

MAD MARCH 2016

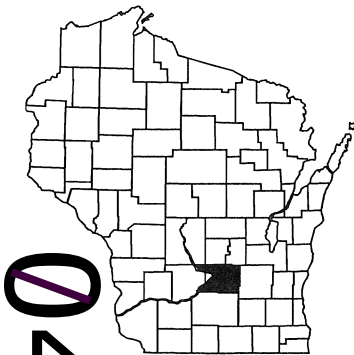
PROJECT ID: 1401-02-72

COUNTY: COLUMBIA

ORDER OF SHEETS

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

TOTAL SHEETS = 480

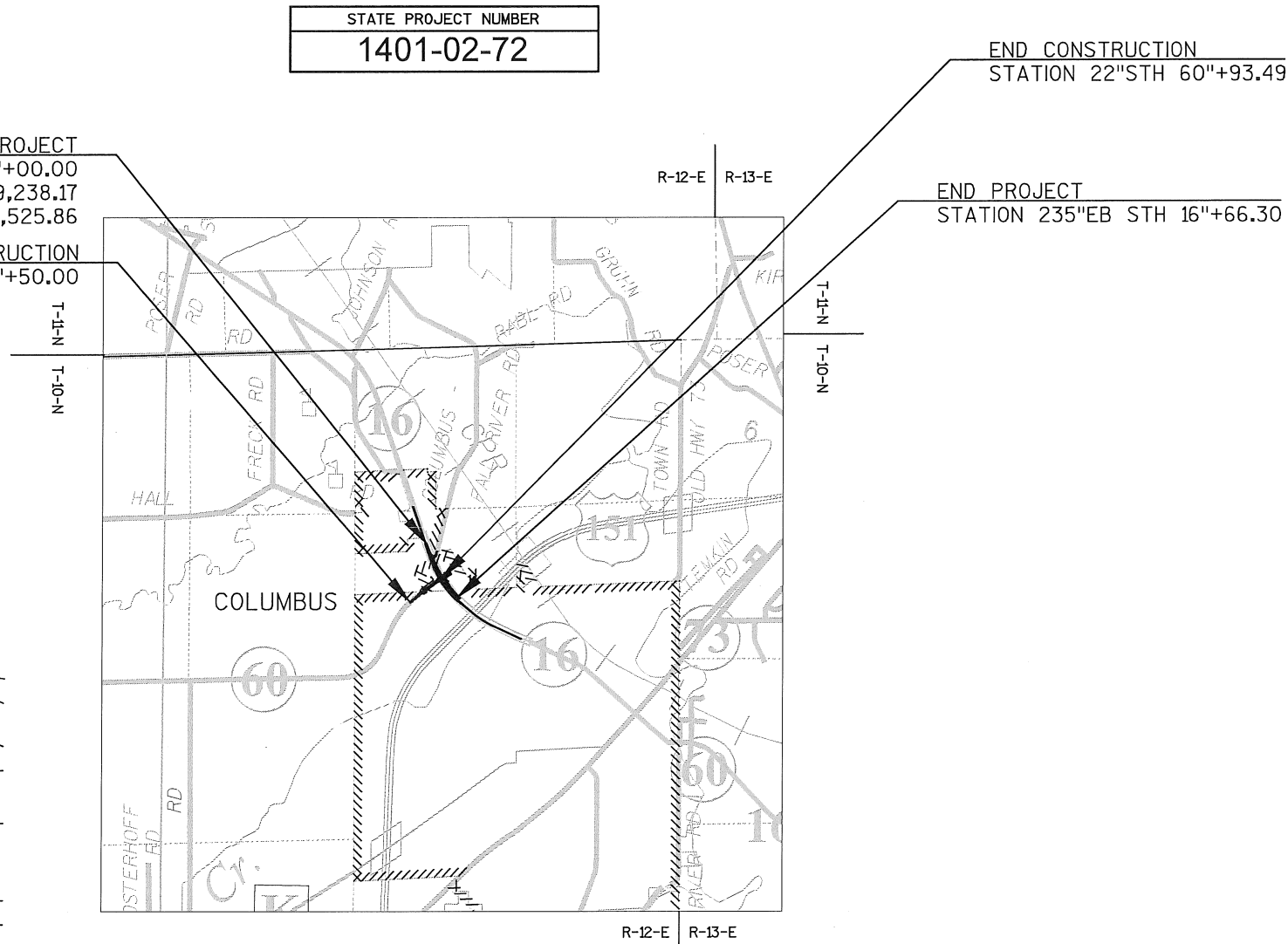


DESIGN DESIGNATION	(HALL RD-STH 60)	(STH 16-USH 151 SB RAMPS)	(STH 60)
A.A.D.T. 2014	= 10,600	16,400	1,800
A.A.D.T. 2034	= 15,300	28,400	2,600
D.H.V.	= 1,960	1,960	1,960
D.D.	= 60/40	60/40	60/40
T.	= 15.1%	15.1%	15.1%
DESIGN SPEED	= 50 mph	50 mph	60 mph
ESALS	= 4,642,800	7,584,700	635,100

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	CAUTION
MARSH AREA	----
WOODED OR SHRUB AREA	----

PROFILE	
GRADE LINE	----
ORIGINAL GROUND	----
MARSH OR ROCK PROFILE (To be noted as such)	----
SPECIAL DITCH	----
GRADE ELEVATION	95.36
CULVERT (Profile View)	----
UTILITIES	
ELECTRIC	----
FIBER OPTIC	----
GAS	----
SANITARY SEWER	----
STORM SEWER	----
TELEPHONE	----
WATER	----
UTILITY PEDESTAL	----
POWER POLE	----
TELEPHONE POLE	----



LAYOUT
SCALE 0 0.5 MI.
TOTAL NET LENGTH OF CENTERLINE = 0.391 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
PORTAGE - COLUMBUS
HALL ROAD - USH 151 INTERCHANGE
STH 16
COLUMBIA COUNTY

STATE PROJECT NUMBER
1401-02-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1401-02-72	WISC 2016048	1

ORIGINAL PLANS PREPARED BY

DAAR
ENGINEERING, INC.
www.daarcorp.com
Madison, WI 53703
608-249-0140



10/30/2015
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	DAAR ENGINEERING, INC.
Designer	DAAR ENGINEERING, INC.
Project Manager	DAVID PILON
Regional Examiner	
Regional Supervisor	KARLA KNORR
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 10/28/15 David Pilon
(Signature)

E

GENERAL NOTES

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. NO WORK MAY BEGIN UNTIL PROPER TRAFFIC CONTROL DEVICES ARE PLACED AND APPROVED BY THE ENGINEER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DEEMS THE MEASURE NO LONGER NECESSARY.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY THAT ARE NOT A RESULT OF CONTRACT WORK ITEMS SHALL BE FERTILIZED SEEDED AND MULCHED AT THE CONTRACTORS EXPENSE.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

THE CONTRACTORS PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL HMA PAVEMENT LOCATIONS SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
STH 16 SHOULDERS	3 1/2"	3 1/2" UPPER	12.5 mm	PG64-28
STH 60 RECONSTRUCTION	5"	3" LOWER	19.0 mm	PG58-28
		2" UPPER	12.5 mm	PG64-28
SIDEROAD RECONSTRUCTION	4"	2" UPPER	12.5 mm	PG64-28
		2" LOWER	12.5 mm	PG64-28

TYPICAL SECTION AND DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
JOINT DETAILS
EROSION CONTROL
STORM SEWER
SIGNING
LIGHTING/TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL AND STAGING
ALIGNMENT

PAVEMENT CORE LOG				
BORING NO.	STATION	OFFSET FROM C/L	ASPHALT DEPTH IN INCHES	UNDERLYING MATERIAL
B1	STA 234"WB16"+00	6' LT	7"	8" BASE
B3	STA 222"EB16"+00	6' RT	5"	6" BASE
B5	STA 20"STH 60"+50	14' RT	-	10" BASE

UTILITY CONTACTS

ATC MANAGEMENT, INC. – ELECTRICITY
ALEX METZ
5303 FEN OAK DRIVE
MADISON, WI 53718
(608) 877-7105
AMETZ@ATCLLC.COM

ALLIANT ENERGY – ELECTRICITY
JASON HOGAN
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

COLUMBUS WATER AND LIGHT DEPT - ELECTRICITY
ERIC ANTHON
950 MAPLE AVE
P.O. BOX 228
COLUMBUS, WI 53925-0228
(920) 623-5912
EANTHON@COLUMBUSWATERANDLIGHT.COM

COLUMBUS WASTE WATER TREATMENT PLANT – SEWER
JOHN NEHMER
105 N DICKASON BLVD
COLUMBUS, WI 53925
(920) 623-5915
JNEHMER@COLUMBUSWI.US

OTHER CONTACTS

WISDOT SW REGION
PROJECT MANAGER
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2101 WRIGHT ST.
MADISON, WI 53704
OFFICE (608) 245-2622
DAVID.PILON@DOT.WI.GOV

DAAR ENGINEERING, INC
KEVIN KEAST
1400 E. WASHINGTON AVENUE, SUITE 262
MADISON, WI 53703
OFFICE (608) 229-1446
FAX (608) 249-0170
KEVIN.KEAST@DAARCORP.COM

AT&T WISCONSIN - COMMUNICATION LINE
RICK PODOLAK
304 S. DEWEY ST. 4TH FLOOR
EAU CLAIRE, WI 54701
(715) 839-5565
RP4514@ATT.COM

VILLAGE OF FALL RIVER
CRAIG SHULTZ
641 S. MAIN ST.
P.O. BOX 37
FALL RIVER, WI 53932
(920) 484-3525
CSCHULTZ@FALLRIVERWI.COM

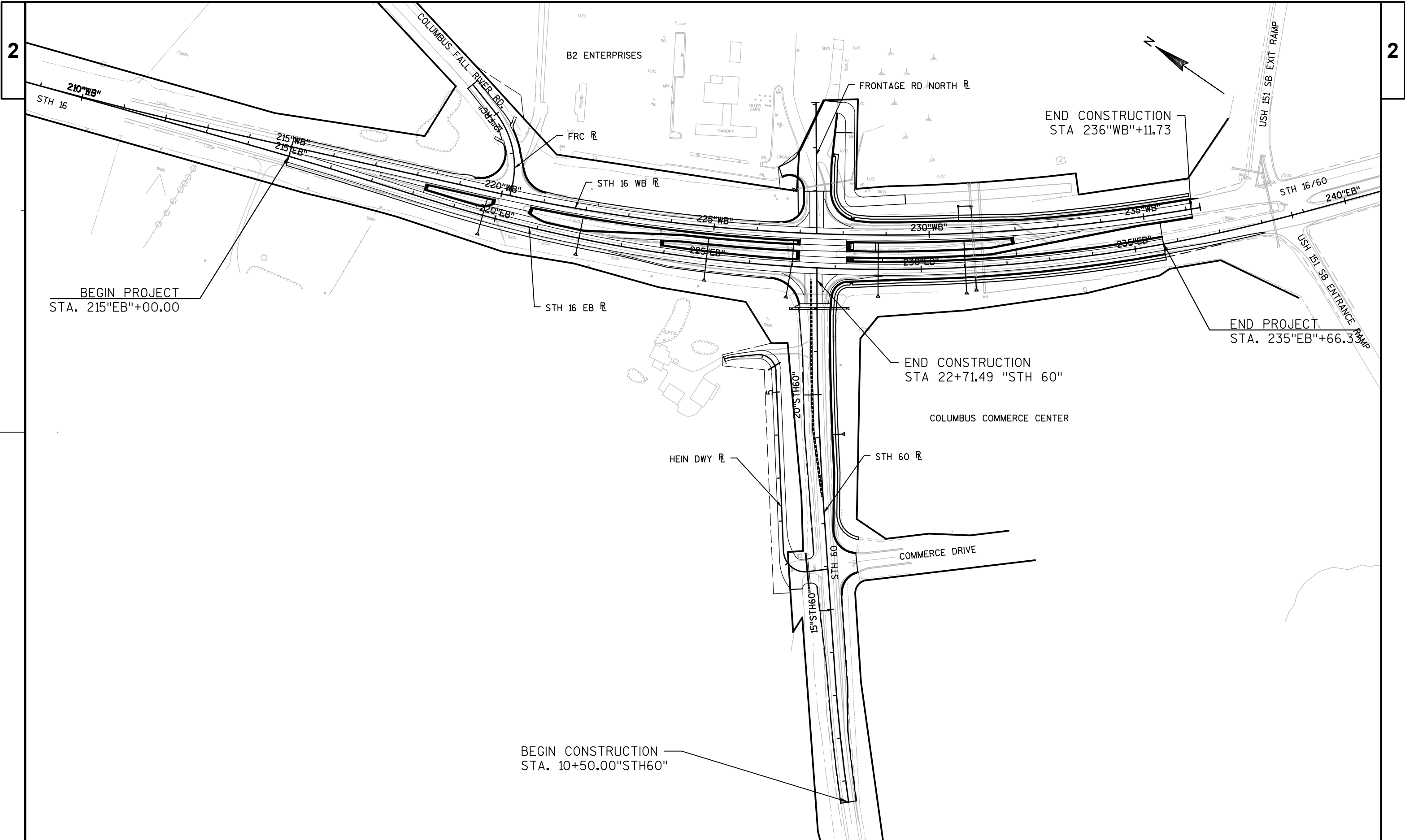
COLUMBUS WATER AND LIGHT DEPT - WATER
ERIC ANTHON
950 MAPLE AVE
P.O. BOX 228
COLUMBUS, WI 53925-0228
(920) 623-5912
EANTHON@COLUMBUSWATERANDLIGHT.COM

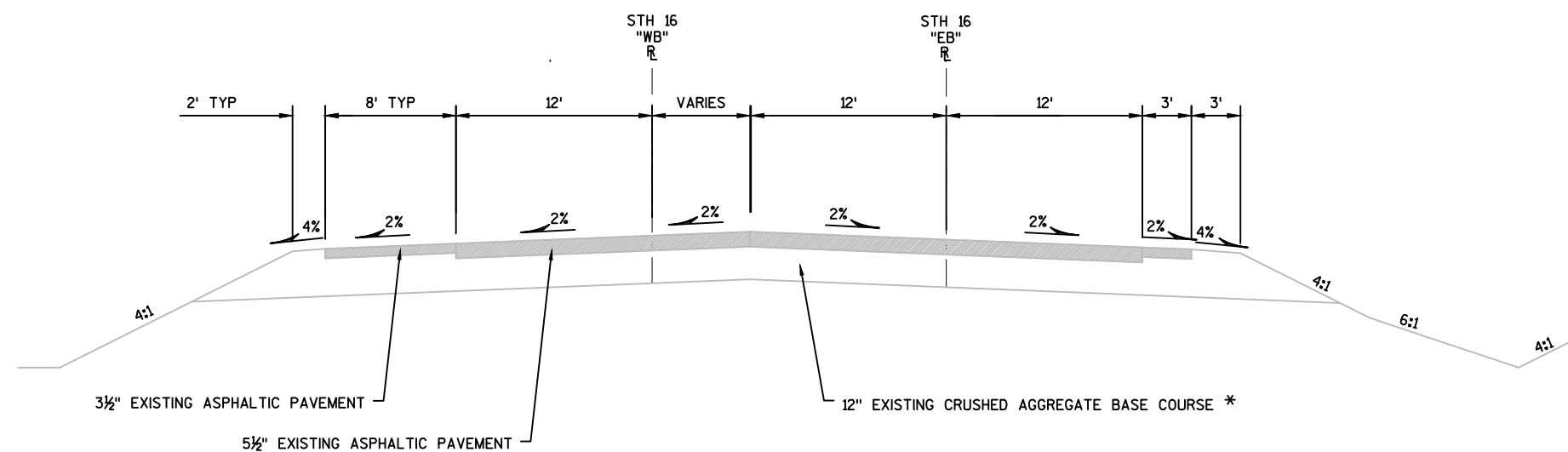
WE ENERGIES - GAS/PETROLEUM
LATROY BRUMFIELD
ROOM A299
333 WEST EVERETT ST
MILWAUKEE, WI 53203
(414) 221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

WDNR CONTACT

WISCONSIN DNR
MR. ERIC HEGGLAND
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
MADISON, WI 53711
OFFICE (608)275-3338
ERIC.HEGGLUND@wisconsin.gov

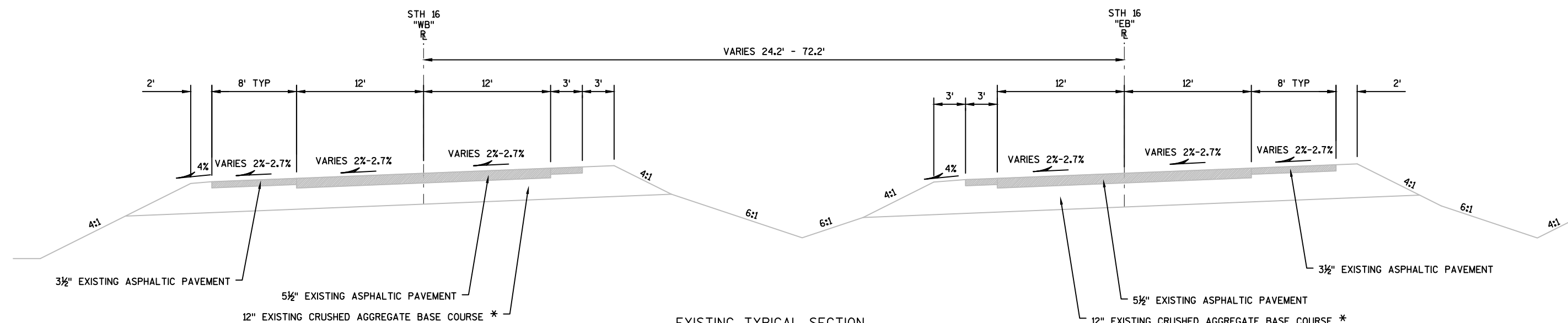






EXISTING TYPICAL SECTION

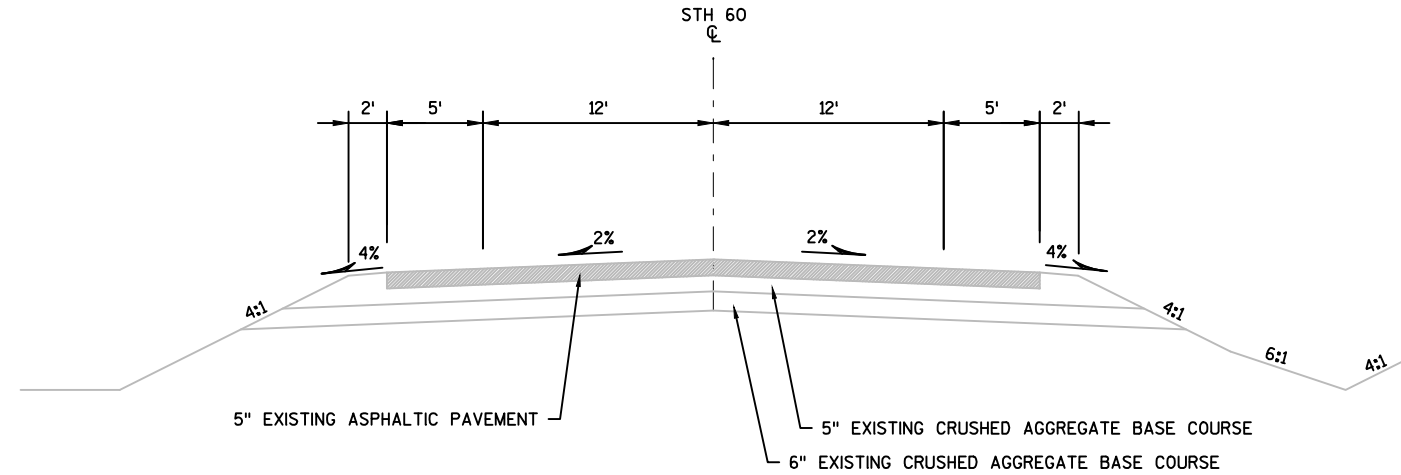
STA 215'EB'+00.00 TO STA 216'EB'+58.37



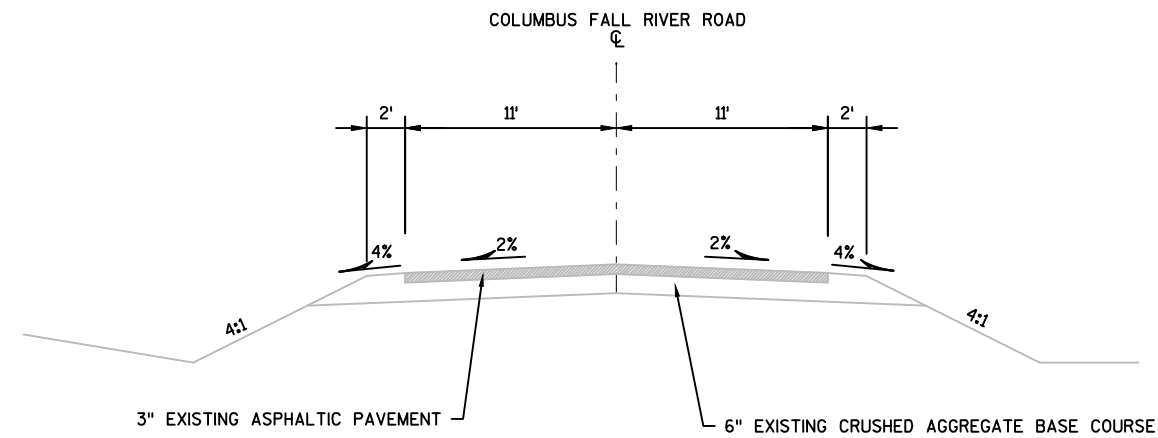
EXISTING TYPICAL SECTION

STA 216'EB'+58.37 TO STA 235'EB'+66.33
STA 216'WB'+58.37 TO STA 236'WB'+32.98

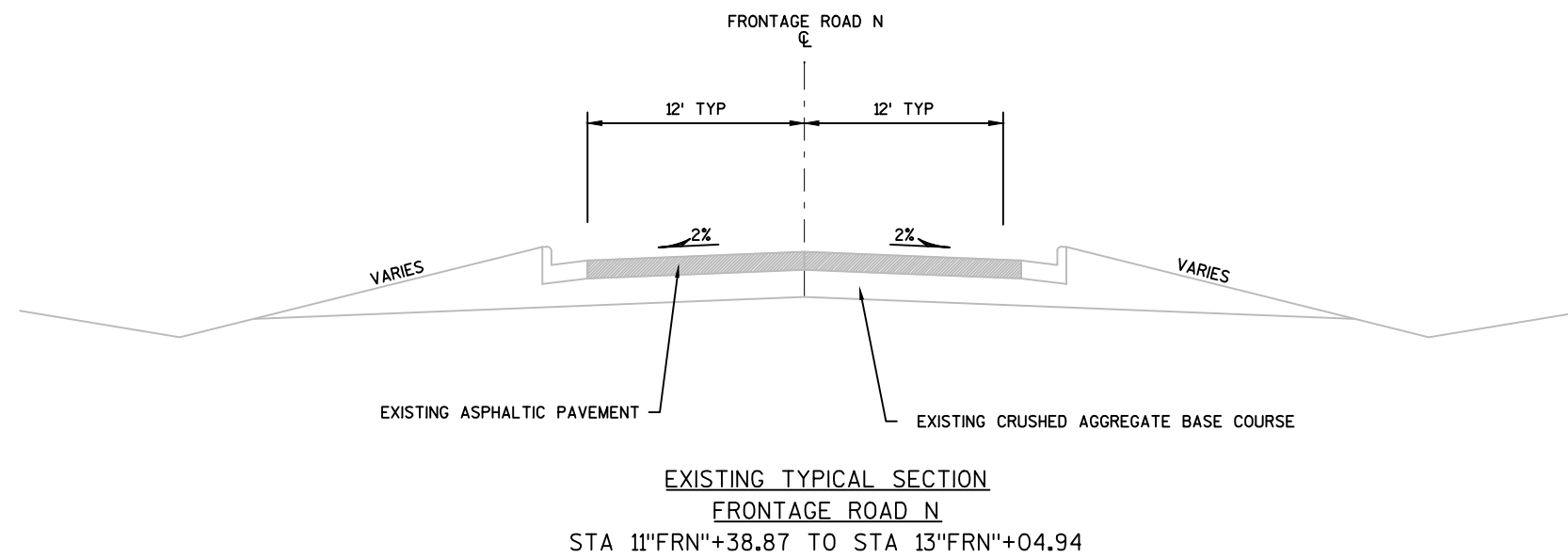
* 6" TOP LAYER-CRUSHED AGGREGATE BASE COURSE
6" BOTTOM LAYER-3" ROCK



EXISTING TYPICAL SECTION
STH 60
STA 10"STH60"+50.00 TO STA 22"STH60"+62.24



EXISTING TYPICAL SECTION
COLUMBUS FALL RIVER ROAD
STA 10"FRC"+00.00 TO STA 13"FRC"+00.00

LEGEND

PROJECT NO:1401-02-72

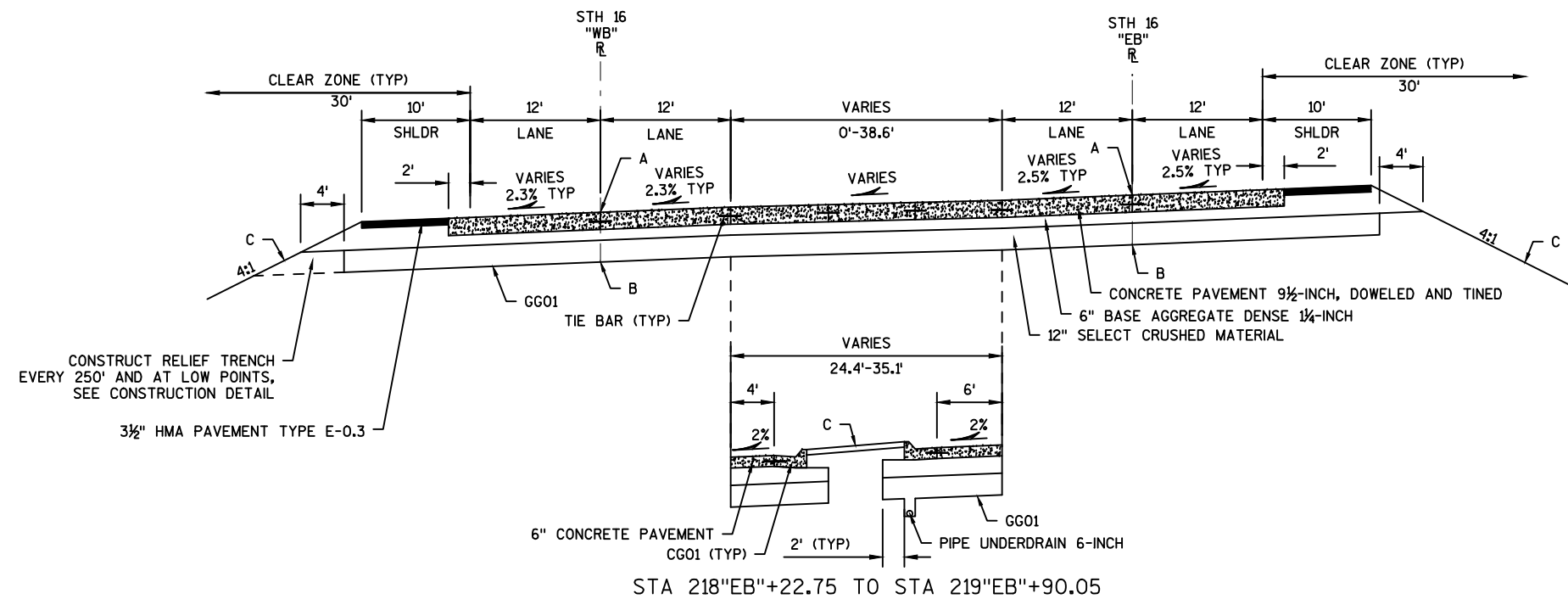
HWY:STH 16

COUNTY:COLUMBIA

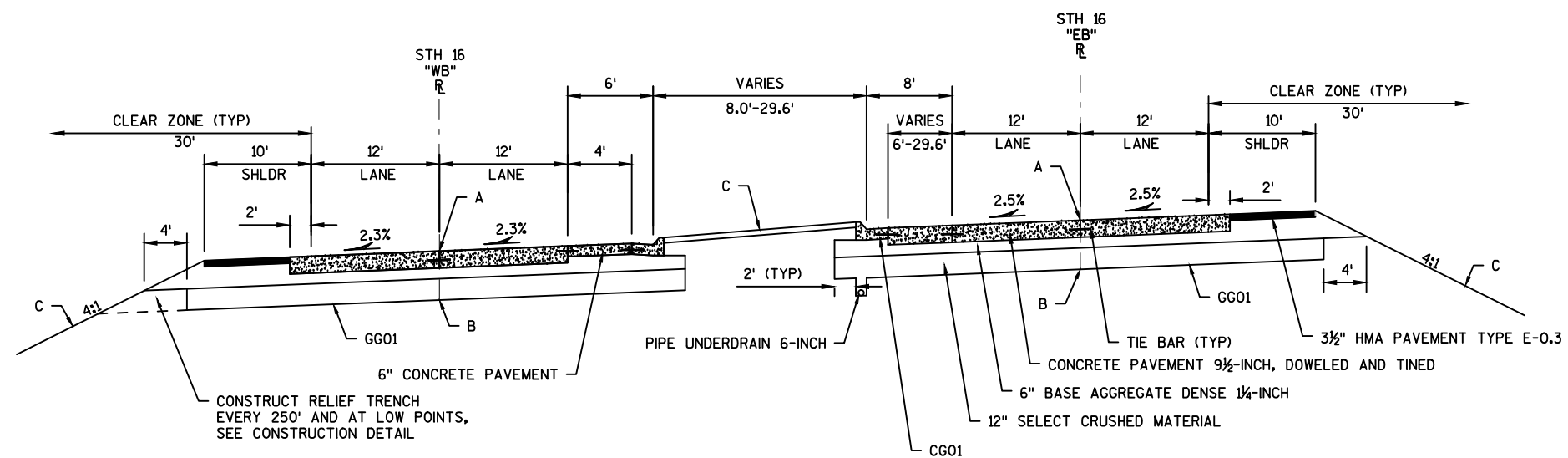
TYPICAL EXISTING SECTION

SHEET

E



TYPICAL FINISHED SECTION
 STH 16
 STA 215'EB"+00.00 TO STA 220'EB"+72.83



TYPICAL FINISHED SECTION
 STH 16
 STA 220'EB"+72.83 TO STA 223'EB"+89.65

LEGEND

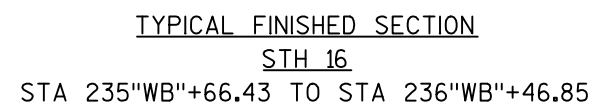
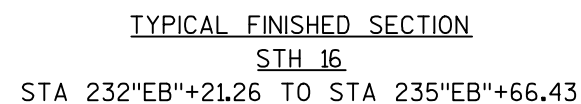
- A. POINT REFERRED TO ON PROFILE
 B. POINT REFERRED TO ON CROSS SECTION
 C. SALVAGED TOPSOIL 4-INCH, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE B

CG01 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
 CG02 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
 CG03 CONCRETE CURB AND GUTTER 30-INCH TYPE D
 SW01 CONCRETE SIDEWALK 5-INCH
 AS01 ASPHALTIC SURFACE SAFETY ISLANDS, 3-INCH, RAKED
 GG01 GEOGRID REINFORCEMENT

[illegible]

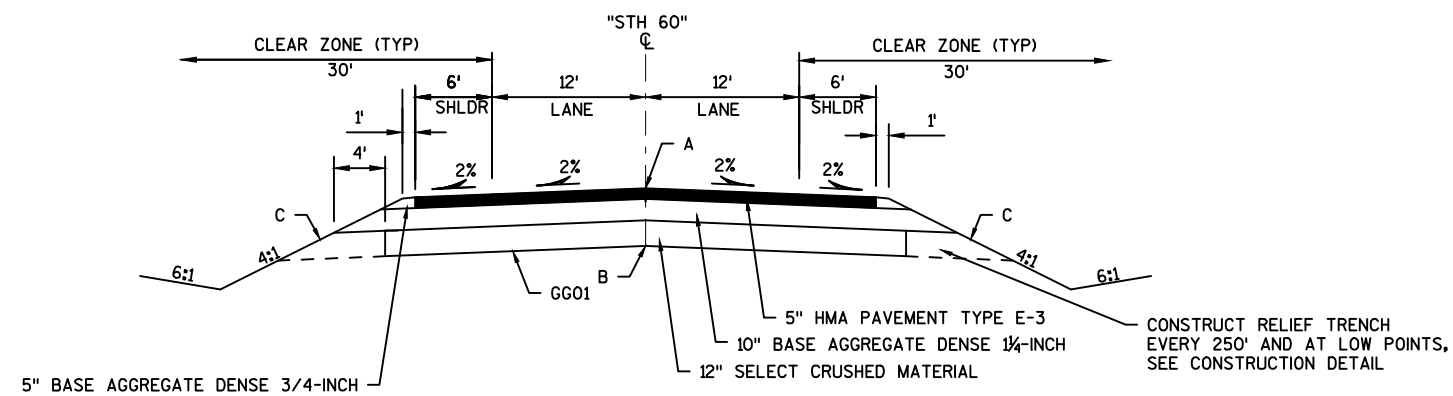
STH 16

STA 228"EB"+25.49 TO STA 232"EB"+21.26



A. POINT REFERRED TO ON PROFILE
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AND EROSION MAT CLASS I TYPE B

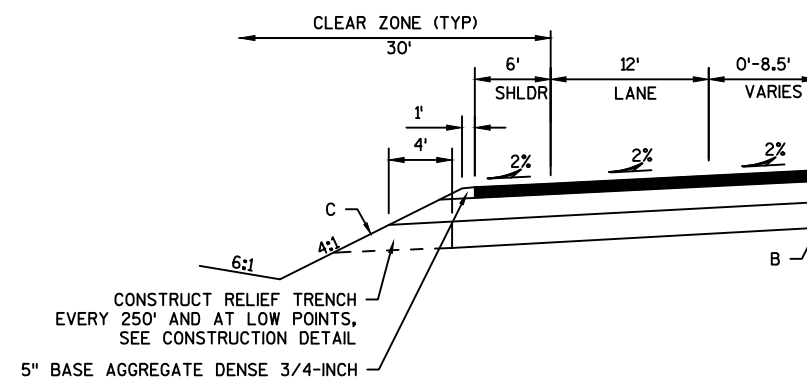
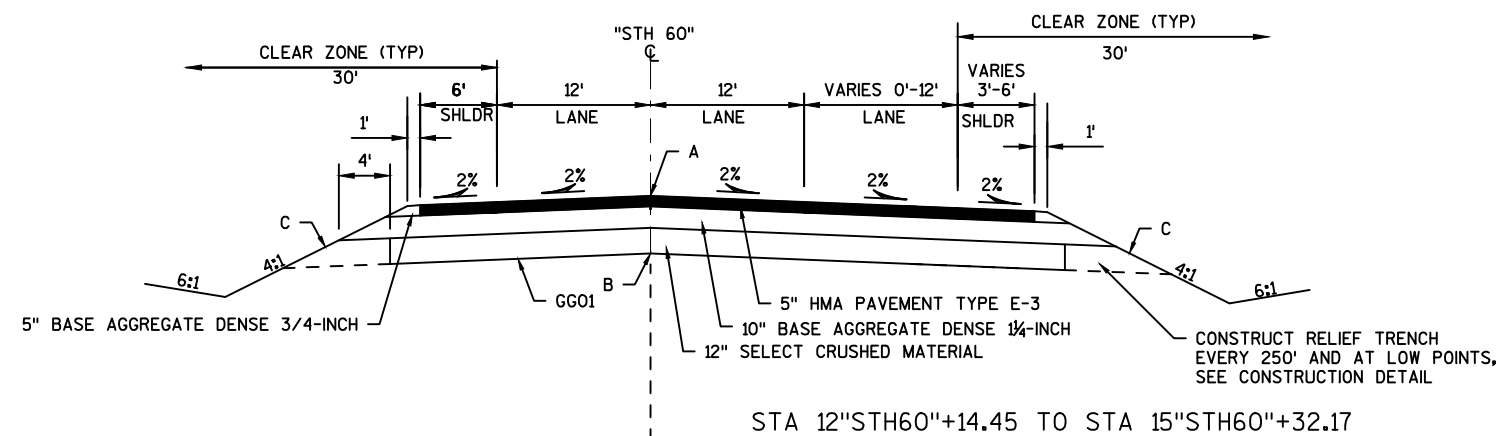
CG01	CONCRETE	CURB AND GUTTER	6-INCH SLOPED	36-INCH TYPE A
CG02	CONCRETE	CURB AND GUTTER	6-INCH SLOPED	36-INCH TYPE D
CG03	CONCRETE	CURB AND GUTTER	30-INCH TYPE D	
SW01	CONCRETE	SIDEWALK	5-INCH	
AS01	ASPHALTIC	SURFACE SAFETY ISLANDS,	3-INCH, RAKED	
GG01	GEGRID	REINFORCEMENT		



TYPICAL FINISHED SECTION

STH 60

STA 10"STH60"+50.00 TO STA 12"STH60"+14.45



TYPICAL FINISHED SECTION

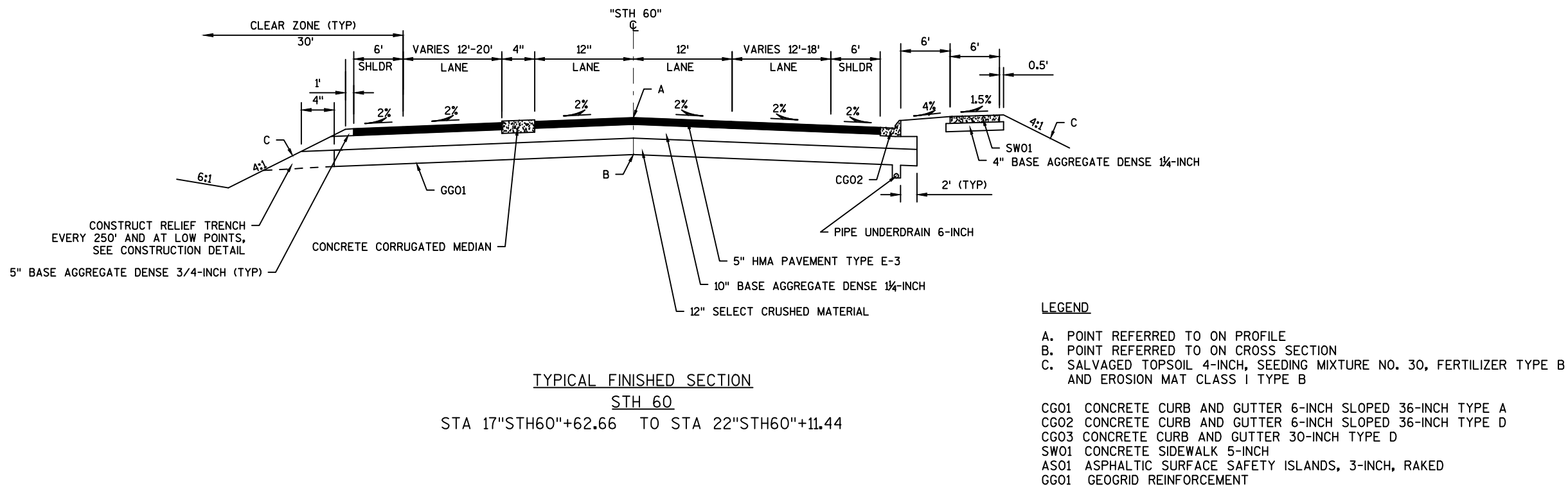
STH 60

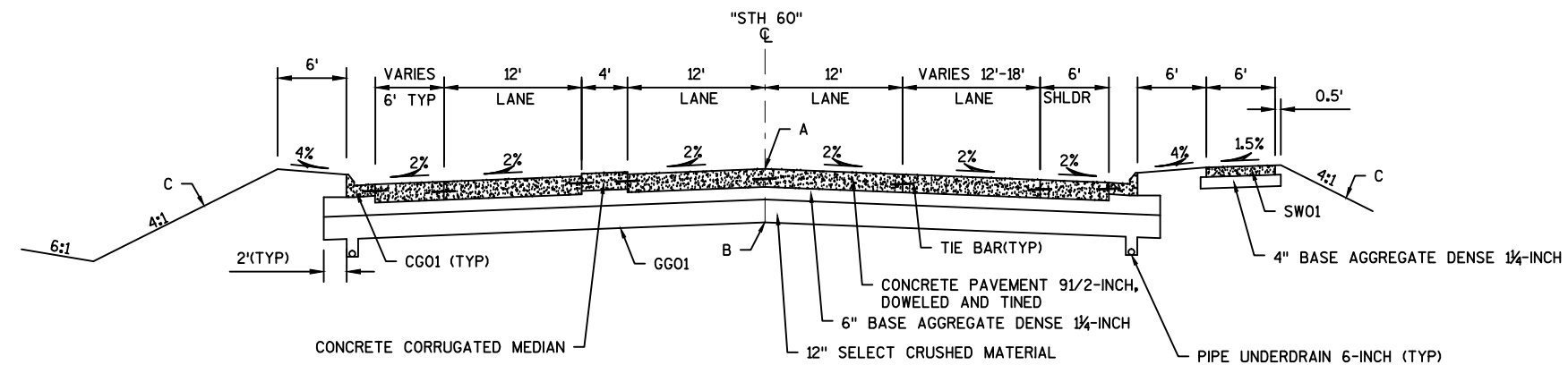
STA 13"STH60"+50.05 TO STA 15"STH60"+32.17

LEGEND

- A. POINT REFERRED TO ON PROFILE
- B. POINT REFERRED TO ON CROSS SECTION
- C. SALVAGED TOPSOIL 4-INCH, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B AND EROSION MAT CLASS I TYPE B

- CG01 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
- CG02 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- CG03 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- SW01 CONCRETE SIDEWALK 5-INCH
- AS01 ASPHALTIC SURFACE SAFETY ISLANDS, 3-INCH, RAKED
- GG01 GEOGRID REINFORCEMENT



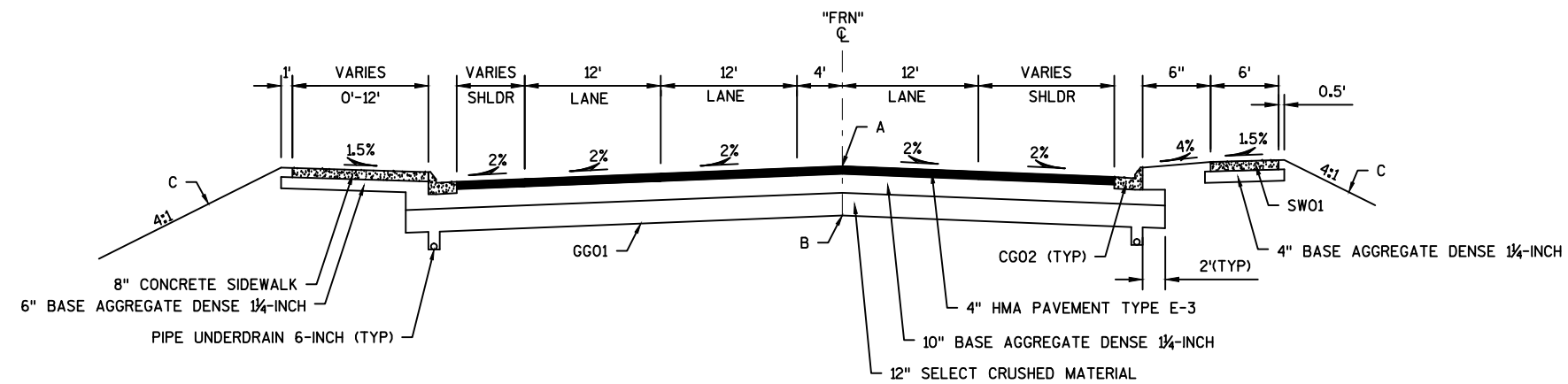


TYPICAL FINISHED SECTION
STH 60
STA 22"STH60"+11.14 TO STA 22"STH60"+66.85

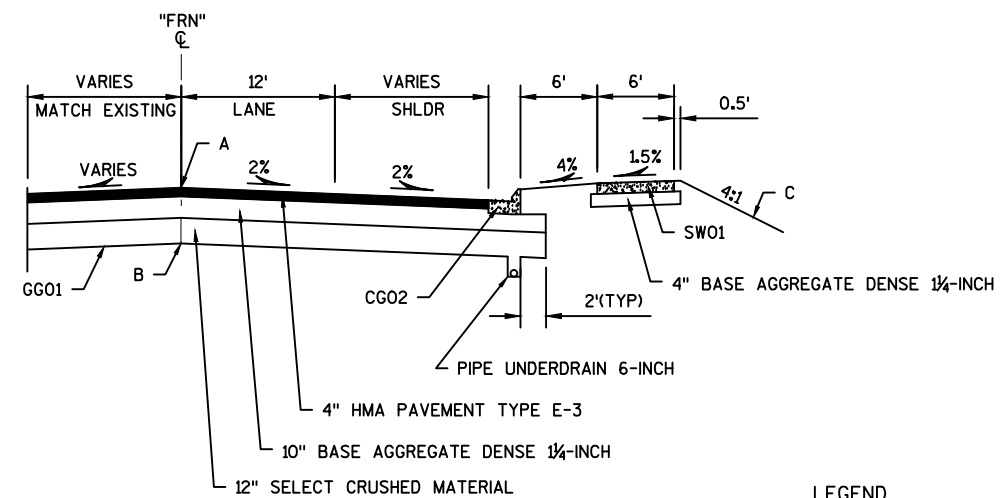
LEGEND

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CG02 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CG03 CONCRETE CURB AND GUTTER 30-INCH TYPE D
SW01 CONCRETE SIDEWALK 5-INCH
AS01 ASPHALTIC SURFACE SAFETY ISLANDS, 3-INCH, RAKED
GG01 GEOGRID REINFORCEMENT



TYPICAL FINISHED SECTION
FRONTAGE ROAD "N"
STA 10"FRN"+98.89 TO STA 11"FRN"+33.74

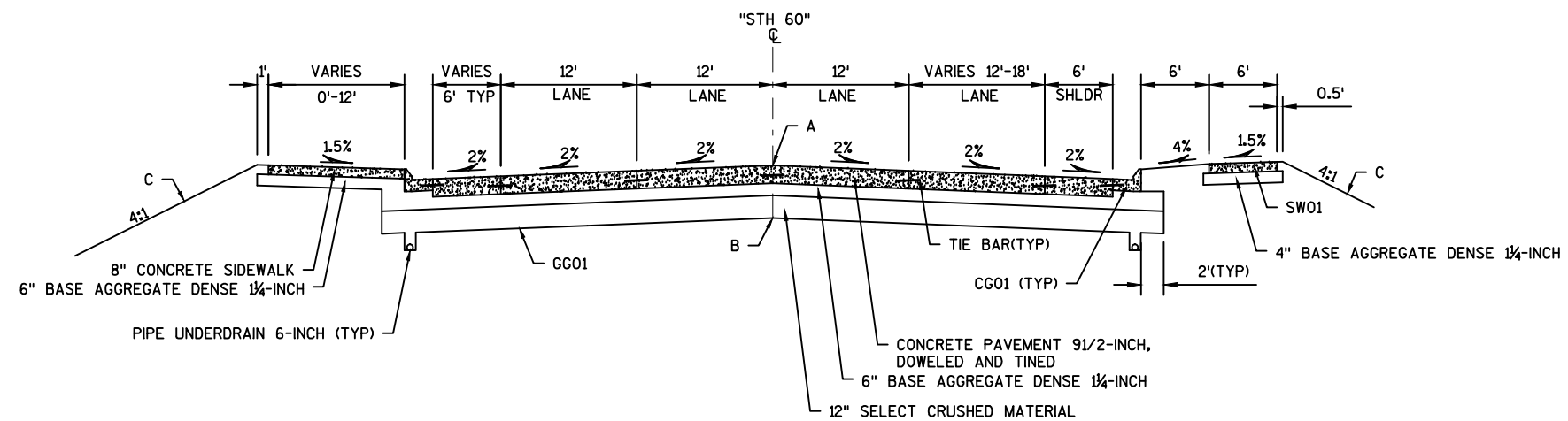


TYPICAL FINISHED SECTION
FRONTAGE ROAD "N"
STA 11"FRN"+33.74 TO STA 13"FRN"+04.84

LEGEND

- A. POINT REFERRED TO ON PROFILE
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- SW01 CONCRETE SIDEWALK 5-INCH
- AS01 ASPHALTIC SURFACE SAFETY ISLANDS, 3-INCH, RAKED
- GG01 GEOGRID REINFORCEMENT

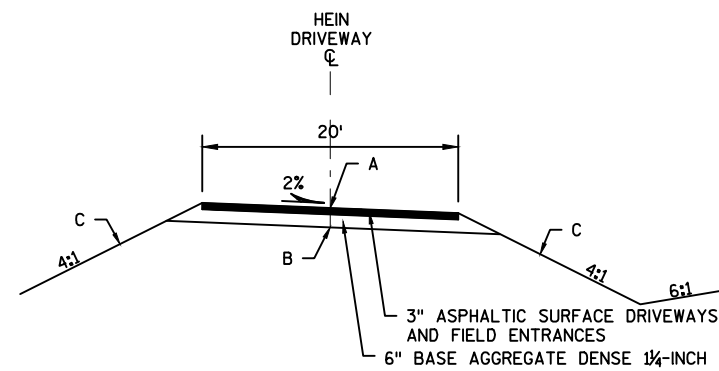
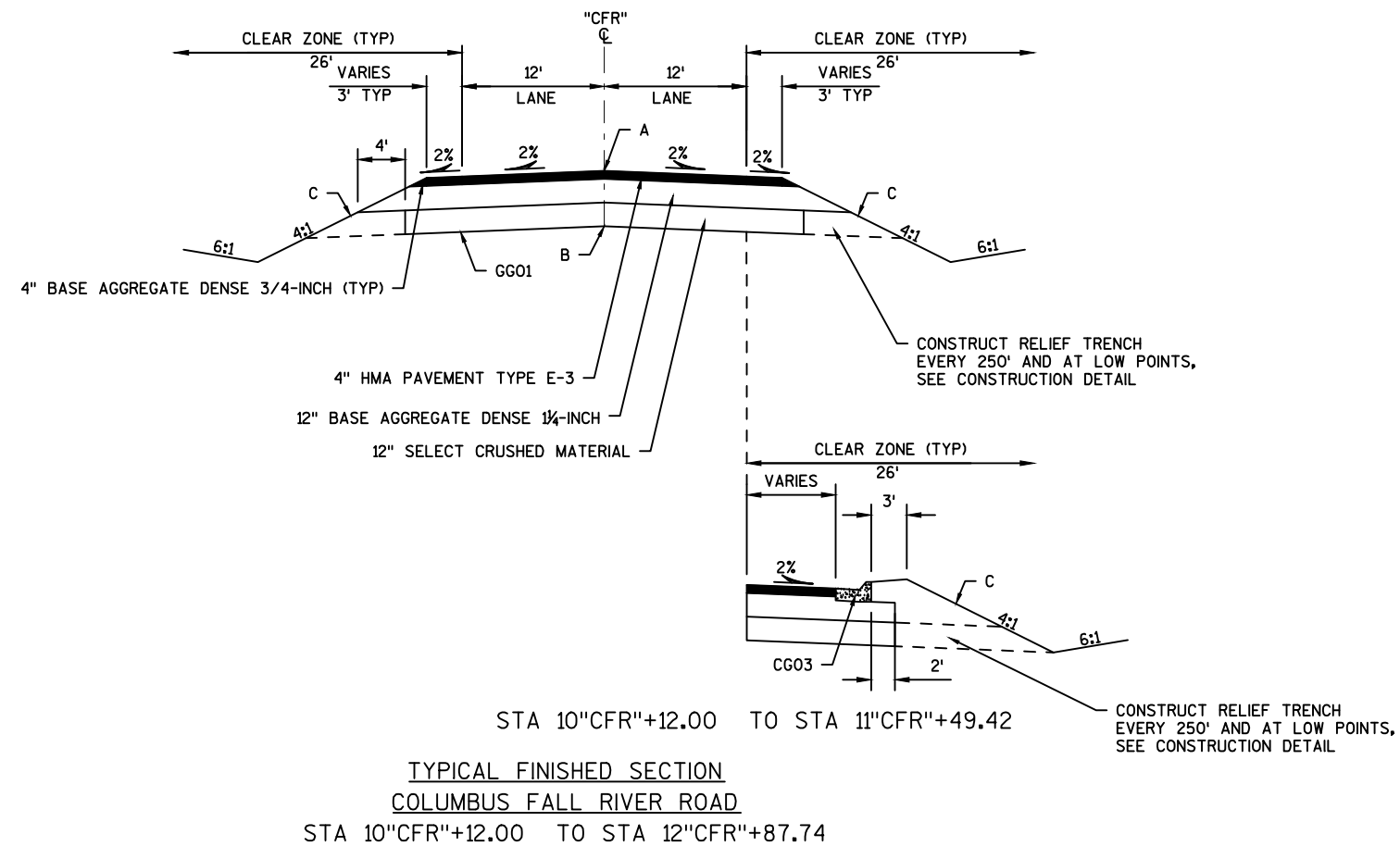


TYPICAL FINISHED SECTION
FRONTAGE ROAD "N"
STA 10"FRN"+12.00 TO STA 10"FRN"+98.89

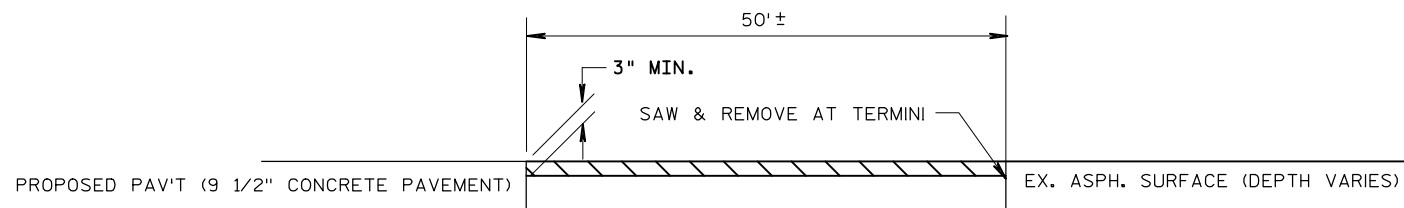
LEGEND

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SW01 CONCRETE SIDEWALK 5-INCH
AS01 ASPHALTIC SURFACE SAFETY ISLANDS, 3-INCH, RAKED
GG01 GEOGRID REINFORCEMENT

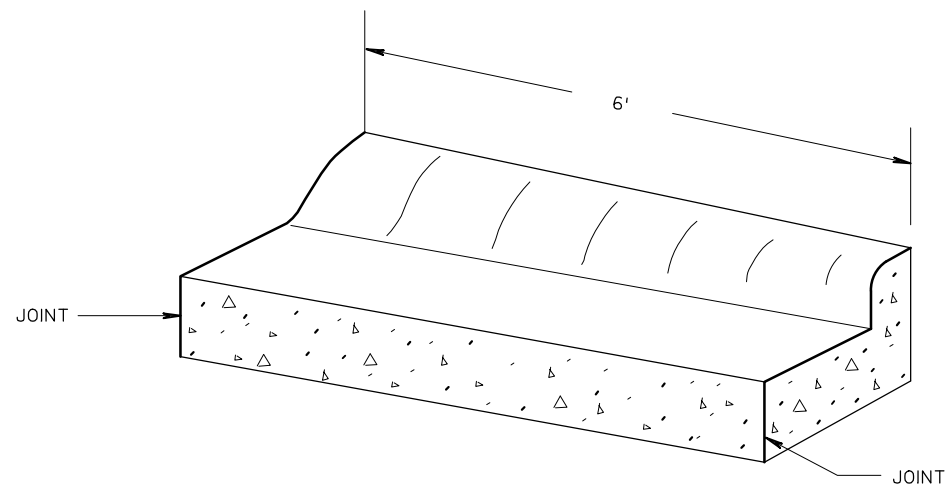
**LEGEND**

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- GG01 GEOGRID REINFORCEMENT



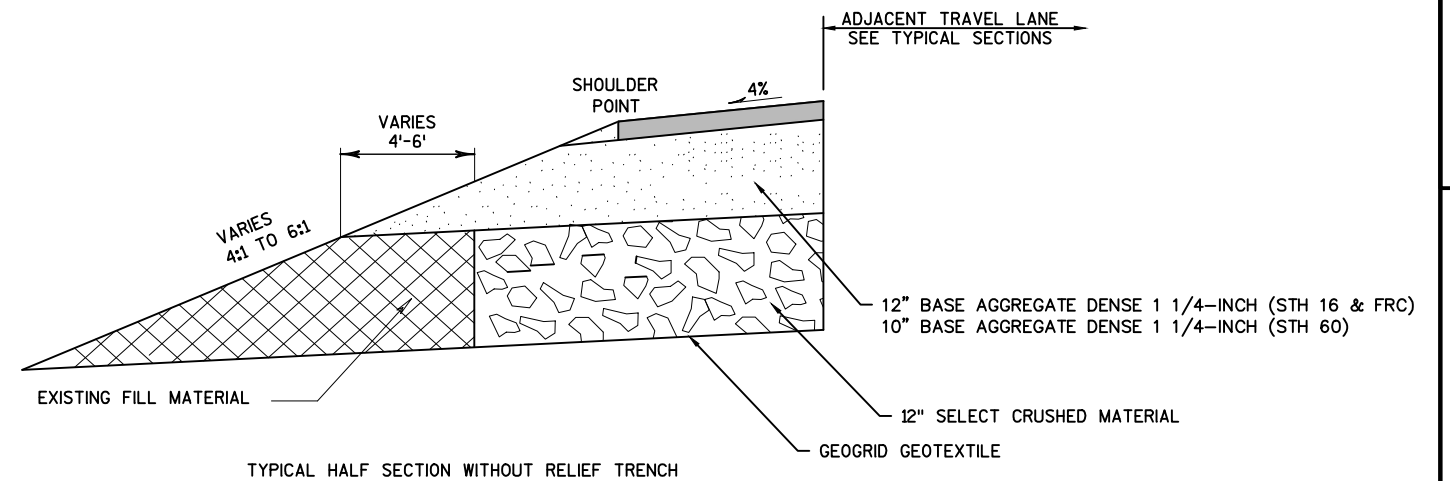
 REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT DETAIL

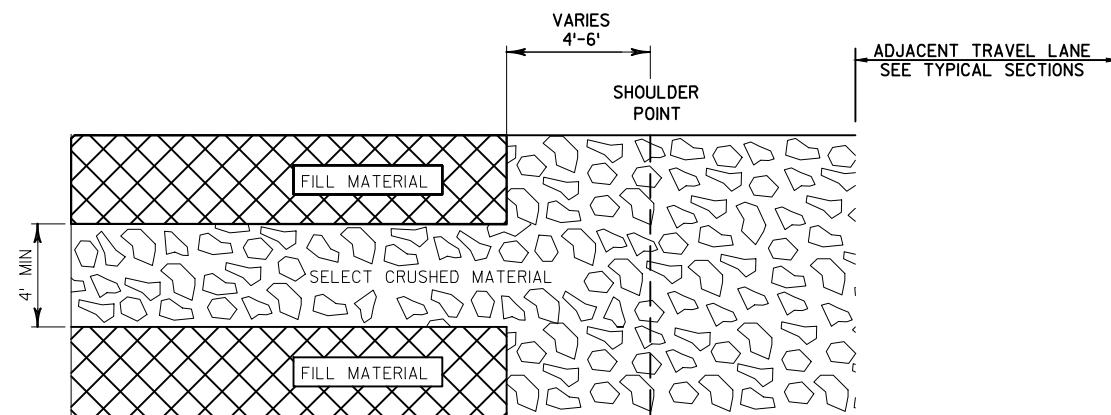
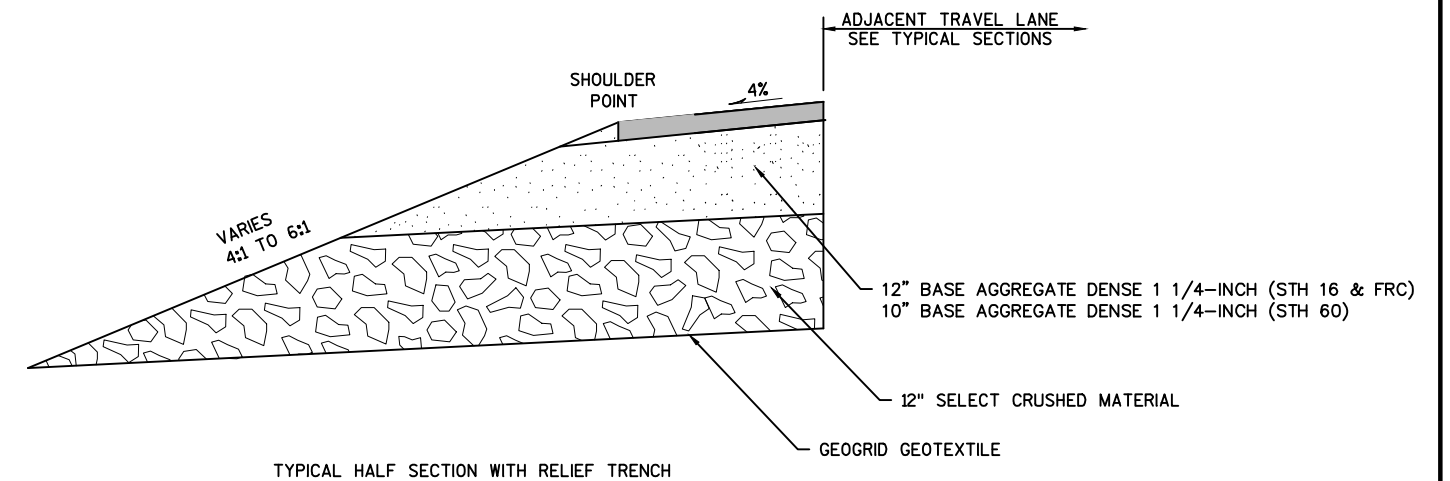


TRANSITION DETAIL

36" CURB & GUTTER TO 30" CURB & GUTTER
(TO BE MEASURED & PAID FOR AS 36" CONC. C&G)



RELIEF TRENCH LOCATIONS
EVERY 250' AND AT LOW POINTS



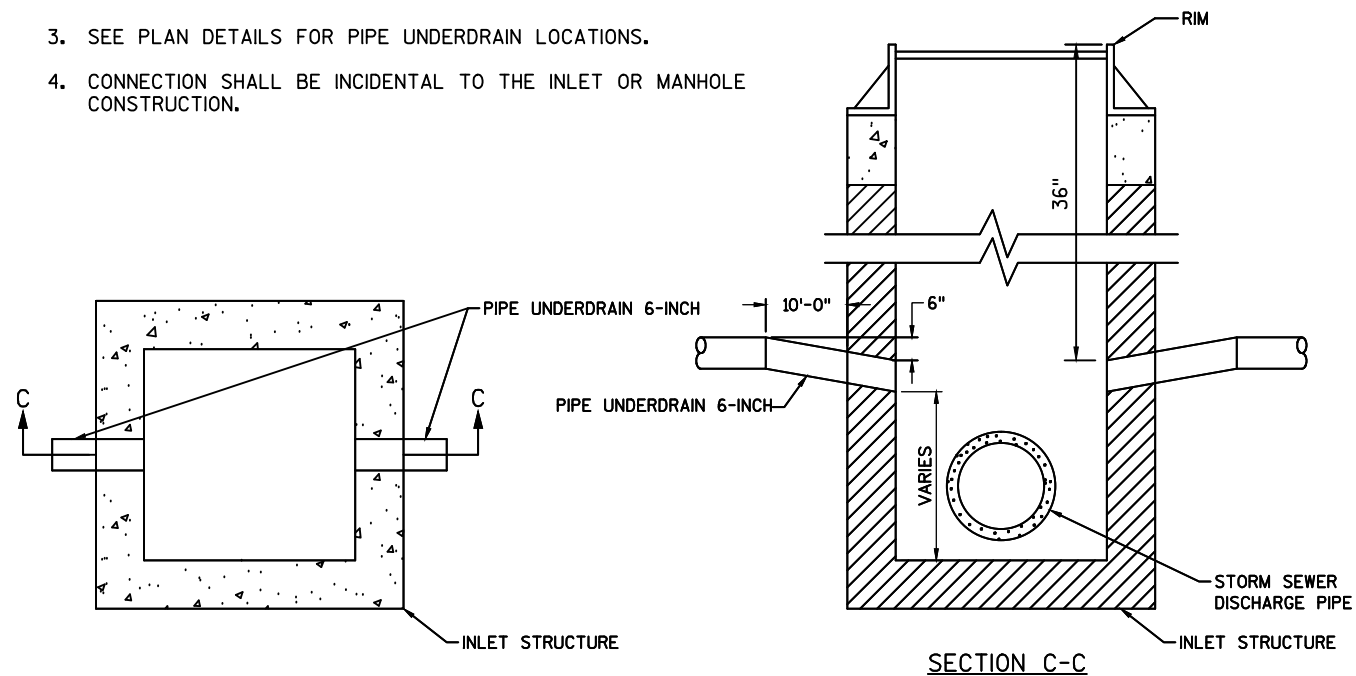
RELIEF TRENCH PLAN VIEW

RELIEF TRENCH

NOTE: EXCAVATION FOR RELIEF TRENCHES SHALL BE CONSIDERED INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL.

NOTES

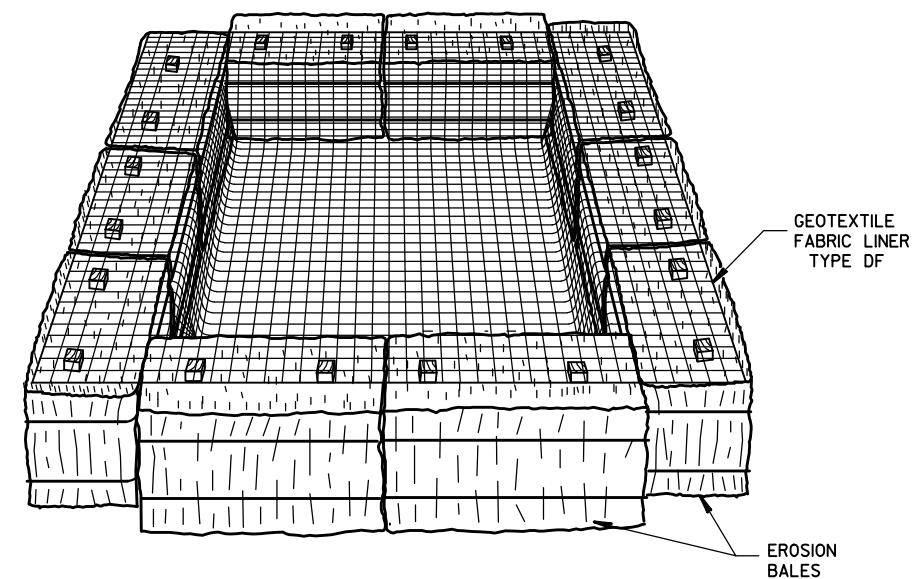
1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN, 6-INCH.
2. PROVIDE 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 36" BELOW THE RIM ELEVATION.
3. SEE PLAN DETAILS FOR PIPE UNDERDRAIN LOCATIONS.
4. CONNECTION SHALL BE INCIDENTAL TO THE INLET OR MANHOLE CONSTRUCTION.



PLAN VIEW

UNDERDRAIN OUTFALL AT INLET

SECTION C-C



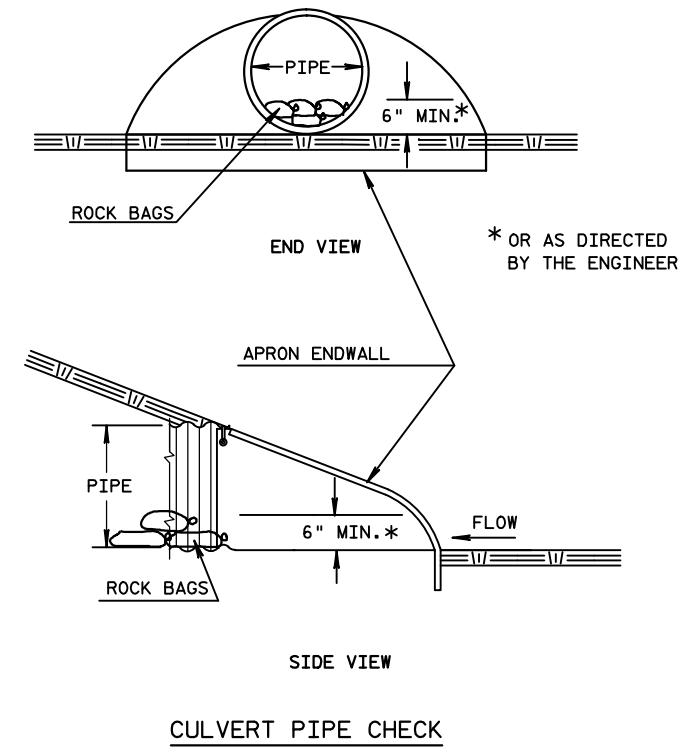
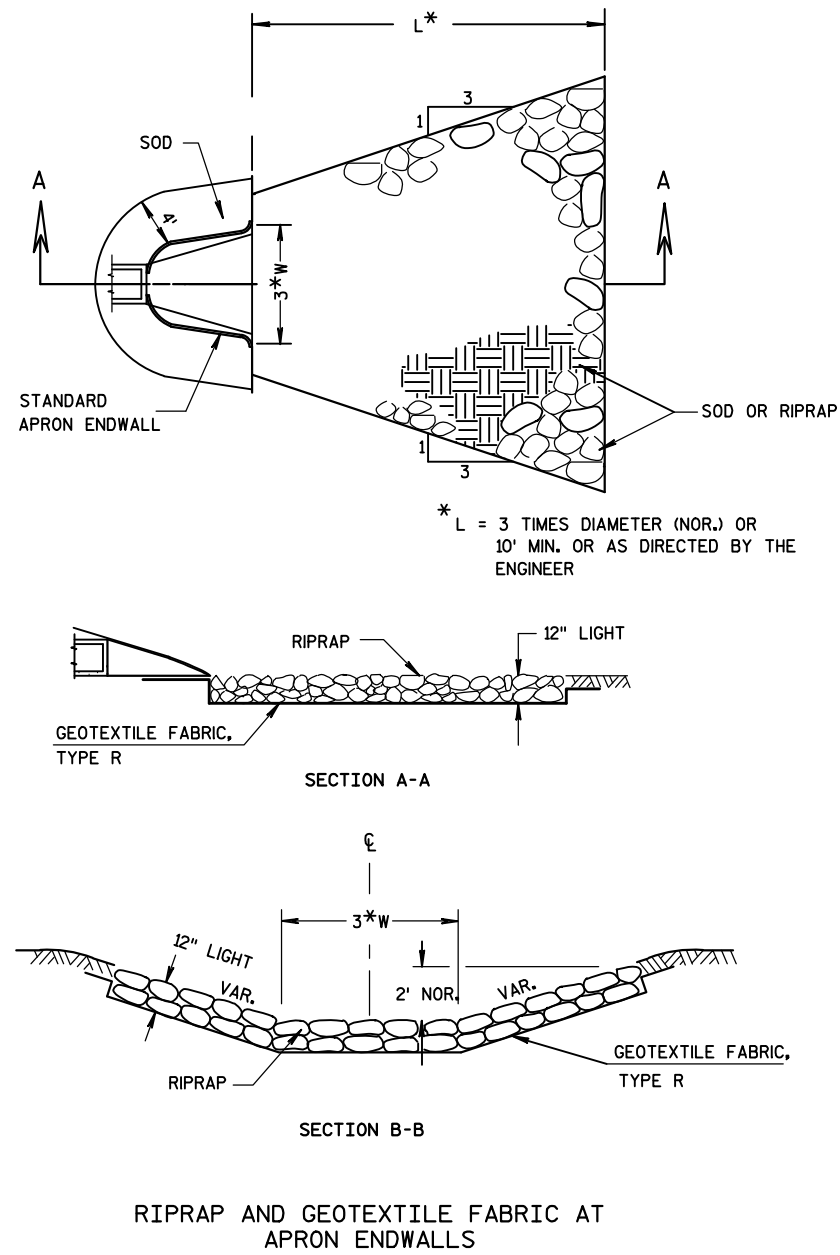
TEMPORARY SETTLING BASIN
(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

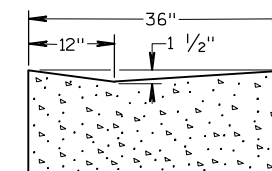
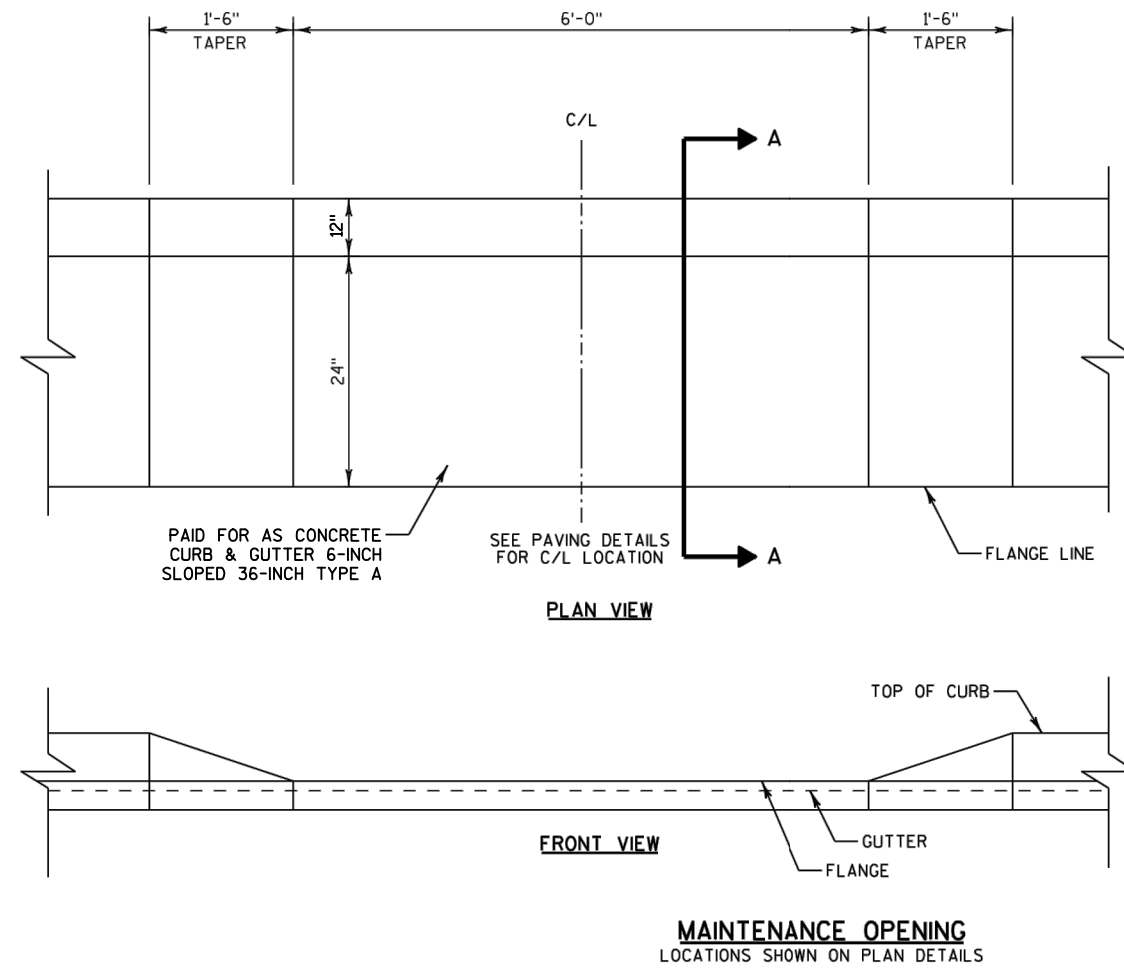
STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

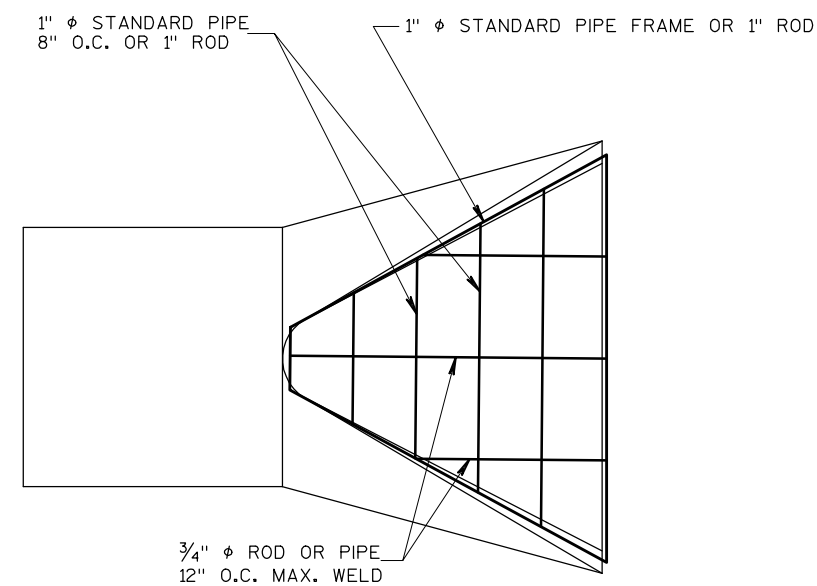
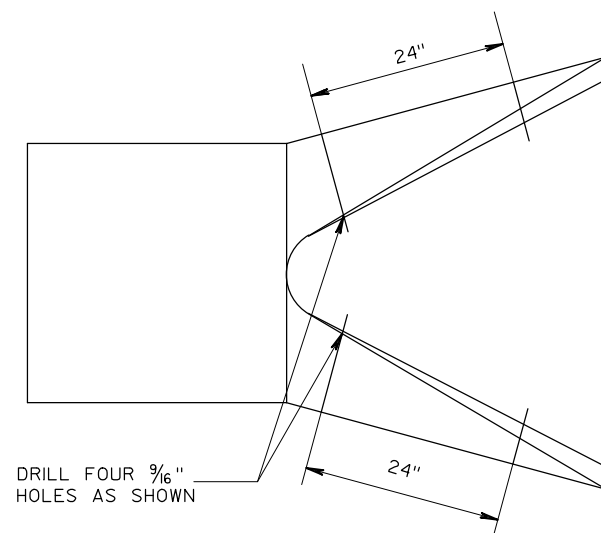
EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

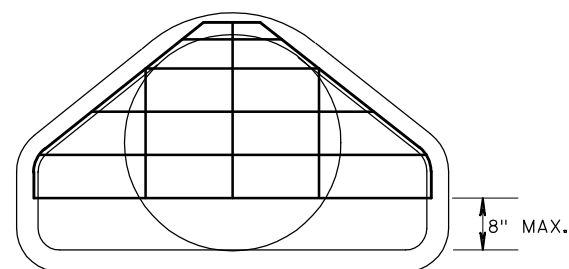
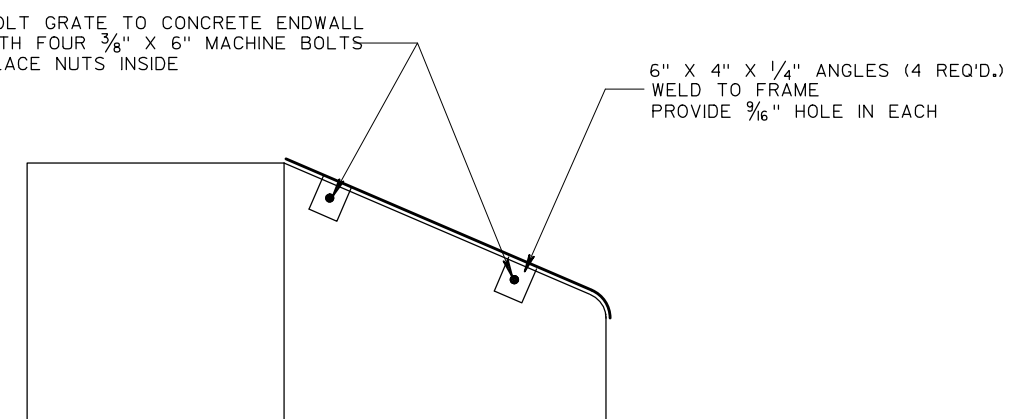
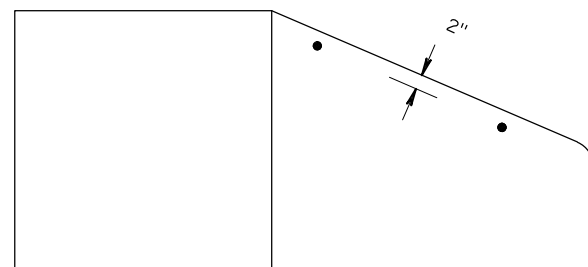
$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}} = 533 \text{ S.F.}$
USE A 20 FT. X 27 FT. BASIN





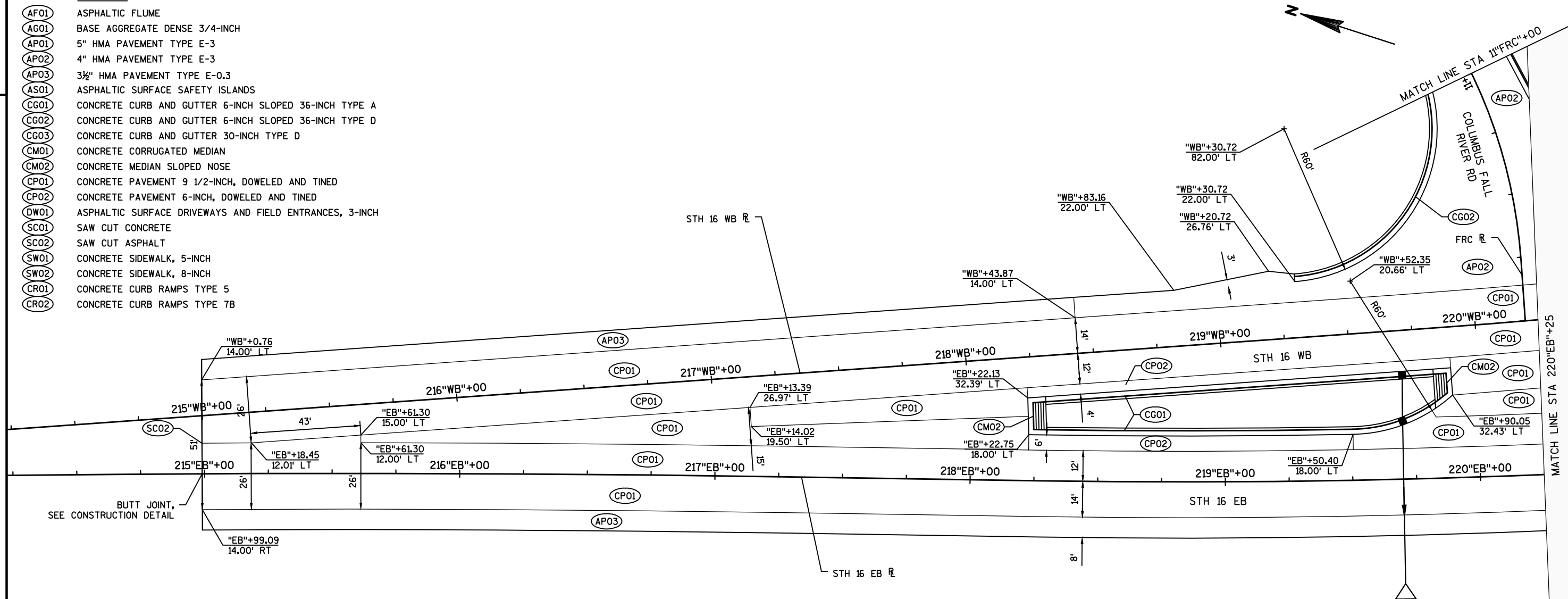


AT EACH PIPE

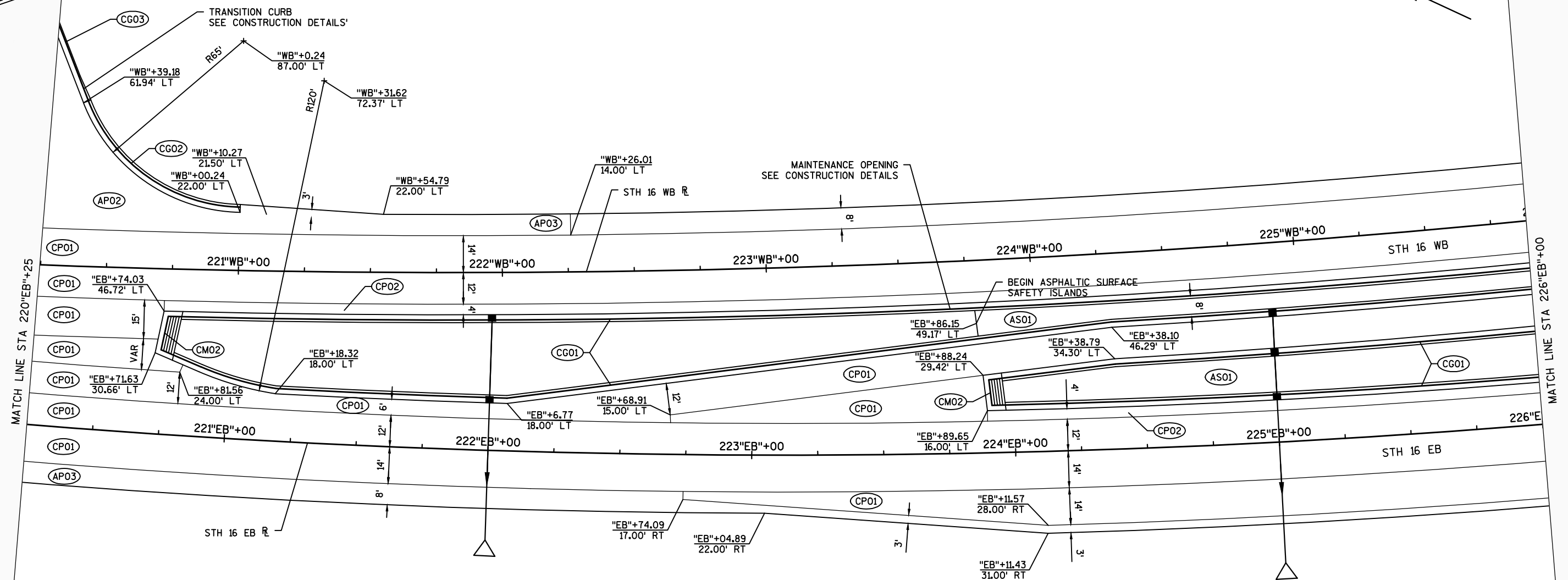
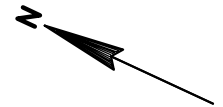


PIPE GRATE DETAIL

ASPHALTIC FLUME
 BASE AGGREGATE DENSE 3/4-INCH
 5" HMA PAVEMENT TYPE E-3
 4" HMA PAVEMENT TYPE E-3
 3½" HMA PAVEMENT TYPE E-0.3
 ASPHALTIC SURFACE SAFETY ISLANDS
 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
 CONCRETE CURB AND GUTTER 30-INCH TYPE D
 CONCRETE CORRUGATED MEDIAN
 CONCRETE MEDIAN SLOPED NOSE
 CONCRETE PAVEMENT 9 1/2-INCH, DOWELED AND TINED
 CONCRETE PAVEMENT 6-INCH, DOWELED AND TINED
 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
 SAW CUT CONCRETE
 SAW CUT ASPHALT
 CONCRETE SIDEWALK, 5-INCH
 CONCRETE SIDEWALK, 8-INCH
 CONCRETE CURB RAMPS TYPE 5
 CONCRETE CURB RAMPS TYPE 7B

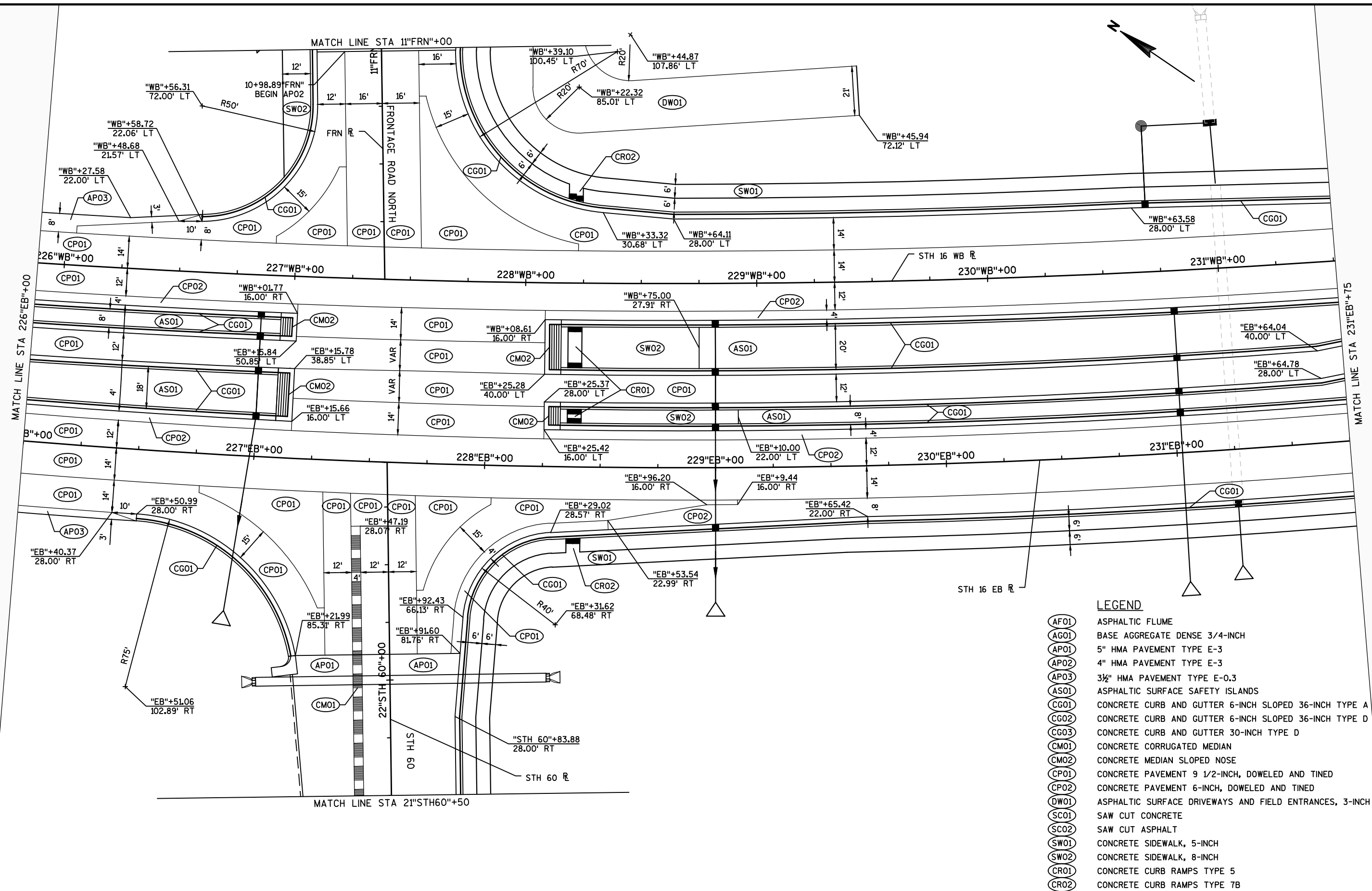


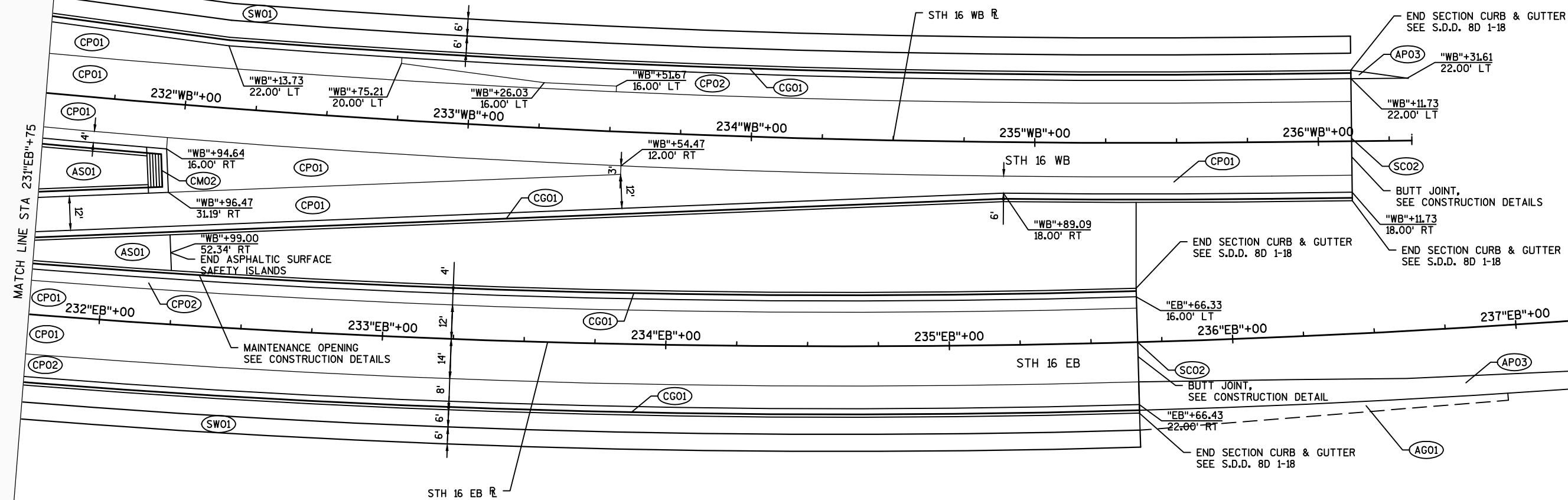
MATCH LINE STA 11"FR" +00



LEGEND

- (AF01) ASPHALTIC FLUME
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP01) 5" HMA PAVEMENT TYPE E-3
- (AP02) 4" HMA PAVEMENT TYPE E-3
- (AP03) 3 1/2" HMA PAVEMENT TYPE E-0.3
- (AS01) ASPHALTIC SURFACE SAFETY ISLANDS
- (CG01) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
- (CG02) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CG03) CONCRETE CURB AND GUTTER 30-INCH TYPE D
- (CM01) CONCRETE CORRUGATED MEDIAN
- (CM02) CONCRETE MEDIAN SLOPED NOSE
- (CP01) CONCRETE PAVEMENT 9 1/2-INCH, DOWELED AND TINED
- (CP02) CONCRETE PAVEMENT 6-INCH, DOWELED AND TINED
- (DW01) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- (SC01) SAW CUT CONCRETE
- (SC02) SAW CUT ASPHALT
- (SW01) CONCRETE SIDEWALK, 5-INCH
- (SW02) CONCRETE SIDEWALK, 8-INCH
- (CR01) CONCRETE CURB RAMPS TYPE 5
- (CR02) CONCRETE CURB RAMPS TYPE 7B

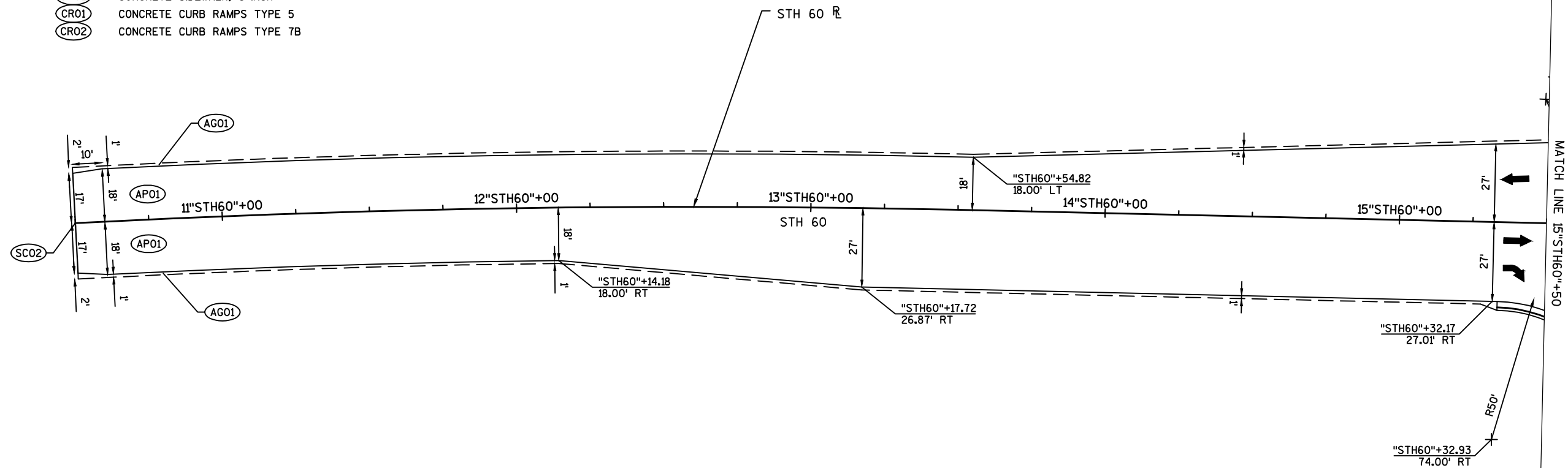


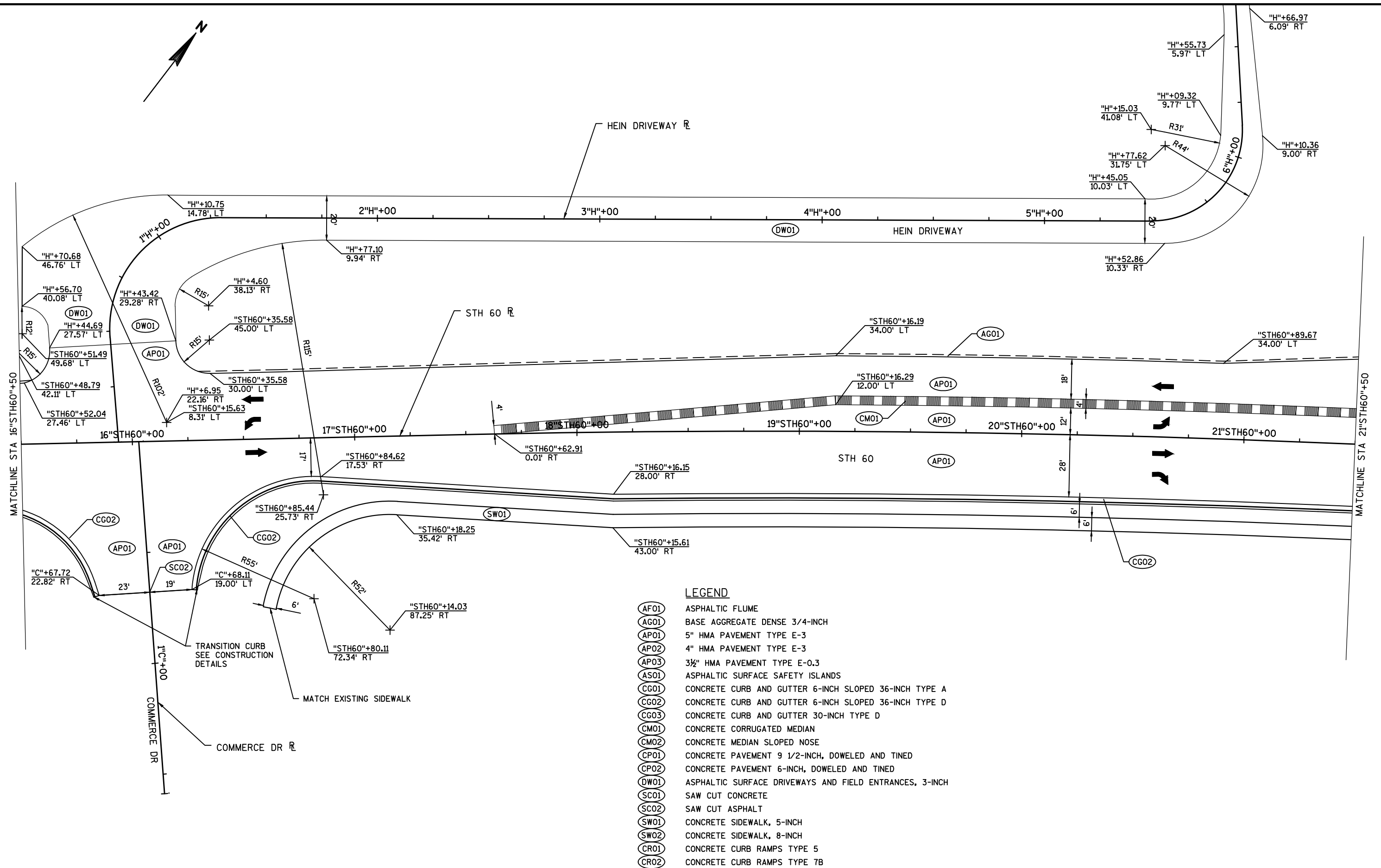
**LEGEND**

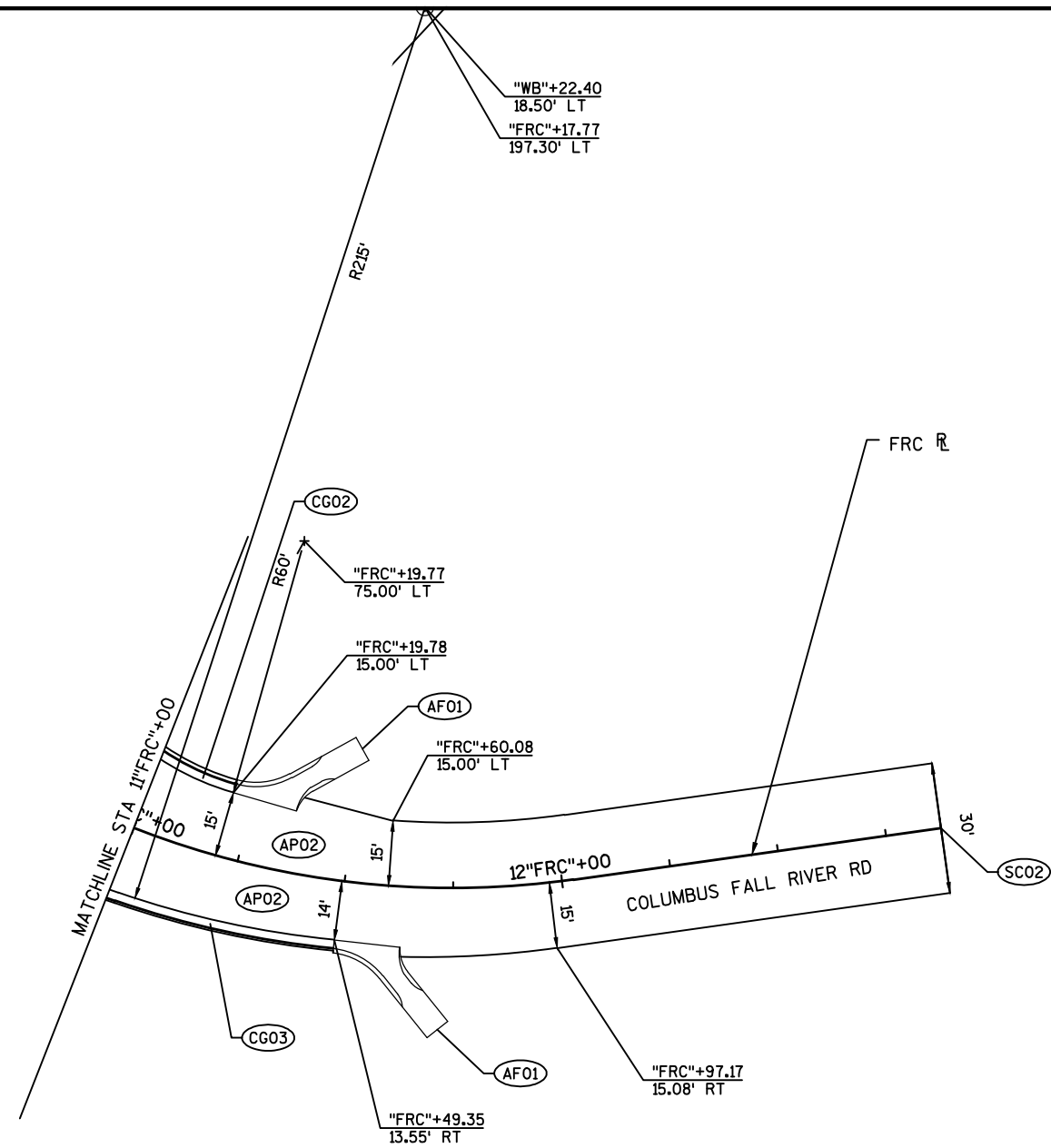
AF01	ASPHALTIC FLUME
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP01	5" HMA PAVEMENT TYPE E-3
AP02	4" HMA PAVEMENT TYPE E-3
AP03	3 1/2" HMA PAVEMENT TYPE E-0.3
AS01	ASPHALTIC SURFACE SAFETY ISLANDS
CG01	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
CG02	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CG03	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CM01	CONCRETE CORRUGATED MEDIAN
CM02	CONCRETE MEDIAN SLOPED NOSE
CP01	CONCRETE PAVEMENT 9 1/2-INCH, DOWELED AND TINED
CP02	CONCRETE PAVEMENT 6-INCH, DOWELED AND TINED
DW01	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
SC01	SAW CUT CONCRETE
SC02	SAW CUT ASPHALT
SW01	CONCRETE SIDEWALK, 5-INCH
SW02	CONCRETE SIDEWALK, 8-INCH
CR01	CONCRETE CURB RAMPS TYPE 5
CR02	CONCRETE CURB RAMPS TYPE 7B

LEGEND

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AG01	BASE AGGREGATE DENSE 3/4-INCH
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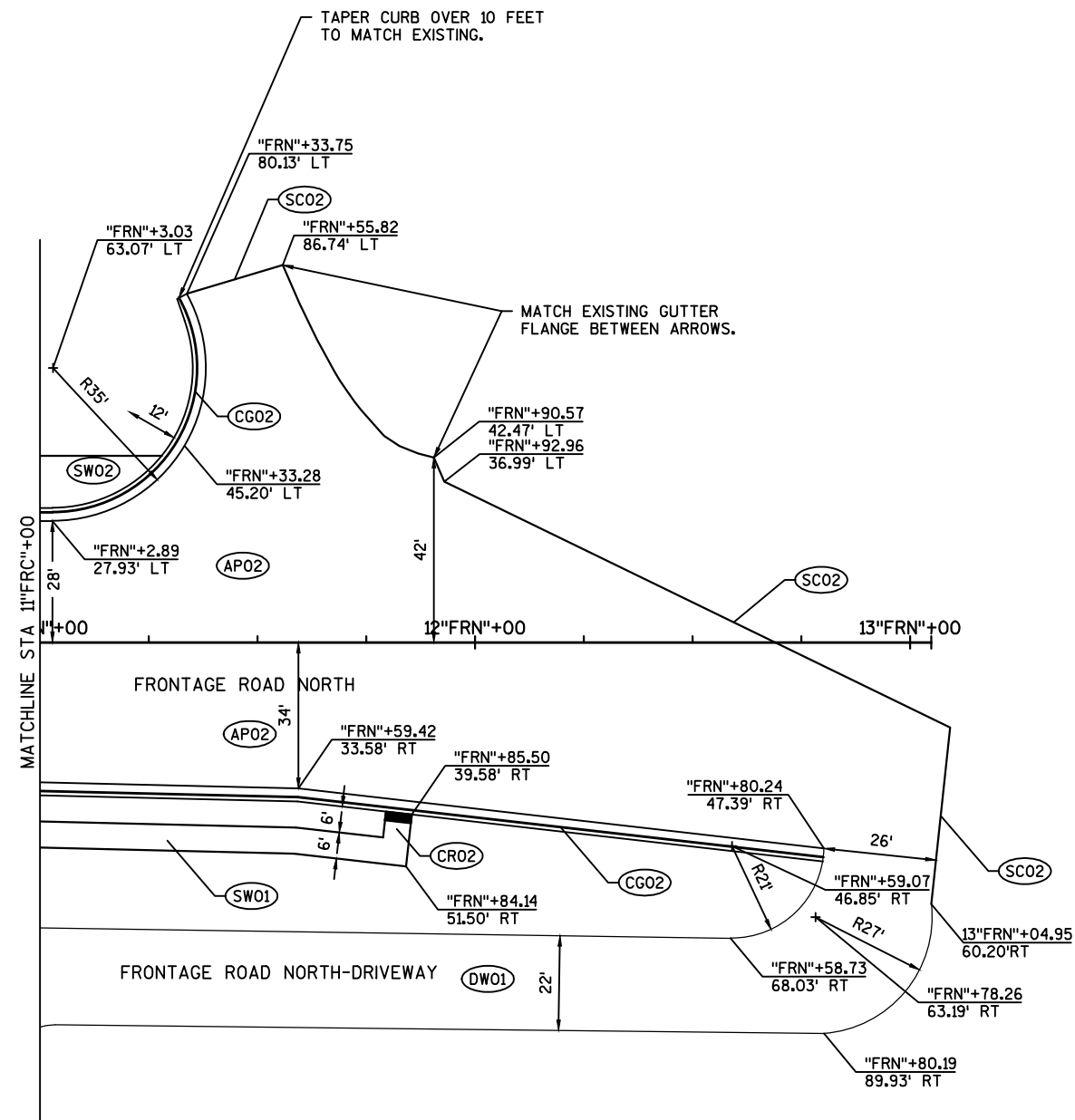






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- (AP01) 5" HMA PAVEMENT TYPE E-3
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- (CR01) CONCRETE CURB RAMPS TYPE 5
- (CR02) CONCRETE CURB RAMPS TYPE 7B

**LEGEND**

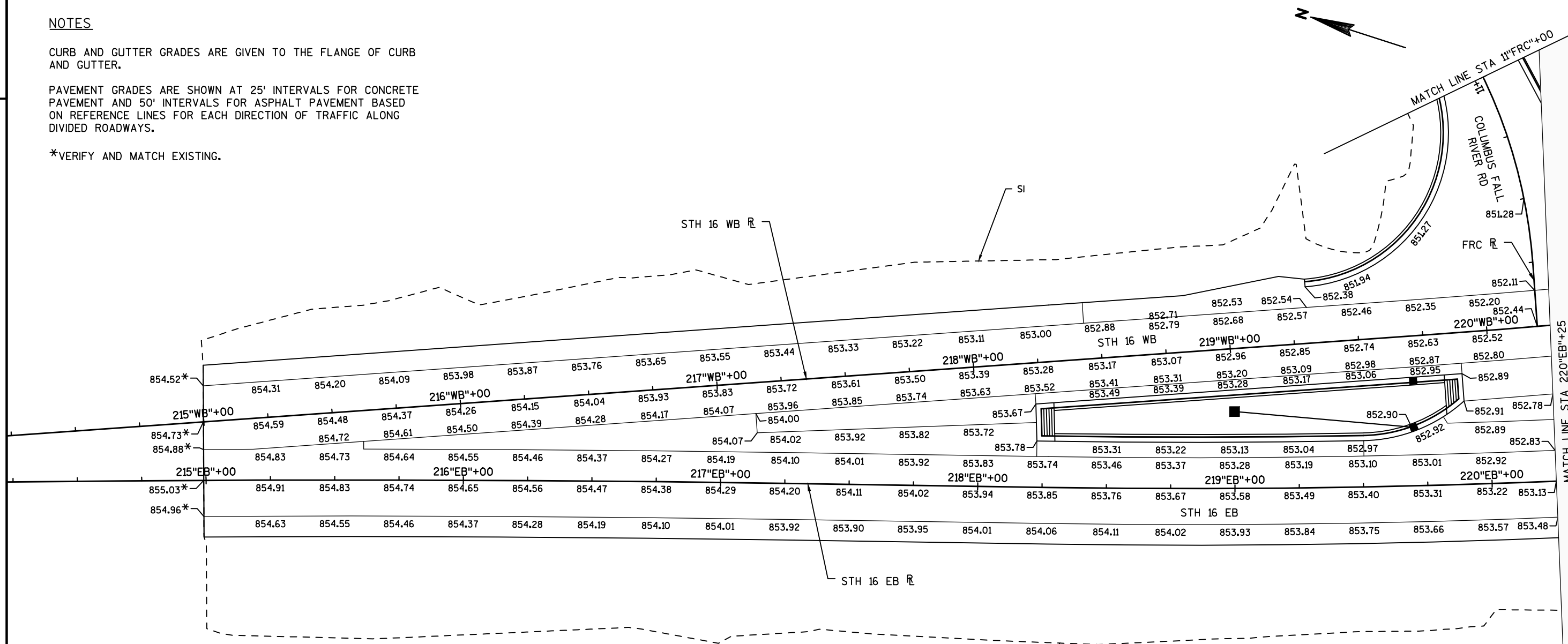
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(AP01)	5" HMA PAVEMENT TYPE E-3
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NOTES

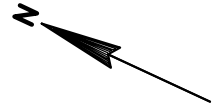
CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER.

PAVEMENT GRADES ARE SHOWN AT 25' INTERVALS FOR CONCRETE PAVEMENT AND 50' INTERVALS FOR ASPHALT PAVEMENT BASED ON REFERENCE LINES FOR EACH DIRECTION OF TRAFFIC ALONG DIVIDED ROADWAYS.

*VERIFY AND MATCH EXISTING.



MATCH LINE STA 11"FR" +00



SI

STH 16 WB R

MATCH LINE STA 220"EB" +25

MATCH LINE STA 226"EB" +00

STH 16 EB R

SI

NOTES

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*VERIFY AND MATCH EXISTING.

