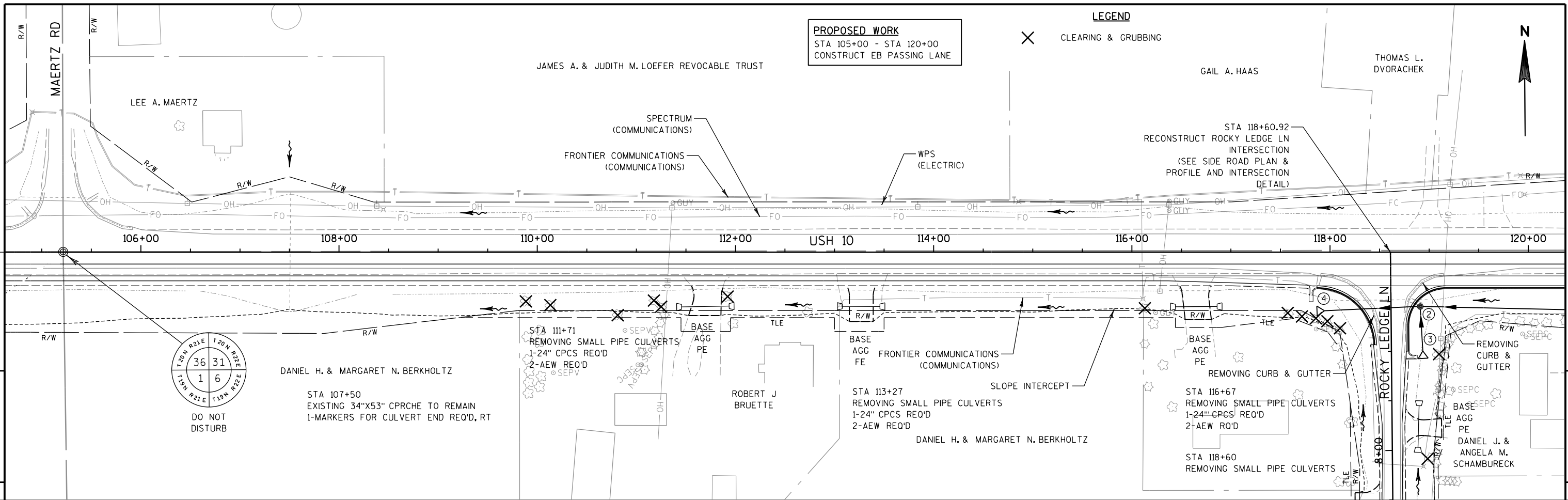


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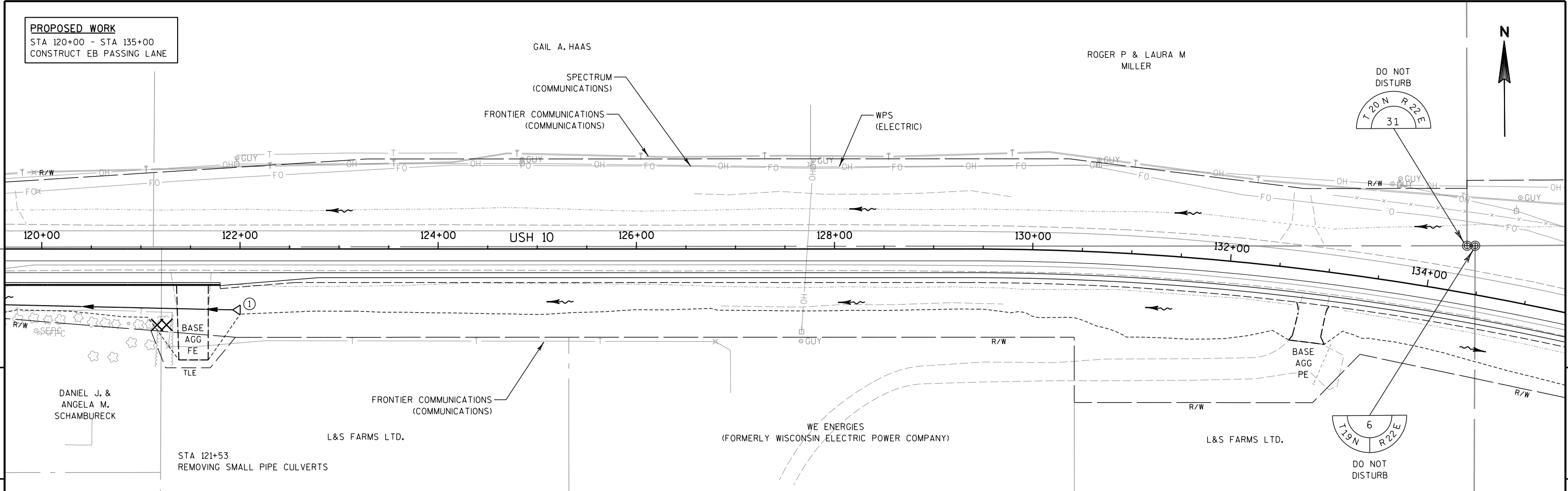


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

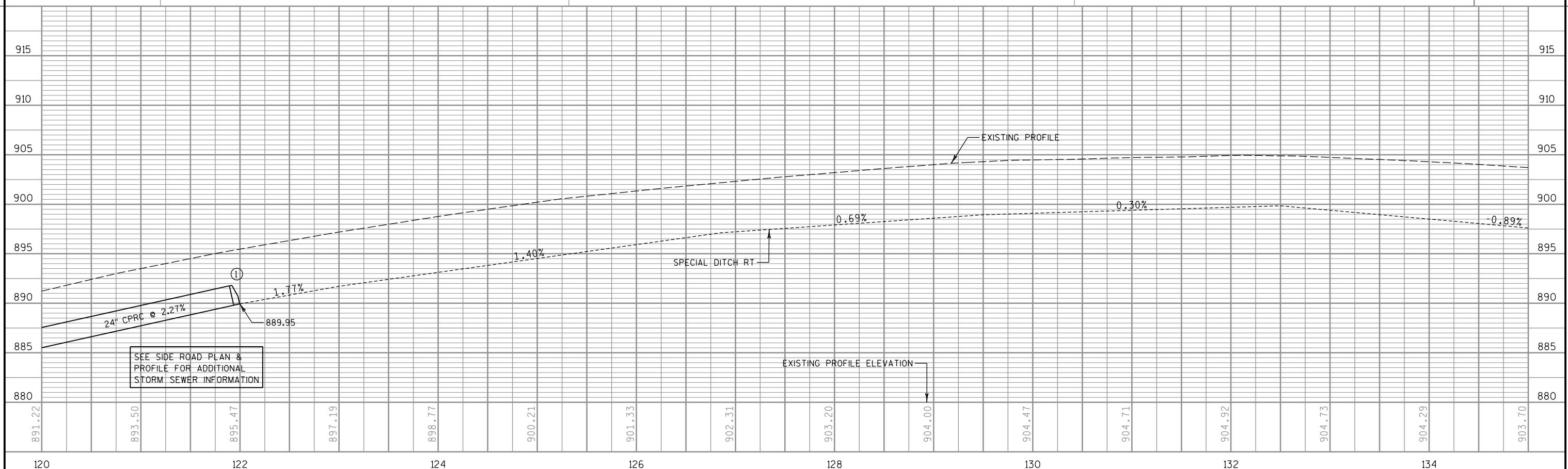


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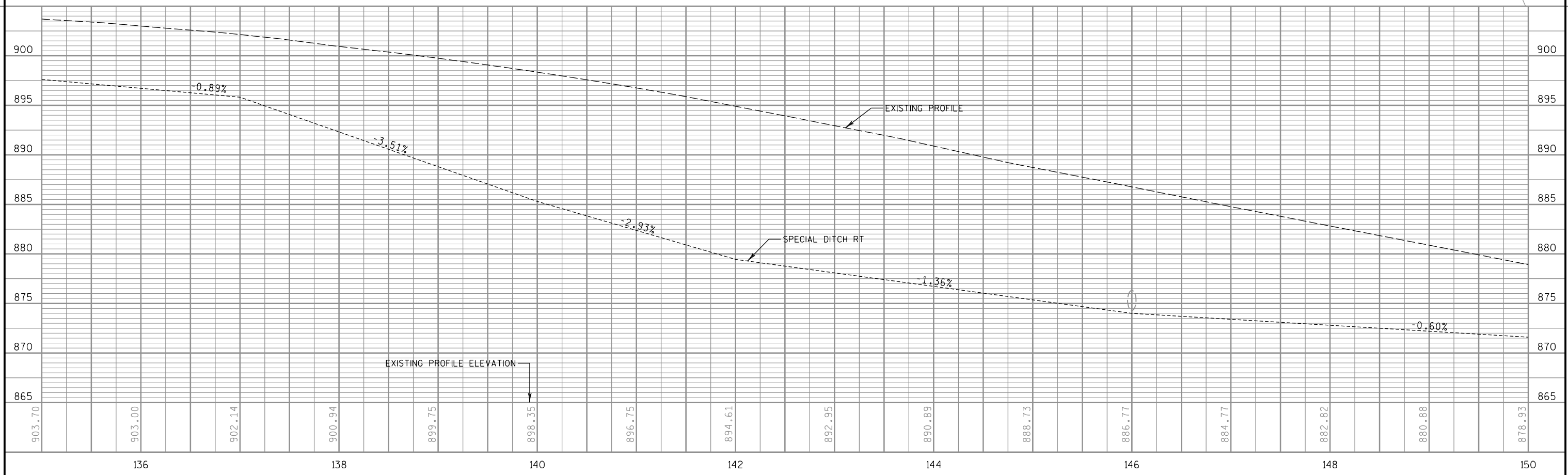
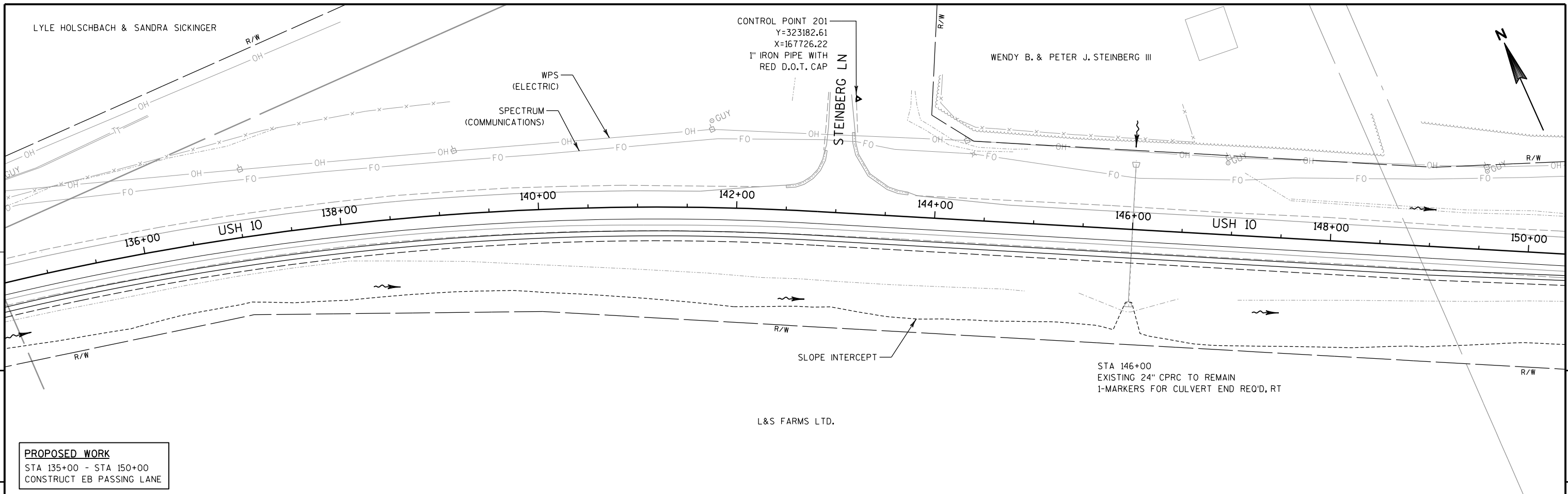
PROPOSED WORK
 STA 120+00 - STA 135+00
 CONSTRUCT EB PASSING LANE



STA 121+53
 REMOVING SMALL PIPE CULVERTS



PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

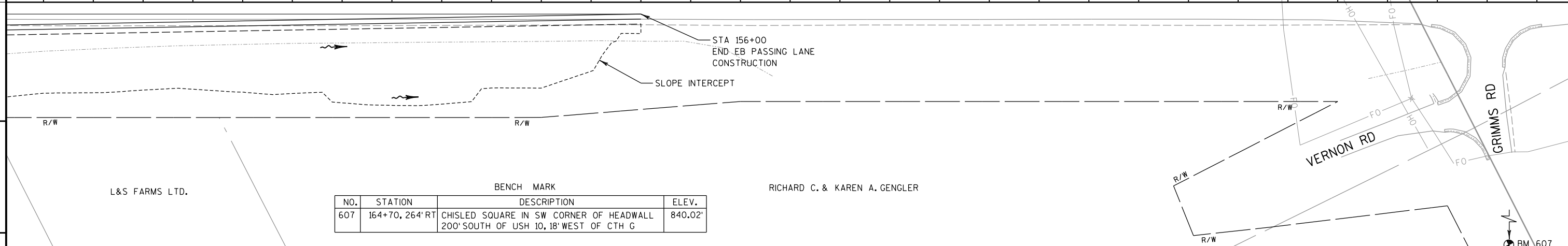
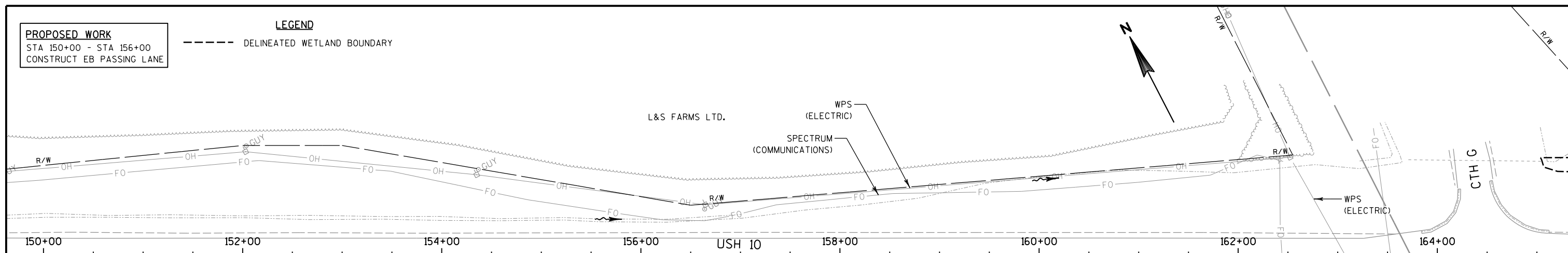


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

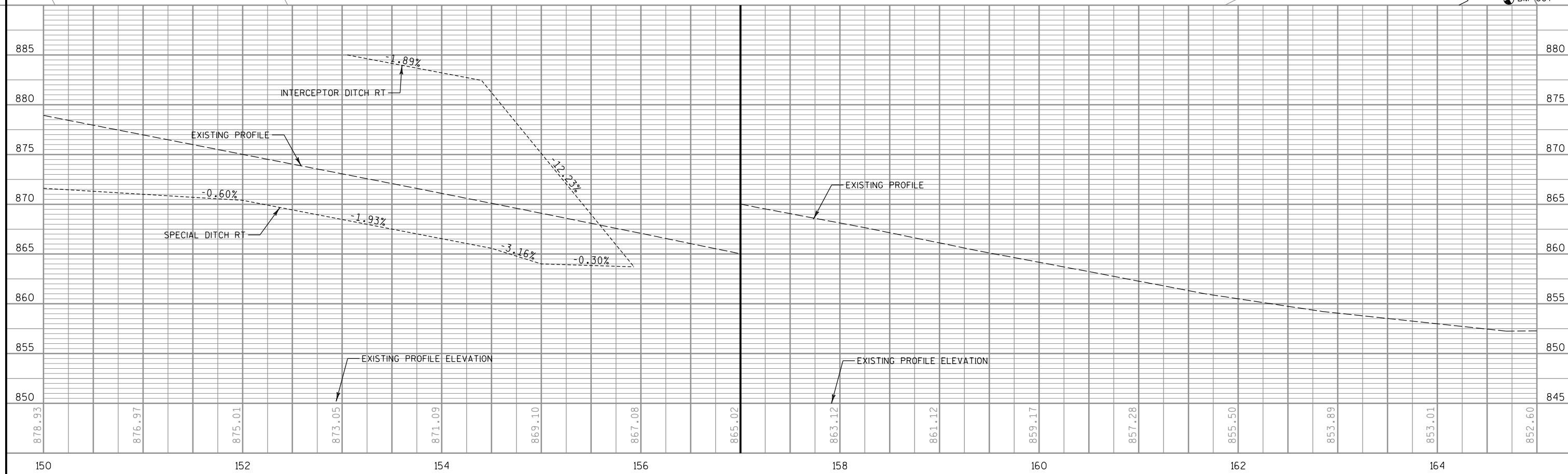
PROPOSED WORK
 STA 150+00 - STA 156+00
 CONSTRUCT EB PASSING LANE

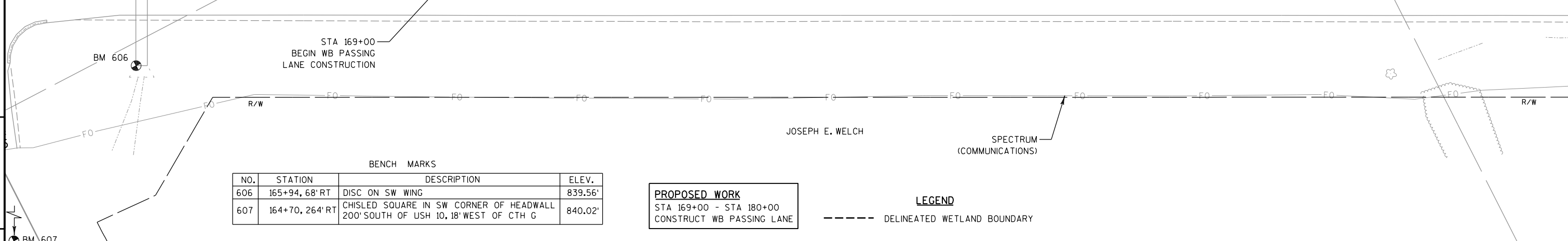
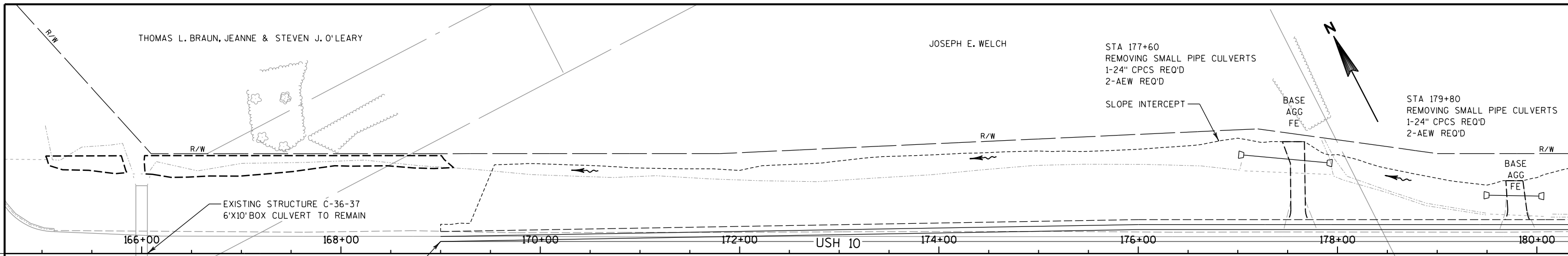
LEGEND

----- DELINEATED WETLAND BOUNDARY



BENCH MARK			
NO.	STATION	DESCRIPTION	ELEV.
607	164+70, 264' RT	CHISLED SQUARE IN SW CORNER OF HEADWALL 200' SOUTH OF USH 10, 18' WEST OF CTH G	840.02'





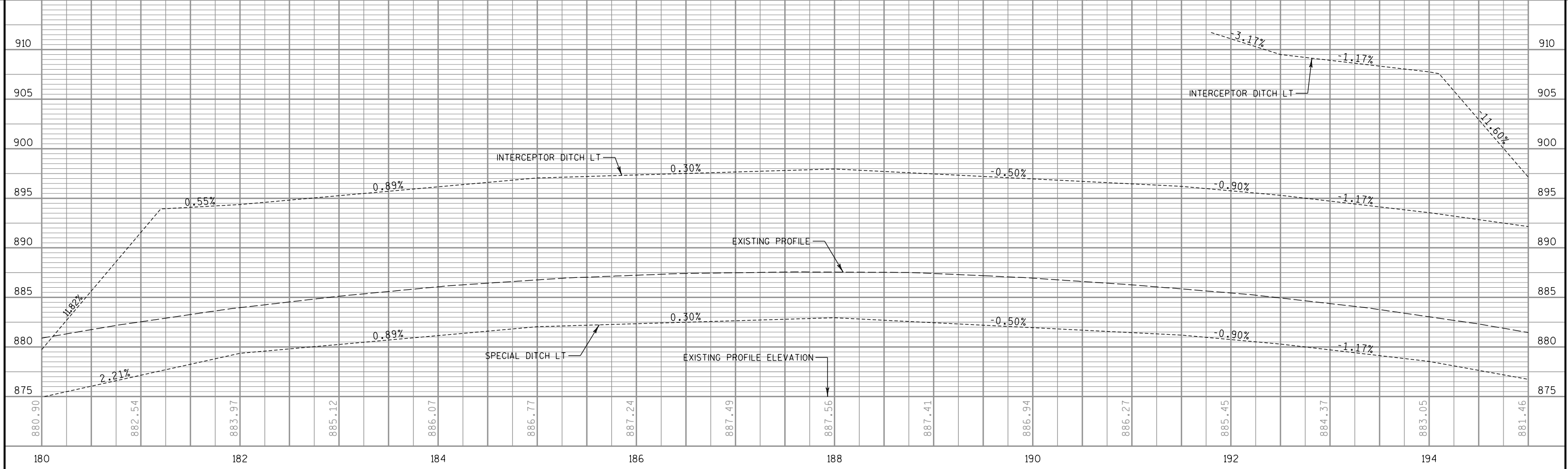
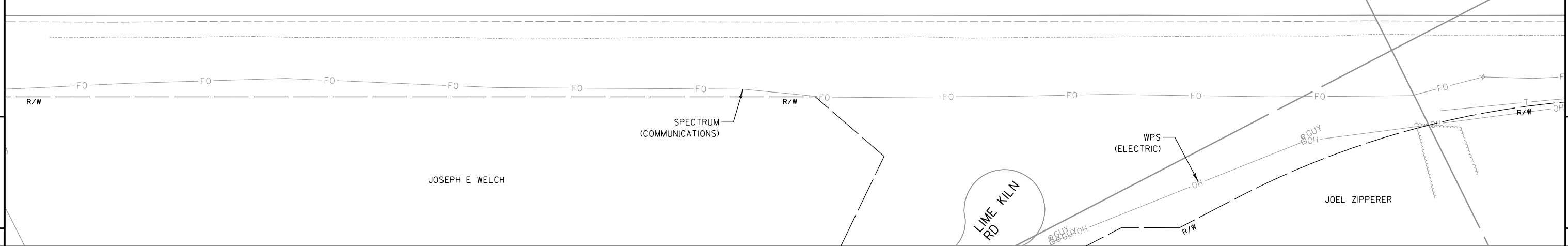
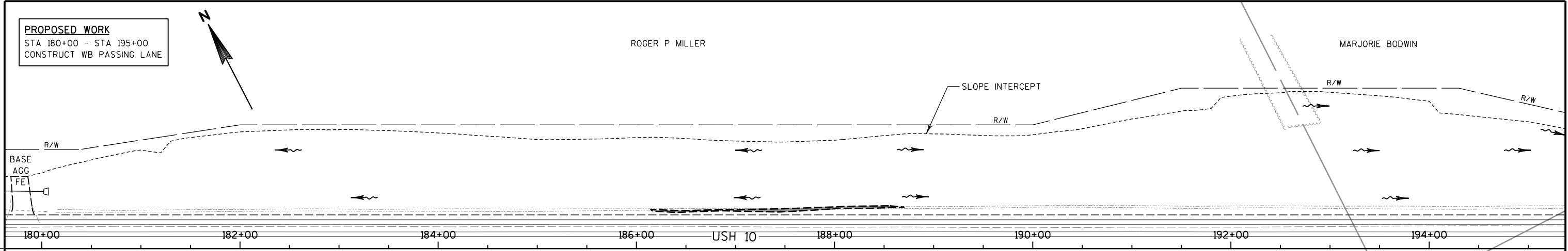
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
606	165+94, 68' RT	DISC ON SW WING	839.56'
607	164+70, 264' RT	CHISELED SQUARE IN SW CORNER OF HEADWALL 200' SOUTH OF USH 10, 18' WEST OF CTH G	840.02'

PROPOSED WORK
 STA 169+00 - STA 180+00
 CONSTRUCT WB PASSING LANE

LEGEND
 - - - - - DELINEATED WETLAND BOUNDARY

PROPOSED WORK
 STA 180+00 - STA 195+00
 CONSTRUCT WB PASSING LANE

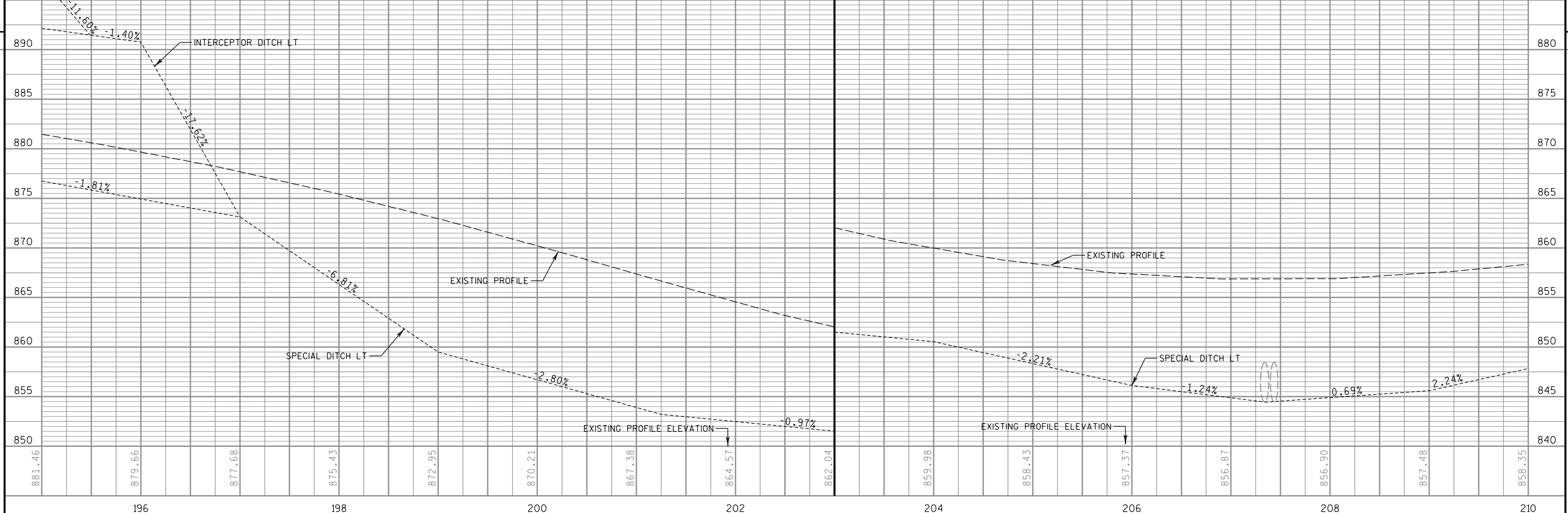
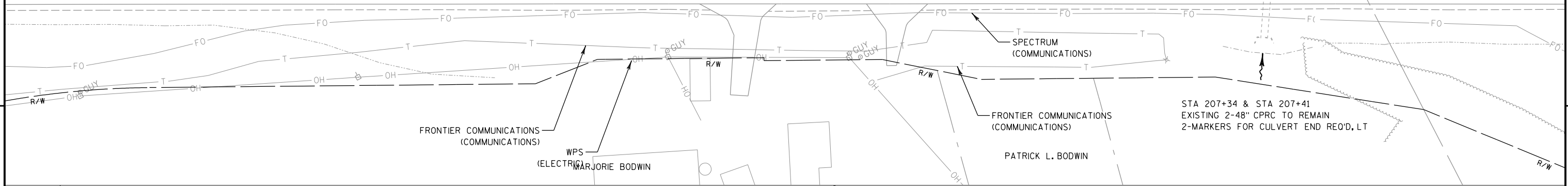
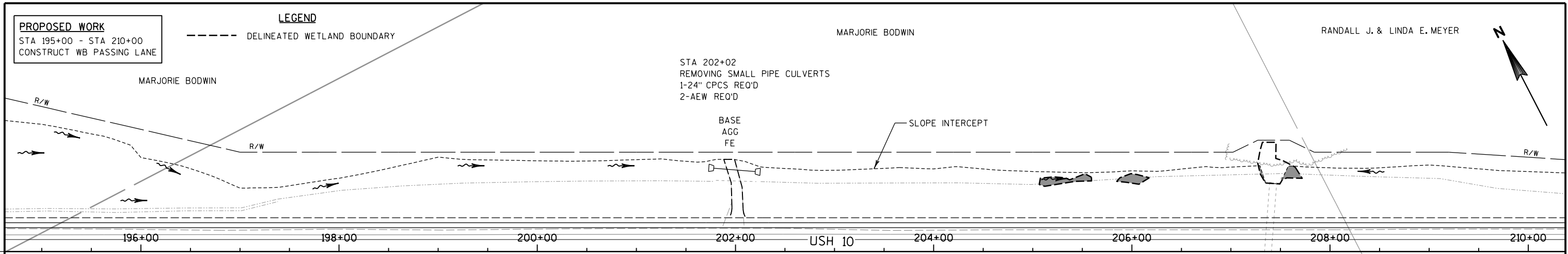


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET **E**

PROPOSED WORK
 STA 195+00 - STA 210+00
 CONSTRUCT WB PASSING LANE

LEGEND

----- DELINEATED WETLAND BOUNDARY



PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

PROPOSED WORK
 STA 210+00 - STA 225+00
 CONSTRUCT WB PASSING LANE



RANDALL J. & LINDA E. MEYER

WILLIAM J. & ELIZABETH FRITSCH

SEE SIDE ROAD PLAN & PROFILE
 FOR CULVERT INFORMATION

STA 223+12
 REMOVING SMALL PIPE CULVERTS

SLOPE INTERCEPT

REMOVING CURB & GUTTER

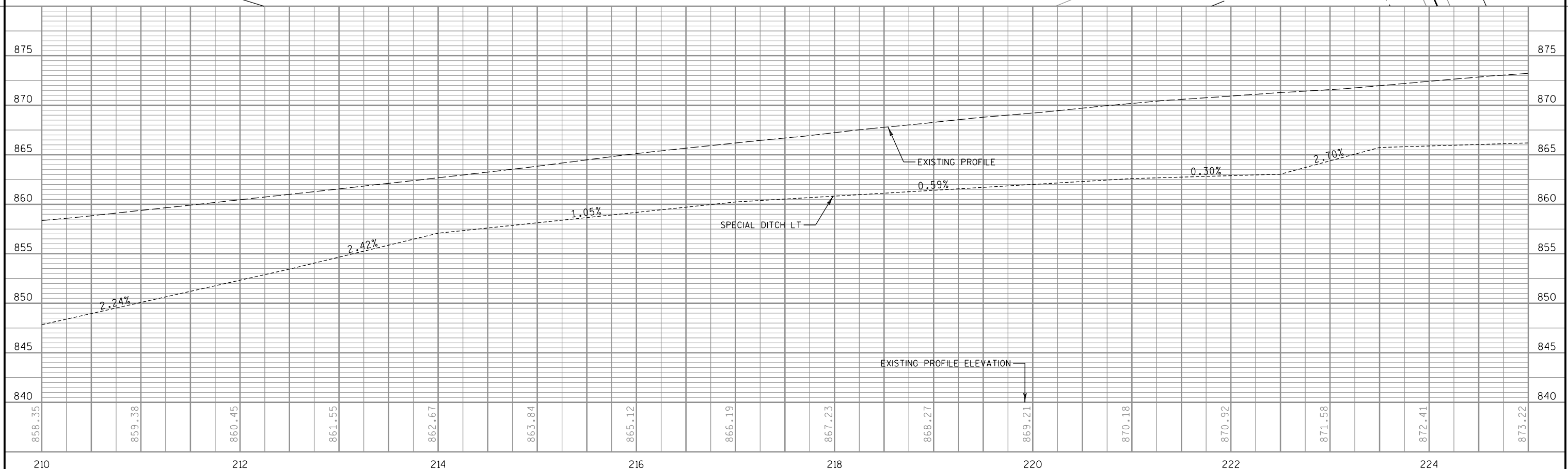
STA 223+12.38
 RECONSTRUCT
 MENCHALVILLE RD
 INTERSECTION
 (SEE SIDE ROAD PLAN &
 PROFILE AND
 INTERSECTION DETAIL)

SPECTRUM
 (COMMUNICATIONS)

WPS
 (ELECTRIC)

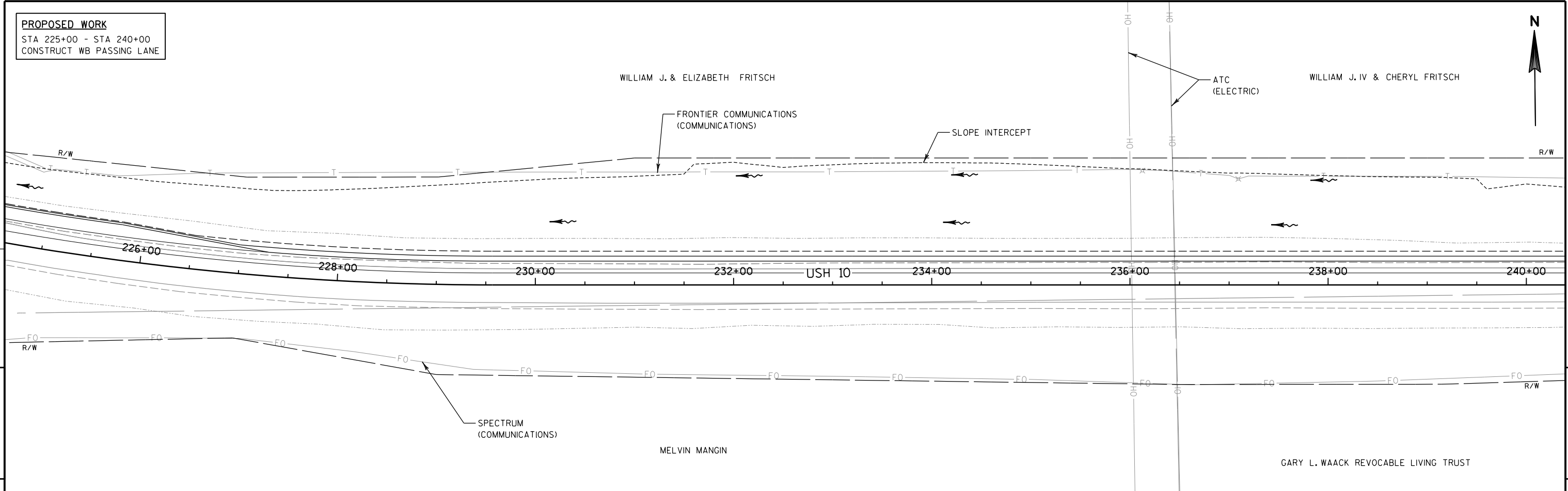
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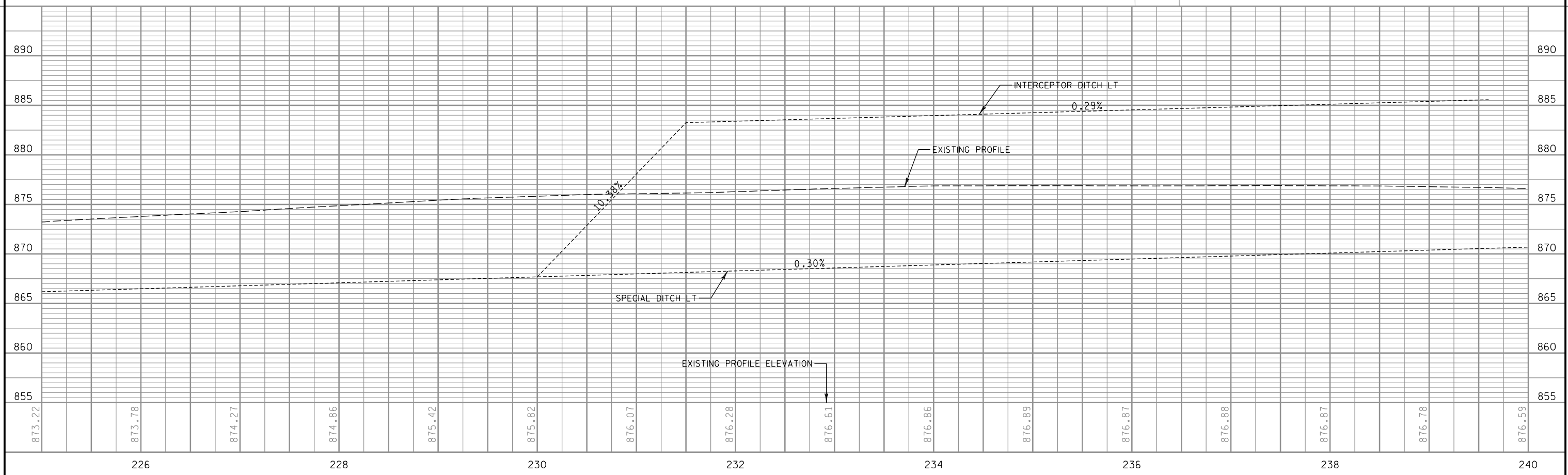
PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET E

PROPOSED WORK
 STA 225+00 - STA 240+00
 CONSTRUCT WB PASSING LANE



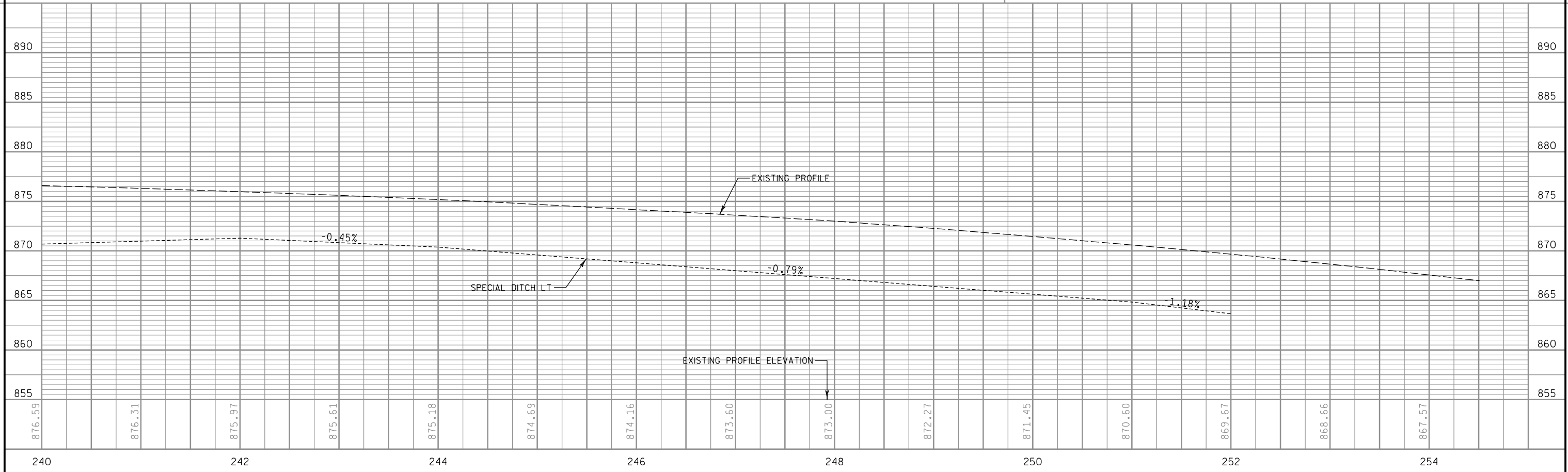
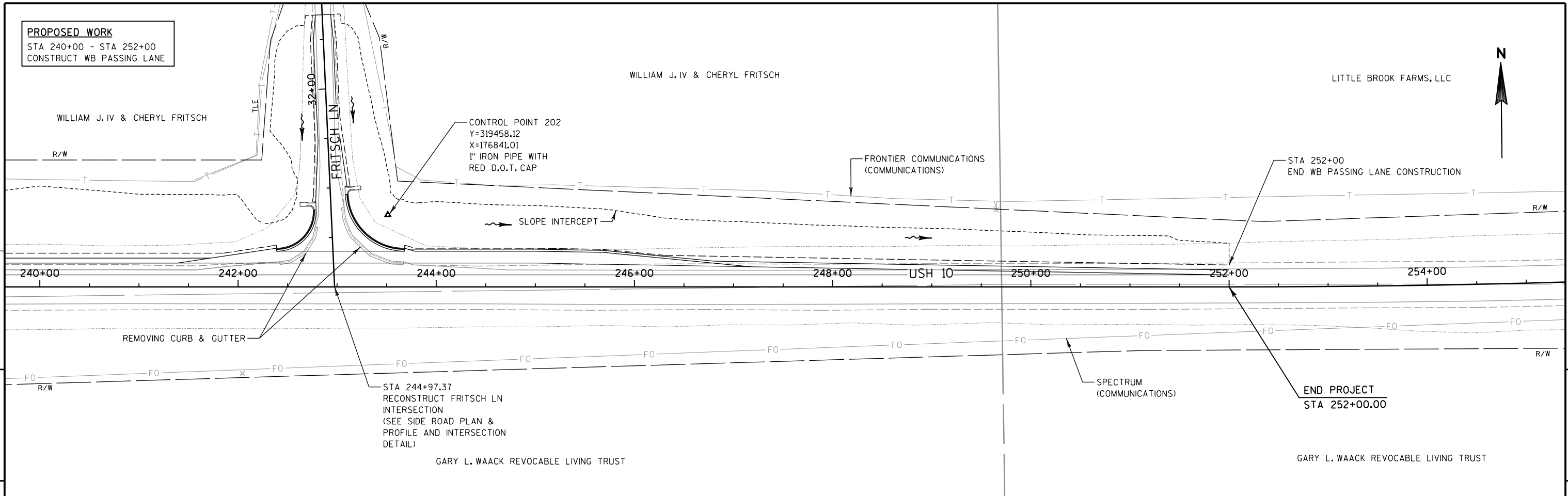
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PROJECT NO: 1500-33-71	HWY: USH 10	COUNTY: MANITOWOC	PLAN & PROFILE	SHEET	E
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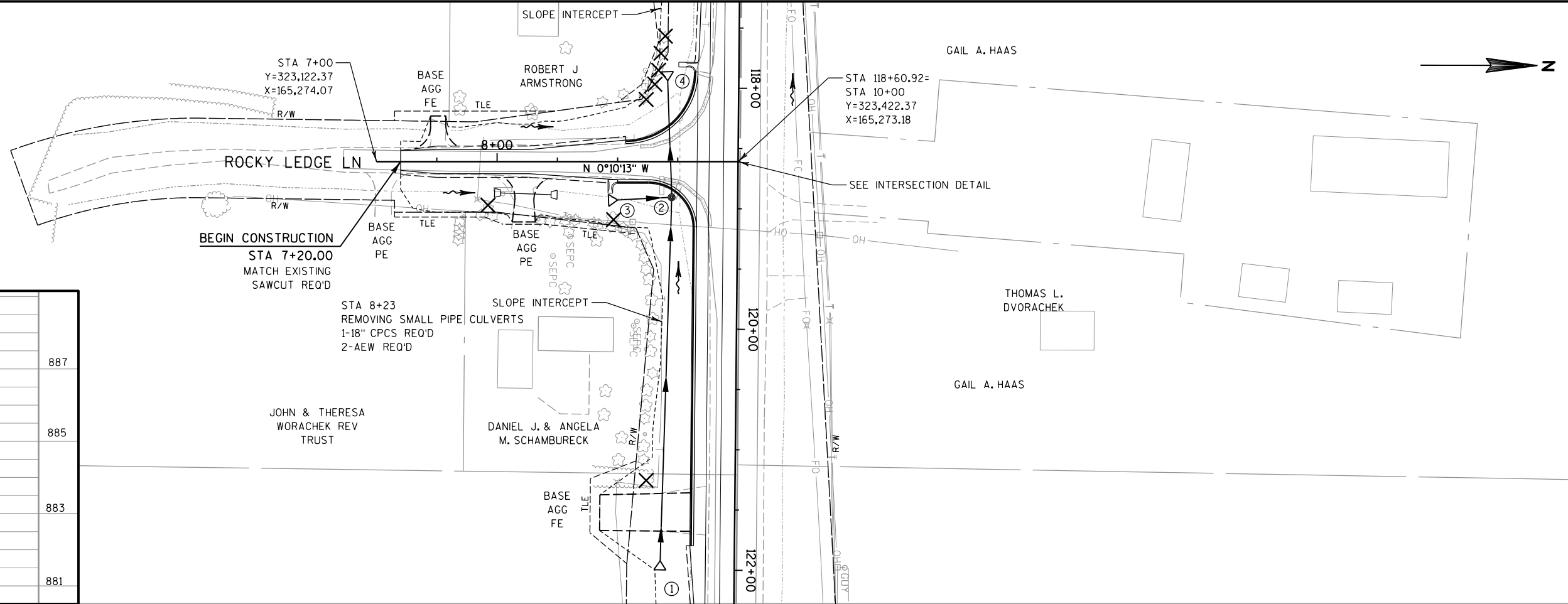
PROPOSED WORK
 STA 240+00 - STA 252+00
 CONSTRUCT WB PASSING LANE



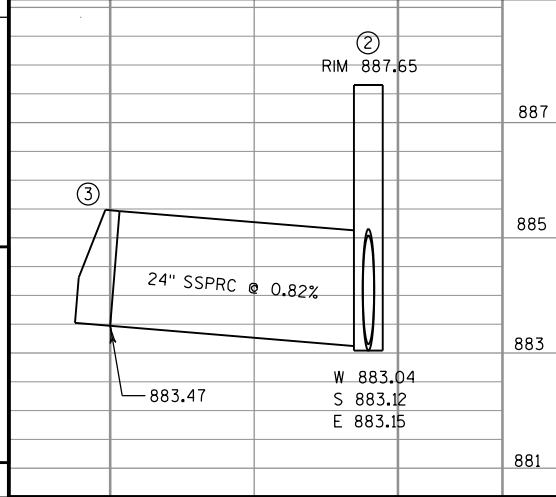
PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC PLAN & PROFILE SHEET **E**

PROPOSED WORK
 STA 7+20 - STA 10+00
 RECONSTRUCT ROCKY LEDGE LN

✕ CLEARING & GRUBBING

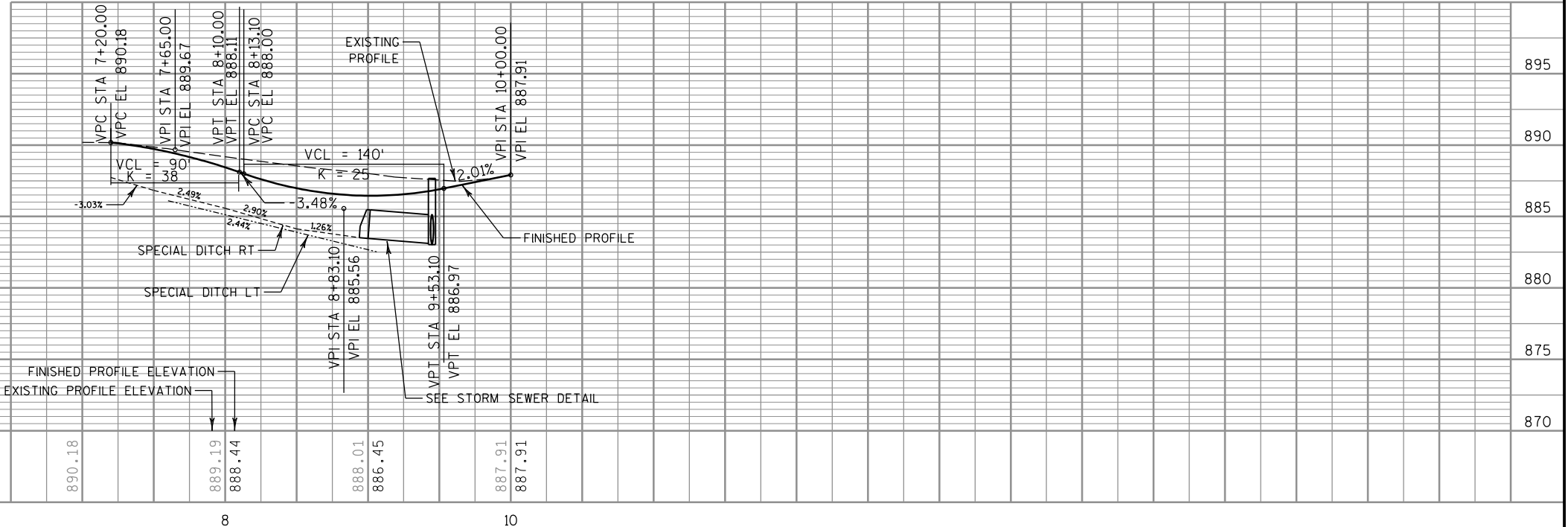


STORM SEWER DETAIL



STRUCT NO.	STATION	(1) OFFSET	C-C (FT)	TO STRUCT	MH TYPE / COVER	(2) RIM/GRATE ELEV.	(3) TOS ELEV.	(4) DEPTH (FT)	DISCHARGE PIPE				(8) REMARKS		
									CLASS	SIZE (IN)	INLET ELEV. (5)	DISCHARGE ELEV. (5)		(6) LENGTH (FT)	(7) SLOPE (%)
1	122+01	61.5' RT	299.0	2	--	--	--	--	IV	24	889.95	883.15	300	2.27%	APRON ENDWALL, JOINT TIES REQ'D
2	118+91	54.8' RT	104.20	4	5-FT DIAMETER / J	887.65	886.40	3.36	IV	24	883.04	880.84	102	2.17%	APRON ENDWALL, JOINT TIES REQ'D
3	8+93.9	32.1' RT	44.9	2	--	--	--	--	IV	24	883.47	883.12	42	0.82%	APRON ENDWALL, JOINT TIES REQ'D
4	117+80.7	56.3' RT	--	--	--	--	--	--	--	--	--	--	--	--	APRON ENDWALL, JOINT TIES REQ'D

- (1) STRUCTURE OFFSET IS TO CENTER OF STRUCTURE AND THE END OF APRON ENDWALL
- (2) RIM ELEVATION FOR MANHOLE IS TO CENTER OF CASTING
- (3) TOP OF STRUCTURE ELEVATION (TOS) DETERMINED BY SUBTRACTING CASTING HEIGHT AND 6-INCHES, FOR ADJUSTMENT, FROM RIM ELEVATION. A TYPE J MH CASTING HEIGHT IS 9 INCHES IN HEIGHT.
- (4) DEPTH OF STRUCTURE MEASURED FROM SUBTRACTING DISCHARGE ELEVATION FROM TOS
- (5) DISCHARGE ELEVATION IS TO END OF PIPE
- (6) PIPE LENGTH IS MEASURED FROM INSIDE WALL OF STRUCTURE TO END OF PIPE (DOES NOT INCLUDE APRON ENDWALL)
- (7) PIPE SLOPE IS CALCULATED USING PIPE LENGTH BETWEEN INSIDE WALL OF STRUCTURE TO END OF PIPE (DOES NOT INCLUDE APRON ENDWALL)
- (8) STATION AND OFFSET IS TO END OF APRON ENDWALL

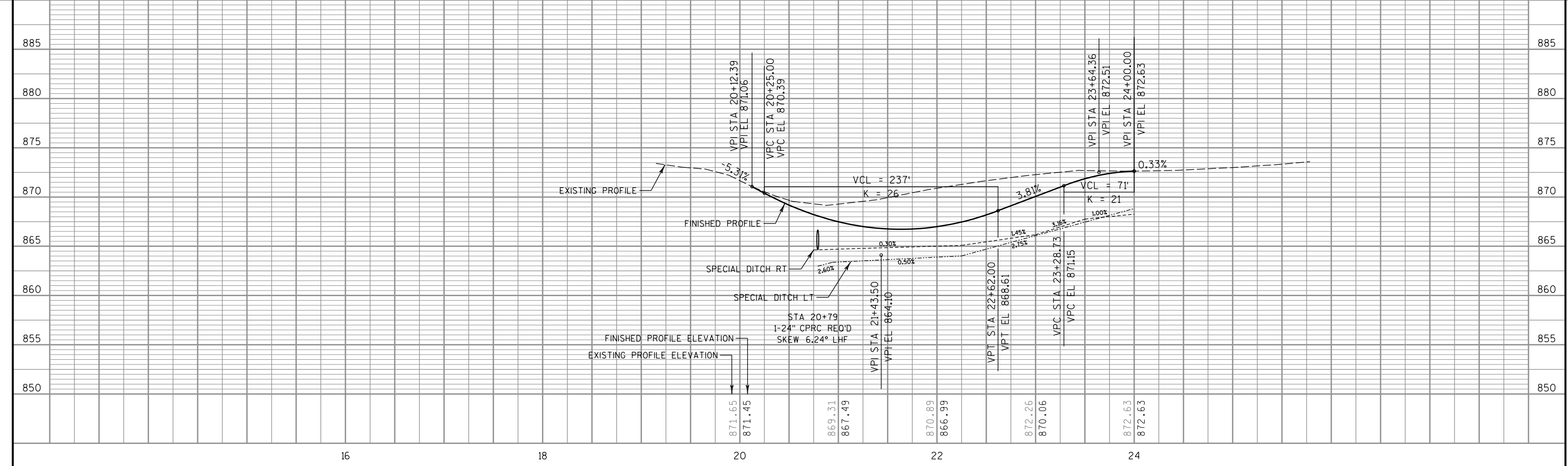
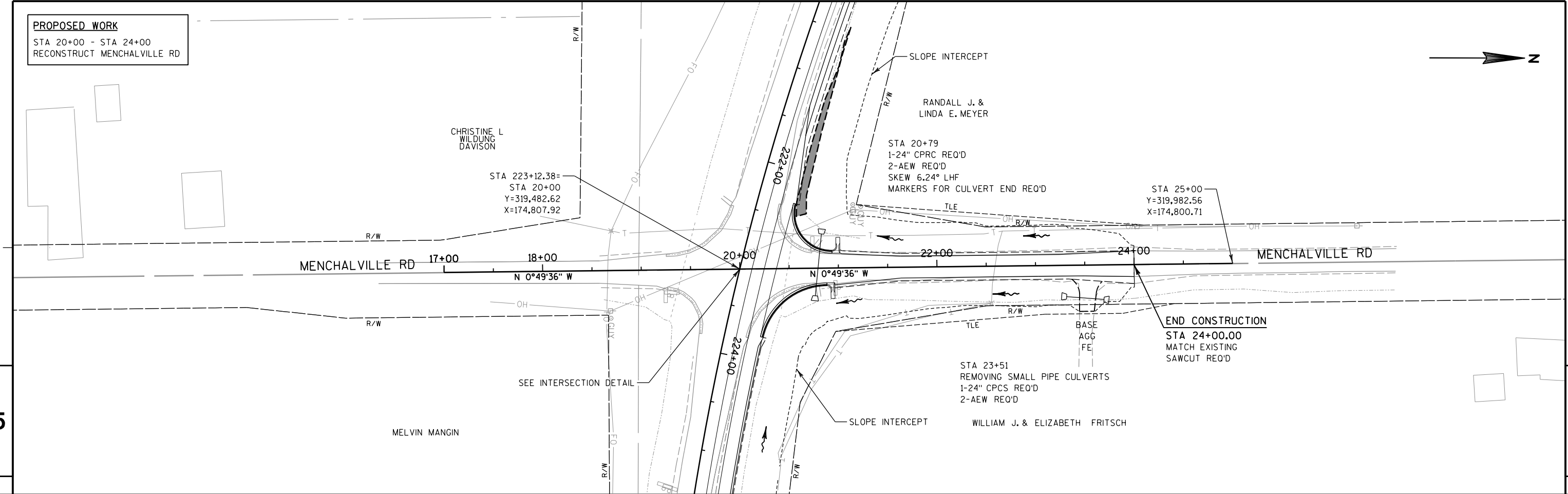


PROPOSED WORK
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 RECONSTRUCT MENCHALVILLE RD

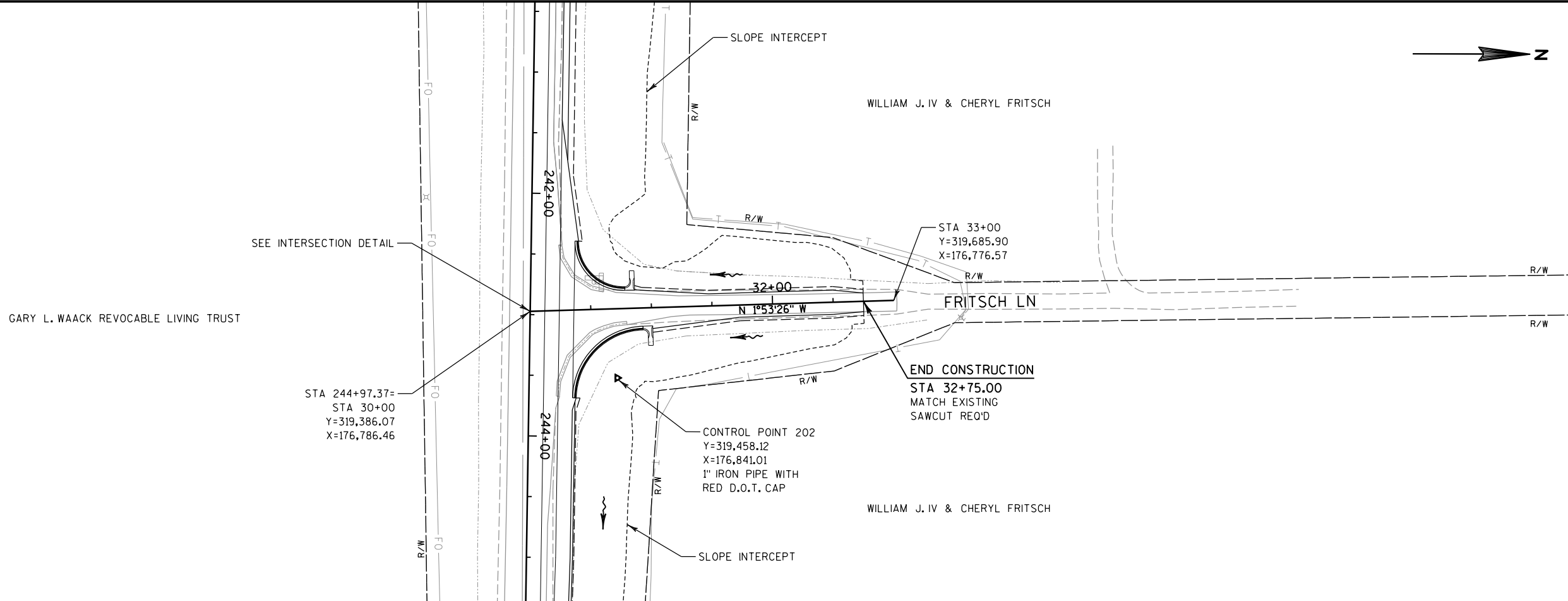


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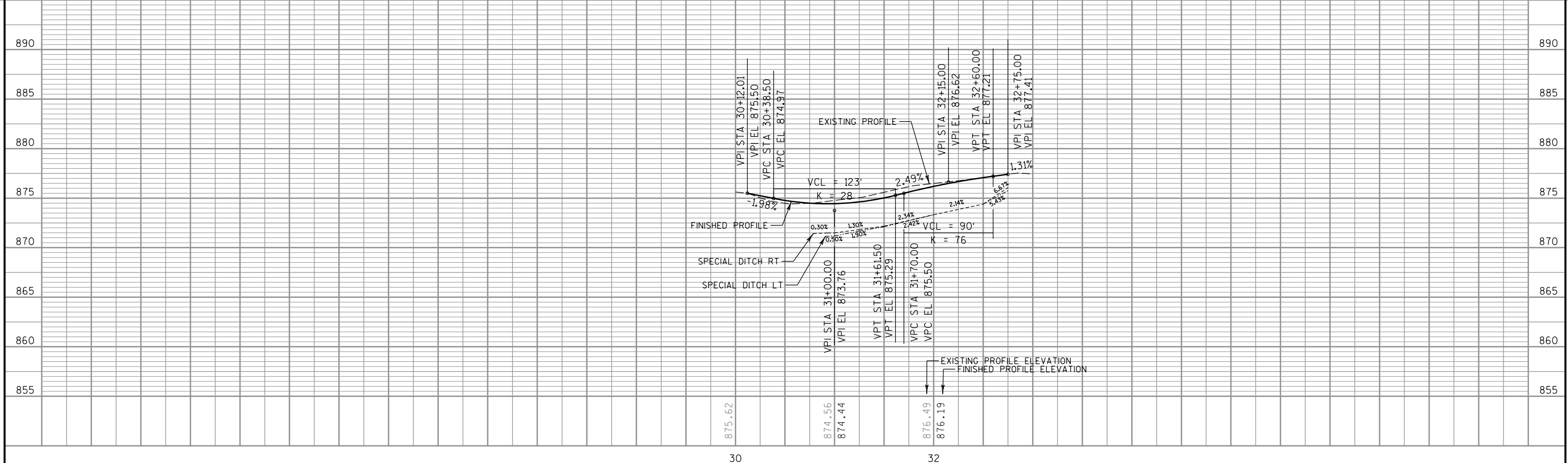


PROPOSED WORK
 STA 30+00 - STA 32+75
 RECONSTRUCT FRITSCH LN



5

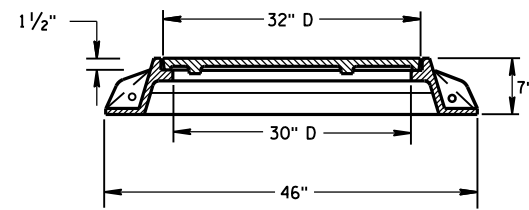
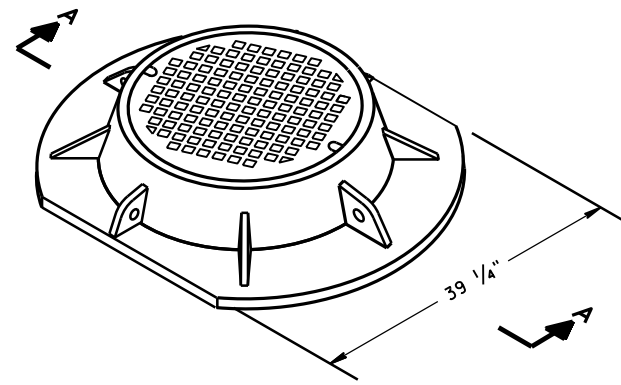
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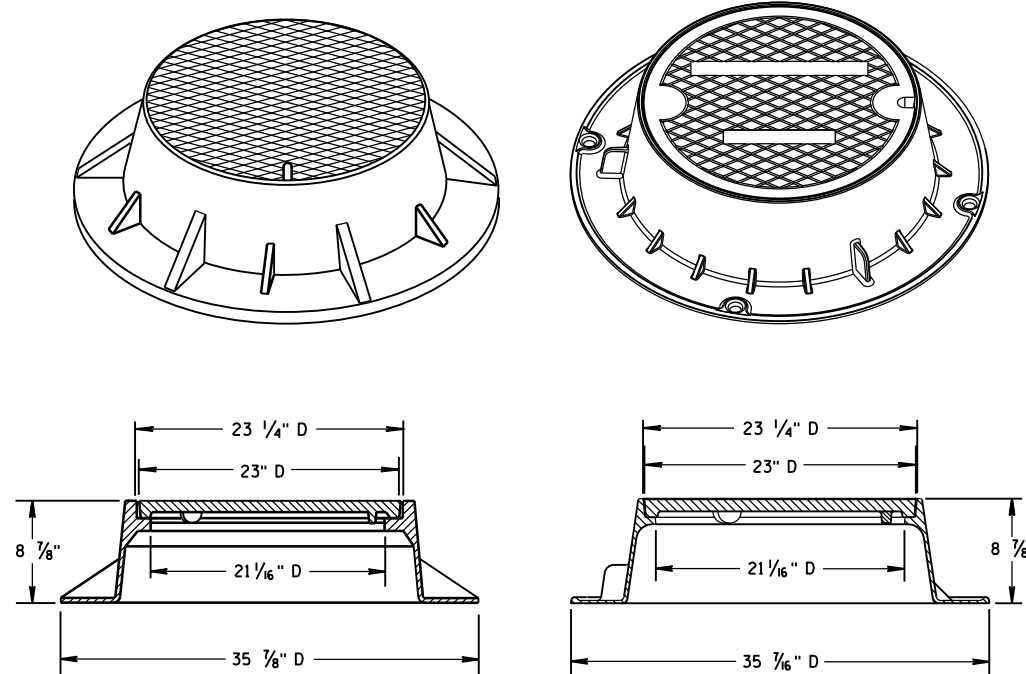
PROJECT NO: 1500-33-71	HWY: USH 10	COUNTY: MANITOWOC	PLAN & PROFILE - FRITSCH LN
SHEET			E

Standard Detail Drawing List

08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-14B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13C19-03	HMA LONGITUDINAL JOINTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-08B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

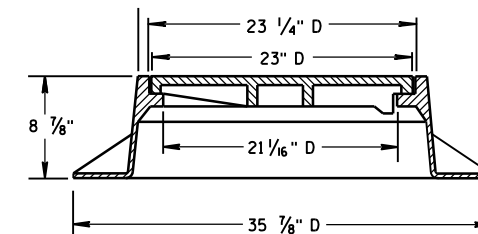
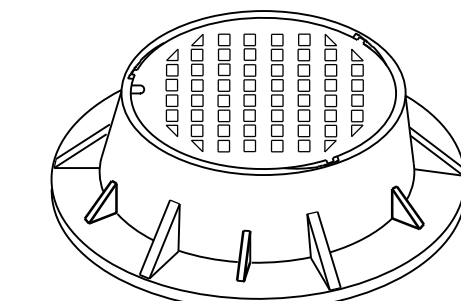
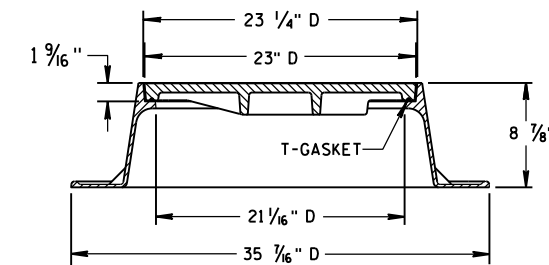
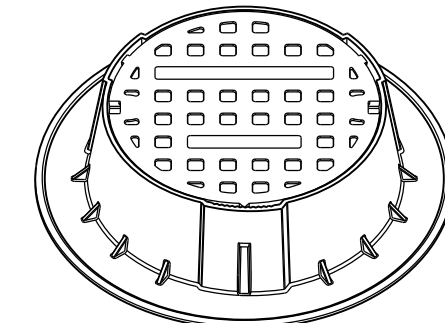


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE



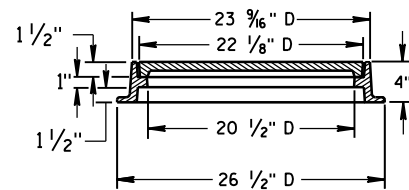
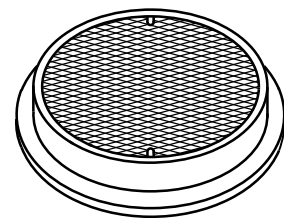
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

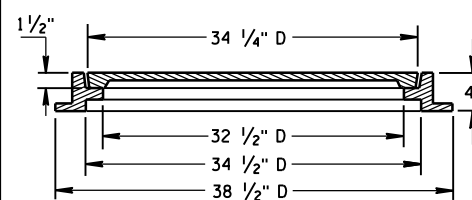
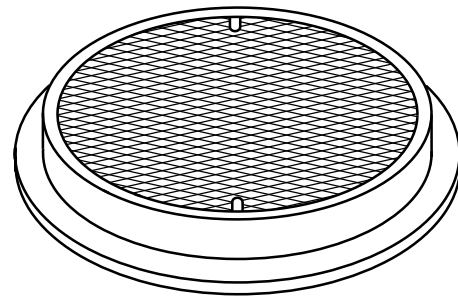
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

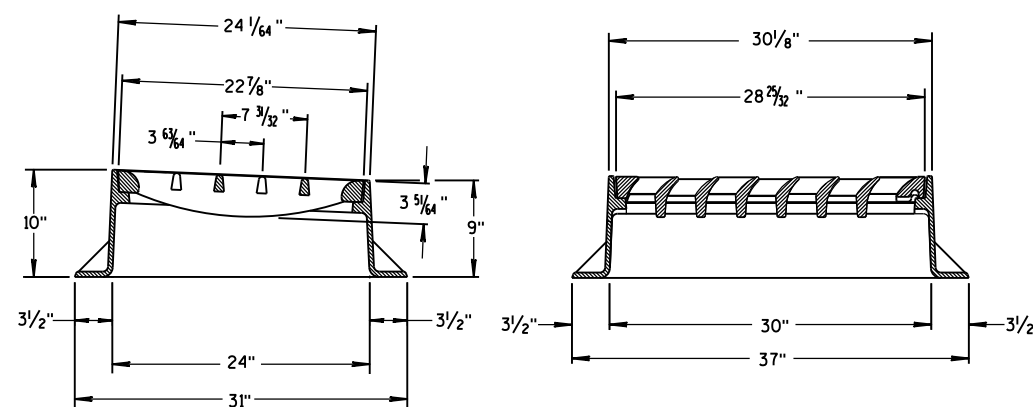
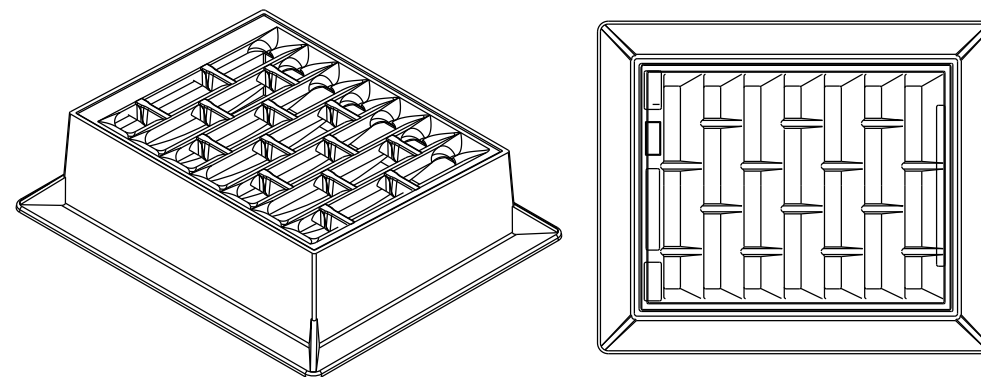
6



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

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 MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

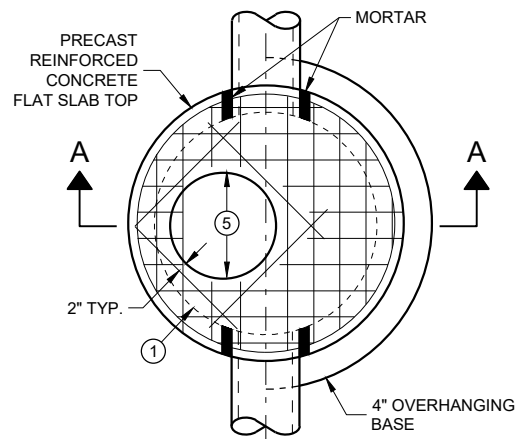
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

6

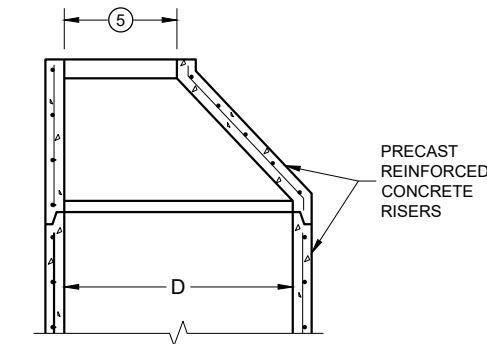
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

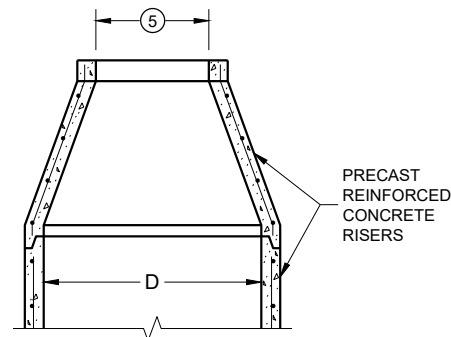
APPROVED
11/27/2013 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



**PLAN VIEW
CIRCULAR OPENING**



**OPTIONAL PRECAST
REINFORCED CONCRETE
ECCENTRIC TOP**



**OPTIONAL PRECAST
REINFORCED CONCRETE
CONCENTRIC TOP**

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

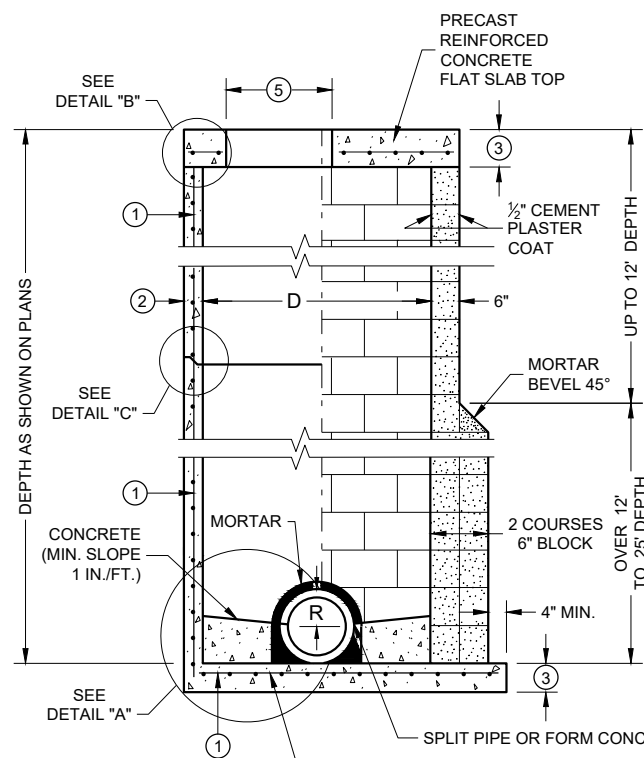
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

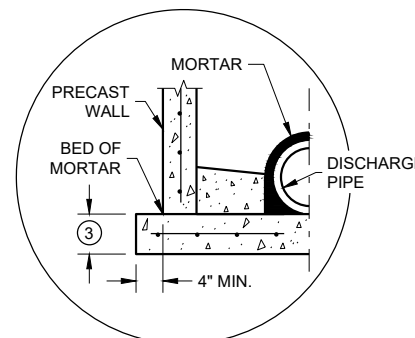
- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- ③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- ④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- ⑤ SEE MANHOLE COVER OPENING MATRIX.



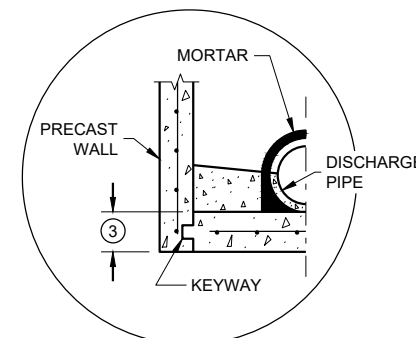
SECTION A - A

**PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE**

**CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①**

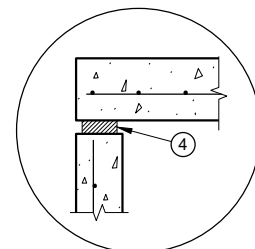


**SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION**

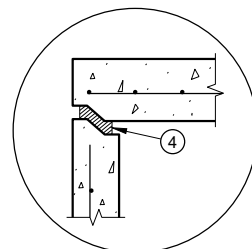


**PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION**

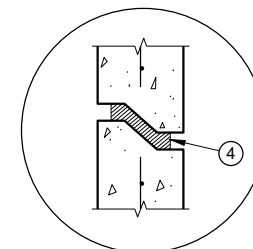
DETAIL "A"



**TOP WITH PLAIN
END JOINT**



**TOP WITH TONGUE
AND GROOVE JOINT**

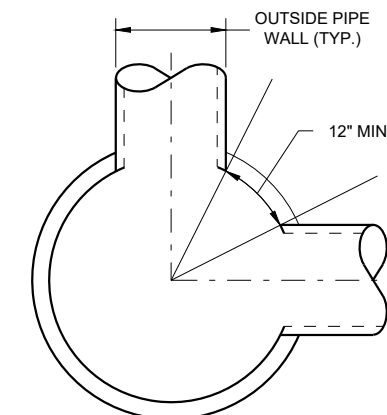


**RISER WITH TONGUE
AND GROOVE JOINT**

DETAIL "B"

DETAIL "C"

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

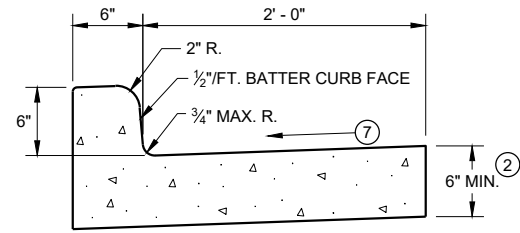


**MINIMUM HORIZONTAL
PIPE SEPARATION**

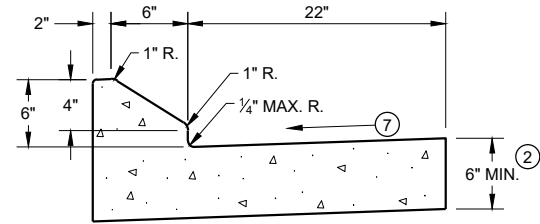
**MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

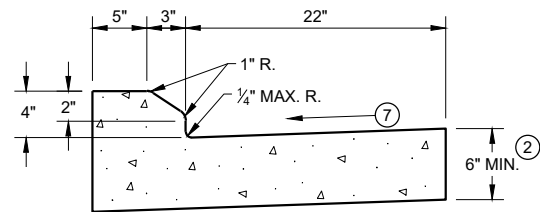
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



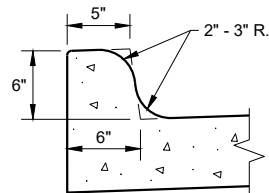
TYPES A¹ & D



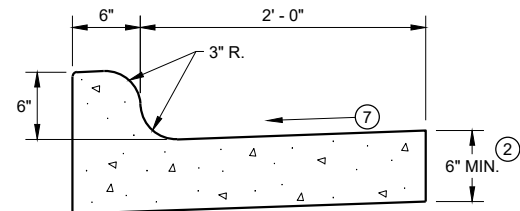
6" SLOPED CURB TYPES G¹ & J



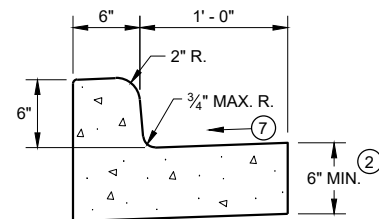
4" SLOPED CURB TYPES G¹ & J



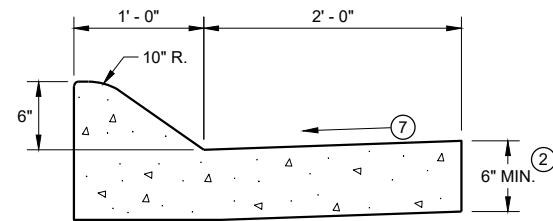
TYPES K¹ & L
(OPTIONAL CURB SHAPE)



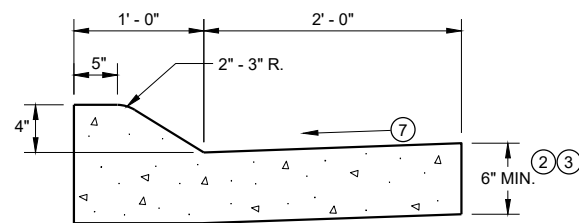
TYPES K¹ & L
CONCRETE CURB AND GUTTER 30"



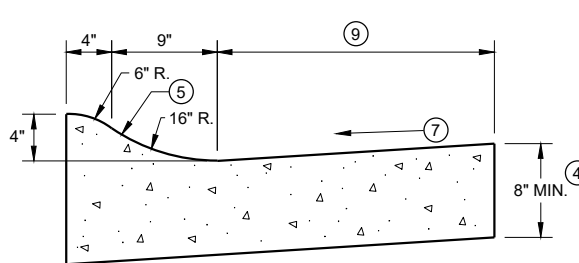
TYPES A¹ & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A¹ & D

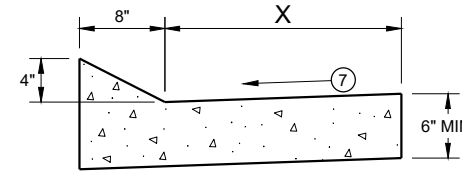


4" SLOPED CURB TYPES A¹ & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R¹ & T

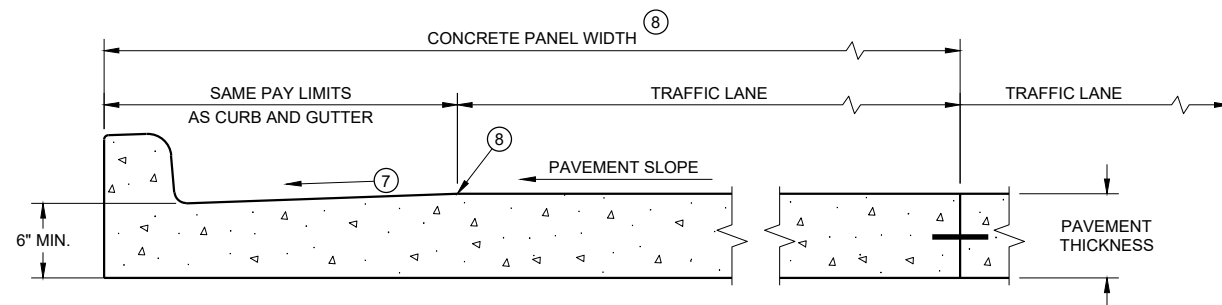
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT¹
CONCRETE CURB AND GUTTER

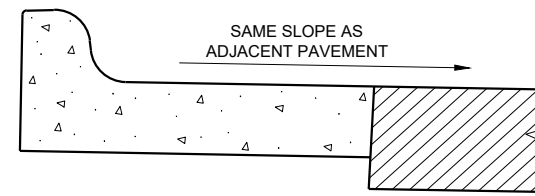
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT* WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER⁶
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

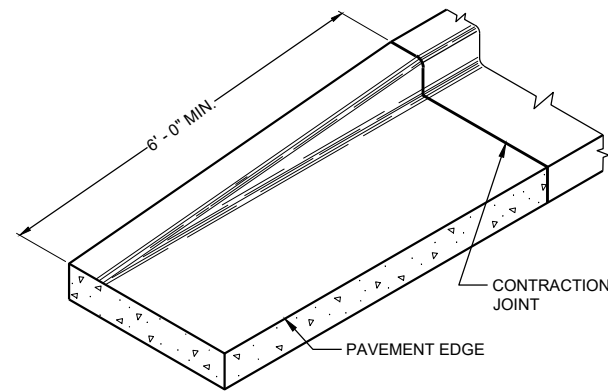
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

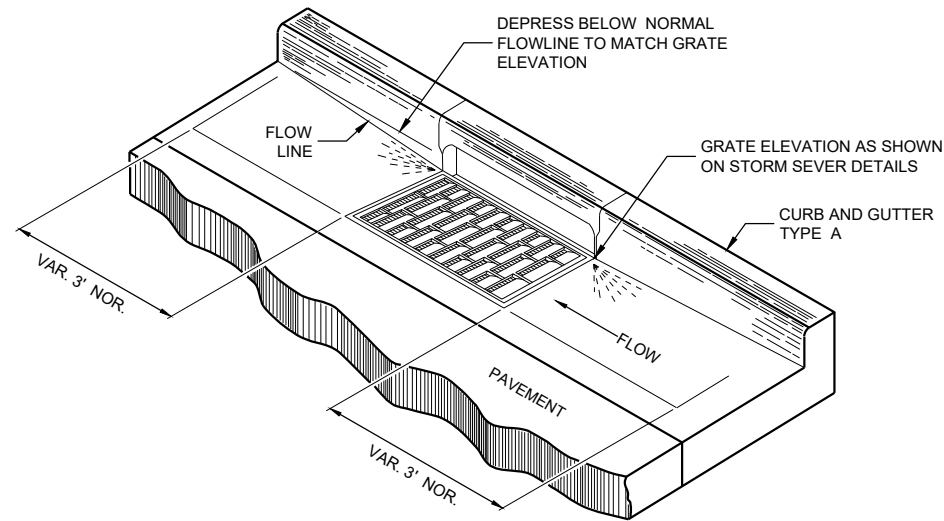
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

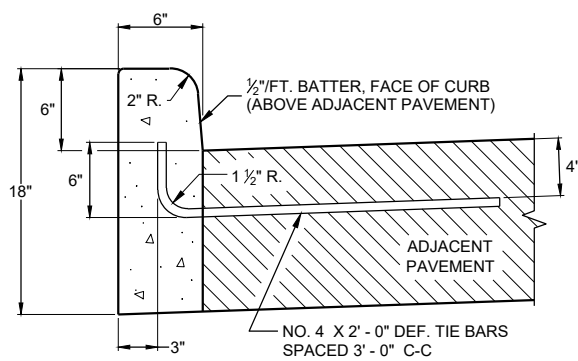
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

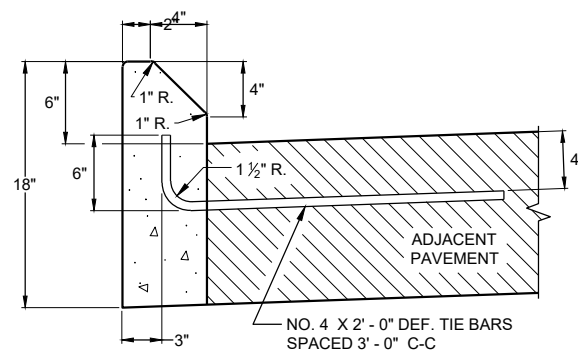
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

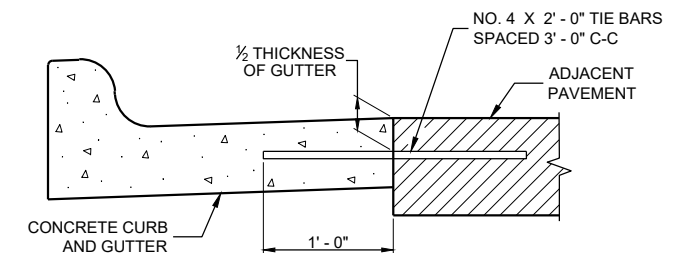
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



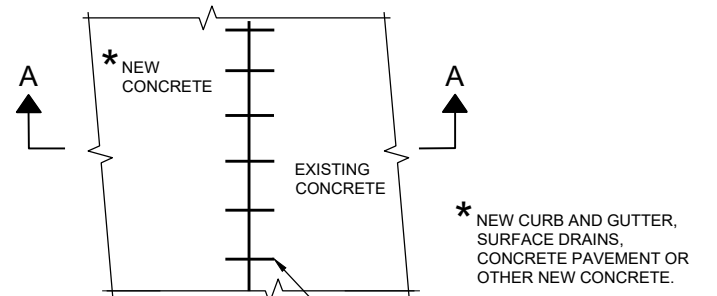
TYPES A^① & D



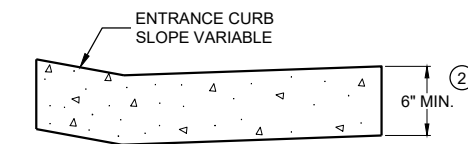
**TYPES G^① & J
CONCRETE CURB**



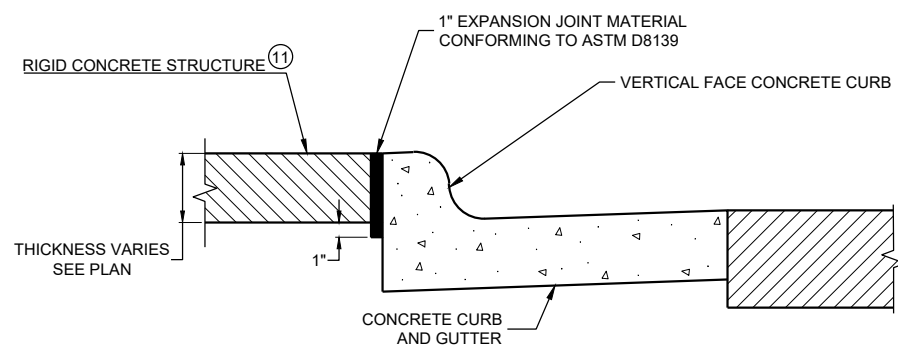
TYPICAL TIE BAR LOCATION^①



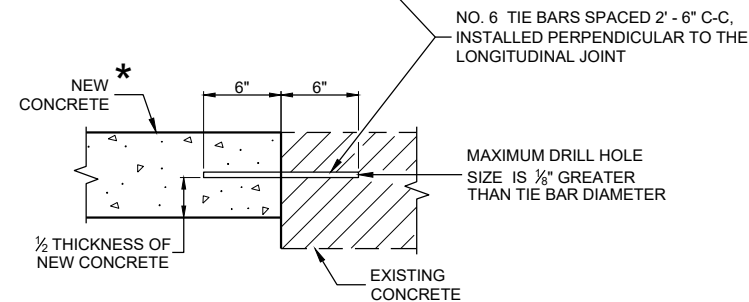
PLAN VIEW



**DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)**



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



**SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT**

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

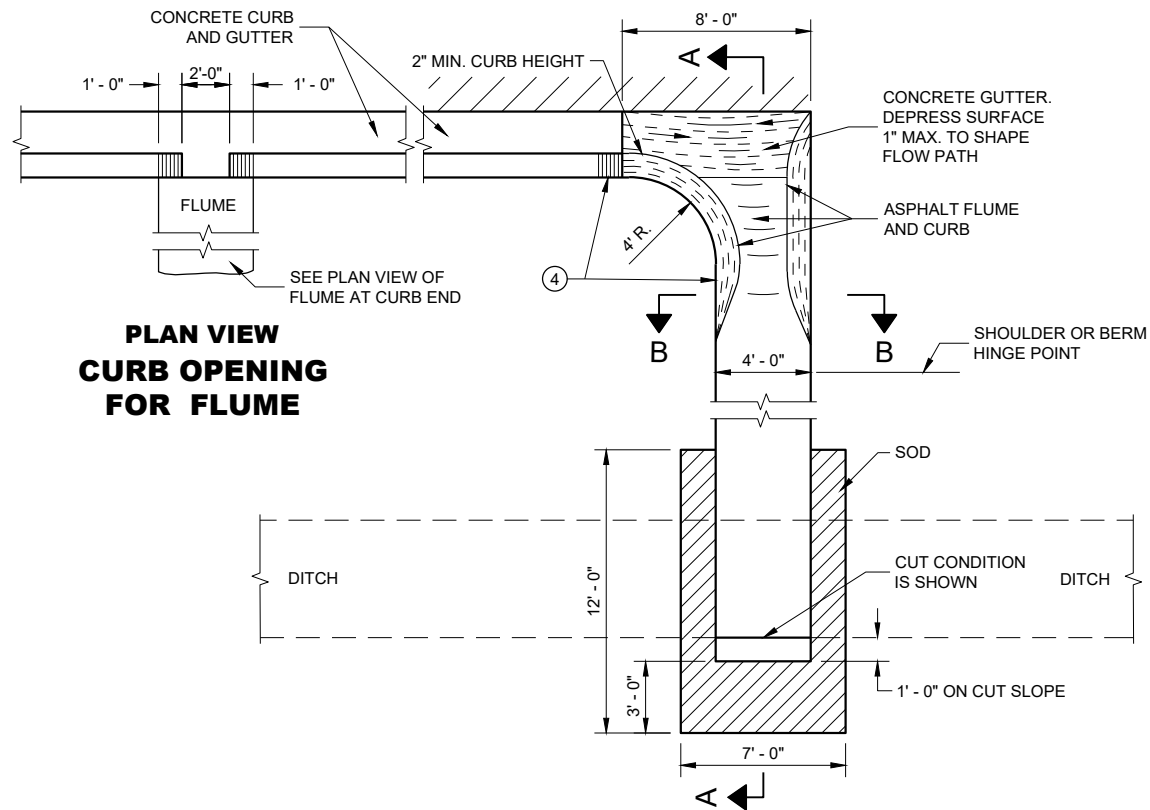
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

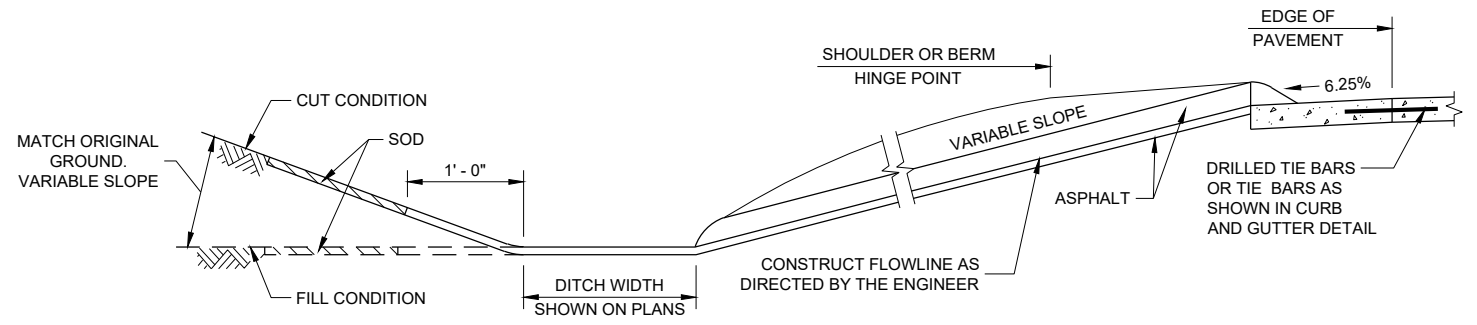
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

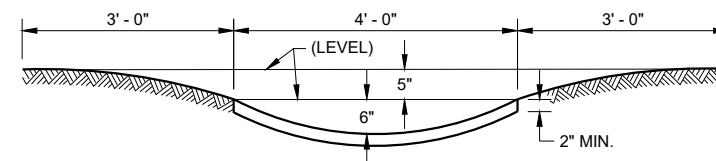
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

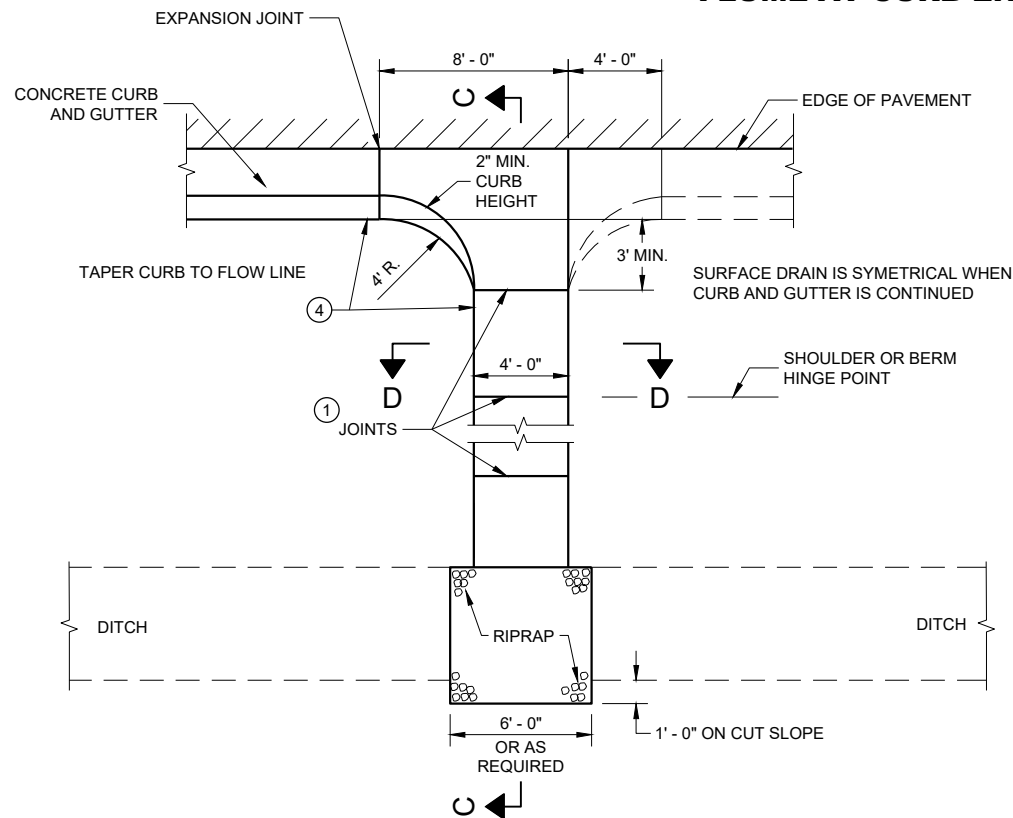
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



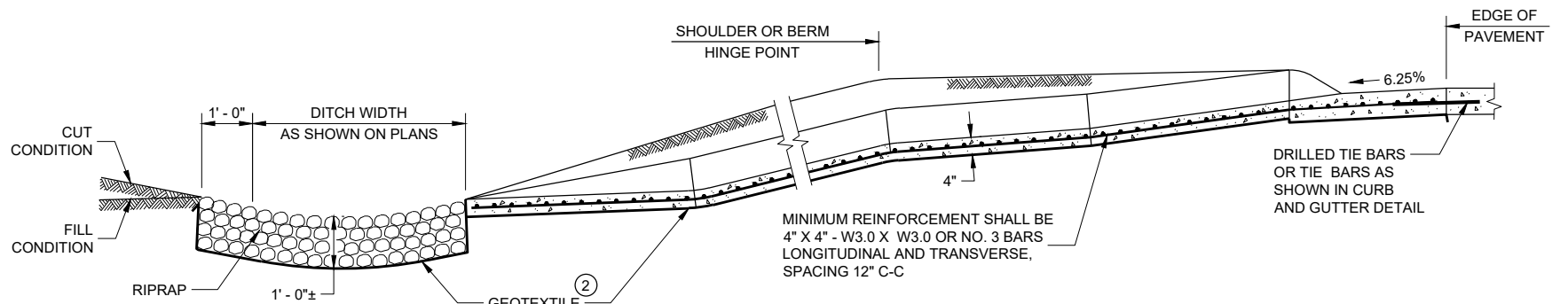
SECTION A - A



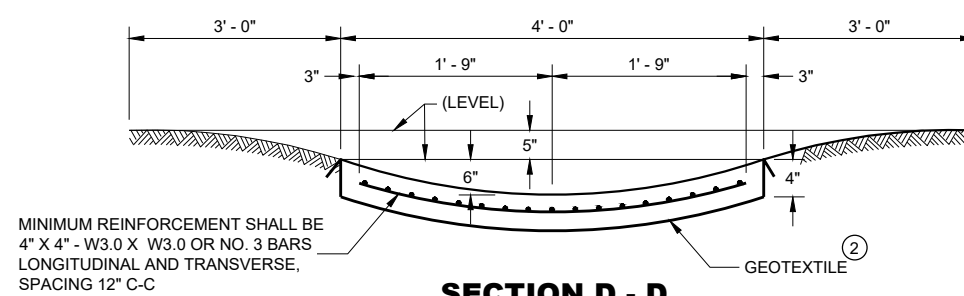
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