PROJECT NO:1401-02-72

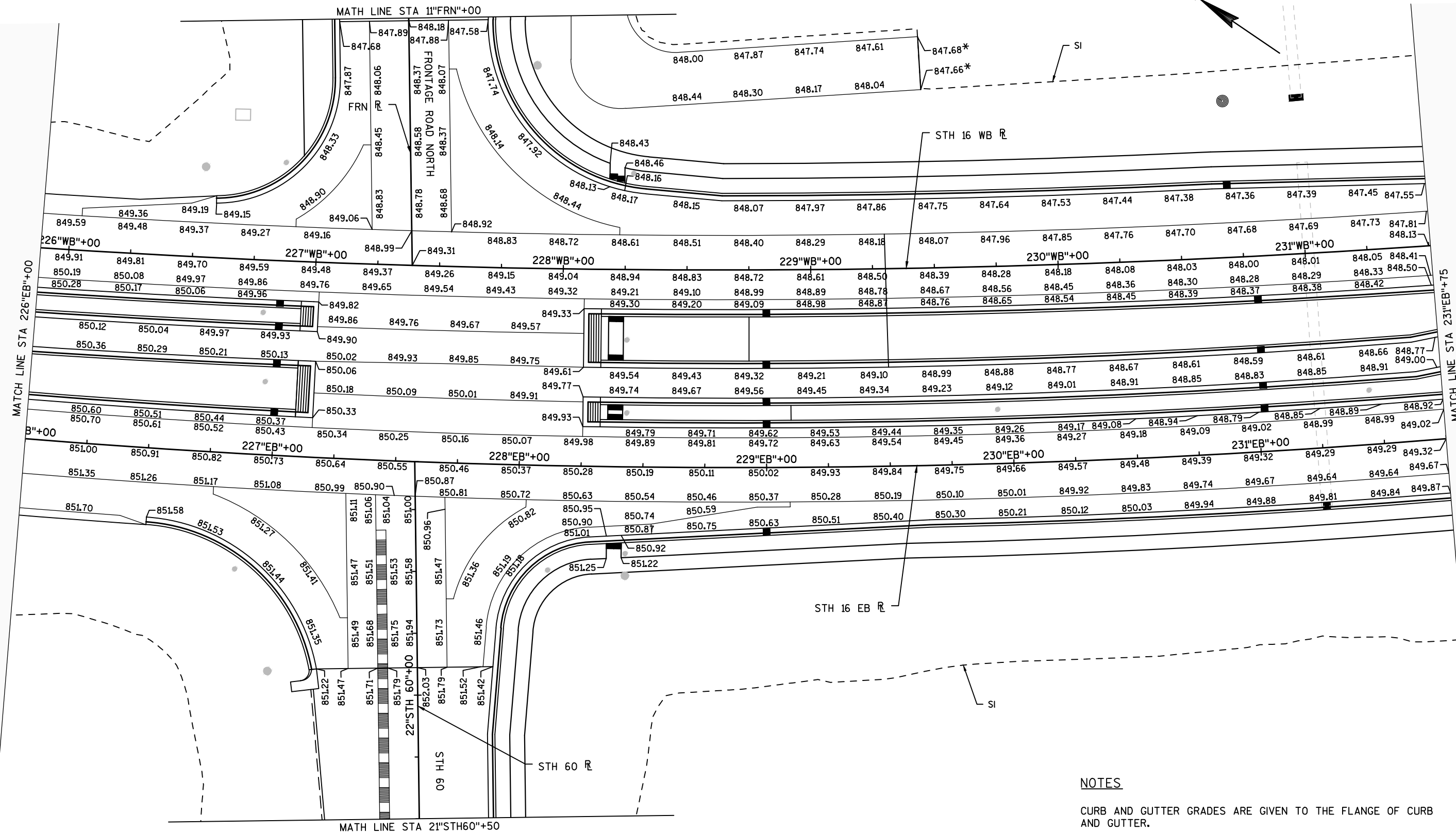
HWY:STH 16

COUNTY:COLUMBIA

PAVEMENT GRADES - STH 16

SHEET

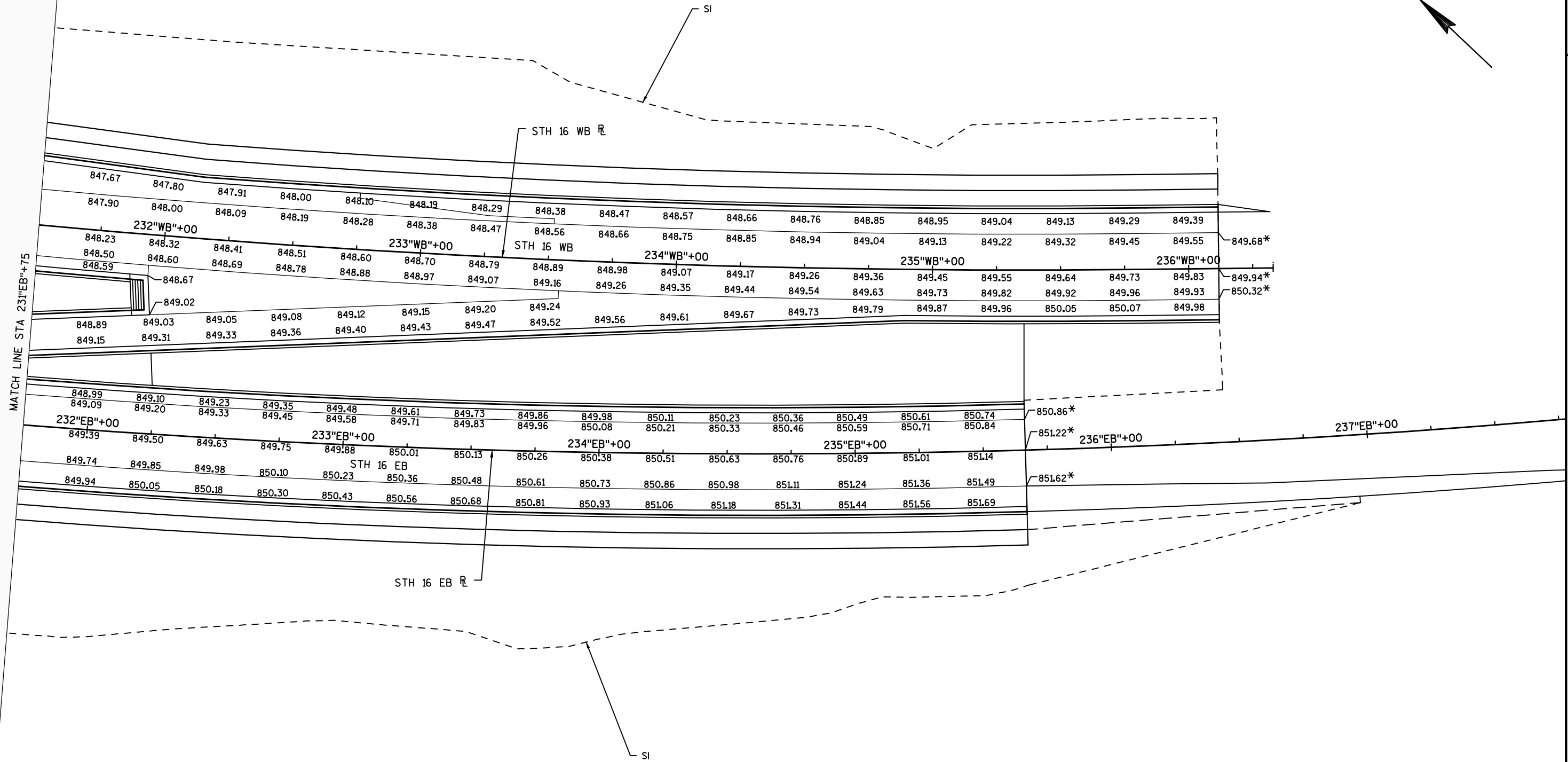
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**NOTES**

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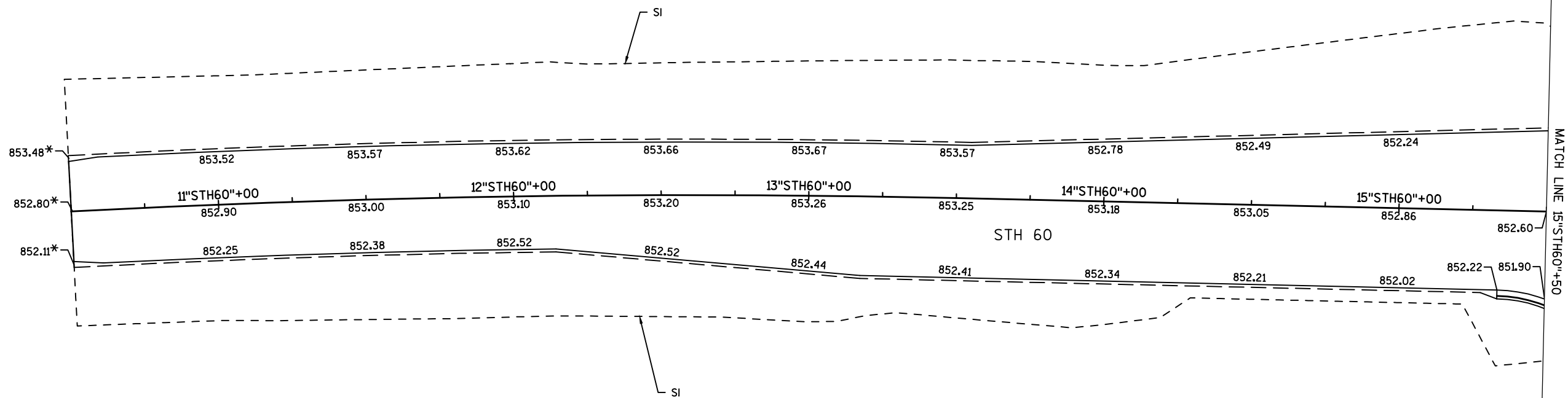
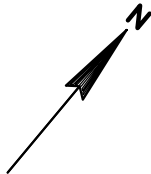
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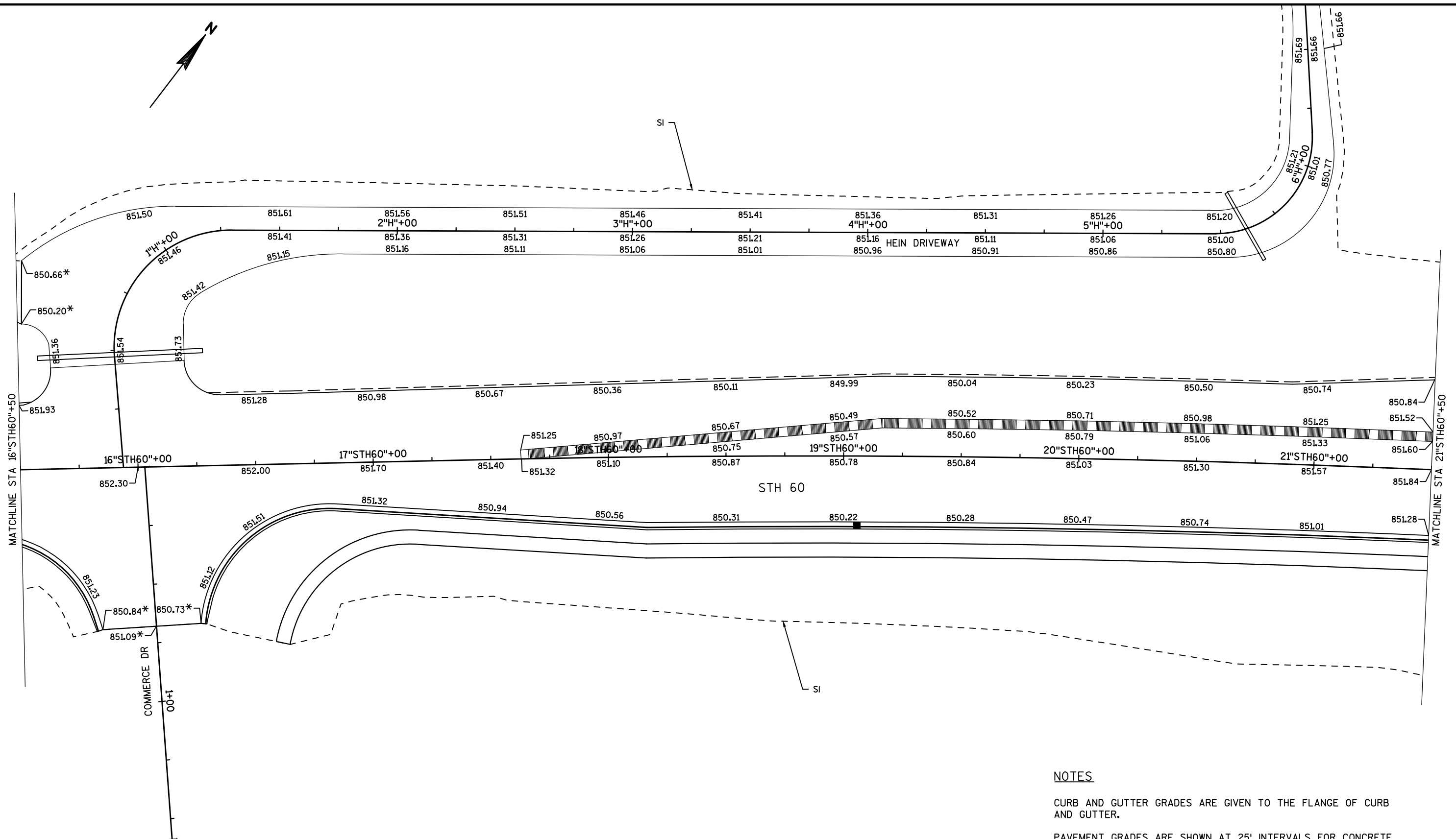
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*VERIFY AND MATCH EXISTING.



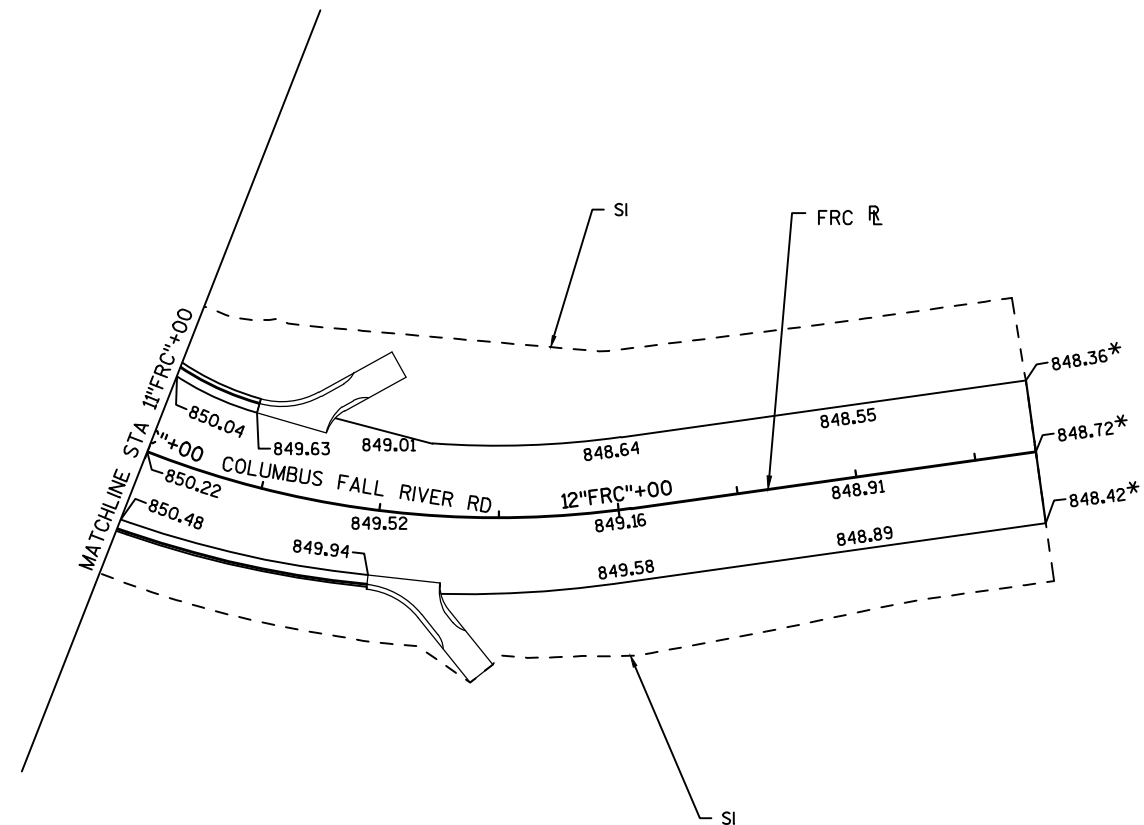
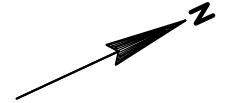


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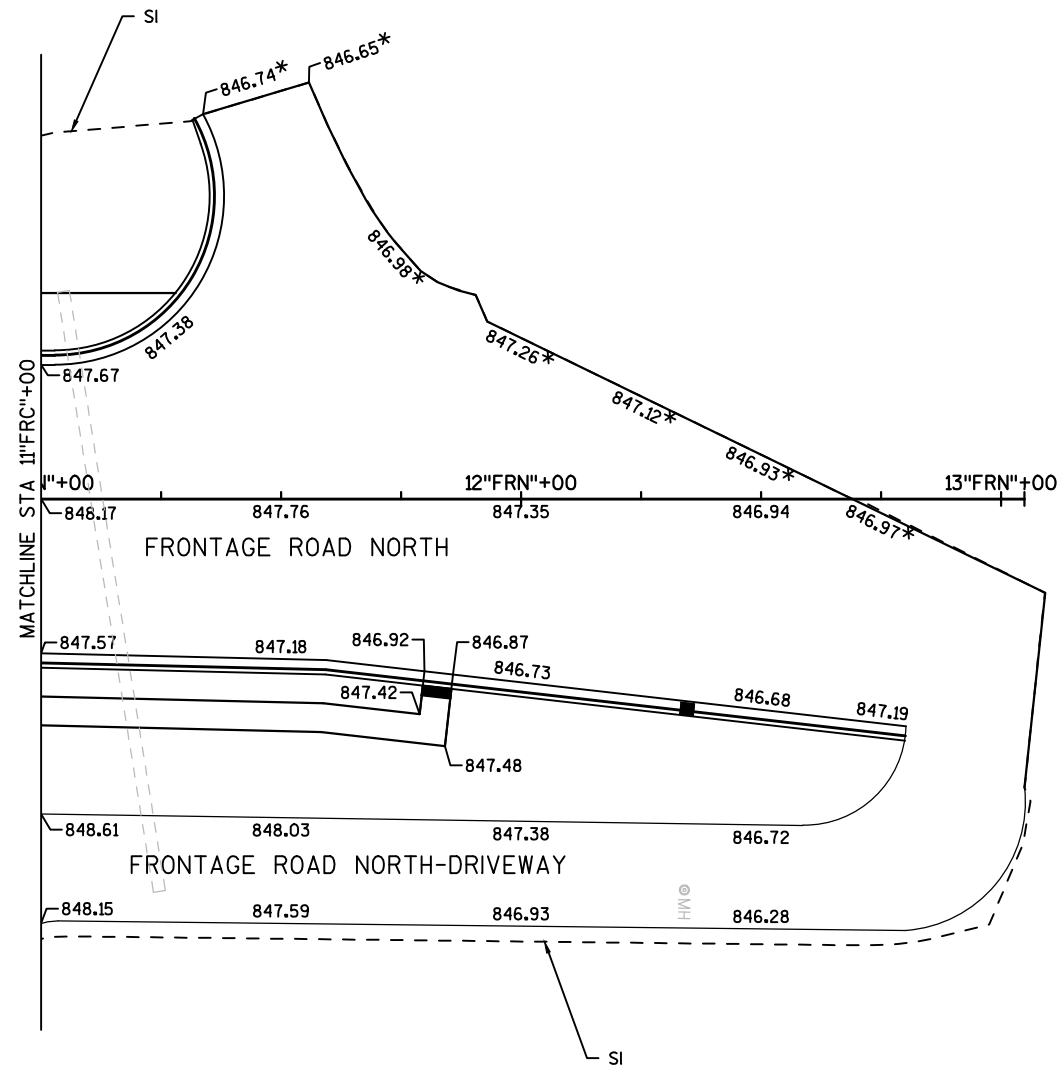


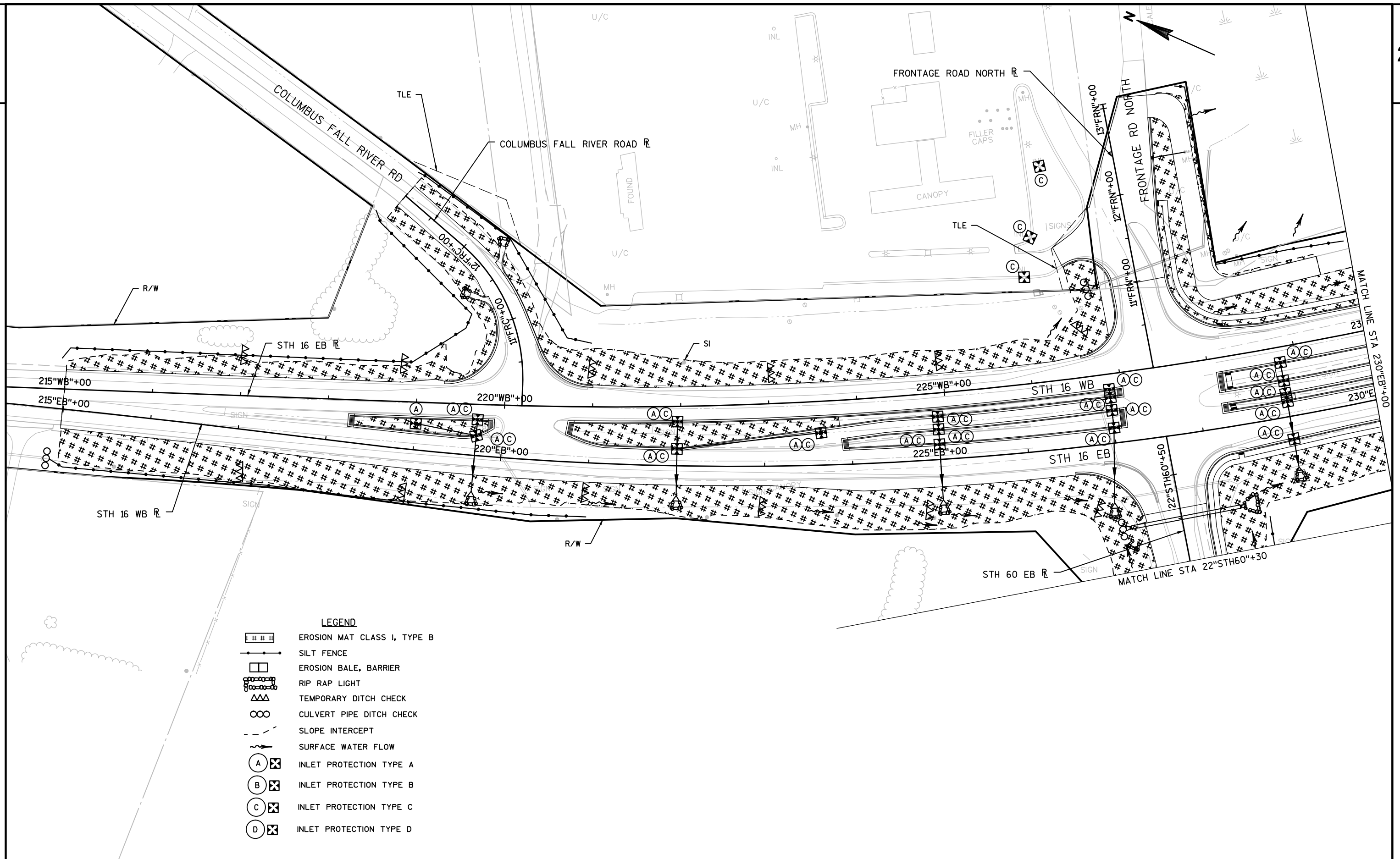
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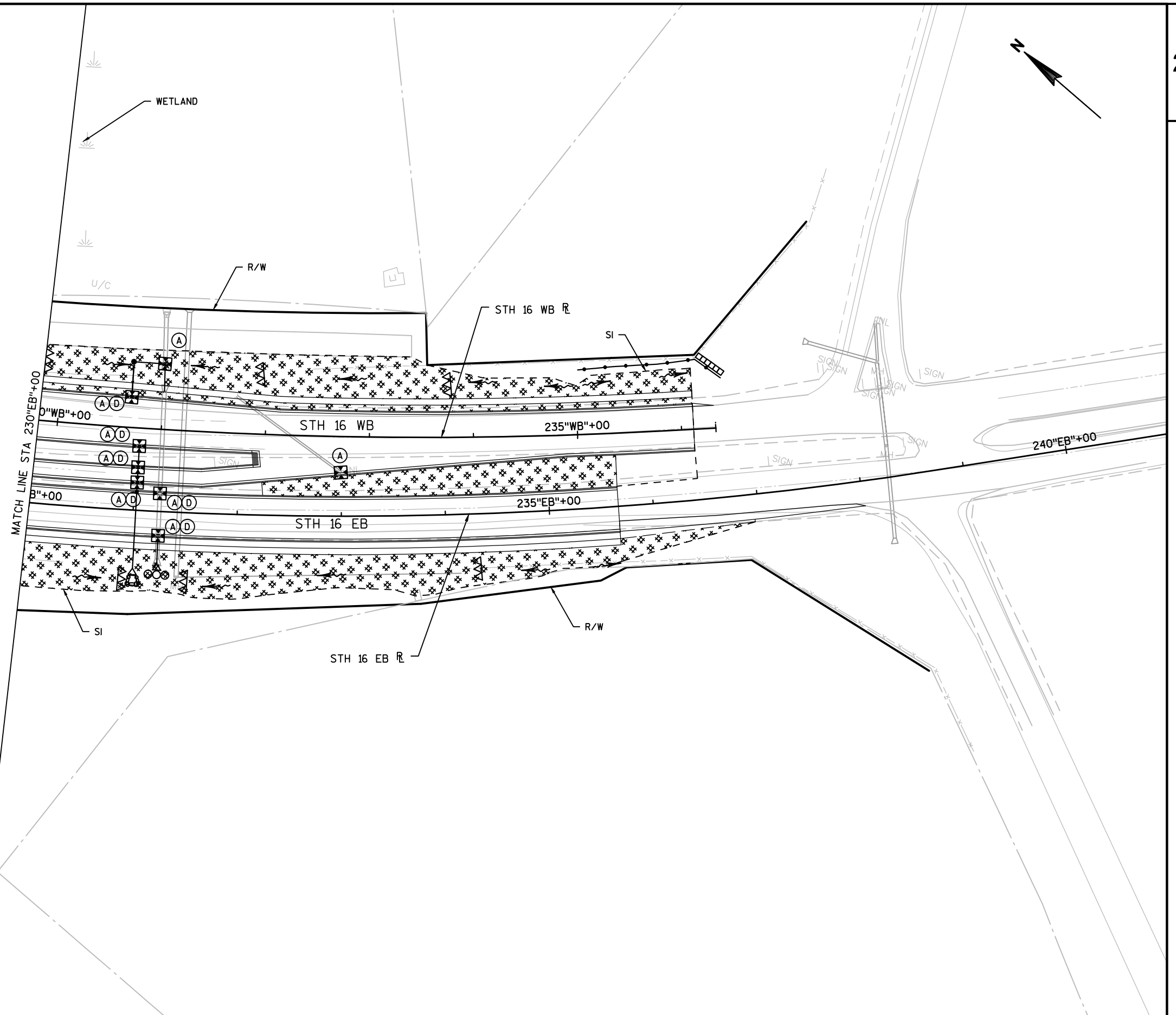
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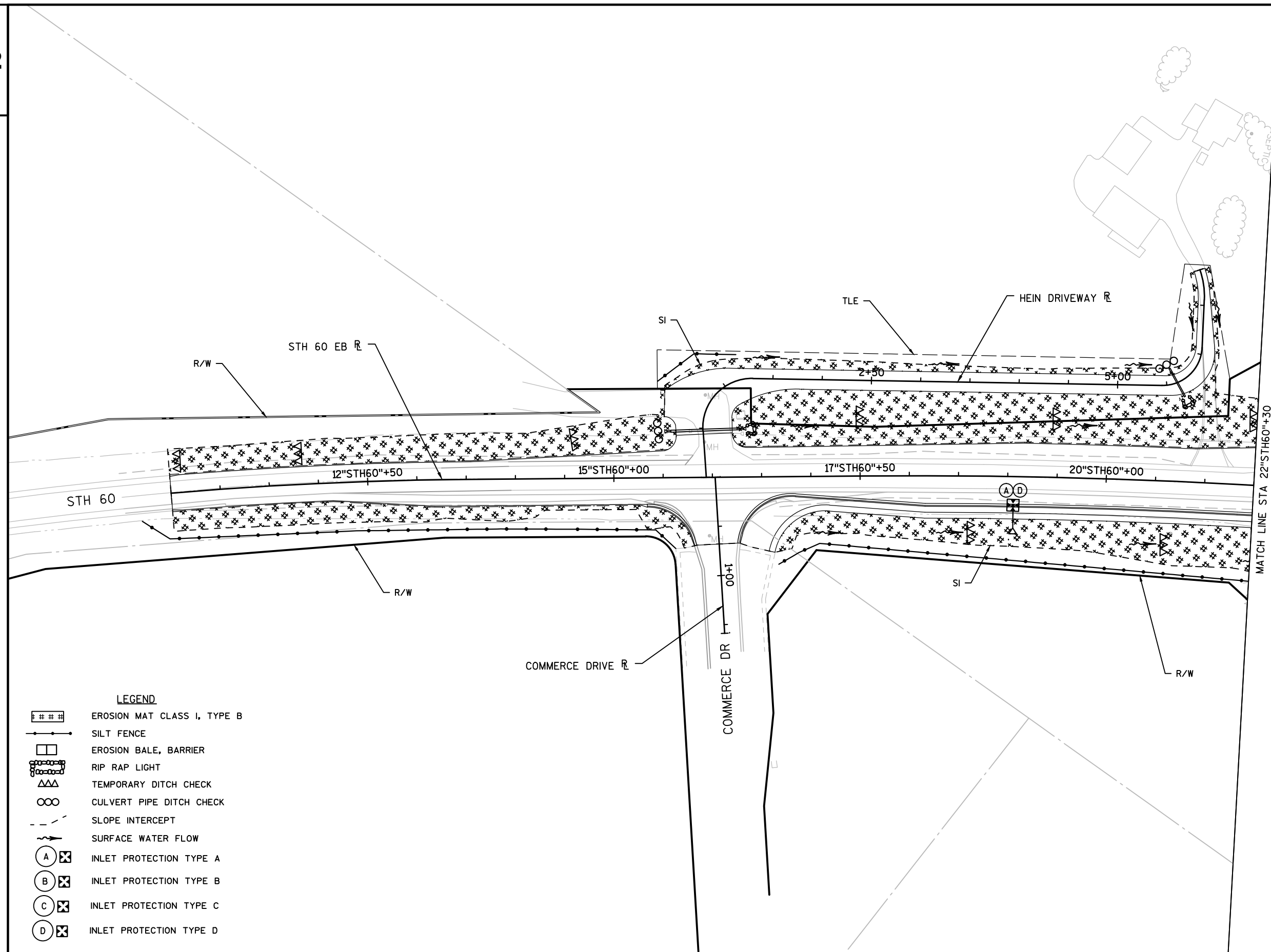
*VERIFY AND MATCH EXISTING.





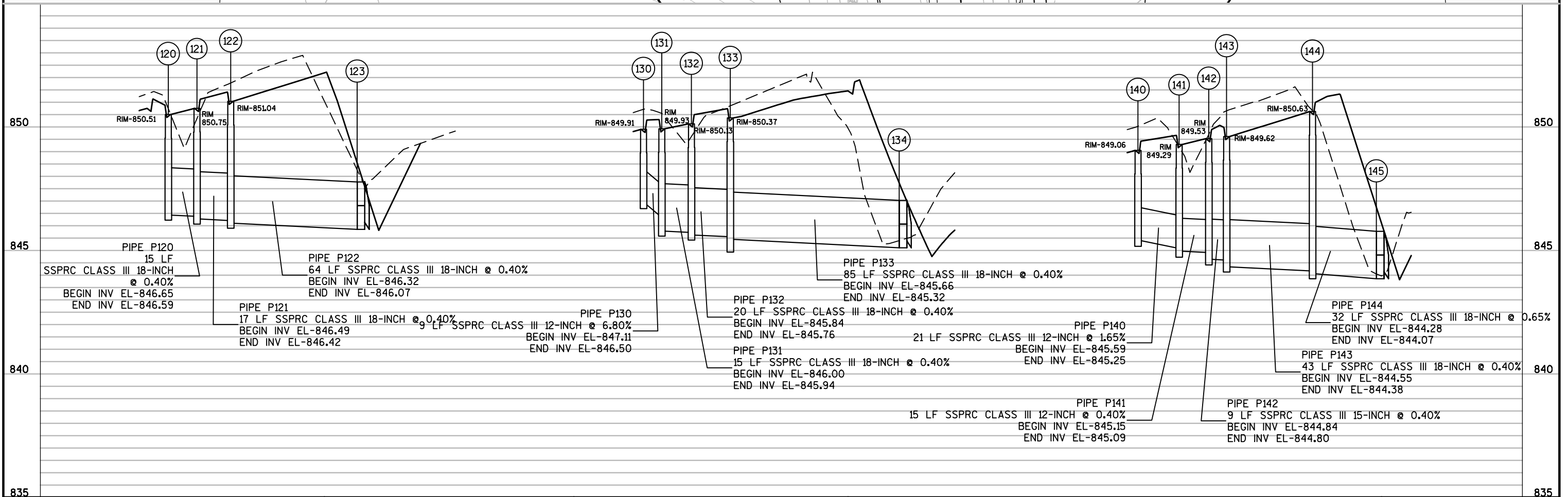
**LEGEND**

	EROSION MAT CLASS I, TYPE B
	SILT FENCE
	EROSION BALE, BARRIER
	RIP RAP LIGHT
	TEMPORARY DITCH CHECK
	CULVERT PIPE DITCH CHECK
	SLOPE INTERCEPT
	SURFACE WATER FLOW
	INLET PROTECTION TYPE A
	INLET PROTECTION TYPE B
	INLET PROTECTION TYPE C
	INLET PROTECTION TYPE D



NOTE:

ALL STH 16 STATION OFFSETS
REFERENCED OFF OF STH 16 EB R/L



PROJECT NO:1401-02-72

HWY: STH 16

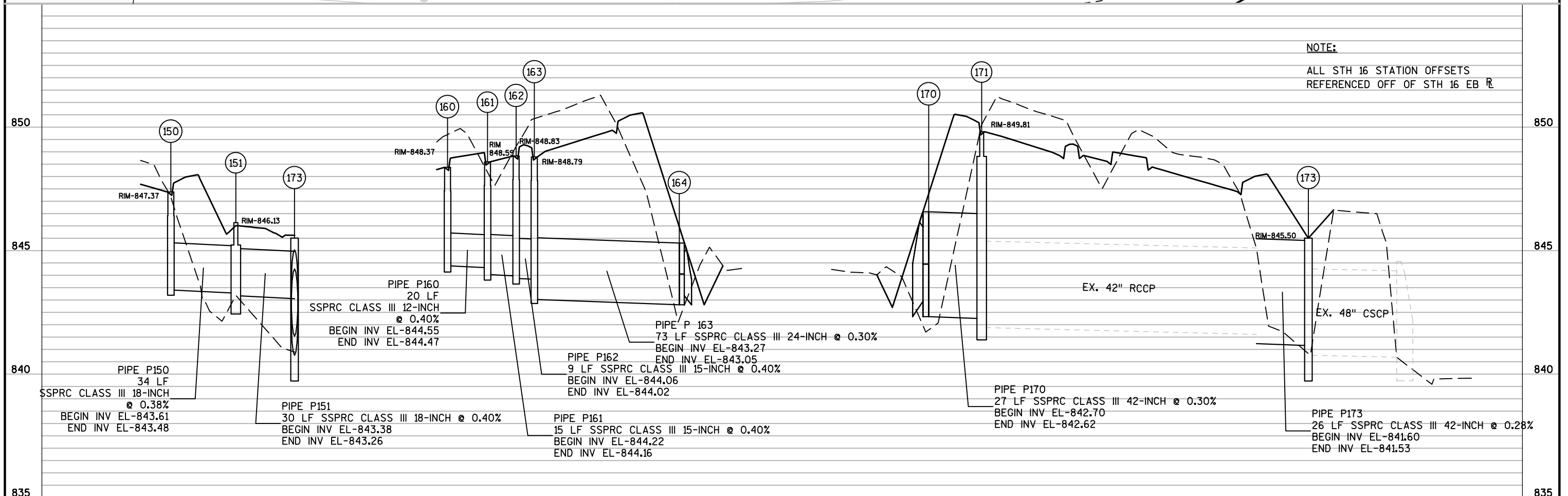
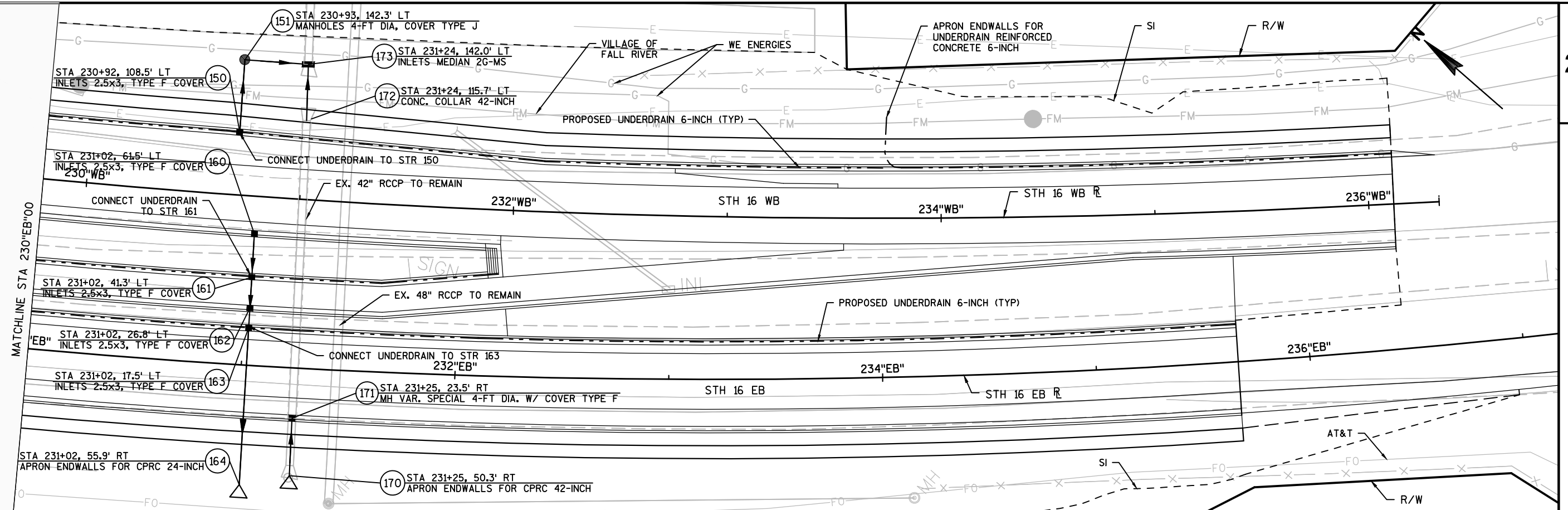
COUNTY: COLUMBIA

STORM SEWER

SHEET

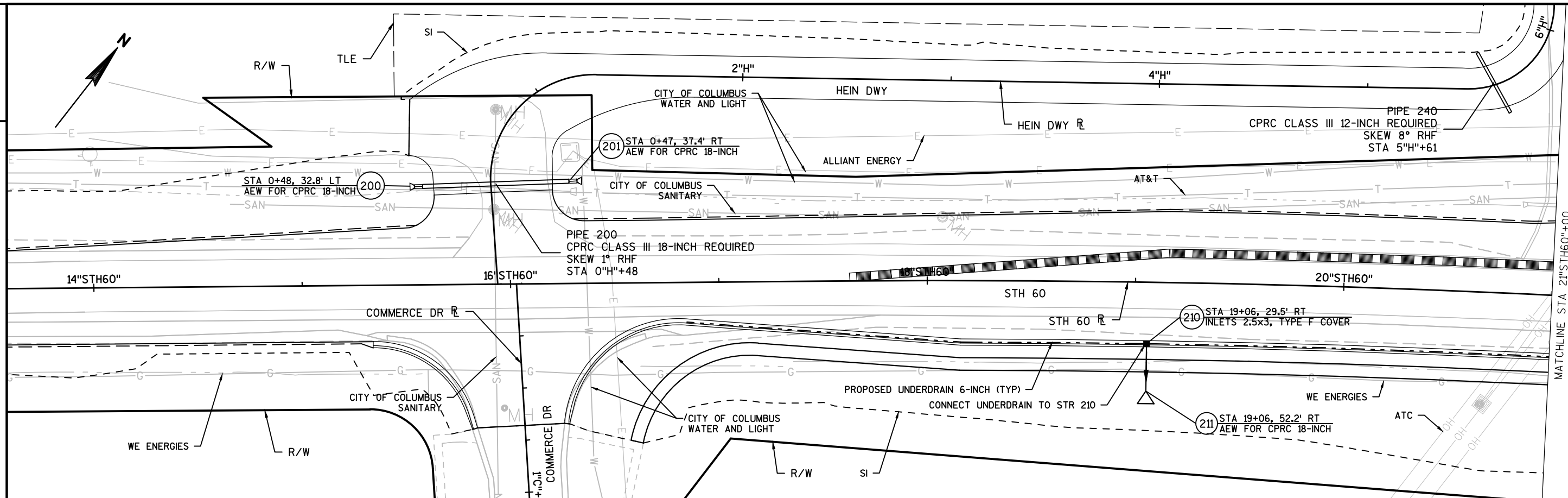
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2



PROJECT NO:1401-02-72	HWY: STH 16	COUNTY: COLUMBIA	STORM SEWER	SHEET	E
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2

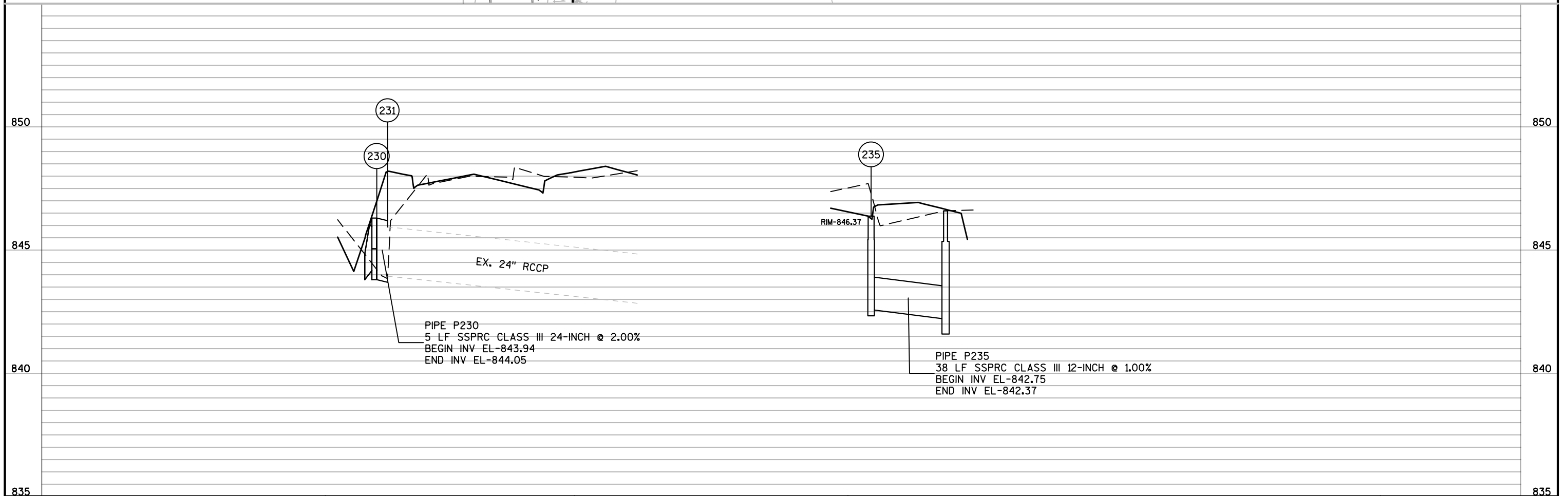
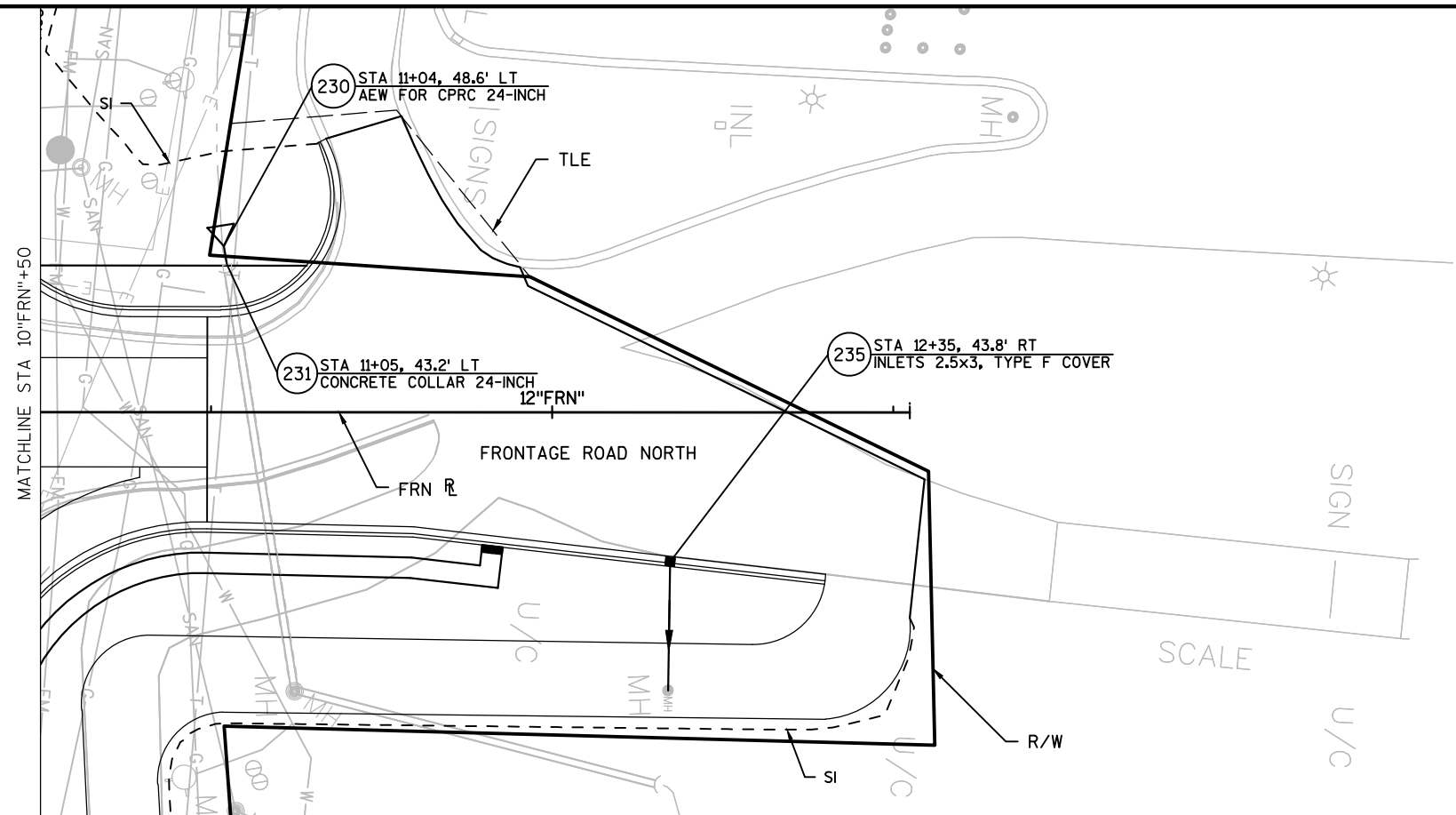


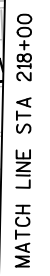
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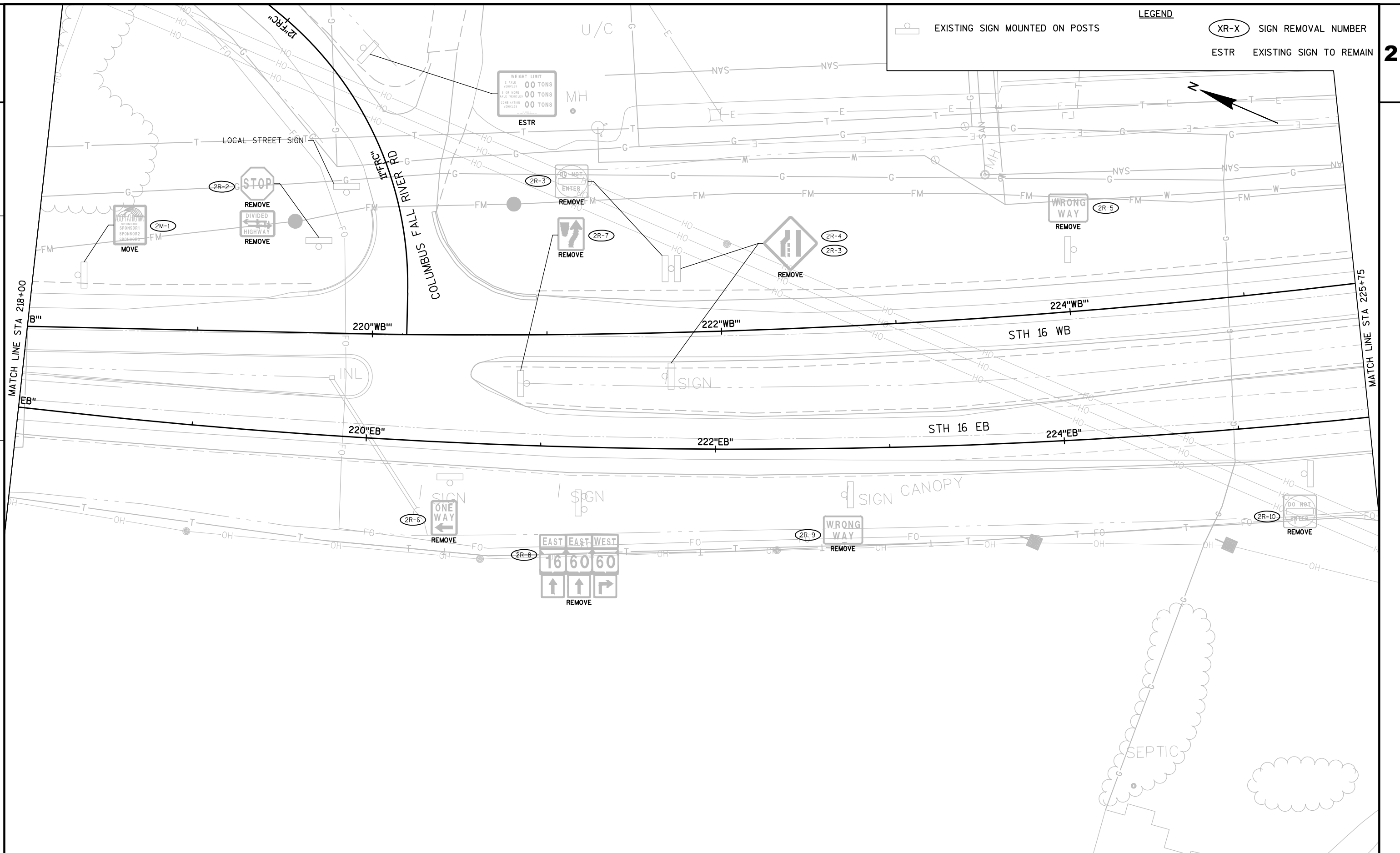


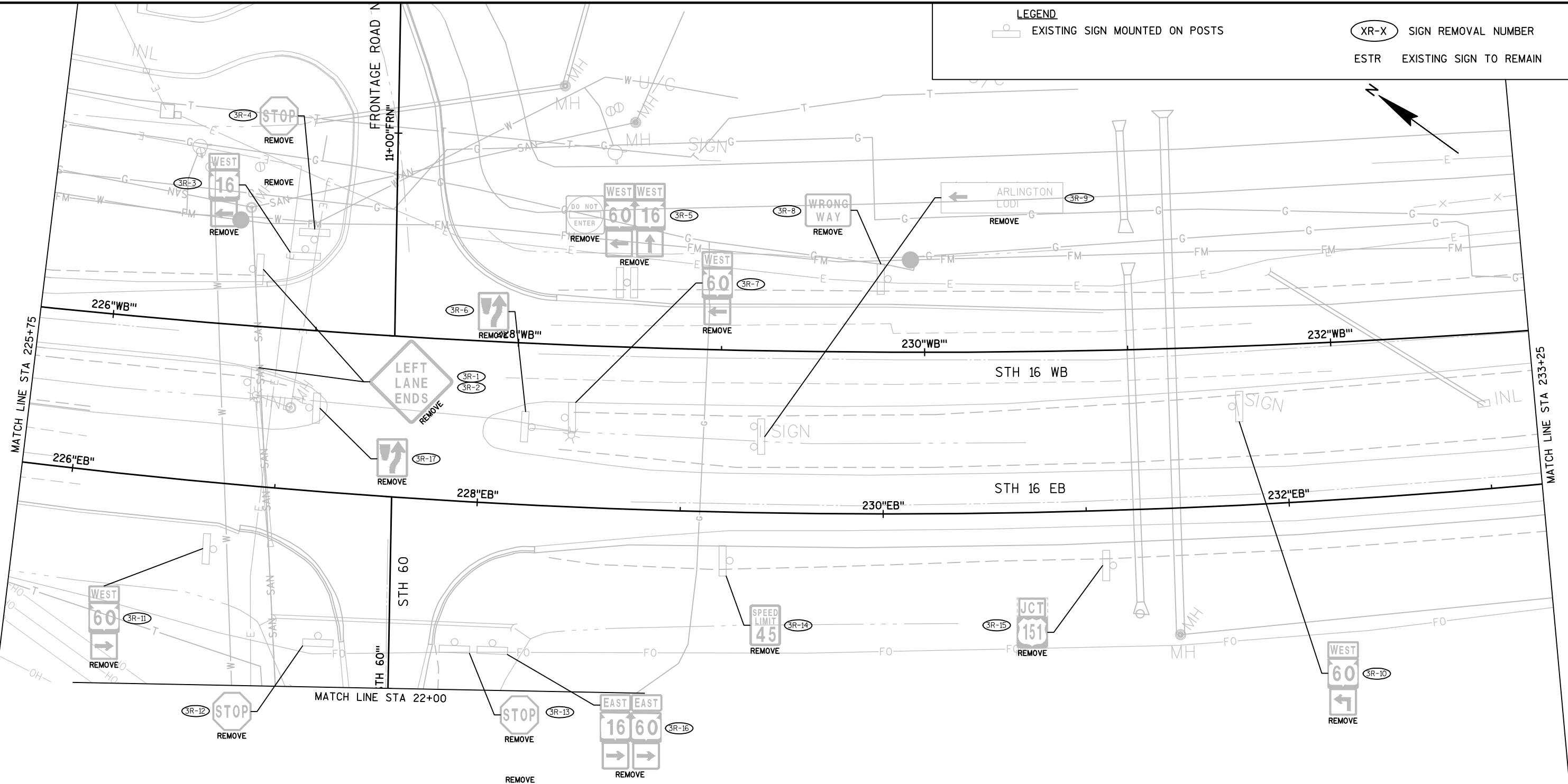
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	STORM SEWER	SHEET	E
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FILE NAME : J:\ACTIVE\SW\1401-02-02\CAD\14010202\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 04
PLOT DATE : 10/22/2015 3:15 PM
PLOT BY : CORY IHDE
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 41







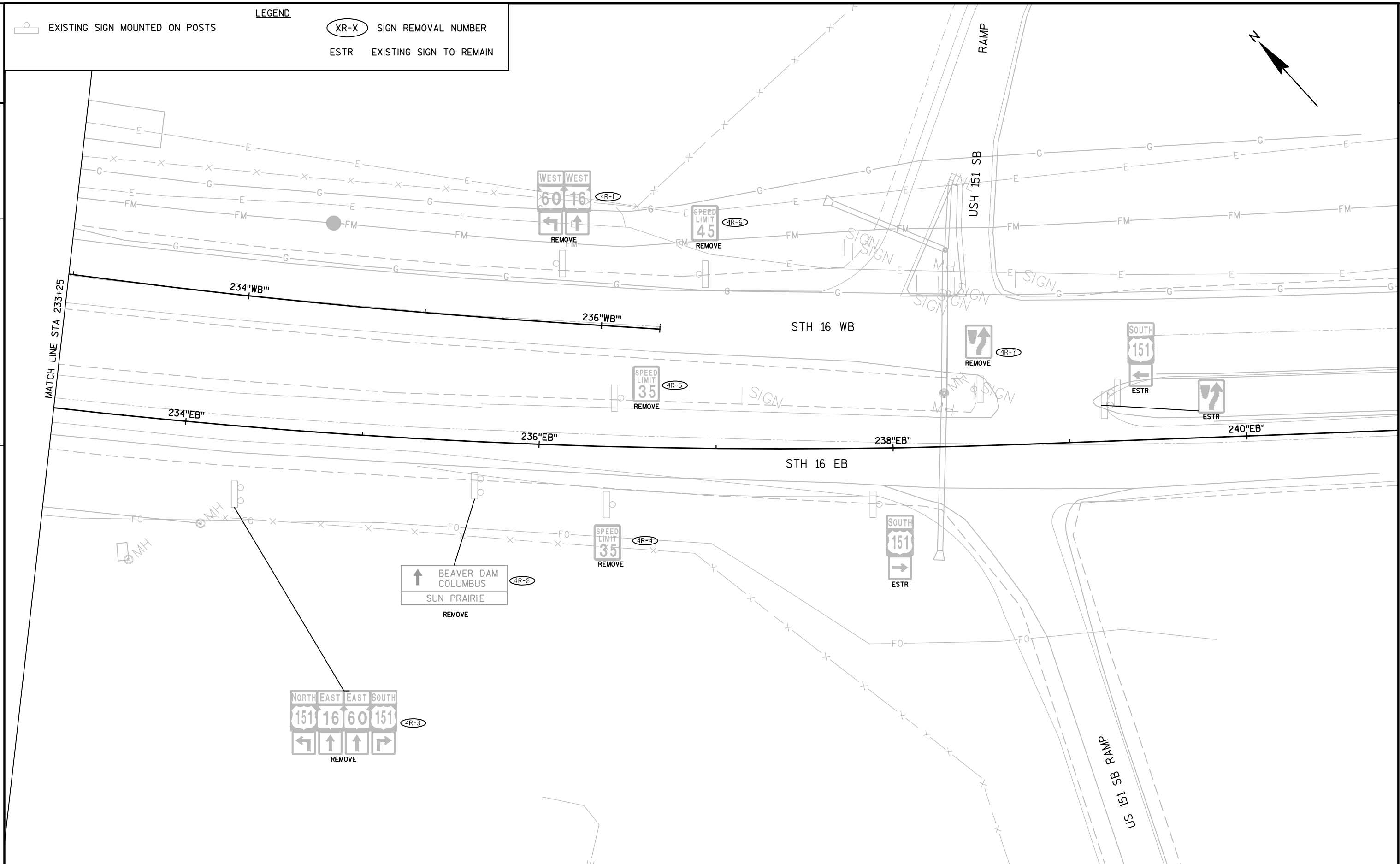
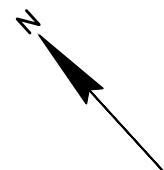


LEGEND

EXISTING SIGN MOUNTED ON POSTS

XR-X SIGN REMOVAL NUMBER

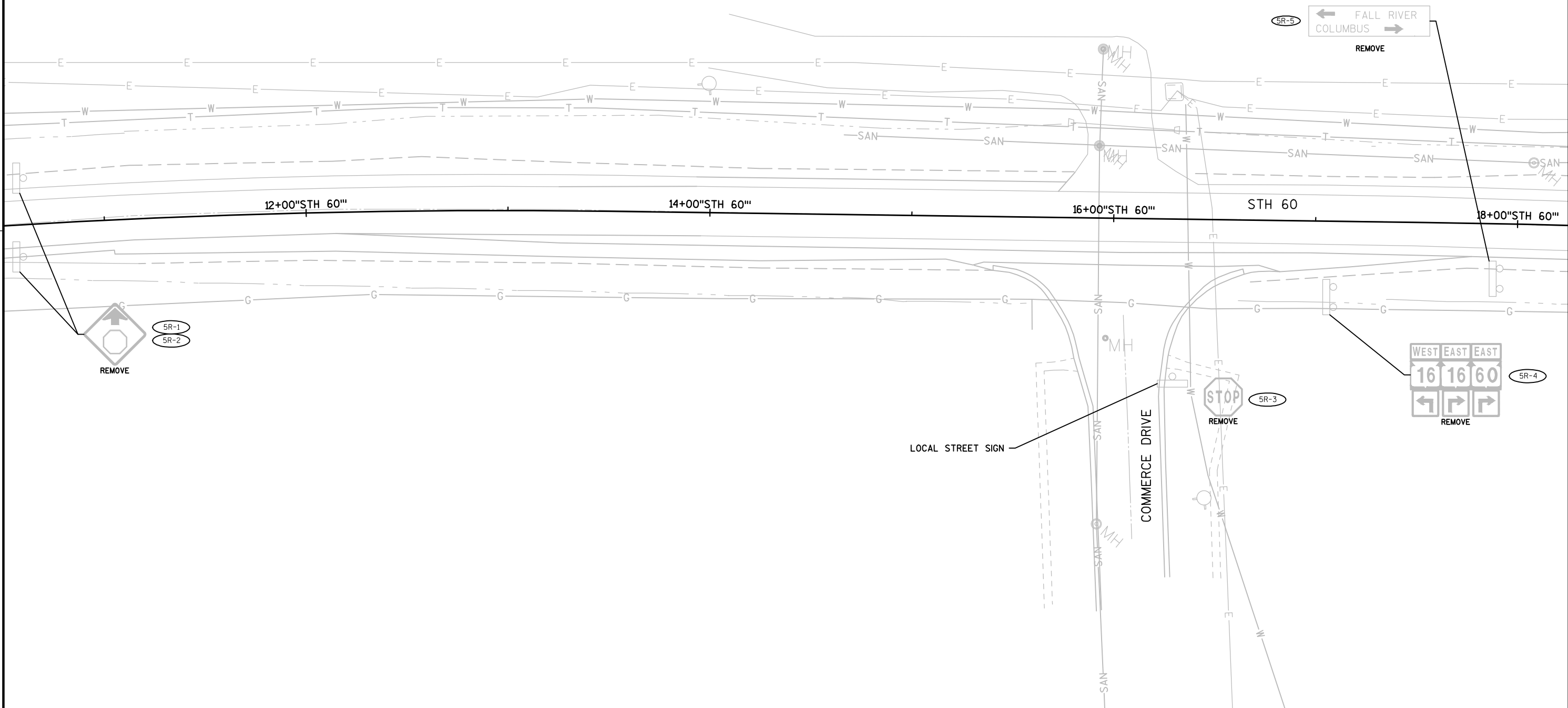
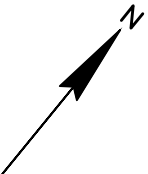
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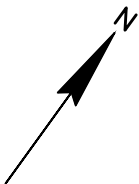
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XR-X SIGN REMOVAL NUMBER

ESTR EXISTING SIGN TO REMAIN



MATCH LINE STA 18+35



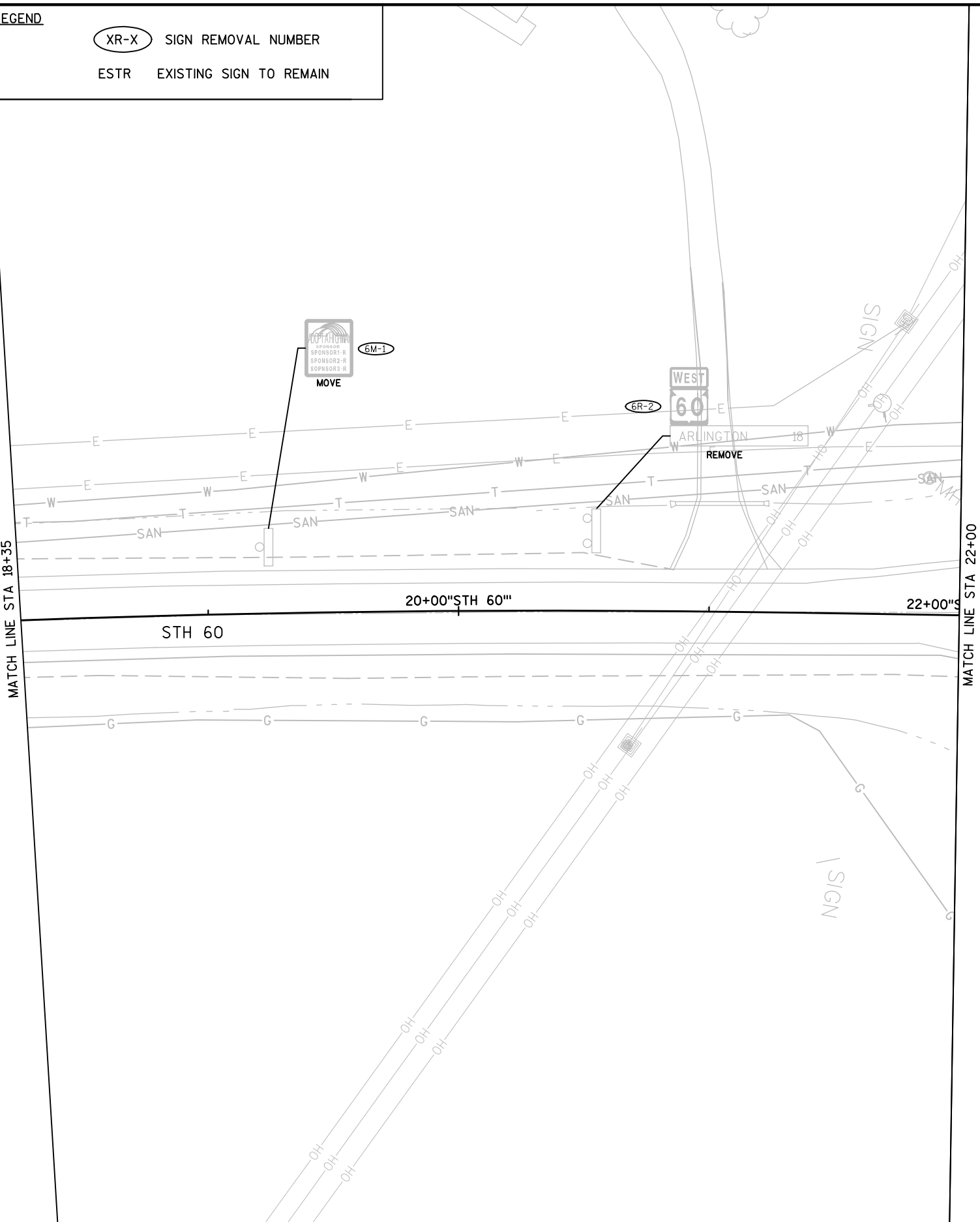
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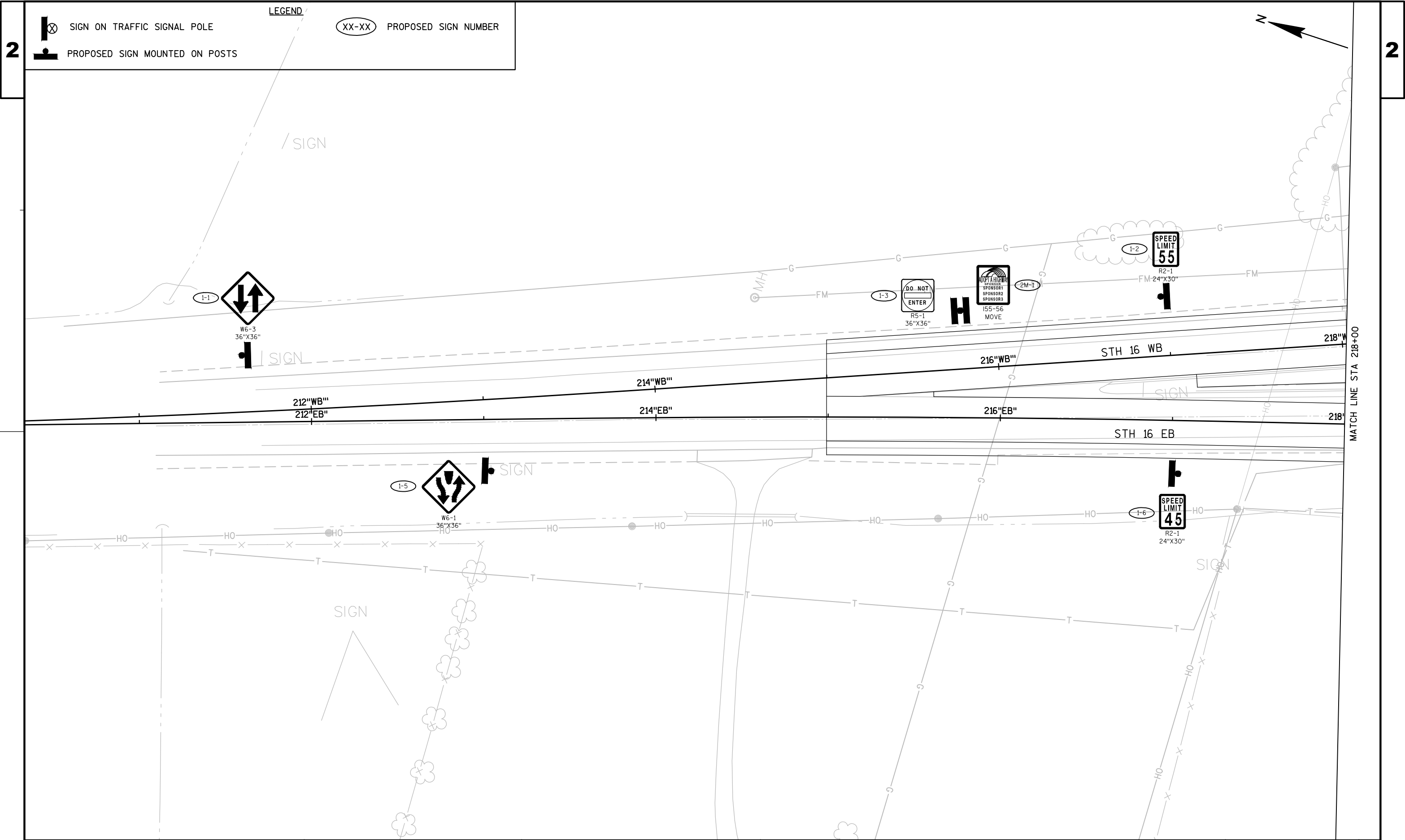
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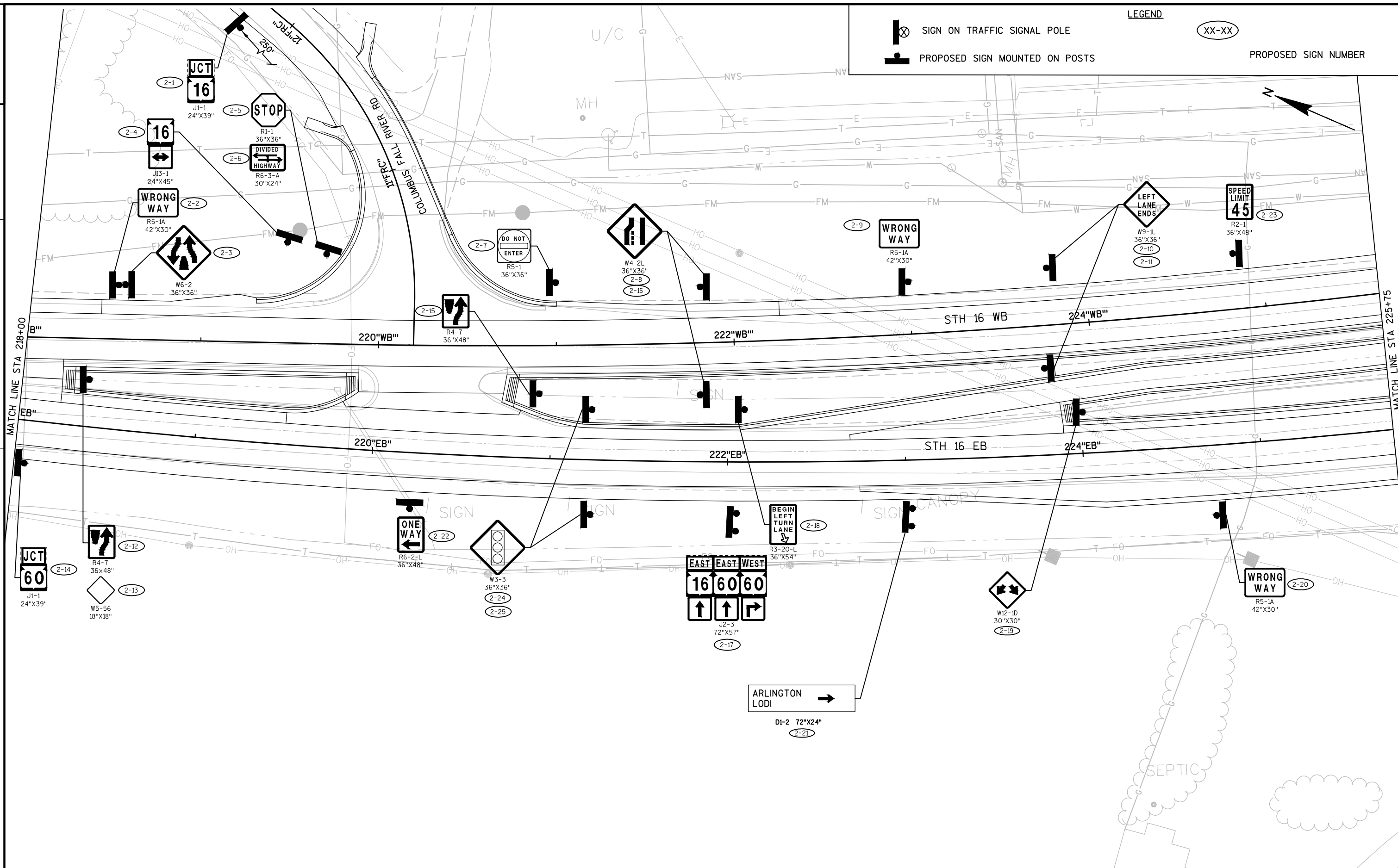
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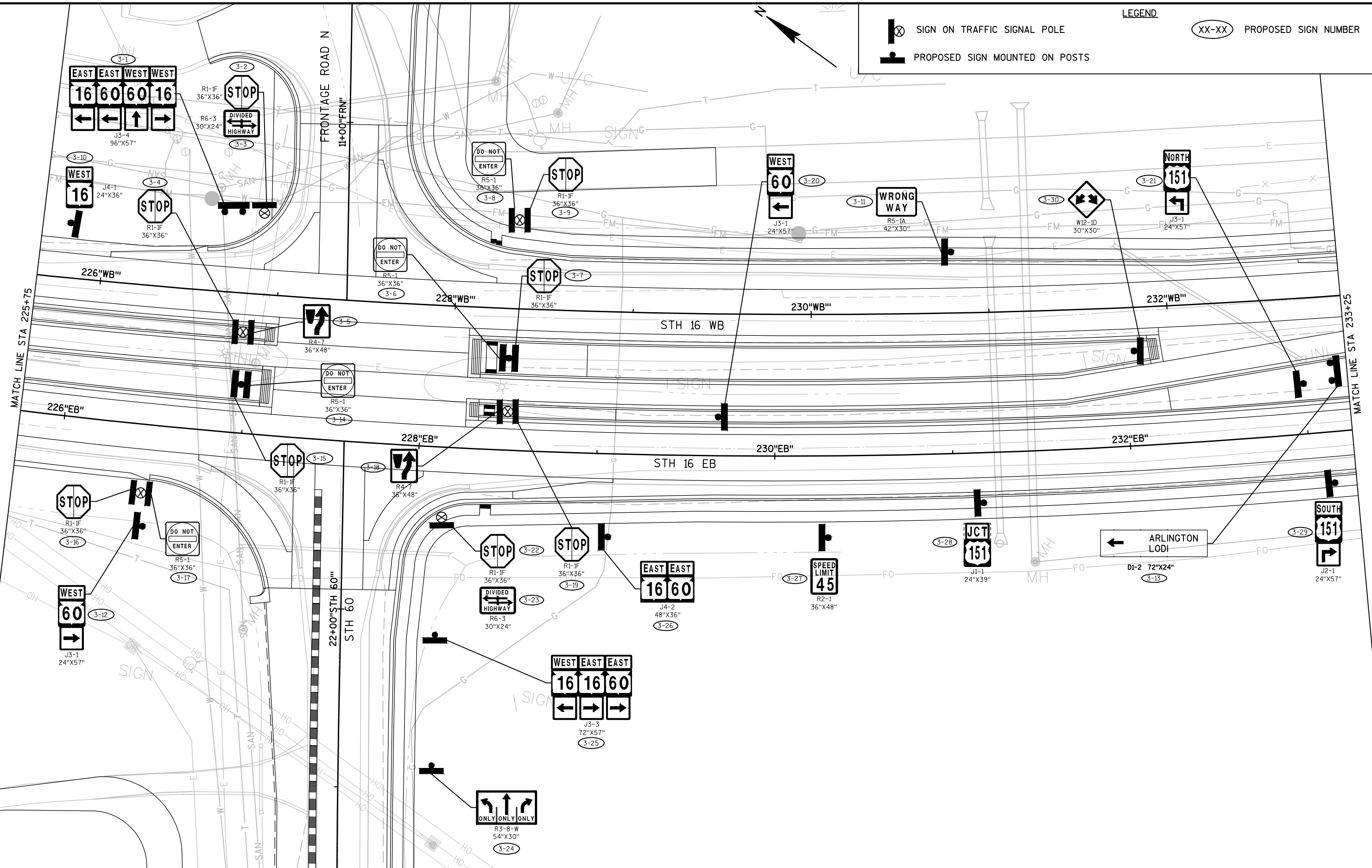
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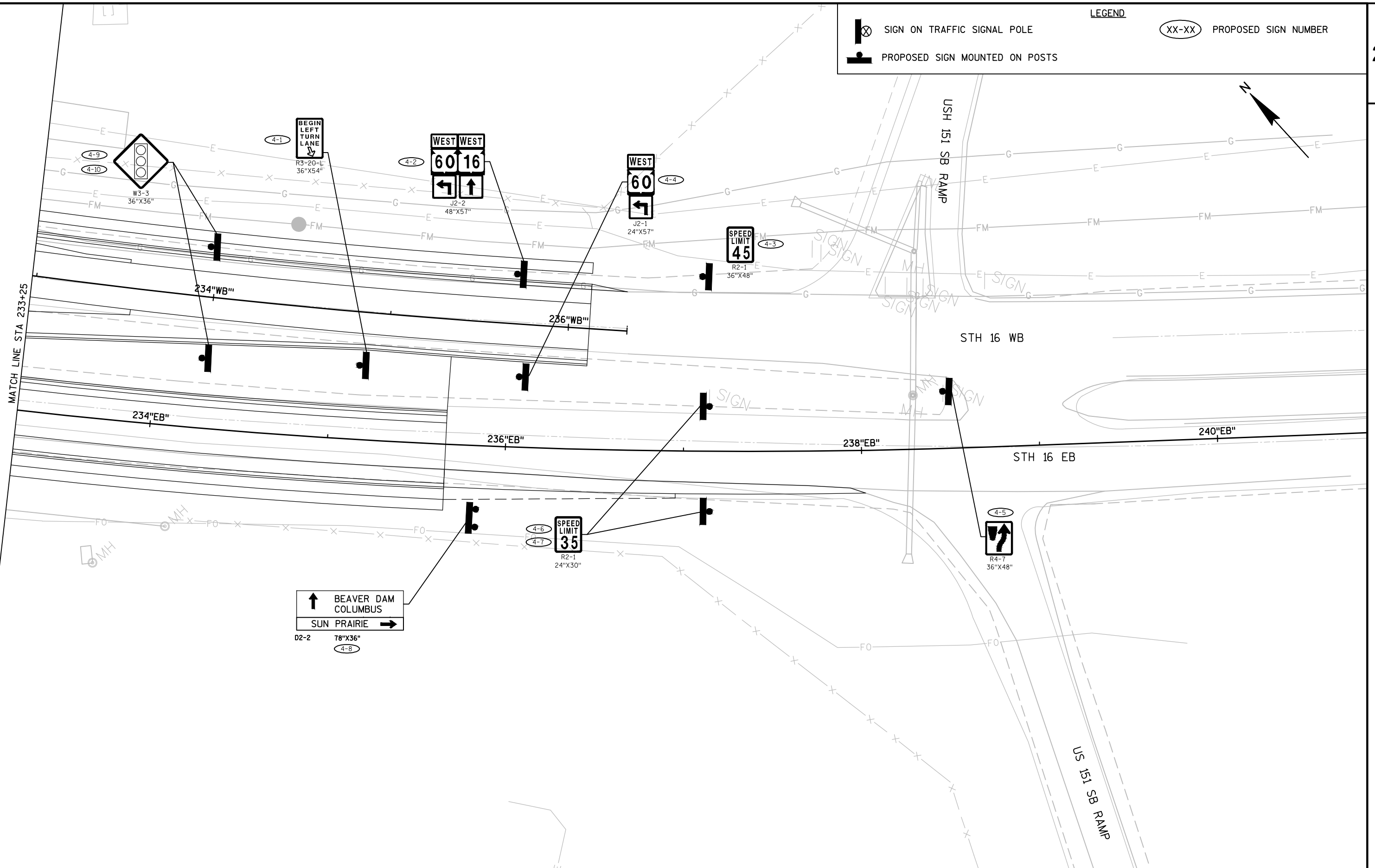
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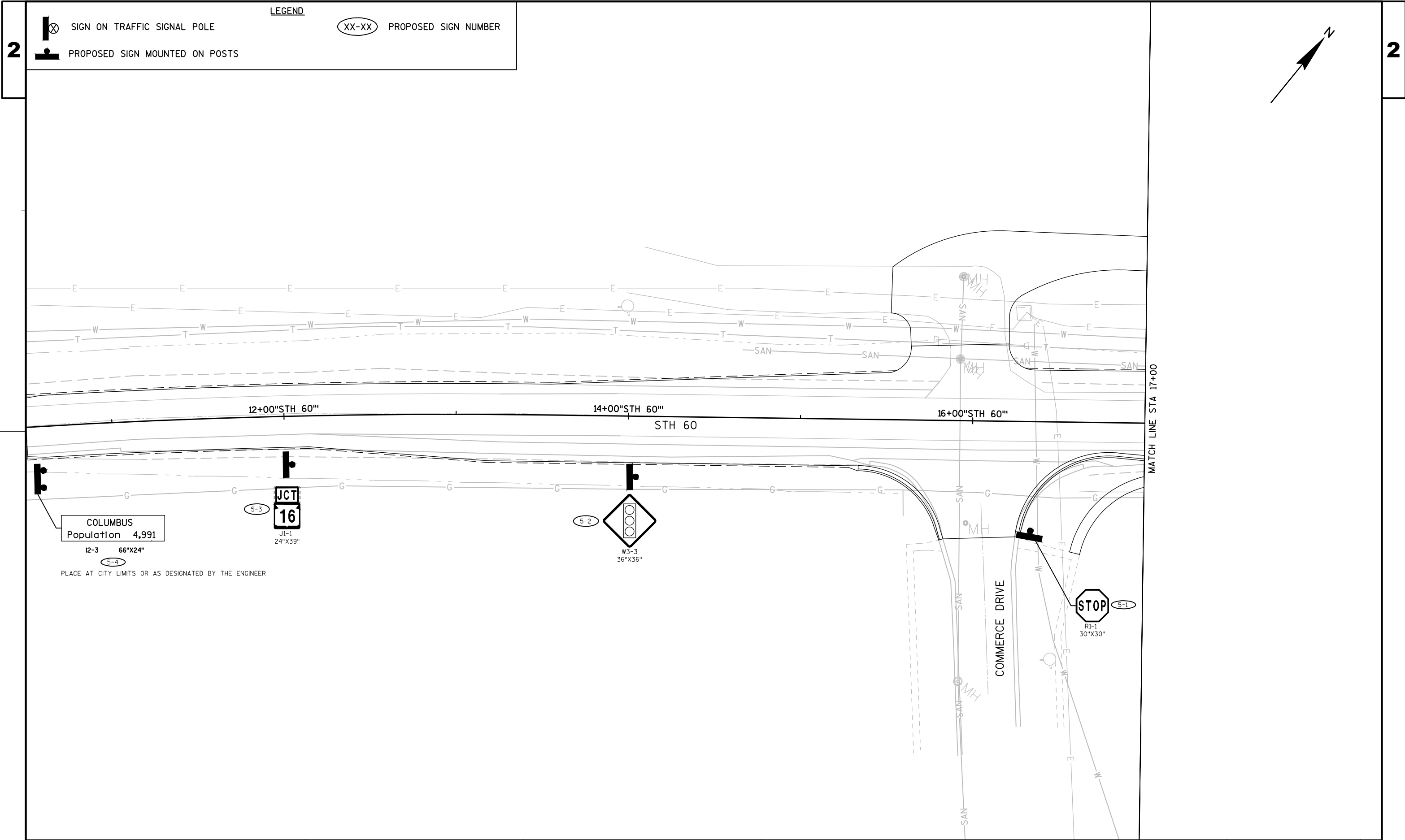


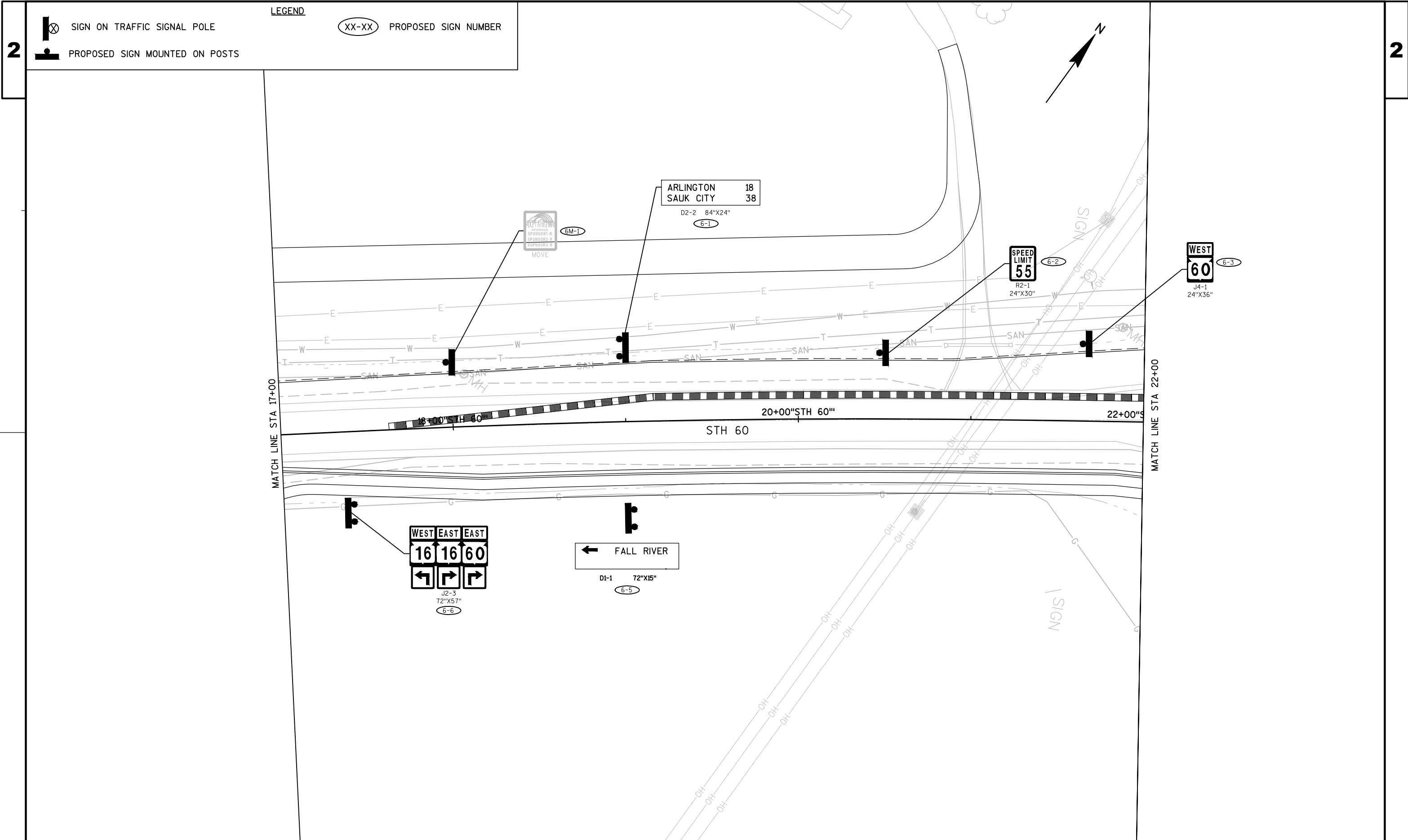








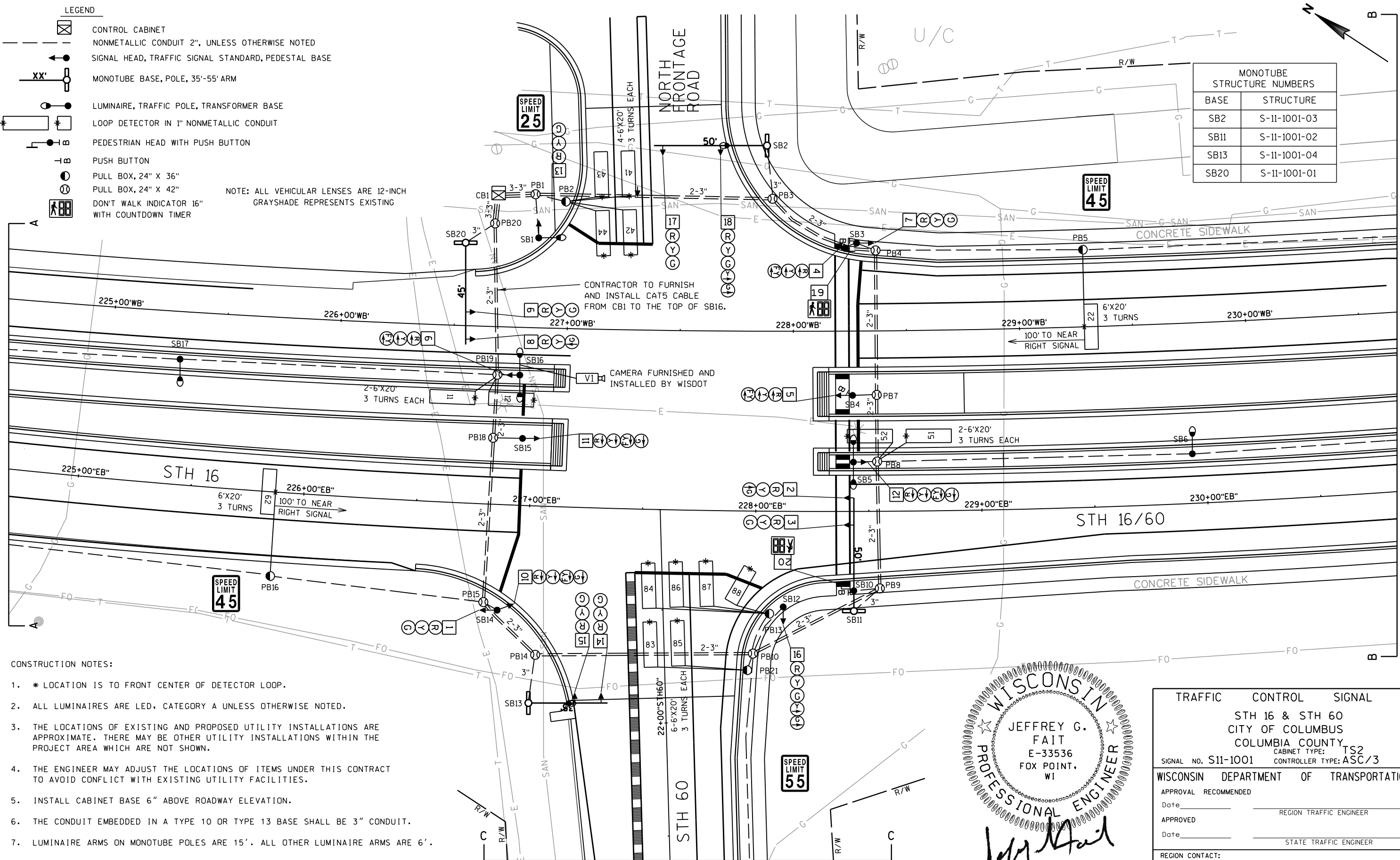




LEGEND

- — — — — CONTROL CABINET
— — — — — NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
— — — — — SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
— — — — — MONOTUBE BASE, POLE, 35'-55' ARM
— — — — — LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
— — — — — LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
— — — — — PEDESTRIAN HEAD WITH PUSH BUTTON
— — — — — PUSH BUTTON
— — — — — PULL BOX, 24" X 36"
— — — — — PULL BOX, 24" X 42"
— — — — — DON'T WALK INDICATOR 16" WITH COUNTDOWN TIMER

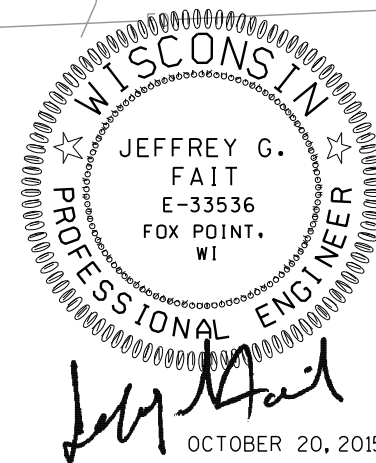
NOTE: ALL VEHICULAR LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
- ALL LUMINAIRES ARE LED, CATEGORY A UNLESS OTHERWISE NOTED.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
- INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
- THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 BASE SHALL BE 3" CONDUIT.
- LUMINAIRE ARMS ON MONOTUBE POLES ARE 15'. ALL OTHER LUMINAIRE ARMS ARE 6'.

MONOTUBE STRUCTURE NUMBERS	
BASE	STRUCTURE
SB2	S-11-1001-03
SB11	S-11-1001-02
SB13	S-11-1001-04
SB20	S-11-1001-01



TRAFFIC CONTROL SIGNAL	
STH 16 & STH 60	
CITY OF COLUMBUS	
COLUMBIA COUNTY	
SIGNAL NO. S11-1001	CABINET TYPE: TS2 CONTROLLER TYPE: ASC/3
WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVAL RECOMMENDED	
Date _____	REGION TRAFFIC ENGINEER
APPROVED	
Date _____	STATE TRAFFIC ENGINEER
REGION CONTACT: DESIGNED BY: J. FAIT (TADI) REVISED BY:	

PROJECT NO: 1401-02-72

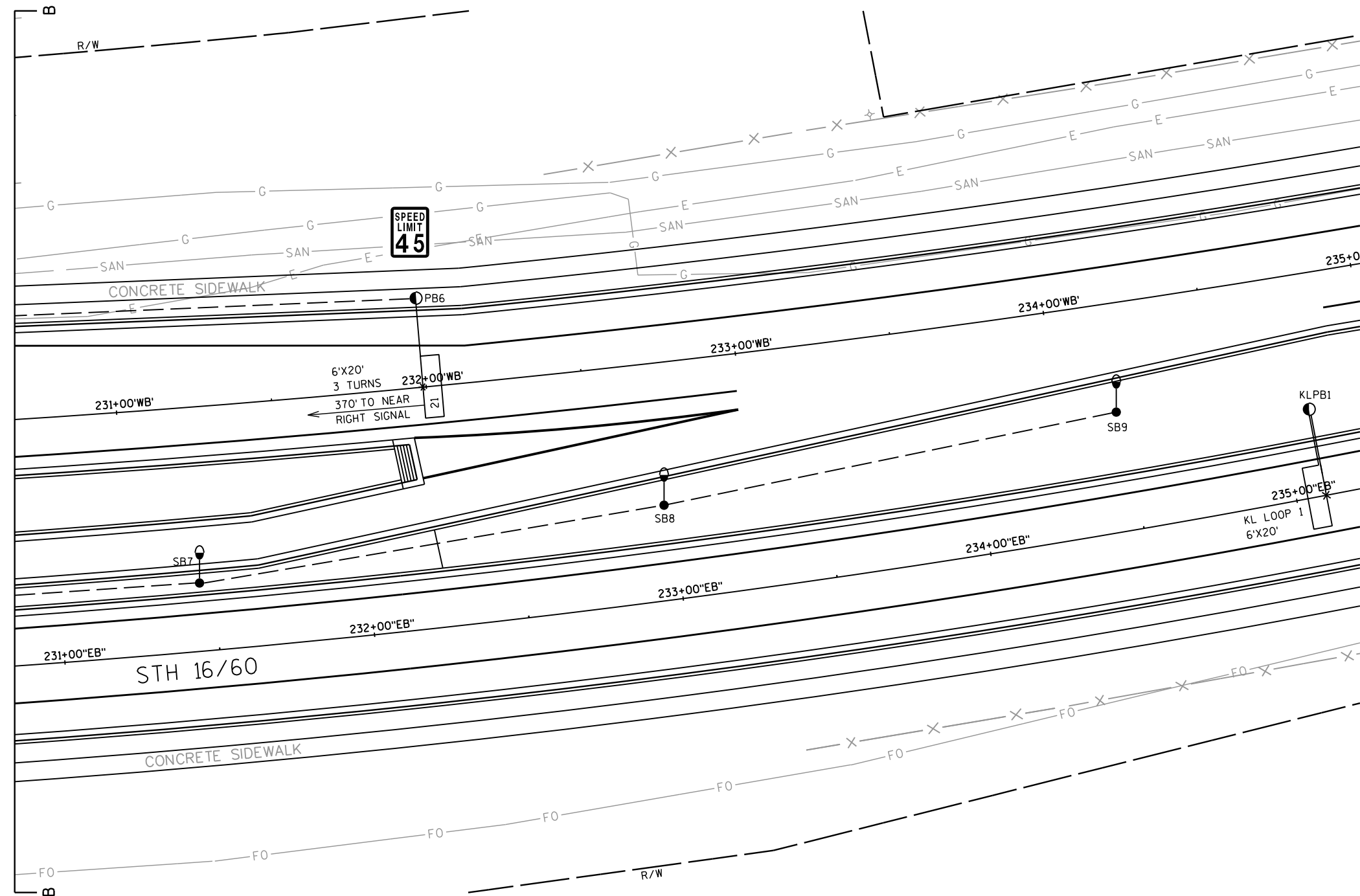
HWY: STH 16

COUNTY: COLUMBIA

TRAFFIC SIGNAL PLAN

SHEET

E



TRAFFIC CONTROL SIGNAL
STH 16 & STH 60
CITY OF COLUMBUS
COLUMBIA COUNTY

SIGNAL NO. S11-1001

REGION CONTACT:
DESIGNED BY: J. FAIT (TADI)
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 1401-02-72

HWY: STH 16

COUNTY: COLUMBIA

TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : Proposed Signals.dgn

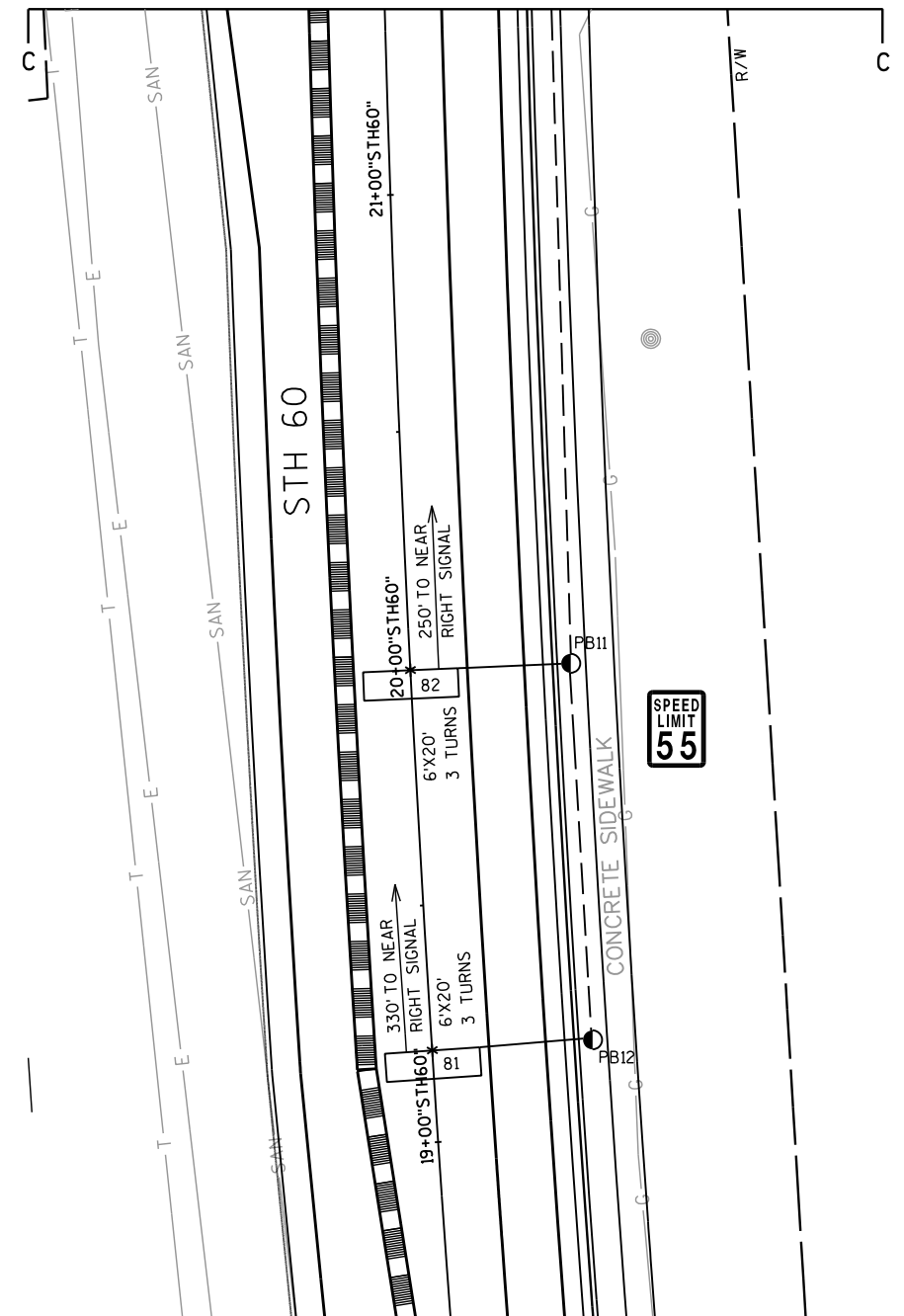
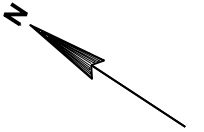
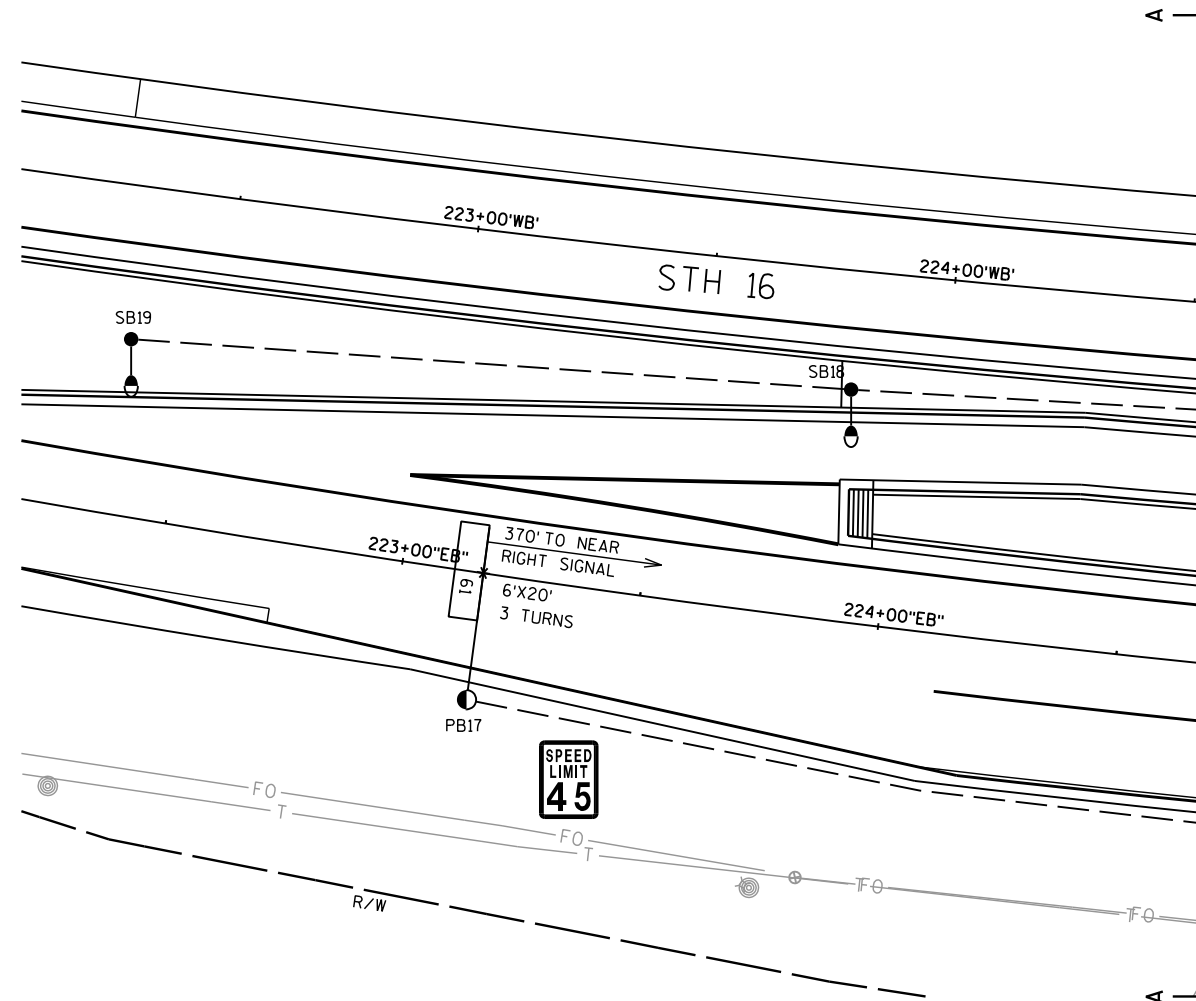
PLOT DATE : 10/20/2015

PLOT BY : JFAIT-TADI

PLOT NAME :

PLOT SCALE : 40.0000' / in.

WISDOT/CADDs SHEET 42



TRAFFIC CONTROL SIGNAL
STH 16 & STH 60
CITY OF COLUMBUS
COLUMBIA COUNTY

SIGNAL NO. S11-1001

REGION CONTACT:
DESIGNED BY: J. FAIT (TADI)
REVISED BY:

PAGE 3 OF 4

PROJECT NO:1401-02-72

HWY: STH 16

COUNTY:COLUMBIA

TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : Proposed Signals.dgn

PLOT DATE : 10/20/2015

PLOT BY : JFAIT-TADI

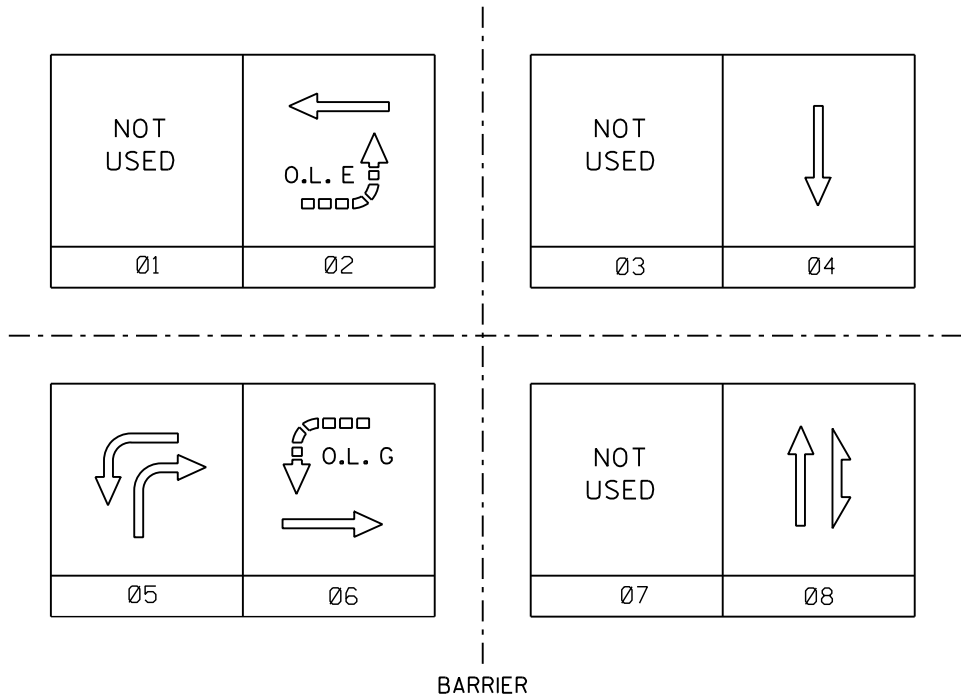
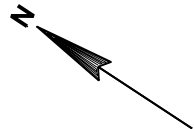
PLOT NAME :

PLOT SCALE : 40.0000' / in.

WISDOT/CADDs SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	7-9	R
Ø3		
Ø4	13-15	R
Ø5	10-12	R
Ø5 RT	16,18	-
Ø6	1-3	R
Ø7		
Ø8	16-18	R
Ø2 PED		
Ø4 PED		
Ø6 PED		
Ø8 PED	19,20	
OLA		
OLB		
OLC		
OLD		
OLE	4-6	R
OLF		
OLG	10-12	-
OLH		

O.L. ASSIGNMENTS	
PH 2 & 4	
PH 6 & 8	



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	x
3				
4		8		x
5		2		x
6	X	2	MIN	x
7				
8		4		x

TYPE OF INTERCONNECT

NONE	X
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF LIGHTING

BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT

NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF REMOTE COMMUNICATION

NONE	
FIBER	
CELL MODEM	X
PHONE	

CENTRAL SYSTEM

LOCATION OF MASTER CONTROLLER NO: S-
SIGNAL SYSTEM #: SS- -

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR *(S)	11	21	41	43	51	61	-	-
PHASE CALLED	6	2	4	4	5	6		
PHASE EXTENDED	6	2	4	4	5	6		
DISCONNECT TIME								
CALLING DELAY				8				
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR *(S)	81	83	85	87				
PHASE CALLED		8	8	8				
PHASE EXTENDED	8	8	8	8				
DISCONNECT TIME								
CALLING DELAY				16				
EXTENSION STRETCH	5.5							
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR *(S)	12	22	42	44	52	62	-	-
PHASE CALLED	6	2	4	4	5	6		
PHASE EXTENDED	6	2	4	4	5	6		
DISCONNECT TIME		15				15		
CALLING DELAY			2	8				
EXTENSION STRETCH								
LOOP FUNCTION		DIS-CONNECT				DIS-CONNECT		

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR *(S)	82	84	86	88				
PHASE CALLED		8	8	8				
PHASE EXTENDED	8	8	8	8				
DISCONNECT TIME								
CALLING DELAY				16				
EXTENSION STRETCH	4.0							
LOOP FUNCTION								

TRAFFIC CONTROL SIGNAL

STH 16 & STH 60
CITY OF COLUMBUS
COLUMBIA COUNTY

SIGNAL NO. S11-1001

REGION CONTACT:
DESIGNED BY: J. FAIT (TADI)
REVISED BY:

PROJECT ID:	1401-02-72
INTERSECTION:	STH 16 AT STH 60

SIGNAL WIRE COLOR	BLK-BLACK	RED-RED	GRN-GREEN
CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR								D/WALK	WALK	PED BUTTON
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	*GREEN				
SB1		5	13	RED	ORG	GRN								
SB2		12	17	RED	ORG	GRN								
			18	RED/BLK	ORG/BLK	GRN/BLK		WHT/BLK		BLU				
SB3		12	4				RED/BLK	ORG/BLK	BLK/WHT					
			7	RED	ORG	GRN								
			19									BLK	BLU	
			BUTTON											WHT/BLK
SB4		7	5				RED	ORG	WHT/BLK					
			BUTTON											BLK
SB5		7	12				RED	ORG	BLK/WHT	GRN				
SB10		5	20									RED	GRN	
			BUTTON											BLK
SB11		9	2	RED	ORG					GRN				
			3	RED/BLK	ORG/BLK	GRN/BLK								
SB12		7	16	RED/BLK	ORG/BLK	GRN/BLK		BLU/BLK		BLK/WHT				
SB13		9	14	RED	ORG	GRN								
			15	RED/BLK	ORG/BLK	GRN/BLK								
SB14		9	1	RED	ORG	GRN								
			10				RED/BLK	WHT/BLK	BLK	GRN/BLK				
SB15		7	11				RED	ORG	BLK	GRN				
SB16		5	6				RED	ORG	BLK					
SB20		9	8	RED	ORG					GRN				
			9	RED/BLK	ORG/BLK	GRN/BLK								

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB20
SB20	CB1

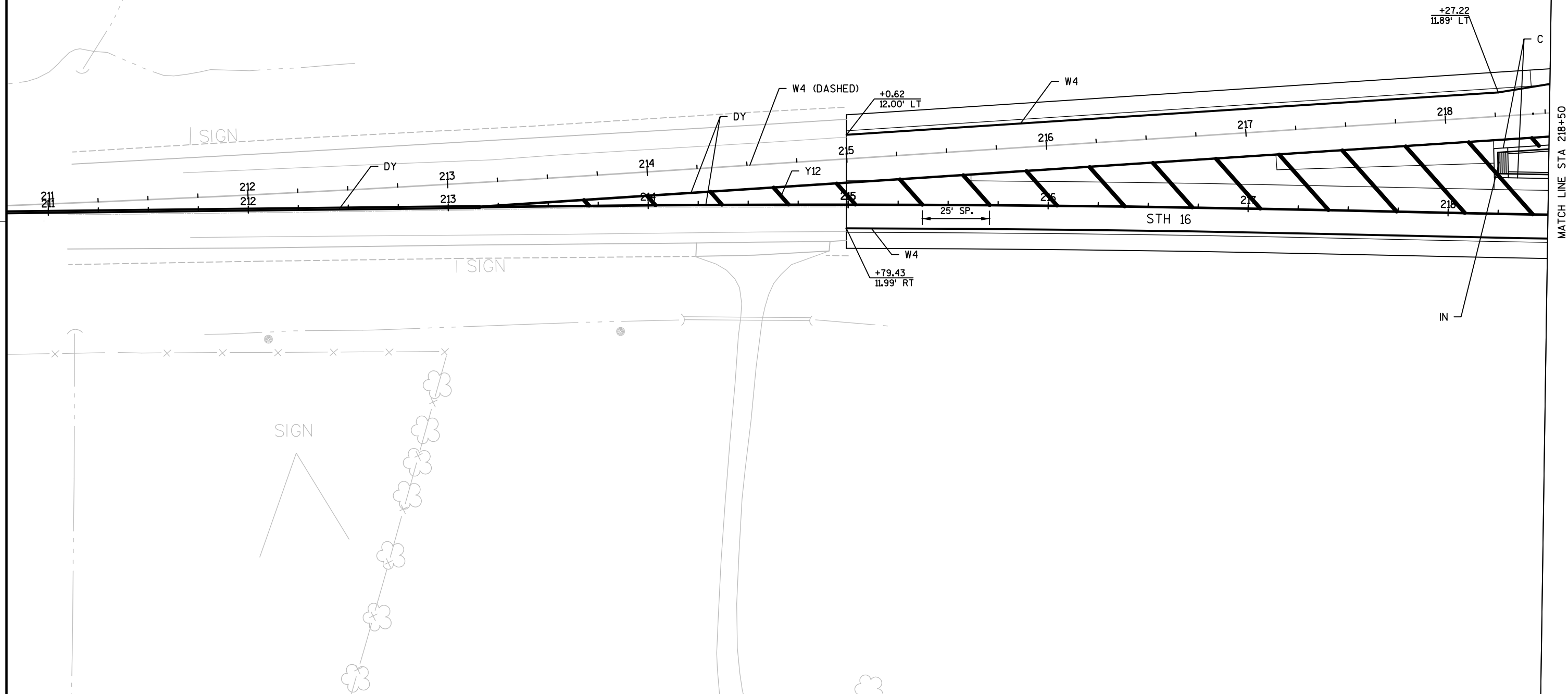
PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
SB1	PB1
SB2	PB3
SB3	PB4
SB4	PB7
SB5	PB8
SB11	PB9
SB12	PB10
SB13	PB14
SB14	PB15
SB15	PB18
SB16	PB19
SB20	PB20

LIGHTING 3 - #6 AWG	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
CB1	SB16
SB16	SB17
SB17	SB18
SB18	SB19
SB16	SB13

- NOTES:
- 1. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - 2. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

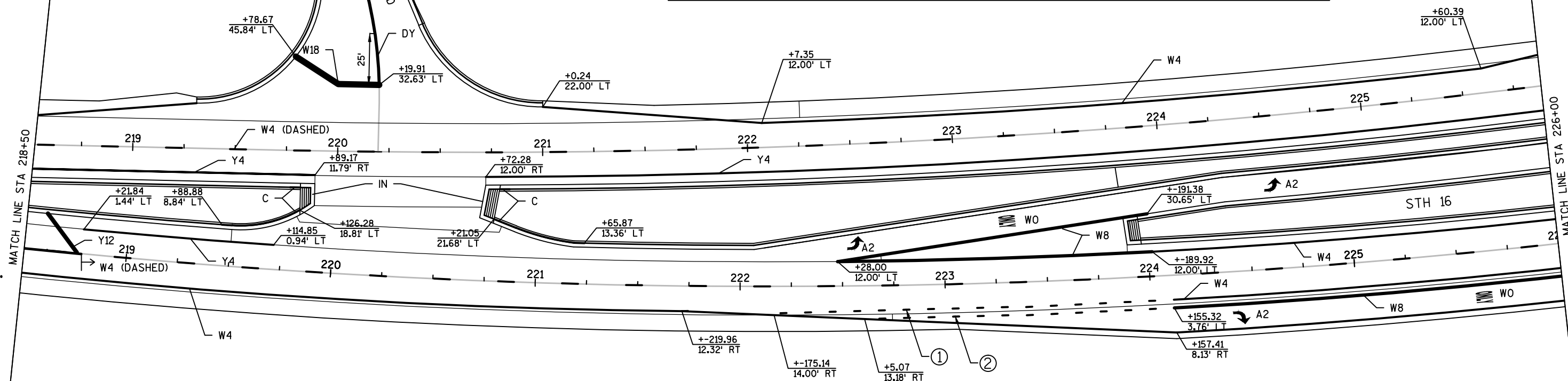
LEGEND

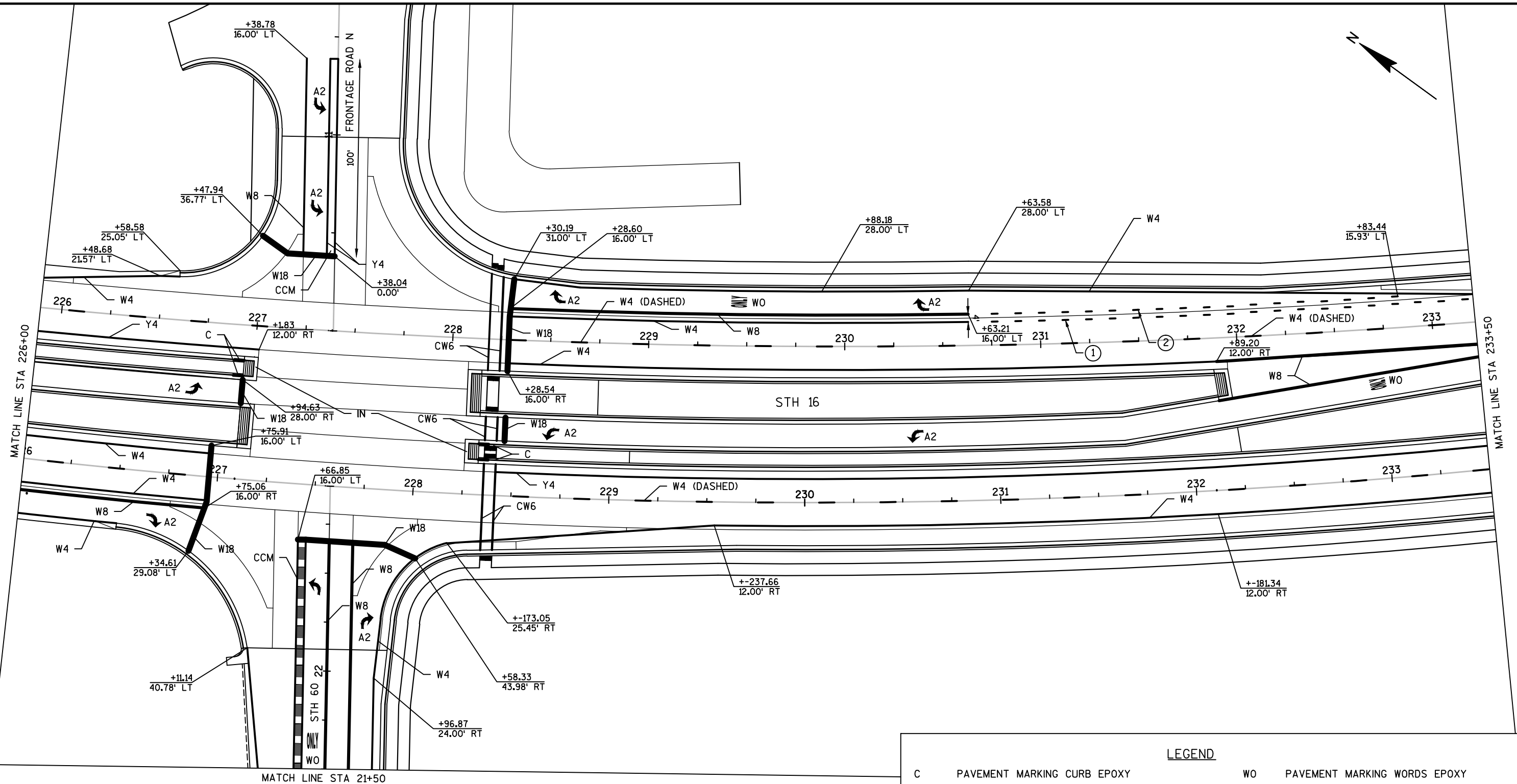
C	PAVEMENT MARKING CURB EPOXY	W0	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
IN	PAVEMENT MARKING ISLAND NOSE EPOXY	DY	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
W8	PAVEMENT MARKING EPOXY 8-INCH, WHITE	Y12	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW
W4	PAVEMENT MARKING EPOXY 4-INCH, WHITE	①	PAVEMENT MARKING EPOXY 4-INCH WHITE 3' DASH, 9' GAP
W18	STOP LINE EPOXY 18-INCH, WHITE	②	PAVEMENT MARKING EPOXY 8-INCH WHITE 3' DASH, 9' GAP
Y4	PAVEMENT MARKING EPOXY 4-INCH, YELLOW		
A2	PAVEMENT MARKING ARROWS EPOXY TYPE 2		



LEGEND

C	PAVEMENT MARKING CURB EPOXY	W0	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
IN	PAVEMENT MARKING ISLAND NOSE EPOXY	DY	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
W8	PAVEMENT MARKING EPOXY 8-INCH, WHITE	Y12	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW
W4	PAVEMENT MARKING EPOXY 4-INCH, WHITE	①	PAVEMENT MARKING EPOXY 4-INCH WHITE 3' DASH, 9' GAP
W18	STOP LINE EPOXY 18-INCH, WHITE	②	PAVEMENT MARKING EPOXY 8-INCH WHITE 3' DASH, 9' GAP
Y4	PAVEMENT MARKING EPOXY 4-INCH, YELLOW		
A2	PAVEMENT MARKING ARROWS EPOXY TYPE 2		





LEGEND

C	PAVEMENT MARKING CURB EPOXY	W0	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
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Y4	PAVEMENT MARKING EPOXY 4-INCH, YELLOW		
A2	PAVEMENT MARKING ARROWS EPOXY TYPE 2		

PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

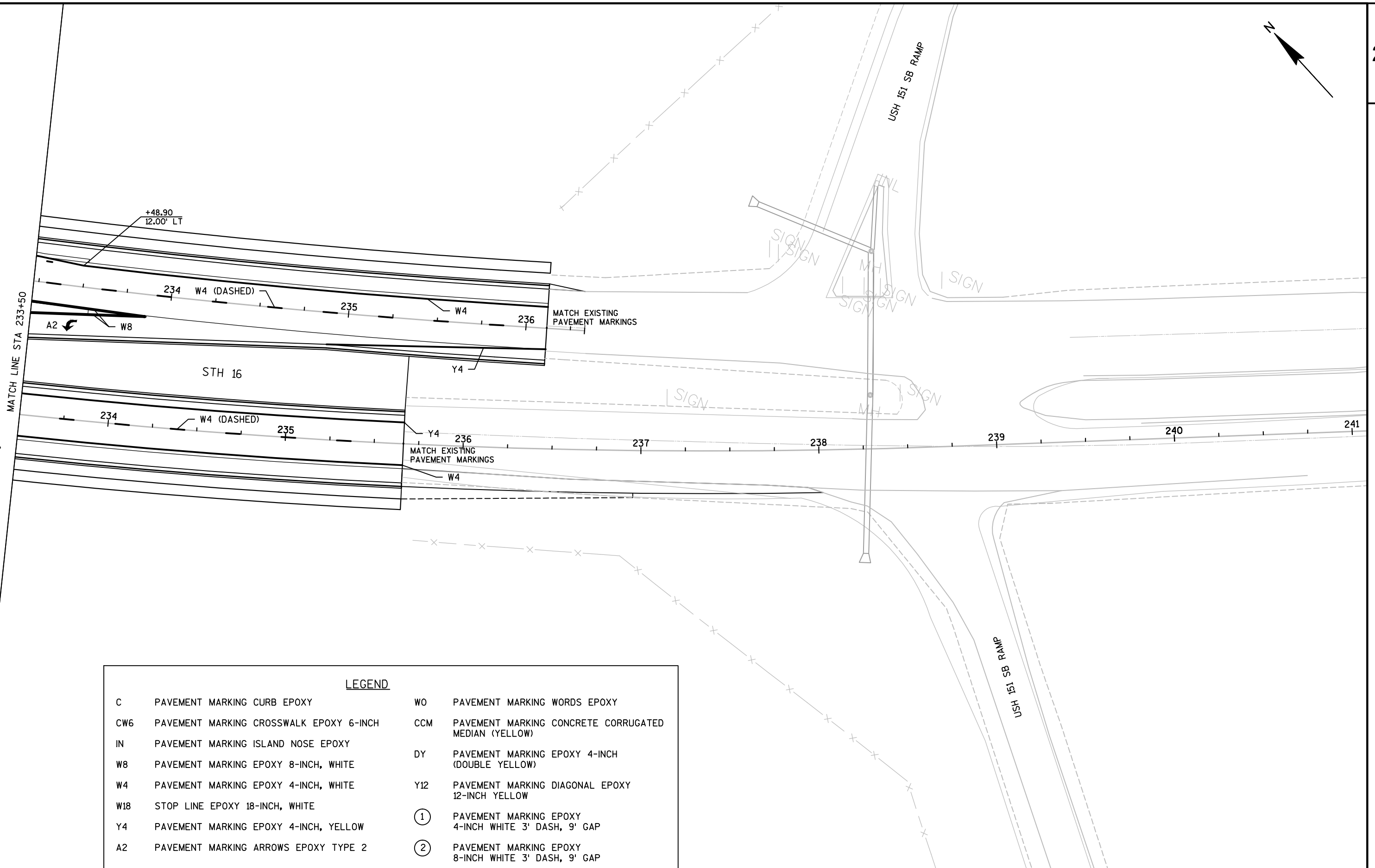
PAVEMENT MARKING STH 16

SHEET

E

2

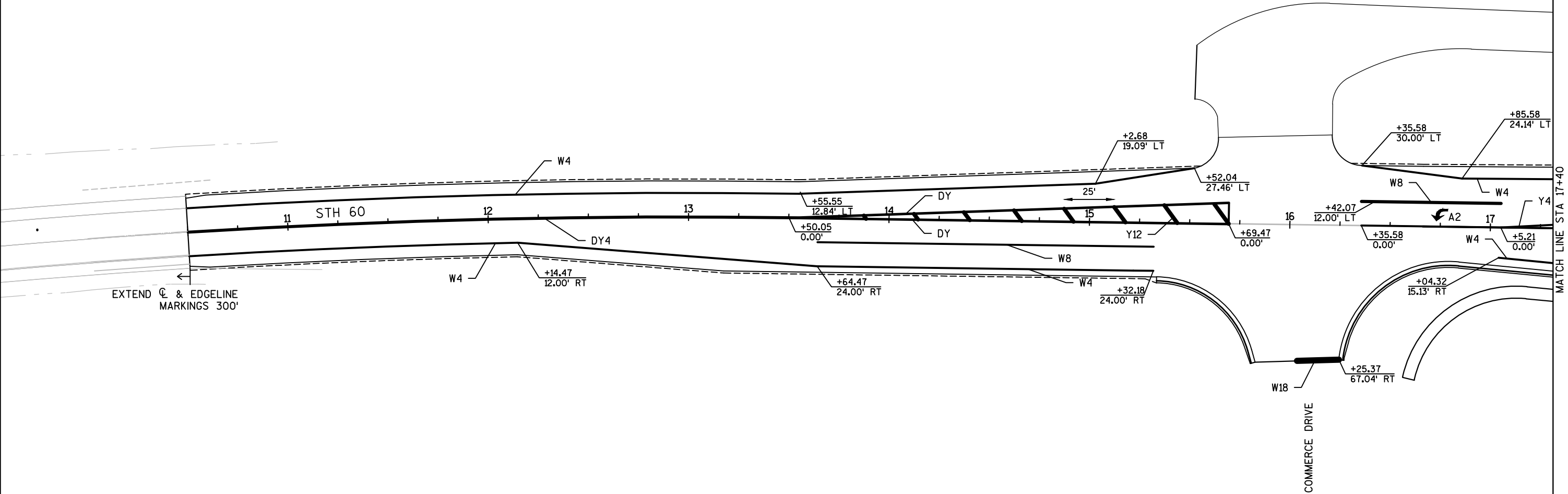
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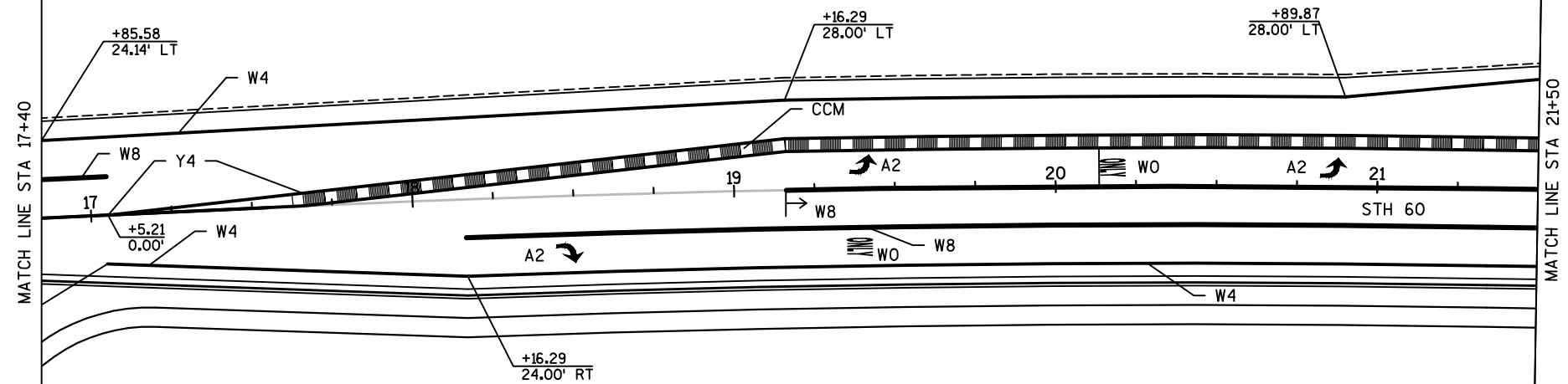


LEGEND			
C	PAVEMENT MARKING CURB EPOXY	WO	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
IN	PAVEMENT MARKING ISLAND NOSE EPOXY	DY	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
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Y4	PAVEMENT MARKING EPOXY 4-INCH, YELLOW		
A2	PAVEMENT MARKING ARROWS EPOXY TYPE 2		

LEGEND

C	PAVEMENT MARKING CURB EPOXY	W0	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
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W8	PAVEMENT MARKING EPOXY 8-INCH, WHITE	Y12	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW
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Y4	PAVEMENT MARKING EPOXY 4-INCH, YELLOW		
A2	PAVEMENT MARKING ARROWS EPOXY TYPE 2		



**LEGEND**

C	PAVEMENT MARKING CURB EPOXY	W0	PAVEMENT MARKING WORDS EPOXY
CW6	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	CCM	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN (YELLOW)
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PROJECT NO:1401-02-72

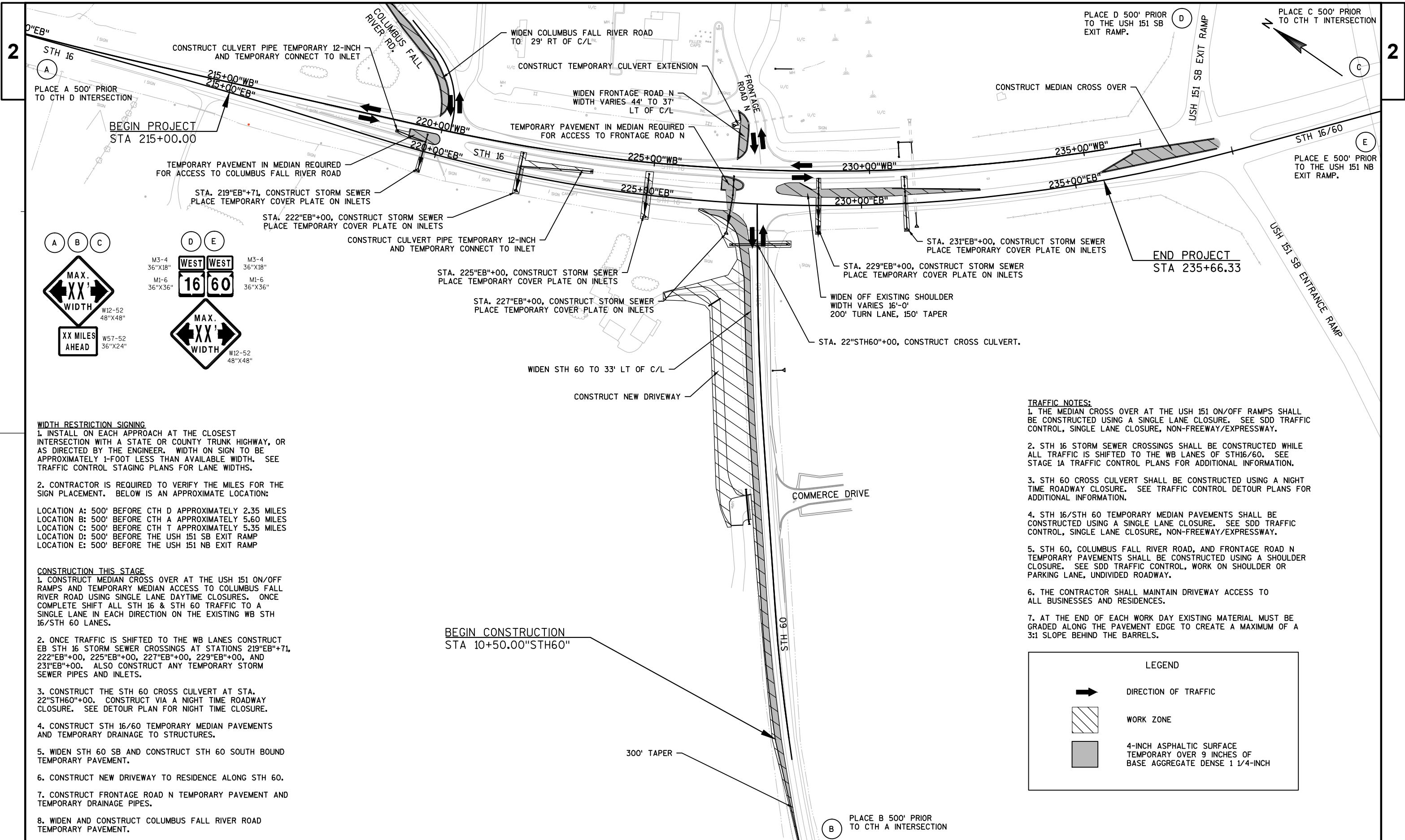
HWY:STH 16

COUNTY:COLUMBIA

PAVEMENT MARKINGS STH 60

SHEET

E



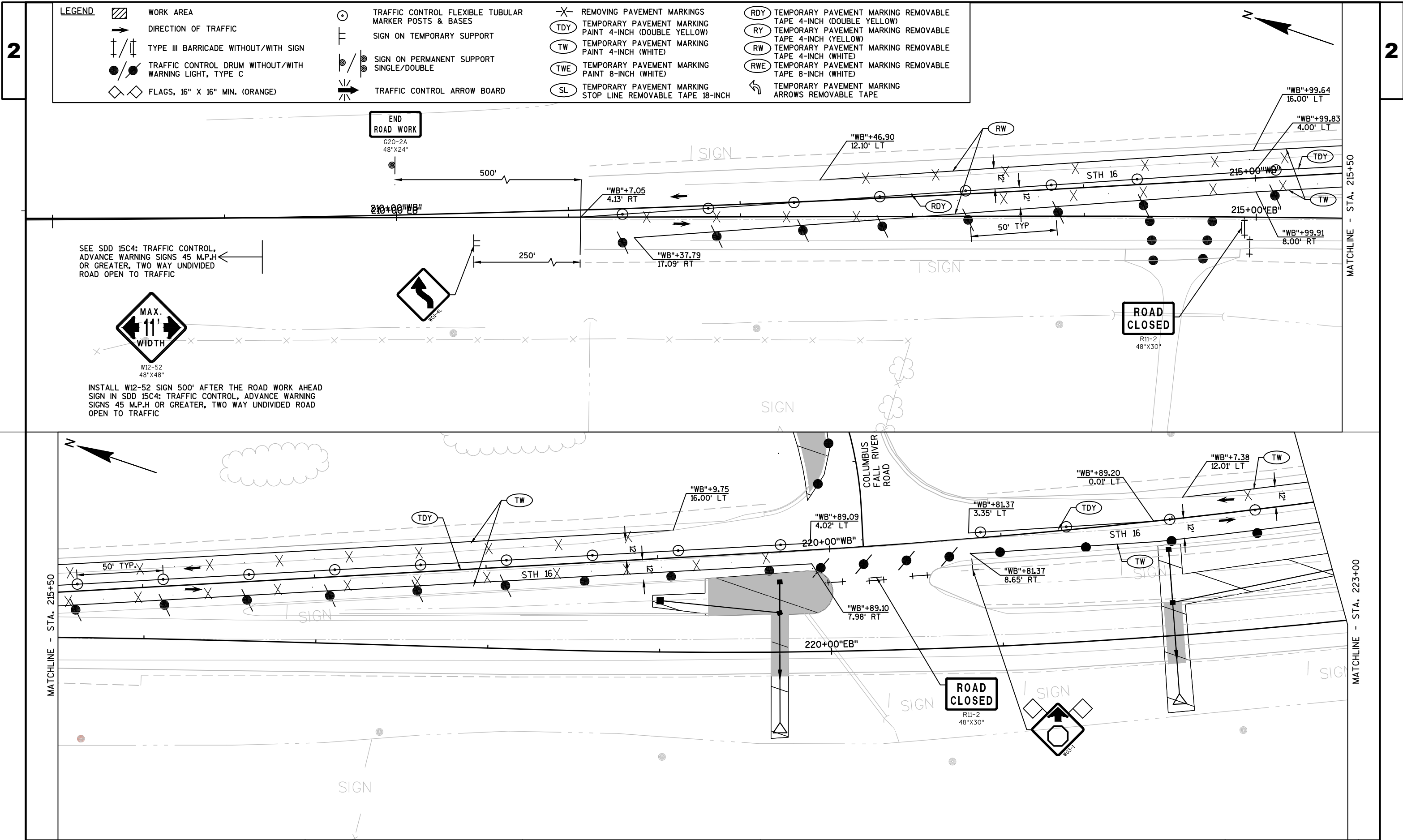
WIDTH RESTRICTION SIGNING
1. INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROXIMATELY 1-FOOT LESS THAN AVAILABLE WIDTH. SEE TRAFFIC CONTROL STAGING PLANS FOR LANE WIDTHS.
2. CONTRACTOR IS REQUIRED TO VERIFY THE MILES FOR THE SIGN PLACEMENT. BELOW IS AN APPROXIMATE LOCATION:
LOCATION A: 500' BEFORE CTH D APPROXIMATELY 2.35 MILES
LOCATION B: 500' BEFORE CTH A APPROXIMATELY 5.60 MILES
LOCATION C: 500' BEFORE CTH T APPROXIMATELY 5.35 MILES
LOCATION D: 500' BEFORE THE USH 151 SB EXIT RAMP
LOCATION E: 500' BEFORE THE USH 151 NB EXIT RAMP

CONSTRUCTION THIS STAGE
1. CONSTRUCT MEDIAN CROSS OVER AT THE USH 151 ON/OFF RAMP AND TEMPORARY MEDIAN ACCESS TO COLUMBUS FALL RIVER ROAD USING SINGLE LANE DAYTIME CLOSURES. ONCE COMPLETE SHIFT ALL STH 16 & STH 60 TRAFFIC TO A SINGLE LANE IN EACH DIRECTION ON THE EXISTING WB STH 16/STH 60 LANES.
2. ONCE TRAFFIC IS SHIFTED TO THE WB LANES CONSTRUCT EB STH 16 STORM SEWER CROSSINGS AT STATIONS 219"EB"+71, 222"EB"+00, 225"EB"+00, 227"EB"+00, 229"EB"+00, AND 231"EB"+00. ALSO CONSTRUCT ANY TEMPORARY STORM SEWER PIPES AND INLETS.
3. CONSTRUCT THE STH 60 CROSS CULVERT AT STA. 22"STH60"+00. CONSTRUCT VIA A NIGHT TIME ROADWAY CLOSURE. SEE DETOUR PLAN FOR NIGHT TIME CLOSURE.
4. CONSTRUCT STH 16/60 TEMPORARY MEDIAN PAVEMENTS AND TEMPORARY DRAINAGE TO STRUCTURES.
5. WIDEN STH 60 SB AND CONSTRUCT STH 60 SOUTH BOUND TEMPORARY PAVEMENT.
6. CONSTRUCT NEW DRIVEWAY TO RESIDENCE ALONG STH 60.
7. CONSTRUCT FRONTAGE ROAD N TEMPORARY PAVEMENT AND TEMPORARY DRAINAGE PIPES.
8. WIDEN AND CONSTRUCT COLUMBUS FALL RIVER ROAD TEMPORARY PAVEMENT.

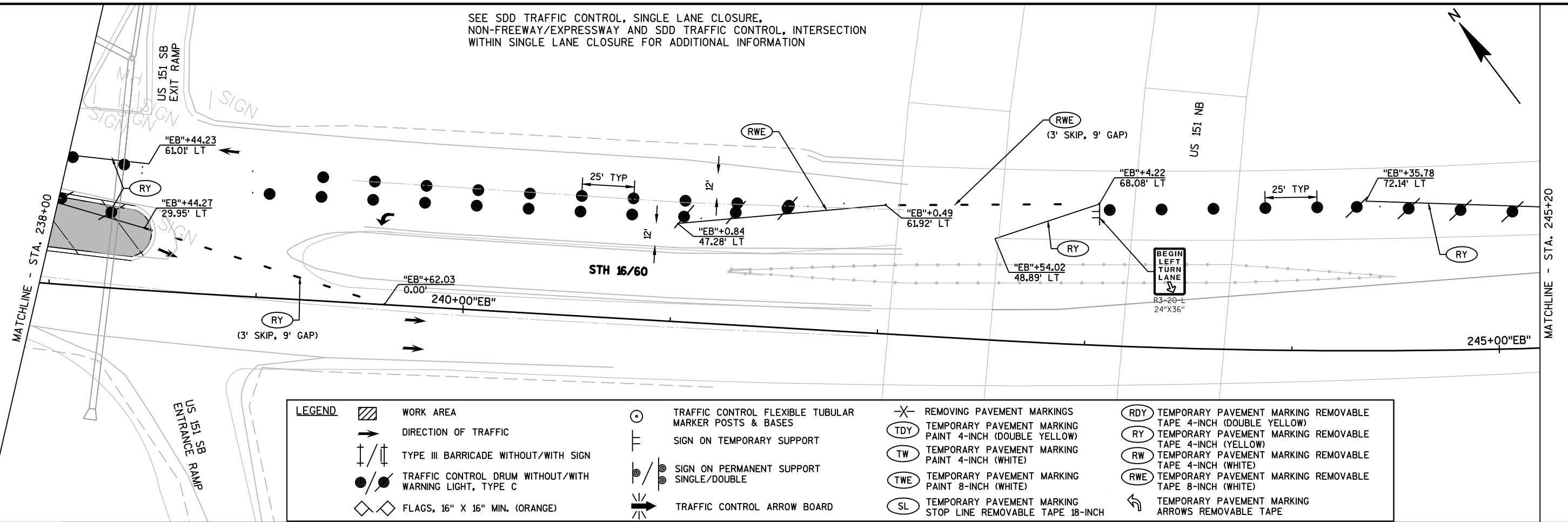
TRAFFIC NOTES:
1. THE MEDIAN CROSS OVER AT THE USH 151 ON/OFF RAMP SHALL BE CONSTRUCTED USING A SINGLE LANE CLOSURE. SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY.
2. STH 16 STORM SEWER CROSSINGS SHALL BE CONSTRUCTED WHILE ALL TRAFFIC IS SHIFTED TO THE WB LANES OF STH16/60. SEE STAGE 1A TRAFFIC CONTROL PLANS FOR ADDITIONAL INFORMATION.
3. STH 60 CROSS CULVERT SHALL BE CONSTRUCTED USING A NIGHT TIME ROADWAY CLOSURE. SEE TRAFFIC CONTROL DETOUR PLANS FOR ADDITIONAL INFORMATION.
4. STH 16/STH 60 TEMPORARY MEDIAN PAVEMENTS SHALL BE CONSTRUCTED USING A SINGLE LANE CLOSURE. SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY.
5. STH 60, COLUMBUS FALL RIVER ROAD, AND FRONTAGE ROAD N TEMPORARY PAVEMENTS SHALL BE CONSTRUCTED USING A SHOULDER CLOSURE. SEE SDD TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY.
6. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL BUSINESSES AND RESIDENCES.
7. AT THE END OF EACH WORK DAY EXISTING MATERIAL MUST BE GRADED ALONG THE PAVEMENT EDGE TO CREATE A MAXIMUM OF A 3:1 SLOPE BEHIND THE BARRELS.

LEGEND

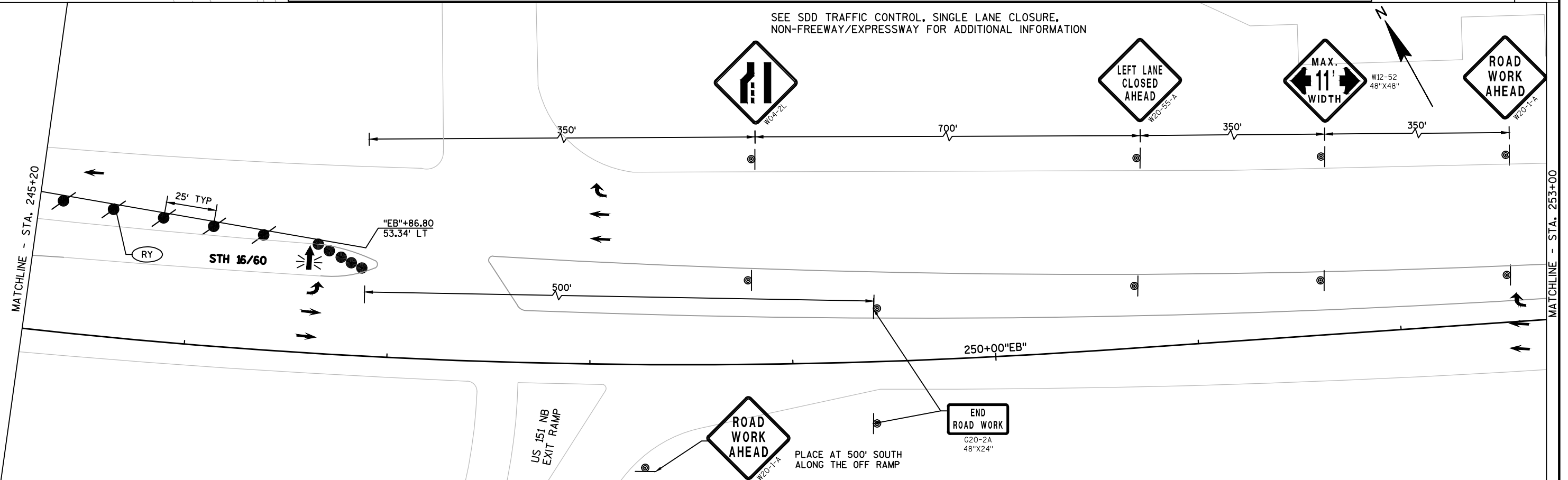
- DIRECTION OF TRAFFIC
- WORK ZONE
- 4-INCH ASPHALTIC SURFACE TEMPORARY OVER 9 INCHES OF BASE AGGREGATE DENSE 1 1/4-INCH



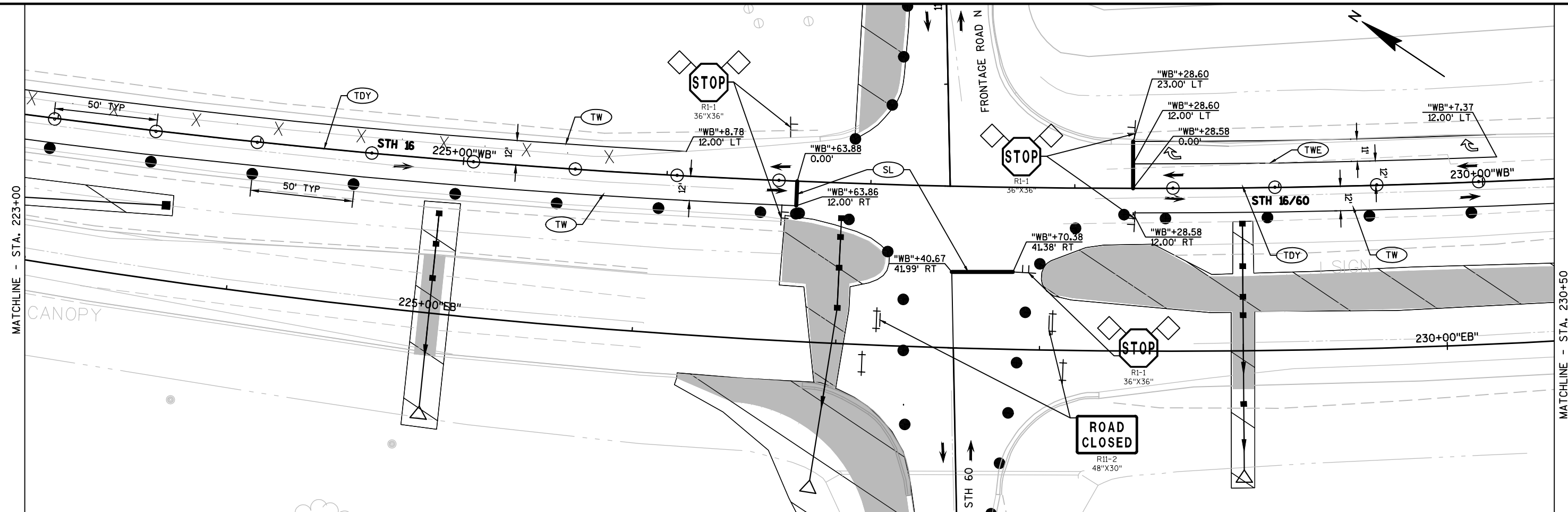
SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE,
NON-FREEWAY/EXPRESSWAY AND SDD TRAFFIC CONTROL, INTERSECTION
WITHIN SINGLE LANE CLOSURE FOR ADDITIONAL INFORMATION



SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE,
NON-FREEWAY/EXPRESSWAY FOR ADDITIONAL INFORMATION



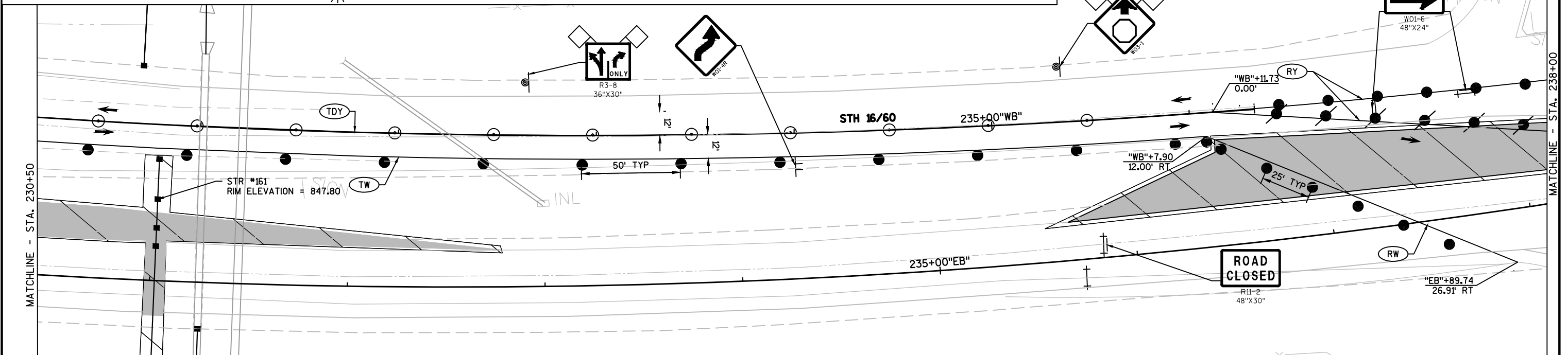
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2

LEGEND

	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)		TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE



PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 1A

SHEET

E

2

NOTE:
EXISTING TRAFFIC CONTROL AND PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

END
ROAD WORK
G20-2A
48"X24"

500'

300' TAPER

50' TYP

STH 60

LANE
CLOSED
R11-2-L
48"X30"

ASPHALTIC SURFACE TEMPORARY
CONSTRUCTED THIS STAGE

14'

50' TYP

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC

LEGEND

- WORK AREA
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/WITH SIGN
- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C
- FLAGS, 16" X 16" MIN. (ORANGE)

- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
- TRAFFIC CONTROL ARROW BOARD

- REMOVING PAVEMENT MARKINGS
- TDY TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- TW TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- TWE TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
- SL TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH

- RDY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- RY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- RW TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- RWE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

MATCHLINE - STA. 12+50 "STH 60"

2

NOTE:
EXISTING TRAFFIC CONTROL AND PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

MATCHLINE - STA. 12+50 "STH 60"

50' TYP

14'

15+00"STH 60"

ASPHALTIC SURFACE TEMPORARY
CONSTRUCTED THIS STAGE

STH 60

50' TYP

20+00"

MATCHLINE - STA. 20+00 "STH 60"

COMMERCE DR



PLACE AT 500' FROM INTERSECTION
ALONG COMMERCE DRIVE

PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 1A

SHEET

E

FILE NAME : J:\ACTIVE\SW\1401-02-02\CAD\14010202\SHEETSP\AN\025007_TC.DWG

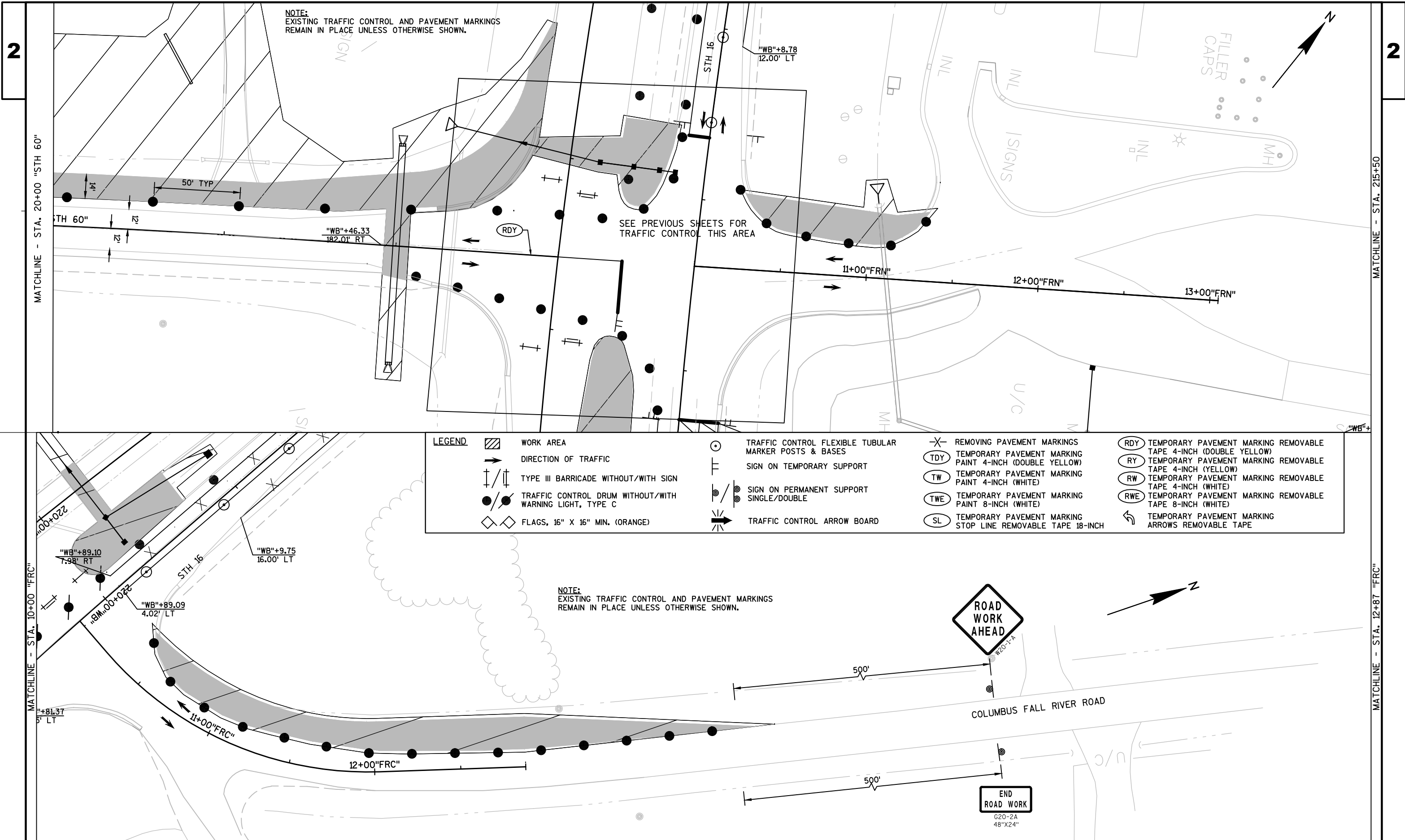
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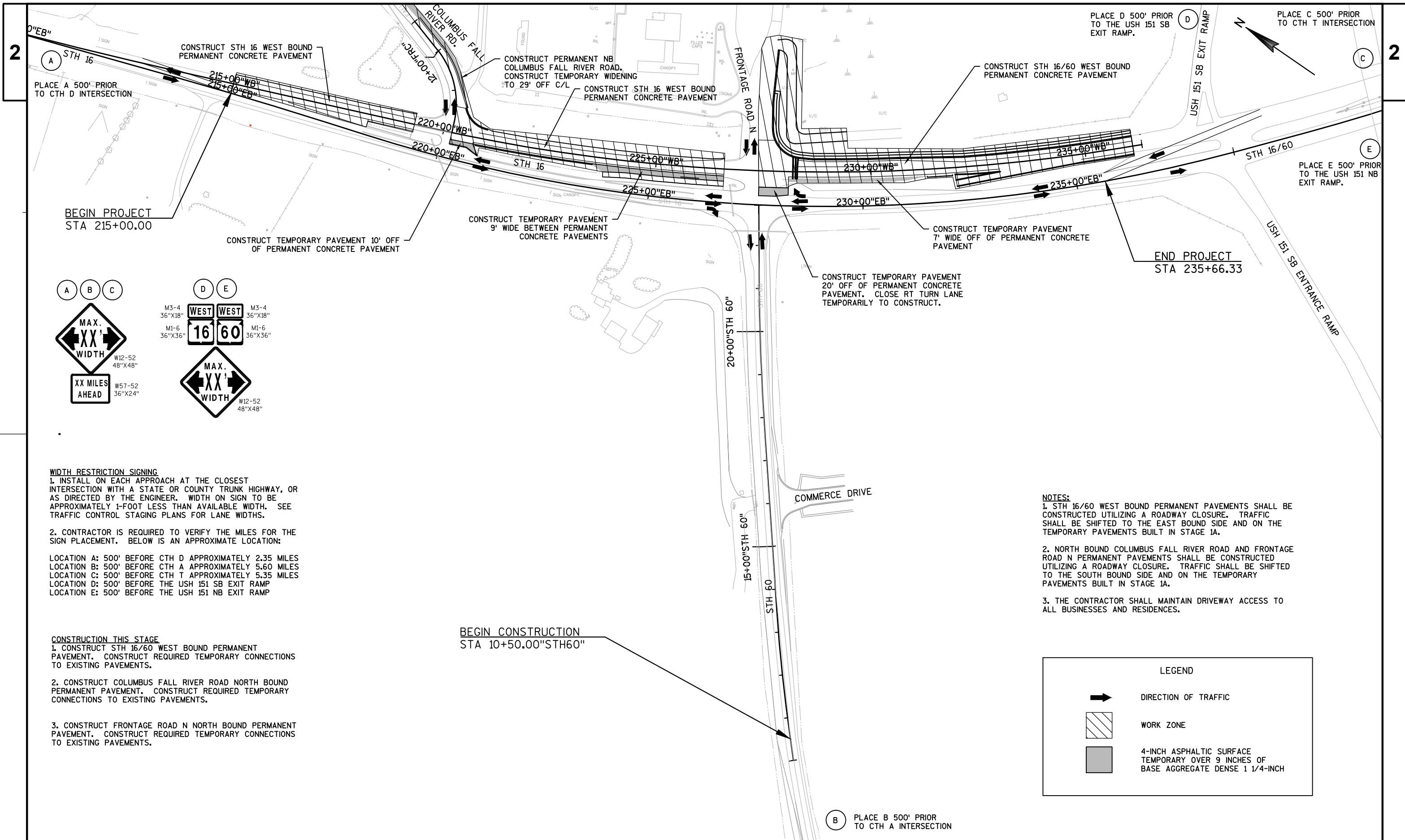
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PLOT NAME :

PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 42





PROJECT NO:1401-02-72

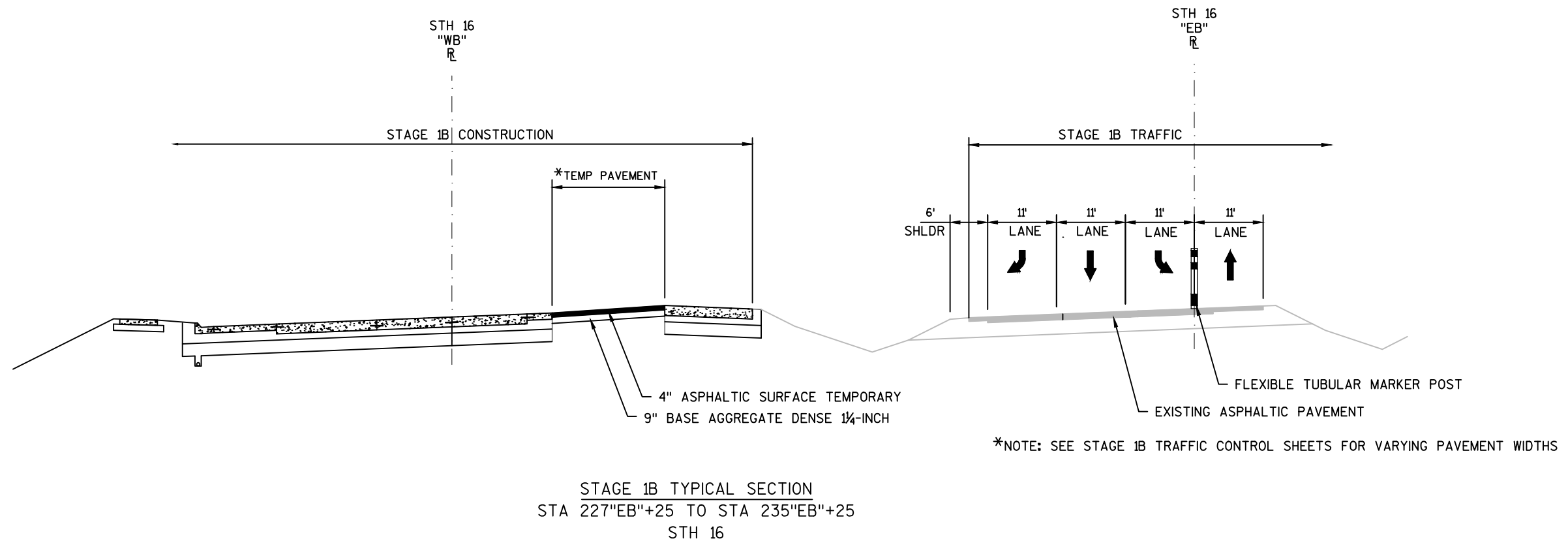
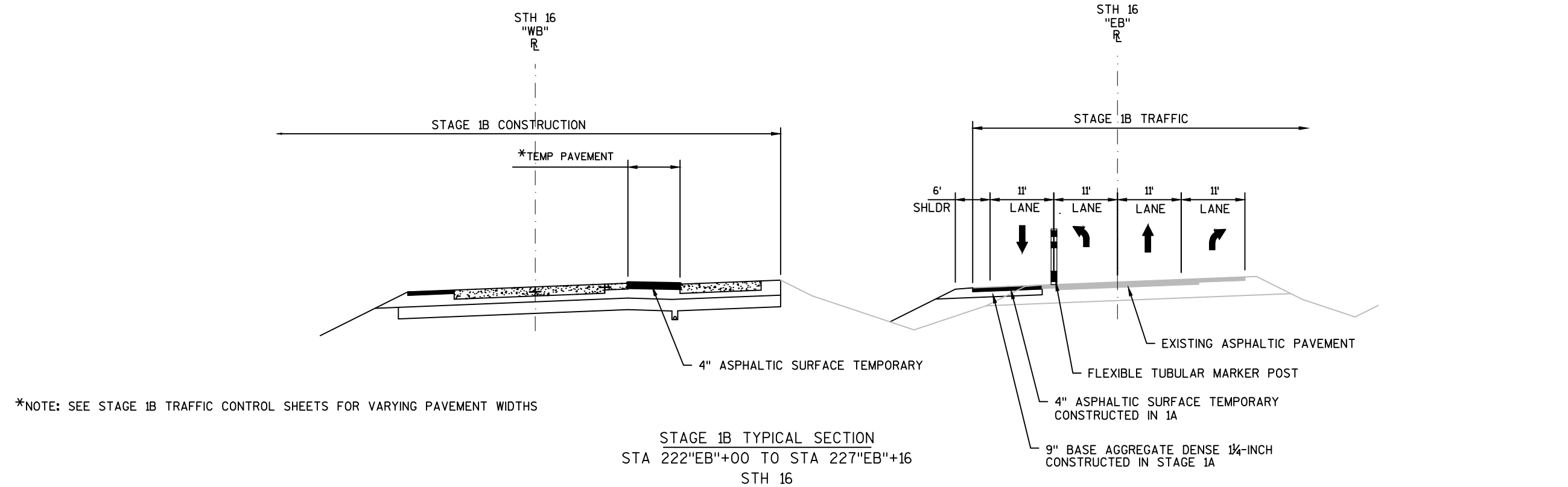
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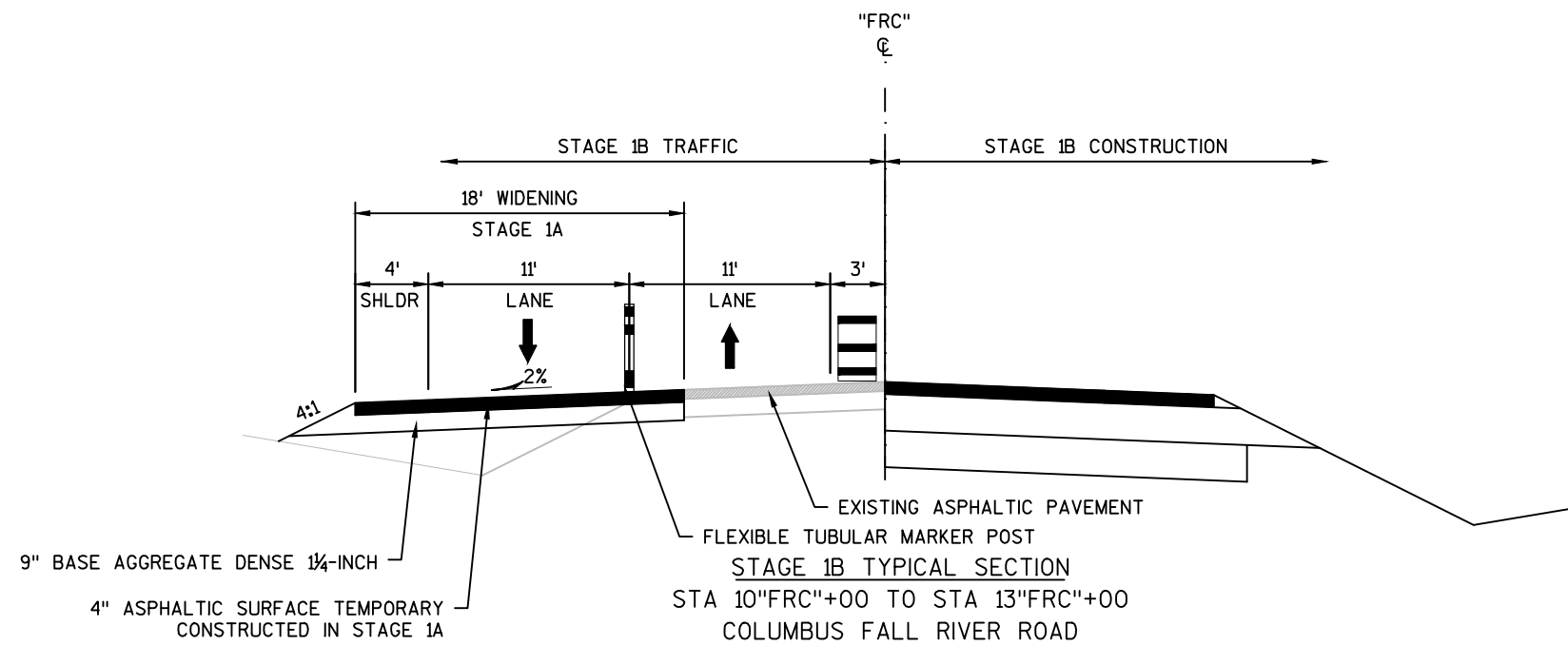
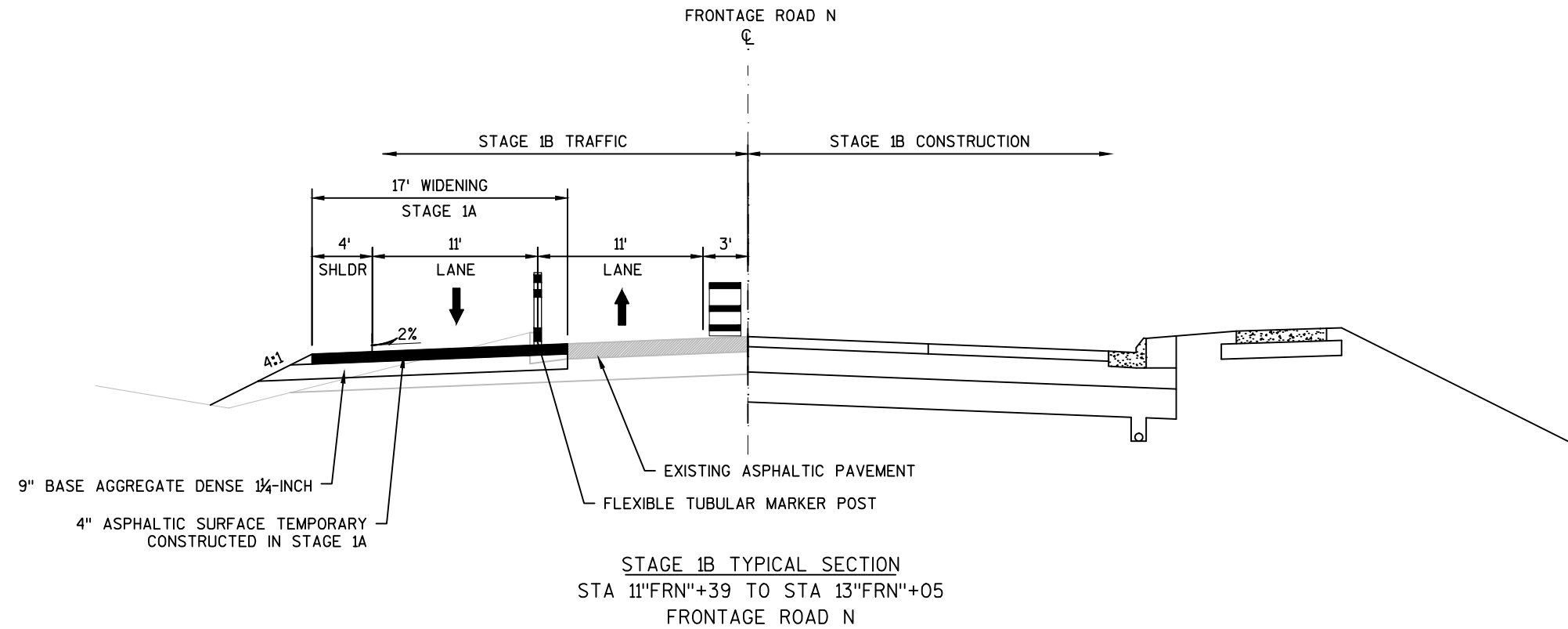
COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 1B OVERVIEW

SHEET

E





2

LEGEND

WORK AREA

DIRECTION OF TRAFFIC

TYPE III BARRICADE WITHOUT/WITH SIGN

TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C

FLAGS, 16" X 16" MIN. (ORANGE)

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES

SIGN ON TEMPORARY SUPPORT

SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE

TRAFFIC CONTROL ARROW BOARD

REMOVING PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)

TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)

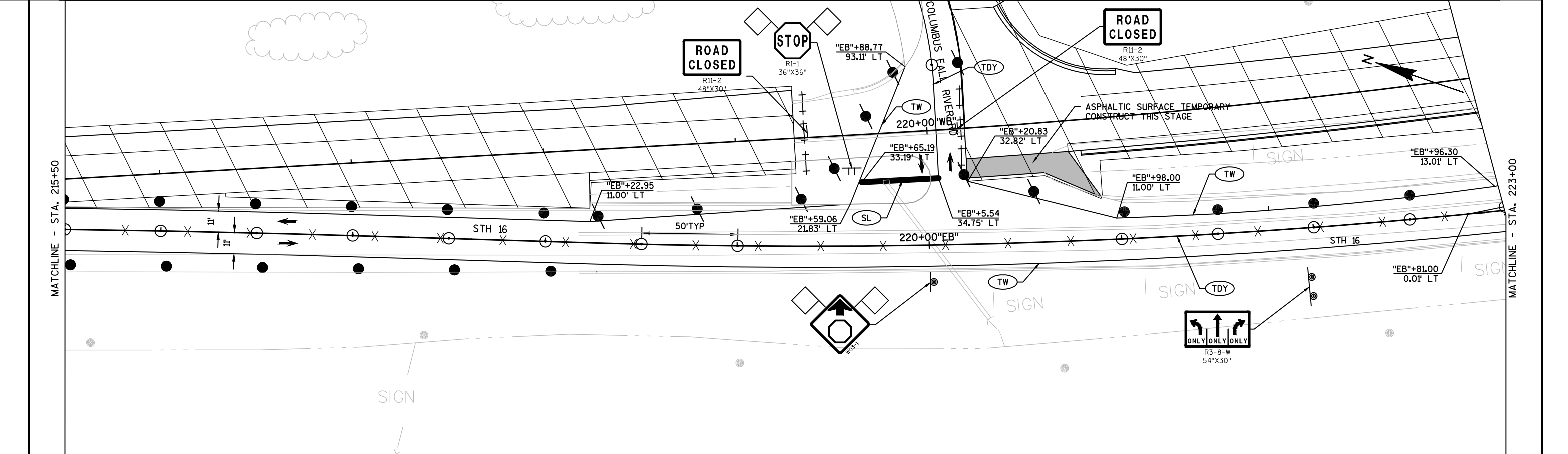
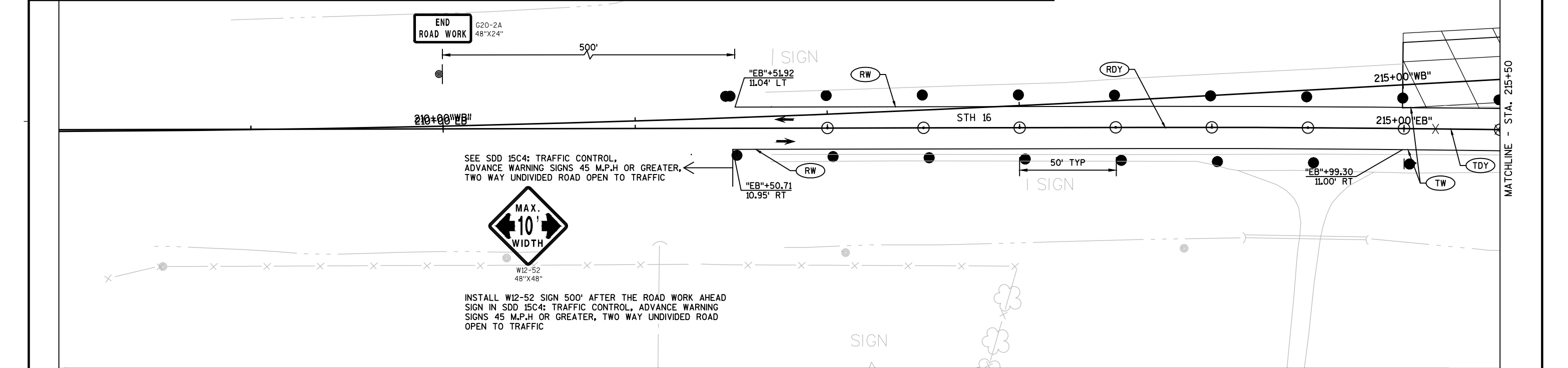
TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)

TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

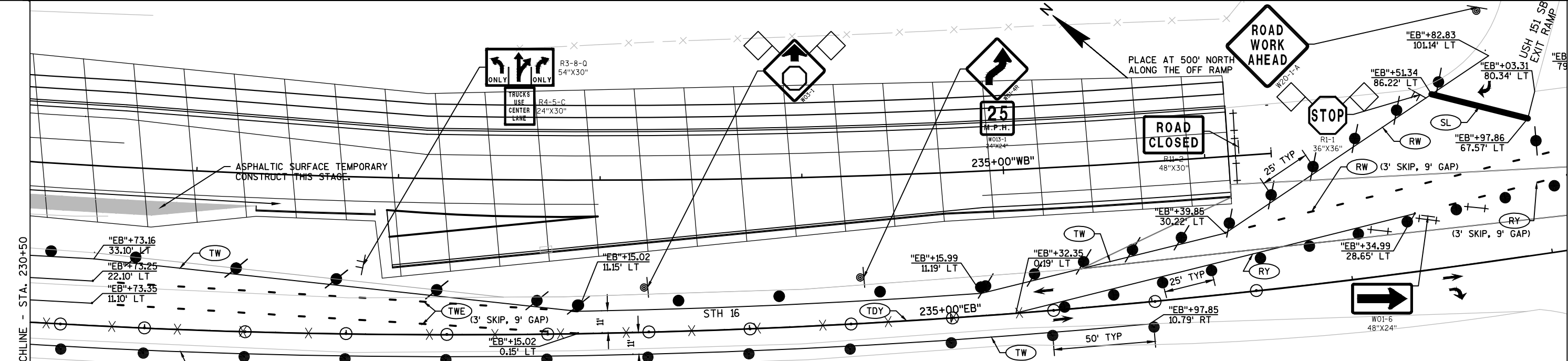
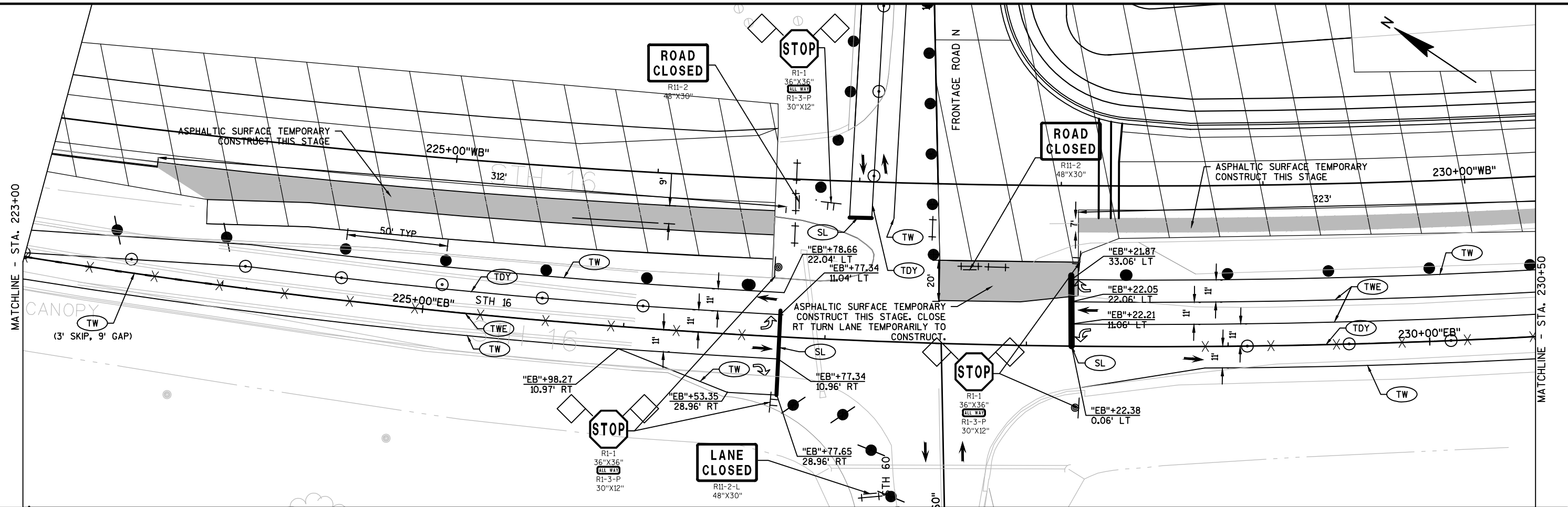
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2

2



	WORK AREA		REMOVING PAVEMENT MARKINGS		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	DIRECTION OF TRAFFIC		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)		TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH		TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

PROJECT NO:1401-02-72

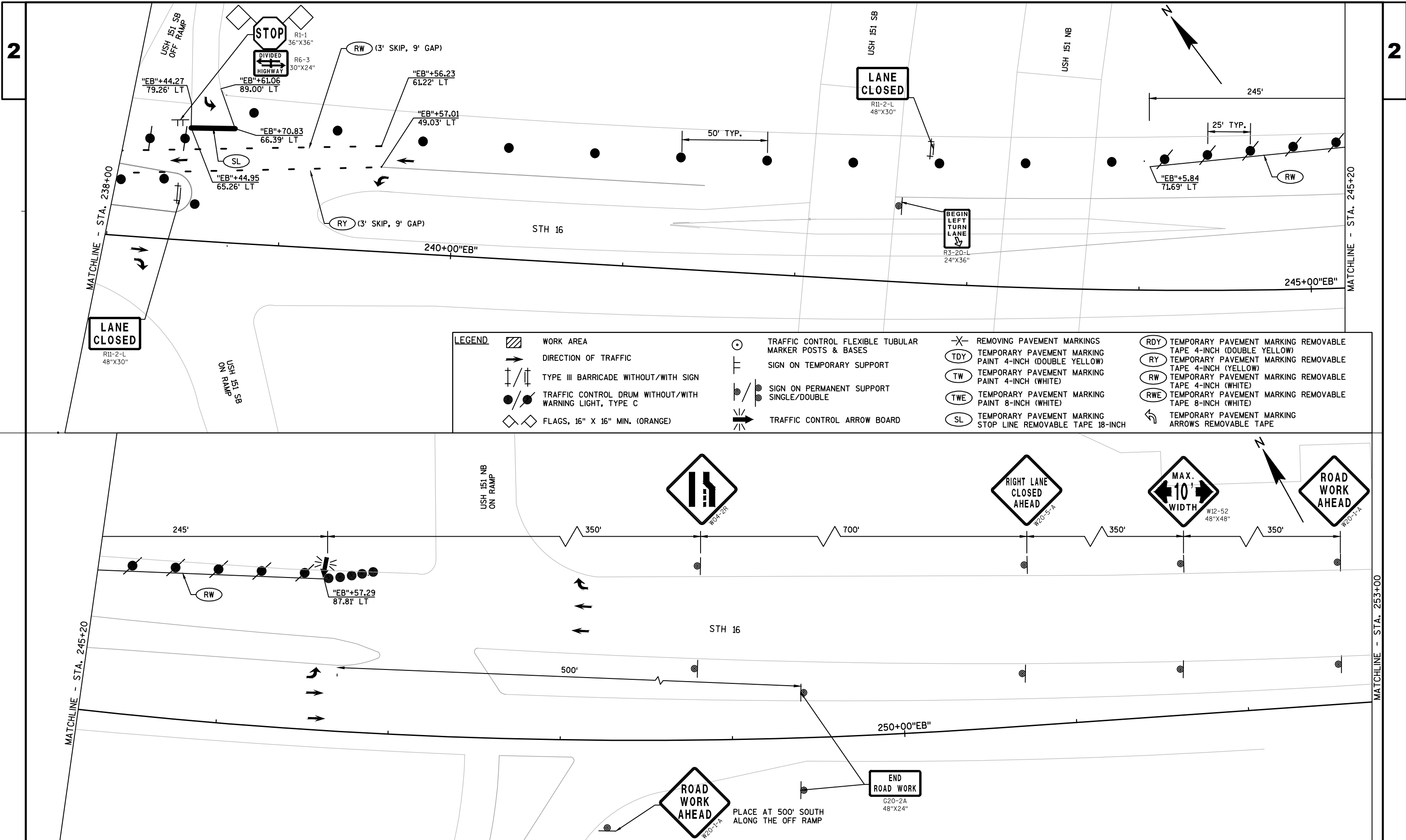
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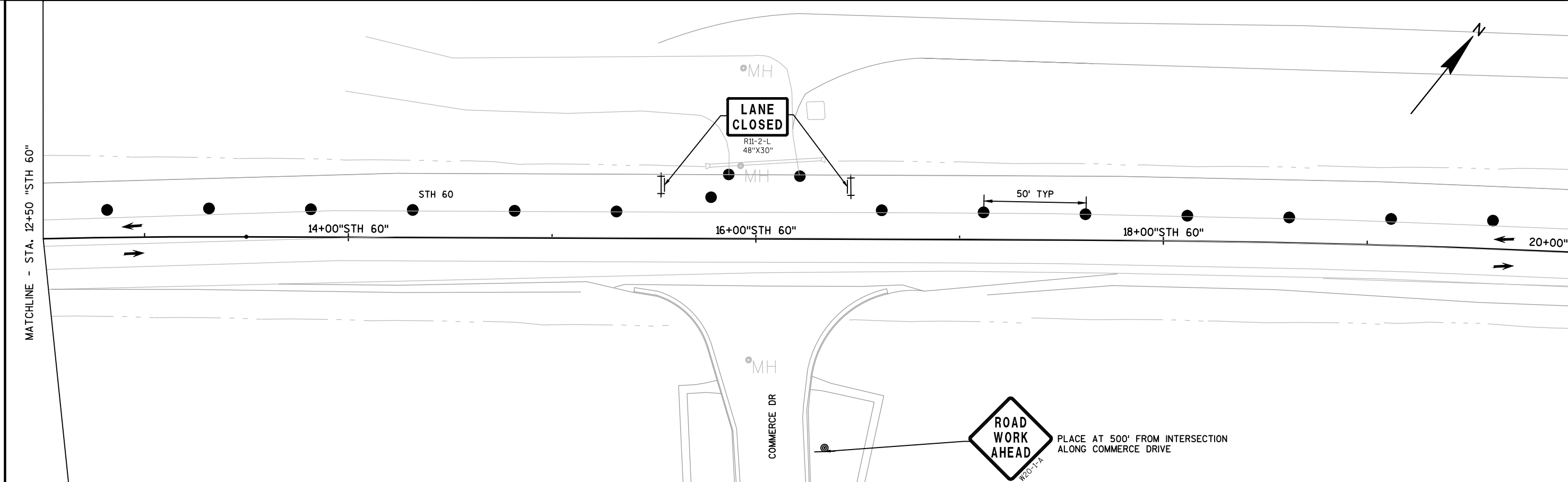
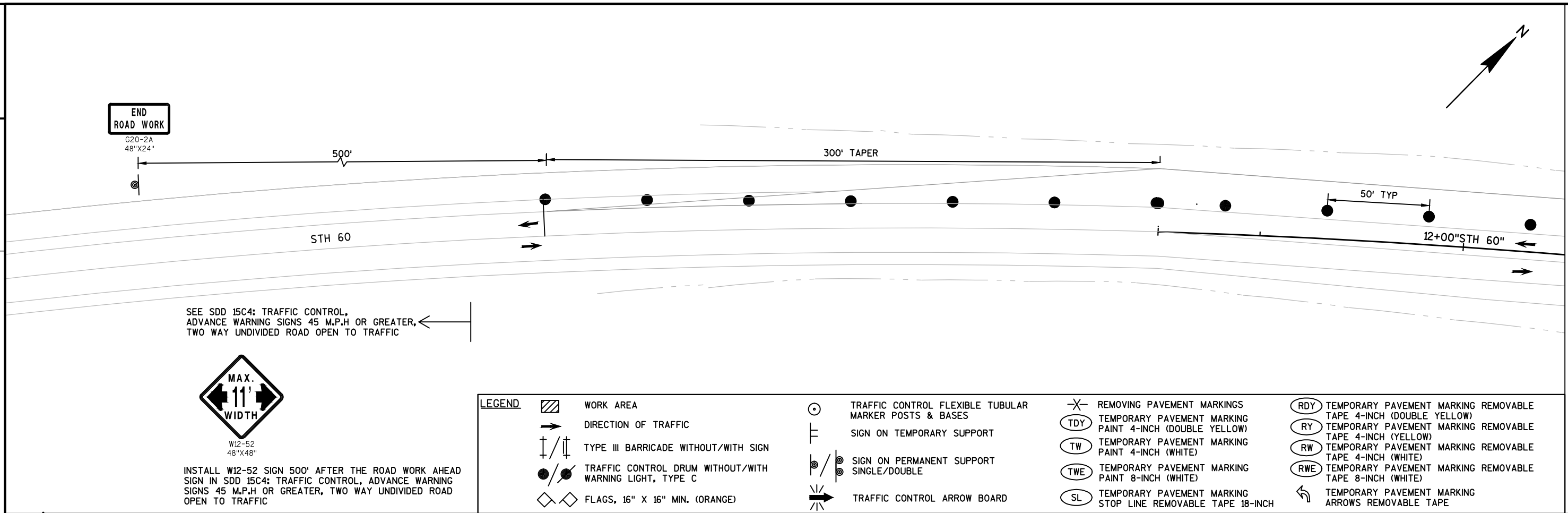
COUNTY:COLUMBIA

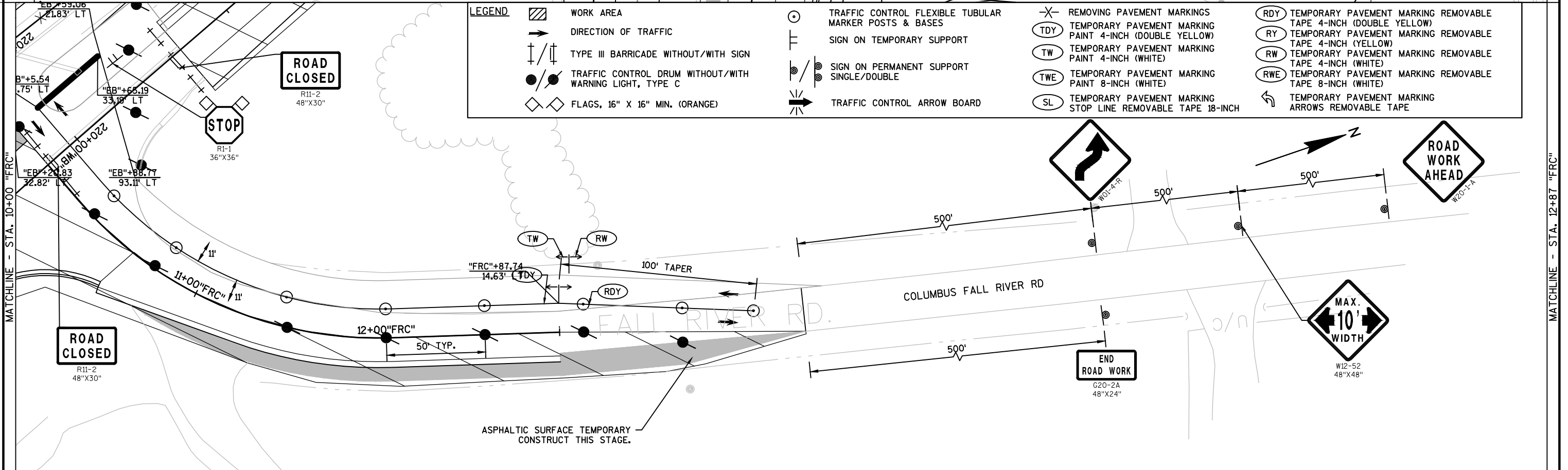
TRAFFIC CONTROL STAGE 1B

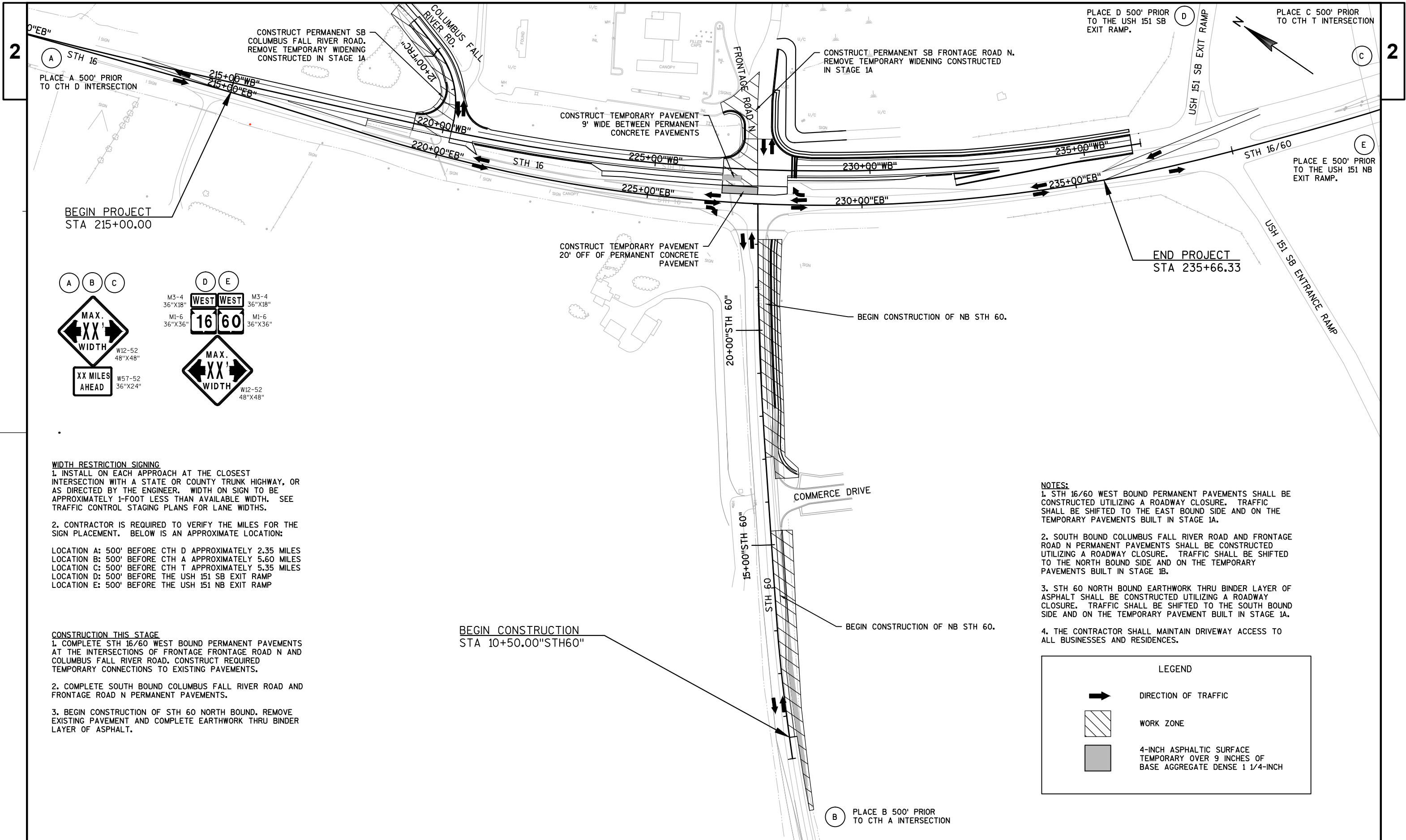
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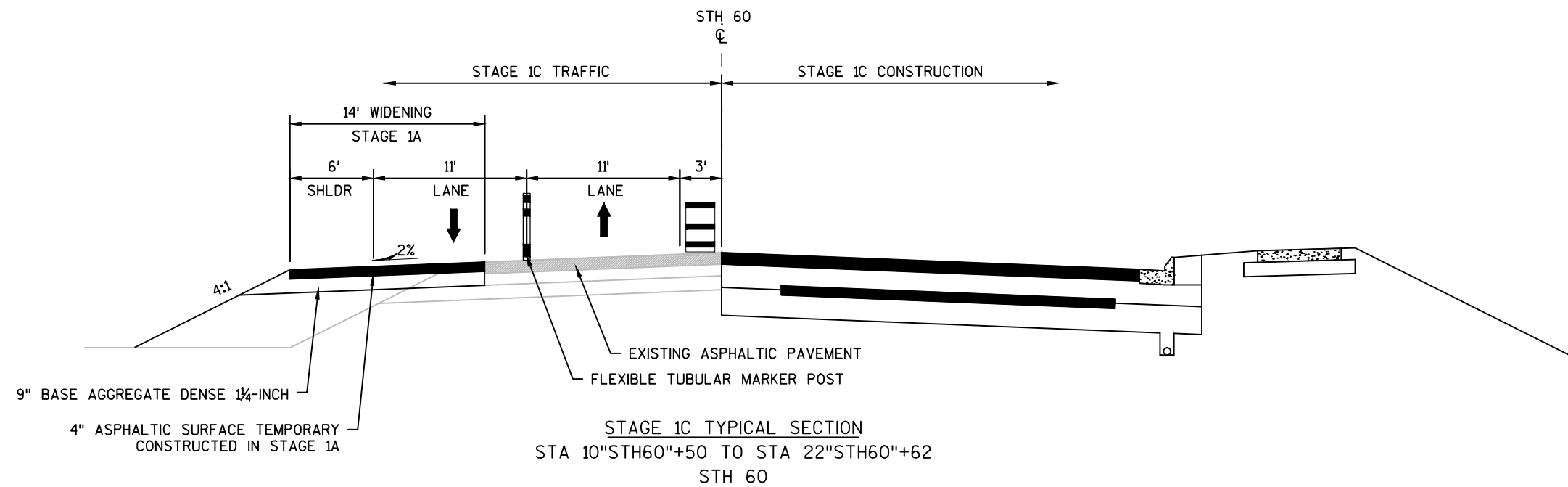
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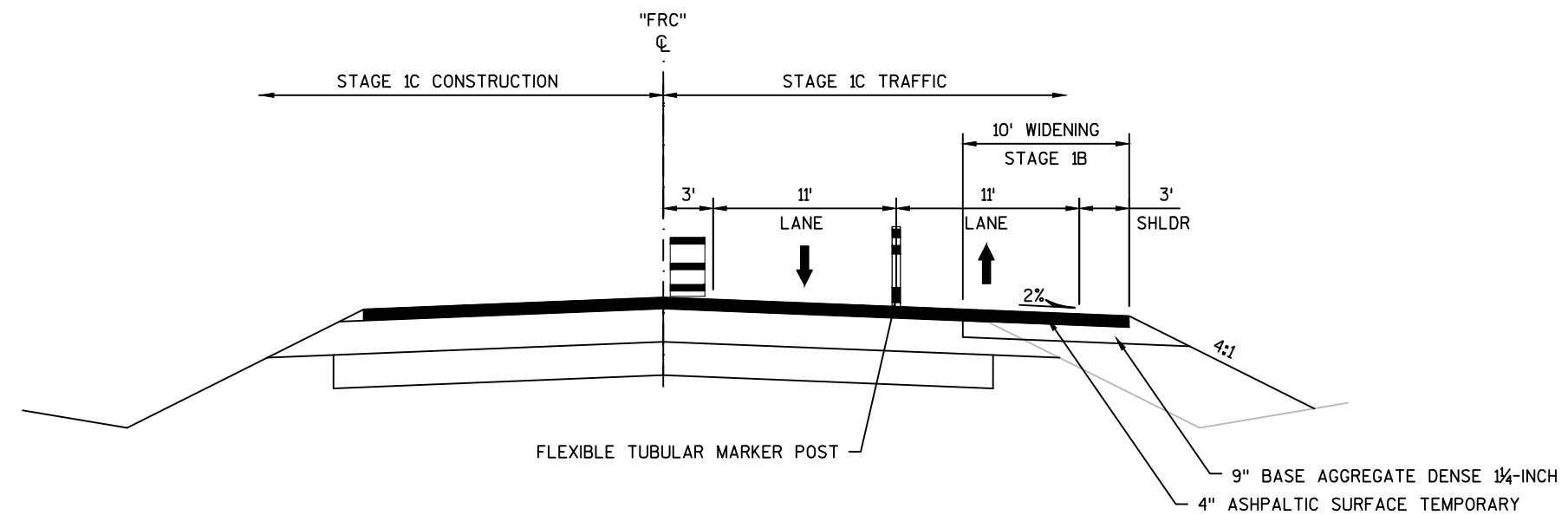




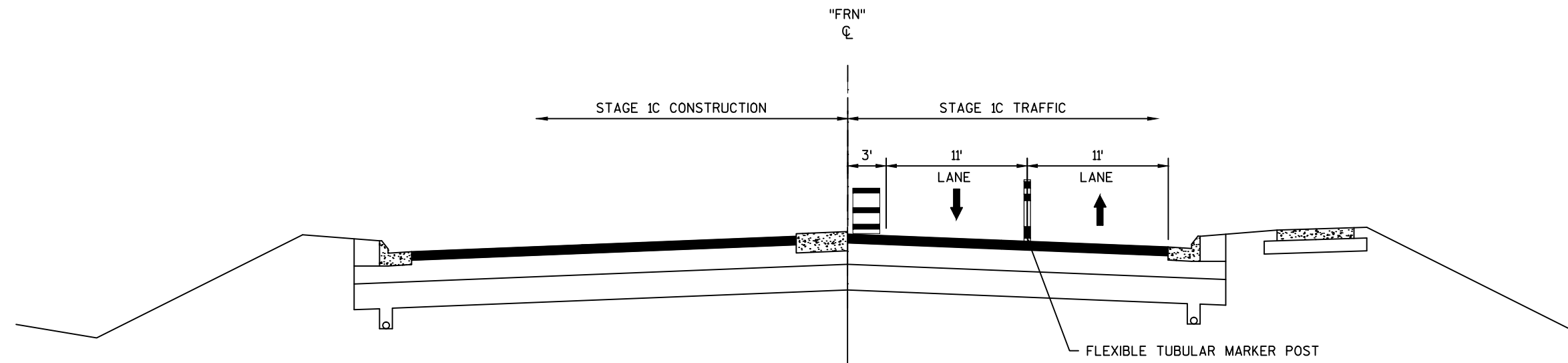




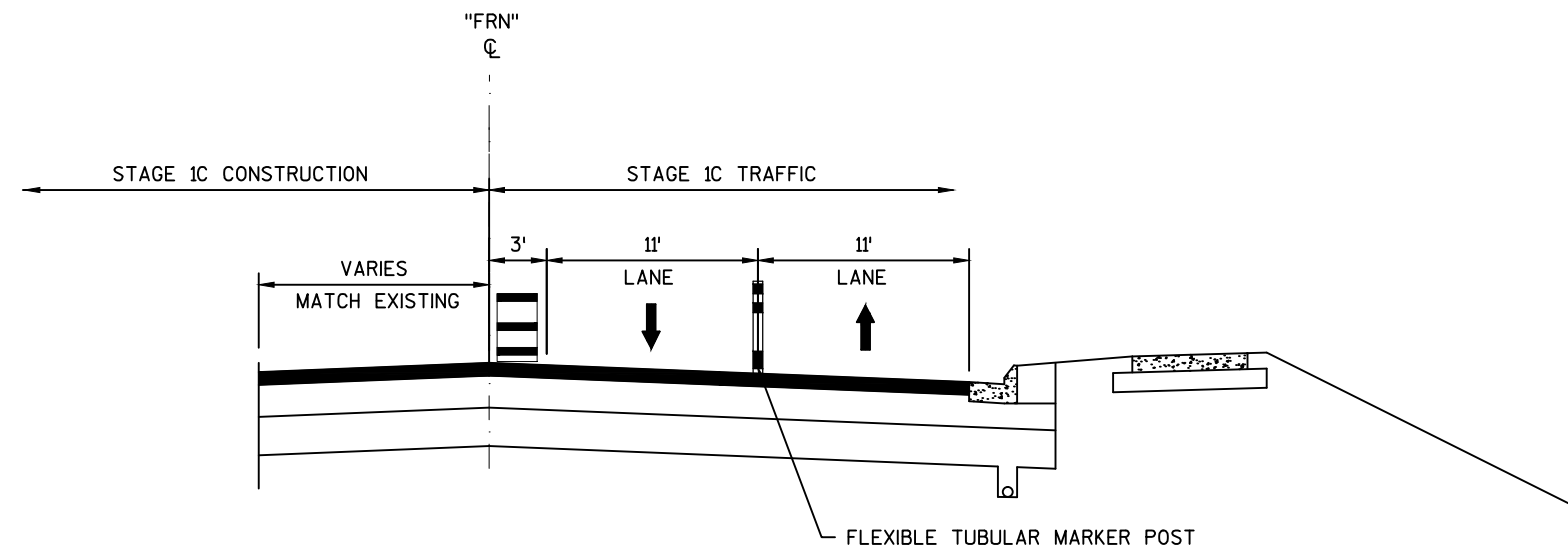




STAGE 1C TYPICAL SECTION
STA 10"FRC"+00 TO STA 13"FRC"+00
COLUMBUS FALL RIVER ROAD



STAGE 1C TYPICAL SECTION
STA 10"FRN"+38 TO STA 11"FRN"+39
FRONTAGE ROAD "N"



STAGE 1C TYPICAL SECTION
STA 11"FRN"+39 TO STA 13"FRN"+05
FRONTAGE ROAD "N"

LEGEND

- WORK AREA
 DIRECTION OF TRAFFIC
 TYPE III BARRICADE WITHOUT/WITH SIGN
 TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C
 FLAGS, 16" X 16" MIN. (ORANGE)

- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
 SIGN ON TEMPORARY SUPPORT
 SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
 TRAFFIC CONTROL ARROW BOARD

- REMOVING PAVEMENT MARKINGS
 TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
 TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
 TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH

- TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
 TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

NOTE:
STAGE 1B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

END
ROAD WORK
G20-2A
48"X24"

500'

SIGN

STH 16

215+00"WB"

215+00"EB"

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

50' TYP

SIGN



W12-52
48"X48"

INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC

SIGN

MATCHLINE - STA. 215+50

NOTE:
STAGE 1B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

ROAD
CLOSED

R11-2
48"X30"

STOP

R1-1
36"X36"

ROAD
CLOSED

R11-2
48"X30"

220+00"WB"

"EB"+22.95
11.00' LT

STH 16

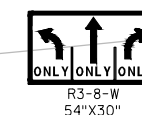
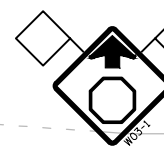
"EB"+20.66
34.53' LT

220+00"EB"

"EB"+31.76
34.84' LT

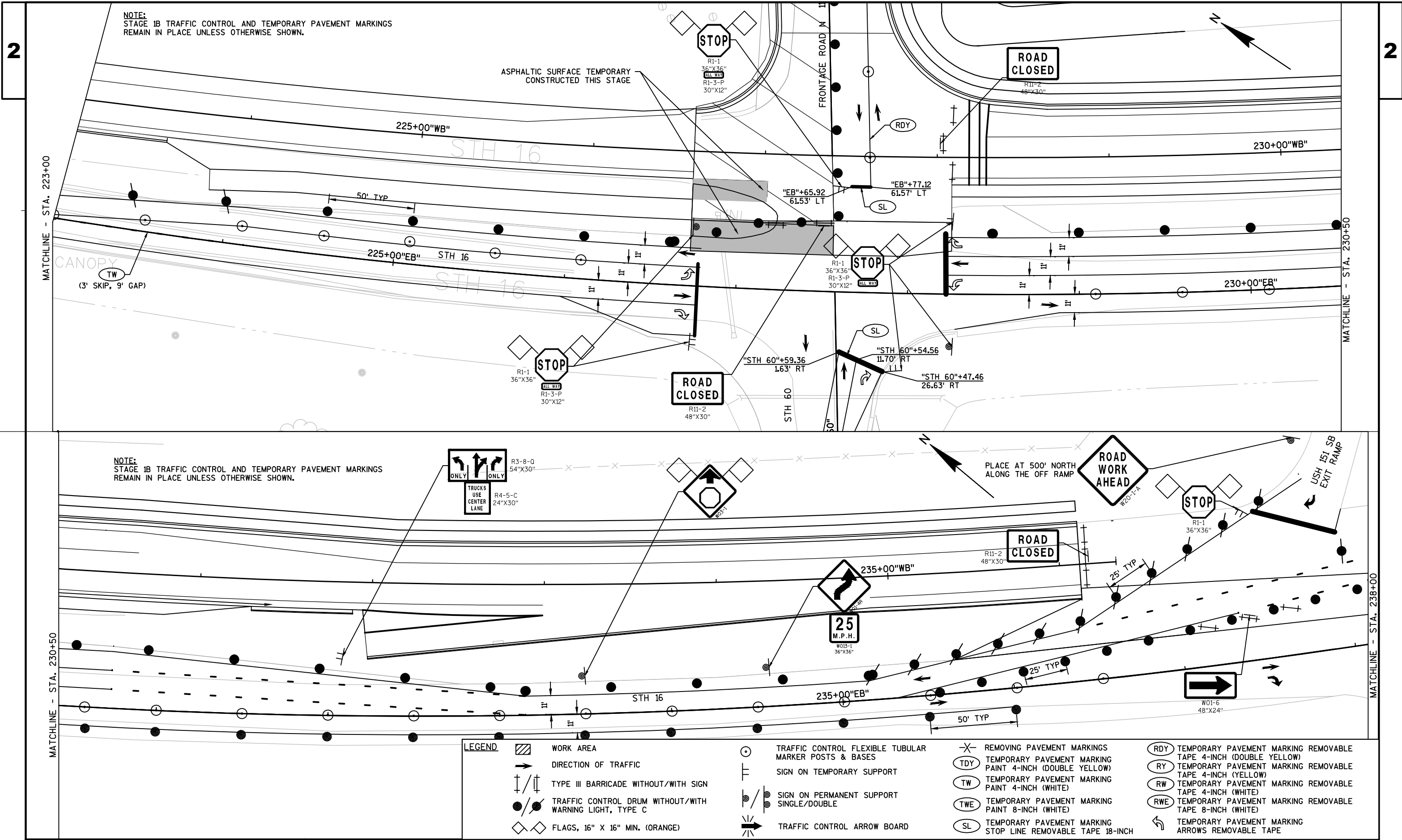
"EB"+98.00
11.00' LT

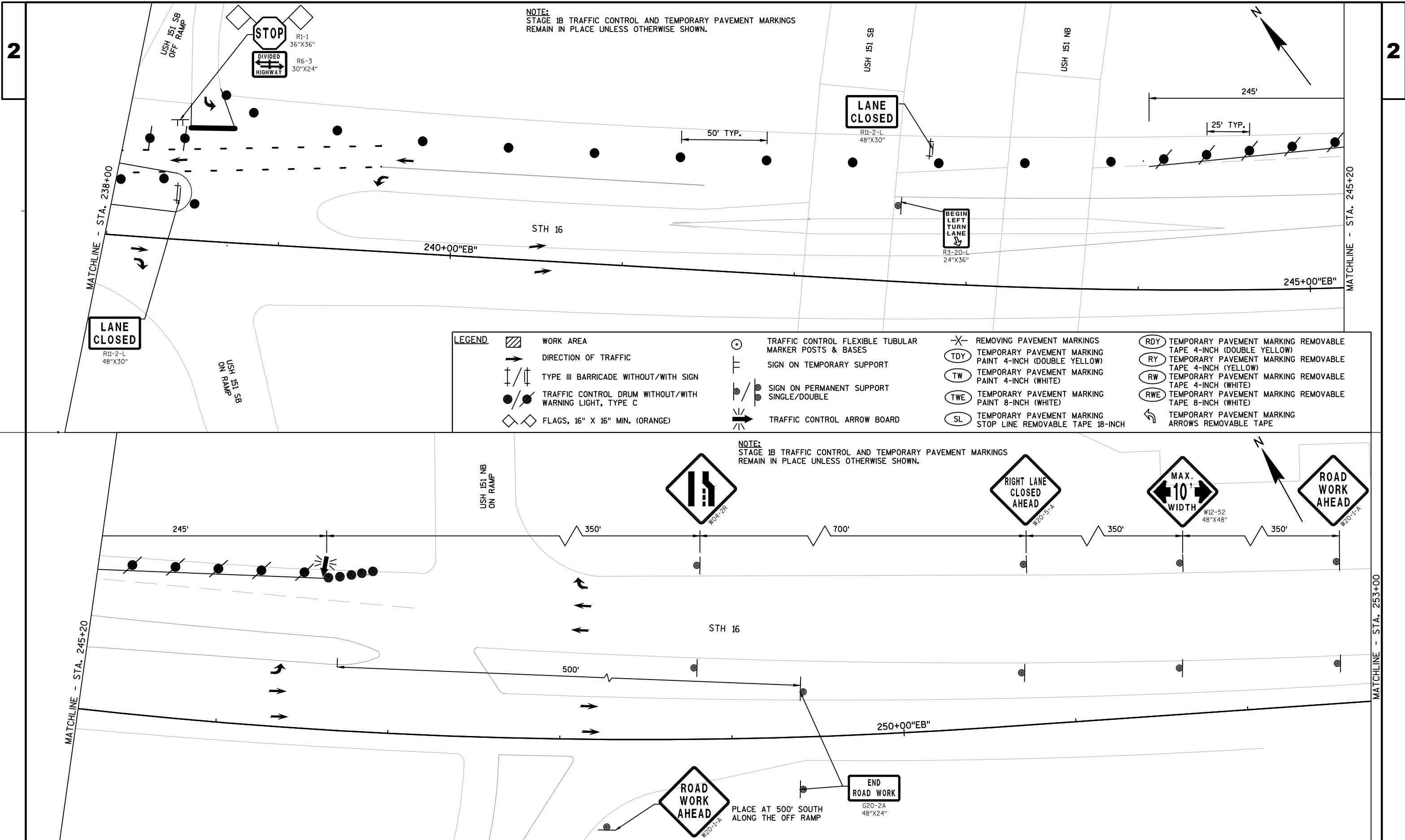
STH 16



R3-8-W
54"X30"

MATCHLINE - STA. 223+00





NOTE:
STAGE 1B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

END
ROAD WORK
G20-2A
48"X24"

STH 60

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC

LEGEND

- WORK AREA
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/WITH SIGN
- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C
- FLAGS, 16" X 16" MIN. (ORANGE)

- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
- TRAFFIC CONTROL ARROW BOARD

- REMOVING PAVEMENT MARKINGS
- TDY TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- TW TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- TWE TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
- SL TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH

- RDY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- RY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- RW TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- RWE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

LANE
CLOSED

R11-2-L
48"X30"

ASPHALTIC SURFACE TEMPORARY

MATCHLINE - STA. 12+50 "STH 60"

NOTE:
STAGE 1B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

MATCHLINE - STA. 12+50 "STH 60"

LANE
CLOSED

R11-2-L
48"X30"

APSHALTIC SURFACE TEMPORARY

STOP

R1-1
36"X36"

"STH 60"+02.47
56.88' RT

COMMERCE DR

SIDEWALK
CLOSED

R9-9
24"X12"



PLACE AT 500' FROM INTERSECTION
ALONG COMMERCE DRIVE

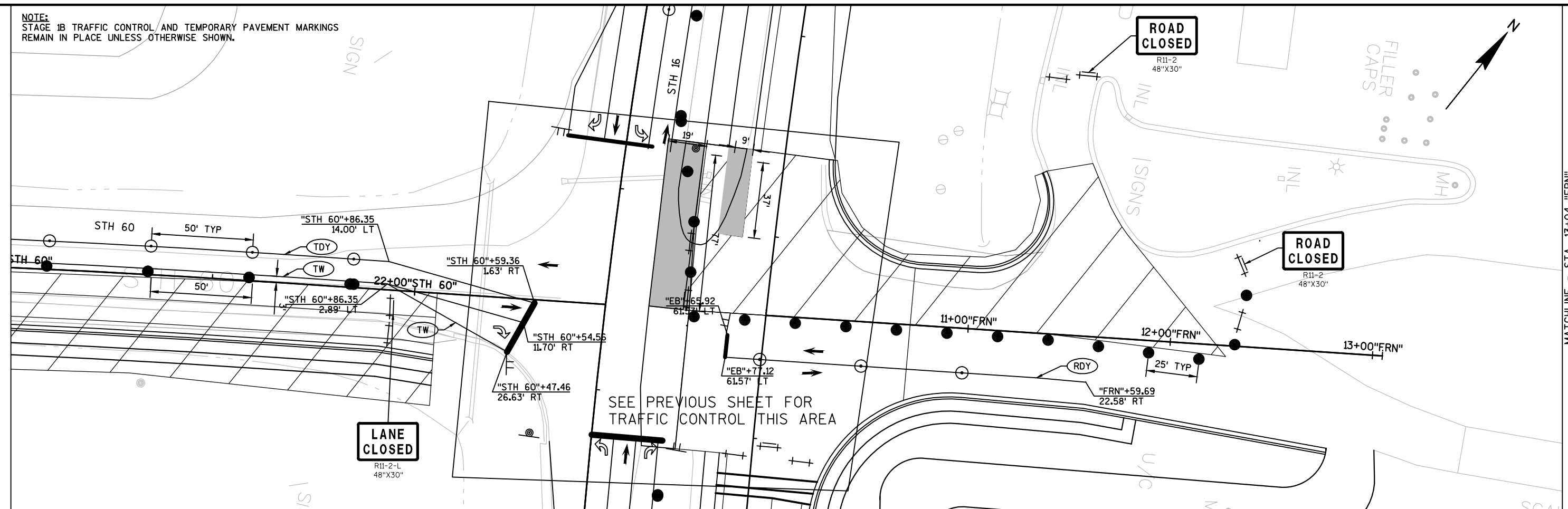
ASPHALTIC SURFACE TEMPORARY

MATCHLINE - STA. 20+00 "STH 60"

2

NOTE:
STAGE 1B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

MATCHLINE - STA. 20+00 "STH 60"

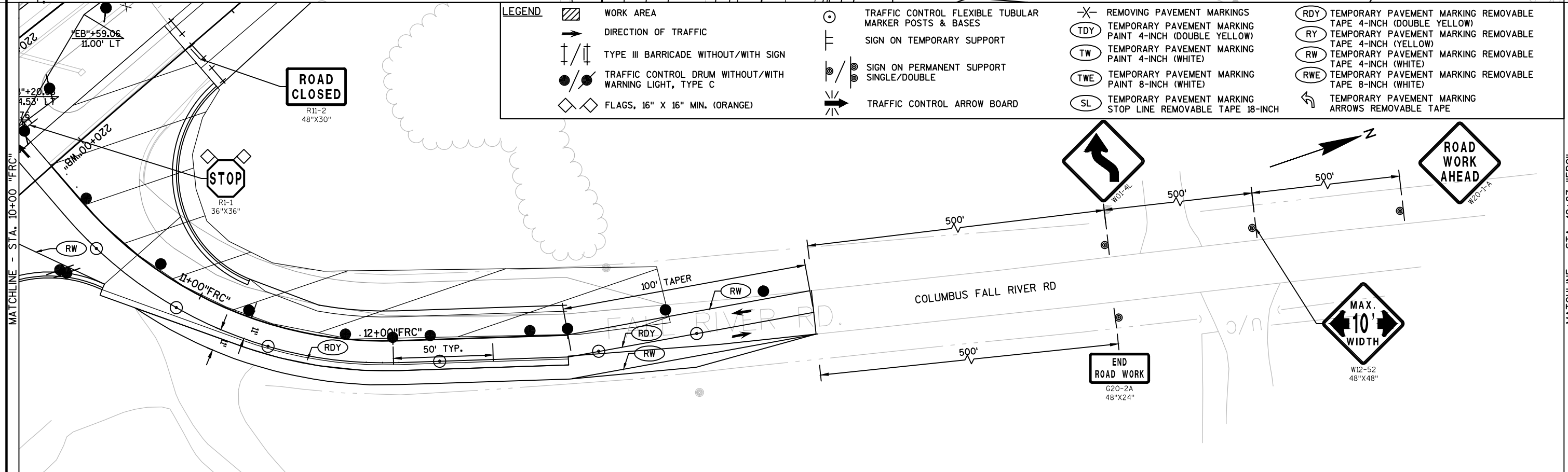


MATCHLINE - STA. 13+04 "FRN"

2

LEGEND

	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)				TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH		TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE



MATCHLINE - STA. 12+87 "FRC"

PROJECT NO:1401-02-72

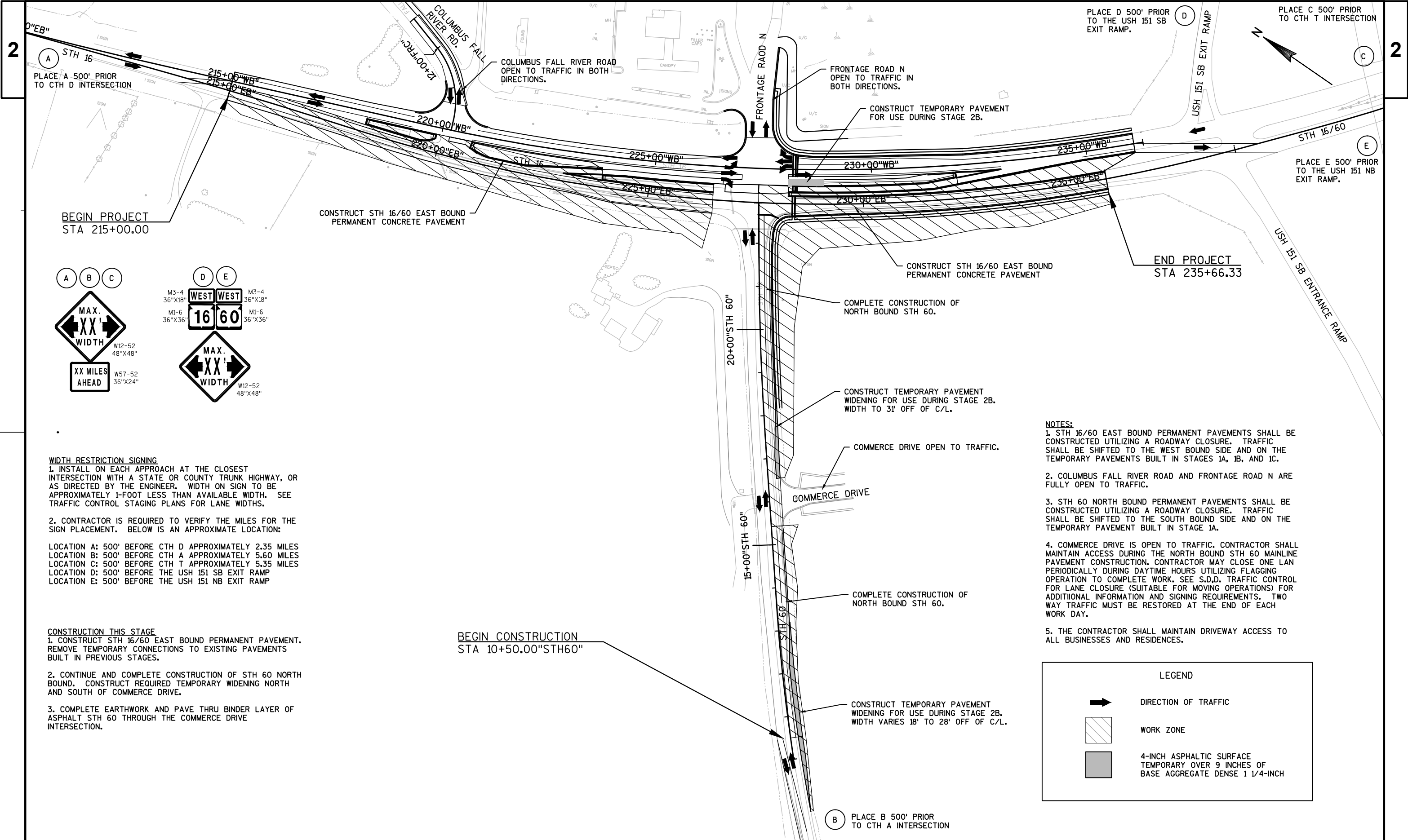
HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 1C

SHEET

E



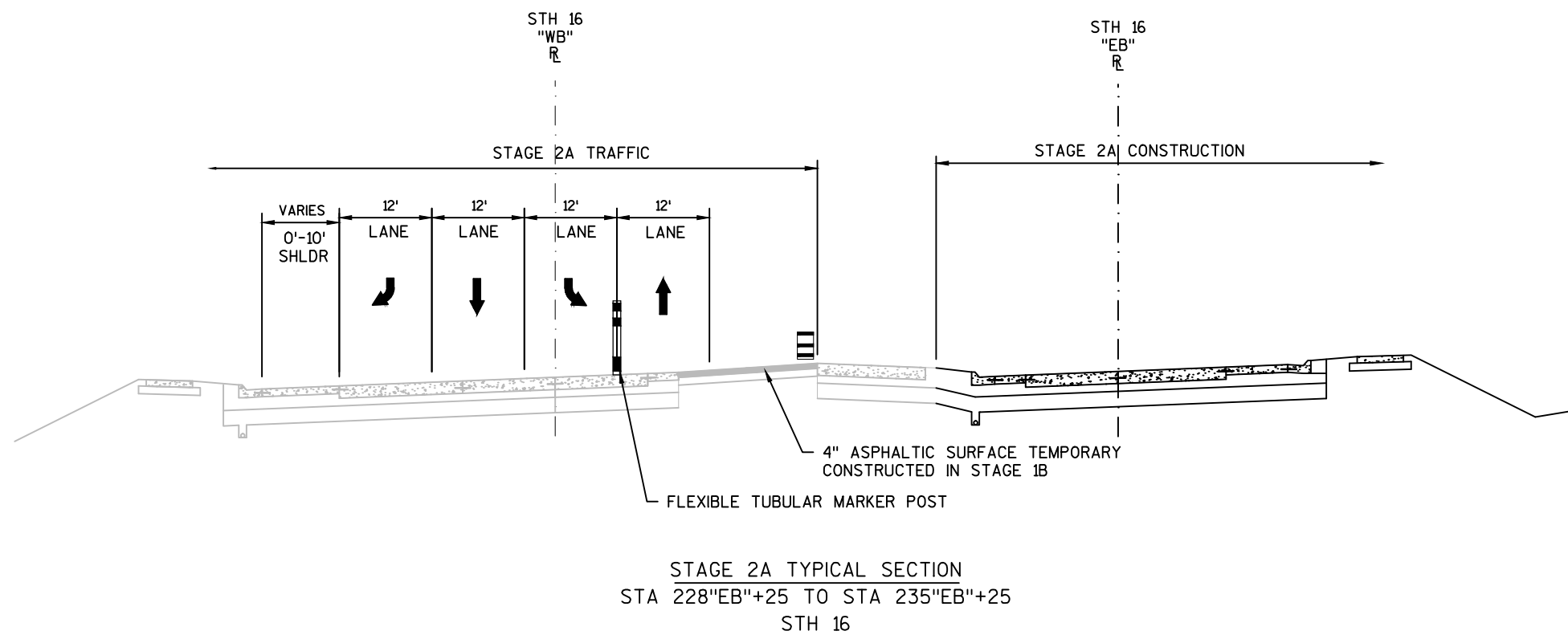
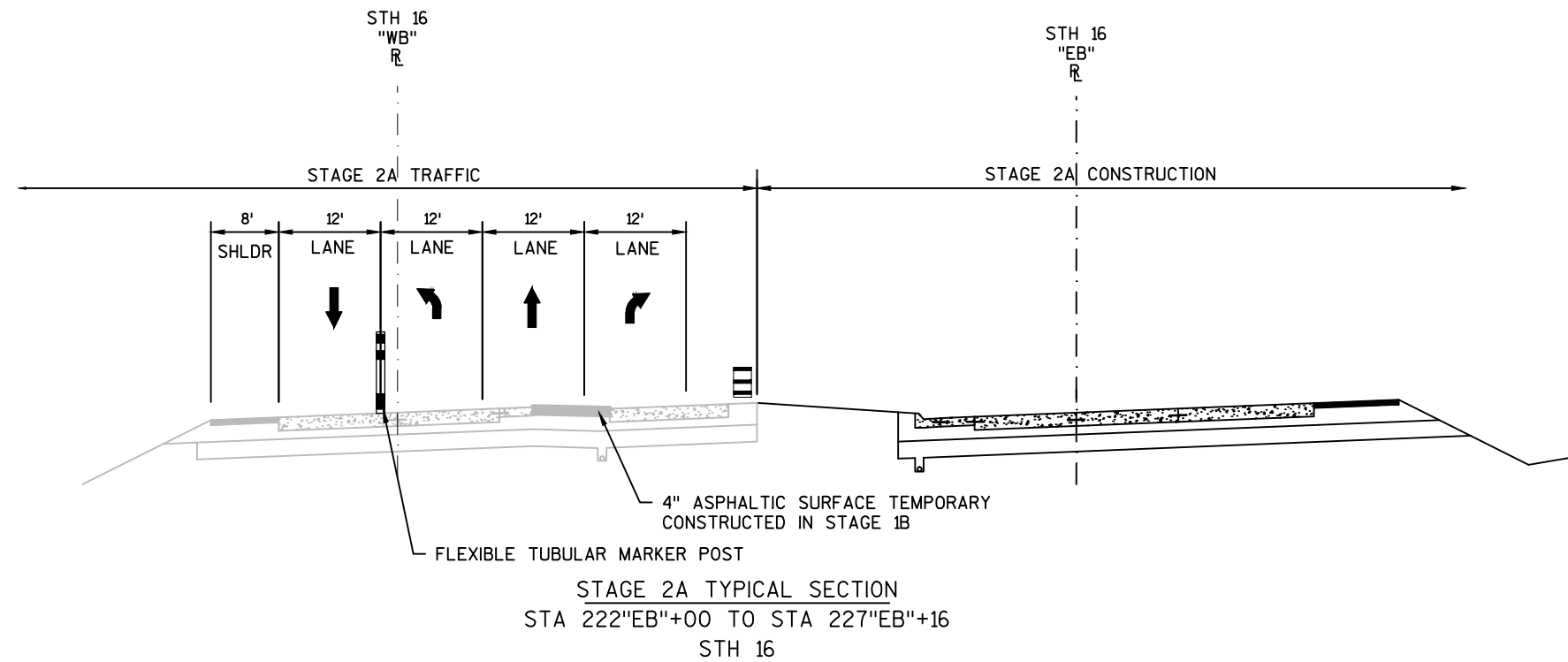
WIDTH RESTRICTION SIGNING
1. INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROXIMATELY 1-FOOT LESS THAN AVAILABLE WIDTH. SEE TRAFFIC CONTROL STAGING PLANS FOR LANE WIDTHS.
2. CONTRACTOR IS REQUIRED TO VERIFY THE MILES FOR THE SIGN PLACEMENT. BELOW IS AN APPROXIMATE LOCATION:
LOCATION A: 500' BEFORE CTH D APPROXIMATELY 2.35 MILES
LOCATION B: 500' BEFORE CTH A APPROXIMATELY 5.60 MILES
LOCATION C: 500' BEFORE CTH T APPROXIMATELY 5.35 MILES
LOCATION D: 500' BEFORE THE USH 151 SB EXIT RAMP
LOCATION E: 500' BEFORE THE USH 151 NB EXIT RAMP

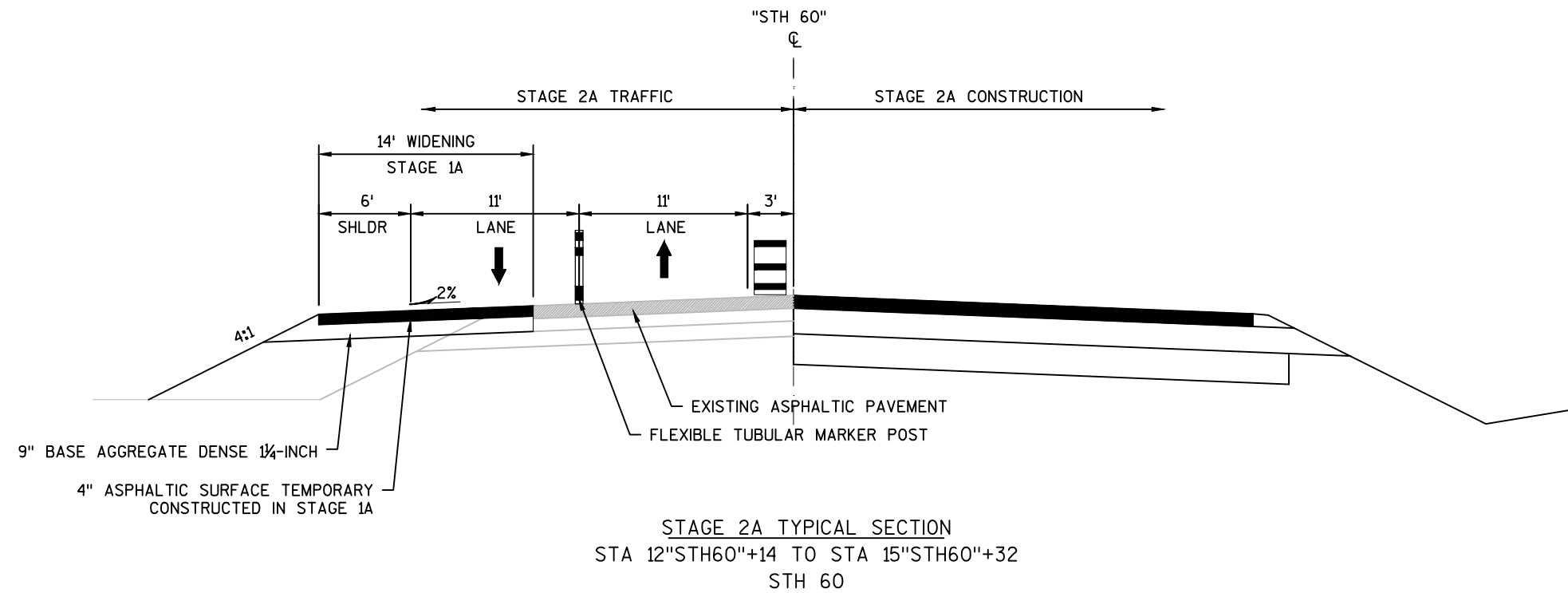
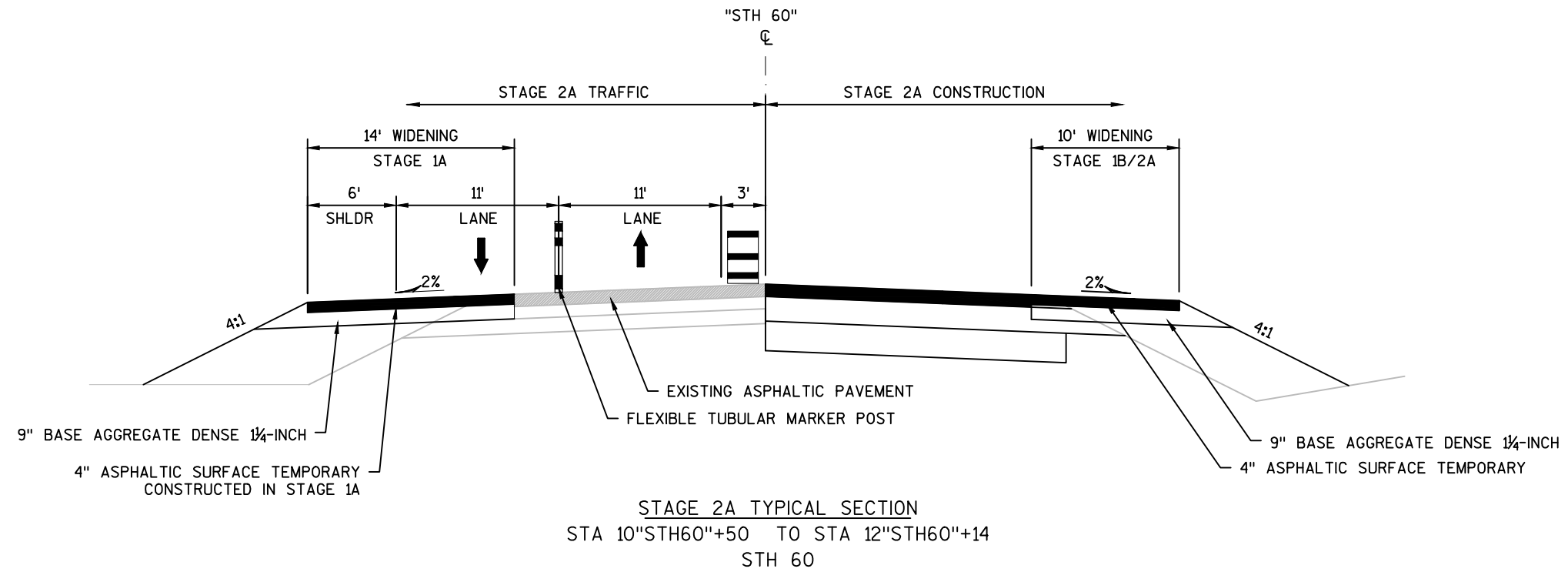
CONSTRUCTION THIS STAGE
1. CONSTRUCT STH 16/60 EAST BOUND PERMANENT PAVEMENT. REMOVE TEMPORARY CONNECTIONS TO EXISTING PAVEMENTS BUILT IN PREVIOUS STAGES.
2. CONTINUE AND COMPLETE CONSTRUCTION OF STH 60 NORTH BOUND. CONSTRUCT REQUIRED TEMPORARY WIDENING NORTH AND SOUTH OF COMMERCE DRIVE.
3. COMPLETE EARTHWORK AND PAVE THRU BINDER LAYER OF ASPHALT STH 60 THROUGH THE COMMERCE DRIVE INTERSECTION.