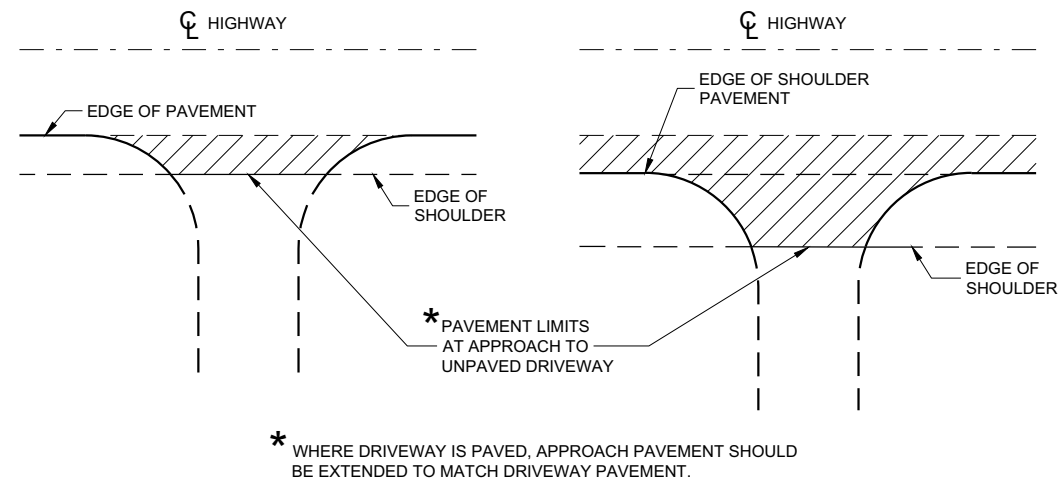
SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

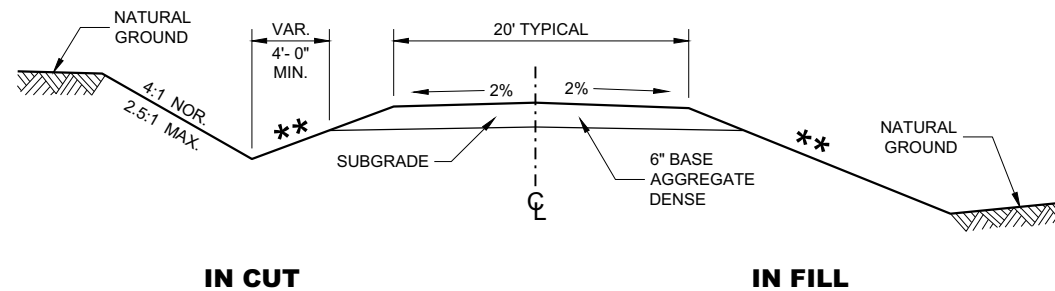
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

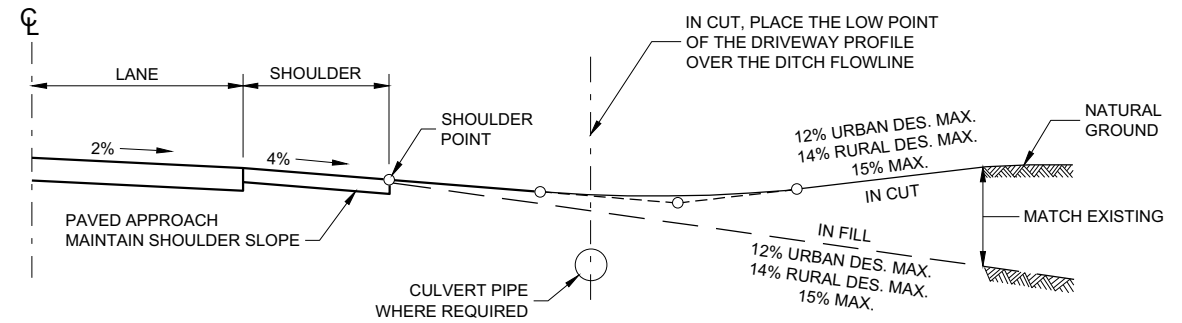
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



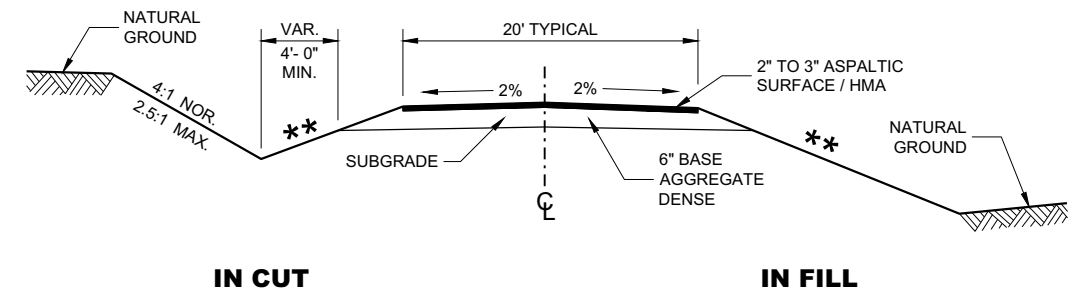
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1

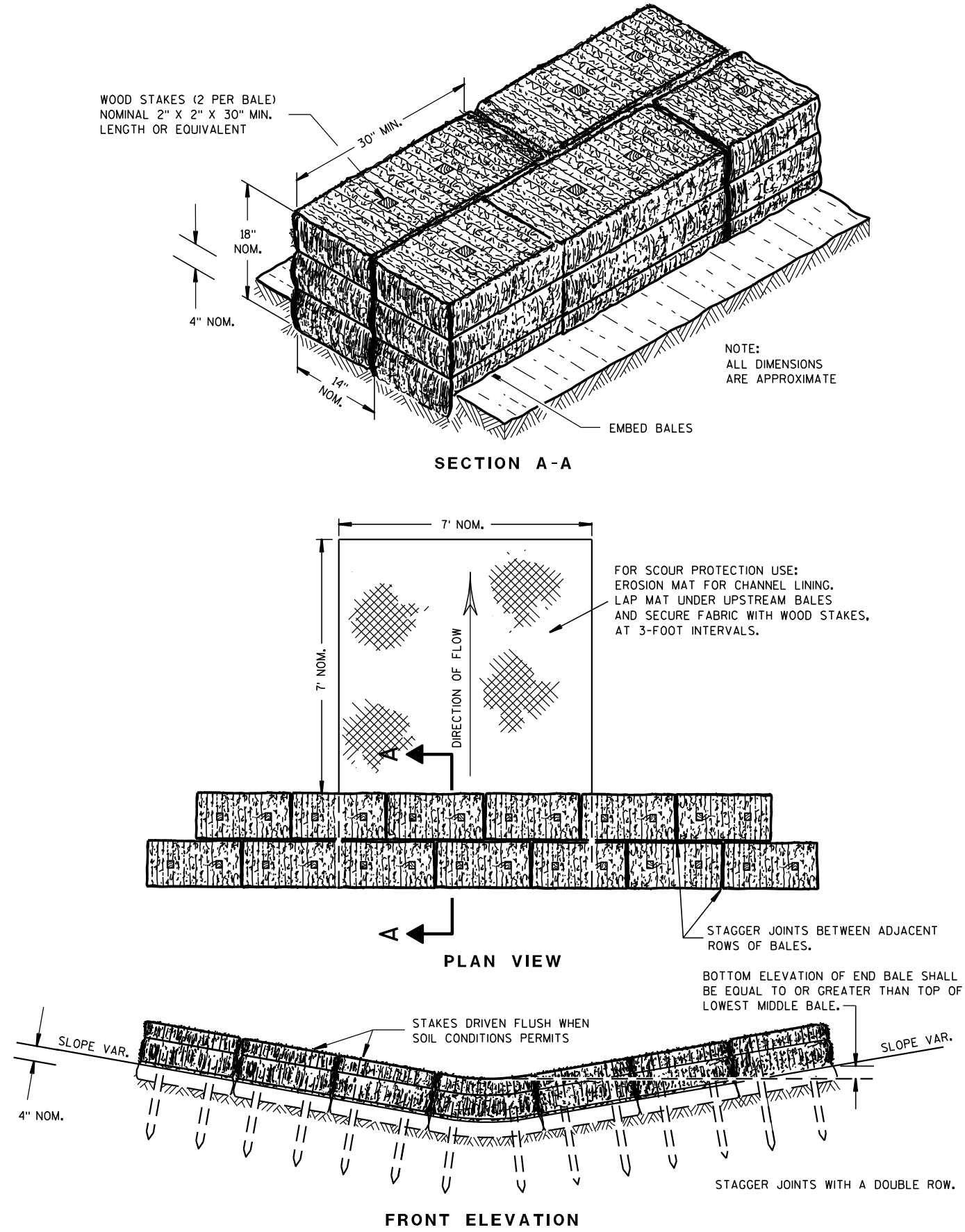


TYPICAL DRIVEWAY PROFILES



**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

DRIVEWAYS WITHOUT CURB AND GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

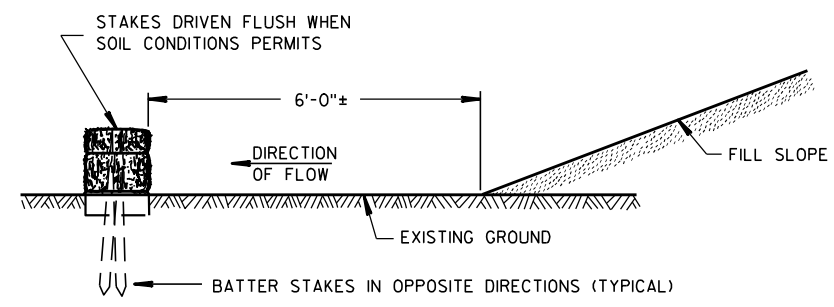
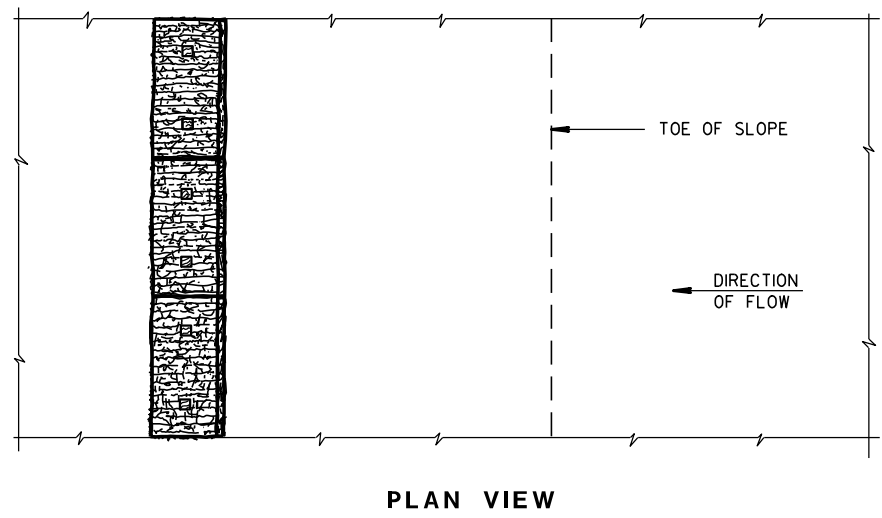
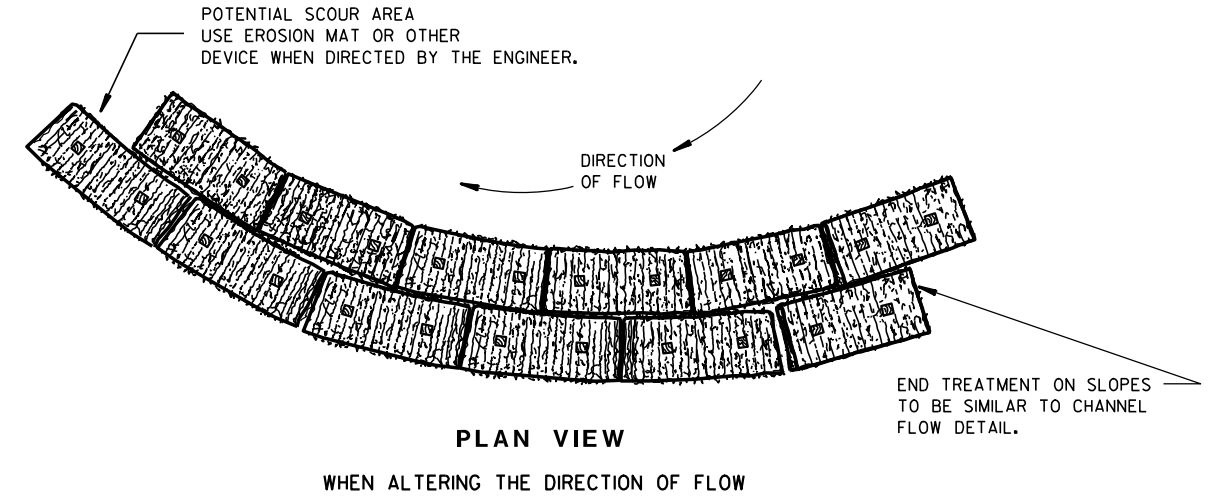


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

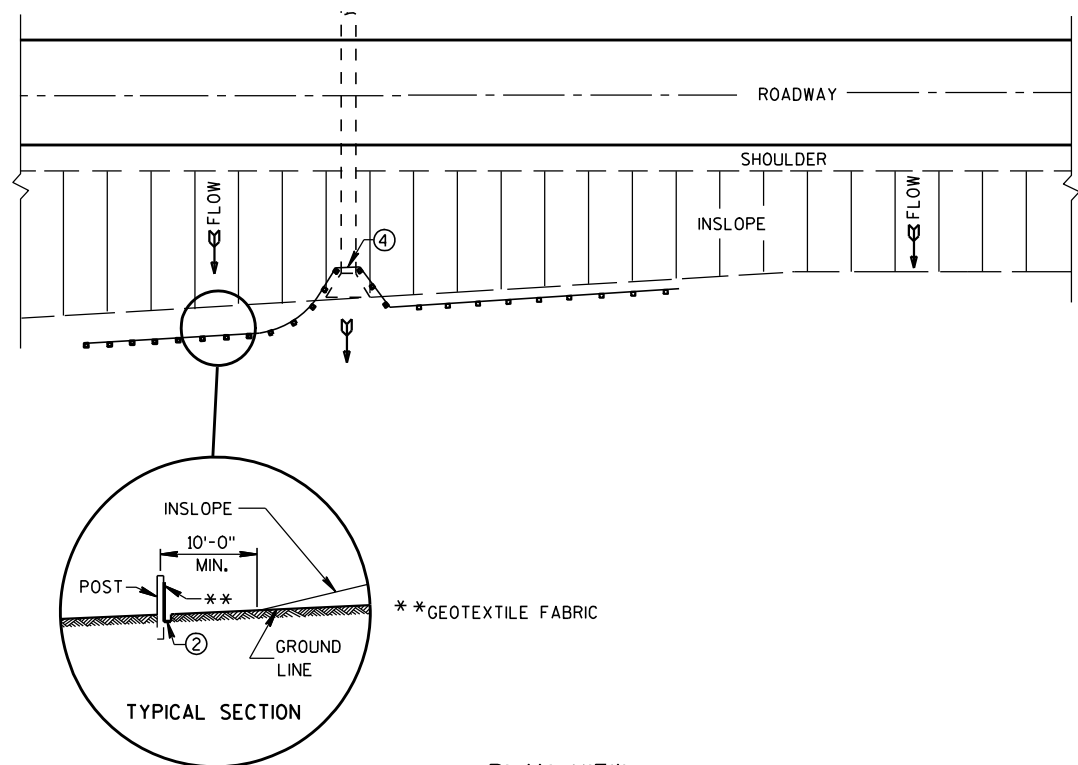


EROSION BALES FOR SHEET FLOW

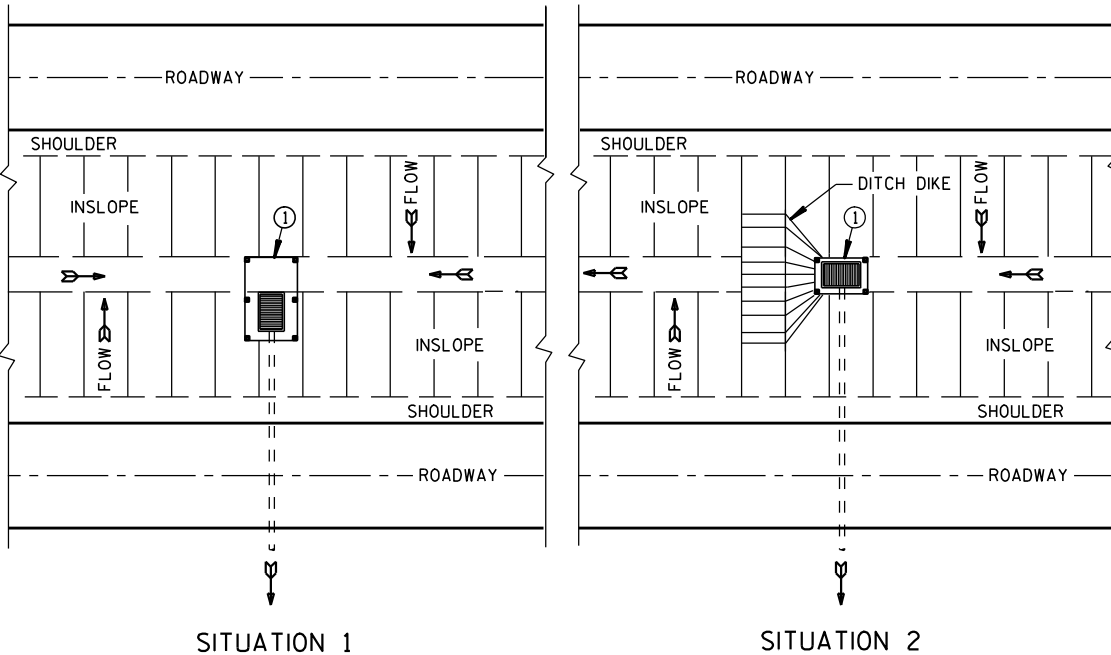
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

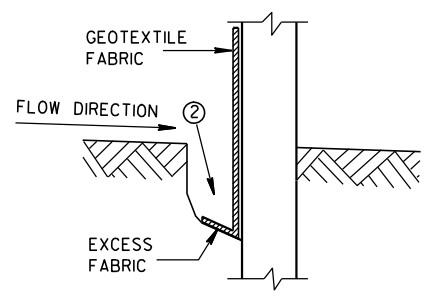


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

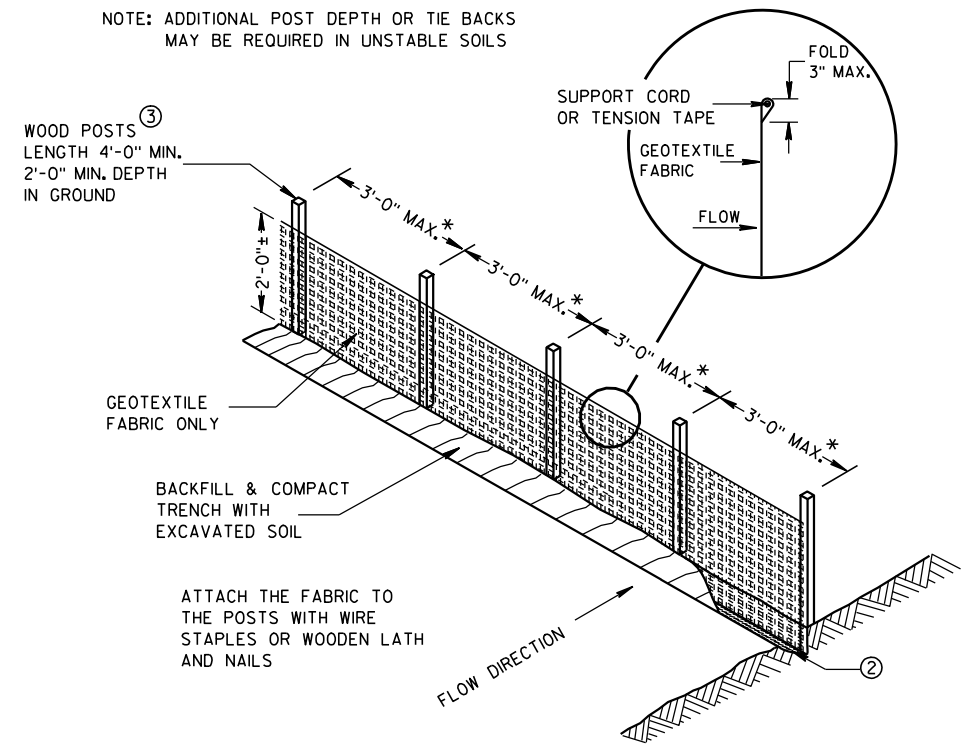
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



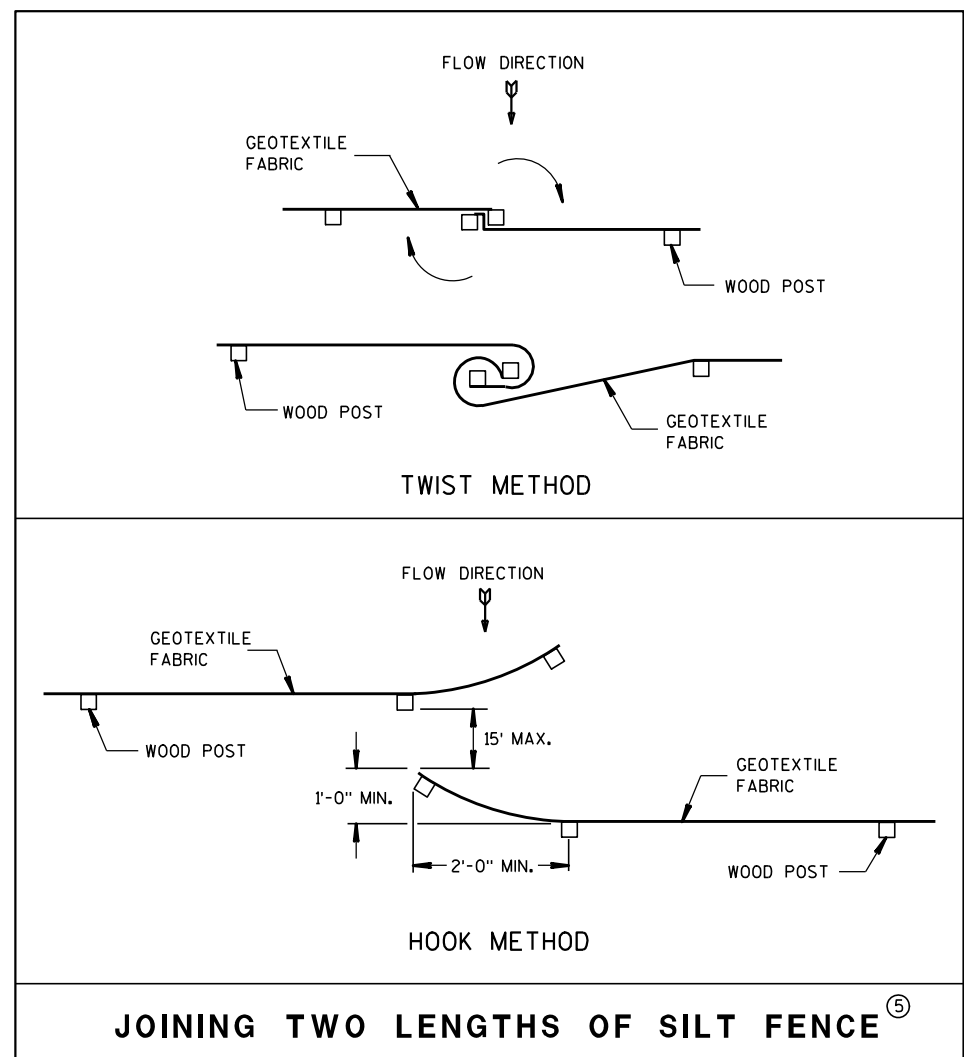
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

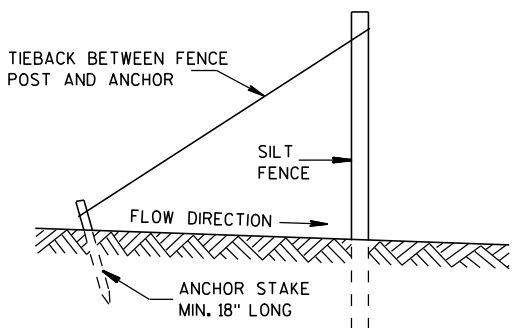


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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

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

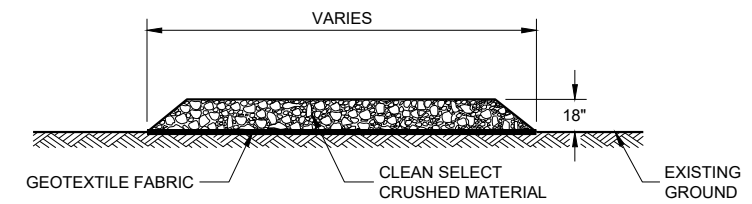
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

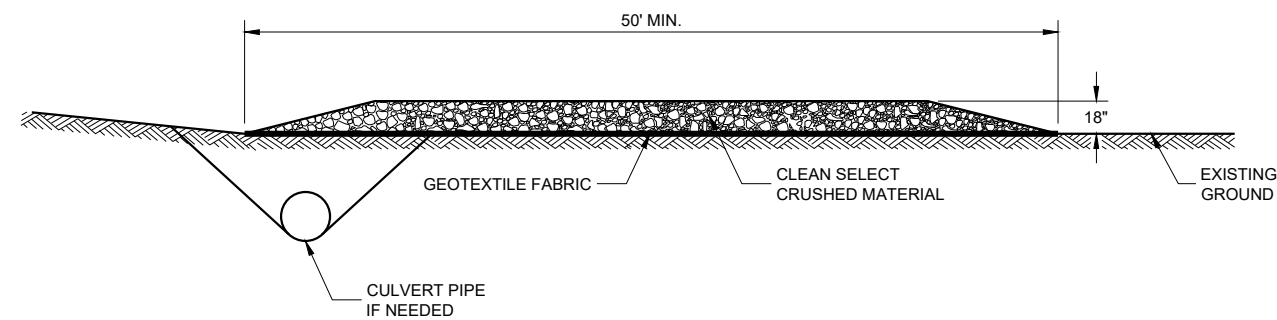
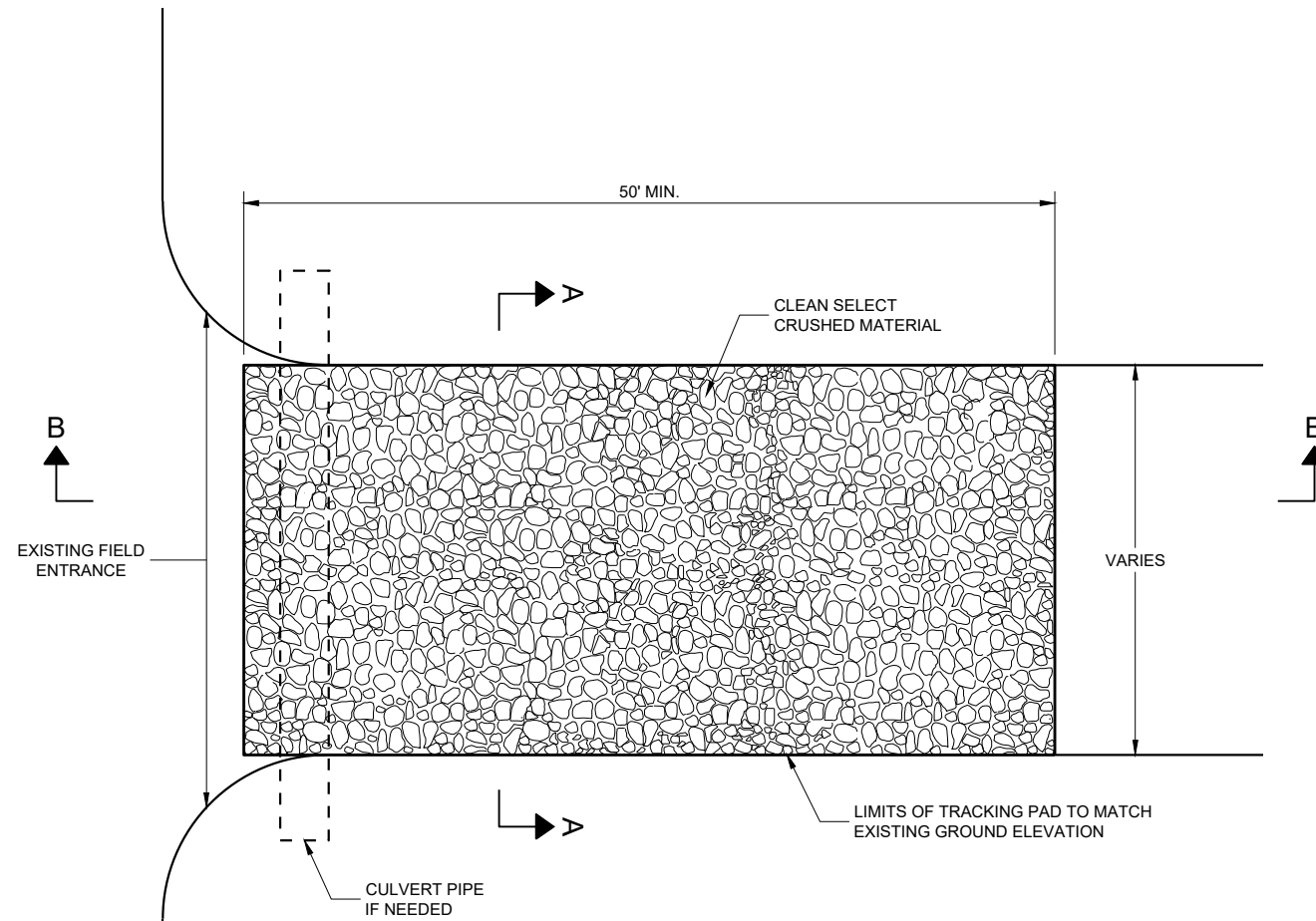
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

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

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



SECTION A - A



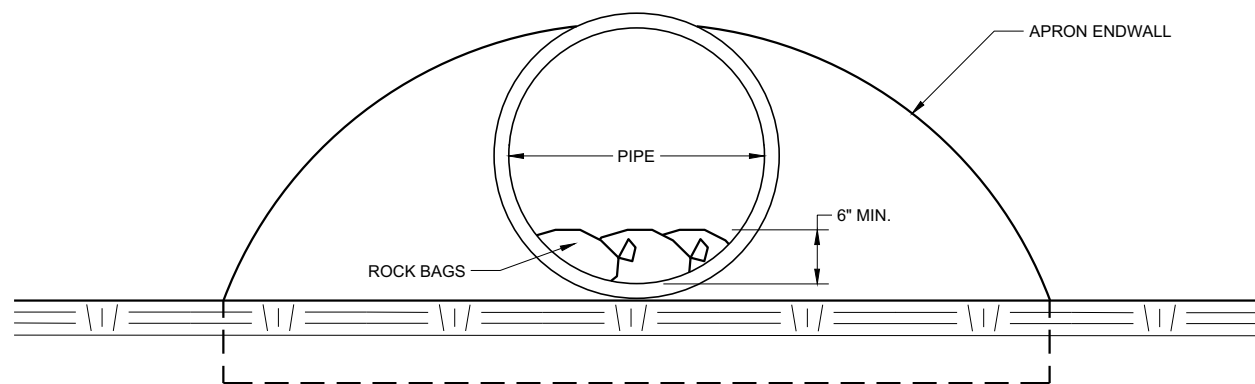
SECTION B - B

TRACKING PAD

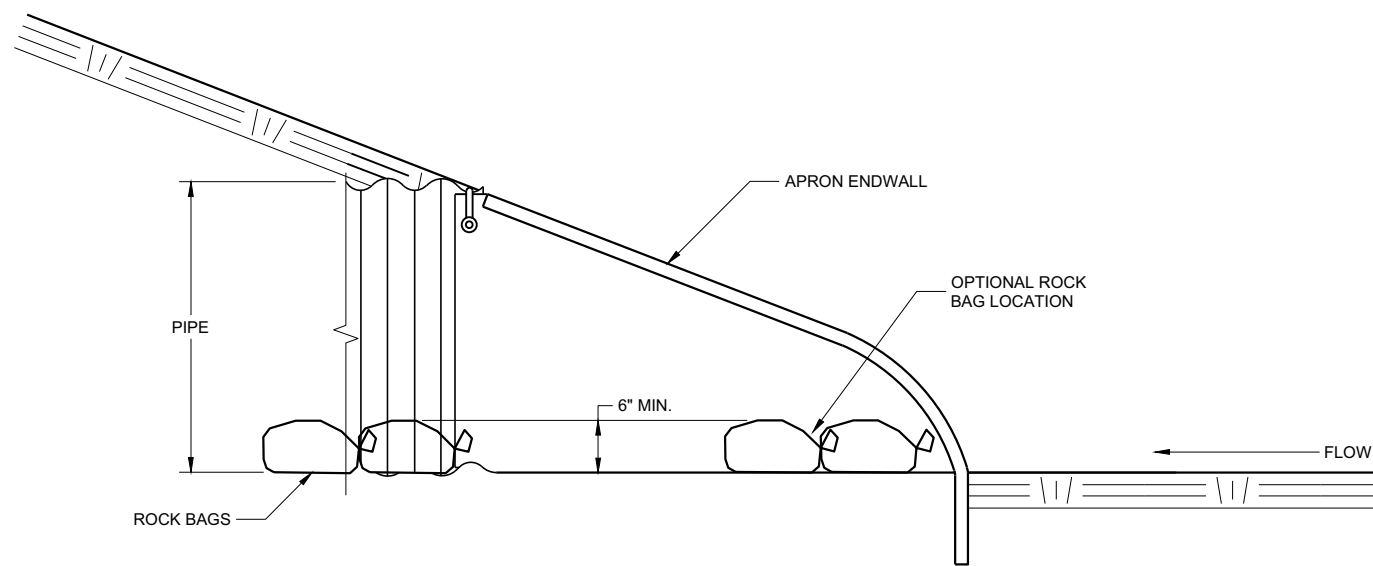
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

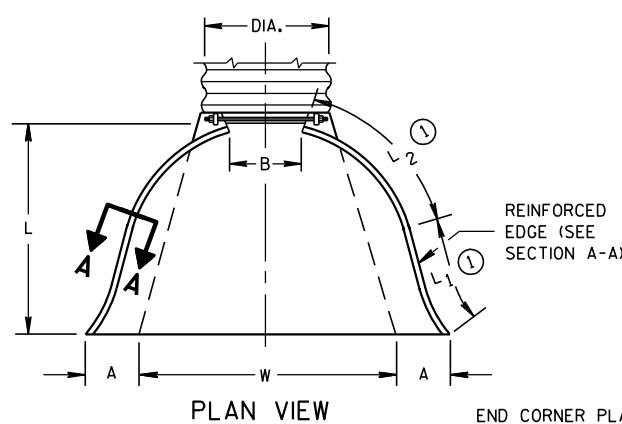
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
<small>FHWA</small>	

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

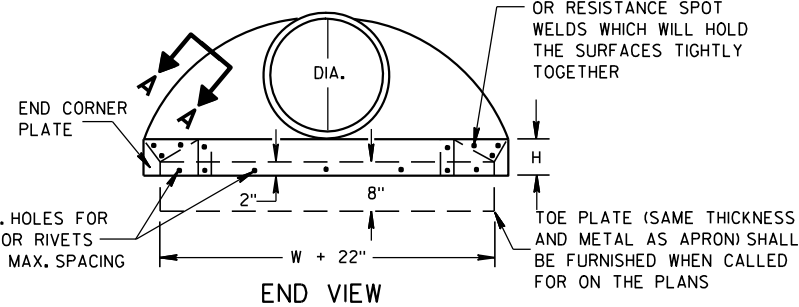
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

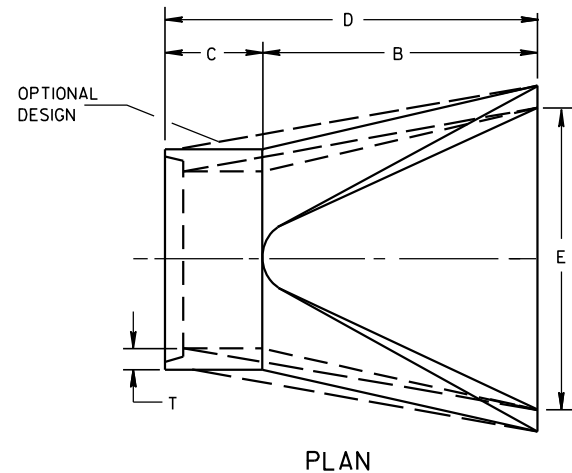
* MINIMUM
** MAXIMUM



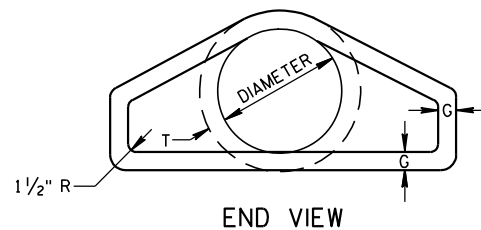
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



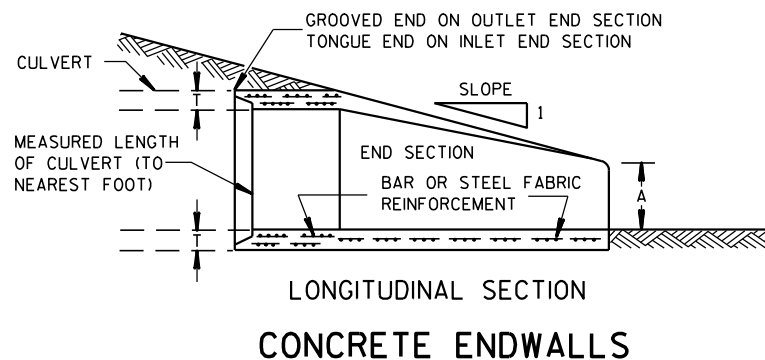
SIDE ELEVATION
METAL ENDWALLS



PLAN

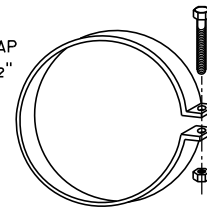


END VIEW

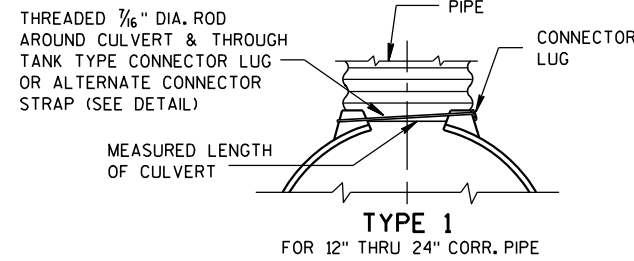


LONGITUDINAL SECTION
CONCRETE ENDWALLS

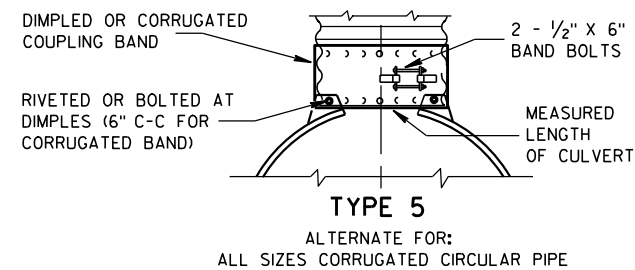
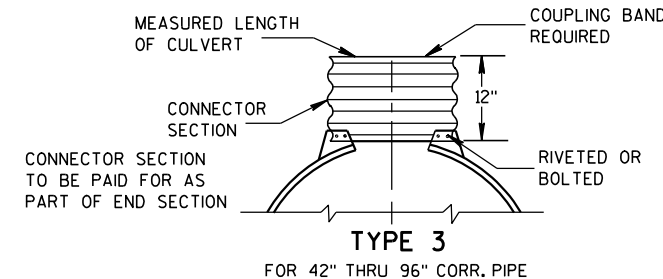
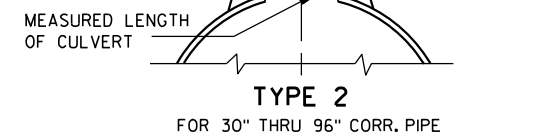
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



THREADED 1/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



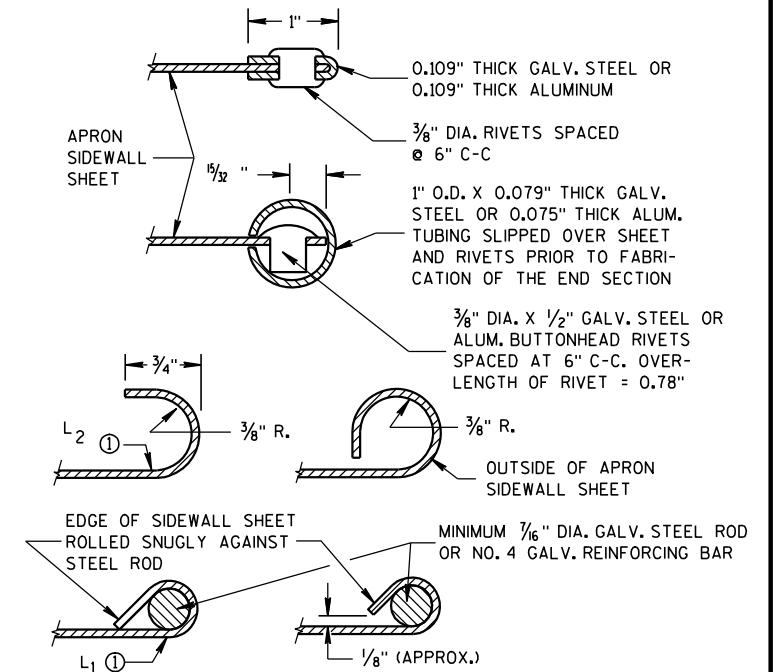
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

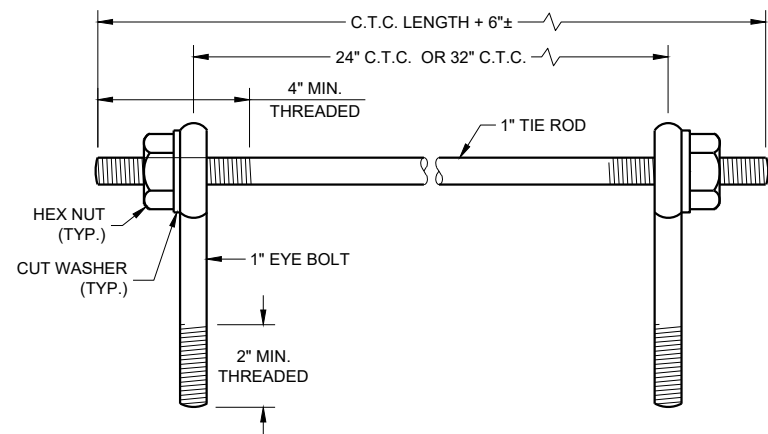
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

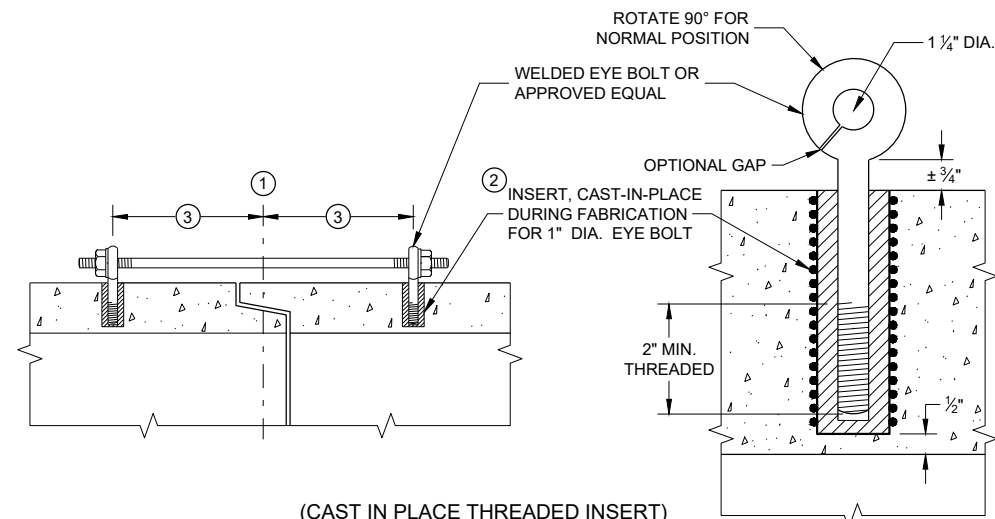
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

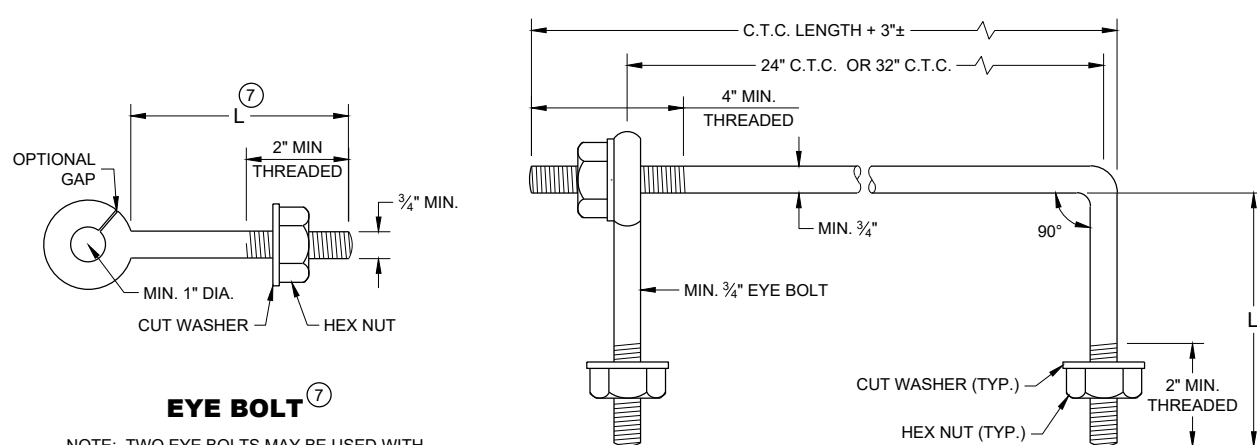
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

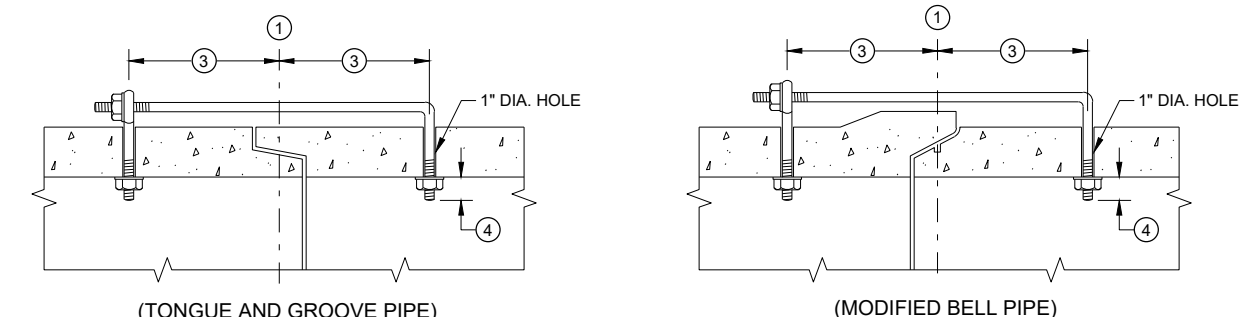
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT AND TIE ROD

EYE BOLT ⑦

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



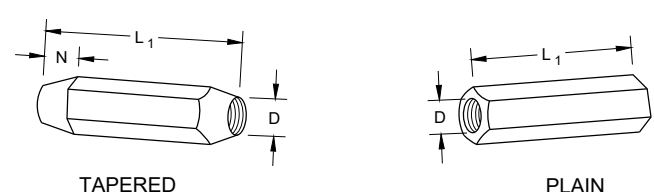
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

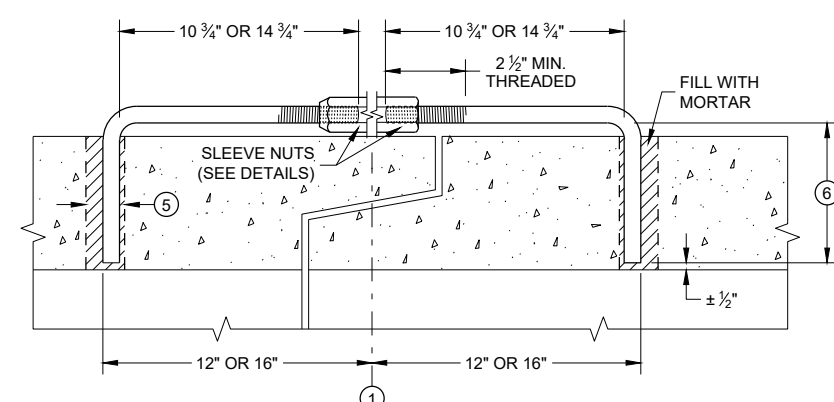
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

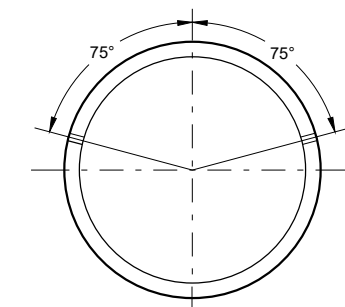


RIGHT AND LEFT THREADS SLEEVE NUTS



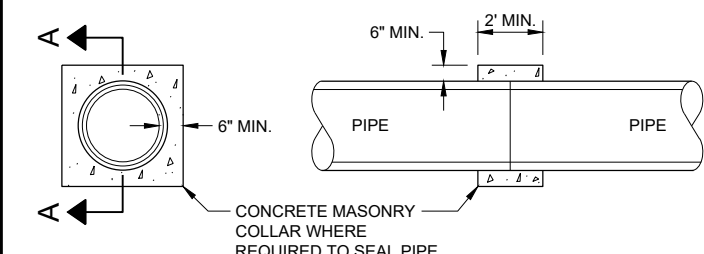
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



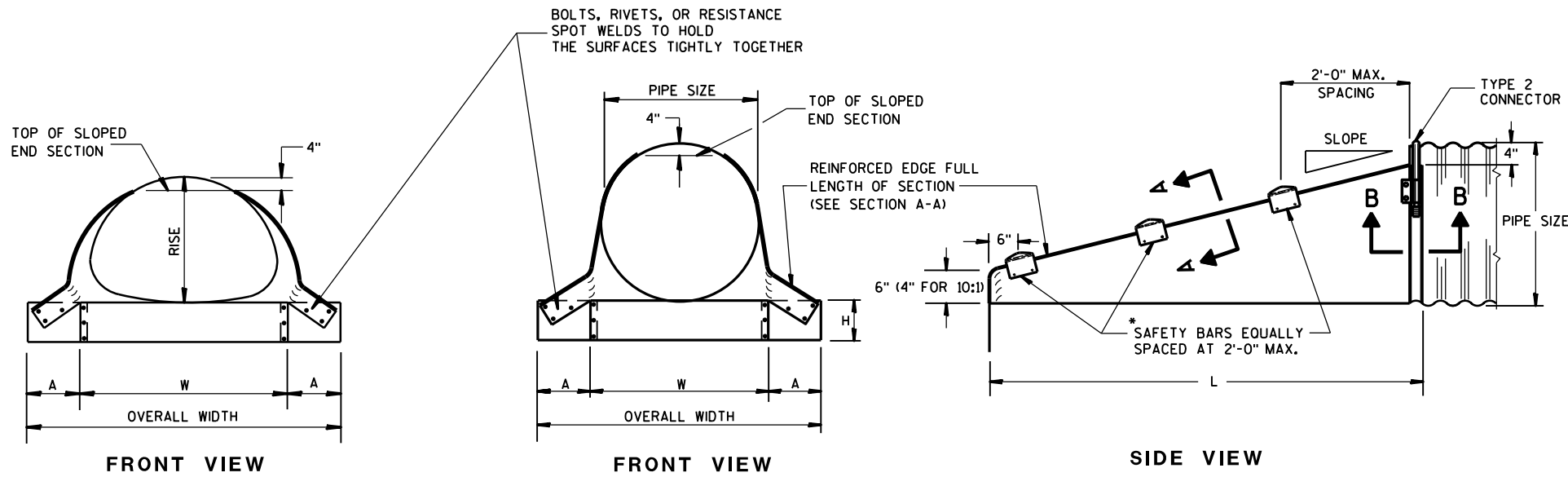
SECTION A - A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



GENERAL NOTES

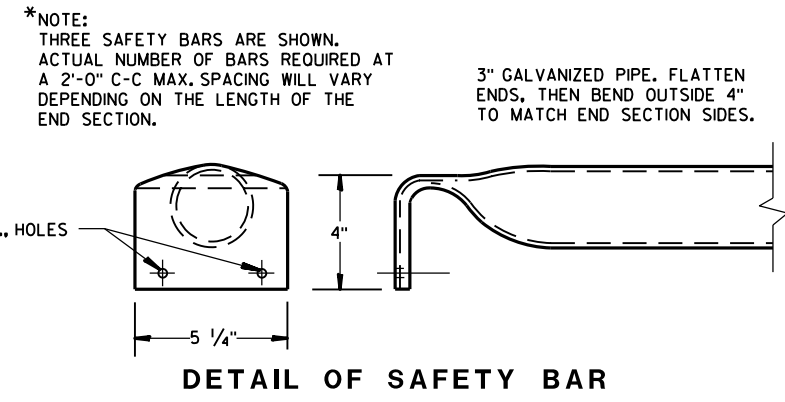
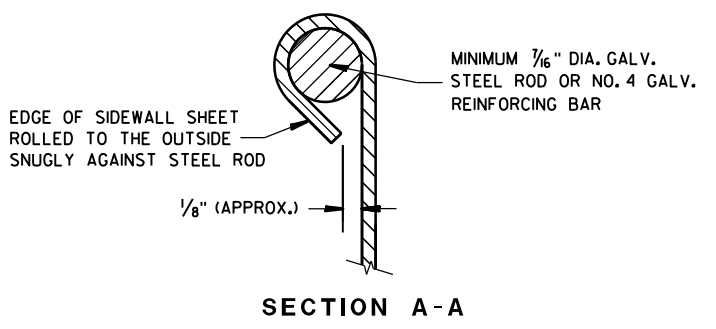
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS

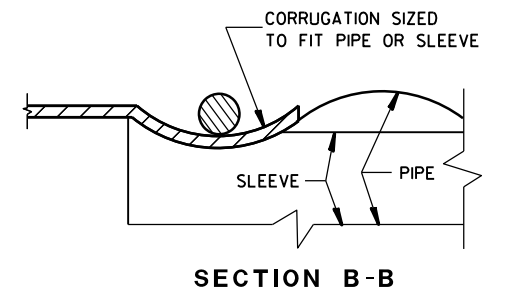
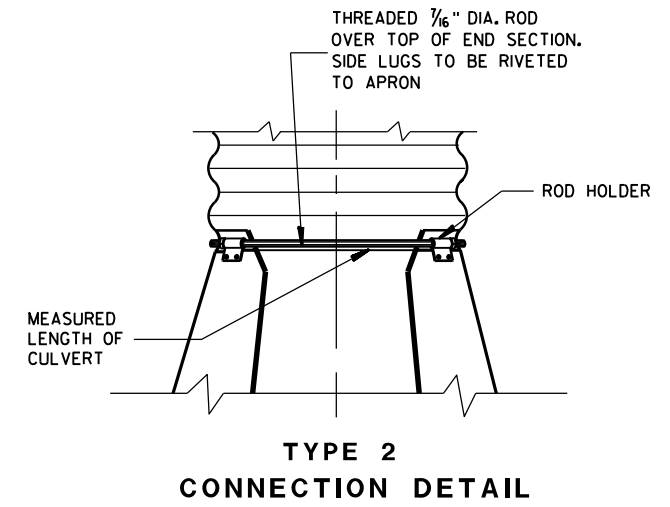
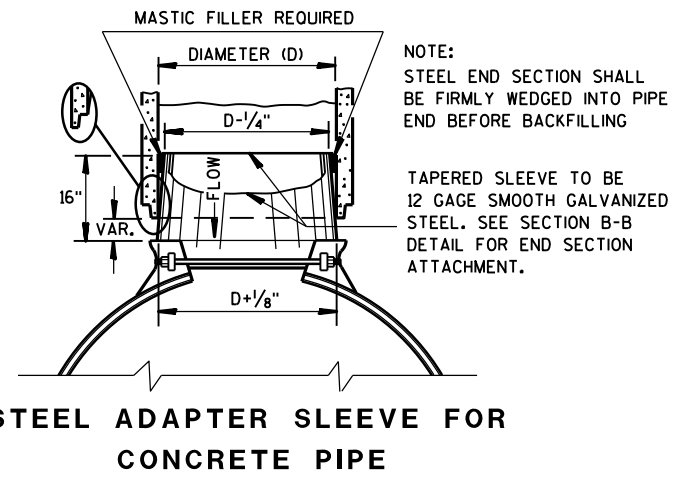
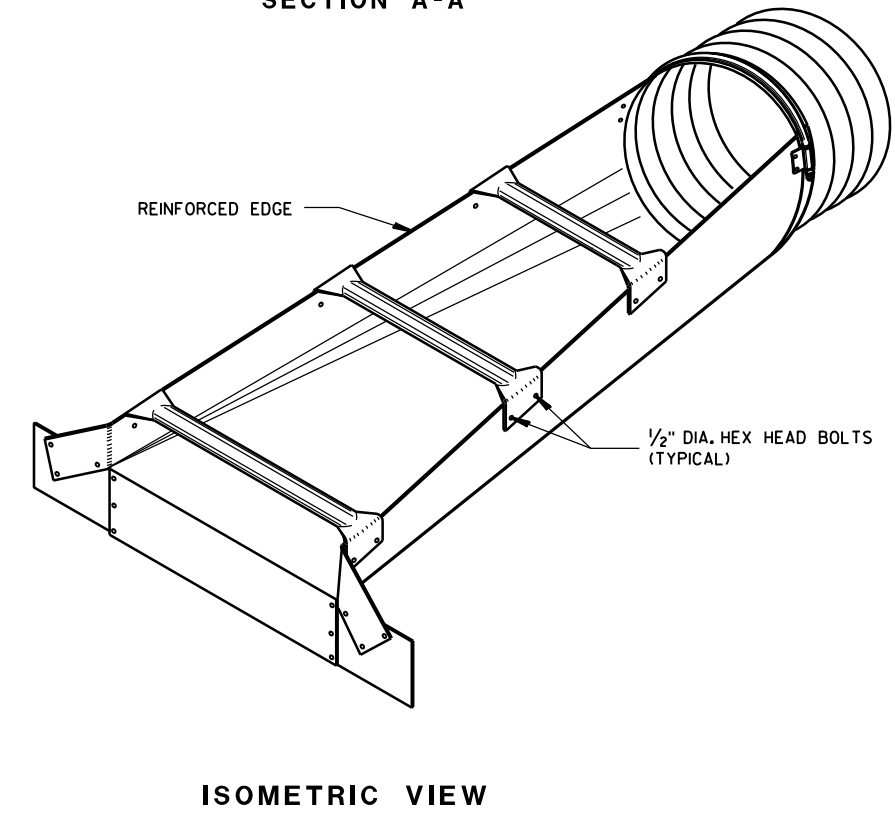
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	—	—
48	.109	16	12	54	86	4:1	152	6:1	228	—	—
54	.109	16	12	60	92	4:1	176	6:1	264	—	—
60	.109	16	12	66	98	4:1	200	6:1	300	—	—



STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS					
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	—	—
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	—	—
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	—	—

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
 ② ACTUAL SLOPE GREATER THAN 10:1.

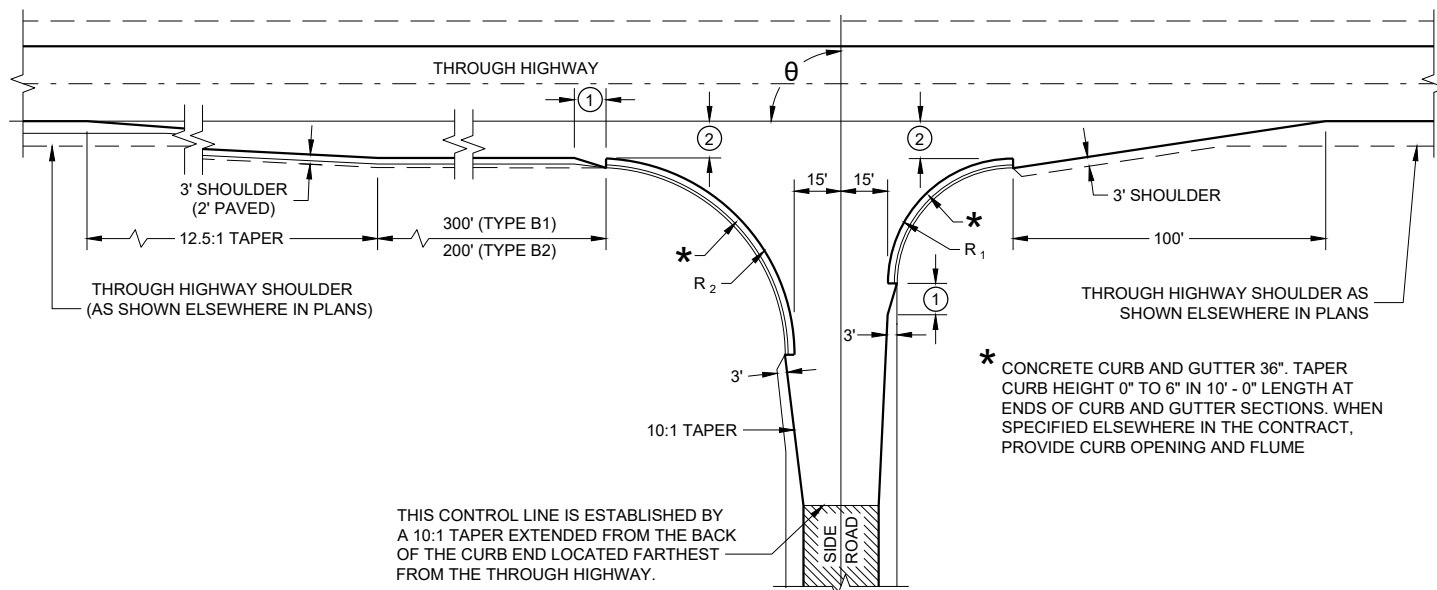


STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 9/14/2012 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



TYPE "B1" AND "B2"

RADI DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65 - 70	35	70
71 - 80	40	70
81 - 90	40	60
91 - 100	50	55
101 - 110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

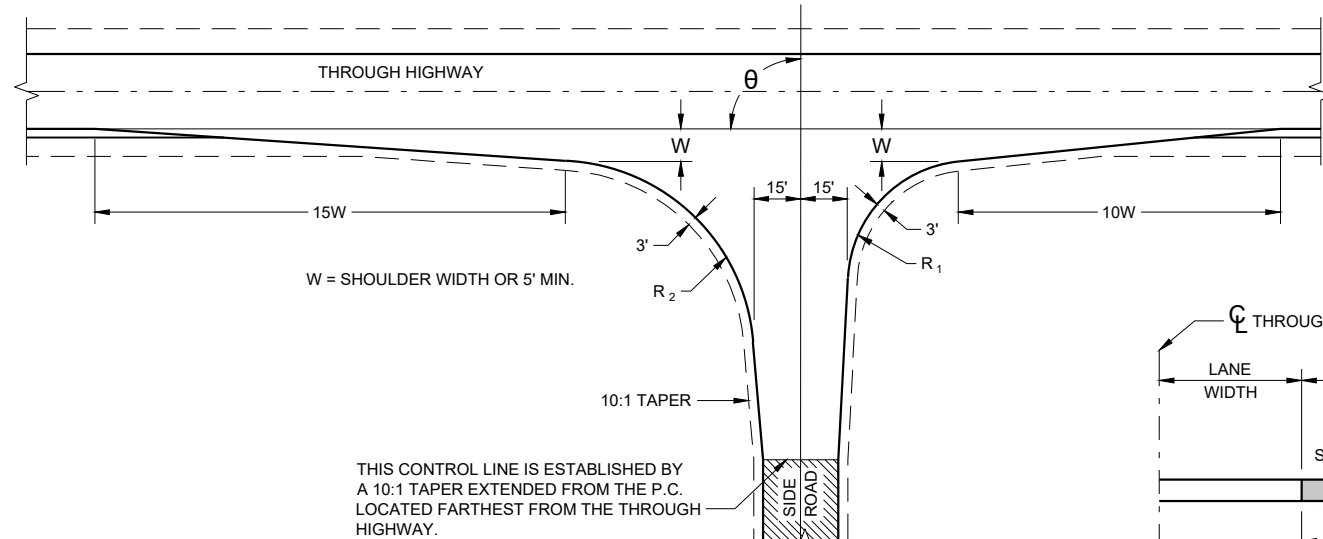
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

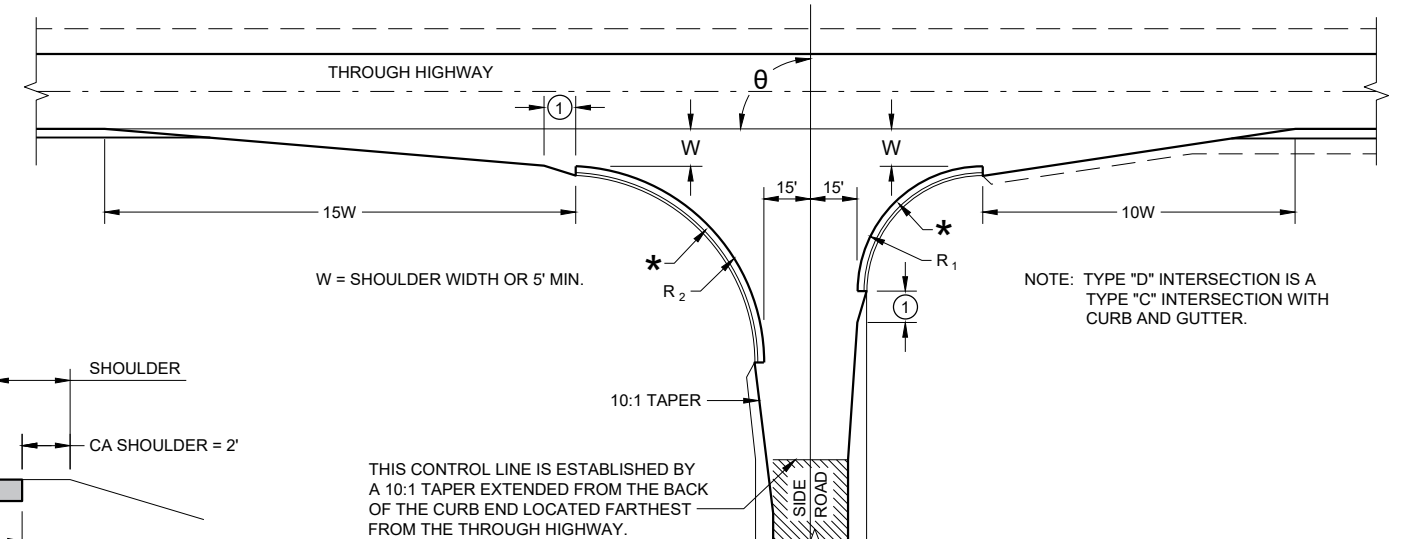
- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

THIS CONTROL LINE IS ESTABLISHED BY A 10:1 TAPER EXTENDED FROM THE BACK OF THE CURB END LOCATED FARTHEST FROM THE THROUGH HIGHWAY.

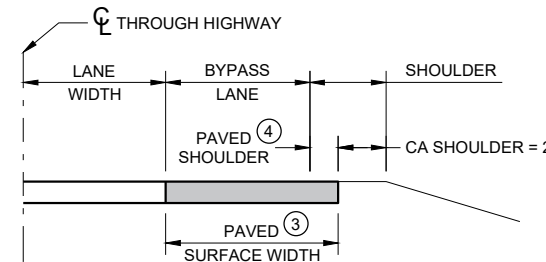


TYPE "C"

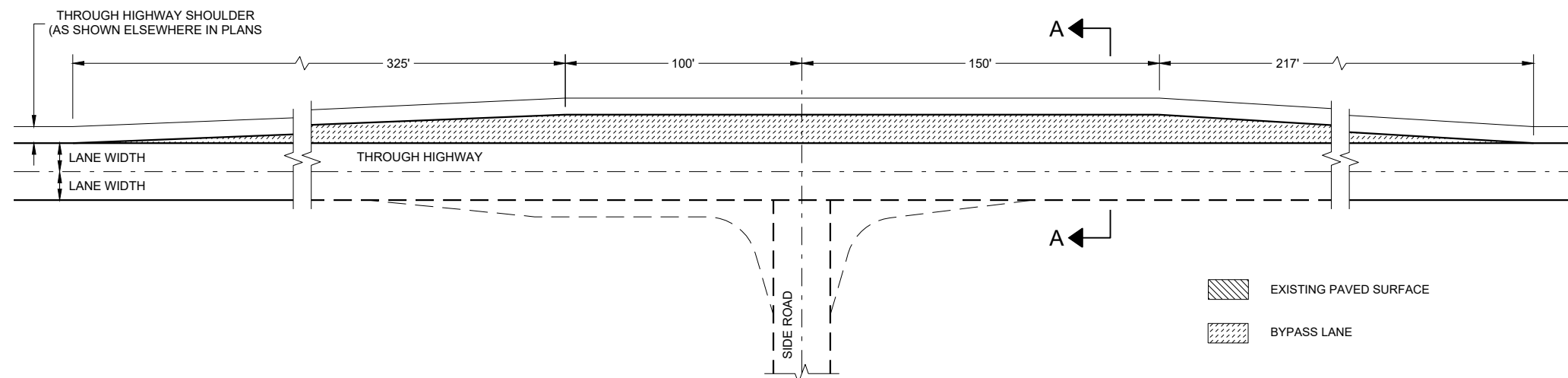


TYPE "D"

NOTE: TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB AND GUTTER.



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)

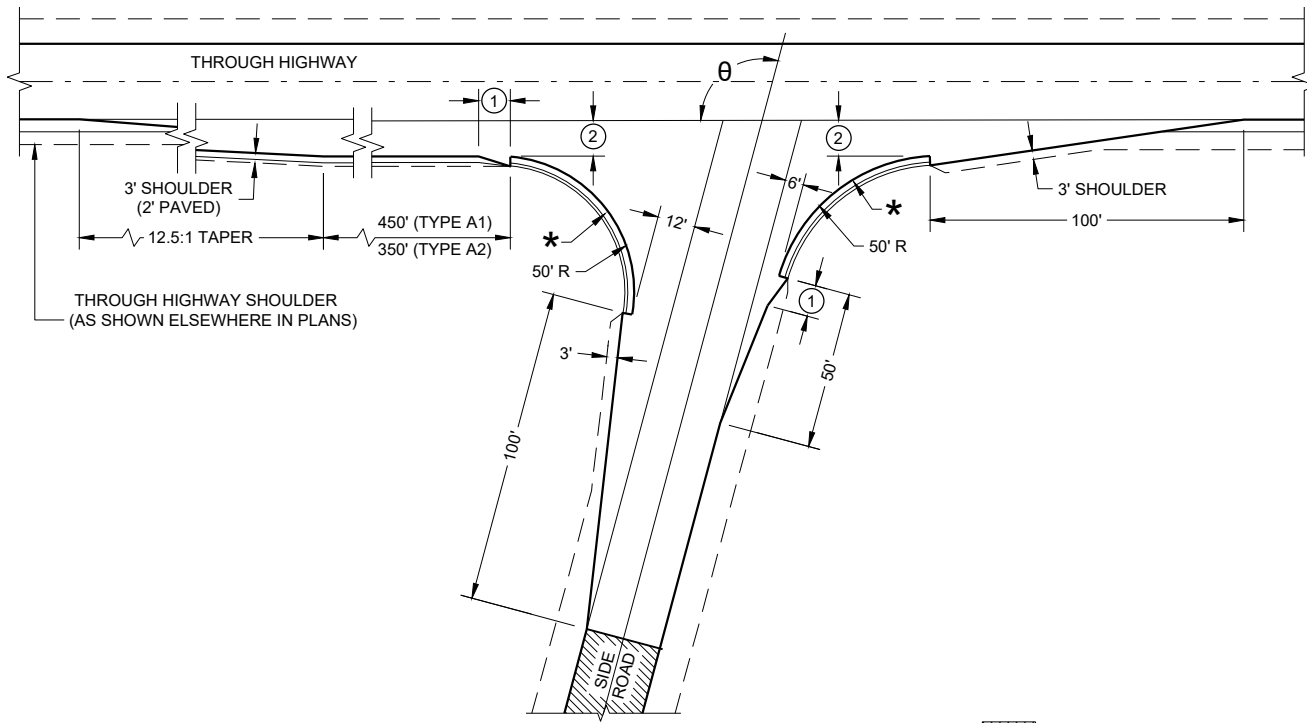


TEE INTERSECTION BYPASS LANE DETAIL

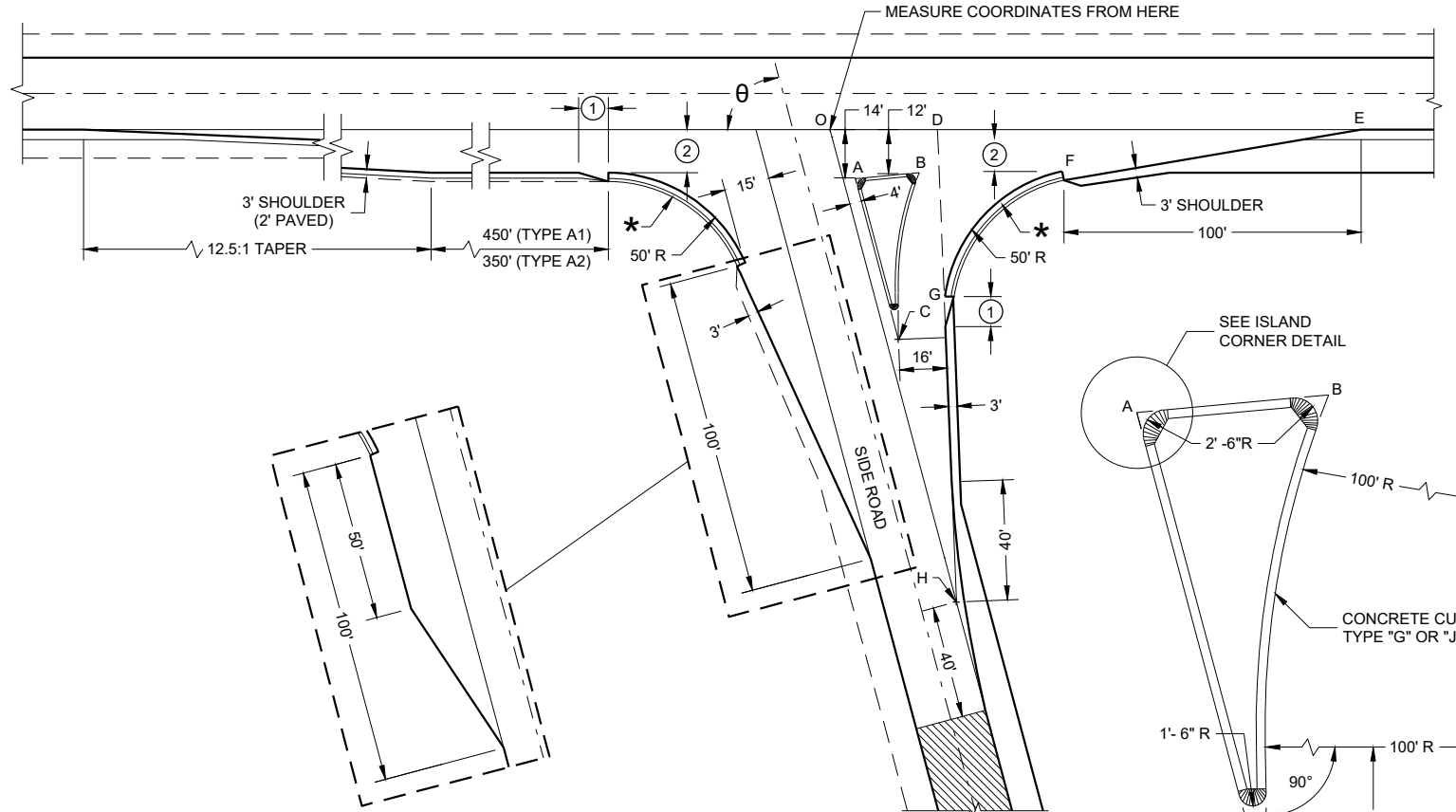
EXISTING PAVED SURFACE
BYPASS LANE

AT GRADE SIDE ROAD INTERSECTION TYPES "B1", "B2", "C", "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



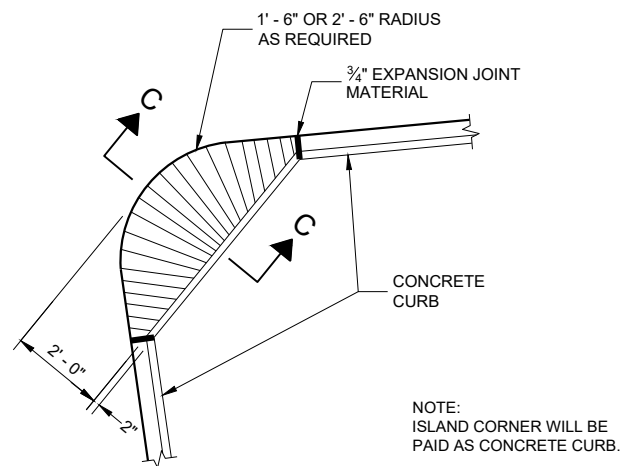
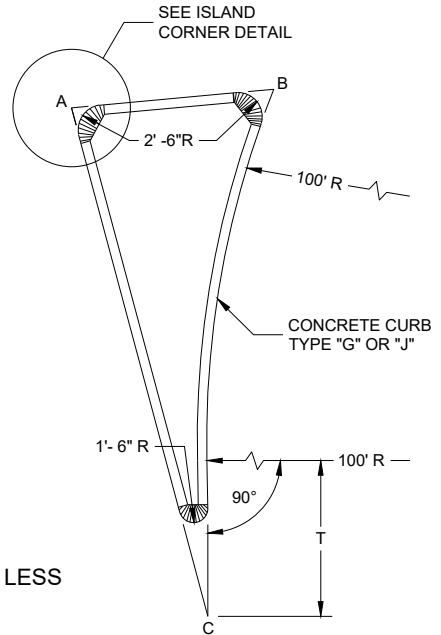
$\theta = \text{MORE THAN } 80^\circ$



$\theta = \text{ACUTE ANGLES } 80^\circ \text{ OR LESS}$

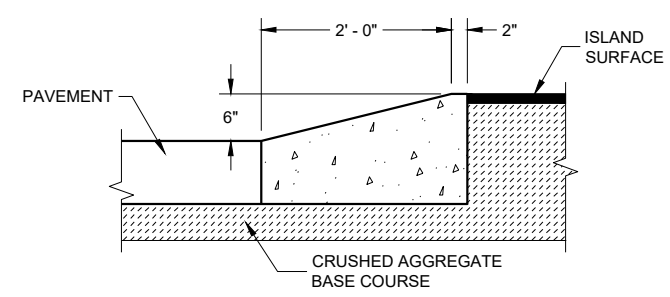
SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 $\theta = \text{ACUTE ANGLES } 70^\circ \text{ OR LESS}$

EXISTING PAVED SURFACE



PLAN VIEW

NOTE: ISLAND CORNER WILL BE PAID AS CONCRETE CURB.



SECTION C - C

ISLAND CORNER DETAIL
 (TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT 'O')								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE 'A1" AND "A2" SIDE ROAD INTERSECTION DETAILS

AT GRADE SIDE ROAD INTERSECTIONS
 TYPES "A1" AND "A2"

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ John Jenkins
 DATE ROADWAY STANDARDS DEVELOPMENT
 ENGINEER
 FHWA

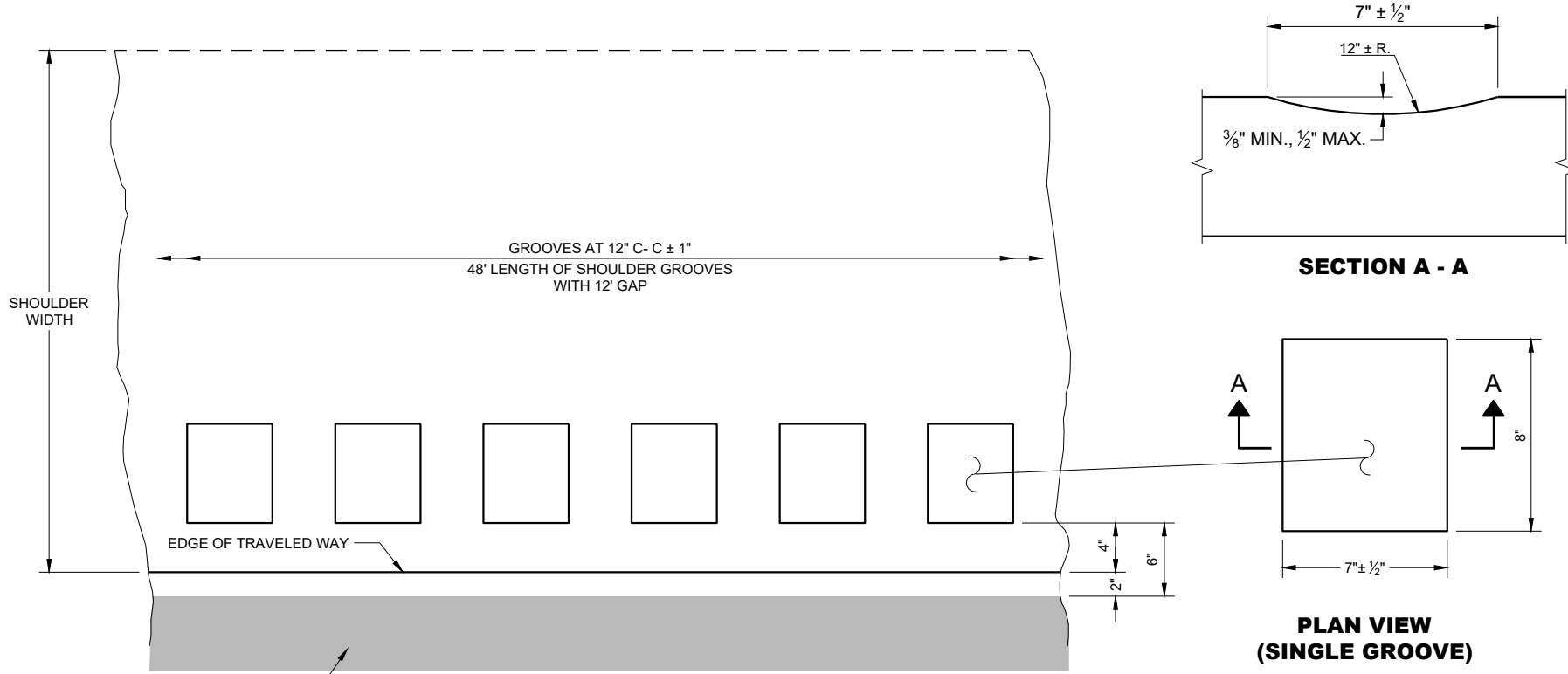
SDD09A01 - 14b

SDD09A01 - 14b

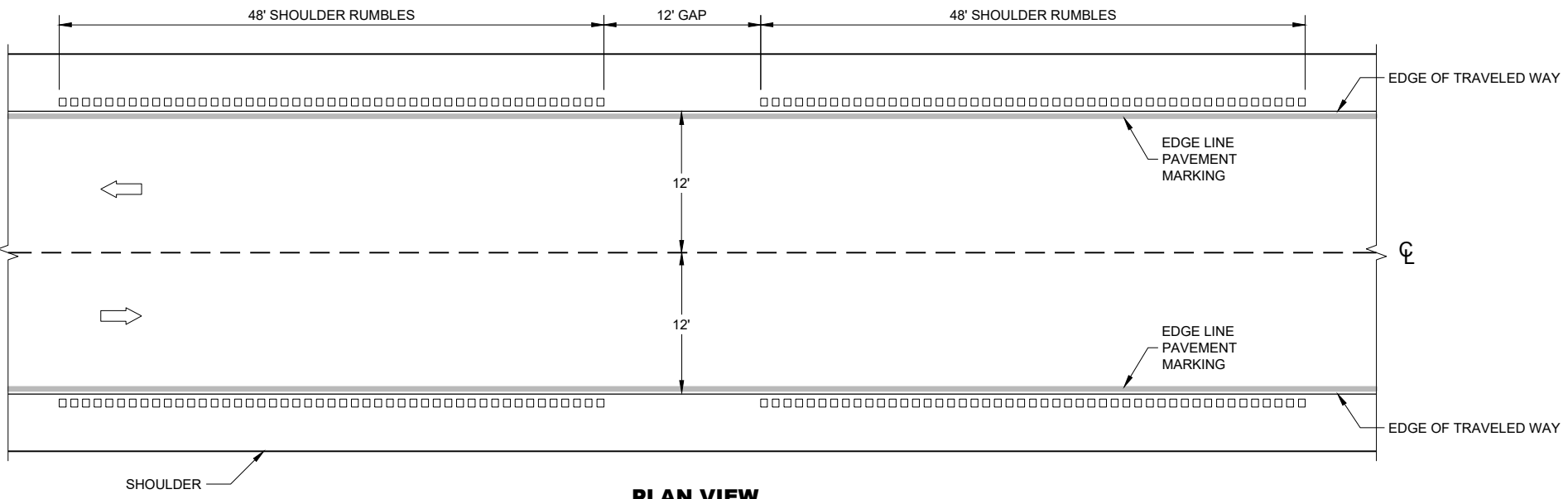
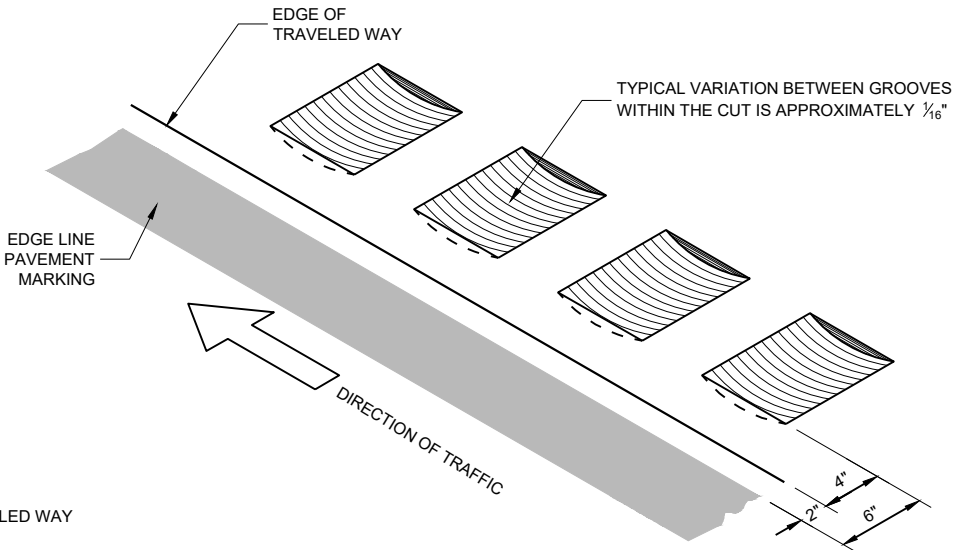
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

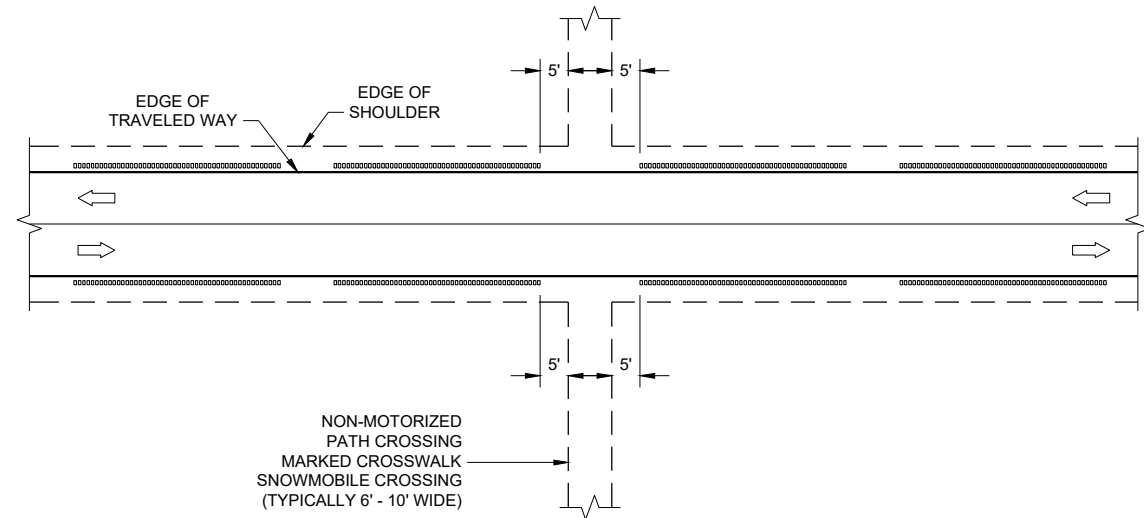


PLAN DETAIL VIEW SHOULDER WITH GROOVES

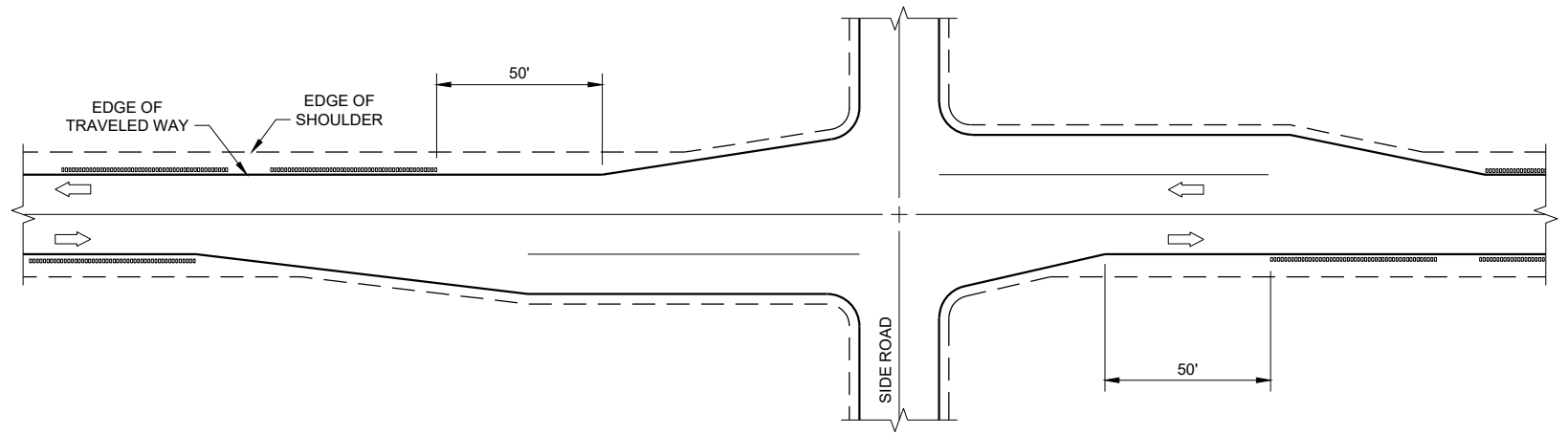


PLAN VIEW SHOULDER RUMBLE STRIPS - ASPHALT

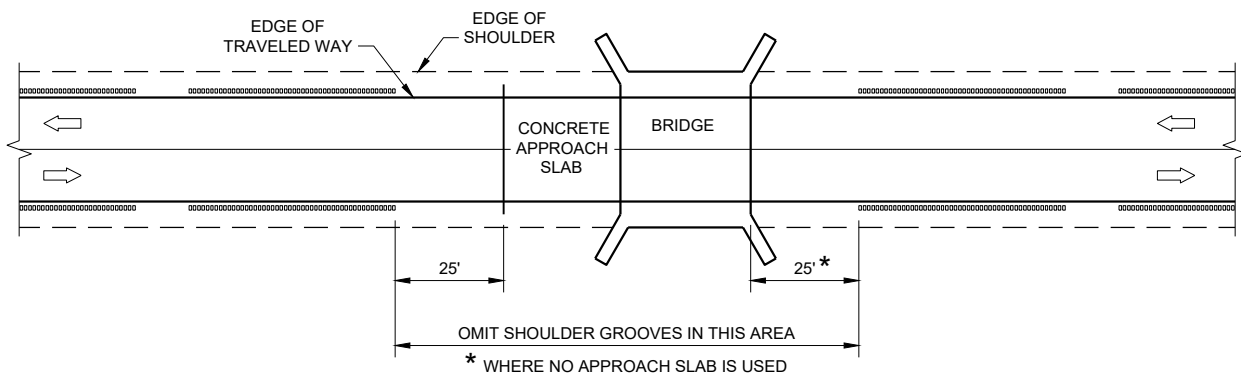
SHOULDER RUMBLE STRIPS ASPHALT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



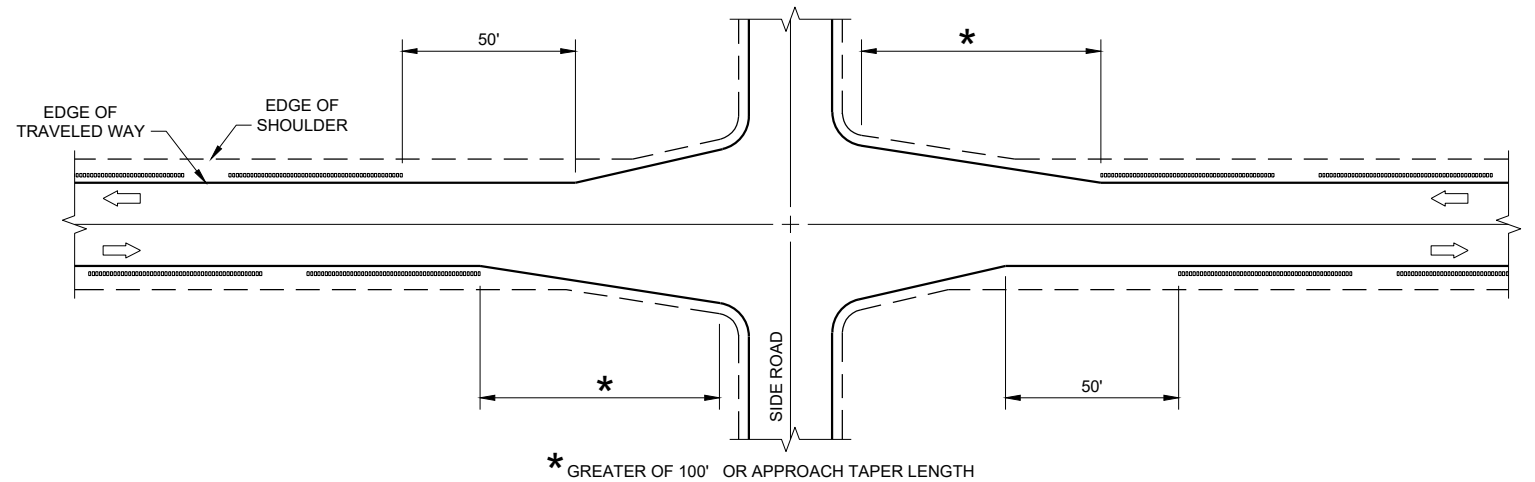
GROOVES AT MISCELLANEOUS CROSSINGS



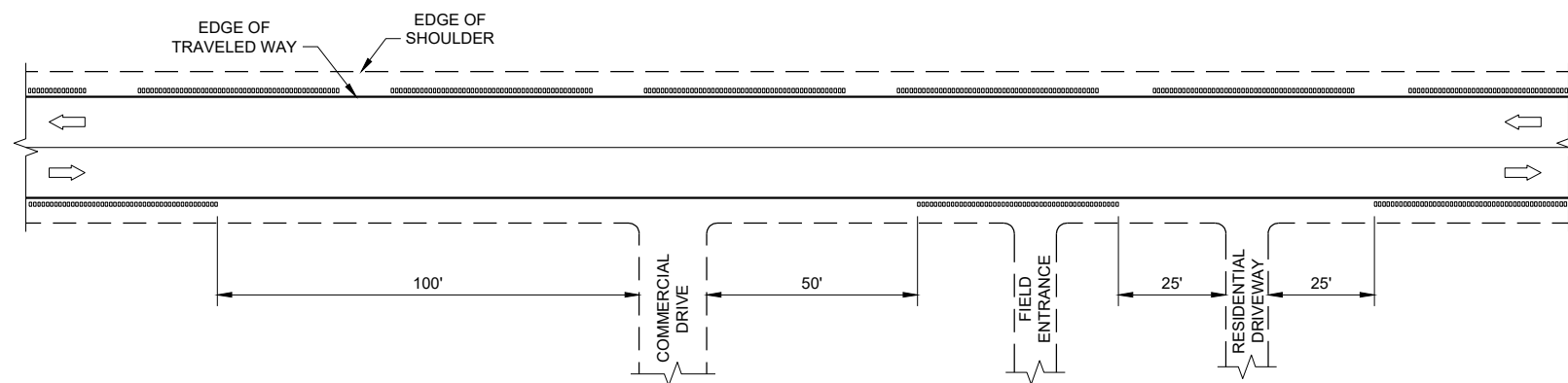
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



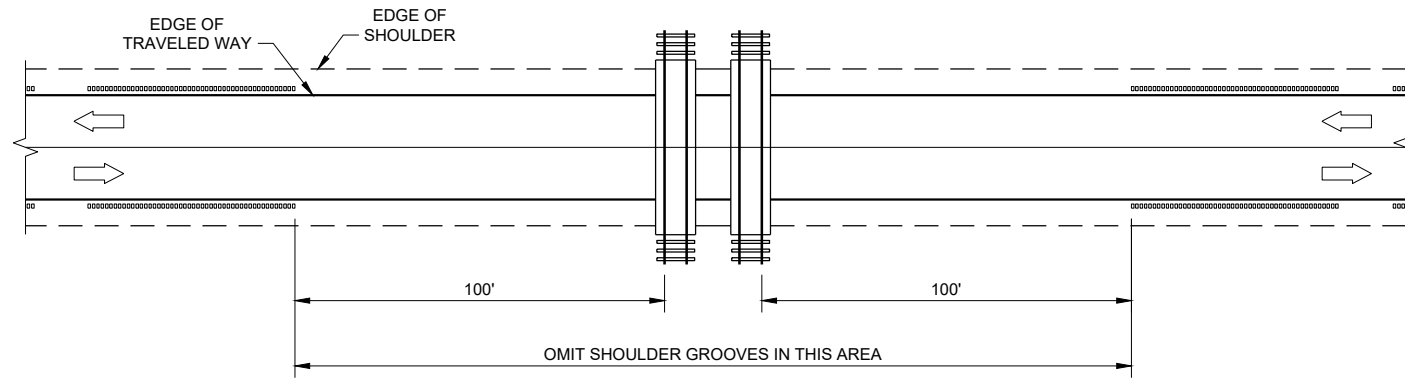
GROOVES AT DRIVEWAYS

GENERAL NOTES

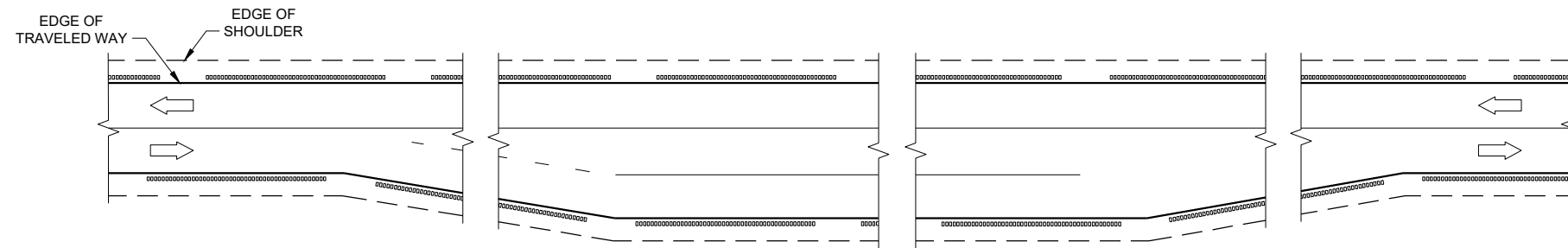
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**SHOULDER AND EDGE LINE
RUMBLE STRIPS
CROSSINGS, INTERSECTIONS,
BRIDGES, DRIVEWAYS**