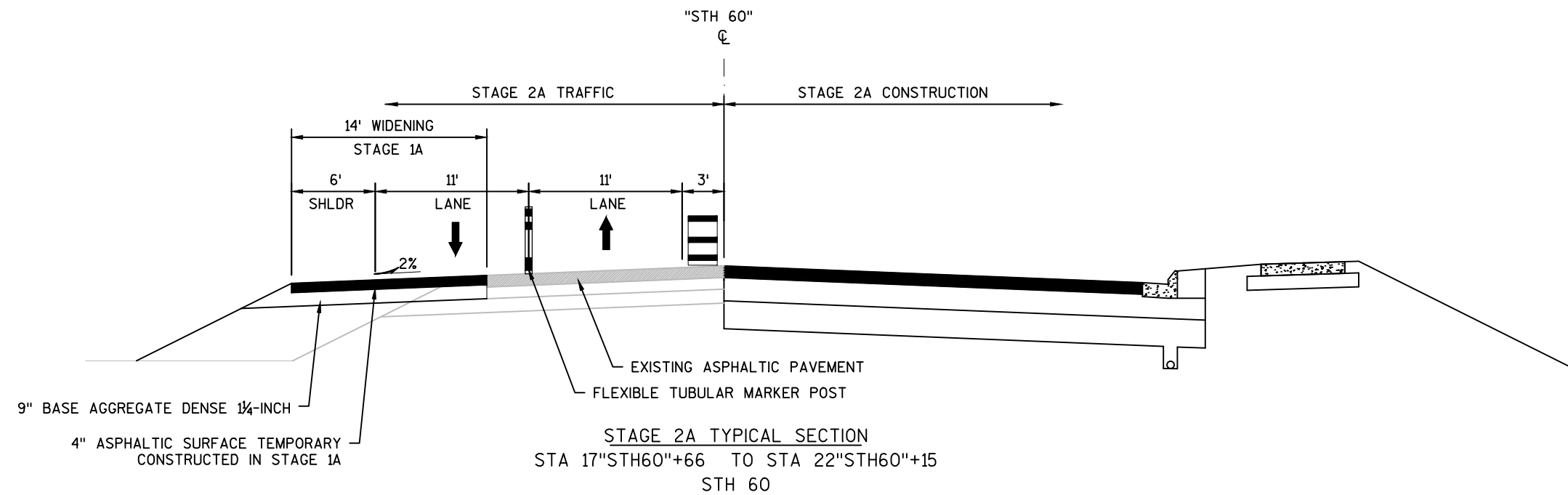
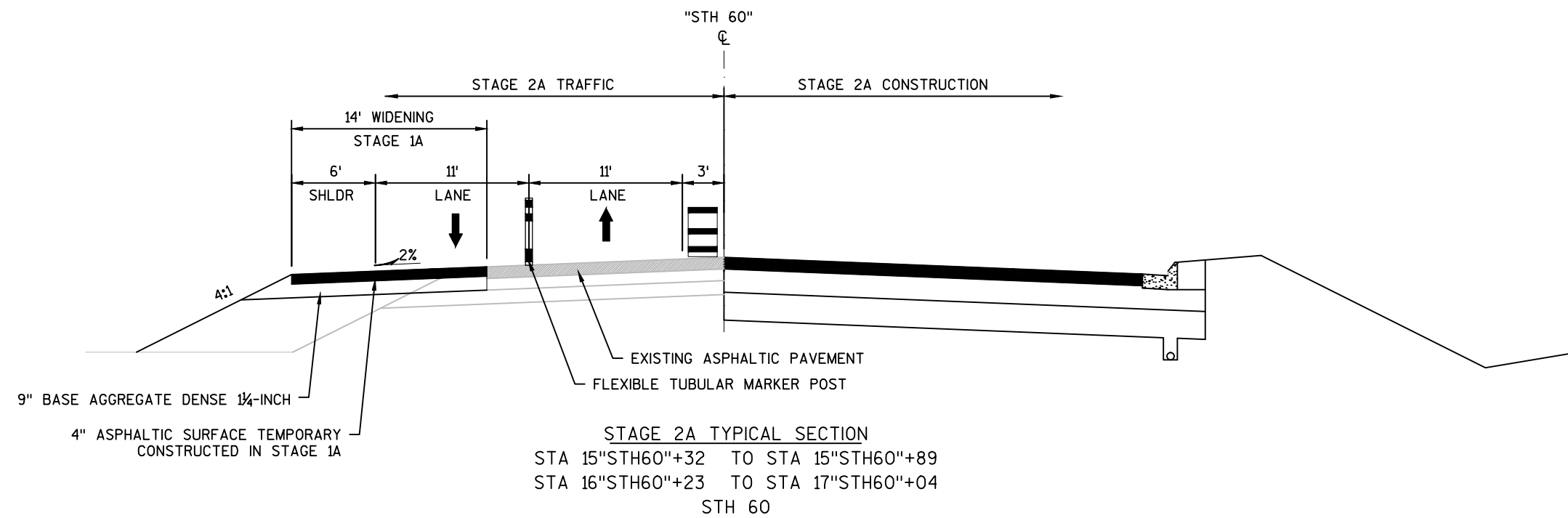
- NOTES:**
- 1. STH 16/60 EAST BOUND PERMANENT PAVEMENTS SHALL BE CONSTRUCTED UTILIZING A ROADWAY CLOSURE. TRAFFIC SHALL BE SHIFTED TO THE WEST BOUND SIDE AND ON THE TEMPORARY PAVEMENTS BUILT IN STAGES 1A, 1B, AND 1C.
 - 2. COLUMBUS FALL RIVER ROAD AND FRONTAGE ROAD N ARE FULLY OPEN TO TRAFFIC.
 - 3. STH 60 NORTH BOUND PERMANENT PAVEMENTS SHALL BE CONSTRUCTED UTILIZING A ROADWAY CLOSURE. TRAFFIC SHALL BE SHIFTED TO THE SOUTH BOUND SIDE AND ON THE TEMPORARY PAVEMENT BUILT IN STAGE 1A.
 - 4. COMMERCE DRIVE IS OPEN TO TRAFFIC. CONTRACTOR SHALL MAINTAIN ACCESS DURING THE NORTH BOUND STH 60 MAINLINE PAVEMENT CONSTRUCTION. CONTRACTOR MAY CLOSE ONE LAN PERIODICALLY DURING DAYTIME HOURS UTILIZING FLAGGING OPERATION TO COMPLETE WORK. SEE S.D.D. TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS) FOR ADDITIONAL INFORMATION AND SIGNING REQUIREMENTS. TWO WAY TRAFFIC MUST BE RESTORED AT THE END OF EACH WORK DAY.
 - 5. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL BUSINESSES AND RESIDENCES.

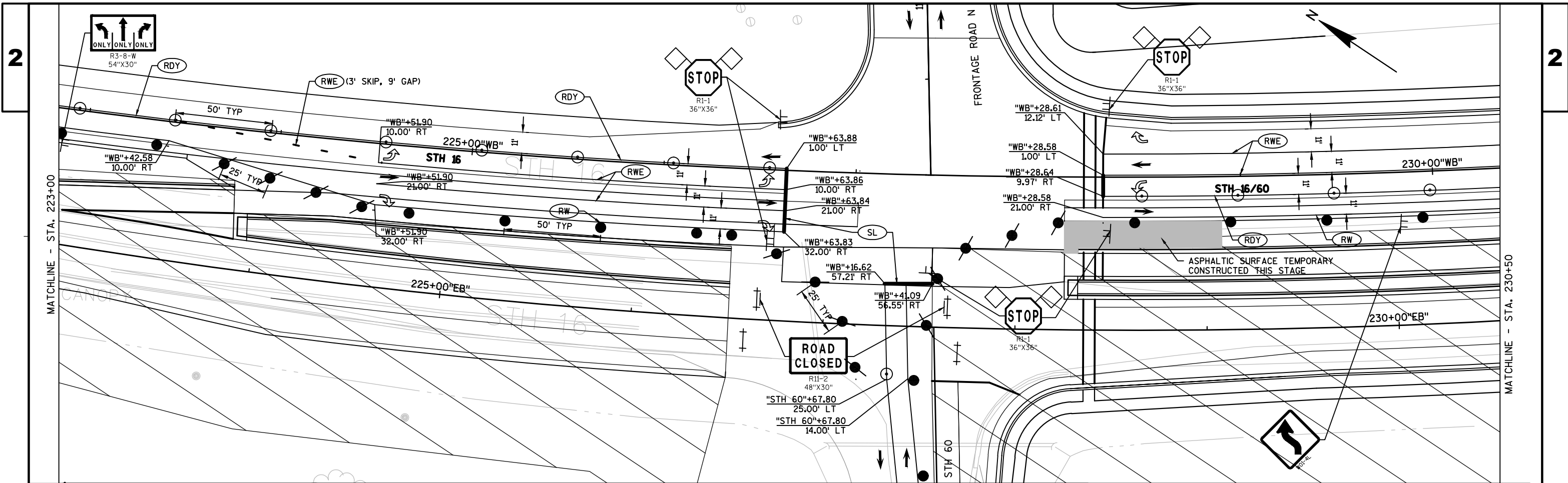
LEGEND

- DIRECTION OF TRAFFIC
- WORK ZONE
- 4-INCH ASPHALTIC SURFACE TEMPORARY OVER 9 INCHES OF BASE AGGREGATE DENSE 1 1/4-INCH

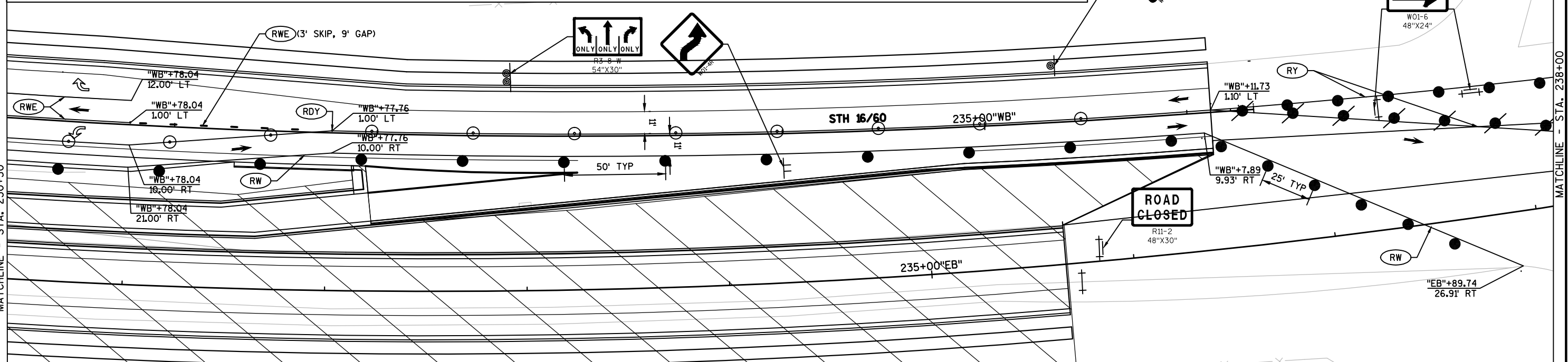


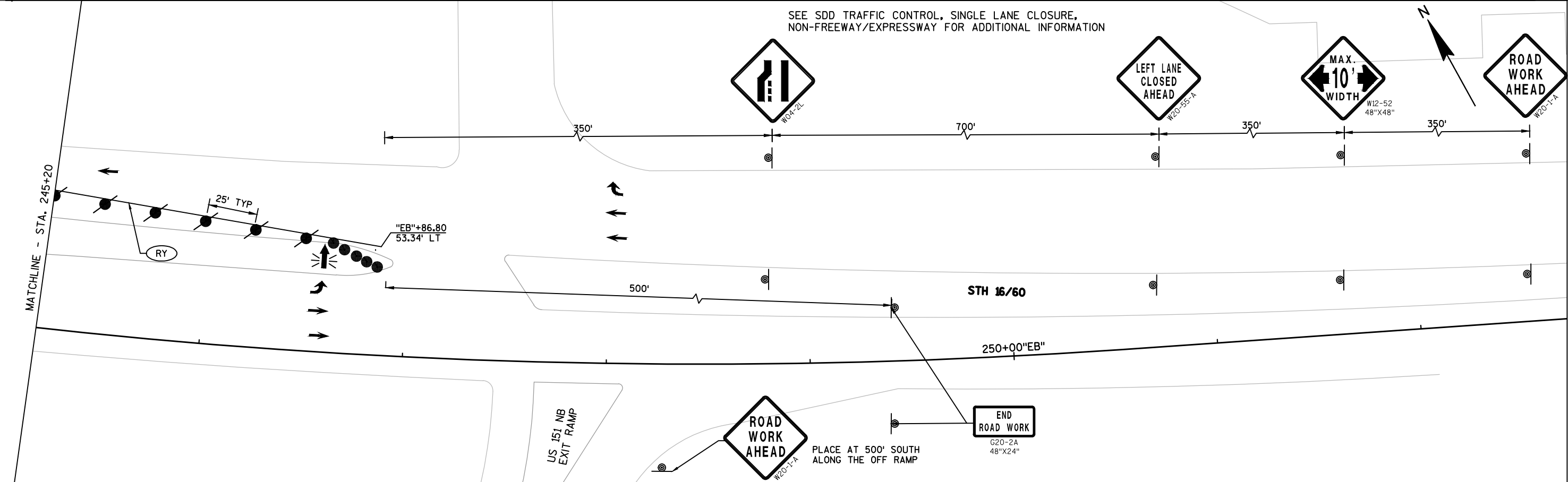




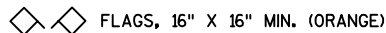


LEGEND					
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

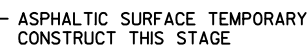




INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC



NOTE: COMMERCIAL DRIVE INTERSECTION OPEN TO TRAFFIC. CONTRACTOR TO MAINTAIN ACCESS DURING CONSTRUCTION OF STH 60 MAINLINE PAVEMENT. CONTRACTOR MAY CLOSE ONE LANE PERIODICALLY DURING DAYTIME HOURS UTILIZING FLAGGING OPERATION TO COMPLETE WORK. SEE S.D.D. TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS) FOR ADDITIONAL INFORMATION AND SIGNING REQUIREMENTS. TWO WAY TRAFFIC MUST BE RESTORED AT THE END OF EACH WORK DAY.

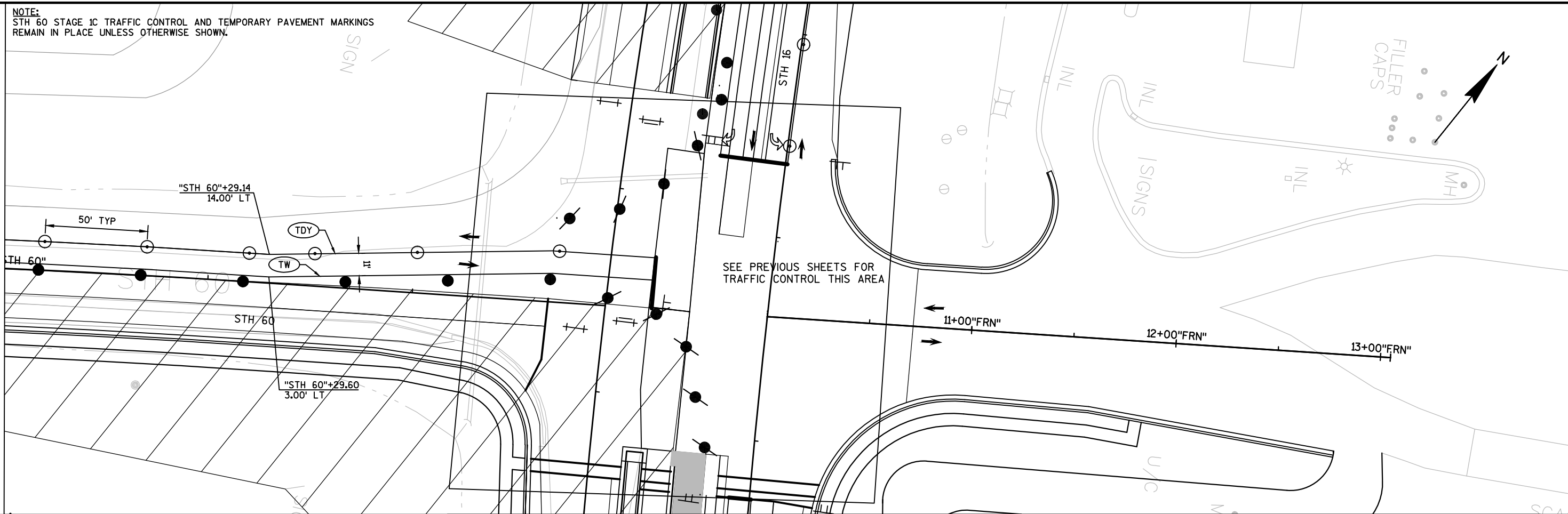


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2

NOTE:
STH 60 STAGE 1C TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

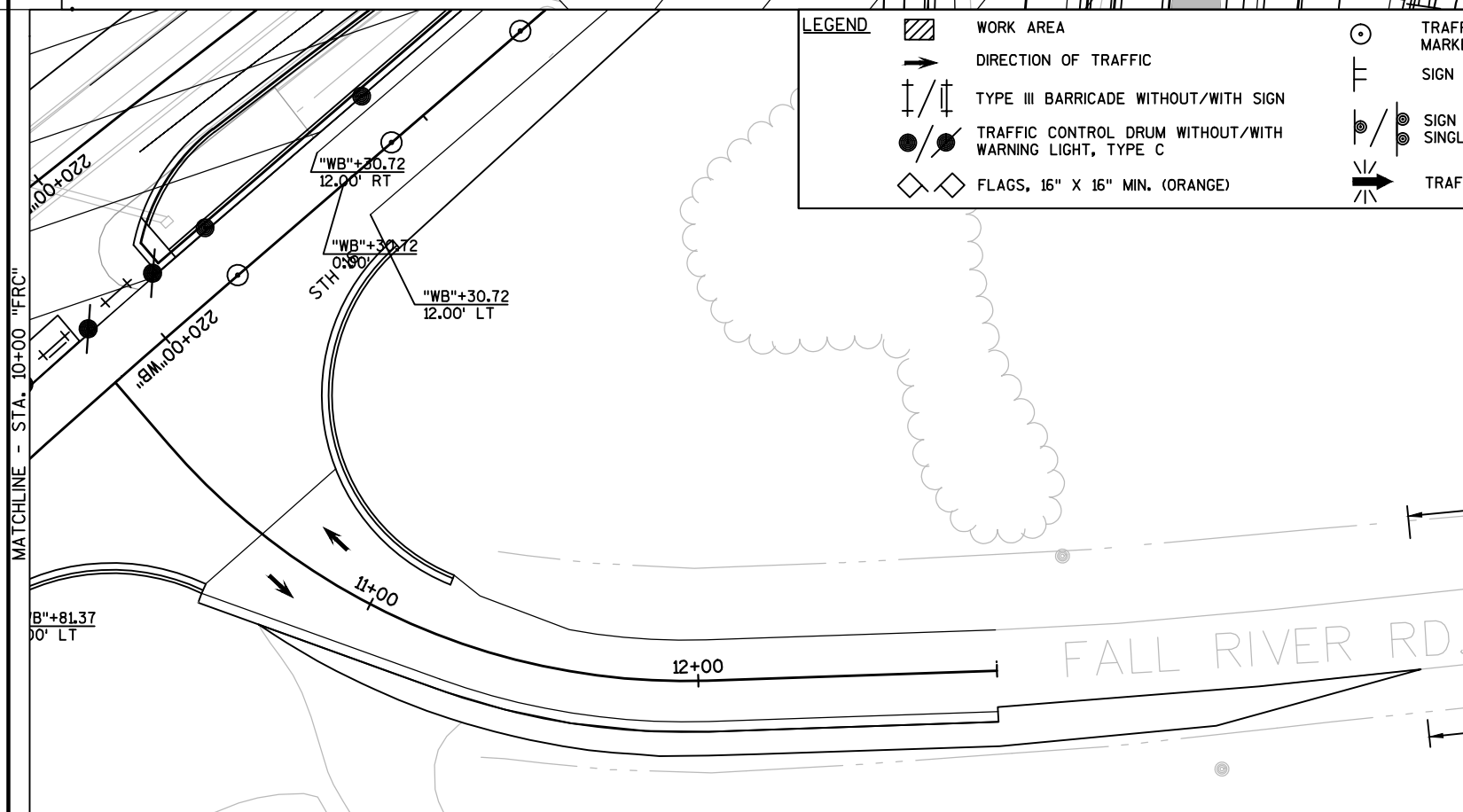
MATCHLINE - STA. 20+00 "STH 60"



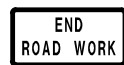
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MATCHLINE - STA. 215+50

LEGEND							
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)				TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH		TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE



COLUMBUS FALL RIVER ROAD



G20-2A
48"X24"

PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 2A

SHEET

E

FILE NAME : J:\ACTIVE\SW\1401-02-02\CAD\14010202\SHEETPLAN\025010_TC.DWG

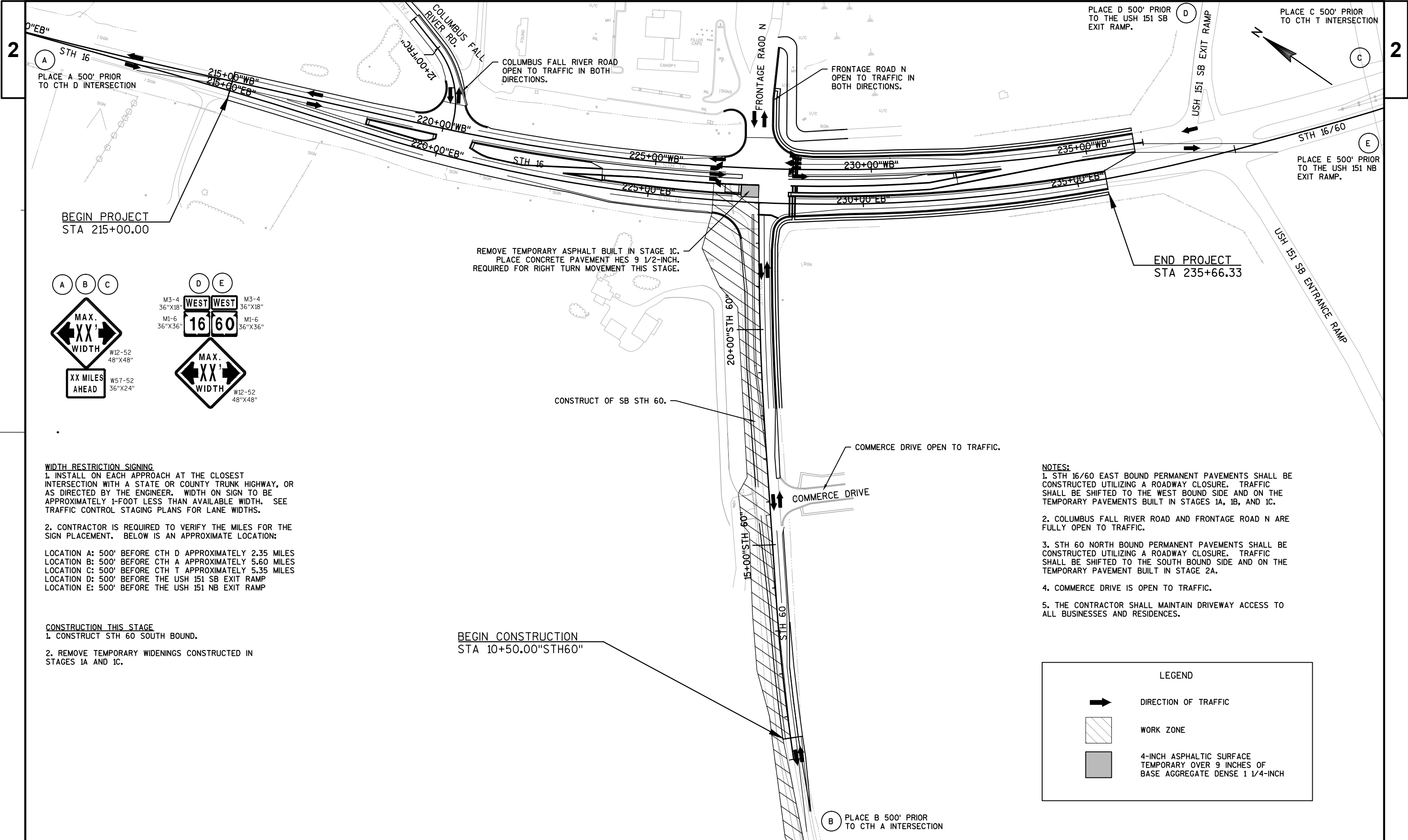
PLOT DATE : 12/14/2015 1:49 PM

PLOT BY : CORY IHDE

PLOT NAME :

PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 42



WIDTH RESTRICTION SIGNING
1. INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROXIMATELY 1-FOOT LESS THAN AVAILABLE WIDTH. SEE TRAFFIC CONTROL STAGING PLANS FOR LANE WIDTHS.

2. CONTRACTOR IS REQUIRED TO VERIFY THE MILES FOR THE SIGN PLACEMENT. BELOW IS AN APPROXIMATE LOCATION:

LOCATION A: 500' BEFORE CTH D APPROXIMATELY 2.35 MILES
LOCATION B: 500' BEFORE CTH A APPROXIMATELY 5.60 MILES
LOCATION C: 500' BEFORE CTH T APPROXIMATELY 5.35 MILES
LOCATION D: 500' BEFORE THE USH 151 SB EXIT RAMP
LOCATION E: 500' BEFORE THE USH 151 NB EXIT RAMP

CONSTRUCTION THIS STAGE
1. CONSTRUCT STH 60 SOUTH BOUND.
2. REMOVE TEMPORARY WIDENINGS CONSTRUCTED IN STAGES 1A AND 1C.

- NOTES:**
1. STH 16/60 EAST BOUND PERMANENT PAVEMENTS SHALL BE CONSTRUCTED UTILIZING A ROADWAY CLOSURE. TRAFFIC SHALL BE SHIFTED TO THE WEST BOUND SIDE AND ON THE TEMPORARY PAVEMENTS BUILT IN STAGES 1A, 1B, AND 1C.
 2. COLUMBUS FALL RIVER ROAD AND FRONTAGE ROAD N ARE FULLY OPEN TO TRAFFIC.
 3. STH 60 NORTH BOUND PERMANENT PAVEMENTS SHALL BE CONSTRUCTED UTILIZING A ROADWAY CLOSURE. TRAFFIC SHALL BE SHIFTED TO THE SOUTH BOUND SIDE AND ON THE TEMPORARY PAVEMENT BUILT IN STAGE 2A.
 4. COMMERCE DRIVE IS OPEN TO TRAFFIC.
 5. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL BUSINESSES AND RESIDENCES.

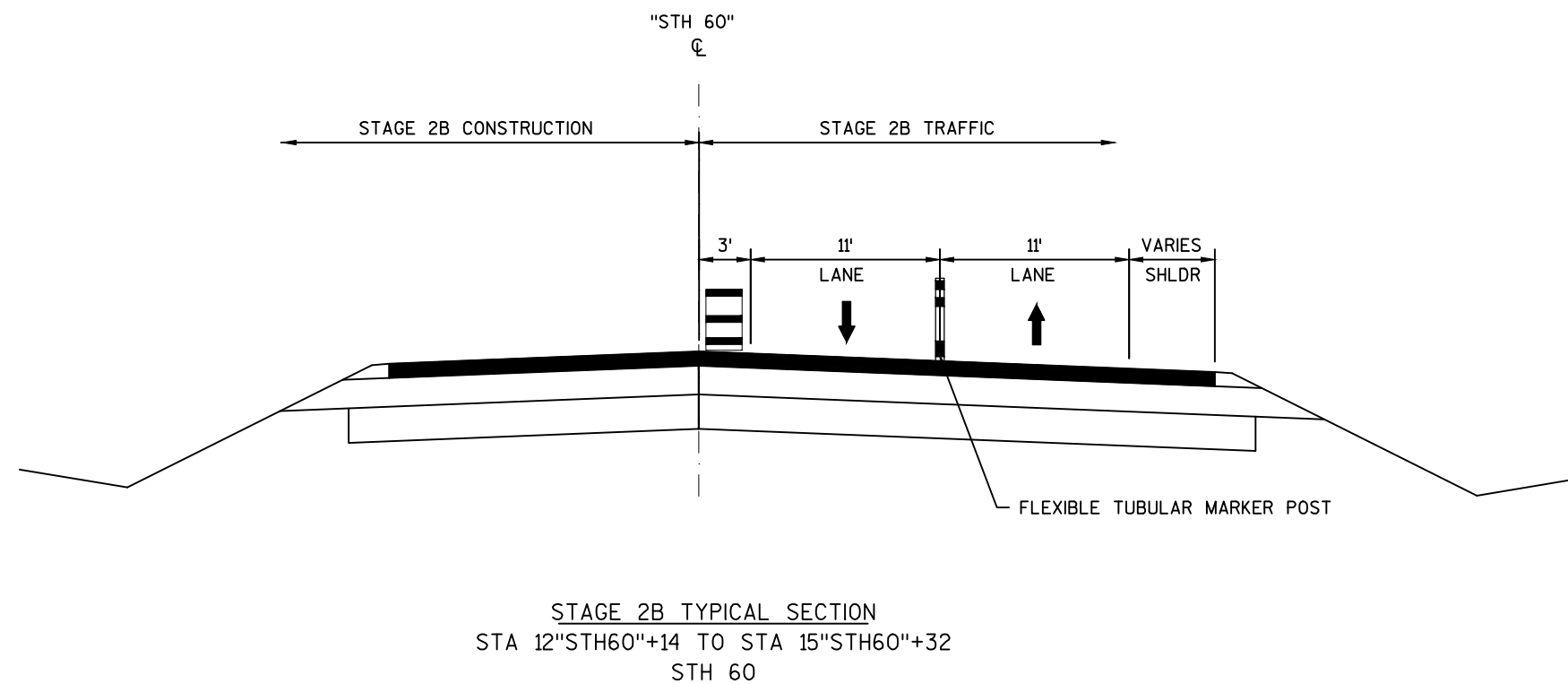
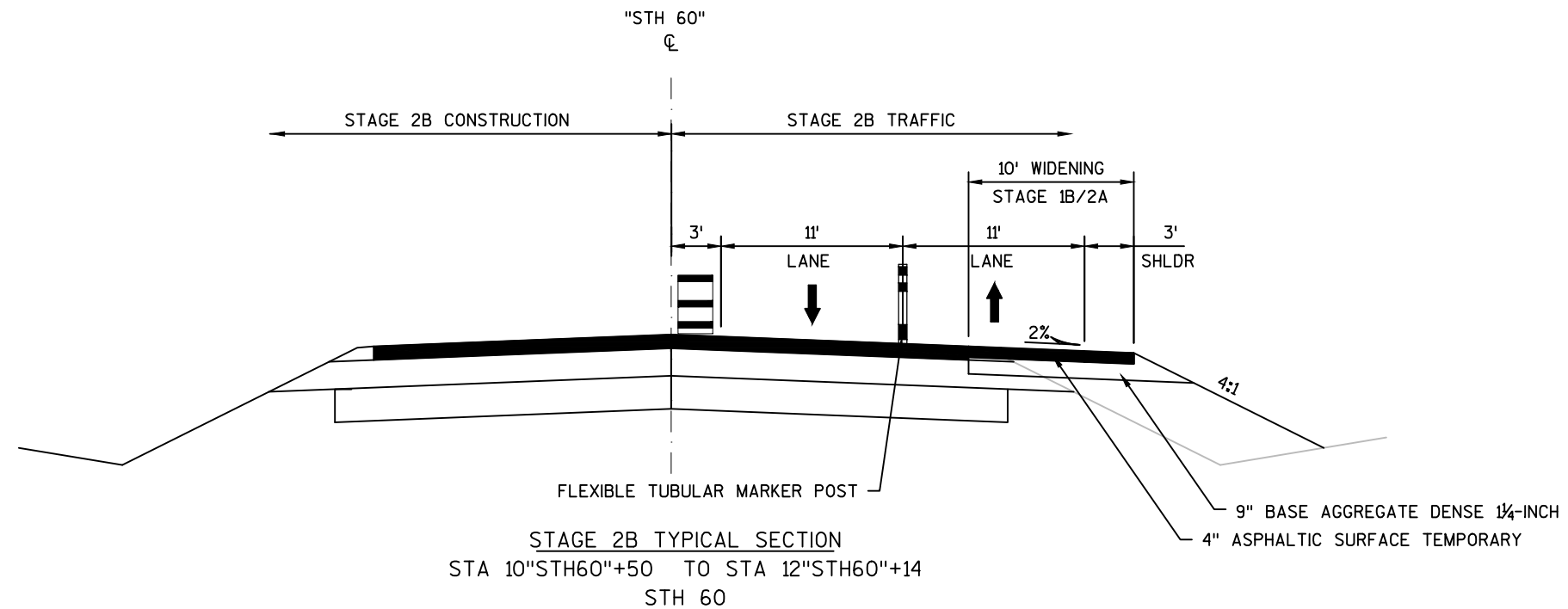
LEGEND

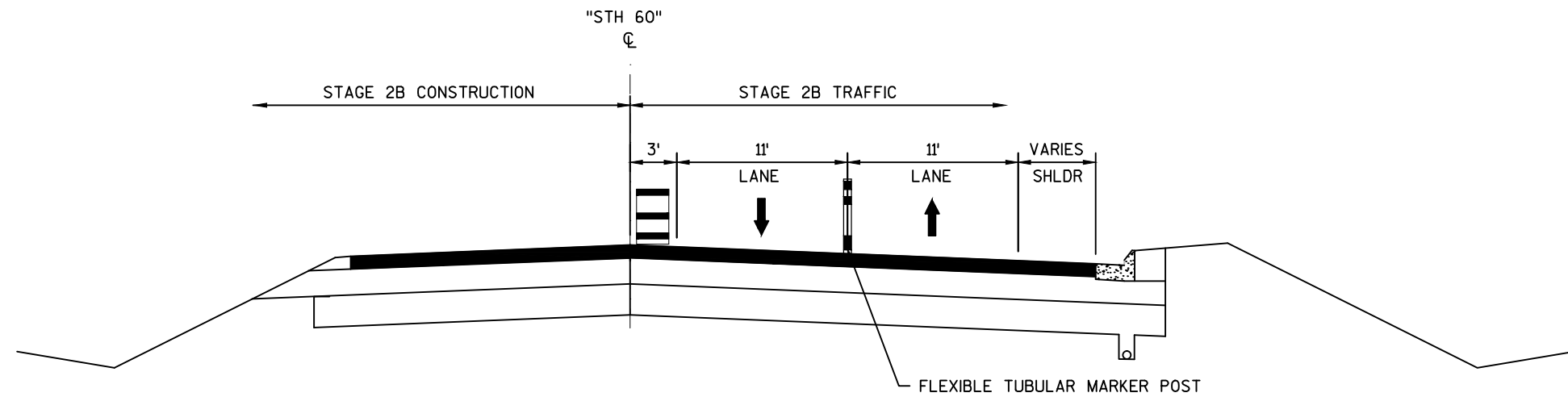
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DIRECTION OF TRAFFIC

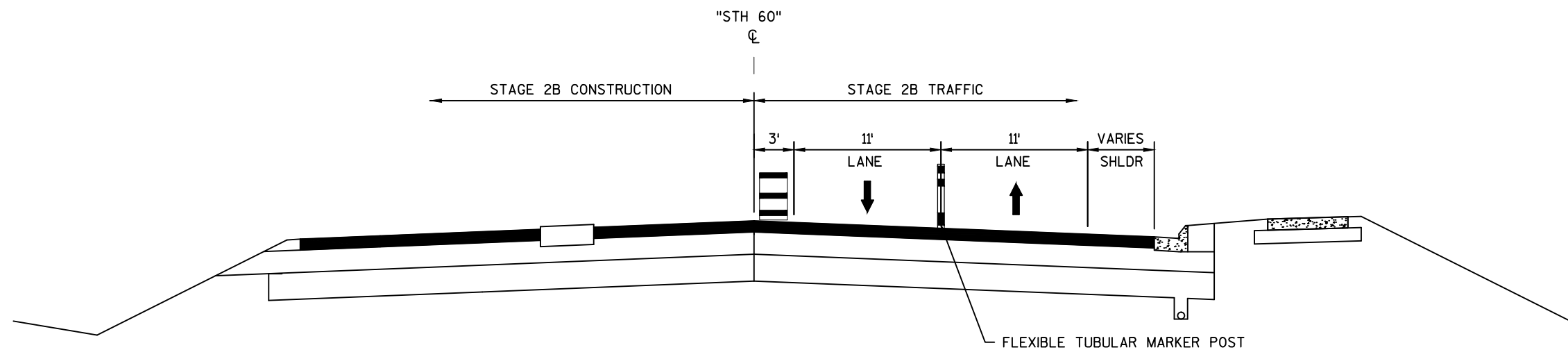
WORK ZONE

4-INCH ASPHALTIC SURFACE
TEMPORARY OVER 9 INCHES OF
BASE AGGREGATE DENSE 1 1/4-INCH





STAGE 2B TYPICAL SECTION
STA 15"STH60"+32 TO STA 15"STH60"+89
STA 16"STH60"+23 TO STA 17"STH60"+04
STH 60



STAGE 2B TYPICAL SECTION
STA 17"STH60"+66 TO STA 22"STH60"+15
STH 60

2

LEGEND					
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)				TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

NOTE:
STAGE 2A TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

END
ROAD WORK
G20-2A
48"X24"

500'

SIGN

210+00"EB"

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

MAX.
10'
WIDTH
W12-52
48"X48"

INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC

SIGN

ROAD
CLOSED
R11-2
48"X30"

STH 16

50' TYP

215+00"EB"

MATCHLINE - STA. 215+50

2

NOTE:
STAGE 2A TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

MATCHLINE - STA. 215+50

50' TYP.

STH 16

220+00"EB"

ROAD
CLOSED
R11-2
48"X30"

SIGN

SIGN

ONLY ONLY ONLY
R3-8-W
54"X30"

MATCHLINE - STA. 223+00

PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 2B

SHEET

E

FILE NAME : J:\ACTIVE\SW\1401-02-02\CAD\14010202\SHEETPLAN\025011.TC.DWG

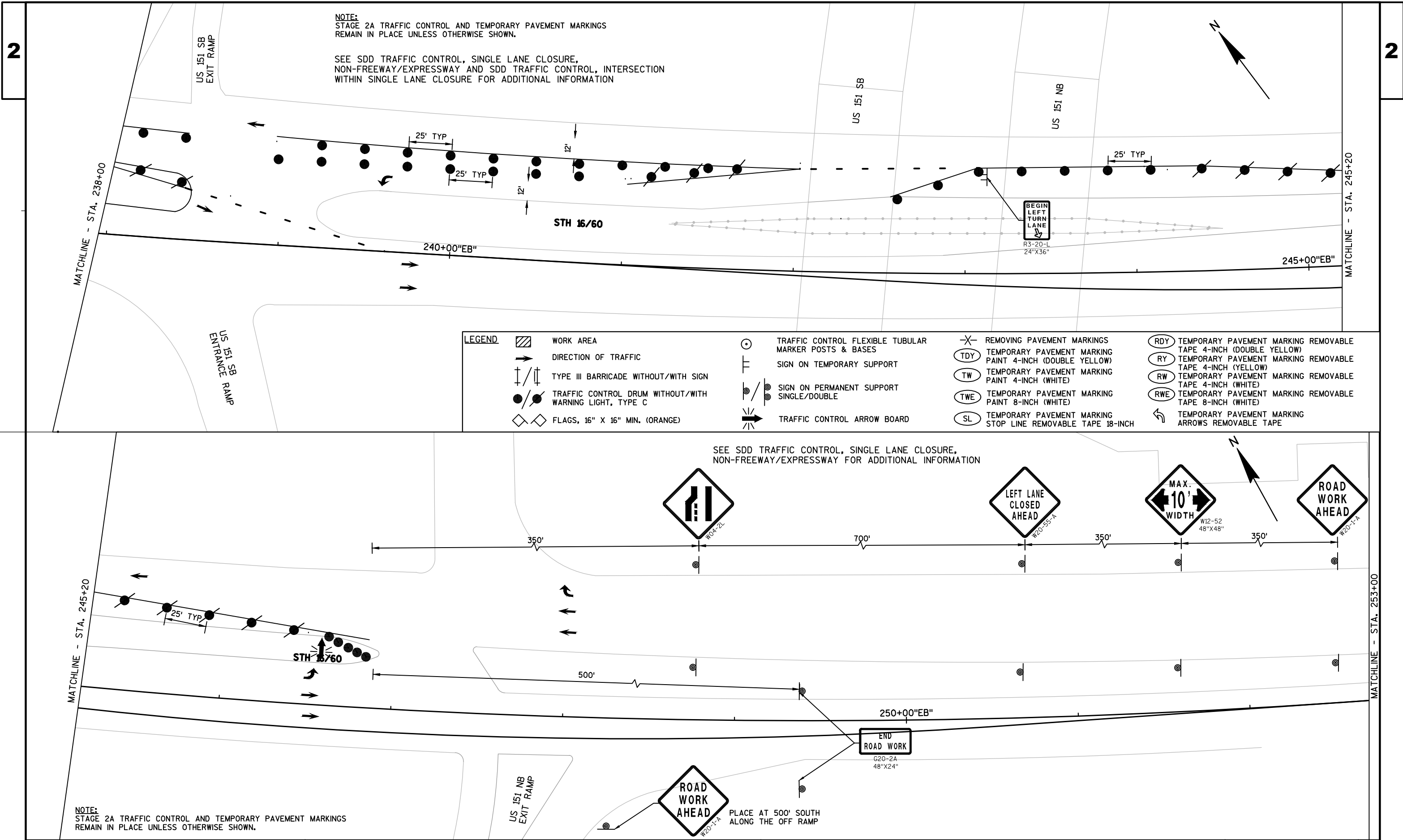
PLOT DATE : 12/14/2015 1:51 PM

PLOT BY : CORY IHDE

PLOT NAME :

PLOT SCALE : 1" = 50'-XREF

WISDOT/CADDS SHEET 42



END
ROAD WORK
G20-2A
48"X24"

500'

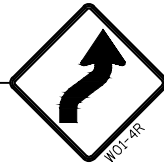
250'

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



W12-52
48"X48"

INSTALL W12-52 SIGN 500' AFTER THE ROAD WORK AHEAD
SIGN IN SDD 15C4: TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 M.P.H OR GREATER, TWO WAY UNDIVIDED ROAD
OPEN TO TRAFFIC



LEGEND

- WORK AREA
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/WITH SIGN
- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C
- FLAGS, 16" X 16" MIN. (ORANGE)

- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
- TRAFFIC CONTROL ARROW BOARD

- REMOVING PAVEMENT MARKINGS
- TDY TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- TW TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- TWE TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
- SL TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH

- RDY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- RY TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- RW TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- RWE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

LANE
CLOSED
R11-2-L
48"X30"

STH 60

300' TAPER

"STH 60"+50.19
4.00' RT
"STH 60"+50.02
14.99' RT
"STH 60"+50.04
26.00' RT

RDY

50' TYP

MATCHLINE - STA. 12+50 "STH 60"

MAINTAIN DRIVEWAY ACCESS AT
ALL TIMES DURING CONSTRUCTION.

MH

MH

MH

COMMERCE DR

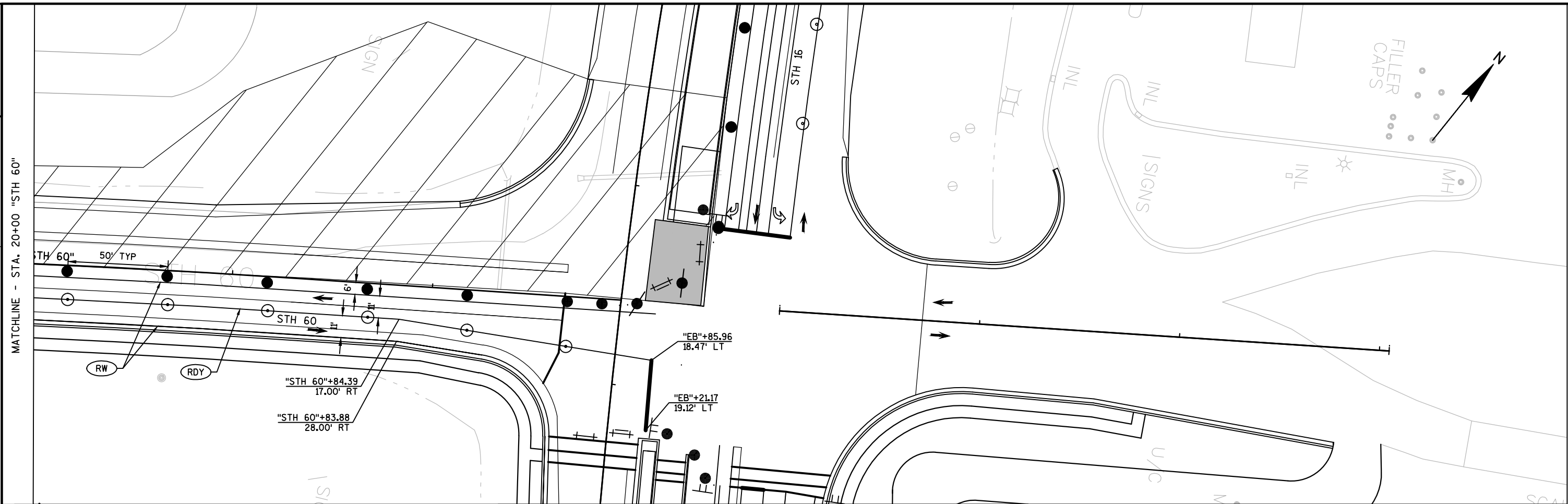
STOP
R1-1
36"X36"

SIDEWALK
CLOSED
R9-9
24"X12"

ROAD
WORK
AHEAD
W20-1-A

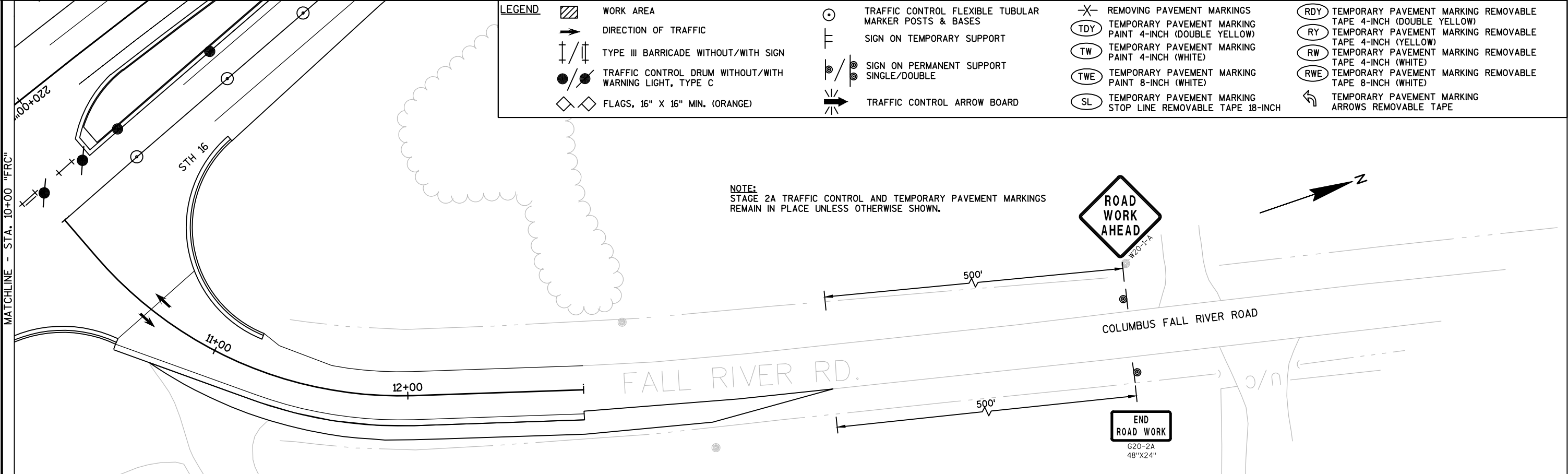
PLACE AT 500' FROM INTERSECTION
ALONG COMMERCE DRIVE

2



2

LEGEND			
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD
	FLAGS, 16" X 16" MIN. (ORANGE)		REMOVING PAVEMENT MARKINGS
			TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
			TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE



MATCHLINE - STA. 12+87 "FRC"

PROJECT NO:1401-02-72

HWY:STH 16

COUNTY:COLUMBIA

TRAFFIC CONTROL STAGE 2B

SHEET

E

FILE NAME : J:\ACTIVE\SW\1401-02-02\CAD\14010202\SHEETSP\LAN\025011.TC.DWG

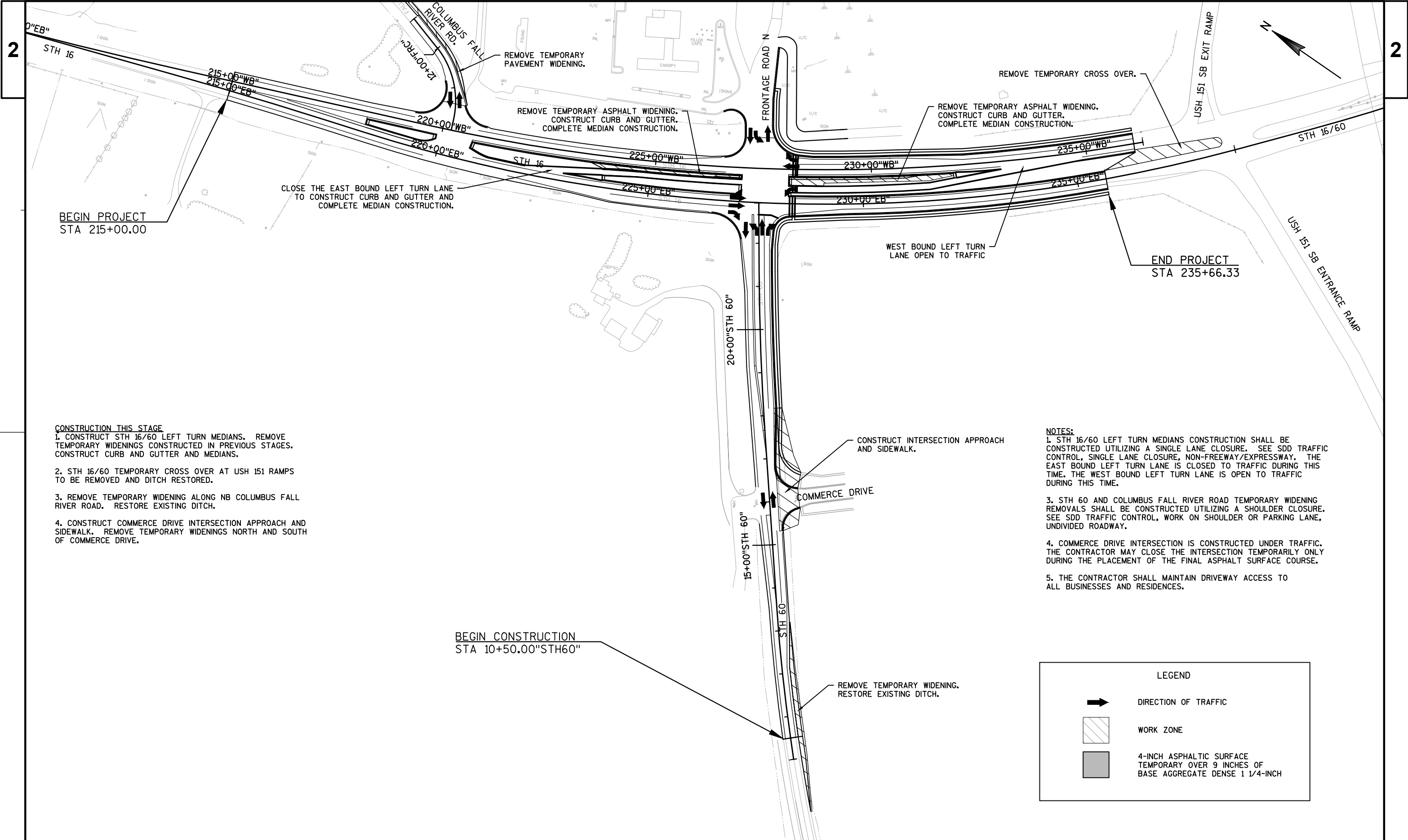
PLOT DATE : 12/14/2015 1:51 PM

PLOT BY : CORY IHDE

PLOT NAME :

PLOT SCALE : 1" = 50'-XREF

WISDOT/CADDS SHEET 42



- CONSTRUCTION THIS STAGE**
- 1. CONSTRUCT STH 16/60 LEFT TURN MEDIANS. REMOVE TEMPORARY WIDENINGS CONSTRUCTED IN PREVIOUS STAGES. CONSTRUCT CURB AND GUTTER AND MEDIANS.
 - 2. STH 16/60 TEMPORARY CROSS OVER AT USH 151 RAMPS TO BE REMOVED AND DITCH RESTORED.
 - 3. REMOVE TEMPORARY WIDENING ALONG NB COLUMBUS FALL RIVER ROAD. RESTORE EXISTING DITCH.
 - 4. CONSTRUCT COMMERCE DRIVE INTERSECTION APPROACH AND SIDEWALK. REMOVE TEMPORARY WIDENINGS NORTH AND SOUTH OF COMMERCE DRIVE.

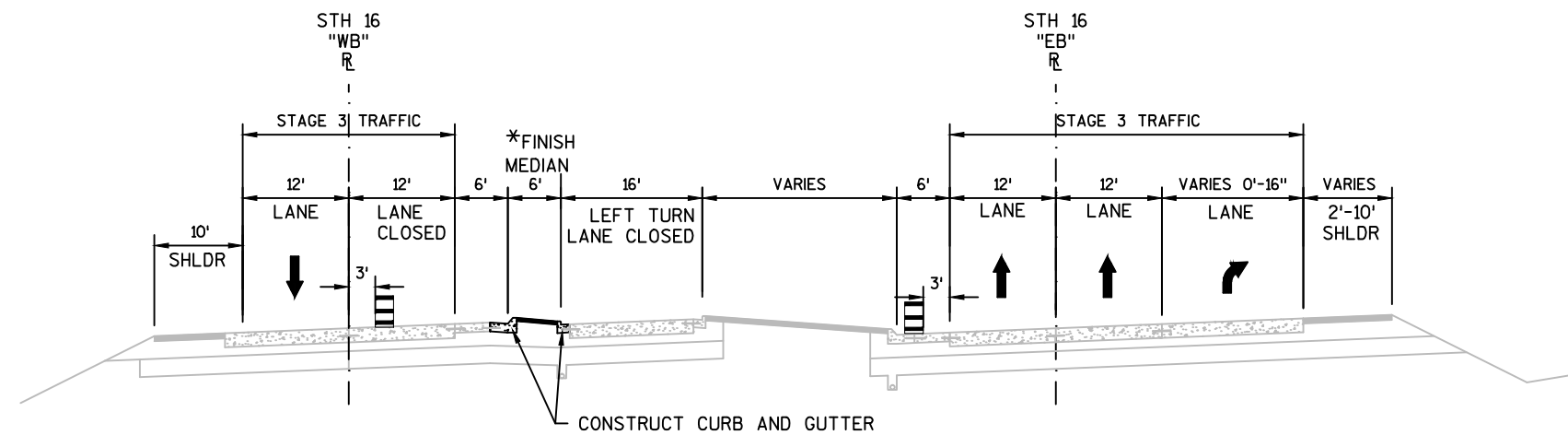
- NOTES:**
- 1. STH 16/60 LEFT TURN MEDIANS CONSTRUCTION SHALL BE CONSTRUCTED UTILIZING A SINGLE LANE CLOSURE. SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY. THE EAST BOUND LEFT TURN LANE IS CLOSED TO TRAFFIC DURING THIS TIME. THE WEST BOUND LEFT TURN LANE IS OPEN TO TRAFFIC DURING THIS TIME.
 - 3. STH 60 AND COLUMBUS FALL RIVER ROAD TEMPORARY WIDENING REMOVALS SHALL BE CONSTRUCTED UTILIZING A SHOULDER CLOSURE. SEE SDD TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY.
 - 4. COMMERCE DRIVE INTERSECTION IS CONSTRUCTED UNDER TRAFFIC. THE CONTRACTOR MAY CLOSE THE INTERSECTION TEMPORARILY ONLY DURING THE PLACEMENT OF THE FINAL ASPHALT SURFACE COURSE.
 - 5. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL BUSINESSES AND RESIDENCES.

LEGEND

DIRECTION OF TRAFFIC

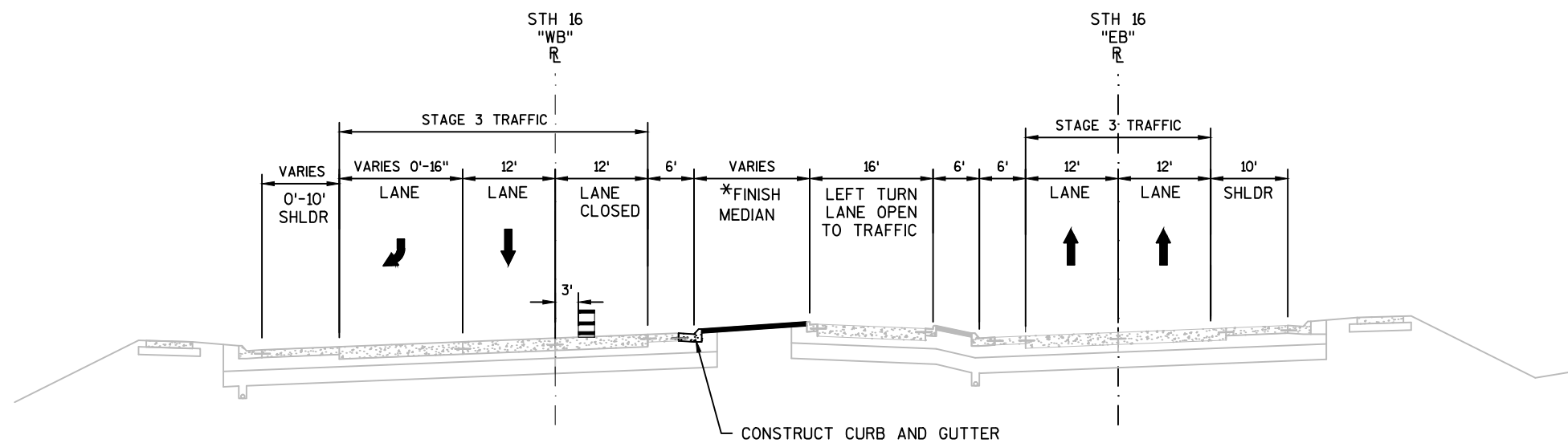
WORK ZONE

4-INCH ASPHALTIC SURFACE
TEMPORARY OVER 9 INCHES OF
BASE AGGREGATE DENSE 1 1/4-INCH



STAGE 3 TYPICAL SECTION
STA 222'EB"+00 TO STA 227'EB"+16
STH 16

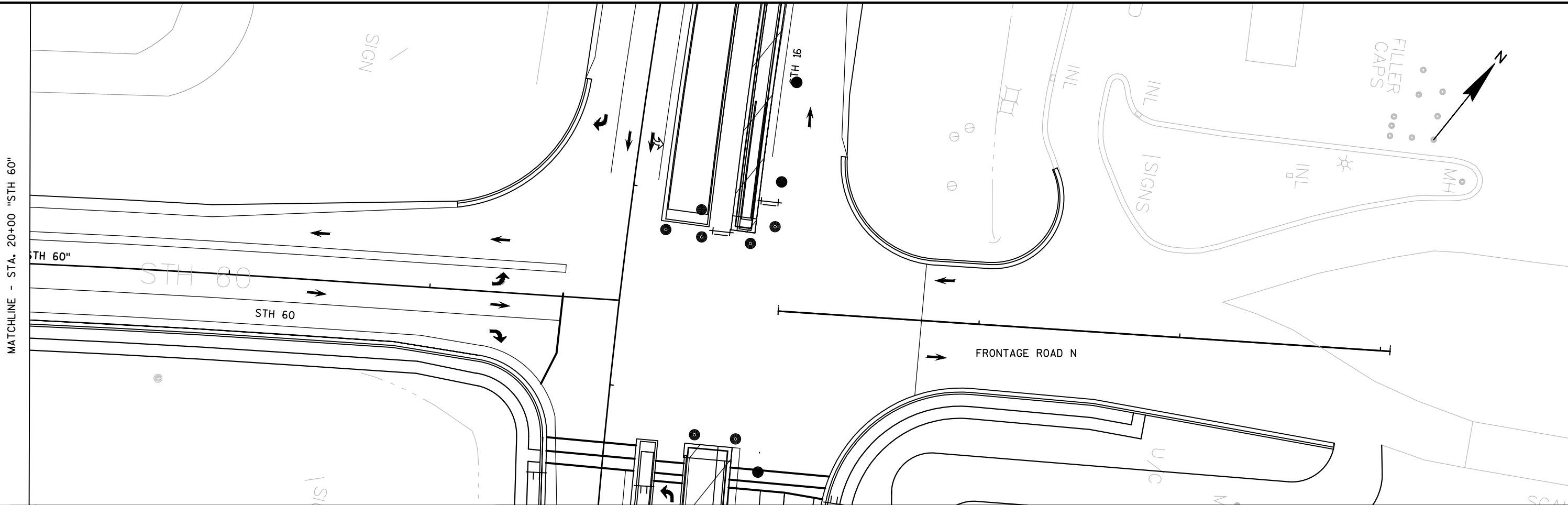
*NOTE: SEE PLAN DETAIL SHEETS FOR MEDIAN MATERIALS



STAGE 3 TYPICAL SECTION
STA 228'EB"+25 TO STA 235'EB"+25
STH 16

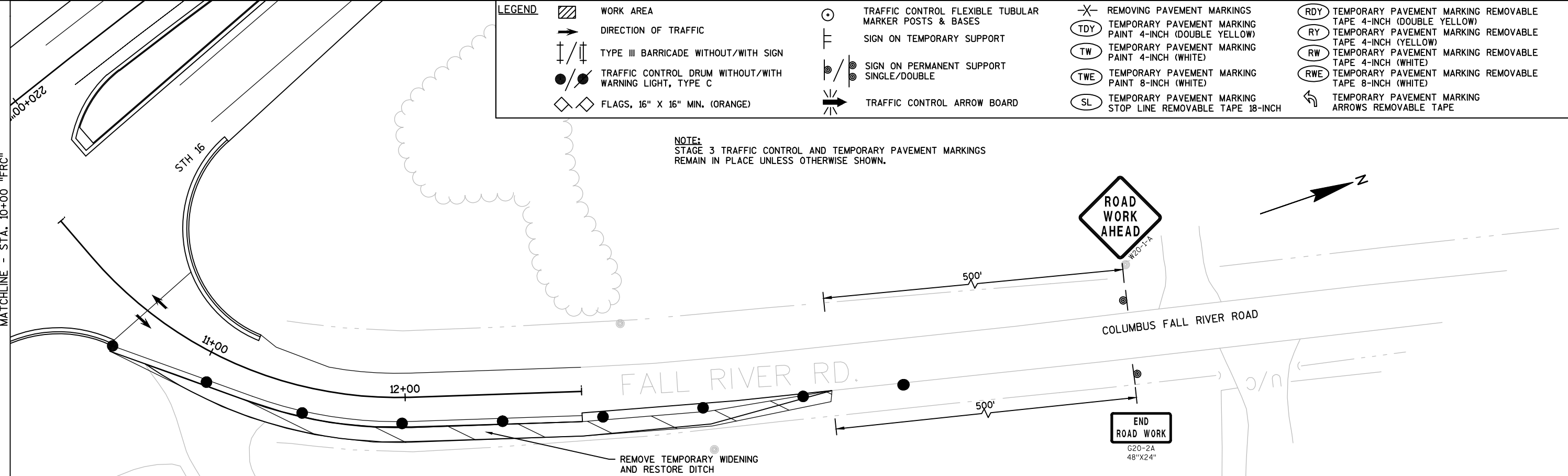
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2



LEGEND			
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD
	FLAGS, 16" X 16" MIN. (ORANGE)		REMOVING PAVEMENT MARKINGS
			TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
			TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
			TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

NOTE:
STAGE 3 TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.



PROJECT NO:1401-02-72

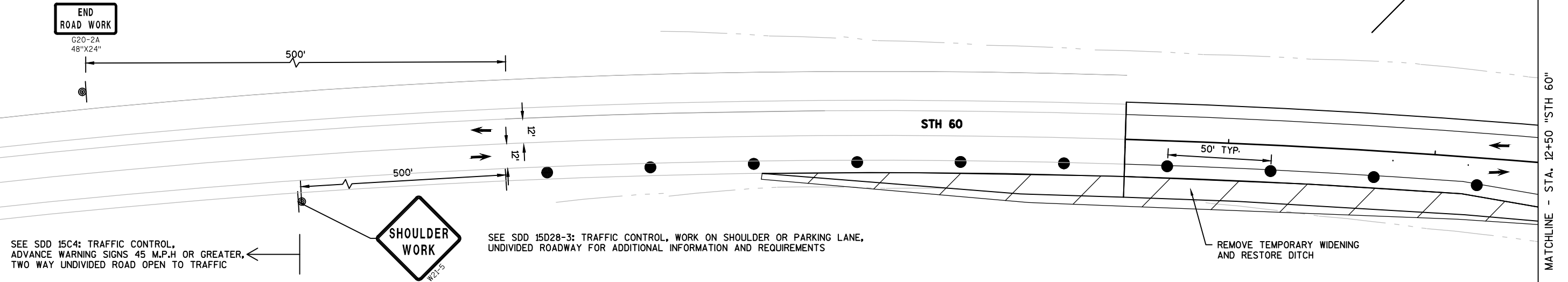
HWY:STH 16

COUNTY:COLUMBIA

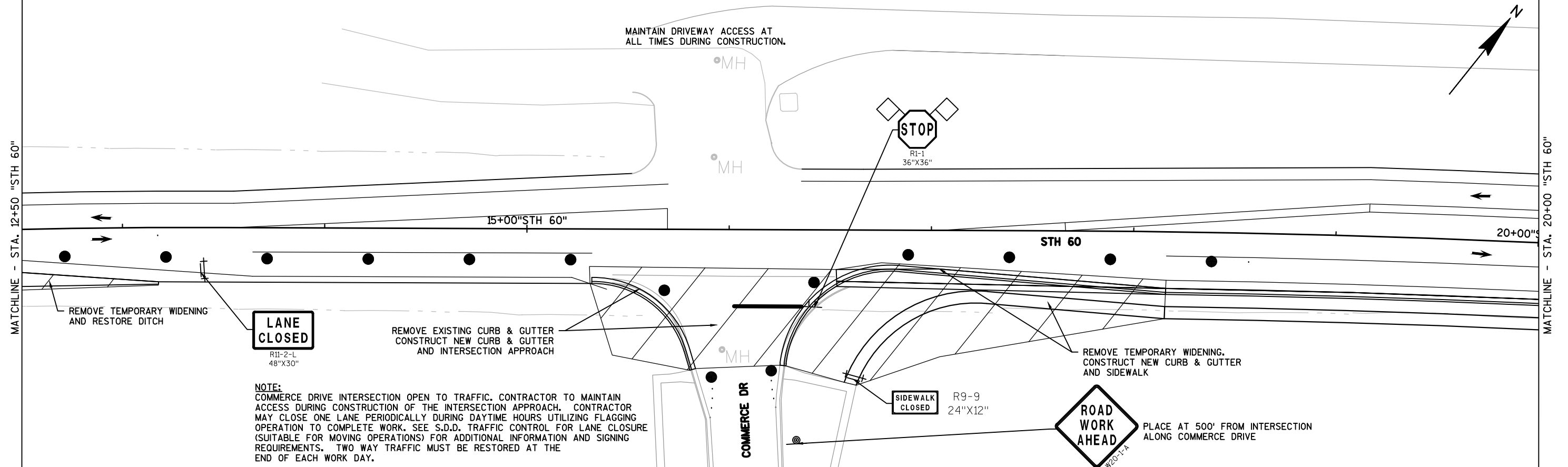
TRAFFIC CONTROL STAGE 3

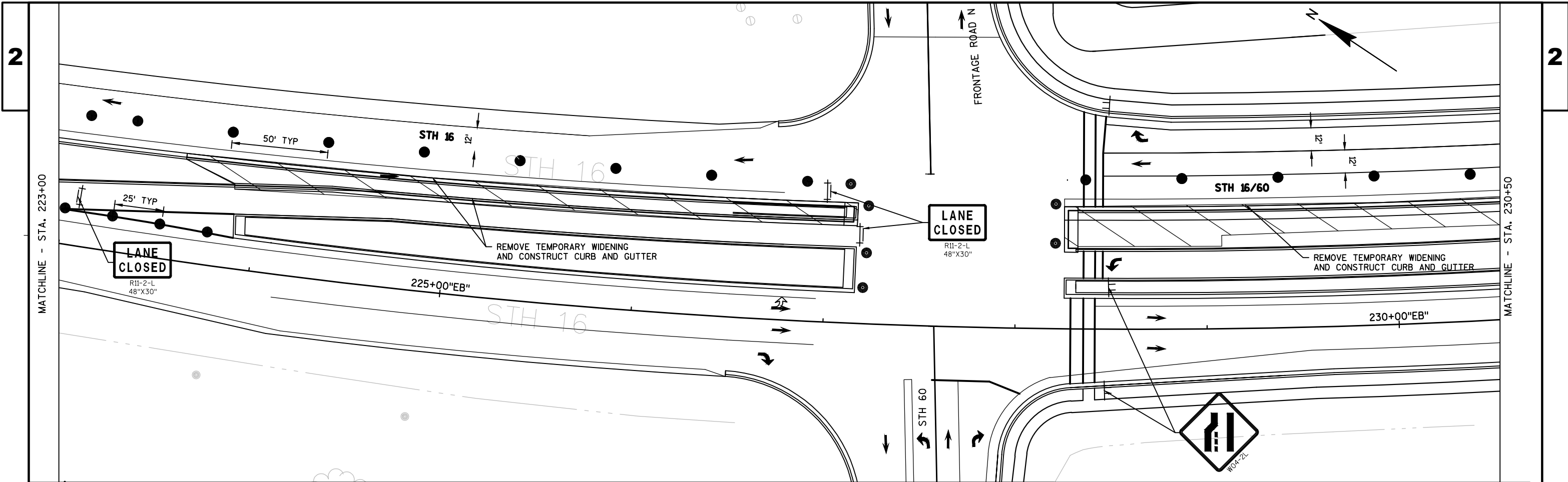
SHEET

E

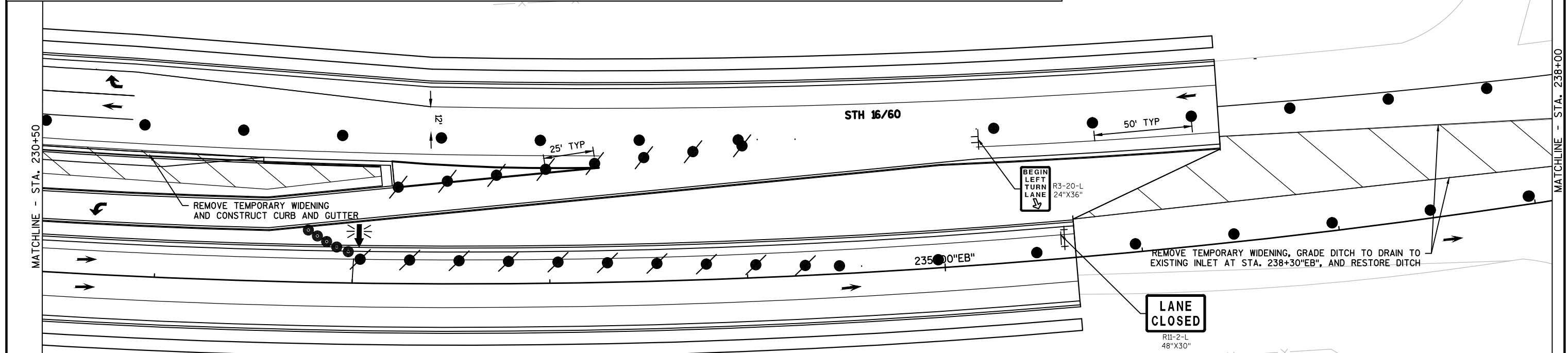
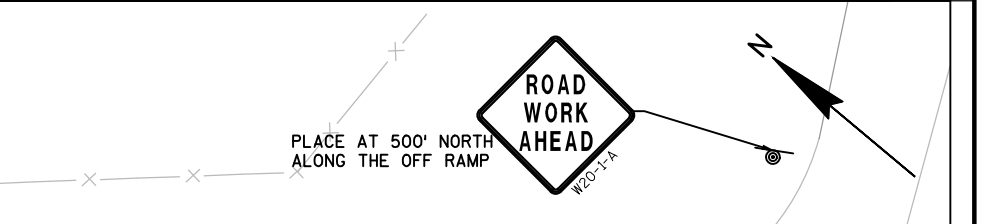


LEGEND									
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)		TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH		TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE		

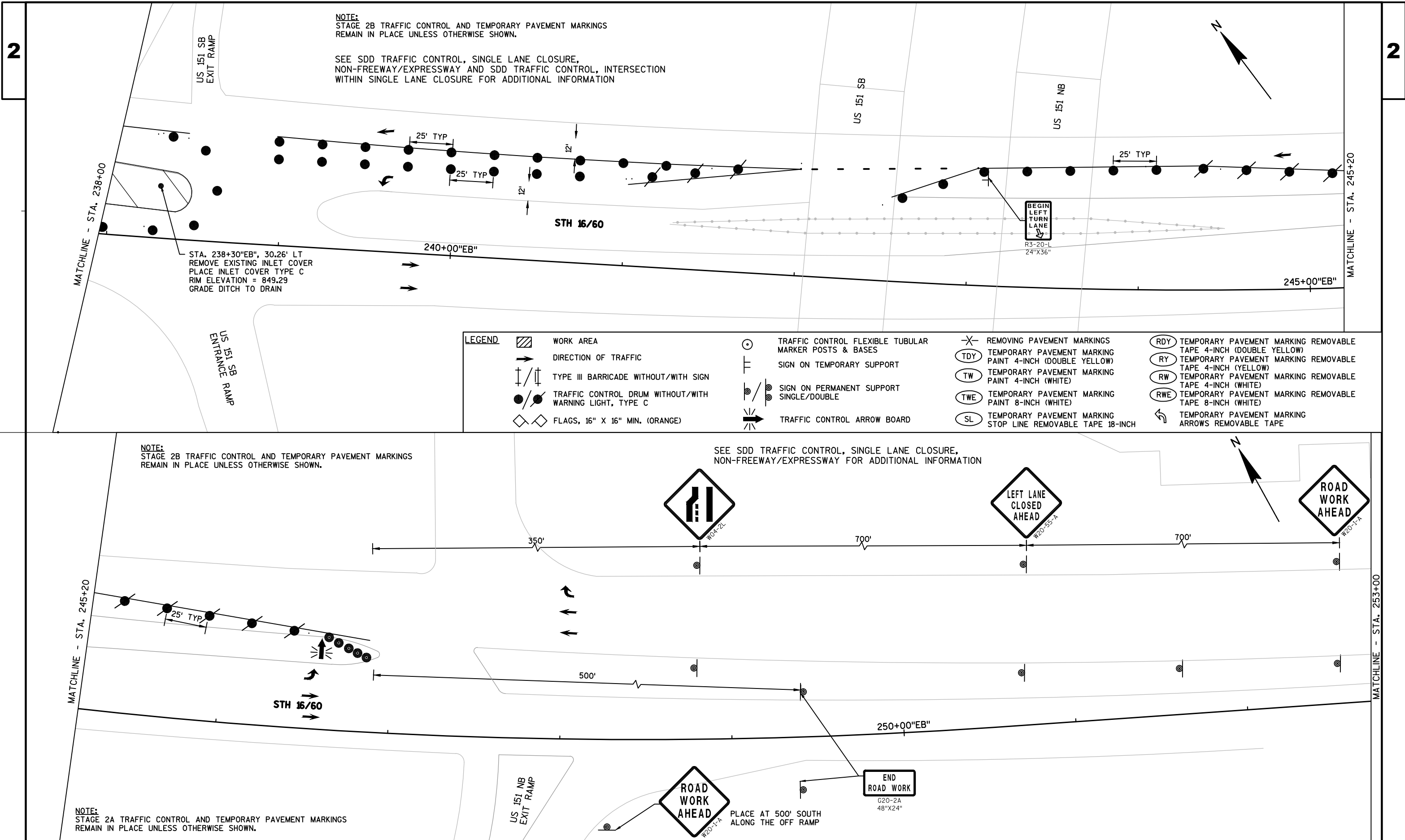




LEGEND					
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE



PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	TRAFFIC CONTROL STAGE 3	SHEET	E
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2

LEGEND					
	WORK AREA		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES		REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC		SIGN ON TEMPORARY SUPPORT		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
	TYPE III BARRICADE WITHOUT/WITH SIGN		SIGN ON PERMANENT SUPPORT SINGLE/DOUBLE		TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT, TYPE C		TRAFFIC CONTROL ARROW BOARD		TEMPORARY PAVEMENT MARKING PAINT 8-INCH (WHITE)
	FLAGS, 16" X 16" MIN. (ORANGE)				TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
					TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE

NOTE:
STAGE 2B TRAFFIC CONTROL AND TEMPORARY PAVEMENT MARKINGS
REMAIN IN PLACE UNLESS OTHERWISE SHOWN.

END
ROAD WORK
G20-2A
48"X24"

500'

SIGN

STH 16

210+00"EB"

215+00"EB"

MATCHLINE - STA. 215+50

SEE SDD 15C4: TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45 M.P.H OR GREATER,
TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

SIGN

SIGN

STH 16

220+00"EB"

LEFT LANE
CLOSED
AHEAD
W20-55-A

SIGN

SIGN

SIGN

SIGN

MATCHLINE - STA. 223+00

2

LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- ⊥ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- TRAFFIC FLOW ARROW
- XXX CLOSURE
- ▨ WORK AREA

GENERAL NOTES

ALL SIGNS SHOWN ON DETOUR SHEETS SHALL BE PAID FOR AT TRAFFIC CONTROL DETOUR SIGNS UNLESS OTHERWISE NOTED.

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

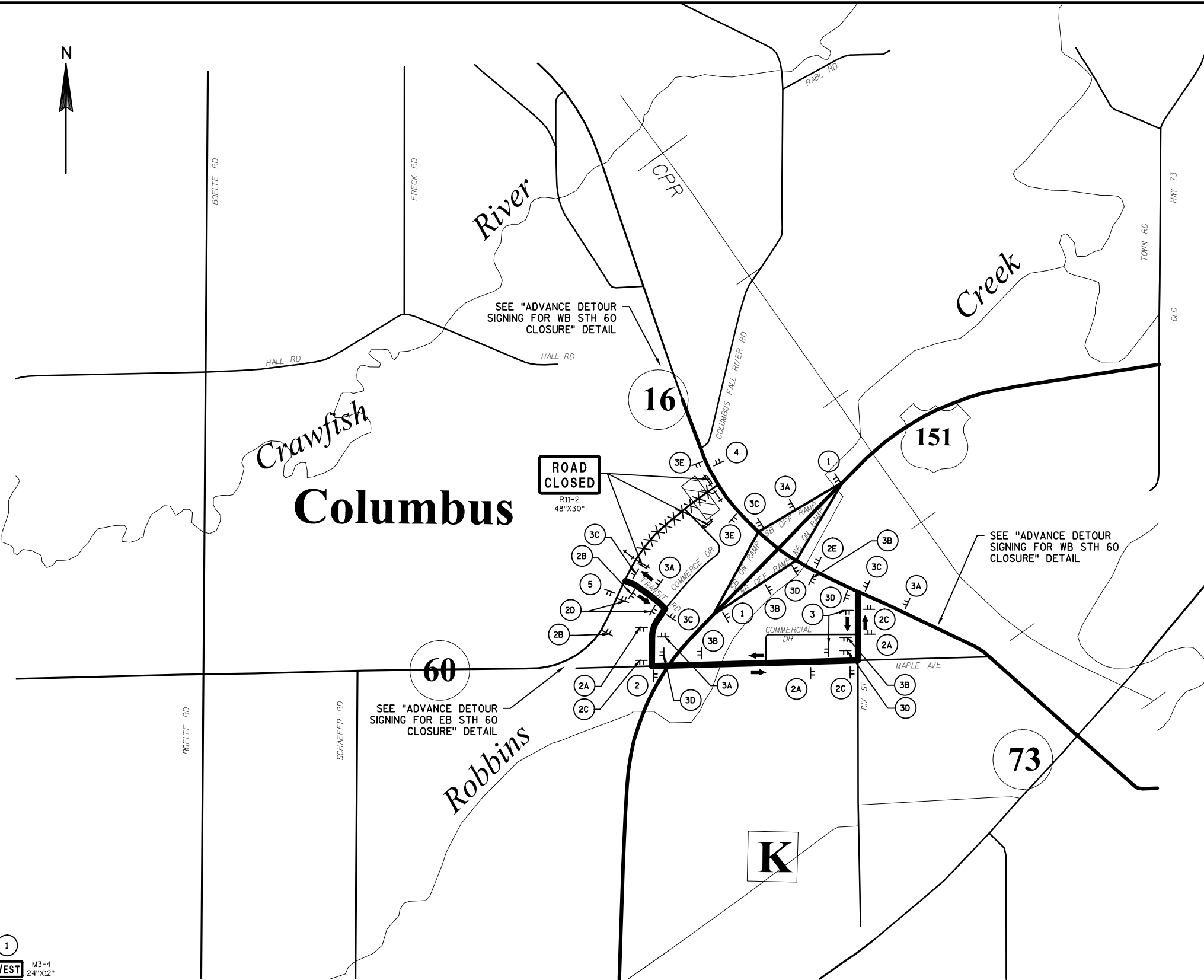
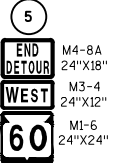
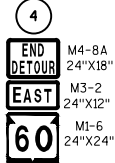
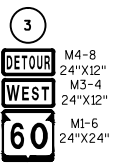
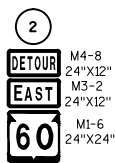
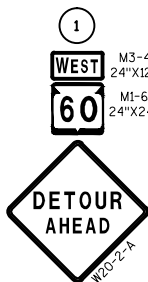
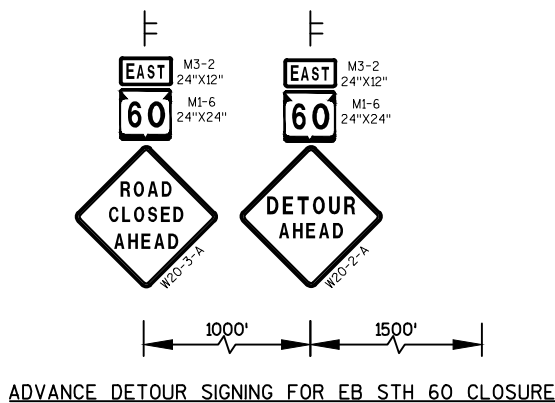
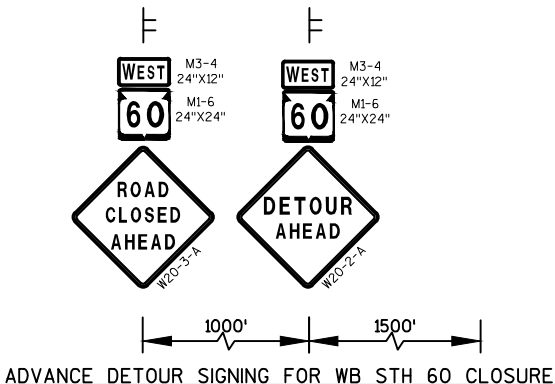
LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

COVERING AND UNCOVERING EXISTING SIGNS PAID FOR UNDER "TRAFFIC CONTROL DETOUR" ITEM.





BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
BM200	233"WB"+67.89	TOP SE CORNER OF STATUE PAD	854.87
BM201	19"STH60"+41.36	239.24' RT, CHIZ. ON ATC BOLT	848.05
BM202	21"STH60"+67.91	84.15' LT, TAG BOLT ON HYDRANT	850.54
BM203	222"WB"+05.35	47.63' LT, CHIZ. ON ATC BOLT	848.96
BM204	226"WB"+35.52	85.95' LT, TAG BOLT ON HYDRANT	849.01

STH 16 EB					
SUPERELEVATION DATA	STATION	LT SHLDR	LT LANE	RT LANE	RT SHLDR
MATCH EXISTING	215+00.00	--	-1.20%	-1.30%	-4.00%
END NORMAL SHOULDER	217+39.25	--	-0.90%	-2.00%	-4.00%
END NORMAL CROWN	217+39.25	--	-0.90%	-2.00%	-2.00%
LEVEL CROWN	217+87.25	--	-0.90%	0.00%	0.00%
REVERSE CROWN	218+35.25	-4.00%	-1.70%	2.00%	2.00%
BEGIN FULL SUPER	218+47.25	-4.00%	-2.50%	2.50%	2.50%
END FULL SUPER	238+52.64	-4.00%	-2.50%	2.50%	2.50%

STH 60					
SUPERELEVATION DATA	STATION	LT SHLDR	LT LN (WB)	RT LN (EB)	RT SHLDR
MATCH EXISTING	10+50.00'	3.75%	3.75%	-3.75%	-4.00%
REVERSE CROWN	13+47.00'	2.00%	2.00%	-2.00%	-4.00%
BEGIN NORMAL CROWN	14+00.00'	-2.00%	-2.00%	-2.00%	-4.00%
BEGIN NORMAL SHLDR	14+54.49'	-4.00%	-2.00%	-2.00%	-4.00%
END NORMAL CROWN	22+16.30'	-4.00%	-2.00%	-2.00%	-4.00%
BEGIN FULL SUPER	22+66.30'	--	0.36%	-0.36%	--
END FULL SUPER	22+94.35'	--	0.36%	-0.36%	--

STH 16 WB					
SUPERELEVATION DATA	STATION	LT SHLDR	LT LANE	RT LANE	RT SHLDR
MATCH EXISTING	215+00.00	-4.00%	-1.50%	1.50%	--
REVERSE CROWN	215+25.00	-4.00%	-2.00%	2.00%	--
BEGIN FULL SUPER	219+90.16	-4.00%	-2.30%	2.30%	2.30%
END FULL SUPER	235+65.11	-4.00%	-2.30%	2.30%	2.30%
REVERSE CROWN	235+72.28	-4.00%	-2.00%	2.00%	2.00%
LEVEL CROWN	236+20.11	-4.00%	-2.00%	0.00%	0.00%

COLUMBUS FALL RIVER ROAD					
SUPERELEVATION DATA	STATION	LT SHLDR	LT LN (EB)	RT LN (WB)	RT SHLDR
BEGIN FULL SUPER	10+00.00	--	0.43%	-0.43%	--
SUPER TRANSITION	10+22.00	--	0.43%	-0.43%	--
END FULL SUPER	11+80.29	-4.00%	-3.90%	3.90%	3.90%
LEVEL CROWN	12+47.29	-4.00%	-2.00%	0.00%	0.00%
BEGIN NORMAL CROWN	12+81.65	-4.00%	-2.00%	-2.00%	-2.00%
BEGIN NORMAL SHLDR	12+81.65	-4.00%	-2.00%	-2.00%	-4.00%

DATE 18DEC15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1401-02-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0020	204.0110	Removing Asphaltic Surface	SY	1,040.000	1,040.000
0030	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,155.000	1,155.000
0040	204.0150	Removing Curb & Gutter	LF	812.000	812.000
0050	204.0170	Removing Fence	LF	273.000	273.000
0060	204.0195	Removing Concrete Bases	EACH	2.000	2.000
0070	204.0220	Removing Inlets	EACH	5.000	5.000
0080	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	235.000	235.000
0090	204.0245	Removing Storm Sewer (size) 02. 14"x23"	LF	303.000	303.000
0100	205.0100	Excavation Common	CY	41,953.000	41,953.000
0110	208.0100	Borrow	CY	776.000	776.000
0120	213.0100	Finishing Roadway (project) 01. 1401-02-72	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	200.000	200.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	25,035.000	25,035.000
0150	310.0110	Base Aggregate Open Graded	TON	310.000	310.000
0160	312.0110	Select Crushed Material	TON	27,690.000	27,690.000
0170	415.0060	Concrete Pavement 6-Inch	SY	2,010.000	2,010.000
0180	415.0095	Concrete Pavement 9 1/2-Inch	SY	17,665.000	17,665.000
0190	415.1095	Concrete Pavement HES 9 1/2-Inch	SY	1,015.000	1,015.000
0200	440.4410	Incentive IRI Ride	DOL	4,098.000	4,098.000
0210	455.0105	Asphaltic Material PG58-28	TON	73.000	73.000
0220	455.0120	Asphaltic Material PG64-28	TON	99.000	99.000
0230	455.0605	Tack Coat	GAL	861.000	861.000
0240	460.1100	HMA Pavement Type E-0.3	TON	330.000	330.000
0250	460.1103	HMA Pavement Type E-3	TON	2,610.000	2,610.000
0260	460.2000	Incentive Density HMA Pavement	DOL	1,960.000	1,960.000
0270	460.4000	HMA Cold Weather Paving	TON	250.000	250.000
0280	465.0110	Asphaltic Surface Patching	TON	50.000	50.000
0290	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	485.000	485.000
0300	465.0125	Asphaltic Surface Temporary	TON	1,910.000	1,910.000
0310	465.0305	Asphaltic Surface Safety Islands	TON	265.000	265.000
0320	465.0315	Asphaltic Flumes	SY	30.000	30.000
0330	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
0340	522.0112	Culvert Pipe Reinforced Concrete Class III 12-Inch	LF	33.000	33.000
0350	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	70.000	70.000
0360	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	8.000	8.000
0370	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0380	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	1.000	1.000
0390	523.0124	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	LF	126.000	126.000
0400	523.0524	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	2.000	2.000
0410	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	99.000	99.000
0420	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	6,346.000	6,346.000
0430	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	1,128.000	1,128.000

DATE 18DEC15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1401-02-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0440	602.0410	Concrete Sidewalk 5-Inch	SF	14,020.000	14,020.000
0450	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	60.000	60.000
0460	606.0100	Riprap Light	CY	85.000	85.000
0470	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	387.000	387.000
0480	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	33.000	33.000
0490	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	495.000	495.000
0500	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	78.000	78.000
0510	608.0342	Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	LF	53.000	53.000
0520	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0530	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0540	611.0606	Inlet Covers Type B	EACH	1.000	1.000
0550	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0560	611.0615	Inlet Covers Type F	EACH	24.000	24.000
0570	611.0642	Inlet Covers Type MS	EACH	4.000	4.000
0580	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0590	611.2604	Manholes Variable Special 4-FT Diameter	EACH	1.000	1.000
0600	611.3004	Inlets 4-FT Diameter	EACH	2.000	2.000
0610	611.3253	Inlets 2.5x3-FT	EACH	22.000	22.000
0620	611.3901	Inlets Median 1 Grate	EACH	2.000	2.000
0630	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0640	611.8110	Adjusting Manhole Covers	EACH	2.000	2.000
0650	611.8120.S	Cover Plates Temporary	EACH	20.000	20.000
0660	611.9800.S	Pipe Grates	EACH	2.000	2.000
0670	612.0106	Pipe Underdrain 6-Inch	LF	3,850.000	3,850.000
0680	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	10.000	10.000
0690	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	1.000	1.000
0700	616.0100	Fence Woven Wire (height) 01. 4-Ft	LF	196.000	196.000
0710	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1401-02-72	EACH	1.000	1.000
0720	619.1000	Mobilization	EACH	1.000	1.000
0730	620.0100	Concrete Corrugated Median	SF	2,025.000	2,025.000
0740	620.0300	Concrete Median Sloped Nose	SF	515.000	515.000
0750	624.0100	Water	MGAL	600.000	600.000
0760	625.0500	Salvaged Topsoil	SY	33,750.000	33,750.000
0770	627.0200	Mulching	SY	4,300.000	4,300.000
0780	628.1104	Erosion Bales	EACH	250.000	250.000
0790	628.1504	Silt Fence	LF	3,575.000	3,575.000
0800	628.1520	Silt Fence Maintenance	LF	2,125.000	2,125.000
0810	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0820	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0830	628.2004	Erosion Mat Class I Type B	SY	42,050.000	42,050.000
0840	628.6510	Soil Stabilizer Type B	ACRE	0.500	0.500
0850	628.7005	Inlet Protection Type A	EACH	37.000	37.000
0860	628.7010	Inlet Protection Type B	EACH	11.000	11.000
0870	628.7015	Inlet Protection Type C	EACH	25.000	25.000
0880	628.7020	Inlet Protection Type D	EACH	15.000	15.000
0890	628.7504	Temporary Ditch Checks	LF	600.000	600.000
0900	628.7555	Culvert Pipe Checks	EACH	33.000	33.000

DATE 18DEC15		E S T I M A T E O F Q U A N T I T I E S			
LINE				1401-02-72	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0910	628.7560	Tracking Pads	EACH	9.000	9.000
0920	628.7570	Rock Bags	EACH	85.000	85.000
0930	629.0210	Fertilizer Type B	CWT	32.000	32.000
0940	630.0130	Seeding Mixture No. 30	LB	645.000	645.000
0950	630.0200	Seeding Temporary	LB	410.000	410.000
0960	633.5200	Markers Culvert End	EACH	5.000	5.000
0970	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	37.000	37.000
0980	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	40.000	40.000
0990	637.2210	Signs Type II Reflective H	SF	611.390	611.390
1000	637.2215	Signs Type II Reflective H Folding	SF	59.680	59.680
1010	637.2230	Signs Type II Reflective F	SF	122.750	122.750
1020	638.2102	Moving Signs Type II	EACH	2.000	2.000
1030	638.2602	Removing Signs Type II	EACH	45.000	45.000
1040	638.3000	Removing Small Sign Supports	EACH	54.000	54.000
1050	642.5001	Field Office Type B	EACH	1.000	1.000
1060	643.0100	Traffic Control (project) 01. 1401-02-72	EACH	1.000	1.000
1070	643.0300	Traffic Control Drums	DAY	28,655.000	28,655.000
1080	643.0420	Traffic Control Barricades Type III	DAY	3,040.000	3,040.000
1090	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	225.000	225.000
1100	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	225.000	225.000
1110	643.0705	Traffic Control Warning Lights Type A	DAY	6,380.000	6,380.000
1120	643.0715	Traffic Control Warning Lights Type C	DAY	7,850.000	7,850.000
1130	643.0800	Traffic Control Arrow Boards	DAY	170.000	170.000
1140	643.0900	Traffic Control Signs	DAY	11,035.000	11,035.000
1150	643.2000	Traffic Control Detour (project) 01. 1401-02-72	EACH	1.000	1.000
1160	643.3000	Traffic Control Detour Signs	DAY	175.000	175.000
1170	645.0111	Geotextile Fabric Type DF Schedule A	SY	4,050.000	4,050.000
1180	645.0130	Geotextile Fabric Type R	SY	85.000	85.000
1190	646.0106	Pavement Marking Epoxy 4-Inch	LF	14,251.000	14,251.000
1200	646.0126	Pavement Marking Epoxy 8-Inch	LF	1,445.000	1,445.000
1210	646.0600	Removing Pavement Markings	LF	3,910.000	3,910.000
1220	646.0805.S	Pavement Marking Outfall	EACH	1.000	1.000
1230	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	18.000	18.000
1240	647.0356	Pavement Marking Words Epoxy	EACH	6.000	6.000
1250	647.0456	Pavement Marking Curb Epoxy	LF	65.000	65.000
1260	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	299.000	299.000
1270	647.0606	Pavement Marking Island Nose Epoxy	EACH	5.000	5.000
1280	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	398.000	398.000
1290	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	198.000	198.000
1300	647.0856	Pavement Marking Concrete Corrugated Median Epoxy	SF	2,320.000	2,320.000
1310	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	23,095.000	23,095.000
1320	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	21,540.000	21,540.000
1330	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	1,915.000	1,915.000
1340	649.0802	Temporary Pavement Marking Paint 8-Inch	LF	1,575.000	1,575.000
1350	649.1200	Temporary Pavement Marking Stop Line Removable Tape 18-Inch	LF	435.000	435.000
1360	649.1800	Temporary Pavement Marking Arrows Removable Tape	EACH	17.000	17.000

DATE 18DEC15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1401-02-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1370	650.4000	Construction Staking Storm Sewer	EACH	41.000	41.000
1380	650.4500	Construction Staking Subgrade	LF	11,071.000	11,071.000
1390	650.5000	Construction Staking Base	LF	6,585.000	6,585.000
1400	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,227.000	1,227.000
1410	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
1420	650.7000	Construction Staking Concrete Pavement	LF	4,486.000	4,486.000
1430	650.8500	Construction Staking Electrical Installations (project) 01. 1401-02-72	LS	1.000	1.000
1440	650.9910	Construction Staking Supplemental Control (project) 01. 1401-02-72	LS	1.000	1.000
1450	650.9920	Construction Staking Slope Stakes	LF	8,398.000	8,398.000
1460	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,225.000	2,225.000
1470	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,585.000	1,585.000
1480	652.0800	Conduit Loop Detector	LF	2,030.000	2,030.000
1490	653.0135	Pull Boxes Steel 24x36-Inch	EACH	10.000	10.000
1500	653.0140	Pull Boxes Steel 24x42-Inch	EACH	12.000	12.000
1510	654.0101	Concrete Bases Type 1	EACH	6.000	6.000
1520	654.0102	Concrete Bases Type 2	EACH	3.000	3.000
1530	654.0105	Concrete Bases Type 5	EACH	7.000	7.000
1540	654.0113	Concrete Bases Type 13	EACH	4.000	4.000
1550	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
1560	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,290.000	1,290.000
1570	655.0240	Cable Traffic Signal 7-14 AWG	LF	1,385.000	1,385.000
1580	655.0250	Cable Traffic Signal 9-14 AWG	LF	1,040.000	1,040.000
1590	655.0260	Cable Traffic Signal 12-14 AWG	LF	425.000	425.000
1600	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	3,025.000	3,025.000
1610	655.0610	Electrical Wire Lighting 12 AWG	LF	1,680.000	1,680.000
1620	655.0625	Electrical Wire Lighting 6 AWG	LF	6,720.000	6,720.000
1630	655.0700	Loop Detector Lead In Cable	LF	6,310.000	6,310.000
1640	655.0800	Loop Detector Wire	LF	6,124.000	6,124.000
1650	657.0100	Pedestal Bases	EACH	6.000	6.000
1660	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	10.000	10.000
1670	657.0310	Poles Type 3	EACH	3.000	3.000
1680	657.0322	Poles Type 5-Aluminum	EACH	7.000	7.000
1690	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	5.000	5.000
1700	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	1.000	1.000
1710	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	5.000	5.000
1720	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	7.000	7.000
1730	657.1355	Install Poles Type 12	EACH	2.000	2.000
1740	657.1360	Install Poles Type 13	EACH	2.000	2.000
1750	657.1535	Install Monotube Arms 35-FT	EACH	1.000	1.000
1760	657.1545	Install Monotube Arms 45-FT	EACH	1.000	1.000
1770	657.1550	Install Monotube Arms 50-FT	EACH	2.000	2.000
1780	657.1815	Install Luminaire Arms Steel 15-FT	EACH	2.000	2.000
1790	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	13.000	13.000
1800	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	3.000	3.000
1810	658.0120	Traffic Signal Face 5-12 Inch Vertical	EACH	2.000	2.000
1820	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	13.000	13.000

DATE 18DEC15		E S T I M A T E O F Q U A N T I T I E S			
LINE					1401-02-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1830	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	3.000	3.000
1840	658.0225	Backplates Signal Face 5 Section 12-Inch	EACH	2.000	2.000
1850	658.0416	Pedestrian Signal Face 16-Inch	EACH	2.000	2.000
1860	658.0500	Pedestrian Push Buttons	EACH	3.000	3.000
1870	658.0600	Led Modules 12-Inch Red Ball	EACH	12.000	12.000
1880	658.0605	Led Modules 12-Inch Yellow Ball	EACH	12.000	12.000
1890	658.0610	Led Modules 12-Inch Green Ball	EACH	10.000	10.000
1900	658.0615	Led Modules 12-Inch Red Arrow	EACH	6.000	6.000
1910	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	14.000	14.000
1920	658.0625	Led Modules 12-Inch Green Arrow	EACH	7.000	7.000
1930	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	2.000	2.000
1940	658.5069	Signal Mounting Hardware (location) 01. STH 16 & STH 60	LS	1.000	1.000
1950	659.1115	Luminaires Utility LED A	EACH	14.000	14.000
1960	690.0150	Sawing Asphalt	LF	3,298.000	3,298.000
1970	690.0250	Sawing Concrete	LF	50.000	50.000
1980	715.0415	Incentive Strength Concrete Pavement	DOL	6,211.000	6,211.000
1990	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	800.000	800.000
2000	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	550.000	550.000
2010	SPV.0060	Special 01. Adjusting Water Valve Boxes	EACH	7.000	7.000
2020	SPV.0060	Special 02. Adjusting Sanitary Manholes	EACH	3.000	3.000
2030	SPV.0090	Special 01. Install CAT-5E Cable	LF	200.000	200.000
2040	SPV.0090	Special 02. Removing HMA Pavement	LF	1,331.000	1,331.000
2050	SPV.0105	Notched Wedge Longitudinal Joint Milling Special 01. Concrete Pavement Joint Layout	LS	1.000	1.000
2060	SPV.0165	Special 01. Concrete Sidewalk 8-Inch	SF	2,330.000	2,330.000
2070	SPV.0180	Special 01. Geogrid Reinforcement	SY	35,615.000	35,615.000

REMOVING ASPHALT

					204.0110	204.0115
					REMOVING ASPHALTIC SURFACE	REMOVING ASPHALTIC SURFACE BUTT JOINTS
STAGE	LOCATION	STATION	TO	STATION	SY	SY
CATEGORY 0010						
STAGE 1B	STH 16	214"WB"+50	-	215"WB"+00	--	170
	STH 16	236"WB"+12	-	236"WB"+62	--	215
	COLUMBUS FALL RIVER RD	12"FRC"+87	-	13"FRC"+37	--	--
	FRONTAGE ROAD N	11"FRN"+31	-	13"FRN"+37	--	--
STAGE 1B SUBTOTALS					--	385
STAGE 1C	COLUMBUS FALL RIVER RD	12"FRC"+87	-	13"FRC"+37	--	0
	COLUMBUS FALL RIVER RD	12"FRC"+87	-	14"FRC"+21	140	--
	FRONTAGE ROAD N	11"FRN"+31	-	13"FRN"+37	--	0
STAGE 1C SUBTOTALS					140	0
STAGE 2A	STH 16	214"EB"+50	-	215"EB"+00	--	170
	STH 16	235"EB"+66	-	236"EB"+16	--	215
	STH 16	214"WB"+50	-	215"WB"+00	--	170
	STH 16	236"WB"+33	-	236"WB"+83	--	215
	STH 60	10"STH60"+00	-	10"STH60"+50	--	0
STAGE 2A SUBTOTALS					--	770
STAGE 2B	STH 60	10"STH60"+00	-	10"STH60"+50	--	0
	STH 60	7"STH60"+50	-	10"STH60"+50	320	--
STAGE 2B SUBTOTALS					320	0
STAGE 3	COMMERCE DRIVE	0"C"+67.93	-	1"C"+17.93	--	--
	STH 60	8"STH60"+74	-	13"STH60"+18	365	--
	COLUMBUS FALL RIVER RD	11"FRC"+64	-	14"FRC"+12	215	--
STAGE 3 SUBTOTALS					580	0
CATEGORY 0010 TOTALS					1,040	1,155

REMOVING CURB AND GUTTER

						204.0150
						REMOVING CURB & GUTTER
STAGE	STATION	-	STATION	LOCATION	LF	REMARKS
CATEGORY 0010						
STAGE 1A	219"WB"+63	-	220"WB"+00	LT	72	COLUMBUS FALL RIVER RD
	10"FRN"+23	-	11"FRN"+34	LT	185	B2 ENTERPRISE ENTRANCE
	22"STH60"+23	-	22"STH60"+79	LT	85	--
STAGE 1A SUBTOTAL					342	
STAGE 1B	220"WB"+33	-	220"WB"+94	LT	85	COLUMBUS FALL RIVER RD
	10"FRN"+19	-	11"FRN"+64	RT	182	B2 ENTERPRISE ENTRANCE
STAGE 1B SUBTOTAL					267	
STAGE 2A	22"STH60"+22	-	22"STH60"+71	RT	80	--
	STAGE 2A SUBTOTAL				80	
STAGE 3	15"STH60"+40	-	15"STH60"+84	RT	68	COLUMBUS COMMERCE CENTER
	16"STH60"+25	-	16"STH60"+64	RT	55	COLUMBUS COMMERCE CENTER
STAGE 3 SUBTOTAL					123	
CATEGORY 0010 TOTAL					812	

REMOVING FENCE

					204.0170
					REMOVING FENCE
STAGE	STATION	-	STATION	LOCATION	LF
CATEGORY 0010					
STAGE 1B	232"WB"+44	-	233"WB"+56	LT	110
	234"EB"+13	-	235"EB"+74	RT	163
STAGE 1B SUBTOTAL					273
CATEGORY 0010 TOTAL					273

REMOVING STORM SEWER AND CULVERTS

STAGE	STATION	LOCATION	203.0100	204.0220	204.0245.01	204.0245.02	COMMENTS
			REMOVING SMALL PIPE CULVERTS	REMOVING INLETS	REMOVING STORM SEWER (12-INCH)	REMOVING STORM SEWER (14" x 23")	
			EACH	EACH	LF	LF	
<u>CATEGORY 0010</u>							
STAGE 1A	219"EB"+78	33' LT	--	1	--	--	
	22"STH60"+33	56' LT - 61' RT	1	--	--	--	117' 24-INCH RCCP
STAGE 1A SUBTOTALS			1	1	0	0	
STAGE 1B	233"EB"+00	42' LT - 114' LT	--	1	--	124	---
	STAGE 1B SUBTOTALS		0	1	0	124	
STAGE 2A	219"EB"+00	29.9' LT	--	--	70	--	T01 & TP01
	219"EB"+78	33' LT -39' RT	--	1	--	89	---
	223"EB"+65	36.7' LT	--	1	165	--	T02 & TP02
	231"EB"+25	23' RT - 46' RT	1	--	--	--	25' 42-INCH RCCP
STAGE 2A SUBTOTALS			1	2	235	89	
STAGE 2B	226"EB"+87	43' LT - 26' RT	--	1	--	90	---
	0"H"+37	14' LT - 40' RT	1	--	--	--	55' 18-INCH CMCP
STAGE 2B SUBTOTALS			1	1	0	90	
CATEGORY 0010 TOTALS			3	5	235	303	

REMOVING CONCRETE BASES

			204.0195
			REMOVING CONCRETE BASES
STAGE	STATION	LOCATION	EACH
<u>CATEGORY 0010</u>			
STAGE 1A	226"EB"+87	LT	1
	228"EB"+45	LT	1
STAGE 1A SUBTOTAL			2
CATEGORY 0010 TOTAL			2