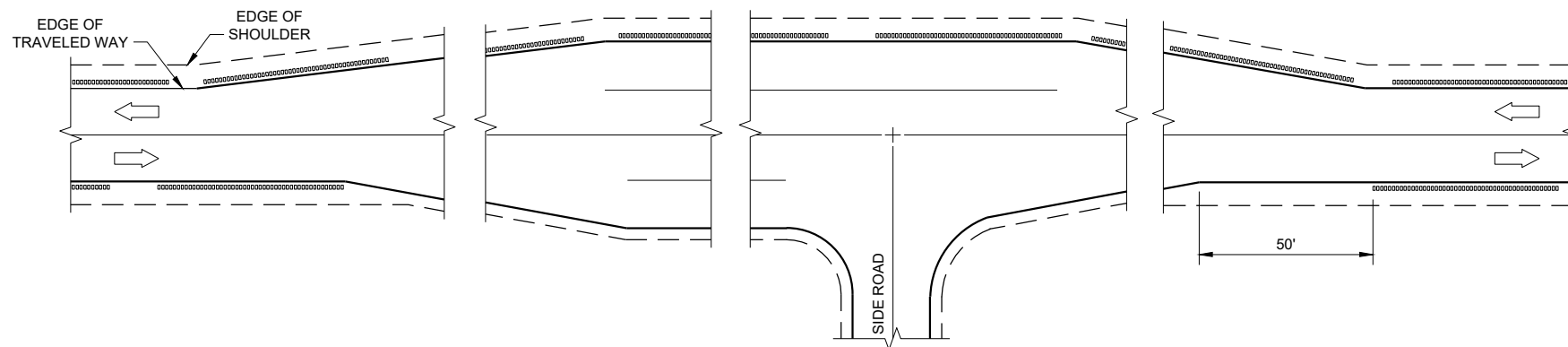
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GROOVES AT RAILROADS

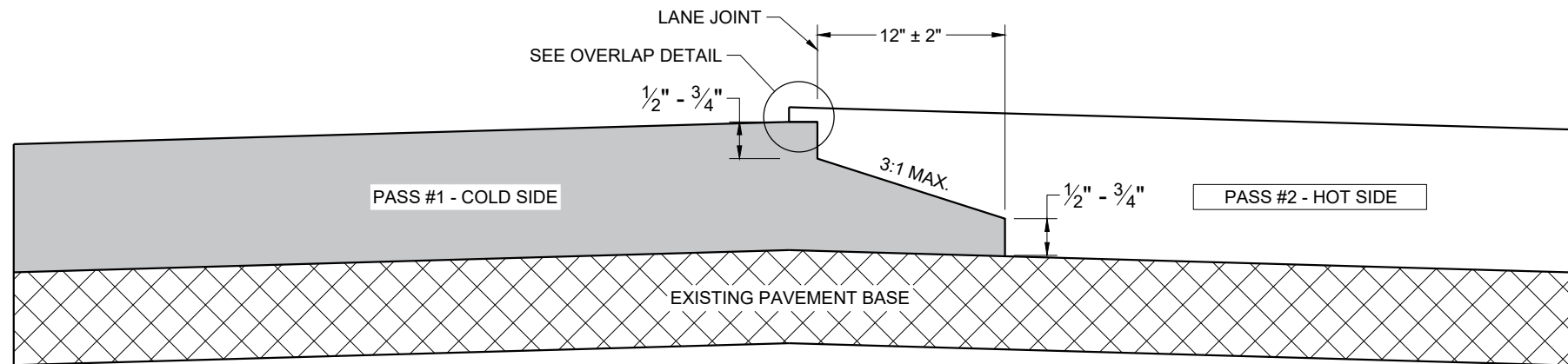


GROOVES AT PASSING AND CLIMBING LANES

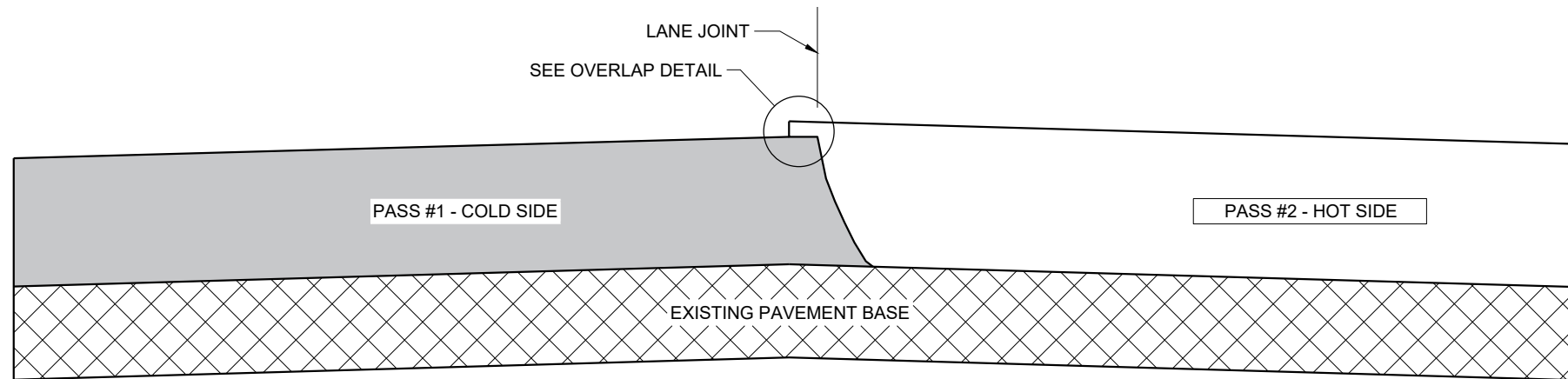


GROOVES AT BYPASS LANES

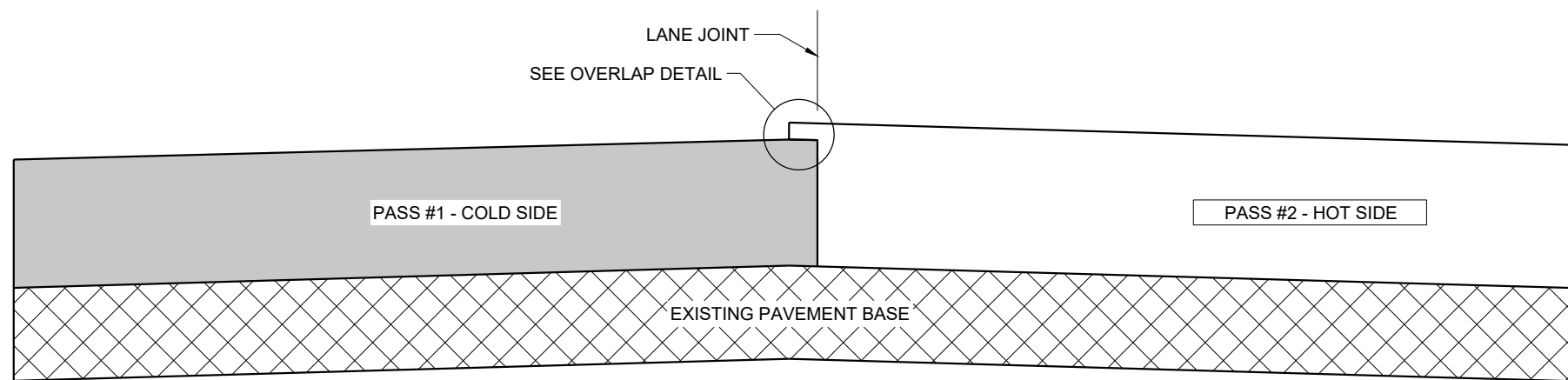
SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
<small>FHWA</small>	



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

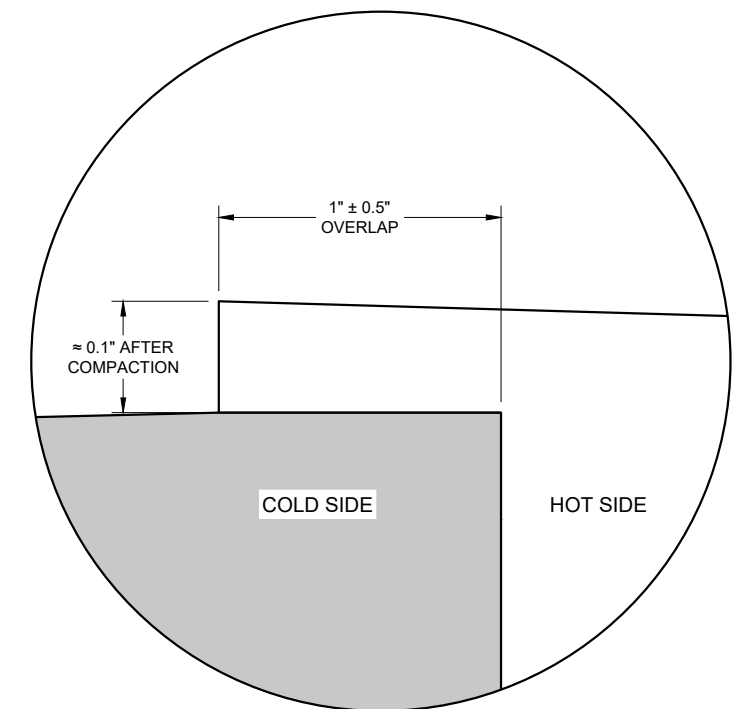
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

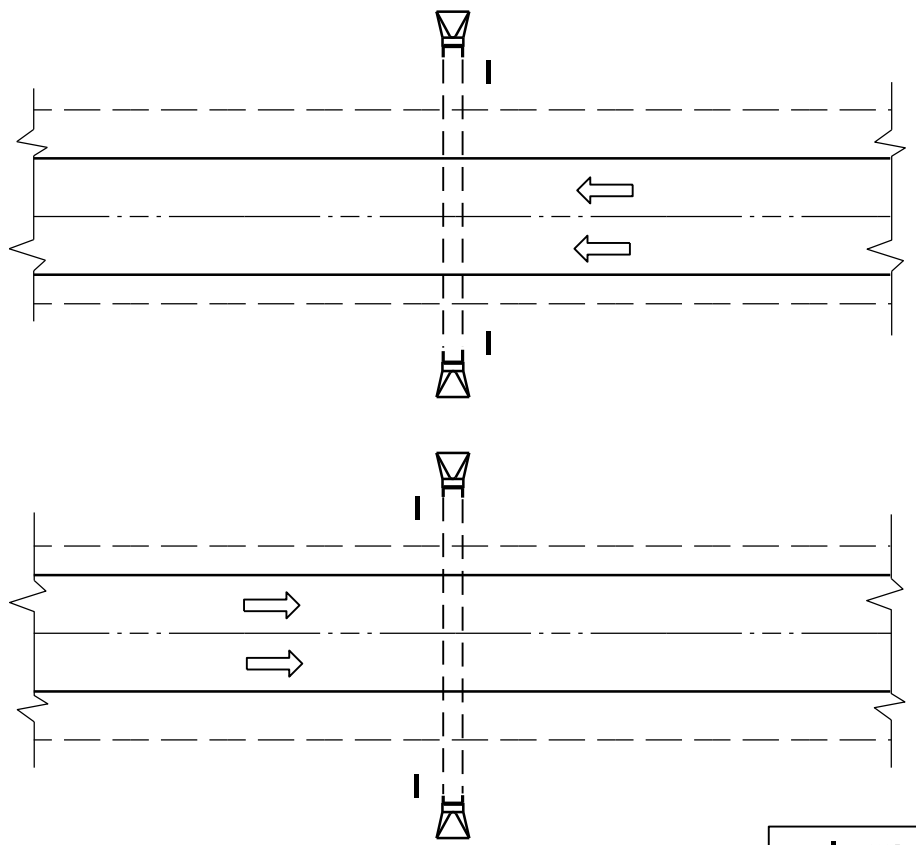
6

6

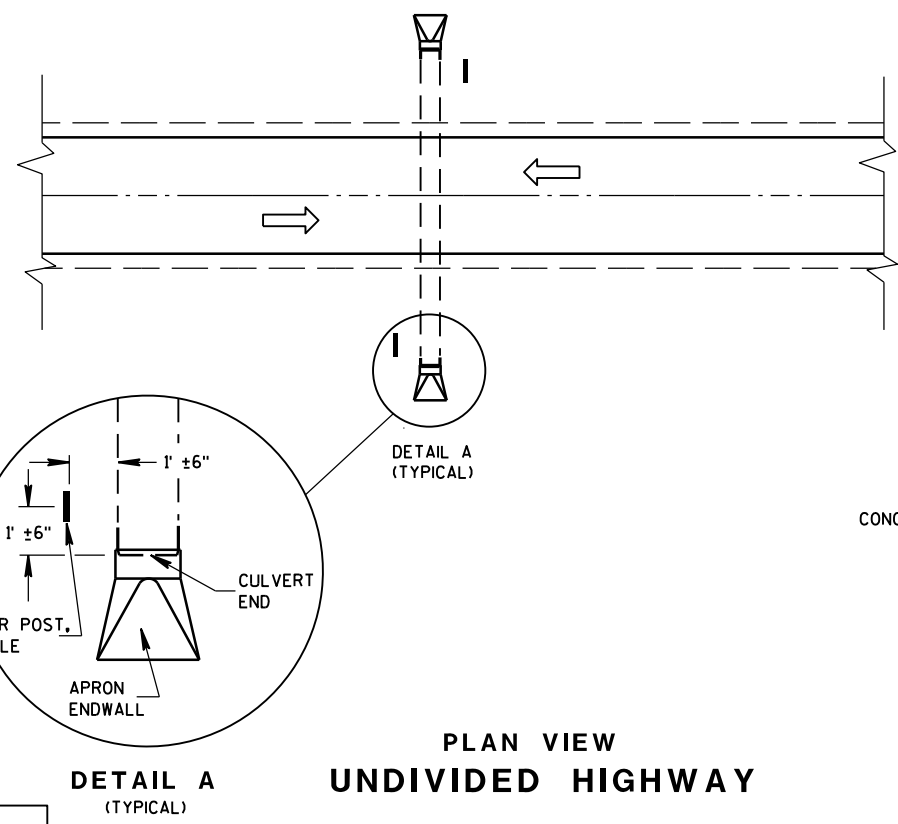
SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



PLAN VIEW
DIVIDED HIGHWAY

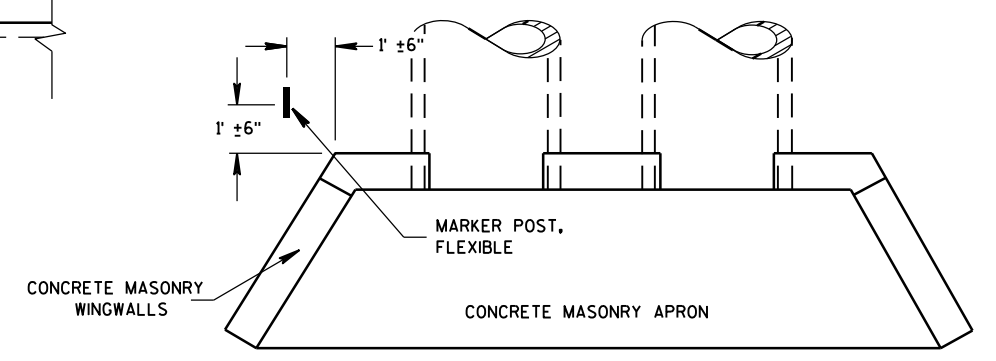


PLAN VIEW
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE
 DIRECTION OF TRAFFIC FLOW

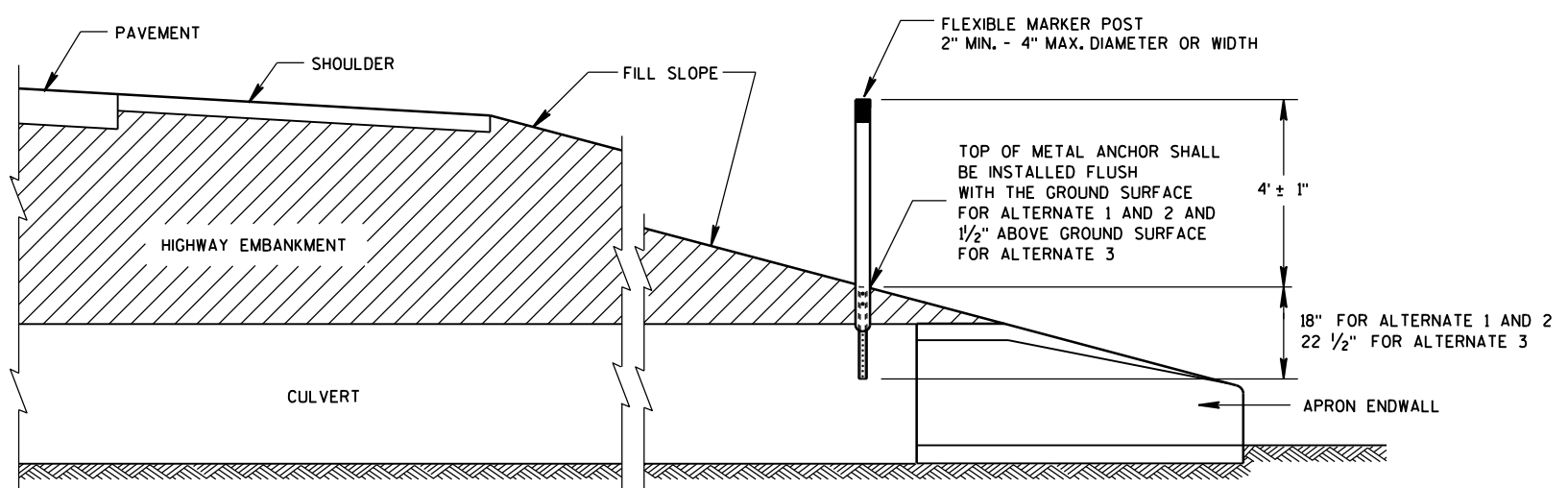
GENERAL NOTES

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

FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

**FLEXIBLE MARKER POST
FOR CULVERT END**

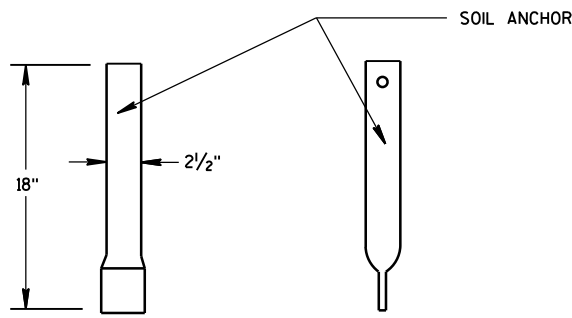
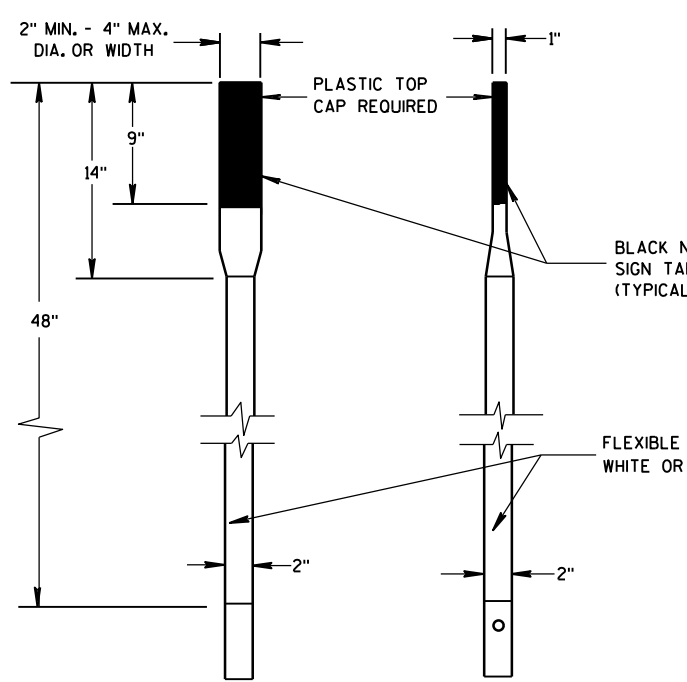
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

6

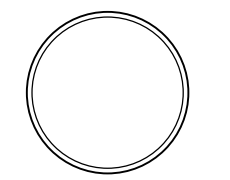
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S.D.D. 15 A 3-2a

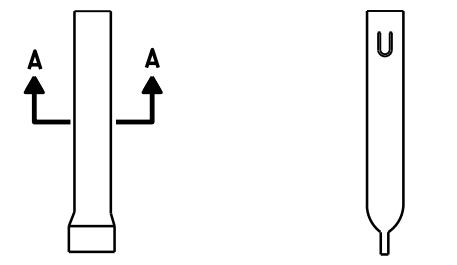
S.D.D. 15 A 3-2a



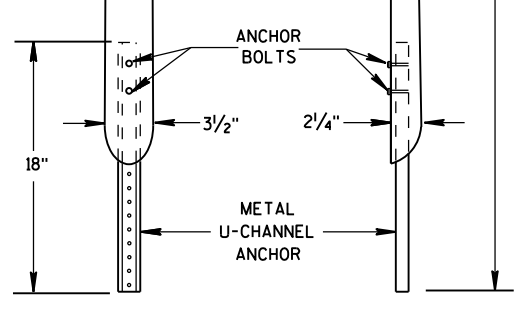
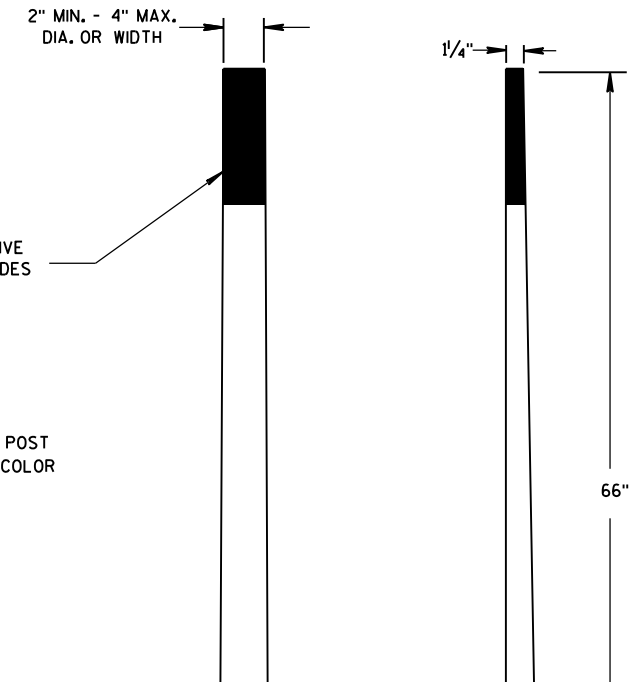
FRONT VIEW SIDE VIEW
ALTERNATE 1



SECTION A-A

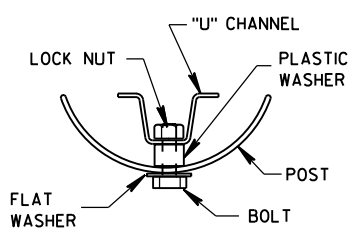


FRONT VIEW SIDE VIEW
ALTERNATE 1

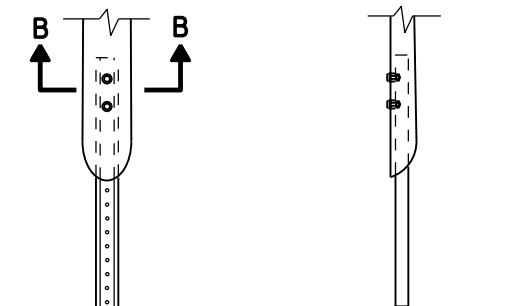


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS

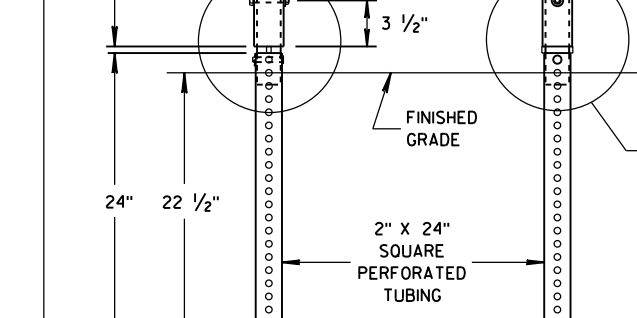
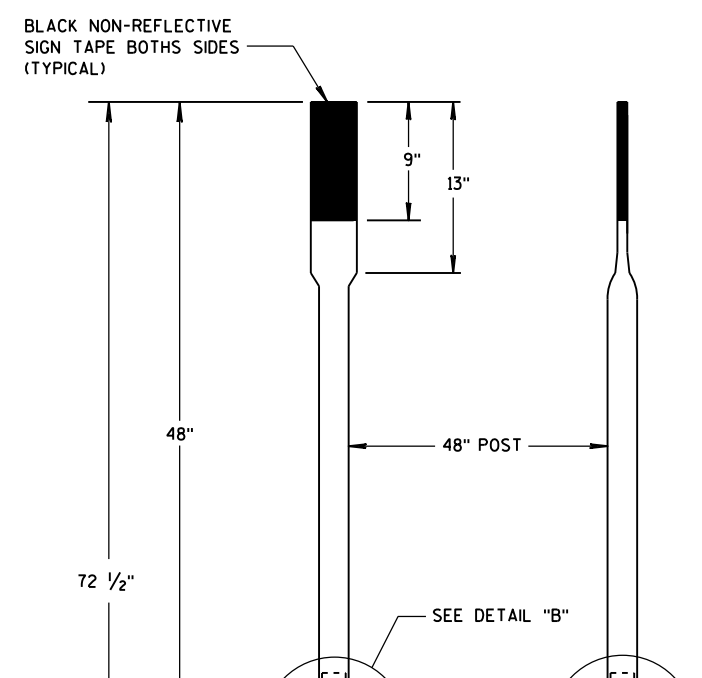


SECTION B-B

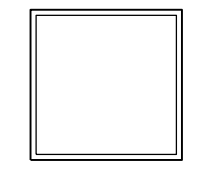


FRONT VIEW SIDE VIEW
ALTERNATE 2

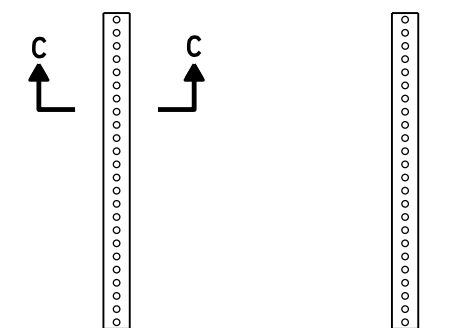
FLEXIBLE MARKER POST ANCHORS



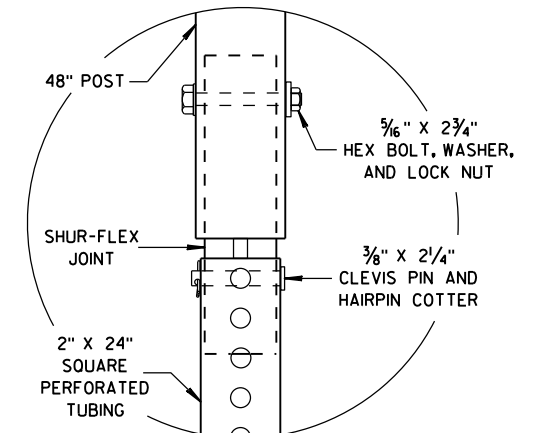
FRONT VIEW SIDE VIEW
ALTERNATE 3



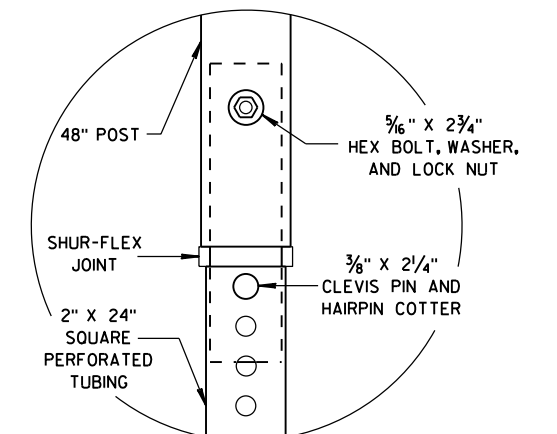
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

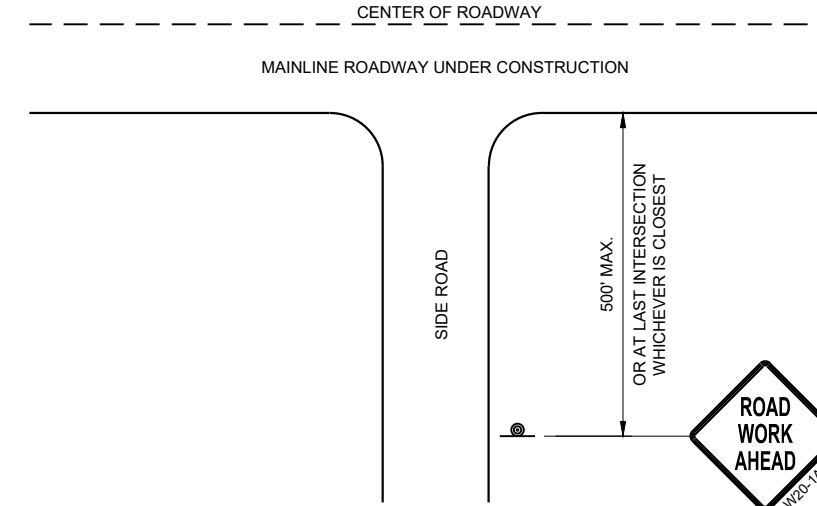
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

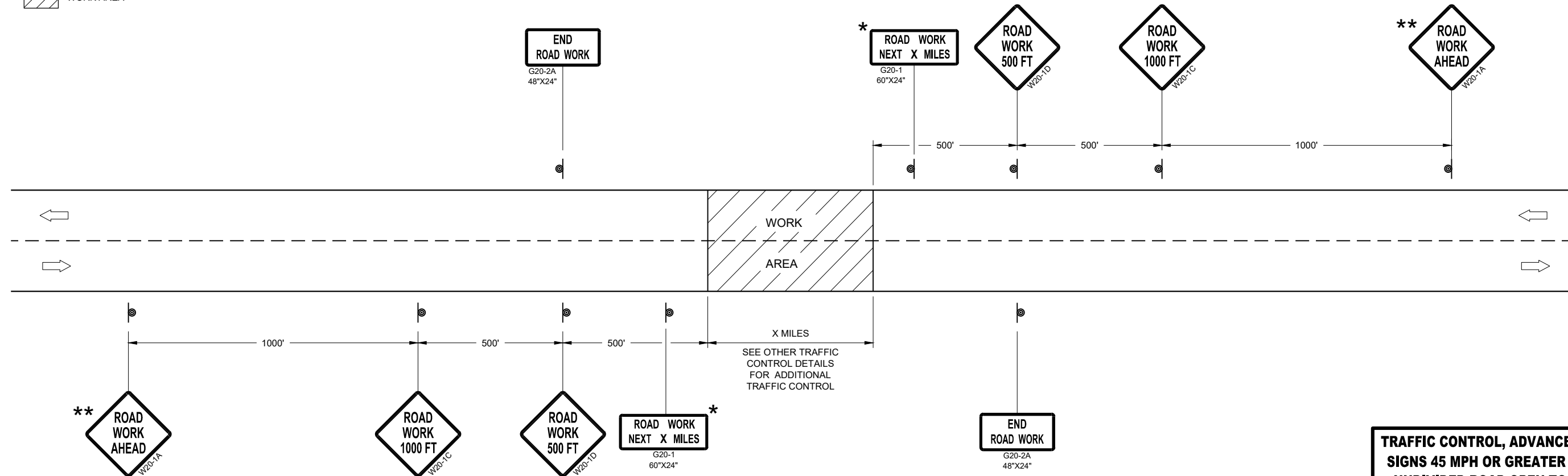
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER




FHWA

GENERAL NOTES

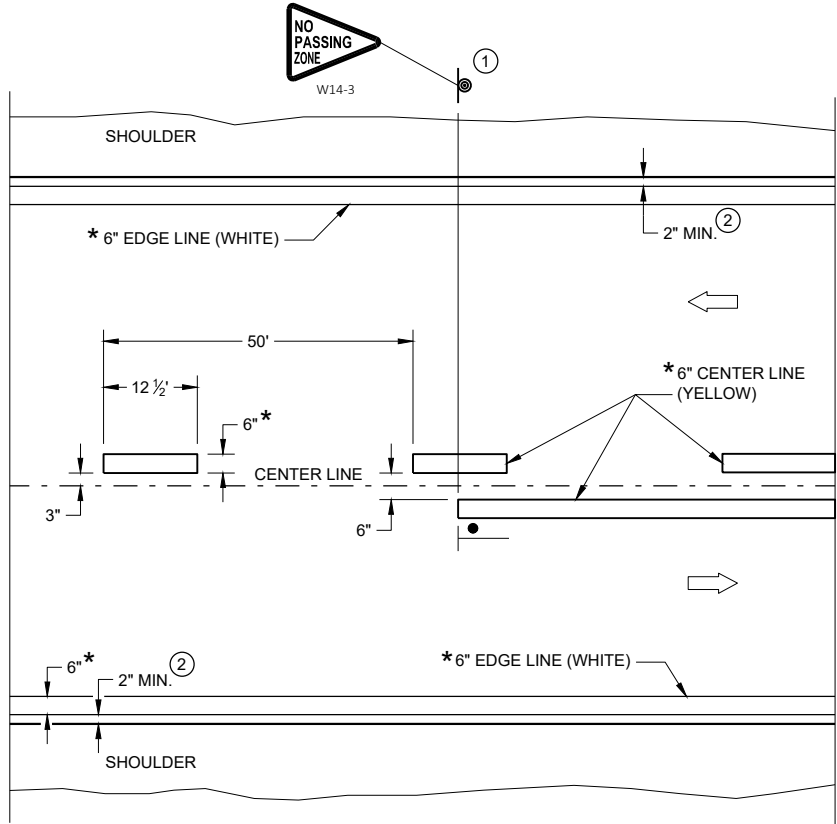
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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.

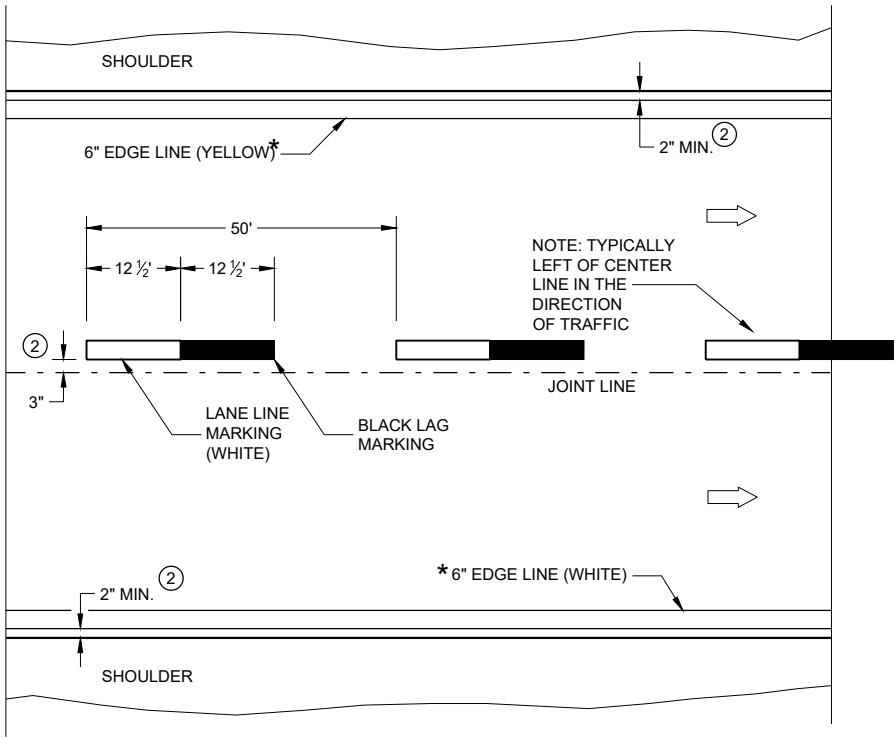
LEGEND

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

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

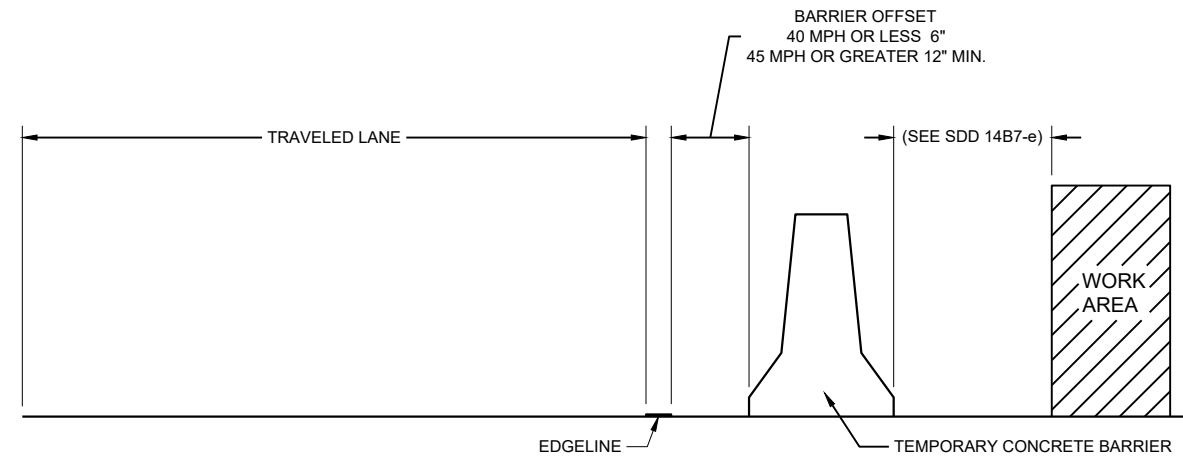
PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



TEMPORARY BARRIER OFFSET FROM EDGELINE

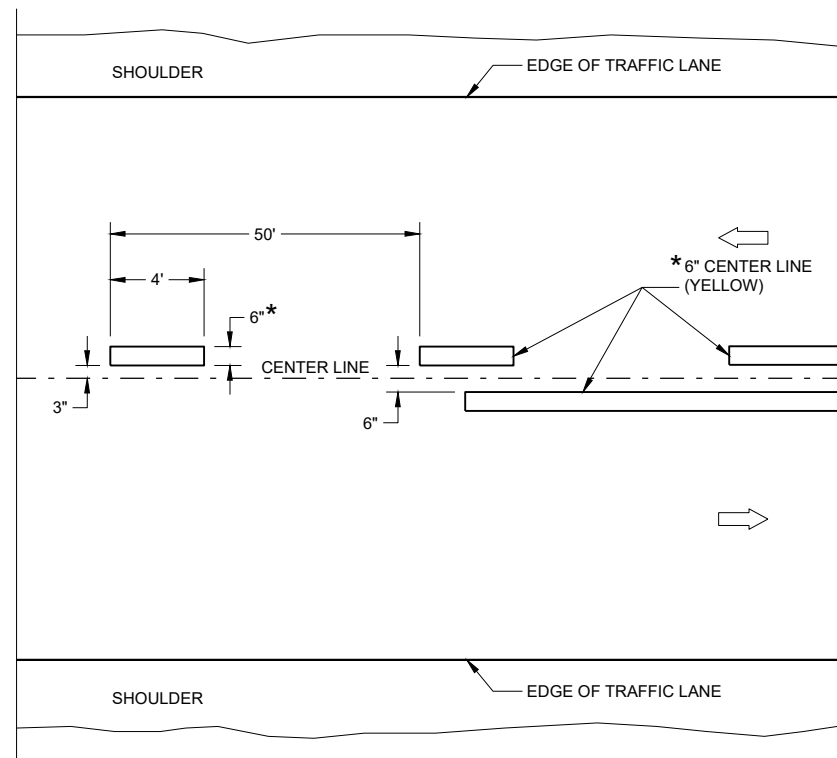
GENERAL NOTES

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

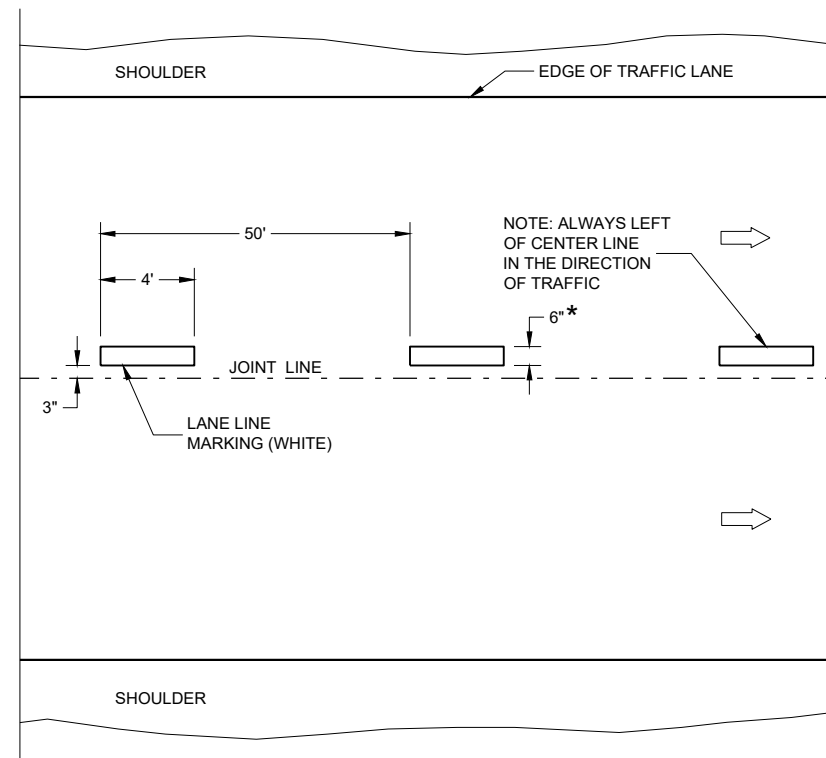
LEGEND

➡ DIRECTION OF TRAFFIC

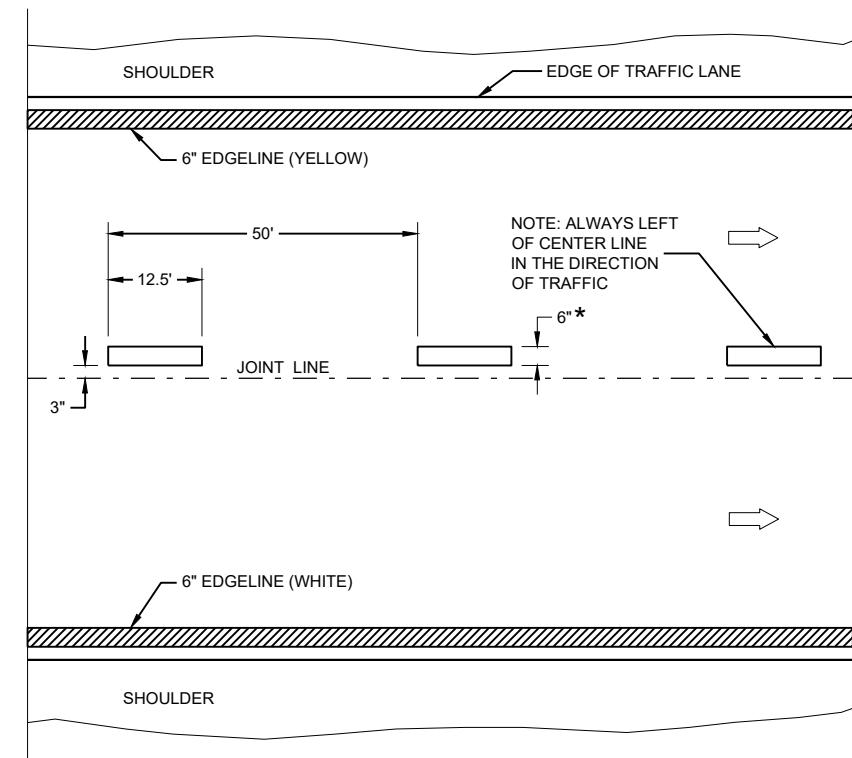
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

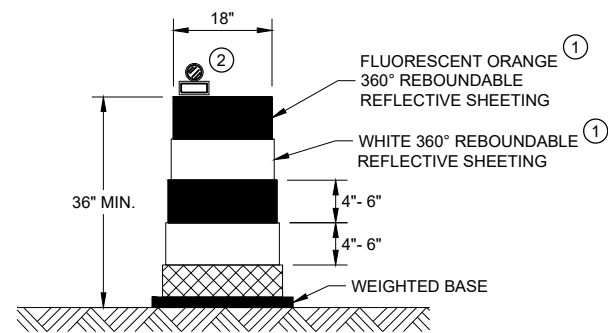
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

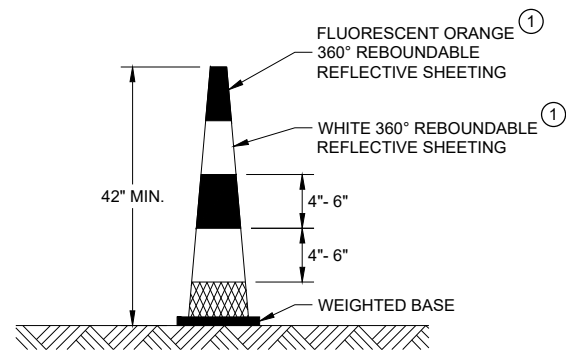
APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



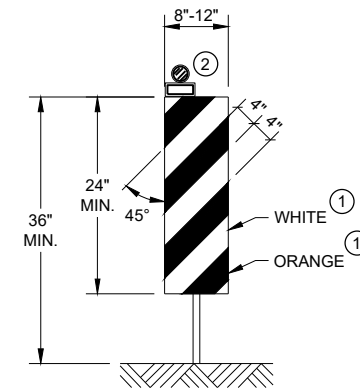
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

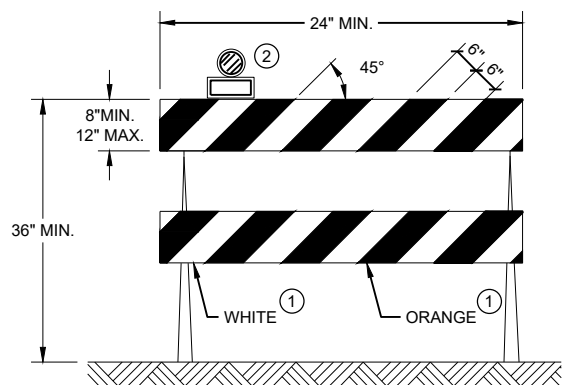


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.

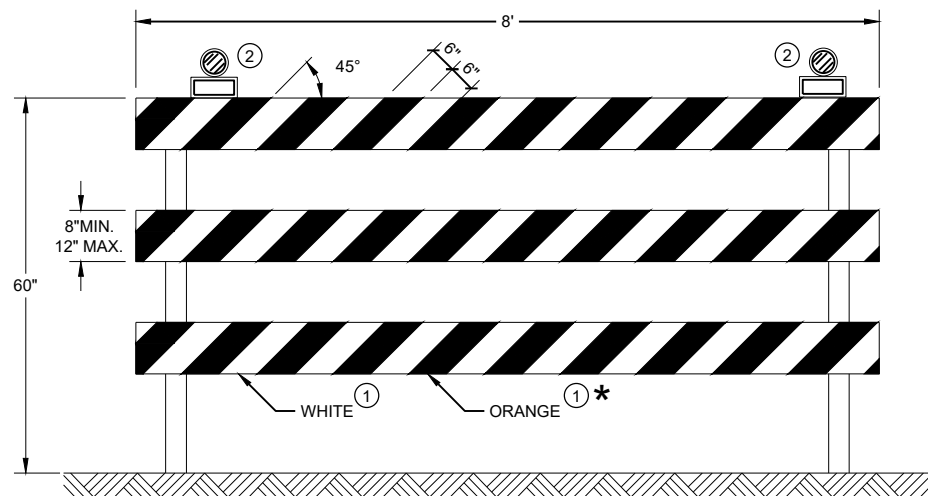
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.








TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

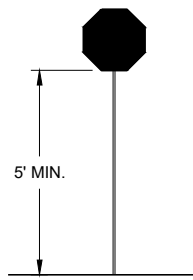
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



STOP/SLOW PADDLE ON SUPPORT STAFF

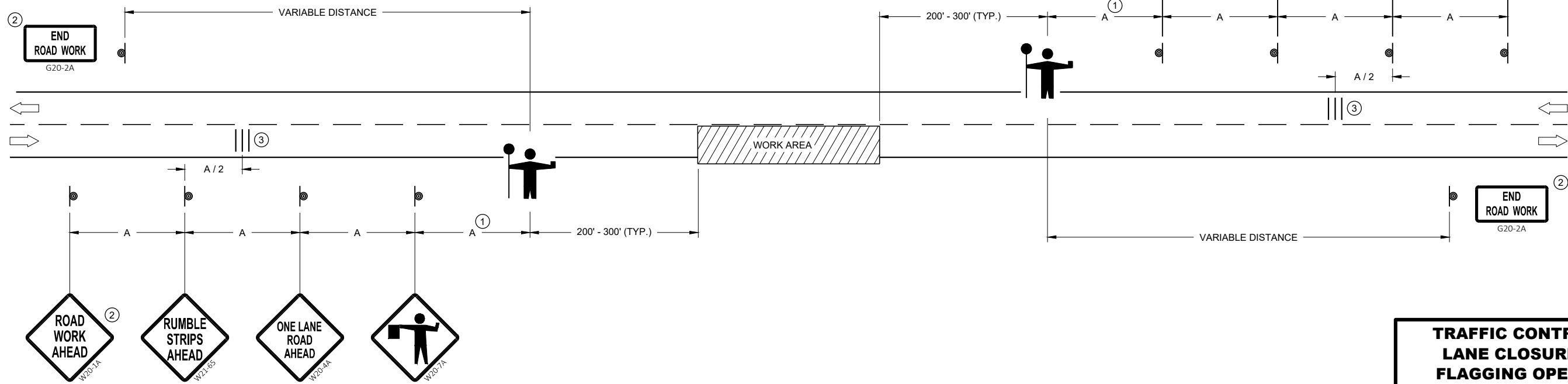
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W03-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".










TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL CONE 42-INCH
-  TRAFFIC CONTROL DRUM
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

- ① SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ② IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

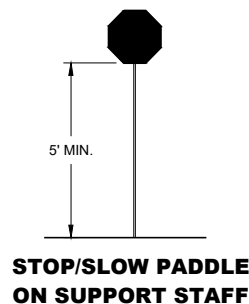
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

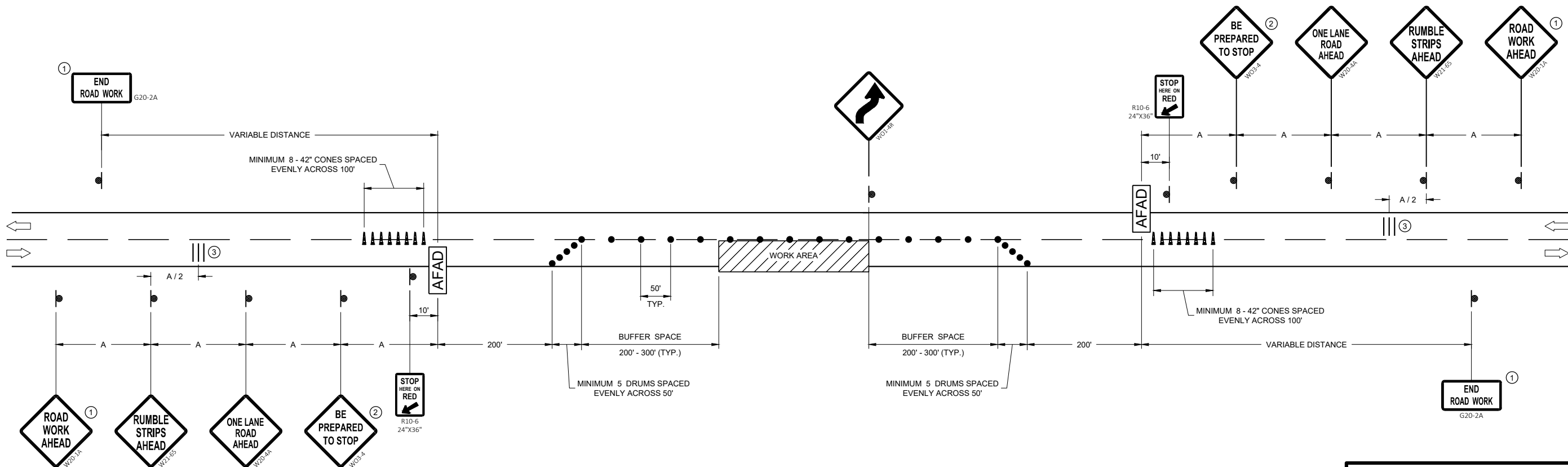
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'







TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

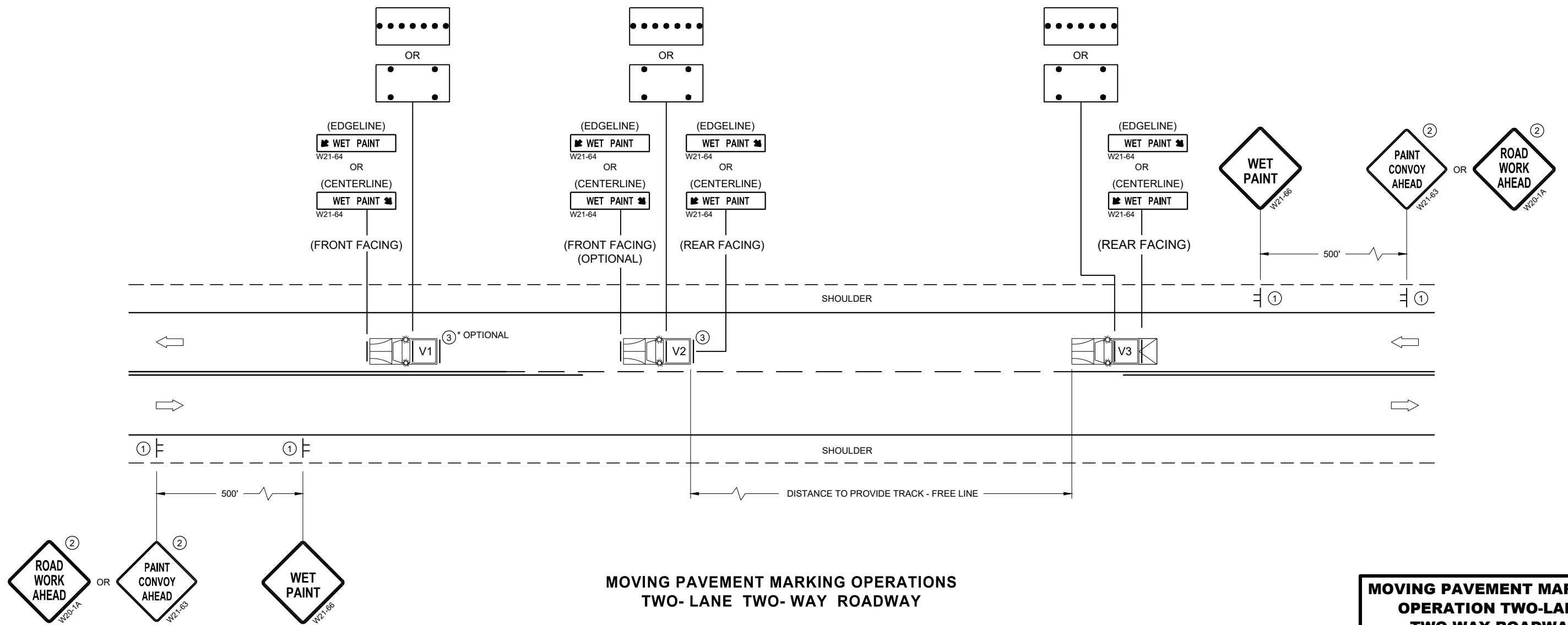
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

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



**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19-08a

SDD 15C19-08a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

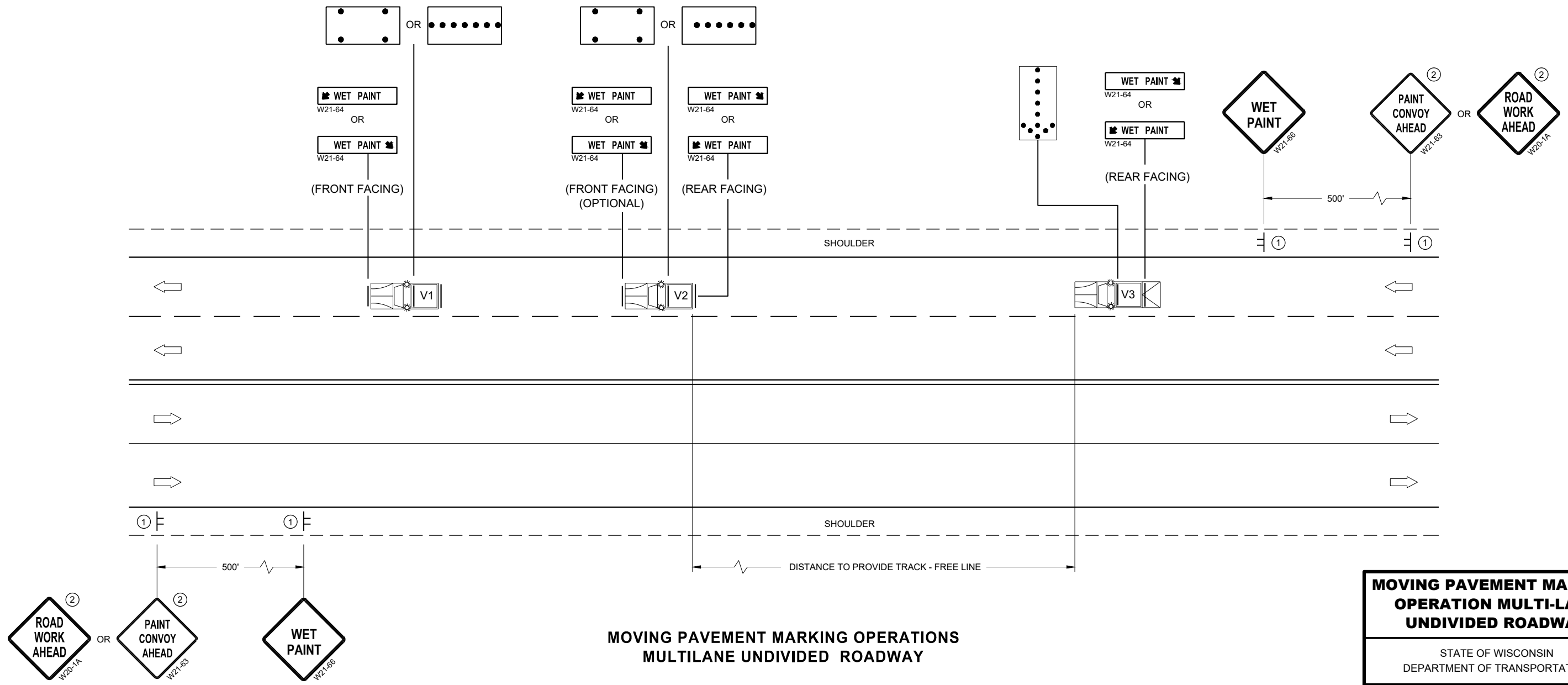
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

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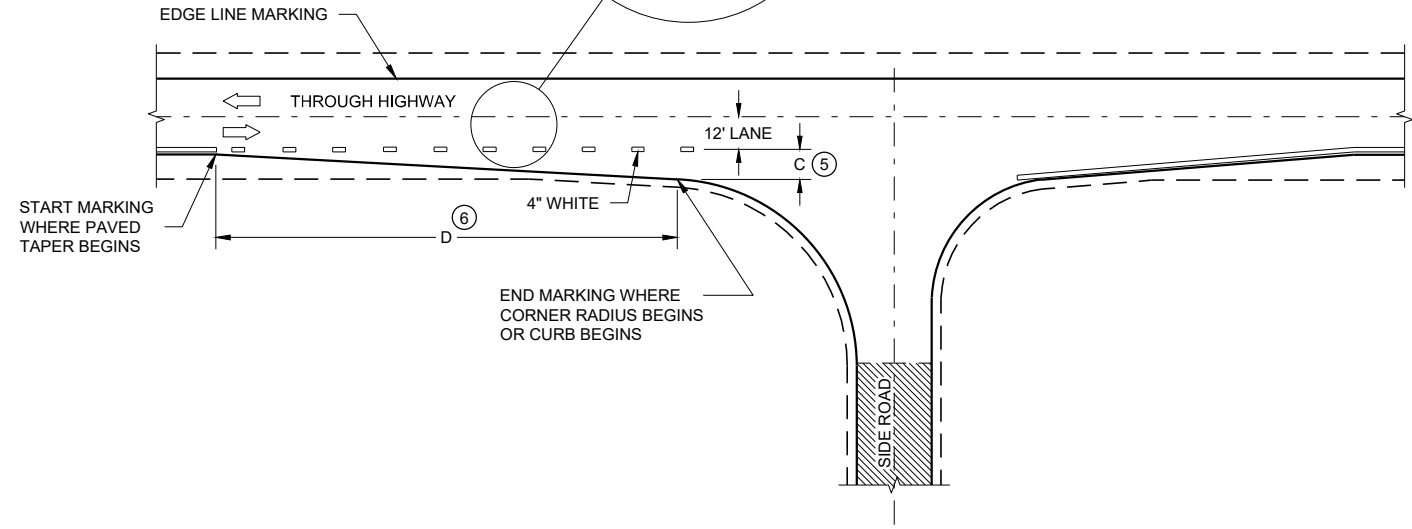
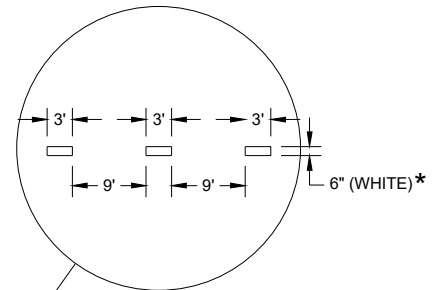


SDD 15C19-08b

SDD 15C19-08b

**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY**

MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MINOR INTERSECTION

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

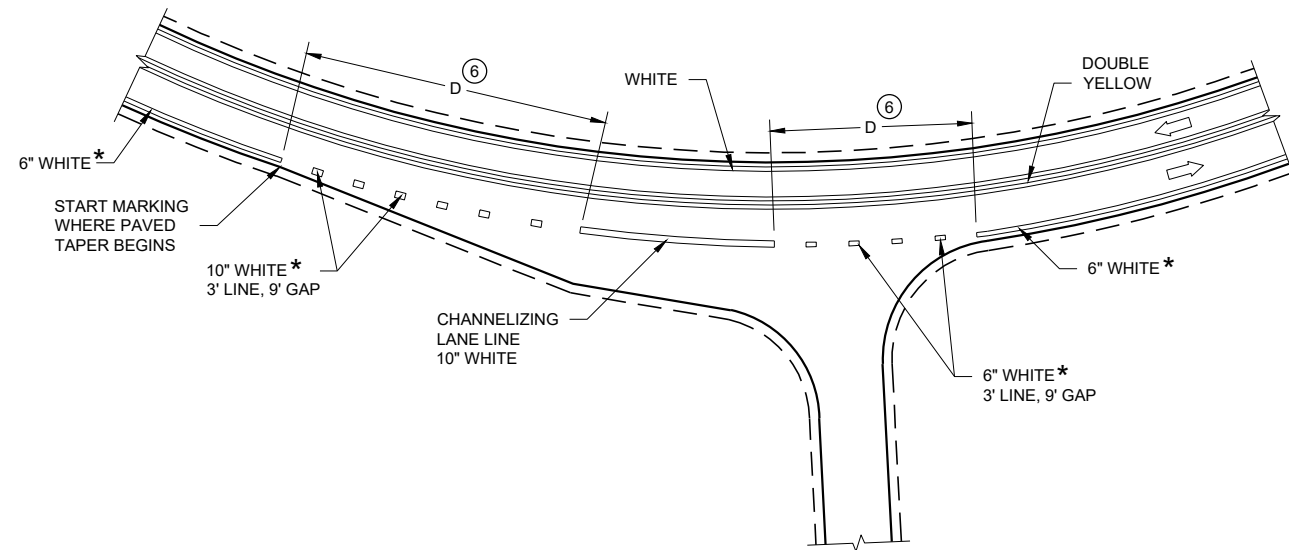
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

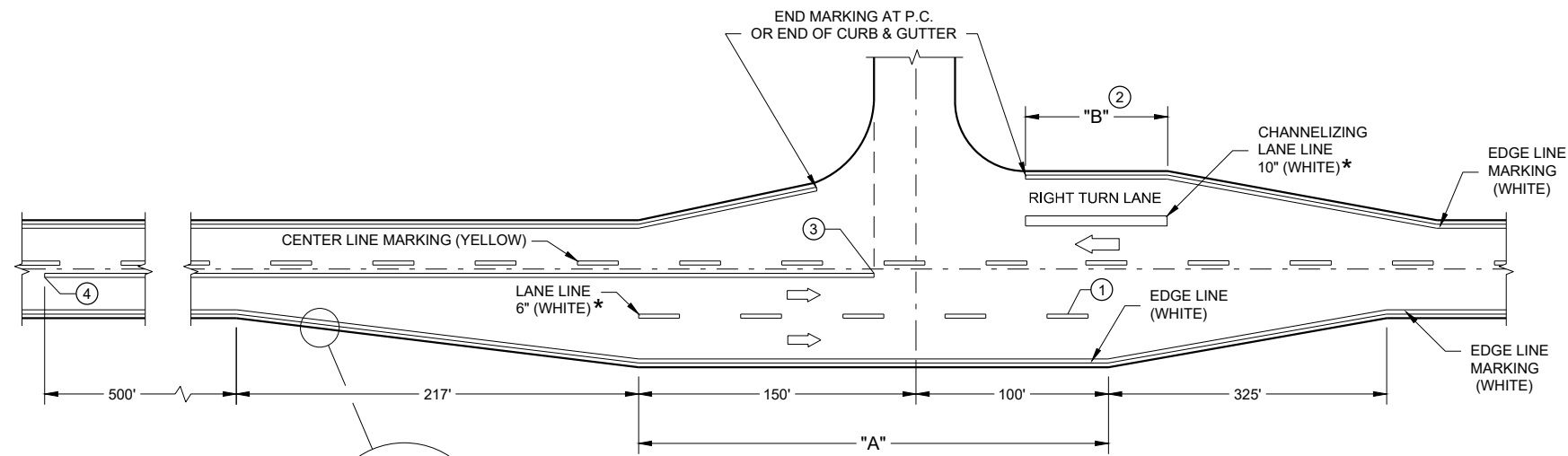
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

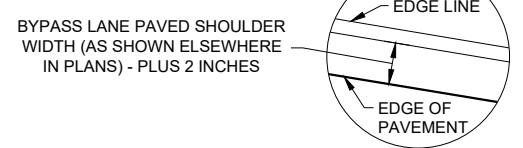
➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



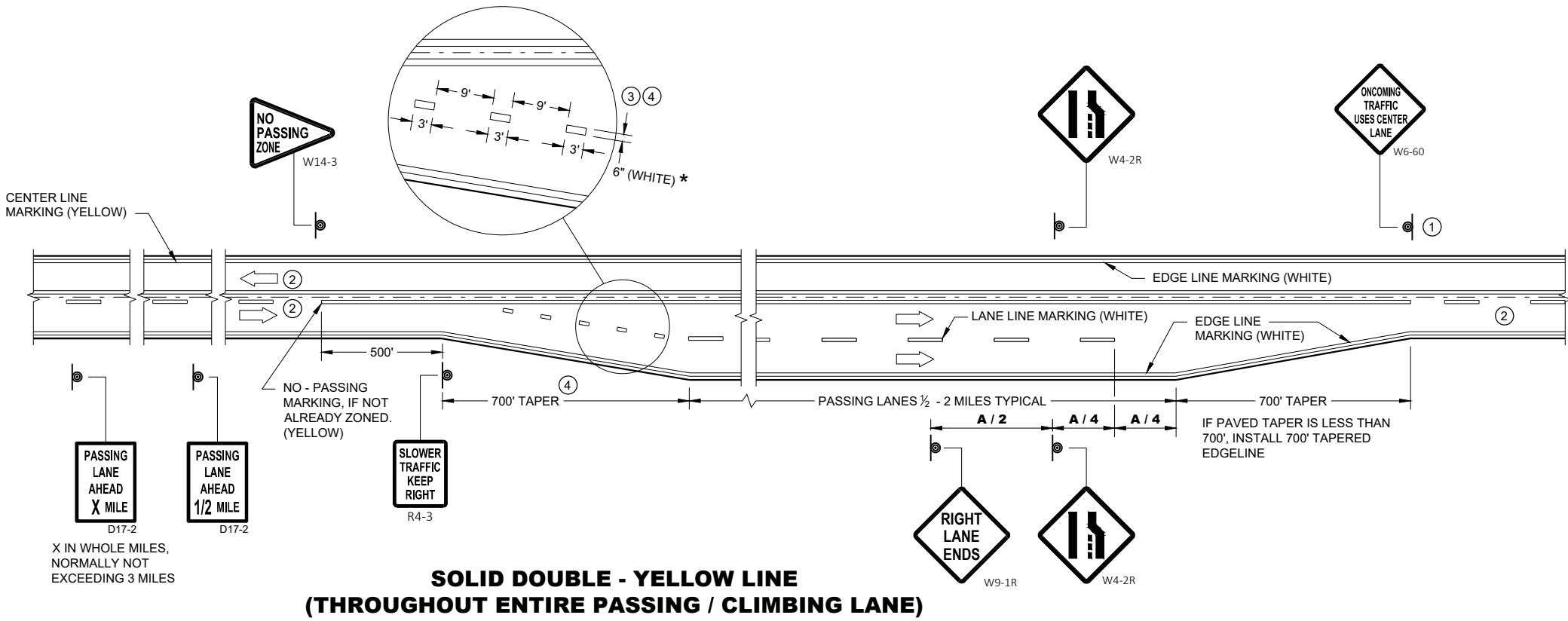
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**



BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

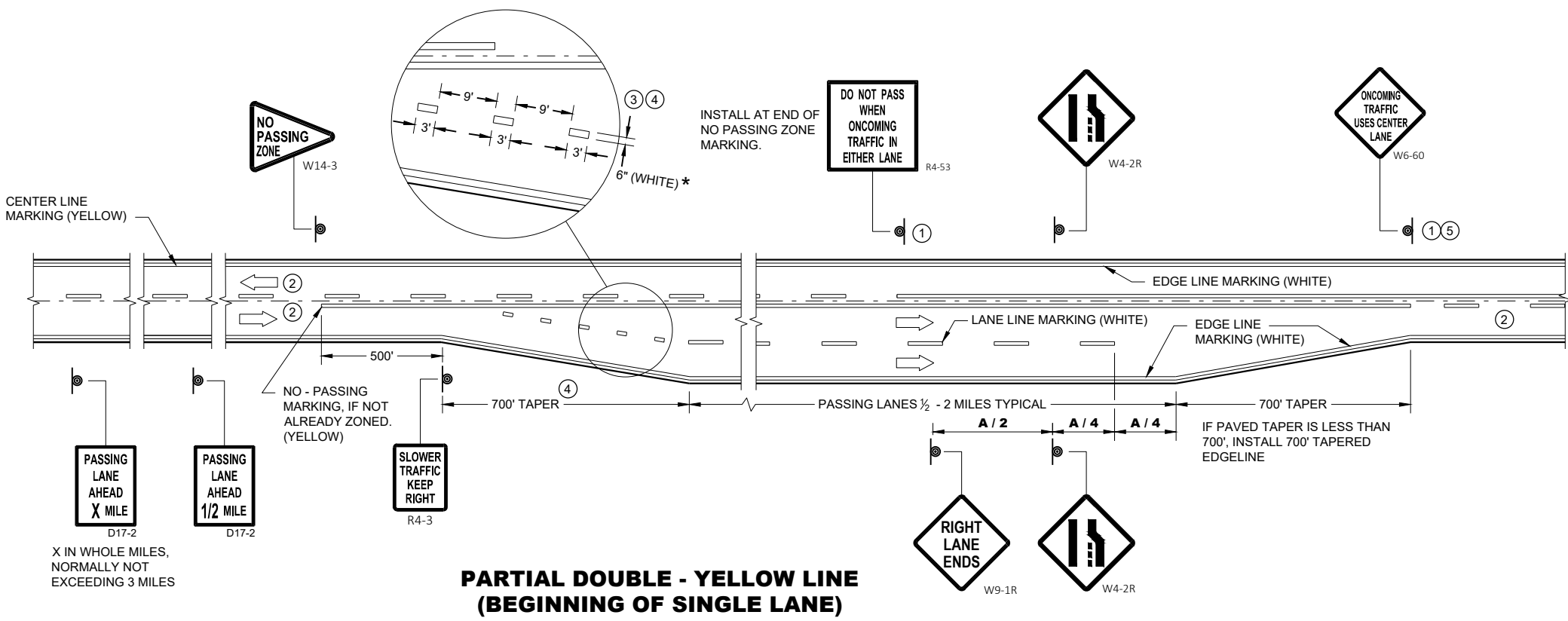
- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

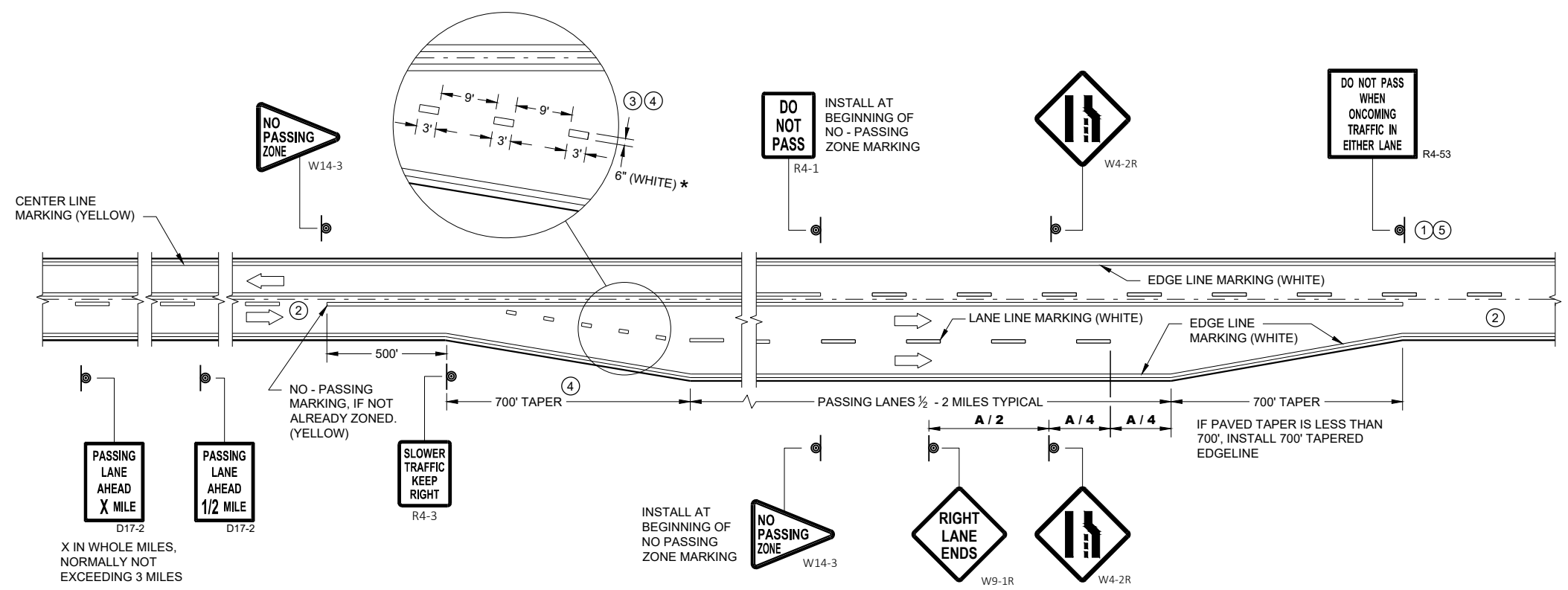
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

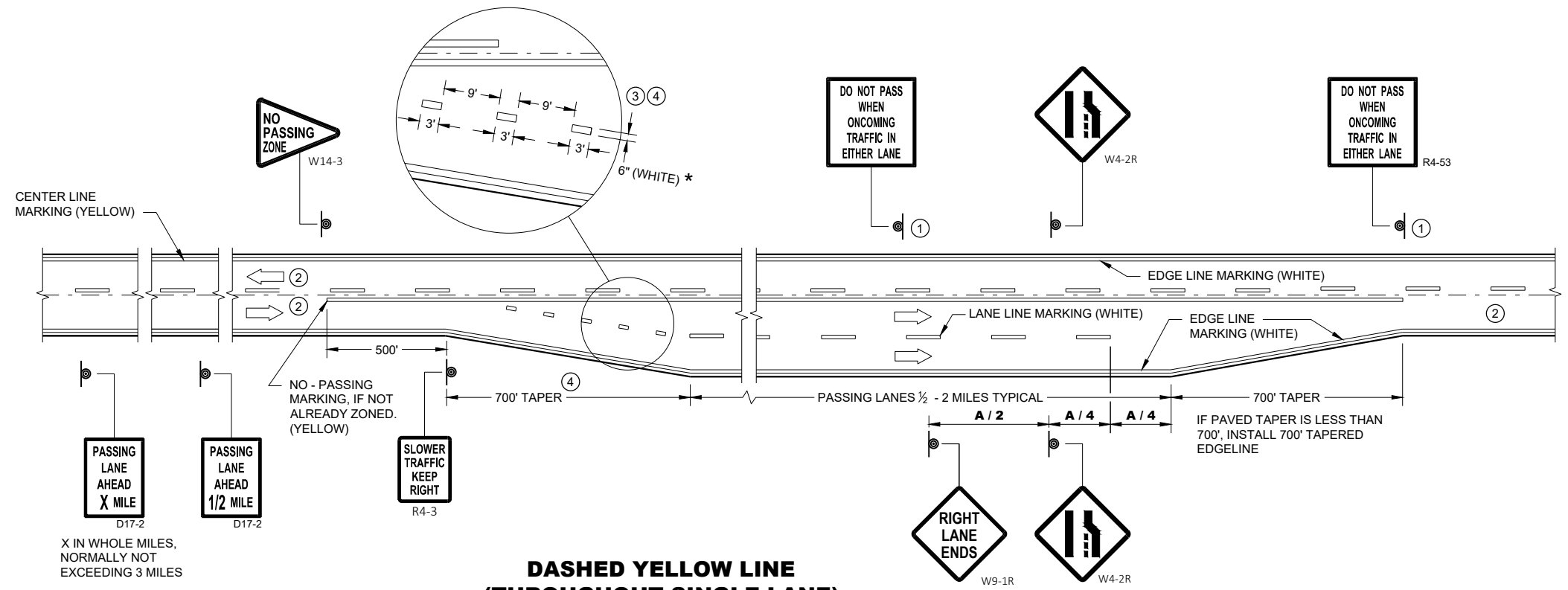


**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE - YELLOW LINE
(END OF SINGLE LANE)**



**DASHED YELLOW LINE
(THROUGHOUT SINGLE LANE)**

GENERAL NOTES

- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990





* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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

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

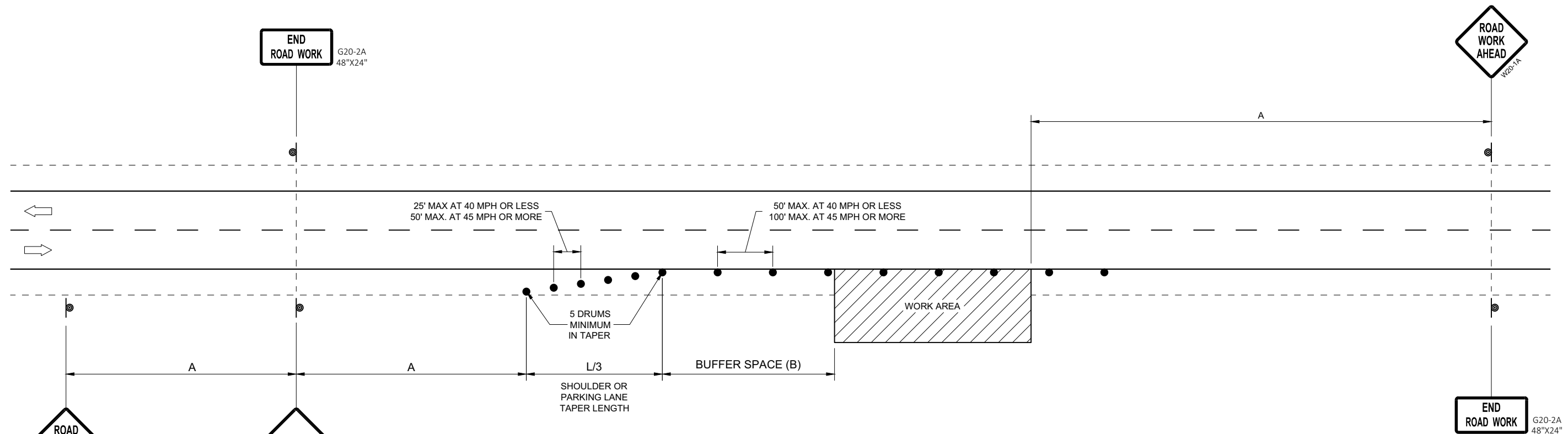
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6



OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

**TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY**

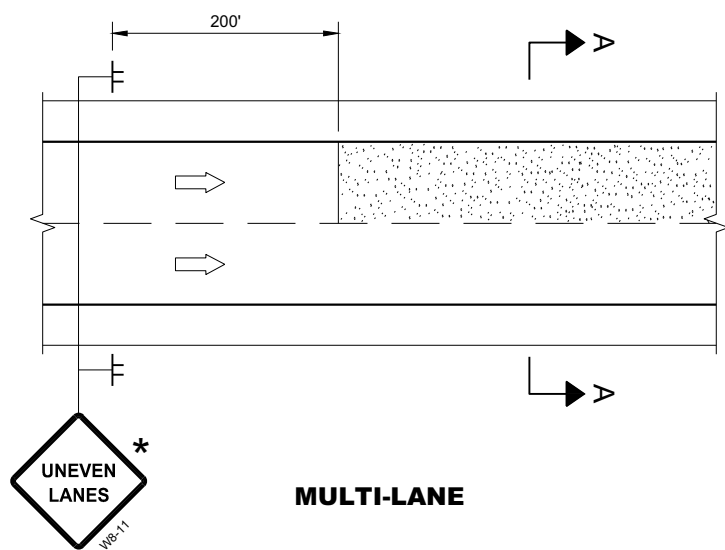
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

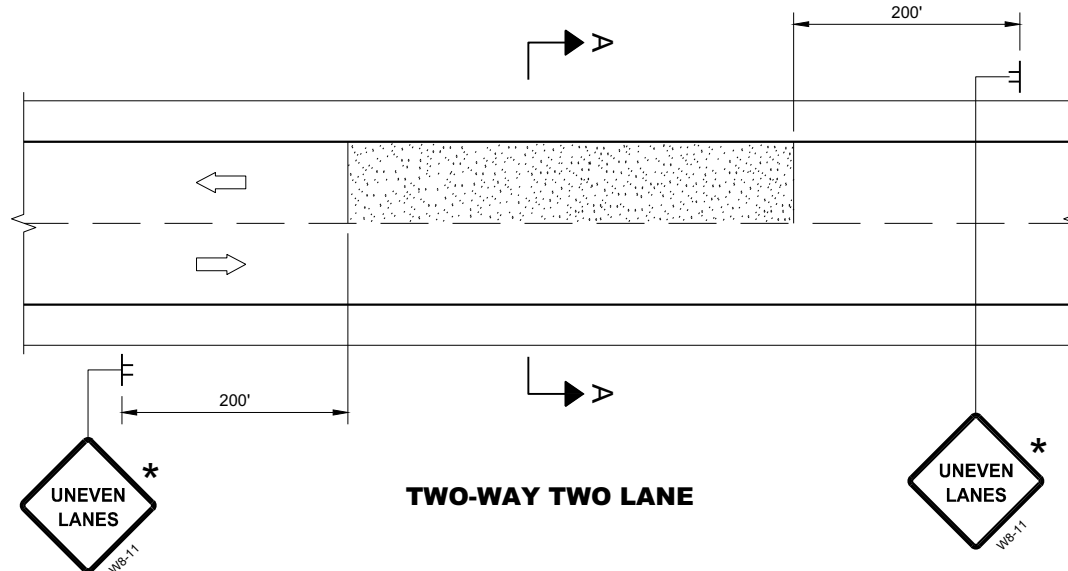
FHWA

SDD 15D28 - 04

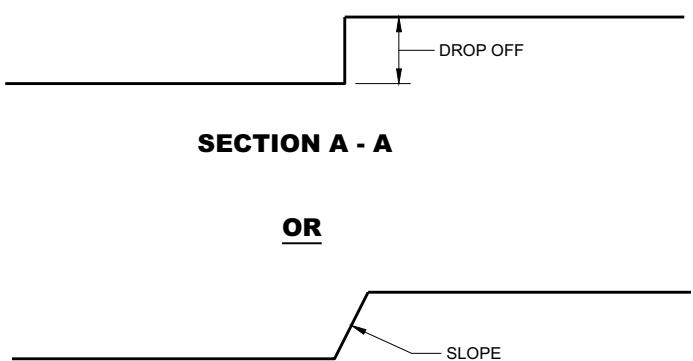
SDD 15D28 - 04



MULTI-LANE



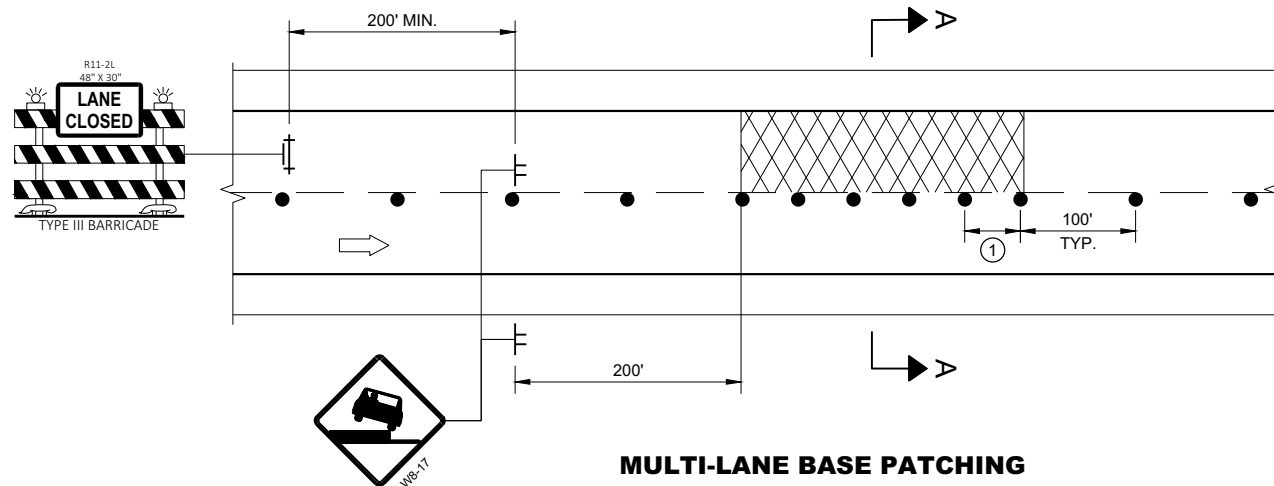
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

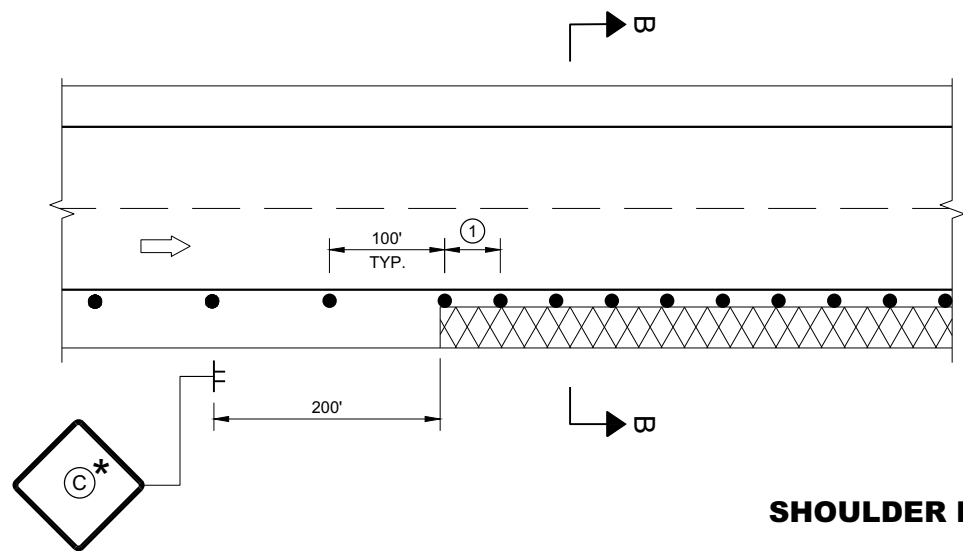
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

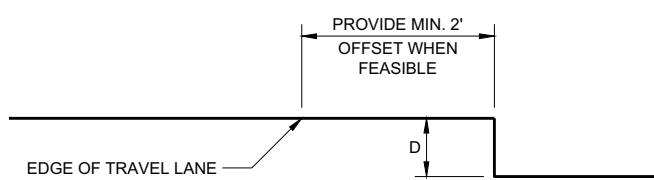
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

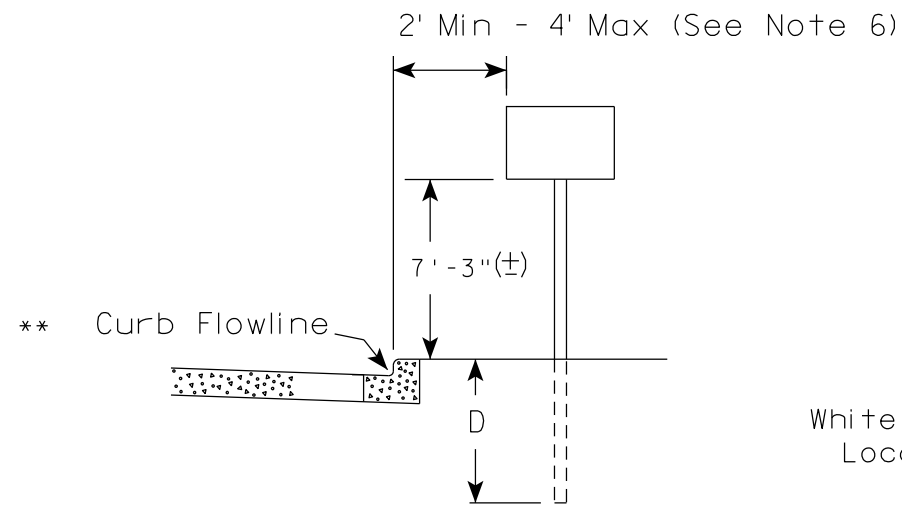
**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

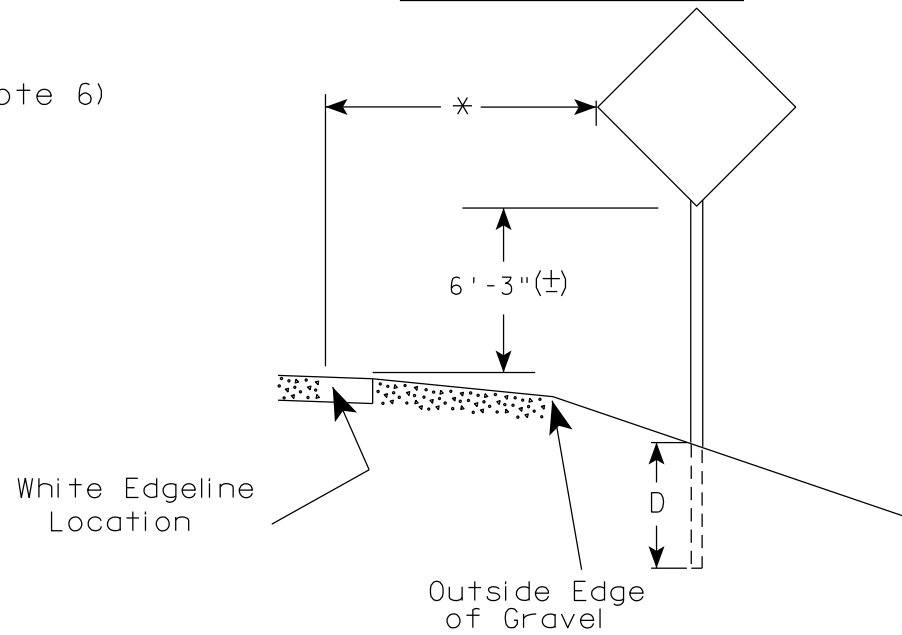
APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

URBAN AREA

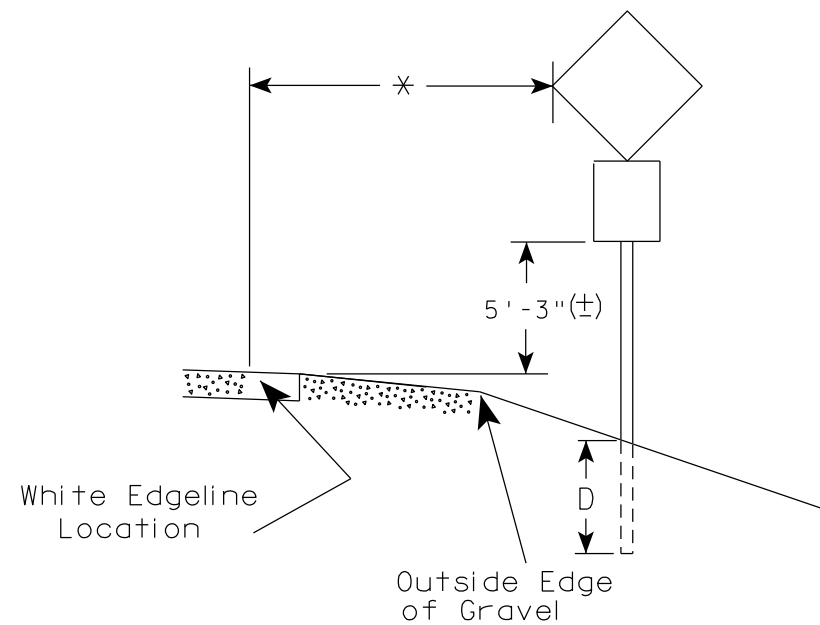
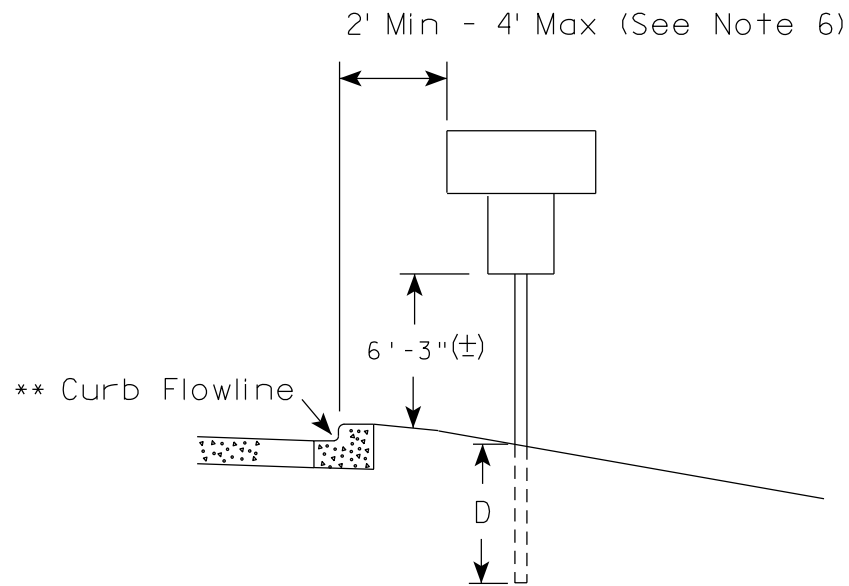


RURAL AREA (See Note 2)



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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.



POST EMBEDMENT DEPTH

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

* * 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.