3

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100)		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6)	Expanded EBS Backfill (7)	Unexpanded Fill	Expanded Fill (8)	Mass Ordinate +/- (9)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)						Factor 0.80				
Stage 1A														
STA 219+29"WB" to 238+40"WB"		STH 16	259	13	0	259	10	16	151	189	54	54	0	
STA 10+50"STH60" to 22+75"STH60"		STH 60	918	46	0	918	37	58	867	1,084	-224	0	224	
STA 10+50"FRC" to 12+75"FRC"		Columbus Fall River Rd	71	4	0	71	3	5	18	23	43	43	0	
STA 10+35"FRN" to 11+25"FRN"		Frontage Road North	70	4	0	70	3	5	8	10	55	55	0	
STA 0+57"H" to 6+86"H"		Hein Driveway	123	7	0	123	6	9	654	818	-704	0	704	
Stage 1A Subtotal			1,441	74	0	1,441	59	93	1,698	2,124	-776	0	776	
Stage 1B														
STA 215+00"WB" to 236+12"WB"		STH 16 WB	11,446	575	1,135	10,311	460	719	1,722	2,153	7,439	7,439	0	
STA 10+25"FRC" to 12+88"FRC"		Columbus Fall River Rd	504	30	60	444	24	38	19	24	383	383	0	
STA 10+15"FRN" to 12+68"FRN"		Frontage Road North	1,294	65	215	1,079	52	81	135	169	829	829	0	
Stage 1B Subtotal			13,244	670	1,410	11,834	536	838	1,876	2,346	8,651	8,651	0	
Stage 1C														
STA 219+31"WB" to 227+38"WB"		STH 16 WB	899	45	135	764	36	56	22	28	680	680	0	
STA 10+50"STH60" to 22+11"STH60"		STH 60 EB	2,548	128	290	2,258	102	160	1,466	1,833	265	265	0	
STA 10+15"FRC" to 12+88"FRC"		Columbus Fall River Rd	831	42	90	741	34	53	8	10	679	679	0	
STA 10+15"FRN" to 12+68"FRN"		Frontage Road North	977	49	120	857	39	61	64	80	716	716	0	
Stage 1C Subtotal			5,255	264	635	4,620	211	330	1,560	1,951	2,339	2,339	0	
Stage 2A														
STA 215+00"EB" to 235+66"EB"		STH 16 EB	12,799	640	1,135	11,664	512	800	2,975	3,719	7,145	7,145	0	
STA 22+11"STH60" to STA 22+80"STH60"		STH 60 EB	415	21	30	385	17	26	17	22	337	337	0	
Stage 2A Subtotal			13,214	661	1,165	12,049	529	826	2,992	3,741	7,482	7,482	0	
Stage 2B														
STA 22+51"EB" to 227+58"EB"		STH 16 EB	688	35	95	593	28	44	162	203	346	346	0	
STA 10+50"STH60" to 22+80"STH60"		STH 60 WB	4,676	234	665	4,011	187	293	407	509	3,209	3,209	0	
Stage 2B Subtotal			5,364	269	760	4,604	215	336	569	712	3,556	3,556	0	
Stage 3														
STA 223+80"WB" 231+30"WB"		STH 16 Median	873	44	415	458	35	55	0	0	403	403	0	
STA 15+33"STH60" to 18+16"STH60"		STH 60 EB	377	19	60	317	15	24	402	503	-210	0	210	
STA 0+12"C" to 0+66"C'		Commerce Drive	175	9	40	135	7	11	76	95	29	29	0	
Stage 3 Subtotal			1,425	72	515	910	58	90	478	598	222	222	0	
Grand Total			39,943	2,010	4,485	35,458	1,608	2,513	9,173	11,472	21,473	22,249	776	
			41,953											
1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100 2) Salvaged/Unsuable Pavement Material is included in Cut. 3) EBS Excavation is undistributed and to be backfilled with Select Crushed Material (item #312.0110); EBS considered to be waste and is 5% of the total Common Excavation 4) Salvaged/Unusable Pavement Material (Asphalt pavement not to be used in fill.) 5) Available Material = Cut - Salvaged/Unusuable Pavement Material 6) Reduced EBS in Fill - Excavated EBS material is usable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8 7) Expanded EBS Backfill - This is to be filled with Select Crushed Material. EBS Backfill Factor = 1.25. Item number 208.0100 8) Expanded Fill. Factor = 1.25 Expanded Fill = (Unexpanded Fill) * Fill Factor 9) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.														
PROJECT NO: 1401-02-72			HWY: STH 16			COUNTY: COLUMBIA			MISCELLANEOUS QUANTITIES			SHEET		E

3

TEMPORARY WIDENING

						305.01200*	455.0605*	465.0125
						BASE AGGREGATE DENSE 1 1/4-INCH	TACK COAT	ASPHALTIC SURFACE TEMPORARY
STAGE	ROADWAY	STA	-	STA	LOCATION	TON	GAL	TON
CATEGORY 0010								
STAGE 1A	STH 16	219"EB"+28	-	220"EB"+01	MEDIAN & SS CROSSING	120	1	55
	STH 16	221"EB"+95	-	222"EB"+05	SS CROSSING	25	1	10
	STH 16	224"EB"+95	-	225"EB"+05	SS CROSSING	30	1	15
	STH 16	226"EB"+72	-	227"EB"+28	MEDIAN & SS CROSSING	120	1	50
	STH 16	228"EB"+00	-	232"EB"+78	MEDIAN & SS CROSSING	600	1	230
	STH 16	235"EB"+66	-	238"EB"+48	MEDIAN	395	1	165
	STH 60	10"STH60"+50	-	22"STH60"+84	LEFT WIDENING	1,965	3	750
	FRONTAGE ROAD N	10"FRN"+27	-	11"FRN"+34	LEFT WIDENING	115	1	45
	COLUMBUS FALL RIVER RD	10"FRC"+36	-	12"FRC"+88	LEFT WIDENING	335	1	120
STAGE 1A SUBTOTAL						3,705	11	1,440
STAGE 1B	STH 16	220"EB"+20	-	220"EB"+91	TEMP CONNECTION	45	1	20
	STH 16	223"EB"+60	-	226"EB"+72	TEMP WIDENING	225	1	95
	STH 16	227"EB"+56	-	228"EB"+25	TEMP CONNECTION	80	1	35
	STH 16	228"EB"+25	-	231"EB"+54	TEMP WIDENING	170	1	55
	COLUMBUS FALL RIVER RD	10"FRC"+76	-	12"FRC"+88	RIGHT WIDENING	195	1	65
STAGE 1B SUBTOTAL						715	5	270
STAGE 1C	STH 16	226"EB"+72	-	227"EB"+16	TEMP WIDENING	35	1	15
	STH 16	226"EB"+72	-	227"EB"+56	TEMP CONNECTION	95	1	40
STAGE 1C SUBTOTAL						130	2	55
STAGE 2A	STH 16	228"EB"+25	-	229"EB"+08	TEMP WIDENING	70	1	30
	STH 60	10"STH60"+50	-	13"STH60"+18	RIGHT WIDENING	260	1	85
	STH 60	16"STH60"+53	-	18"STH60"+16	RIGHT WIDENING	95	1	30
STAGE 2A SUBTOTAL						425	3	145
CATEGORY 0010 TOTALS						4,975	21	1,910

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

BASE AGGREGATE, SELECT CRUSHED MATERIAL & GEOGRID

STAGE	LOCATION	STATION	-	STATION	305.0110	305.0120*	312.0110	SPV.0180.01
					BASE	BASE	SELECT	GEOGRID
					AGGREGATE	AGGREGATE	CRUSHED	REINFORCEMENT
					DENSE	DENSE	MATERIAL	
					3/4-INCH	1 1/4-INCH		
					TON	TON	TON	SY
CATEGORY 0010								
STAGE 1A	HEIN DRIVEWAY	0"H"+71	-	6"H"+90	--	580	--	--
STAGE 1A SUBTOTALS					0	580	0	0
STAGE 1B	STH 16 WB	215"WB"+00	-	219"WB"+31	--	850	1,150	1,760
	STH 16 WB	220"WB"+20	-	223"WB"+81	--	730	1,050	1,600
	STH 16 WB	231"WB"+96	-	236"WB"+12	--	1,030	1,700	2,650
	COLUMBUS FALL RIVER RD	10"FRC"+14	-	12"FRC"+88	--	510	470	730
	FRONTAGE RD NORTH	10"FRN"+99	-	13"FRN"+05	--	540	630	985
	FRN DRIVEWAY	10"FRN"+62	-	13"FRN"+05	--	310	--	--
STAGE 1B SUBTOTALS					0	3,970	5,000	7,725
STAGE 1C	STH 16 WB	219"WB"+31	-	220"WB"+20	--	120	210	320
	COLUMBUS FALL RIVER RD	10"FRC"+14	-	12"FRC"+88	--	490	480	745
	FRONTAGE RD NORTH	10"FRN"+99	-	13"FRN"+05	--	420	490	755
	STH 60	10"STH60"+50	-	15"STH60"+32	30	800	790	1,230
	STH 60	17"STH60"+04	-	17"STH60"+63	--	100	120	175
	STAGE 1C SUBTOTALS				30	1,930	2,090	3,225
STAGE 2A	STH 16 EB	215"EB"+00	-	223"EB"+79	--	2,250	3,250	5,040
	STH 16 EB	232"EB"+21	-	235"EB"+66	--	800	1,200	1,850
STAGE 2A SUBTOTALS					0	3,050	4,450	6,890
STAGE 2B	STH 60	10"STH60"+50	-	17"STH60"+63	45	1,250	1,250	1,910
	HEIN DRIVEWAY	0"H"+44	-	0"H"+71	--	180	--	--
STAGE 2B SUBTOTALS					45	1,430	1,250	1,910
STAGE 3	STH 16 WB	223"WB"+83	-	223"WB"+81	--	10	10	15
	COMMERCE DR	0"C"+00	-	0"C"+68	--	460	540	835
STAGE 3 SUBTOTALS					0	470	550	850
UNDISTRIBUTED					50	630	718	400
EBS					0	0	2,292	0
CATEGORY 0010 TOTALS					125	12,060	16,350	21,000

CONTINUED ON NEXT PAGE

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONTINUED FROM PREVIOUS PAGE

BASE AGGREGATE, SELECT CRUSHED MATERIAL & GEOGRID CONT.					305.0110	305.0120*	312.0110	SPV.0180.01
					BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	SELECT CRUSHED MATERIAL	GEOGRID REINFORCEMENT
STAGE	LOCATION	STATION	-	STATION	TON	TON	TON	SY
CATEGORY 0020								
STAGE 1B	STH 16 WB	223"WB"+81	-	226"WB"+59	--	610	760	1,180
	STH 16 EB LT TURN LN	223"EB"+80	-	226"EB"+72	--	130	240	375
	STH 16 WB	227"WB"+39"	-	231"WB"+96	--	920	1,650	2,510
	FRONTAGE RD NORTH	10"FRN"+14	-	10"FRN"+99	--	30	40	55
STAGE 1B SUBTOTALS					0	1,690	2,690	4,120
STAGE 1C	STH 16 WB	226"WB"+59	-	227"WB"+39"	--	150	280	430
	FRONTAGE RD NORTH	10"FRN"+14	-	10"FRN"+99	--	30	40	55
	STH 60	17"STH60"+63	-	22"STH60"+11	--	900	1,050	1,640
STAGE 1C SUBTOTALS					0	1,080	1,370	2,125
STAGE 2A	STH 16 EB	223"EB"+79	-	226"EB"+51	--	900	1,100	1,670
	STH 16 EB	227"EB"+55	-	232"EB"+21	--	1,400	1,950	3,040
	STH 60	22"STH60"+11	-	22"STH60"+80	--	130	230	350
STAGE 2A SUBTOTALS					0	2,430	3,280	5,060
STAGE 2B	STH 16 EB	226"EB"+51	-	227"EB"+55	--	170	280	425
	STH 60	17"STH60"+63	-	22"STH60"+80	30	1,100	1,250	1,890
STAGE 2B SUBTOTALS					30	1,270	1,530	2,315
STAGE 3	STH 16 MEDIANS	233"WB"+79	-	226"WB"+95	--	310	290	445
	STH 16 MEDIANS	228"WB"+75	-	231"WB"+98	--	300	120	180
STAGE 3 SUBTOTALS					0	610	410	625
UNDISTRIBUTED					45	420	533	370
EBS					0	0	1,527	0
CATEGORY 0020 TOTALS					75	7,500	11,340	14,615
PROJECT TOTALS					200	19,560	27,690	35,615

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CONCRETE PAVEMENT					415.0060	415.0095	415.1095
					CONCRETE PAVEMENT 6-INCH	CONCRETE PAVEMENT 9 1/2-INCH	CONCRETE PAVEMENT HES 9 1/2 INCH
STAGE	LOCATION	STATION	-	STATION	SY	SY	SY
CATEGORY 0010							
STAGE 1B	STH 16 WB	215"WB"+00	-	219"WB"+31	50	1,250	--
	STH 16 WB	220"WB"+20	-	223"WB"+81	140	1,110	--
	STH 16 WB	231"WB"+96	-	236"WB"+12	270	1,910	--
STAGE 1B SUBTOTALS					460	4,270	0
STAGE 1C	STH 16 WB	219"WB"+31	-	220"WB"+20	30	260	--
STAGE 1C SUBTOTALS					30	260	0
STAGE 2A	STH 16 EB	215"EB"+00	-	223"EB"+79	85	3,930	--
	STH 16 EB	232"EB"+21	-	235"EB"+66	465	1,000	--
STAGE 2A SUBTOTALS					550	4,930	0
CATEGORY 0010 TOTALS					1,040	9,460	0
CATEGORY 0020	STH 16 WB	223"EWB"+81	-	226"WB"+59	125	840	--
STAGE 1B	STH 16 EB LT TURN LN	223"EB"+80	-	226"EB"+72	--	375	--
	STH 16 WB	227"WB"+39	-	231"WB"+96	175	2,090	--
	FRONTAGE RD NORTH	10"FRN"+14	-	10"FRN"+99	--	--	510
STAGE 1B SUBTOTALS					300	3,305	510
STAGE 1C	STH 16 WB	226"WB"+59	-	227"WB"+39"	20	410	--
	FRONTAGE RD NORTH	10"FRN"+14	-	10"FRN"+99	--	--	380
STAGE 1C SUBTOTALS					20	410	380
STAGE 2A	STH 16 EB	223"EB"+79	-	226"EB"+51	115	1,170	--
	STH 16 EB	227"EB"+58	-	232"EB"+21	505	1,555	--
	STH 16 WB LEFT TURN LN	227"WB"+39	-	231"WB"+96	--	635	--
	STH 60	22"STH60"+11	-	22"STH60"+80	--	305	--
STAGE 2A SUBTOTALS					620	3,665	0
STAGE 2B	STH 16 EB	226"EB"+51	-	227"EB"+55	30	315	125
	STH 60	22"STH60"+11	-	22"STH60"+80	--	510	--
STAGE 2B SUBTOTALS					30	825	125
CATEGORY 0020 TOTALS					970	8,205	1,015
PROJECT TOTALS					2,010	17,665	1,015

				455.0105	455.0120	455.0605	460.1100	460.1103	460.4000	465.0120	465.0305
ASPHALTIC PAVEMENT				ASPHALTIC MATERIAL PG58-28	ASPHALTIC MATERIAL PG64-28	TACK COAT	HMA PAVEMENT TYPE E-0.3	HMA PAVEMENT TYPE E-3	HMA COLD WEATHER PAVING	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	ASPHALTIC SURFACE SAFETY ISLANDS
STAGE	LOCATION	STATION	- STATION	TON	TON	GAL	TON	TON	TON	TON	TON
CATEGORY 0010											
STAGE 1A	HEIN DRIVEWAY	0"H"+71	- 6"H"+90	--	--	--	--	--	--	240	--
STAGE 1A SUBTOTALS				0	0	0	0	0	0	240	0
STAGE 1B	STH 16 WB	215"WB"+00	- 219"WB"+31	--	5	--	80	--	--	--	--
	STH 16 WB	221"WB"+00	- 223"WB"+81	--	3	--	40	--	--	--	--
	COLUMBUS FALL RIVER RD	10"FRC"+14	- 12"FRC"+88	--	8	32	--	145	--	--	--
	FRONTAGE RD NORTH	10"FRN"+99	- 13"FRN"+05	--	11	44	--	200	--	--	--
	FRN DRIVEWAY	10"FRN"+62	- 13"FRN"+05	--	--	--	--	--	--	185	--
STAGE 1B SUBTOTALS				0	27	76	120	345	0	185	0
STAGE 1C	COLUMBUS FALL RIVER RD	10"FRC"+14	- 12"FRC"+88	--	9	34	--	155	--	--	--
	FRONTAGE RD NORTH	10"FRN"+99	- 13"FRN"+05	--	9	36	--	160	--	--	--
	STH 60	10"STH60"+50	- 15"STH60"+32	13	7	123	--	345	--	--	--
	STH 60	17"STH60"+04	- 17"STH60"+63	2	1	14	--	40	--	--	--
STAGE 1C SUBTOTALS				15	26	207	0	700	0	0	0
STAGE 2A	STH 16 EB	215"EB"+00	- 223"EB"+79	--	8	--	145	--	--	--	--
STAGE 2A SUBTOTALS				0	8	0	145	0	0	0	0
STAGE 2B	STH 60	10"STH60"+50	- 17"STH60"+63	20	11	191	--	535	140	--	--
	HEIN DRIVEWAY	0"H"+44	- 0"H"+71	--	--	--	--	--	--	60	--
STAGE 2B SUBTOTALS				20	11	191	0	535	140	60	0
STAGE 3	COMMERCE DR	0"C"+00	- 0"C"+68	8	5	74	--	210	--	--	--
STAGE 3 SUBTOTALS				8	5	74	0	210	0	0	0
CATEGORY 0010 TOTALS				43	77	548	265	1,790	140	485	0
CATEGORY 0020											
STAGE 1B	STH 16 WB	223"WB"+81	- 226"WB"+59	--	3	--	45	--	--	--	--
STAGE 1B SUBTOTALS				0	3	0	45	0	0	0	0
STAGE 1C	STH 60	17"STH60"+63	- 22"STH60"+11	14	8	139	--	390	--	--	--
STAGE 1C SUBTOTALS				14	8	139	0	390	0	0	0
STAGE 2A	STH 16 EB	223"EB"+79	- 226"EB"+51	--	2	--	20	--	--	--	65
	STH 16 EB	229"EB"+10	- 231"EB"+98	--	--	--	--	--	--	--	40
STAGE 2A SUBTOTALS				0	2	0	20	0	0	0	105
STAGE 2B	STH 16 EB	226"EB"+51	- 227"EB"+16	--	--	--	--	--	--	--	20
	STH 60	17"STH60"+63	- 22"STH60"+11	16	9	153	--	430	110	--	--
STAGE 2B SUBTOTALS				16	9	153	0	430	110	0	20
STAGE 3	STH 16 MEDIANS	233"WB"+81	- 227"WB"+02	--	--	--	--	--	--	--	40
	STH 16 MEDIANS	228"WB"+75	- 231"WB"+96	--	--	--	--	--	--	--	100
STAGE 3 SUBTOTALS				0	0	0	0	0	0	0	140
CATEGORY 0020 TOTALS				30	22	292	65	820	110	0	265
PROJECT TOTALS				73	99	840	330	2,610	250	485	265

HMA JOINTS

SPV.0090.02
REMOVING HMA
PAVEMENT
NOTCHED
WEDGE
LONGITUDINAL
JOINT MILLING

STAGE	ROADWAY	STATION	TO	STATION	LF
CATEGORY 0010					
STAGE 1C	FRONTAGE RD NORTH	10"FRN"+99	-	12"FRN"+69	170
STAGE 2B	STH 60	10"STH60"+50	-	17"STH60"+63	713
CATEGORY 0010 TOTALS					883
CATEGORY 0020					
STAGE 2B	STH 60	17"STH60"+63	-	22"STH60"+11	448
CATEGORY 0020 TOTALS					448
PROJECT TOTALS					1,331

NOTES

1) STATIONS AND OFFSETS ARE TO THE END OF PIPE FOR AEW'S.
* ADDITIONAL QUANTITIES FOUND ELSEWHERE

APRON ENDWALL SUMMARY

				520.8000	522.1018	522.1024	522.1042	523.0524	633.5200	650.4000*
				CONCRETE COLLARS FOR PIPE	APRON ENDWALLS FOR CULVERT PIPE				MARKERS CULVERT END	CONSTRUCTION STAKING STORM SEWER
					REINFORCED CONCRETE		HE Class HE-III			
STAGE	STR NO	STATION	OFFSET FEET		18-INCH	24-INCH	42-INCH	24X38-INCH		
				EACH	EACH	EACH	EACH	EACH	EACH	EACH
CATEGORY 0020										
STAGE 1A	102	219+70EB	40.9 RT	--	1	--	--	--	--	1
	112	222+00EB	34.0 RT	--	1	--	--	--	--	1
	123	225+00EB	46.7 RT	--	1	--	--	--	--	1
	134	226+91EB	67.4 RT	--	1	--	--	--	--	1
	145	229+00EB	58.3 RT	--	1	--	--	--	--	1
	164	231+02EB	55.9 RT	--	--	1	--	--	--	1
	170	231+25EB	50.3 RT	--	--	--	1	--	1	1
	220	22+00 STH 60	58.2 LT	--	--	--	--	1	1	1
	221	22+00 STH 60	67.7 RT	--	--	--	--	1	1	1
STAGE 1A SUBTOTALS				0	5	1	1	2	3	9
STAGE 1B	172	231+24EB	115.7 LT	1	--	--	--	--	--	--
STAGE 1B SUBTOTALS				1	0	0	0	0	0	0
STAGE 1C	211	19+06 STH 60	52.2 RT	--	1	--	--	--	--	1
	230	11+04 FRN	48.6 LT	--	--	1	--	--	--	1
	231	11+05 FRN	43.2 LT	1	--	--	--	--	--	--
STAGE 1C SUBTOTALS				1	1	1	0	0	0	2
STAGE 2B	200	0+48 H	32.8 LT	--	1	--	--	--	1	1
	201	0+47 H	37.4 RT	--	1	--	--	--	1	1
STAGE 2B SUBTOTALS				0	2	0	0	0	2	2
CATEGORY 0020 TOTALS				2	8	2	1	2	5	13

ASPHALTIC SURFACE PATCHING EXISTING ROADS

465.0110

ASPHALTIC
SURFACE
PATCHING

STAGE	LOCATION	TON	COMMENTS
CATEGORY 0010			
PROJECT	UNDISTRIBUTED	50	PATCHING OF EXISTING ROADS
CATEGORY 0010 TOTAL		50	

PIPE GRATES

611.9800.S.01

PIPE GRATES

STAGE	LOCATION	EACH
CATEGORY 0020		
STAGE 2B	STRUCTURE 200	1
	STRUCTURE 201	1
CATEGORY 0020 TOTAL		2

3

PIPE SUMMARY												522.0112		522.0118	523.0124	608.0312	608.0315	608.0318	608.0324	608.0342	650.6000	JOINT TIES ¹		
												CULVERT PIPE REINFORCED CONCRETE CLASS III		HORIZONTAL ELLIPTICAL CLASS HE-III	STORM SEWER PIPE REINFORCED CONCRETE					CONSTRUCTION STAKING PIPE CULVERTS				
PIPE		INLET END			DISCHARGE END								12-INCH	18-INCH	24X38-INCH	12-INCH	15-INCH	18-INCH	24-INCH	42-INCH				
STAGE	NUMBER	STR	STATION	FEET	ELEV	STR	STATION	FEET	ELEV	SLOPE	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH				
CATEGORY 0020																								
STAGE 1A	P100	100	219+70EB	40.8	LT	849.32	101	219+70EB	22.8	LT	848.78	3.00%	--	--	--	18	--	--	--	--	--	--		
	P101	101	219+70EB	22.8	LT	848.29	102	219+70EB	40.9	RT	848.03	0.40%	--	--	--	--	--	64	--	--	--	6		
	P110	110	222+00EB	50.2	LT	848.80	111	222+00EB	19.3	LT	848.18	2.00%	--	--	--	31	--	--	--	--	--	--		
	P111	111	222+00EB	19.3	LT	847.68	112	222+00EB	34.0	RT	847.47	0.40%	--	--	--	--	--	53	--	--	--	6		
	P120	120	225+00EB	48.9	LT	846.65	121	225+00EB	34.4	LT	846.59	0.40%	--	--	--	--	--	15	--	--	--	--		
	P121	121	225+00EB	34.4	LT	846.49	122	225+00EB	17.3	LT	846.42	0.40%	--	--	--	--	--	17	--	--	--	--		
	P122	122	225+00EB	17.3	LT	846.32	123	225+00EB	46.7	RT	846.07	0.40%	--	--	--	--	--	64	--	--	--	6		
	P130	130	227+00EB	61.4	LT	847.11	131	227+00EB	52.2	LT	846.50	6.80%	--	--	--	9	--	--	--	--	--	--		
	P131	131	227+00EB	52.2	LT	846.00	132	227+00EB	37.2	LT	845.94	0.40%	--	--	--	--	--	15	--	--	--	--		
	P132	132	227+00EB	37.2	LT	845.84	133	227+00EB	17.5	LT	845.76	0.40%	--	--	--	--	--	20	--	--	--	--		
	P133	133	227+00EB	17.5	LT	845.66	134	226+90EB	67.4	RT	845.32	0.40%	--	--	--	--	--	85	--	--	--	6		
	P140	140	229+00 EB	62.3	LT	845.59	141	229+00 EB	41.5	LT	845.25	1.65%	--	--	--	21	--	--	--	--	--	--		
	P141	141	229+00 EB	41.5	LT	845.15	142	229+00 EB	26.5	LT	845.09	0.40%	--	--	--	15	--	--	--	--	--	--		
	P142	142	229+00 EB	26.5	LT	844.84	143	229+00 EB	17.5	LT	844.80	0.40%	--	--	--	--	9	--	--	--	--	--		
	P143	143	229+00 EB	17.5	LT	844.55	144	229+00 EB	26.0	RT	844.38	0.40%	--	--	--	--	--	43	--	--	--	--		
	P144	144	229+00 EB	26.0	RT	844.28	145	229+00 EB	58.3	RT	844.07	0.65%	--	--	--	--	--	32	--	--	--	6		
	P160	160	231+02EB	61.5	LT	844.55	161	231+02EB	41.3	LT	844.47	0.40%	--	--	--	20	--	--	--	--	--	--		
	P161	161	231+02EB	41.3	LT	844.22	162	231+02EB	26.8	LT	844.16	0.40%	--	--	--	--	15	--	--	--	--	--		
	P162	162	231+02EB	26.8	LT	844.06	163	231+02EB	17.5	LT	844.02	0.40%	--	--	--	--	9	--	--	--	--	--		
	P163	163	231+02EB	17.5	LT	843.27	164	231+02EB	55.9	RT	843.05	0.30%	--	--	--	--	--	--	73	--	--	6		
	P220	220	22+00 STH 60	58.2	LT	844.70	221	22+00 STH 60	67.7	RT	844.15	0.44%	--	--	126	--	--	--	--	--	1	12		
	P240	--	5+55 H	17.0	LT	849.45	--	5+63 H	15.0	RT	849.05	1.24%	33	--	--	--	--	--	--	--	1	--		
	TP01	T01	219+00EB	29.9	LT	849.48	101	219+70EB	22.8	LT	848.78	1.00%	--	--	--	70	--	--	--	--	--	--		
	TP02	T02	223+65EB	36.7	LT	848.28	111	222+00EB	19.3	LT	847.78	0.30%	--	--	--	165	--	--	--	--	--	--		
STAGE 1A SUBTOTALS												33	0	126	349	33	408	73	0	2	48			
STAGE 1B	P173	173	231+24EB	115.7	LT	841.60	174	231+24EB	142.0	LT	841.53	0.28%	--	--	--	--	--	--	--	26	--	--		
	P150	150	230+92EB	108.5	LT	843.61	151	230+93EB	142.3	LT	843.48	0.38%	--	--	--	--	--	34	--	--	--	--		
	P151	151	230+93EB	142.3	LT	843.38	174	231+24EB	142.0	LT	843.26	0.40%	--	--	--	--	--	30	--	--	--	6		
	P235	235	12+35FRN	43.8	RT	842.75	EX.	12+34FRN	81.5	RT	842.37	1.00%	--	--	--	38	--	--	--	--	--	--		
STAGE 1B SUBTOTALS												0	0	0	38	0	64	0	26	0	6			
STAGE 1C	P210	210	19+06 STH 60	29.5	RT	846.17	211	19+06 STH 60	52.2	RT	846.08	0.40%	--	--	--	--	--	23	--	--	--	6		
	P230	230	11+04 FRN	48.6	LT	844.05	231	11+05 FRN	43.2	LT	843.94	2.00%	--	--	--	--	--	--	5	--	--	6		
STAGE 1C SUBTOTALS												0	0	0	0	0	23	5	0	0	12			
STAGE 2A	P170	170	231+25EB	50.3	RT	842.70	171	231+25EB	23.3	RT	842.62	0.30%	--	--	--	--	--	--	--	27	--	--		
STAGE 2A SUBTOTALS												0	0	0	0	0	0	0	27	0	0			
STAGE 2B	P200	200	0+48 H	32.8	LT	847.14	201	0+47 H	37.4	RT	846.92	0.30%	--	70	--	--	--	--	--	--	1	12		
STAGE 2B SUBTOTALS												0	70	0	0	0	0	0	0	0	1	12		
CATEGORY 0020 TOTALS												33	70	126	387	33	495	78	53	3	78			
NOTES																								
1) JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT PIPE ENDS. THE COST OF THESE TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.																								
2) STATIONS AND OFFSETS ARE TO THE CENTER OF STRUCTURES OR TO THE END OF PIPE.																								
3) PIPE LENGTHS ARE MEASURED TO AND FROM CENTER OF STRUCTURE.																								
PROJECT NO: 1401-02-72							HWY: STH 16					COUNTY: COLUMBIA					MISCELLANEOUS QUANTITIES				SHEET		E	

3

3

3

PIPE UNDERDRAIN									
					310.0110	612.0106	612.0206	612.0806	645.0111
					APRON ENDWALLS FOR UNDERDRAIN				
					BASE AGGREGATE OPEN GRADED	PIPE UNDERDRAIN 6-INCH	PIPE UNDERDRAIN UNPERFORATED 6-INCH	REINFORCED CONCRETE 6-INCH	GEOTEXTILE FABRIC TYPE DF SCHEDULE A
STAGE	LOCATION	STATION	TO	STATION	TON	LF	LF	EACH	SY
CATEGORY 0010									
STAGE 1B	STH 16 WB	228"WB"+33	-	STR 150	16	205	--	--	188
	STH 16 WB	STR 150	-	233"WB"+73	23	300	--	--	275
	STH 16 WB	233"WB"+73	-	236"WB"+33	19	247	10	1	227
STAGE 1B SUBTOTALS					58	752	10	1	690
STAGE 2A	STH 16 EB	218"EB"+25"	-	STR 101	11	145	--	--	133
	STH 16 EB	STR 101	-	219"EB"+88	2	21	--	--	20
	STH 16 EB	220"EB"+74	-	STR 111	7	81	--	--	75
	STH 16 EB	STR 111	-	223"EB"+87	15	187	--	--	172
	STH 16 EB	223+91	-	STR 122	9	108	--	--	99
	STH 16 EB	STR 122	-	226"EB"+50	12	150	--	--	138
	STH 16 EB	228"EB"+27	-	STR 143	6	72	--	--	66
	STH 16 EB	228"EB"+27	-	STR 141	6	72	--	--	66
	STH 16 EB	STR 143	-	STR 162	17	224	--	--	206
	STH 16 EB	STR 141	-	STR 161	16	200	--	--	184
	STH 16 EB	STR 161		232"EB"+19	9	116	--	--	107
	STH 16 EB	STR 171		235"EB"+66	34	439	--	--	403
	STH 60	18"STH60"+16	-	STR 210	7	89	--	--	82
	STH 60	STR 210		STR 144	34	447	--	--	410
STAGE 2A SUBTOTALS					185	2,351	0	0	2,161
STAGE 2B	STH 16 EB	226"EB"+50	-	STR 133	4	50	--	--	46
	STH 16 EB	STR 133	-	227"EB"+14	2	14	--	--	13
STAGE 2B SUBTOTALS					6	64	0	0	59
STAGE 3	STH 16 EB	223"EB"87	-	STR 120	9	112	--	--	103
	STH 16 EB	STR 120	-	STR 131	15	197	--	--	181
	STH 16 EB	STR 131	-	227"EB"+14	2	14	--	--	13
STAGE 3 SUBTOTALS					26	323	0	0	297
UNDISTRIBUTED					35	360	--	--	343
CATEGORY 0010 TOTALS					310	3,850	10	1	3,550

CONCRETE CURB AND GUTTER & CONCRETE MEDIAN

						601.0411	601.0555	601.0557	620.0100	620.0300	650.5500
						CONCRETE CURB & GUTTER 30-INCH TYPE D	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D	CONCRETE CORRUGATED MEDIAN	CONCRETE MEDIAN SLOPED NOSE	CONSTRUCTION STAKING CURB GUTTER & C&G
STAGE	ROADWAY	STATION	TO	STATION	LOCATION	LF	LF	LF	SF	SF	LF
CATEGORY 0010											
STAGE 1B	STH 16 WB	218"WB"+30	-	219"WB"+31	RT	--	101	--	--	--	--
	STH 16 WB	220"WB"+79	-	223"WB"+53	RT	--	275	--	--	--	--
	STH 16 WB	231"WB"+96	-	231"WB"+96	LT	--	413	--	--	--	--
	STH 16 WB	231"WB"+98	-	236"WB"+12	RT	--	418	--	--	--	--
	COLUMBUS FALL RIVER RD	10"FRC"+25	-	10"FRC"+59	RT	--	--	75	--	--	75
	FRONTAGE RD NORTH	10"FRN"+99	-	12"FRN"+80	RT	--	--	182	--	--	182
	STAGE 1B SUBTOTALS					0	1,207	257	0	0	257
STAGE 1C	STH 16 WB	219"WB"+31	-	219"WB"+82	RT	--	52	--	--	--	--
	COLUMBUS FALL RIVER RD	10"FRC"+24	-	11"FRC"+20	LT	--	--	119	--	--	119
	FRONTAGE RD NORTH	10"FRN"+99	-	11"FRN"+32	LT	--	--	73	--	--	73
	STH 60	17"STH60"+04	-	17"STH60"+63	RT	--	--	59	--	--	59
	STAGE 1C SUBTOTALS					0	52	251	0	0	251
STAGE 2A	STH 16 EB	218"EB"+23	-	219"EB"+90	LT	--	155	--	--	90	--
	STH 16 EB	220"EB"+72	-	223"EB"+87	LT	--	309	--	--	50	--
	STH 16 EB	232"EB"+21	-	235"EB"+66	LT	--	344	--	--	40	--
	STH 16 EB	232"EB"+21	-	235"EB"+66	RT	--	349	--	--	--	--
	STAGE 2A SUBTOTALS					0	1,157	0	0	180	0
STAGE 3	STH 16 MEDIAN	223"WB"+53	-	223"WB"+81	RT	--	28	--	--	40	--
	COLUMBUS FALL RIVER RD	10"FRC"+59	-	11"FRC"49	RT	99	--	--	--	--	99
	COMMERCE DR	0"C"+22	-	0"C"+68	RT	--	--	72	--	--	72
	COMMERCE DR	0"C"+26	-	0"C"+68	LT	--	--	101	--	--	101
	STAGE 3 SUBTOTALS					99	28	173	0	40	272
CATEGORY 0010 SUBTOTALS						99	2,444	681	0	220	780

CONTINUED ON NEXT PAGE

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CONCRETE CURB AND GUTTER & CONCRETE MEDIAN CONT.

						601.0411	601.0555	601.0557	620.0100	620.0300	650.5500
						CONCRETE	CONCRETE	CONCRETE		CONCRETE	CONSTRUCTION
						CURB &	CURB &	CURB &		MEDIAN	STAKING
						GUTTER	GUTTER	GUTTER		SLOPED	CURB GUTTER
						30-INCH	6-INCH	6-INCH	CONCRETE	NOSE	& C&G
						TYPE D	SLOPED	SLOPED	CORRUGATED		
						LF	LF	LF	MEDIAN		LF
CATEGORY 0020											
STAGE 1B	STH 16 WB	228"WB"+33	-	231"WB"+96	LT	--	361	--	--	--	--
	STH 16 WB	231"WB"+30	-	231"WB"+96	RT	--	58	--	--	--	--
	FRONTAGE RD NORTH	10"FRN"+30	-	10"FRN"+99	RT	--	101	--	--	--	--
STAGE 1B SUBTOTALS						0	520	0	0	0	0
STAGE 1C	FRONTAGE RD NORTH	10"FRN"+28	-	10"FRN"+99	LT	--	99	--	--	--	--
	STH 60	17"STH60"+63	-	22"STH60"+11	RT	--	--	447	--	--	447
STAGE 1C SUBTOTALS						0	99	447	0	0	447
STAGE 2A	STH 16 EB	223"EB"+88	-	226"EB"+50	LT	--	505	--	--	45	--
	STH 16 WB	228"WB"+09	-	231"WB"+96	RT	--	765	--	--	45	--
	STH 16 EB	228"EB"+25	-	232"EB"+21	LT	--	387	--	--	40	--
	STH 16 EB	228"EB"+29	-	232"EB"+21	RT	--	394	--	--	--	--
	STH 60	22"STH60"+11	-	22"STH60"+61	RT	--	70	--	--	--	--
STAGE 2A SUBTOTALS						0	2,121	0	0	130	0
STAGE 2B	STH 16 EB	226"EB"+50	-	227"EB"+16	LT	--	116	--	--	60	--
	STH 60	17"STH60"+63	-	22"STH60"+71	LT	--	97	--	2,025	--	--
STAGE 2B SUBTOTALS						0	213	0	2,025	60	0
STAGE 3	STH 16 MEDIAN	223"WB"+81	-	227"WB"+02	RT	--	633	--	--	40	--
	STH 16 MEDIAN	228"WB"+09	-	231"WB"+30	RT	--	316	--	--	65	--
STAGE 3 SUBTOTALS						0	949	0	0	105	0
CATEGORY 0020 TOTALS						0	3,902	447	2,025	295	447
PROJECT TOTALS						99	6,346	1,128	2,025	515	1,227

SIDEWALK									
						305.0120*	602.0410	SPV.0165.01	602.0505
						BASE AGGREGATE DENSE 1 1/4-INCH	CONCRETE SIDEWALK 5-INCH	CONCRETE SIDEWALK 8-INCH	CURB RAMP DETECTABLE WARNING FIELD YELLOW
STAGE	ROADWAY	STATION	TO	STATION	LOCATION	TON	SF	SF	SF
CATEGORY 0010									
STAGE 1B	STH 16 WB	228"WB"+25	-	226"WB"+12	LT	145	4,680	--	10
	FRONTAGE RD NORTH	10"FRN"+40	-	11"FRN"+86	RT	30	1,060	--	--
STAGE 1B SUBTOTALS						175	5,740	0	10
STAGE 1C	FRONTAGE RD NORTH	10"FRN"+45	-	11"FRN"+28	LT	30	--	790	--
	STH 60	17"STH60"+04	-	22"STH60"+11	RT	90	3,040	--	--
STAGE 1C SUBTOTALS						120	3,040	790	0
STAGE 2A	STH 16 EB	228"EB"+36	-	235"EB"+66	RT	130	4,400	--	10
	STH 60	22"STH60"+11	-	22"STH60"+54	RT	15	440	--	--
STAGE 2A SUBTOTALS						145	4,840	0	10
STAGE 3	COMMERCE DR	0"C"+35	-	0"C"+80	LT	15	400	--	--
	STAGE 3 SUBTOTALS					15	400	0	0
CATEGORY 0010 TOTALS						455	14,020	790	20
CATEGORY 0020									
STAGE 2A	STH 16 EB	228"EB"+32	-	229"EB"+10	LT	15	--	470	20
	STAGE 2A SUBTOTALS					15	0	470	20
STAGE 3	STH 16 MEDIAN	228"WB"+16	-	228"WB"+75	RT	30		1,070	20
	STAGE 3 SUBTOTALS					30	0	1,070	20
CATEGORY 0020 TOTALS						45	0	1,540	40
PROJECT TOTALS						500	14,020	2,330	60

*ADDITIONAL QUANTITIES FOUND ELSEWEHERE

EROSION CONTROL SUMMARY

				606.0100	628.1104*	628.1504	628.1520	628.7005	628.7010	628.7015	628.7020	628.7504	628.7555	628.7560	628.7570	645.0130
				RIPRAP LIGHT	EROSION BALES	SILT FENCE	SILT FENCE MAINTENANCE	INLET PROTECTION TYPE A	INLET PROTECTION TYPE B	INLET PROTECTION TYPE C	INLET PROTECTION TYPE D	TEMPORARY DITCH CHECKS	CULVERT PIPE CHECKS	TRACKING PADS	ROCK BAGS	GEOTEXTILE FABRIC TYPE R
LOCATION	STATION	TO	STATION	CY	EACH	LF	LF	EACH	EACH	EACH	EACH	LF	EACH	EACH	EACH	SY
CATEGORY 0010																
STAGE 1A																
STH 16	215"WB"+00	-	236"WB"+12	--	15	1,400	--	2	--	1	--	--	10	--	--	--
STH 60	10"STH60"+50	-	22"STH60"+94	--	--	1,100	--	--	--	--	--	--	6	--	--	--
CFR	10"FRC"+00	-	12"FRC"+88	--	--	475	--	--	--	--	--	--	--	--	--	--
FRN	10"FRN"+00	-	12"FRN"+75	--	--	--	--	--	--	--	--	--	--	--	--	--
HEIN DWY	0"H"+00	-	6"H"+90	5	--	100	50	--	--	--	--	--	5	1	--	5
UNDISTRIBUTED				--	15	--	475	2	2	2	2	100	--	--	10	--
STAGE 1A SUBTOTALS				5	30	3,075	525	4	2	3	2	100	21	1	10	5
STAGE 1B																
STH 16 WB	215"WB"+00	-	236"WB"+12	--	--	--	--	3	--	--	1	105	--	--	--	--
CFR	10"FRC"+00	-	12"FRC"+88	5	--	--	--	--	--	--	--	--	--	1	--	5
FRN	10"FRN"+00	-	12"FRN"+75	--	--	--	--	--	3	--	--	--	--	1	--	--
UNDISTRIBUTED				5	25	200	475	2	2	2	2	65	--	--	25	5
STAGE 1B SUBTOTALS				10	25	200	475	5	5	2	3	170	0	2	25	10
STAGE 1C																
STH 16 WB	215"WB"+00	-	236"WB"+12	--	--	--	--	1	--	1	--	--	--	--	--	--
STH 60	10"STH60"+50	-	22"STH60"+94	--	--	--	--	1	--	--	1	15	--	--	--	--
CFR	10"FRC"+00	-	12"FRC"+88	5	--	--	--	--	--	--	--	--	--	1	--	5
FRN	10"FRN"+00	-	12"FRN"+75	--	--	--	--	--	--	--	--	--	6	1	--	--
UNDISTRIBUTED				5	10	50	175	2	--	--	--	30	--	--	10	5
STAGE 1C SUBTOTALS				10	10	50	175	4	0	1	1	45	6	2	10	10
STAGE 2A																
STH 16 EB	215"EB"+00	-	235"EB"+66	25	--	--	--	13	--	9	4	120	--	2	--	25
STH 60	10"STH60"+50	-	22"STH60"+94	--	--	--	--	--	--	--	--	45	--	1	--	--
UNDISTRIBUTED				10	25	200	775	2	2	2	2	45	--	--	30	10
STAGE 2A SUBTOTALS				35	25	200	775	15	2	11	6	210	0	3	30	35
STAGE 2B																
STH 16 EB	215"EB"+00	-	235"EB"+66	--	--	--	--	2	--	2	--	--	--	--	--	--
STH 60	10"STH60"+50	-	22"STH60"+94	15	--	--	--	--	--	--	--	45	6	1	--	15
UNDISTRIBUTED				10	10	50	175	2	2	2	2	30	--	--	10	10
STAGE 2B SUBTOTALS				25	10	50	175	4	2	4	2	75	6	1	10	25
STAGE 3																
STH 16 EB	215"EB"+00	-	235"EB"+66	--	--	--	--	5	--	4	1	--	--	--	--	--
STAGE 3 SUBTOTALS				0	0	0	0	5	0	4	1	0	0	0	0	0
CATEGORY 0010 TOTALS				85	100	3,575	2,125	37	11	25	15	600	33	9	85	85

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

RESTORATION										
					625.0500	627.0200	628.2004	629.0210	630.0130	630.0200
					SALVAGED		EROSION MAT	FERTILIZER	SEEDING	SEEDING
					TOPSOIL	MULCHING	CLASS I TYPE B	TYPE B	MIXTURE NO. 30	TEMPORARY
STAGE	LOCATION	STATION	TO	STATION	SY	SY	SY	CWT	LB	LB
CATEGORY 0010										
STAGE 1A	STH 16	215"WB"+00	-	236"WB"+12	120	--	120	--	--	5
	STH 60	10"STH60"+50	-	22"STH60"+94	5,350	--	5,350	--	--	145
	CFR	10"FRC"+00	-	12"FRC"+88	410	--	410	--	--	15
	FRN	10"FRN"+00	-	12"FRN"+75	250	--	250	--	--	10
	HEIN DWY	0"H"+00	-	6"H"+90	520		520	1	10	--
	PROJECT	UNDISTRIBUTED			--	900	1,675	--	--	55
STAGE 1A SUBTOTALS					6,650	900	8,325	1	10	230
STAGE 1B	STH 16 WB	215"WB"+00	-	236"WB"+12	5,950	--	5,950	4	110	--
	CFR	10"FRC"+00	-	12"FRC"+88	400	--	400	1	10	--
	FRN	10"FRN"+00	-	12"FRN"+75	700	--	700	1	15	--
	PROJECT	UNDISTRIBUTED			--	900	1,825	2	35	50
STAGE 1B SUBTOTALS					7,050	900	8,875	8	170	50
STAGE 1C	CFR	10"FRC"+00	-	12"FRC"+88	440	--	440	1	10	--
	FRN	10"FRN"+00	-	12"FRN"+75	260	--	260	1	5	--
	PROJECT	UNDISTRIBUTED			--	100	200	1	5	10
STAGE 1C SUBTOTALS					700	100	900	3	20	10
STAGE 2A	STH 16 EB	215"EB"+00	-	235"EB"+66	9,900	--	9,900	7	180	--
	STH 60	10"STH60"+50	-	22"STH60"+94	3,100	--	3,100	2	60	--
	PROJECT	UNDISTRIBUTED			--	1,700	3,250	3	60	80
STAGE 2A SUBTOTALS					13,000	1,700	16,250	12	300	80
STAGE 2B	STH 60	10"STH60"+50	-	22"STH60"+94	5,350	--	5,350	4	100	--
	PROJECT	UNDISTRIBUTED			--	700	1,350	2	25	40
STAGE 2B SUBTOTALS					5,350	700	6,700	6	125	40
STAGE 3	STH 60	10"STH60"+50	-	22"STH60"+94	500	--	500	1	10	--
	CFR	10"FRC"+00	-	12"FRC"+88	500	--	500	1	10	--
STAGE 3 SUBTOTALS					1,000	0	1,000	2	20	0
CATEGORY 0010 TOTALS					33,750	4,300	42,050	32	645	410

ASPHALTIC FLUMES

			465.0315
			ASPHALTIC FLUMES
STAGE	STATION	LOCATION	SY
CATEGORY 0010			
STAGE 1B	11"FRC"+49	RT	10
STAGE 1C	11"FRC"+20	LT	10
STAGE 2B	227"EB"+22	RT	10
CATEGORY 0010 TOTAL			30

TEMPORARY SEDIMENTATION BASIN

LOCATION	628.1104*	645.0111*
	EROSION BALES	GEOTEXTILE FABRIC TYPE DF SCHEDULE A
CATEGORY 0010		
PROJECT		
UNDISTRIBUTED	150	500
CATEGORY 0010 TOTAL		
150 500		

NOTE: EXACT LOCATIONS AND SIZE TO BE DETERMINED IN THE FIELD
* ADDITIONAL QUANTITIES FOUND ELSEWHERE

WOVEN WIRE FENCE

					616.0100
					FENCE WOVEN
					WIRE (4-FT)
STAGE	STATION	-	STATION	LOCATION	LF
<u>CATEGORY 0010</u>					
STAGE 2A	233"EB"+85	-	235"EB"+74	RT	196
STAGE 2A SUBTOTAL					196
CATEGORY 0010 TOTAL					196

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905	628.1910
	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL
CATEGORY 0010		
PROJECT		
UNDISTRIBUTED	12	6
CATEGORY 0010 TOTAL		
12 6		

WATER

624.0100		
STAGE	LOCATION	WATER
		MGAL
<u>CATEGORY 0010</u>		
STAGE 1A	PROJECT	50
STAGE 1B	PROJECT	140
STAGE 1C	PROJECT	70
STAGE 2A	PROJECT	130
STAGE 2B	PROJECT	40
STAGE 3	PROJECT	30
UNDISTRIBUTED		140
CATEGORY 0010 TOTALS		600

SOIL STABILIZER

LOCATION	628.6510
	SOIL STABILIZER TYPE B
CATEGORY 0010	
PROJECT	
UNDISTRIBUTED	0.50
CATEGORY 0010 TOTAL	
0.50	

TRAFFIC CONTROL ITEMS		643.0300		643.0420		643.0500		643.0600		643.0705		643.0715		643.0800		643.0900	
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS	
		**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
ROADWAY	STAGE DURATION (DAYS)	EACH	DAY	EACH	DAY	EACH	EACH	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
CATEGORY 0010																	
STAGE 1A		10															
STH 16		130	1,300	13	130	44	44	26	260	38	380	1	10	49	490		
STH 60		30	300	1	10	--	--	2	20	--	--	--	--	9	90		
FRONTAGE ROAD N		6	60	--	--	--	--	--	--	--	--	--	--	--	--		
COLUMBUS FALL RIVER RD		15	150	--	--	--	--	--	--	15	150	--	--	2	20		
STAGE 1A SUBTOTAL			1,810		140	44	44	280		530		10		600			
STAGE 1B		50															
STH 16		132	6,600	17	850	43	43	34	1,700	41	2,050	1	50	61	3,050		
STH 60		36	1,800	3	150	--	--	6	300	4	200	--	--	9	450		
FRONTAGE ROAD N		15	750	--	--	3	3	--	--	--	--	--	--	--	--		
COLUMBUS FALL RIVER RD		6	300	--	--	8	8	--	--	6	300	--	--	4	200		
STAGE 1B SUBTOTAL			9,450		1000	54	54	2,000		2,550		50		3,700			
STAGE 1C		15															
STH 16		134	2,010	17	255	--	--	34	510	29	435	1	15	63	945		
STH 60		28	420	8	120	27	27	16	240	7	105	--	--	14	210		
FRONTAGE ROAD N		12	180	4	60	3	3	8	400	--	--	--	--	2	30		
COLUMBUS FALL RIVER RD		13	195	--	--	6	6	--	--	3	45	--	--	4	60		
STAGE 1C SUBTOTAL			2,805		435	36	36	1,150		585		15		1,245			
STAGE 2A		50															
STH 16		135	6,750	13	650	44	44	26	1300	46	2300	1	50	51	2550		
STH 60		33	1650	6	300	--	--	12	600	7	350	--	--	14	700		
FRONTAGE ROAD N		--	--	--	--	--	--	--	--	--	--	--	--	--	--		
COLUMBUS FALL RIVER RD		--	--	--	--	--	--	--	--	--	--	--	--	2	100		
STAGE 2A SUBTOTAL			8,400		950	44	44	1900		2650		50		3350			
STAGE 2B		15															
STH 16		130	1950	13	195	--	--	26	390	43	645	1	15	50	750		
STH 60		36	540	2	30	27	27	4	60	--	--	--	--	12	180		
FRONTAGE ROAD N		--	--	--	--	--	--	--	--	--	--	--	--	--	--		
COLUMBUS FALL RIVER RD		--	--	--	--	--	--	--	--	--	--	--	--	2	30		
STAGE 2B SUBTOTAL			2490		225	27	27	450		645		15		960			
STAGE 3		10															
STH 16		124	1240	4	40	--	--	8	80	30	300	1	10	25	250		
STH 60		24	240	2	20	--	--	4	40	--	--	--	--	9	90		
FRONTAGE ROAD N		--	--	--	--	--	--	--	--	--	--	--	--	--	--		
COLUMBUS FALL RIVER RD		9	90	--	--	--	--	--	--	--	--	--	--	2	20		
STAGE 3 SUBTOTAL			1570		60	--	--	120		300		10		360			
UNDISTRIBUTED			2130		230	20	20	480		590		20		820			
CATEGORY 0010 TOTALS			28,655		3,040	225	225	6,380		7,850		170		11,035			

** INFORMATION ONLY

TEMPORARY PAVEMENT MARKING

						646.0600 REMOVING PAVEMENT MARKINGS	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH			649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH		649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH		649.0802 TEMPORARY PAVEMENT MARKING PAINT 8-INCH		649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	649.1800 TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
STAGE	LOCATION	STATION	TO	STATION	LF	DOT WHITE ² LF	WHITE LF	DOT YELLOW ³ LF	YELLOW LF	WHITE LF	YELLOW LF	DOT WHITE ² LF	WHITE LF	DOT WHITE ² LF	WHITE LF	LF	EACH
CATEGORY 0010																	
STAGE 1A	STH 16	211"EB"+68	-	246"EB"+87	1,376	--	615	31	1,496	2,664	3,710	26	100	--	178	33	2
	STH 60	10"STH60"+50	-	22"STH60"+94	--	--	--	--	280	--	--	--	--	--	--	30	--
STAGE 1B	STH 16	211"EB"+68	-	246"EB"+87	472	79	1,154	56	902	3,968	3,938	--	--	121	765	75	4
	FRONTAGE ROAD N	10"FRN"+00	-	11"FRN"+29	--	--	--	--	280	290	290	--	--	--	290	11	--
	COULMBUS FALL RIVER RD	10"FRC"+00	-	13"FRC"+87	--	--	--	--	196	77	600	--	--	--	77	40	--
STAGE 1C	STH 16	211"EB"+68	-	246"EB"+87	216	--	128	--	--	201	--	--	--	--	--	--	--
	STH 60	10"STH60"+50	-	22"STH60"+94	900	--	300	--	600	1,124	2,122	--	--	--	--	64	1
	FRONTAGE ROAD N	10"FRN"+00	-	11"FRN"+60	--	--	--	--	356	--	--	--	--	--	--	11	--
	COULMBUS FALL RIVER RD	10"FRC"+00	-	13"FRC"+87	--	--	250	--	898	--	--	--	--	--	--	11	--
STAGE 2A	STH 16	211"EB"+68	-	246"EB"+87	216	--	2,454	31	5,213	--	--	78	1,533	--	--	35	8
	STH 60	10"STH60"+50	-	22"STH60"+94	374	--	--	--	--	199	396	--	--	--	--	25	--
STAGE2B	STH 60	10"STH60"+50	-	22"STH60"+94	--	--	2,786	--	2,886	--	--	--	--	--	--	60	--
SUBTOTAL ALL STAGES					3,554	79	7,687	118	13,107	8,523	11,056	104	1,633	121	1,310	395	15
UNDISTRIBUTED					356	10	769	14	1311	855	1106	14	164	13	131	40	2
CATEGORY 0010 TOTALS					3,910		23,095			21,540		1,915		1,575		435	17

* ADDITIONAL QUANTITIES FOUND ELSEWHERE
¹ DASHED WHITE = 12.5-FT DASH, 37.5-FT SKIP
² DOT WHITE = 3-FT LINE, 9-FT SKIP
³ DOT YELLOW = 3-FT LINE, 9-FT SKIP

TRAFFIC CONTROL DETOUR ITEMS

ROADWAY	STAGE DURATION (DAYS)	643.3000 TRAFFIC CONTROL DETOUR SIGNS	
		**	
		EACH DAY	
CATEGORY 0010			
STAGE 1A	1		
STH 60 NIGHT CLOSURE		155	155
STAGE 1A SUBTOTAL			155
UNDISTRIBUTED			20
CATEGORY 0010 TOTAL			175

PAVEMENT MARKING

					646.0106	646.0126	646.0805.S	647.0166	647.0356	647.0456	647.0566	647.0606	647.0726	647.0766	647.0856	
					EPOXY 4-INCH			ARROWS			STOP LINE	ISLAND	DIAGONAL	CROSSWALK	CONCRETE	
					WHITE	YELLOW	EPOXY	OUTFALL	EPXOY	WORDS	CURB	EPOXY	NOSE	EPOXY	EXPOXY	CORRUGATED
STAGE	STA	-	STA	LOCATION	LF	LF	8-INCH	EACH	TYPE 2	EPOXY	EPOXY	18-INCH	EXPOXY	12-INCH	6-INCH	MEDIAN EPOXY
CATEGORY 0010																
STAGE 3	215"EB"+00	-	222"EB"+00	RT	500	--	--	--	--	--	--	-	--	--	--	--
	213"EB"+00	-	222"EB"+00	LT & C/L	80	770	--	--	--	--	20	--	1	355	--	--
	213"WB"+00	-	222"WB"+00	RT	--	790	--	--	--	--	--	--	--	--	--	--
	215"WB"+00	-	222"WB"+00	LT & C/L	675	--	--	--	--	--	--	--	--	--	--	--
	233"EB"+00	-	237"EB"+40	LT, C/L, & RT	560	444	--	1	--	--	--	--	--	--	--	--
	233"WB"+00	-	237"WB"+40	LT, C/L, & RT	560	250	--	--	--	--	--	--	--	--	--	--
	7"STH60"+50	-	22"STH60"+65	LT, C/L, & RT	2,310	1,740	940	--	6	2	--	55	--	43	--	1,920
	10"FRC"+33	-	12"FRC"+88	LT, C/L, & RT	510	510	--	--	--	--	--	42	--	--	--	--
	10"FRN"+38	-	11"FRN"+38	LT, C/L, & RT	100	--	--	--	2	--	--	38	--	--	--	400
	222"EB"+00	-	226"EB"+95	LT, C/L, & RT	834	385	226	--	2	1	10	53	1	--	--	--
	222"WB"+00	-	226"WB"+95	LT, C/L, & RT	573	450	--	--	--	--	5	--	--	--	--	--
	222"EB"+00	-	226"EB"+95	EB LEFT TURN LANE	-	--	--	--	3	1	10	12	1	--	--	--
	228"EB"+04	-	233"EB"+00	LT, C/L, & RT	560	460	--	--	--	--	5	42	1	--	84	--
	228"WB"+30	-	233"WB"+00	LT, C/L, & RT	918	272	279	--	2	1	5	45	--	--	90	--
	228"WB"+30	-	233"WB"+00	WB LEFT TURN LANE	--	--	--	--	3	1	10	12	1	--	24	--
					8,180	6,071										
CATEGORY 0010 TOTALS					14,251	1,445	1	18	6	65	299	5	398	198	2,320	

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING [SF]	637.2230 SIGN TYPE II REFLECTIVE F [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
1R-1	W6-3	--	-- x --	--	--	--	--	--	--	1	1	--	--
1R-2	R5-1, R2-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
1R-3	R5-1A, W6-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
1R-4	R4-7	--	-- x --	--	--	--	--	--	--	1	1	--	--
1R-5	R2-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
1R-6	J1-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
2M-1	155-56	ADOPT A HWY	-- x --	--	--	--	1	--	1	--	1	--	SEE PERMANENT SIGNING SHEET FOR PERMANENT LOCATION
2R-2	R1-1, R3-6	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-3	R5-1, W4-2	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-4	W4-2	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-5	R5-1A	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-6	R6-2L	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-7	R4-7	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-8	J3-3	--	-- x --	--	--	--	--	--	--	1	2	--	--
2R-9	R5-1A	--	-- x --	--	--	--	--	--	--	1	1	--	--
2R-10	R5-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-1	W9-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-2	W9-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-3	J3-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-4	R1-1, R6-3	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-5	J3-2, R5-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-6	R4-7	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-7	J3-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-8	R5-1A	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-9	D1-1	ARLINGTON, LODI	-- x --	--	--	--	--	--	--	1	2	--	--
3R-10	J2-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-11	J3-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-12	R1-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-13	R1-1, R6-3	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-14	R2-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-15	J1-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-16	J2-4	--	-- x --	--	--	--	--	--	--	1	1	--	--
3R-17	R4-7	--	-- x --	--	--	--	--	--	--	1	1	--	--
4R-1	J3-2	--	-- x --	--	--	--	--	--	--	1	1	--	--
4R-2	D1-2	BEAVER DAM, COLUMBUS, SUN PRAIRIE	-- x --	--	--	--	--	--	--	1	2	--	--
4R-3	J2-4	--	-- x --	--	--	--	--	--	--	1	2	--	--
4R-4	R2-1	35 MPH	-- x --	--	--	--	--	--	--	1	1	--	--
4R-5	R2-1	35 MPH	-- x --	--	--	--	--	--	--	1	1	--	--
4R-6	R2-1	45 MPH	-- x --	--	--	--	--	--	--	1	1	--	--
4R-7	R4-7	--	-- x --	--	--	--	--	--	--	1	1	--	--

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II	637.2210	637.2215	637.2230	634.0616	634.0618	638.2102	638.2602	638.3000	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
			SIGN SIZE	SIGNS TYPE II	SIGNS TYPE II	SIGNS TYPE II	WOOD POSTS	WOOD POSTS	MOVING SIGNS	REMOVING SIGNS	REMOVING SMALL SIGN		
			W x H [IN.] x [IN.]	REFLECTIVE H [SF]	REFLECTIVE H FOLDING [SF]	REFLECTIVE F [SF]	4"x 6"X16' [EA]	4"x 6"X18' [EA]	TYPE II [EA]	TYPE II [EA]	TYPE II [EA]		
5R-1	W3-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
5R-2	W3-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
5R-3	R1-1	--	-- x --	--	--	--	--	--	--	1	1	--	--
5R-4	J3-3	--	-- x --	--	--	--	--	--	--	1	2	--	--
5R-5	D1-2	FALL RIVER, COLUMBUS	-- x --	--	--	--	--	--	--	1	2	--	--
6M-1	--	ADOPT A HWY	-- x --	--	--	--	1	--	1	--	1	--	SEE PERMANENT SIGNING SHEET FOR PERMANENT LOCATION
6R-2	J4-1, D2-1	ARLINGTON 18	-- x --	--	--	--	--	--	--	1	2	--	--
1-1	W6-3(2S)	--	36 x 36	--	--	9.00	1	--	--	--	--	--	--
1-2	R2-1(2S)	45 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
1-3	R5-1(2M)	--	36 x 36	9.00	--	--	--	1	--	--	--	--	--
1-4	NOT USED	--	-- x --	--	--	--	--	--	--	--	--	--	--
1-5	W6-1(2S)	--	36 x 36	--	--	9.00	1	--	--	--	--	--	--
1-6	R2-1(2S)	45 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
2-1	J1-1(2S)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M6-1	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
2-2	R5-1A(3)	--	42 x 30	8.75	--	--	1	--	--	--	--	--	--
2-3	W6-2(2M)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-4	J13-1(2S)	--	24 x 45	7.50	--	--	--	1	--	--	--	--	--
	M6-1	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-4	--	21 x 21	--	--	--	--	--	--	--	--	--	--
2-5	R1-1(3)	--	36 x 36	7.46	--	--	--	1	--	--	--	2-6	--
2-6	R6-3A(3)	--	30 x 24	5.00	--	--	--	--	--	--	--	2-5	--
2-7	R5-1(3)	--	36 x 36	9.00	--	--	1	--	--	--	--	--	--
2-8	W4-2L(2M)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-9	R5-1A(3)	--	42 x 30	8.75	--	--	1	--	--	--	--	--	--
2-10	W9-1L(2M)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-11	W9-1L(2M)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-12	R4-7(3)	--	36 x 48	12.00	--	--	--	1	--	--	--	2-13	--
2-13	W5-56(2S)	--	18 x 18	--	--	2.25	--	--	--	--	--	2-12	--
2-14	J1-1(2M)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M6-1	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
2-15	R4-7(3)	--	36 x 48	12.00	--	--	1	--	--	--	--	--	--
2-16	W4-2L(2M)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-17	J2-3(2M)	--	72 x 57	28.50	--	--	--	2	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING [SF]	637.2230 SIGN TYPE II REFLECTIVE F [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1R	--	21 x 21	--	--	--	--	--	--	--	--	--	--
2-18	R3-20L(3)	--	36 x 54	13.50	--	--	1	--	--	--	--	--	--
2-19	W12-1D(3)	--	30 x 30	--	--	6.25	1	--	--	--	--	--	2' MOUNTING HEIGHT
2-20	R5-1A(3)	--	42 x 30	8.75	--	--	1	--	--	--	--	--	--
2-21	D1-2(2)	ARLINGTON, LODI RA	72 x 24	12.00	--	--	2	--	--	--	--	--	--
2-22	R6-2L(3)	--	36 x 48	12.00	--	--	--	1	--	--	--	--	--
2-23	R2-1(3)	45 MPH	36 x 48	12.00	--	--	--	1	--	--	--	--	--
2-24	W3-3(3)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
2-25	W3-3(3)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
3-1	J3-4(2M)	--	96 x 57	38.00	--	--	--	2	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
3-2	R1-1F(3)	--	36 x 36	--	7.46	--	--	1	--	--	--	3-3	--
3-3	R6-3(3)	--	30 x 24	5.00	--	--	--	--	--	--	--	3-2	--
3-4	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	ON SIGNAL POLE
3-5	R4-7(3)	--	36 x 48	12.00	--	--	--	--	--	--	--	--	ON SIGNAL POLE
3-6	R5-1(3)	--	36 x 36	9.00	--	--	1	--	--	--	--	3-7	--
3-7	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	3-6	--
3-8	R5-1(3)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	ON SIGNAL POLE
3-9	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	ON SIGNAL POLE
3-10	J4-1(3)	--	24 x 36	6.00	--	--	1	--	--	--	--	--	--
		--	21 x 21	--	--	--	--	--	--	--	--	--	--
		--	24 x 12	--	--	--	--	--	--	--	--	--	--
3-11	R5-1A(3)	--	42 x 30	8.75	--	--	--	1	--	--	--	--	--
3-12	J3-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLECTIVE H [SF]	637.2215 SIGN TYPE II REFLECTIVE H FOLDING [SF]	637.2230 SIGN TYPE II REFLECTIVE F [SF]	634.0616 WOOD POSTS 4"x 6"X16' [EA]	634.0618 WOOD POSTS 4"x 6"X18' [EA]	638.2102 MOVING SIGN TYPE II [EA]	638.2602 REMOVING SIGN TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
3-13	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	D1-1(2)	LA, ARLINGTON, LODI	72 x 24	12.00	--	--	2	--	--	--	--	--	--
3-14	R5-1(3)	--	36 x 36	9.00	--	--	1	--	--	--	--	3-15	--
3-15	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	3-14	--
3-16	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	ON SIGNAL POLE
3-17	R5-1(3)	--	36 x 36	9.00	--	--	--	--	--	--	--	--	ON SIGNAL POLE
3-18	R4-7(3)	--	36 x 48	12.00	--	--	--	--	--	--	--	--	ON SIGNAL POLE
3-19	R1-1F(3)	--	36 x 36	--	7.46	--	--	--	--	--	--	--	ON SIGNAL POLE
3-20	J3-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
3-21	J3-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--
3-22	M3-1	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-4	USH 151	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1L	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	R1-1F(3)	--	36 x 36	--	7.46	--	--	1	--	--	--	3-23	--
3-23	R6-3(2M)	--	30 x 24	5.00	--	--	--	--	--	--	--	3-22	--
3-24	R3-8W(2S)	--	54 x 30	11.25	--	--	1	--	--	--	--	--	--
3-25	J3-3(2S)	--	72 x 57	28.50	--	--	--	2	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
3-26	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	J4-2(2M)	--	48 x 36	12.00	--	--	--	1	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
3-27	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	R2-1(3)	45 MPH	36 x 48	12.00	--	--	--	1	--	--	--	--	--
	J1-1(2M)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
3-28	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
3-29	M1-4	USH 151	24 x 24	--	--	--	--	--	--	--	--	--	--
	J2-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II	637.2210	637.2215	637.2230	634.0616	634.0618	638.2102	638.2602	638.3000	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
			SIGN SIZE	SIGNS TYPE II	SIGNS TYPE II	SIGNS TYPE II	WOOD POSTS	WOOD POSTS	MOVING SIGNS	REMOVING SIGNS	REMOVING SMALL SIGN SUPPORTS		
			W x H [IN.] x [IN.]	REFLECTIVE H [SF]	REFLECTIVE H FOLDING [SF]	REFLECTIVE F [SF]	4"x 6"x16' [EA]	4"x 6"x18' [EA]	TYPE II [EA]	TYPE II [EA]	TYPE II [EA]		
	M3-3		24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-4		24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1R		21 x 21	--	--	--	--	--	--	--	--	--	--
3-30	W12-1D(3)	--	30 x 30	--	--	6.25	1	--	--	--	--	--	2' MOUNTING HEIGHT
4-1	R3-20L(3)	--	36 x 54	13.50	--	--	1	--	--	--	--	--	--
4-2	J2-2(2M)	--	48 x 57	19.00	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1L	--	21 x 21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M6-1	--	21 x 21	--	--	--	--	--	--	--	--	--	--
4-3	R2-1(3)	45 MPH	36 x 48	12.00	--	--	1	--	--	--	--	--	--
4-4	J2-1(2M)	--	24 x 57	9.50	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1L	--	21 x 21	--	--	--	--	--	--	--	--	--	--
4-5	R4-7(3)	--	36 x 48	12.00	--	--	1	--	--	--	--	--	--
4-6	R2-1(2S)	35 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
4-7	R2-1(2S)	35 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
4-8	D2-2(2)	UA BEAVER DAM/COLUMBUS, SUN PRAIRIE RA	78 x 36	19.50	--	--	2	--	--	--	--	--	--
4-9	W3-3(3)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
4-10	W3-3(3)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
5-1	R1-1(2S)	--	30 x 30	5.18	--	--	1	--	--	--	--	--	--
5-2	W3-3(3)	--	36 x 36	--	--	9.00	--	1	--	--	--	--	--
5-3	J1-1(2M)	--	24 x 39	6.50	--	--	--	1	--	--	--	--	--
	M2-1	--	21 x 15	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
5-4	I2-3	COLUMBUS, 4,991	66 x 24	11.00	--	--	2	--	--	--	--	--	CONSULT FIELD ENGINEER FOR SIGN PLACEMENT
6-1	D2-1(2)	ARLINGTON 18, SAUK CITY 38	84 x 24	14.00	--	--	2	--	--	--	--	--	--
6-2	R2-1(2S)	55 MPH	24 x 30	5.00	--	--	1	--	--	--	--	--	--
6-3	J4-1(2S)	--	24 x 36	6.00	--	--	--	1	--	--	--	--	--
	M3-4	--	24 x 12	--	--	--	--	--	--	--	--	--	--
6-4	M1-6	STH 60	24 x 24	--	--	--	--	--	--	--	--	--	--
	NOT USED	--	-- x --	--	--	--	--	--	--	--	--	--	--
6-5	D1-1(2)	LA FALL RIVER	72 x 15	7.50	--	--	2	--	--	--	--	--	--
6-6	J2-3(2M)	--	72 x 57	28.50	--	--	--	2	--	--	--	--	--
	M3-2	--	24 x 12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24 x 24	--	--	--	--	--	--	--	--	--	--
	M5-1L	--	21 x 21	--	--	--	--	--	--	--	--	--	--

TYPE I & II PERMANENT SIGNING

CATEGORY CODE 0010

SIGN NO.		SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2215	637.2230	634.0616	634.0618	638.2102	638.2602	638.3000	MOUNT ON SAME POST AS SIGN #	REMARKS NEW SIGN LOCATION
			W x H			SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE H FOLDING	SIGNS TYPE II REFLECTIVE F	WOOD POSTS 4"x 6"X16'	WOOD POSTS 4"x 6"X18'	MOVING SIGNS TYPE II	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS		
			[IN.]	x	[IN.]	[SF]	[SF]	[SF]	[EA]	[EA]	[EA]	[EA]	[EA]		
	M3-2	--	24	x	12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 16	24	x	24	--	--	--	--	--	--	--	--	--	--
	M5-1R	--	21	x	21	--	--	--	--	--	--	--	--	--	--
	M3-4	--	24	x	12	--	--	--	--	--	--	--	--	--	--
	M1-6	STH 60	24	x	24	--	--	--	--	--	--	--	--	--	--
	M5-1R	--	21	x	21	--	--	--	--	--	--	--	--	--	--
TOTALS						611.39	59.68	122.75	37	40	2	45	54	--	--

CONSTRUCTION STAKING									
STAGE	ROADWAY	STATION	TO	STATION	650.4500	650.5000	650.7000	650.9910	650.9920
					SUBGRADE	BASE	CONCRETE PAVEMENT	SUPPLEMENTAL CONTROL (1401-02-72)	SLOPE STAKES
					LF	LF	LF	LS	LF
CATEGORY 0010									
STAGE 1A	STH 16	228"EB"+00	-	232"EB"+78	478	478	--	--	--
STAGE 1A	STH 16	235"EB"+66	-	238"EB"+48	282	282	--	--	--
STAGE 1A	COLUMBUS FALL RIVER RD	10"FRC"+37	-	14"FRC"+22	385	385	--	--	--
STAGE 1A	STH 60	7"STH"+52	-	22"STH60"+80	1,528	1,528	--	--	--
STAGE 1A	HEIN DWY	0"H"+94	-	6"H"+90	596	596	--	--	596
STAGE 1A SUBTOTALS					3,269	3,269	0	0	596
STAGE 1B	STH 16 WB	215"WB"+00	-	219"WB"+31	431	--	431	--	431
STAGE 1C	STH 16 WB	220"WB"+20	-	226"WB"+59	639	--	639	--	639
STAGE 1B	STH 16 WB	227"WB"+39	-	236"WB"+12	873	--	873	--	873
STAGE 1B	COLUMBUS FALL RIVER RD	10"FRC"+14	-	14"FRC"+12	398	398	--	--	398
STAGE 1B	FRONTAGE RD NORTH	10"FRN"+14	-	13"FRC"+05	291	206	85	--	291
STAGE 1B SUBTOTALS					2,632	604	2,028	0	2,632
STAGE 1C	STH 16 WB	219"WB"+31	-	220"WB"+20	89	--	89	--	89
STAGE 1C	STH 16 WB	226"WB"+59	-	227"WB"+39	80	--	80	--	80
STAGE 1C	COLUMBUS FALL RIVER RD	10"FRC"+14	-	12"FRC"+88	274	274	--	--	274
STAGE 1C	FRONTAGE RD NORTH	10"FRN"+14	-	12"STH60"+69	255	170	85	--	255
STAGE 1C	STH 60	10"STH60"+50	-	15"STH60"+32	482	482	--	--	482
STAGE 1C	STH 60	17"STH60"+04	-	22"STH60"+11	507	507	--	--	507
STAGE 1C SUBTOTALS					1,687	1,433	254	0	1,687
STAGE 2A	STH 16 EB	215"EB"+00	-	226"EB"+51	1,151	--	1,151	--	1,151
STAGE 2A	STH 16 EB	227"EB"+58	-	235"EB"+66	808	--	808	--	808
STAGE 2A	STH 60	22"STH60"+11	-	22"STH60"+80	69	--	69	--	69
STAGE 2A SUBTOTALS					2,028	0	2,028	0	2,028
STAGE 2B	STH 16 EB	226"EB"+51	-	227"EB"+58	107	--	107	--	107
STAGE 2B	STH 60	10"STH60"+50	-	22"STH60"+80	1,230	1,161	69	--	1,230
STAGE 2B	HEIN DWY	0"H"+44	-	0"H"+94	50	50	--	--	50
STAGE 2B SUBTOTALS					1,387	1,211	176	0	1,387
STAGE 3	COMMERCE DRIVE	0"C"+00	-	0"C"+68	68	68	--	--	68
PROJECT					--	--	--	1	--
CATEGORY 0010 TOTALS					11,071	6,585	4,486	1	8,398

SAWING PAVEMENT								
STAGE	LOCATION	STATION	-	STATION	OFFSET	690.0150	690.0250	COMMENTS
						SAWING ASPHALT	SAWING CONCRETE	
LF								
LF								
CATEGORY 0010								
STAGE 1A	STH 16 EB	219"EB"+65	-	219"EB"+75	LT/RT	68	--	STORM SEWER INSTALL
	STH 16 EB	221"EB"+95	-	222"EB"+05	LT/RT	70	--	STORM SEWER INSTALL
	STH 16 EB	224"EB"+95	-	225"EB"+05	LT/RT	98	--	STORM SEWER INSTALL
	STH 16 EB	226"EB"+84	-	227"EB"+05	LT/RT	100	--	STORM SEWER INSTALL
	STH 16 EB	228"EB"+95	-	229"EB"+05	LT/RT	75	--	STORM SEWER INSTALL
	STH 16 EB	230"EB"+97	-	231"EB"+07"	LT/RT	71	--	STORM SEWER INSTALL
	STH 60	15"STH60"+87	-	16"STH60"+21	LT	35	--	HEIN DWY
	STH 60	20"STH60"+92	-	21"STH60"+16	LT	25	--	HEIN DWY
	STH 60	21"STH60"+93	-	22"STH60"+08	LT/RT	74		CULVERT INSTALL
	STH 60	22"STH60"+23	-	22"STH60"+79	LT	85	--	CURB RETURN
	COLUMBUS FALL RIVER RD	10"FRC"+36	-	10"FRC"+75	LT	40	--	CURB RETURN
	FRONTAGE RD NORTH	10"FRN"+27	-	11"FRN"+35	LT	123	--	---
	HEIN DWY	0"H"+60	-	0"H"+71	LT	21	--	MATCH POINT
	HEIN DWY	6"H"+90	-	6"H"+90	LT/RT	12	--	MATCH POINT
	UNDISTRIBUTED	---	-	---	---	50	--	---
STAGE 1A SUBTOTAL						947	0	
STAGE 1B	STH 16 WB	215"WB"+00	-	215"WB"+00	LT/RT	32	--	MATCH POINT
	STH 16 WB	220"WB"+19	-	22"WB"+88	RT	98	--	---
	STH 16 WB	227"WB"+41	-	228"WB"+09	RT	127	--	---
	STH 16 WB	236"WB"+33	-	236"WB"+33	LT/RT	35	--	MATCH POINT
	COLUMBUS FALL RIVER RD	10"FRC"+00	-	12"FRC"+88	---	288	--	AT RL
	COLUMBUS FALL RIVER RD	12"FRC"+88	-	12"FRC"+88	RT	12	--	MATCH POINT
	FRONTAGE RD NORTH	10"FRN"+00	-	12"FRN"+70	---	270	--	AT RL
	FRONTAGE RD NORTH	12"FRN"+75	-	12"FRN"+75	RT	32	--	MATCH POINT
	UNDISTRIBUTED	---	-	---	---	50	--	---
STAGE 1B SUBTOTAL						944	0	
STAGE 1C	STH 60	10"STH60"+50	-	15"STH60"+32	---	482	--	AT RL
	STH 60	17"STH60"+04	-	22"STH60"+11	---	507	--	AT RL
	COLUMBUS FALL RIVER RD	12"FRC"+88	-	12"FRC"+88	RT	12	--	MATCH POINT
	FRONTAGE RD NORTH	11"FRN"+35	-	12"FRN"+70	LT	125	--	MATCH POINTS
	UNDISTRIBUTED	---	-	---	---	25	--	---
STAGE 1C SUBTOTAL						1,151	0	
STAGE 2A	STH 16 EB	215"EB"+00	-	215"EB"+00	LT/RT	30	--	MATCH POINT
	STH 16 EB	227"EB"+58"	-	227"EB"+58"	LT/RT	35	--	STH16/60 INTERSECTION
	STH 16 EB	235"EB"+66	-	235"EB"+66	LT/RT	40	--	MATCH POINT
	STH 60	22"STH60"+11		22"STH60"+95	---	84	--	AT RL
	UNDISTRIBUTED	---	-	---	---	25	--	---
STAGE 2A SUBTOTAL						214	0	
STAGE 3	COMMERCE DR	0"C"+68	-	0"C"+68	LT/RT	42	0	MATCH POINT
STAGE 3 SUBTOTAL						42	0	
UNDISTRIBUTED						--	50	
CATEGORY 0010 TOTAL						3,298	50	

CONCRETE PAVEMENT JOINT LAYOUT

LOCATION	SPV.0105.01 CONCRETE PAVEMENT JOINT LAYOUT	
	LS	
CATEGORY 0010		
PROJECT		1
CATEGORY 0010 TOTAL		1

ADJUSTING WATER VALVE BOX & SANITARY MANHOLES

LOCATION	SPV.0060.01 ADJUSTING WATER VALVE BOXES		SPV.0060.02 ADJUSTING SANITARY MANHOLES	
	EACH		EACH	
CATEGORY 0030				
PROJECT		7		3
CATEGORY 0040 TOTAL		7		3

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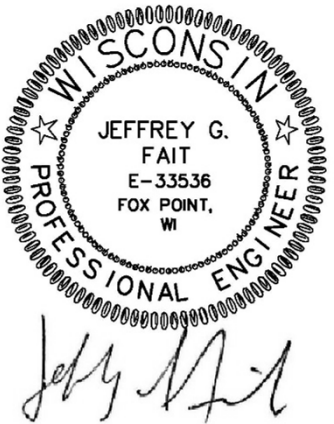
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STATE FURNISHED MATERIALS SUMMARY	
EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES, TYPE 12
2	POLES, TYPE 13
2	LUMINAIRE ARMS, STEEL, 15-FT
1	35-FT MONOTUBE ARM
1	45-FT MONOTUBE ARM
2	50-FT MONOTUBE ARM

TRAFFIC DETECTOR LOOPS									
LOOP NO.	HOME RUN PB	LOCATION* STA OFFSET		SIZE (FT) X (FT)	NO. OF TURNS	652.0800	655.0700	655.0800	
						CONDUIT	LOOP DETECTOR	LOOP DETECTOR	
						LOOP DETECTOR L.F.	LEAD IN CABLE L.F.	WIRE L.F.	
11	PB19	226+72.7 EB	46.6 LT	6 X 20	3	74	125	233	
12	PB19	226+98.7 EB	46.6 LT	6 X 20	3	66	125	208	
21	PB6	231+98.9 WB	0.0 CL	6 X 20	3	94	555	296	
22	PB5	229+28.9 WB	0.0 CL	6 X 20	3	98	285	309	
41	PB2	227+26.0 WB	59.1 LT	6 X 20	3	100	45	315	
42	PB2	227+27.4 WB	33.1 LT	6 X 20	3	100	45	315	
43	PB2	227+14.0 WB	58.5 LT	6 X 20	3	76	45	239	
44	PB2	227+15.4 WB	35.5 LT	6 X 20	3	76	45	239	
51	PB8	228+49.9 WB	46.6 RT	6 X 20	3	80	290	252	
52	PB8	228+23.9 WB	46.6 RT	6 X 20	3	70	290	221	
61	PB17	223+17.0 EB	0.0 CL	6 X 20	3	82	595	258	
62	PB16	225+87.0 EB	0.0 CL	6 X 20	3	104	325	328	
81	PB12	19+20.0 STH60	0.0 CL	6 X 20	3	96	670	302	
82	PB11	20+00.0 STH60	0.0 CL	6 X 20	3	96	590	302	
83	PB21	22+44.8 STH60	6.0 LT	6 X 20	3	148	380	466	
84	PB13	22+70.8 STH60	6.0 LT	6 X 20	3	154	380	485	
85	PB21	22+45.0 STH60	6.0 RT	6 X 20	3	124	380	391	
86	PB13	22+71.0 STH60	6.0 RT	6 X 20	3	124	380	391	
87	PB13	22+71.0 STH60	19.5 RT	6 X 20	3	102	380	321	
88	PB13	22+67.0 STH60	39.0 RT	6 X 20	3	80	380	252	
KL LOOP 1	KLPB1	235+09.6 EB	0.0 CL	6 X 20		86			
						2030	6310	6124	

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

CONDUIT			
		652.0225	652.0235
		CONDUIT RIGID	CONDUIT RIGID
		NONMETALLIC	NONMETALLIC
		SCHEDULE 40	SCHEDULE 40
		2-INCH	3-INCH
FROM	TO	L.F.	L.F.
CB1	PB1		45
PB1	SB1	20	
PB1	PB2	15	
PB1	PB3		210
PB3	SB2		25
PB3	PB4		120
PB4	SB3	10	
PB4	PB5	90	
PB5	PB6	270	
PB4	PB7		130
PB7	SB4	10	
PB7	PB8		60
PB8	SB5	10	
PB8	SB6	140	
SB6	SB7	150	
SB7	SB8	150	
SB8	SB9	150	
PB8	PB9		110
PB9	SB10	10	
PB9	SB11		15
PB9	PB10		130
PB10	PB11	230	
PB11	PB12	80	
PB10	SB12	25	
PB10	PB13	20	
PB10	PB14		200
PB14	SB13		20
PB14	PB15		60
PB15	SB14	5	
PB15	PB16	95	
PB16	PB17	270	
PB15	PB18		150
PB18	SB15	15	
PB18	PB19		60
PB19	SB16	10	
PB19	SB17	140	
SB17	SB18	150	
SB18	SB19	150	
PB19	PB20		200
PB20	SB20		20
PB20	CB1		30
PB21	PB10	10	
TOTAL		2225	1585



OCTOBER 22, 2015

SHEET: 1 OF 5

PROJECT NO: 1401-02-72

HWY: STH 16

COUNTY: COLUMBIA

MISCELLANEOUS QUANTITIES

SHEET:

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PULL BOXES				
			653.0135	653.0140
			PULL BOXES	PULL BOXES
			STEEL	STEEL
PULL BOX	LOCATION		24x36-INCH	24x42-INCH
NO.	STA	OFFSET	EACH	EACH
PB1	226+83.2 WB	59.0 LT		1
PB2	226+96.7 WB	56.0 LT	1	
PB3	227+89.4 WB	58.5 LT		1
PB4	228+36.5 WB	35.6 LT		1
PB5	229+28.8 WB	34.1 LT	1	
PB6	232+00.0 WB	28.7 LT	1	
PB7	228+36.9 WB	28.3 RT		1
PB8	228+37.0 WB	57.7 RT		1
PB9	228+55.2 EB	34.1 RT		1
PB10	228+00.0 EB	63.0 RT		1
PB11	20+00.0 STH60	40.0 RT	1	
PB12	19+20.0 STH60	40.0 RT	1	
PB13	228+06.3 EB	45.3 RT	1	
PB14	227+05.0 EB	65.8 RT		1
PB15	226+82.3 EB	43.4 RT		1
PB16	225+88.5 EB	37.2 RT	1	
PB17	223+17.5 EB	26.6 RT	1	
PB18	226+81.9 EB	29.4 LT		1
PB19	226+81.9 EB	57.3 LT		1
PB20	226+66.0 WB	45.6 LT		1
PB21	227+98.8 EB	70.4 RT	1	
KLPB1	235+09.3 EB	28.3 LT	1	
TOTAL			10	12

TRAFFIC SIGNAL MOUNTING HARDWARE	
	658.5069.01
	SIGNAL
	MOUNTING
	HARDWARE
LOCATION	L.S.
STH 16 AT STH 60	1
TOTAL	1

CONCRETE BASES							
			654.0101	654.0102	654.0105	654.0113	654.0217
			CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE CONTROL
			BASES	BASES	BASES	BASES	CABINET BASES
SIGNAL	LOCATION		TYPE 1	TYPE 2	TYPE 5	TYPE 13	TYPE 9 SPECIAL
BASE NO.	STA	OFFSET	EACH	EACH	EACH	EACH	EACH
CB1	226+67.0 WB	58.0 LT					1
SB1	226+85.5 WB	39.8 LT		1			
SB2	227+86.4 WB	82.0 LT				1	
SB3	228+27.5 WB	38.8 LT	1				
SB4	228+26.2 WB	28.5 RT	1				
SB5	228+26.6 WB	58.0 RT		1			
SB6	229+75.2 WB	58.0 RT			1		
SB7	231+22.7 WB	56.7 RT			1		
SB8	232+72.5 WB	45.8 RT			1		
SB9	234+18.6 WB	35.0 RT			1		
SB10	228+43.7 EB	35.0 RT	1				
SB11	228+43.7 EB	44.0 RT				1	
SB12	228+12.5 EB	42.3 RT	1				
SB13	227+02.7 EB	87.2 RT				1	
SB14	226+88.7 EB	46.7 RT	1				
SB15	226+94.9 EB	29.6 LT	1				
SB16	226+91.8 EB	57.5 LT		1			
SB17	225+39.9 EB	55.3 LT			1		
SB18	223+87.0 EB	48.3 LT			1		
SB19	222+36.1 EB	36.7 LT			1		
SB20	226+53.4 WB	36.6 LT				1	
TOTAL			6	3	7	4	1

NETWORK CABLE		
		SPV.0090.01
		INSTALL
		CAT-5E
		CABLE
FROM	TO	L.F.
CB1	SB16	200
TOTAL		200

TRAFFIC SIGNAL CABLE AND WIRE			
		655.0515	655.0515
		ELECTRICAL	ELECTRICAL
		WIRE TRAFFIC	WIRE TRAFFIC
		SIGNALS	SIGNALS
		10 AWG GRN	10 AWG WHT
FROM	TO	L.F.	L.F.
CB1	SB1	50	50
SB1	SB2	155	155
SB2	SB3	110	110
SB3	SB4	100	100
SB4	SB5	65	65
SB5	SB10	90	90
SB10	SB11	40	40
SB11	SB12	120	120
SB12	SB13	160	160
SB13	SB14	70	70
SB14	SB15	110	110
SB15	SB16	70	70
SB16	SB20	145	145
SB20	CB1	45	45
SB1	PB1	35	
SB2	PB3	40	
SB3	PB4	25	
SB4	PB7	25	
SB5	PB8	25	
SB11	PB9	30	
SB12	PB10	40	
SB13	PB14	35	
SB14	PB15	20	
SB15	PB18	30	
SB16	PB19	25	
SB20	PB20	35	
TOTAL		1695	1330

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TRAFFIC SIGNAL CABLE AND WIRE						
		655.0230	655.0240	655.0250	655.0260	655.0625
		CABLE	CABLE	CABLE	CABLE	ELECTRICAL
		TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	WIRE
		5-14 AWG	7-14 AWG	9-14 AWG	12-14 AWG	LIGHTING
FROM	TO	L.F.	L.F.	L.F.	L.F.	6 AWG
CB1	SB1	80				
CB1	SB2				190	
CB1	SB3				235	
CB1	SB4		300			
CB1	SB5		330			
CB1	SB10	385				
CB1	SB11			390		
CB1	SB12		415			
CB1	SB13			310		
CB1	SB14			265		
CB1	SB15		200			
CB1	SB16	165				
CB1	SB20			75		
CB1	SB1					240
SB1	SB2					585
SB2	SB5					705
SB5	SB6					585
SB6	SB7					585
SB7	SB8					585
SB8	SB9					585
CB1	SB16					495
SB16	SB17					585
SB17	SB18					585
SB18	SB19					585
SB16	SB13					600
TOTAL		630	1245	1040	425	6720

TRAFFIC SIGNAL CABLE AND WIRE		
		655.0610
		ELECTRICAL
		WIRE
		LIGHTING
FROM	TO	L.F.
SB1	LUMINAIRE 1	120
SB2	LUMINAIRE 1	120
SB5	LUMINAIRE 1	120
SB5	LUMINAIRE 2	120
SB6	LUMINAIRE 1	120
SB7	LUMINAIRE 1	120
SB8	LUMINAIRE 1	120
SB9	LUMINAIRE 1	120
SB16	LUMINAIRE 1	120
SB16	LUMINAIRE 2	120
SB17	LUMINAIRE 1	120
SB18	LUMINAIRE 1	120
SB19	LUMINAIRE 1	120
SB11	LUMINAIRE 2	120
TOTAL		1680

TRAFFIC SIGNAL CABLE AND WIRE			
		655.0230	655.0240
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		5-14 AWG	7-14 AWG
FROM	TO	L.F.	L.F.
SB1	HEAD 13	20	
SB2	HEAD 17	80	
SB2	HEAD 18		60
SB3	HEAD 4	20	
SB3	HEAD 7	20	
SB3	HEAD 19	20	
SB4	HEAD 5	20	
SB5	HEAD 12		20
SB10	HEAD 20	20	
SB11	HEAD 2	80	
SB11	HEAD 3	60	
SB12	HEAD 16		20
SB13	HEAD 14	70	
SB13	HEAD 15	60	
SB14	HEAD 1	20	
SB14	HEAD 10		20
SB15	HEAD 11		20
SB16	HEAD 6	20	
SB20	HEAD 8	80	
SB20	HEAD 9	70	
TOTAL		660	140

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POLES																
	657.0100	657.0255	657.0310	657.0322	657.0425	657.0430	657.0609	657.0610	657.1355	657.1360	657.1535	657.1545	657.1550	657.1815	658.0500	659.1115
	TRANSFORMER				TRAFFIC SIGNAL											
	BASES BREAKAWAY			POLES	STANDARDS	STANDARDS	LUMINAIRE ARMS	LUMINAIRE ARMS	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL	PEDESTRIAN	LUMINAIRES
	PEDESTAL	11 1/2-INCH		TYPE 5	ALUMINUM	ALUMINUM	SINGLE MEMBER	SINGLE MEMBER	POLES	POLES	MONOTUBE	MONOTUBE	MONOTUBE	LUMINAIRE ARMS	PUSH	UTILITY
SIGNAL	BOLTS	BOLT CIRCLE	TYPE 3	ALUMINUM	15-FT	10-FT	4-INCH CLAMP 6-FT	4 1/2-INCH CLAMP 6-FT	TYPE 12	TYPE 13	ARMS 35-FT	ARMS 45-FT	ARMS 50-FT	STEEL 15-FT	BUTTONS	LED A
BASE NO.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1		1	1				1									1
SB2									1				1	1		1
SB3	1				1										1	
SB4	1				1										1	
SB5		1	1				2									2
SB6		1		1				1								1
SB7		1		1				1								1
SB8		1		1				1								1
SB9		1		1				1								1
SB10	1					1									1	
SB11									1				1			
SB12	1				1											
SB13										1	1			1		1
SB14	1				1											
SB15	1				1											
SB16		1	1				2									2
SB17		1		1				1								1
SB18		1		1				1								1
SB19		1		1				1								1
SB20									1			1				
TOTAL	6	10	3	7	5	1	5	7	2	2	1	1	2	2	3	14

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3

		FACES													
SIGNAL BASE NO.	SIGNAL HEAD NO.	658.0110	658.0115	658.0120	658.0215	658.0220	658.0225	658.0416	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
		TRAFFIC	TRAFFIC	TRAFFIC	BACKPLATES	BACKPLATES	BACKPLATES	PEDESTRIAN	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES
		SIGNAL FACE 3-12 INCH VERTICAL EACH	SIGNAL FACE 4-12 INCH VERTICAL EACH	SIGNAL FACE 5-12 INCH VERTICAL EACH	SIGNAL FACE 3 SECTION 12-INCH EACH	SIGNAL FACE 4 SECTION 12-INCH EACH	SIGNAL FACE 5 SECTION 12-INCH EACH	SIGNAL FACE 16-INCH EACH	12-INCH RED BALL EACH	12-INCH YELLOW BALL EACH	12-INCH GREEN BALL EACH	12-INCH RED ARROW EACH	12-INCH YELLOW ARROW EACH	12-INCH GREEN ARROW EACH	PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
SB1	HEAD 13	1			1				1	1	1				
SB2	HEAD 17	1			1				1	1	1				
SB2	HEAD 18			1			1		1	1	1		1	1	
SB3	HEAD 4	1			1							1	2		
SB3	HEAD 7	1			1				1	1	1				
SB3	HEAD 19							1							1
SB4	HEAD 5	1			1							1	2		
SB5	HEAD 12		1			1						1	2	1	
SB10	HEAD 20							1							1
SB11	HEAD 2	1			1				1	1				1	
SB11	HEAD 3	1			1				1	1	1				
SB12	HEAD 16			1			1		1	1	1		1	1	
SB13	HEAD 14	1			1				1	1	1				
SB13	HEAD 15	1			1				1	1	1				
SB14	HEAD 1	1			1				1	1	1				
SB14	HEAD 10		1			1						1	2	1	
SB15	HEAD 11		1			1						1	2	1	
SB16	HEAD 6	1			1							1	2		
SB20	HEAD 8	1			1				1	1				1	
SB20	HEAD 9	1			1				1	1	1				
TOTAL		13	3	2	13	3	2	2	12	12	10	6	14	7	2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
PROJECT NO. 1401-02-20
PORTAGE - COLUMBUS

HALL ROAD - USH 151 INTERCHANGE

STH 16
COLUMBIA COUNTY



CONVENTIONAL SYMBOLS

SECTION LINE	-----	SECTION CORNER		R/W MONUMENT	●
QUARTER LINE	-----			NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	-----	NOTATION FOR COMBUSTABLE FLUIDS		FOUND IRON PIN	IP
NEW REFERENCE LINE	-----			VALVE (GAS, WATER, ETC.)	⊙ (TYPE)
NEW R/W LINE	-----	NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES		SIGN	
EXISTING R/W LINE	-----			OFF-PREMISE SIGN	
PROPERTY LINE	-----				
LOT, TIE & OTHER MINOR LINES	-----				
CORPORATE LIMITS	-----				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	-----	ELECTRIC POLE		COMPENSABLE	
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)	-----	TELEPHONE POLE		NON-COMPENSABLE	
TEMPORARY LIMITED EASEMENT AREA	-----	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)			
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)	-----				
TRANSMISSION STRUCTURES	-----	ACCESS CONTROLLED BY ACQUISITION			
BUILDING	-----	NO ACCESS (BY STATUTORY AUTHORITY)			
NATIONAL GEODETIC SURVEY MONUMENT	-----	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)			
SIXTEENTH CORNER MONUMENT	-----				

CONVENTIONAL ABBREVIATIONS

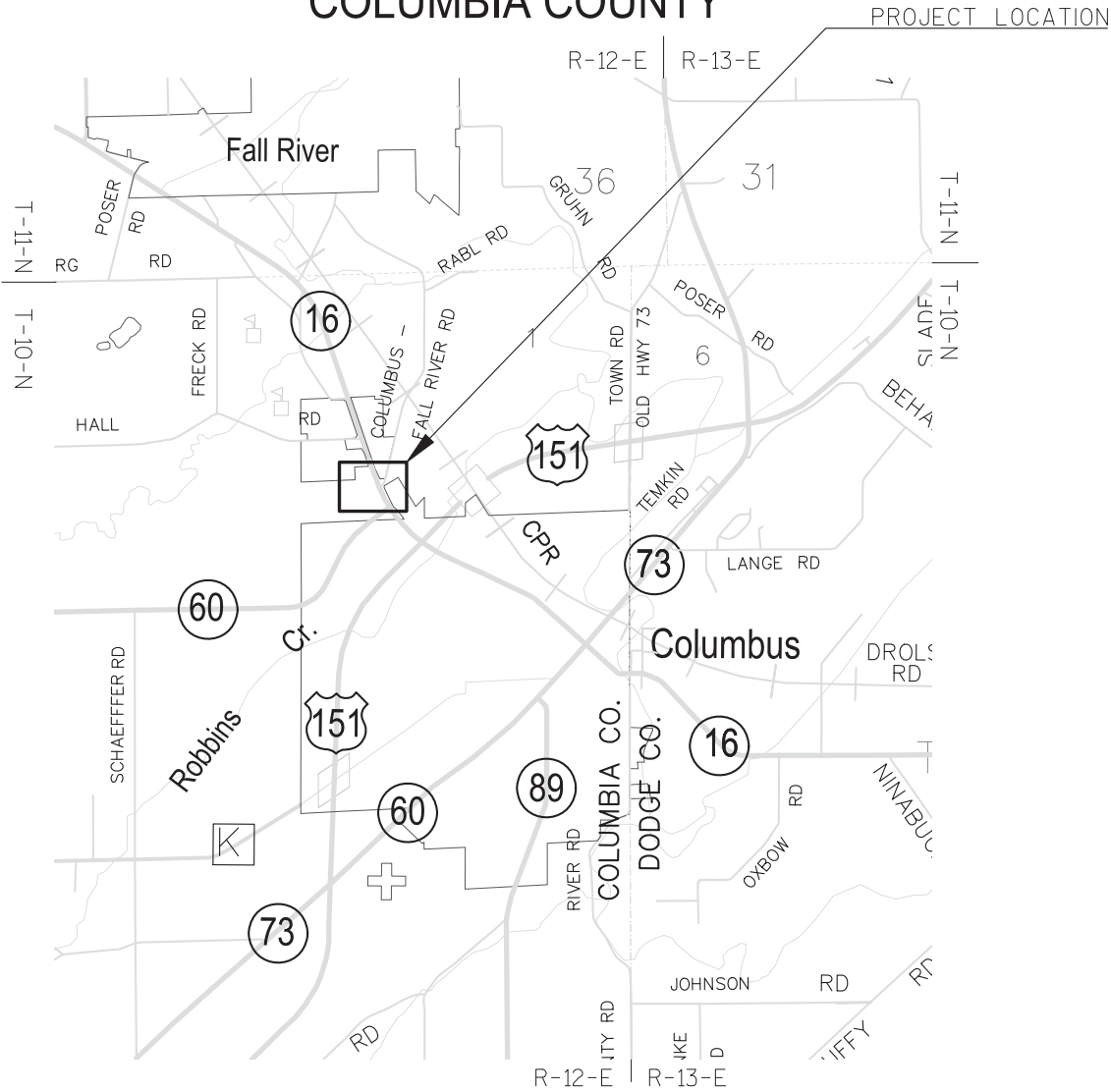
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RIGHT	RT
CENTERLINE	C/L	RIGHT OF WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC
CONCRETE	CONC	SEPTIC VENT	SEPV
COUNTY	CO	SQUARE FEET	SF
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH
DISTANCE	DIST	STATION	STA
CORNER	COR	SUBDIVISION	SUBD
DOCUMENT NUMBER	DOC	TANGENT	TAN
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV		
GRID NORTH	GN	TRANSPORTATION PROJECT	TPP
HIGHWAY EASEMENT	HE	PLAT	
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD	—OH—
TRANSMISSION LINES	—E—
ELECTRIC	—TV—
CABLE TELEVISION	—FO—
FIBER OPTIC	—SAN—
SANITARY SEWER	—SS—
STORM SEWER	—SS—



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1401-02-20

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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

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

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

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

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

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

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN Madison.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING ACCESS CONTROL ALONG ROUTE HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT T 017-2 (35), T06-2 (11) AND 6010-00-22

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 16 ESTABLISHED FROM PREVIOUS PROJECT T017-2 (35), T06-2 (11), 6010-00-22, CSM# 3094, VOL 20 P91, CSM# 4637, V32 P122.

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 60 ESTABLISHED FROM PREVIOUS PROJECT 6010-00-22 AND COLUMBUS COMMERCE CENTER PLAT.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1401-02-20 4.01
SHEET 2 OF 2
AMENDMENT NO:

TRANSPORTATION PROJECT PLAT NO: 1401-02-20 - 4.01

THAT PART OF LOT 1 C.S.M. 4637, LOT 1 C.S.M. 3094, THE SW 1/4 OF THE NE 1/4, THE NW 1/4 OF THE SE 1/4, , THE NE 1/4 OF THE SW 1/4, LOT 1 AND OUTLOT 1 OF THE PLAT OF COLUMBUS COMMERCE CENTER LOCATED IN THE CITY OF COLUMBUS AND PART OF THE SE 1/4 OF THE NW 1/4 LOCATED IN TOWN OF COLUMBUS, ALL LOCATED IN SECTION 11, T10N, R12E, COLUMBIA COUNTY, WISCONSIN

RELOCATION ORDER STH 16, PORTAGE-COLUMBUS (HALL ROAD - USH 151 INTERCHANGE)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

HEREBY ORDERS THAT:

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

NOTE: OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE DEPARTMENT OF TRANSPORTATION.

PARCEL NUMBER	OWNER	INTERESTS REQUIRED	R/W REQUIRED (ACRES)			T.L.E. TEMP ACRES	P.L.E. PERM ACRES
			NEW	EXISTING	TOTAL		
1	B2 ENTERPRISES, LLC	FEE, TLE	0.636	-	0.636	0.129	-
4	HEIN FARMS, A WISCONSIN PARTNERSHIP	FEE, TLE, ACCESS RIGHTS	0.607	-	0.607	0.928	-
5	CITY OF COLUMBUS	FEE, ACCESS RIGHTS	0.165	-	0.165	-	-
6	LOT 1, COLUMBUS COMMERCE CENTER LLC	FEE, ACCESS RIGHTS	0.031	-	0.031	-	-
7	DANIEL M AND VIRGINIA R AMATO	FEE	0.355	-	0.355	-	-

UTILITY INTEREST REQUIRED

UTILITY NUMBER	OWNER	INTERESTS REQUIRED
200	CITY OF COLUMBUS (SANITARY SEWER, WATER)	RELEASE OF RIGHTS
201	AMERICAN TRANSMISSION COMPANY	RELEASE OF RIGHTS
202	WE ENERGIES (GAS)	RELEASE OF RIGHTS
203	AT&T	RELEASE OF RIGHTS
204	ALLIANT ENERGY	RELEASE OF RIGHTS

COURSE TABLE

COURSE	BEARING	LENGTH (FT)
100 - 101	N51°36'58"E	186.55'
101 - 102	S38°23'02"E	35.86'
102 - 103	N53°29'30"E	126.56'
103 - 104	N50°12'54"E	358.25'
104 - 105	N35°39'38"W	37.53'
105 - 106	N23°30'27"E	113.08'
106 - 107	N25°06'14"W	205.01'
107 - 108	N18°57'43"W	204.92'
108 - 109	N25°19'29"W	165.48'
109 - 110	N16°20'14"W	260.29'
110 - 111	N19°07'07"W	47.19'
111 - 112	N87°17'56"E	206.33'
112 - 113	N87°21'38"E	136.64'
113 - 114	S79°33'42"E	66.14'
114 - 115	S12°58'32"W	278.69'
115 - 116	S26°00'34"E	564.01'
116 - 117	N58°52'16"E	94.09'
117 - 118	N81°00'00"E	129.95'
118 - 119	S36°19'05"E	80.20'
119 - 120	S56°31'46"W	208.38'
120 - 121	S39°12'41"E	75.00'
121 - 122	SEE C1 CURVE NOTE	
122 - 123	S47°49'54"W	50.01'
123 - 124	S43°02'27"E	177.00'
124 - 125	S44°59'18"W	201.59'
125 - 126	N68°16'27"W	27.73'
126 - 127	N48°13'26"W	174.24'
127 - 128	N42°49'45"W	160.54'
128 - 129	N42°49'45"W	121.84'
129 - 130	N38°45'13"W	206.13'
130 - 131	N85°29'24"W	64.82'
131 - 132	S56°27'42"W	90.72'
132 - 133	S56°27'42"W	329.38'
133 - 134	S00°34'25"E	81.60'
134 - 135	N77°49'50"W	266.67'
135 - 136	S87°25'58"W	40.30'

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
STH 60	COLUMBUS COMMERCE CENTER PLAT	2012	VARIES
STH 60	R/W PROJECT 6010-00-22	1994	VARIES
STH 16	R/W PROJECT T 017-2(35)	1969	VARIES
STH 16	R/W PROJECT T 06-2(11)	1956	VARIES
STH 60	C.S.M. 4637, VOL. 32, PG. 122	2006	VARIES
COLUMBUS-FALL RIVER RD	C.S.M. 2911, VOL. 19, PG 21	1997	66'

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON.

EXISTING ACCESS CONTROL ALONG HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT
T 017-2 (35), T06-2 (11) AND 6010-00-22.

FOR ADDITIONAL INFORMATION REFER TO TITLE SHEET, RECORDED AS SHEET 2 OF 2.

CURVE TABLE

CURVE #	RADIUS(ft)	DELTA	CHORD LENGTH(ft)	ARC LENGTH(ft)
C1	4,467.74	05°36'02"	S38°35'17"E	436.54
C2	3653.33	10°23'13"	S42°11'29"E	359.52
C3	3653.33	10°23'13"	S47°23'06"E	302.55

ALUMINUM COUNTY MON.
Y= 324,841.082
X= 646,931.930
(SEC10)

SEC. COR. TO SEC. COR.
2639.81'
N87°25'58"E

PI STA = 12"A"+00.10
Y = 324704.829
X = 648852.515
DELTA = 4°20'26"
D = 1°26'48"
T = 150.10
L = 300.05
R = 3960.68
PC STA = 10"A"+50.00
PT STA = 13"A"+50.05
DB=N47°08'01"E
DA=N51°28'26"E

PI STA = 19"A"+44.83
Y = 325168.792
X = 649435.253
DELTA = 3°37'32"
D = 0°57'18"
T = 189.90
L = 379.67
R = 6000.00
PC STA = 17"A"+54.93
PT STA = 21"A"+34.60
DB=N51°28'26"E
DA=N55°05'58"E

PI STA = 225+27.69
Y = 325543.090
X = 649541.736
DELTA = 22°20'16"
D = 1°36'54"
T = 700.43
L = 1383.08
R = 3547.58
PC STA = 218+27.26
PT STA = 232+10.33
DA=S39°22'16"E

PI STA = 235+42.40
Y = 324744.915
X = 650196.689
DELTA = 10°23'13"
D = 1°34'06"
T = 332.06
L = 662.30
R = 3653.33
PC STA = 232+10.33
PT STA = 238+72.64
DA=S49°45'29"E
DB=S39°22'16"E

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN COLUMBIA COUNTY, WISCONSIN AT 11:25 AM ON March 10, 2015 AS DOCUMENT # 867797 AND FILED IN Vol. 1 Pg. 294A

Karen A Manske
SIGNATURE OF REGISTER OF DEEDS

THIS IS A COPY, ORIGINAL DOCUMENT IS FILED AT THE COUNTY REGISTER OF DEEDS

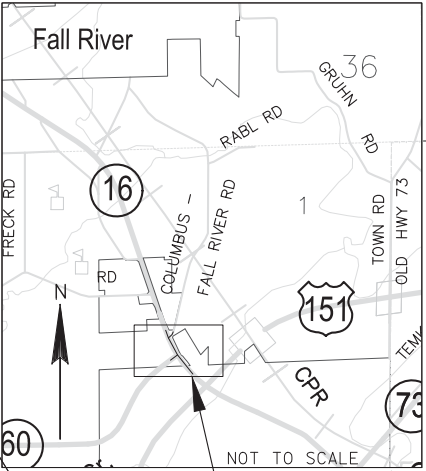
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1401-02-20 -4.01
SHEET 1 OF 2
AMENDMENT NO:...

STATION & OFFSET TABLE (R/W)

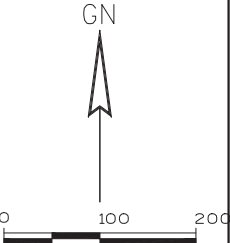
PT NO.	STATION	OFFSET
100	14"A"+53.27	90.67'
101	16"A"+39.82	90.20'
102	16"A"+39.73	54.34'
103	17"A"+66.12	49.90'
104	21"A"+20.40	69.01'
105	21"A"+20.00	106.55'
106	226+00.00	90.00'
107	224+00.00	80.00'
108	222+00.00	59.62'
109	220+37.79	69.96'
110	217+81.54	60.42'
111	217+84.38	62.14'
112	217+85.46	137.77'
113	218+19.43	270.12'
114	218+52.26	328.73'
115	221+05.60	179.06'
117	227+00.00	175.91'
118	227+00.00	270.00'
119	227+55.00	390.00'
120	228+45.00	395.00'
121	228+45.00	186.62'
122	229+23.93	193.29'
123	233+85.71	194.27'
124	233+85.76	142.26'
125	235+70.00	142.63'
126	235+70.00	58.96'
127	235+45.00	70.00'
128	233+75.00	85.00'
129	232+18.33	90.90'
130	231+00.00	100.00'
131	229+00.00	110.00'
132	228+61.08	160.69'
133	20"A"+37.82	97.08'
134	17"A"+05.00	75.00'
135	16"A"+54.81	139.35'
136	14"A"+85.89	67.00'

STATION & OFFSET TABLE (TLE)

PT NO.	STATION	OFFSET
T199	15"A"+45.00	90.44'
T200	15"A"+45.00	130.00'
T201	20"A"+60.00	124.00'
T202	20"A"+70.00	221.00'
T203	20"A"+95.00	221.00'
T206	219+83.00	292.51'
T207	220+05.00	242.15'
T208	226+59.01	179.17'
T209	226+50.76	227.36'



PROJECT LOCATION



ALUMINUM COUNTY MON.
Y= 325,077.382
X= 652,206.489
(SEC14)

DAAR
www.daarcorp.com

1400 E. WASHINGTON AVE, SUITE 262
MADISON, WISCONSIN 53703
PHONE: (608)258-0088

I, JEFFERY B. JOHNSON, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 1401-02-20 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

(SIGNATURE) [Signature] DATE: 2/24/2015

(PRINTED NAME) JEFFERY B. JOHNSON

(REGISTRATION NUMBER) RLS 58-1734



THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

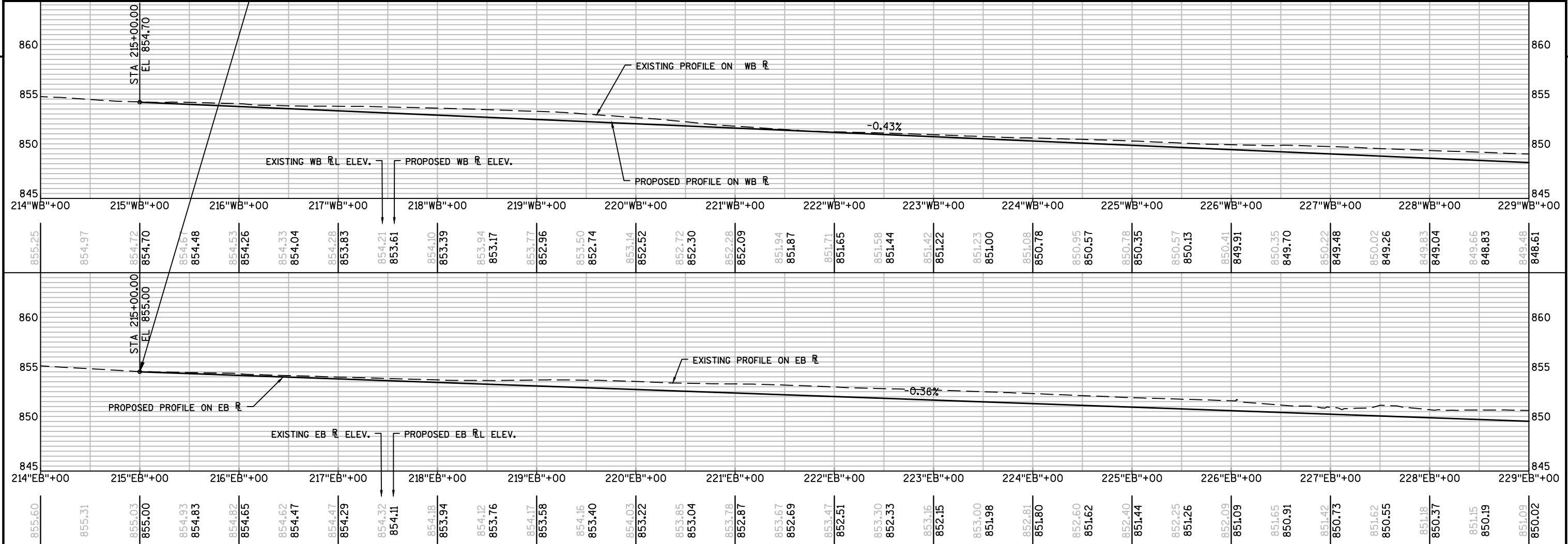
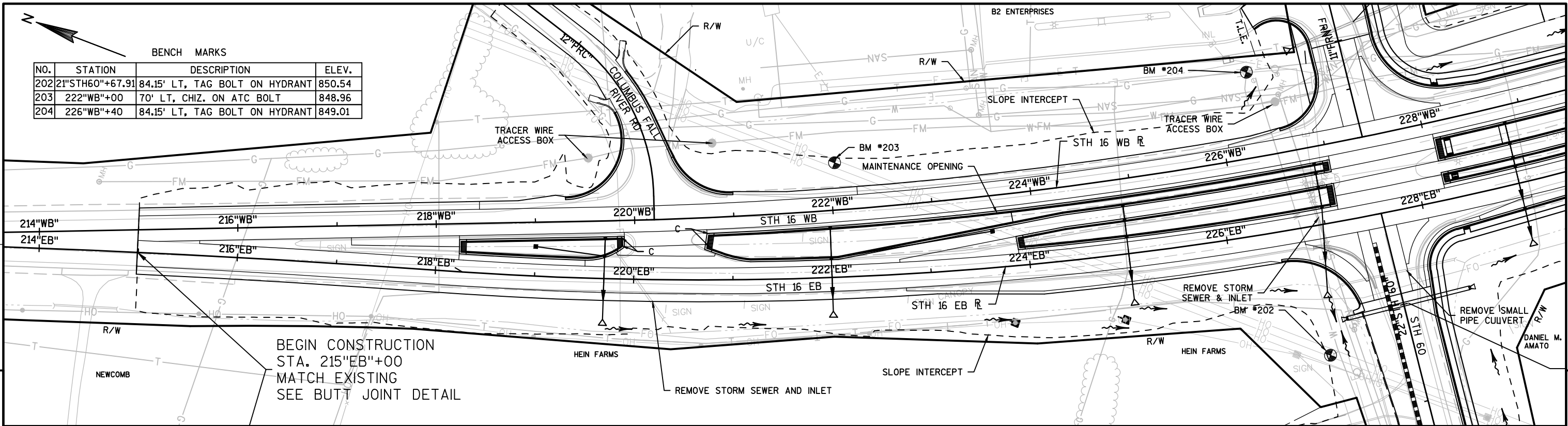
(SIGNATURE) [Signature] DATE: 2/25/2015

(PRINTED NAME) CORY SCHLAGEL

R/W MONUMENT POINT NUMBER AND COORDINATE TABLE

R/W MONUMENT POINT NUMBER AND COORDINATE TABLE			
	Point	Northing (Y)	Easting (X)
	100	324933.544	648994.219
	101	325049.379	649140.451
	102	325021.269	649162.717
	103	325096.565	649264.443
	104	325325.812	649539.740
	105	325356.307	649517.859
	106	325459.999	649562.962
	107	325645.643	649475.985
	108	325839.447	649409.396
	109	325989.026	649338.612
	110	326238.806	649265.395
	111	326283.393	649249.939
	112	326293.116	649456.041
	113	326299.409	649592.541
	114	326287.426	649657.589
	115	326015.847	649595.012
	117	325508.955	649842.343
	118	325557.599	649922.888
	119	325577.927	650051.24
	120	325513.310	650098.738
	121	325398.387	649924.915
	122	325340.278	649972.326
	123	324999.056	650244.603
	124	324965.485	650207.538
	125	324836.124	650328.342
	126	324693.547	650185.824
	127	324703.813	650160.061
	128	324819.893	650030.122
	129	324937.631	649920.985
	130	325026.987	649838.156
	131	325187.740	649709.122
	132	325192.837	649644.502
	133	325142.716	649568.888
	134	324960.734	649294.342
	135	324879.135	649295.159
	136	324935.349	649034.483

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83/1991 IN US SURVEY FEET, VALUES SHOWN ARE GRID COORDINATES, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.