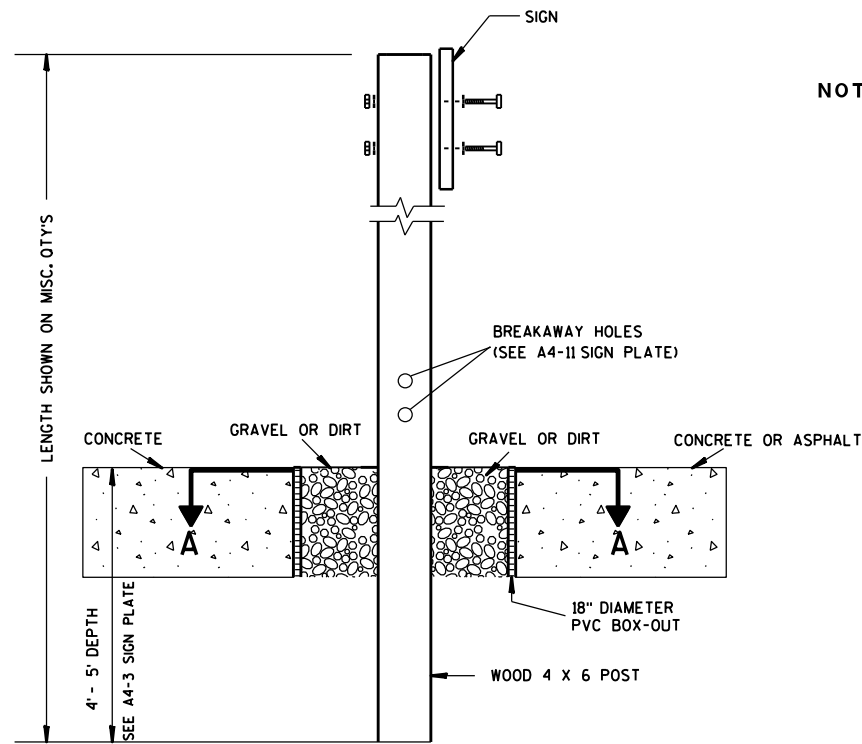
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

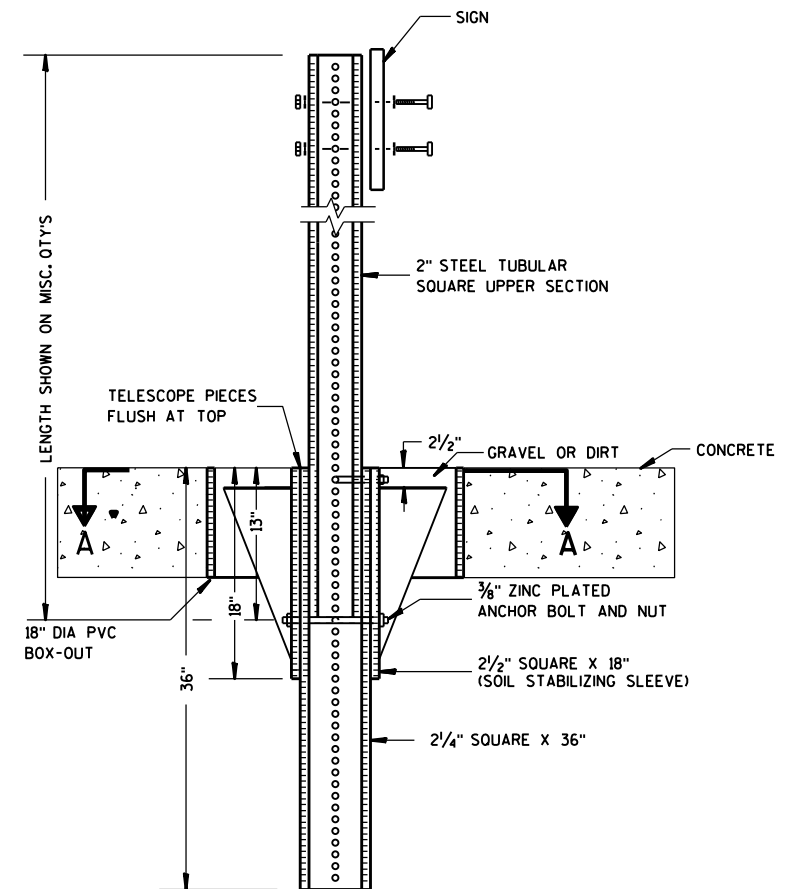
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

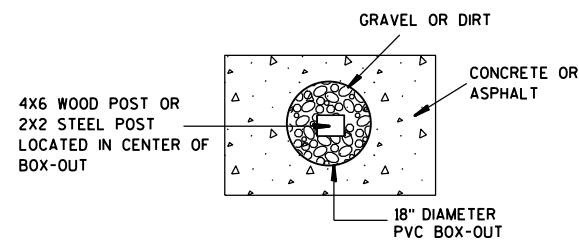
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

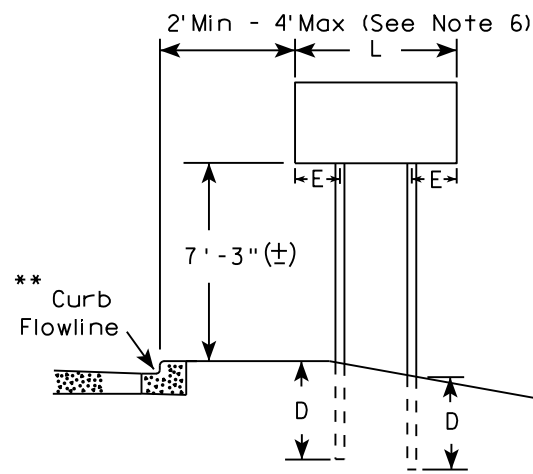
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

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

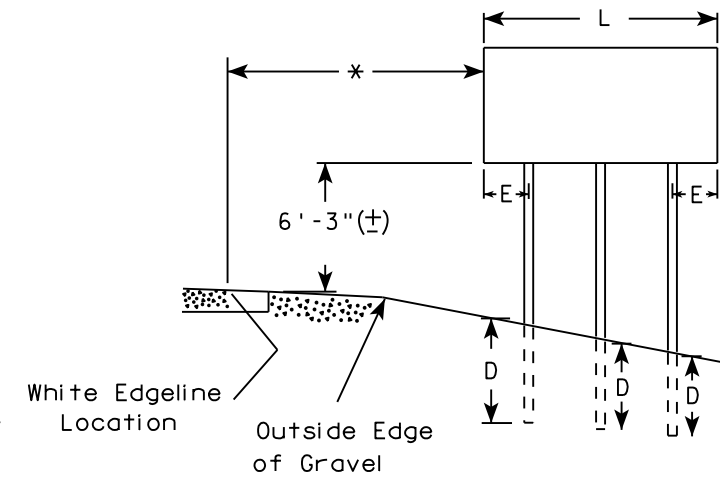
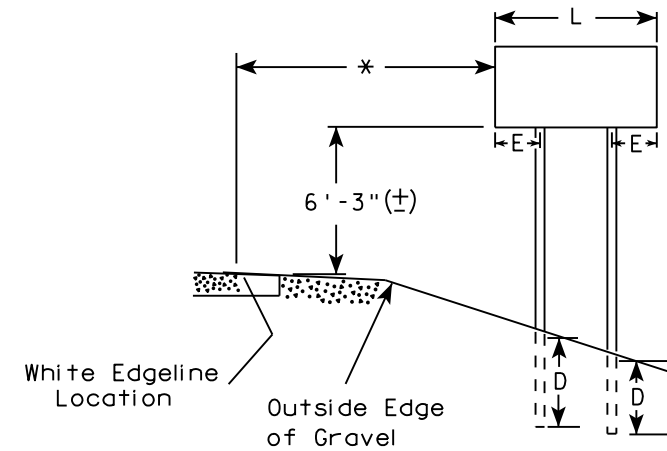
GENERAL NOTES

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

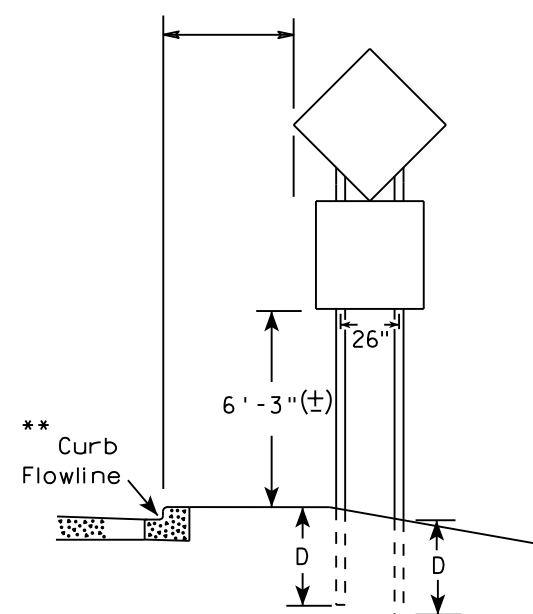
URBAN AREA



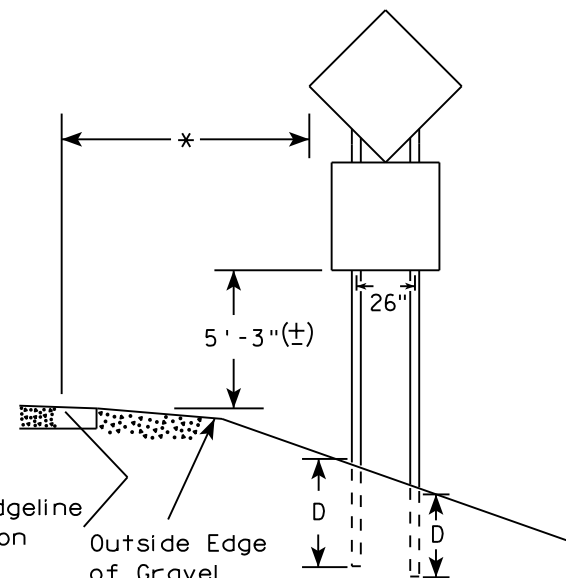
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 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.

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

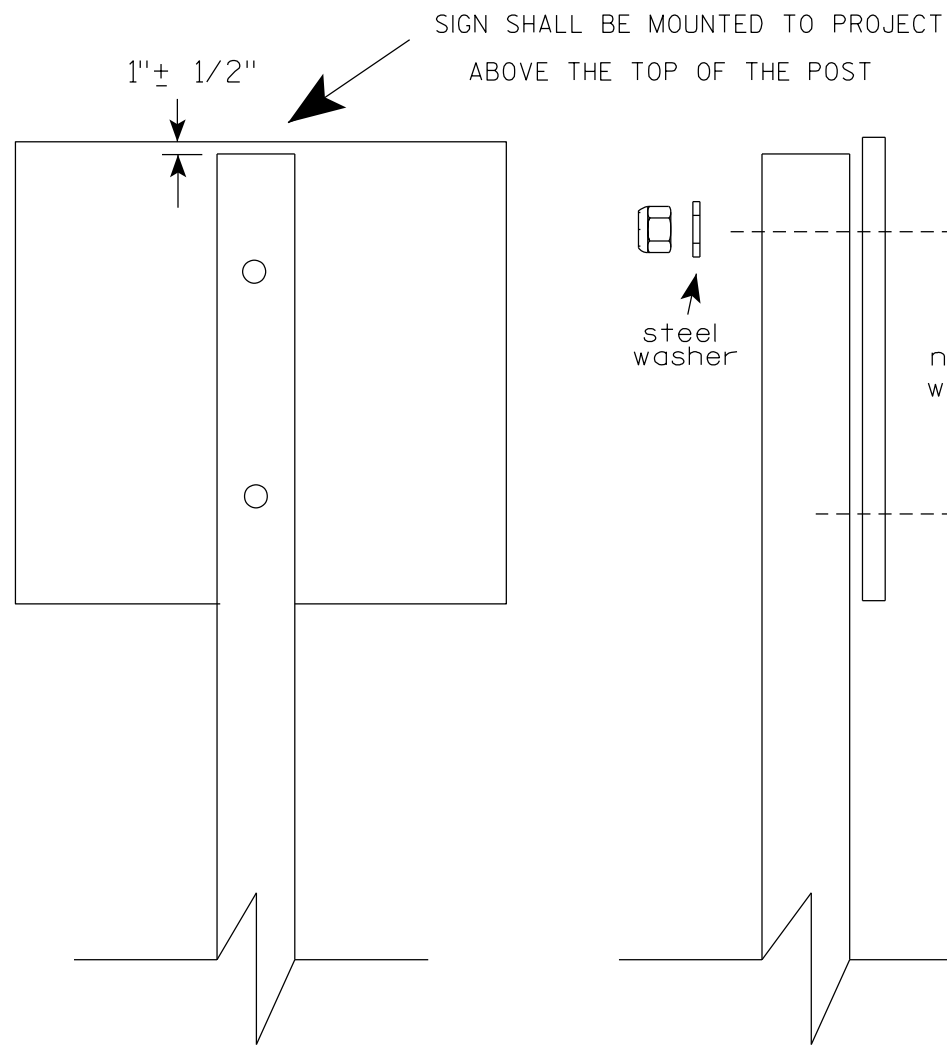
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 8/21/17 PLATE NO. A4-4.15



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

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

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

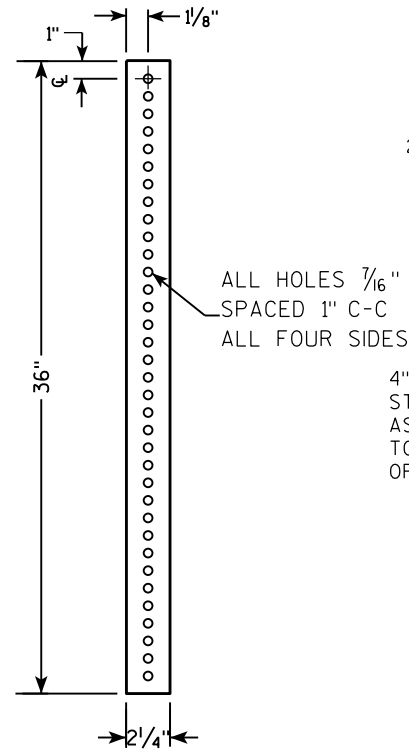
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE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

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

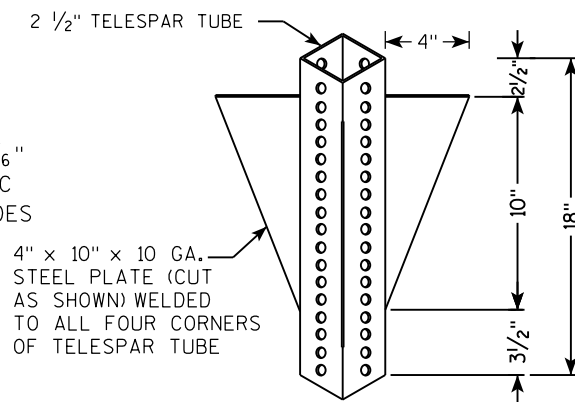
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

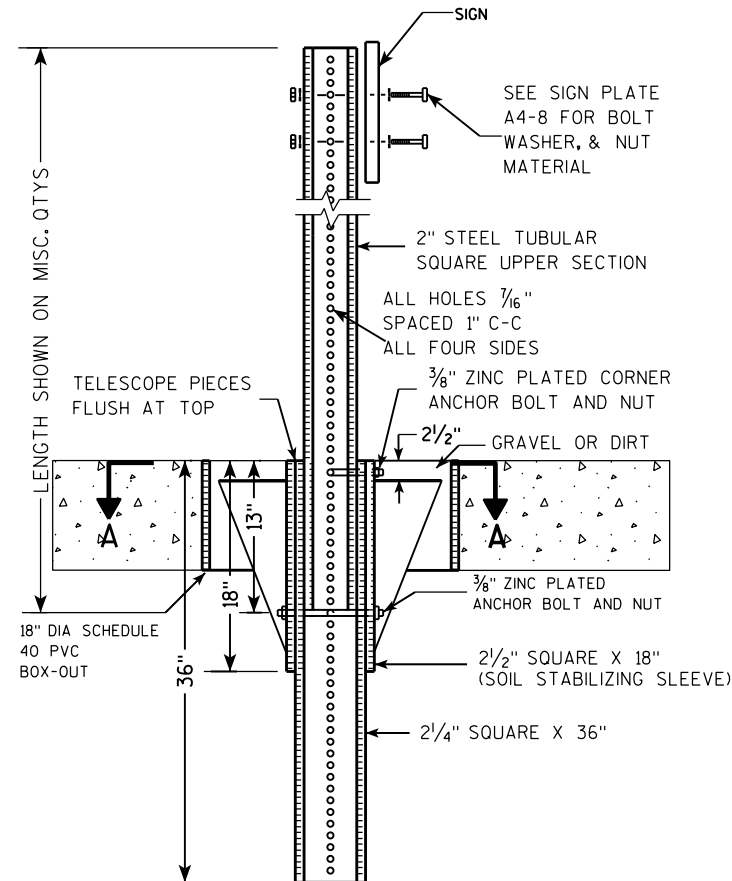
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



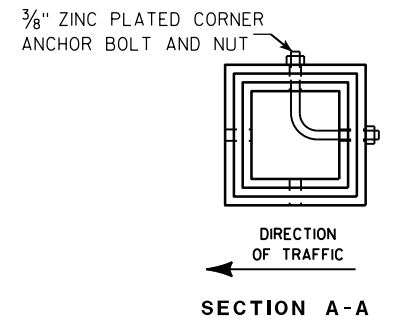
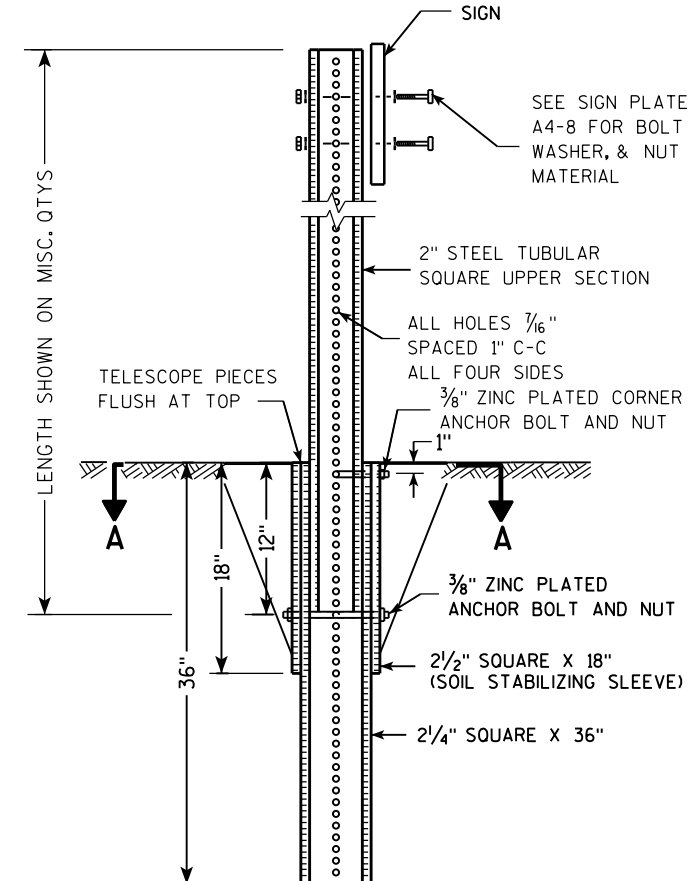
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

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

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

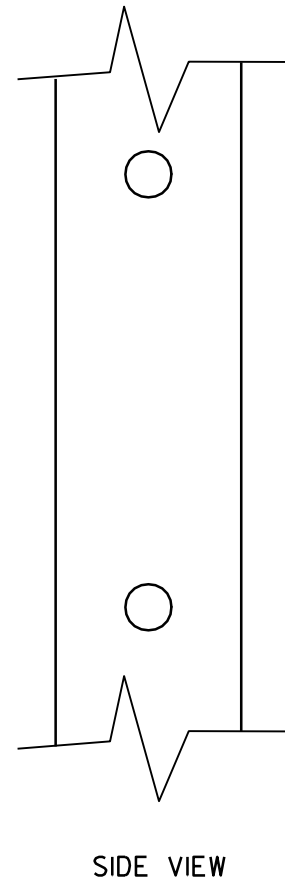
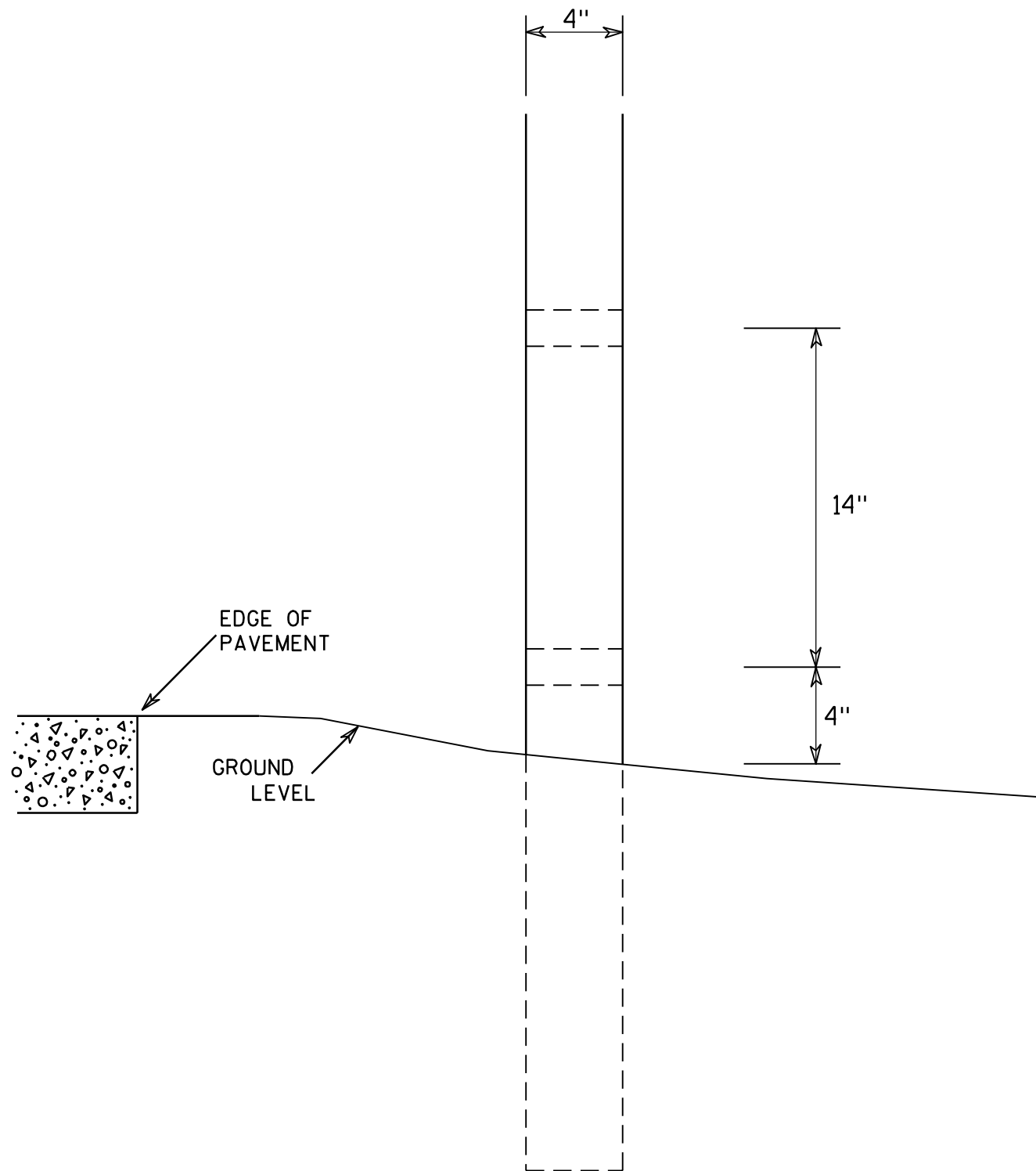
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

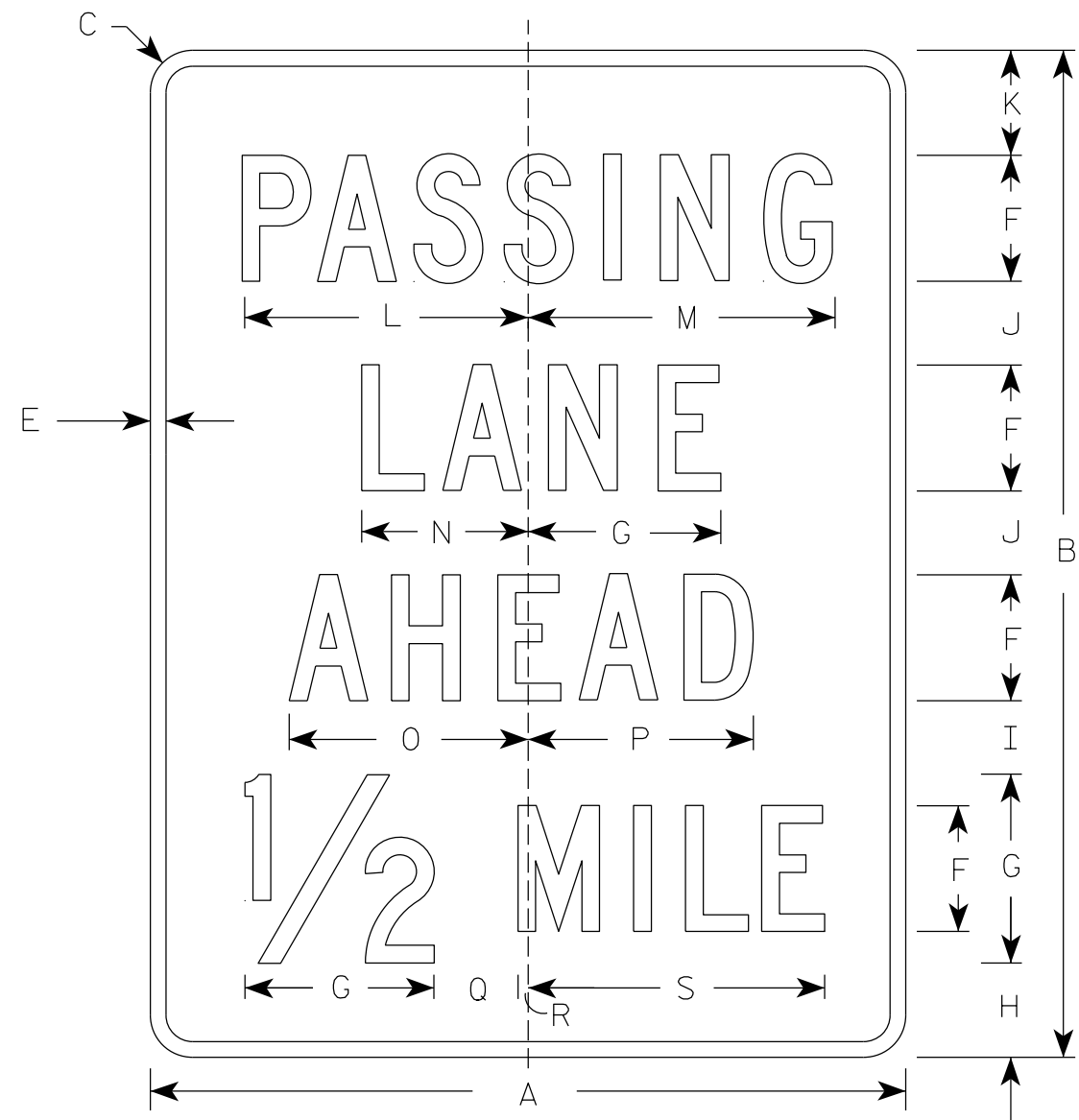
7

7

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

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - C



D17-2

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	36	48	2 1/4		3/4	6	9	4 1/2	3 1/2	4	5	13 5/8	14 1/2	8	11 3/8	10 3/4	4	1/2	14 1/8								12.0
2M	36	48	2 1/4		3/4	6	9	4 1/2	3 1/2	4	5	13 5/8	14 1/2	8	11 3/8	10 3/4	4	1/2	14 1/8								12.0
3																											
4																											
5																											

STANDARD SIGN
D17-2

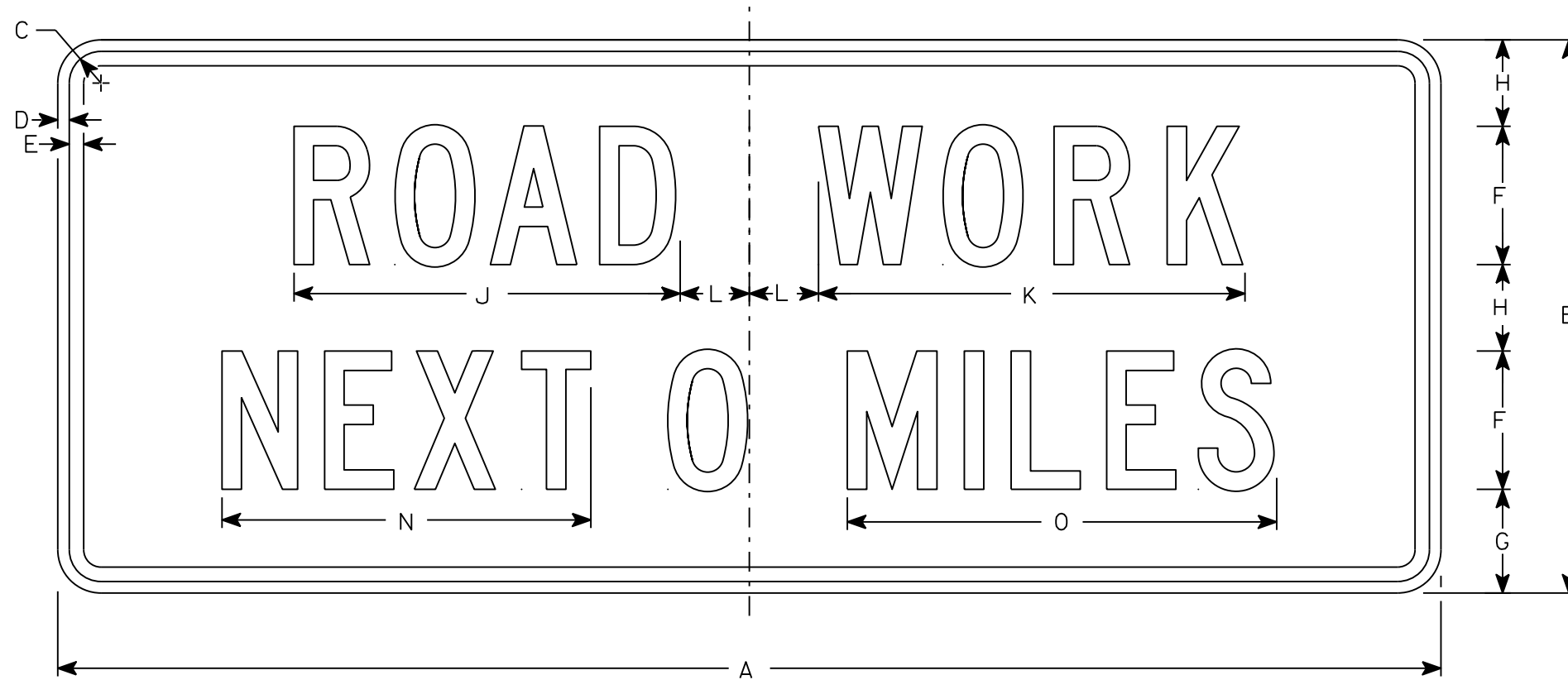
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/18/2019 PLATE NO. D17-2.1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-1

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

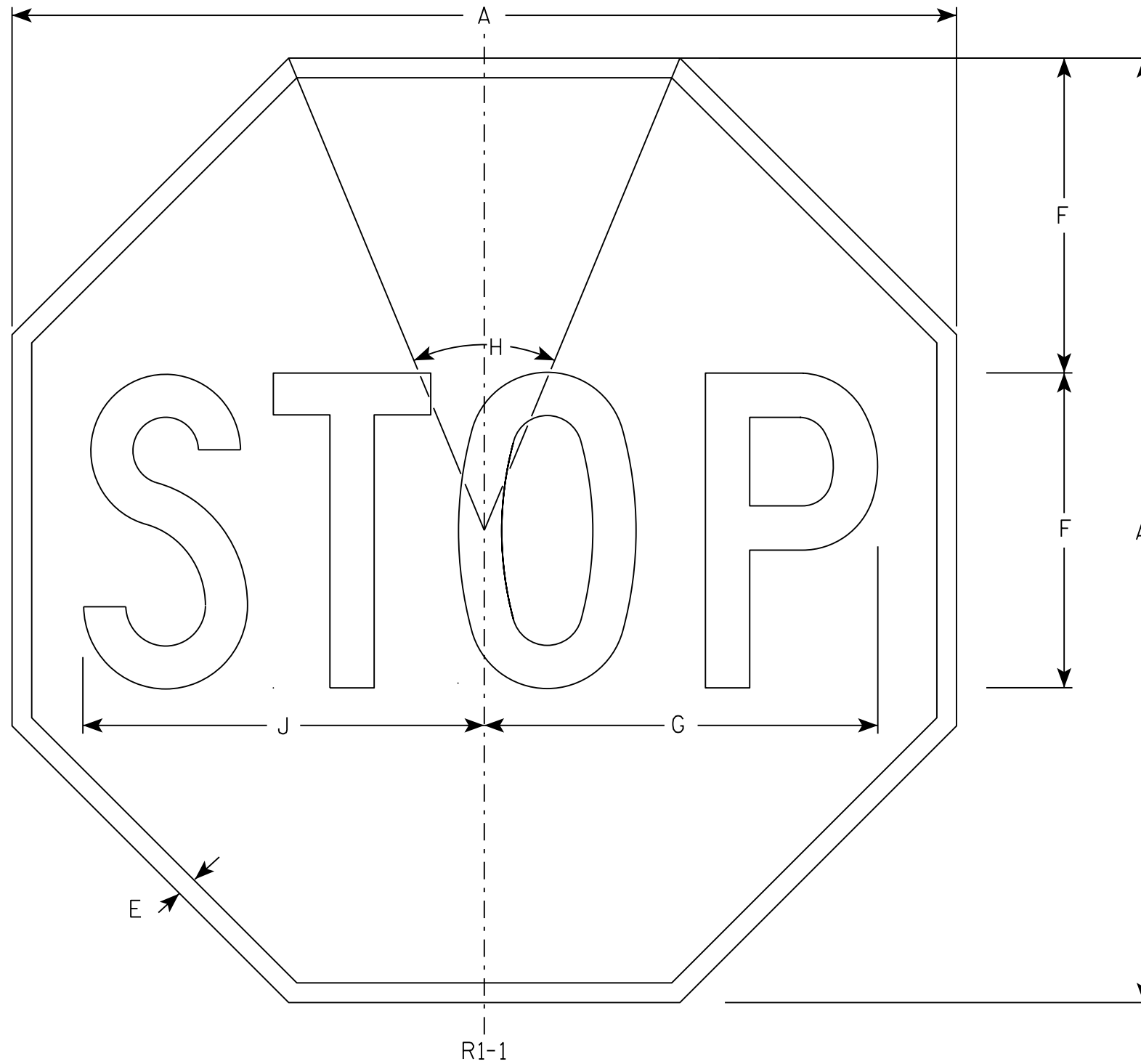
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

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

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	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

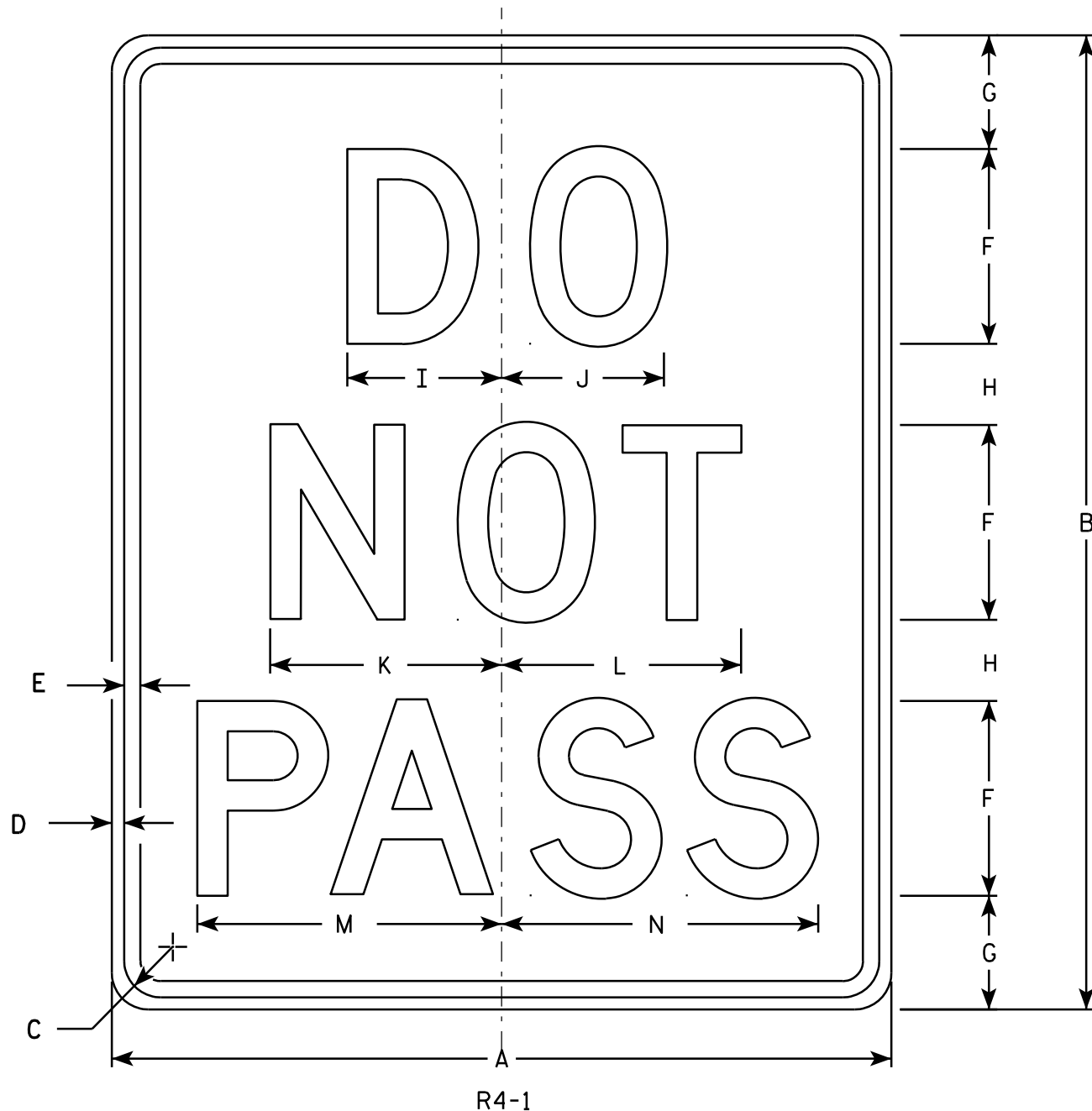
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3																											
4	36	48	1 5/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	2 1/4	3/4	1	10	8	7	7 3/4	8 3/8	11 1/8	12 1/4	15 5/8	16 1/4													20.0

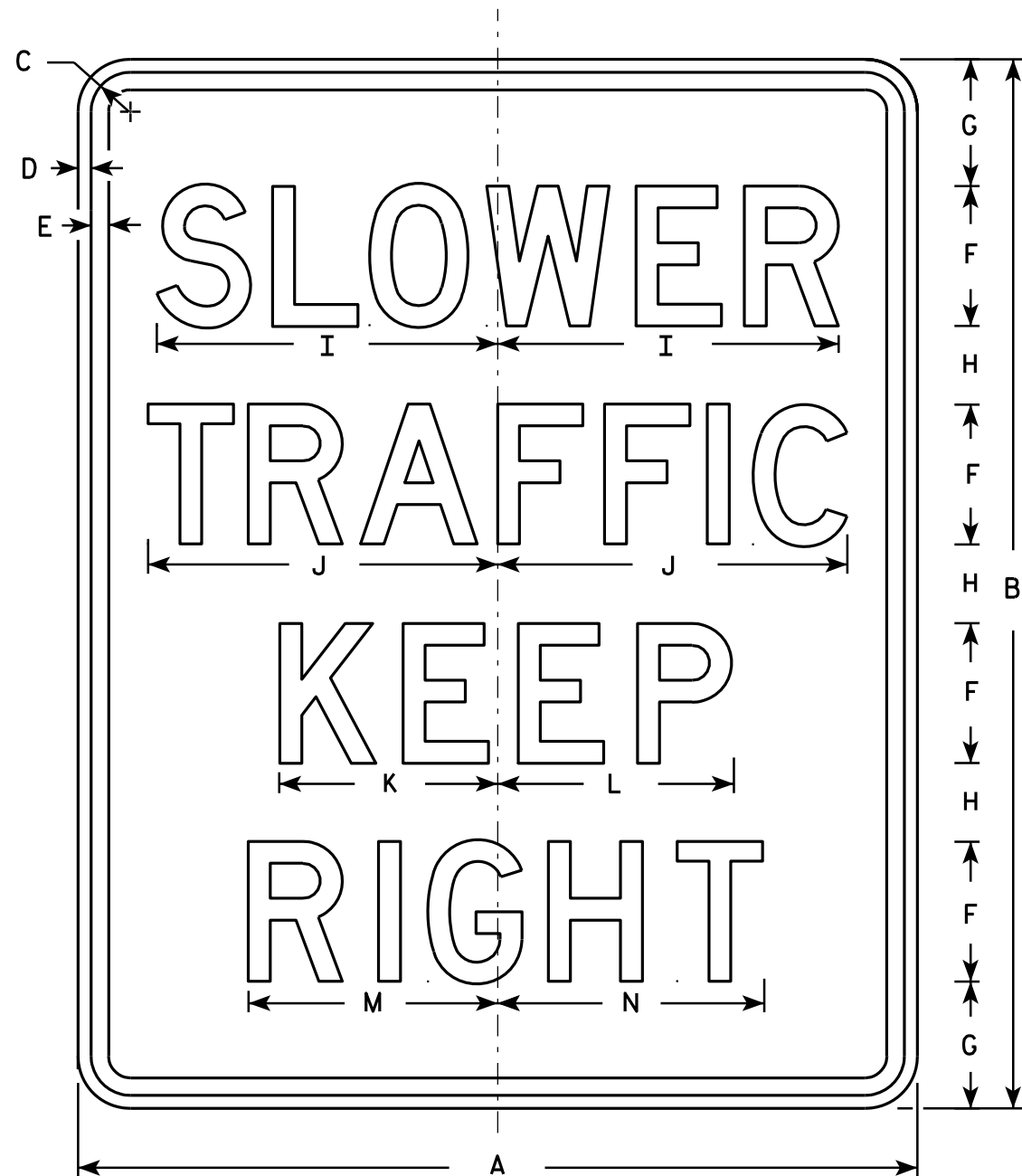
STANDARD SIGN
R4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-1.7

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

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

R4-3

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	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

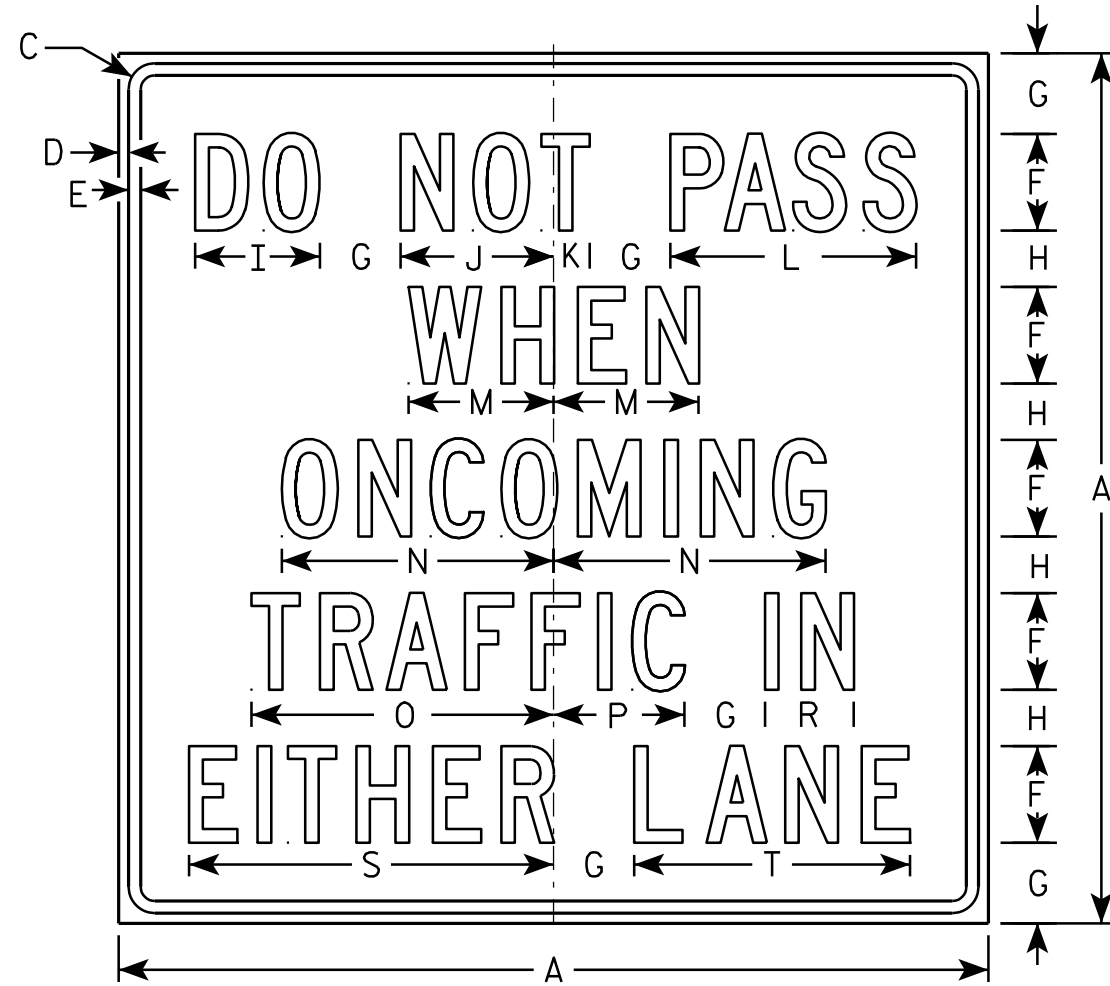
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.



R4-53

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	54		1 5/8	5/8	3/4	6	5	3 1/2	7 3/4	9 1/2	2 1/4	15 1/4	9	16 7/8	18 3/4	8 1/8		5 1/2	22 5/8	17 1/8							20.25
2M	54		1 5/8	5/8	3/4	6	5	3 1/2	7 3/4	9 1/2	2 1/4	15 1/4	9	16 7/8	18 3/4	8 1/8		5 1/2	22 5/8	17 1/8							20.25
3																											
4																											
5																											

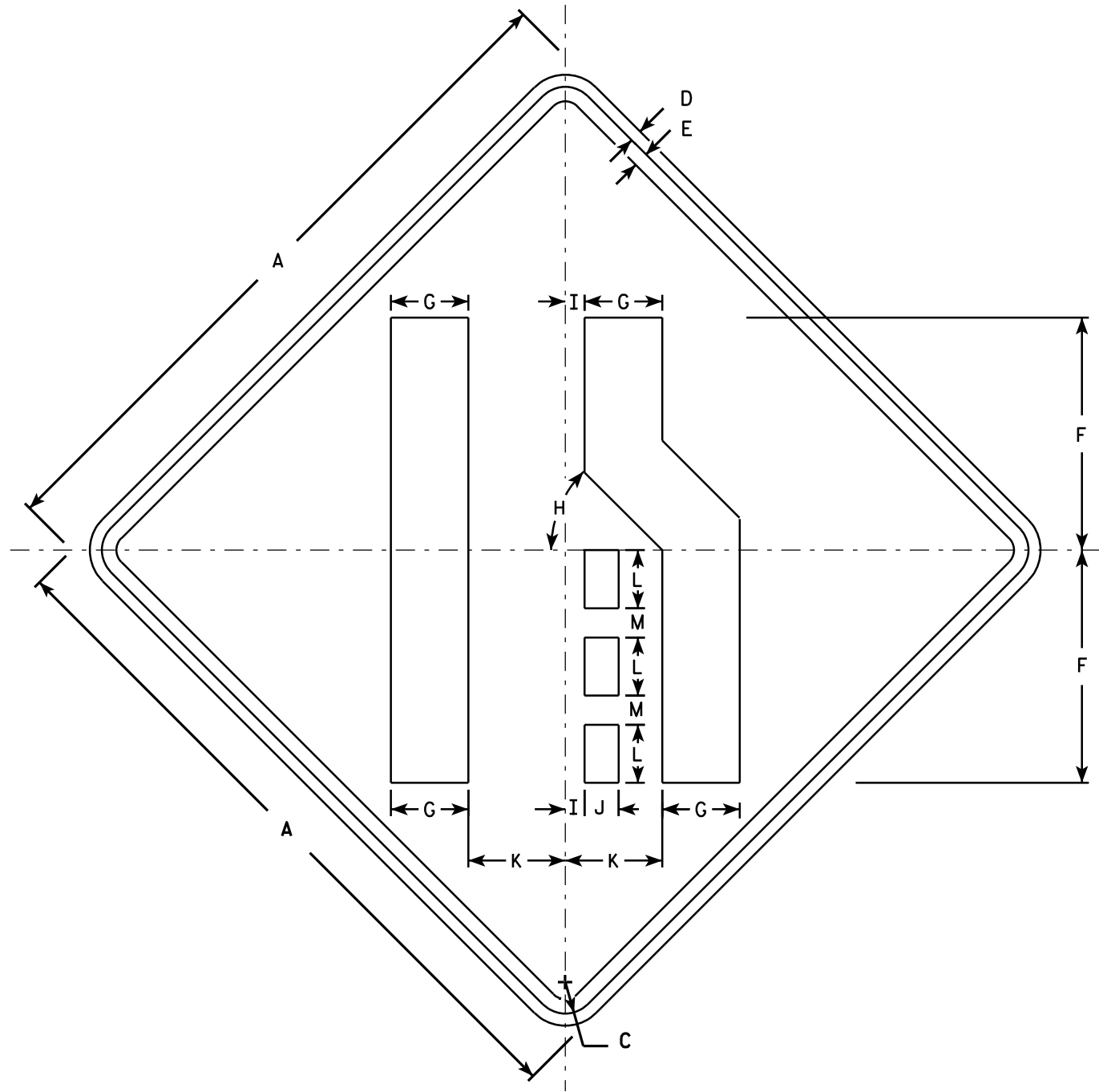
STANDARD SIGN
R4-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/2/10 PLATE NO. R4-53.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. 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.
4. W4-2L is the same as W4-2R except the symbols reversed along the vertical centerline.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

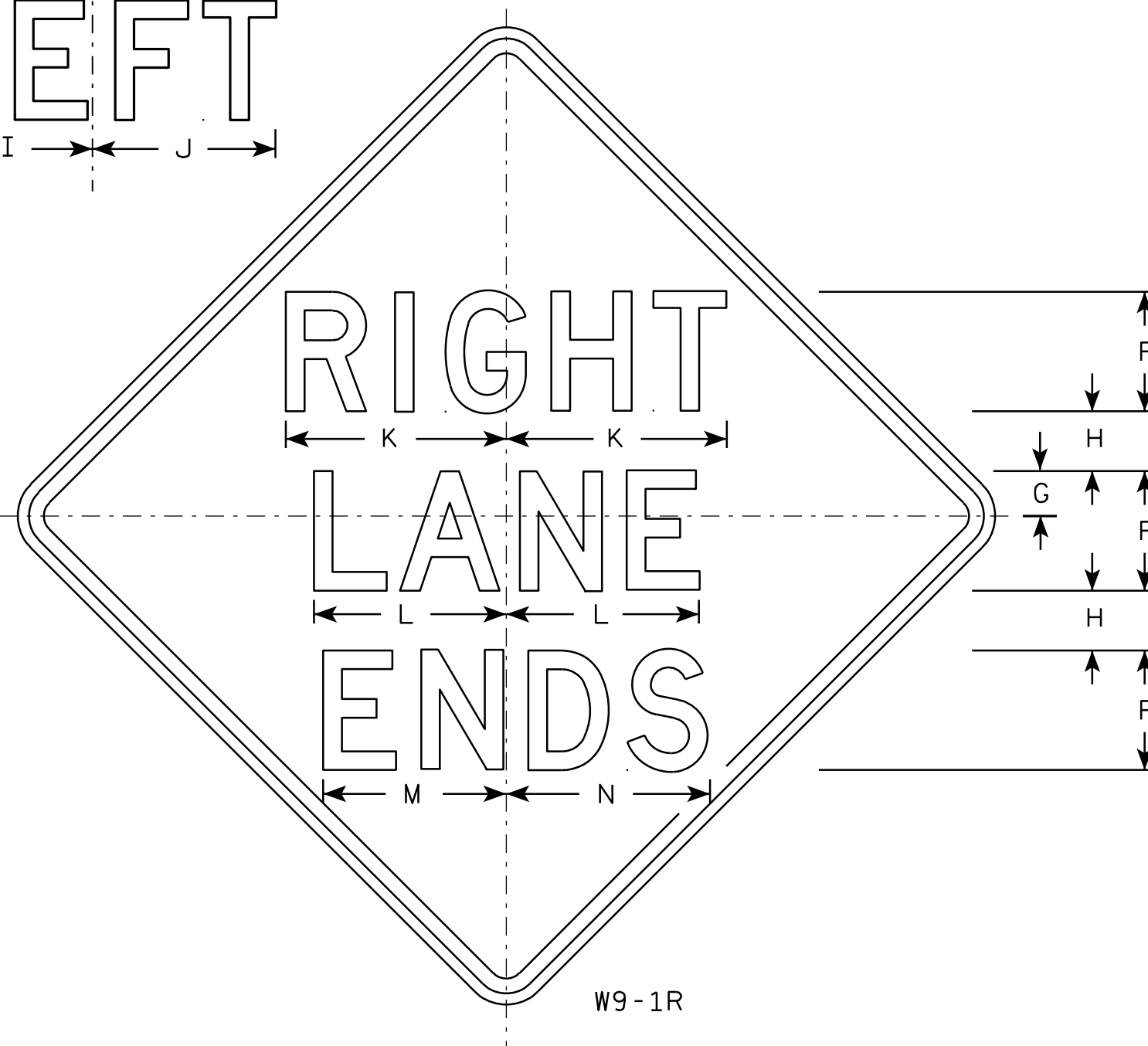
STANDARD SIGN
W4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

LEFT



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - D
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. W9-1L same as W9-1R except the word Left replaces Right.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

STANDARD SIGN

W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

SHEET NO:

E

USH 10 (EB PASSING LANE)
STA 61+00 - STA 156+00, RT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
61+00	0	28	2	0	0	0	0	0	0	0	0	0	0	0
62+00	100	30	2	0	0	107	7	0	0	107	7	0	0	100
63+00	100	28	2	0	0	107	7	0	0	214	14	0	0	200
64+00	100	40	2	1	0	127	7	2	0	341	21	3	0	317
65+00	100	37	2	14	0	143	7	28	0	484	28	41	0	416
66+00	100	53	2	32	0	167	7	85	0	651	35	155	0	461
66+71	71	169	2	0	0	291	5	42	0	942	40	212	0	690
67+00	29	95	2	7	0	144	2	4	0	1,086	42	217	0	827
68+00	100	68	2	18	0	302	7	46	0	1,388	49	279	0	1,060
68+54	54	63	2	17	0	131	4	35	0	1,519	53	327	0	1,139
69+00	46	62	2	13	0	107	3	25	0	1,626	56	360	0	1,210
70+00	100	65	2	7	0	236	7	37	0	1,862	63	410	0	1,389
71+00	100	71	2	6	0	252	7	24	0	2,114	70	443	0	1,601
72+00	100	68	2	7	0	258	7	25	0	2,372	77	477	0	1,818
72+47	47	96	2	0	0	143	3	6	0	2,515	80	485	0	1,950
73+00	53	54	2	13	0	147	4	13	0	2,662	84	502	0	2,076
74+00	100	52	2	14	0	196	7	50	0	2,858	91	570	0	2,197
75+00	100	51	2	16	0	191	7	56	0	3,049	98	645	0	2,306
76+00	100	45	2	15	0	178	7	57	0	3,227	105	722	0	2,400
77+00	100	45	2	13	0	166	7	52	0	3,393	112	792	0	2,489
78+00	100	53	2	12	0	180	7	46	0	3,573	119	855	0	2,599
79+00	100	47	2	13	0	185	7	46	0	3,758	126	917	0	2,715
79+52	52	89	2	0	0	132	4	13	0	3,890	130	934	0	2,826
80+00	48	52	2	9	0	124	4	8	0	4,014	134	945	0	2,935
81+00	100	51	2	11	0	191	7	36	0	4,205	141	994	0	3,070
82+00	100	51	2	9	0	189	7	37	0	4,394	148	1,044	0	3,202
83+00	100	53	2	8	0	192	7	31	0	4,586	155	1,085	0	3,346
84+00	100	71	2	6	0	229	7	25	0	4,815	162	1,119	0	3,534
85+00	100	78	2	6	0	275	7	22	0	5,090	169	1,149	0	3,772
86+00	100	60	2	15	0	255	7	39	0	5,345	176	1,202	0	3,968
87+00	100	55	2	20	0	212	7	65	0	5,557	183	1,289	0	4,085
88+00	100	29	2	44	0	155	7	119	0	5,712	190	1,450	0	4,072
89+00	100	58	2	32	0	161	7	140	0	5,873	197	1,639	0	4,037
90+00	100	43	2	45	0	187	7	142	0	6,060	204	1,831	0	4,025
91+00	100	44	2	44	0	161	7	164	0	6,221	211	2,052	0	3,958
92+00	100	107	2	0	0	279	7	81	0	6,500	218	2,161	0	4,121
92+07	7	105	2	0	0	27	1	0	0	6,527	219	2,161	0	4,147
93+00	93	42	2	52	0	254	7	89	0	6,781	226	2,282	0	4,274
94+00	100	60	2	30	0	189	7	151	0	6,970	233	2,485	0	4,252
95+00	100	60	2	26	0	223	7	104	0	7,193	240	2,626	0	4,327
96+00	100	49	2	34	0	203	7	112	0	7,396	247	2,777	0	4,372
97+00	100	34	2	39	0	155	7	135	0	7,551	254	2,959	0	4,338
98+00	100	28	2	44	0	116	7	154	0	7,667	261	3,167	0	4,239
99+00	100	30	2	37	0	108	7	151	0	7,775	268	3,371	0	4,136
100+00	100	34	2	31	0	119	7	127	0	7,894	275	3,542	0	4,077
101+00	100	41	2	23	0	139	7	100	0	8,033	282	3,677	0	4,074
102+00	100	62	2	15	0	191	7	70	0	8,224	289	3,772	0	4,163
103+00	100	74	2	19	0	252	7	63	0	8,476	296	3,857	0	4,323
104+00	100	72	2	16	0	269	7	65	0	8,745	303	3,945	0	4,497
105+00	100	72	2	12	0	267	7	52	0	9,012	310	4,015	0	4,687
106+00	100	55	2	11	0	235	7	43	0	9,247	317	4,073	0	4,857
107+00	100	41	2	16	0	176	7	50	0	9,423	324	4,140	0	4,959

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	((ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

PROJECT NO: 1500-33-71

HWY: USH 10

COUNTY: MANITOWOC

EARTHWORK

SHEET

E

USH 10 (EB PASSING LANE)
STA 61+00 - STA 156+00, RT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL	EXPANDED ROCK	
108+00	100	29	2	29	0	129	7	83	0	9,552	331	4,253	0	4,969
109+00	100	33	2	35	0	115	7	120	0	9,667	338	4,415	0	4,915
110+00	100	30	2	34	0	116	7	128	0	9,783	345	4,587	0	4,851
111+00	100	32	2	21	0	115	7	101	0	9,898	352	4,724	0	4,822
111+69	69	79	2	0	0	142	5	27	0	10,040	357	4,760	0	4,923
112+00	31	60	2	10	0	80	2	6	0	10,120	359	4,768	0	4,993
113+00	100	48	2	6	0	199	7	29	0	10,319	366	4,807	0	5,146
113+27	27	57	2	0	0	52	2	3	0	10,371	368	4,811	0	5,192
114+00	73	32	2	23	0	120	5	31	0	10,491	373	4,853	0	5,265
115+00	100	29	2	30	0	113	7	97	0	10,604	380	4,984	0	5,240
116+00	100	24	2	35	0	98	7	121	0	10,702	387	5,148	0	5,167
116+37	37	36	2	17	0	41	3	35	0	10,743	390	5,195	0	5,158
116+67	30	66	2	0	0	57	2	9	0	10,800	392	5,207	0	5,201
117+00	33	40	2	16	0	65	2	10	0	10,865	394	5,220	0	5,251
117+76	76	47	2	20	0	123	6	50	0	10,988	400	5,288	0	5,300
117+87	11	50	2	24	0	19	1	9	0	11,007	401	5,300	0	5,306
118+00	13	41	2	0	0	22	1	6	0	11,029	402	5,308	0	5,319
119+00	100	41	2	0	0	152	7	0	0	11,181	409	5,308	0	5,464
119+17	17	36	2	78	0	24	1	24	0	11,205	410	5,341	0	5,454
120+00	83	26	2	13	0	96	6	141	0	11,301	416	5,531	0	5,354
121+00	100	28	2	11	0	99	7	44	0	11,400	423	5,590	0	5,387
121+53	53	231	2	0	0	255	4	10	0	11,655	427	5,604	0	5,624
121+80	27	172	2	6	0	200	2	3	0	11,855	429	5,608	0	5,818
122+00	20	91	2	1	29	98	1	2	11	11,953	430	5,594	12	5,929
122+80	80	28	2	1	87	176	6	3	172	12,129	436	5,343	201	6,350
123+00	20	27	2	2	85	20	1	1	64	12,149	437	5,249	272	6,463
124+00	100	27	2	2	128	101	7	7	395	12,250	444	4,672	706	7,134
125+00	100	29	2	0	173	104	7	4	558	12,354	451	3,849	1,320	8,054
126+00	100	27	2	2	108	104	7	5	520	12,458	458	3,083	1,892	8,917
127+00	100	29	2	1	77	104	7	6	343	12,562	465	2,582	2,269	9,515
128+00	100	28	2	4	65	105	7	9	263	12,667	472	2,204	2,559	9,991
128+30	30	28	2	5	62	31	2	5	71	12,698	474	2,105	2,637	10,119
129+00	70	26	2	7	63	70	5	15	163	12,768	479	1,883	2,816	10,406
129+50	50	26	2	6	61	49	4	12	115	12,817	483	1,729	2,943	10,605
130+00	50	26	2	3	59	49	4	8	111	12,866	487	1,575	3,065	10,804
131+00	100	47	2	1	86	136	7	7	268	13,002	494	1,186	3,359	11,322
131+40	40	59	2	0	86	79	3	1	127	13,081	497	999	3,499	11,585
132+00	60	127	2	0	0	207	4	0	95	13,288	501	858	3,604	11,929
132+86	86	97	2	0	0	358	6	0	0	13,646	507	858	3,604	12,281
133+00	14	97	2	0	0	50	1	0	0	13,696	508	858	3,604	12,330
134+00	100	49	2	6	0	270	7	10	0	13,966	515	871	3,604	12,580
135+00	100	73	2	4	0	226	7	17	0	14,192	522	894	3,604	12,776
136+00	100	79	2	3	0	282	7	13	0	14,474	529	912	3,604	13,033
137+00	100	62	2	6	0	262	7	18	0	14,736	536	936	3,604	13,264
138+00	100	75	2	19	0	254	7	46	0	14,990	543	998	3,604	13,449
139+00	100	39	2	68	0	211	7	161	0	15,201	550	1,216	3,604	13,435
140+00	100	33	2	99	0	133	7	310	0	15,334	557	1,634	3,604	13,143
141+00	100	41	2	101	0	136	7	372	0	15,470	564	2,136	3,604	12,770
141+70	70	50	2	112	0	118	5	277	0	15,588	569	2,510	3,604	12,509
142+00	30	53	2	117	0	57	2	127	0	15,645	571	2,682	3,604	12,392
143+00	100	33	2	143	0	159	7	482	0	15,804	578	3,332	3,604	11,894
144+00	100	51	2	147	0	155	7	538	0	15,959	585	4,059	3,604	11,315
144+30	30	49	2	149	0	55	2	165	0	16,014	587	4,281	3,604	11,146

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	((ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

USH 10 (EB PASSING LANE)
STA 61+00 - STA 156+00, RT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
145+00	70	50	2	128	0	128	5	360	0	16,142	592	4,767	3,604	10,783
146+00	100	0	2	0	0	92	7	238	0	16,234	599	5,089	3,604	10,546
147+00	100	142	2	85	0	264	7	157	0	16,498	606	5,301	3,604	10,591
148+00	100	133	2	80	0	511	7	305	0	17,009	613	5,712	3,604	10,684
149+00	100	143	2	56	0	512	7	252	0	17,521	620	6,053	3,604	10,848
150+00	100	116	2	34	0	479	7	167	0	18,000	627	6,278	3,604	11,095
151+00	100	112	2	15	0	422	7	90	0	18,422	634	6,400	3,604	11,388
152+00	100	111	2	5	0	413	7	37	0	18,835	641	6,449	3,604	11,745
152+80	80	132	2	4	0	360	6	13	0	19,195	647	6,467	3,604	12,081
152+90	10	146	2	4	0	52	1	1	0	19,247	648	6,468	3,604	12,131
153+00	10	154	2	4	0	56	1	1	0	19,303	649	6,470	3,604	12,184
154+00	100	139	2	3	0	543	7	13	0	19,846	656	6,487	3,604	12,703
154+30	30	109	2	2	0	138	2	3	0	19,984	658	6,491	3,604	12,835
154+40	10	92	2	2	0	37	1	1	0	20,021	659	6,493	3,604	12,869
155+00	60	142	2	0	0	260	4	2	0	20,281	663	6,495	3,604	13,123
155+75	75	31	2	0	0	240	6	0	0	20,521	669	6,495	3,604	13,357
156+00	25	30	2	0	0	28	2	0	0	20,549	671	6,495	3,604	13,383
COLUMN TOTALS						20,549	671	8,415	3,276					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	(ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

PROJECT NO: 1500-33-71

HWY: USH 10

COUNTY: MANITOWOC

EARTHWORK

SHEET

E

USH 10 (WB PASSING LANE)
STA 169+00 - STA 252+00, LT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
169+00	0	26	2	0	0	0	0	0	0	0	0	0	0	0
170+00	100	29	2	33	0	101	7	60	0	101	7	81	0	13
171+00	100	29	2	41	0	107	7	136	0	208	14	265	0	-71
172+00	100	28	2	58	0	106	7	183	0	314	21	512	0	-219
173+00	100	31	2	94	0	109	7	281	0	423	28	891	0	-496
174+00	100	32	2	124	0	117	7	403	0	540	35	1,435	0	-930
175+00	100	27	2	137	0	110	7	483	0	650	42	2,087	0	-1,479
176+00	100	31	2	134	0	108	7	503	0	758	49	2,766	0	-2,057
177+00	100	73	2	140	0	194	7	508	0	952	56	3,452	0	-2,556
177+56	56	342	2	0	0	429	4	145	0	1,381	60	3,648	0	-2,327
178+00	44	40	2	119	0	313	3	97	0	1,694	63	3,779	0	-2,148
179+00	100	49	2	42	0	165	7	298	0	1,859	70	4,181	0	-2,392
179+77	77	126	2	0	0	252	6	60	0	2,111	76	4,262	0	-2,227
180+00	23	123	2	0	0	104	2	0	0	2,215	78	4,262	0	-2,125
181+00	100	329	2	10	0	839	7	19	0	3,054	85	4,288	0	-1,319
181+20	20	309	2	10	0	236	1	7	0	3,290	86	4,297	0	-1,093
181+30	10	334	2	10	0	119	1	4	0	3,409	87	4,302	0	-980
182+00	70	400	2	7	0	950	5	21	0	4,359	92	4,331	0	-64
183+00	100	457	2	7	0	1,587	7	25	0	5,946	99	4,365	0	1,482
184+00	100	391	2	7	0	1,571	7	25	0	7,517	106	4,398	0	3,013
185+00	100	309	2	5	0	1,297	7	22	0	8,814	113	4,428	0	4,273
186+00	100	321	2	3	0	1,166	7	15	0	9,980	120	4,448	0	5,412
187+00	100	304	2	4	0	1,158	7	13	0	11,138	127	4,466	0	6,545
188+00	100	306	2	5	0	1,130	7	17	0	12,268	134	4,489	0	7,645
189+00	100	374	2	5	0	1,259	7	20	0	13,527	141	4,516	0	8,870
190+00	100	341	2	4	0	1,324	7	17	0	14,851	148	4,539	0	10,164
191+00	100	440	2	4	36	1,445	7	15	68	16,296	155	4,458	75	11,683
191+80	80	539	2	7	21	1,450	6	16	86	17,746	161	4,352	169	13,233
191+90	10	555	2	7	23	203	1	2	8	17,949	162	4,343	178	13,444
192+00	10	563	2	7	25	207	1	2	9	18,156	163	4,332	188	13,661
193+00	100	567	2	7	79	2,092	7	26	191	20,248	170	4,083	398	15,995
194+00	100	408	2	7	110	1,805	7	26	350	22,053	177	3,599	783	18,277
194+10	10	385	2	6	114	147	1	2	42	22,200	178	3,539	829	18,483
195+00	90	262	2	4	138	1,079	7	17	421	23,279	185	2,937	1,293	20,157
195+90	90	71	2	1	112	554	7	8	416	23,833	192	2,330	1,750	21,311
196+00	10	46	2	1	108	22	1	0	41	23,855	193	2,269	1,795	21,393
197+00	100	45	2	2	0	168	7	6	201	24,023	200	1,979	2,016	21,844
198+00	100	32	2	37	0	143	7	73	0	24,166	207	2,077	2,016	21,882
199+00	100	46	2	91	0	146	7	238	0	24,312	214	2,399	2,016	21,699
200+00	100	34	2	93	0	149	7	341	0	24,461	221	2,859	2,016	21,381
201+00	100	36	2	94	0	130	7	347	0	24,591	228	3,327	2,016	21,036
201+96	96	154	2	0	0	339	7	168	0	24,930	235	3,554	2,016	21,141
202+00	4	159	2	0	0	21	0	0	0	24,951	235	3,554	2,016	21,162
203+00	100	36	2	39	0	360	7	72	0	25,311	242	3,651	2,016	21,418
204+00	100	47	2	18	0	154	7	104	0	25,465	249	3,792	2,016	21,424
205+00	100	38	2	37	0	157	7	101	0	25,622	256	3,928	2,016	21,438
206+00	100	31	2	38	0	126	7	139	0	25,748	263	4,116	2,016	21,369
207+00	100	32	2	40	0	115	7	144	0	25,863	270	4,310	2,016	21,283
208+00	100	34	2	21	0	122	7	113	0	25,985	277	4,463	2,016	21,245
209+00	100	37	2	56	0	131	7	143	0	26,116	284	4,656	2,016	21,176
210+00	100	37	2	65	0	136	7	225	0	26,252	291	4,959	2,016	21,002
211+00	100	41	2	51	0	143	7	216	0	26,395	298	5,251	2,016	20,846

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	((ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

USH 10 (WB PASSING LANE)
STA 169+00 - STA 252+00, LT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL	EXPANDED ROCK	
212+00	100	41	2	42	0	152	7	172	0	26,547	305	5,483	2,016	20,759
213+00	100	31	2	23	0	134	7	119	0	26,681	312	5,644	2,016	20,725
214+00	100	45	2	6	0	141	7	52	0	26,822	319	5,714	2,016	20,789
214+90	90	93	2	4	0	230	7	16	0	27,052	326	5,736	2,016	20,990
215+00	10	100	2	4	0	36	1	2	0	27,088	327	5,738	2,016	21,023
216+00	100	115	2	3	0	399	7	13	0	27,487	334	5,756	2,016	21,397
217+00	100	121	2	1	0	437	7	8	0	27,924	341	5,767	2,016	21,816
218+00	100	119	2	3	0	444	7	8	0	28,368	348	5,778	2,016	22,242
219+00	100	119	2	4	0	440	7	13	0	28,808	355	5,795	2,016	22,658
220+00	100	100	2	5	0	405	7	16	0	29,213	362	5,817	2,016	23,034
221+00	100	88	2	7	0	347	7	22	0	29,560	369	5,846	2,016	23,345
221+33	33	89	2	10	0	107	2	10	0	29,667	371	5,860	2,016	23,436
221+64	31	91	2	14	0	103	2	14	0	29,770	373	5,879	2,016	23,518
221+77	13	94	2	15	0	44	1	7	0	29,814	374	5,888	2,016	23,552
222+00	23	118	2	16	0	92	2	14	0	29,906	376	5,907	2,016	23,623
222+34	34	124	2	19	0	151	2	22	0	30,057	378	5,937	2,016	23,742
223+00	66	53	2	0	0	218	5	23	0	30,275	383	5,968	2,016	23,924
223+75	75	81	2	10	0	186	6	14	0	30,461	389	5,987	2,016	24,085
223+85	10	77	2	10	0	30	1	4	0	30,491	390	5,992	2,016	24,109
224+00	15	81	2	11	0	44	1	6	0	30,535	391	6,000	2,016	24,144
225+00	100	101	2	20	0	337	7	57	0	30,872	398	6,077	2,016	24,397
225+78	78	105	2	23	0	297	6	62	0	31,169	404	6,161	2,016	24,604
226+00	22	103	2	21	0	86	2	18	0	31,255	406	6,185	2,016	24,664
227+00	100	104	2	16	2	385	7	69	4	31,640	413	6,273	2,021	24,954
227+08	8	106	2	17	2	32	1	5	1	31,672	414	6,278	2,022	24,980
227+29	21	112	2	19	2	84	2	14	1	31,756	416	6,295	2,023	25,045
227+80	51	95	2	26	37	195	4	43	36	31,951	420	6,300	2,063	25,231
228+00	20	105	2	30	36	74	1	21	27	32,025	421	6,288	2,092	25,316
229+00	100	107	2	39	91	392	7	127	235	32,417	428	6,111	2,351	25,878
230+00	100	268	2	42	0	695	7	150	169	33,112	435	6,062	2,537	26,615
231+00	100	298	2	53	0	1,049	7	176	0	34,161	442	6,300	2,537	27,419
231+50	50	327	2	52	0	578	4	98	0	34,739	446	6,432	2,537	27,861
231+60	10	329	2	51	0	122	1	19	0	34,861	447	6,458	2,537	27,956
232+00	40	359	2	49	0	510	3	74	0	35,371	450	6,557	2,537	28,364
232+50	50	333	2	45	0	641	4	87	0	36,012	454	6,675	2,537	28,883
233+00	50	365	2	45	0	646	4	83	0	36,658	458	6,787	2,537	29,413
234+00	100	390	2	43	0	1,397	7	164	0	38,055	465	7,008	2,537	30,582
235+00	100	372	2	35	0	1,412	7	145	0	39,467	472	7,204	2,537	31,791
236+00	100	334	2	32	0	1,309	7	125	0	40,776	479	7,373	2,537	32,924
237+00	100	281	2	35	0	1,139	7	126	0	41,915	486	7,543	2,537	33,886
238+00	100	240	2	32	0	963	7	124	0	42,878	493	7,710	2,537	34,675
239+00	100	239	2	31	0	886	7	116	0	43,764	500	7,867	2,537	35,397
239+50	50	221	2	26	0	426	4	53	0	44,190	504	7,939	2,537	35,747
239+60	10	210	2	25	0	80	1	9	0	44,270	505	7,951	2,537	35,814
240+00	40	256	2	18	0	346	3	31	0	44,616	508	7,993	2,537	36,115
241+00	100	199	2	13	0	843	7	57	0	45,459	515	8,069	2,537	36,875
241+39	39	170	2	11	0	266	3	17	0	45,725	518	8,092	2,537	37,115
241+72	33	130	2	7	0	185	2	11	0	45,910	520	8,107	2,537	37,283
241+85	13	93	2	5	0	54	1	3	0	45,964	521	8,111	2,537	37,332
242+00	15	67	2	4	0	43	1	2	0	46,007	522	8,114	2,537	37,371
242+39	39	78	2	0	0	104	3	3	0	46,111	525	8,118	2,537	37,468
243+00	61	46	2	0	0	140	5	0	0	46,251	530	8,118	2,537	37,603
243+68	68	95	2	3	0	177	5	4	0	46,428	535	8,123	2,537	37,770

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	((ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

PROJECT NO: 1500-33-71

HWY: USH 10

COUNTY: MANITOWOC

EARTHWORK

SHEET

E

USH 10 (WB PASSING LANE)
 STA 169+00 - STA 252+00, LT

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
243+78	10	92	2	5	0	35	1	2	0	46,463	536	8,126	2,537	37,801
244+00	22	118	2	6	0	85	2	5	0	46,548	538	8,133	2,537	37,877
245+00	100	119	2	10	0	439	7	30	0	46,987	545	8,173	2,537	38,269
245+68	68	101	2	12	0	277	5	27	0	47,264	550	8,210	2,537	38,504
246+00	32	84	2	14	0	109	2	15	0	47,373	552	8,230	2,537	38,591
246+31	31	68	2	14	0	87	2	16	0	47,460	554	8,252	2,537	38,654
246+81	50	61	2	14	0	119	4	25	0	47,579	558	8,285	2,537	38,736
247+00	19	59	2	13	0	43	1	10	0	47,622	559	8,299	2,537	38,764
247+18	18	57	2	13	0	38	1	9	0	47,660	560	8,311	2,537	38,789
248+00	82	48	2	13	0	159	6	40	0	47,819	566	8,365	2,537	38,888
249+00	100	43	2	11	0	167	7	45	0	47,986	573	8,426	2,537	38,987
250+00	100	36	2	9	0	145	7	36	0	48,131	580	8,474	2,537	39,077
251+00	100	30	2	6	0	122	7	26	0	48,253	587	8,510	2,537	39,156
252+00	100	28	2	4	0	108	7	17	0	48,361	594	8,533	2,537	39,234
COLUMN TOTALS						48,361	594	8,857	2,306					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	(ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

PROJECT NO: 1500-33-71

HWY: USH 10

COUNTY: MANITOWOC

EARTHWORK

SHEET

E

ROKY LEDGE LANE
STA 7+20 - STA 9+65

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
7+20	0	38	10	0	0	0	0	0	0	0	0	0	0	0
7+50	30	63	10	0	0	56	11	0	0	56	11	0	0	45
7+65	15	72	10	4	0	37	6	1	0	93	17	1	0	75
8+00	35	138	11	0	0	136	14	3	0	229	31	5	0	193
8+22	22	159	11	0	0	122	9	0	0	351	40	5	0	306
8+27	5	161	11	0	0	27	2	0	0	378	42	5	0	331
8+50	23	133	11	0	0	127	9	0	0	505	51	5	0	449
8+97	47	149	12	0	0	244	20	0	0	749	71	5	0	673
9+00	3	147	12	0	0	18	1	0	0	767	72	5	0	690
9+07	7	116	12	17	0	32	3	2	0	799	75	8	0	716
9+16	9	112	12	34	0	39	4	9	0	838	79	20	0	739
9+25	10	112	12	43	0	40	4	14	0	878	83	39	0	756
9+50	25	88	14	160	0	92	12	93	0	970	95	165	0	710
9+66	16	102	15	15	0	55	8	50	0	1,025	103	232	0	690
COLUMN TOTALS						1,025	103	172	0					

MENCHALVILLE ROAD
STA 20+20 - STA 24+00

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL	ROCK EXC	CUT 1.00 NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL 1.00 NOTE 2	EXPANDED FILL 1.35 NOTE 3	EXPANDED ROCK 1.10 NOTE 4	
20+20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20+37	17	50	15	62	0	16	5	20	0	16	5	27	0	-16
20+50	13	157	14	15	0	49	7	18	0	65	12	51	0	2
20+55	5	180	13	34	0	33	3	5	0	98	15	58	0	25
20+79	24	237	13	0	0	187	12	15	0	285	27	78	0	180
20+89	10	249	13	0	0	90	5	0	0	375	32	78	0	265
20+94	5	263	13	0	0	51	3	0	0	426	35	78	0	313
21+00	6	261	12	0	0	60	3	0	0	486	38	78	0	370
21+04	4	256	12	0	0	35	2	0	0	521	40	78	0	403
21+10	6	262	12	0	0	60	3	0	0	581	43	78	0	460
21+50	40	320	12	0	0	431	18	0	0	1,012	61	78	0	873
21+63	13	321	12	0	0	156	6	0	0	1,168	67	78	0	1,023
22+00	37	321	11	0	0	439	16	0	0	1,607	83	78	0	1,446
22+25	25	324	11	0	0	299	10	0	0	1,906	93	78	0	1,735
22+50	25	297	11	0	0	288	10	0	0	2,194	103	78	0	2,013
23+00	50	214	11	0	0	474	20	0	0	2,668	123	78	0	2,467
23+25	25	162	11	0	0	174	10	0	0	2,842	133	78	0	2,631
23+50	25	142	10	0	0	141	10	0	0	2,983	143	78	0	2,762
23+52	2	138	10	0	0	10	1	0	0	2,993	144	78	0	2,771
23+67	15	81	10	0	0	61	6	0	0	3,054	150	78	0	2,826
24+00	33	46	10	0	0	77	12	0	0	3,131	162	78	0	2,891
COLUMN TOTALS						3,131	162	58	0					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	((ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

FRITSCH LANE
STA 30+33 - STA 32+75

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				MASS ORDINATE
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL	EXPANDED ROCK	
30+33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30+36	3	51	14	2	0	3	1	0	0	3	1	0	0	2
30+39	3	88	14	15	0	7	1	1	0	10	2	1	0	7
30+50	11	55	13	29	0	30	6	9	0	40	8	14	0	19
30+79	29	105	12	9	0	86	13	20	0	126	21	41	0	65
30+89	10	106	12	8	0	38	4	3	0	164	25	45	0	94
30+93	4	107	12	0	0	17	2	1	0	181	27	46	0	108
31+00	7	120	11	0	0	30	3	0	0	211	30	46	0	135
31+47	47	140	11	0	0	228	19	0	0	439	49	46	0	344
31+50	3	143	11	0	0	14	1	0	0	453	50	46	0	357
31+73	23	158	11	0	0	127	9	0	0	580	59	46	0	475
32+00	27	133	10	0	0	147	11	0	0	727	70	46	0	611
32+32	32	102	10	0	0	139	12	0	0	866	82	46	0	738
32+50	18	87	10	0	0	63	7	0	0	929	89	46	0	794
32+75	25	32	10	0	0	55	9	0	0	984	98	46	0	840
COLUMN TOTALS						984	98	34	0					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS NOT SHOWN ON CROSS SECTIONS; REMOVE AND WASTE EXISTING AND TEMPORARY PAVEMENTS PRESENT IN BOTH CUT AND FILL SECTIONS; SALVAGED/UNUSABLE PAVEMENT MATERIAL INCLUDES ASPHALTIC PAVEMENTS
3 - EXPANDED FILL	((UNEXPANDED FILL - EXPANDED ROCK IN FILL) * FILL FACTOR)
4 - EXPANDED ROCK	(ROCK EXCAVATION * EXPANDED ROCK FACTOR)
5 - MASS ORDINATE	((CUT) - (EXPANDED FILL) - (SALVAGED/UNUSABLE PAVEMENT MATERIAL)); PLUS INDICATES AN EXCESS OF MATERIAL; MINUS INDICATES A SHORTAGE OF MATERIAL

9

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PROJECT NO: 1500-33-71

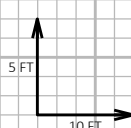
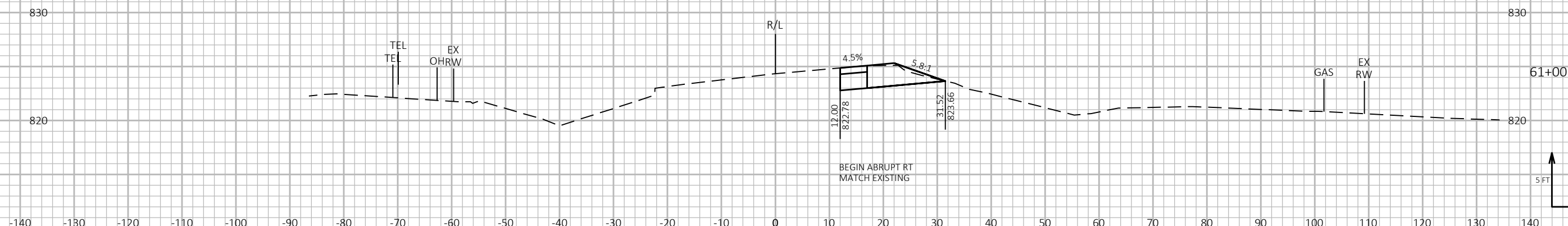
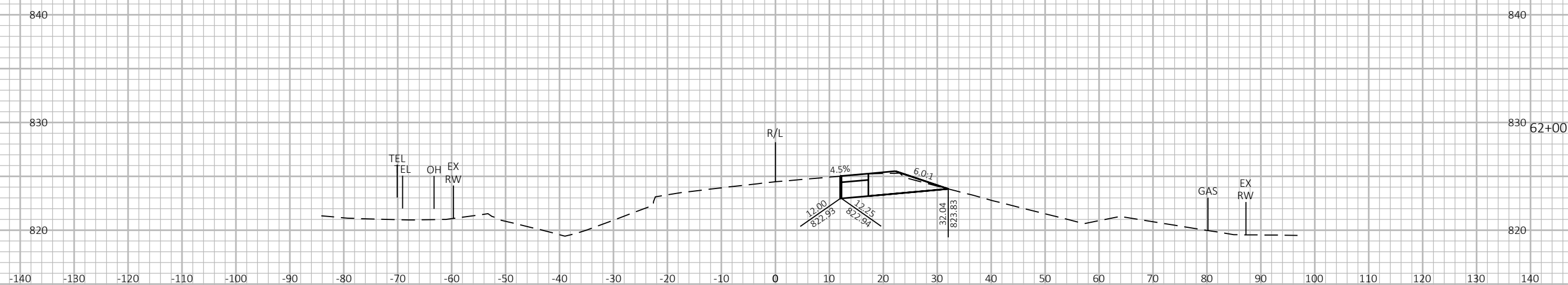
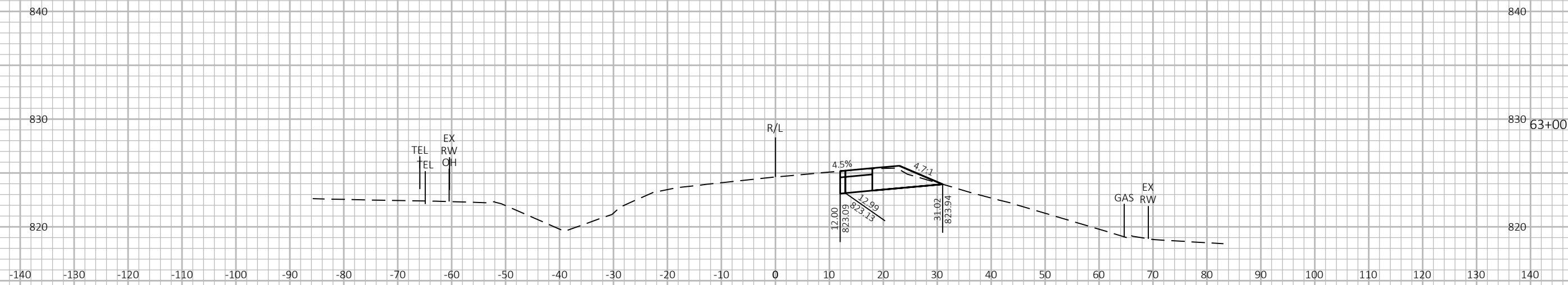
HWY: USH 10

COUNTY: MANITOWOC

EARTHWORK

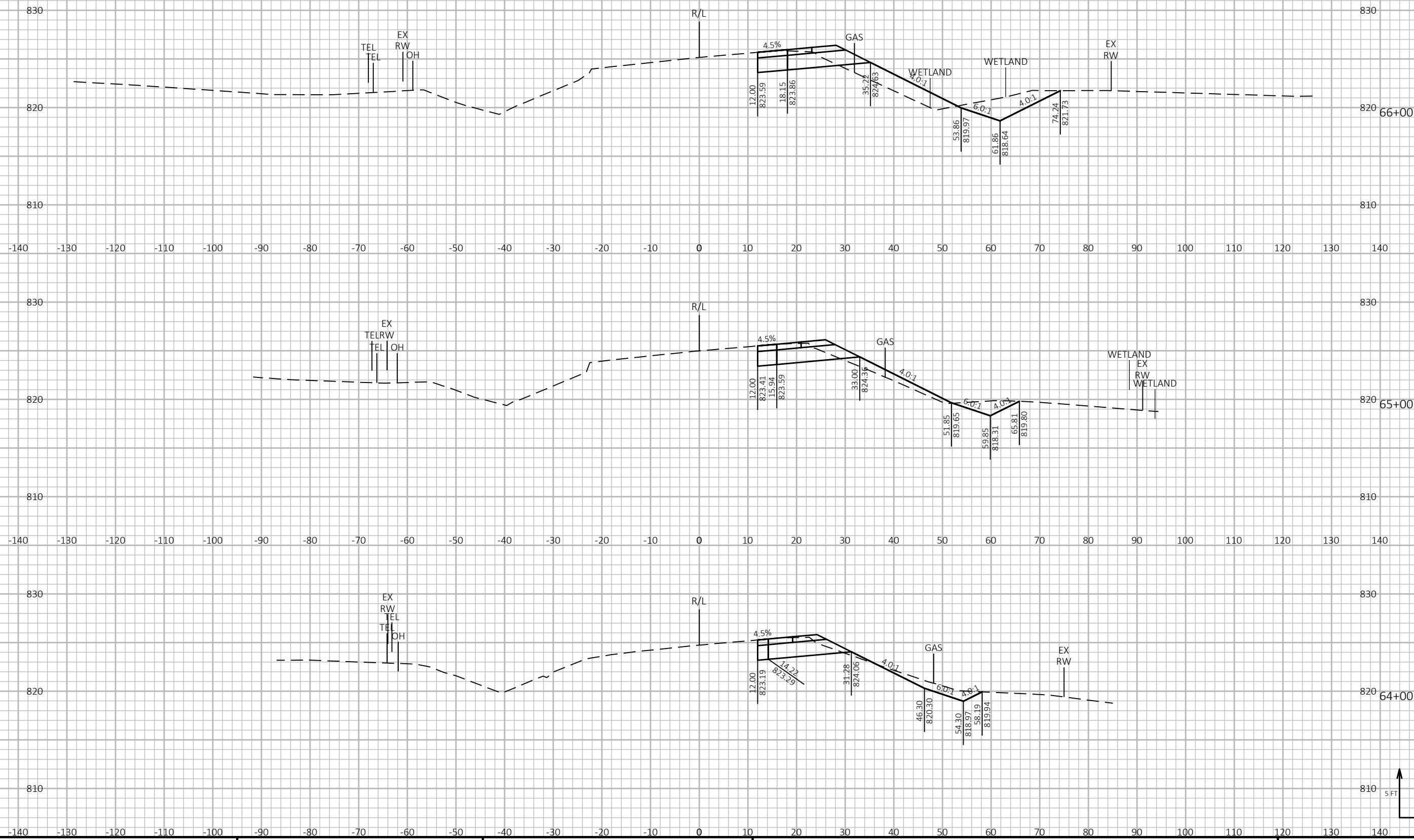
SHEET

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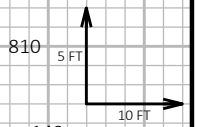
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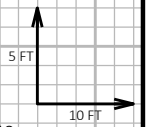
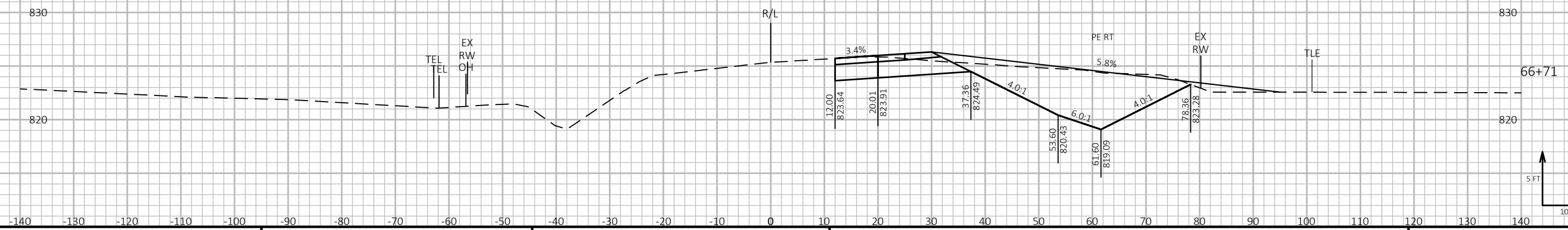
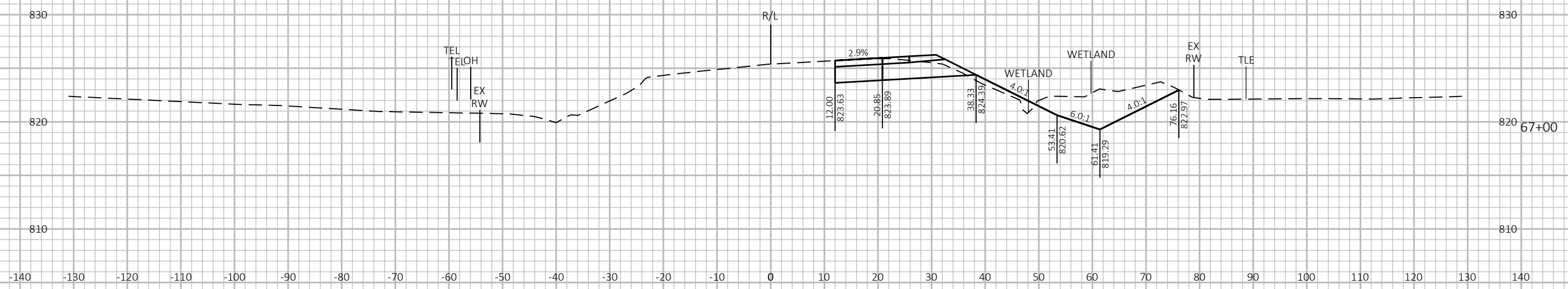
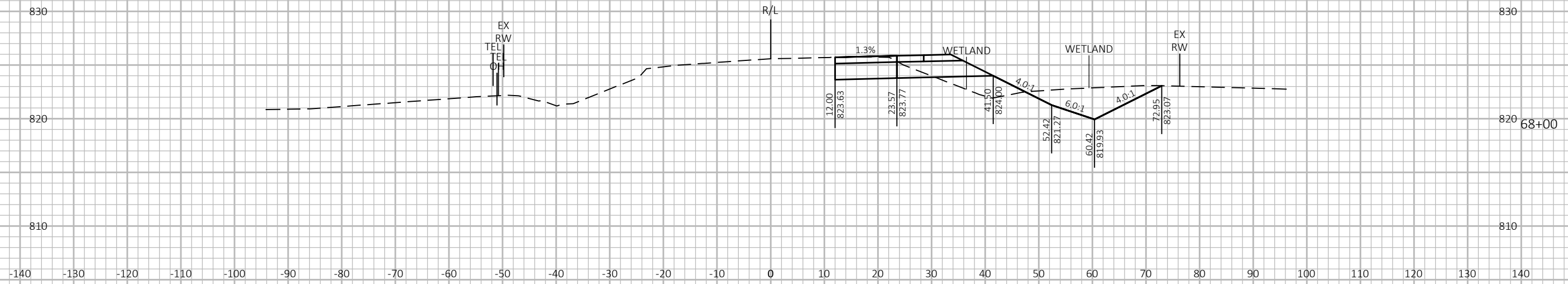
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

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LAYOUT NAME - 02



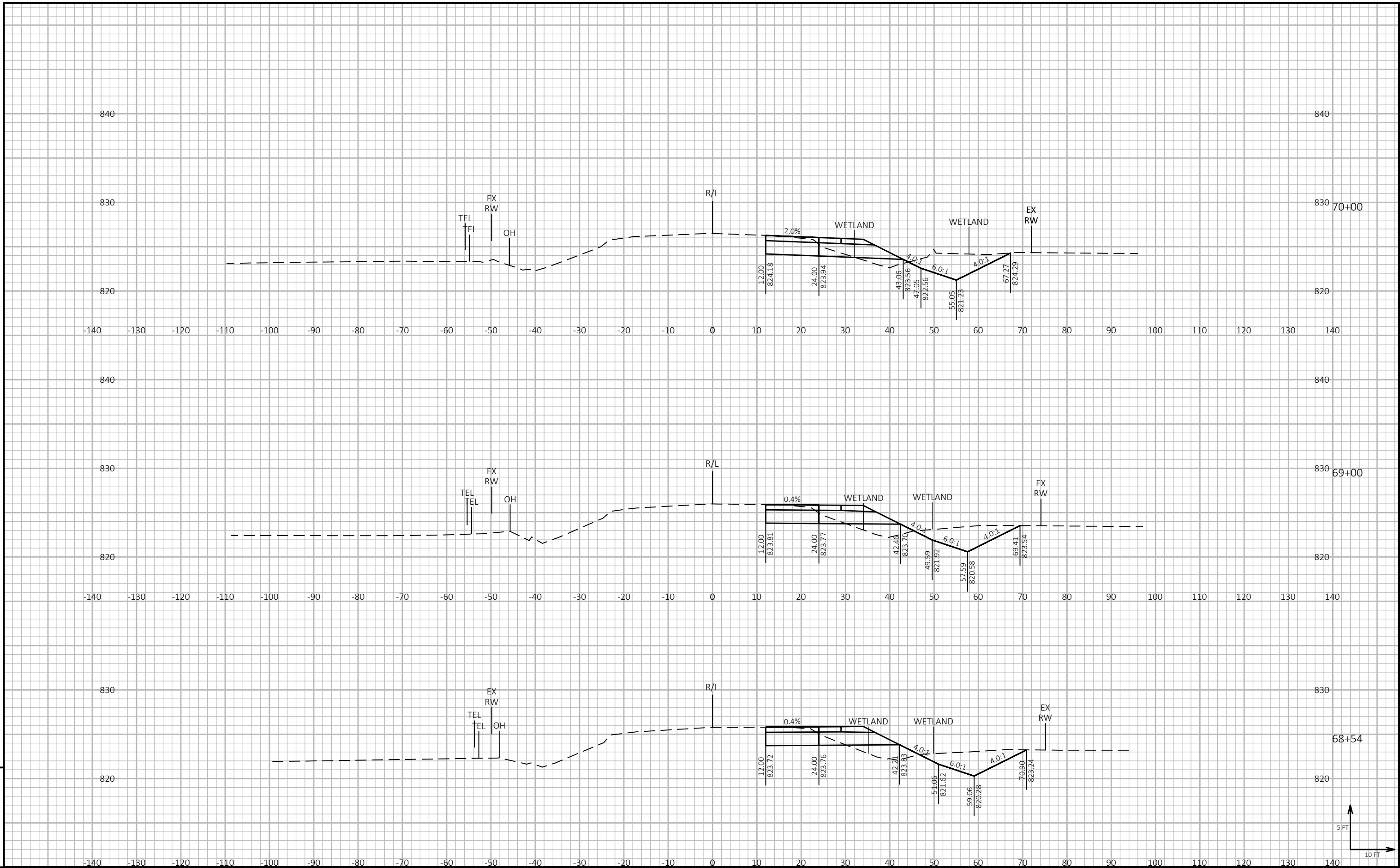
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

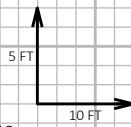
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LAYOUT NAME - 03



9

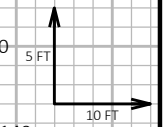
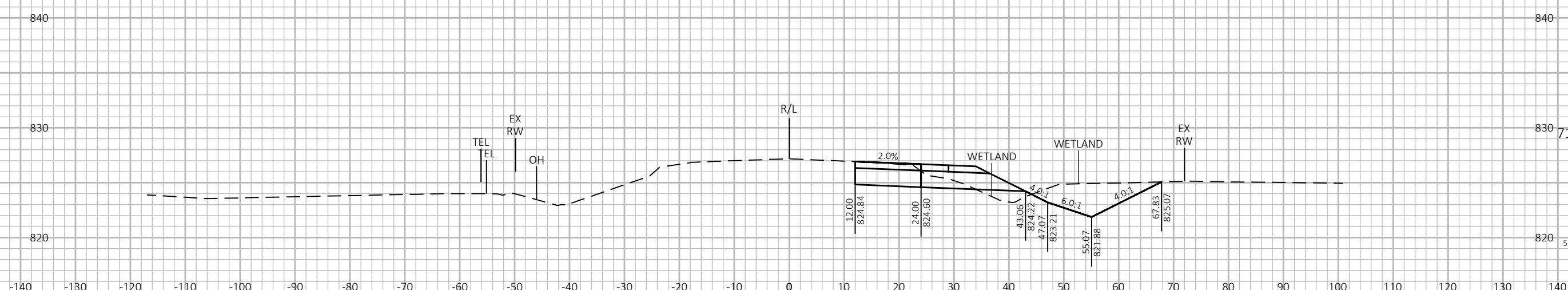
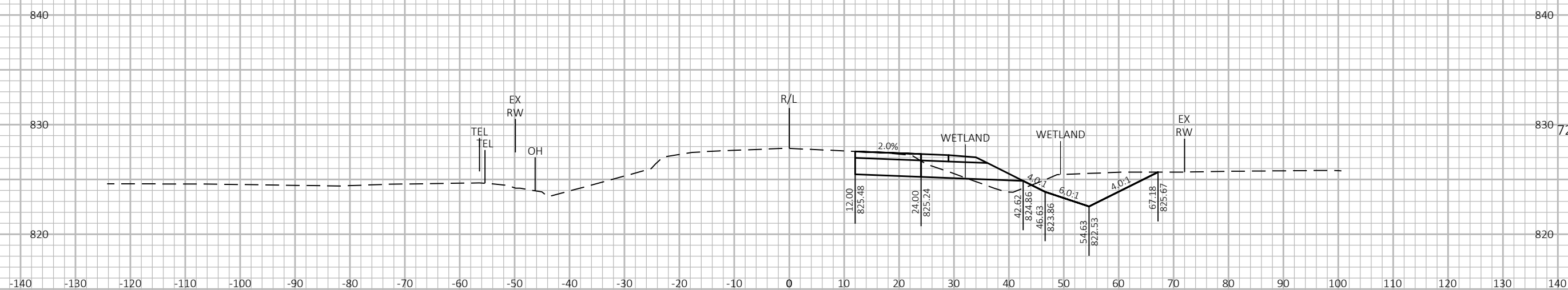
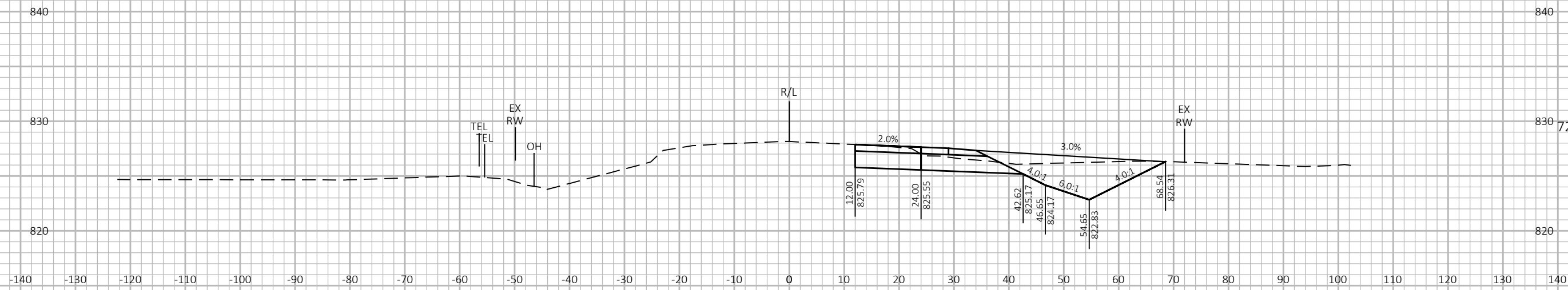
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