BENCH MARK			
NO.	STATION	DESCRIPTION	ELEV.
203	222"WB"+00	CHIZ. SQ. ON ATC BOLT	848.96

HEIN PROPERTY

BENICK PROPERTY

COLUMBUS FALL RIVER RD

FRC R

END CONSTRUCTION
STA. 12"FRC"+87.74
MATCH EXISTING

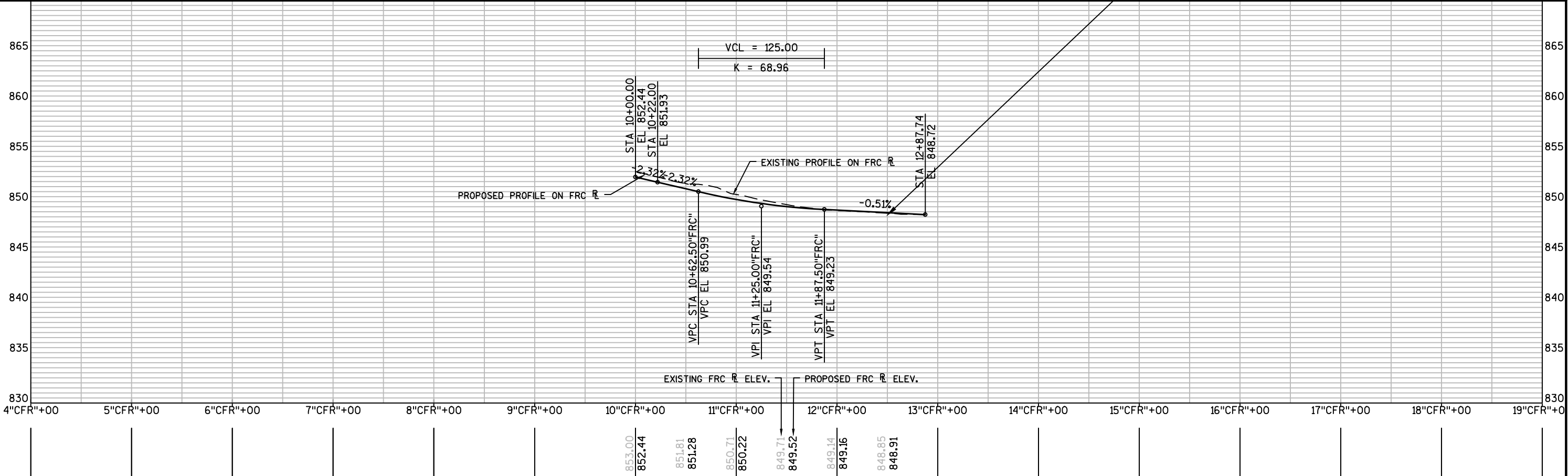
B2 ENTERPRISES PROPERTY

BENCHMARK #203

ATC TOWER

SLOPE INTERCEPT

SLOPE INTERCEPT



PROJECT NO:1401-02-72

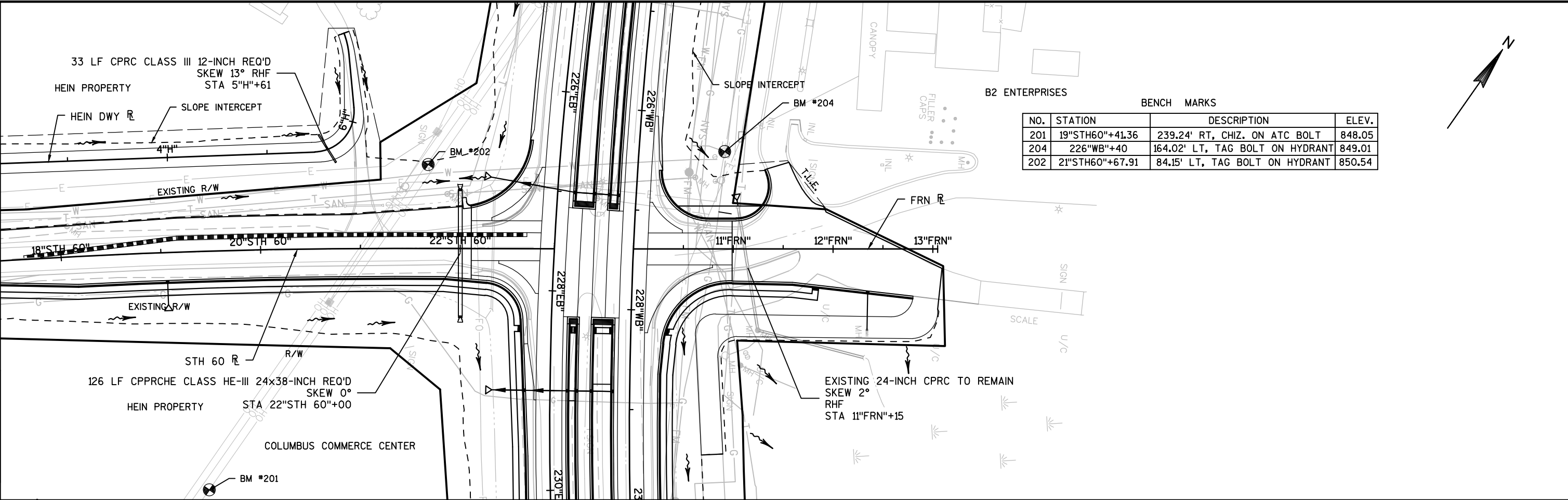
HWY:STH 16

COUNTY:COLUMBIA

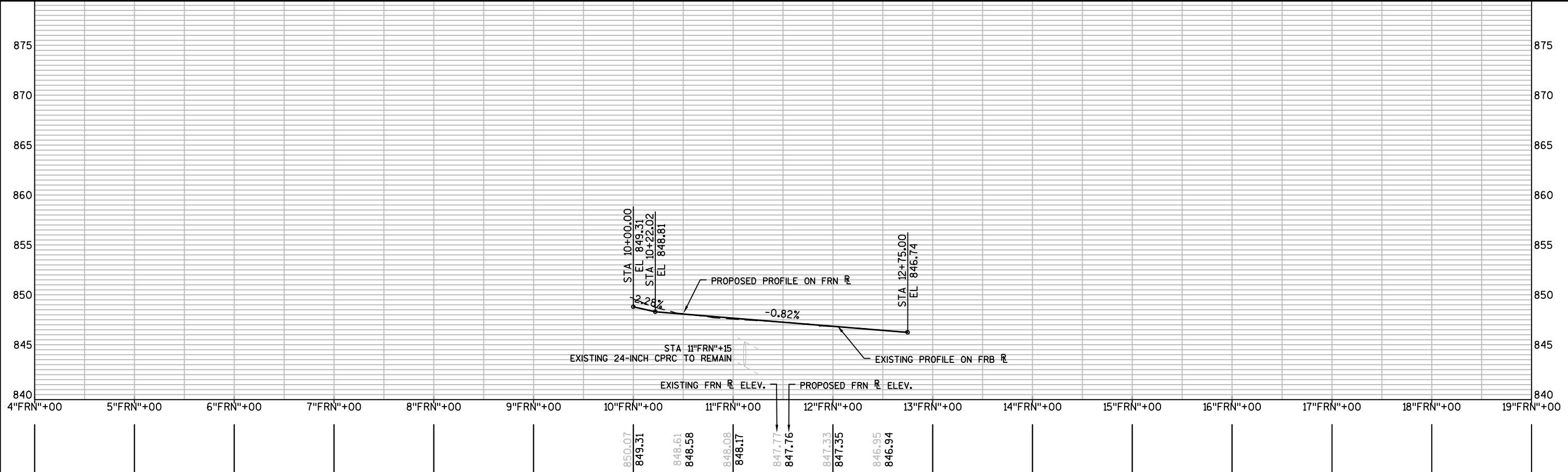
PLAN AND PROFILE: COLUMBUS FALL RIVER RD

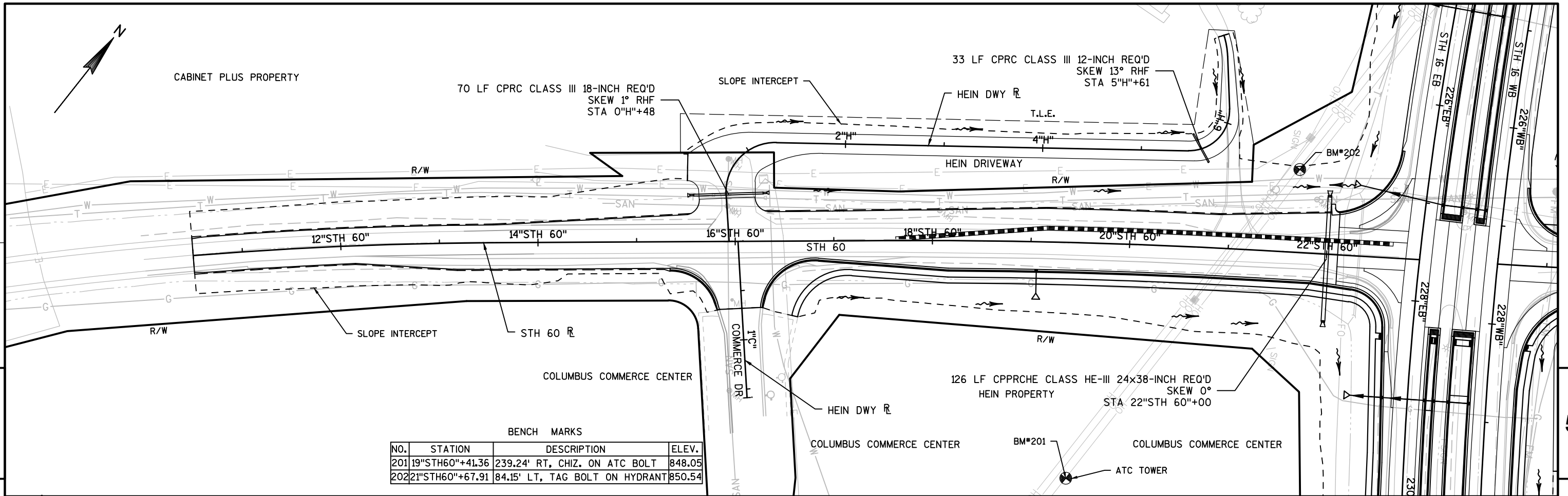
SHEET

5

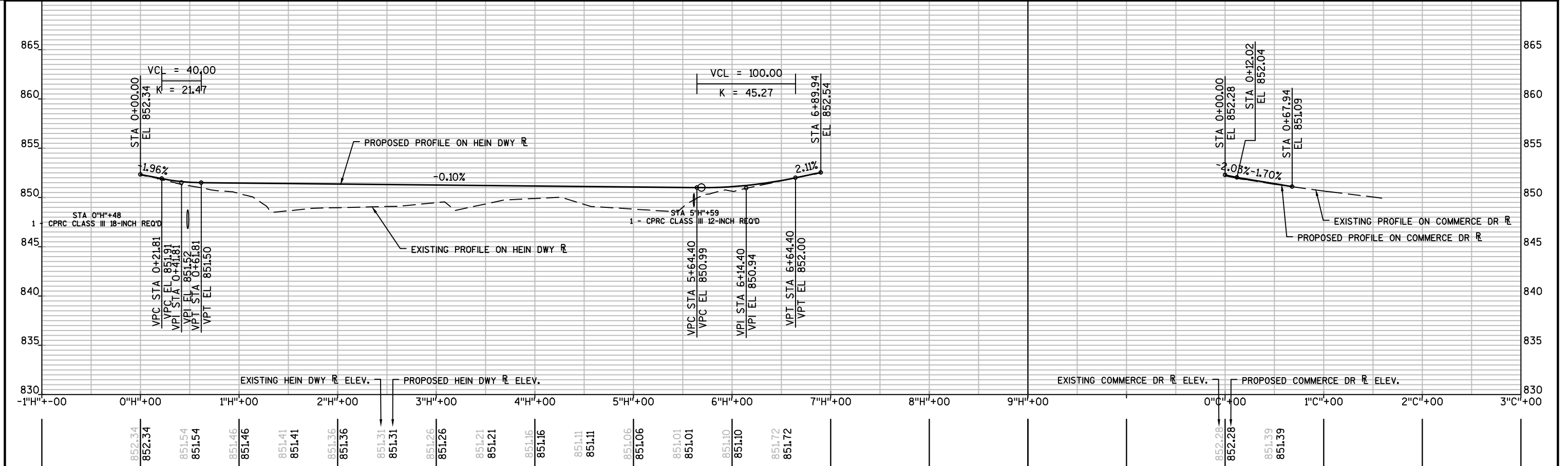


BENCH MARKS		
NO.	STATION	DESCRIPTION
201	19"STH60"+41.36	239.24' RT, CHIZ. ON ATC BOLT
204	226"WB"+40	164.02' LT, TAG BOLT ON HYDRANT
202	21"STH60"+67.91	84.15' LT, TAG BOLT ON HYDRANT





BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
201	19"STH60"+41.36	239.24' RT, CHIZ. ON ATC BOLT	848.05
202	21"STH60"+67.91	84.15' LT, TAG BOLT ON HYDRANT	850.54

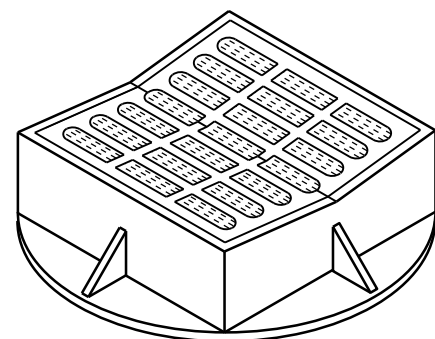
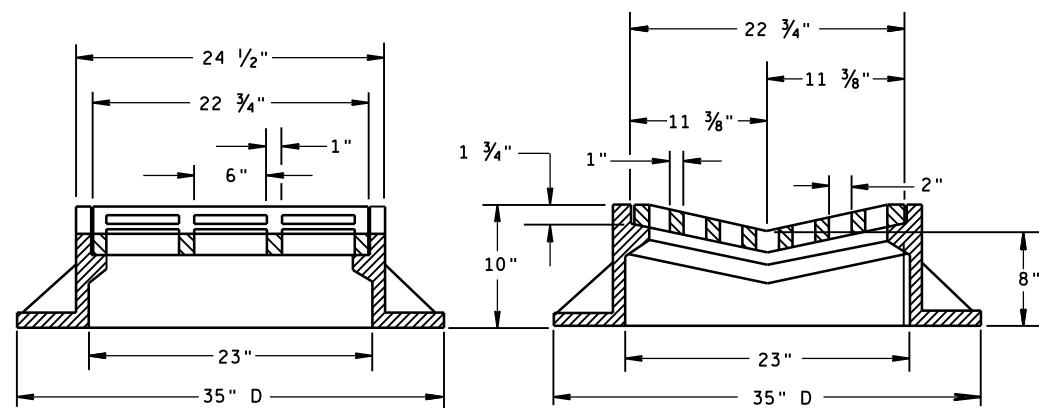


Standard Detail Drawing List

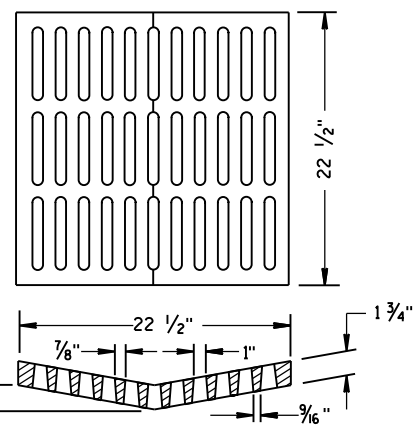
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B11-01	MANHOLES VARIABLE TEE AND SPECIAL 4-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D15-04A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-04B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-06A	CONCRETE BASE TYPE 13
09C12-06B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-07C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-07D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-07E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
13A03-06	CONCRETE PAVEMENT SHOULDERS
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-03A	CONCRETE PAVEMENT JOINTING
13C18-03B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
13C18-03D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS

Standard Detail Drawing List

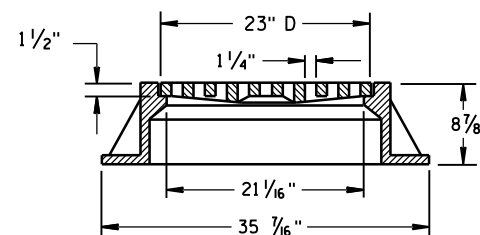
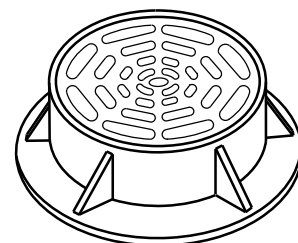
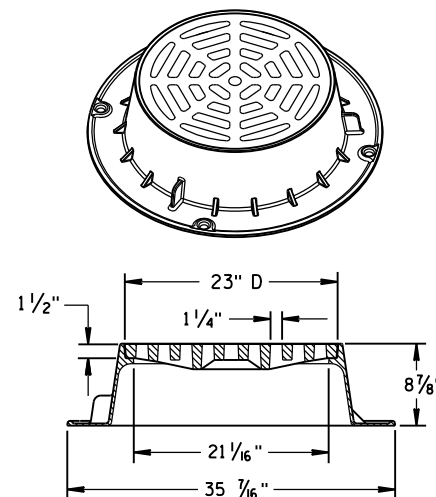
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C21-06	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C29-03A	BICYCLE LANE MARKING
15C29-03B	BICYCLE LANE MARKING
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD



TYPE "B"

ALTERNATIVE GRATE FOR
TYPE "B" COVER

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



TYPE "C"

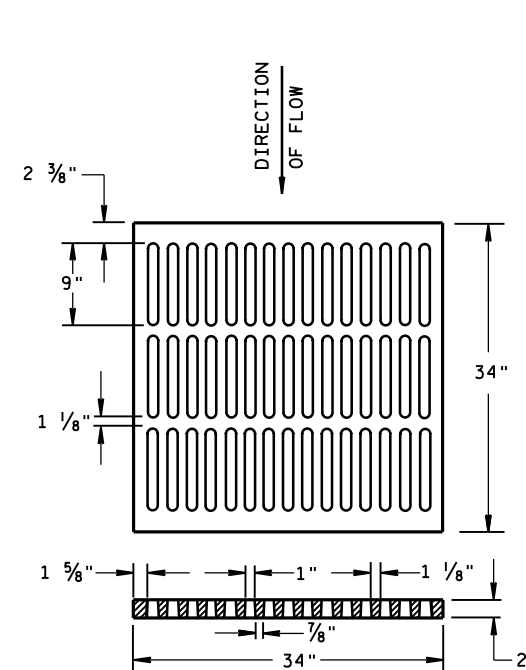
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

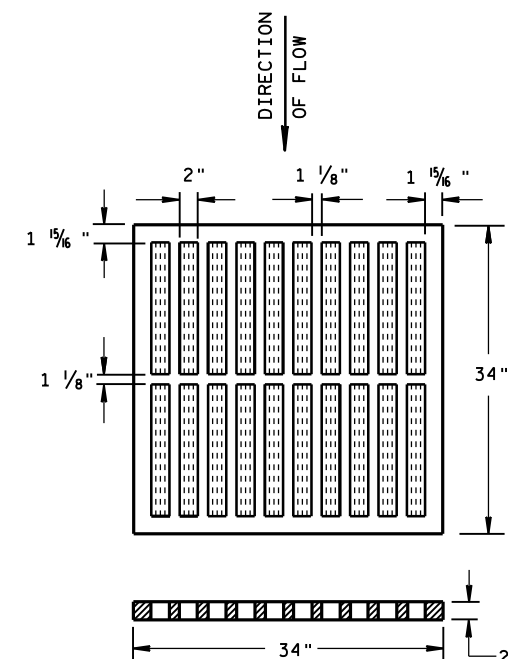
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



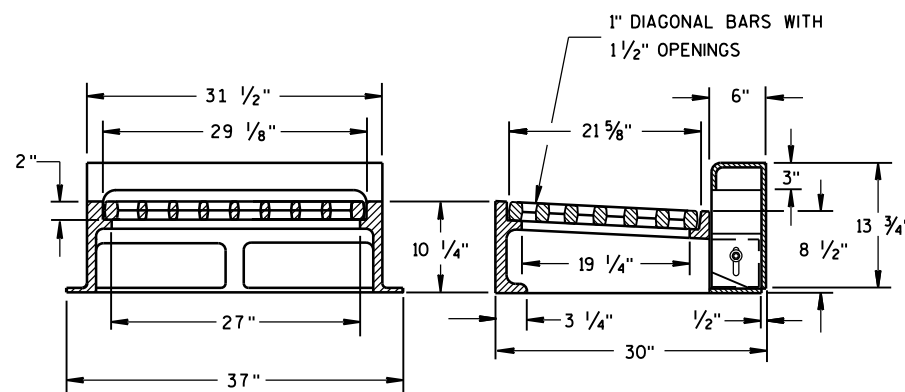
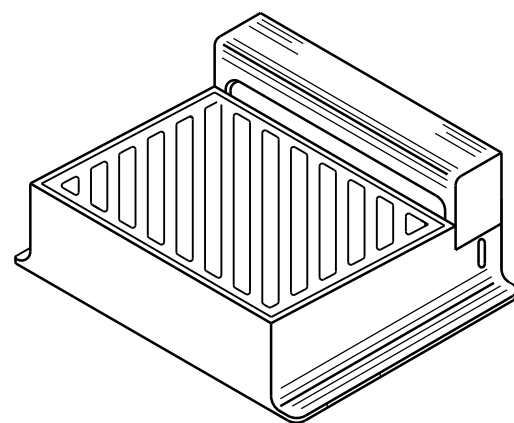
ALTERNATIVE TYPE "MS"

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



TYPE "MS"

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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

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

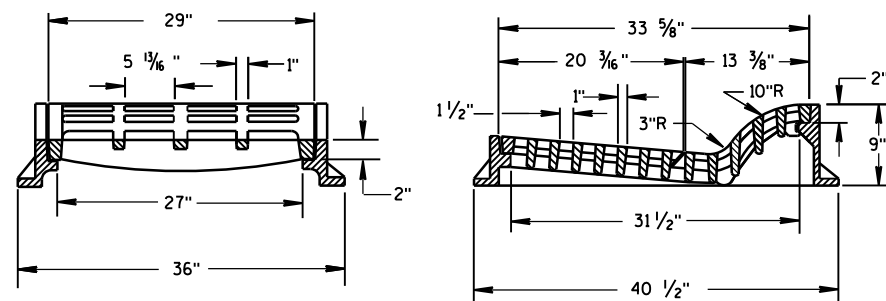
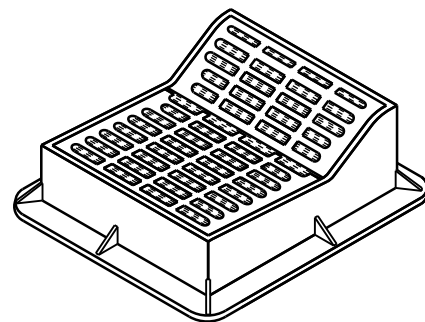
DIRECTION
OF FLOW

INLET COVERS
 TYPE B, B-A, C,
 MS, MS-A, & WM

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

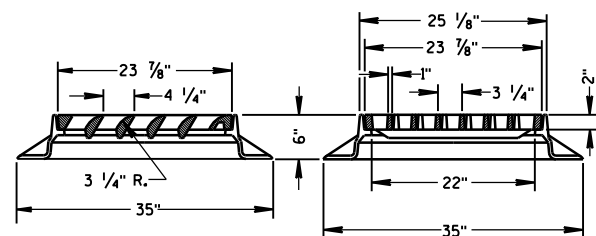
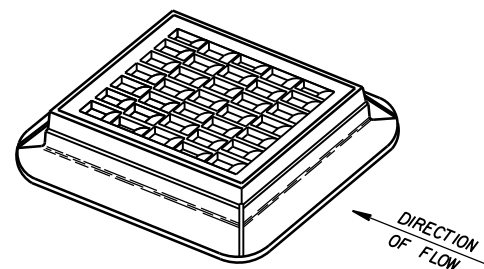
APPROVED
 11/27/2013
 DATE
 FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

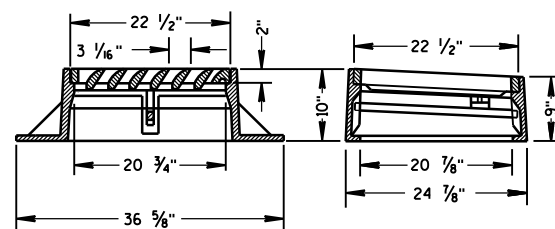
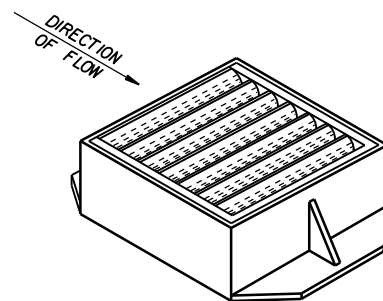


TYPE "F"

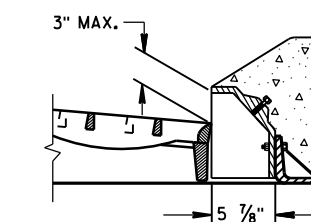
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



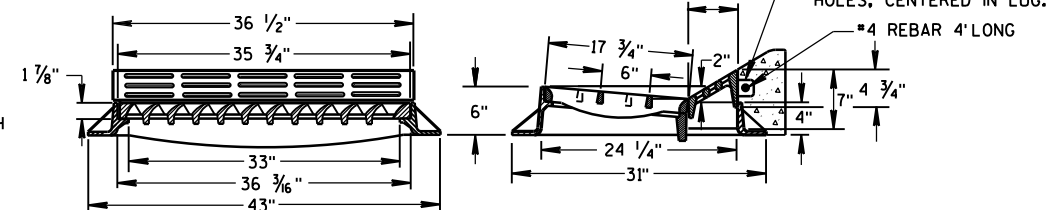
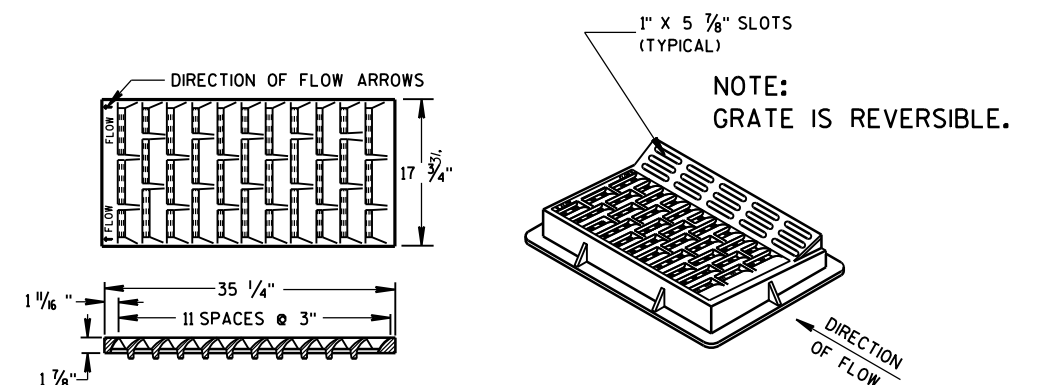
TYPE "S"



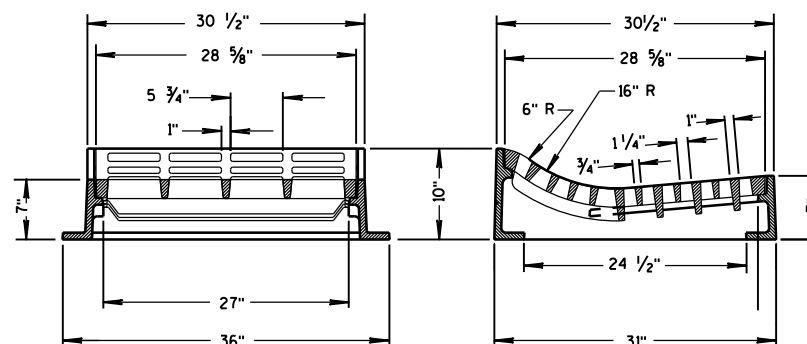
TYPE "V"

ALTERNATIVE CURB BOX
FOR TYPE "HM" COVERUSE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLENOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

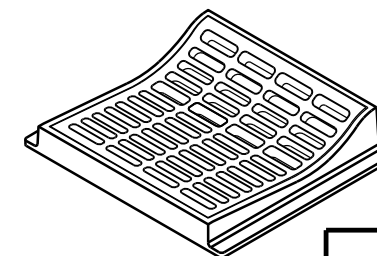
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING
SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND
THE APPLICABLE SPECIAL PROVISIONS.DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED
TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION
FOR EQUIVALENT CAPACITY AND STRENGTH.

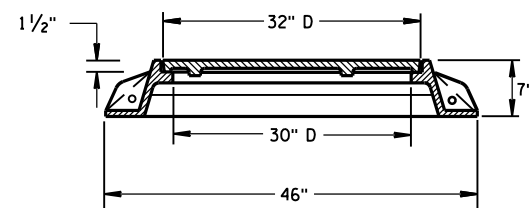
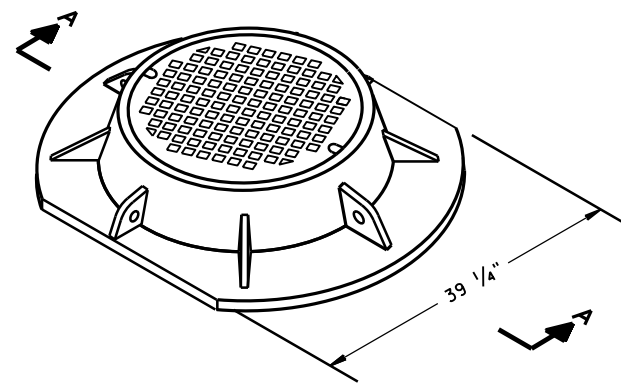
TYPE "HM"

USE WITH TYPES A & D CONCRETE
CURB & GUTTER, 36 INCH.NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

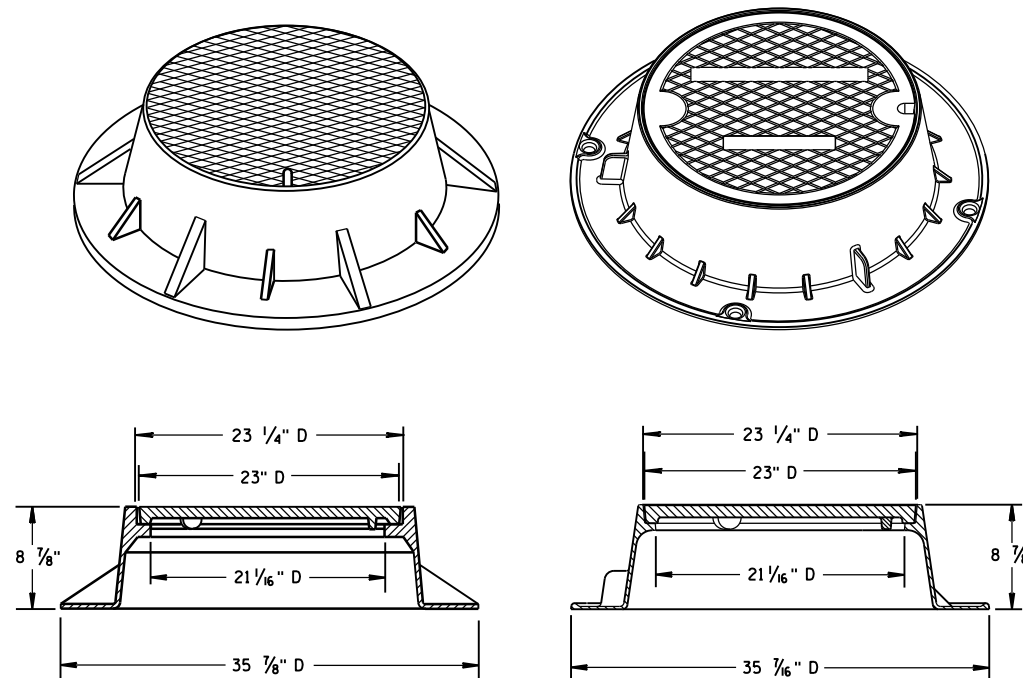
TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-SSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
11/27/2013
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

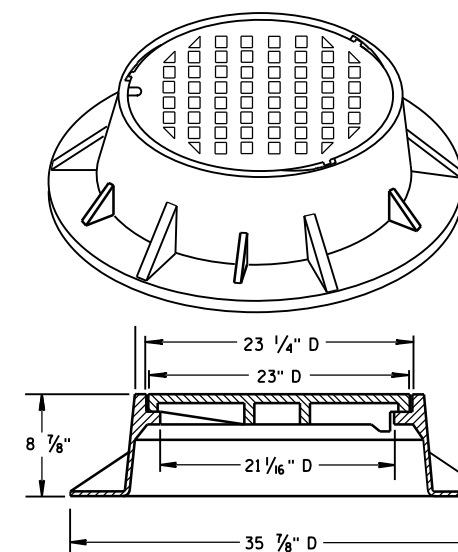
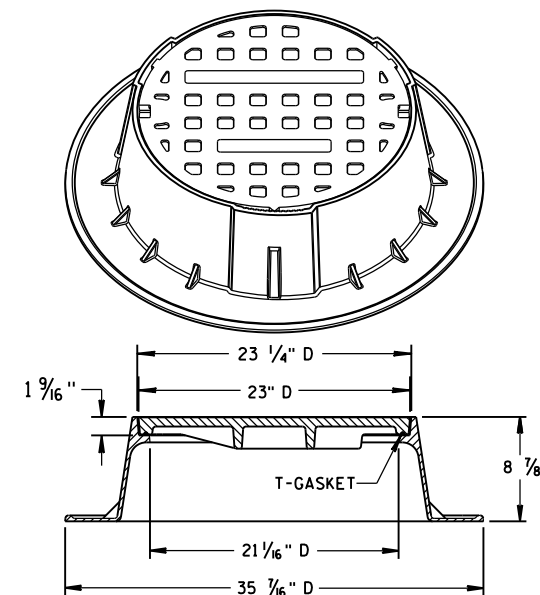


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

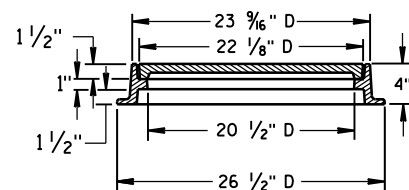
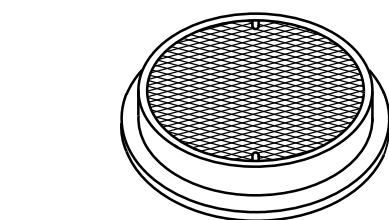


TYPE "J" SPECIAL

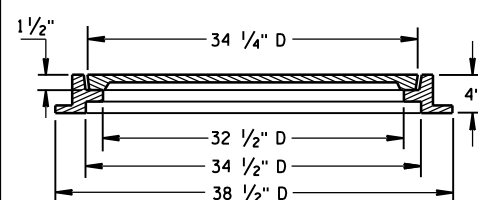
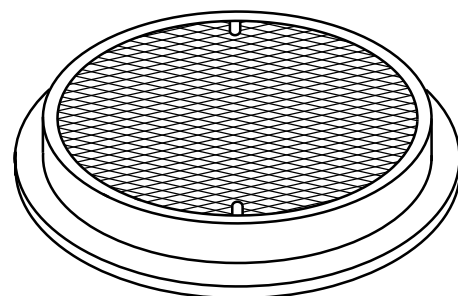
TYPE "B" NON-ROCKING SELF-SEAL LID

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

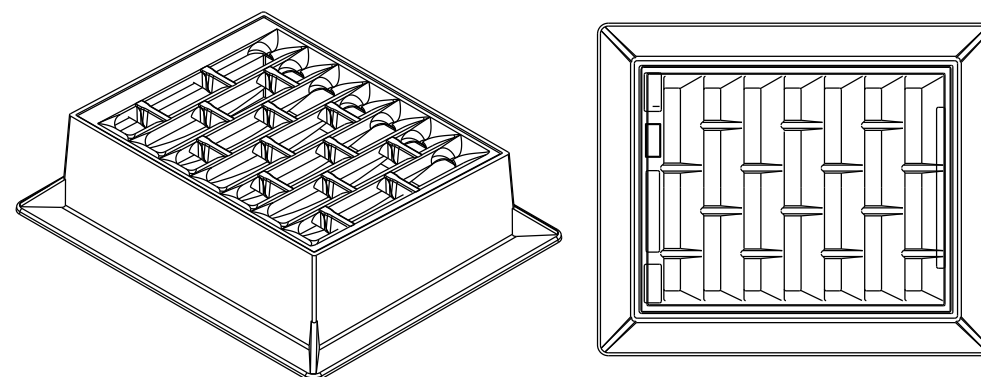
NOTE: EITHER CASTING IS ACCEPTABLE



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.

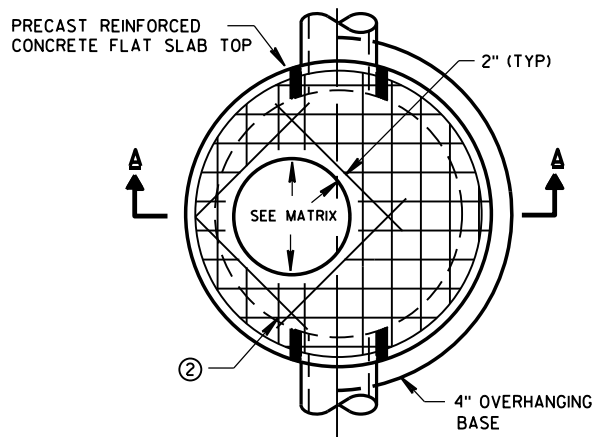
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

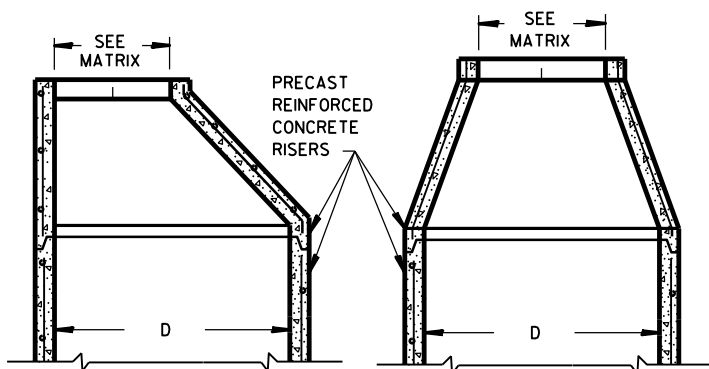
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

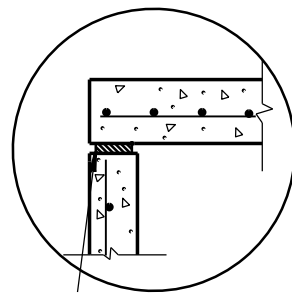


PLAN VIEW CIRCULAR OPENING

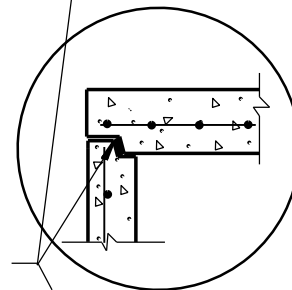


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

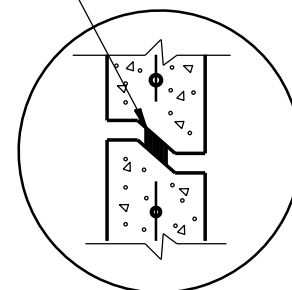
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



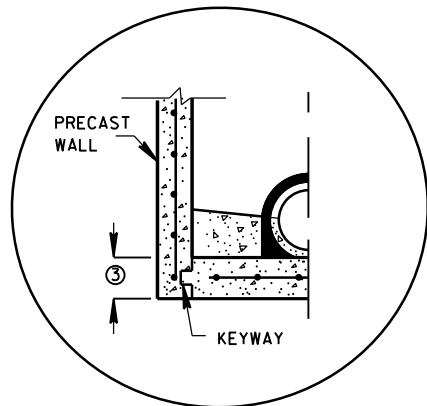
TOP WITH TONGUE AND GROOVE JOINT



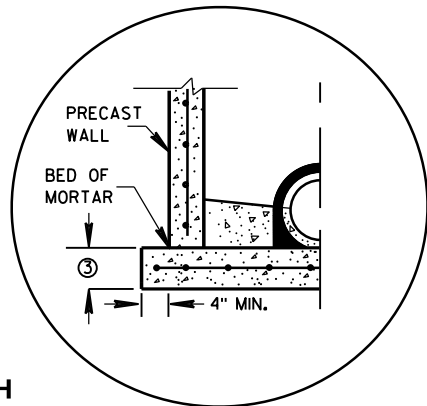
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

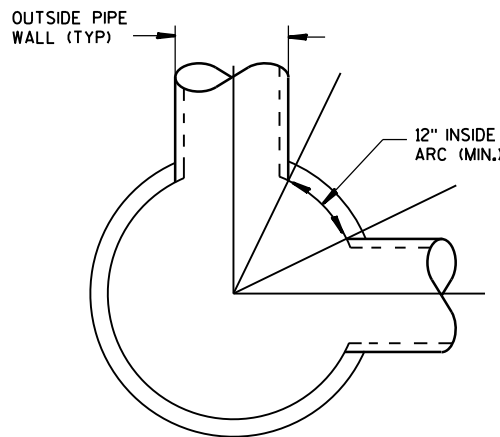


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

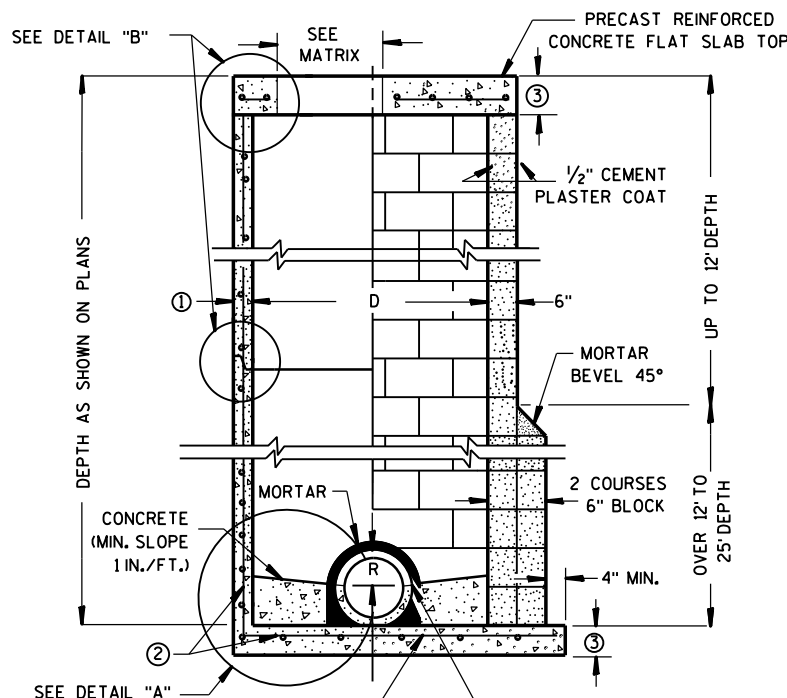


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SPLIT PIPE OR FORM CONCRETE TO FIT

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

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

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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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" 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.

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

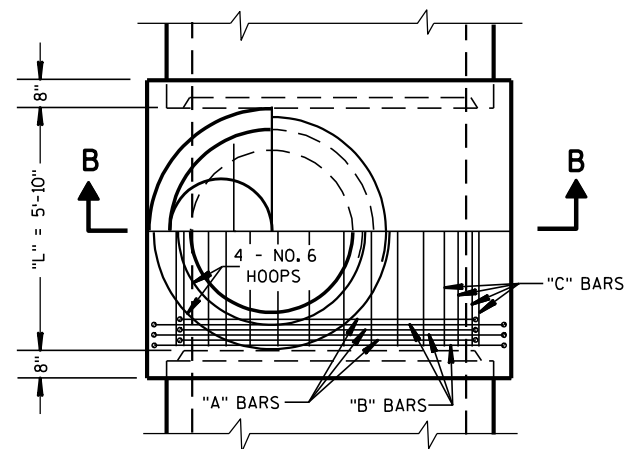
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

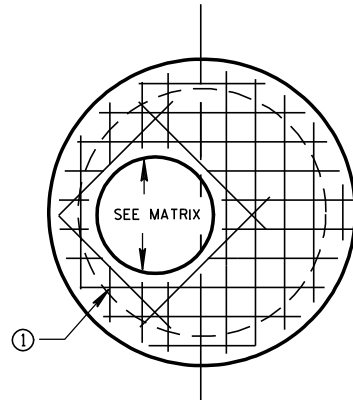
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER

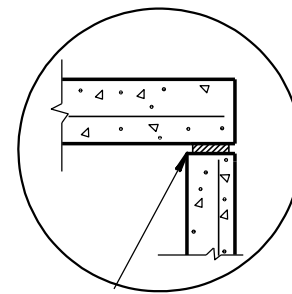


HALF SECTION A-A

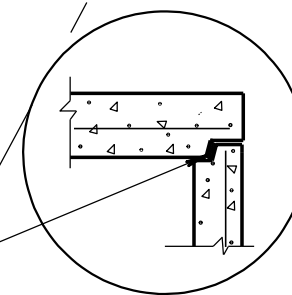


PLAN VIEW PRECAST REINFORCED
CONCRETE FLAT SLAB TOP
WITH ECCENTRIC OPENING

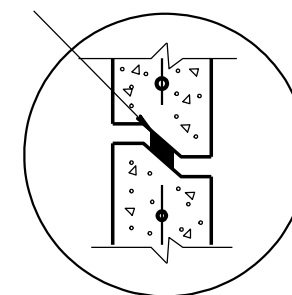
JOINTS TO BE SEALED WITH
A BUTYL RUBBER SEAL PER
SEALANT MANUFACTURERS
RECOMMENDATIONS
CONFORMING TO ASTM C990
(TYP)



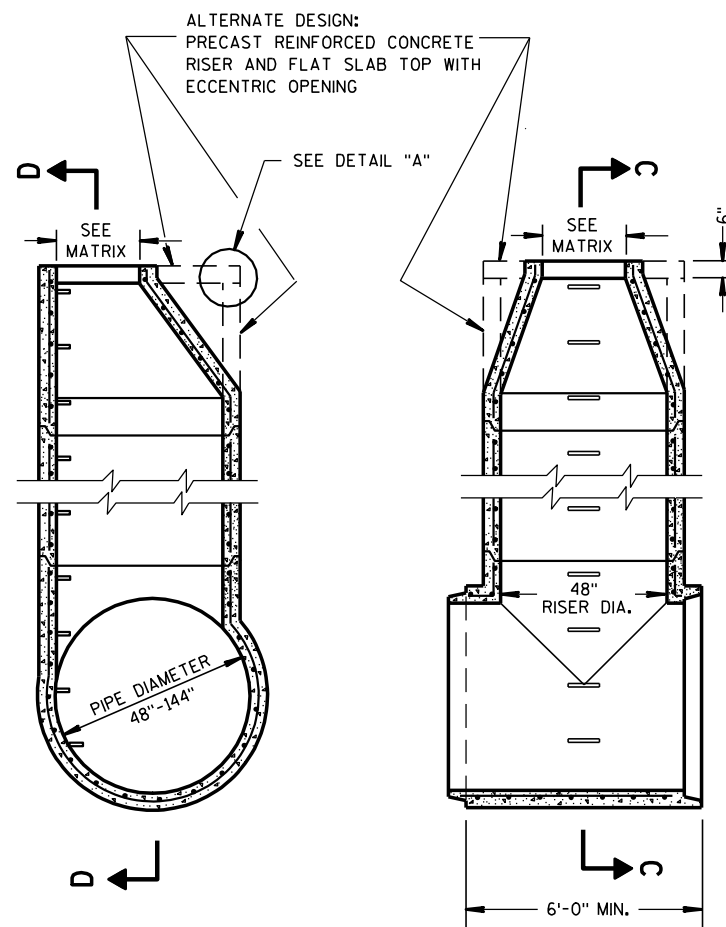
TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



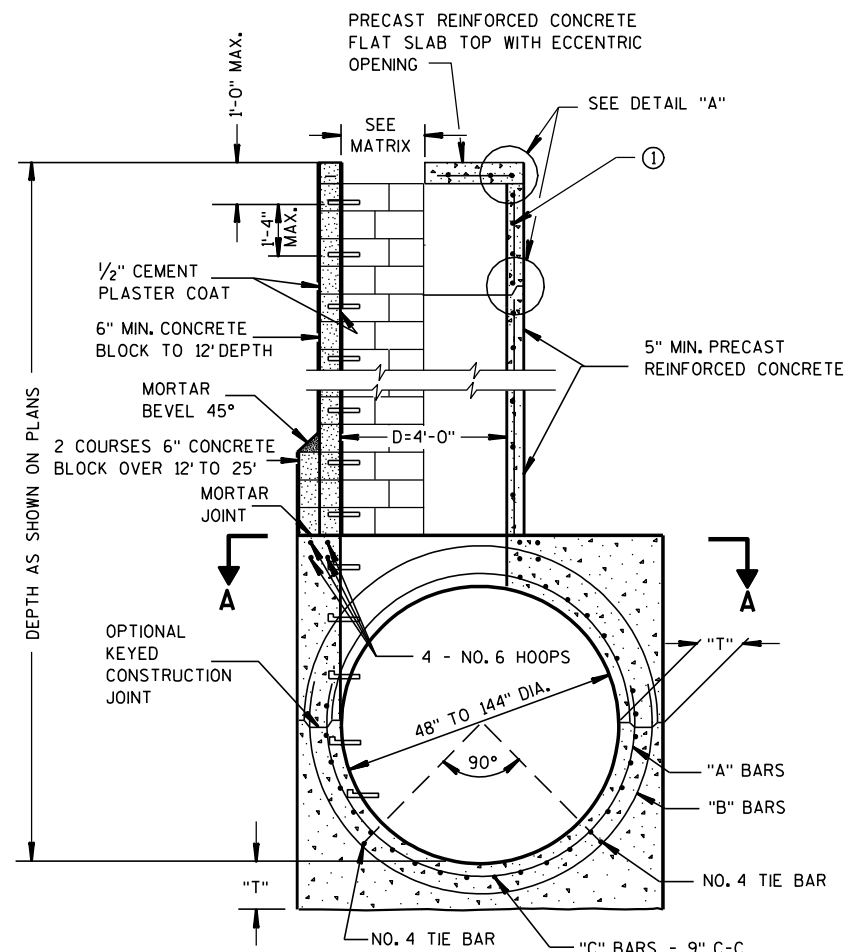
DETAIL "A"



SECTION C-C

SECTION D-D

MANHOLE VARIABLE TEE
4-FT DIAMETER



SECTION B-B

MANHOLE VARIABLE SPECIAL
4-FT DIAMETER

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 4T-L", "MANHOLES 4S-M", ETC. THE VARIABLE TEE IS DENOTED BY 4T AND THE VARIABLE SPECIAL IS DENOTED BY 4S. THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

STEPS MEETING 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.

PRECAST SECTIONS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE OR CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

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

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

ALL PRECAST MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE WITH AASHTO M 199.

MANHOLE COVER OPENING MATRIX

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

NOTES FOR MANHOLE VARIABLE SPECIAL 4-FT DIAMETER

NOTE: ALL "A", "B", AND "C" BAR STEEL REINFORCING IS THE SAME DIAMETER WHICH VARIES WITH DEPTH.
NO. 5 BARS TO 20' DEPTH
NO. 6 BARS OVER 20' TO 30' DEPTH
NO. 7 BARS OVER 30' TO 40' DEPTH

THE "A" AND "B" BARS MAY BE PLACED IN ONE OR TWO SEGMENTS, AND SHALL LAP 24 BAR DIAMETERS.

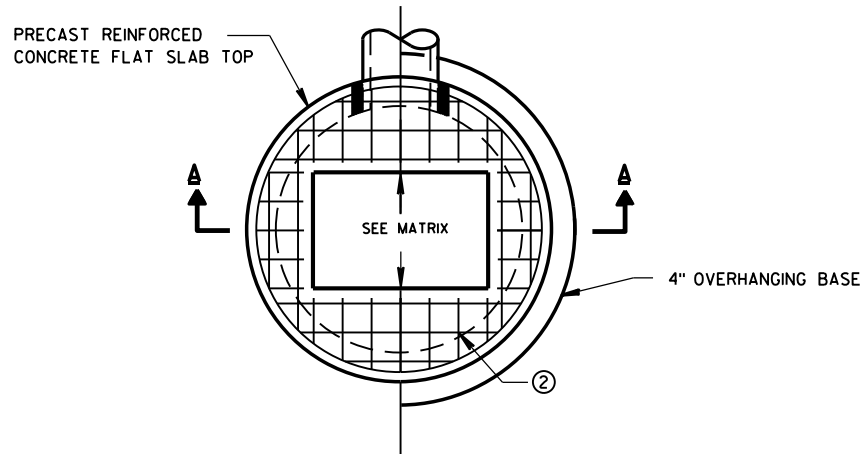
"C" BARS SHALL HAVE STANDARD HOOKED ENDS.

NOTE: "T" THROUGHOUT LENGTH "L" SHALL BE 13" FOR PIPE DIAMETER 48" TO 84" AND 15" FOR PIPE DIAMETER GREATER THAN 84".

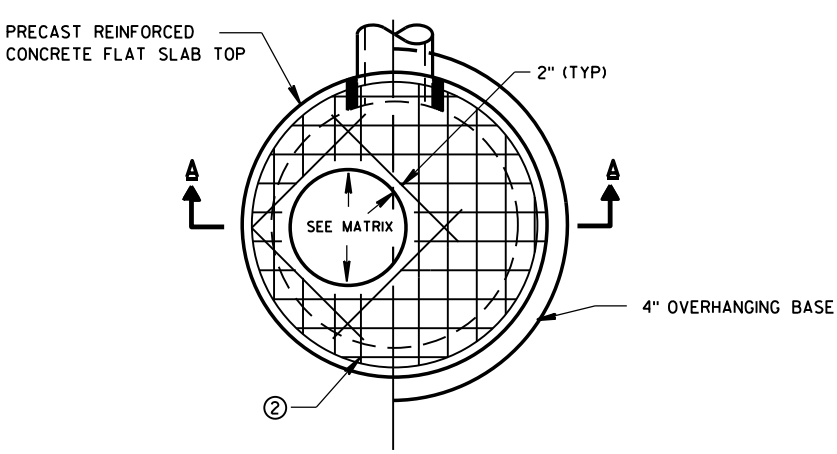
MANHOLE VARIABLE TEE AND SPECIAL 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

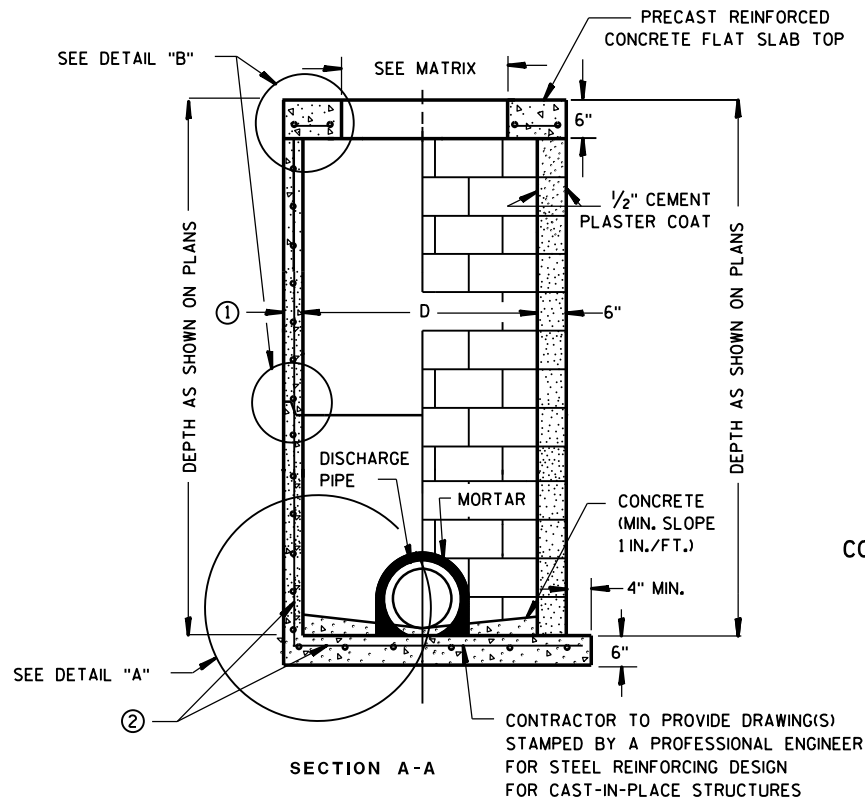


PLAN VIEW RECTANGULAR OPENING



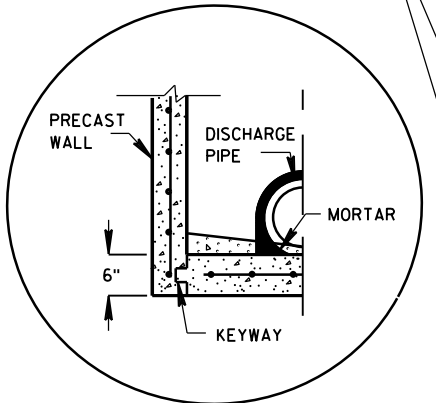
PLAN VIEW CIRCULAR OPENING

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

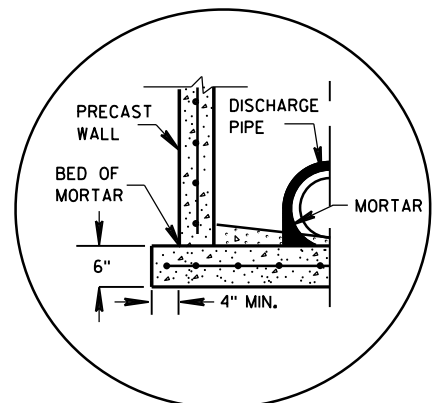


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE **CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②**

CIRCULAR INLETS W/ FLAT TOP

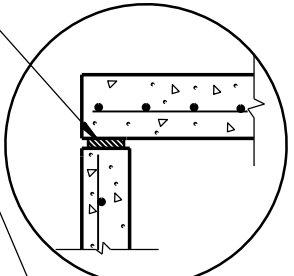


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

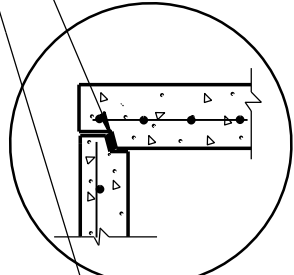


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

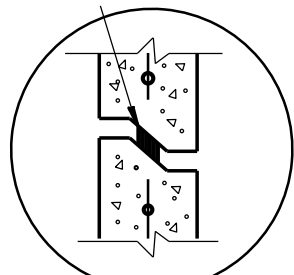
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET 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.

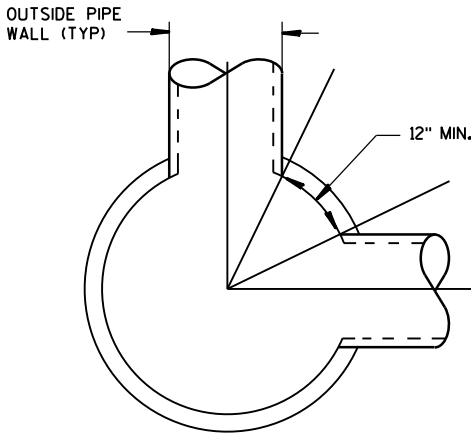
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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 "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X	X	X	X	
	2X2.5			X								
	2X3						X					
	2.5X3					X						



DETAIL "C"

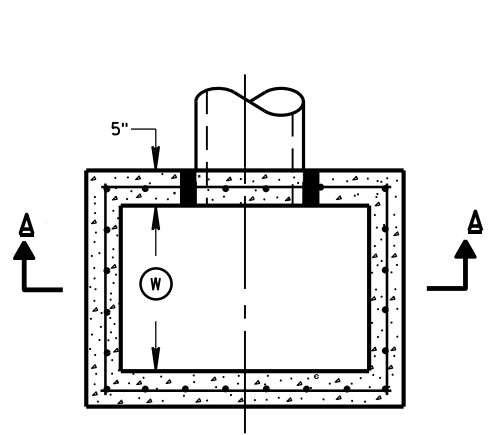
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

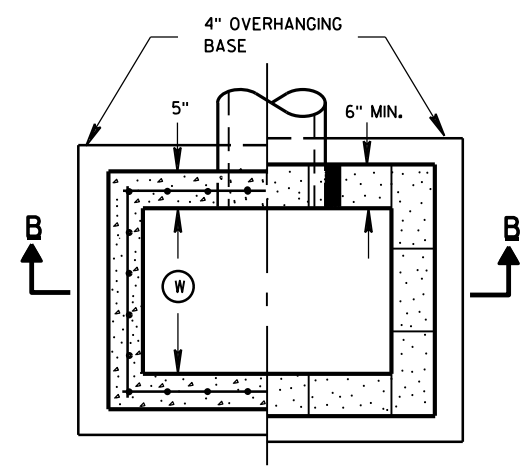
INLETS 3-FT AND 4-FT DIAMETER

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

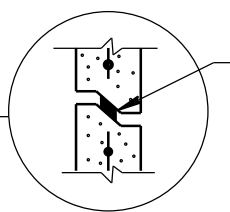
APPROVED
6/5/2012 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



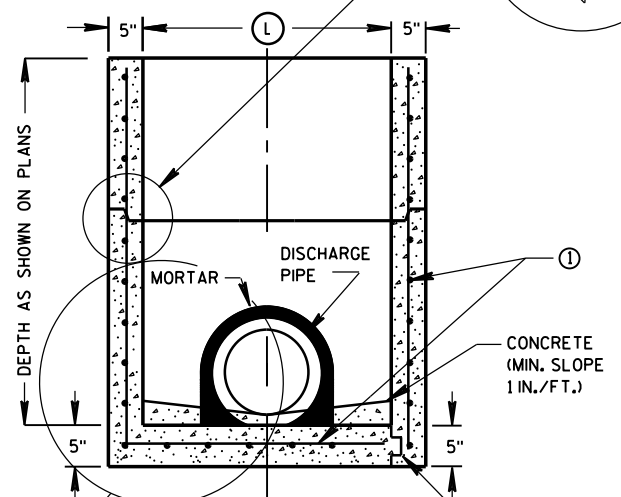
PLAN VIEW



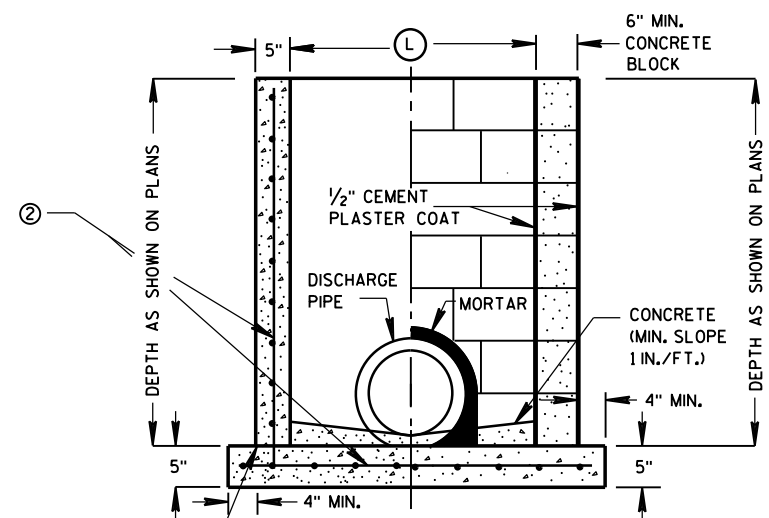
PLAN VIEW



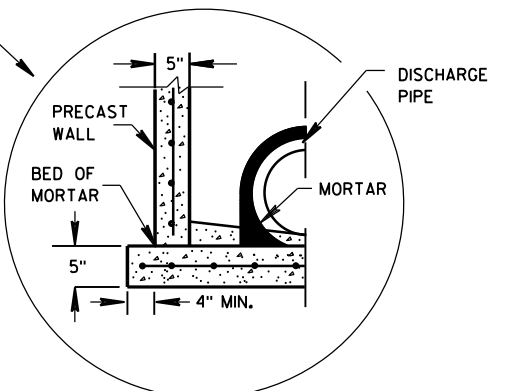
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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.

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

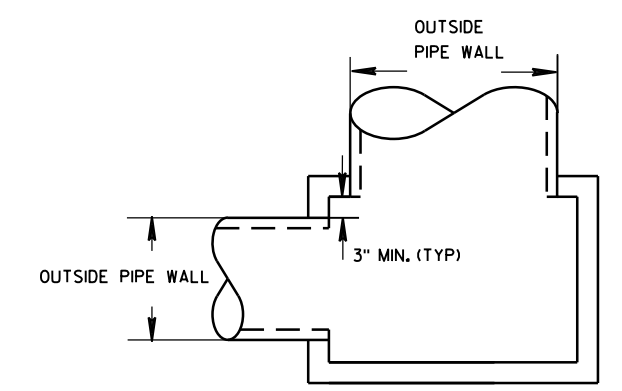
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



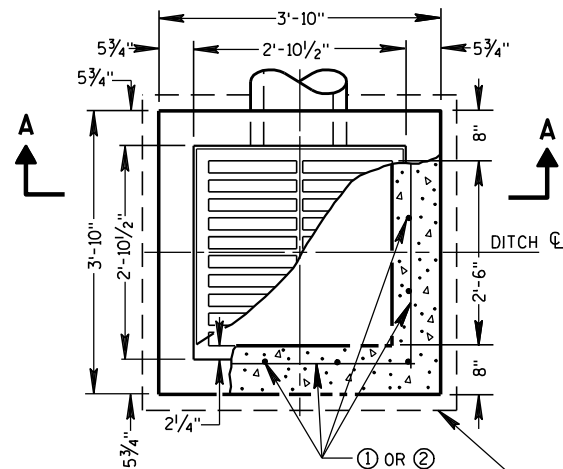
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

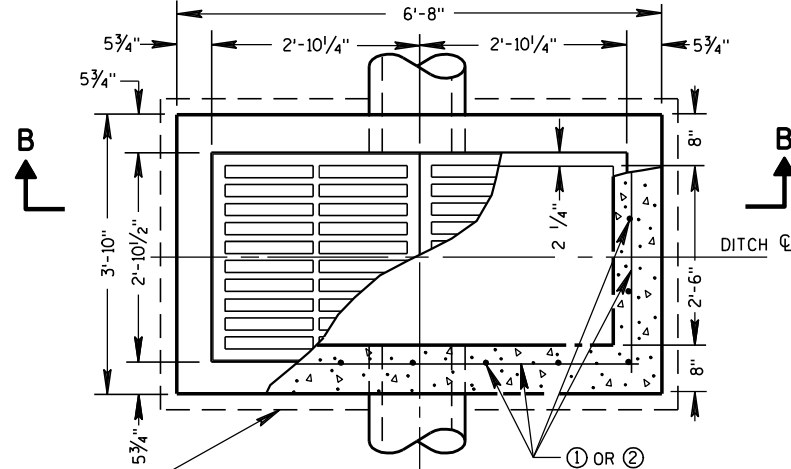
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER

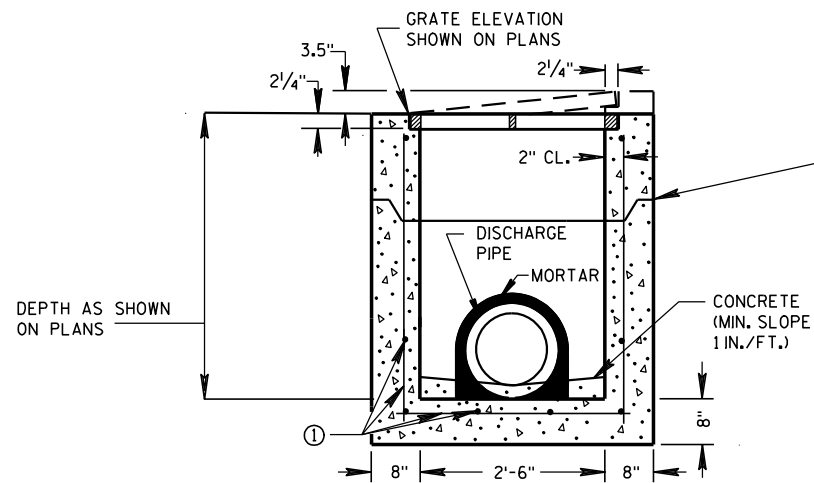


PLAN VIEW

4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS

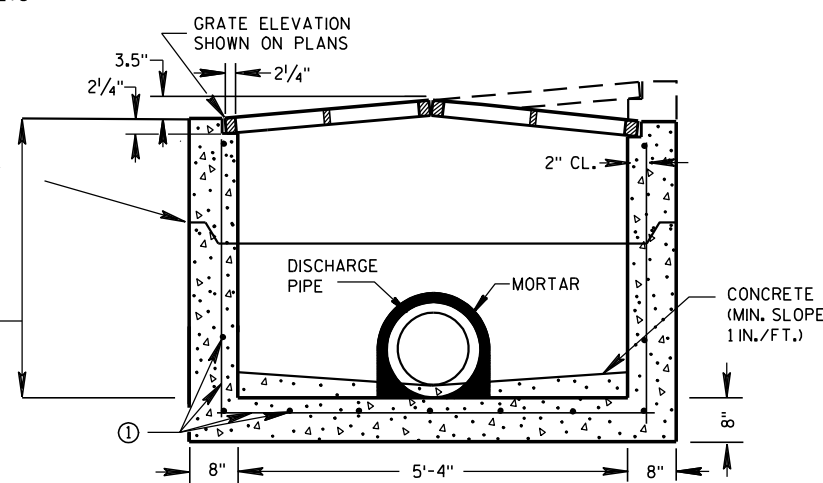


PLAN VIEW

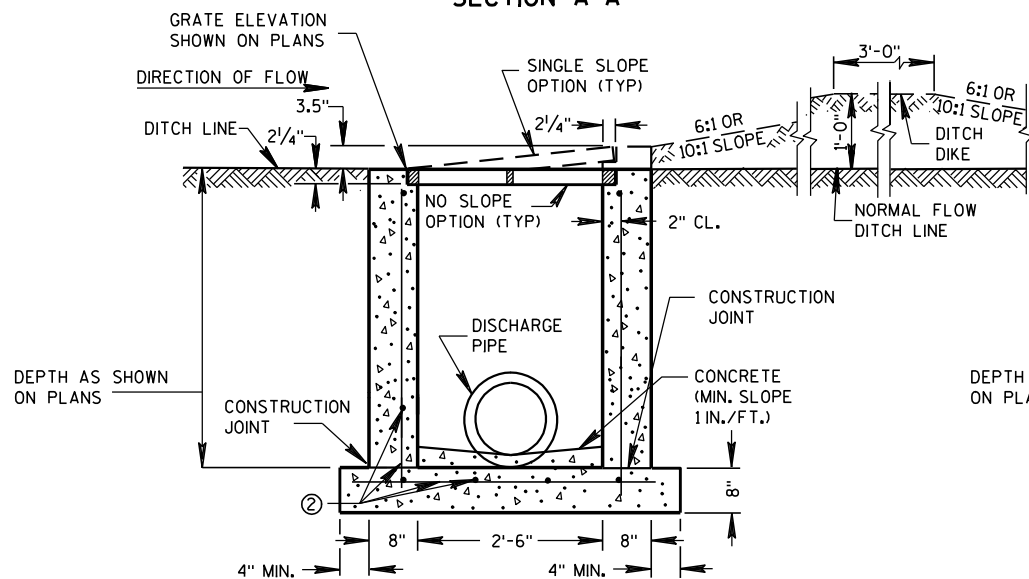


PRECAST REINFORCED CONCRETE SECTION A-A

SEE DETAIL "B"

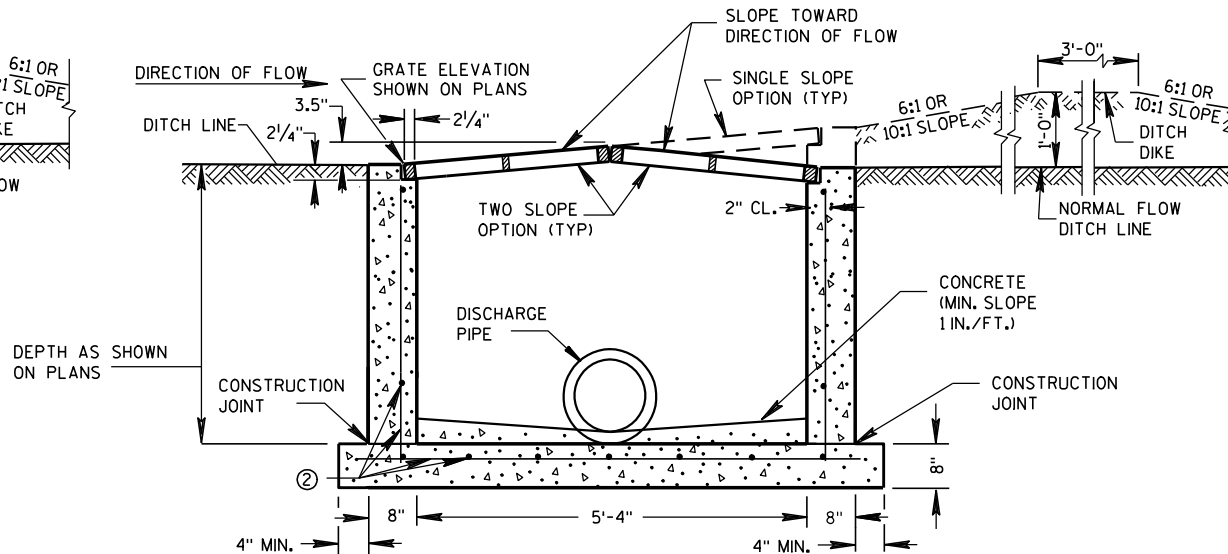


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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

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

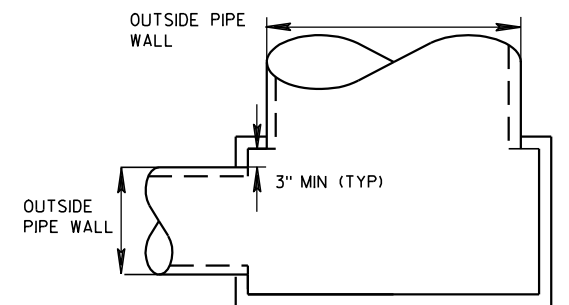
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

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

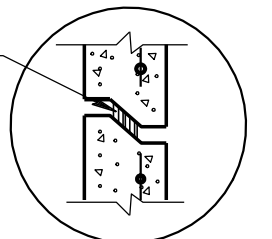
PIPE MATRIX

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



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

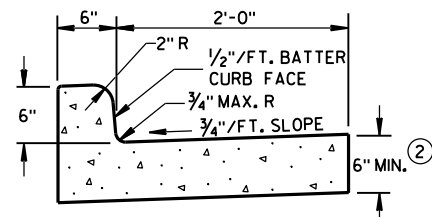
APPROVED

6/5/2012

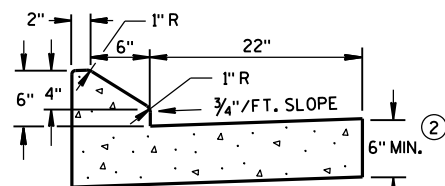
DATE

FHWA

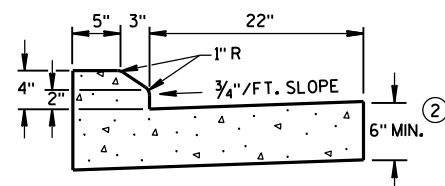
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TYPES A & D ①

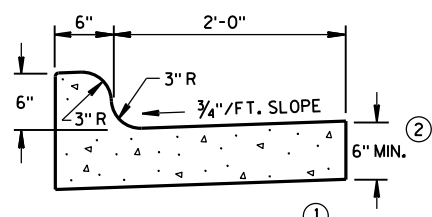


6" SLOPED CURB TYPES G & J ①



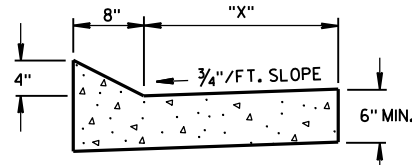
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



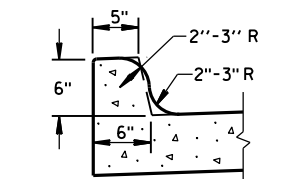
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

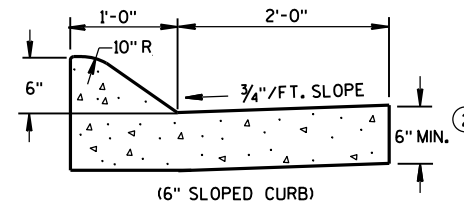


TYPES TBT & TBT ①
CONCRETE CURB & GUTTER

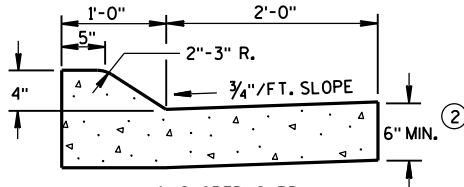
TBT & TBT	"X"
30"	22"
36"	28"



OPTIONAL CURB SHAPE
FOR TYPES K & L ①

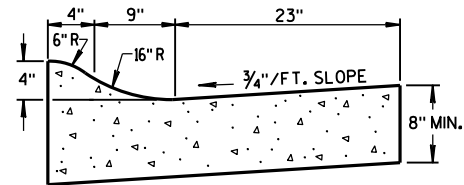


(6" SLOPED CURB)



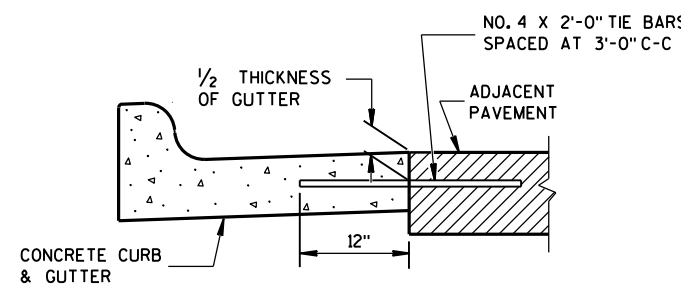
(4" SLOPED CURB)

TYPES A & D ①

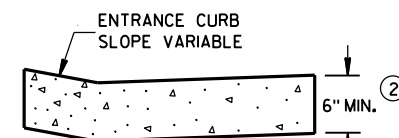


4" SLOPED CURB TYPES R & T ① ④

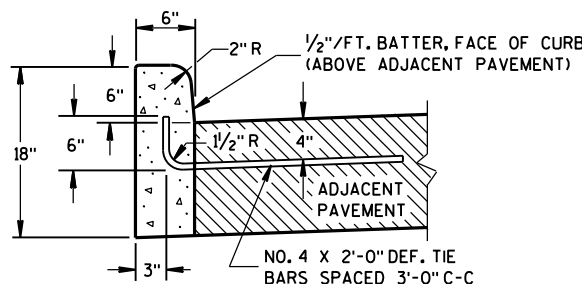
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

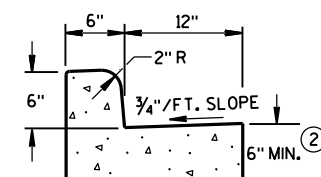


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

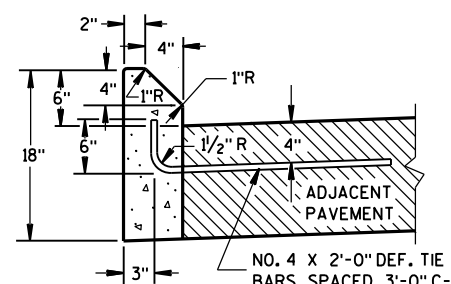


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

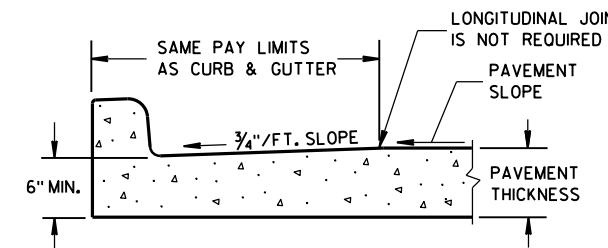
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

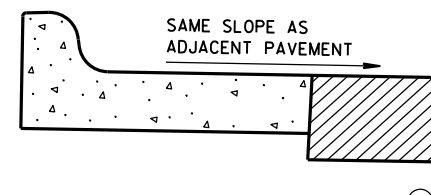
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

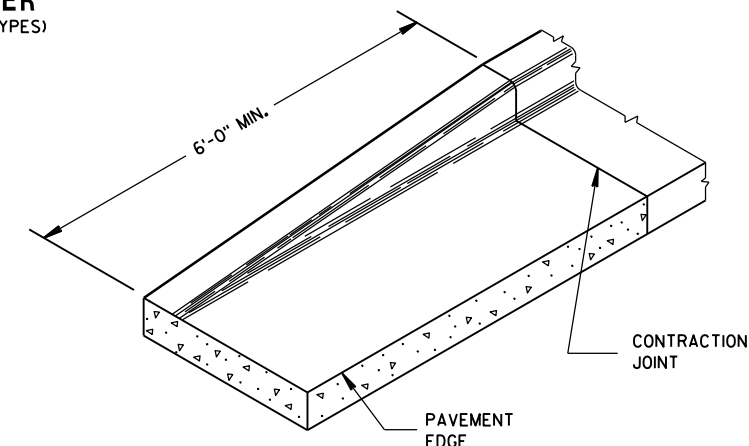
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



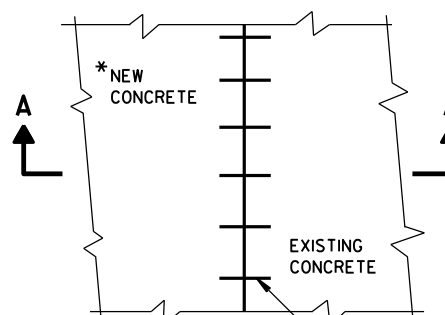
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

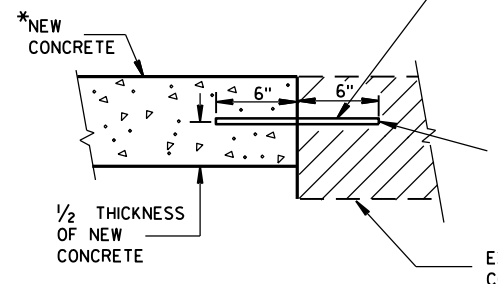


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING
CONCRETE

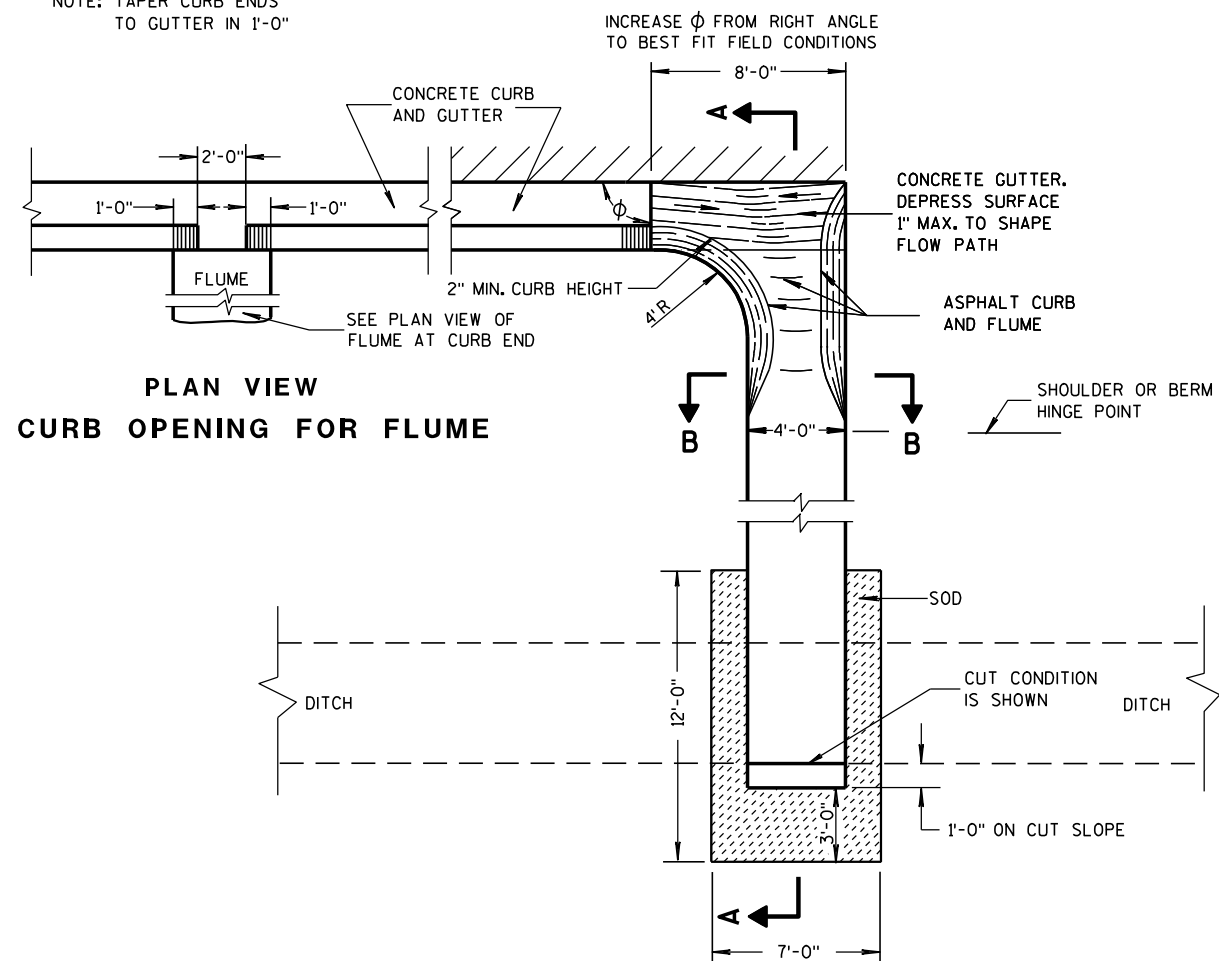
CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

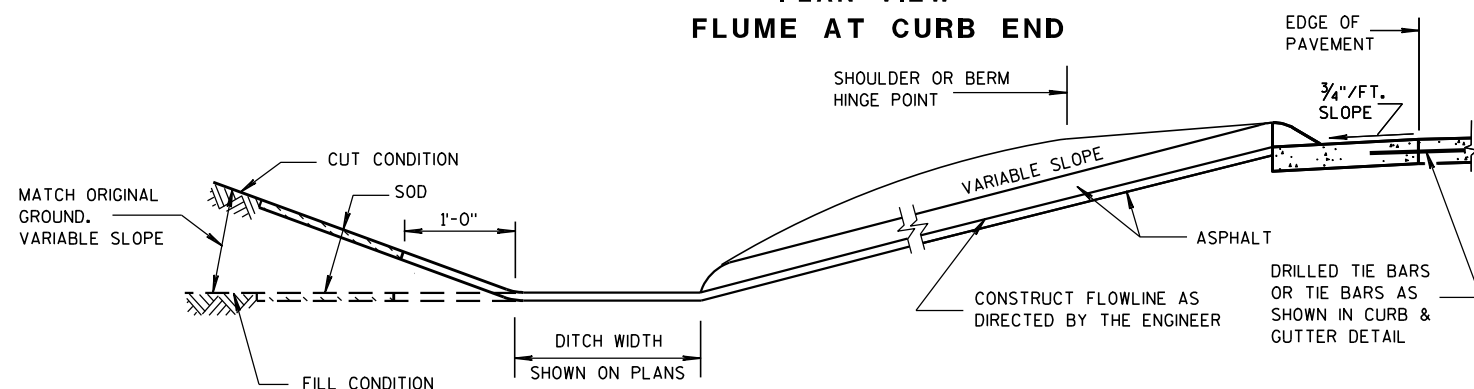
ASPHALTIC FLUME

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

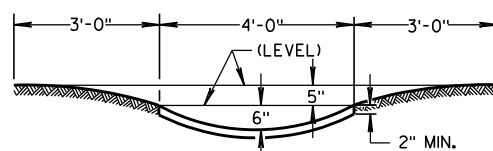


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

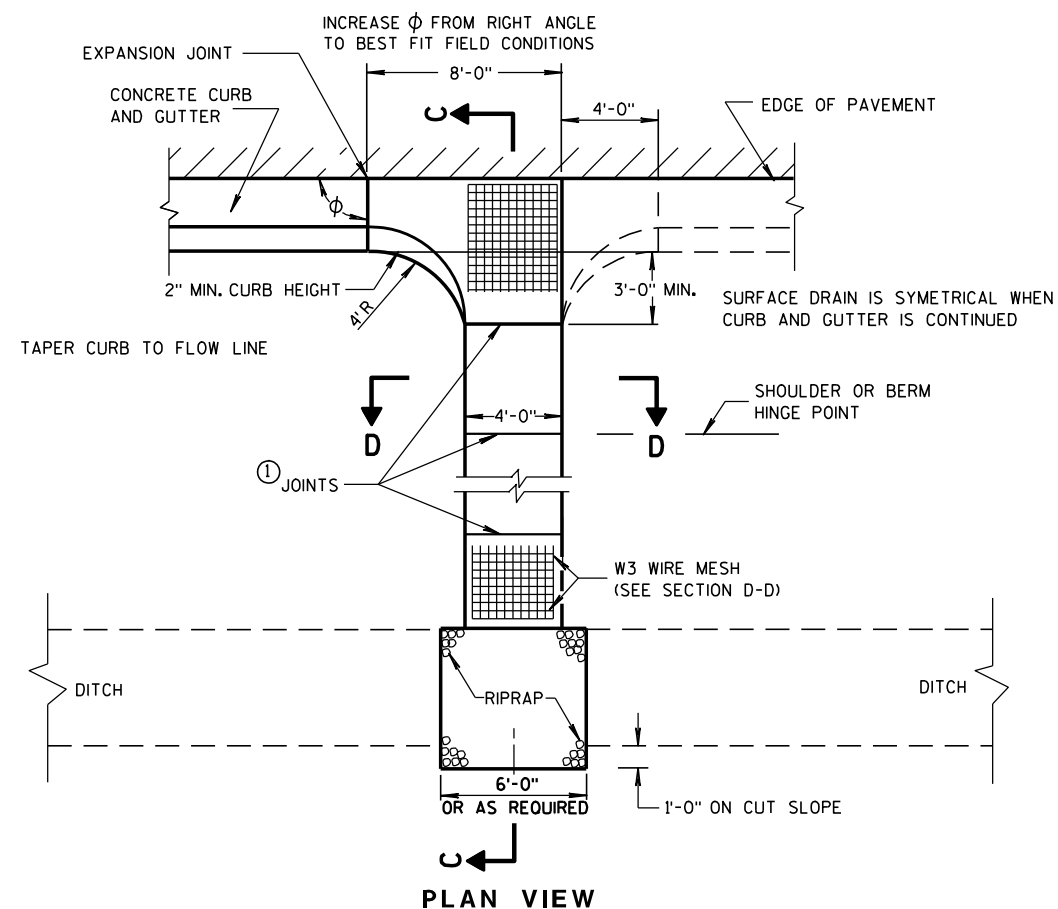
GENERAL NOTES

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

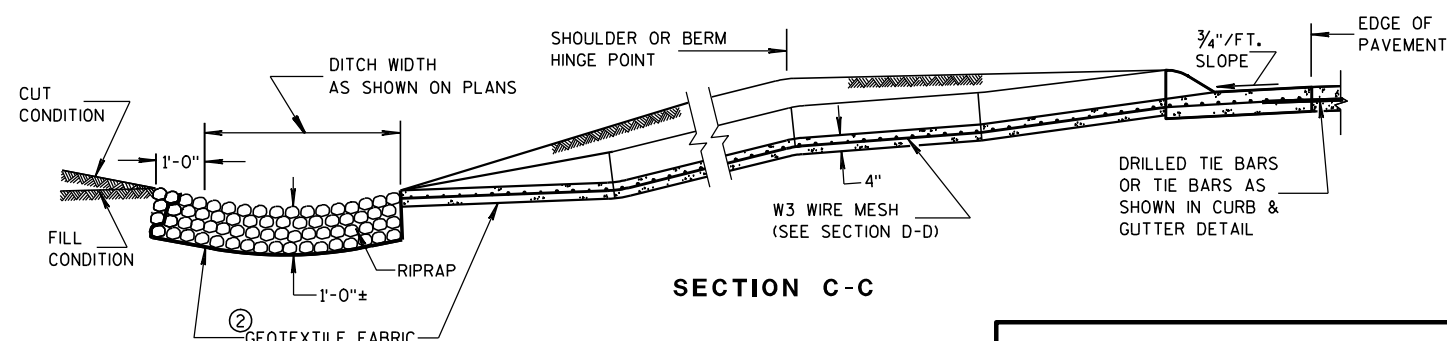
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC 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

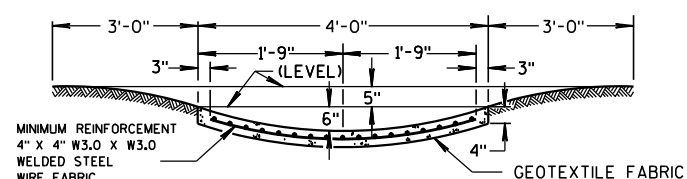
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

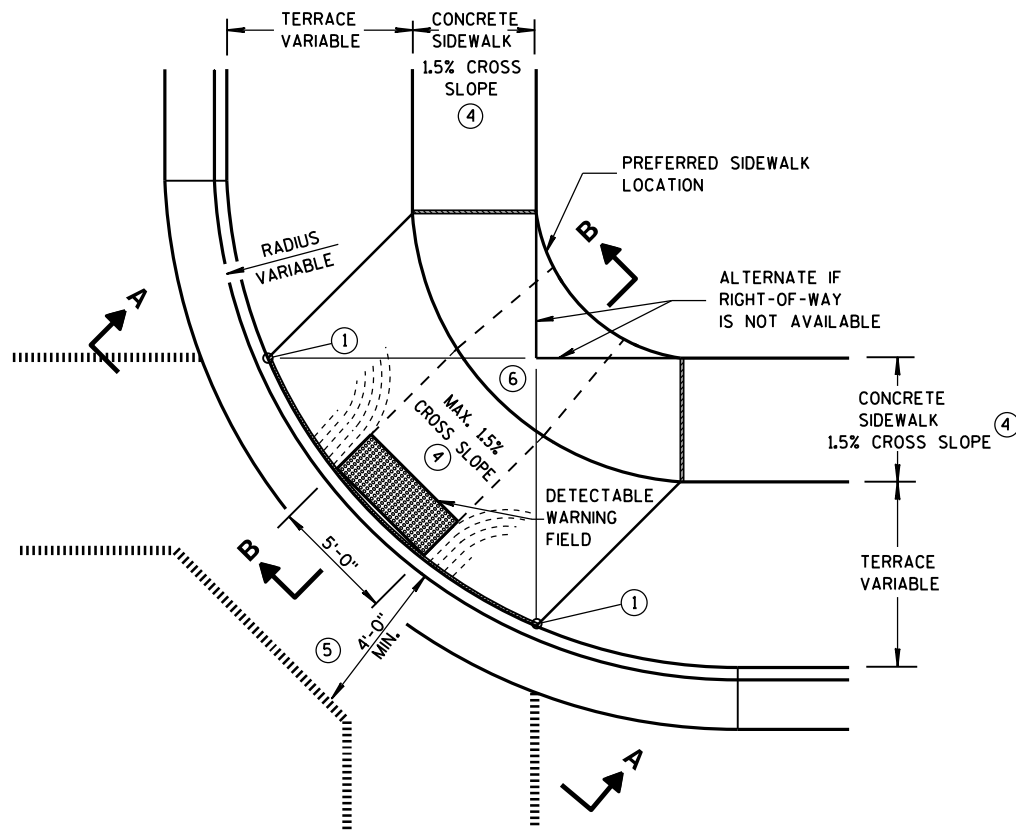
DATE

FHWA

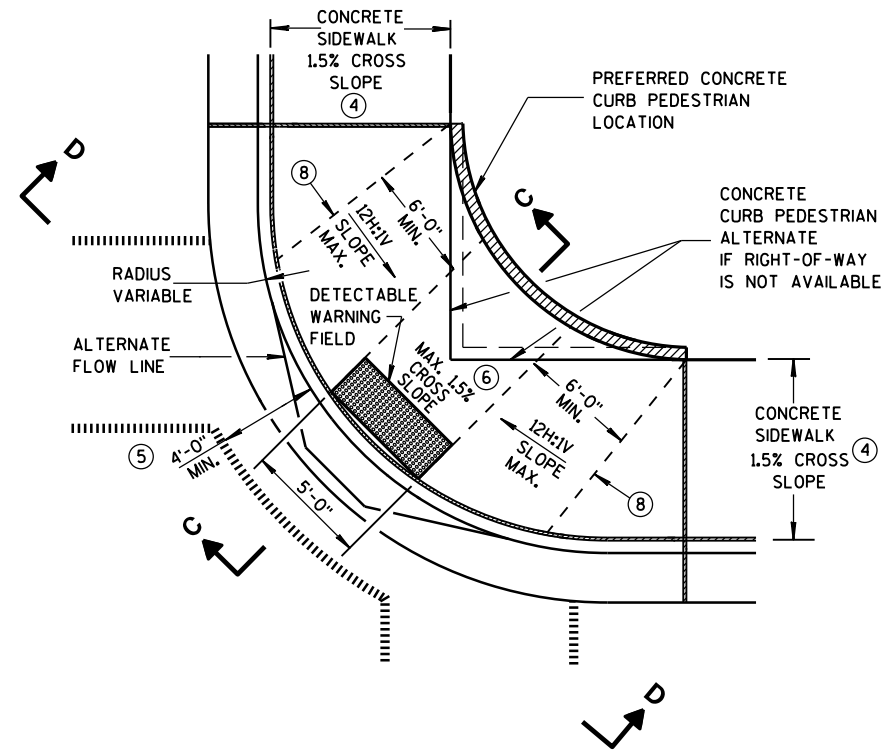
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

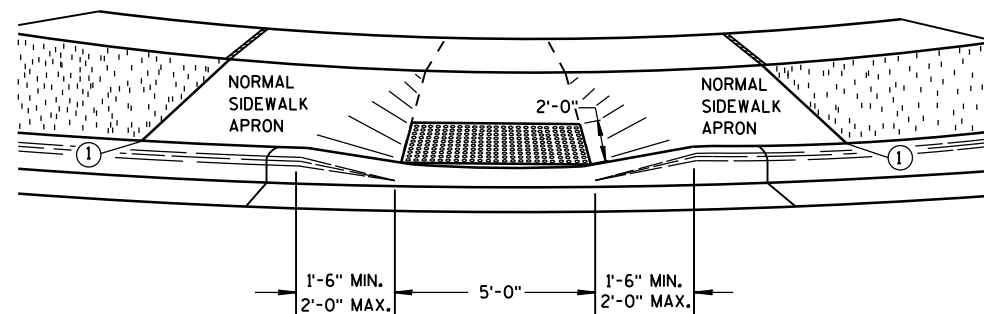
ENGINEER



**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

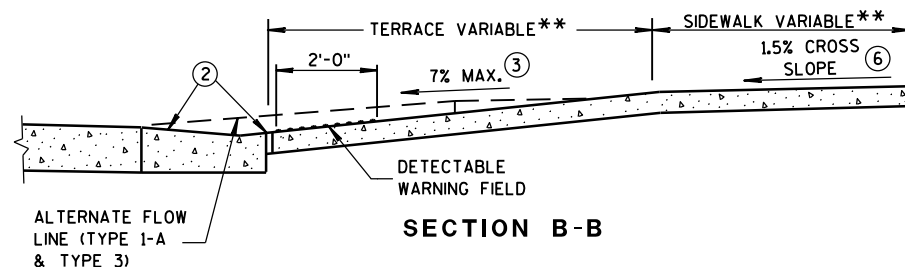


**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)

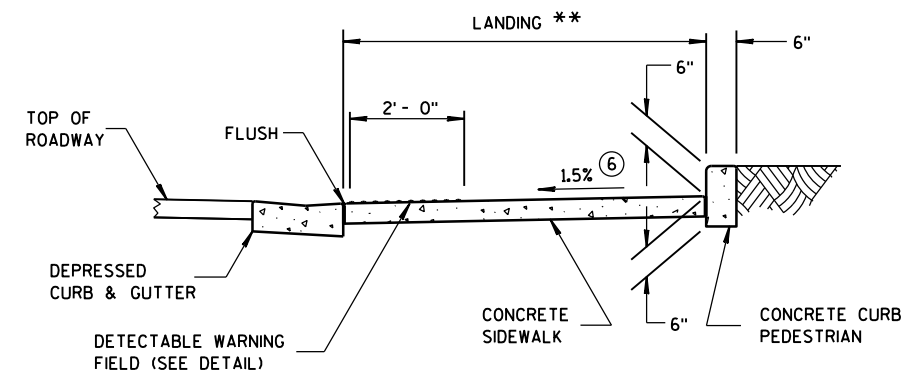


VIEW A-A

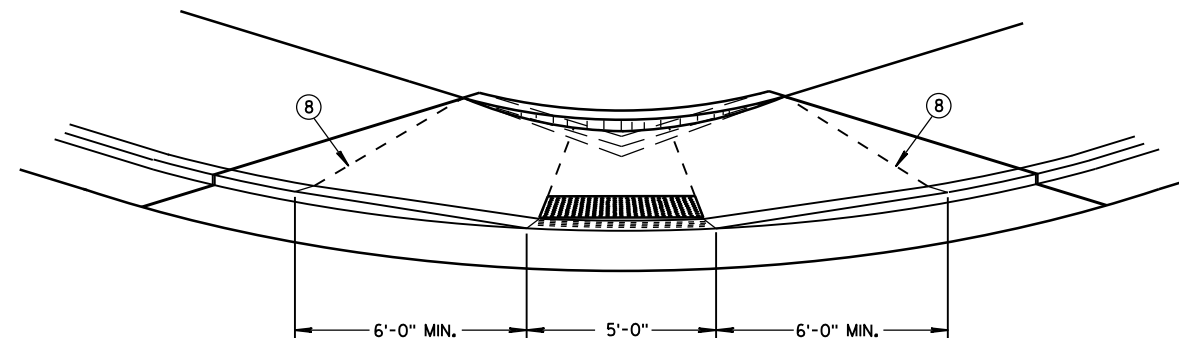
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

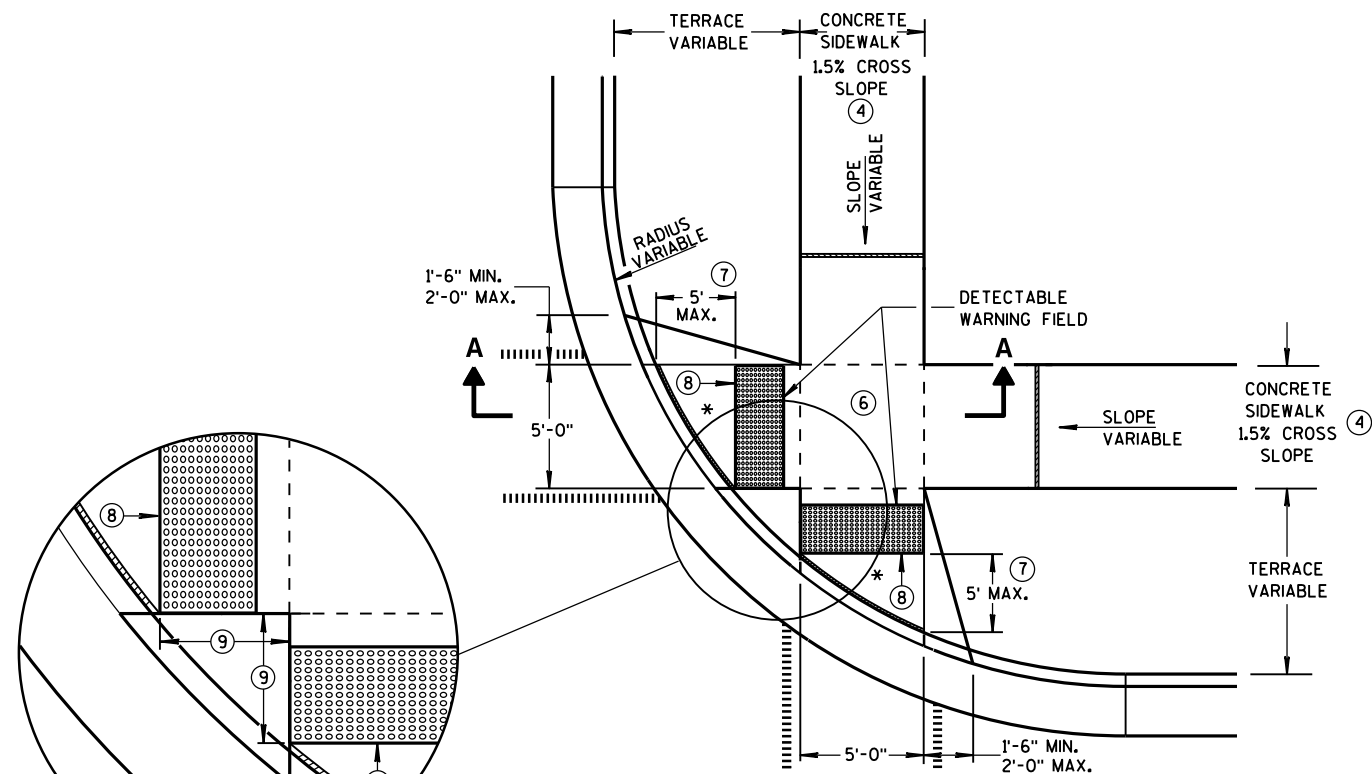
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

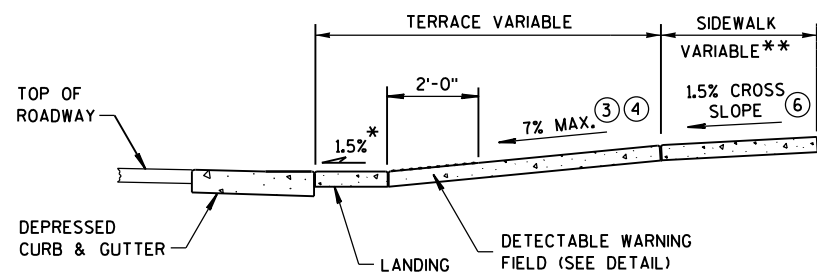
**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



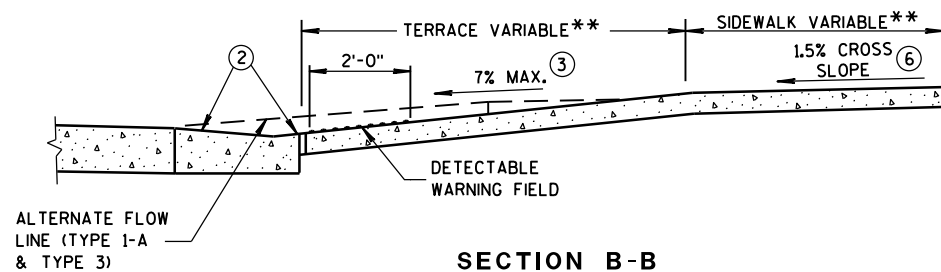
**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

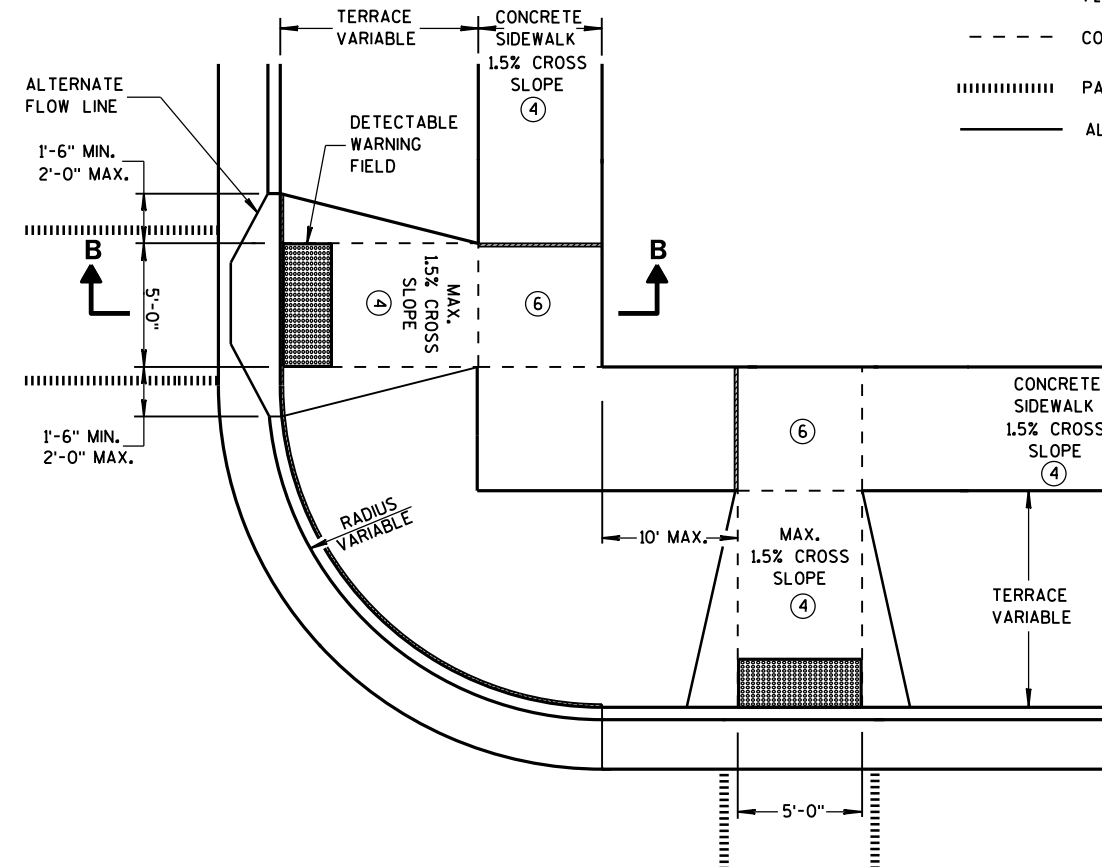
⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



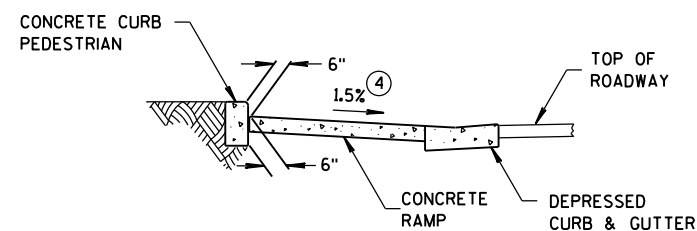
**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

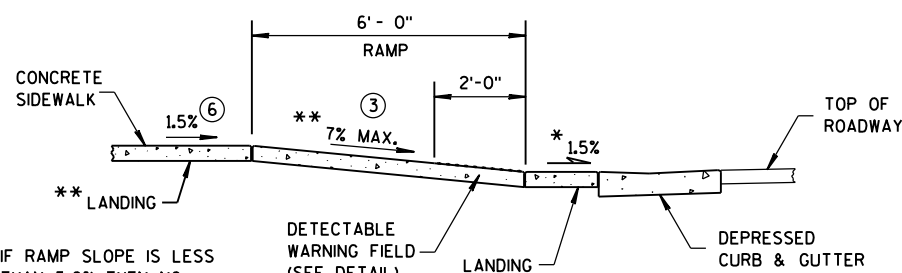
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



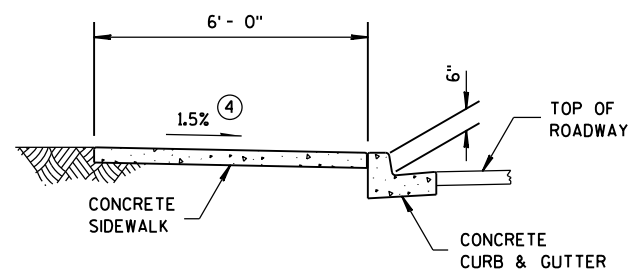
SECTION C-C FOR TYPE 4A



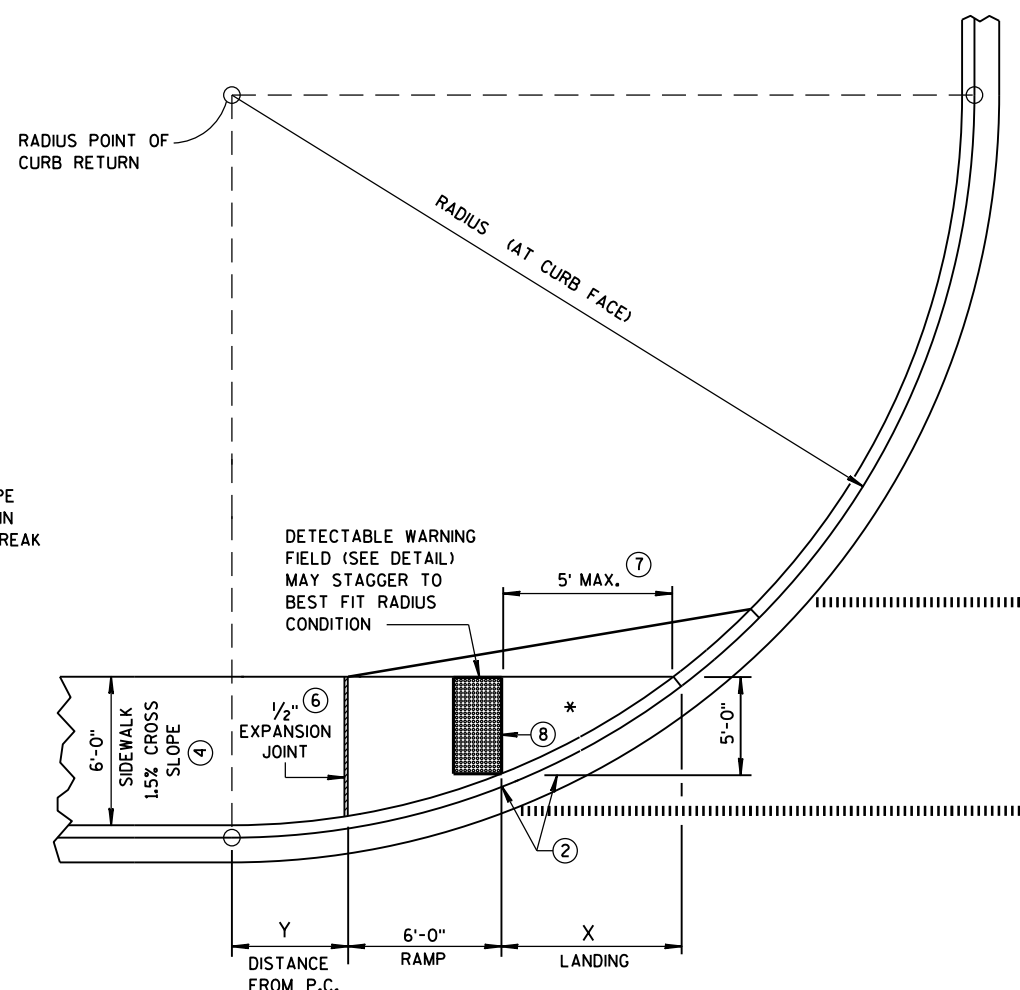
SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 $\frac{3}{4}$ "	2'-7 $\frac{1}{4}$ "
30 FEET	7'-11 $\frac{3}{4}$ "	4'-8 $\frac{1}{4}$ "
40 FEET	9'-5 $\frac{1}{4}$ "	6'-5"
50 FEET	10'-8 $\frac{3}{4}$ "	7'-11 $\frac{1}{4}$ "
60 FEET	11'-10 $\frac{1}{4}$ "	9'-3 $\frac{1}{2}$ "

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



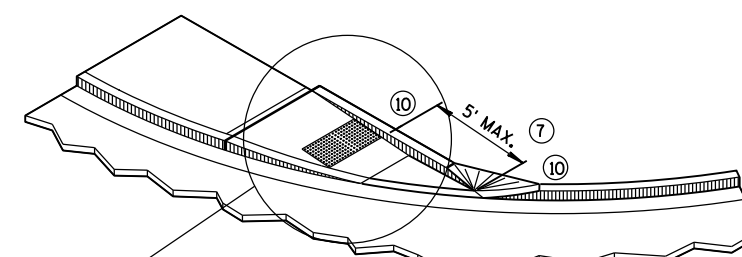
CURB RAMP TYPE 4A1
PLAN VIEW

- ## GENERAL NOTES

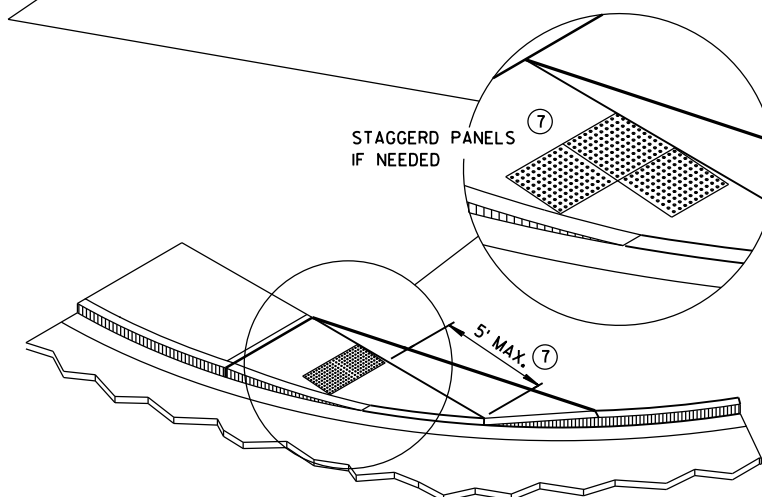
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



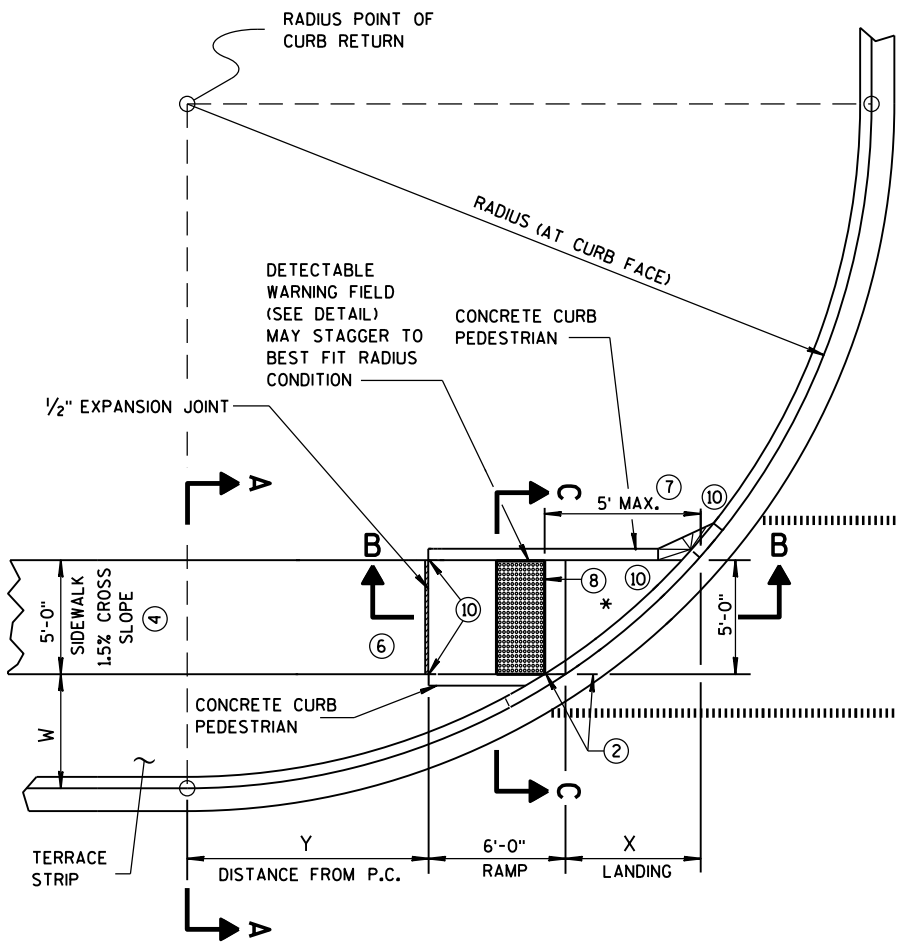
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

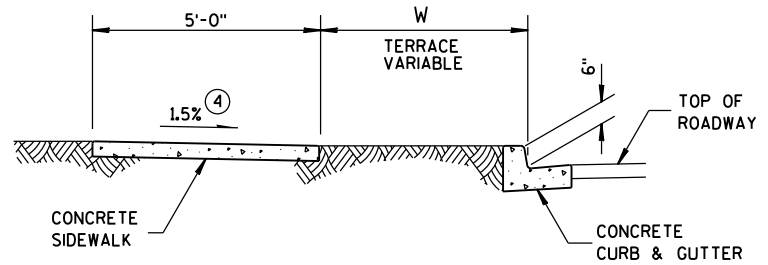
- ===== 1/2" EXPANSION JOINT-SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

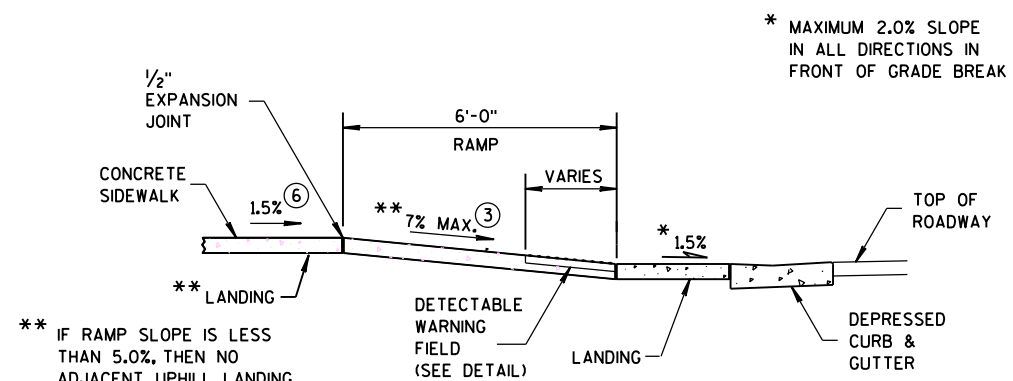
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4B
PLAN VIEW

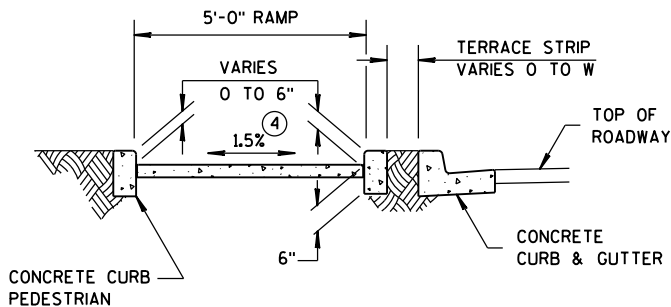


SECTION A-A FOR TYPE 4B

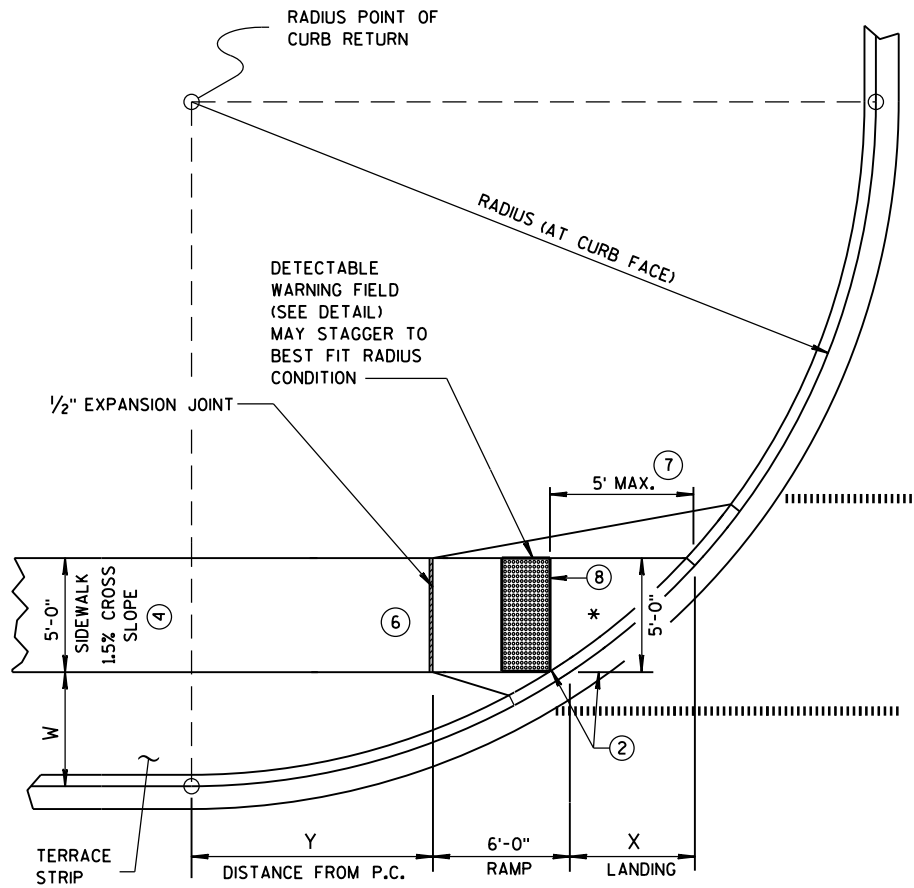


SECTION B-B FOR TYPE 4B

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



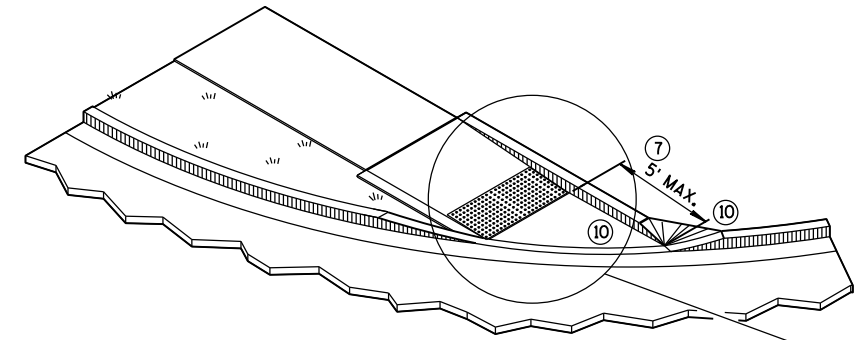
SECTION C-C FOR TYPE 4B



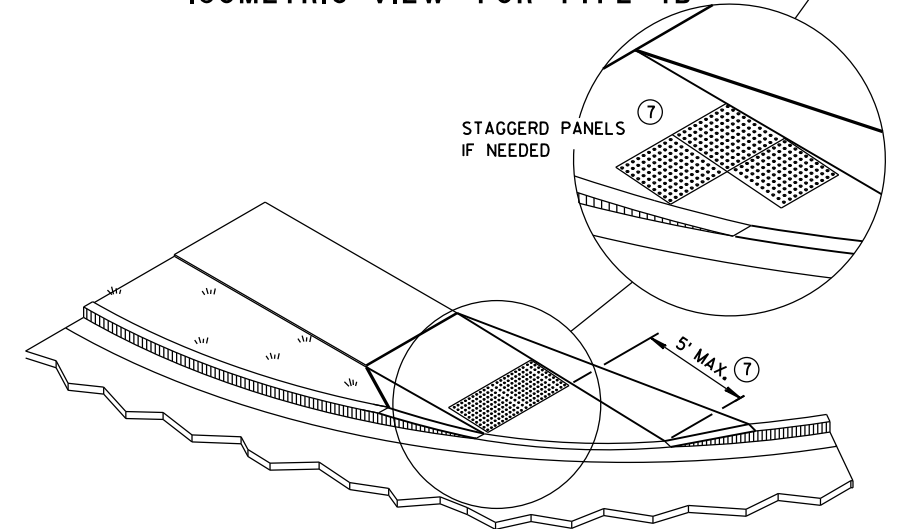
CURB RAMP TYPE 4B1
PLAN VIEW

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

- GENERAL NOTES**
- INTERMEDIATE RADII CAN BE INTERPOLATED
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
 - 3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
 - 7 WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
 - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - 10 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



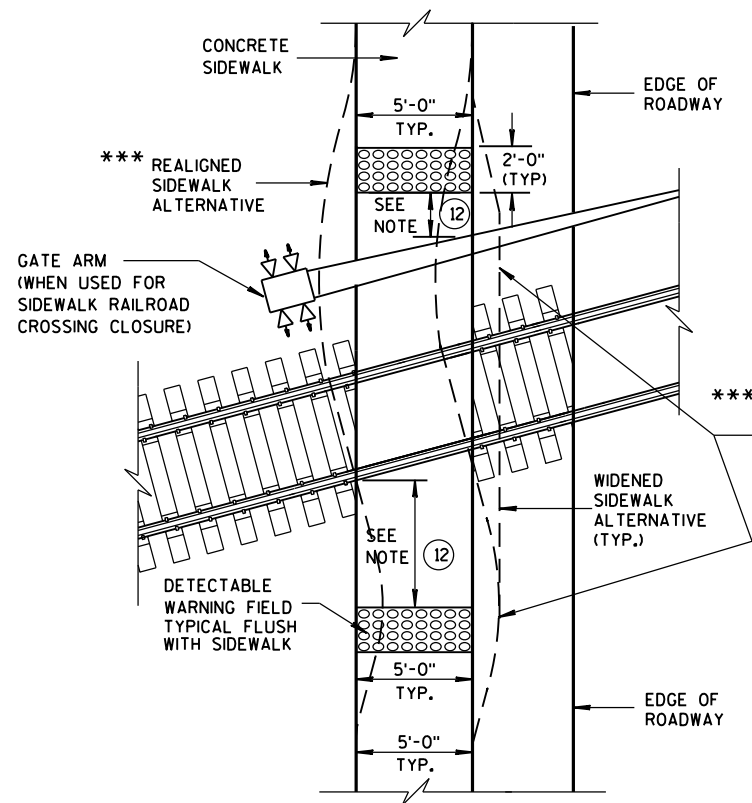
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

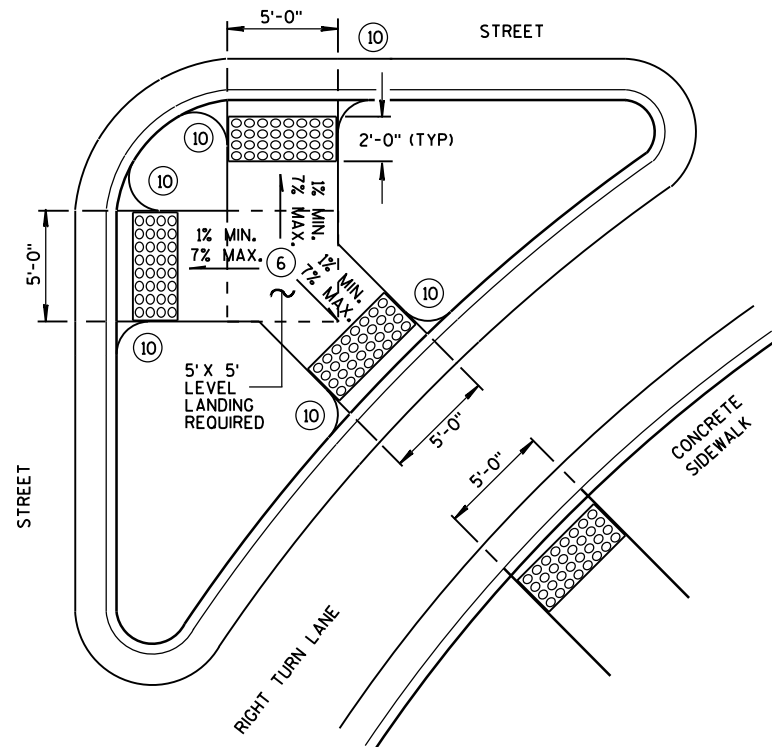
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

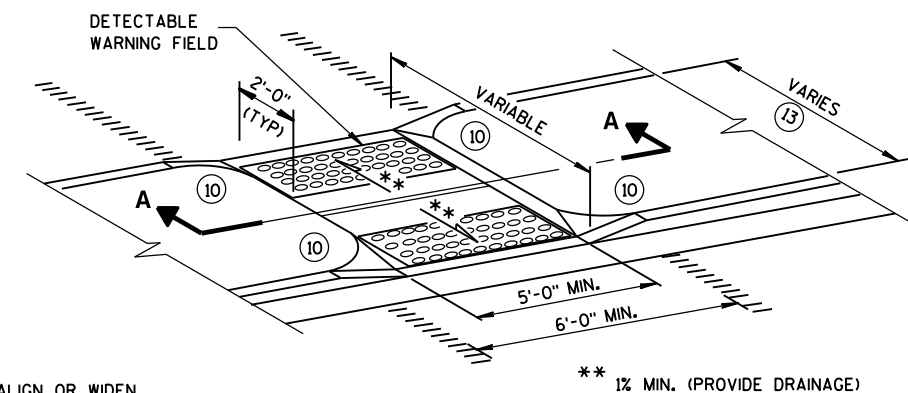


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

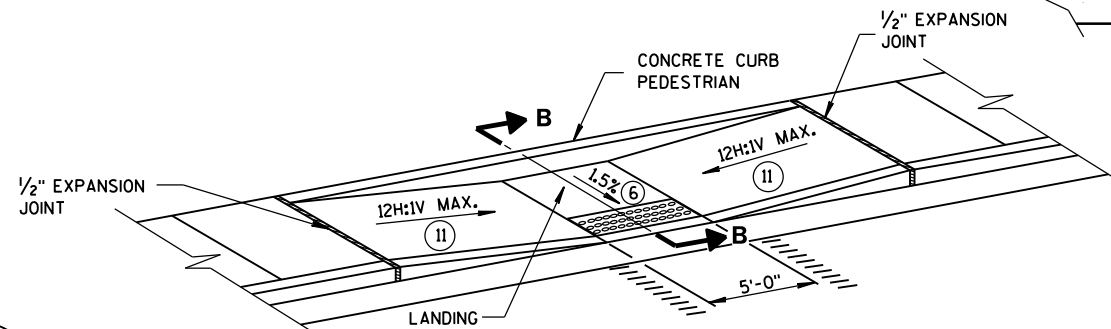
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



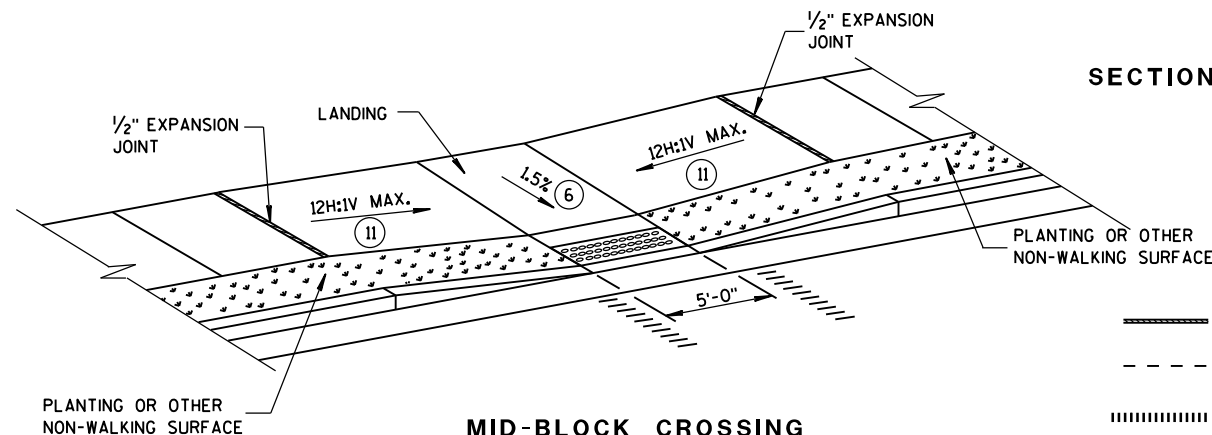
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

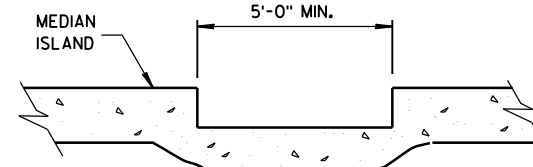


MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

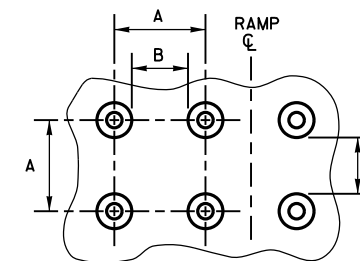
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



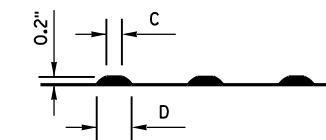
SECTION A-A

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

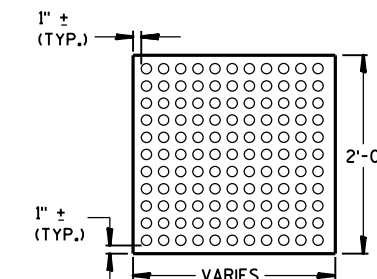


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

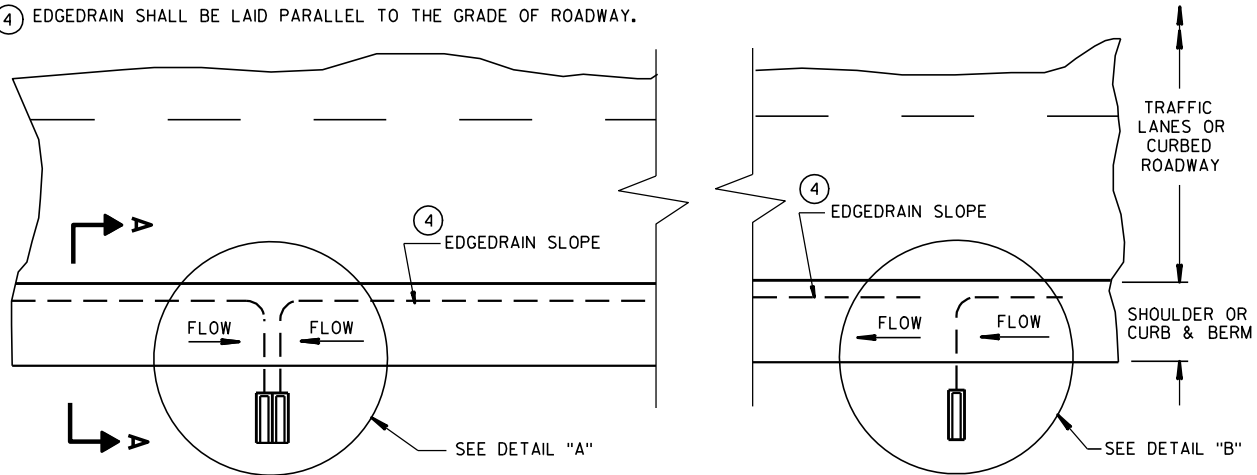
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

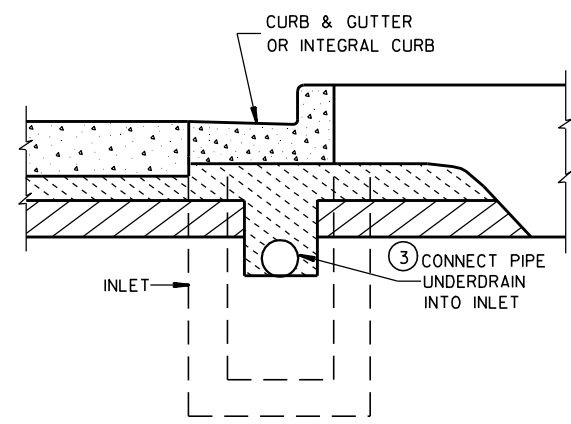
GENERAL NOTES

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.

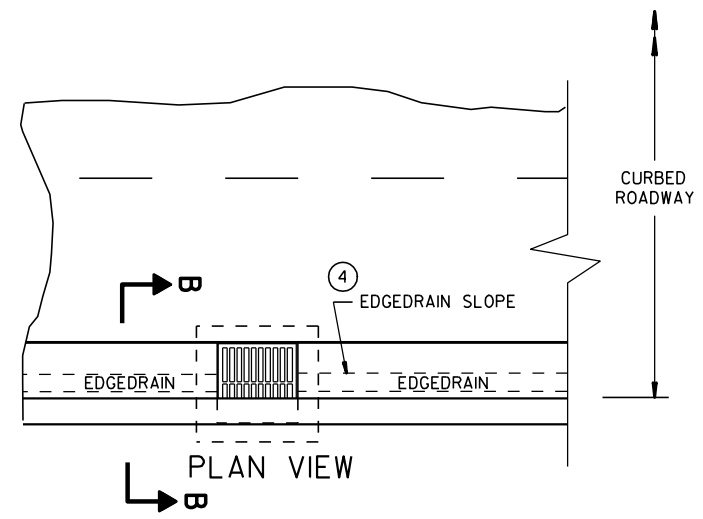
- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



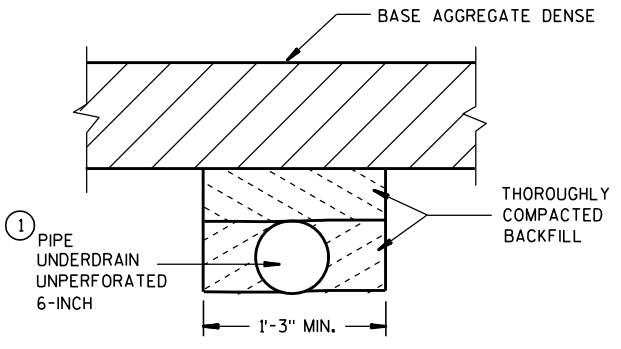
PLAN VIEW
ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN OUTLETS TO ROADSIDE) ②



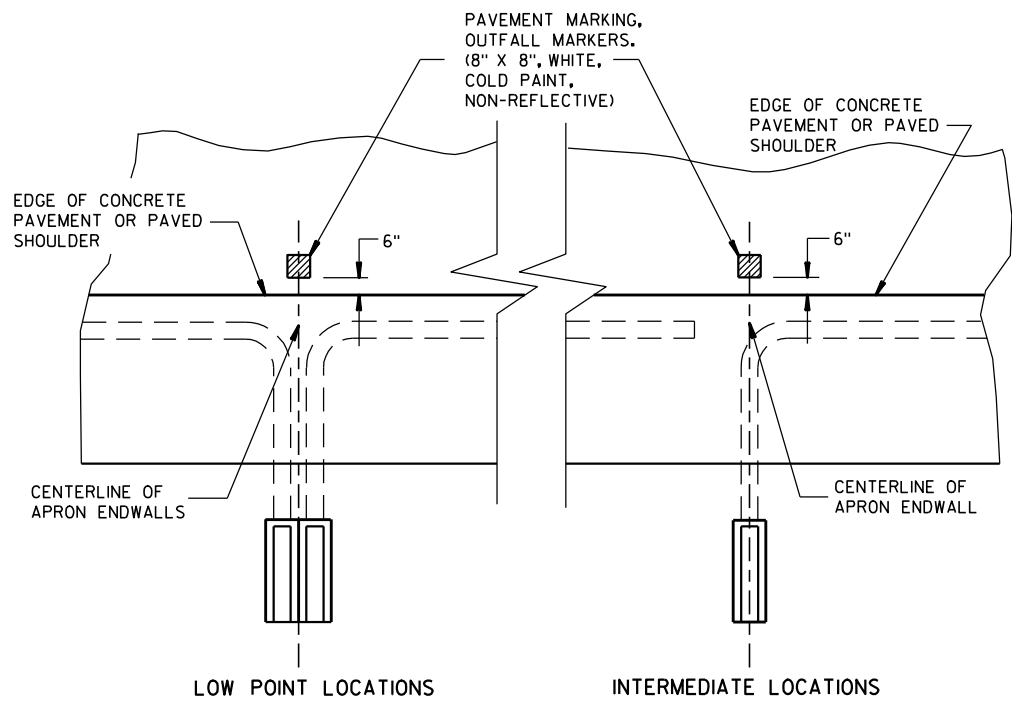
SECTION B-B
URBAN CROSS SECTION



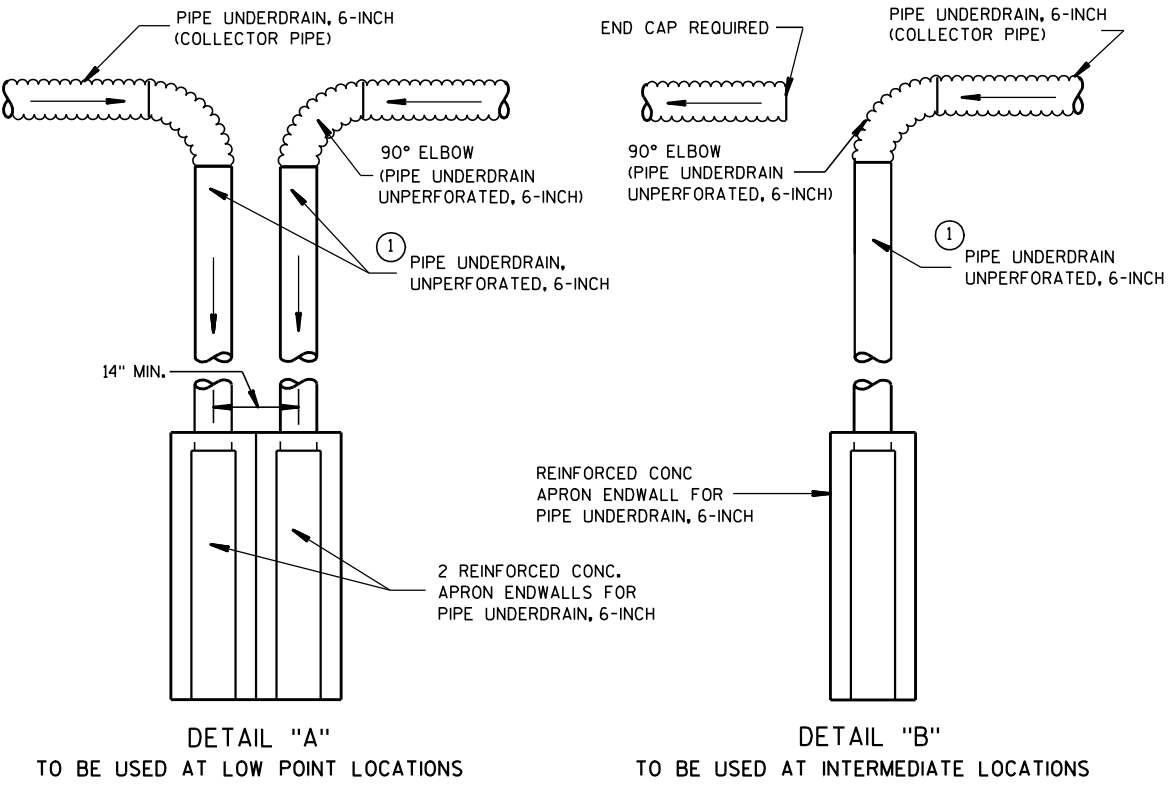
PLAN VIEW
ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



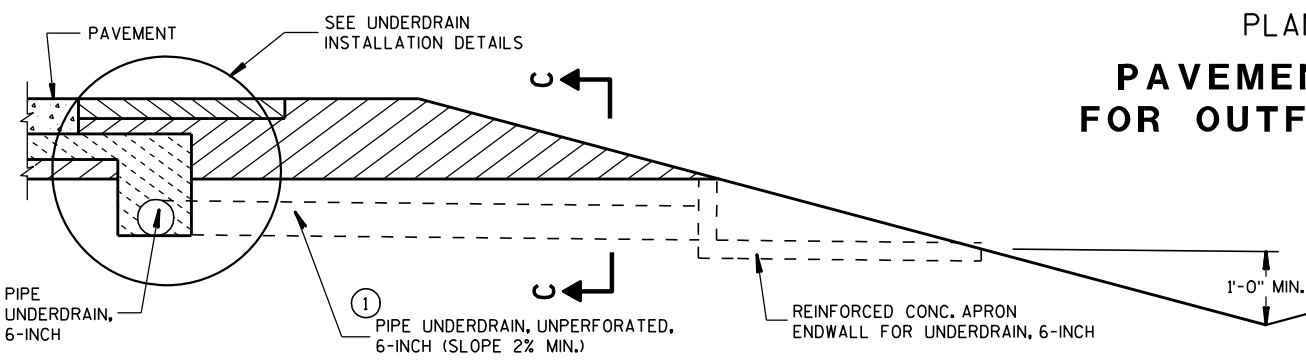
SECTION C-C
(TRENCH FOR OUTFALL PIPE)



PLAN VIEW
PAVEMENT MARKING FOR OUTFALL MARKERS



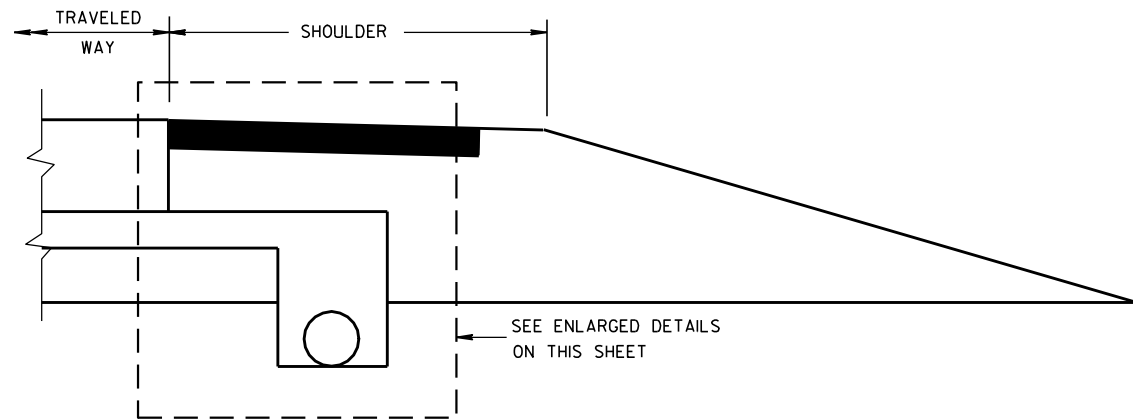
TYPICAL DRAIN OUT DETAILS



SECTION A-A
RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



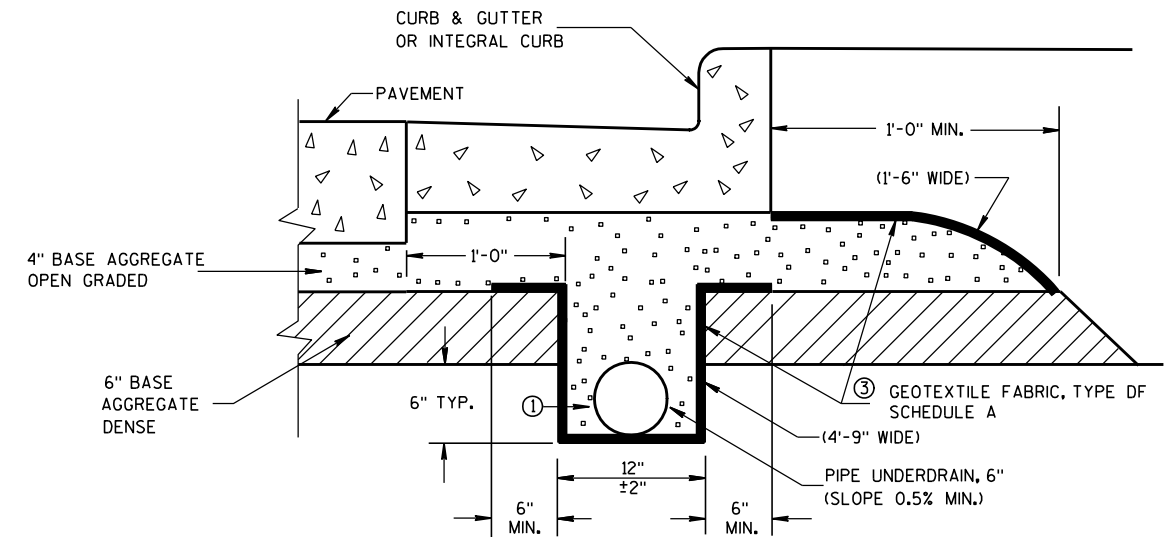
RURAL CROSS SECTION

GENERAL NOTES

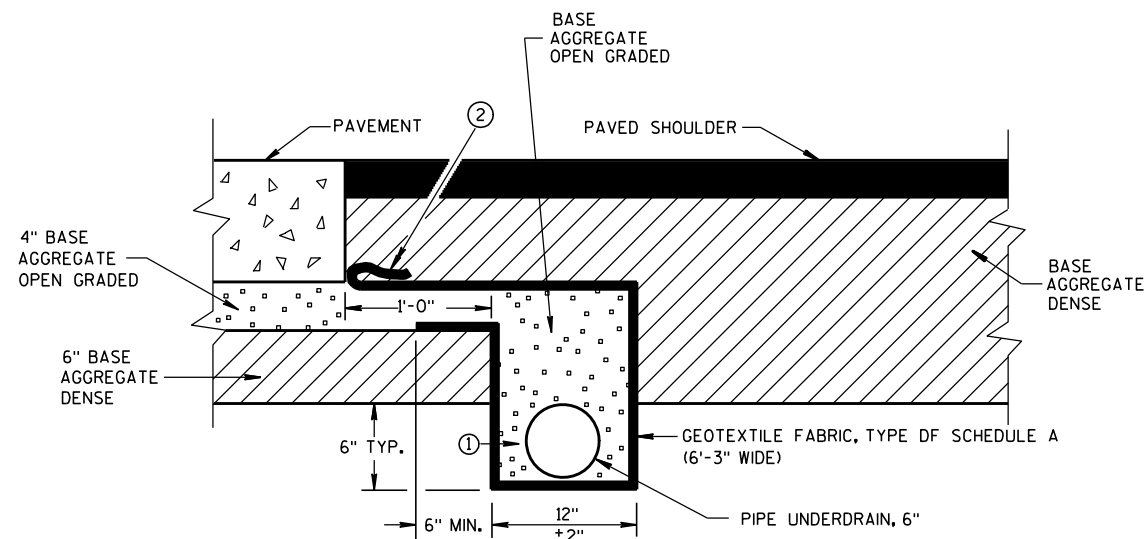
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

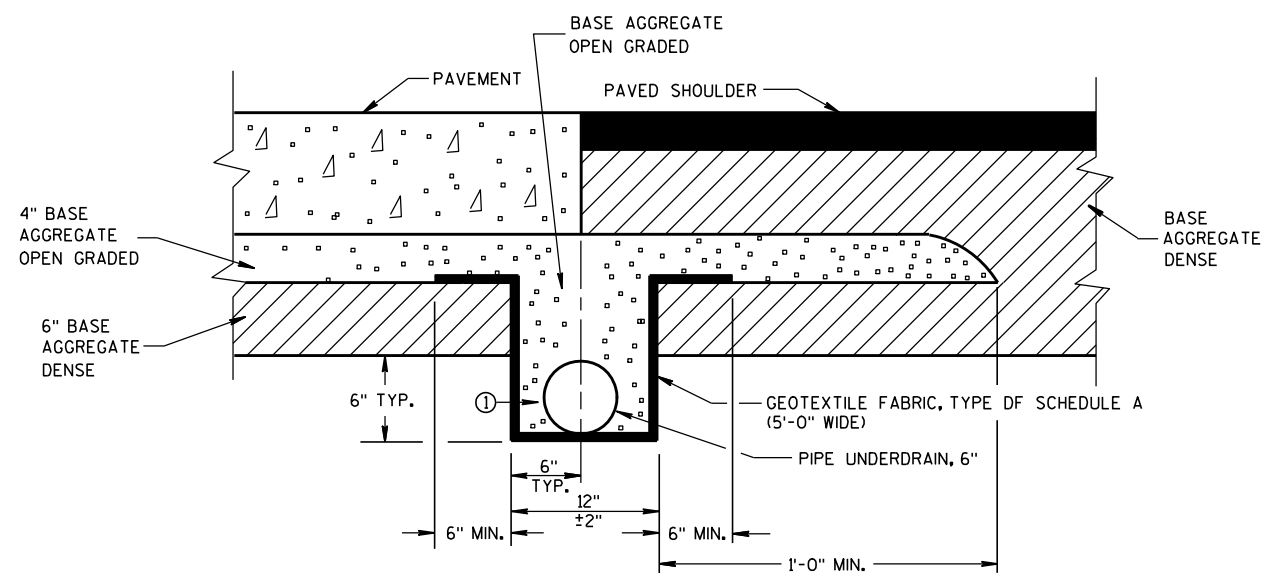
- ① TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.
- ② FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.
- ③ TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

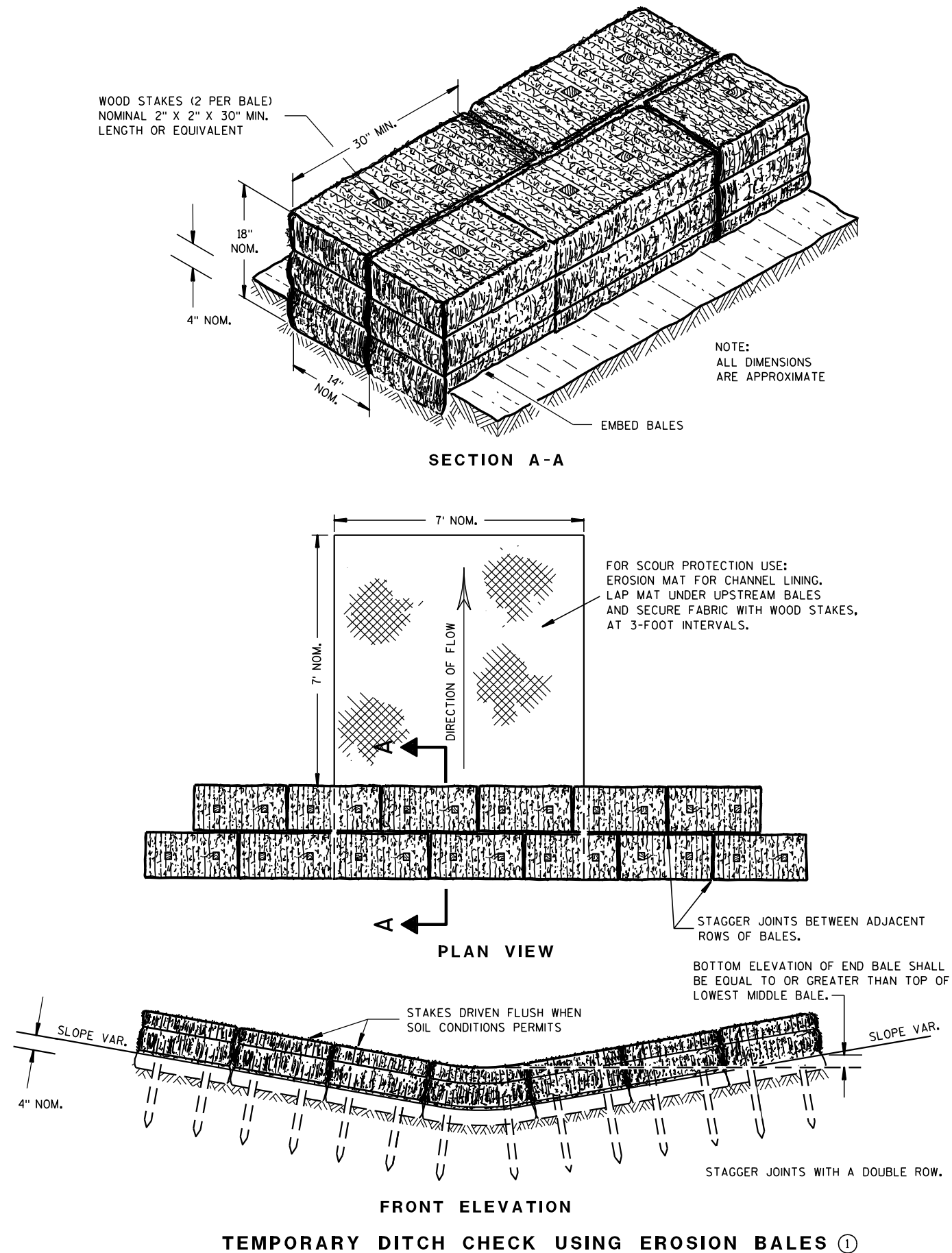
EDGEDRAIN IN RURAL ROADWAY

**EDGEDRAIN AND BASE
AGGREGATE OPEN GRADED**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

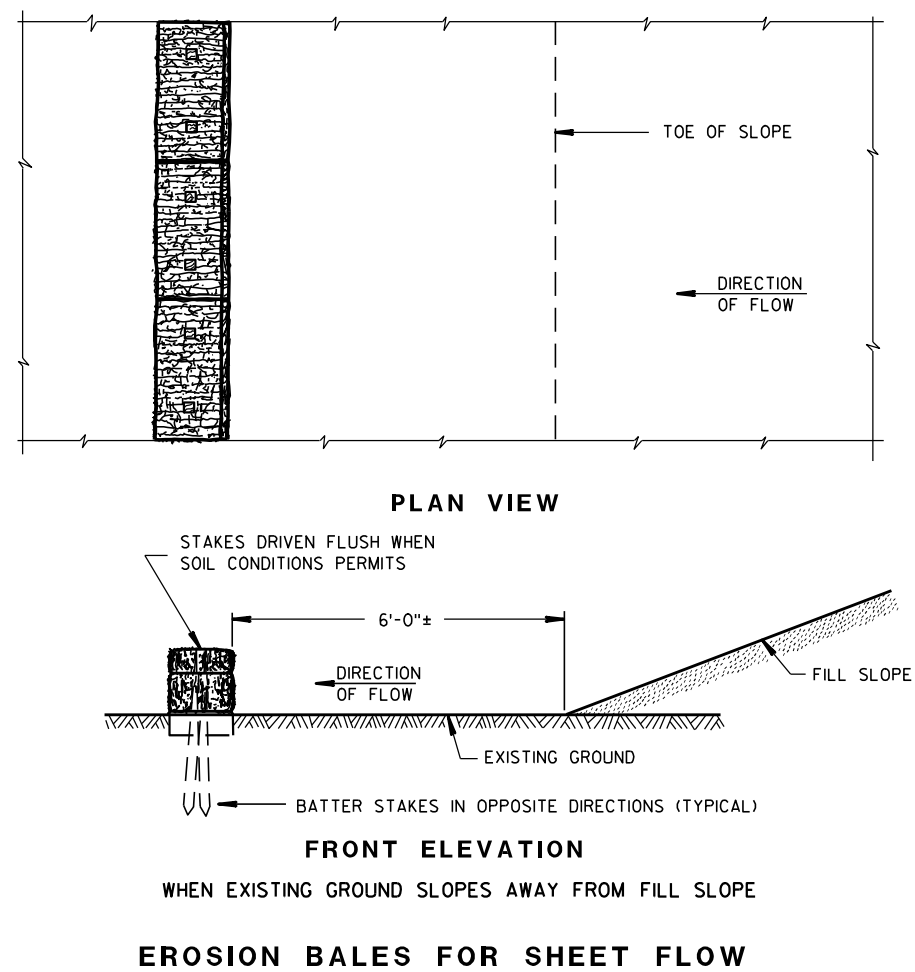
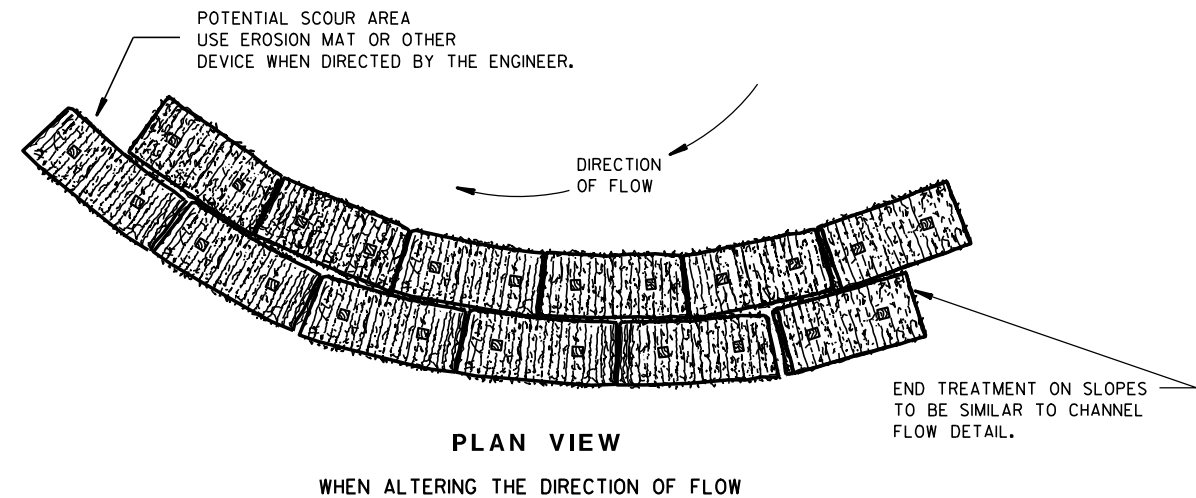
3/21/07 /S/ Steven W. Krebs
DATE CHIEF MATERIALS MANAGEMENT ENGINEER
FHWA



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.

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

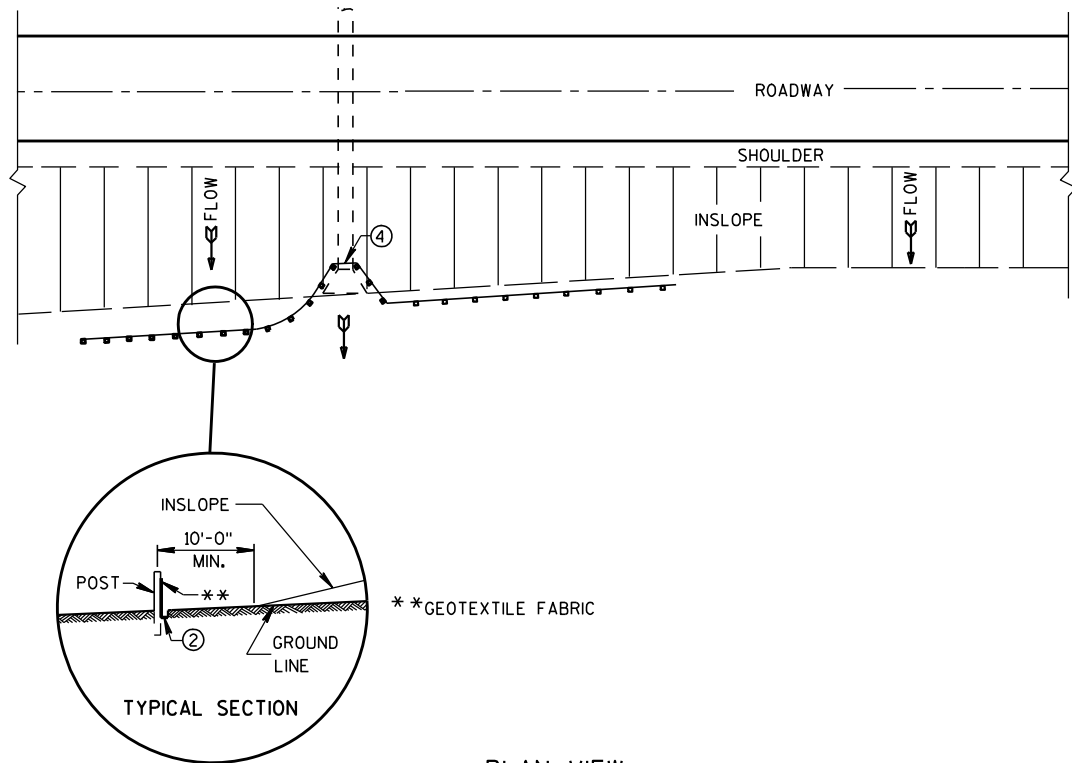
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

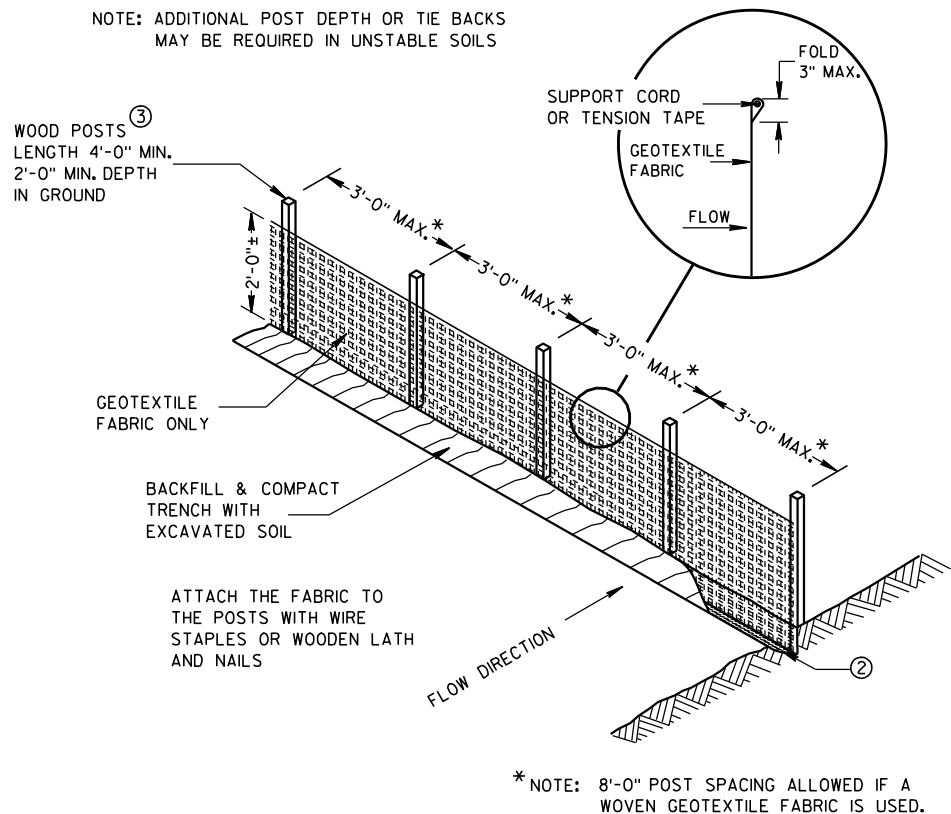
APPROVED

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

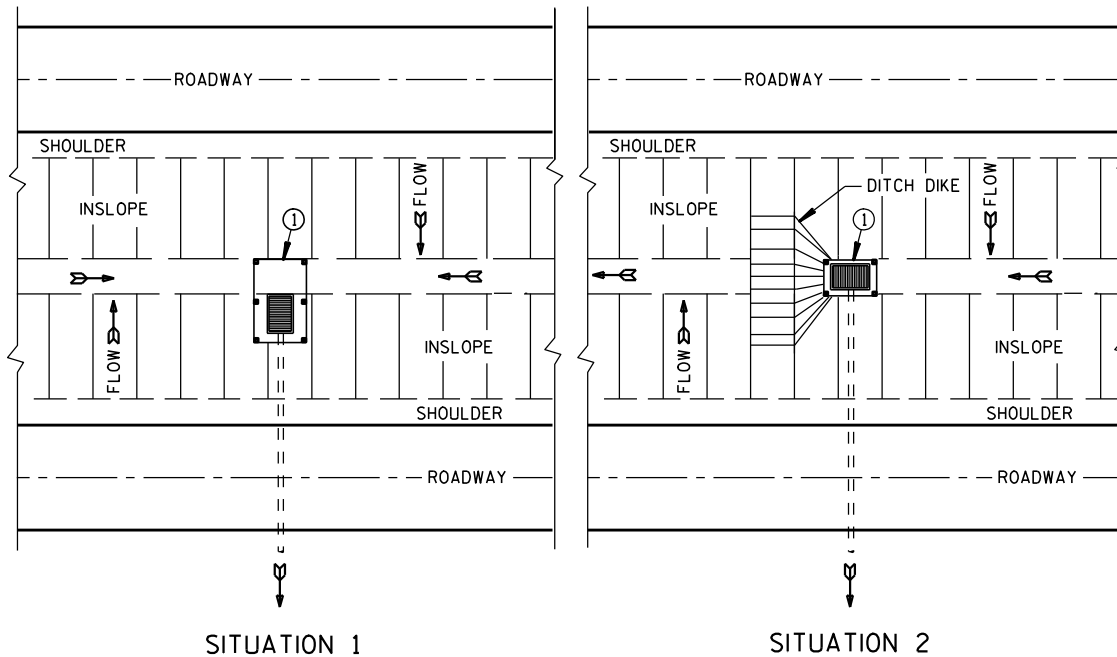
FHWA



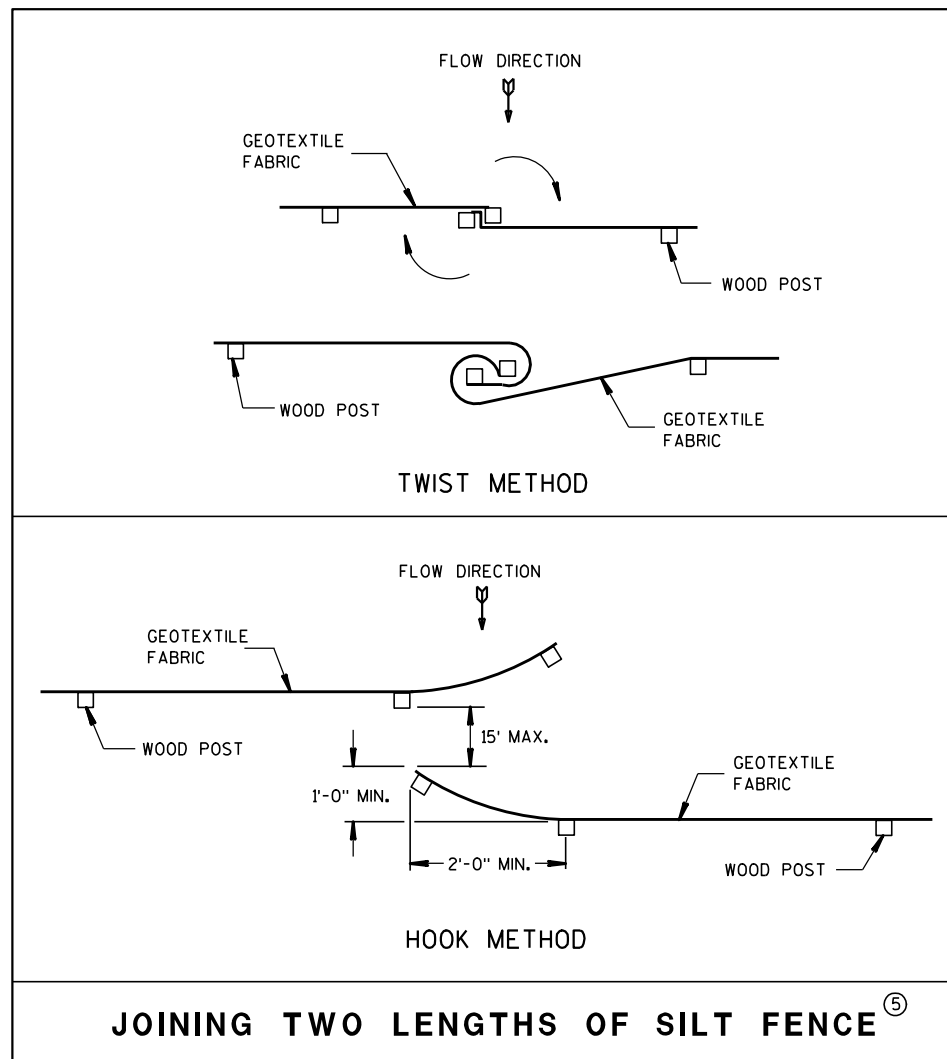
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

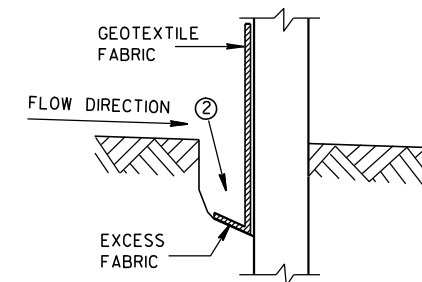


JOINING TWO LENGTHS OF SILT FENCE

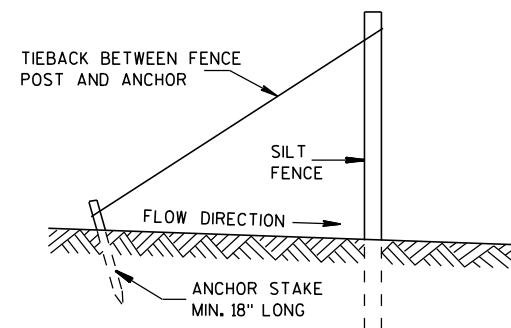
GENERAL NOTES

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

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

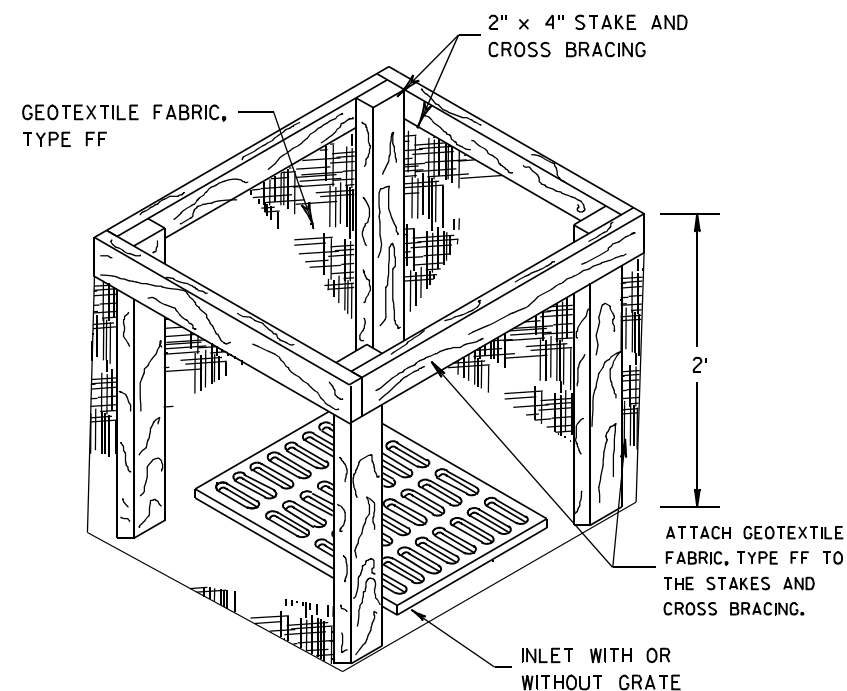
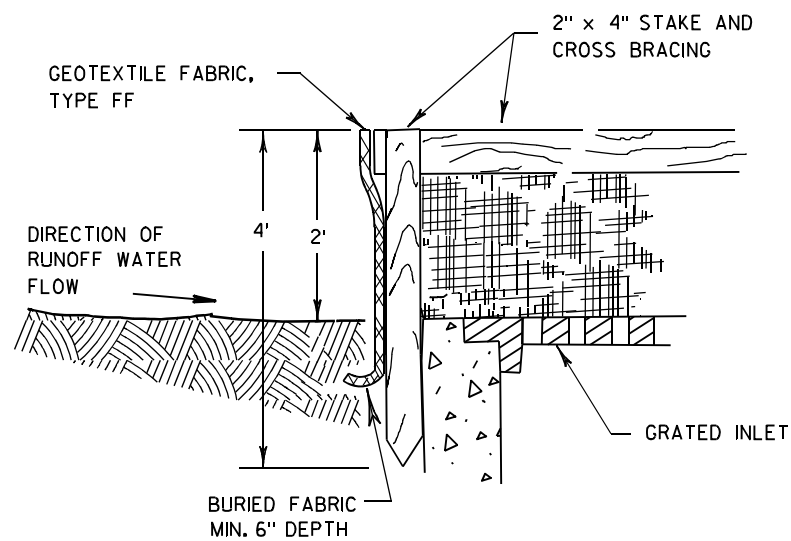


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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



INLET PROTECTION, TYPE A

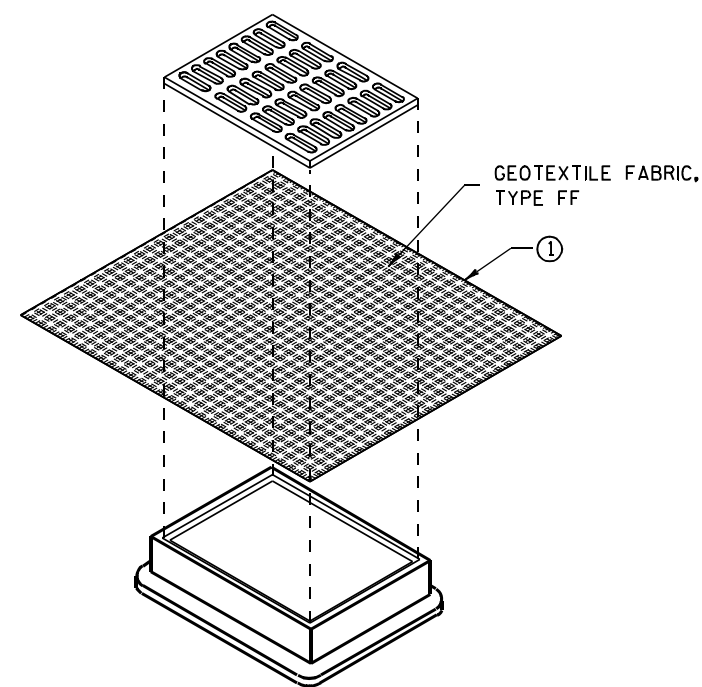
GENERAL NOTES

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

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

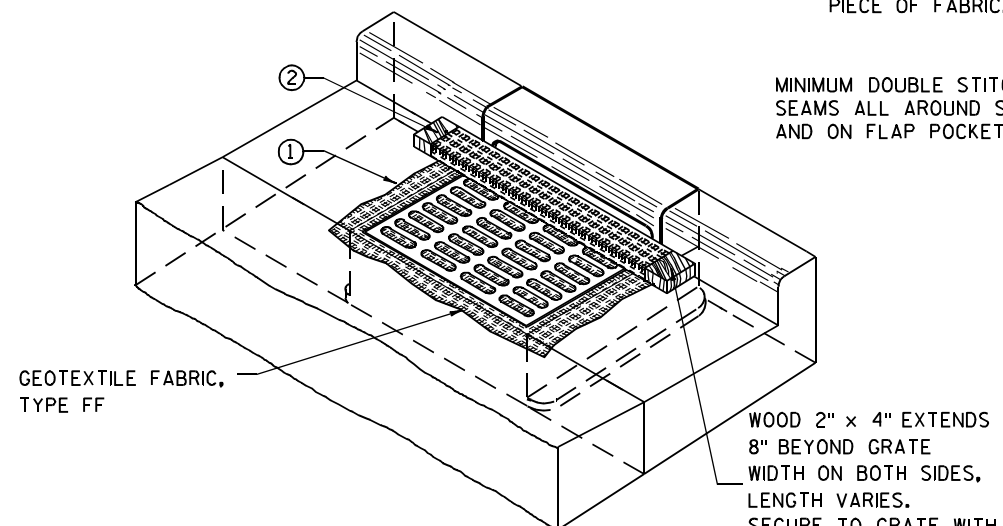
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

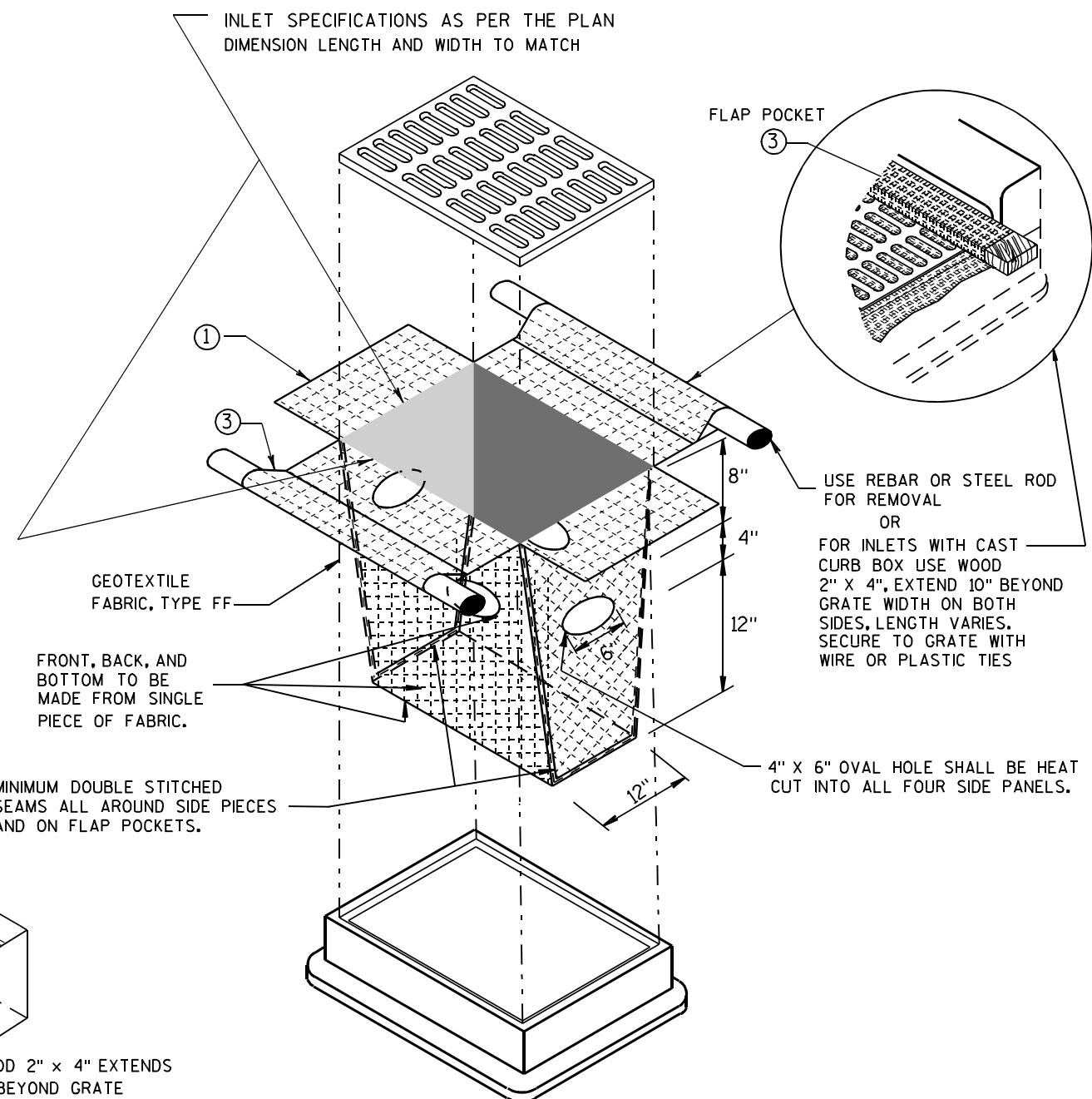
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



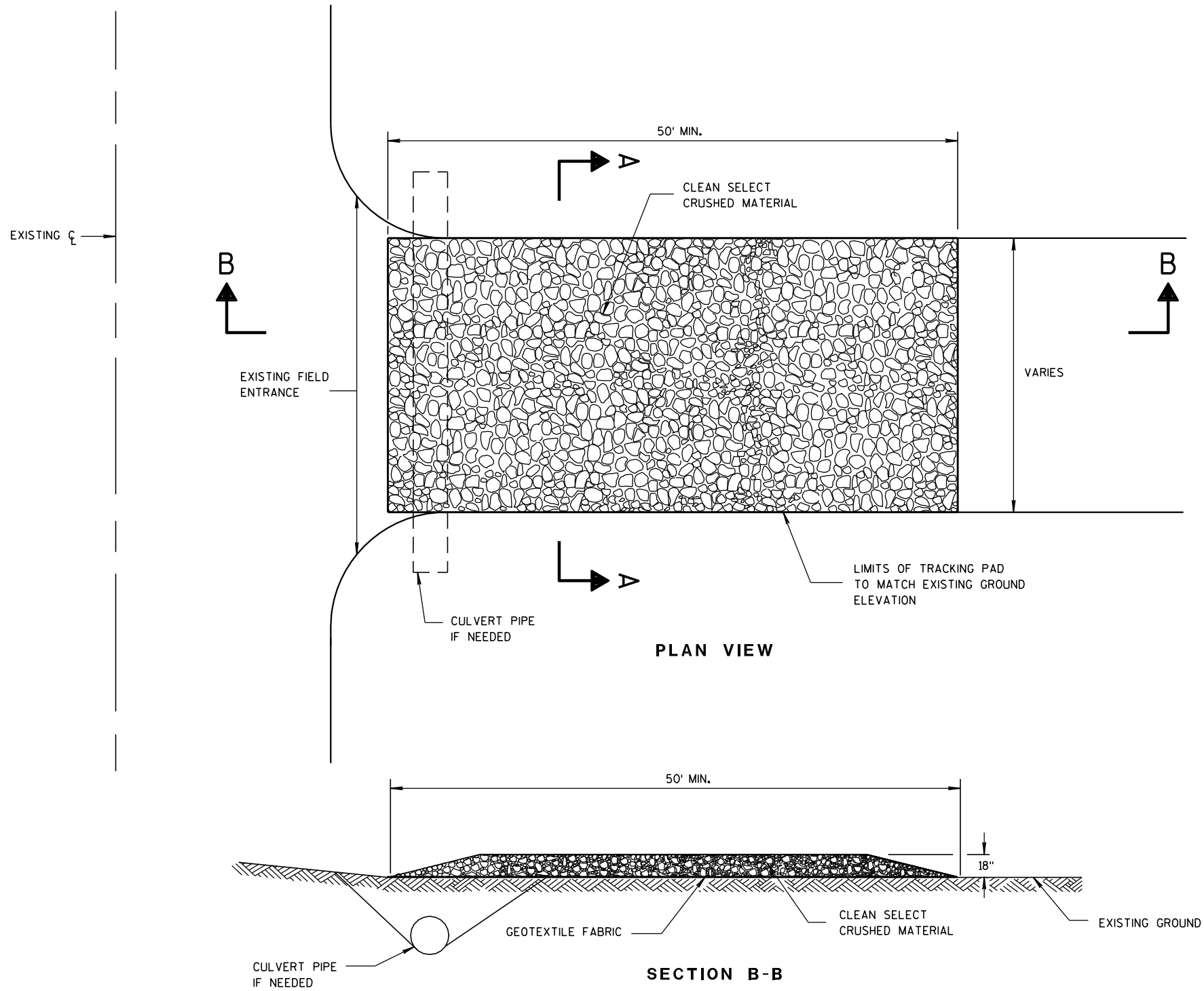
INLET PROTECTION, TYPE D

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

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.

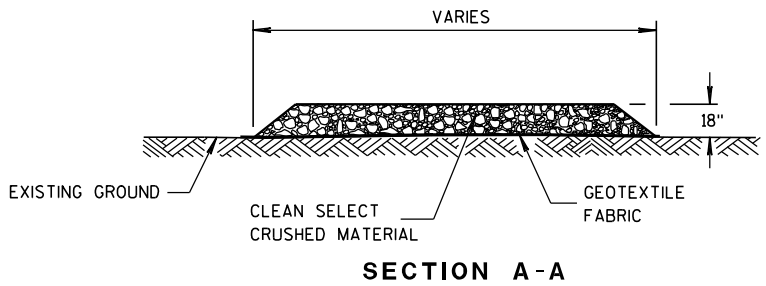
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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.



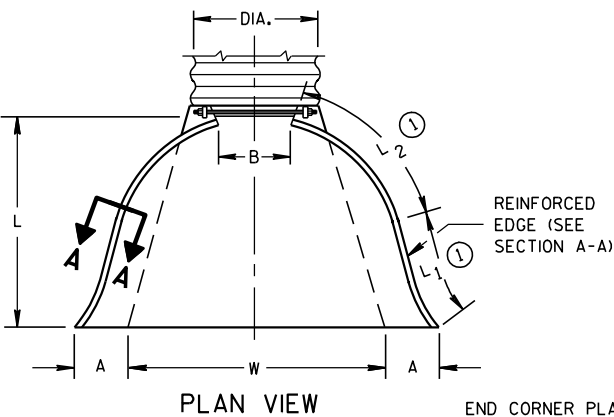
TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

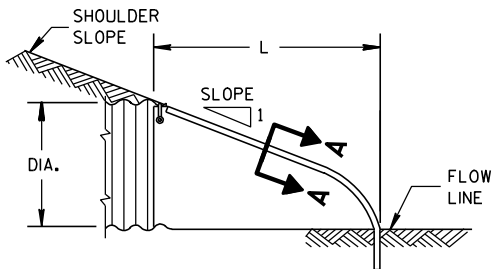
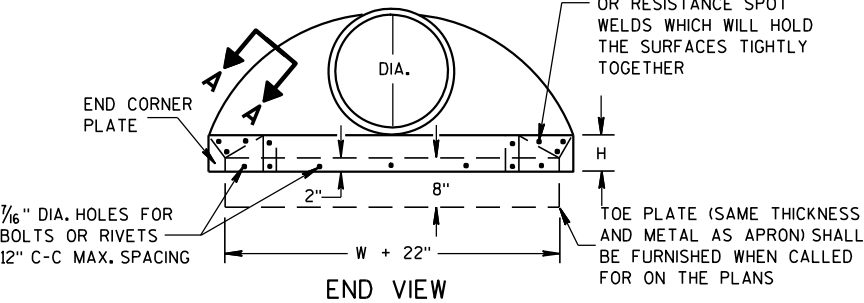
APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

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

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



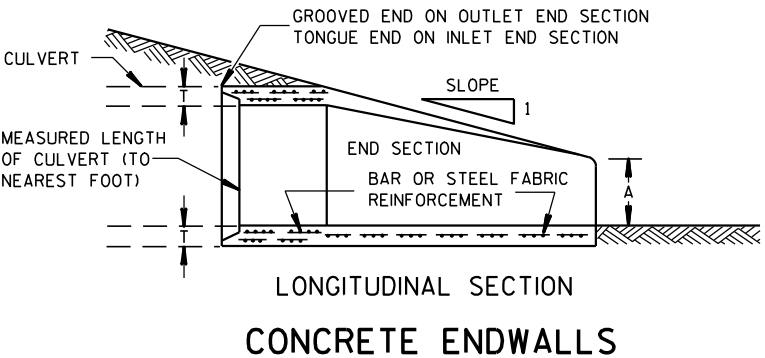
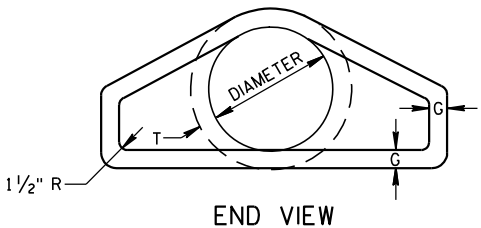
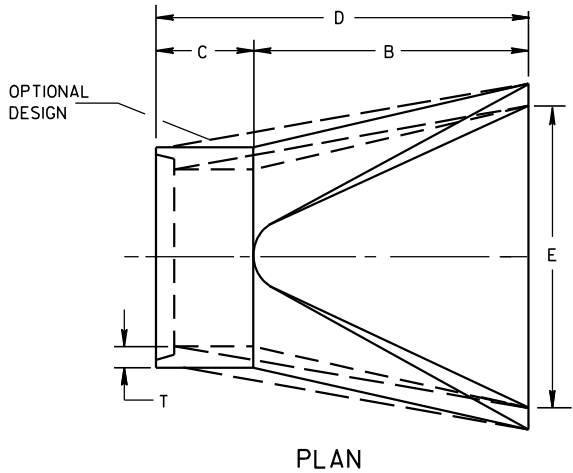
END CORNER PLATES MAY
BE FASTENED TO APRON
PROPER BY BOLTS, RIVETS,
OR RESISTANCE SPOT
WELDS WHICH WILL HOLD
THE SURFACES TIGHTLY
TOGETHER



SIDE ELEVATION
METAL ENDWALLS

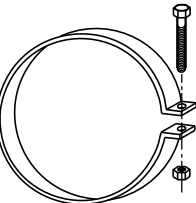
REINFORCED CONCRETE APRON ENDWALLS										
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	T	A	B	C	D	E	G			
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1		
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1		
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1		
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1		
24	3	9 1/2	43 1/2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

* MINIMUM
** MAXIMUM

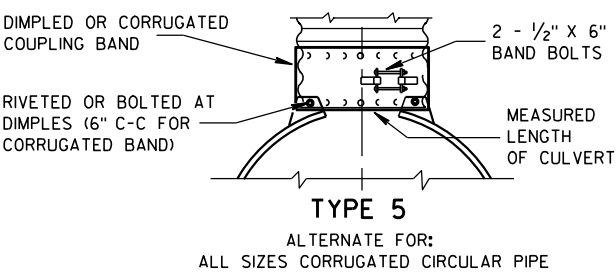
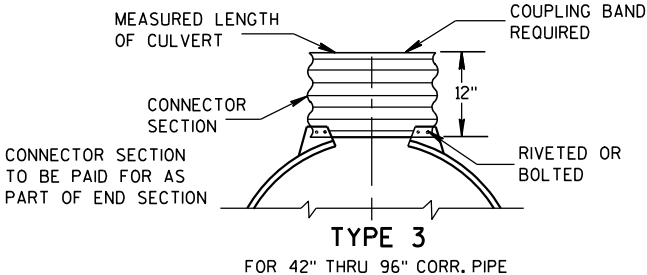
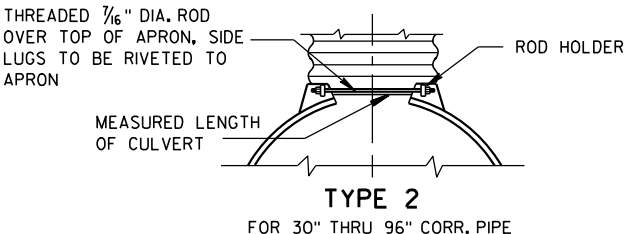
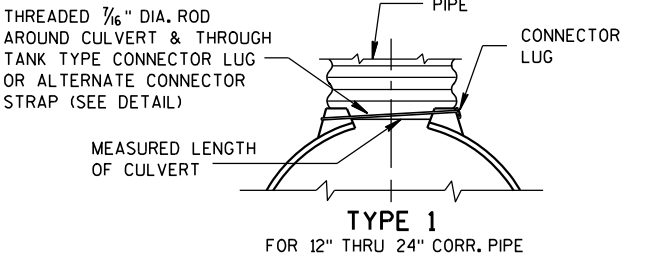


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



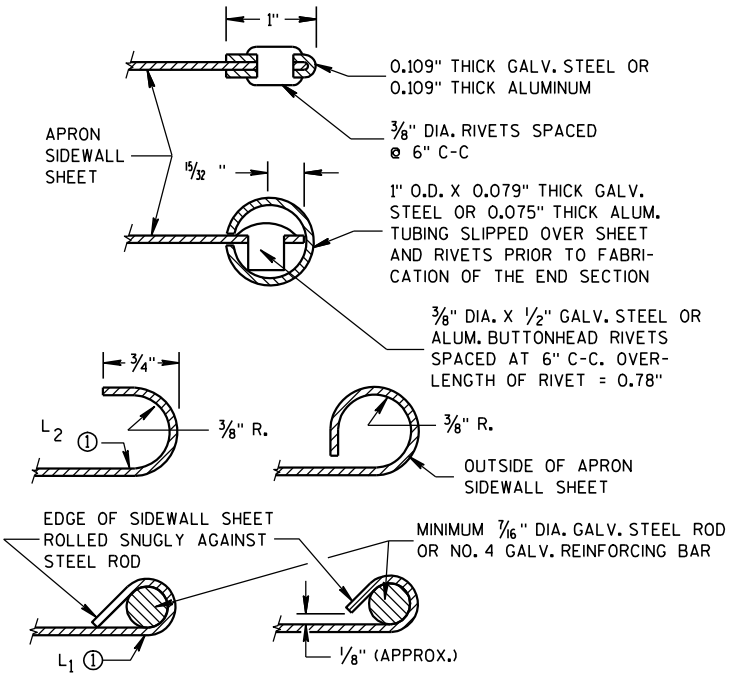
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

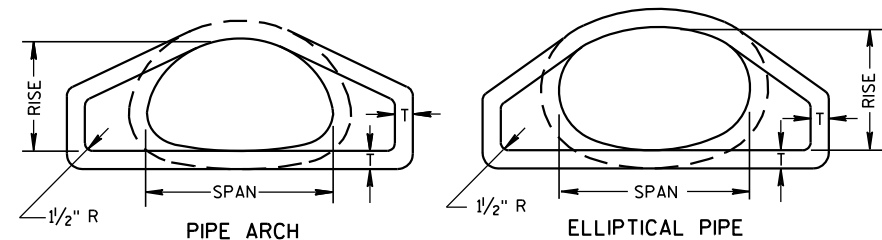
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

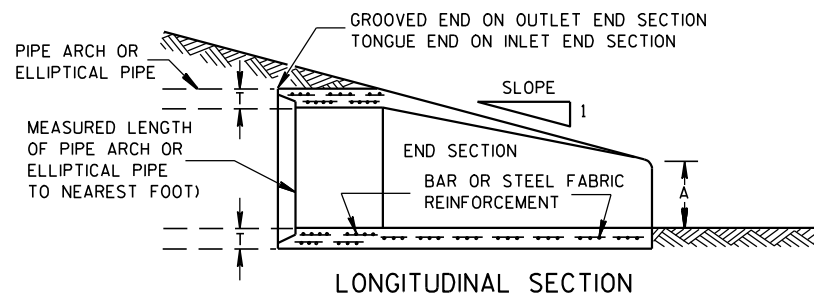
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

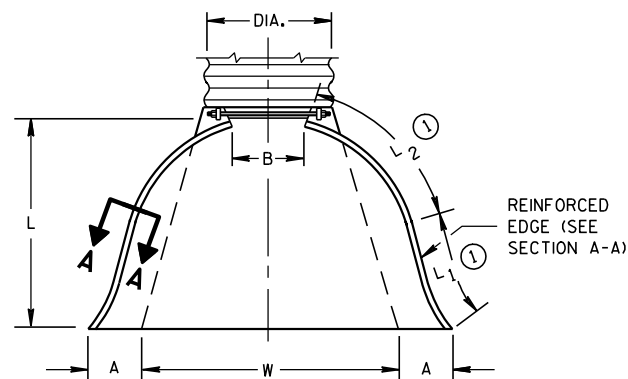


END VIEW

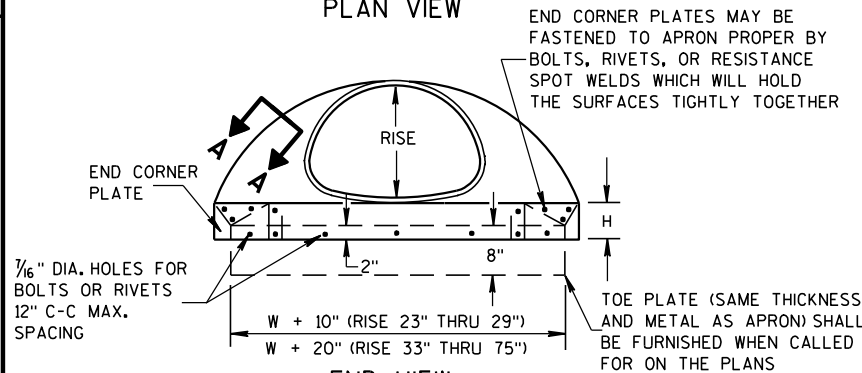


LONGITUDINAL SECTION

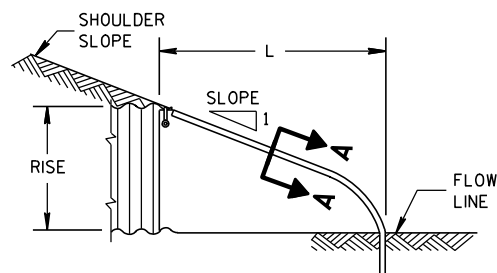
CONCRETE ENDWALLS



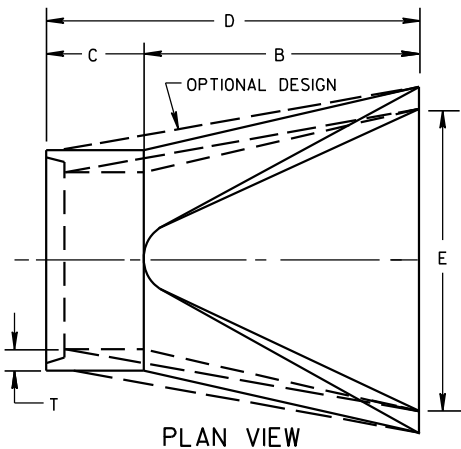
PLAN VIEW



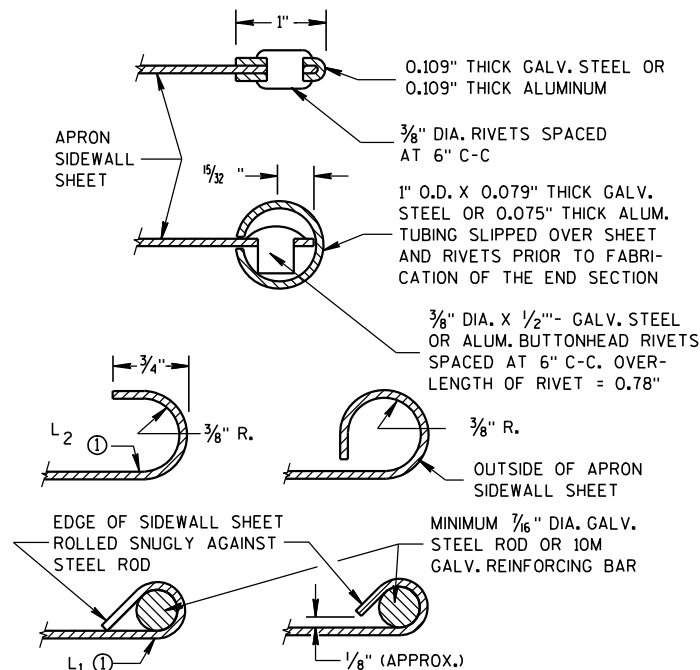
END VIEW



SIDE ELEVATION
METAL ENDWALLS



PLAN VIEW



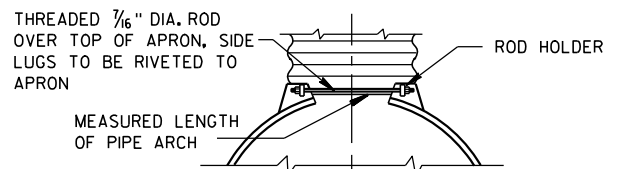
SECTION A-A

2- 2⅓" X ½" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L 2 ①	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅝	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
					A	B	H	L	L1	L2	W		
	SPAN	RISE	STEEL	ALUM.	(±1")	(MAX.)	(±1")	(±1 1/2")	①	①	(±2")		
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

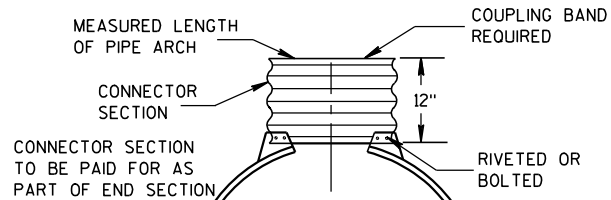
NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



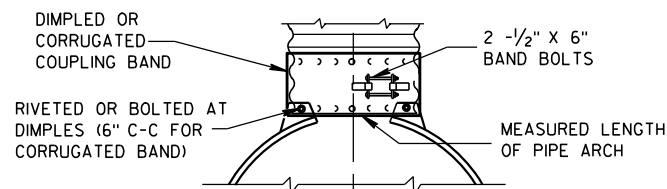
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH									
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅞	60	36	96	72	3 to 1
42	51	31	4½	15⅞	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE									
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPE

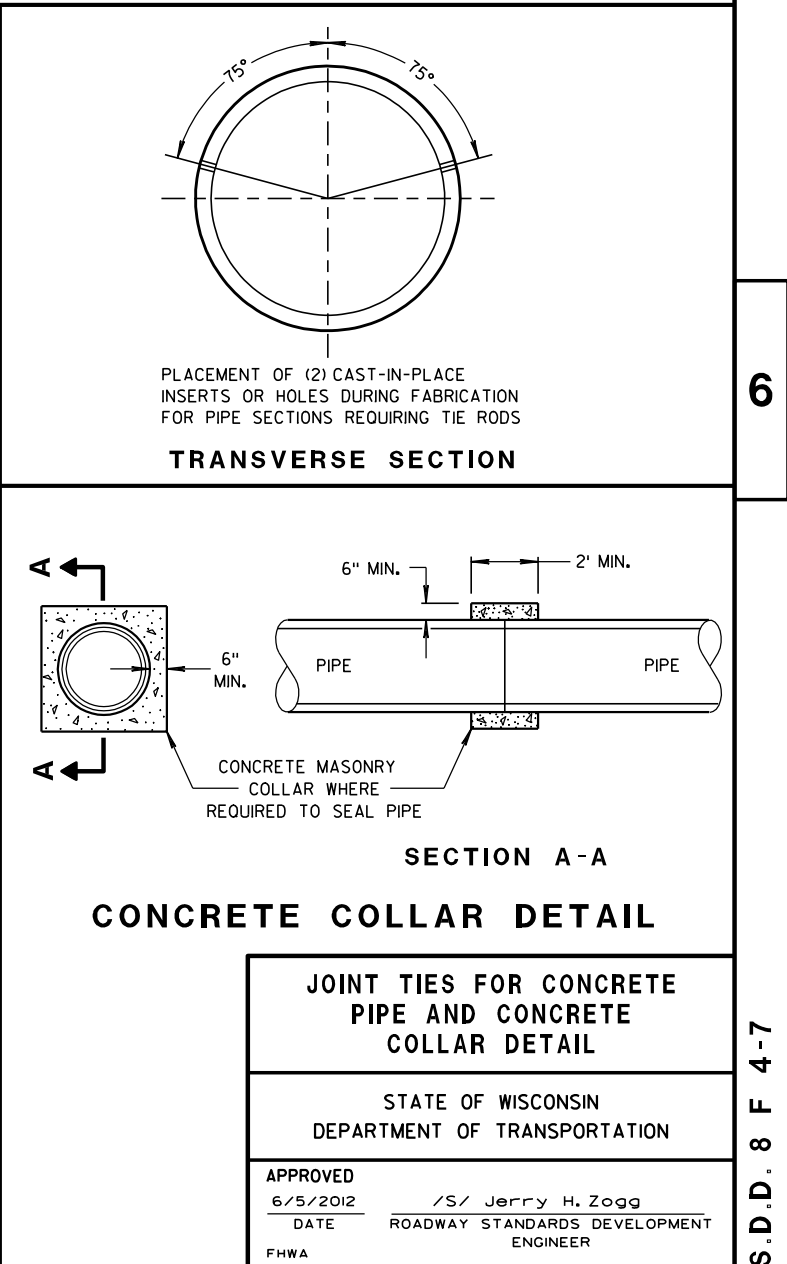
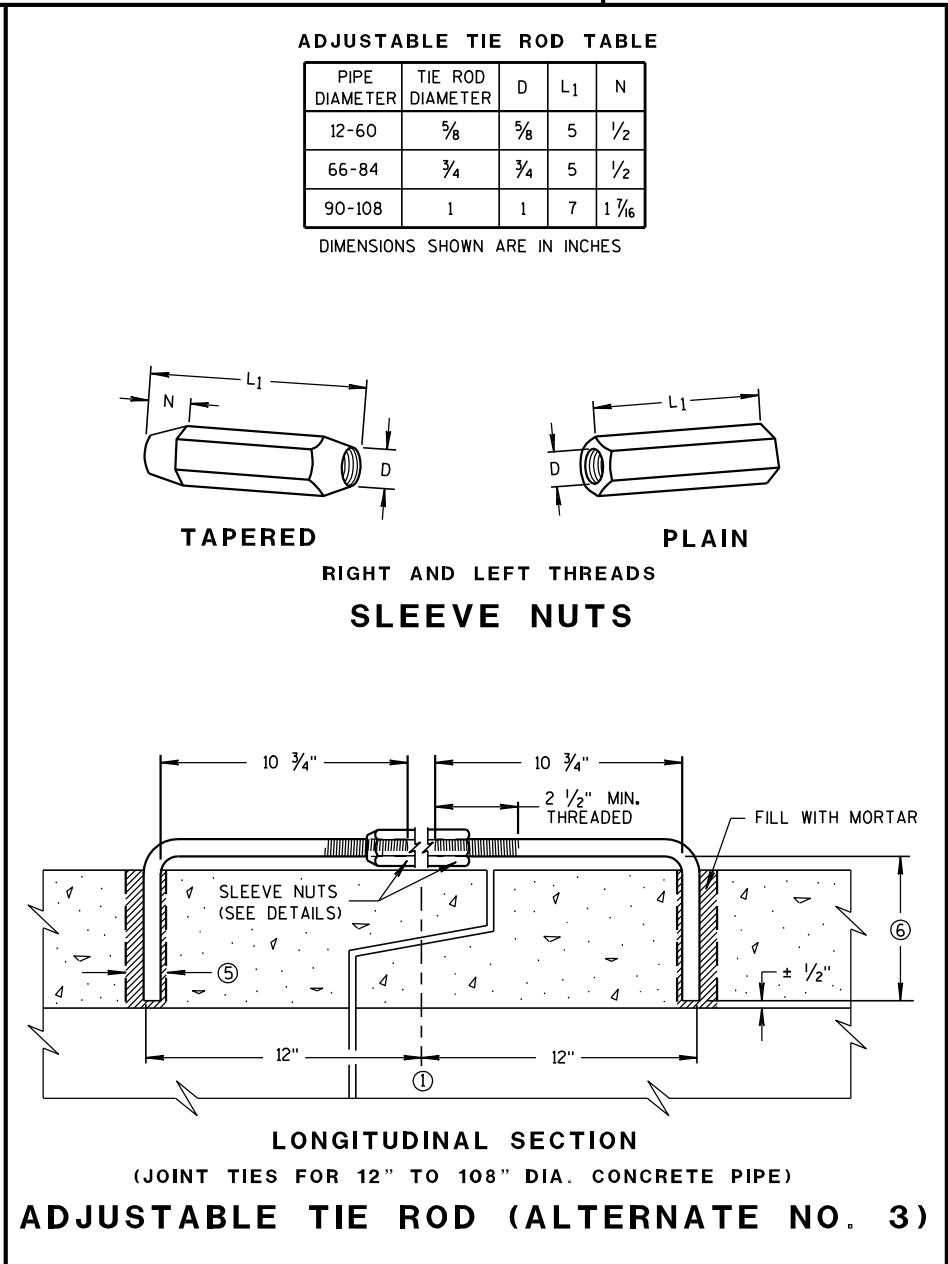
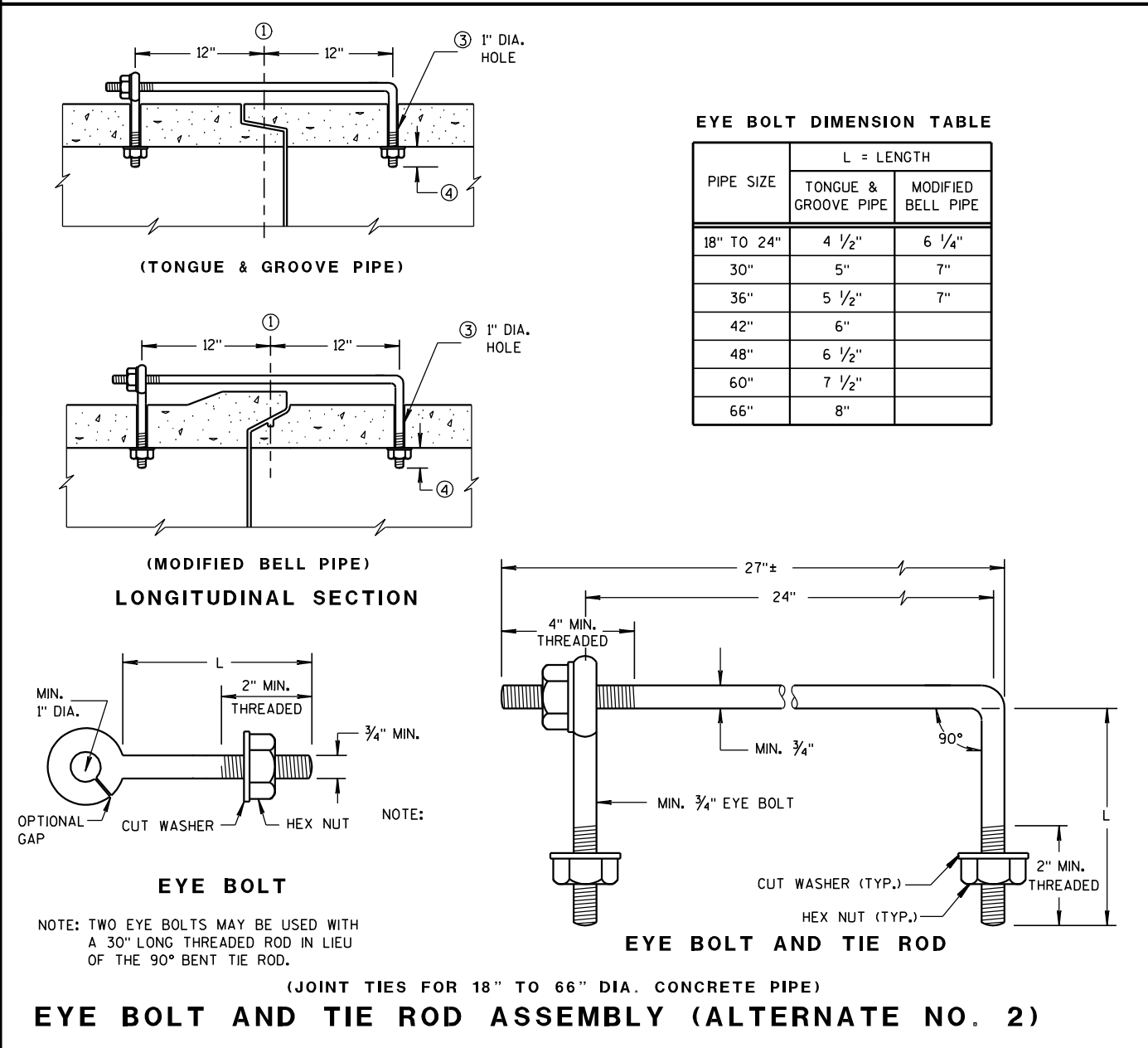
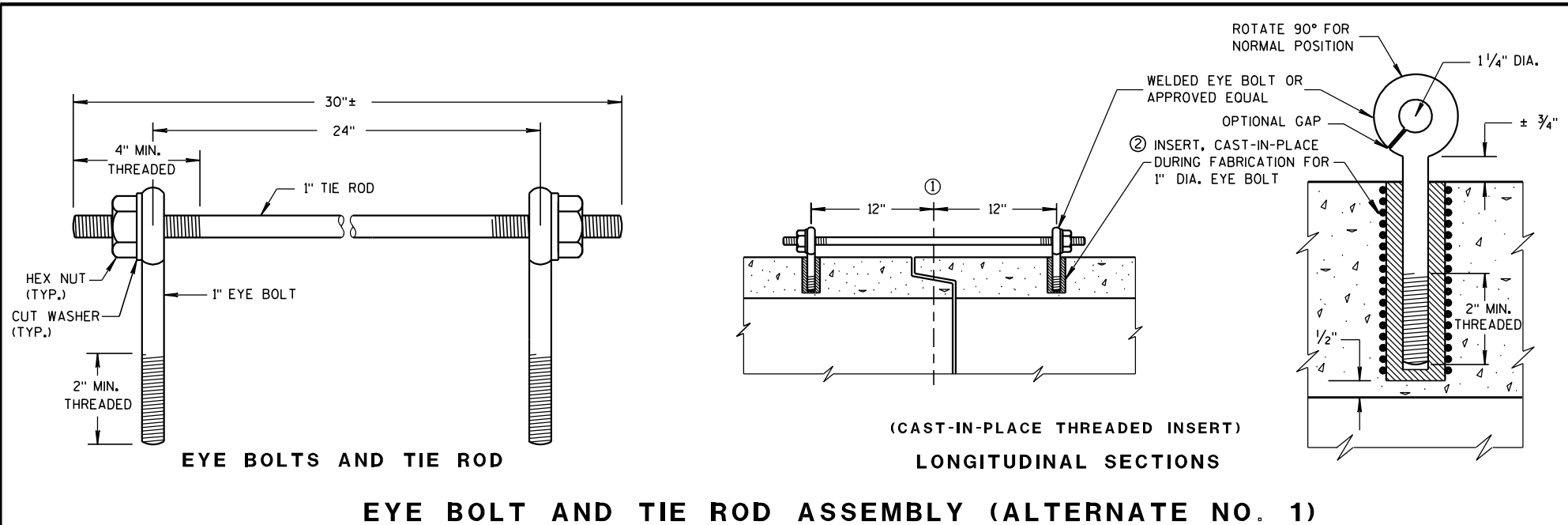
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94
DATE

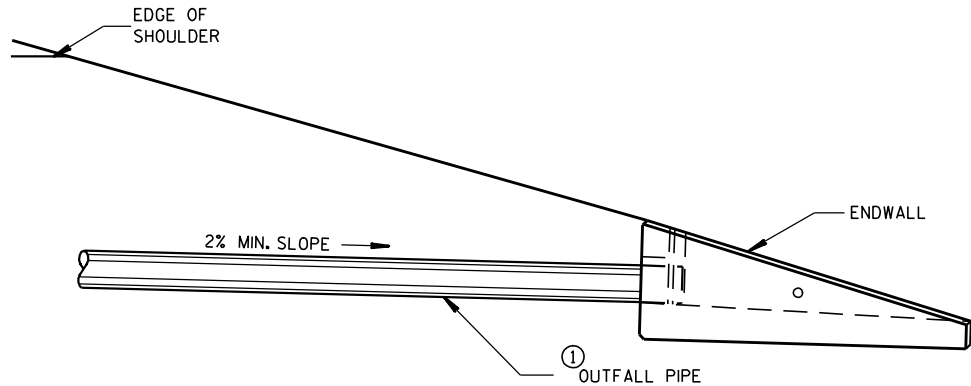
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

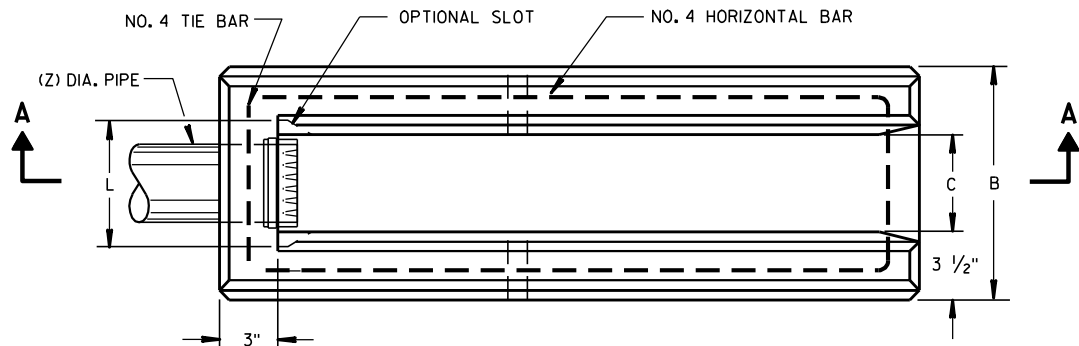


DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

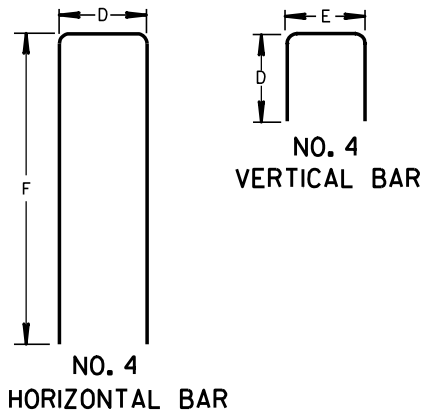
** APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



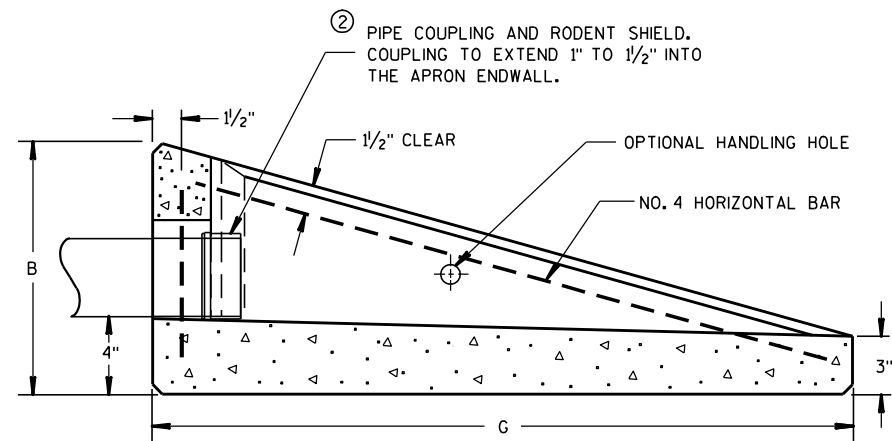
INSTALLATION DETAIL



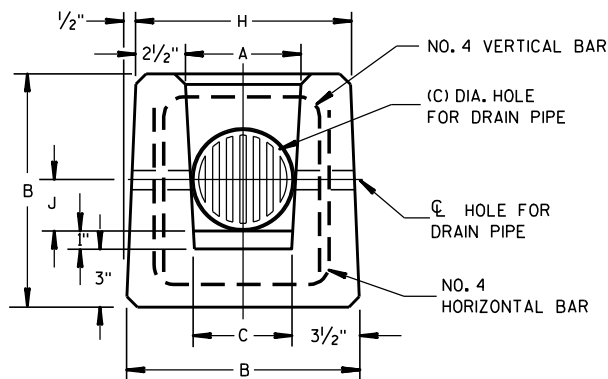
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



SECTION A-A
CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

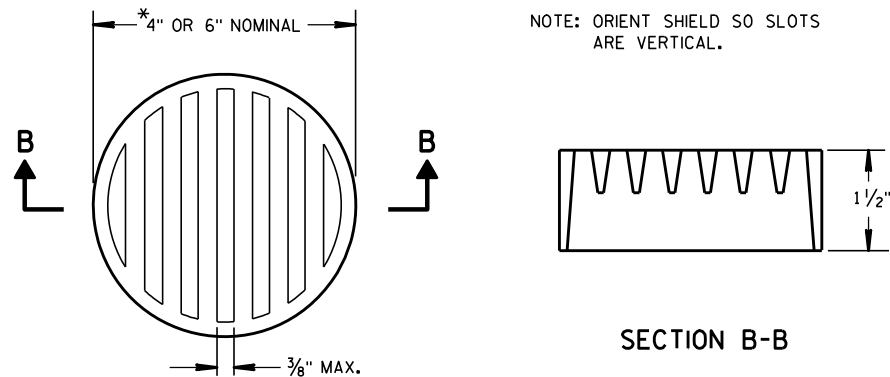
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



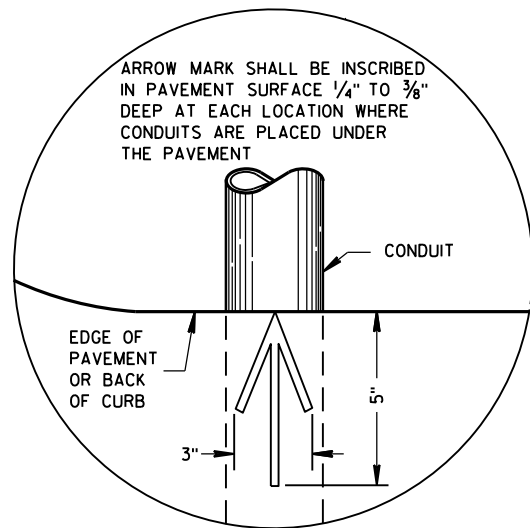
② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

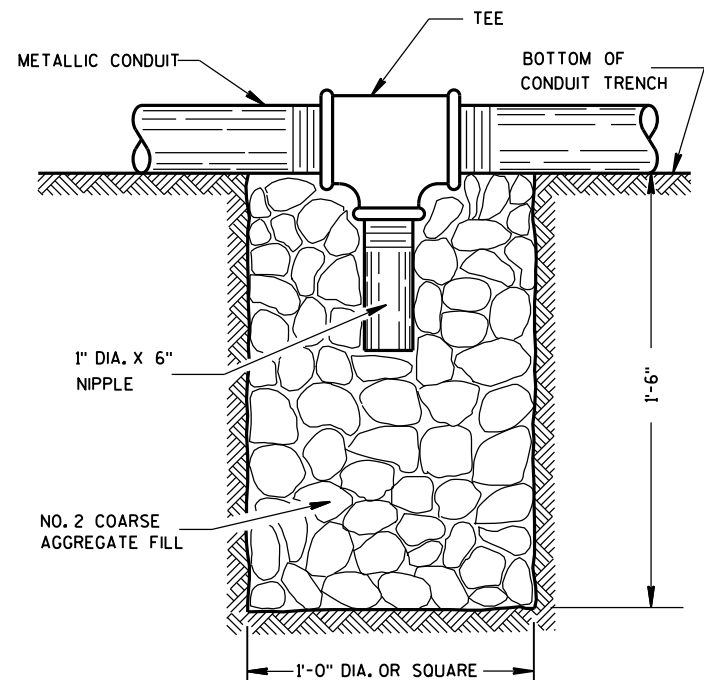
REINFORCED
CONCRETE APRON ENDWALL
FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

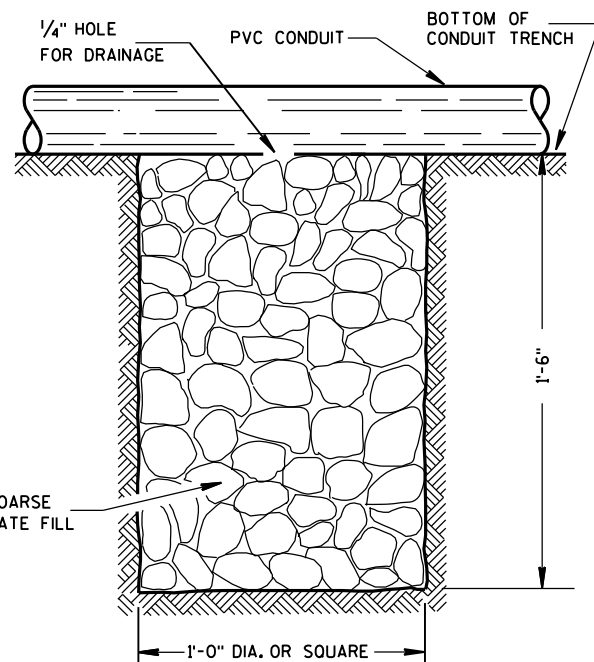


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

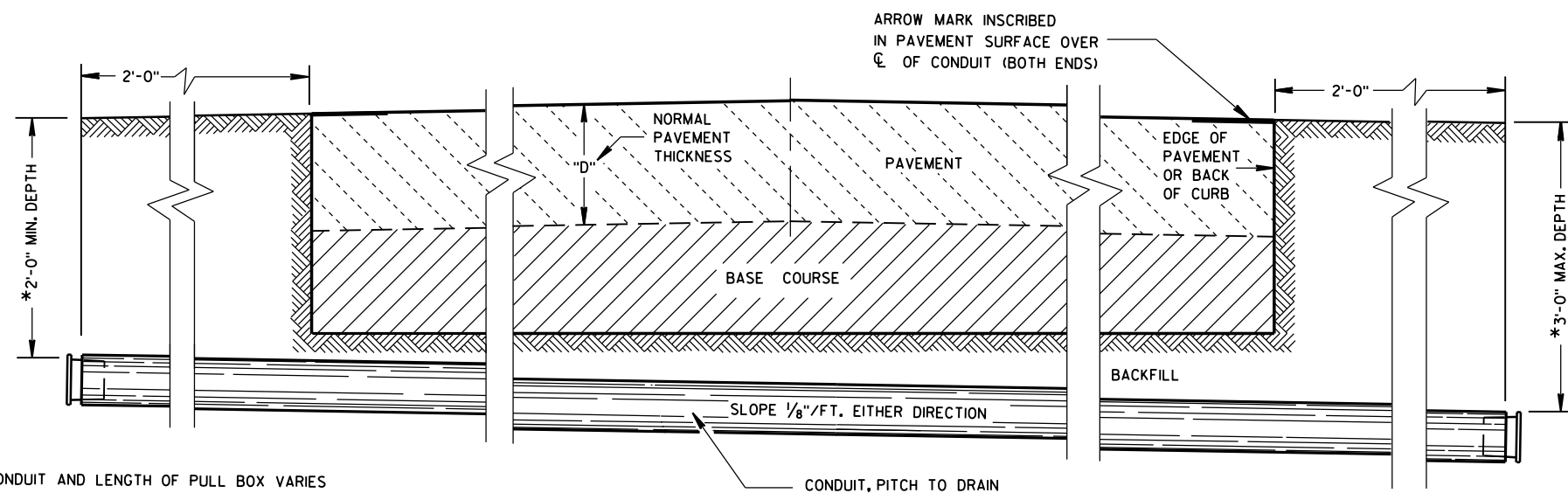
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

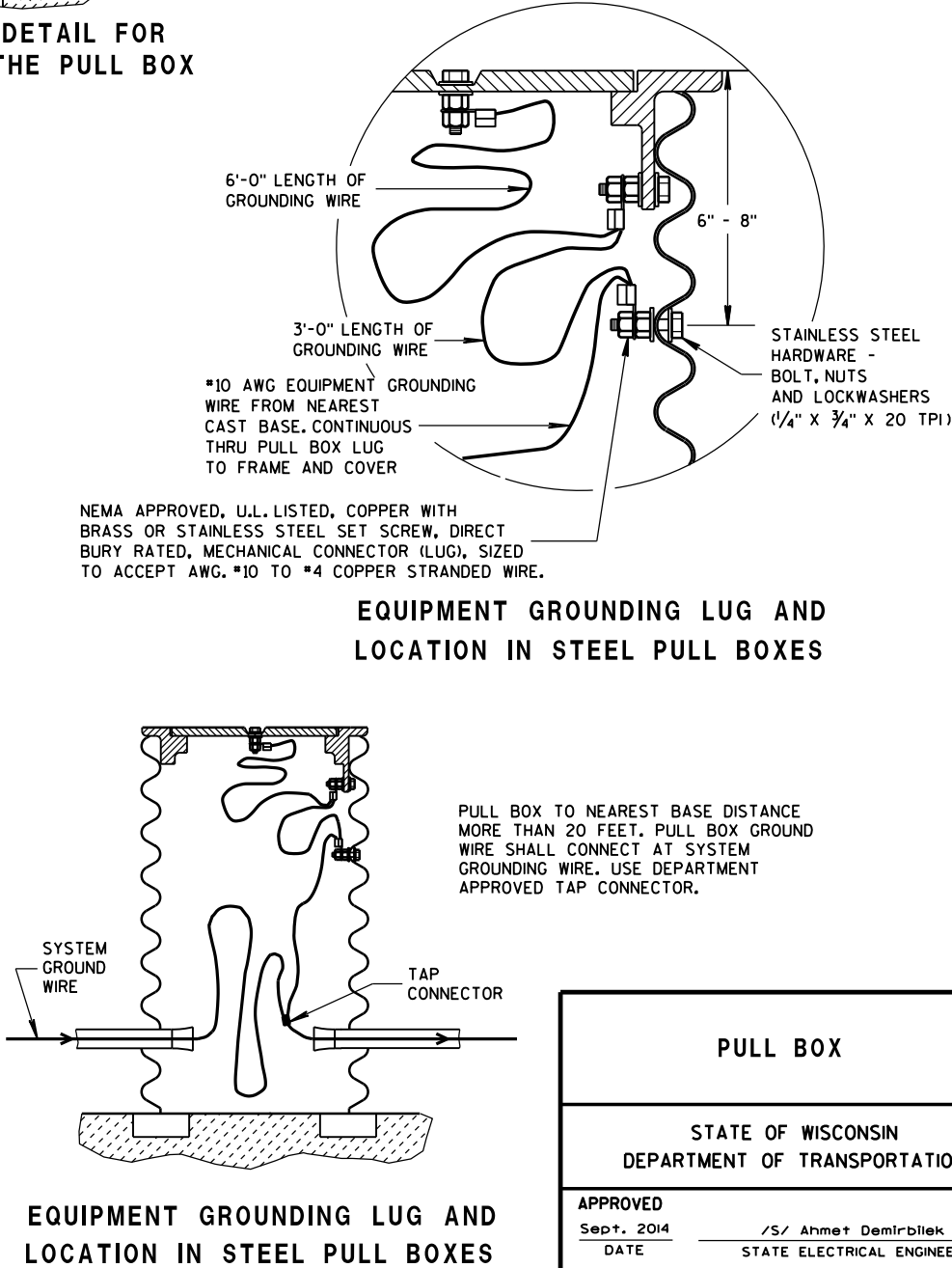
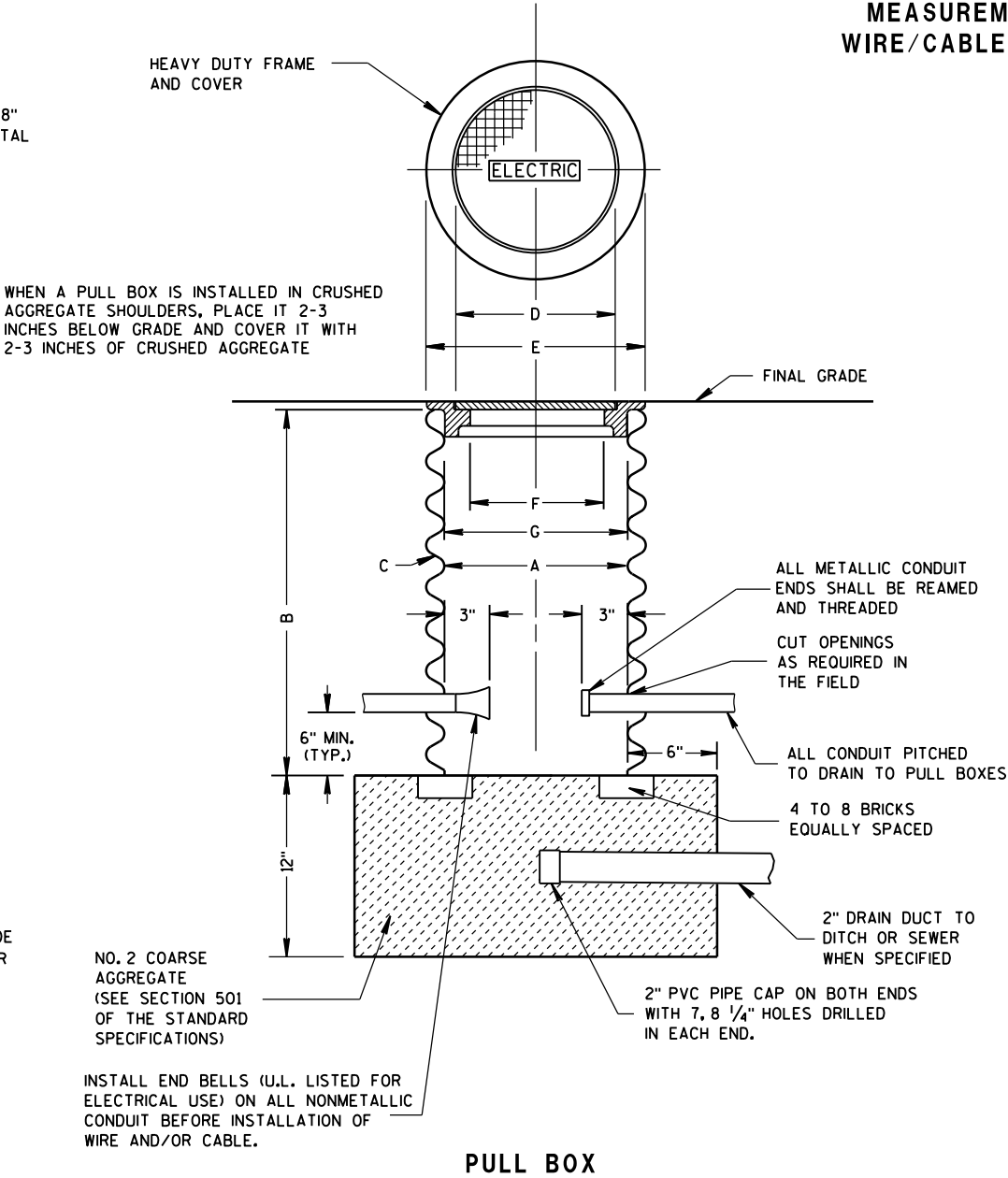
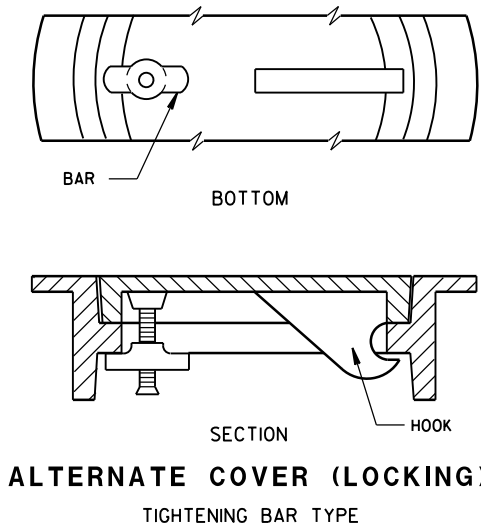
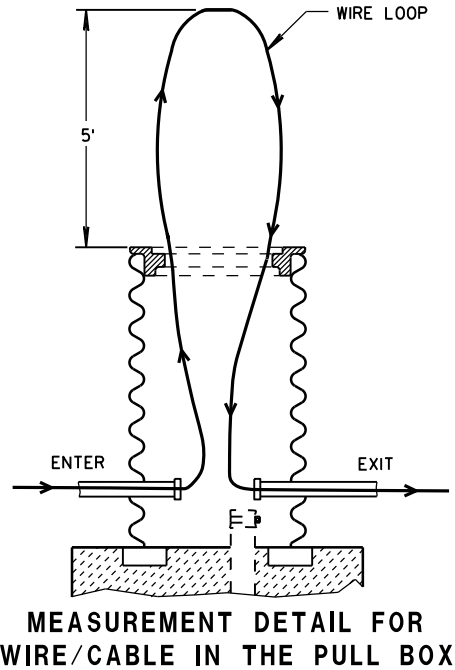
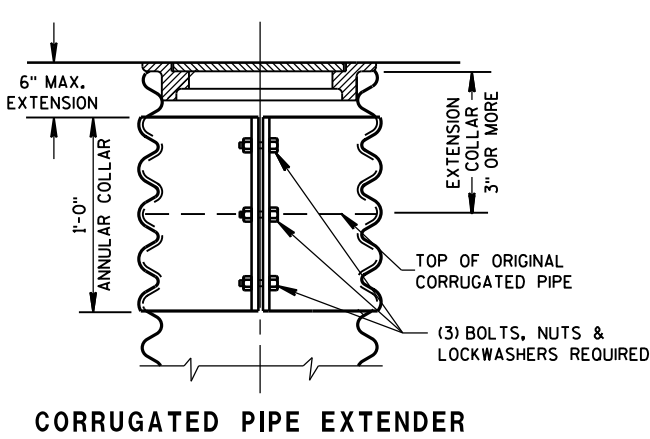
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

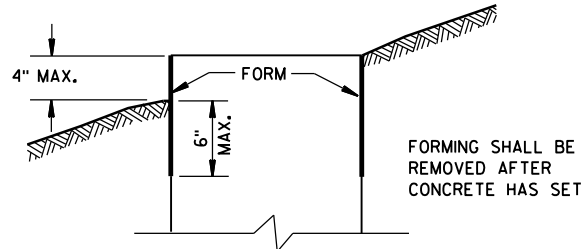
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

2 (4) 1" DIA. X 3'-6" ANCHOR RODS.