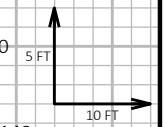
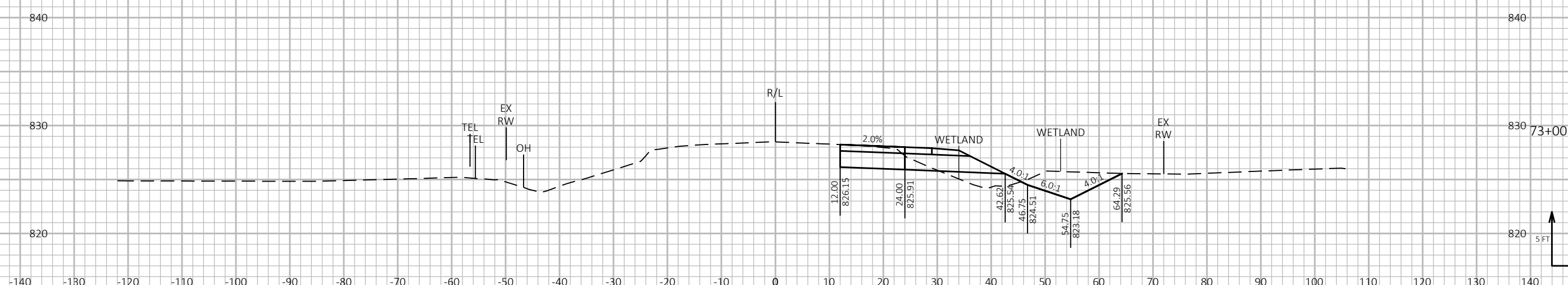
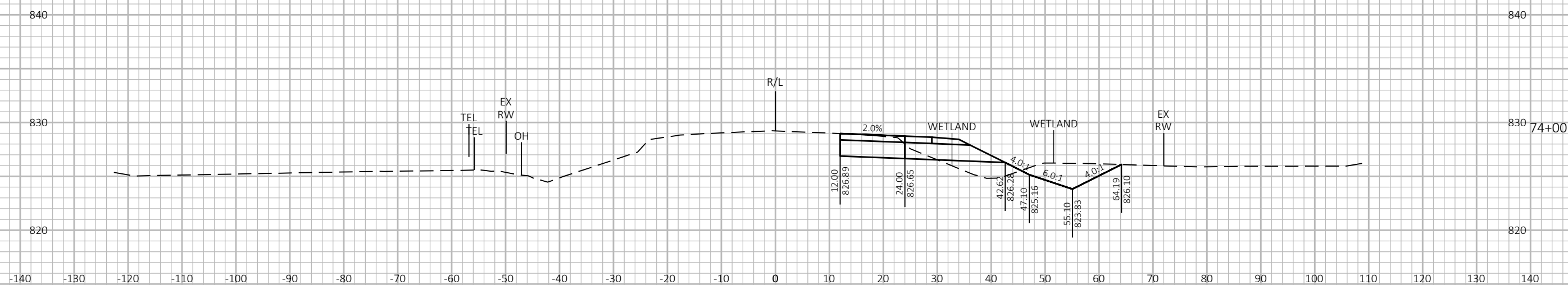
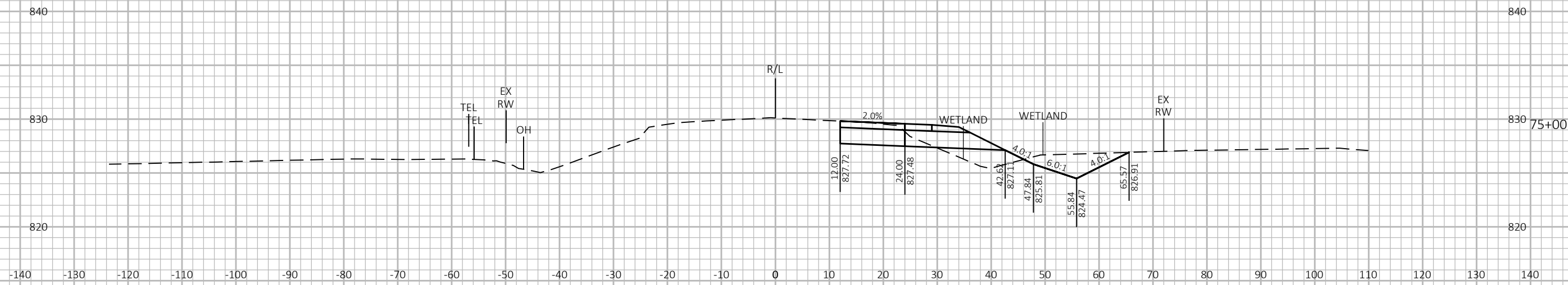
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LAYOUT NAME - 04



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PROJECT NO: 1500-33-71

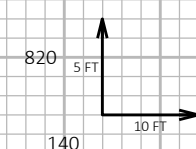
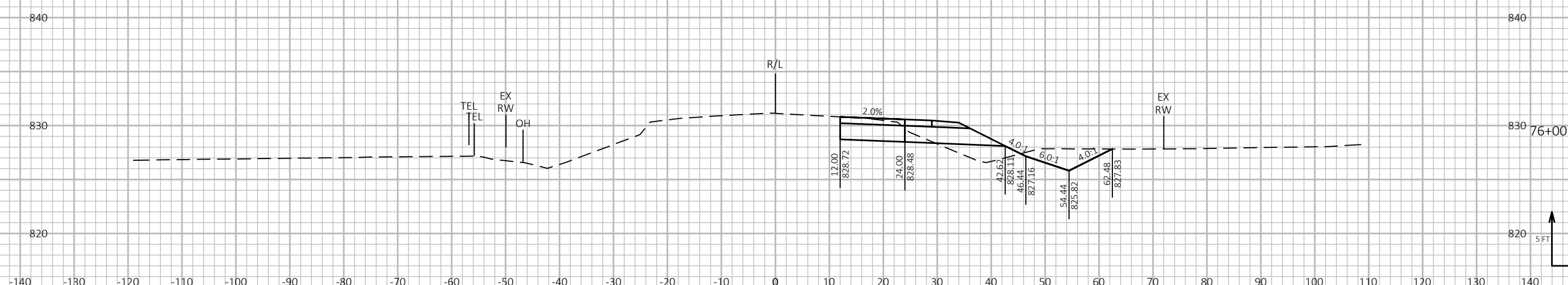
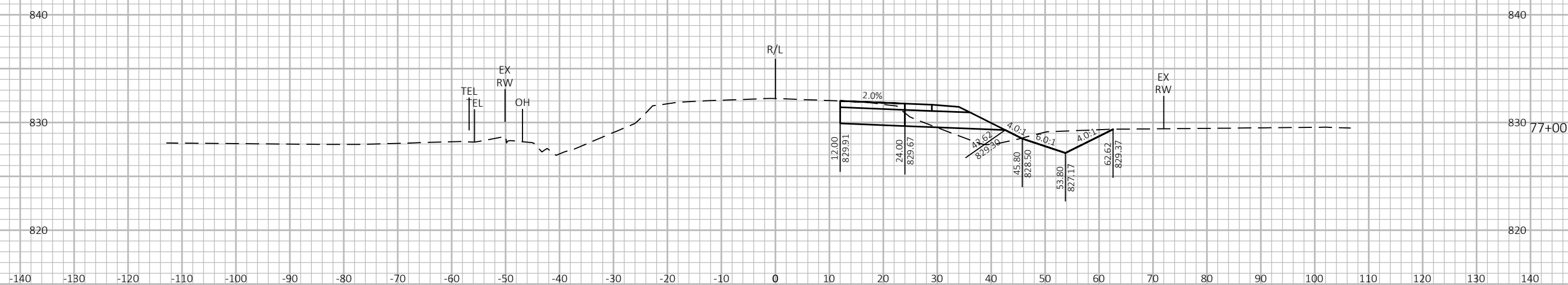
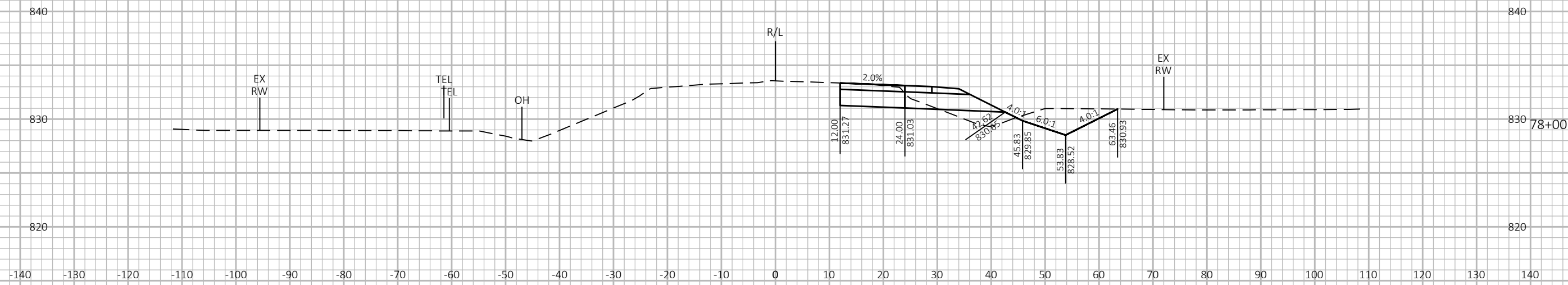
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

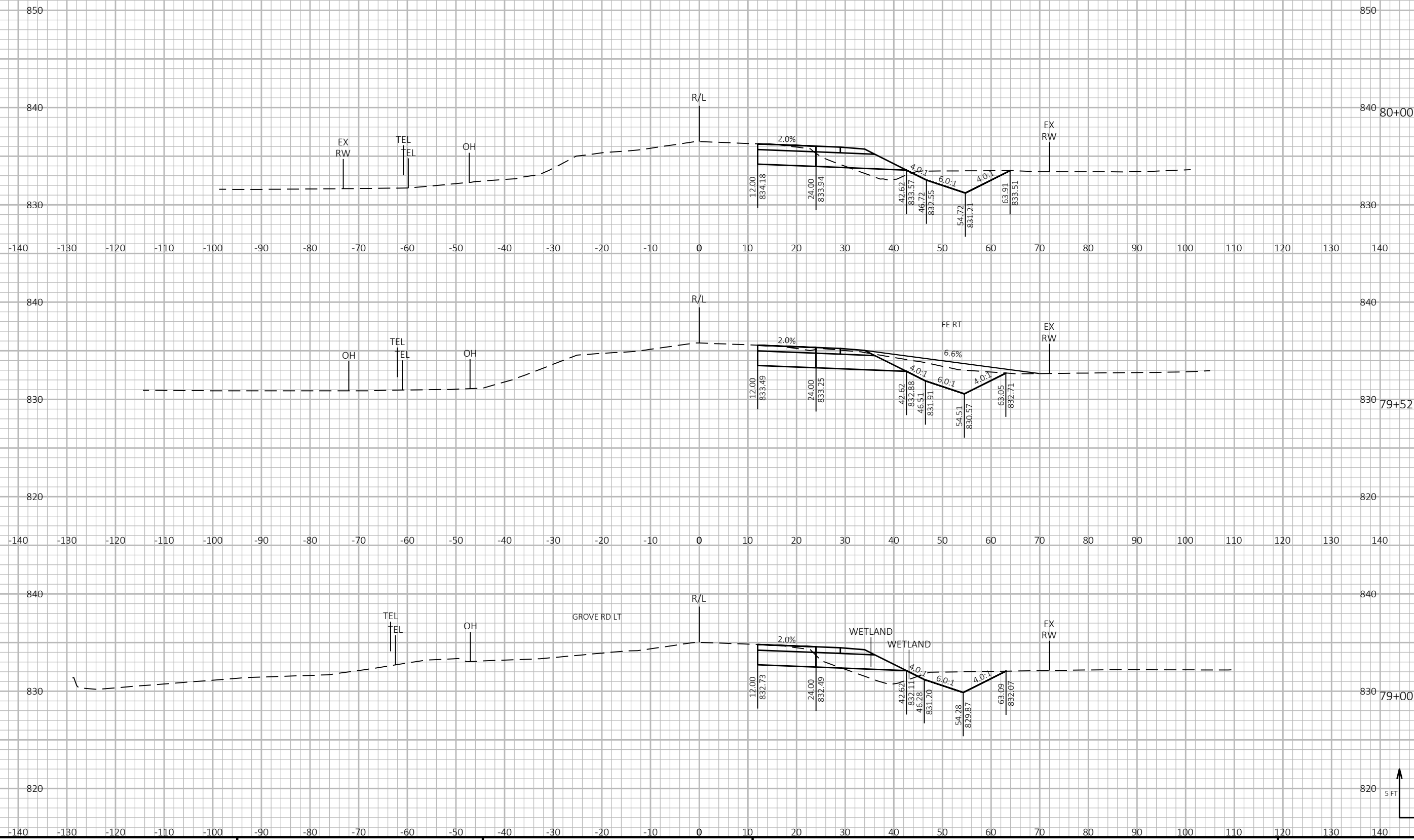
SHEET

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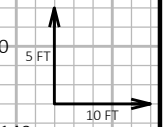


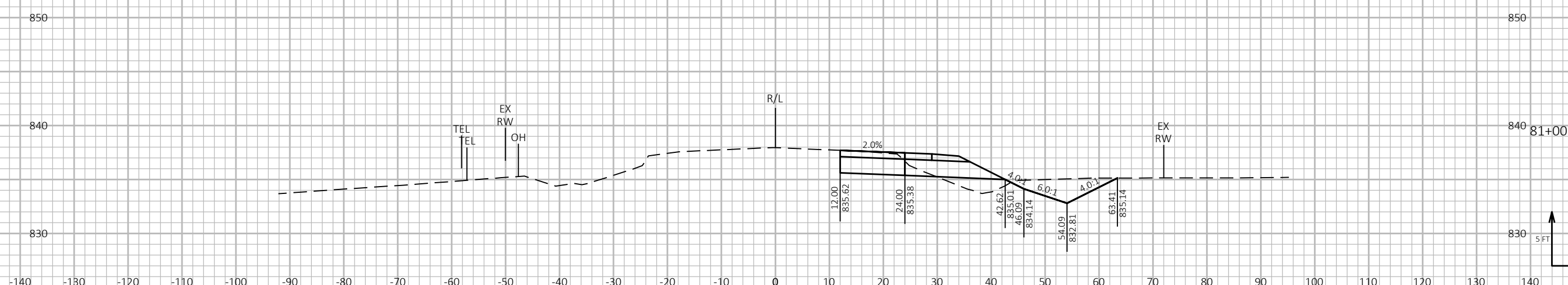
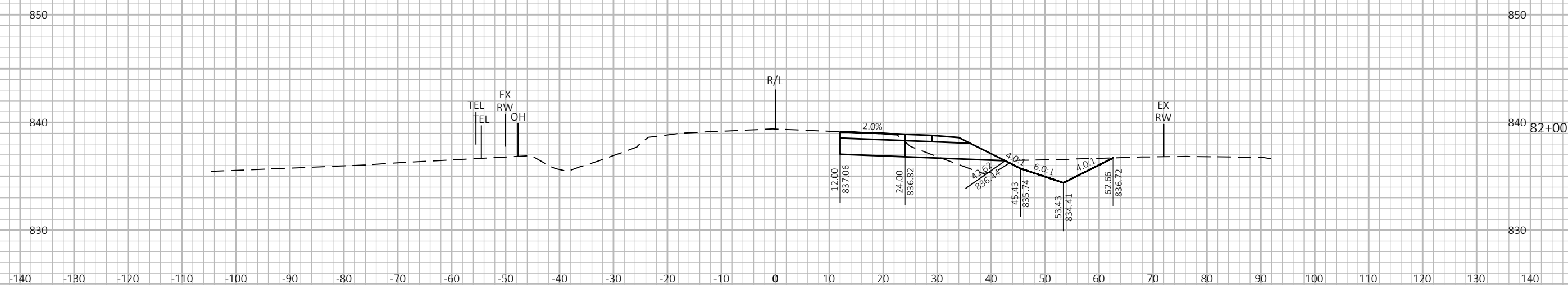
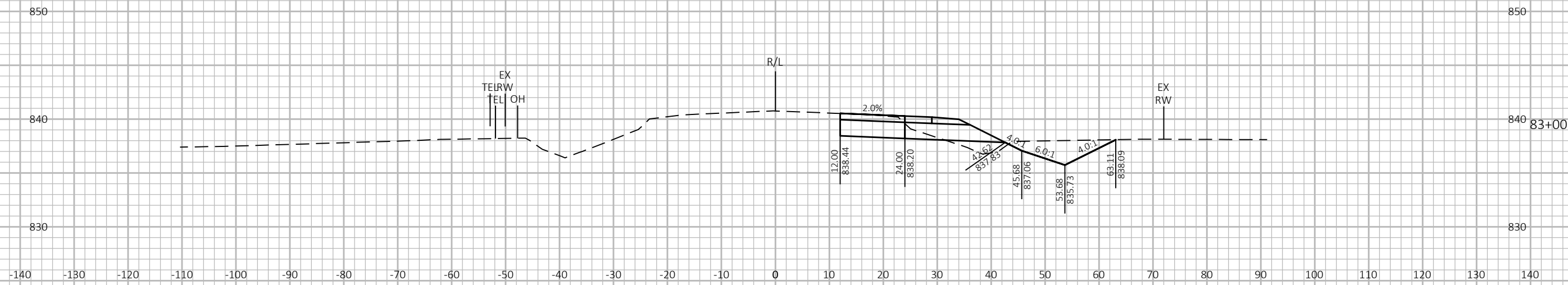
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:38 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

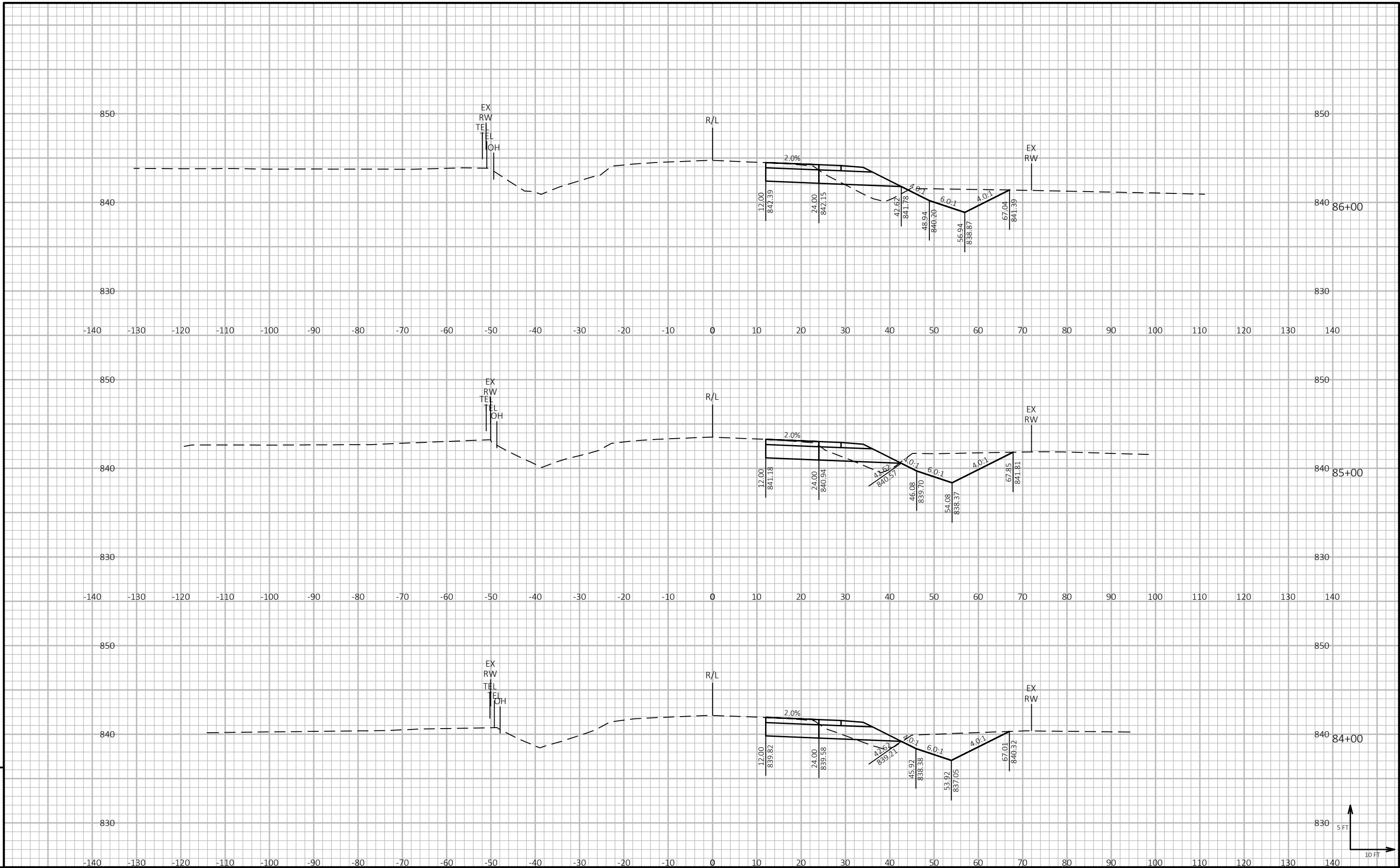




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5 FT
10 FT



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PROJECT NO: 1500-33-71

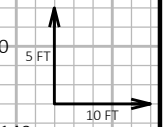
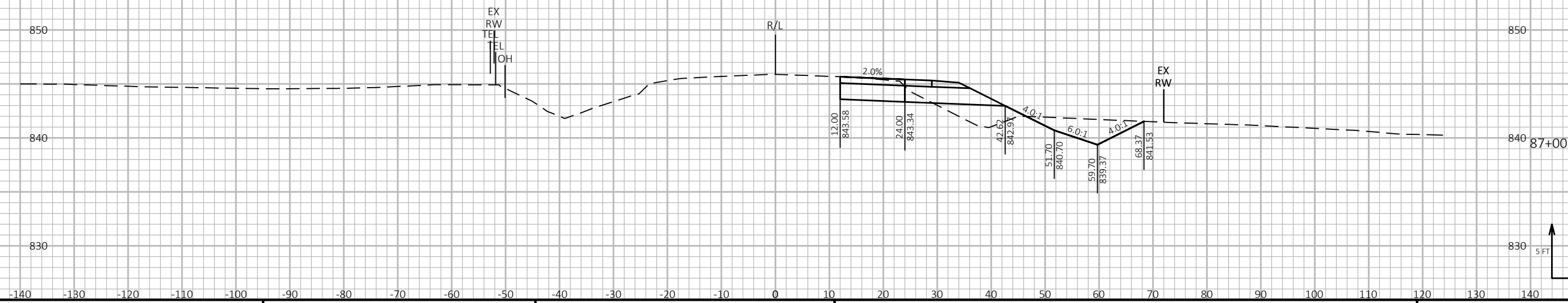
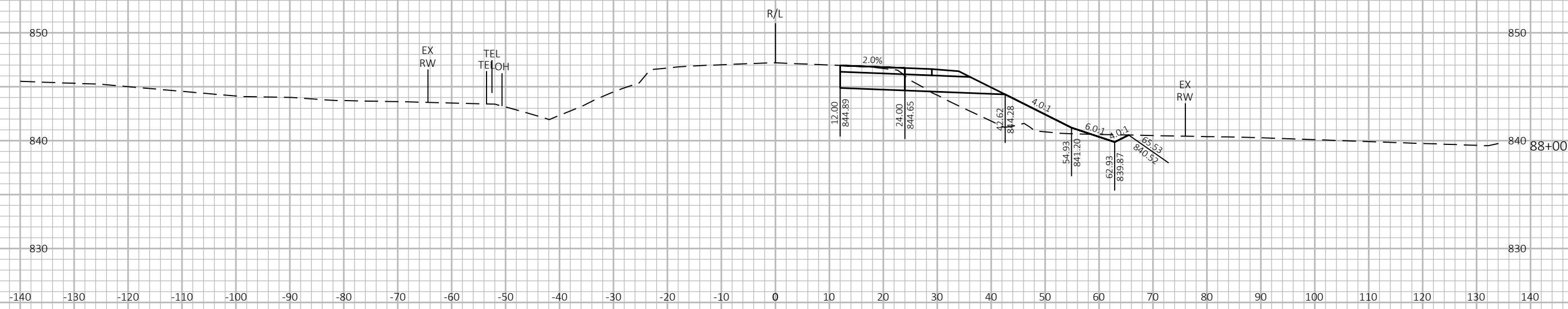
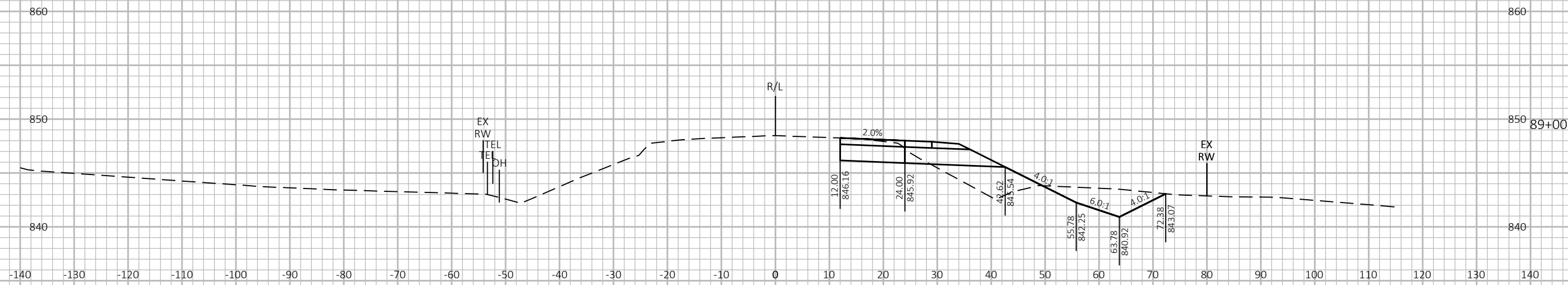
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



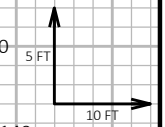
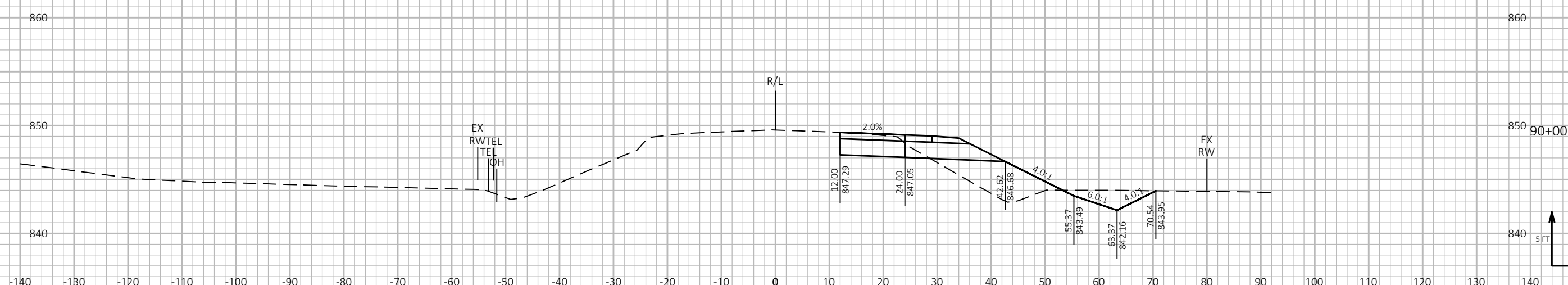
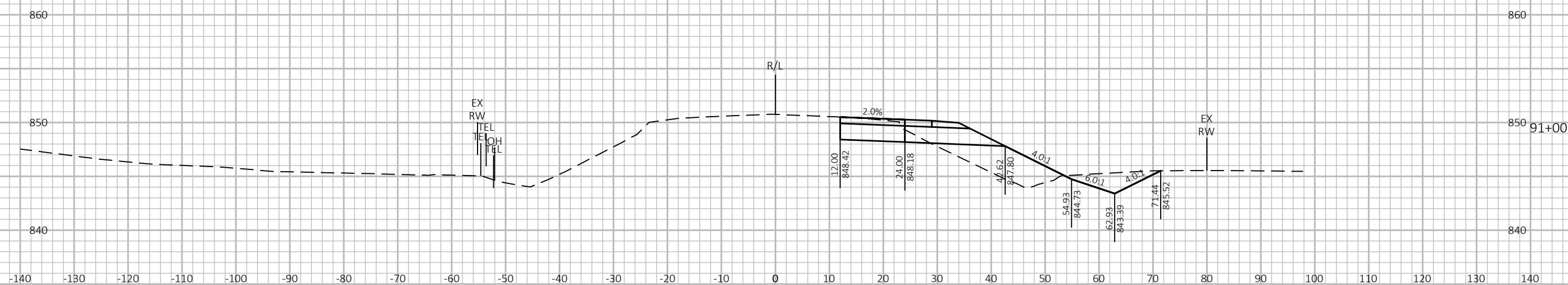
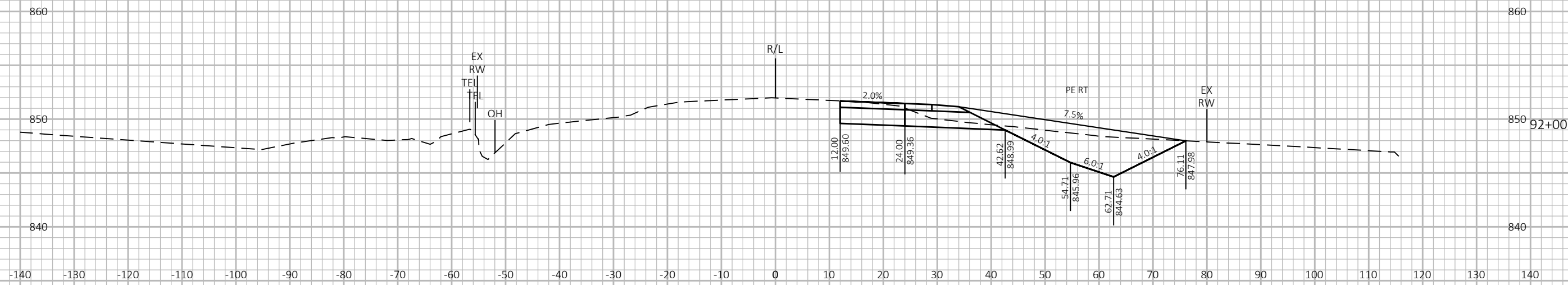
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:38 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 11



PROJECT NO: 1500-33-71

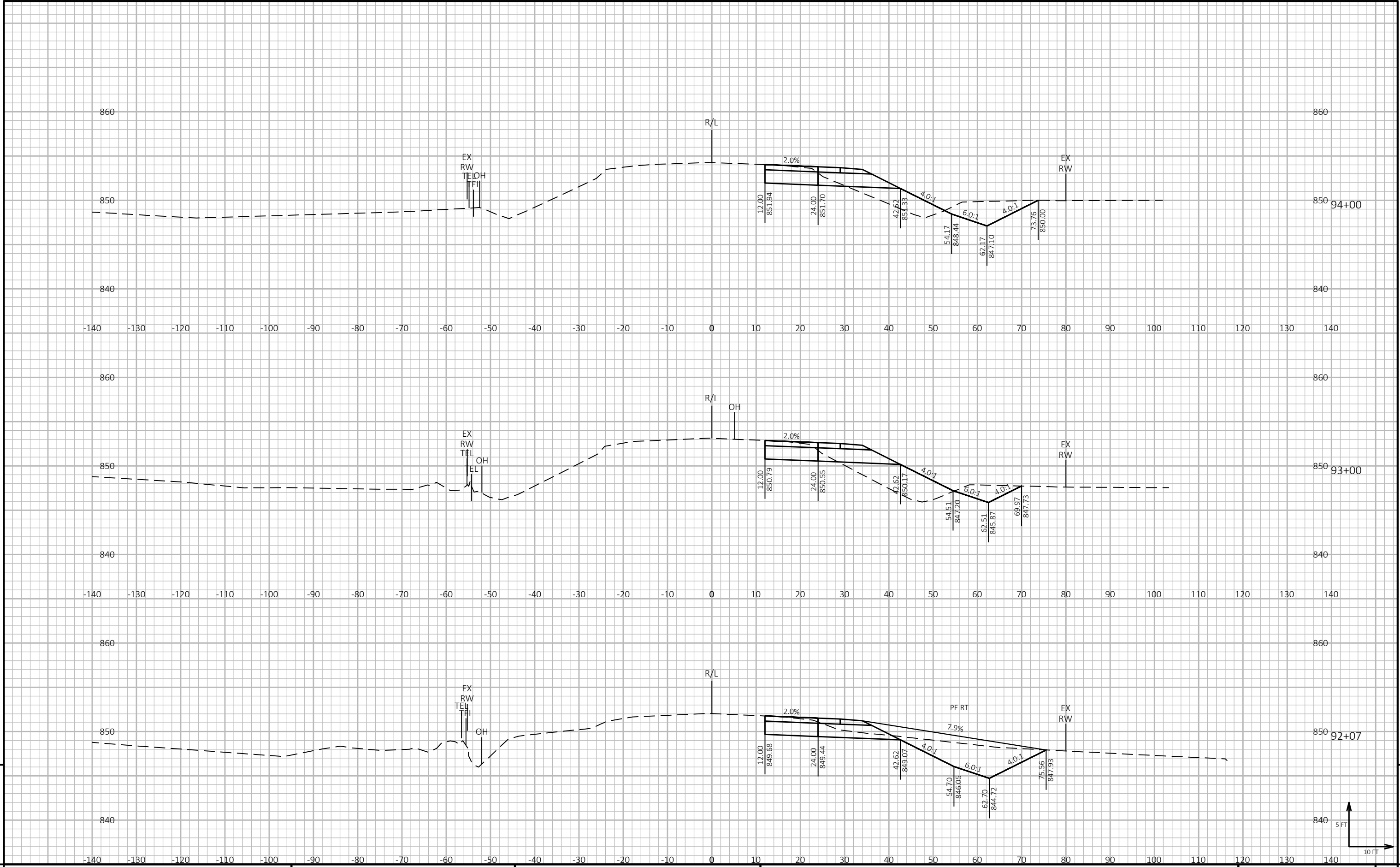
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



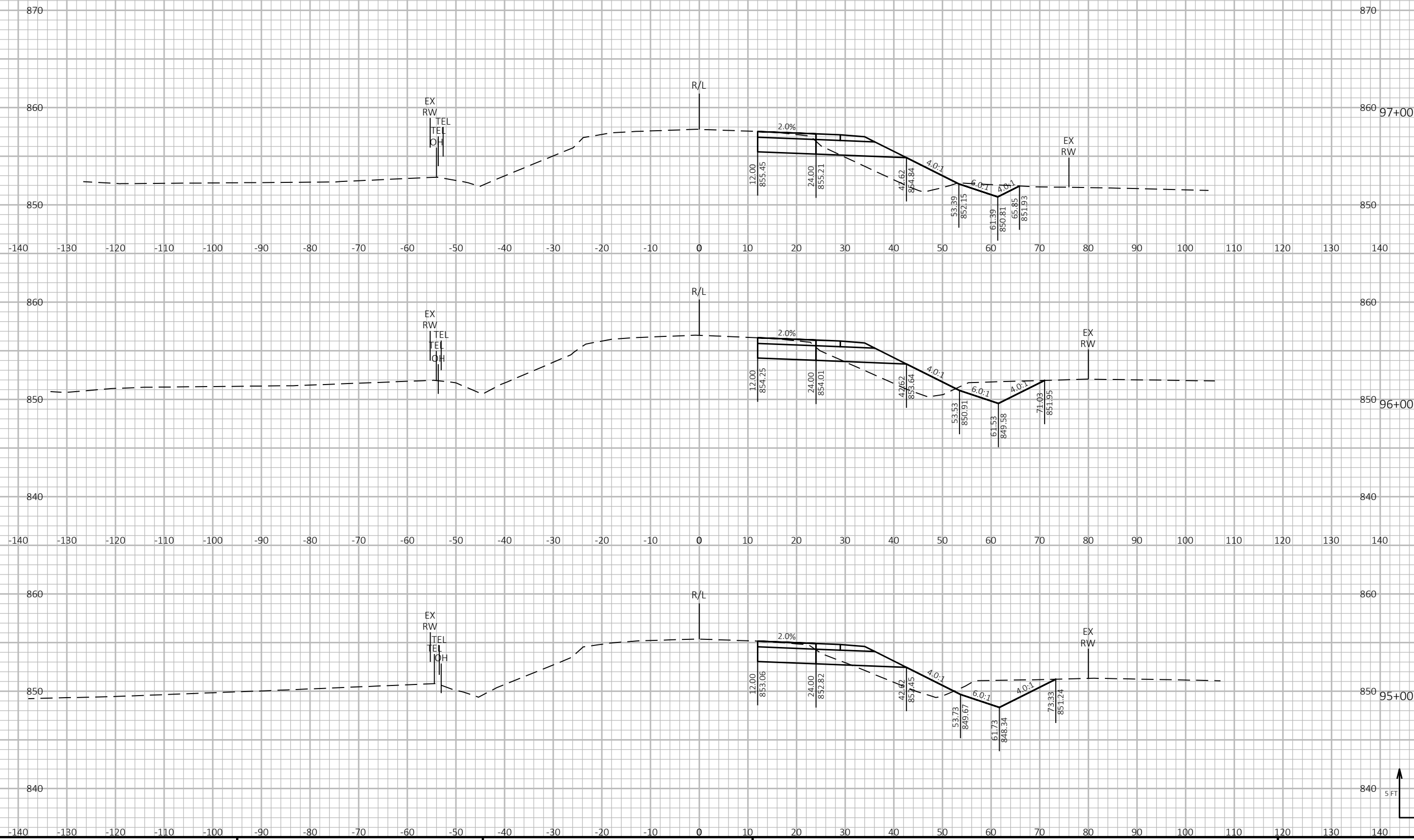
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:39 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 13



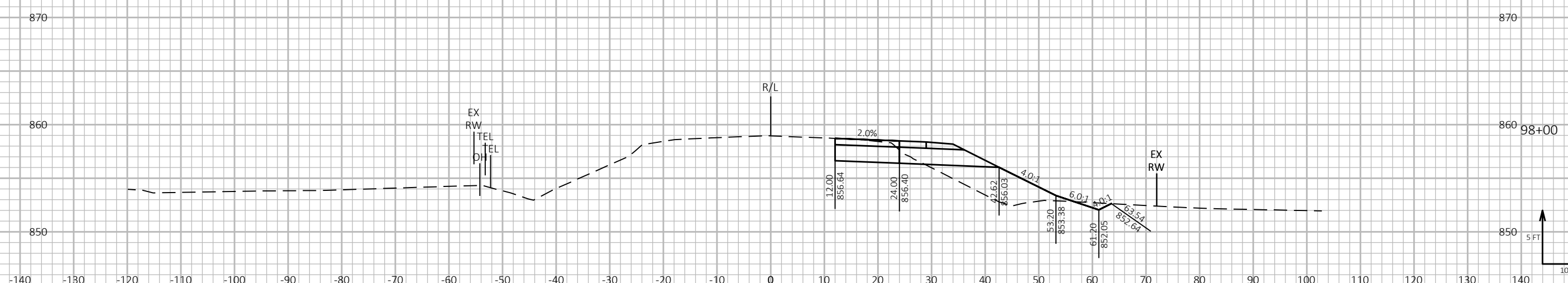
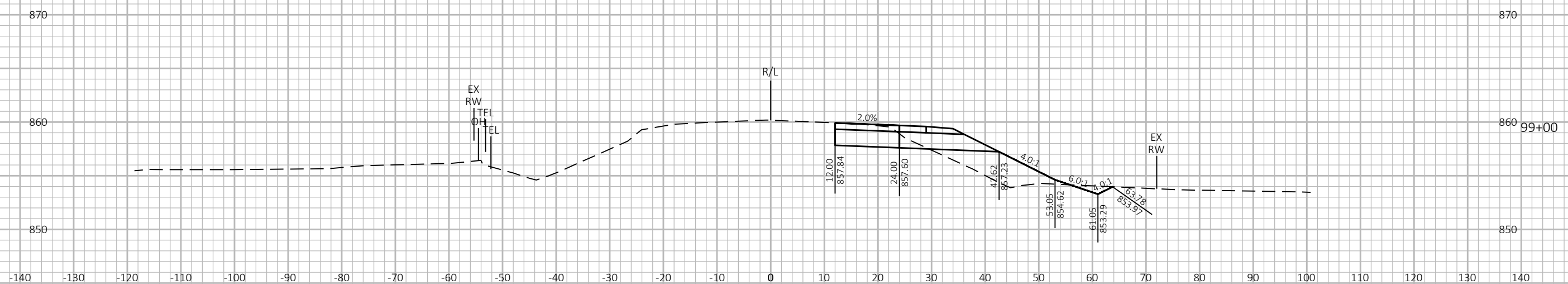
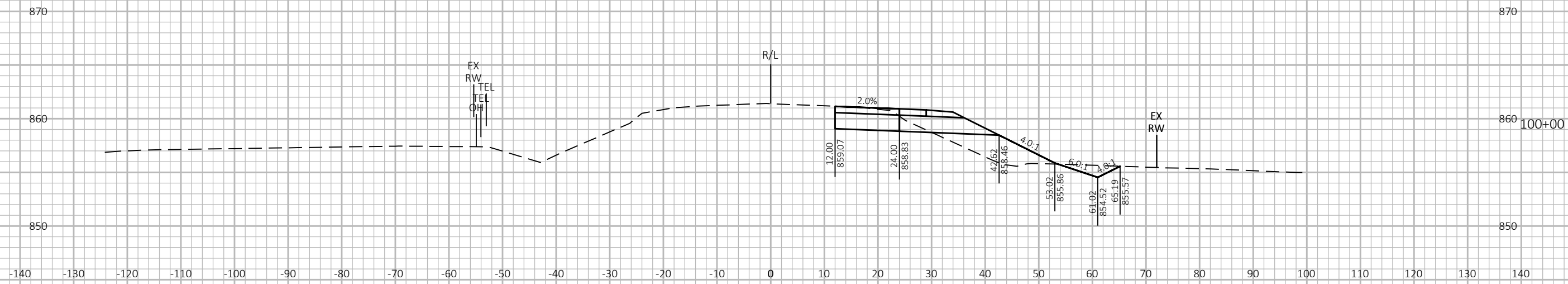
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:39 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 14



PROJECT NO: 1500-33-71

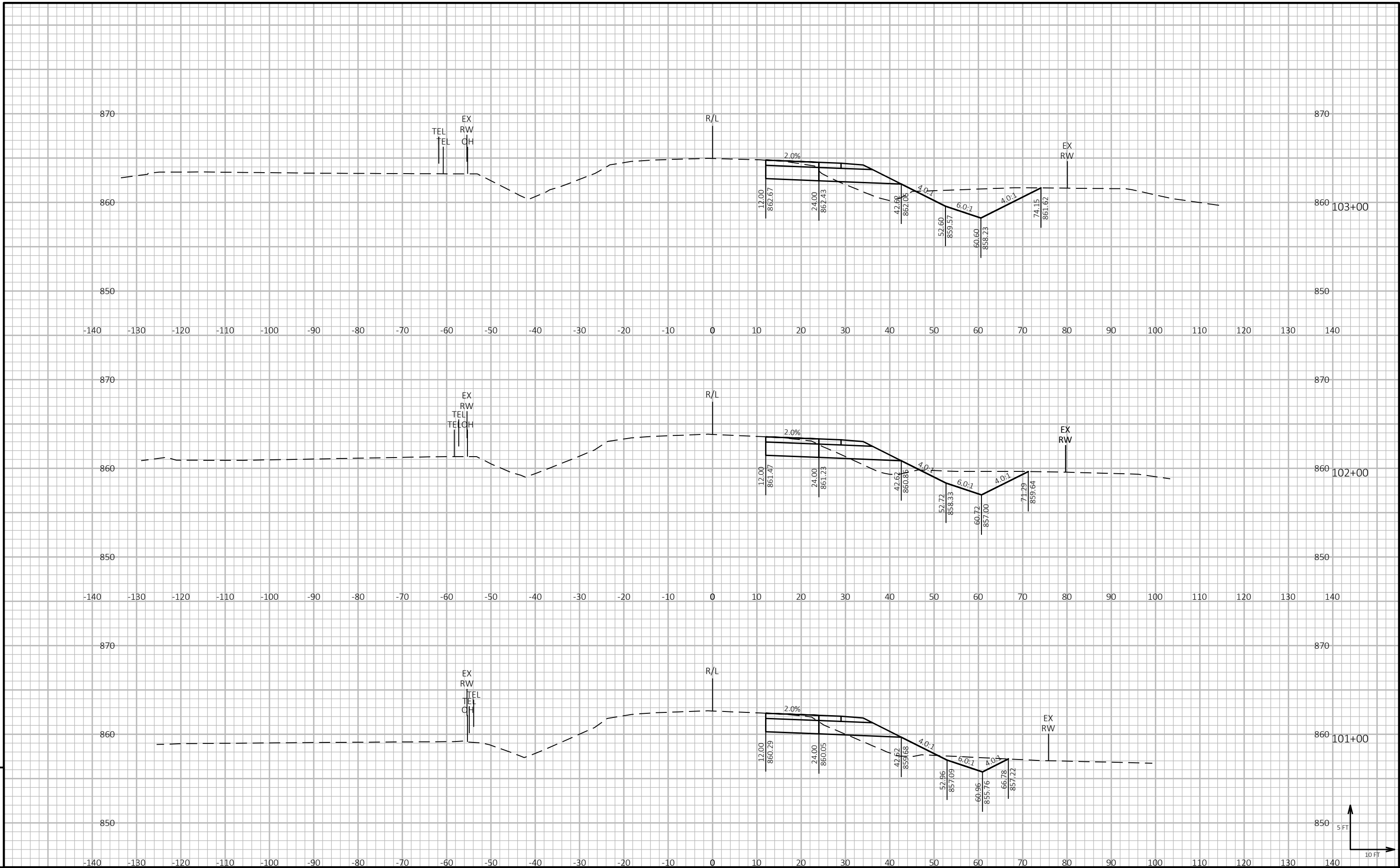
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



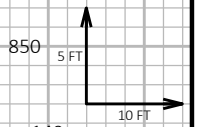
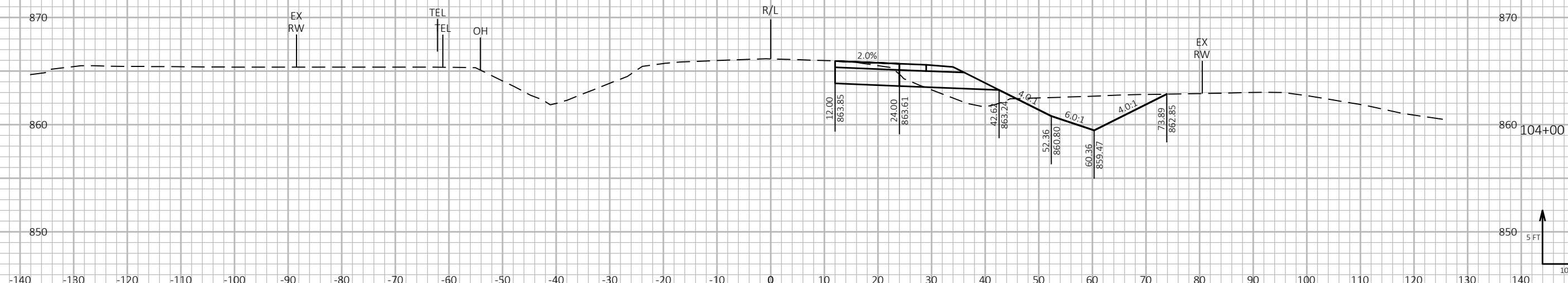
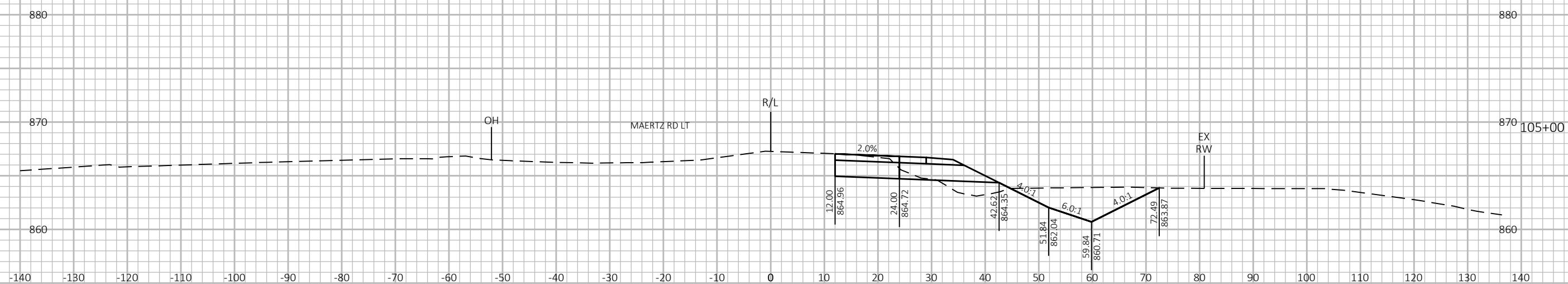
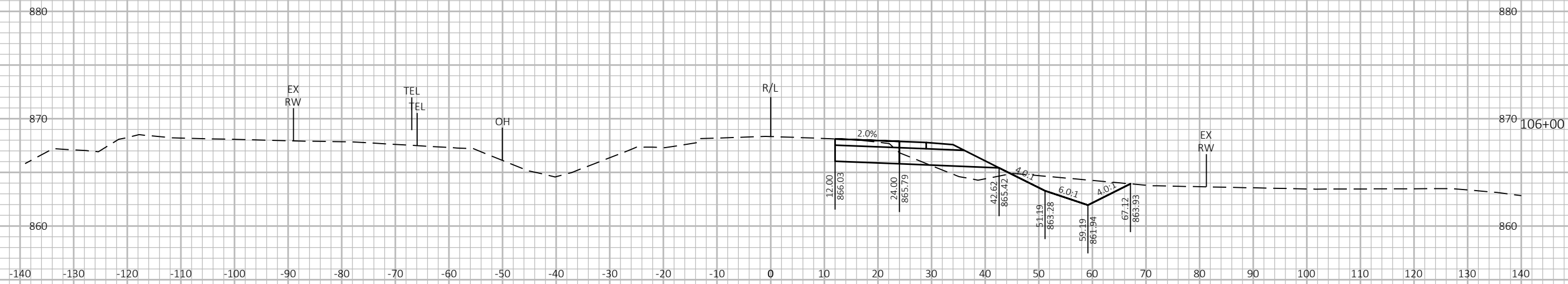
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:40 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 16



PROJECT NO: 1500-33-71

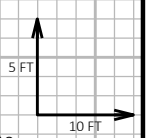
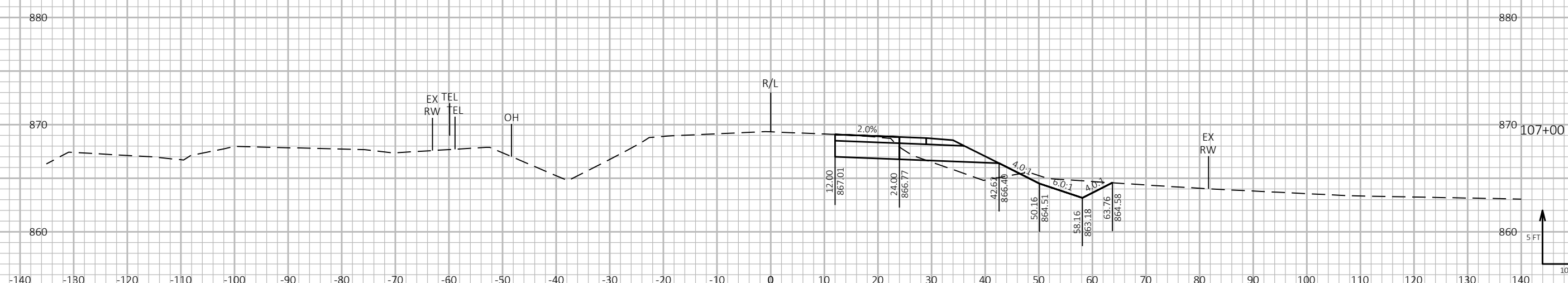
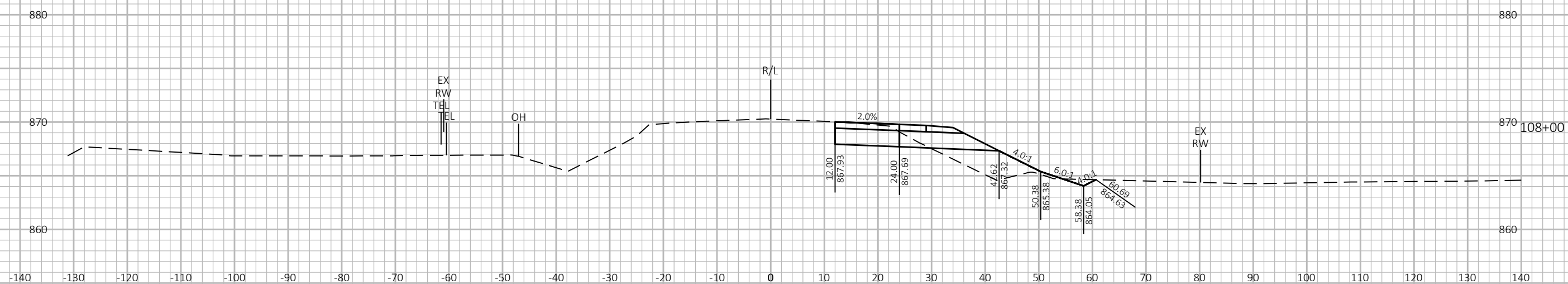
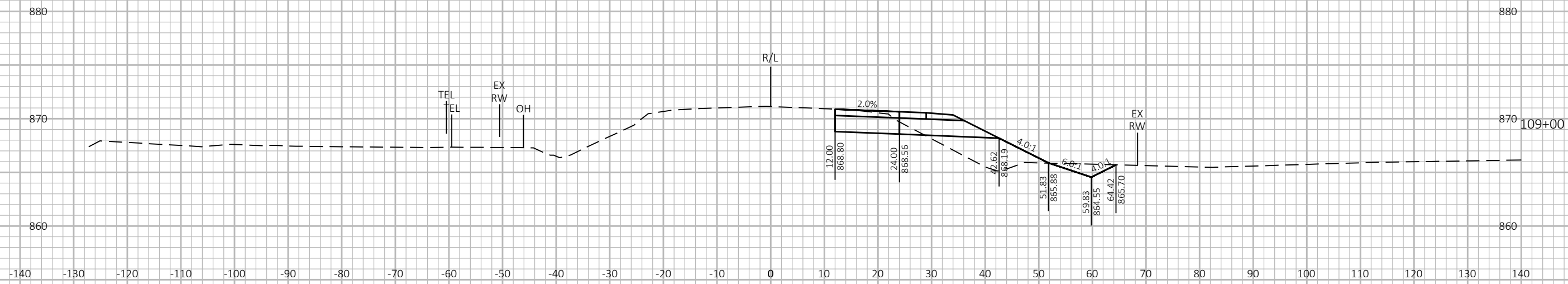
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



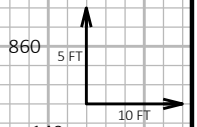
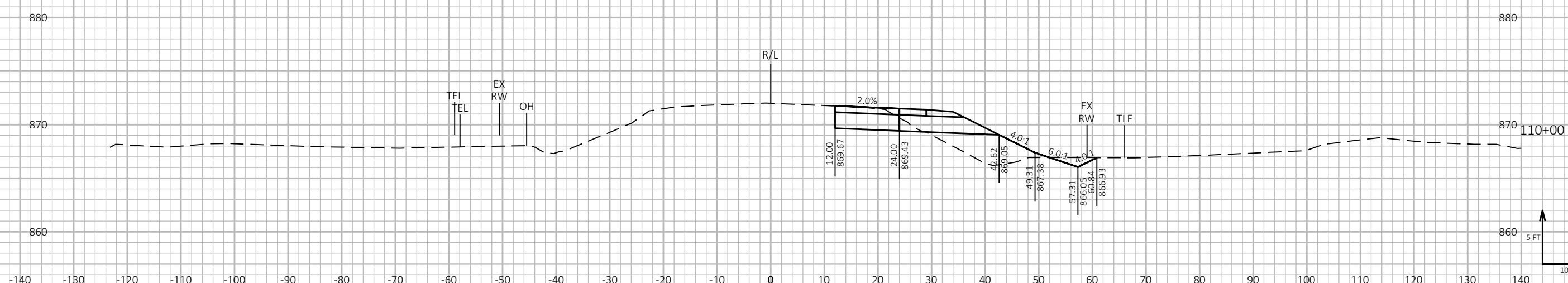
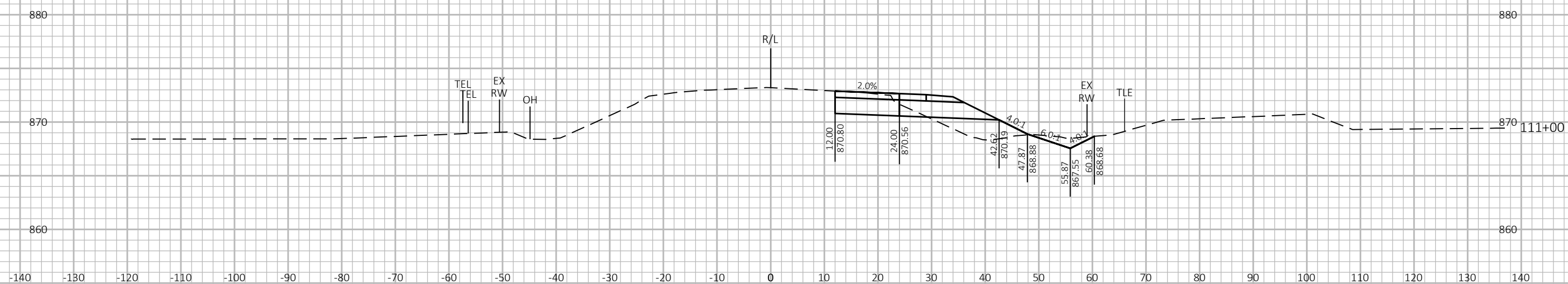
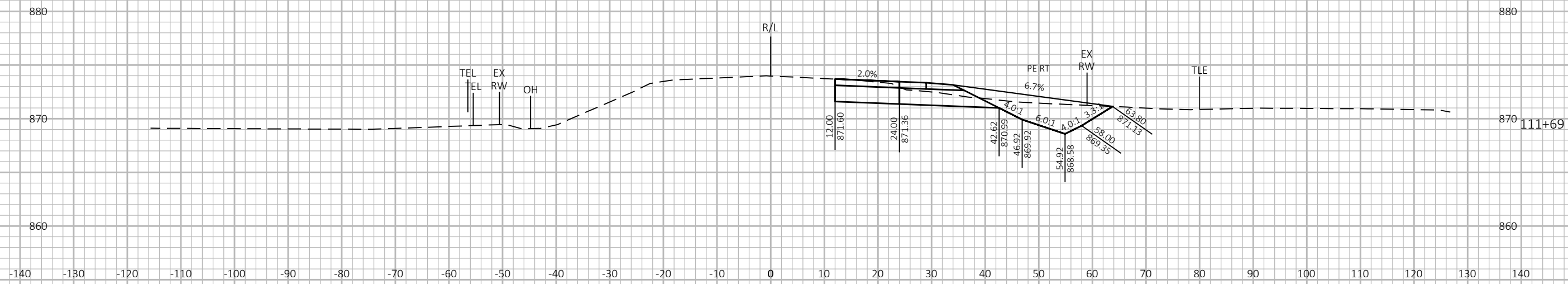
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

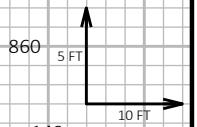
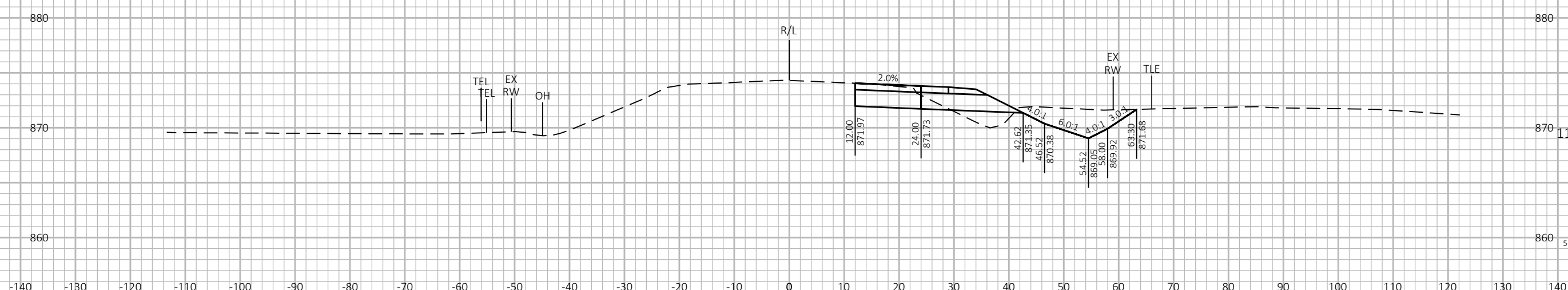
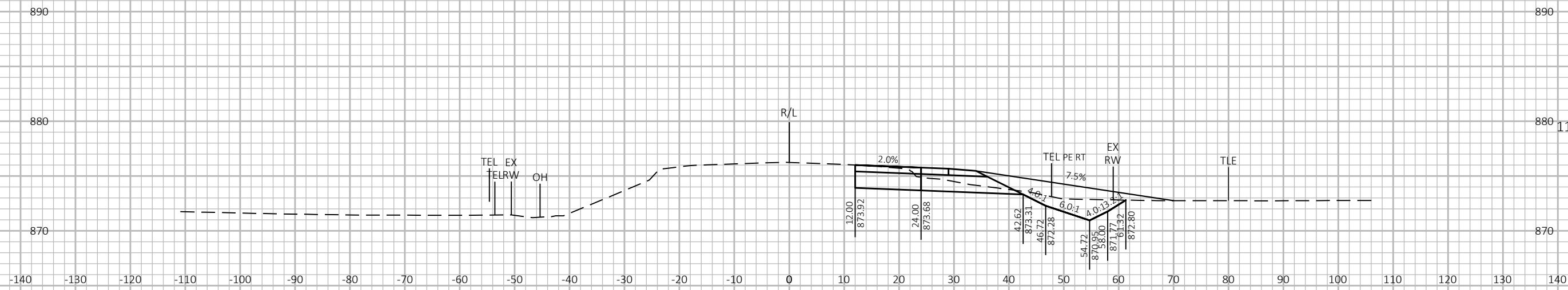
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LAYOUT NAME - 18



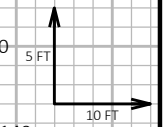
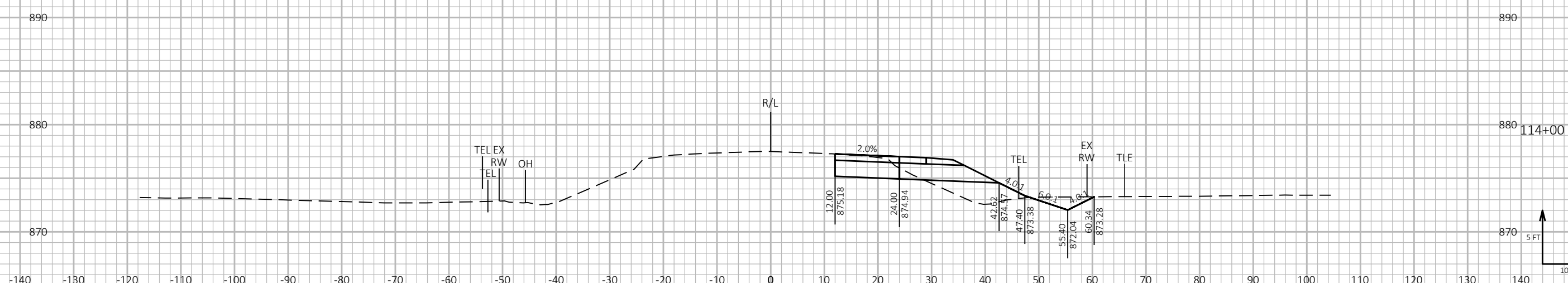
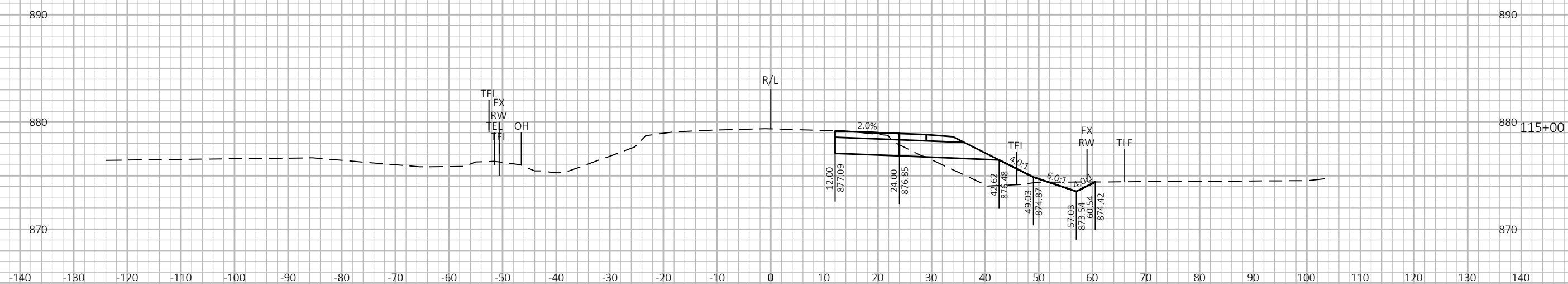
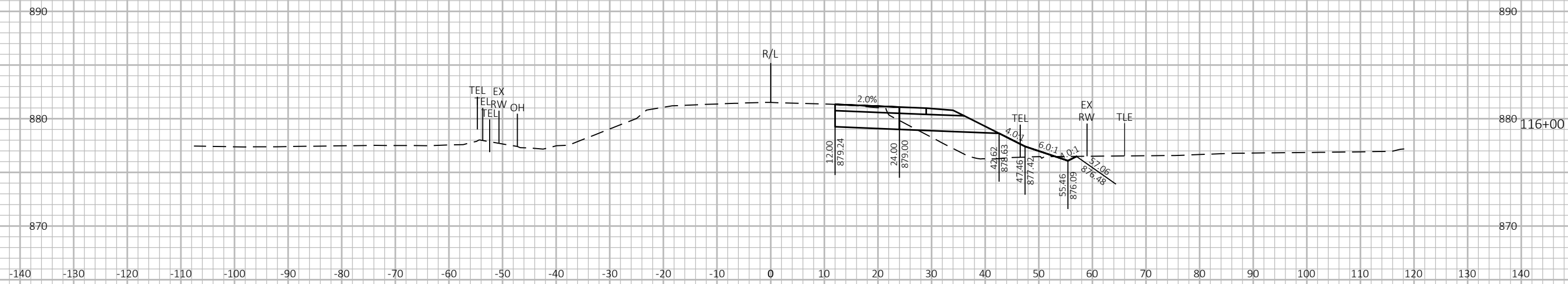
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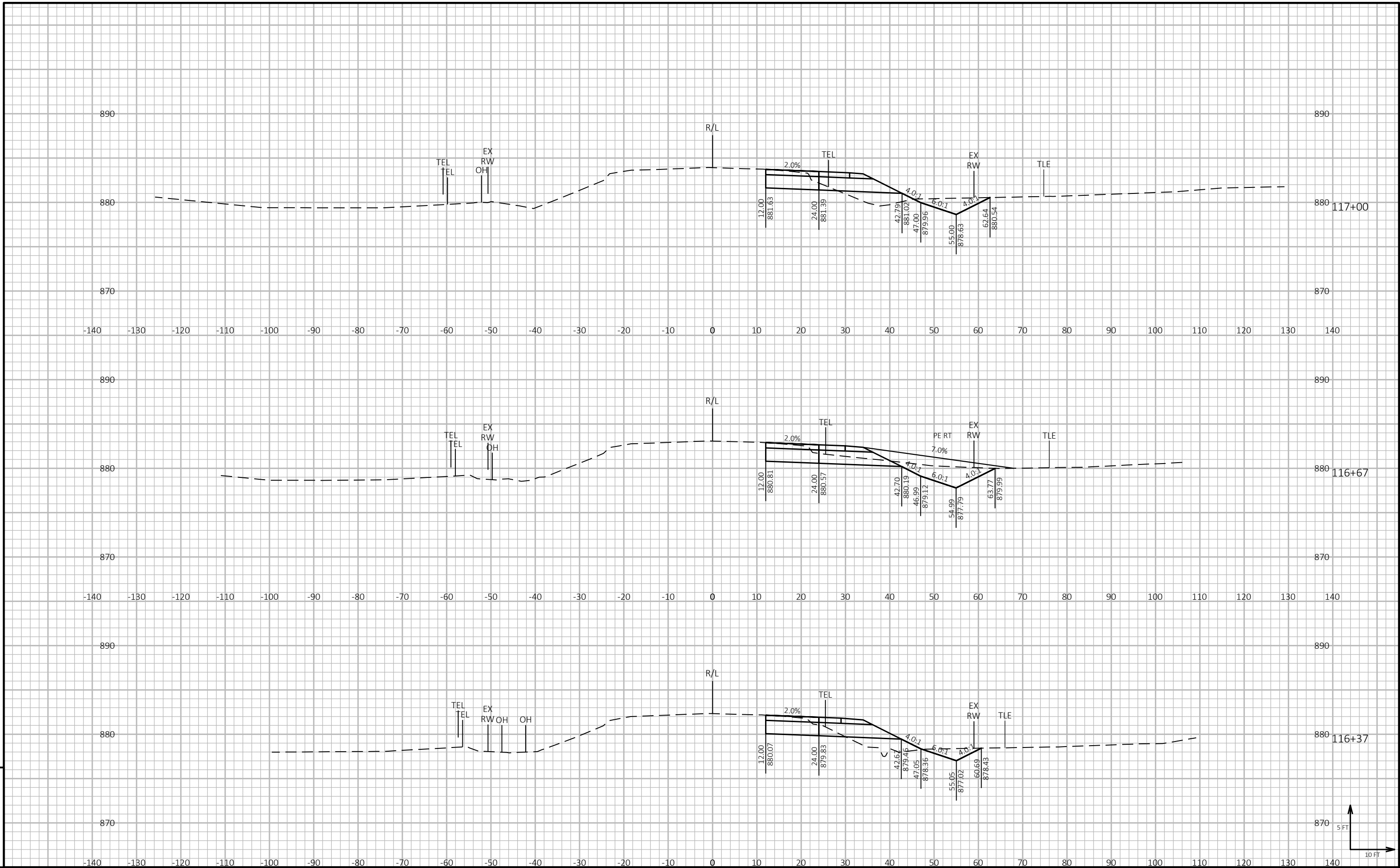
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:41 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 21



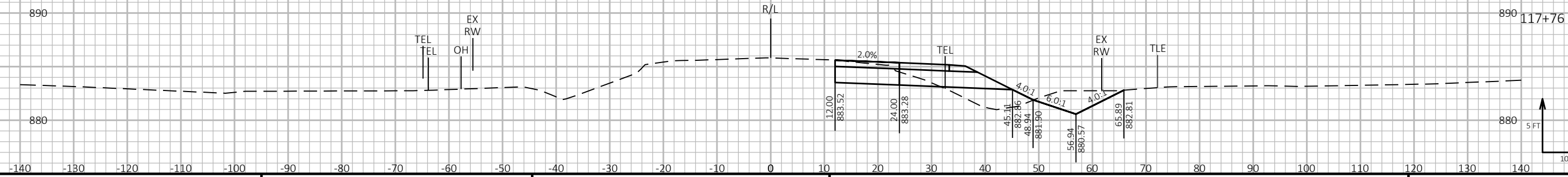
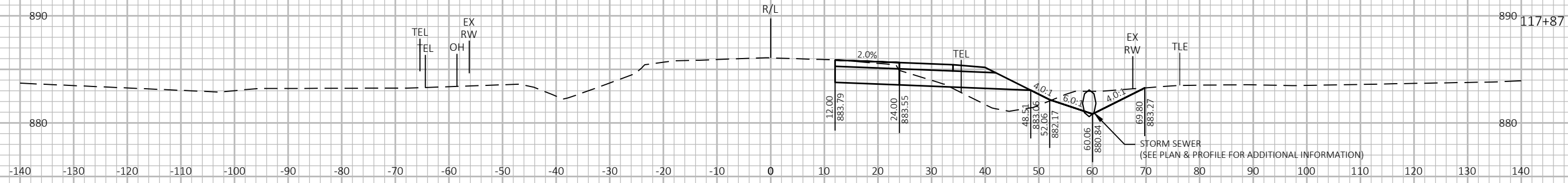
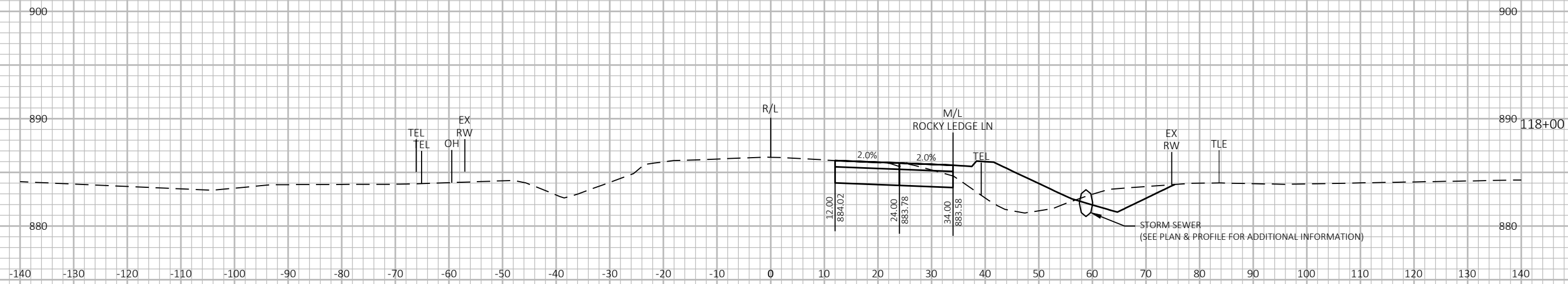
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

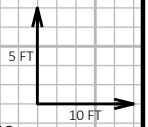
FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:41 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

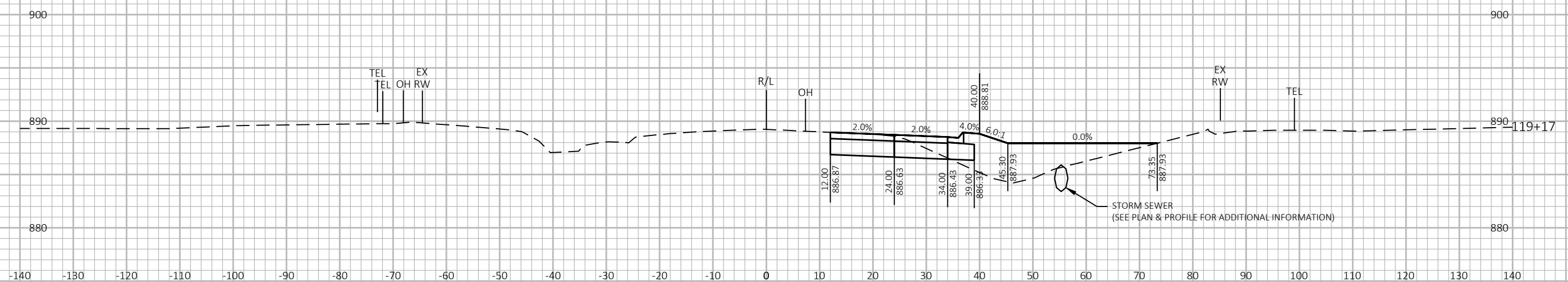
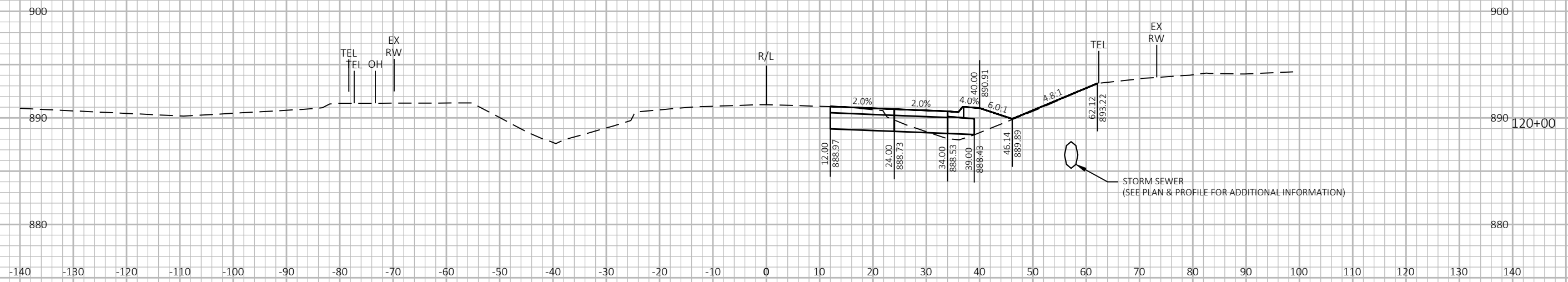
LAYOUT NAME - 22



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PROJECT NO: 1500-33-71

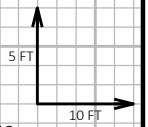
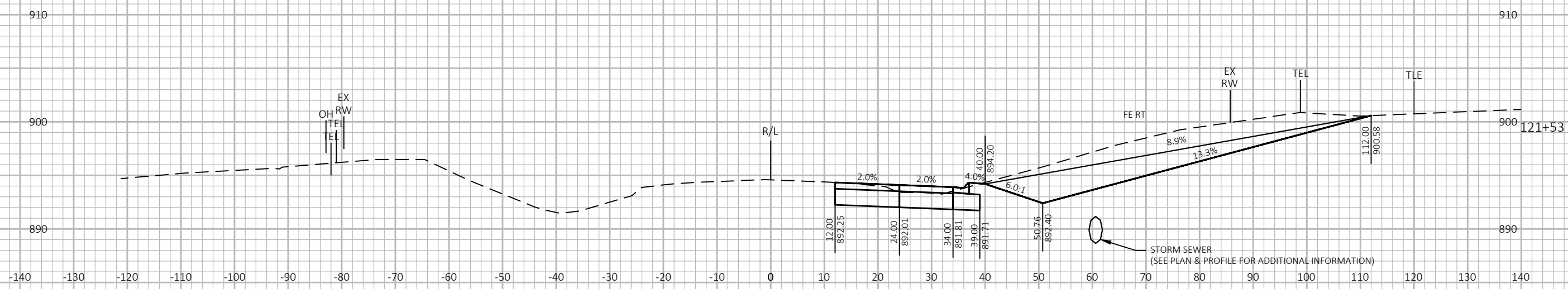
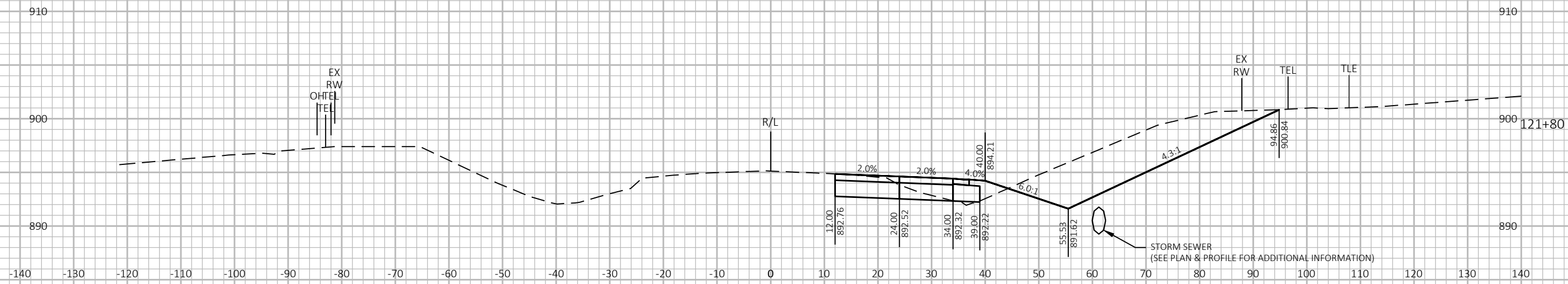
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



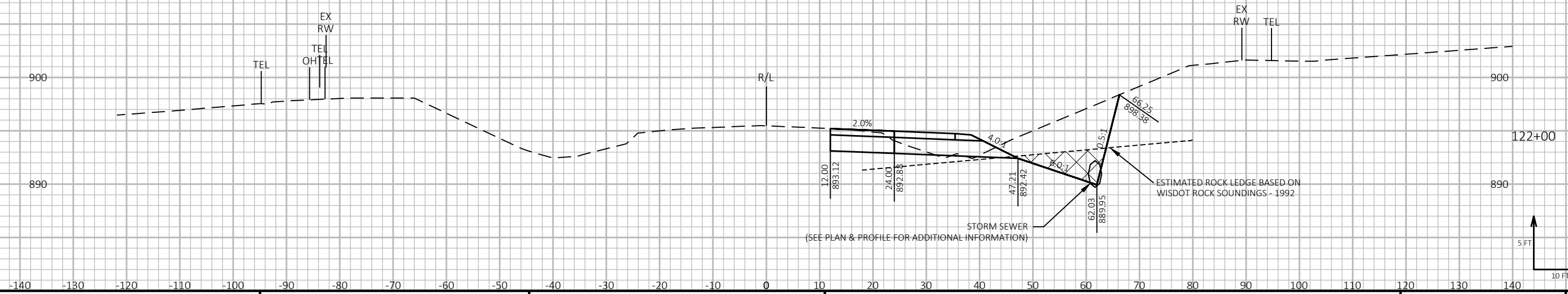
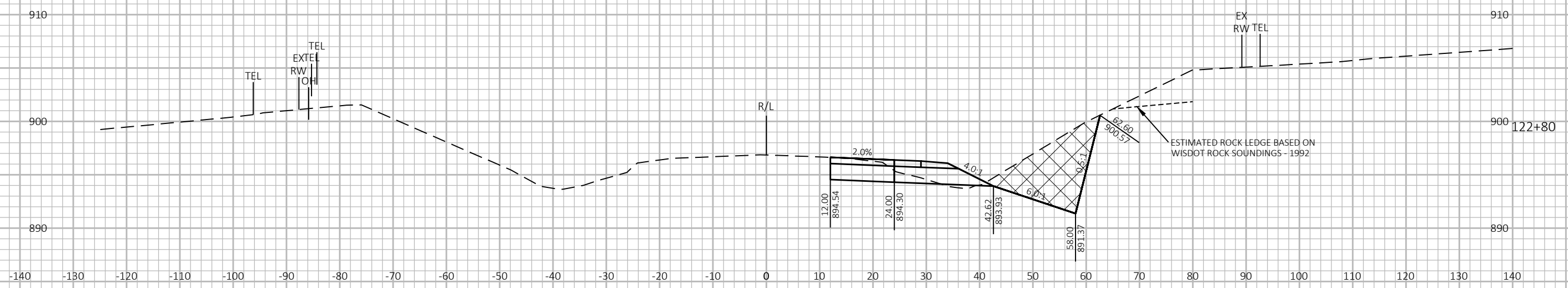
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

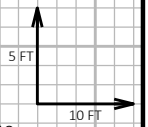
FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:42 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

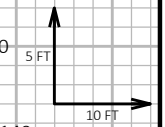
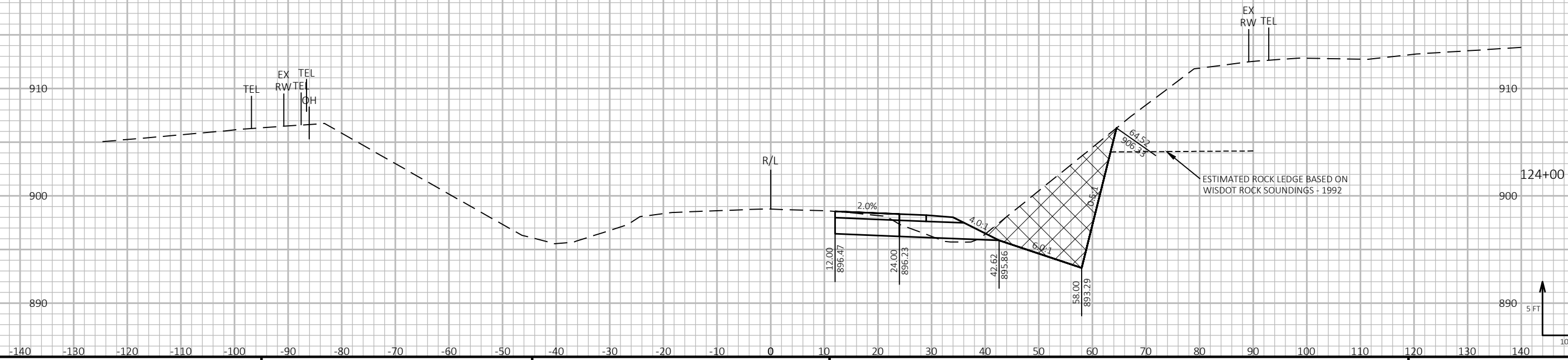
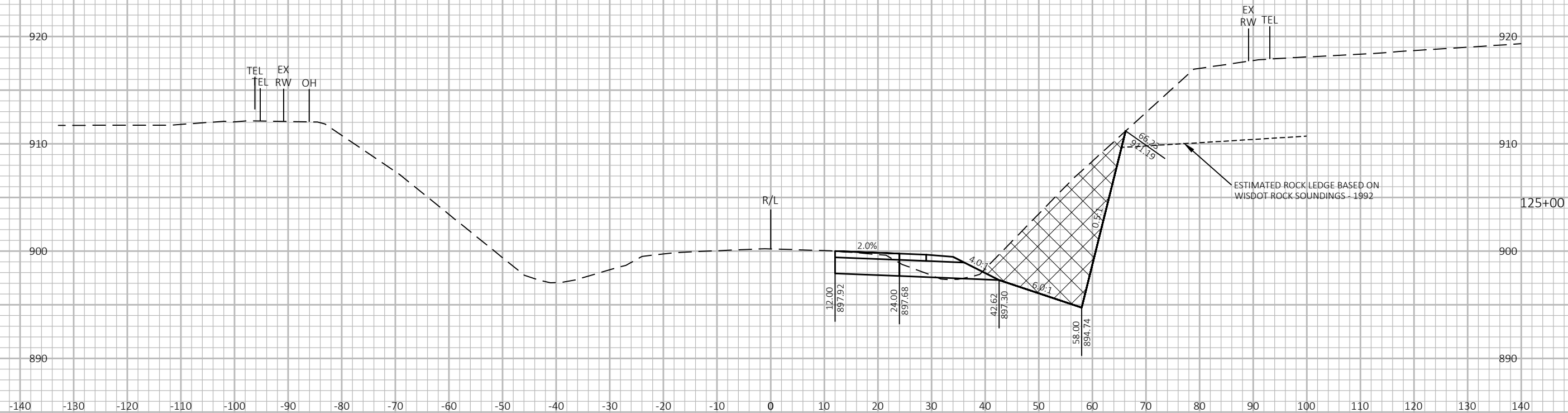
LAYOUT NAME - 25



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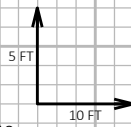
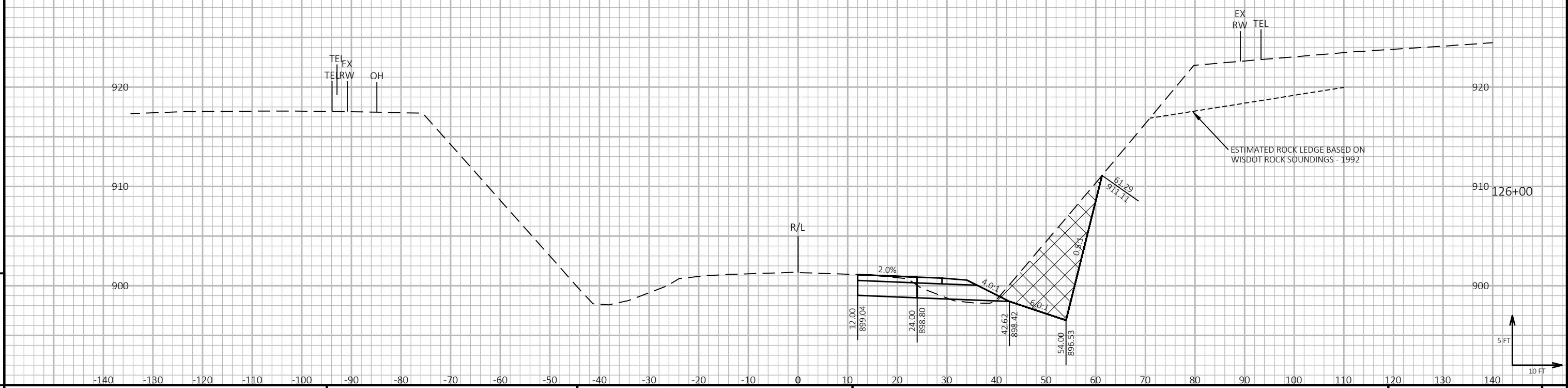
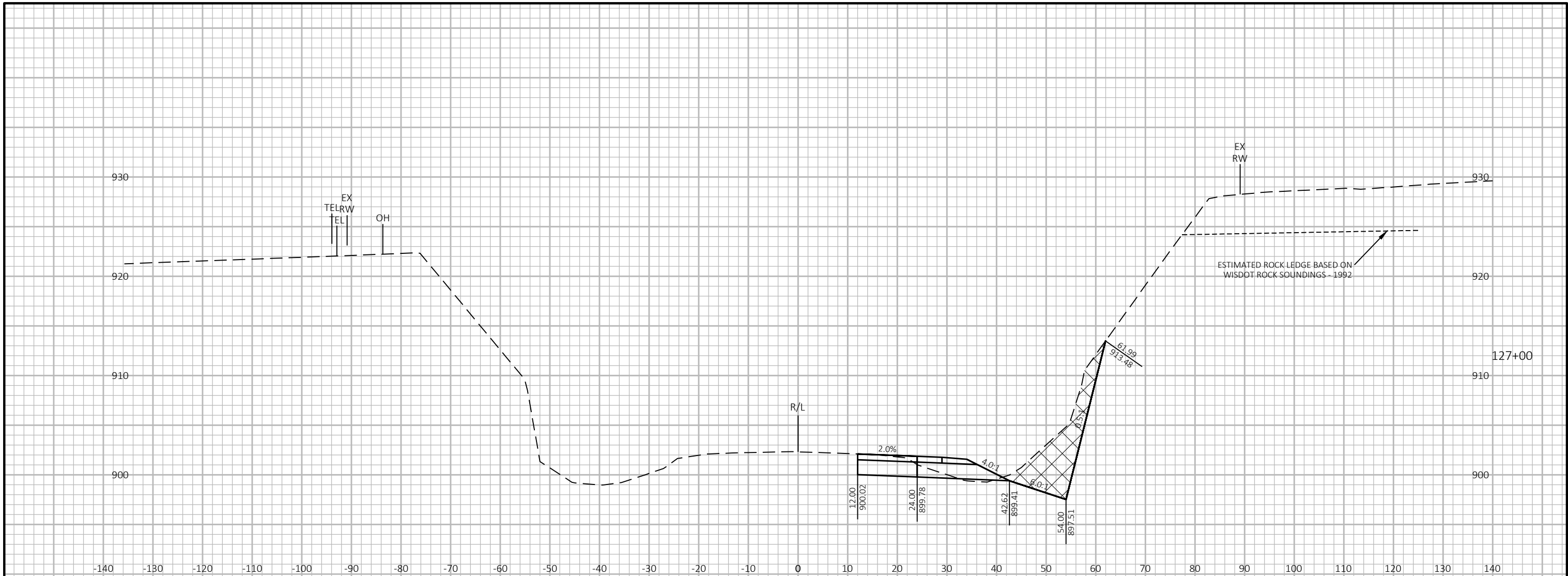


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:42 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

9

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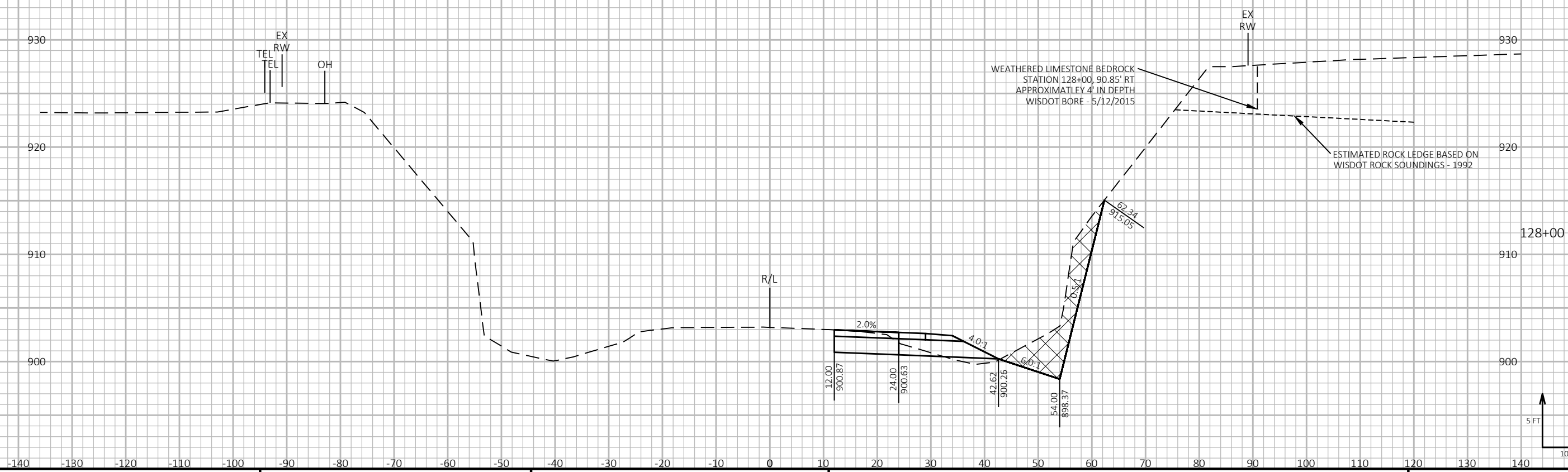
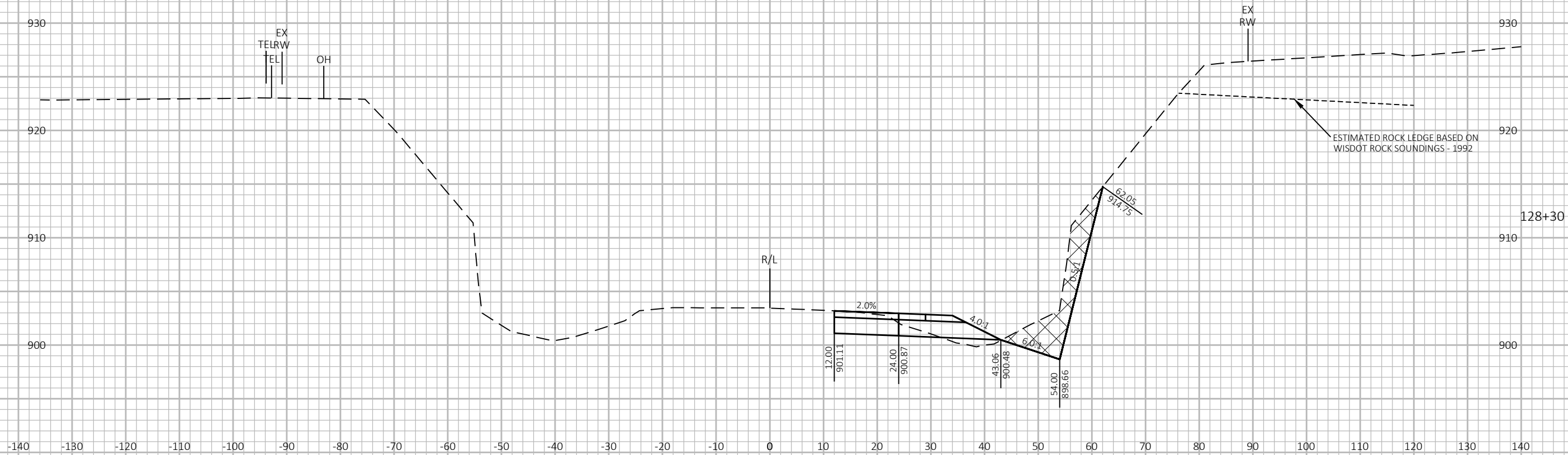
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:43 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 28

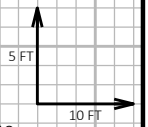


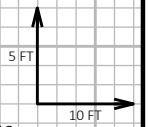
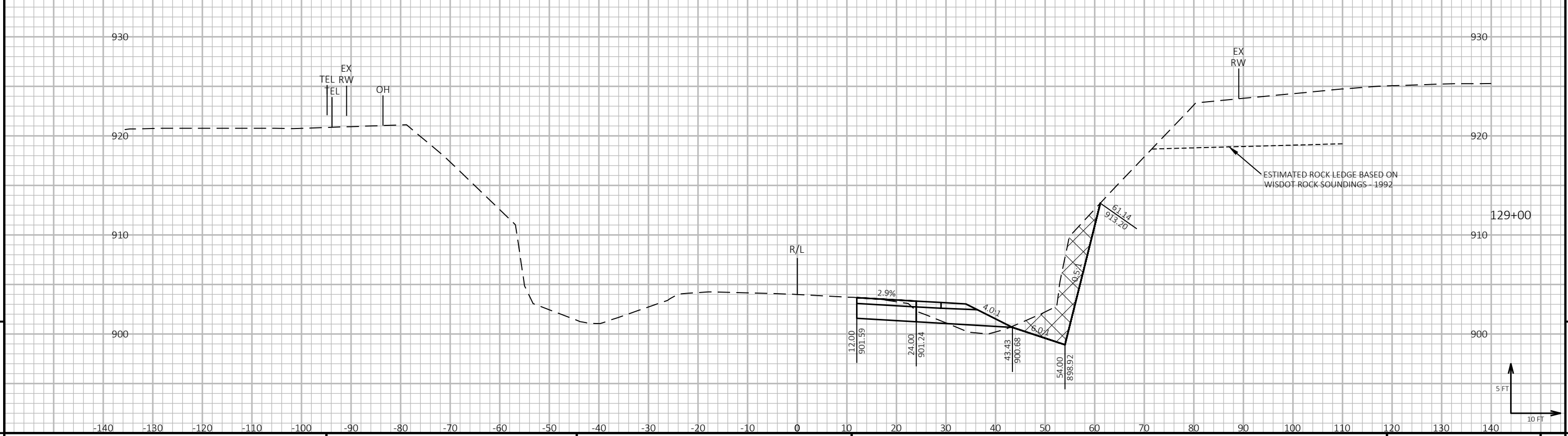
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:43 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49





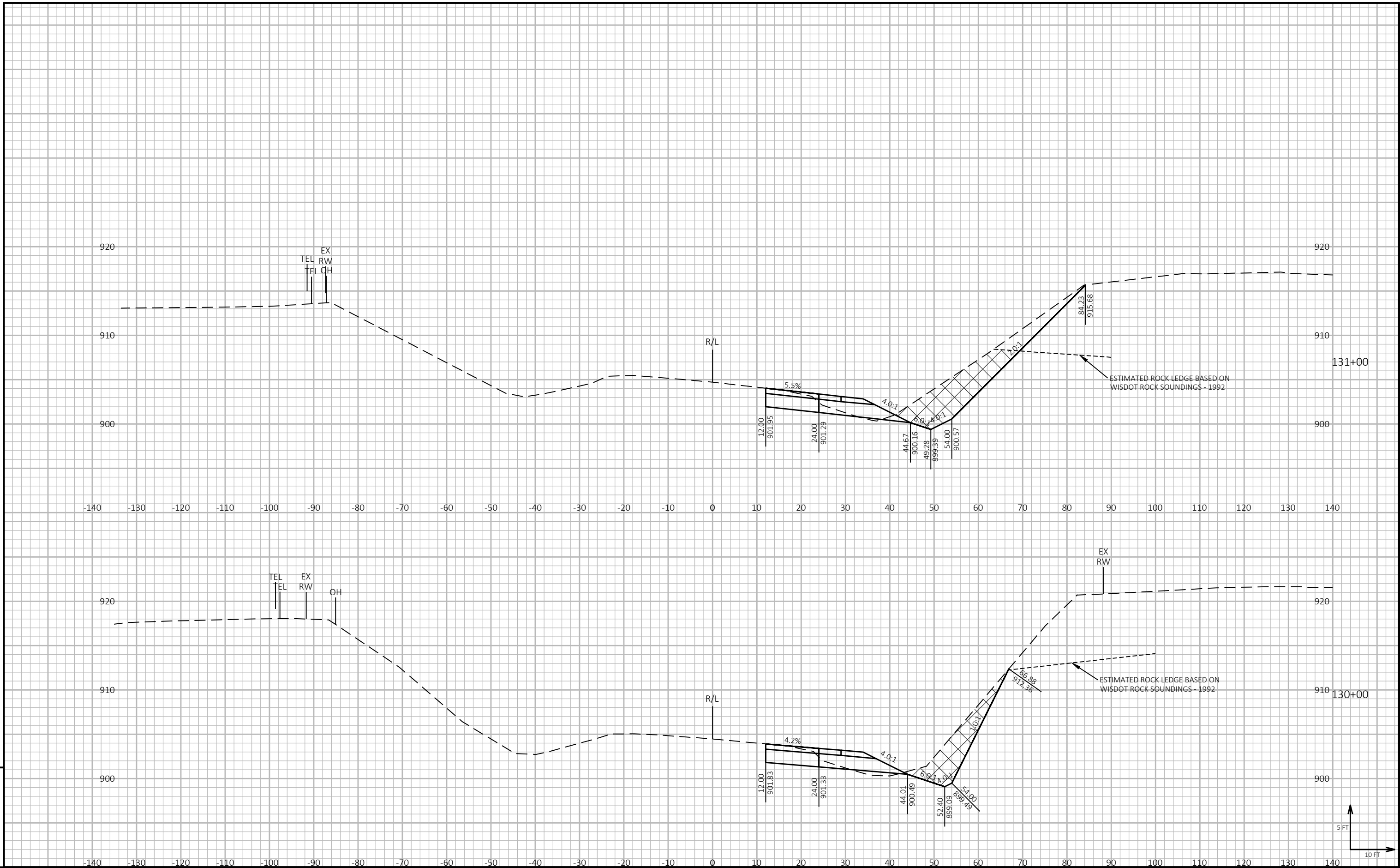
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:43 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 30



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PROJECT NO: 1500-33-71

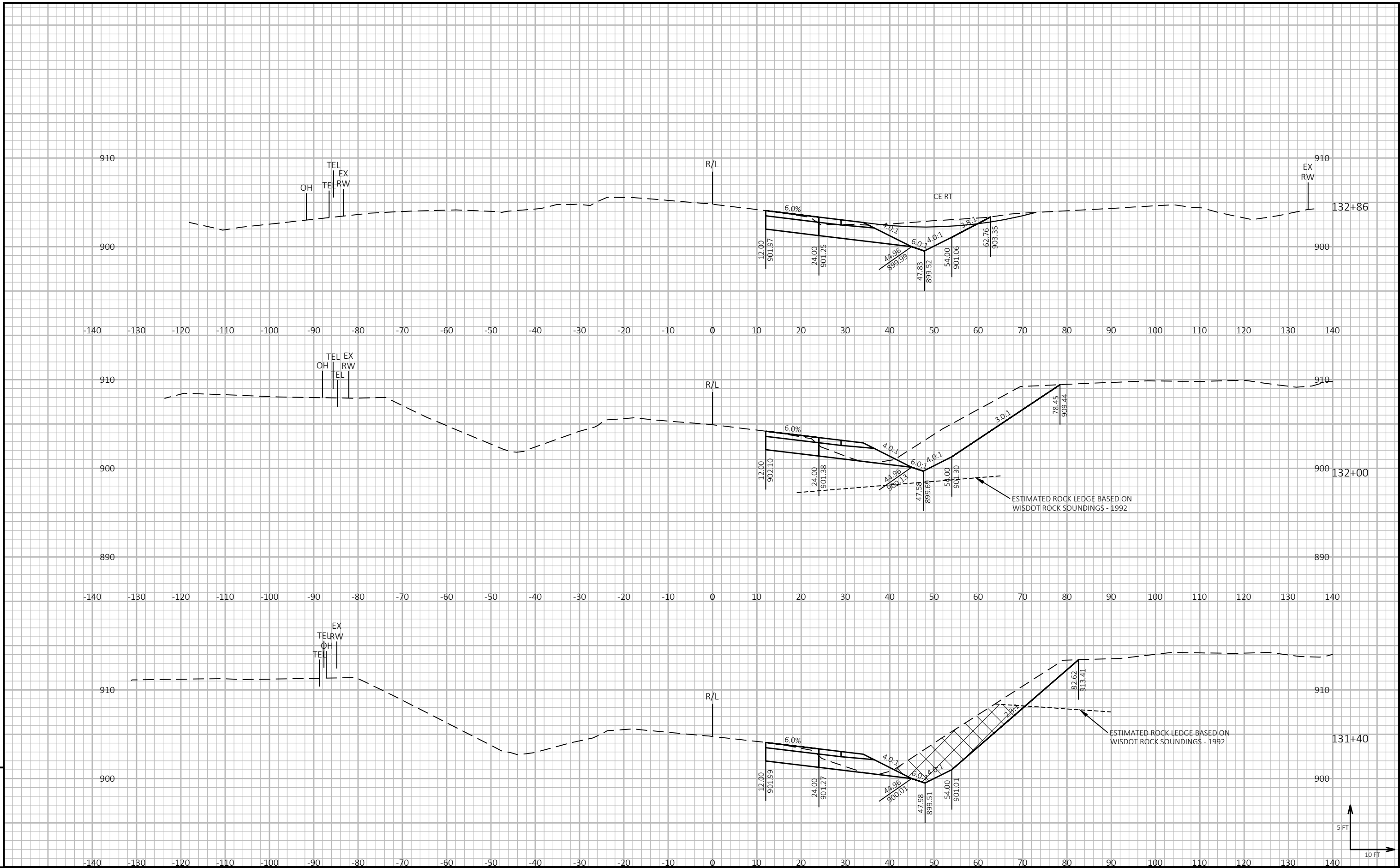
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



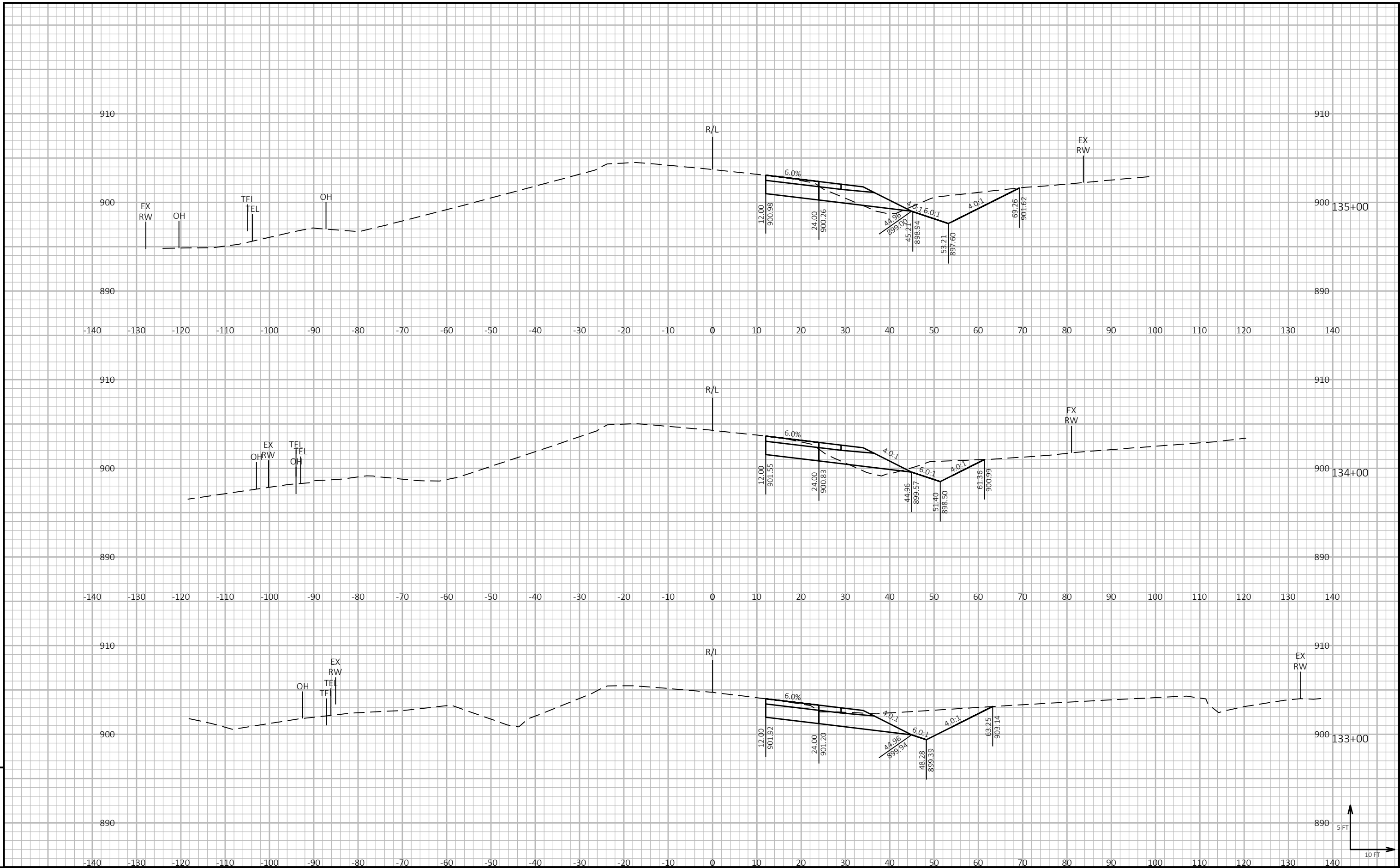
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:44 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 32

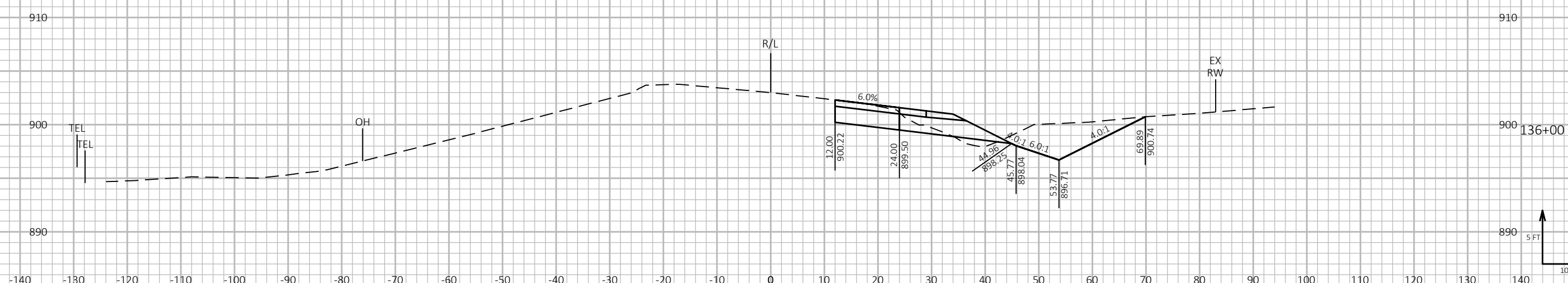
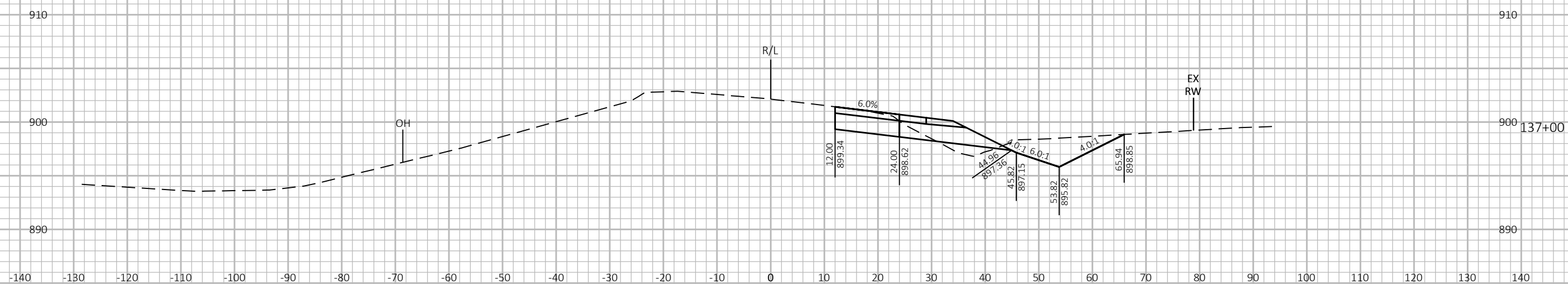
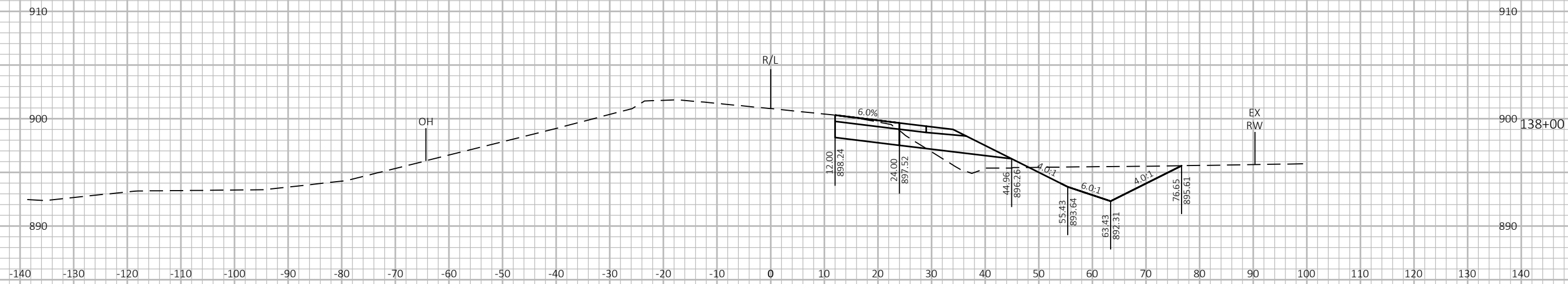


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:44 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49



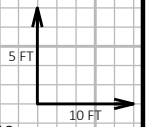
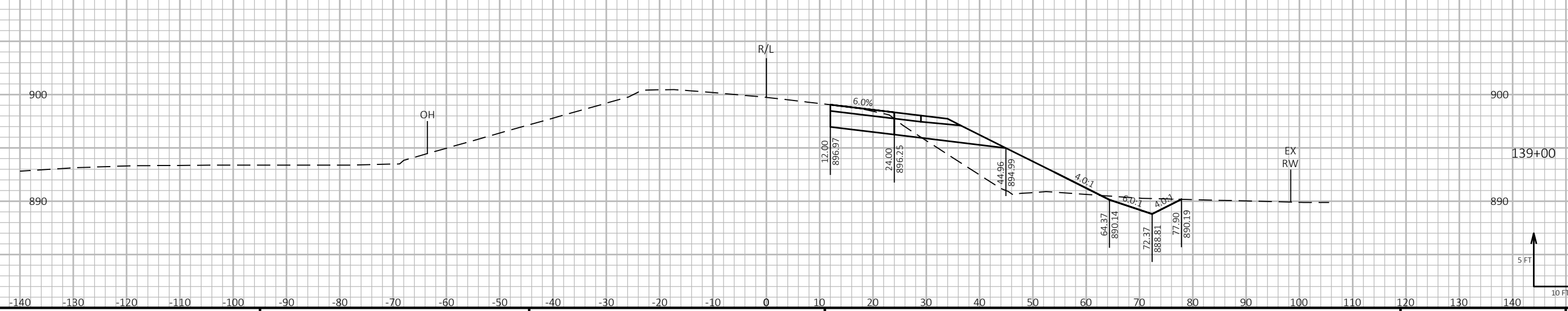
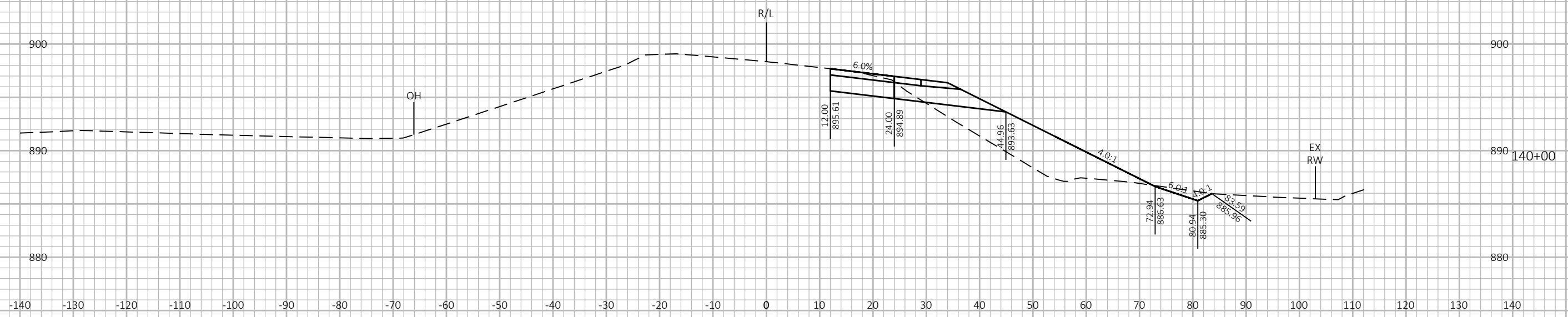
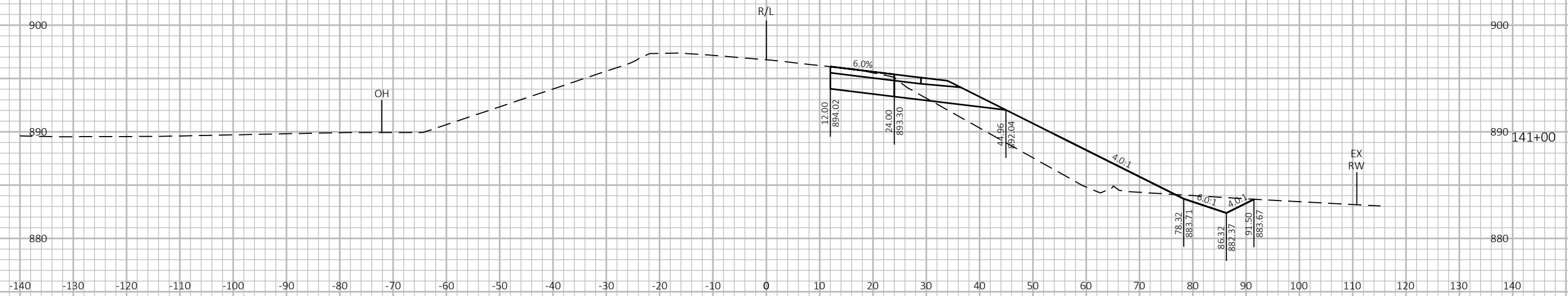
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PROJECT NO: 1500-33-71 | HWY: USH 10 | COUNTY: MANITOWOC | CROSS SECTIONS: USH 10 - EB PASSING LANE | SHEET | E

FILE NAME: P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG | PLOT DATE: 5/24/2023 9:44 AM | PLOT BY: AUSTIN STRAHL | PLOT NAME: | PLOT SCALE: 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. | WISDOT/CADD SHEET 49

LAYOUT NAME - 34



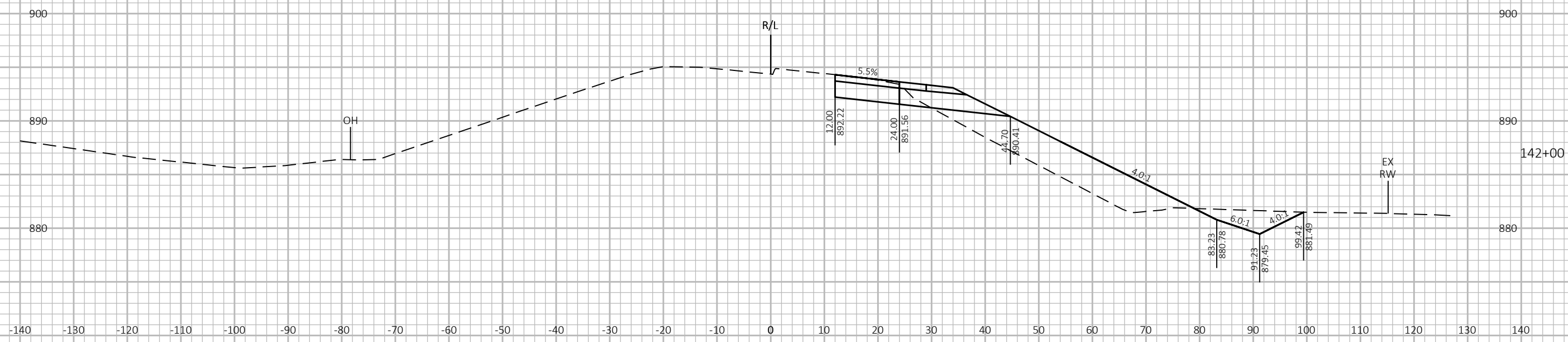
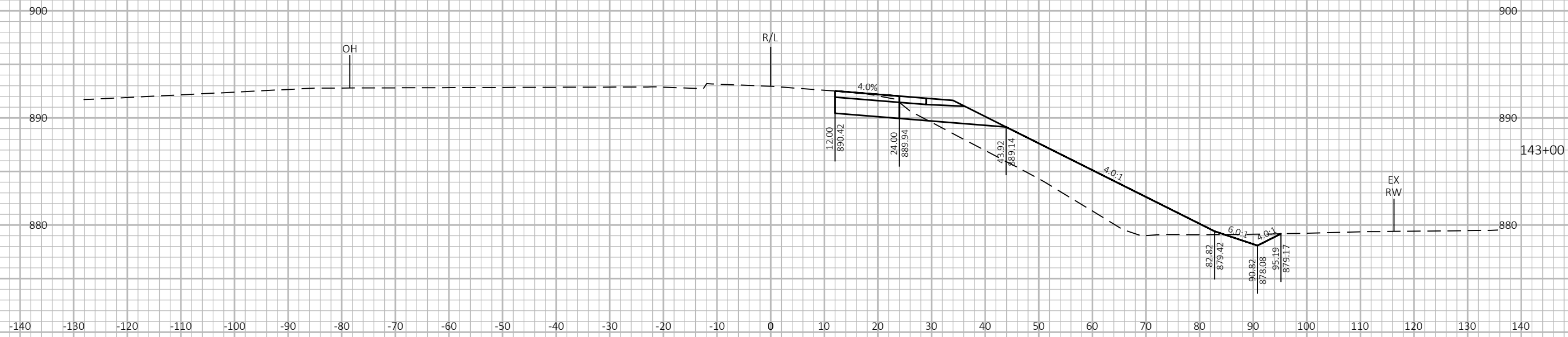
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PROJECT NO: 1500-33-71 | HWY: USH 10 | COUNTY: MANITOWOC | CROSS SECTIONS: USH 10 - EB PASSING LANE | SHEET | E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG | PLOT DATE : 5/24/2023 9:44 AM | PLOT BY : AUSTIN STRAHL | PLOT NAME : | PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. | WISDOT/CADD SHEET 49

LAYOUT NAME - 35



PROJECT NO: 1500-33-71

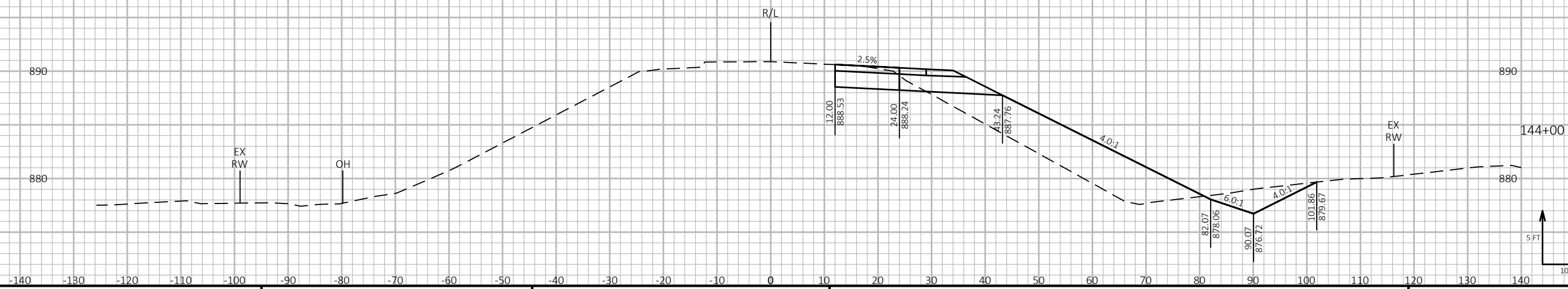
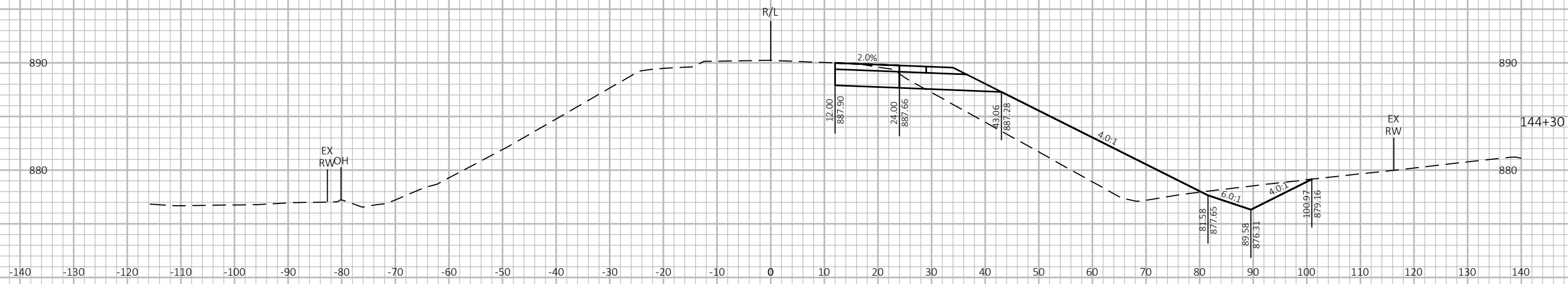
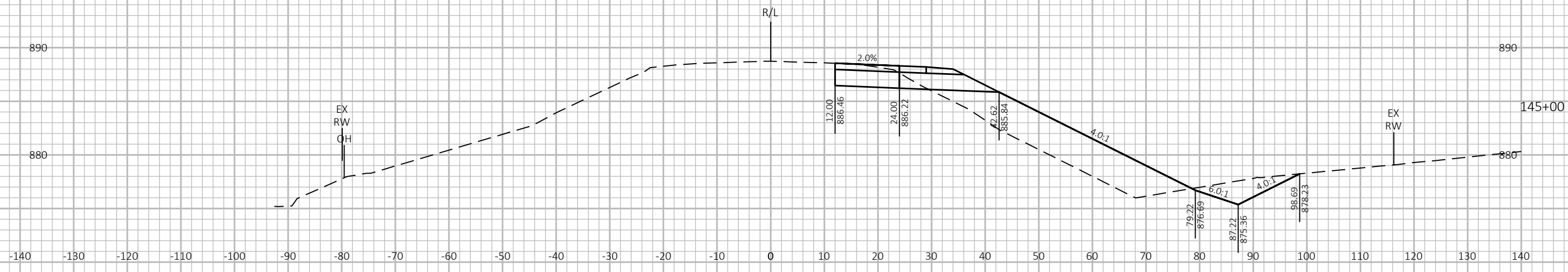
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71

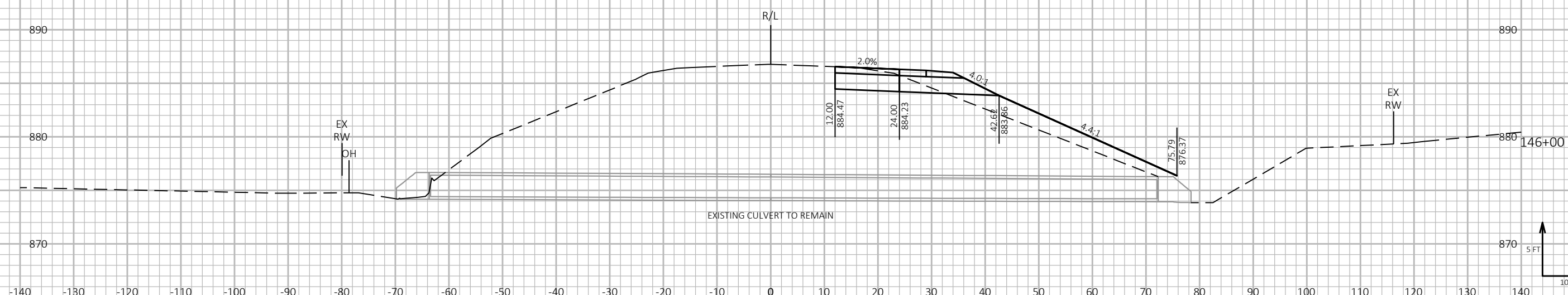
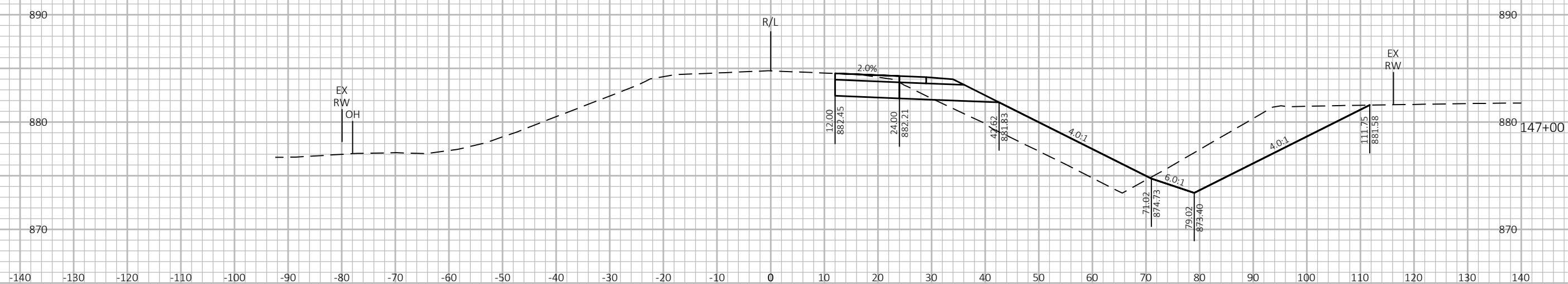
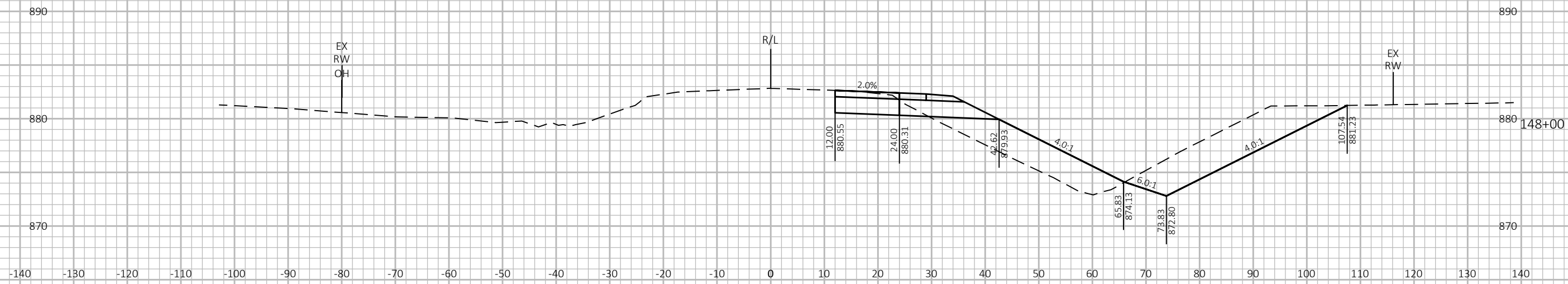
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

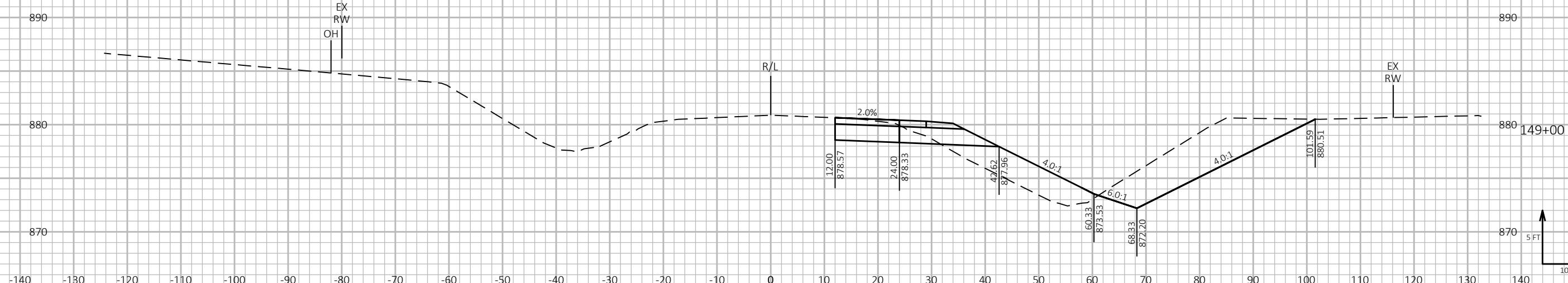
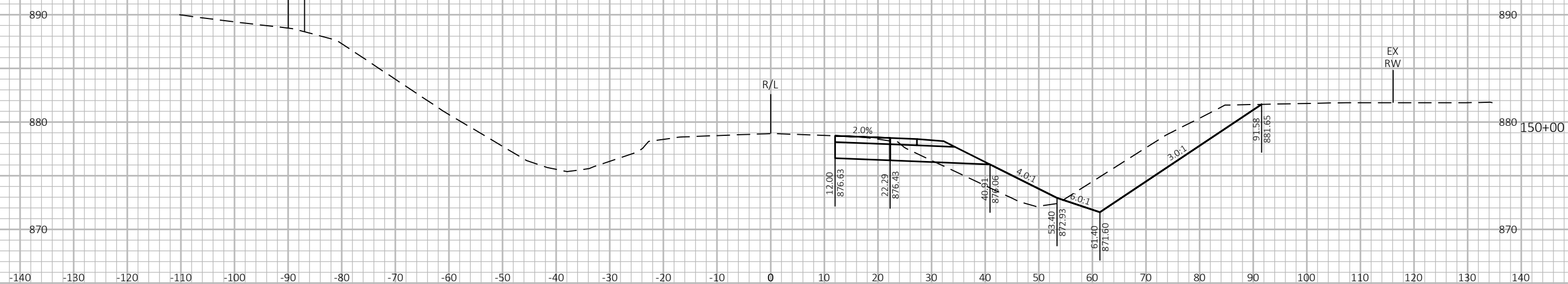
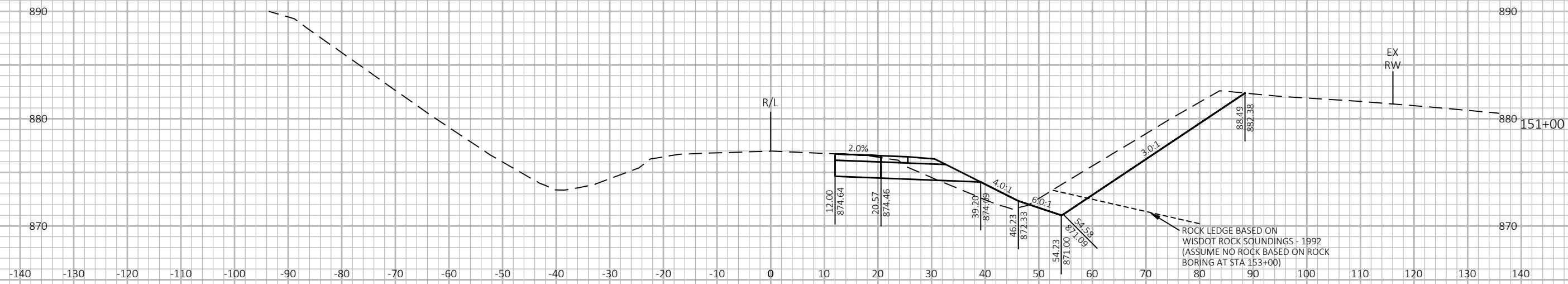
SHEET

E



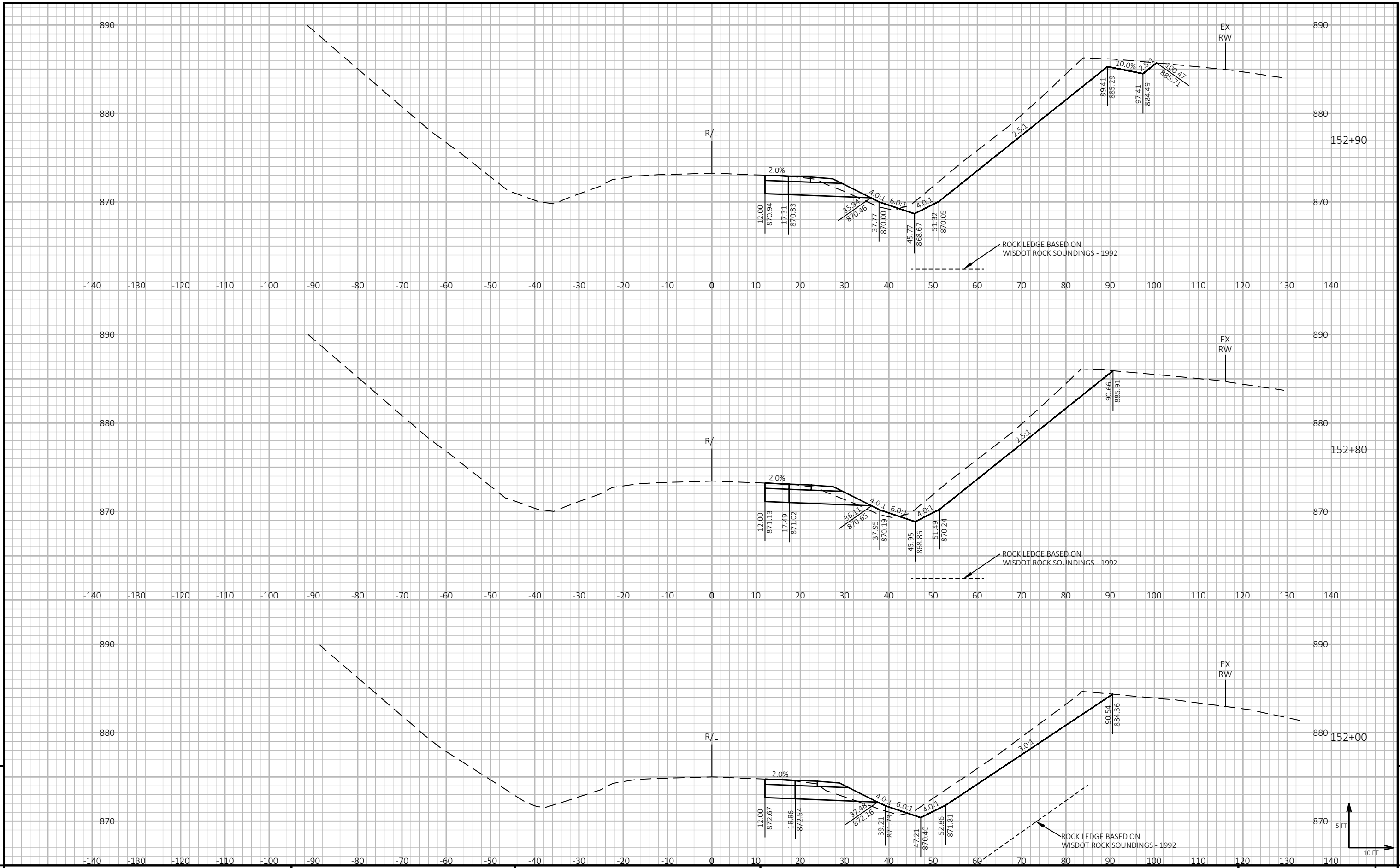
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PROJECT NO: 1500-33-71

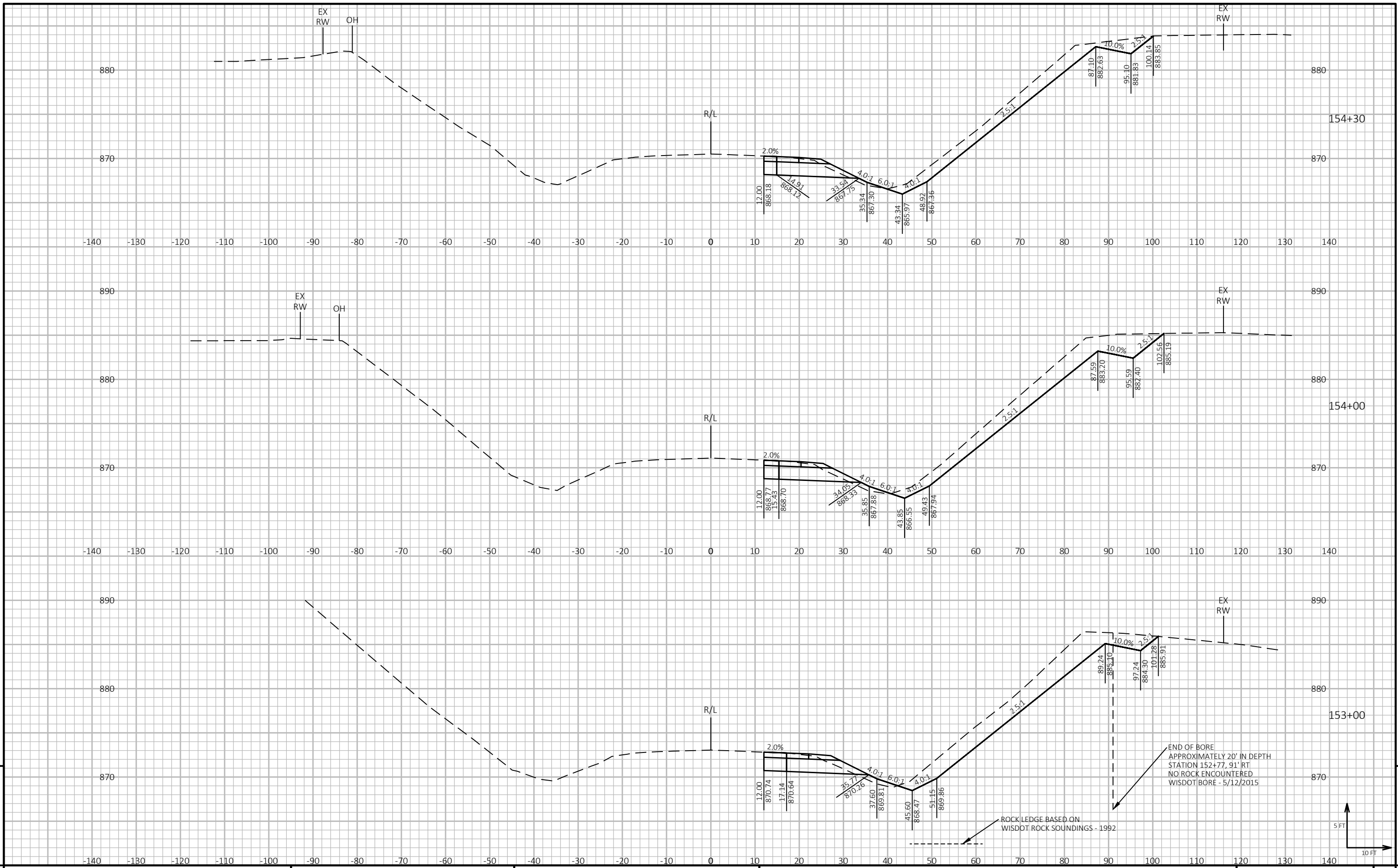
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - EB PASSING LANE

SHEET

E



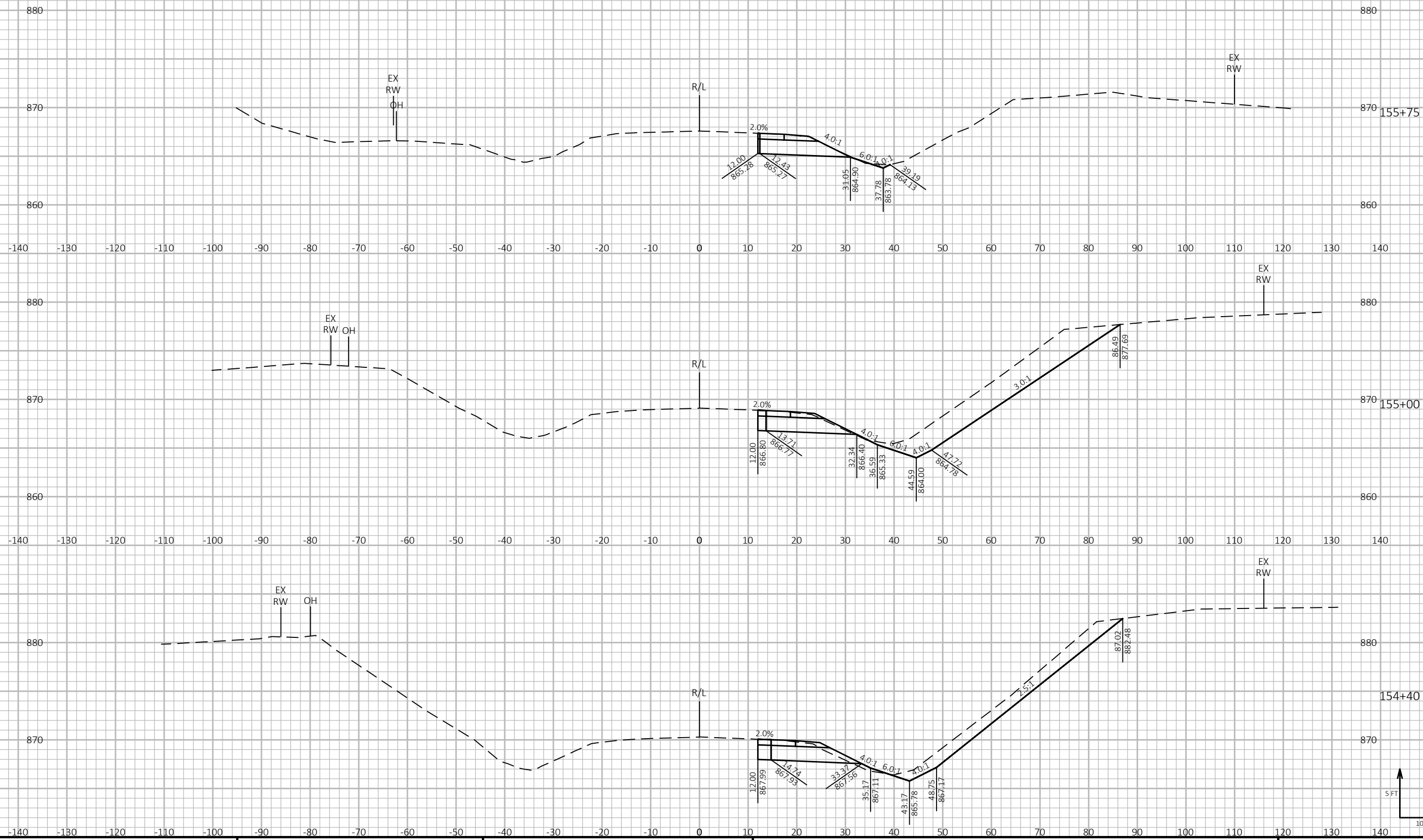
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG PLOT DATE : 5/24/2023 9:46 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT. WISDOT/CADD SHEET 49

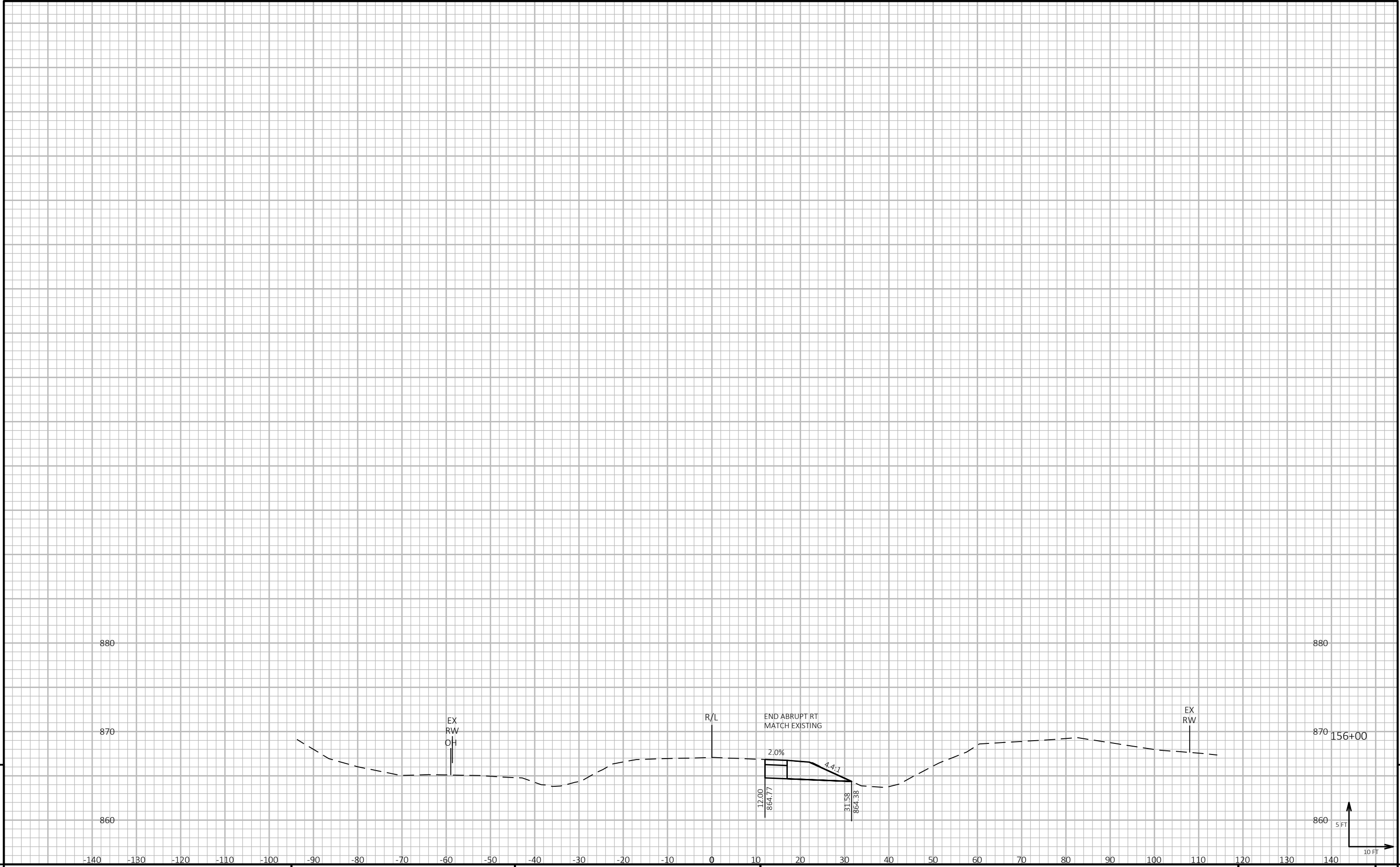
LAYOUT NAME - 41



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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - EB PASSING LANE SHEET E

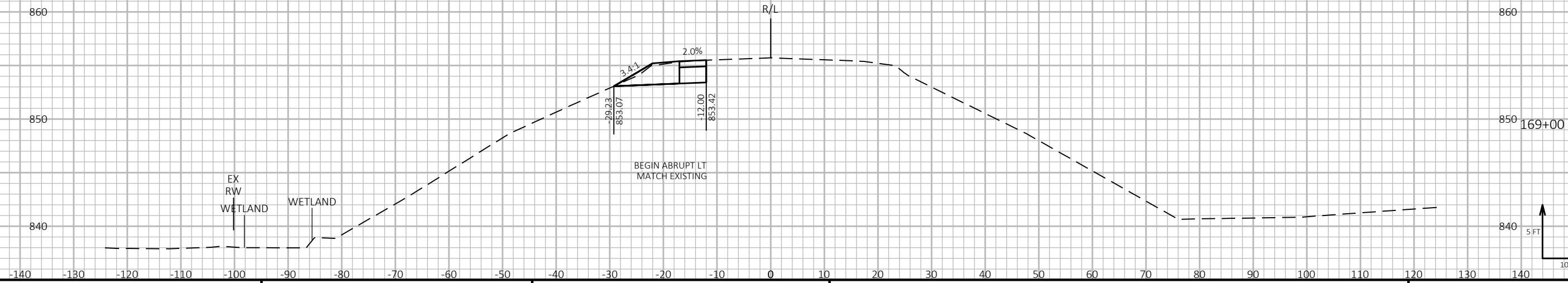
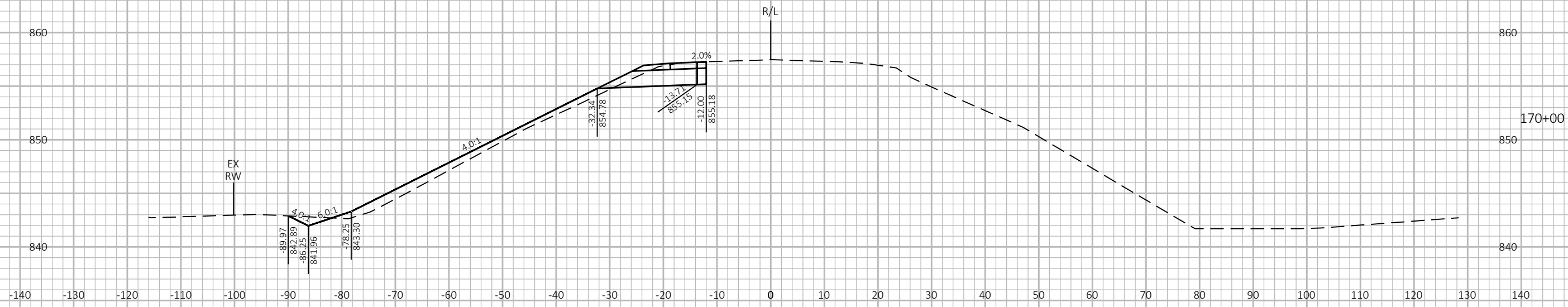
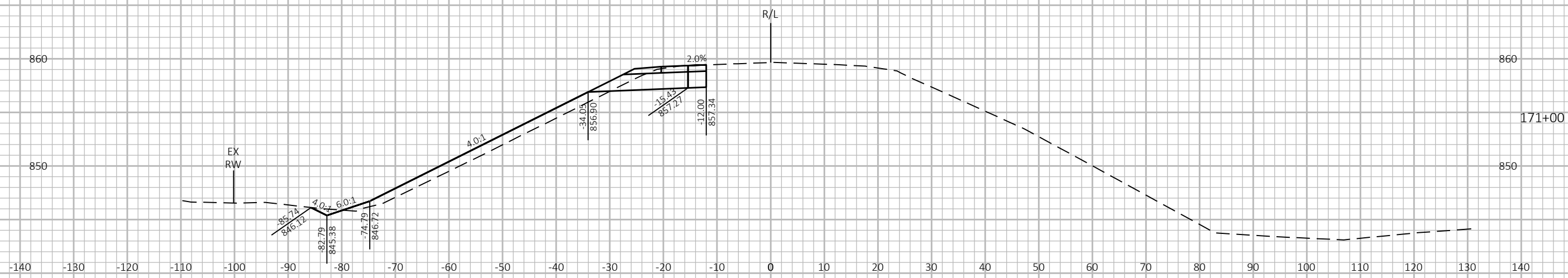


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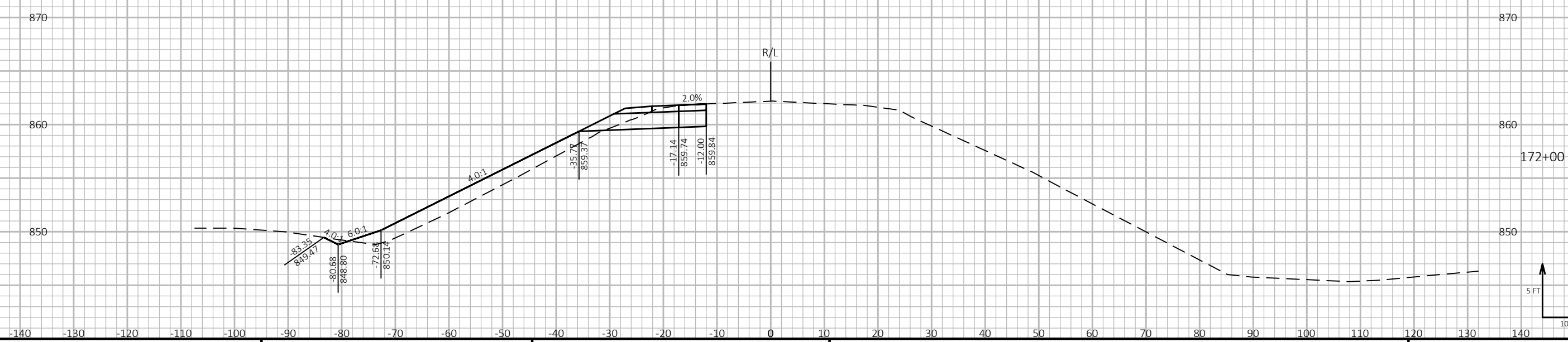
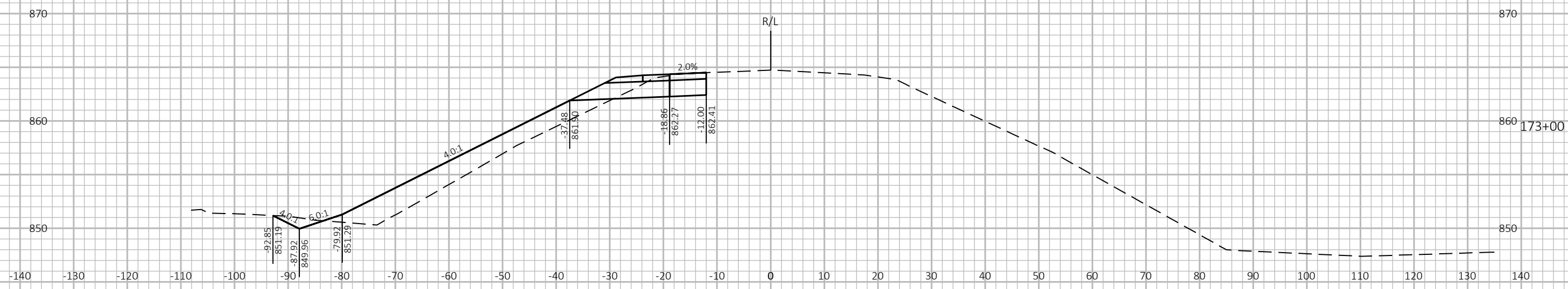
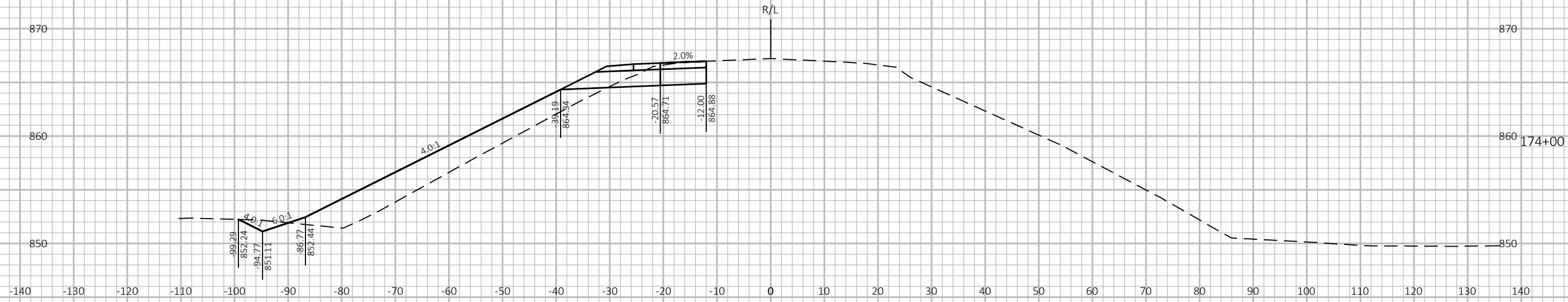
PROJECT NO: 1500-33-71	HWY: USH 10	COUNTY: MANITOWOC	CROSS SECTIONS: USH 10 - EB PASSING LANE	SHEET	E
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FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090201-XS.DWG
 LAYOUT NAME - 43
 PLOT DATE : 5/24/2023 9:46 AM
 PLOT BY : AUSTIN STRAHL
 PLOT NAME :
 PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
 WISDOT/CADD SHEET 49



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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

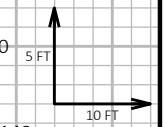
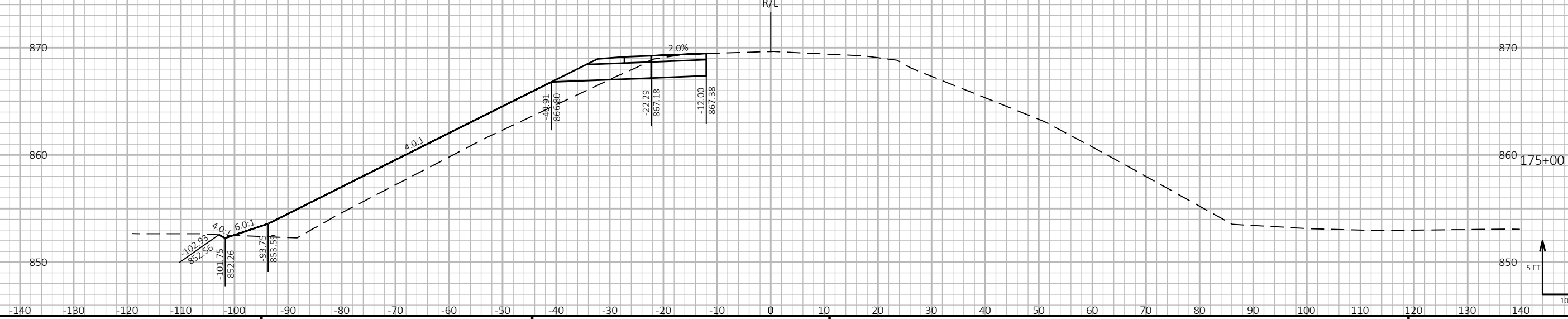
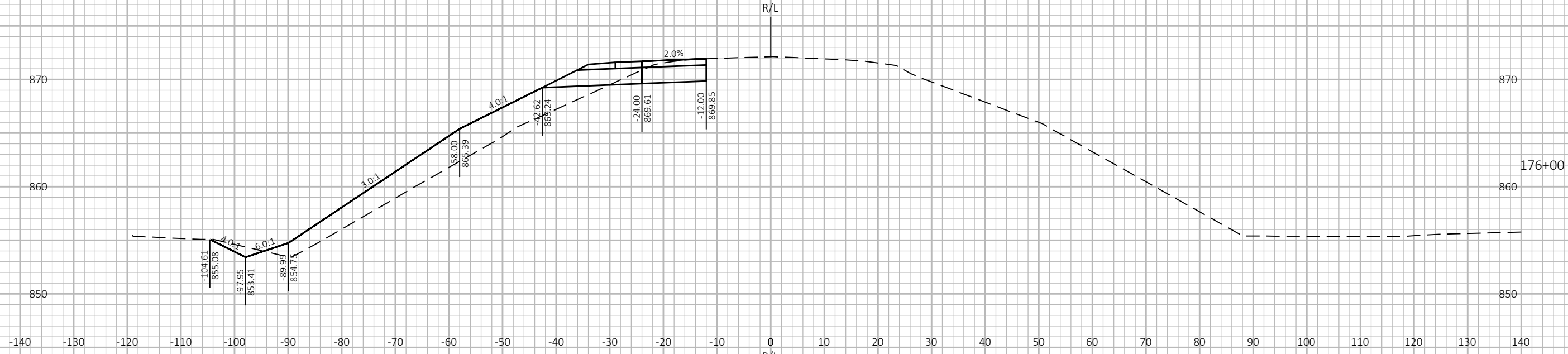
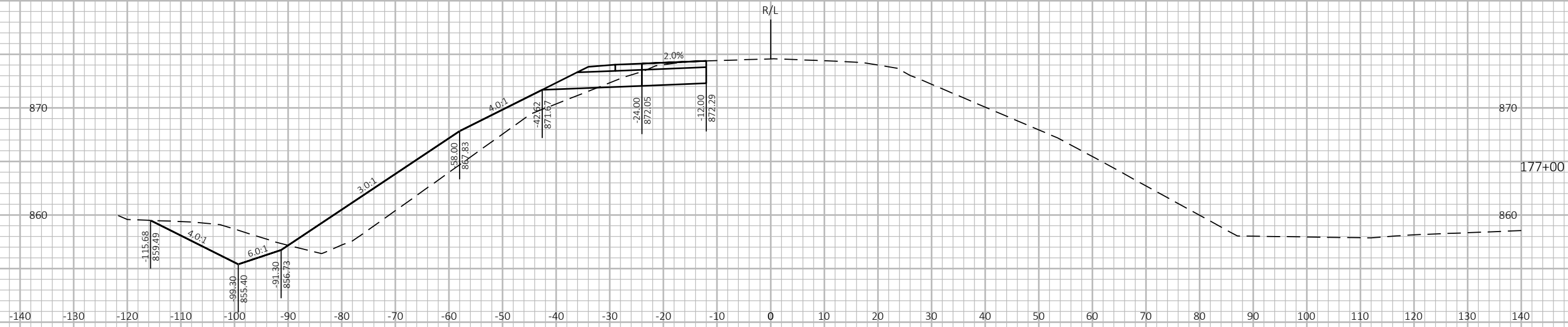


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:17 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1500-33-71

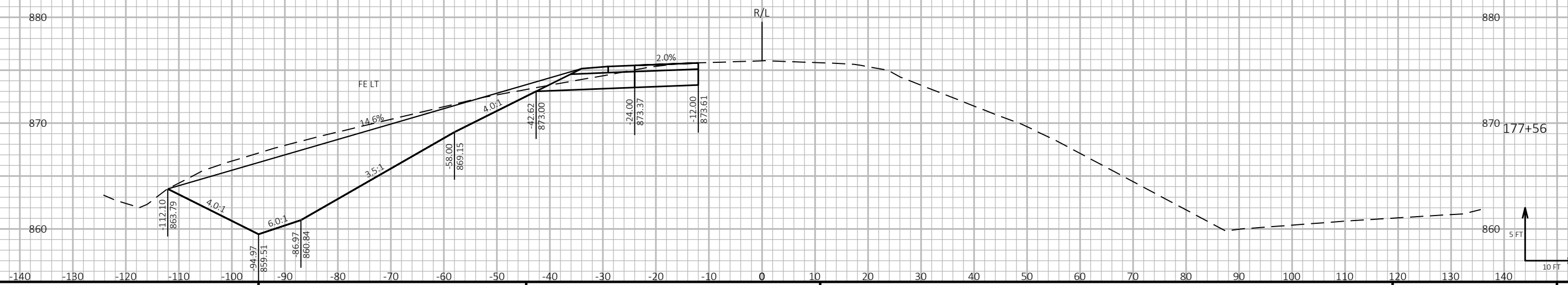
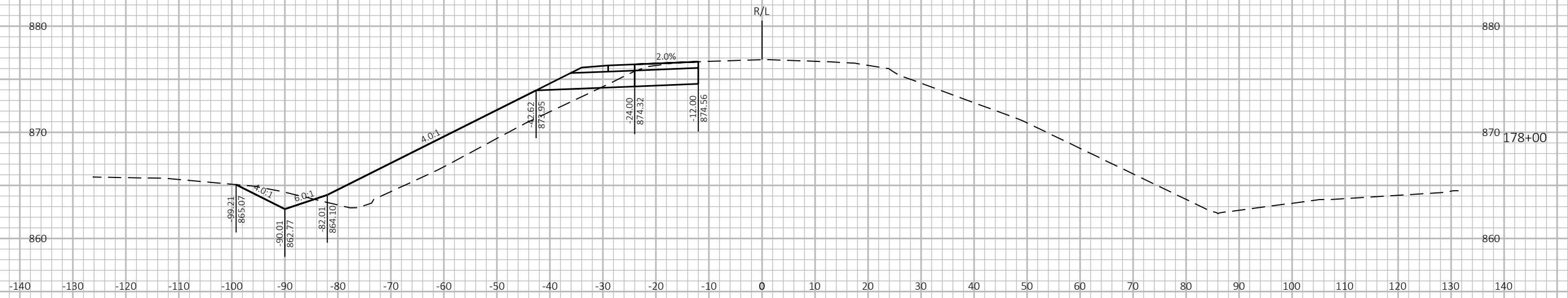
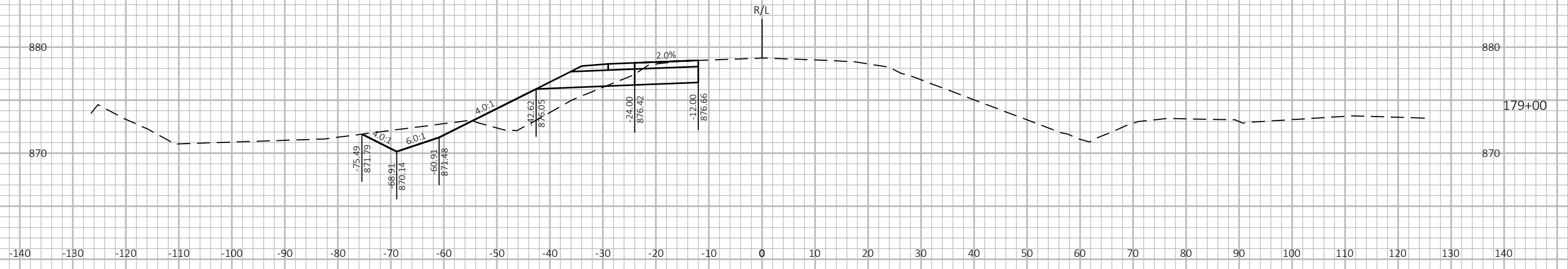
HWY: USH 10

COUNTY: MANITOWOC

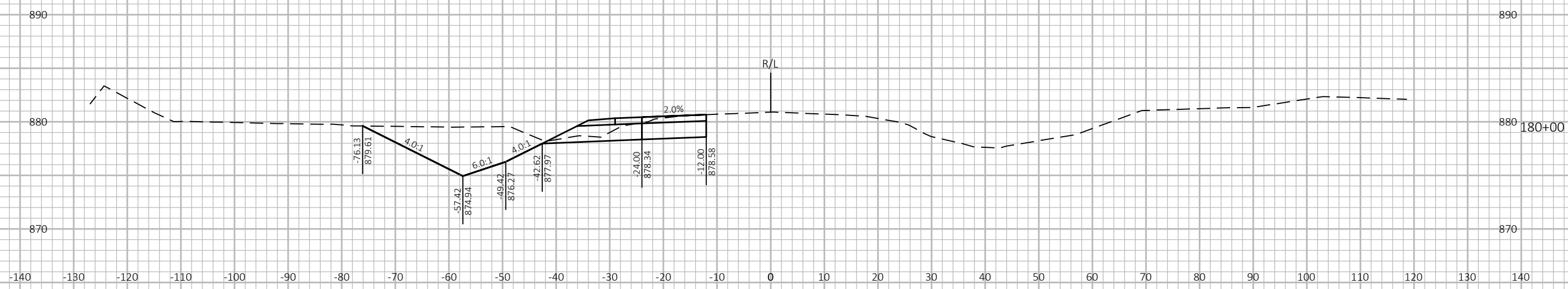
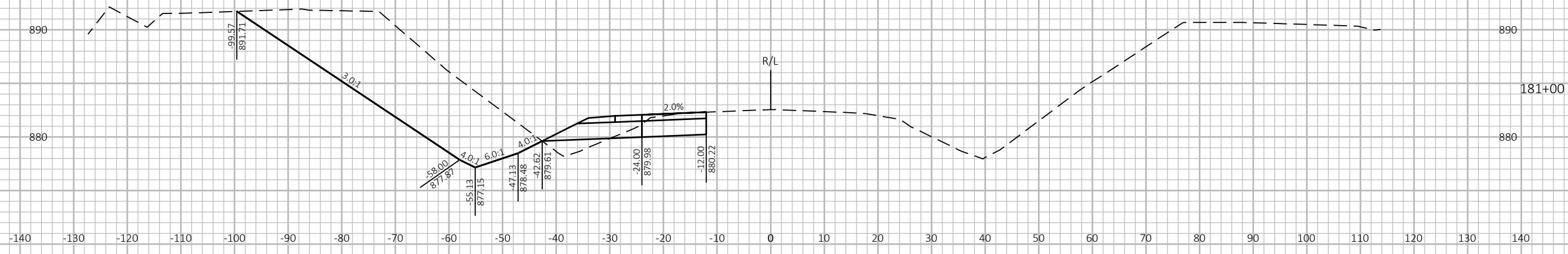
CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E

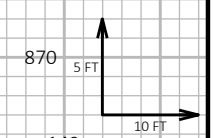


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E



9

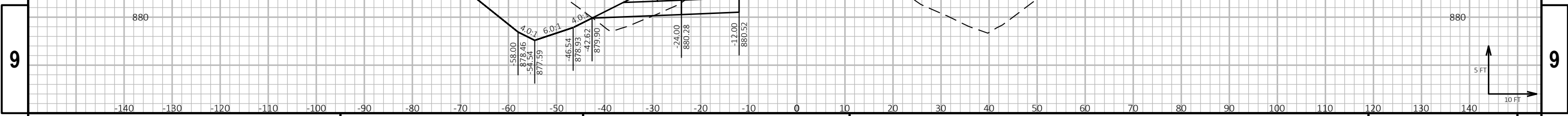
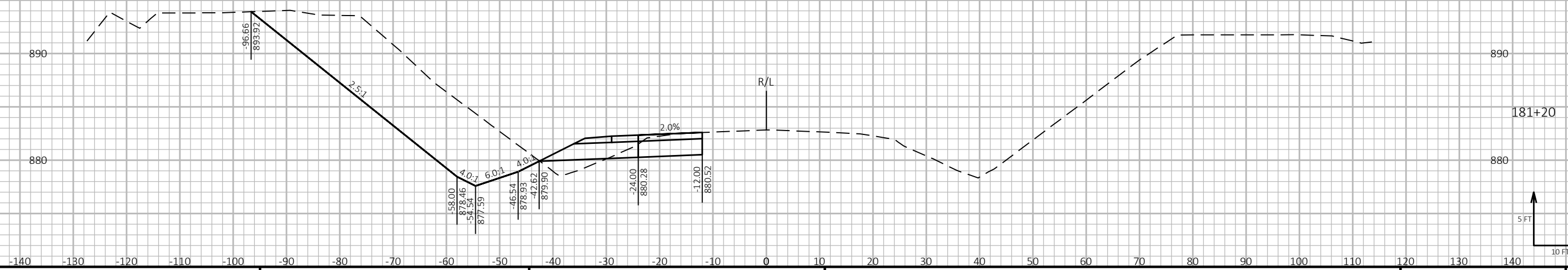
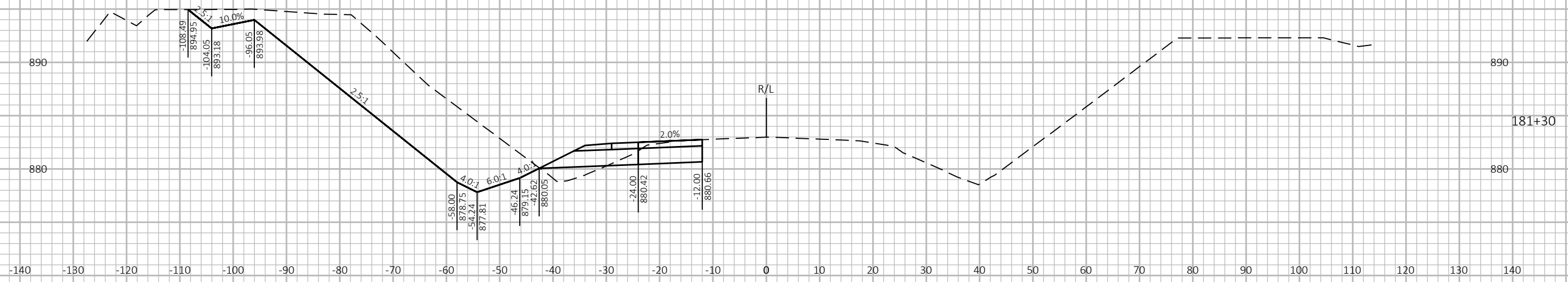
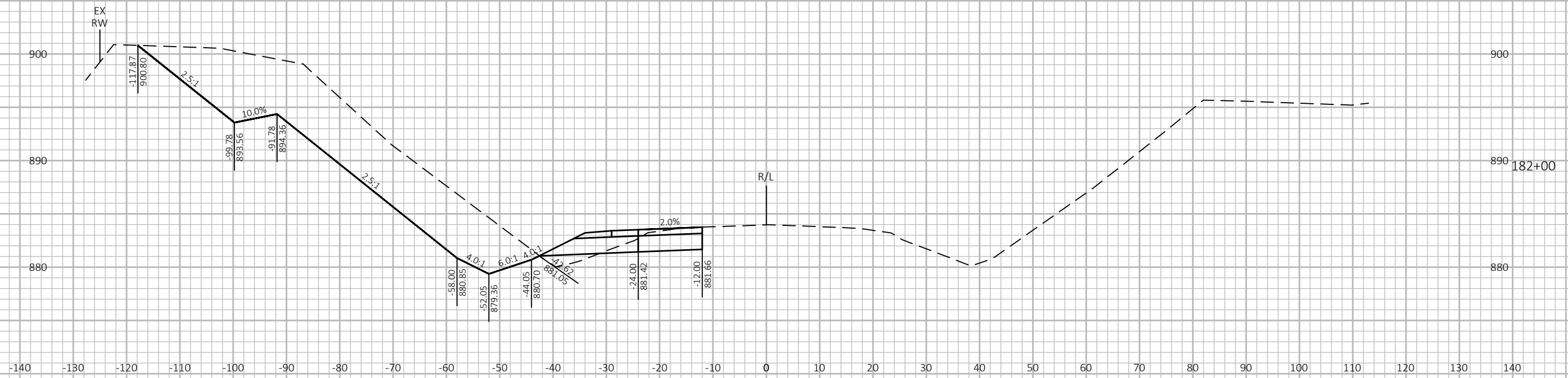
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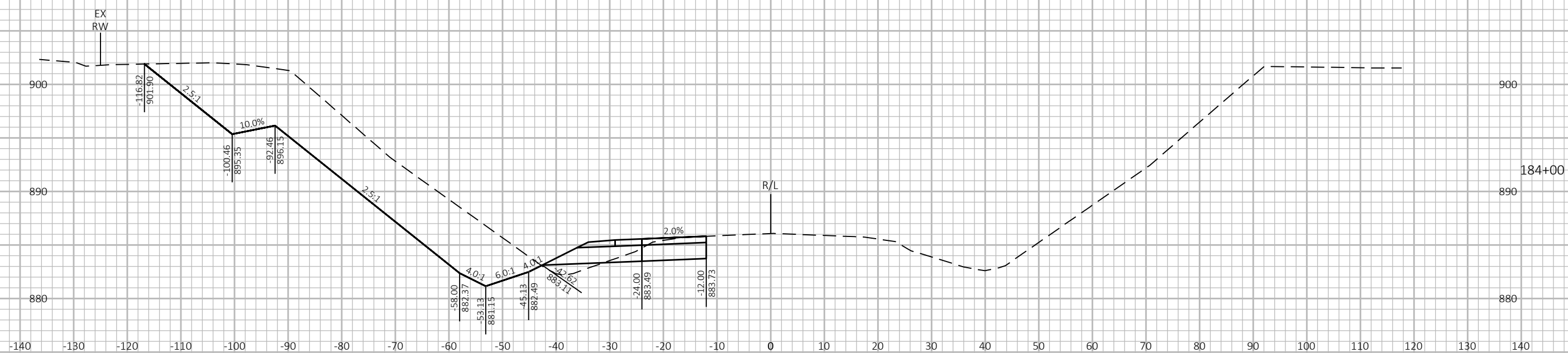


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

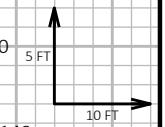
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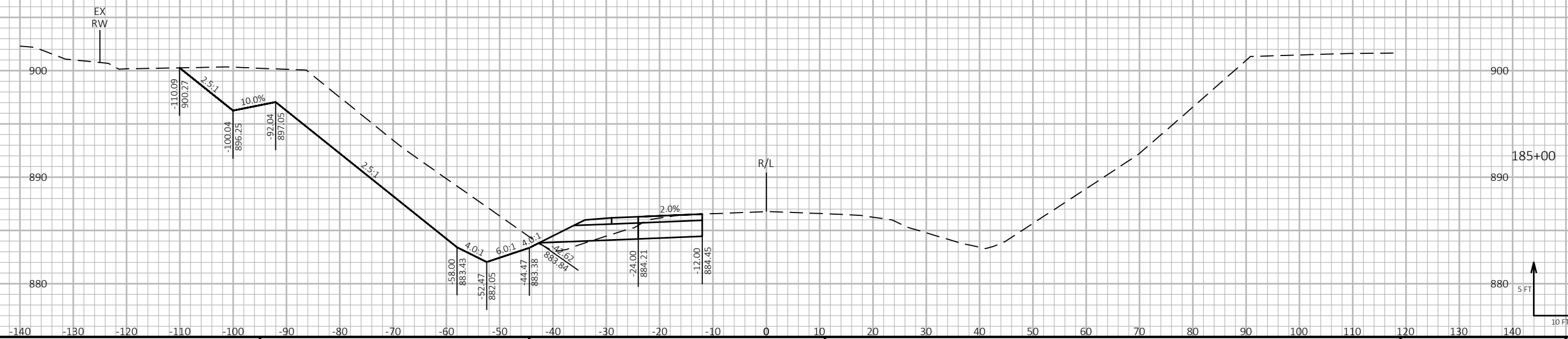
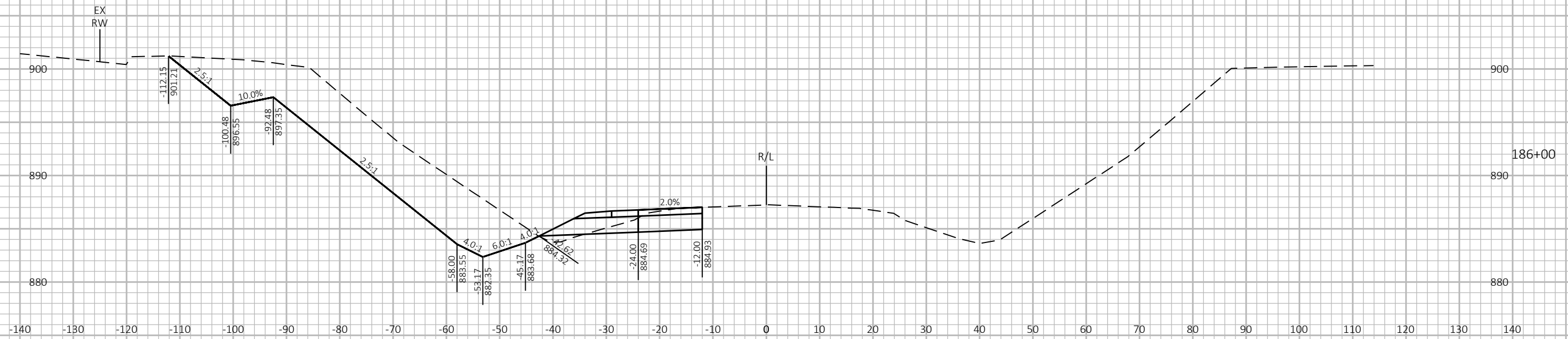
LAYOUT NAME - 05





END OF BORE
 APPROXIMATELY 25' IN DEPTH
 STATION 182+64, 100' LT
 NO ROCK ENCOUNTERED
 WISDOT BORE - 5/12/2015





PROJECT NO: 1500-33-71

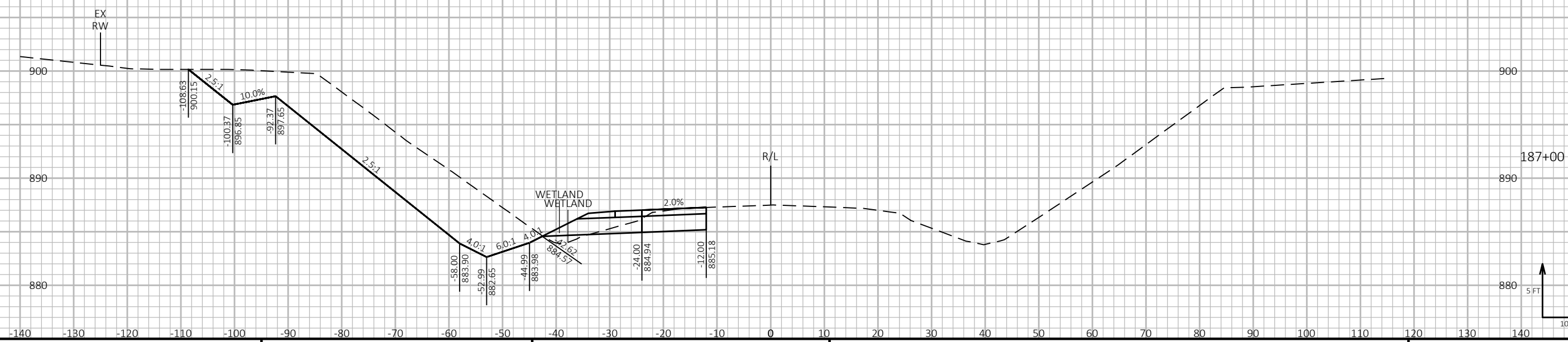
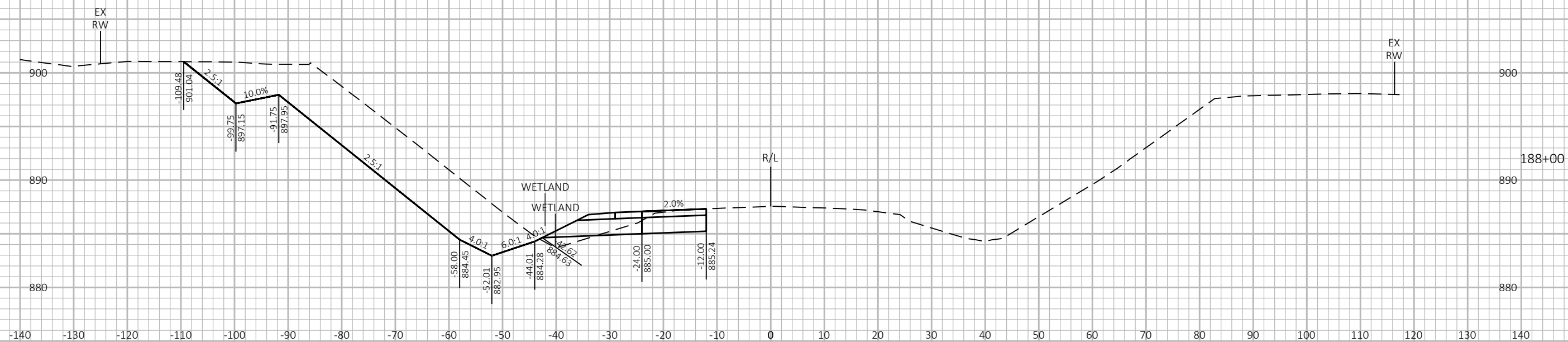
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E

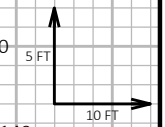


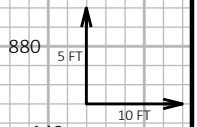
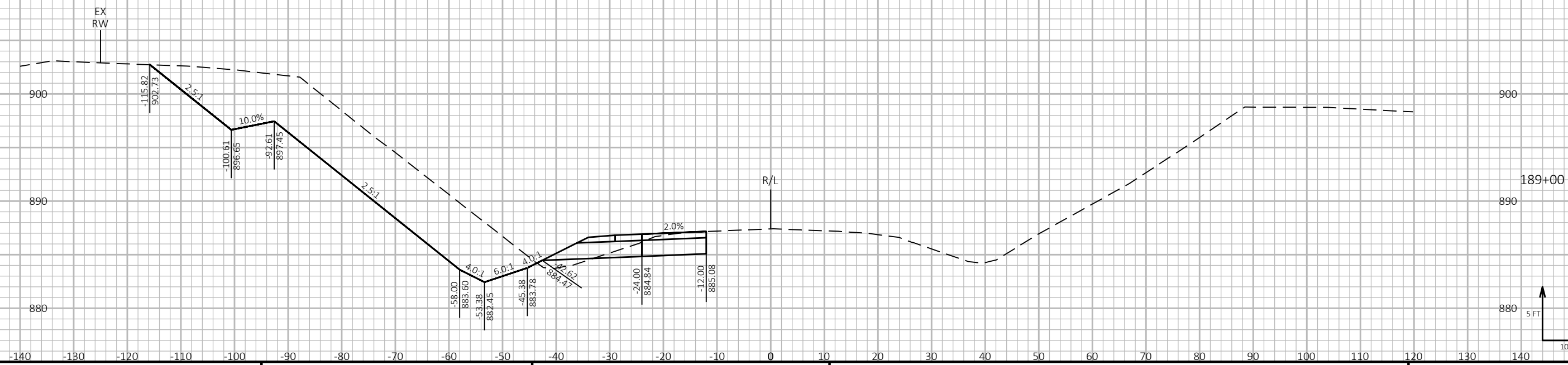
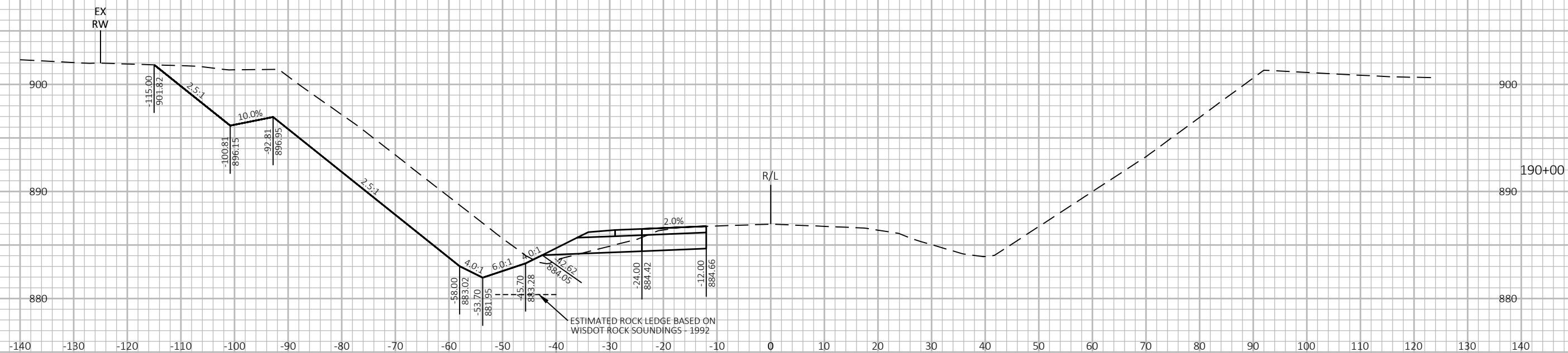
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\15003371\090202-XS.DWG PLOT DATE : 5/23/2023 3:18 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49





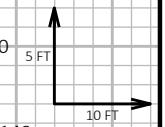
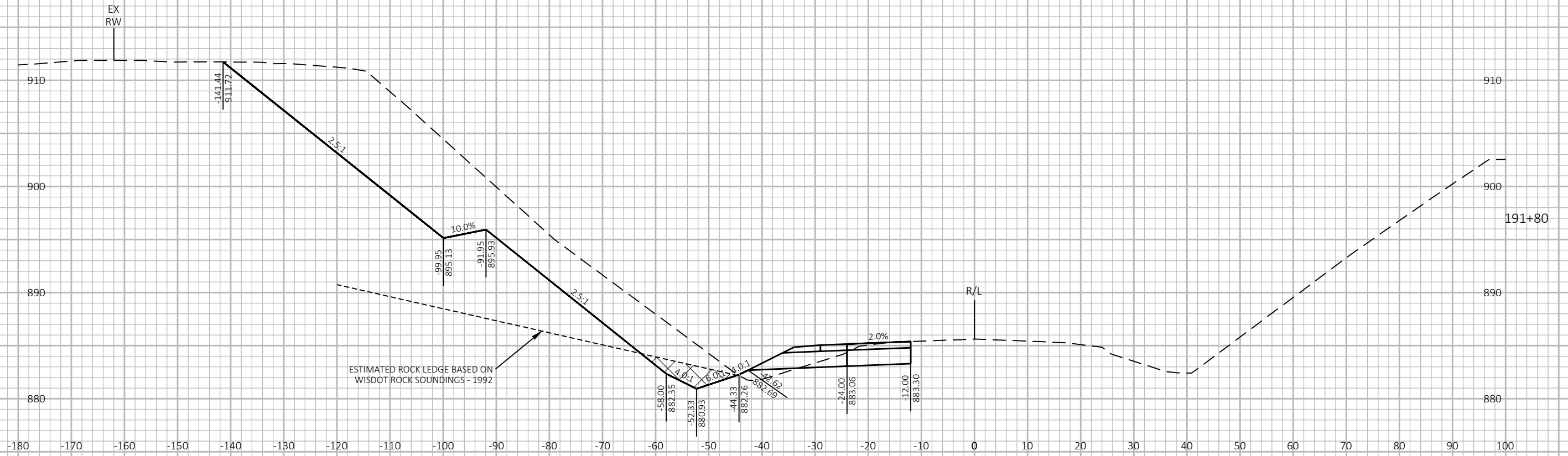
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\0\1\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:18 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 10



PROJECT NO: 1500-33-71

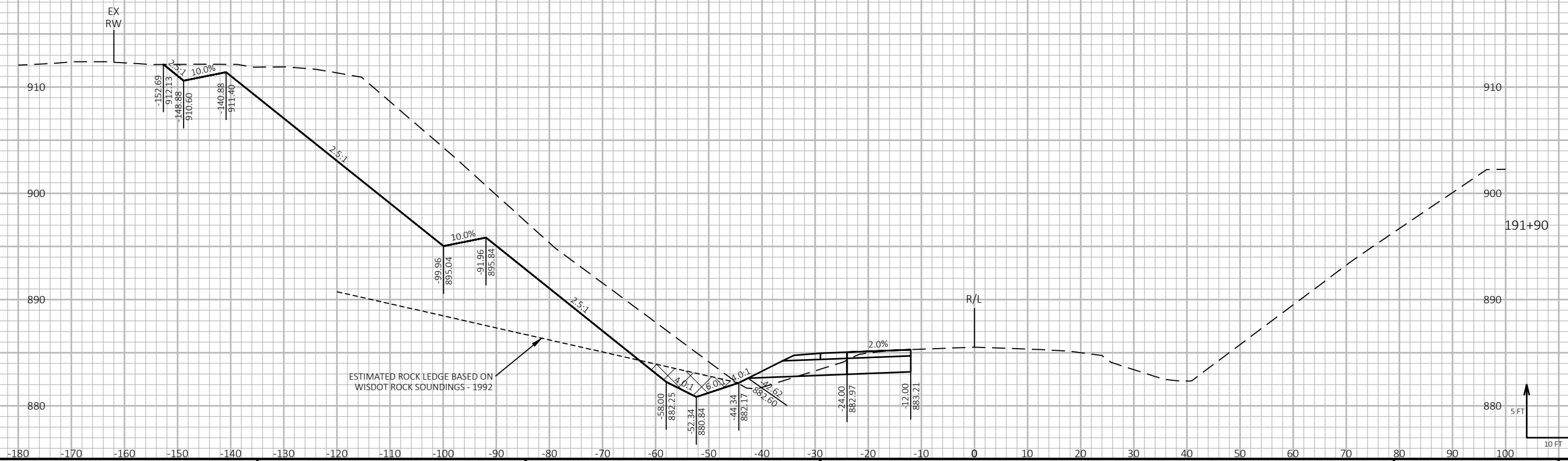
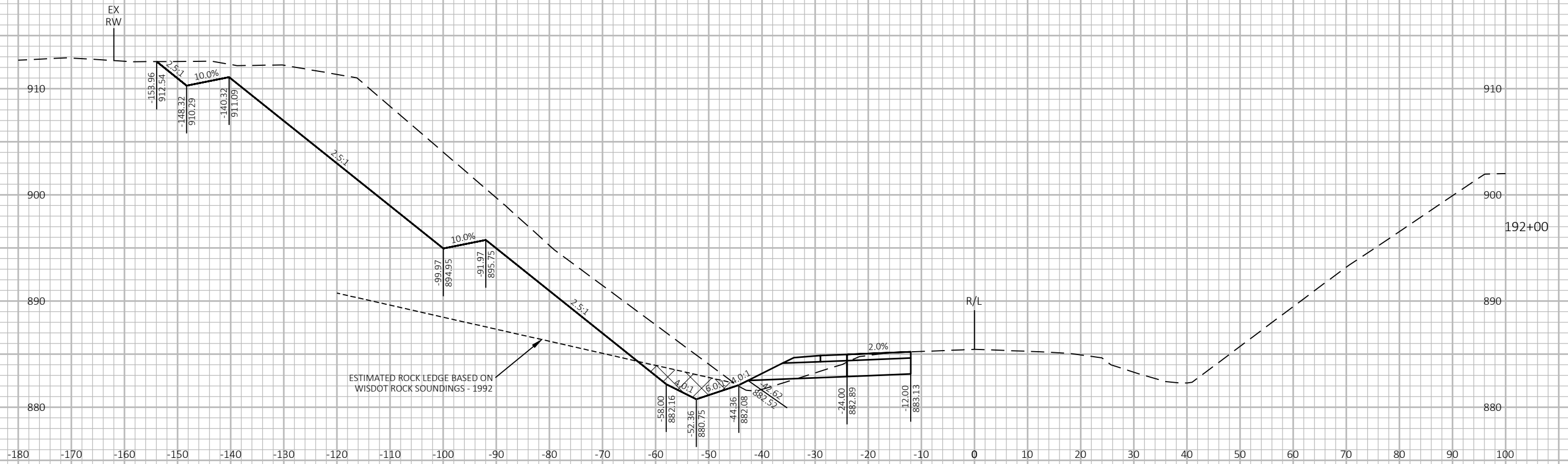
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



9

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PROJECT NO: 1500-33-71

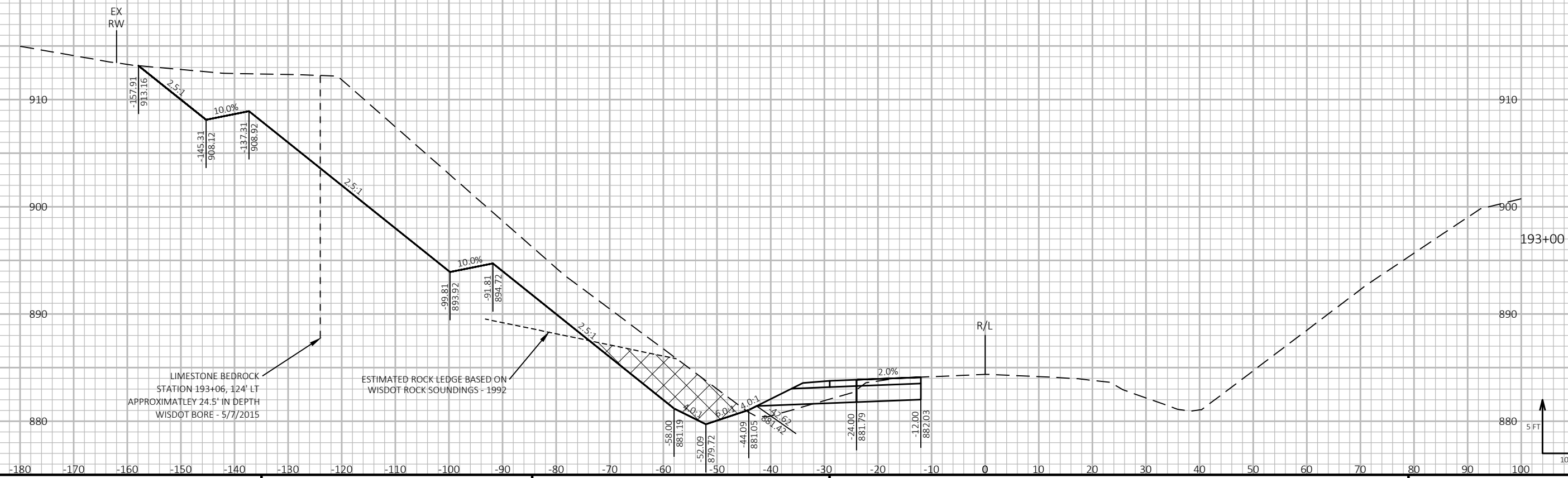
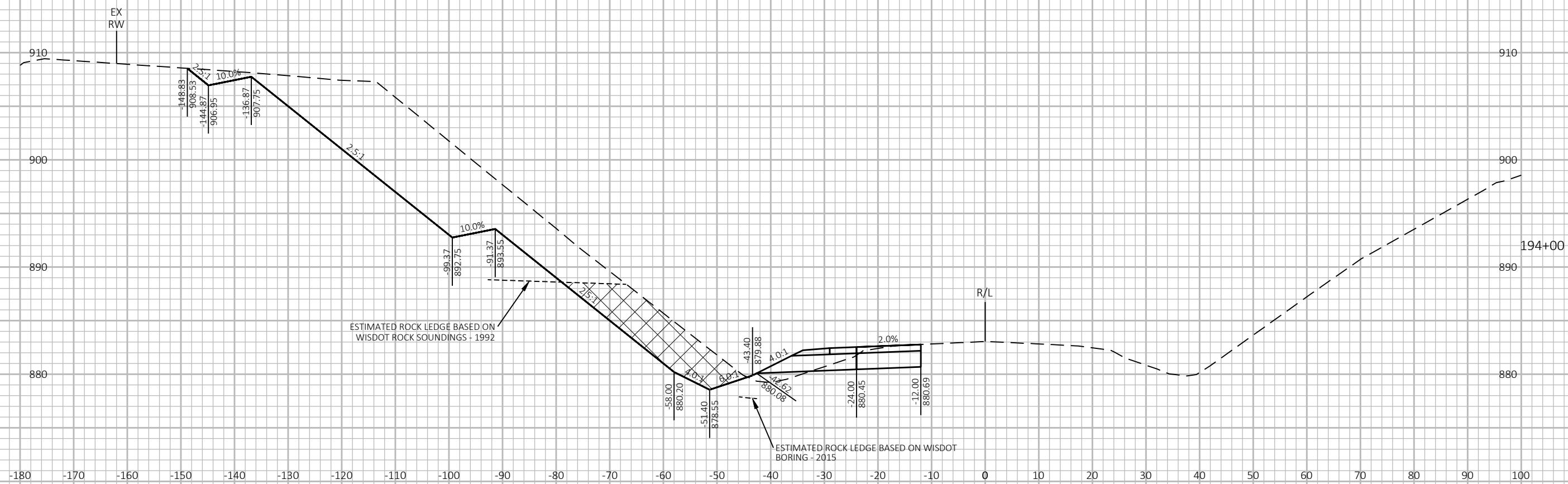
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

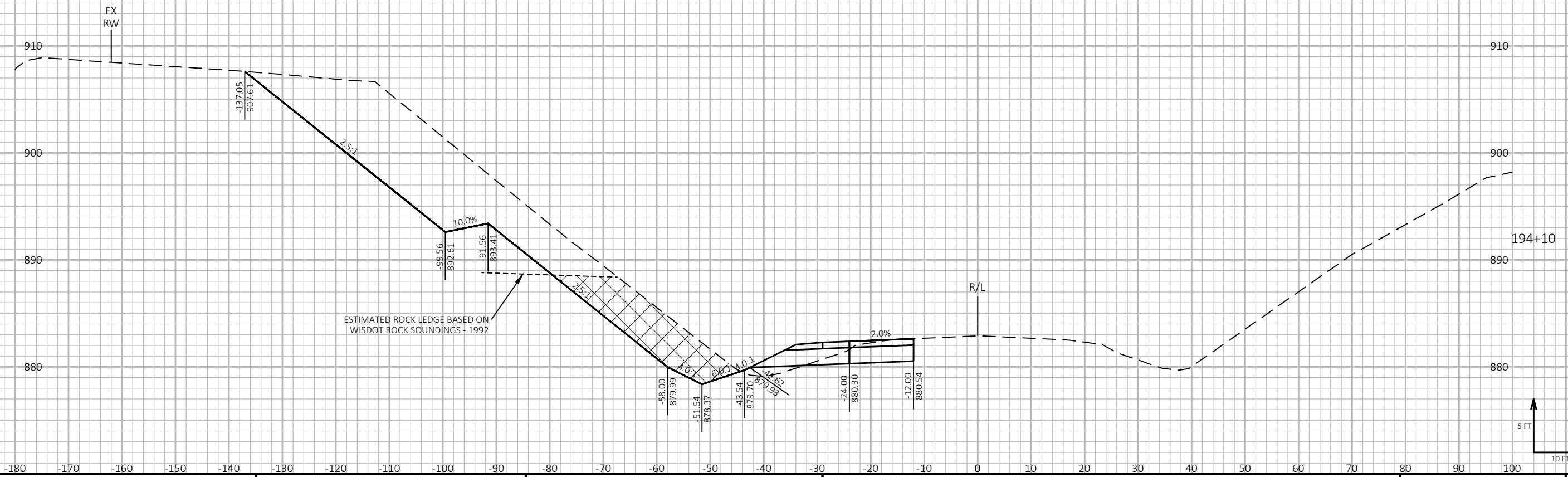
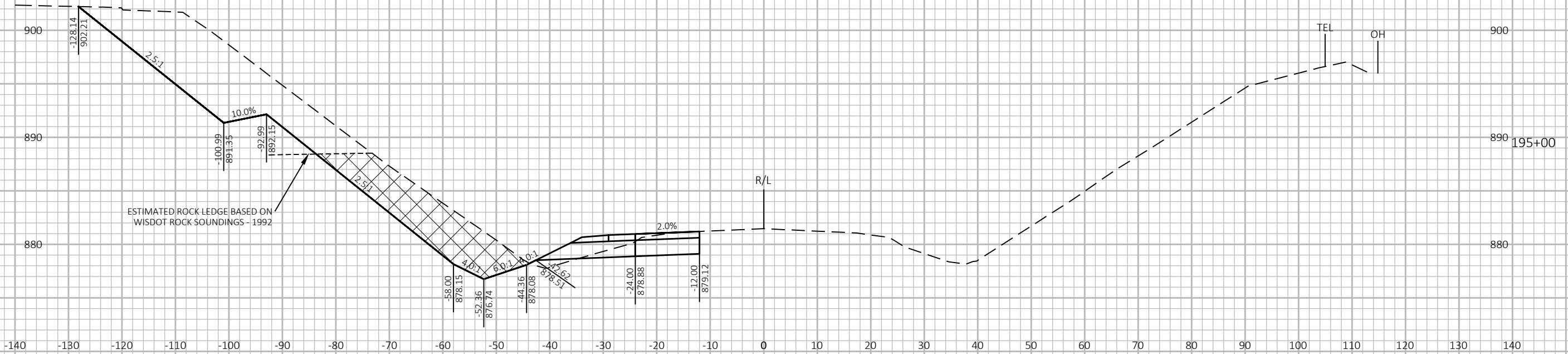
SHEET

E



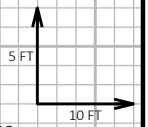
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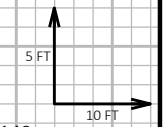
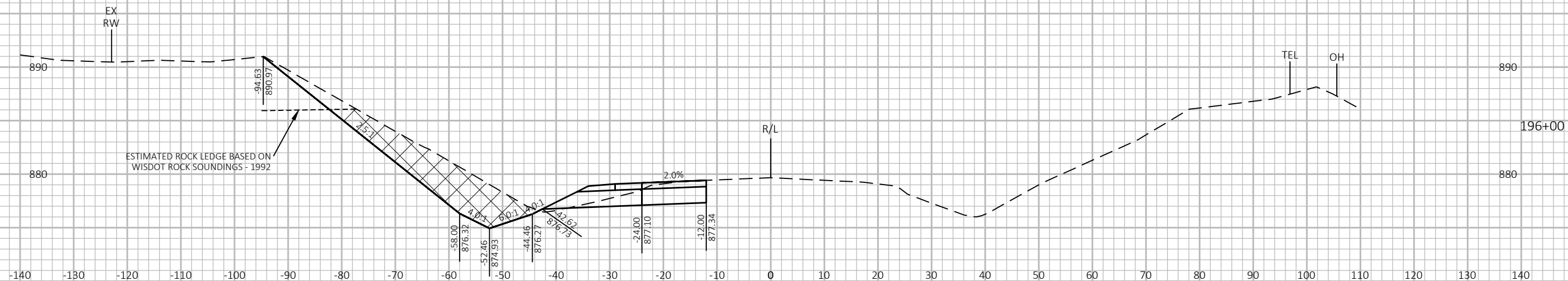
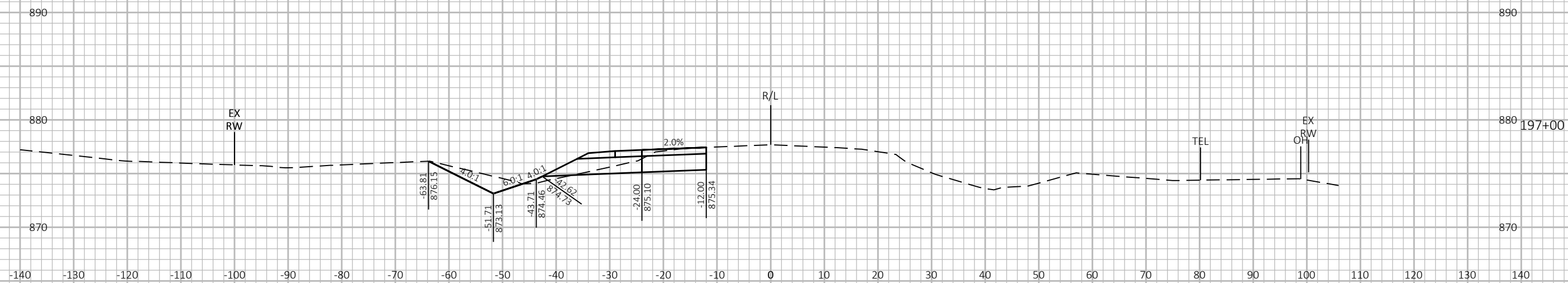
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:19 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 14



PROJECT NO: 1500-33-71

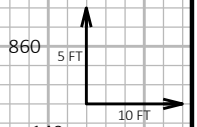
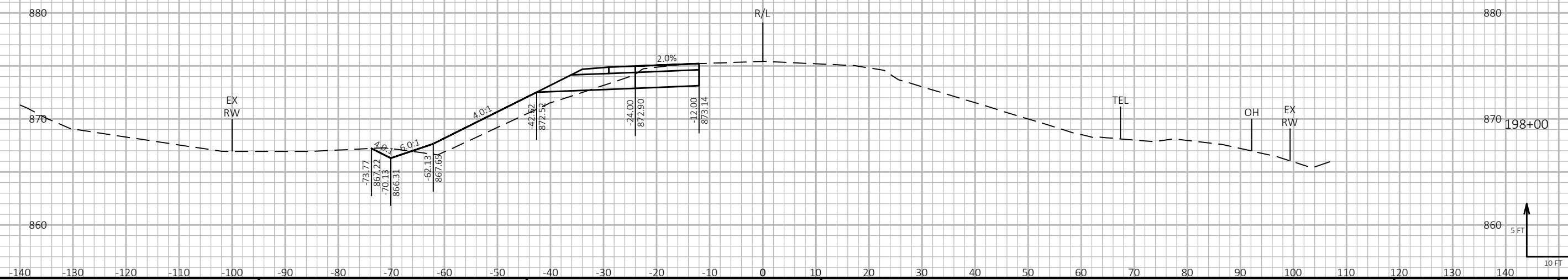
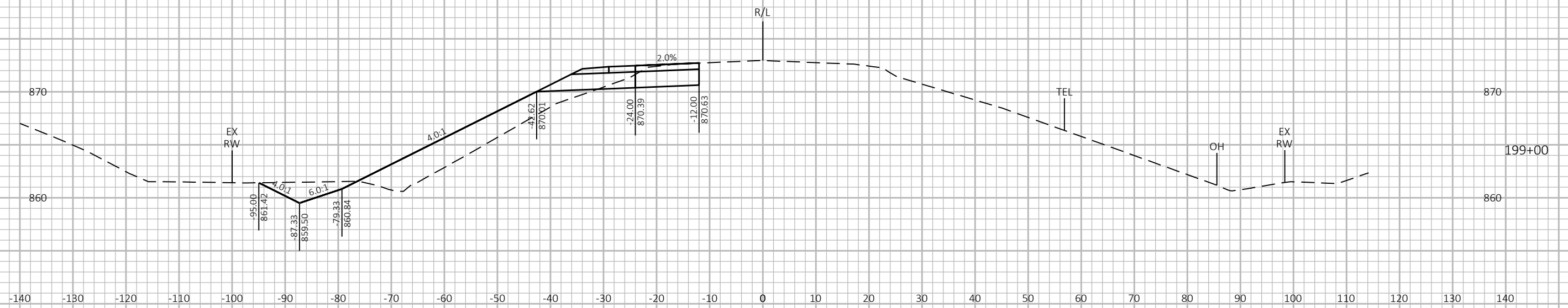
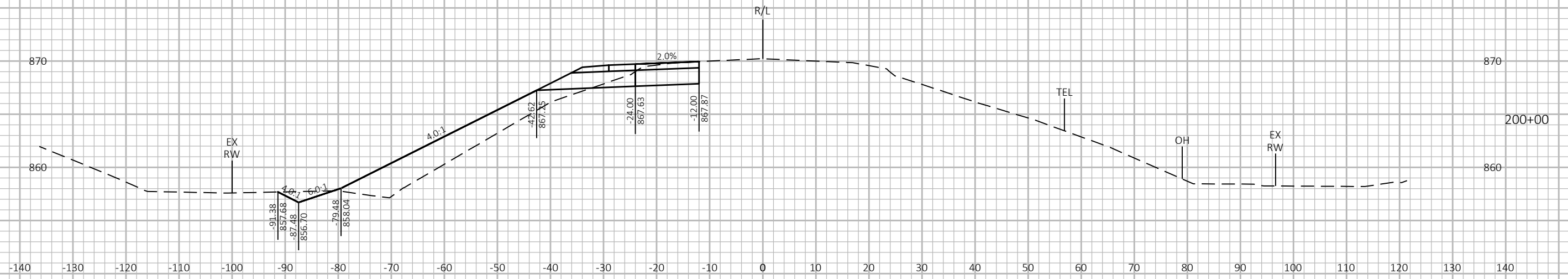
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71

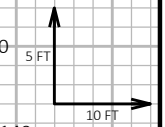
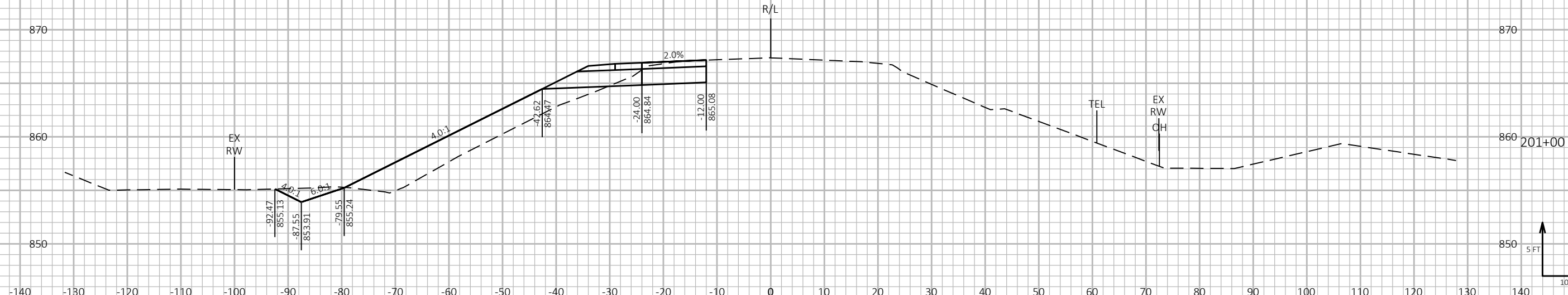
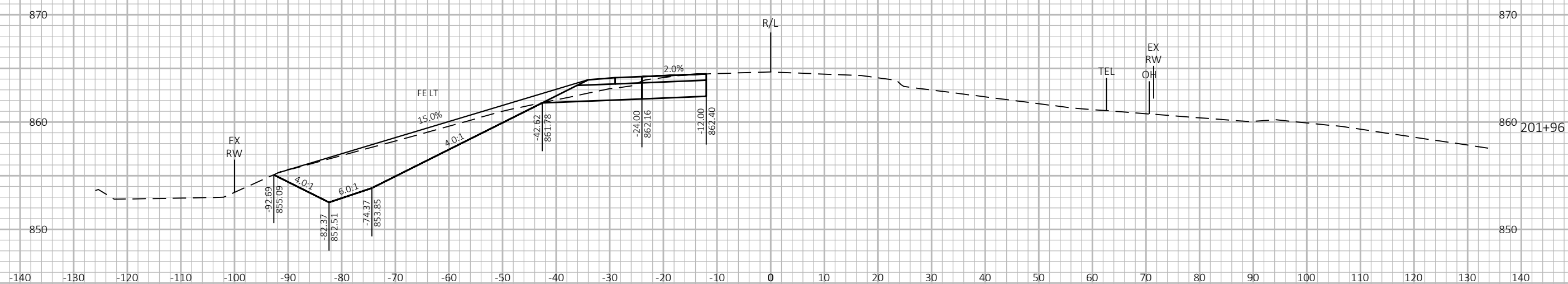
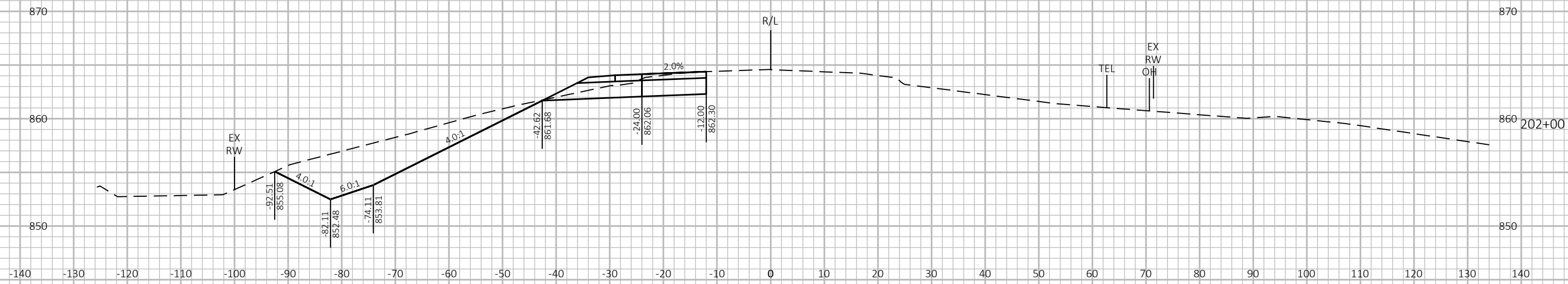
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71

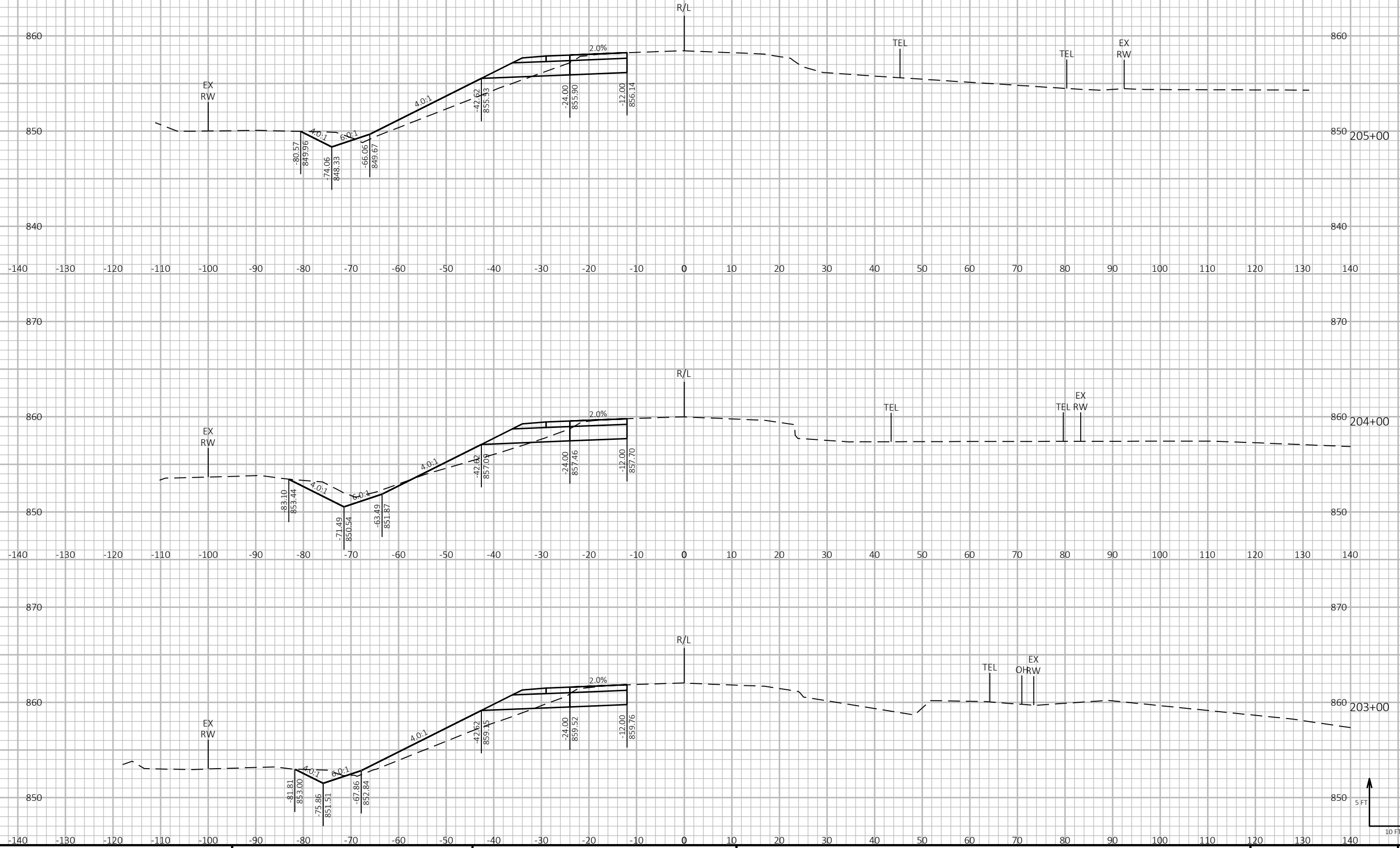
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



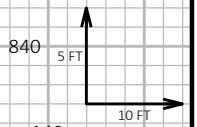
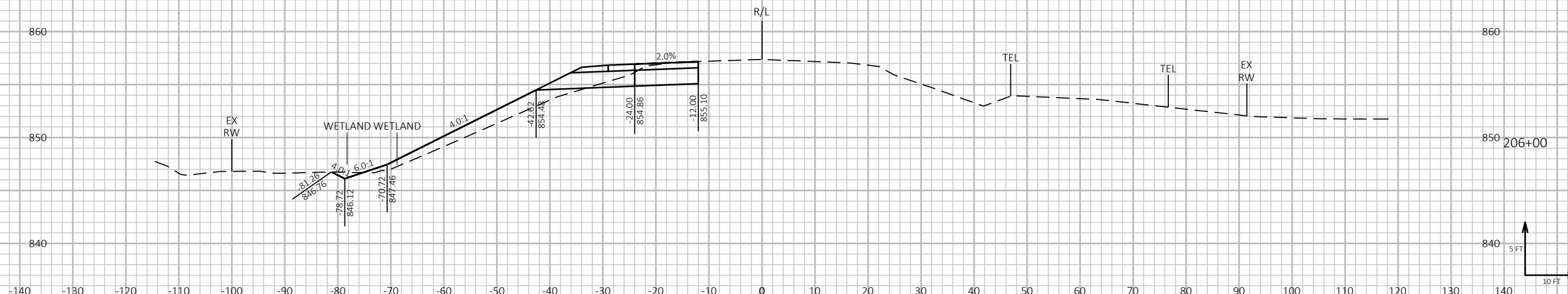
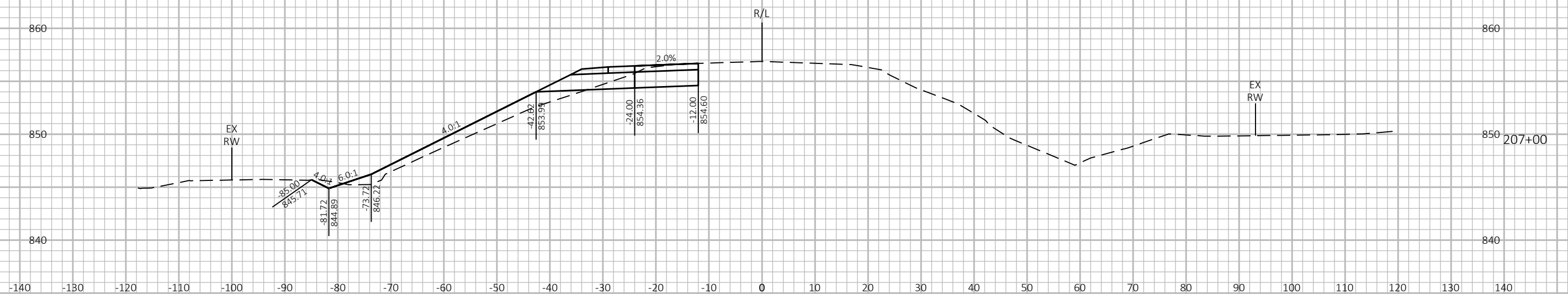
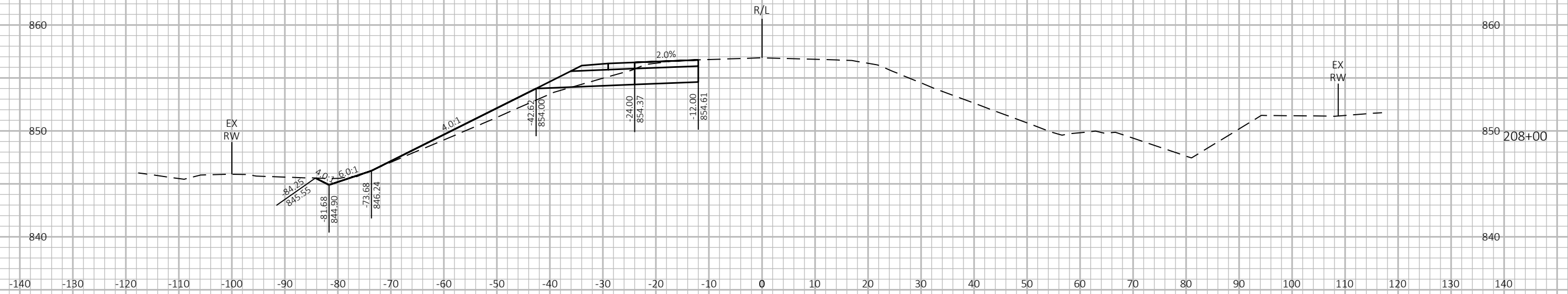
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:20 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 18



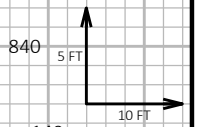
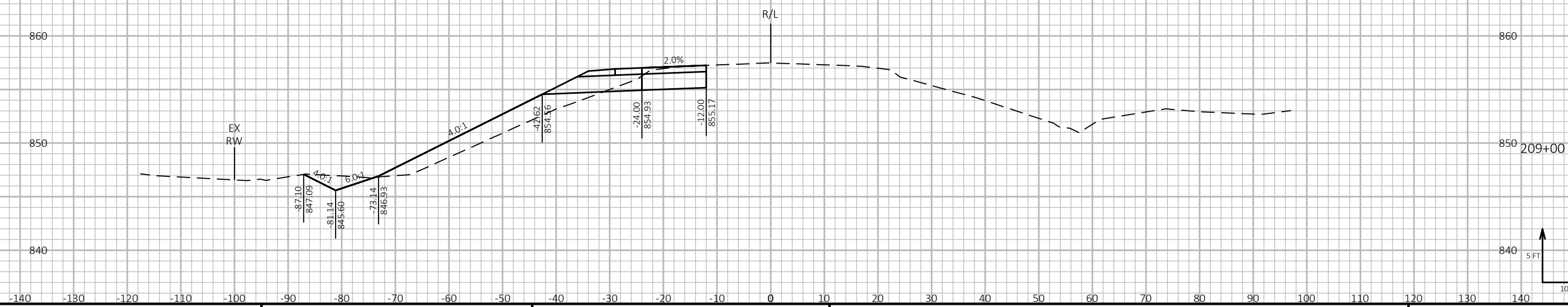
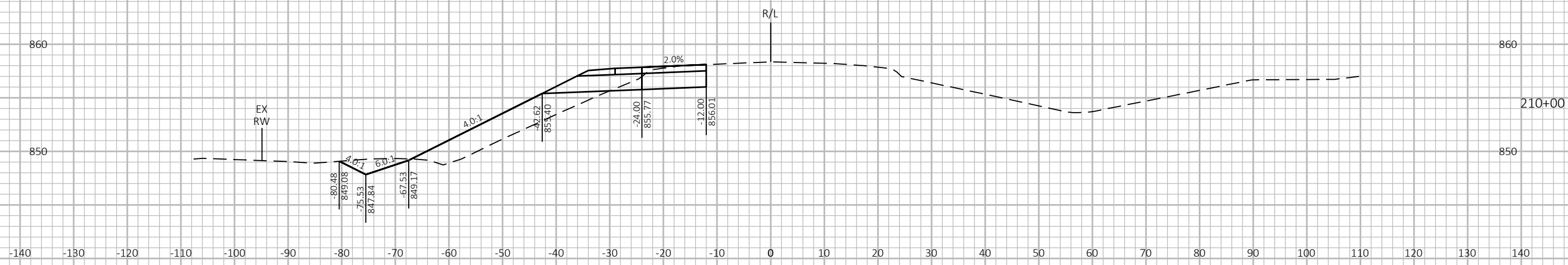
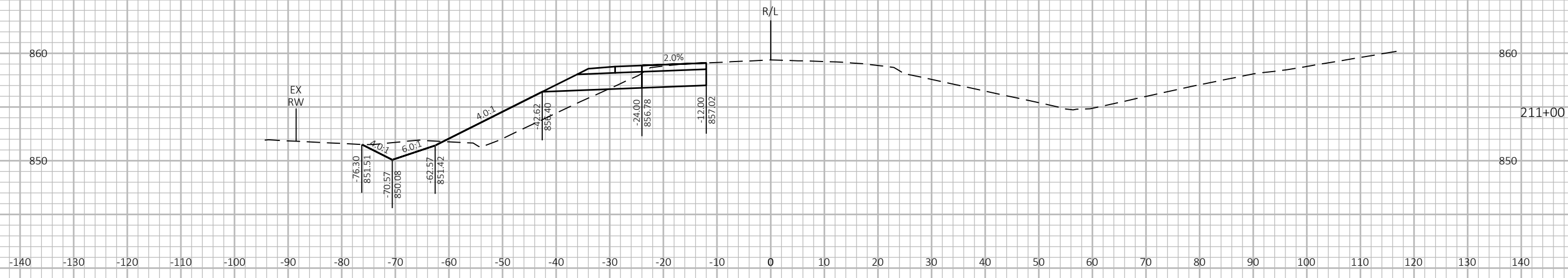
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:20 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 19



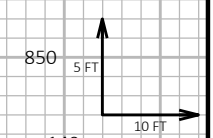
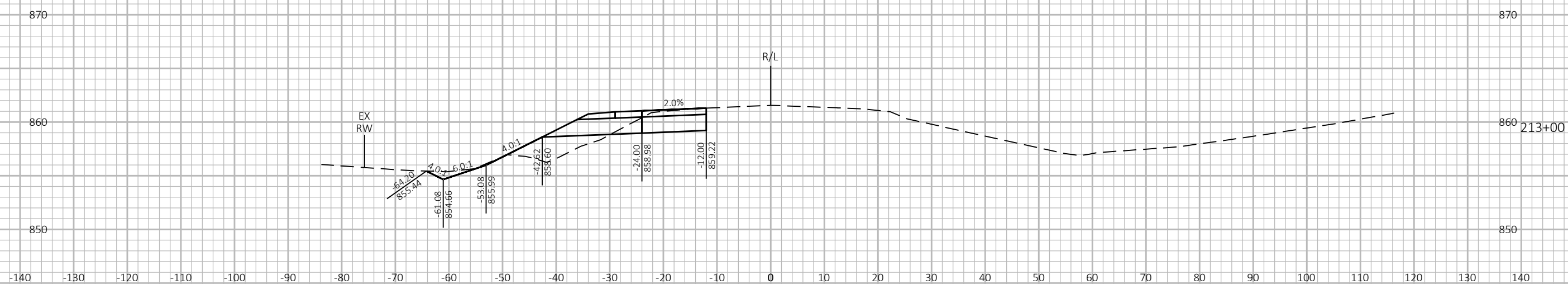
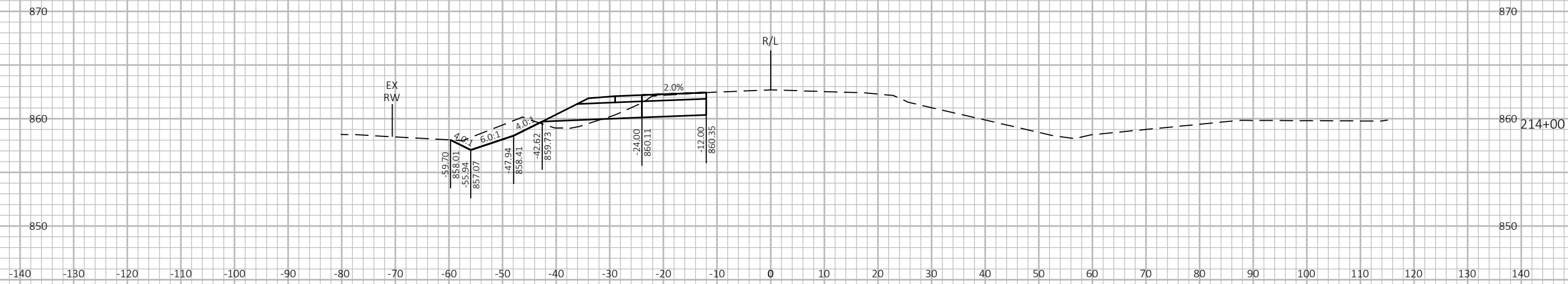
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:21 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 20



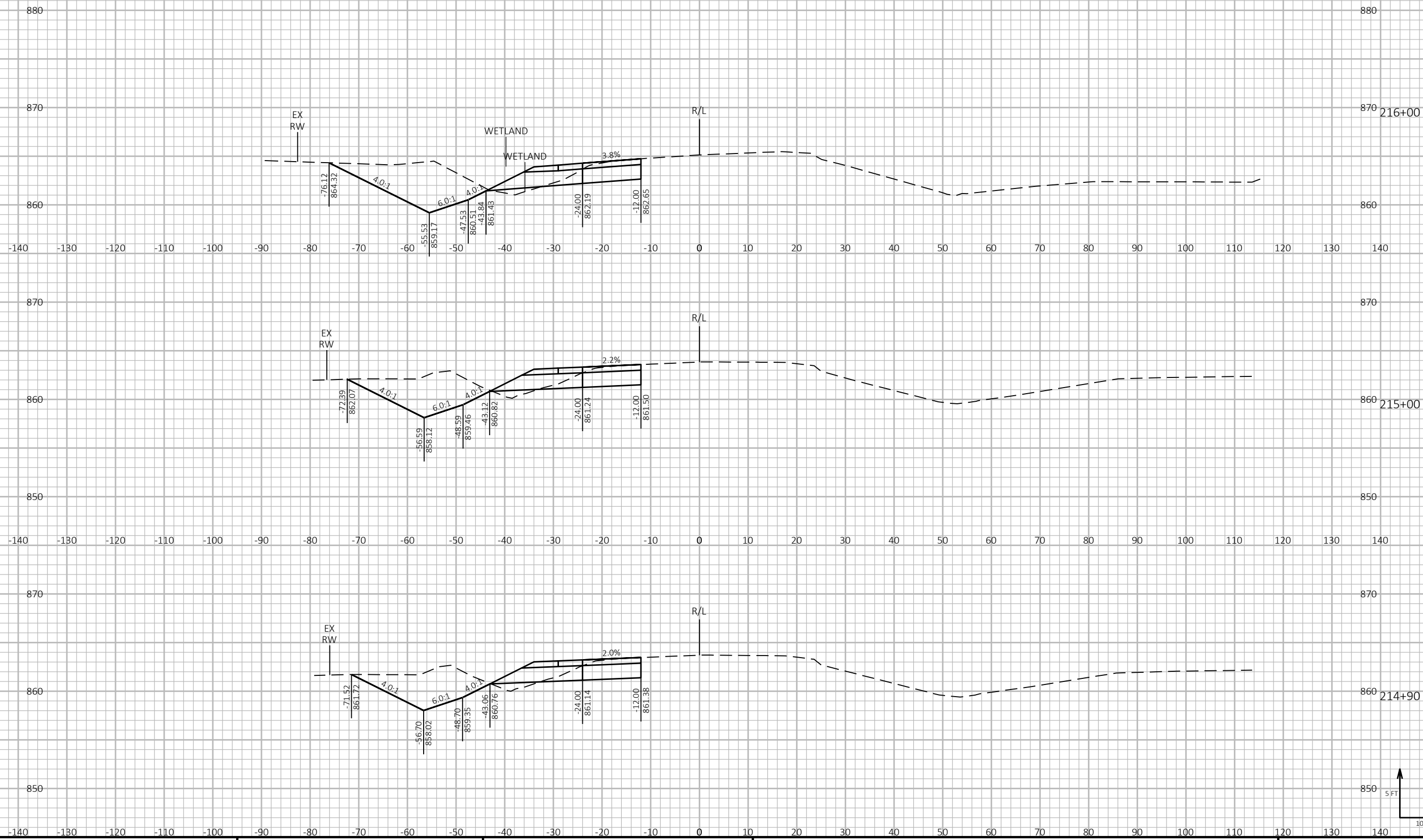
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

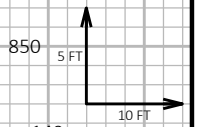
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LAYOUT NAME - 21



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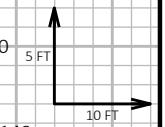
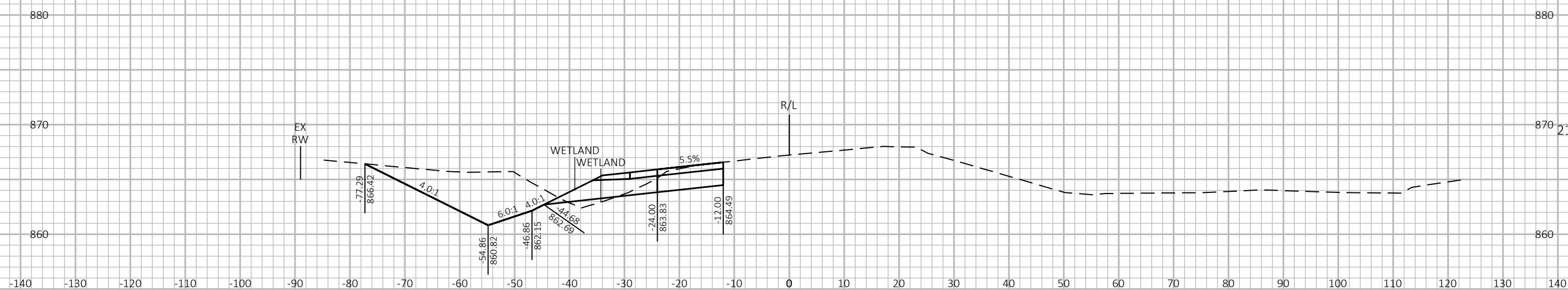
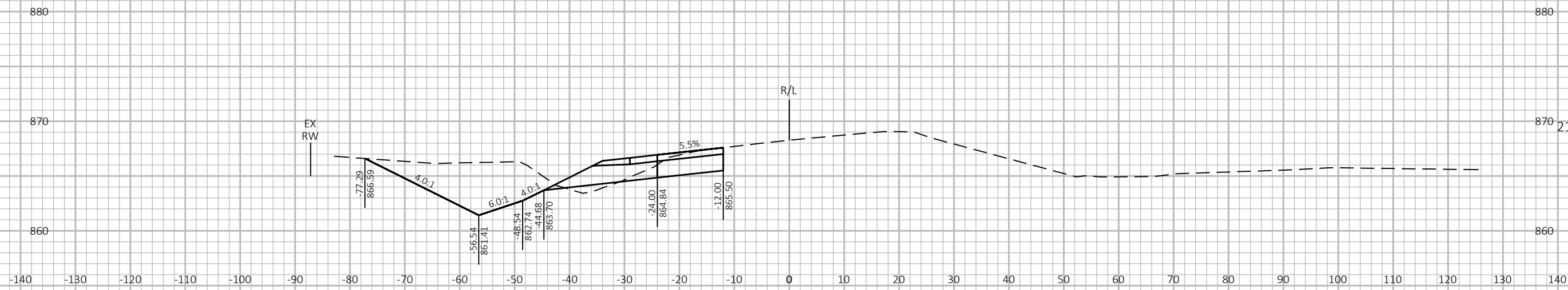
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

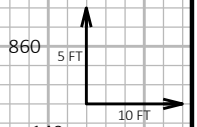
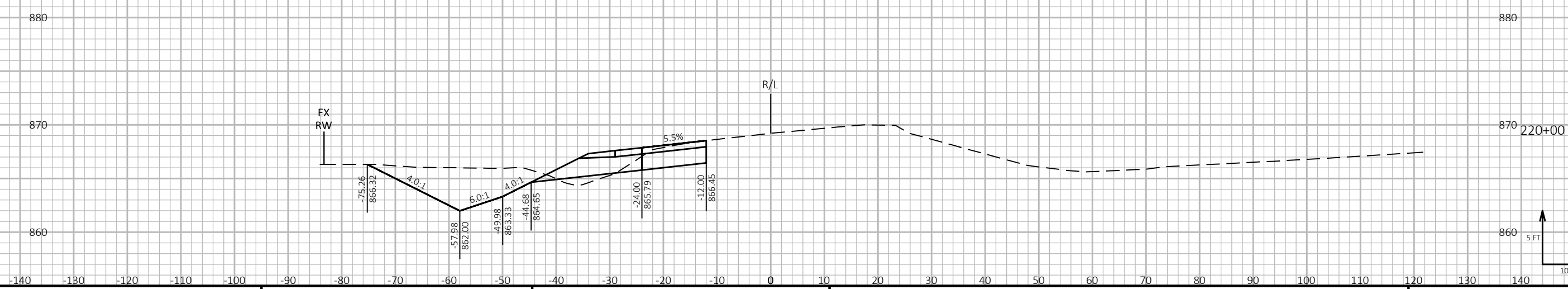
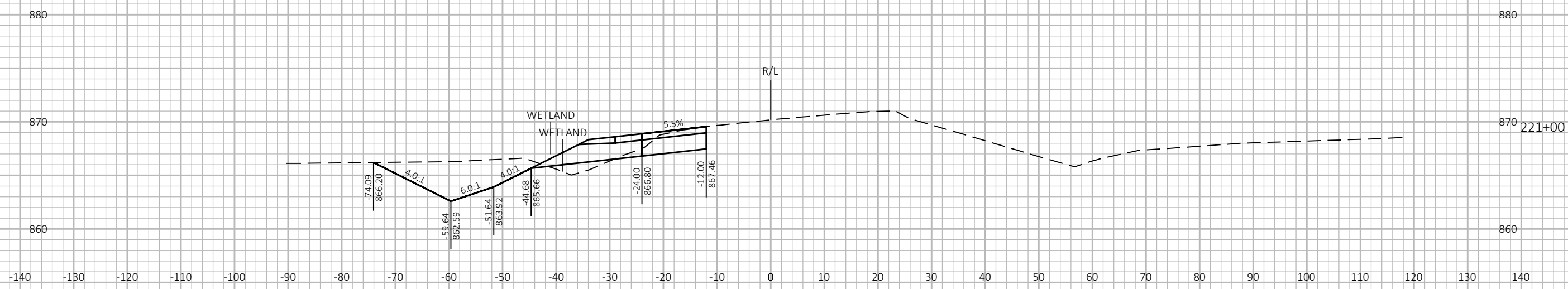
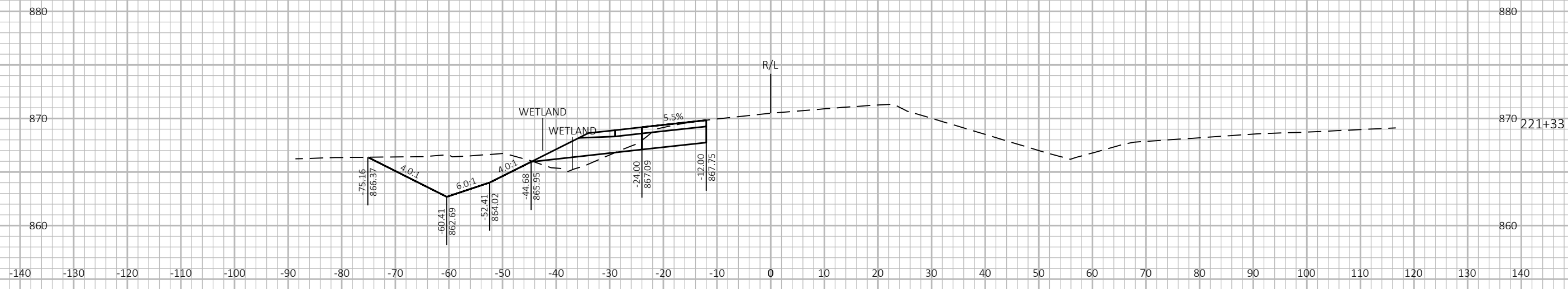
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LAYOUT NAME - 22



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9



PROJECT NO: 1500-33-71

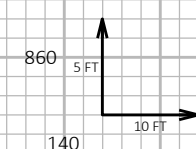
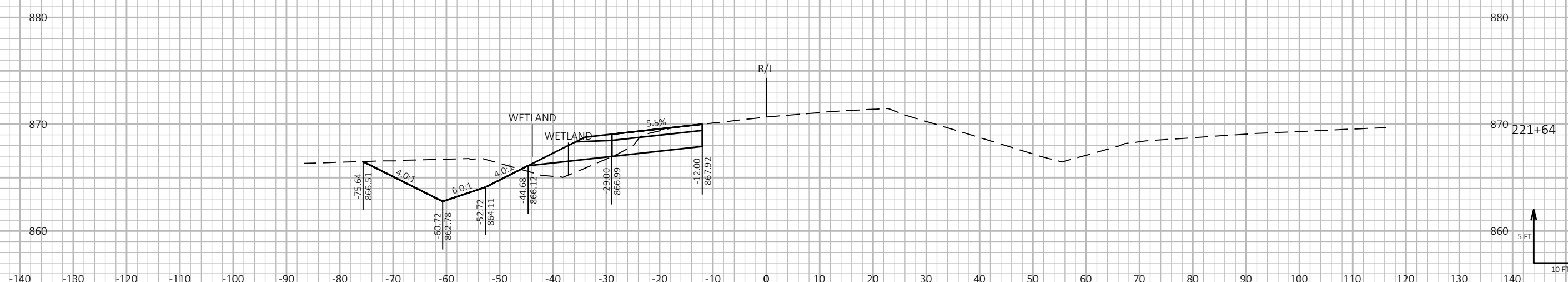
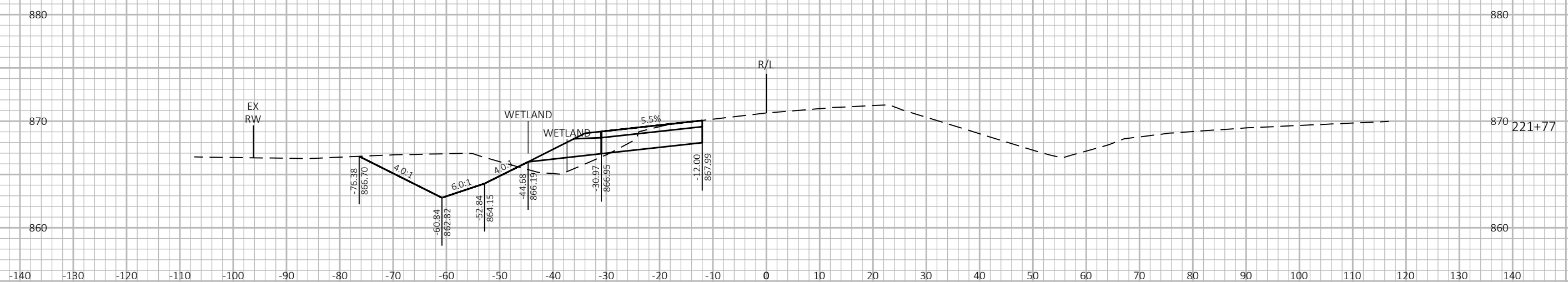
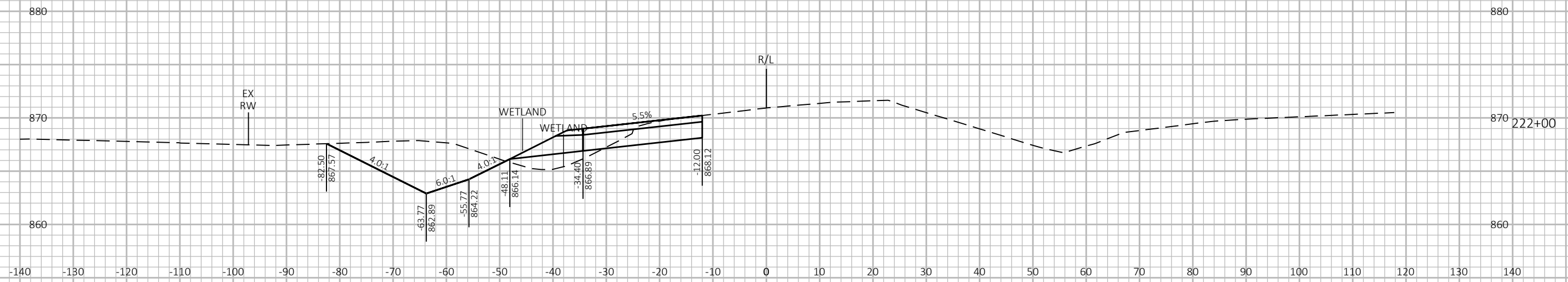
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71

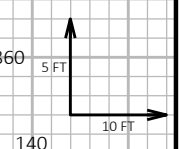
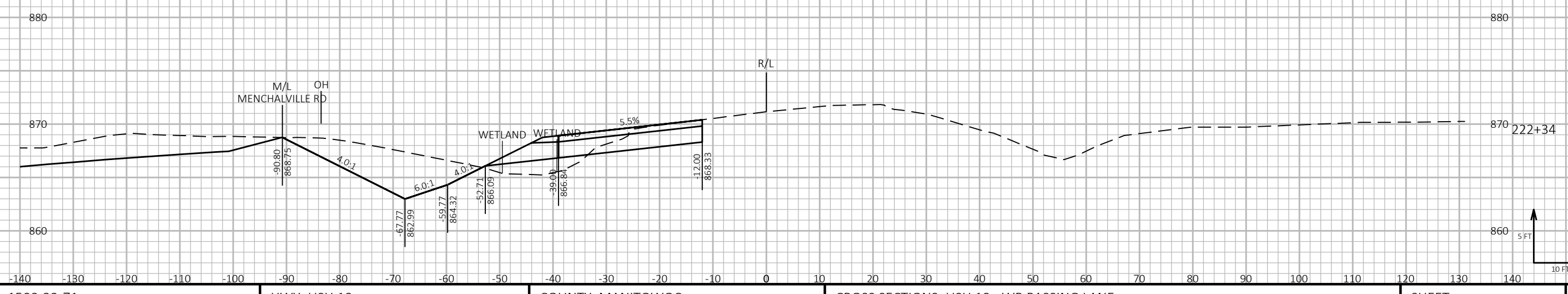
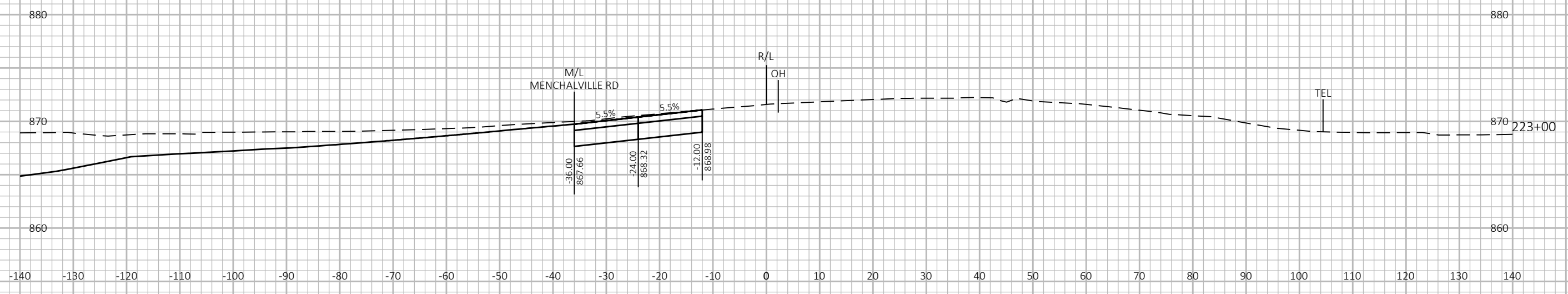
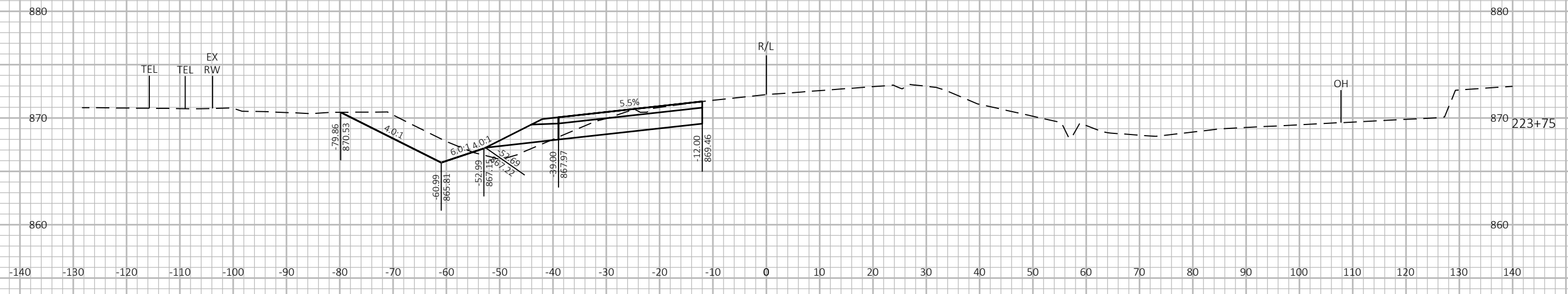
HWY: USH 10

COUNTY: MANITOWOC

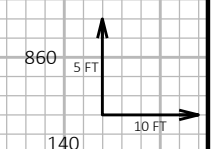
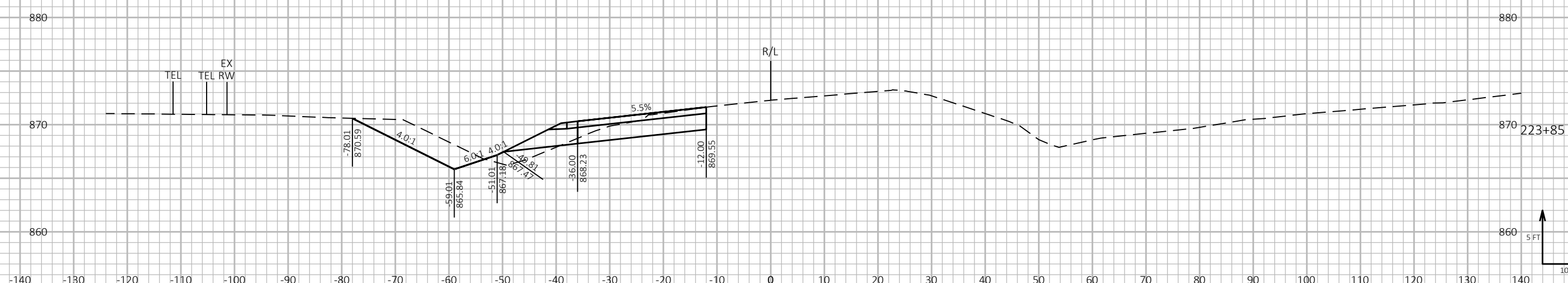
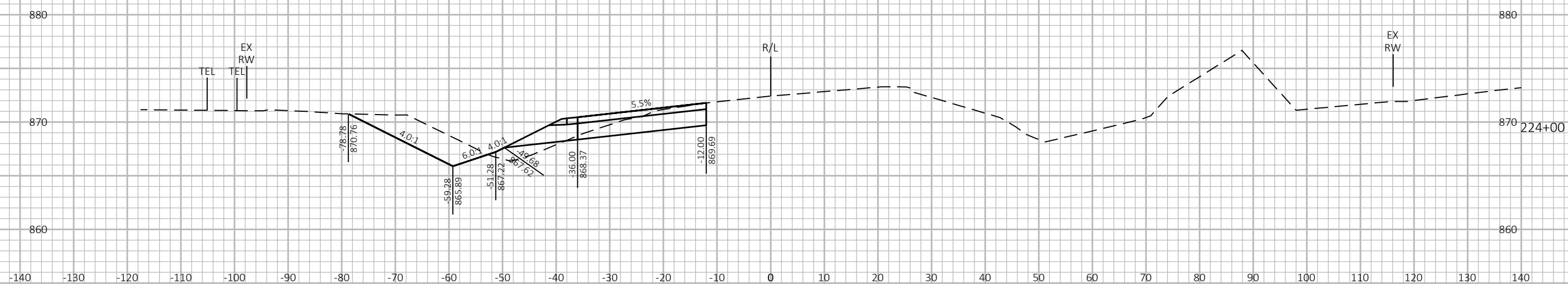
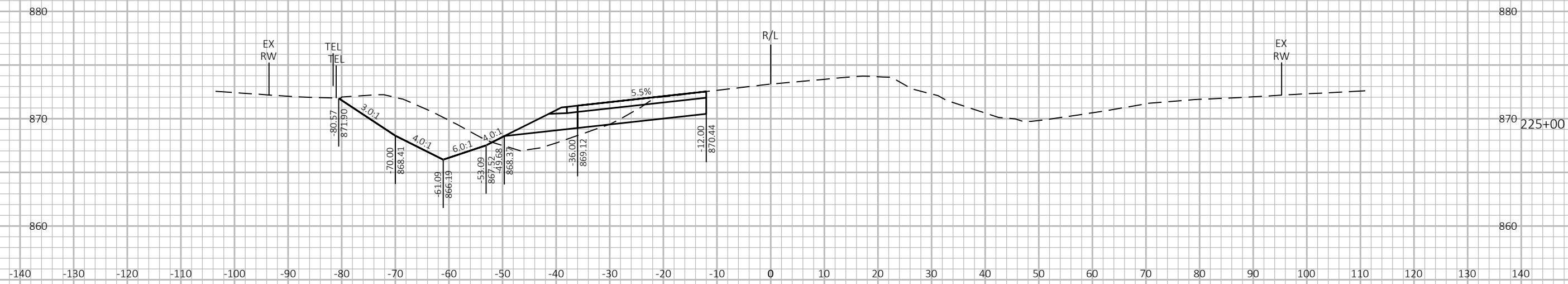
CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E



PROJECT NO: 1500-33-71

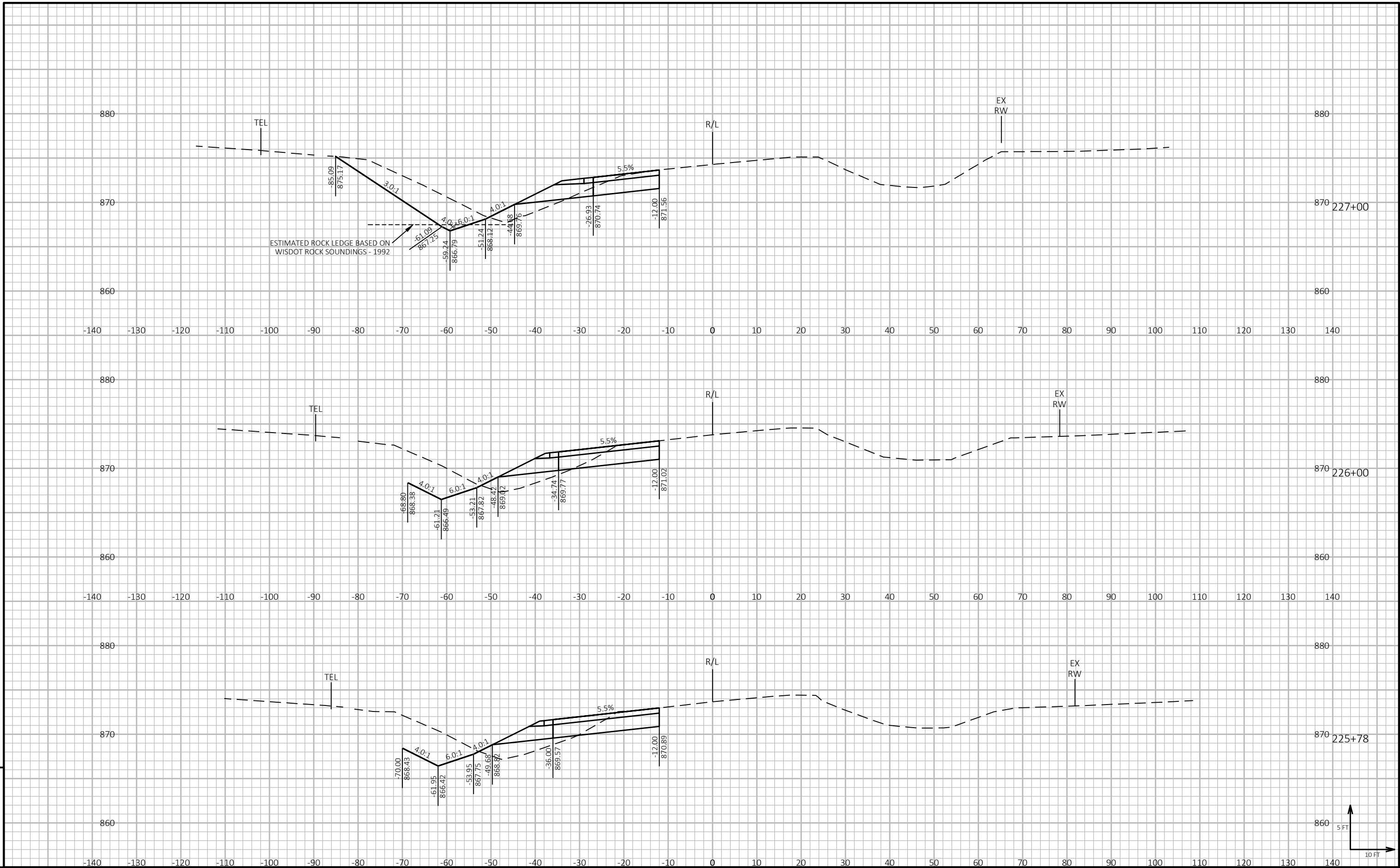
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



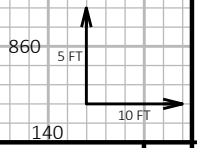
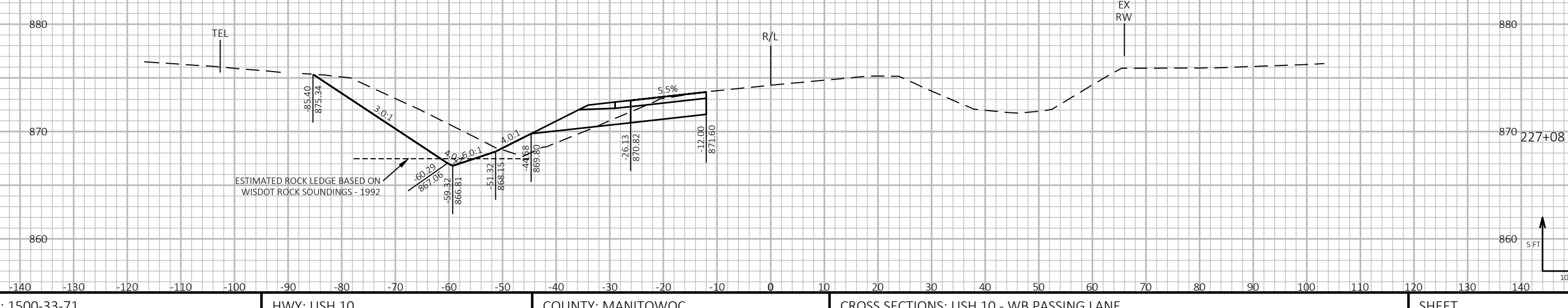
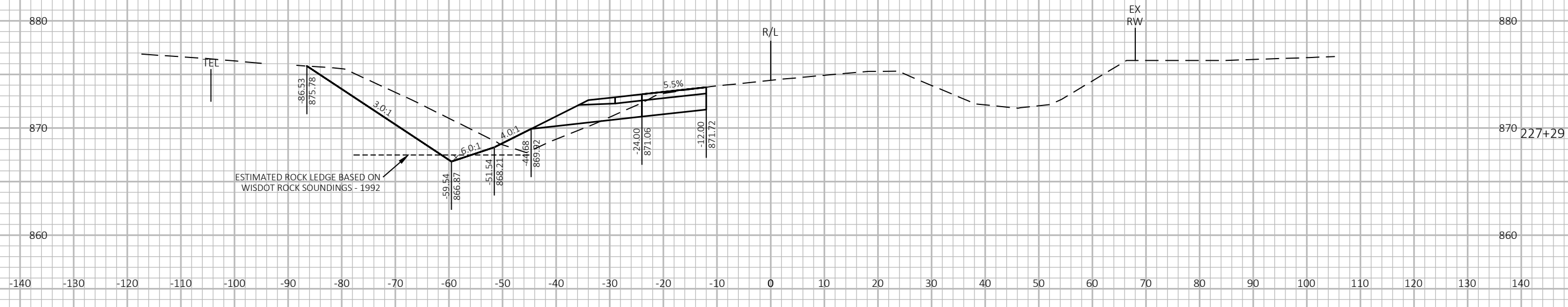
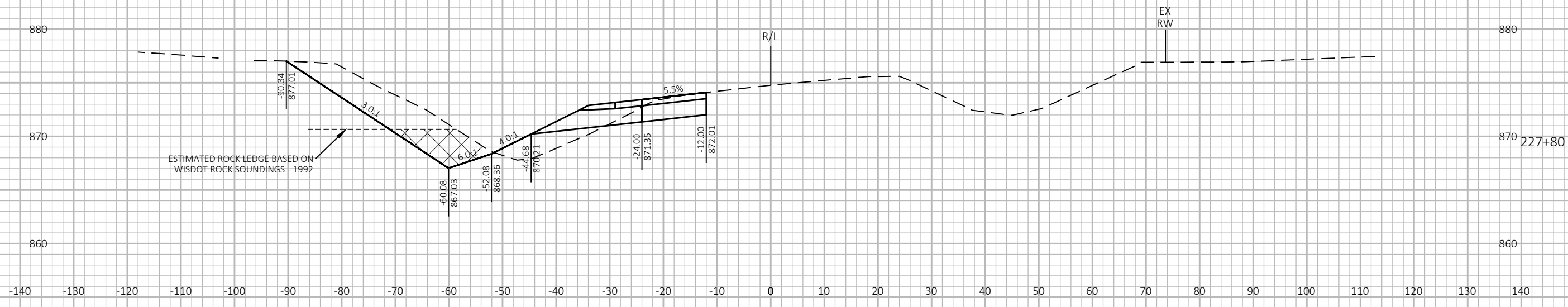
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

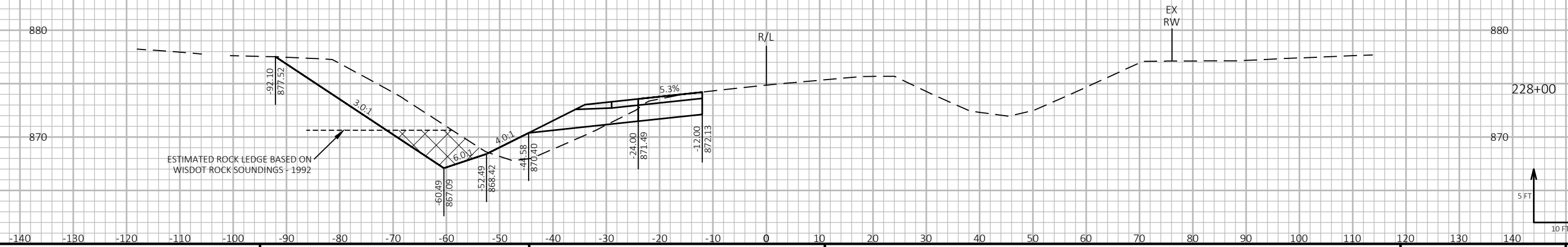
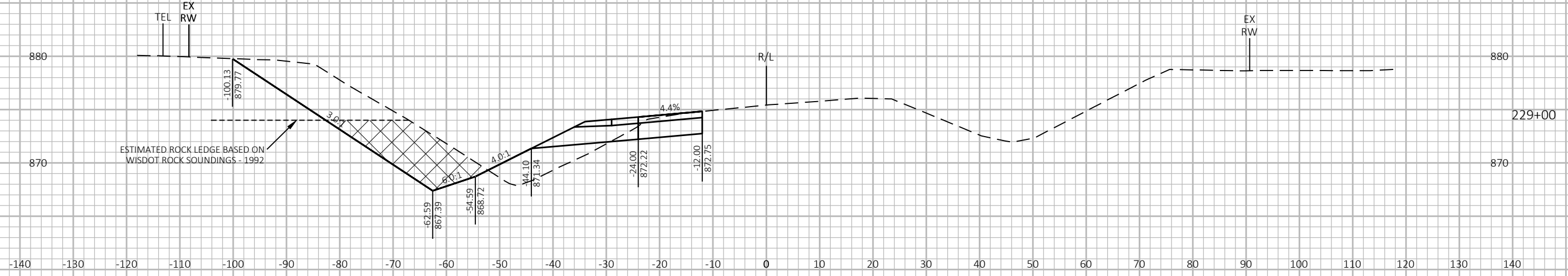
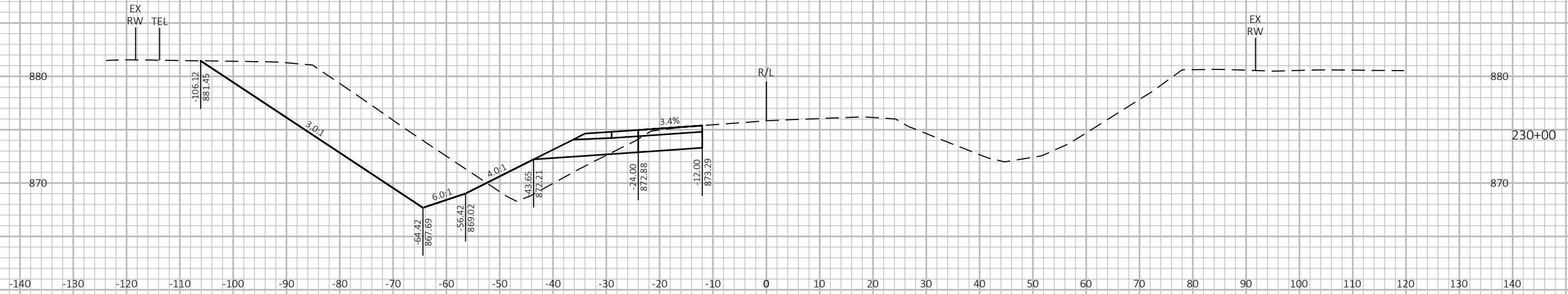
FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:22 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 28



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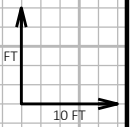
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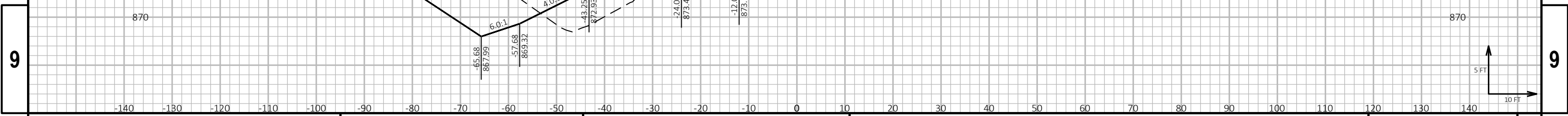
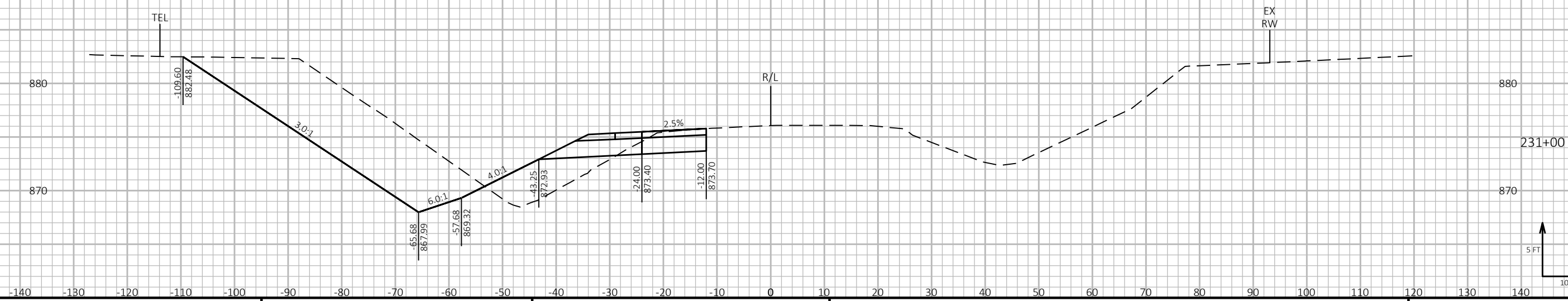
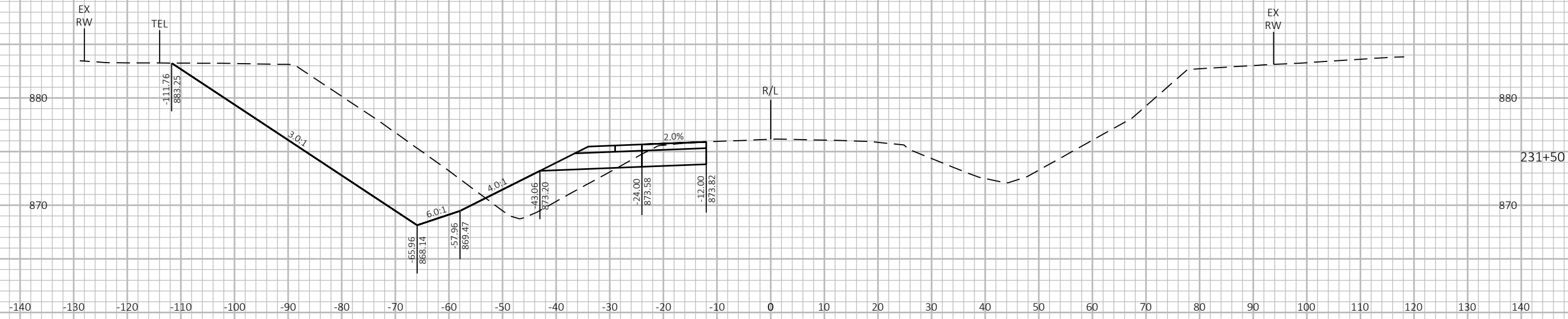
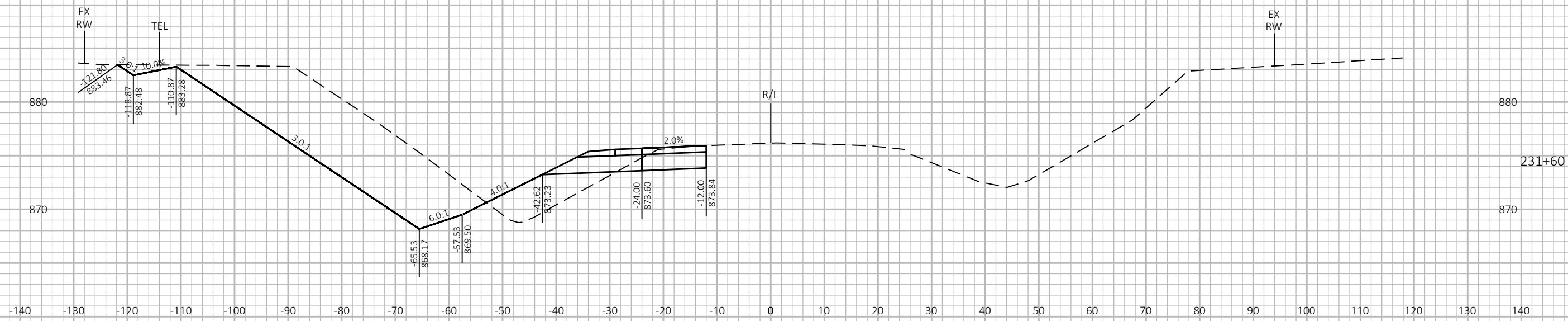
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:23 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

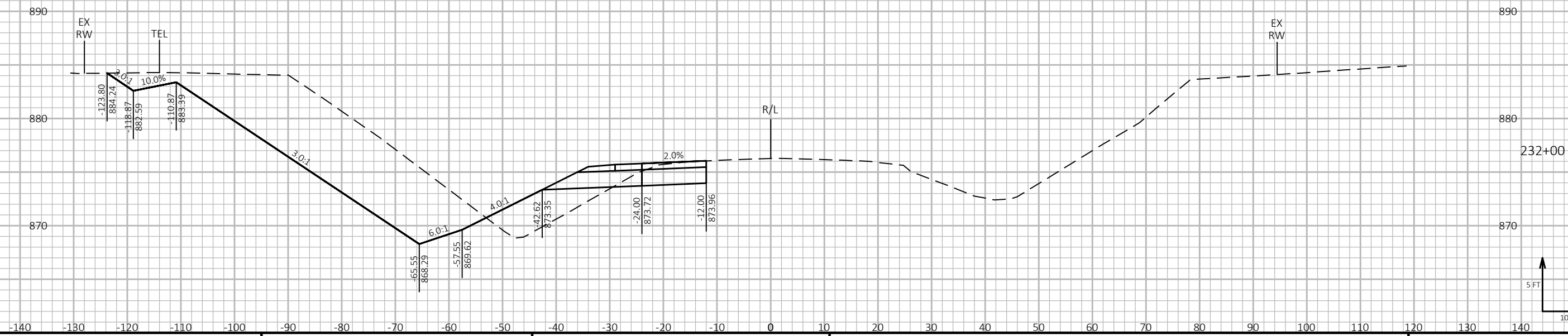
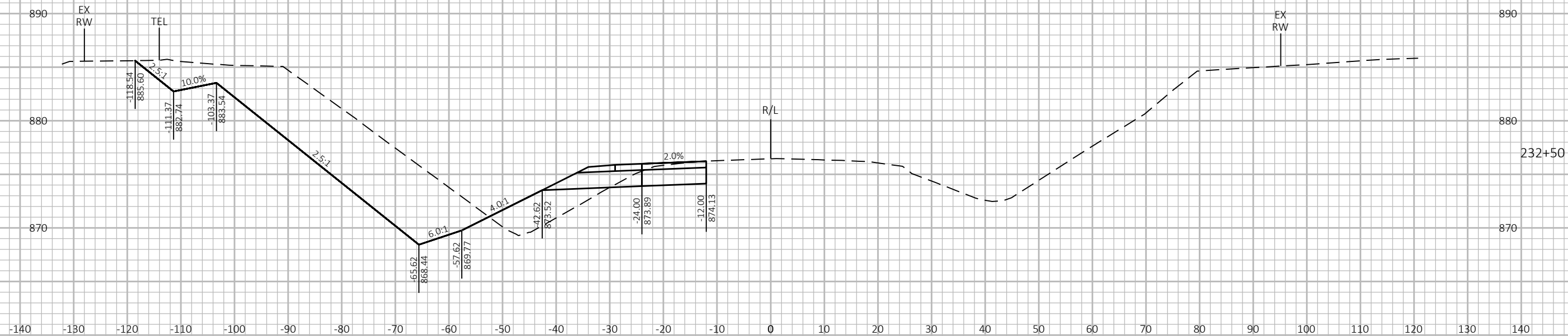
LAYOUT NAME - 30





PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:23 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

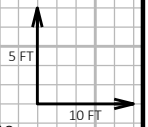


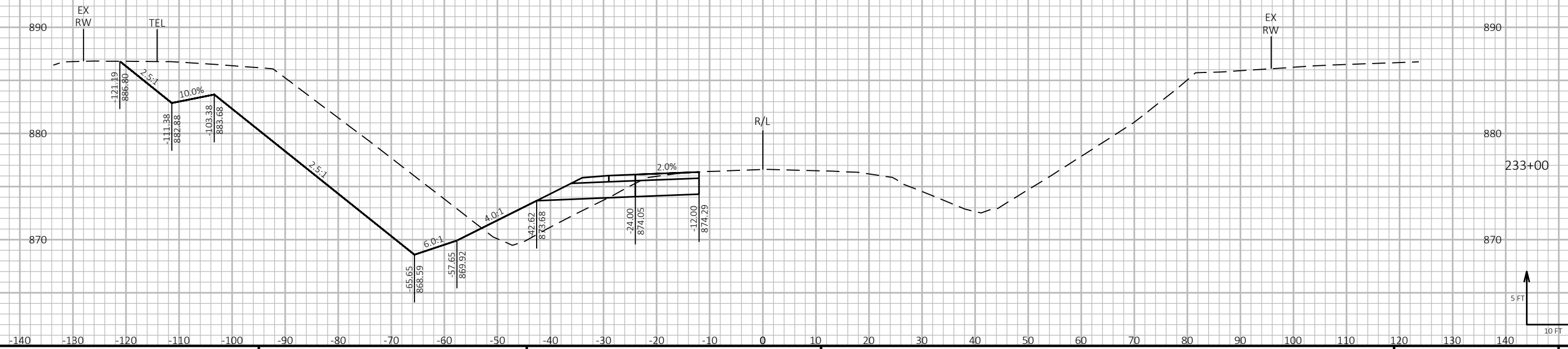
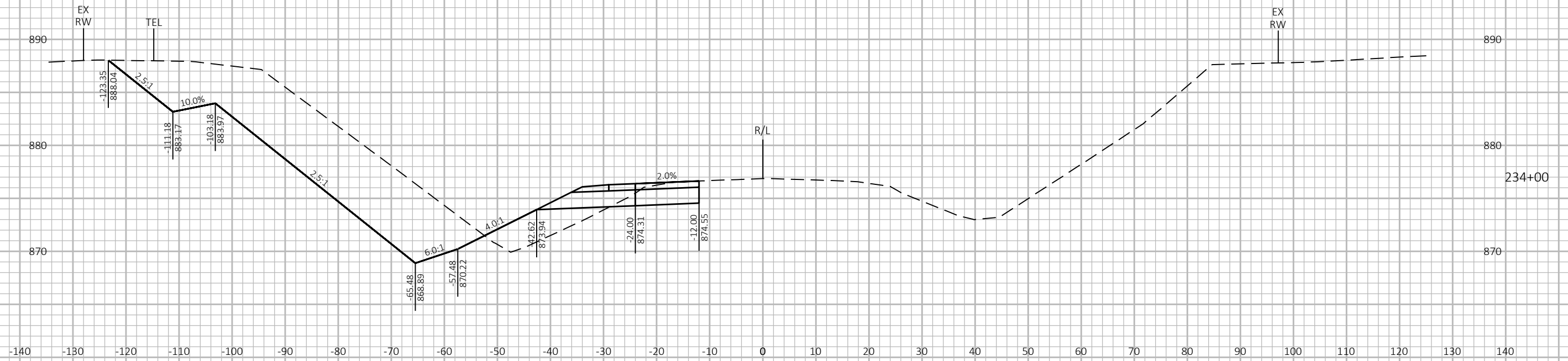
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:23 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49





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PROJECT NO: 1500-33-71

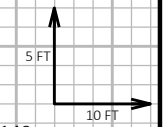
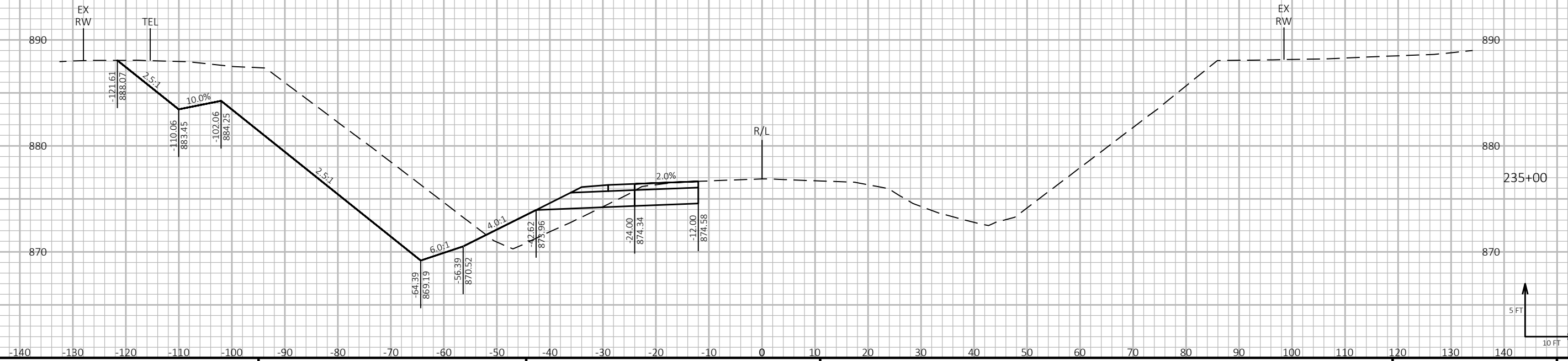
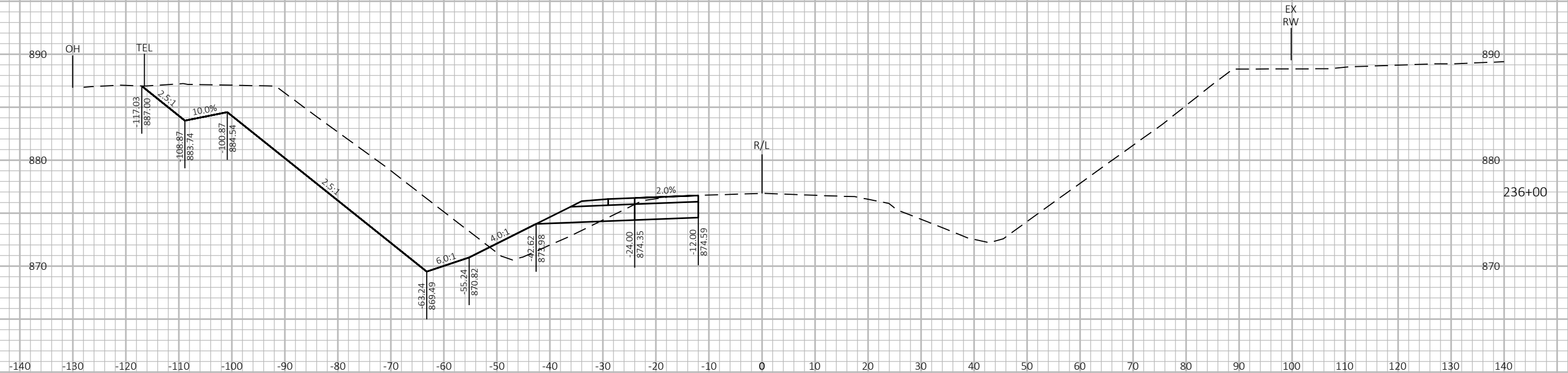
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



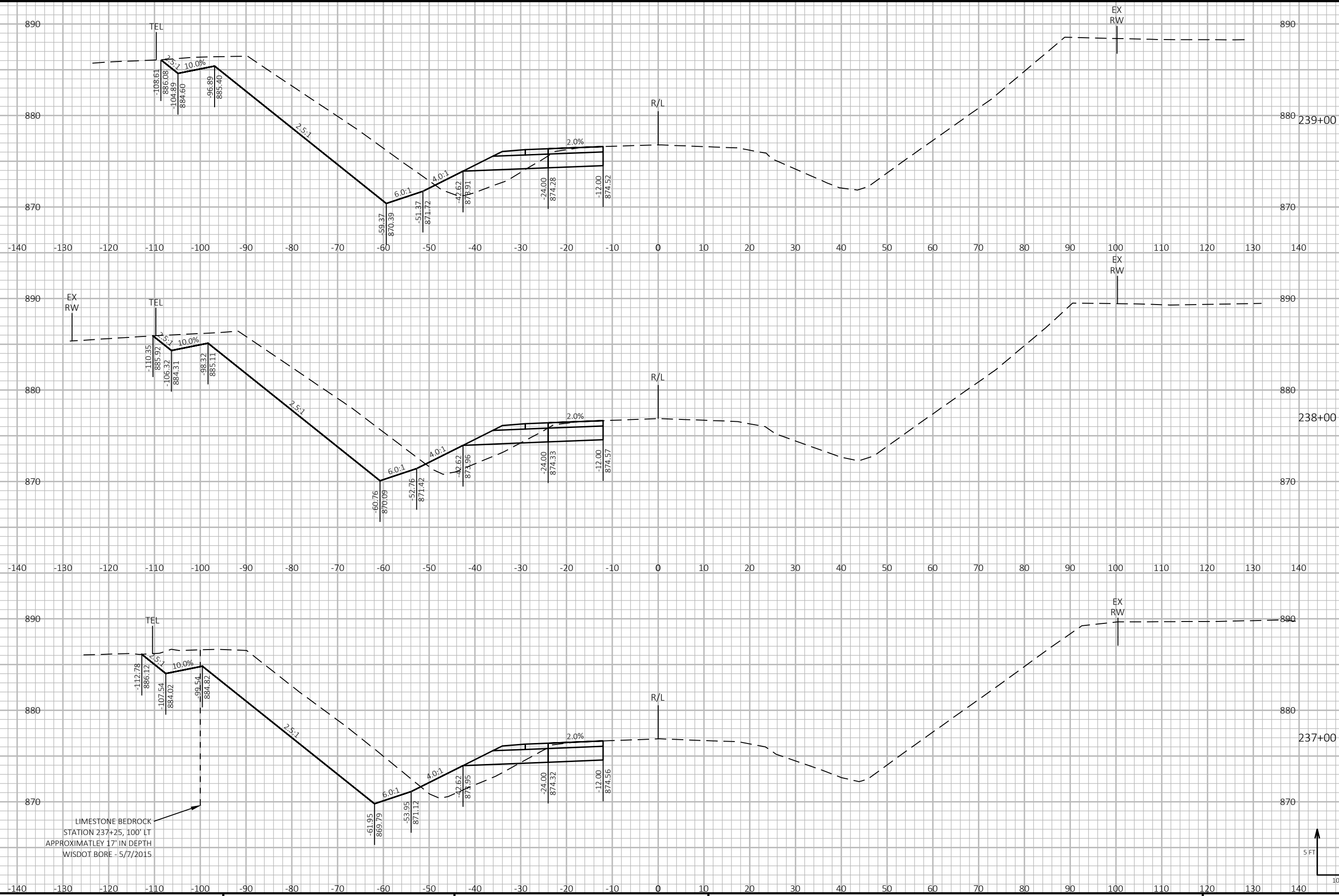
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

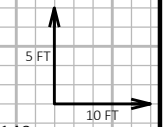
FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:24 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 34

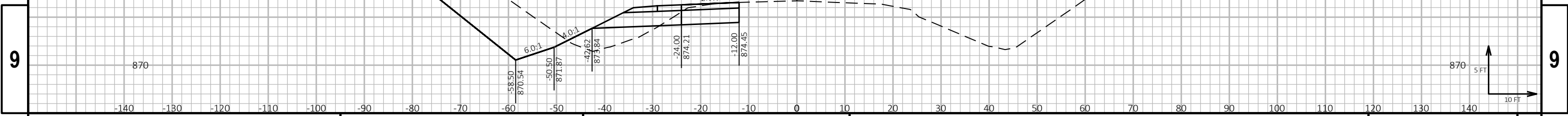
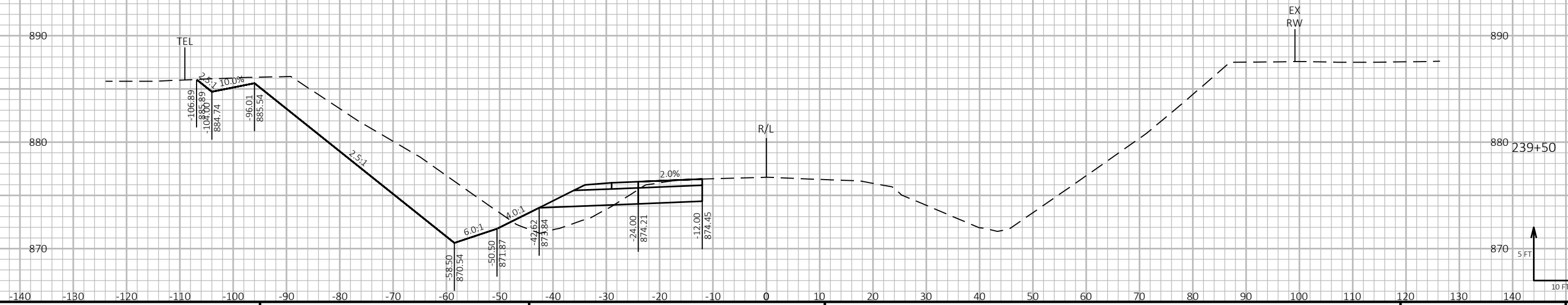
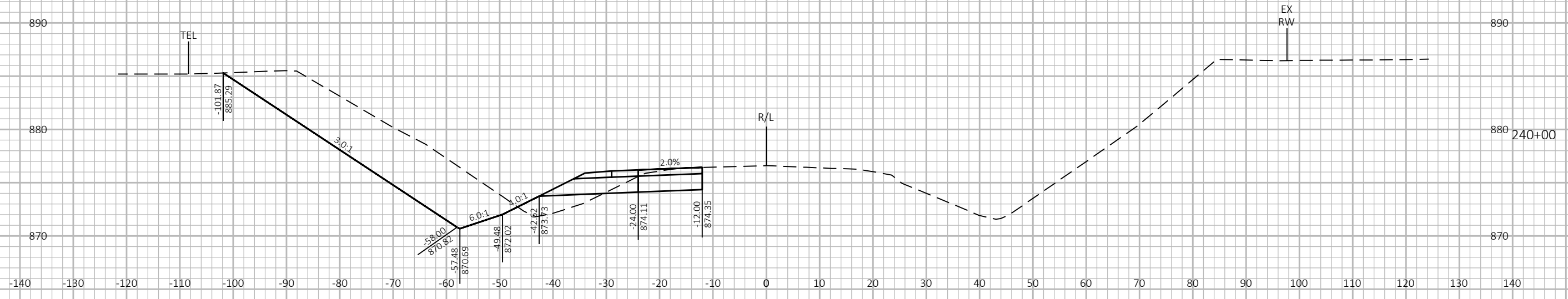


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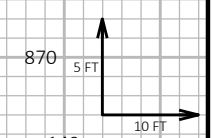
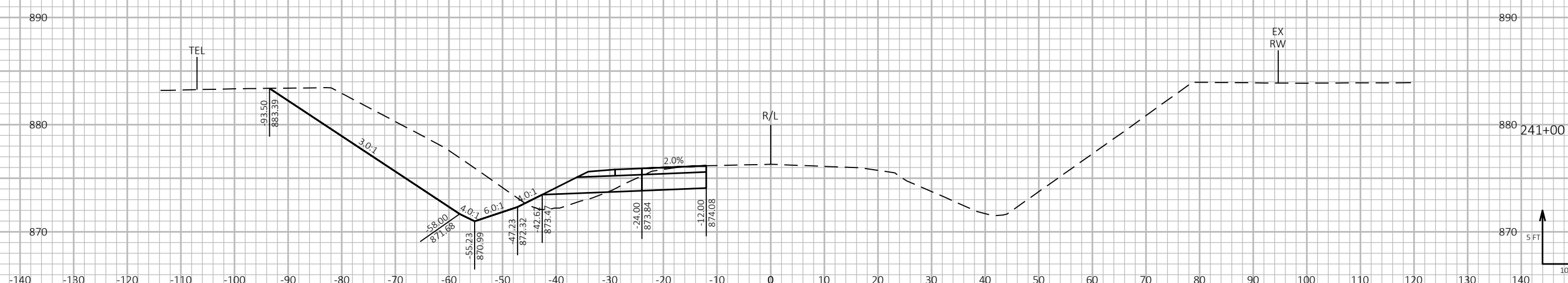
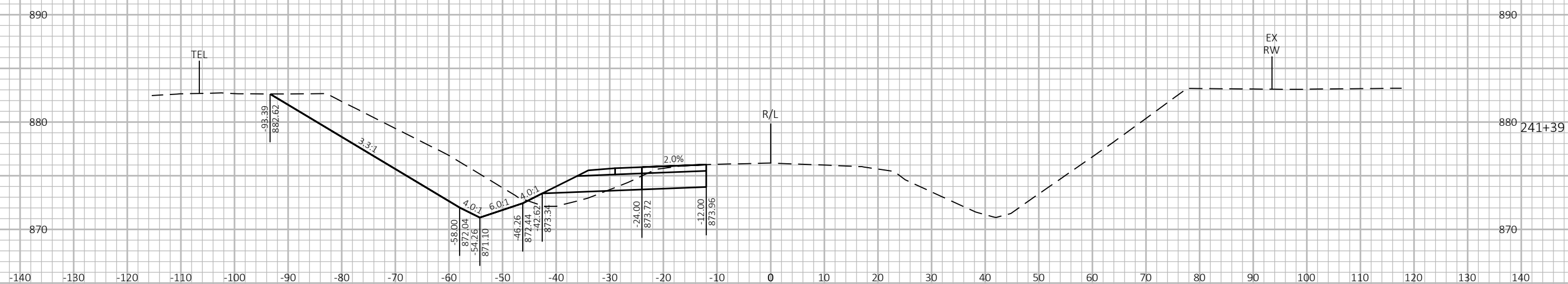
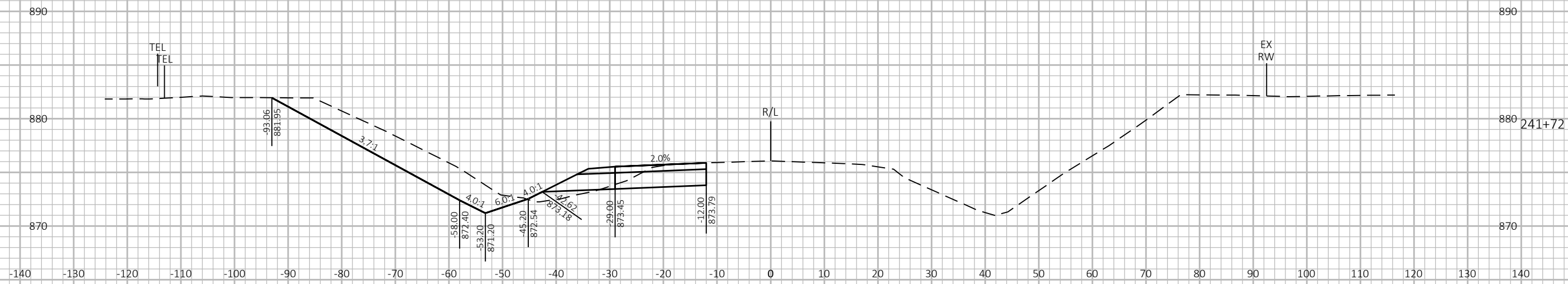


PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E



PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:24 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1500-33-71

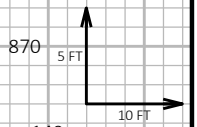
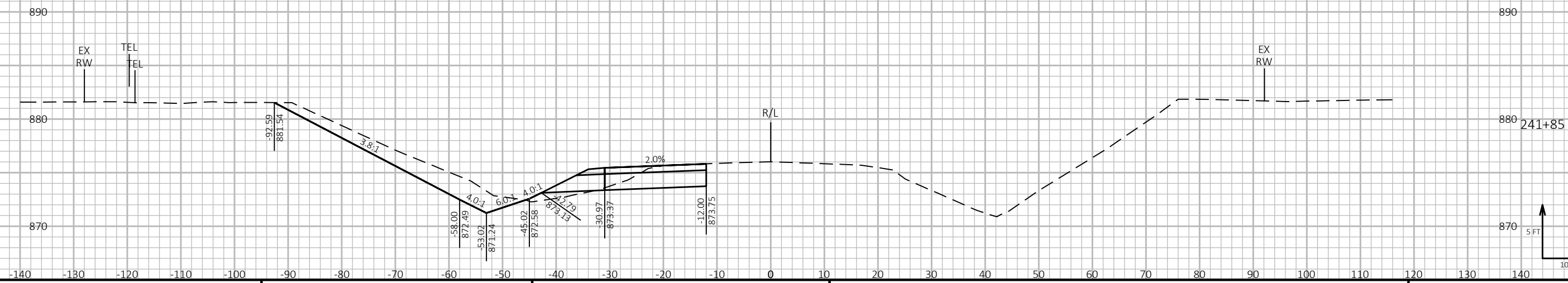
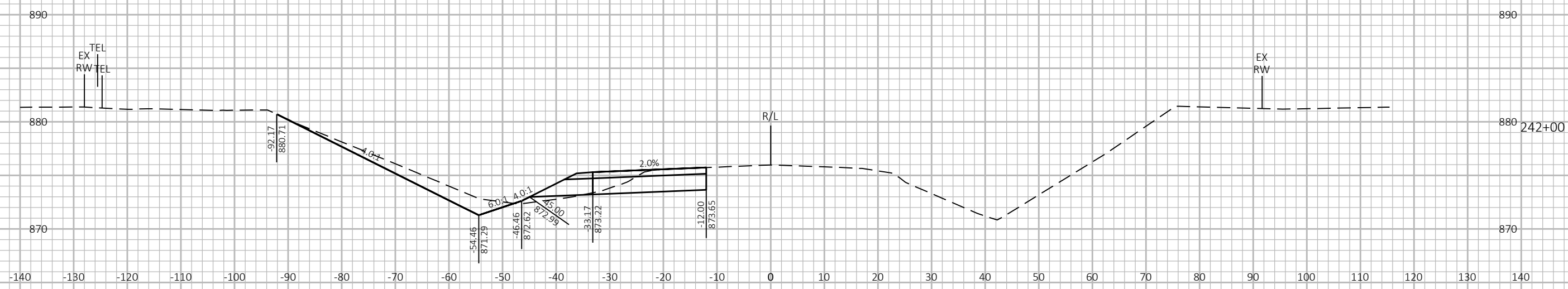
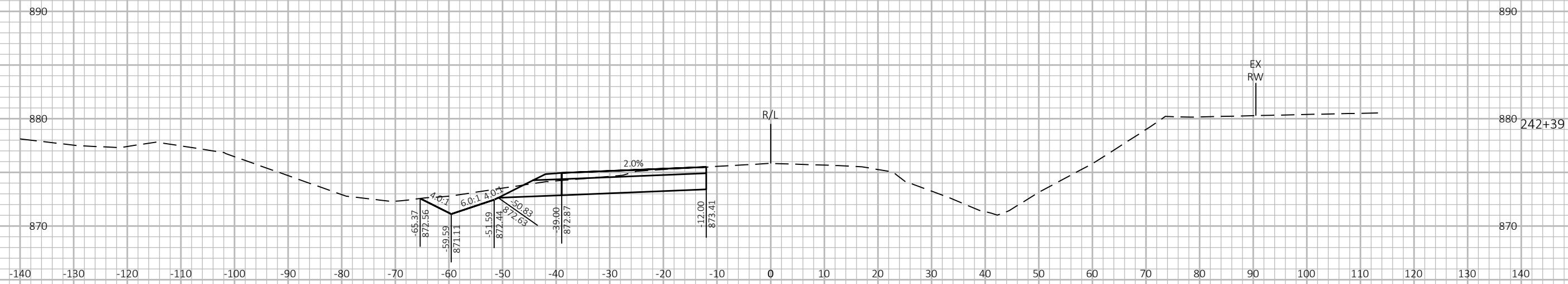
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E



PROJECT NO: 1500-33-71

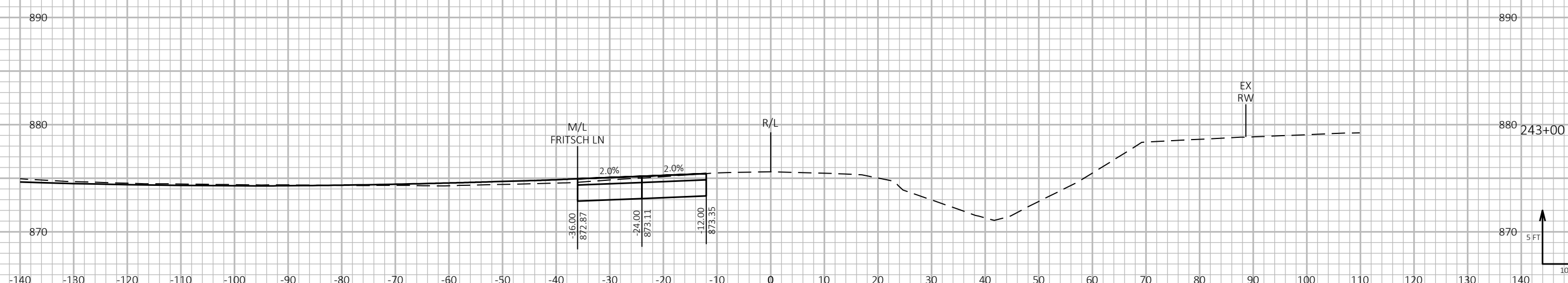
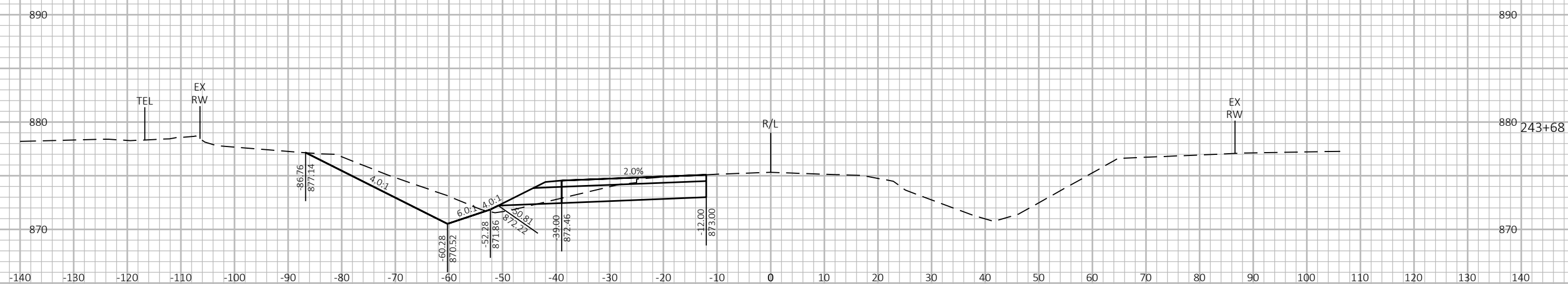
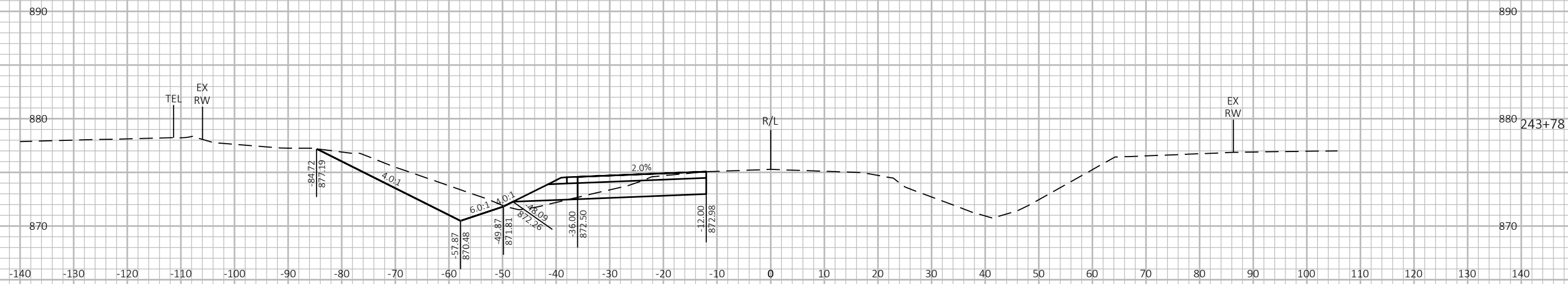
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

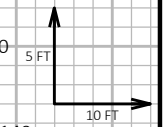
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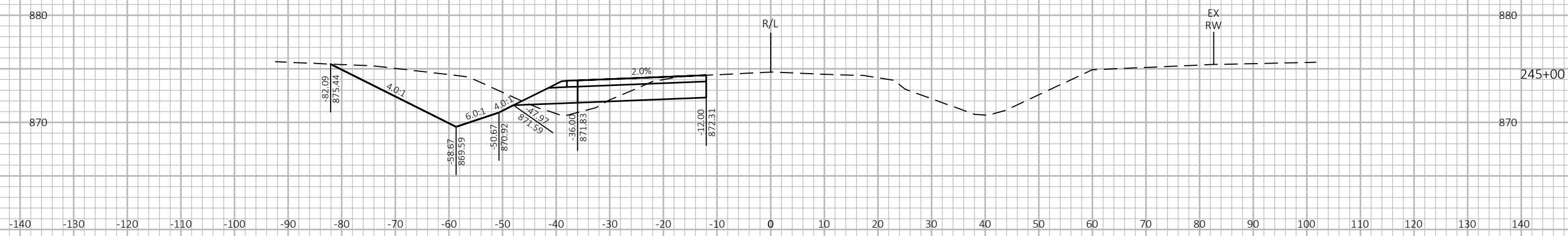
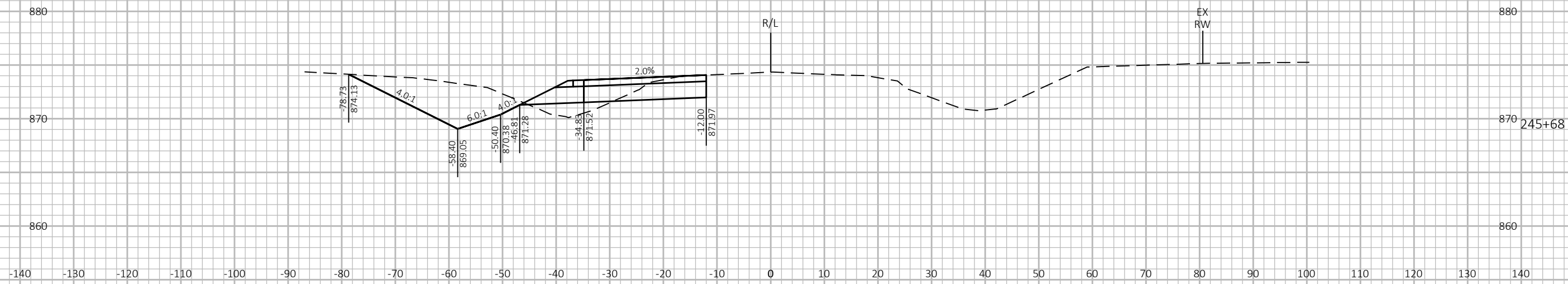


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:25 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49





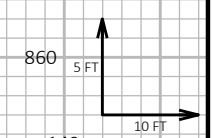
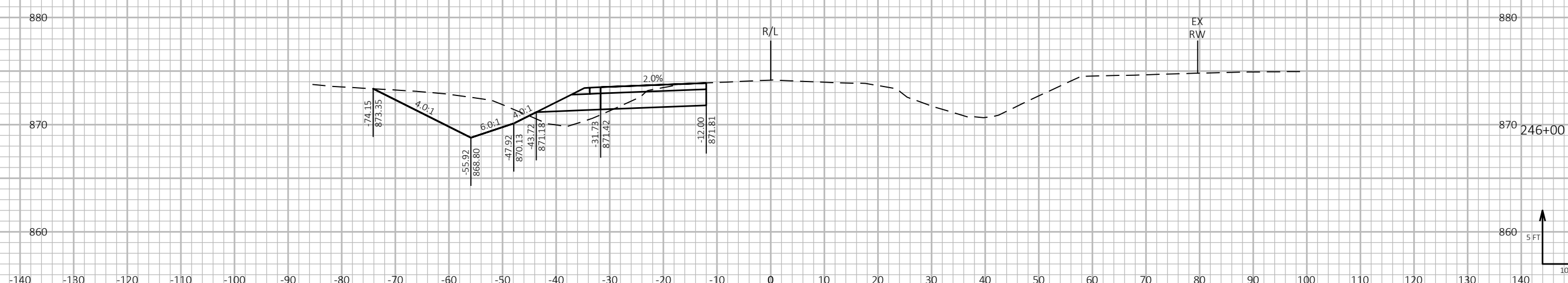
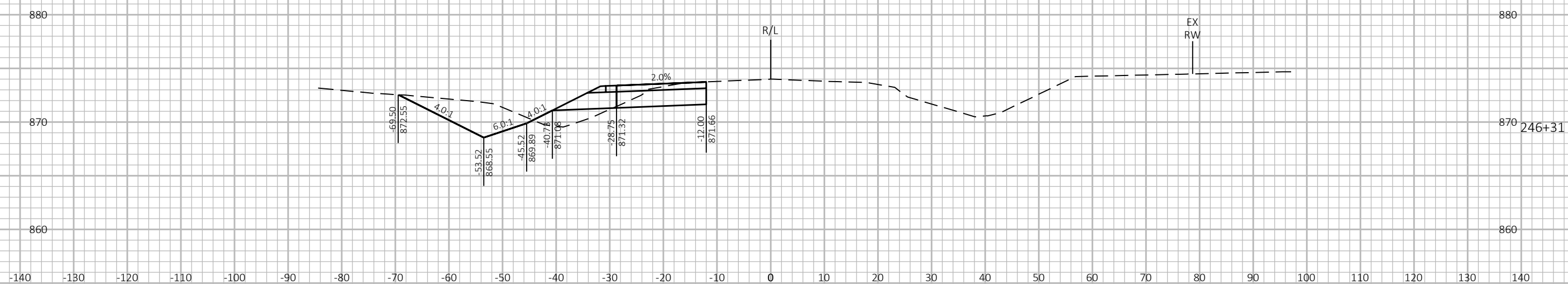
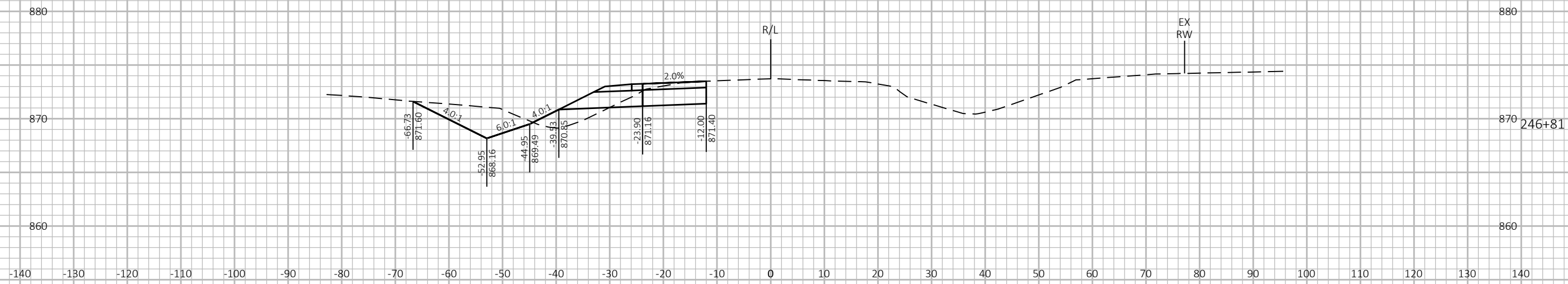
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:25 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

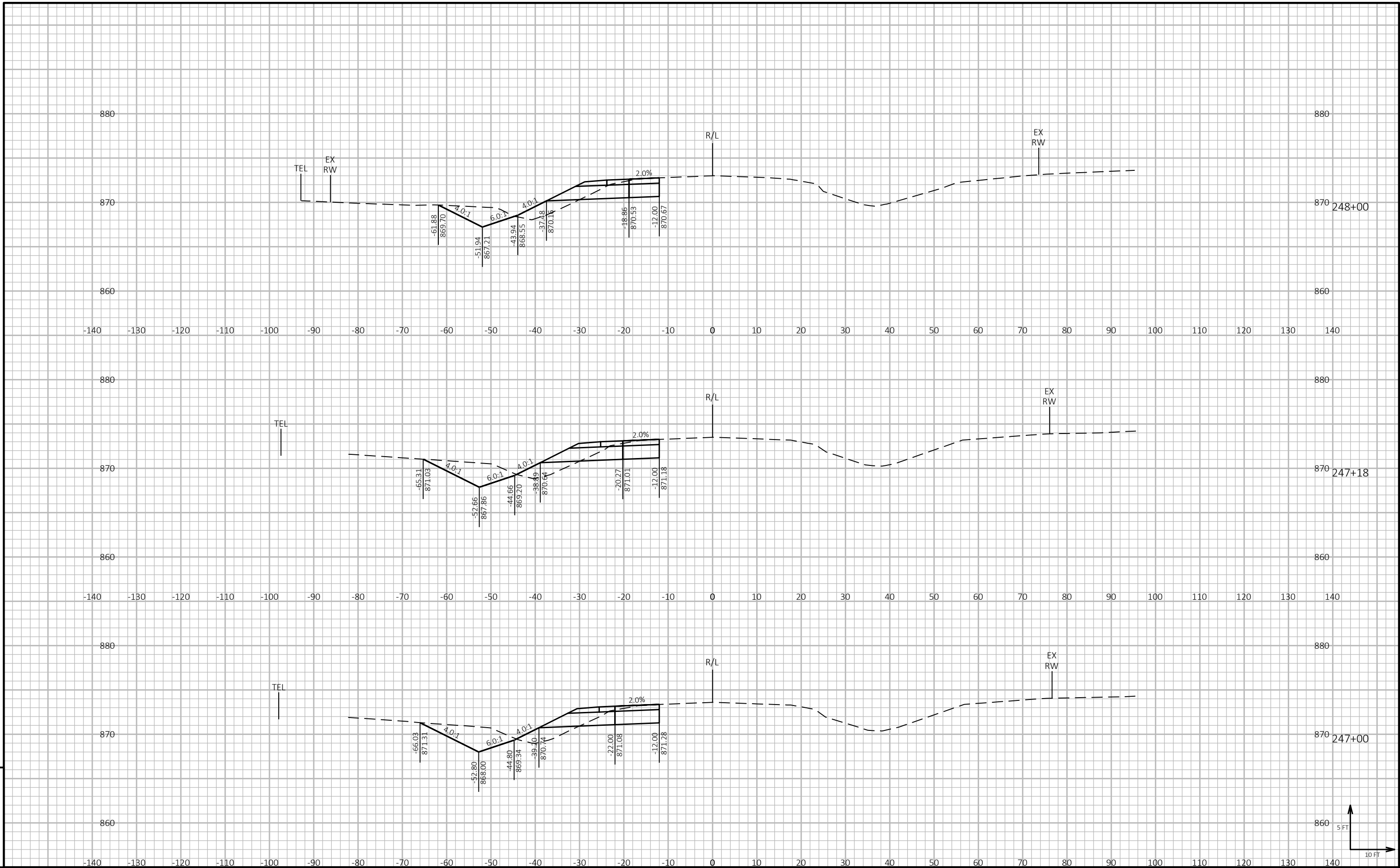
LAYOUT NAME - 40



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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E



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9

PROJECT NO: 1500-33-71

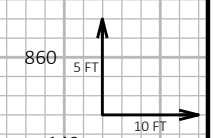
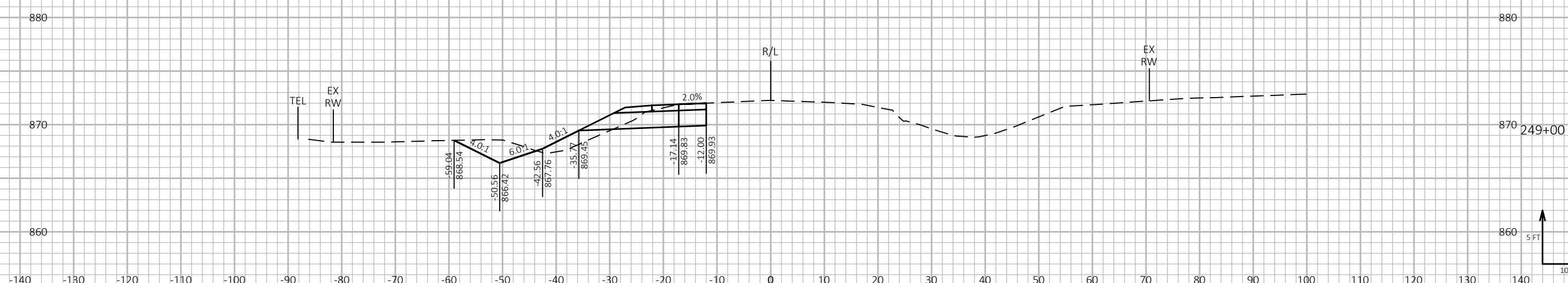
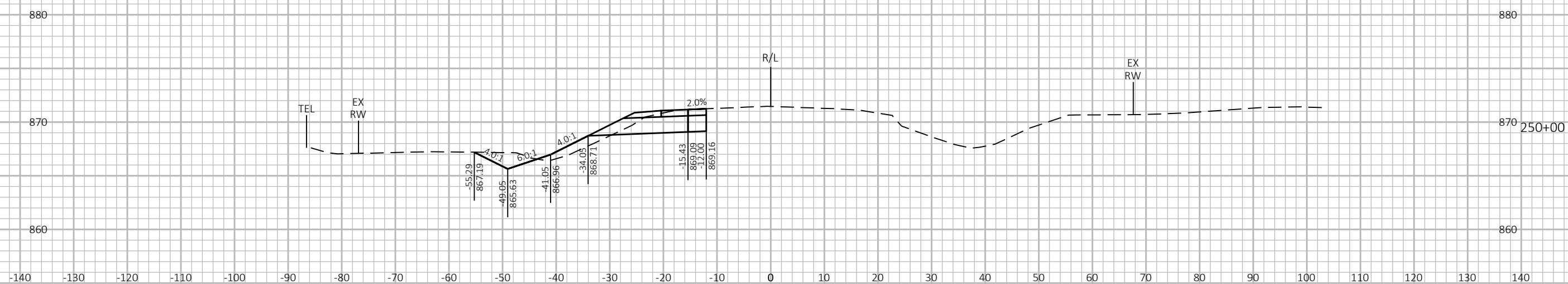
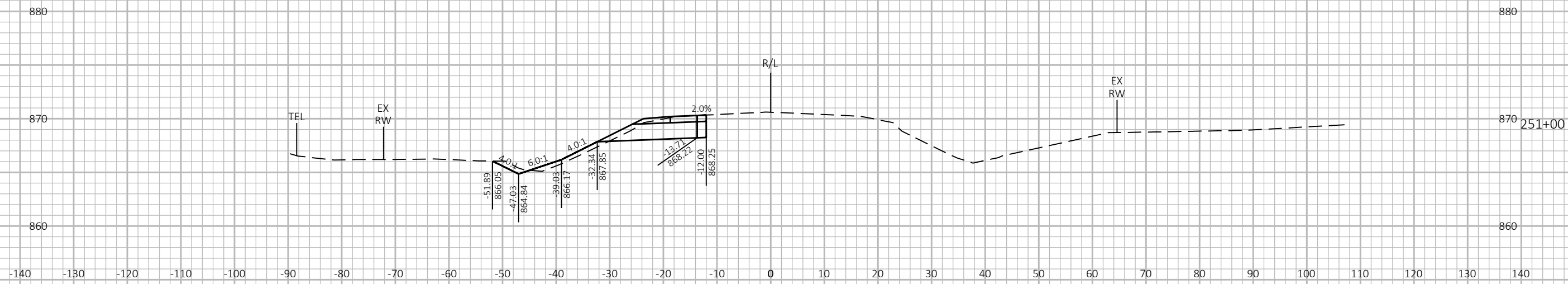
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: USH 10 - WB PASSING LANE

SHEET

E

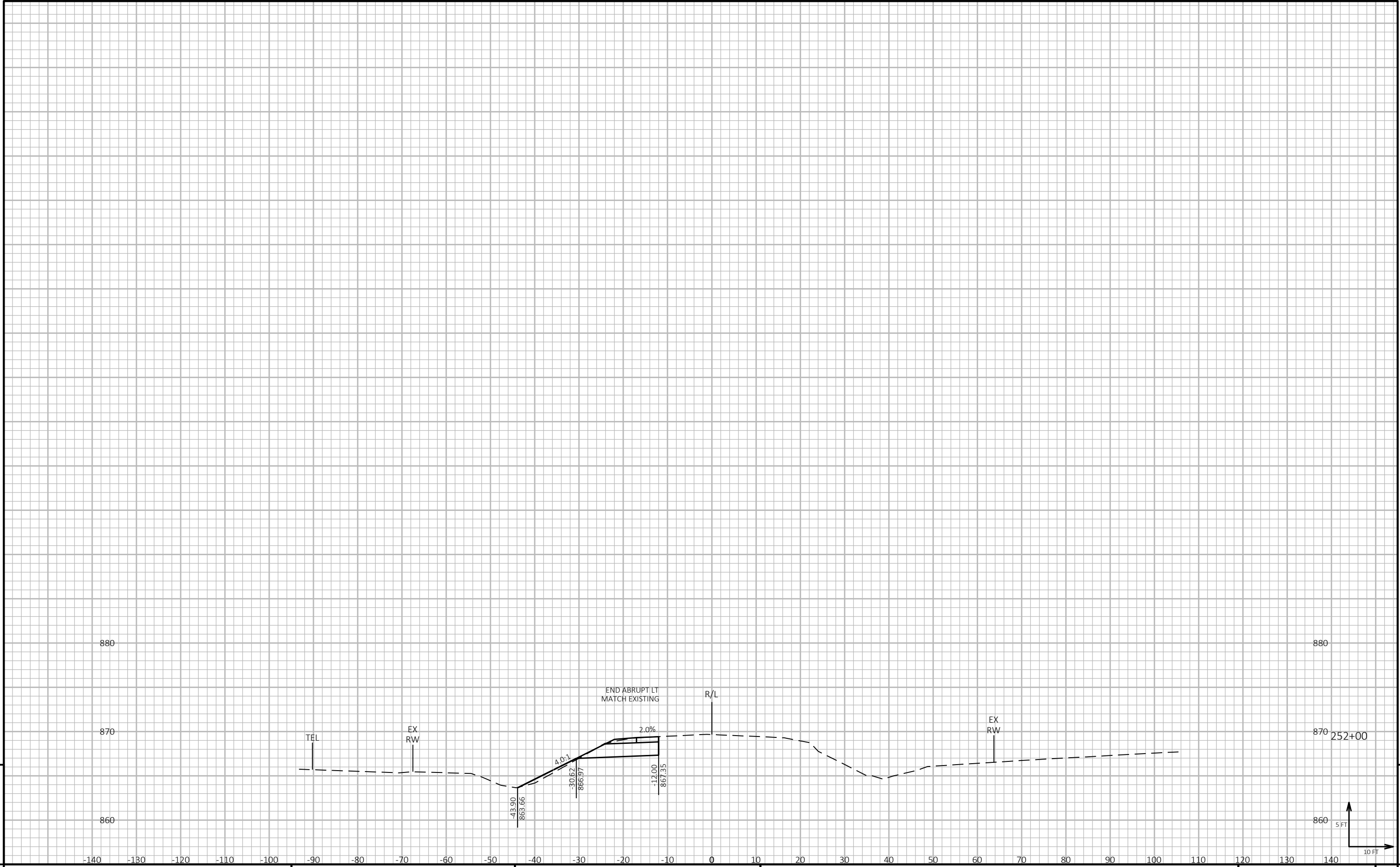


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG LAYOUT NAME - 43 PLOT DATE : 5/23/2023 3:26 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



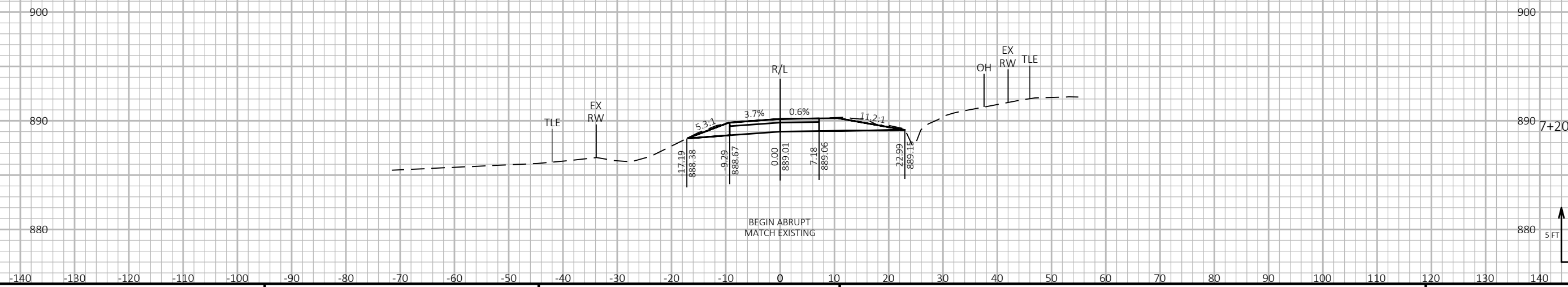
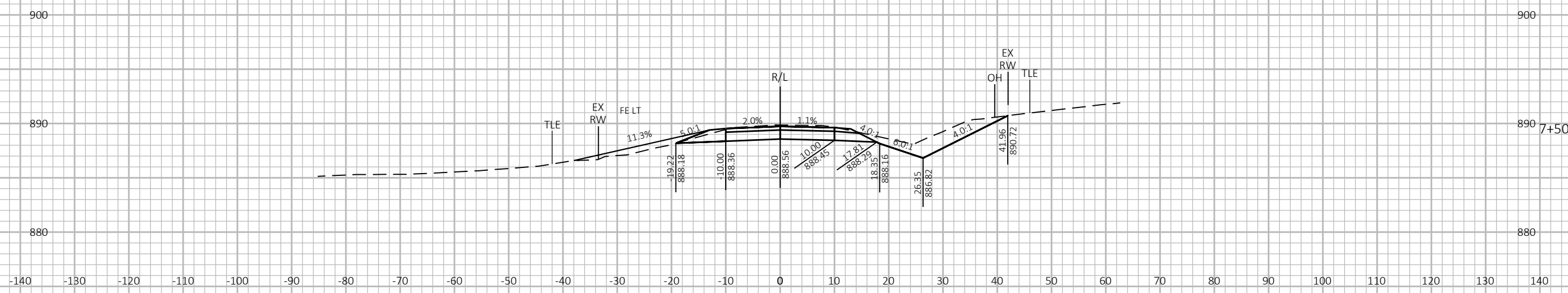
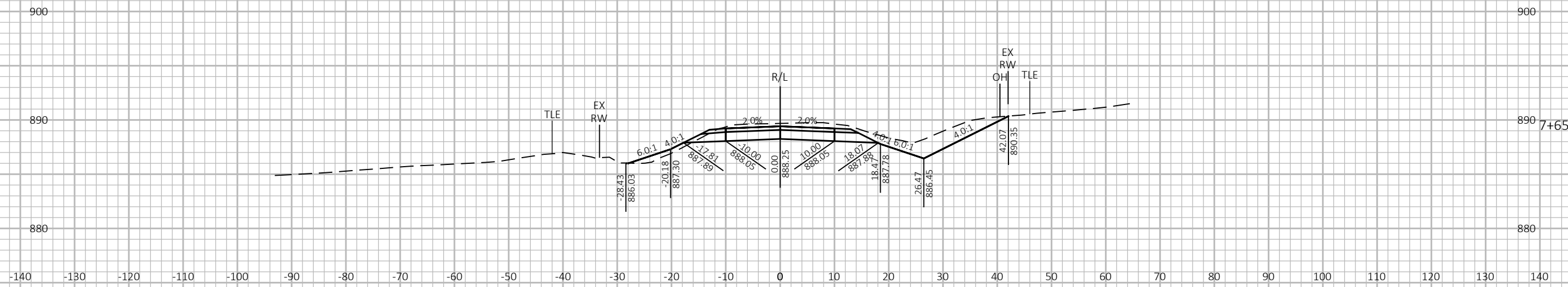
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: USH 10 - WB PASSING LANE SHEET E

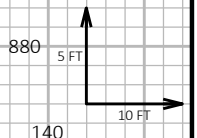
FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090202-XS.DWG PLOT DATE : 5/23/2023 3:26 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

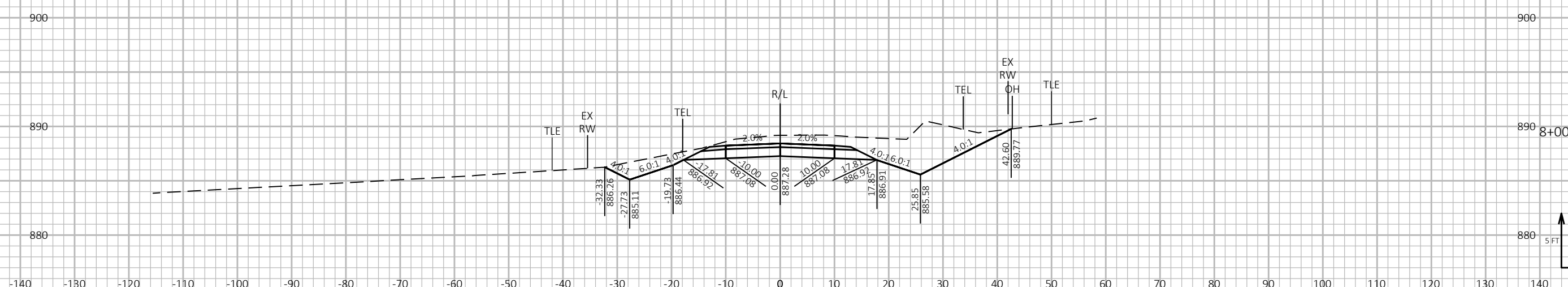
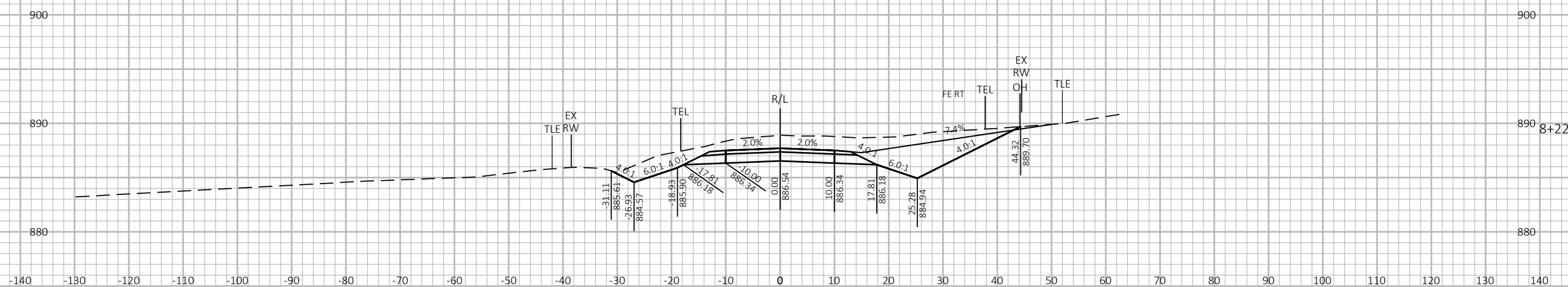
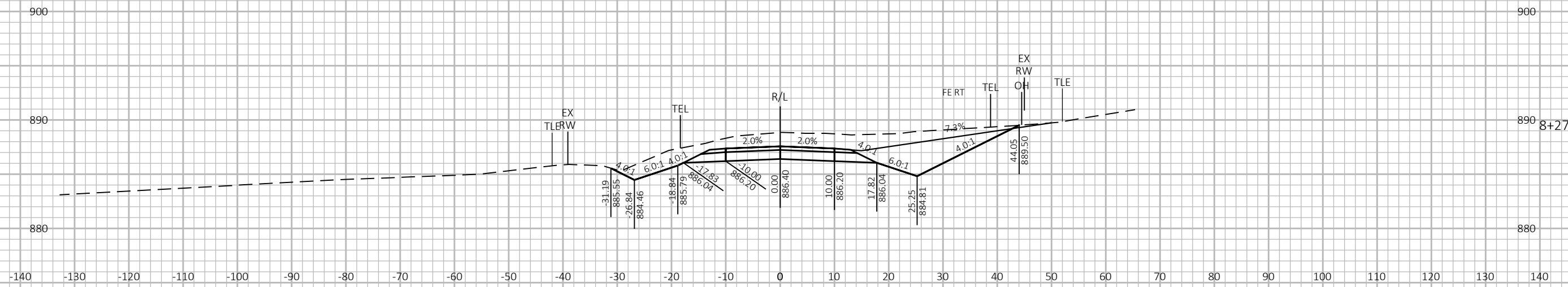
LAYOUT NAME - 44



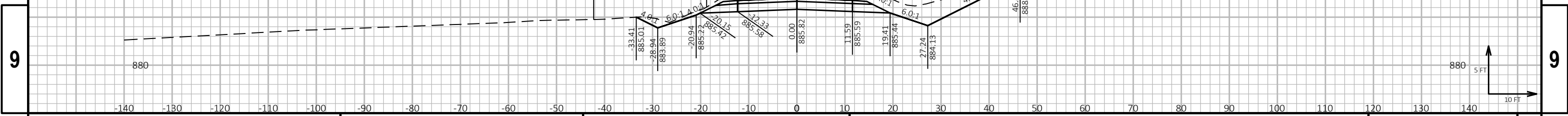
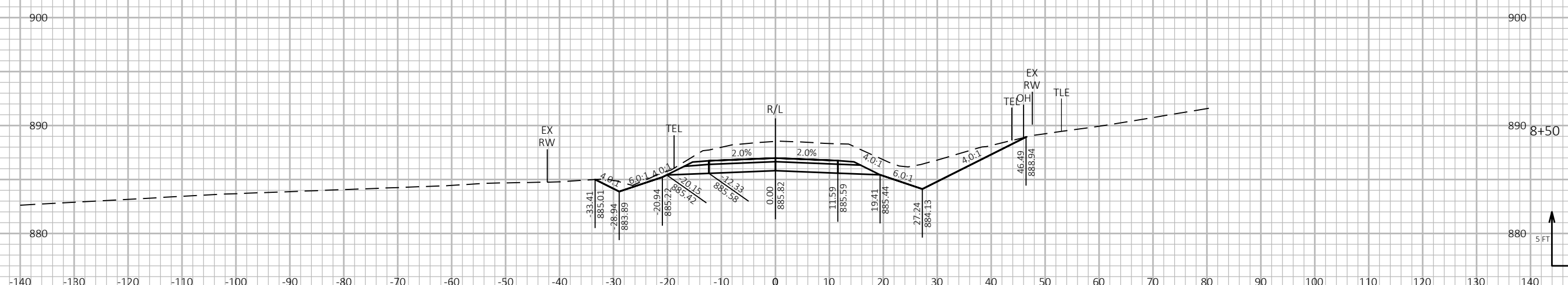
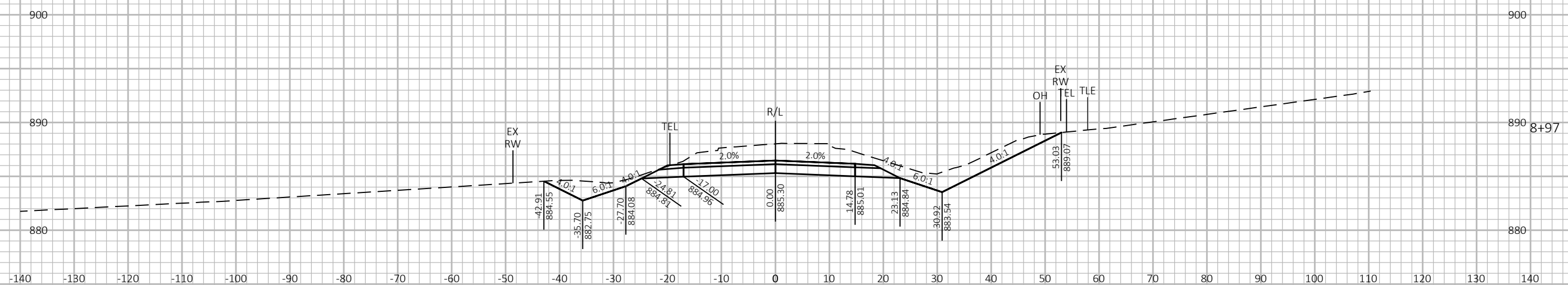
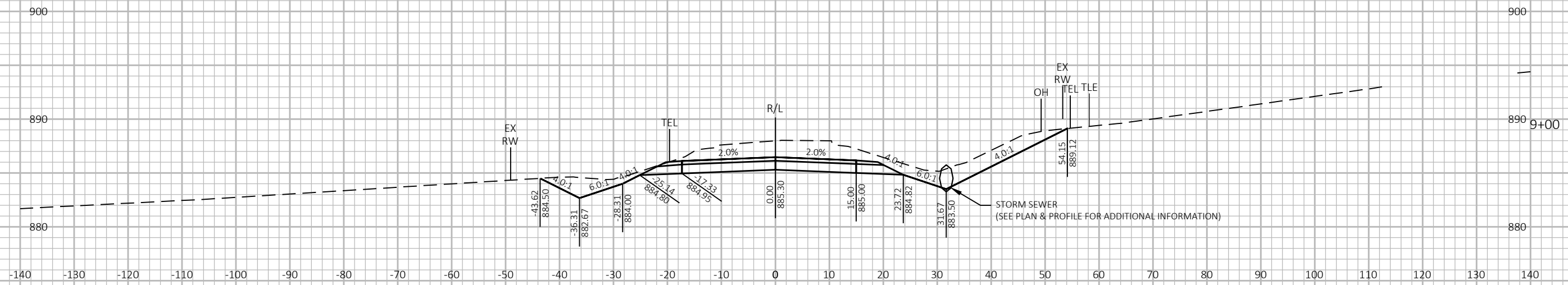
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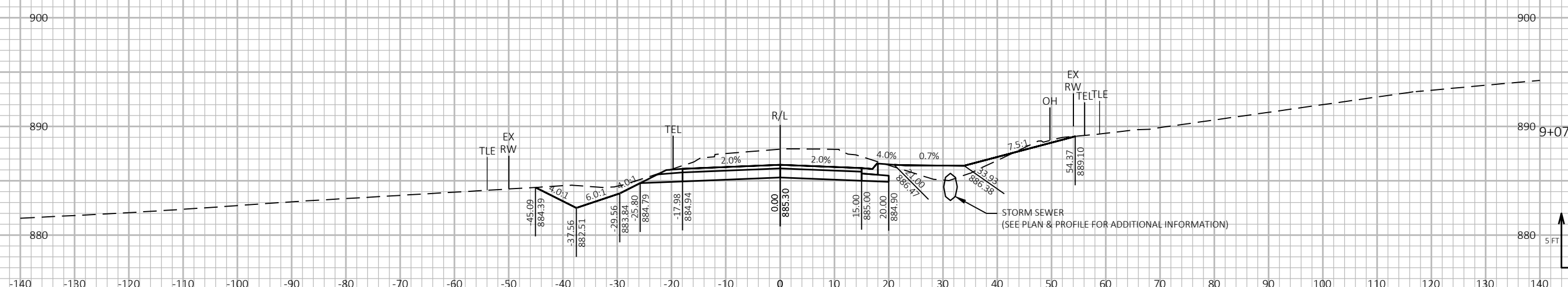
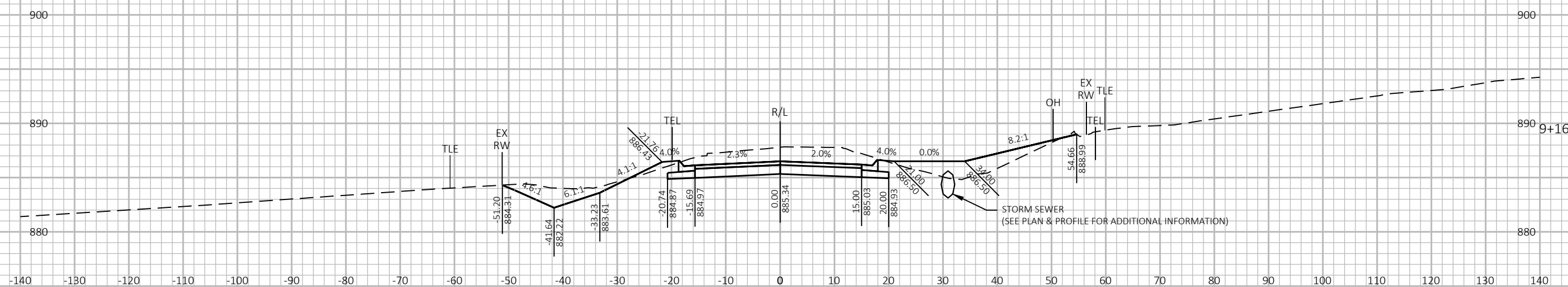
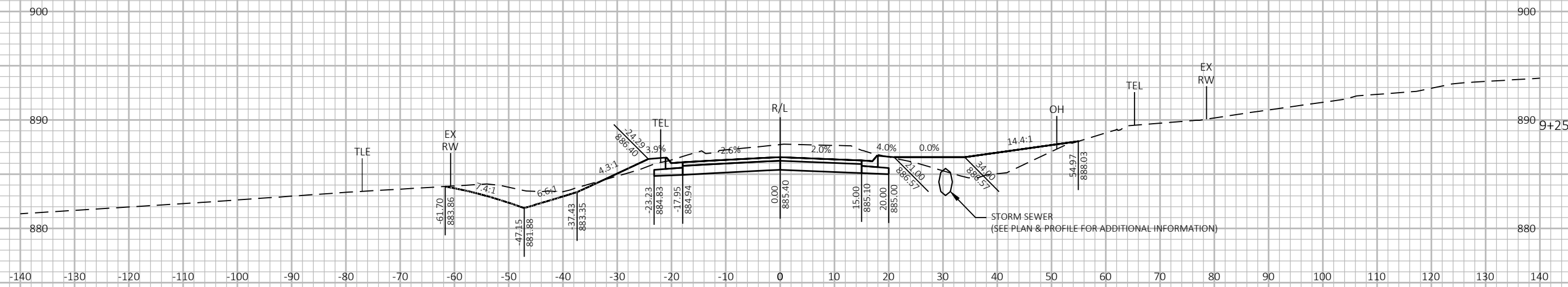




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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: ROCKY LEDGE LANE SHEET E

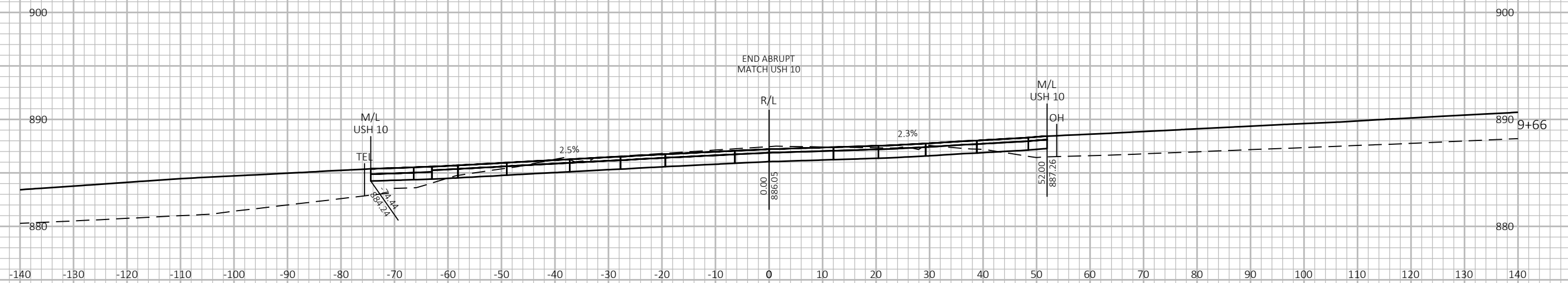


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: ROCKY LEDGE LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090203-XS.DWG PLOT DATE : 5/24/2023 10:57 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1500-33-71

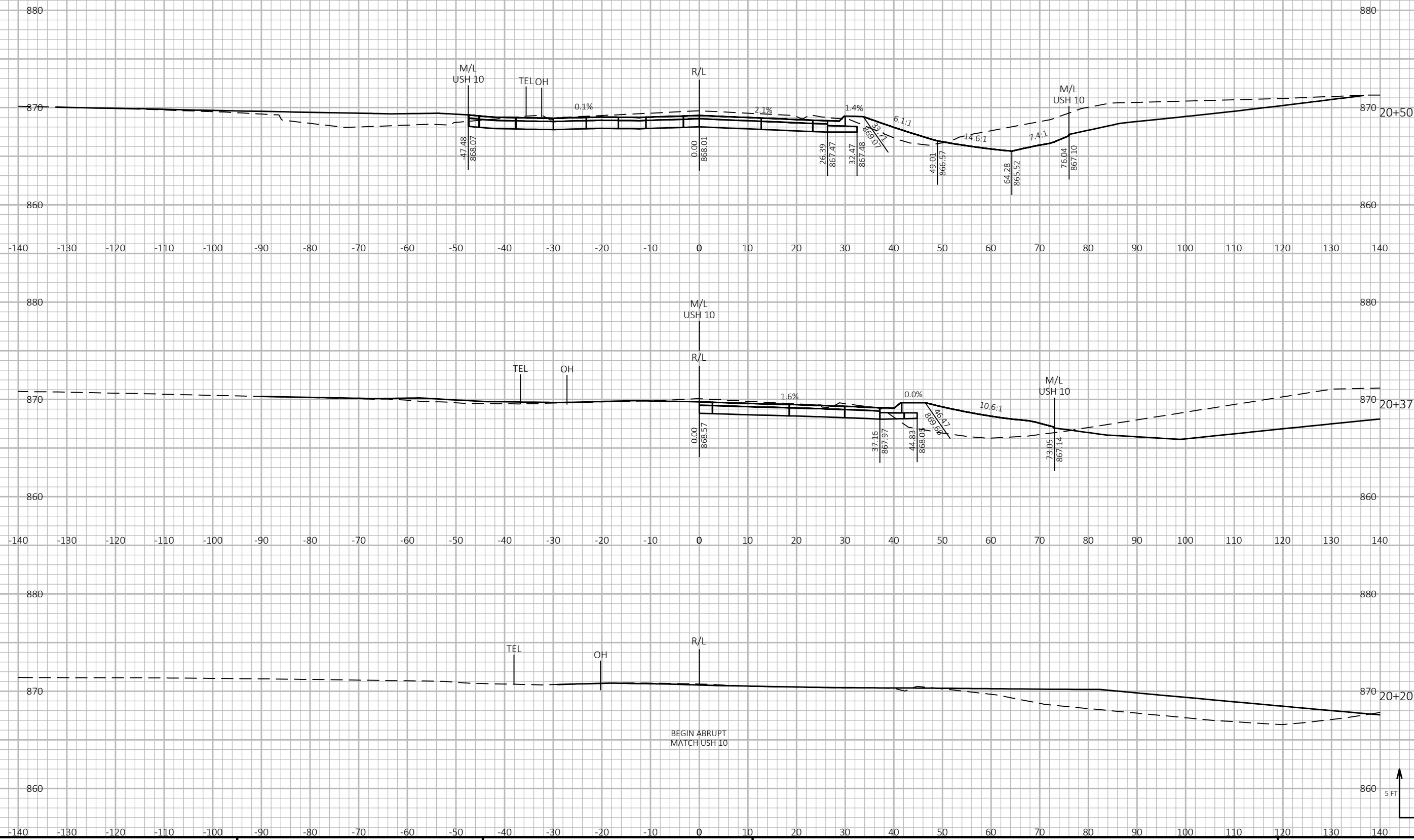
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: ROCKY LEDGE LANE

SHEET

E



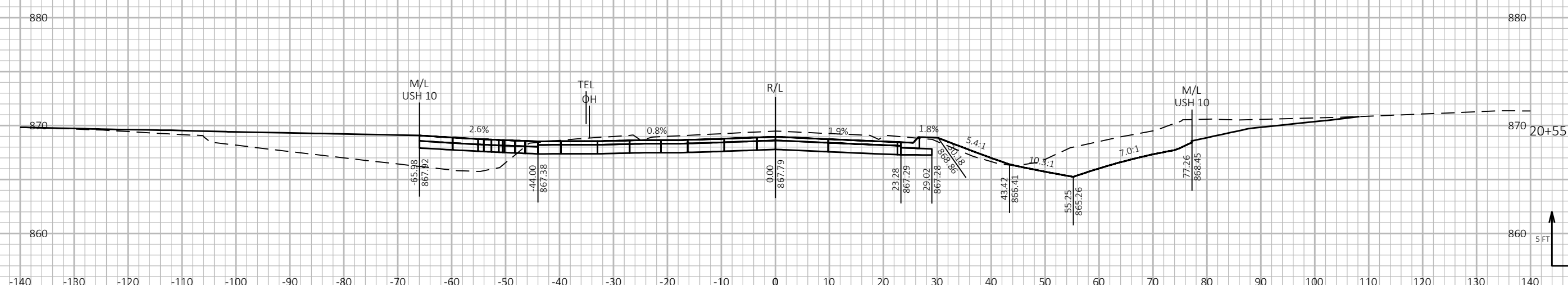
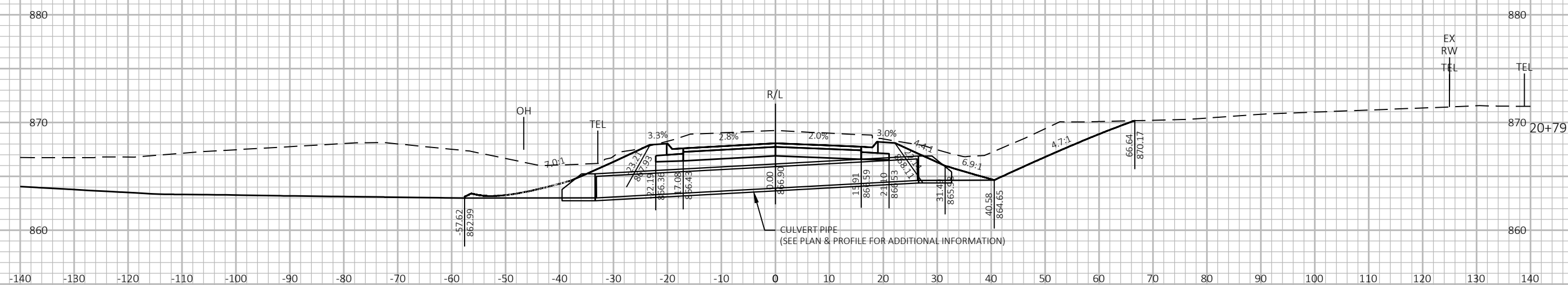
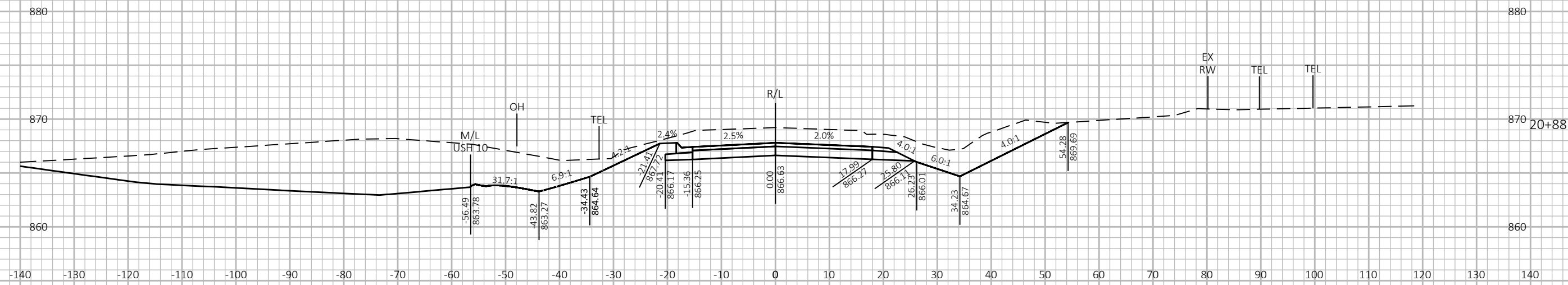
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090204-XS.DWG PLOT DATE : 5/24/2023 11:20 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT\CADD SHEET 49

LAYOUT NAME - 01



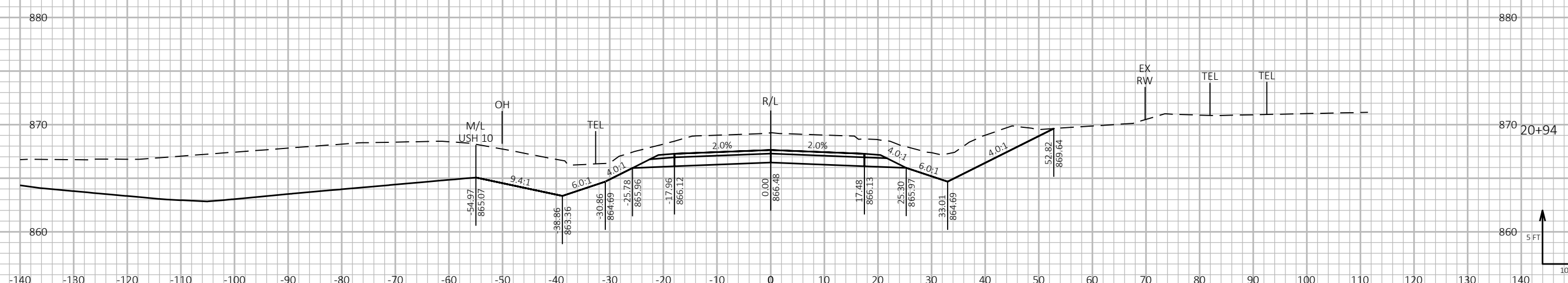
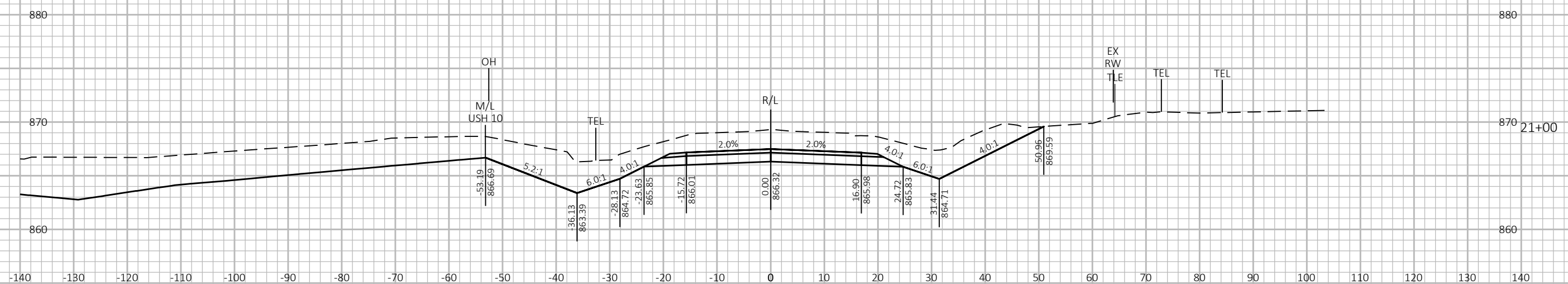
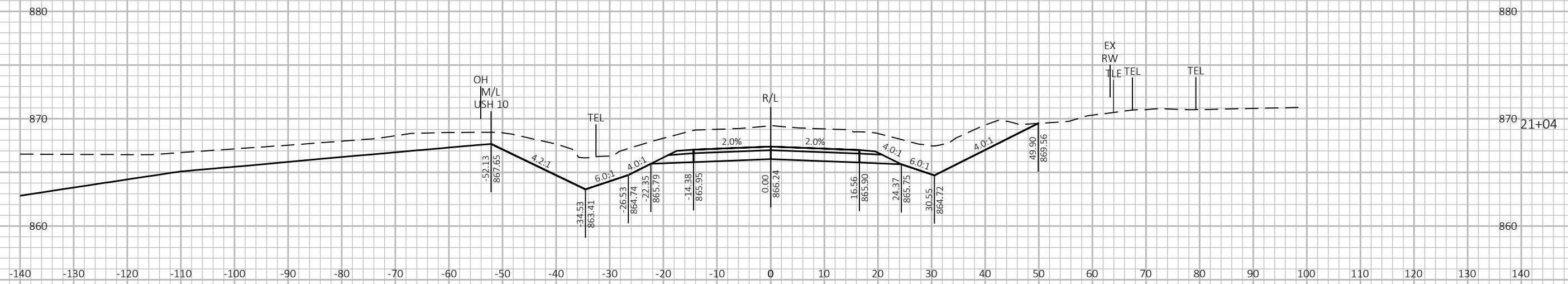
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090204-XS.DWG PLOT DATE : 5/24/2023 11:21 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 02



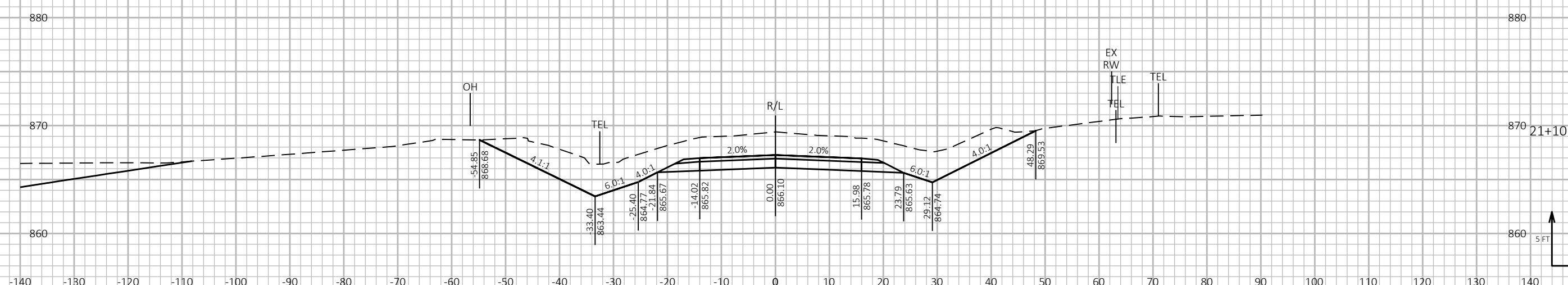
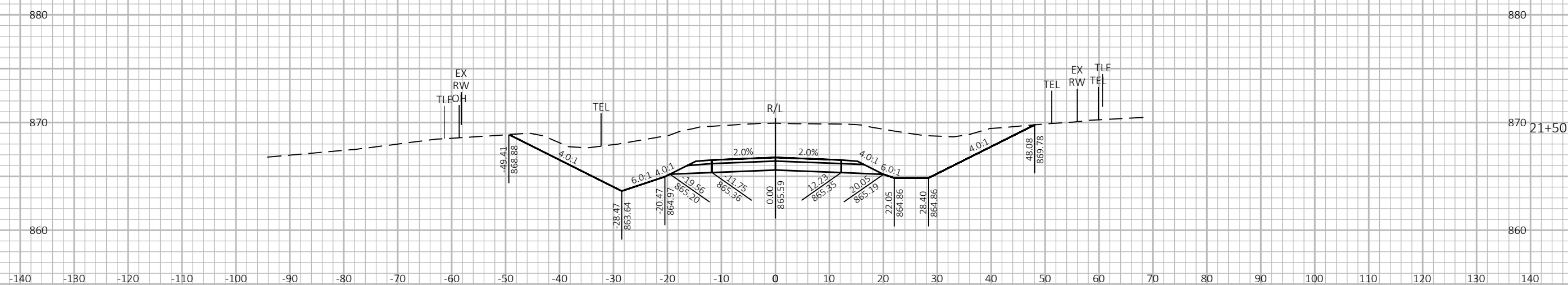
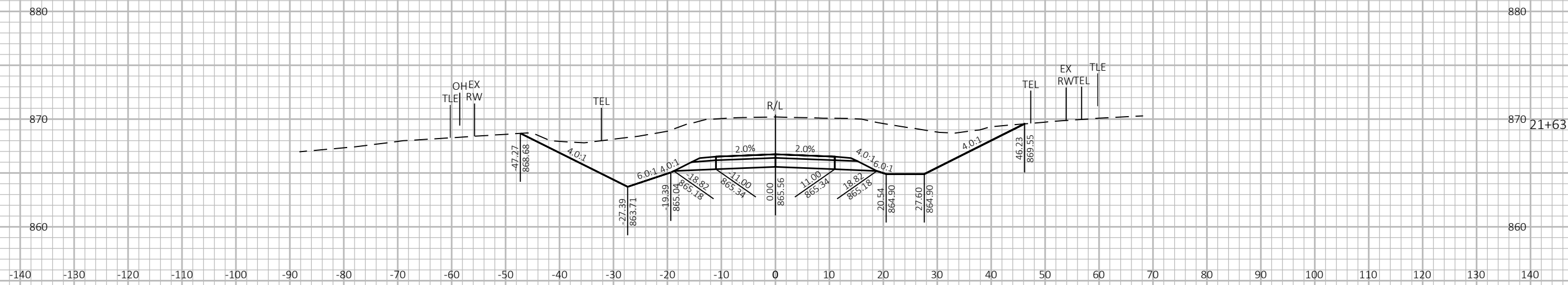
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\15003371\090204-XS.DWG PLOT DATE : 5/24/2023 11:21 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 03

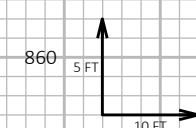
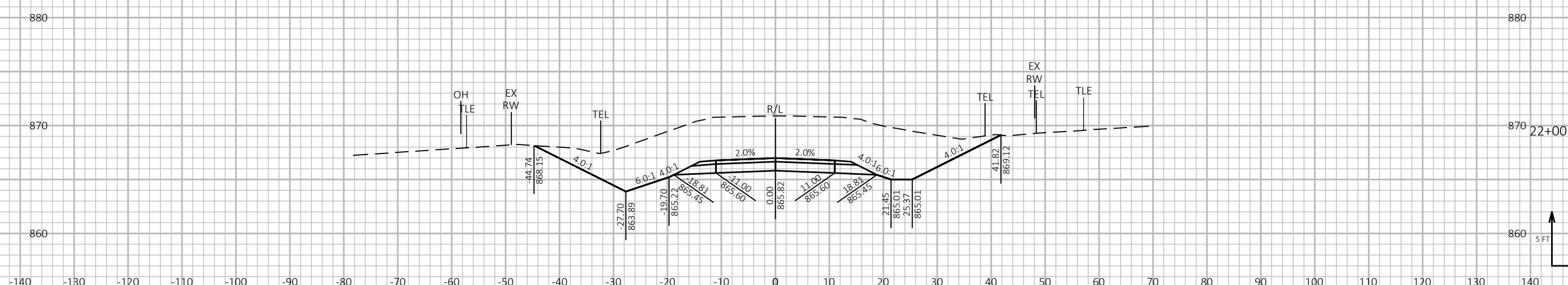
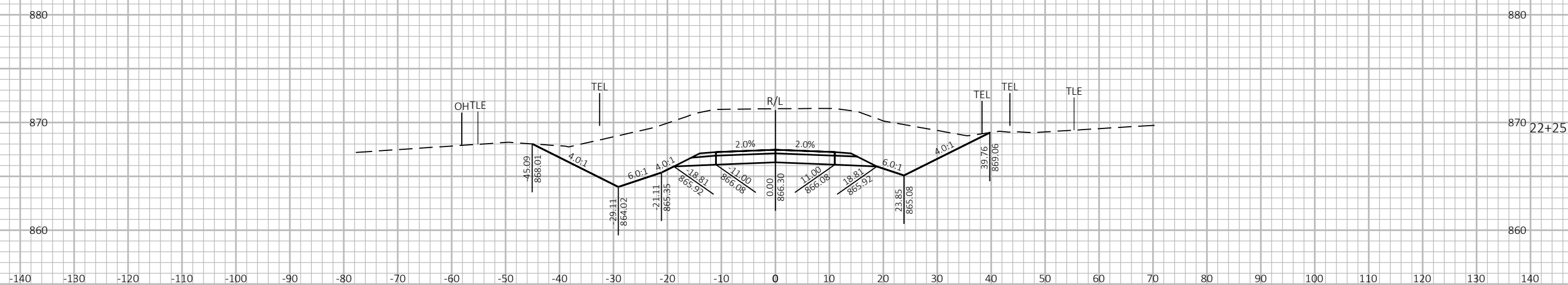
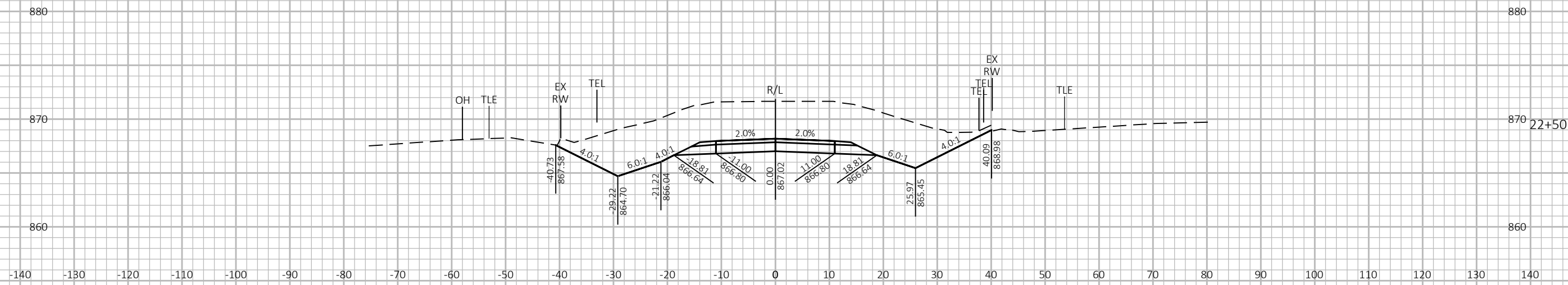


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090204-XS.DWG PLOT DATE : 5/24/2023 11:21 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

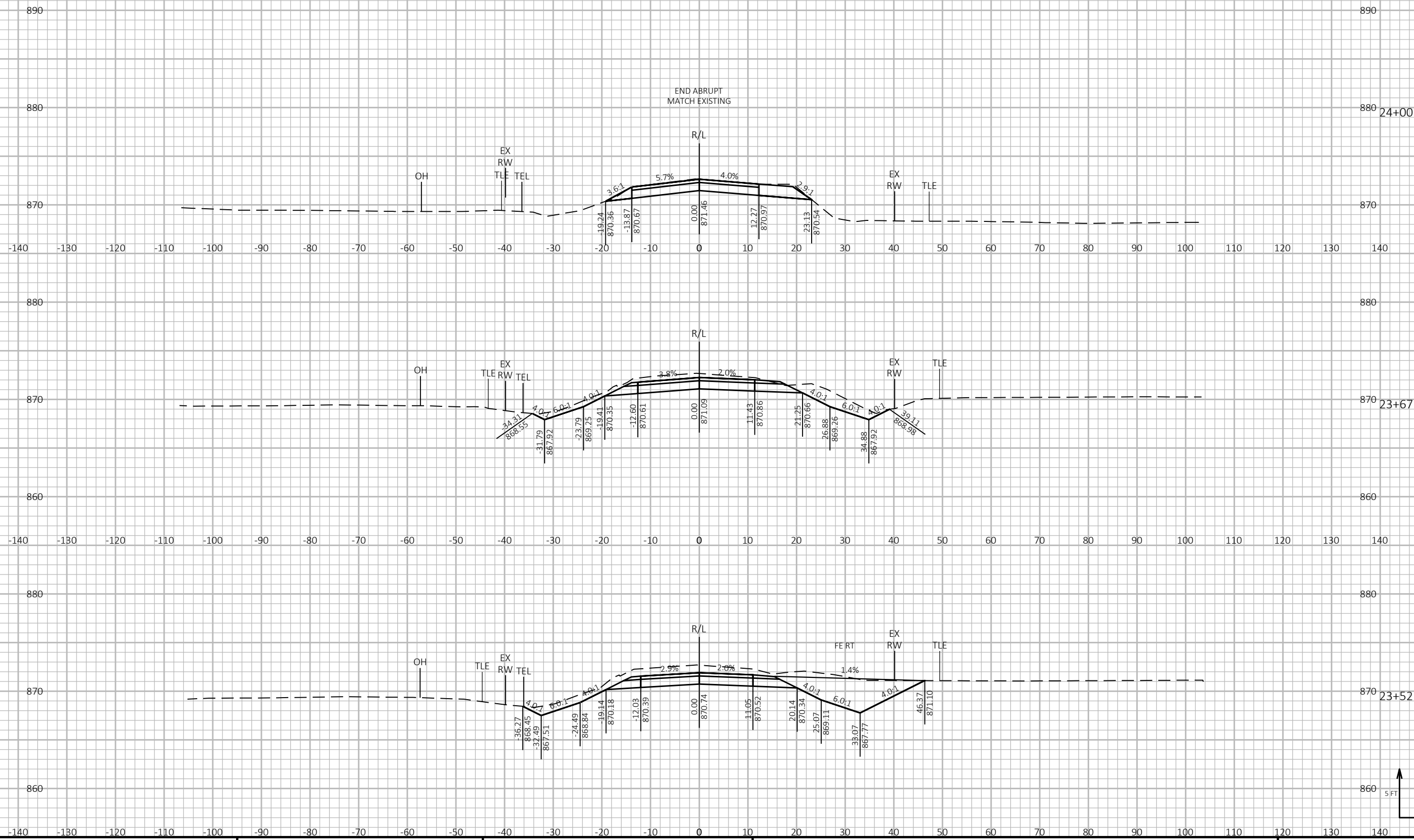


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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090204-XS.DWG PLOT DATE : 5/24/2023 11:21 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



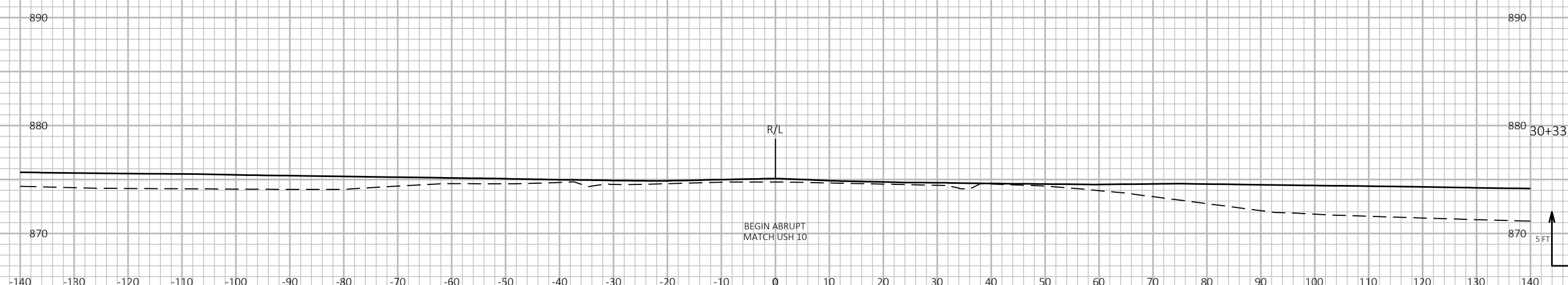
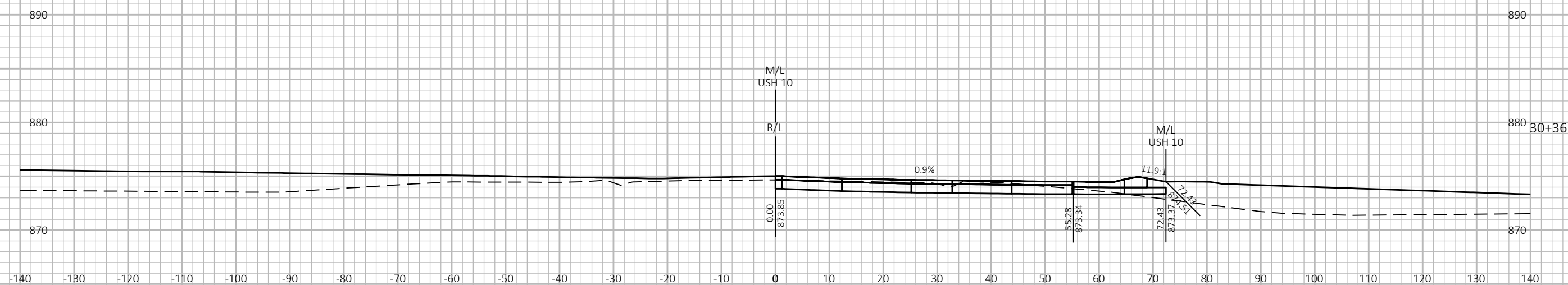
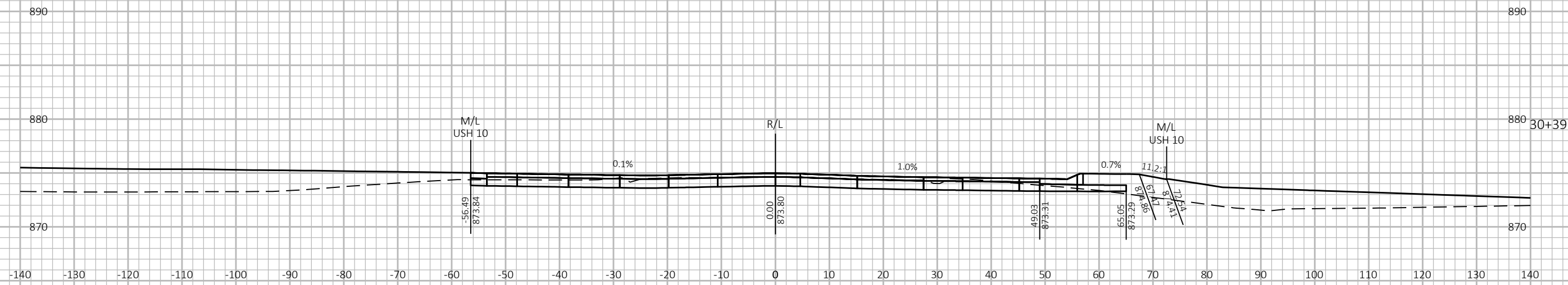
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: MENCHALVILLE ROAD SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090204-XS.DWG PLOT DATE : 5/24/2023 11:22 AM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 07



PROJECT NO: 1500-33-71

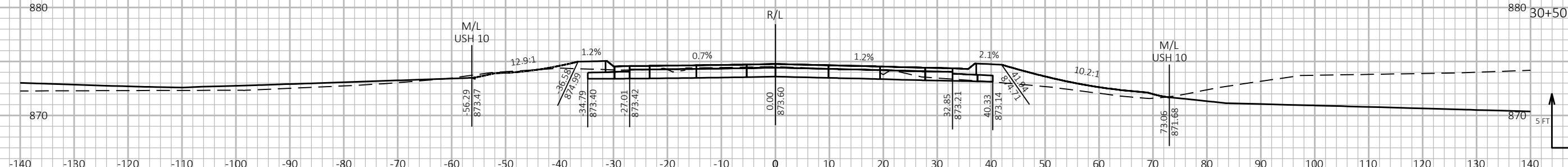
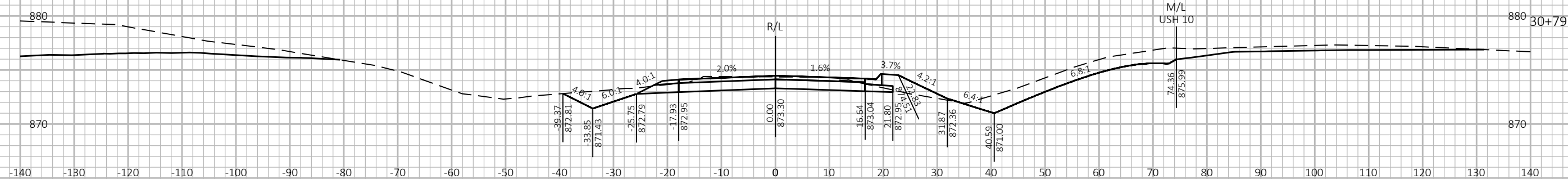
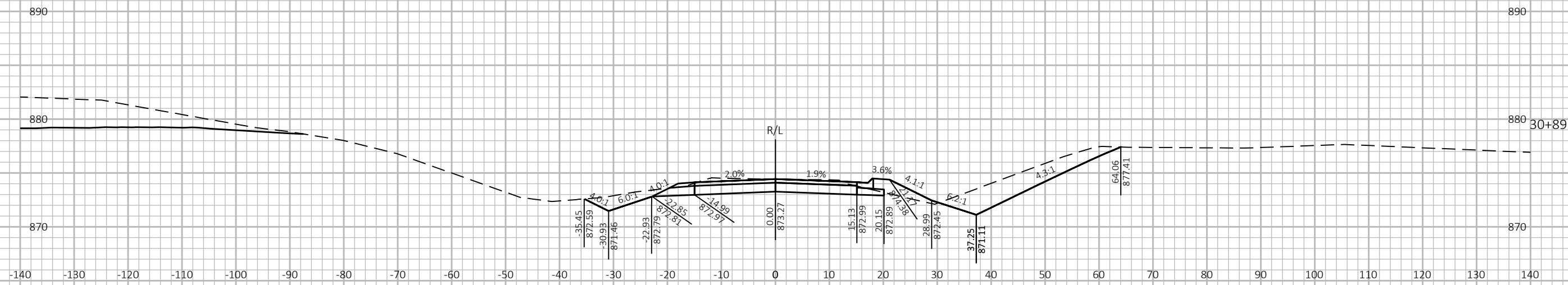
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: FRITSCH LANE

SHEET

E



PROJECT NO: 1500-33-71

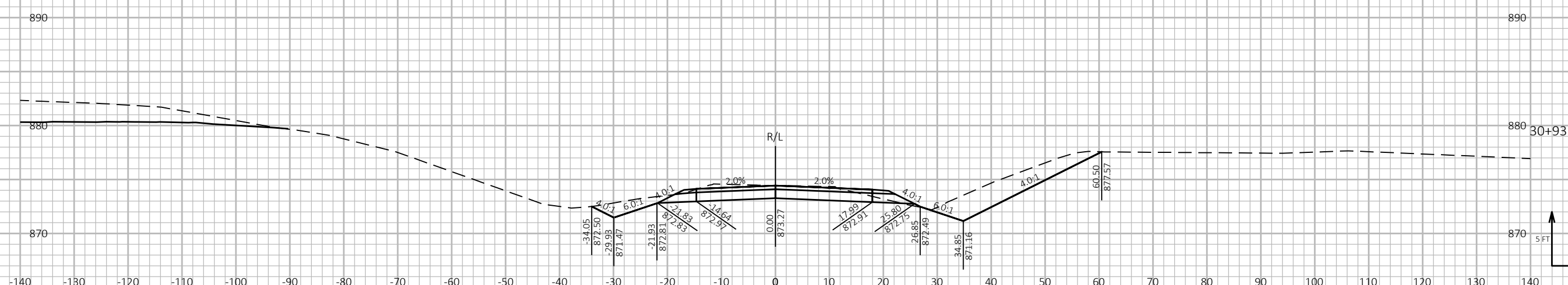
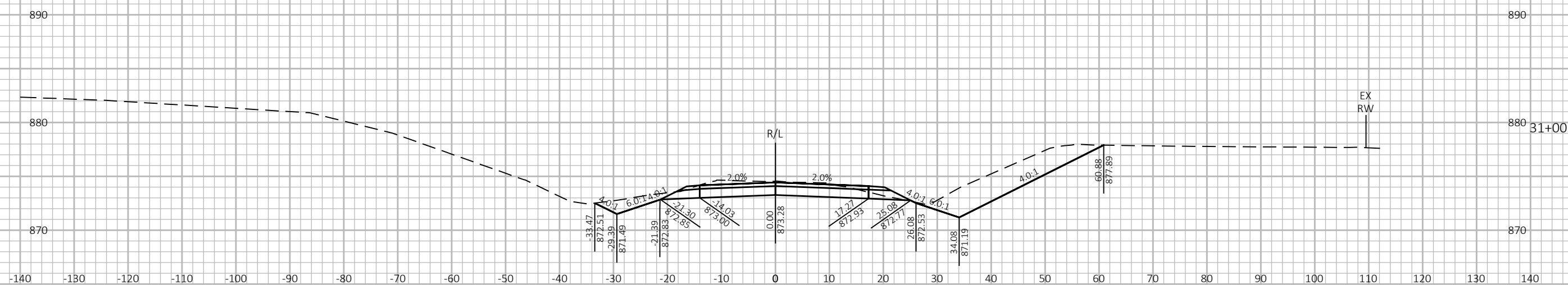
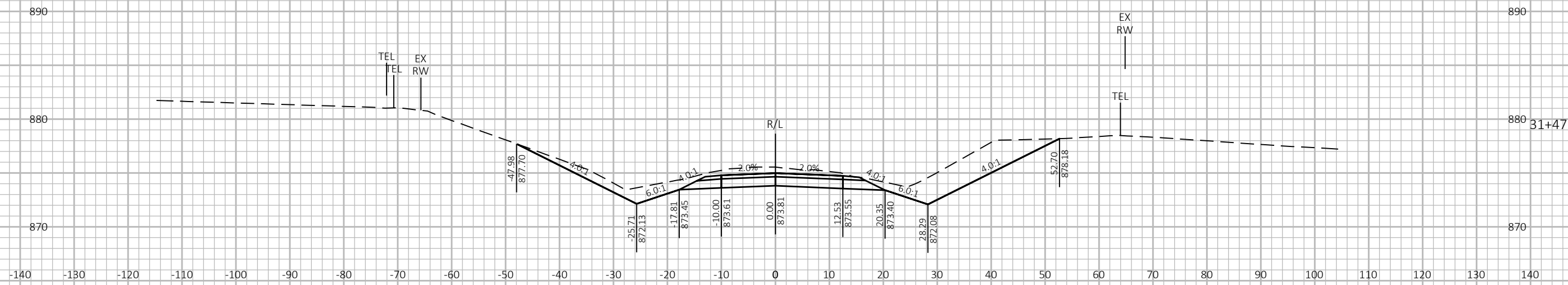
HWY: USH 10

COUNTY: MANITOWOC

CROSS SECTIONS: FRITSCH LANE

SHEET

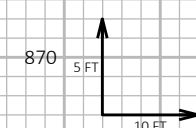
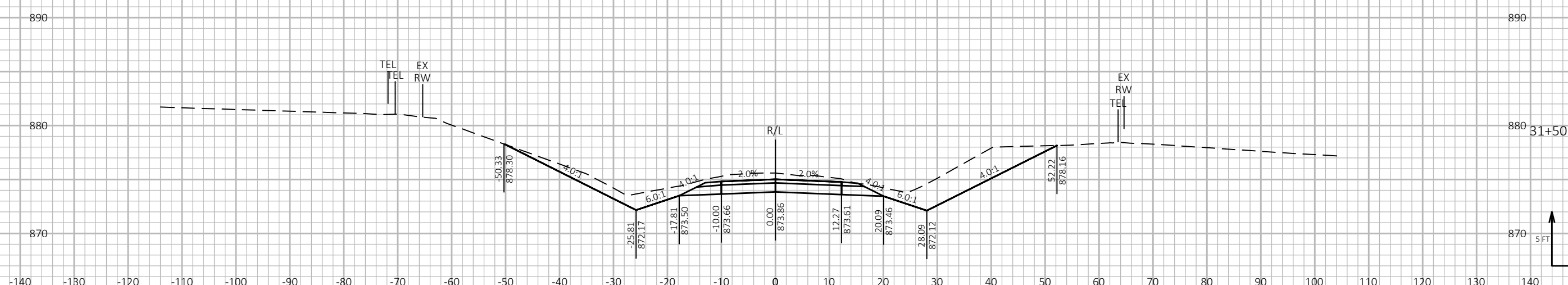
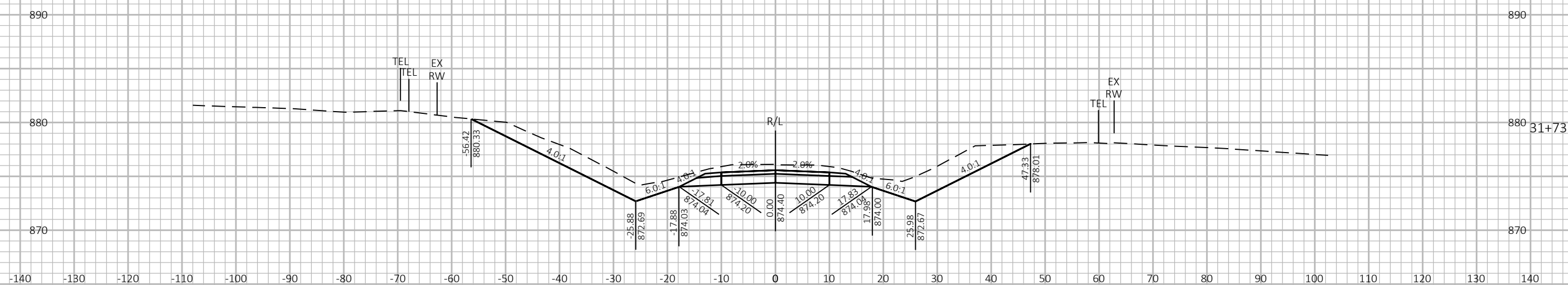
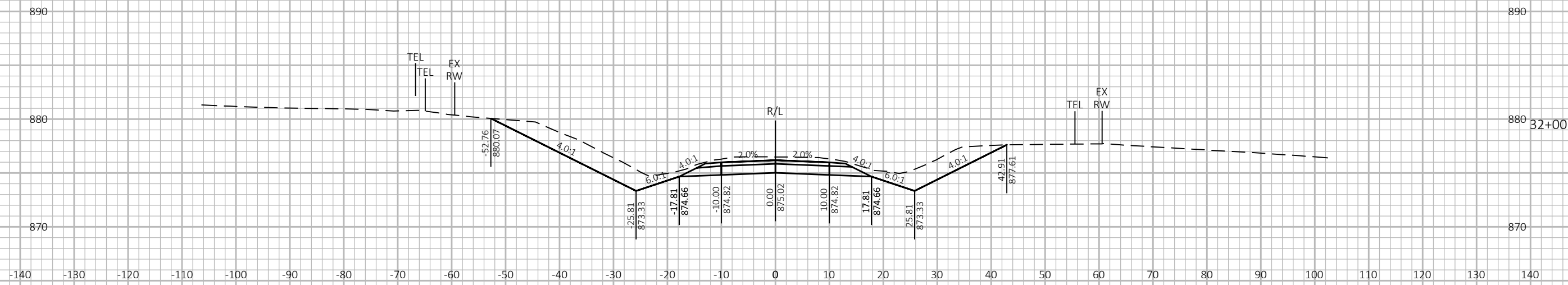
E



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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: FRITSCH LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090205-XS.DWG PLOT DATE : 5/24/2023 1:46 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

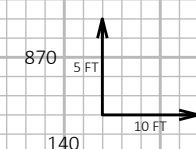
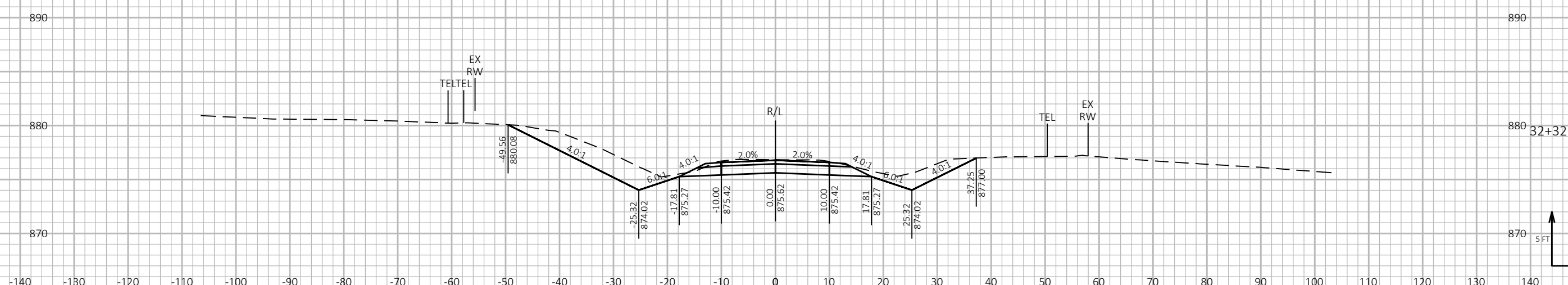
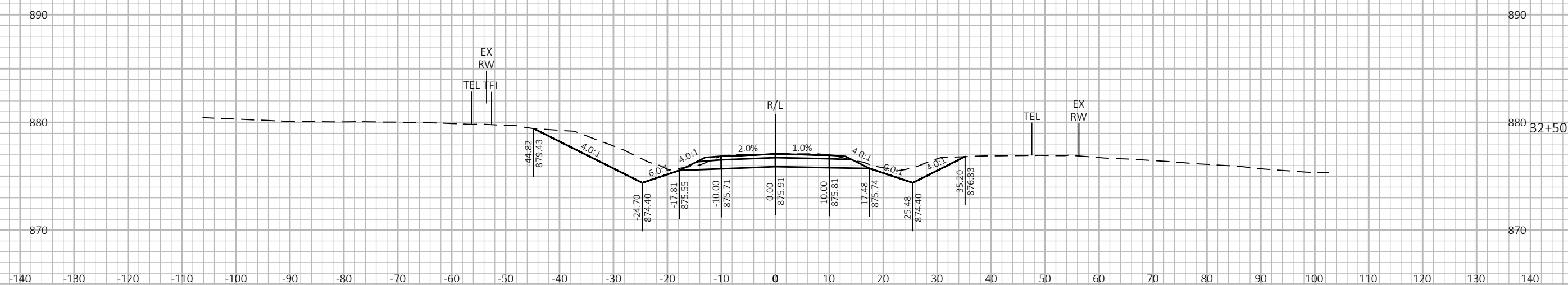
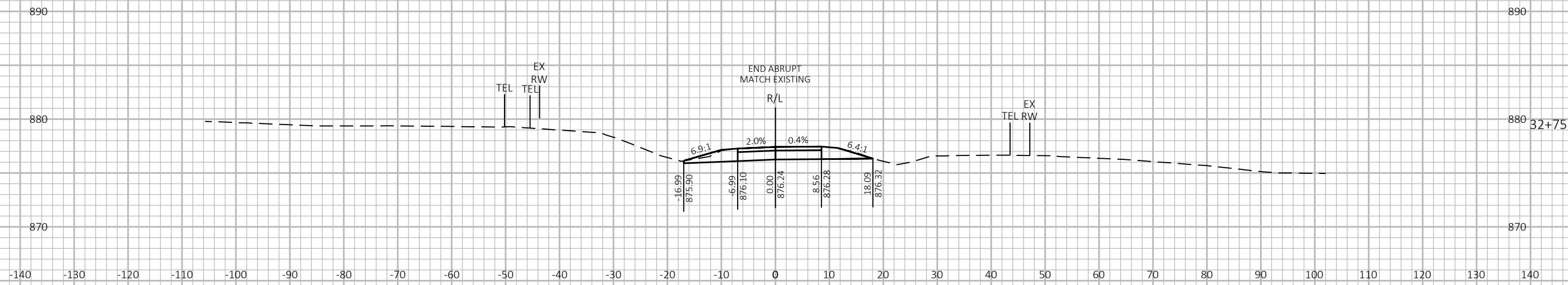


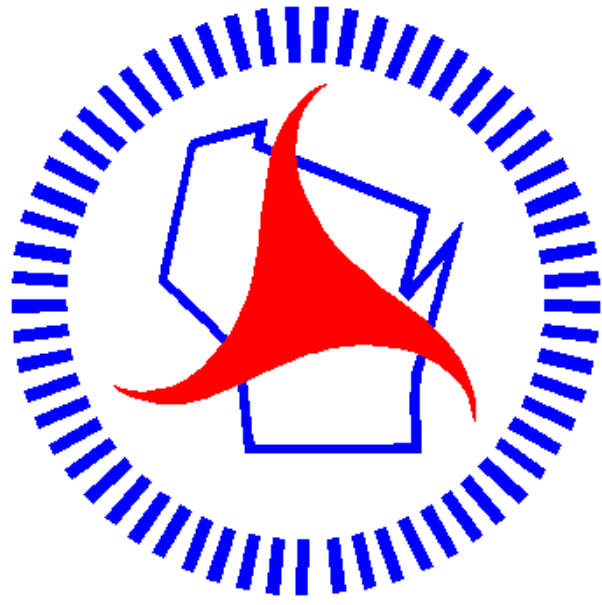
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PROJECT NO: 1500-33-71 HWY: USH 10 COUNTY: MANITOWOC CROSS SECTIONS: FRITSCH LANE SHEET E

FILE NAME : P:\48XX\4816.DP.13.USH 10.MAN\CADD\15003371\SHEETS\090205-XS.DWG LAYOUT NAME - 04 PLOT DATE : 5/24/2023 1:46 PM PLOT BY : AUSTIN STRAHL PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49





Wisconsin Department of Transportation

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