3 (4) 1" DIA. X 5'-0" ANCHOR RODS.

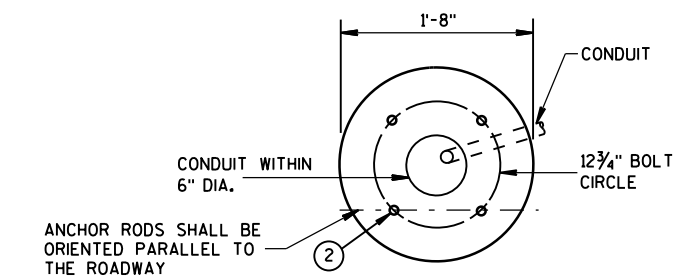
4 (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

6 (4) 1" DIA. X 3'-6" ANCHOR RODS.

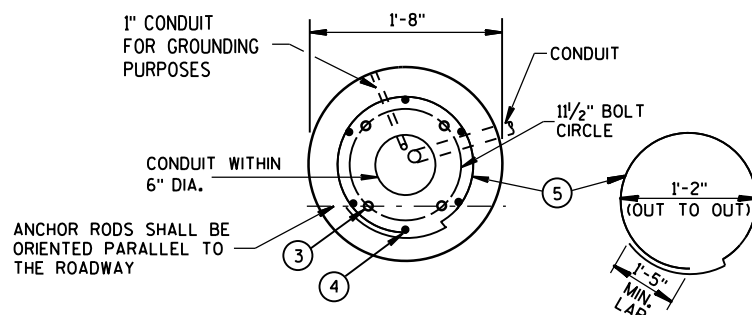
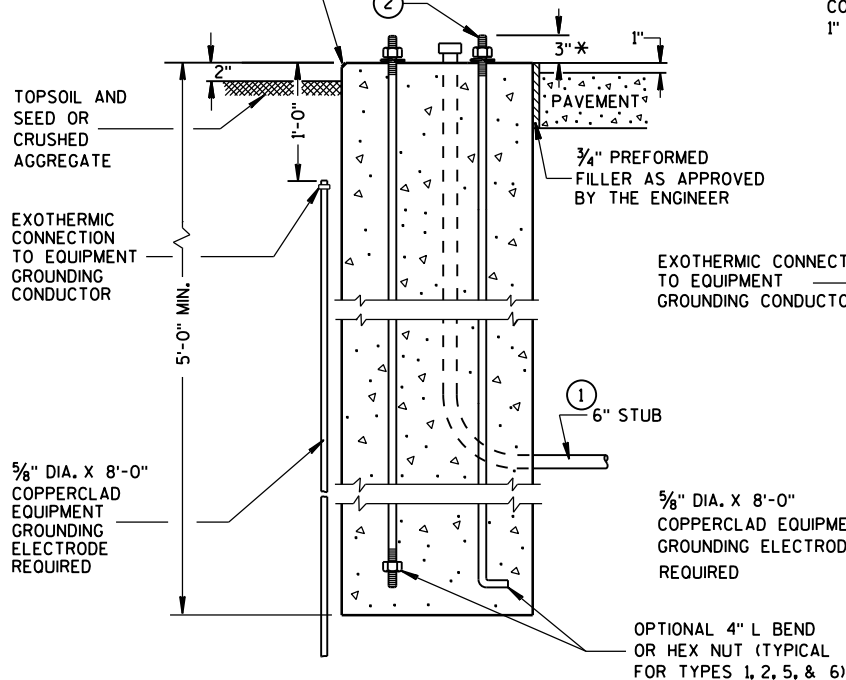
7 (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

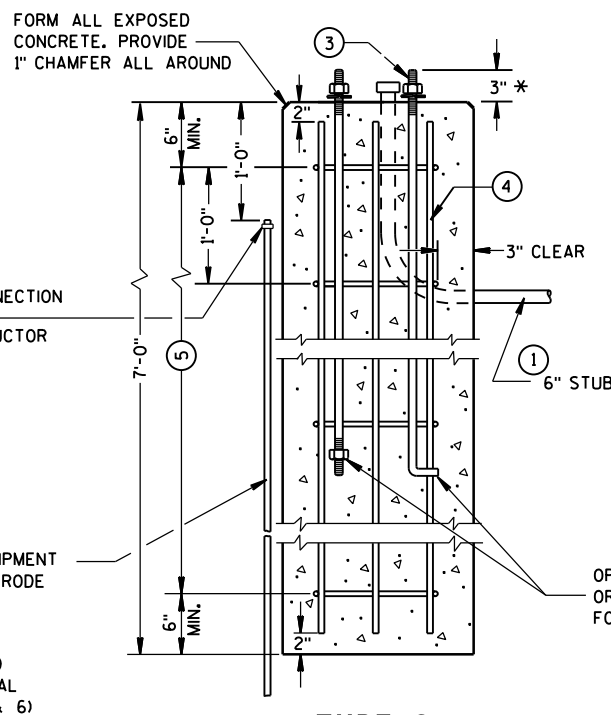


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2, 5, & 6)

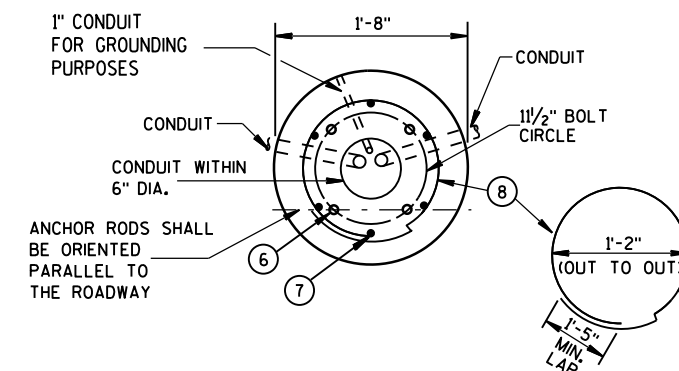


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

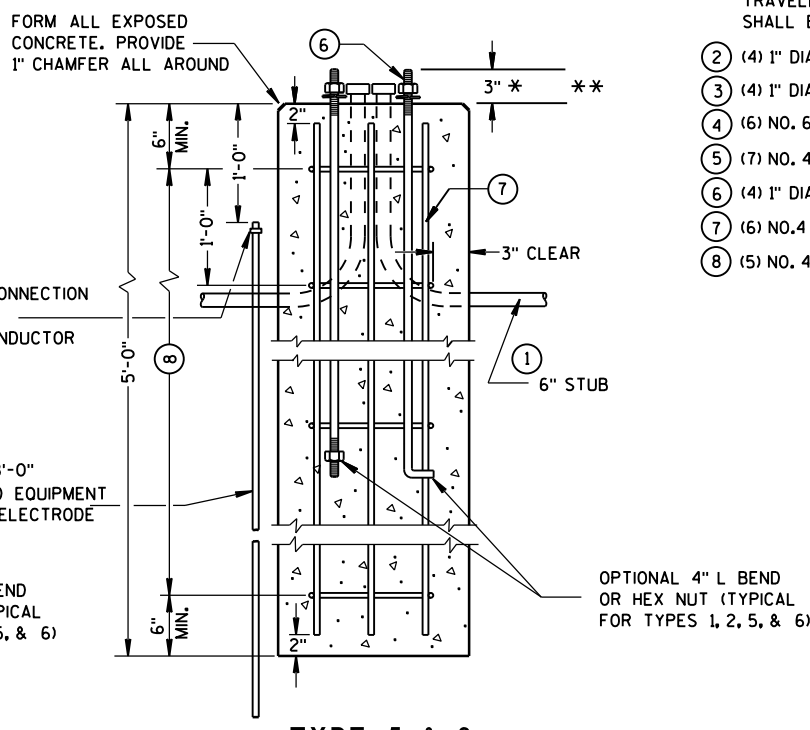


TYPE 2

CONCRETE BASES



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5 & 6

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 3/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" * ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

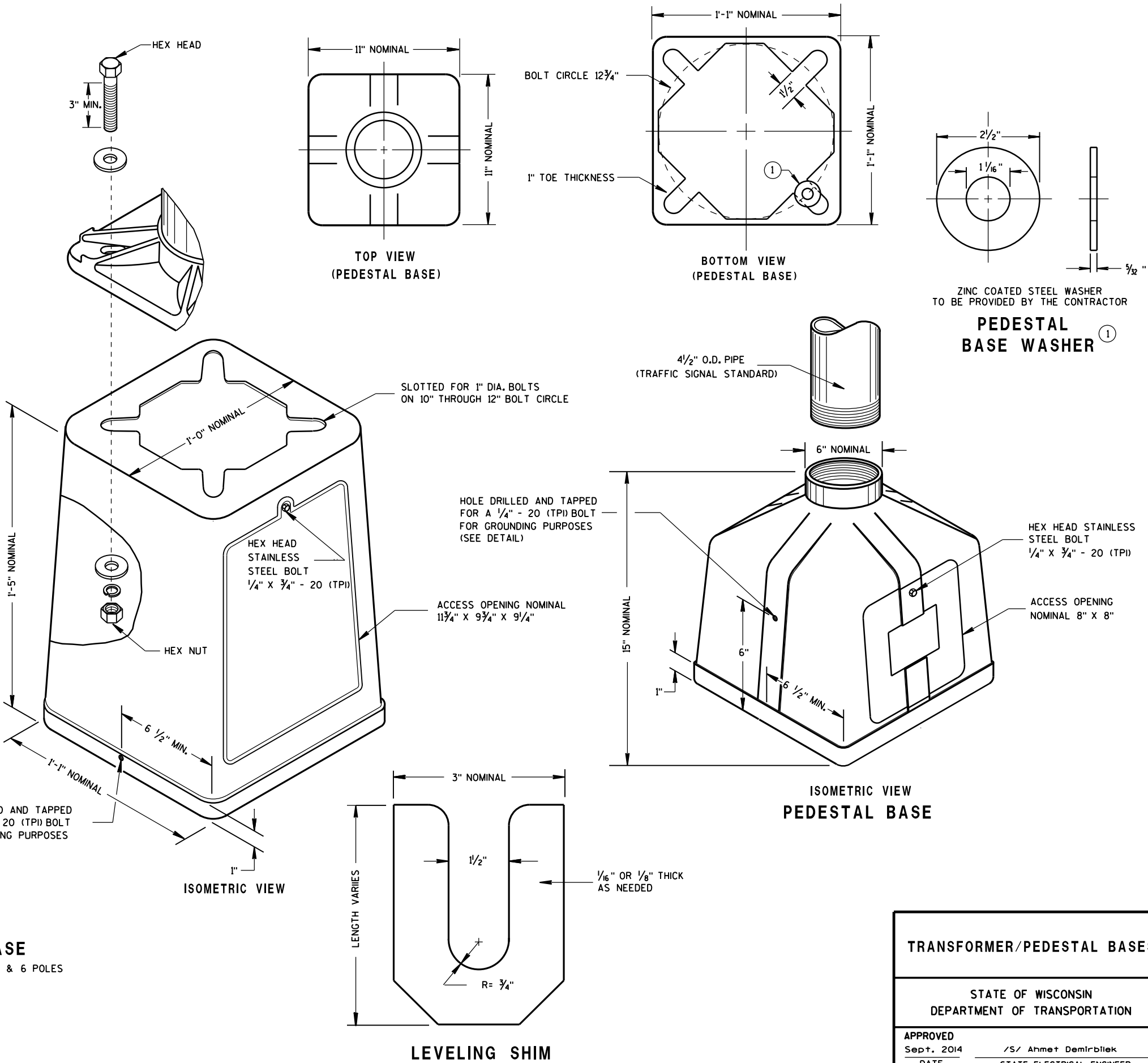
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



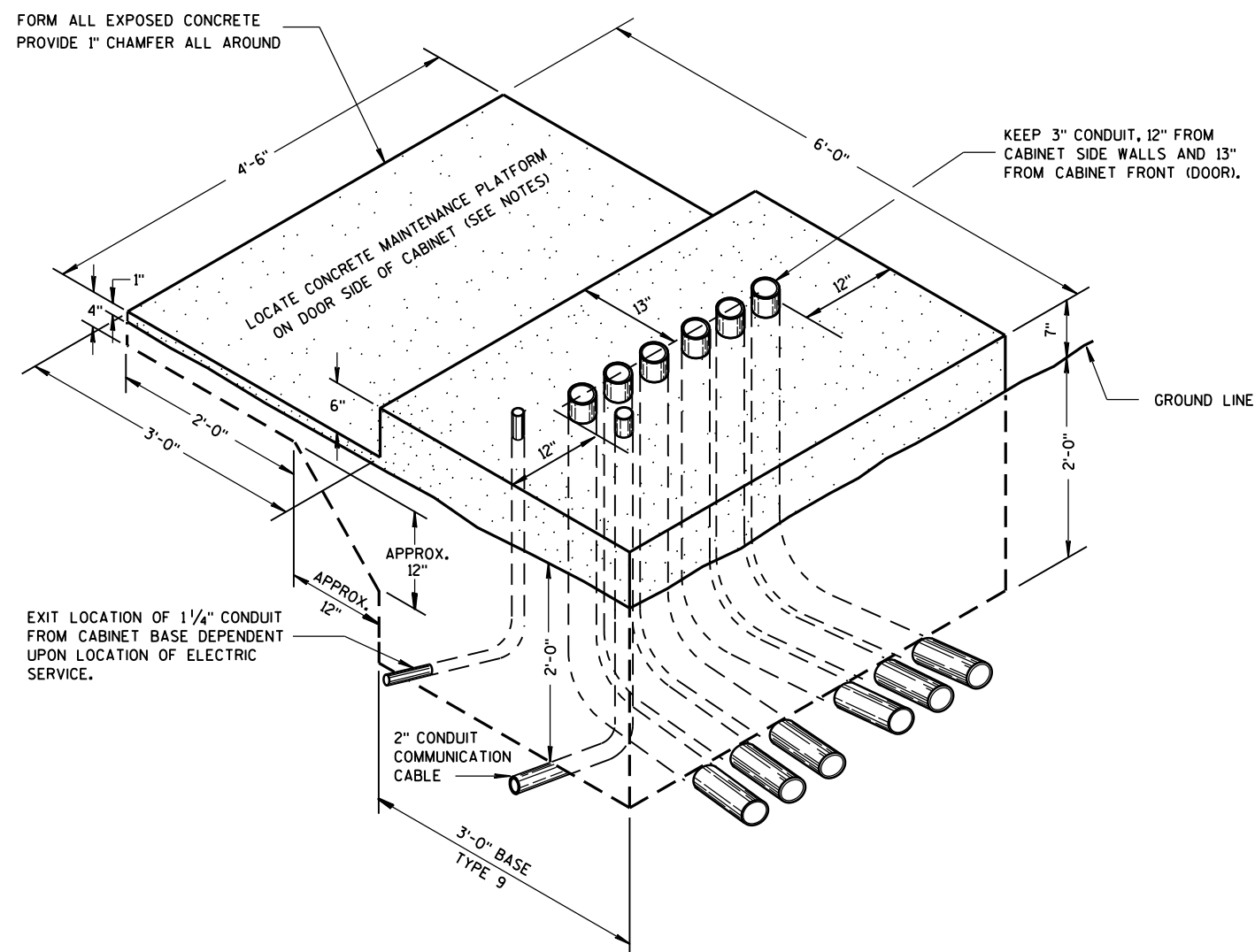
TYPICAL MECHANICAL CONNECTOR LUG TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

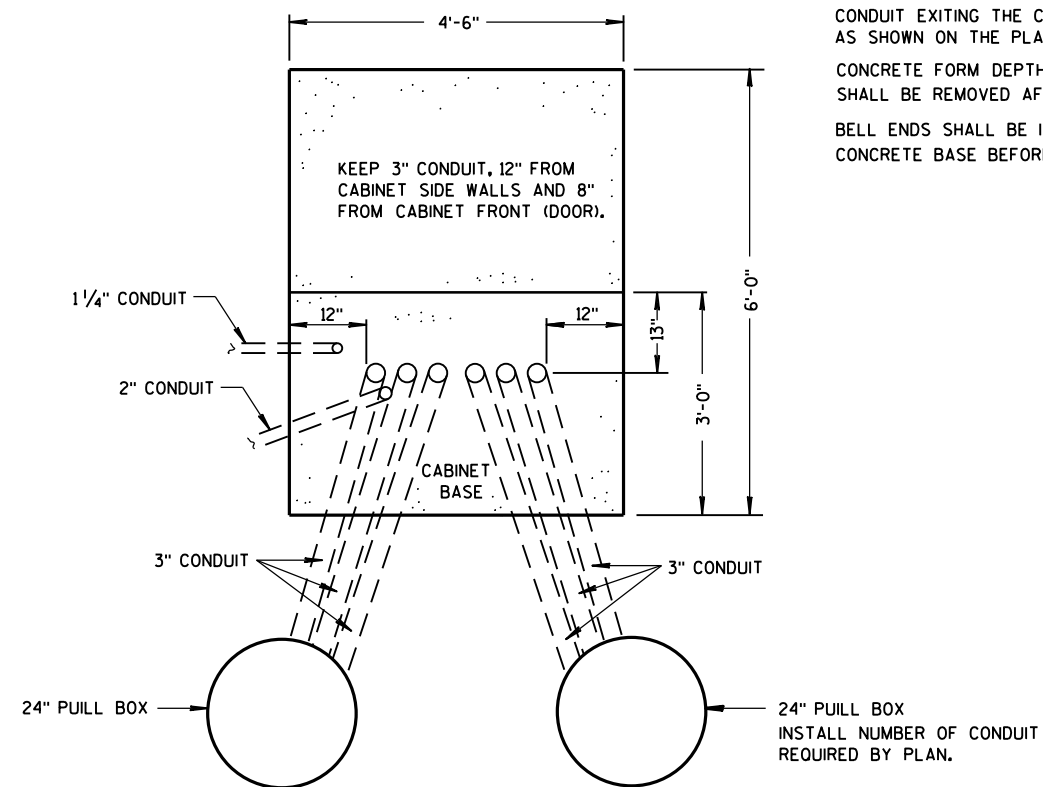
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED Sept. 2014 DATE /S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER FHWA



ISOMETRIC VIEW
TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET
BASE, TYPE 9, SPECIAL

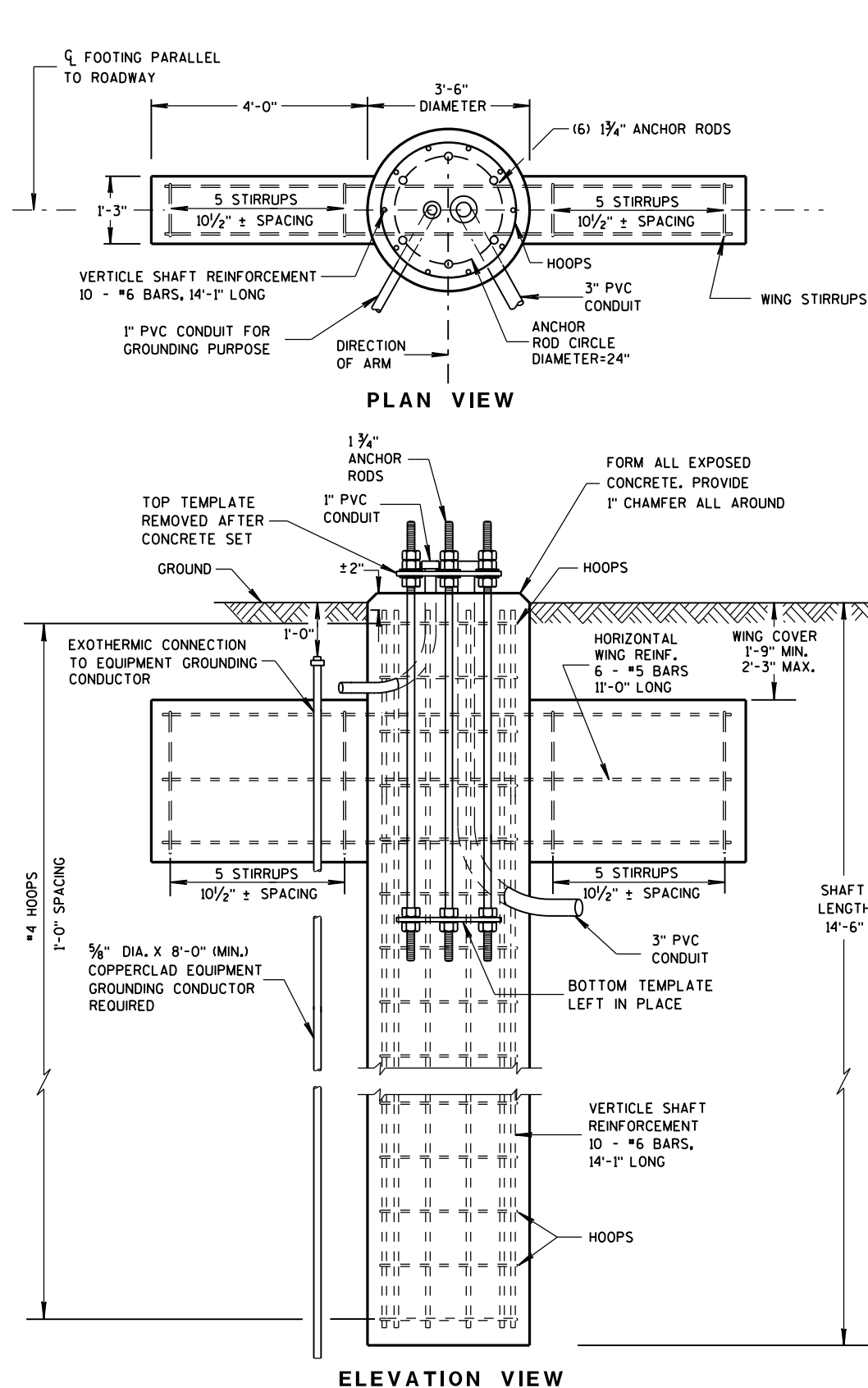
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

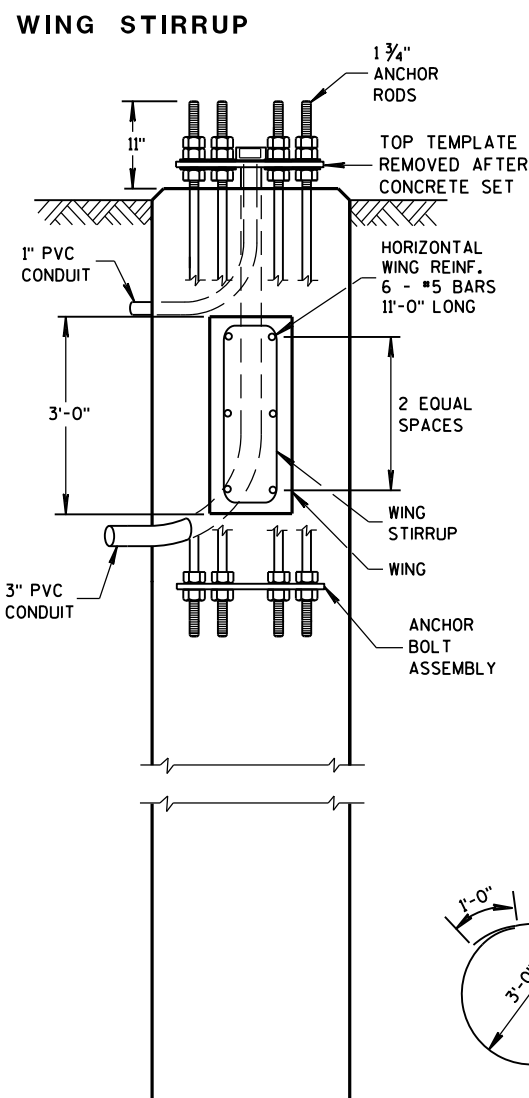
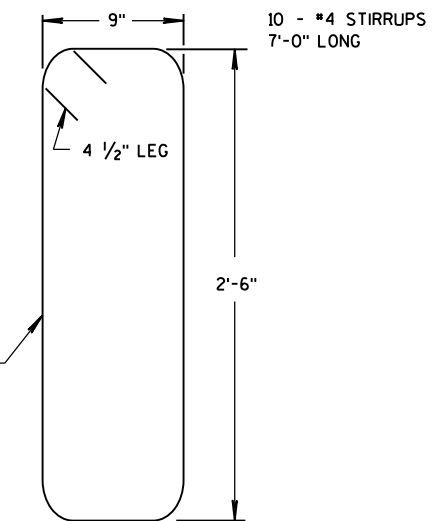
FHWA



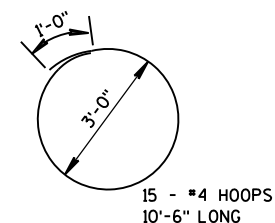
(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



DOES NOT SHOW HOOPS OR
VERTICAL SHAFT REINFORCEMENT



GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

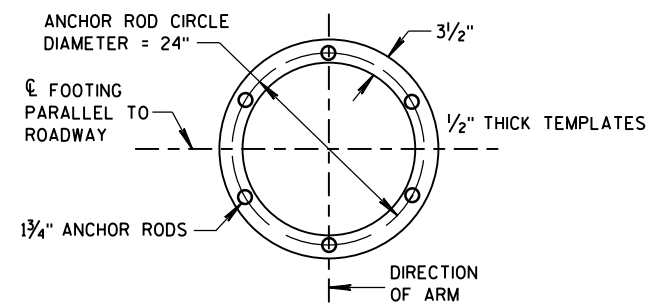
THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

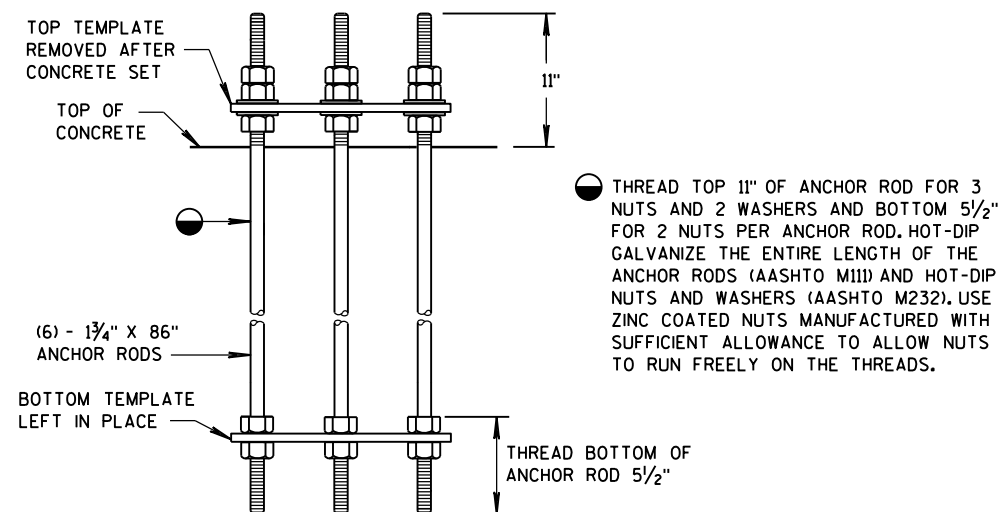
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

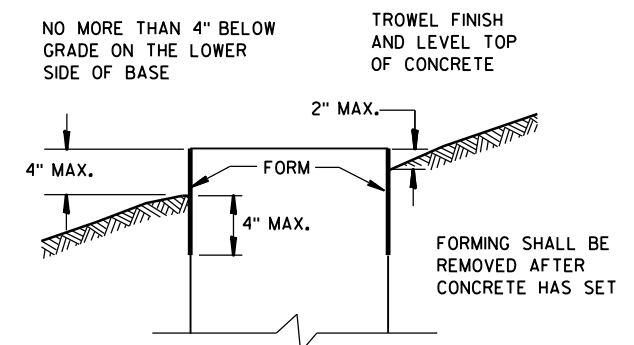


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Feb. 2015

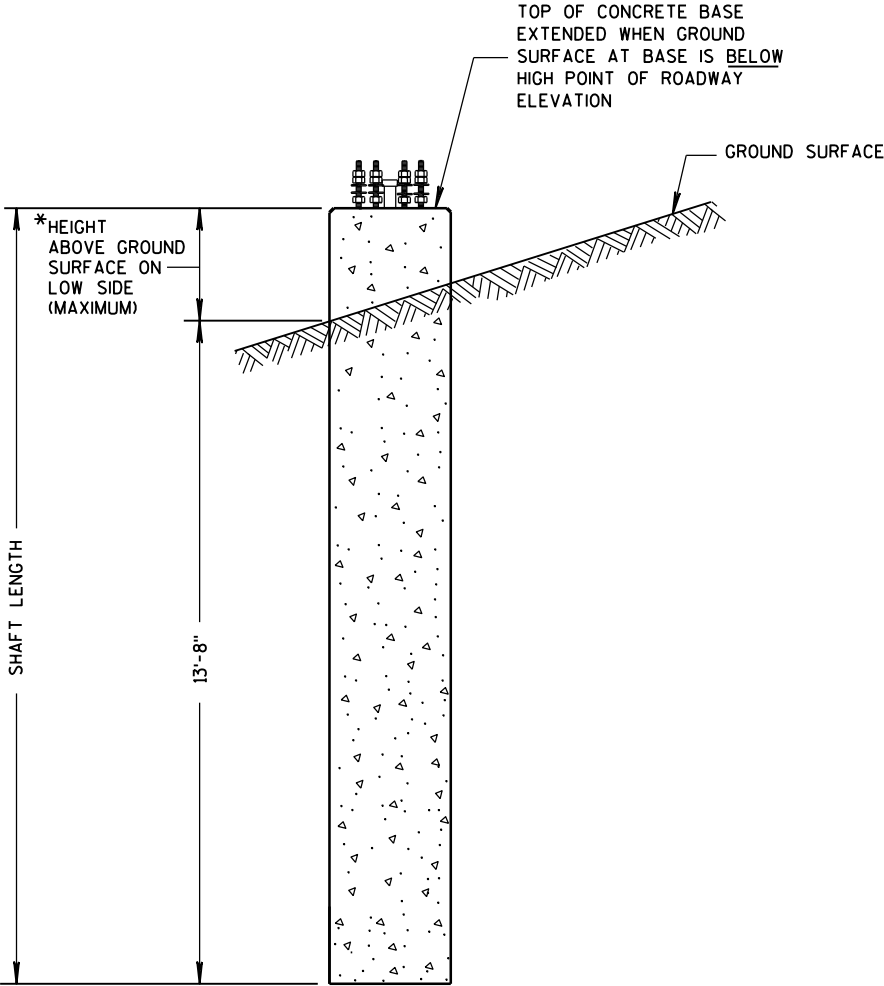
DATE

FHWA

/S/ Ahmet Demirelek
STATE ELECTRICAL ENGINEER

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

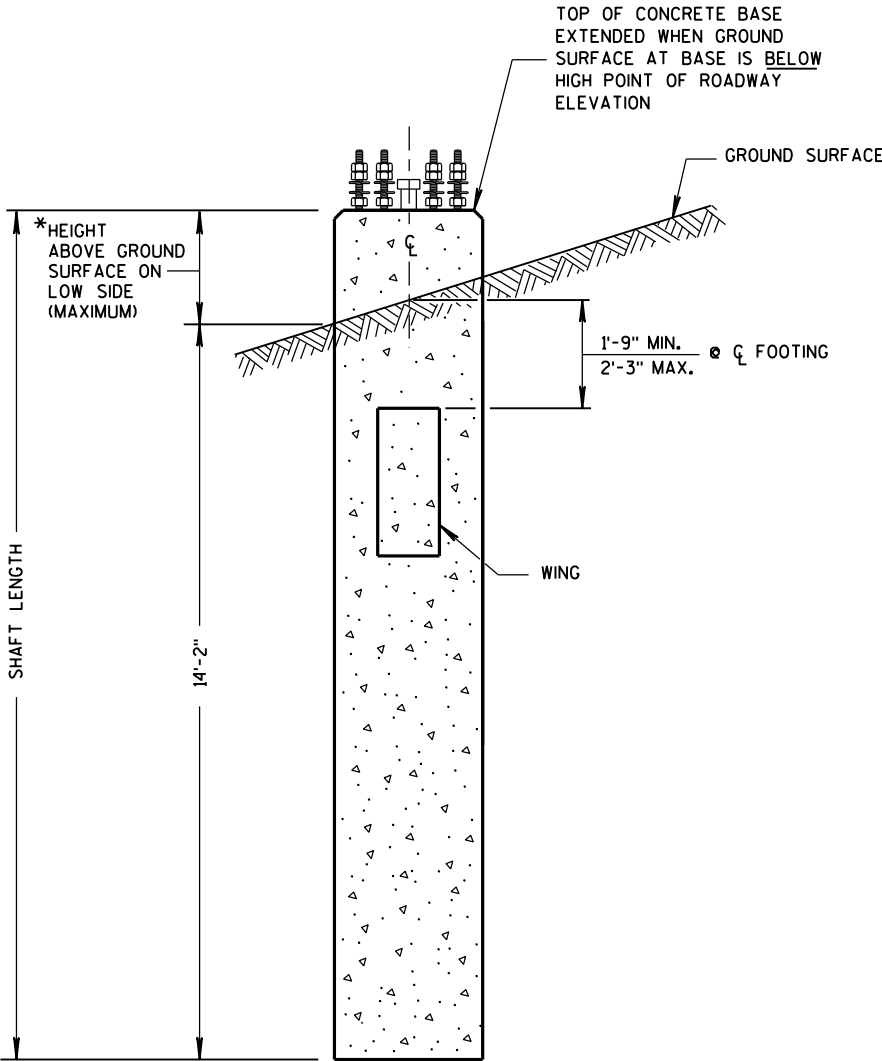
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476

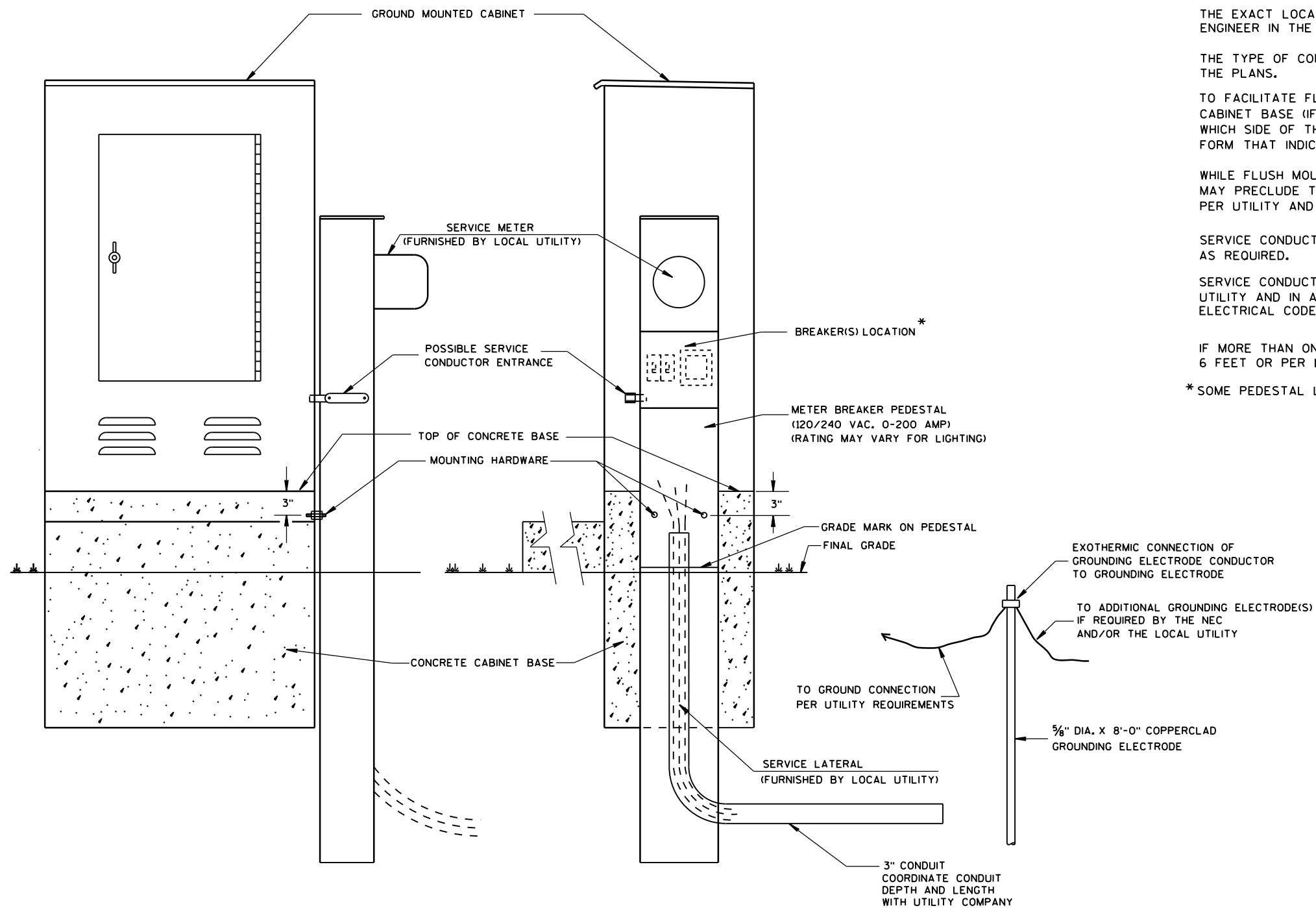


CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

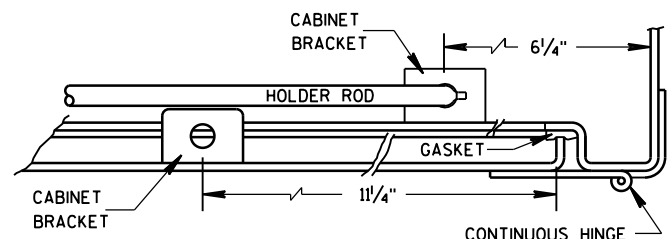
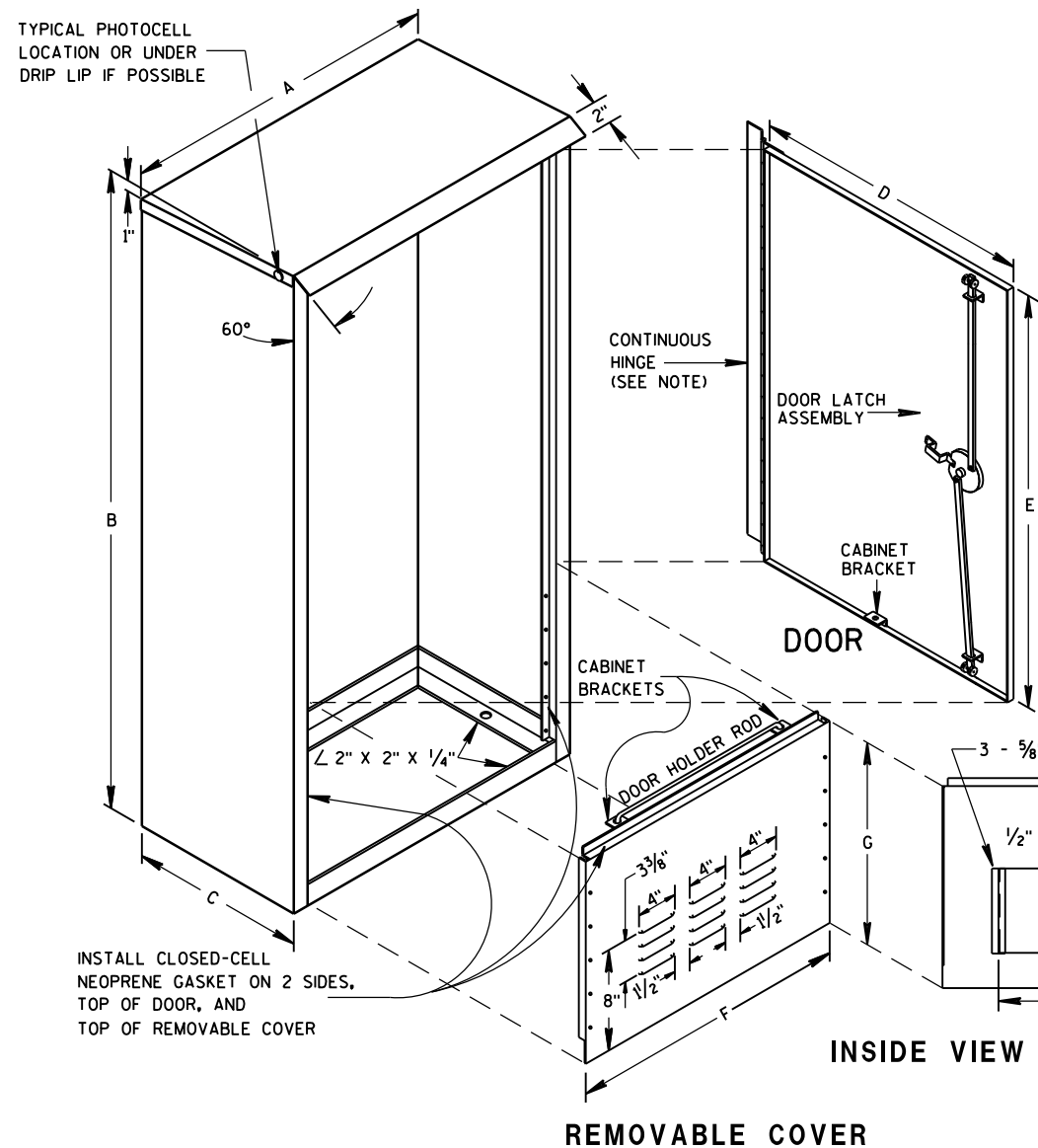
CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

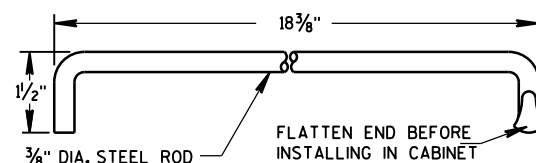
APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

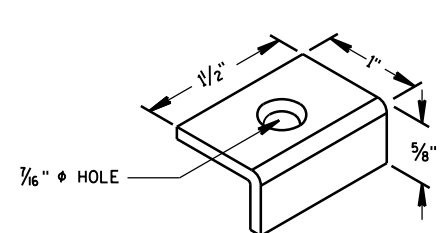
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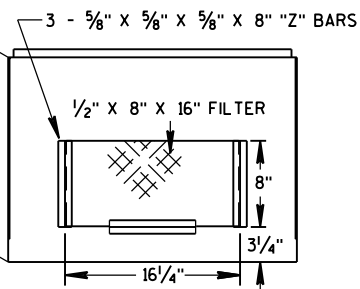
HINGE & DOOR HOLDER



HOLDER ROD



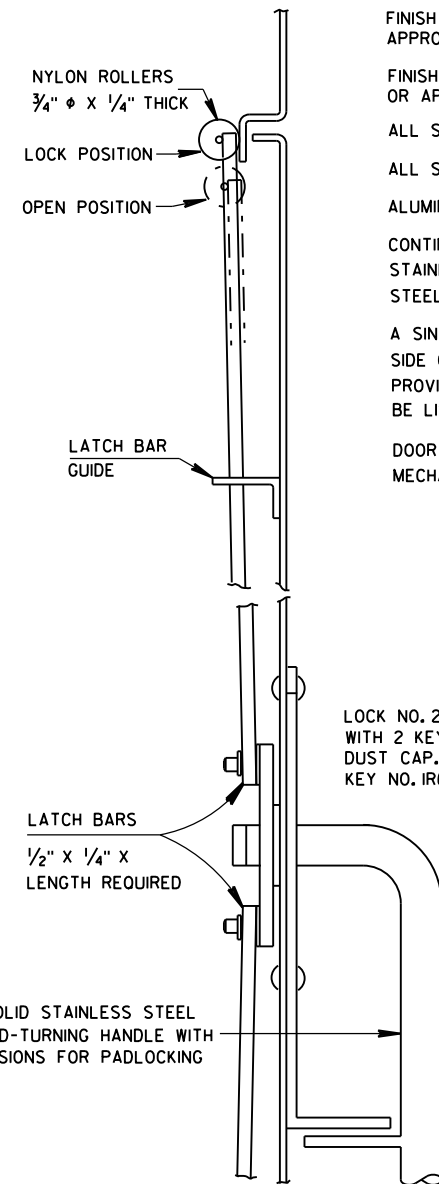
CABINET BRACKET



INSIDE VIEW SHOWING FILTER

TABLE OF DIMENSIONS (INCHES)

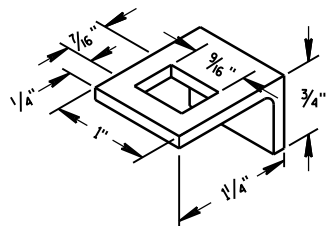
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

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.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

SIGNAL
CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

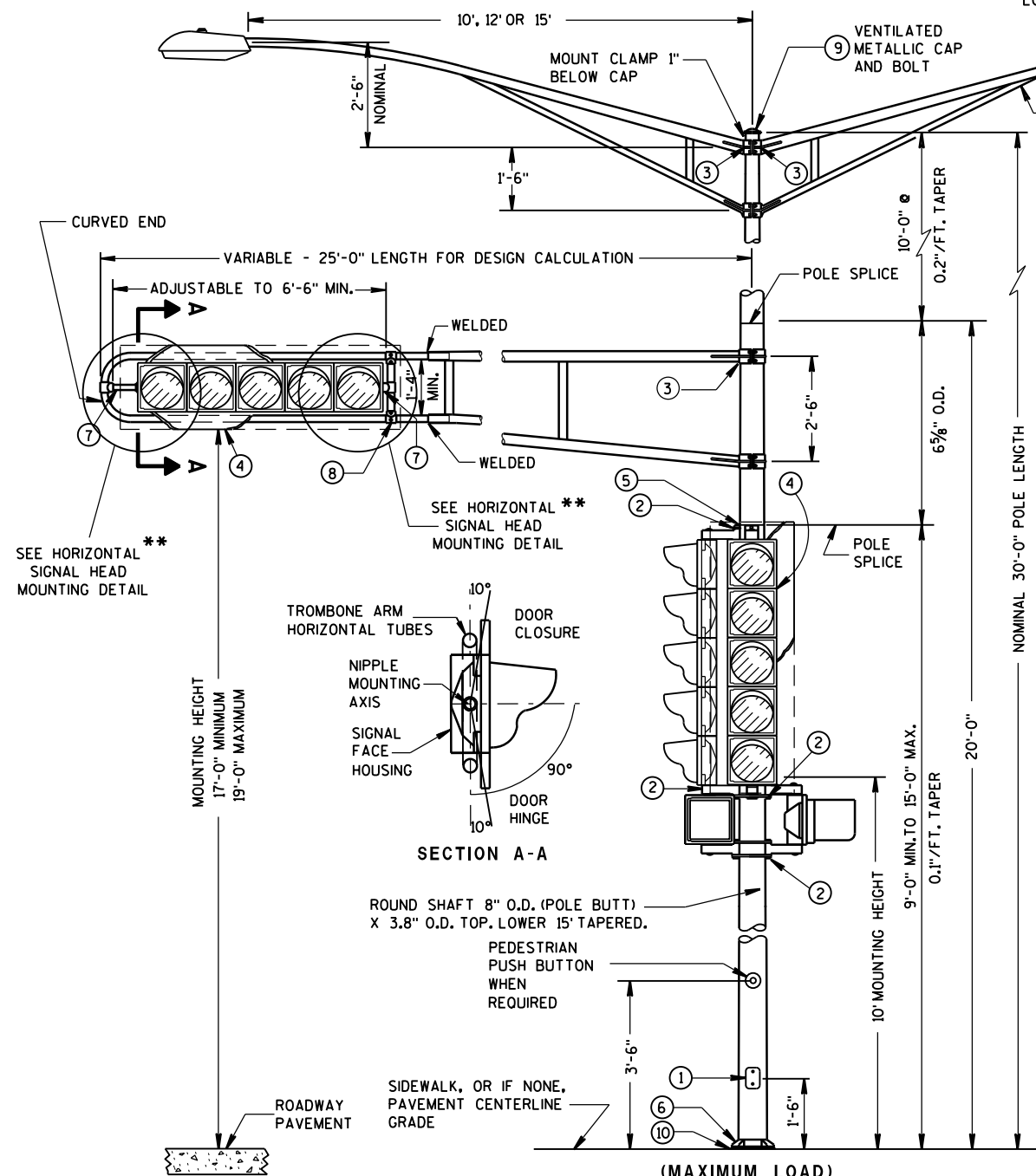
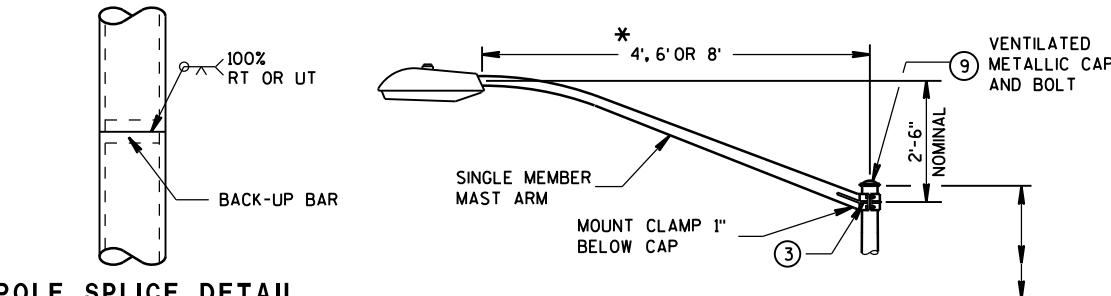
APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

FOR MANUFACTURERS USE ONLY

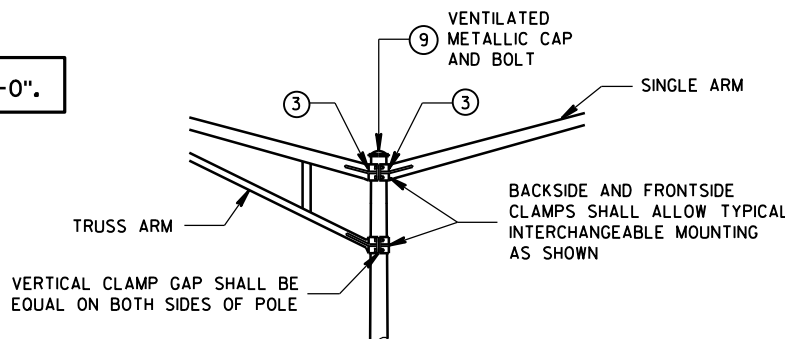
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

* RISE FOR 4' ARM SHALL BE 2'-0".

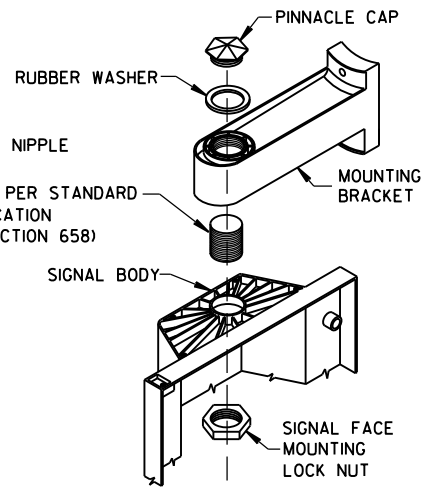
POLE SPLICE DETAIL



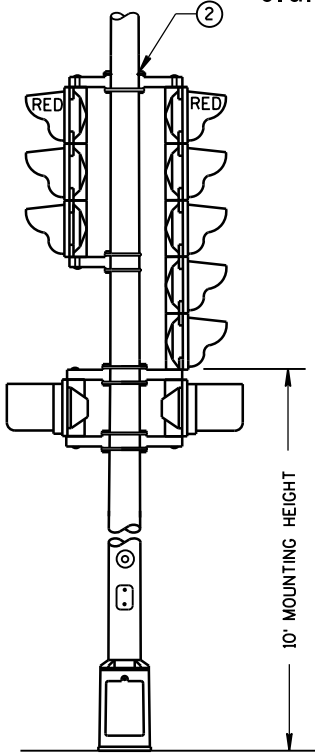
INTERCHANGEABLE MOUNTING DETAIL



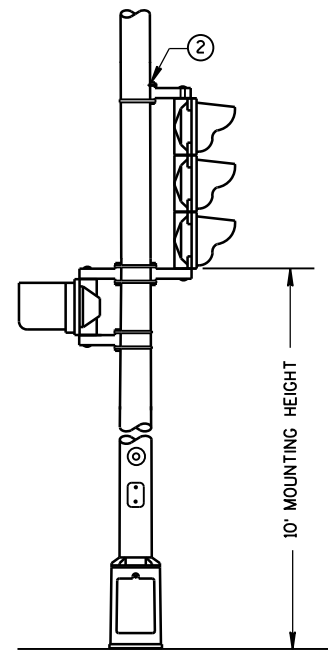
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.



SIGNAL FACE MOUNTING DETAIL (BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

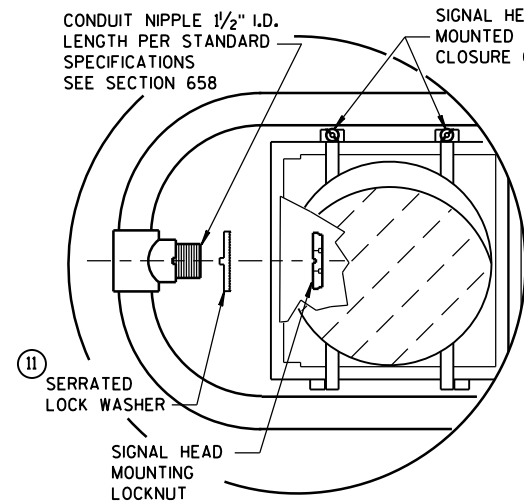
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8" INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
- GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.
- MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1 1/2 INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)
- VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



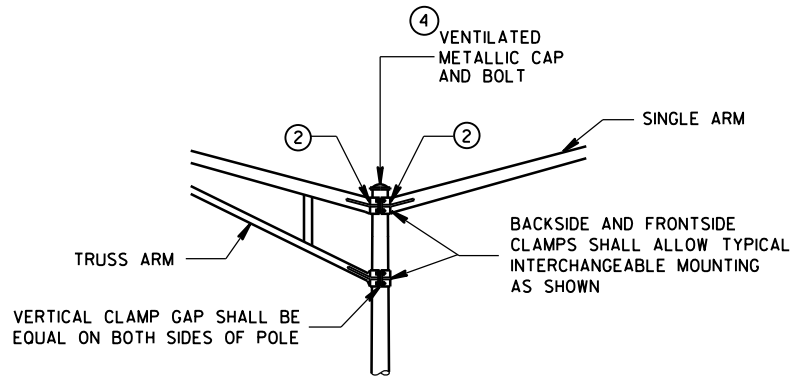
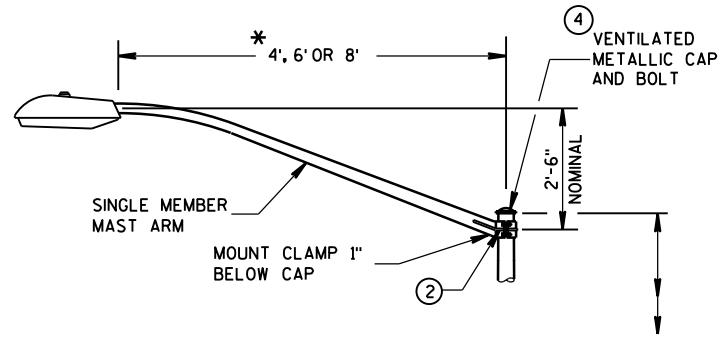
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

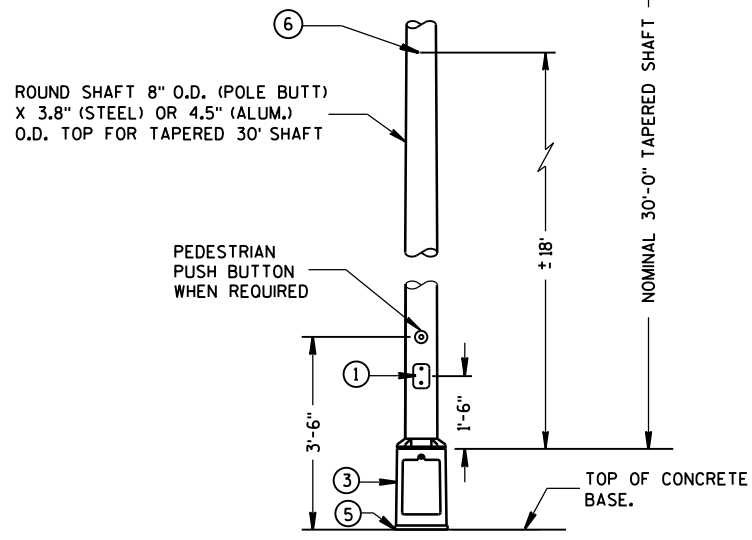
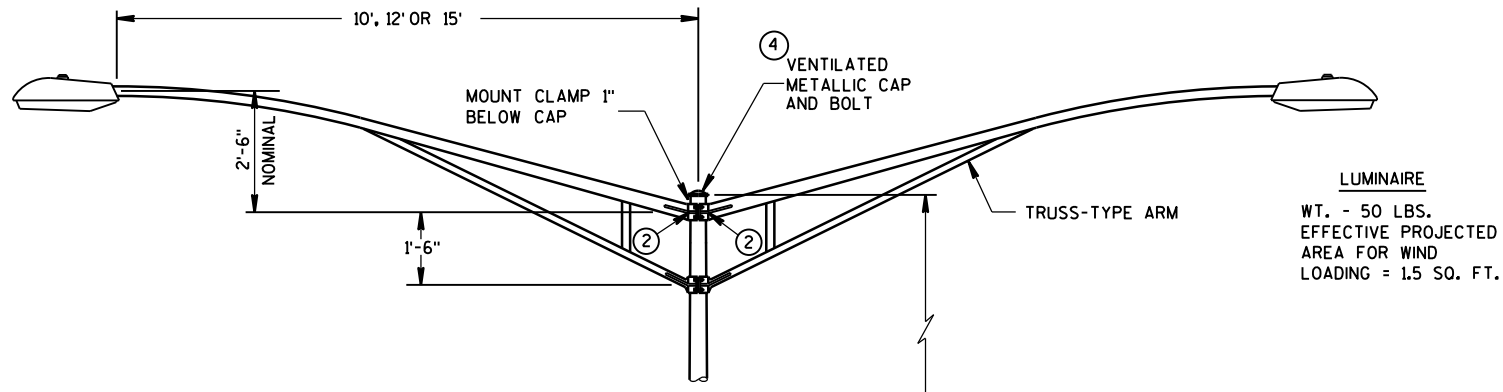
POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

* RISE FOR 4' ARM SHALL BE 2'-0".



INTERCHANGEABLE MOUNTING DETAIL



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

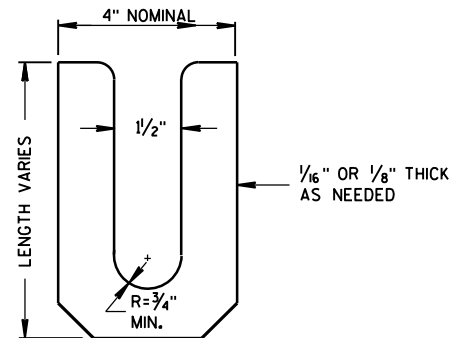
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

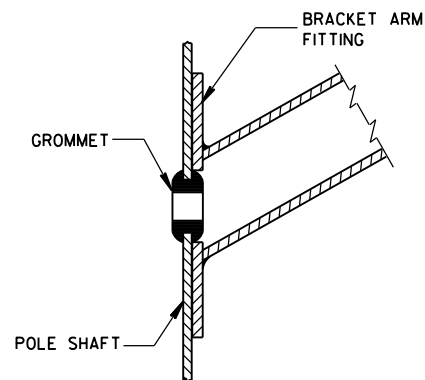
- ① 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" x 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" x 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑥ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

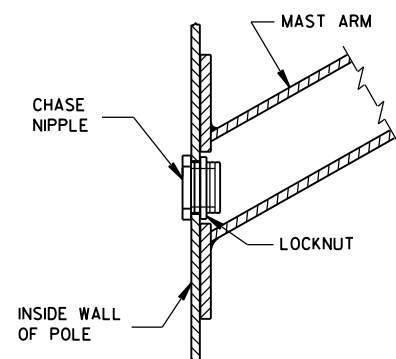
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



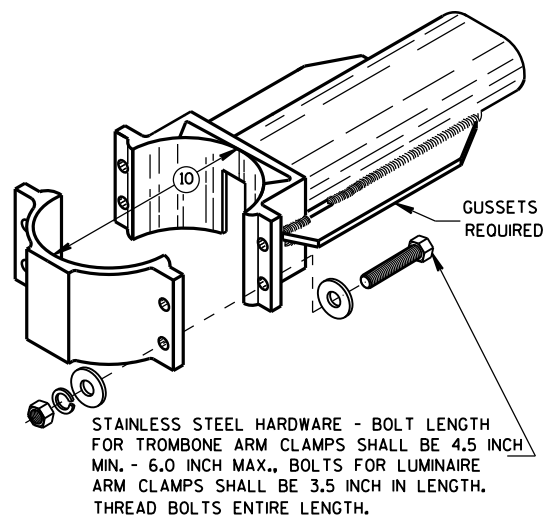
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

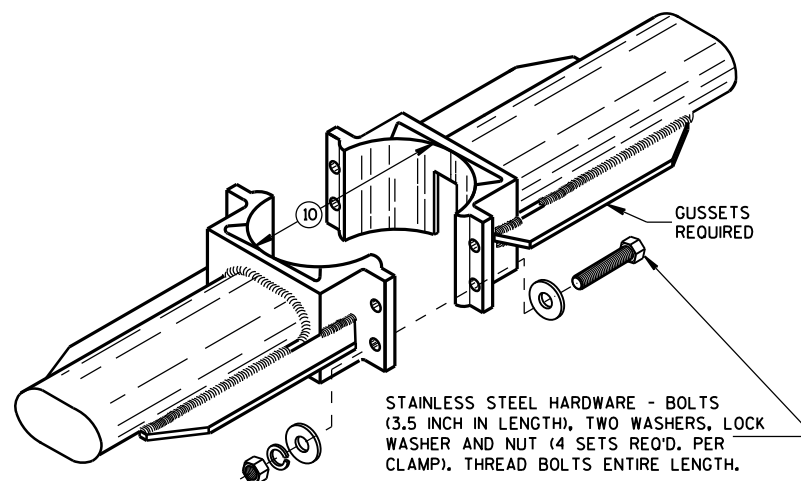
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ⑩ 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ⑪ INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ⑫ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT
CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ⑬ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING
POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT
ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE
CONCRETE BASE AND A METALLIC BASE PLATE.

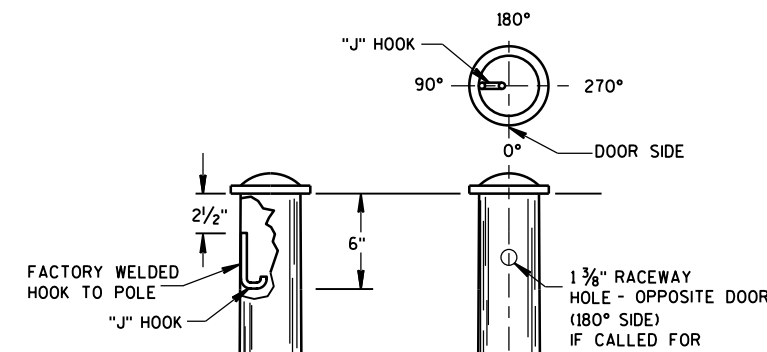
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE
AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



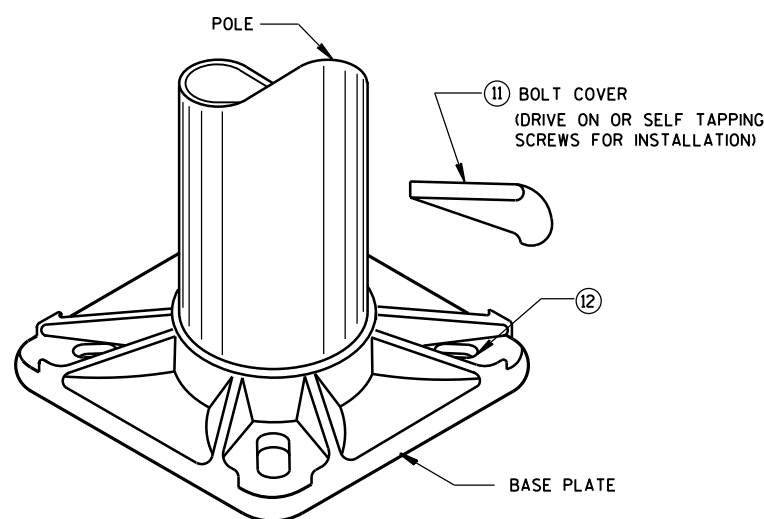
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



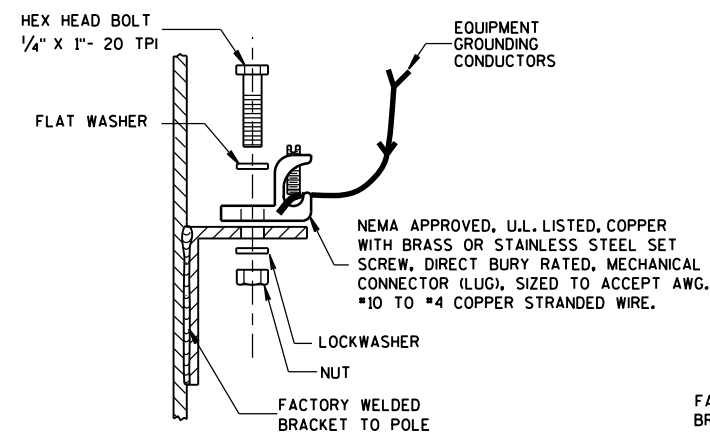
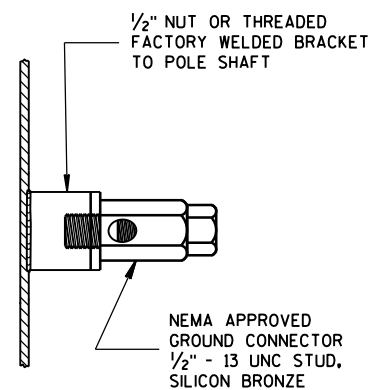
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



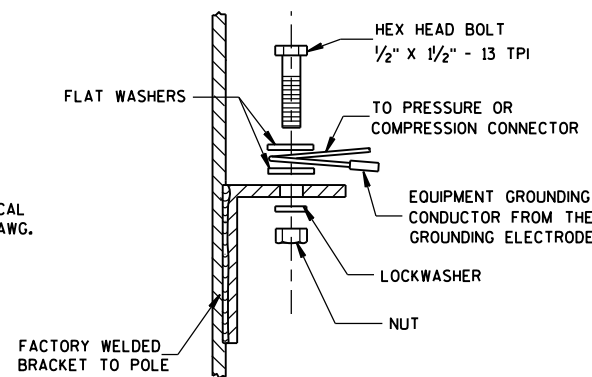
TYPICAL "J" HOOK LOCATION



BASE PLATE



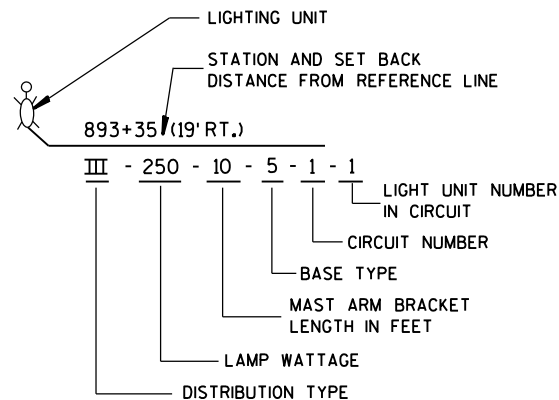
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



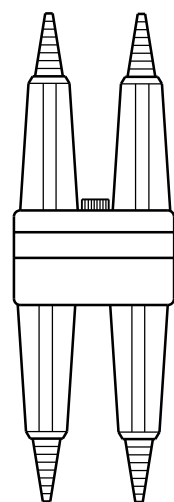
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

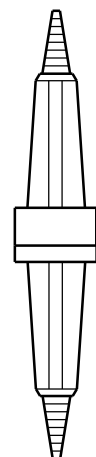
APPROVED
Feb. 2015
DATE /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA



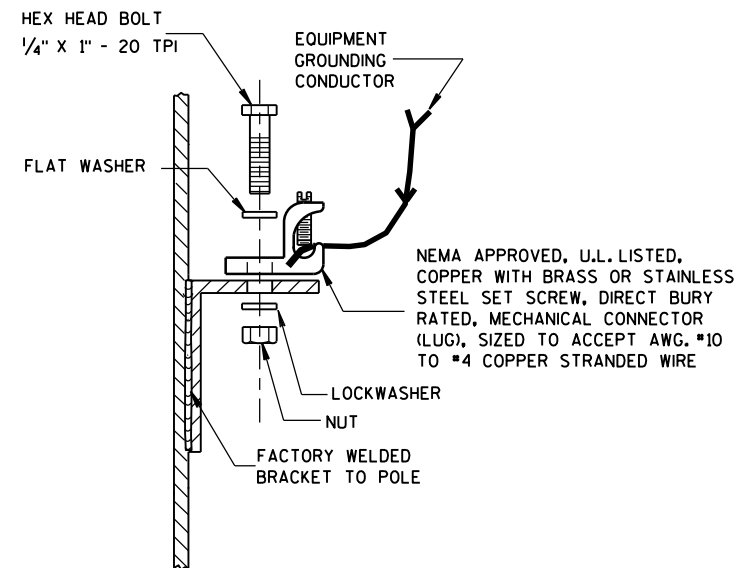
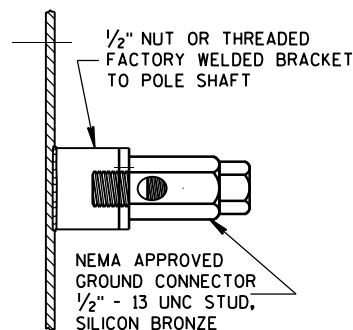
**LIGHTING UNIT CODE
(TYPICAL)**



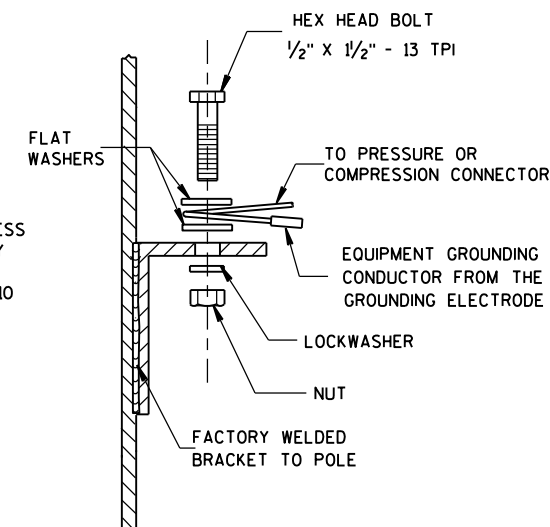
**DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT**



**DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT**



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E. RATED,
XLP INSULATED. SINGLE
LIGHTING UNIT SHOWN

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE SINGLE POLE FUSE ASSEMBLY.
600 VAC, WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "B")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

TWIN LIGHTING UNITS REQUIRE
INDIVIDUAL SETS OF UNGROUNDED
CONDUCTORS AND FUSE ASSEMBLY.

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE FUSE ASSEMBLY
TWO POLE, 600 VAC,
WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "A")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

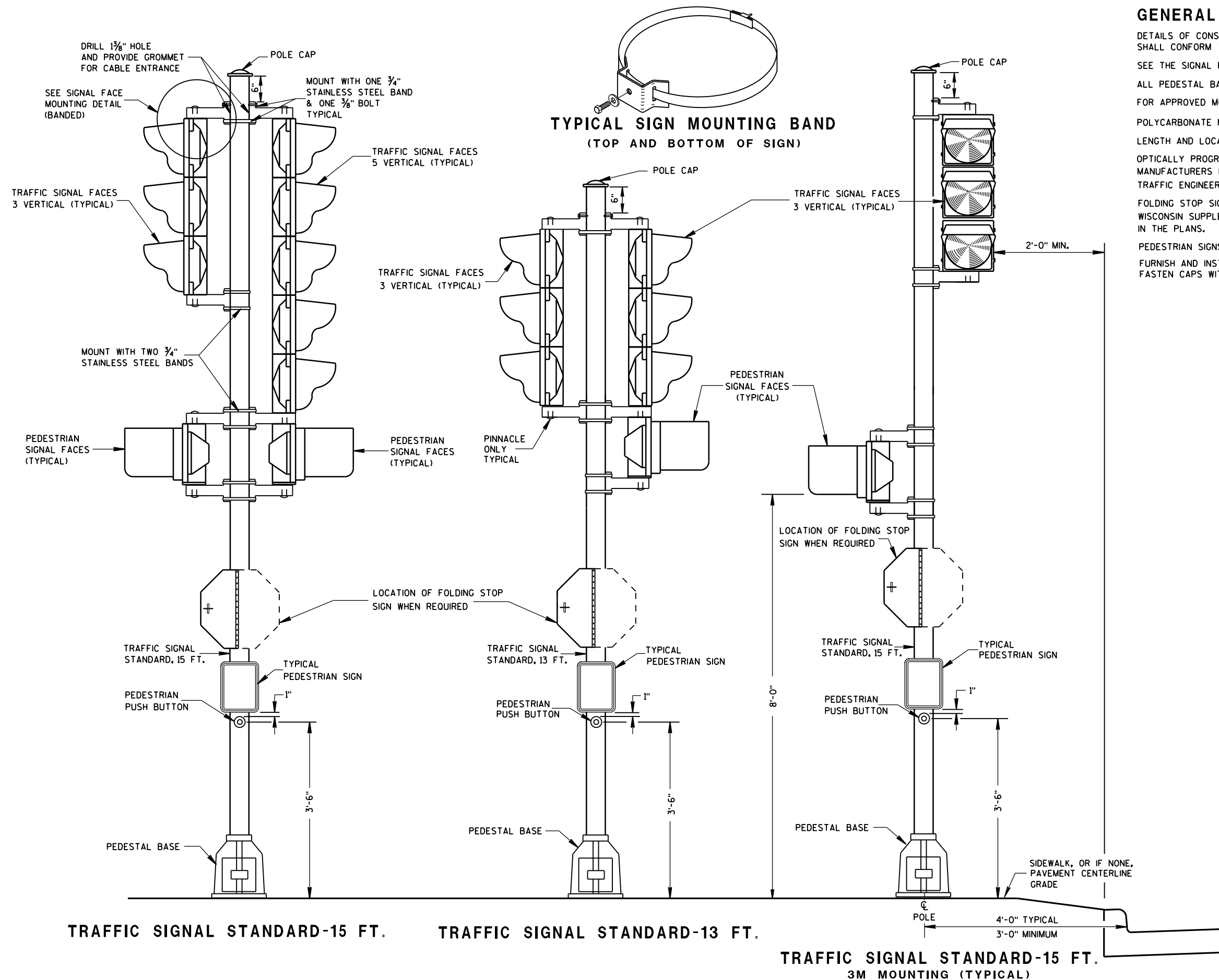
**3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)
WITH GROUNDED CONDUCTOR AND
WITH EQUIPMENT GROUNDING CONDUCTOR**

**2 WIRE - 240 OR 480 VAC (UNGROUND CONDUCTORS)
WITH EQUIPMENT GROUNDING CONDUCTOR**

**NON-FREEWAY LIGHTING UNIT
POLE WIRING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

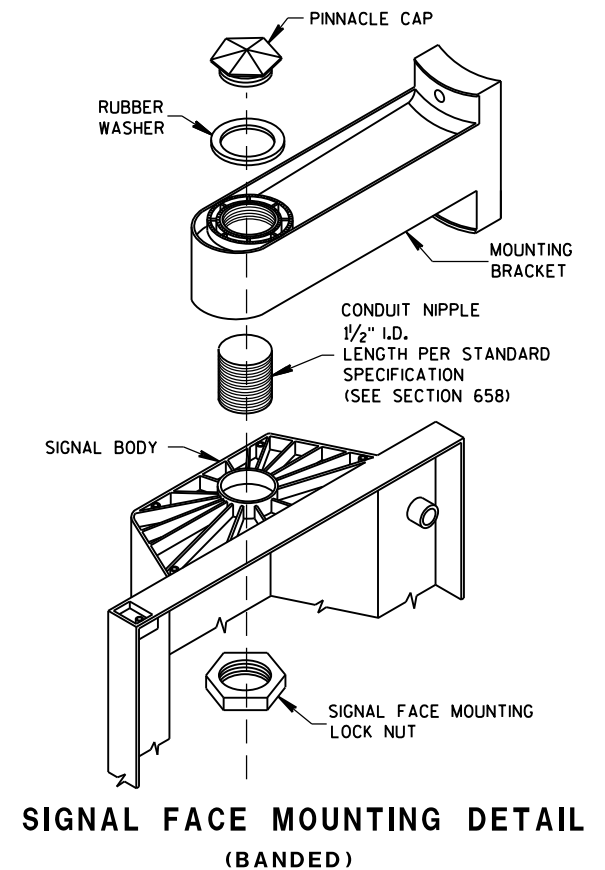
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " X $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



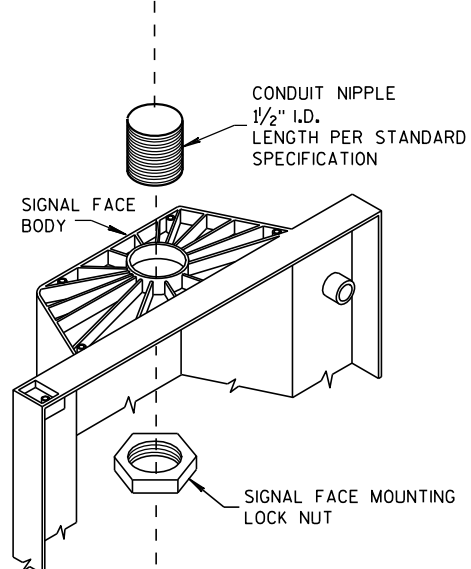
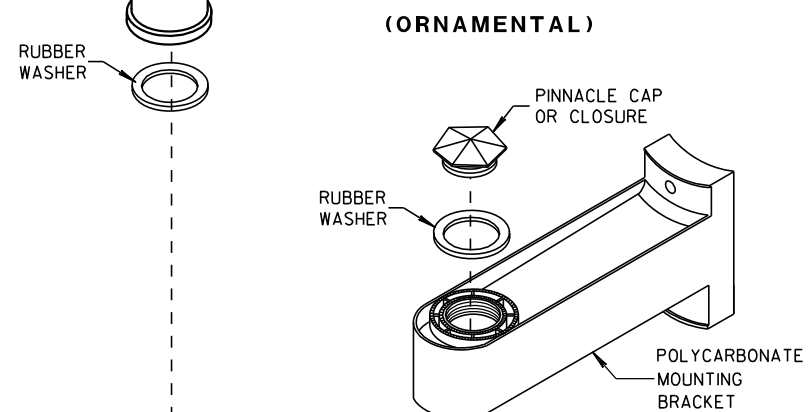
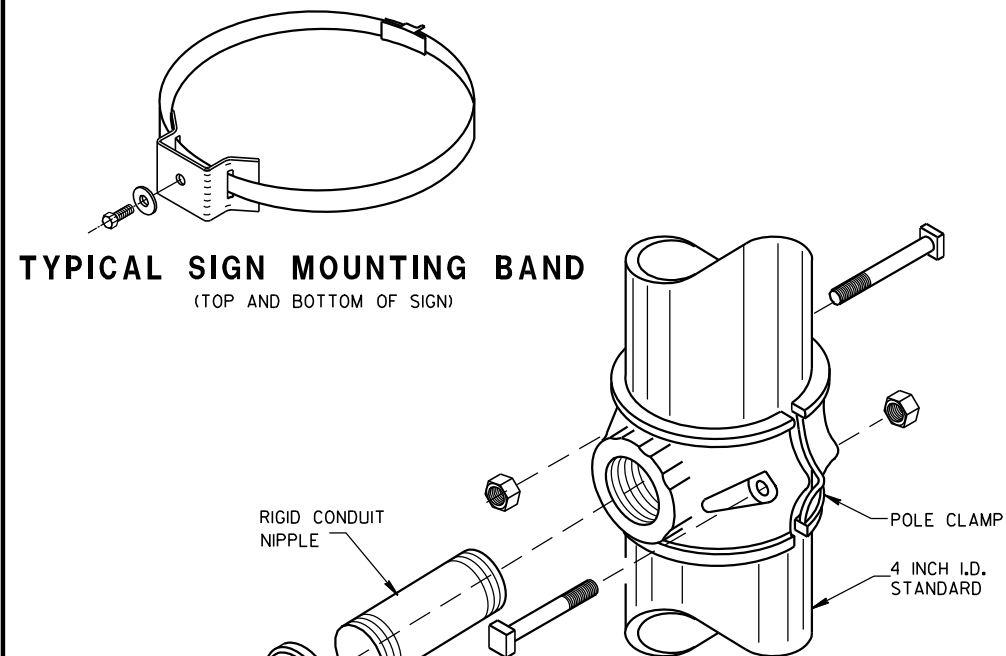
**TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

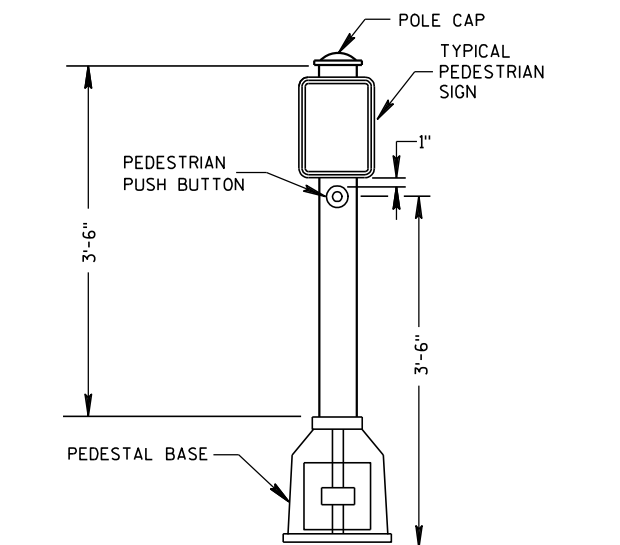
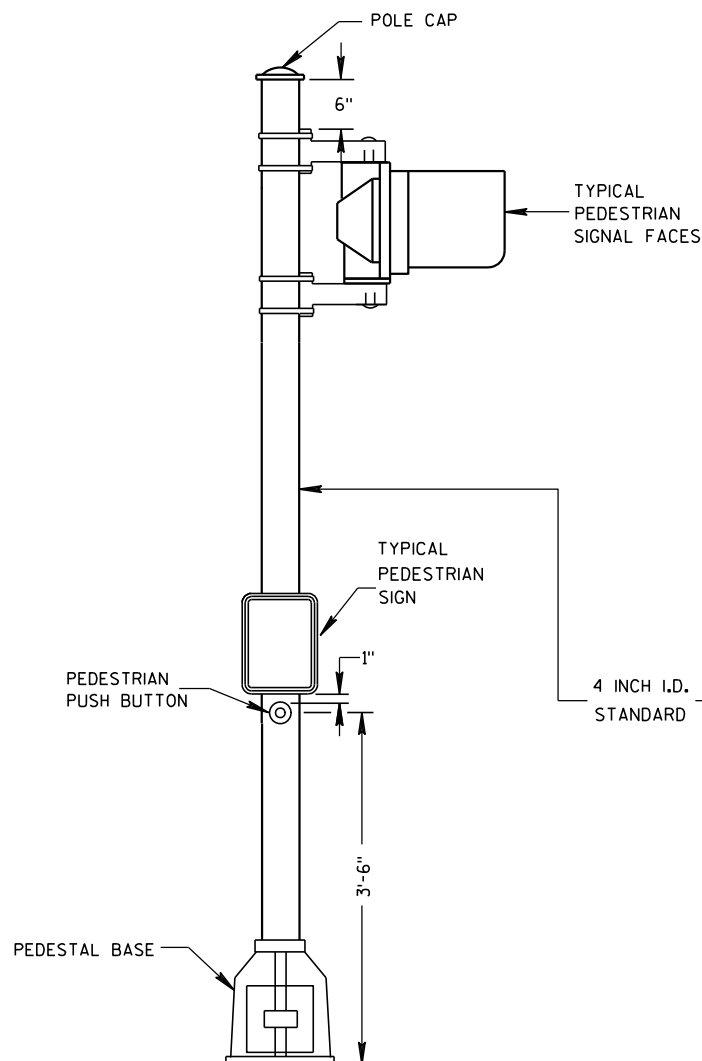
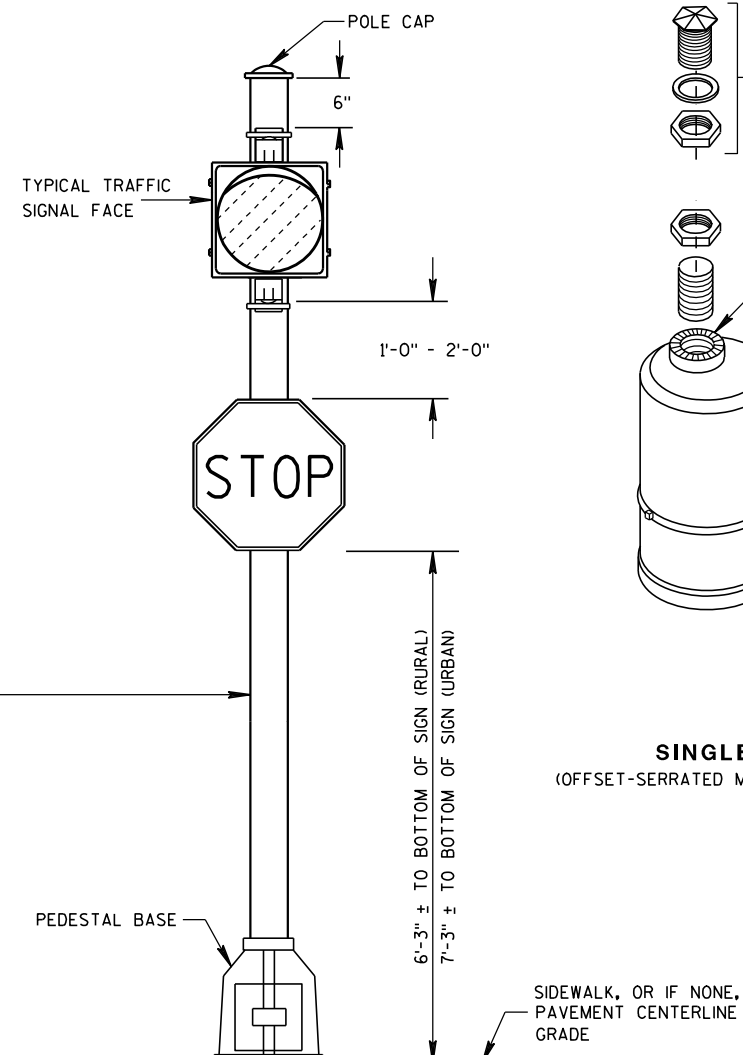
APPROVED
2/28/2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA



SIGNAL FACE MOUNTING DETAILS

PEDESTRIAN PUSH BUTTON
TYPICAL MOUNTINGPEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

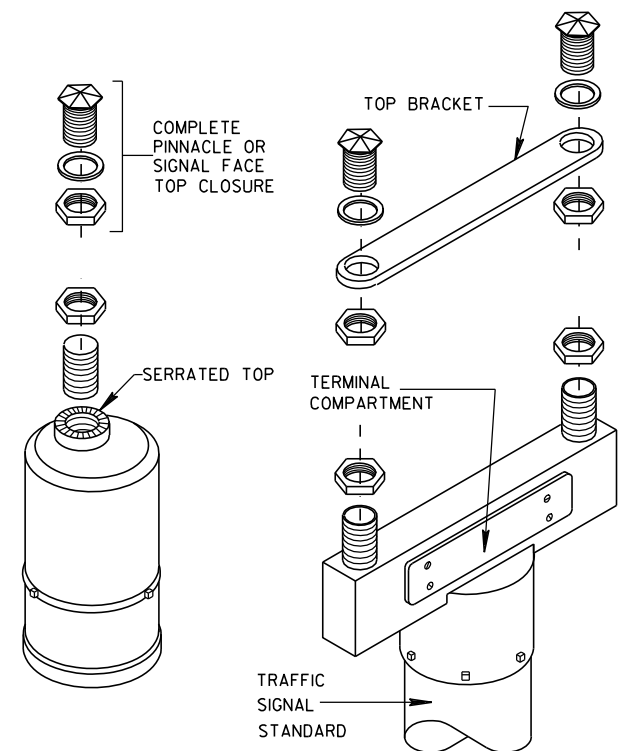
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

SINGLE
(OFFSET-SERRATED MOUNTING)DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

**TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS**

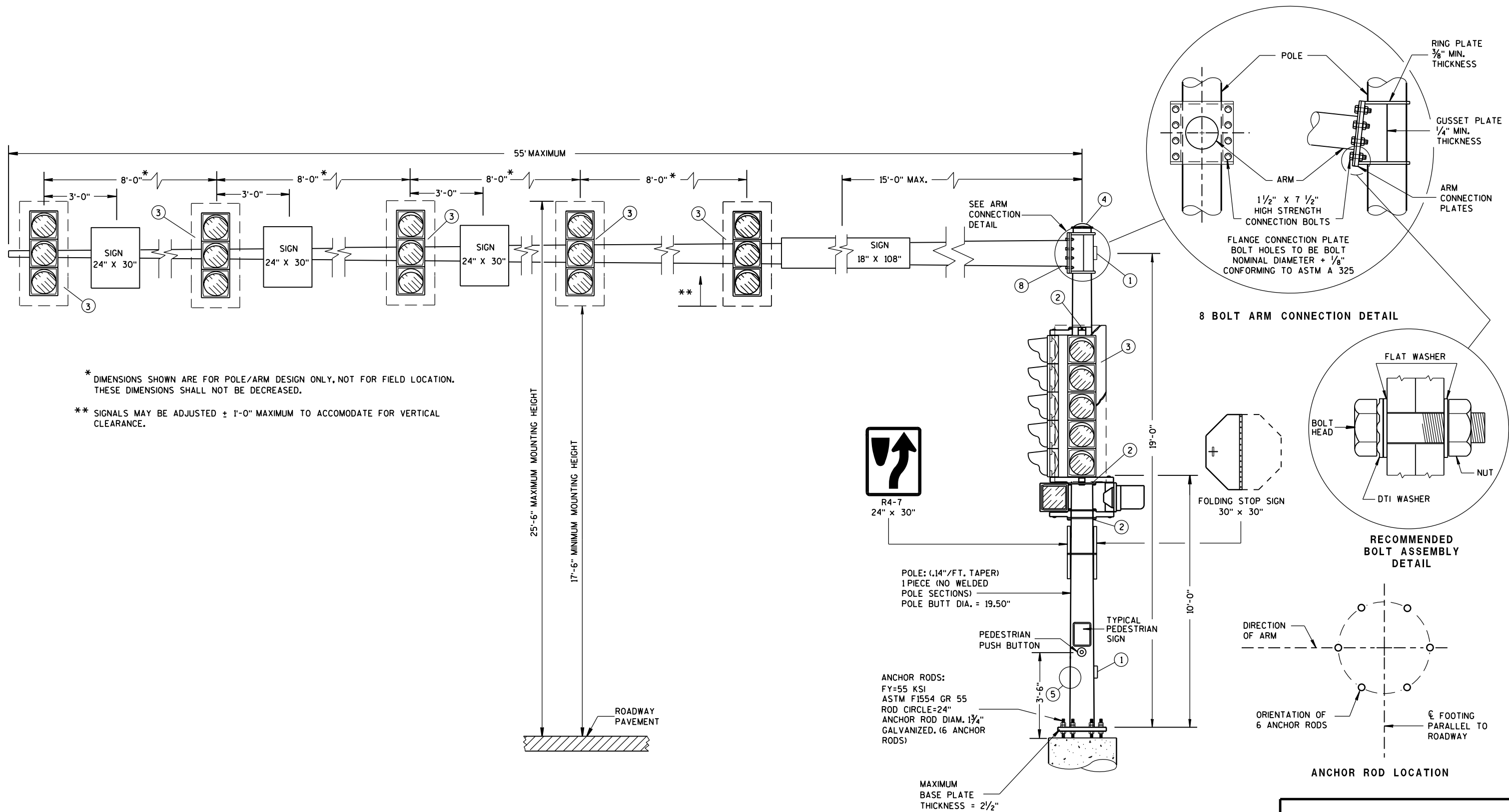
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

FHWA

/S/ John Corbin
STATE ELECTRICAL ENGINEER FOR HWYS



**TYPE 12 POLE
35' - 55' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

DATE

FHWA

/S/ Ahmet Demirbilek

STATE ELECTRICAL ENGINEER

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 ½ ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

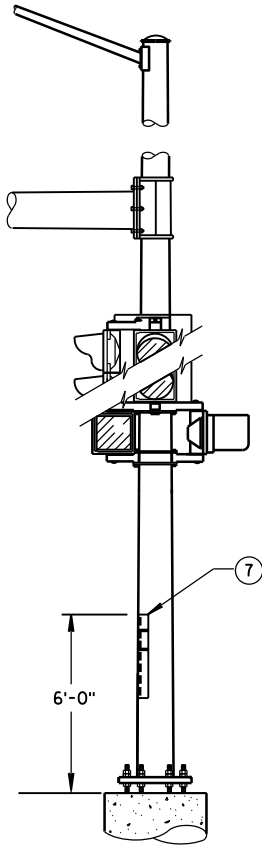
- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

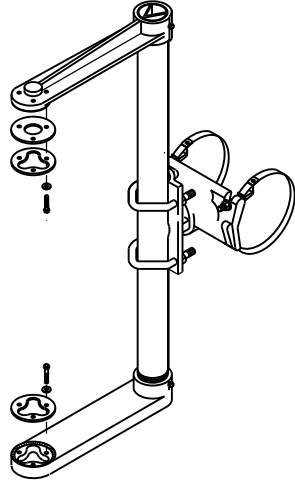
INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

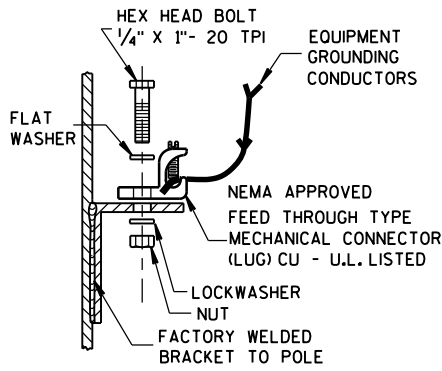


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



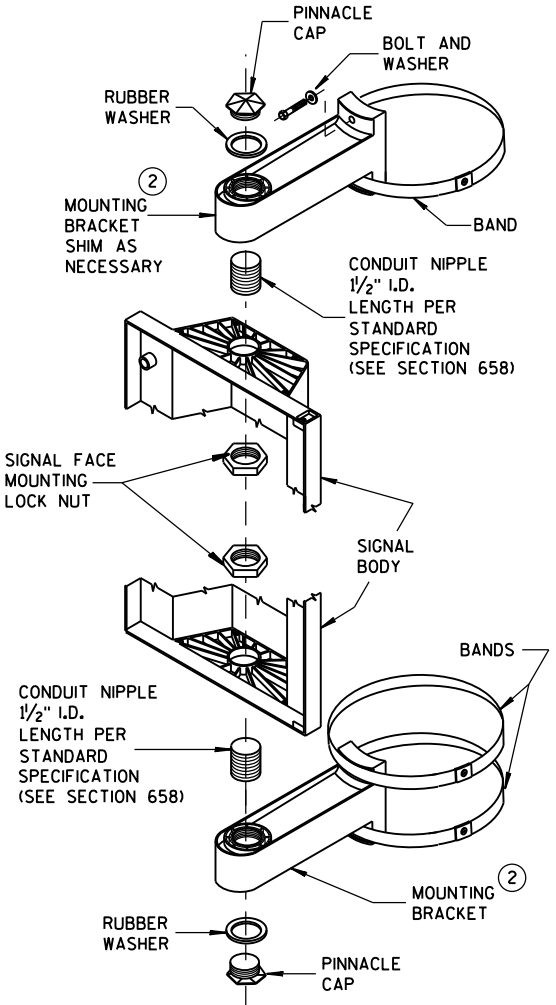
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

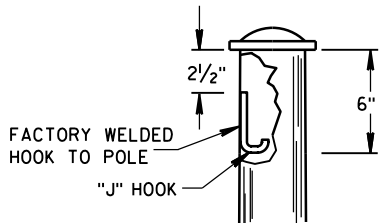


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



SIGNAL FACE
VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT

- DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).
- SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

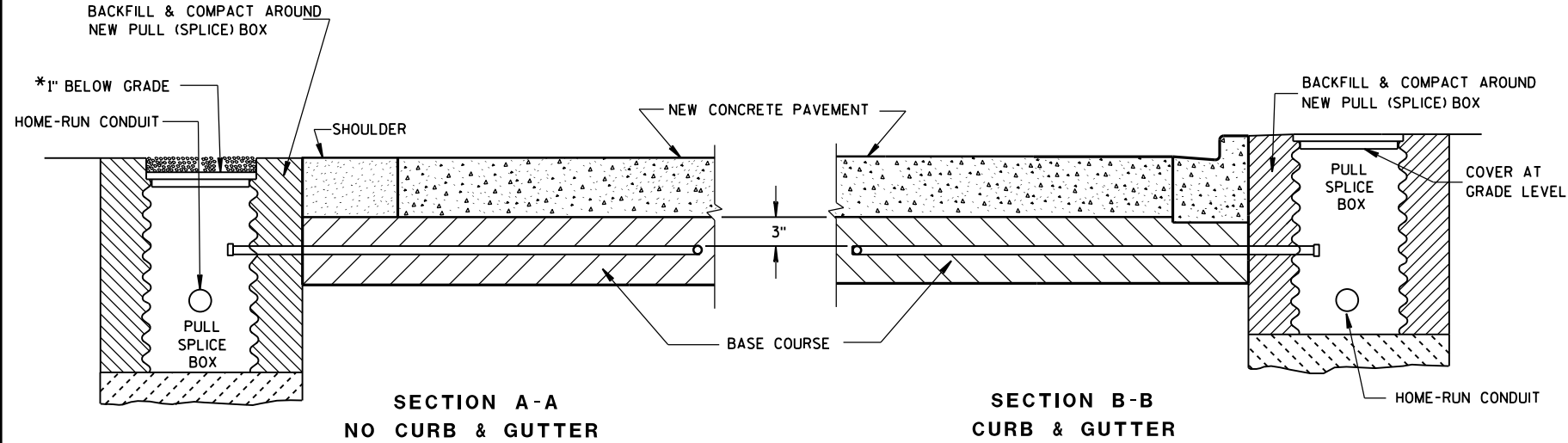
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

- FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

GENERAL NOTES AND HARDWARE
DETAILS FOR TYPE 9, 10, 12 & 13
POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



*RECESS PULL (SPlice) BOX SO THAT THE COVER IS 3\"/>

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPlice) BOX.

SPICES SHALL BE INSTALLED BY USING CAST IN PLACE SPICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

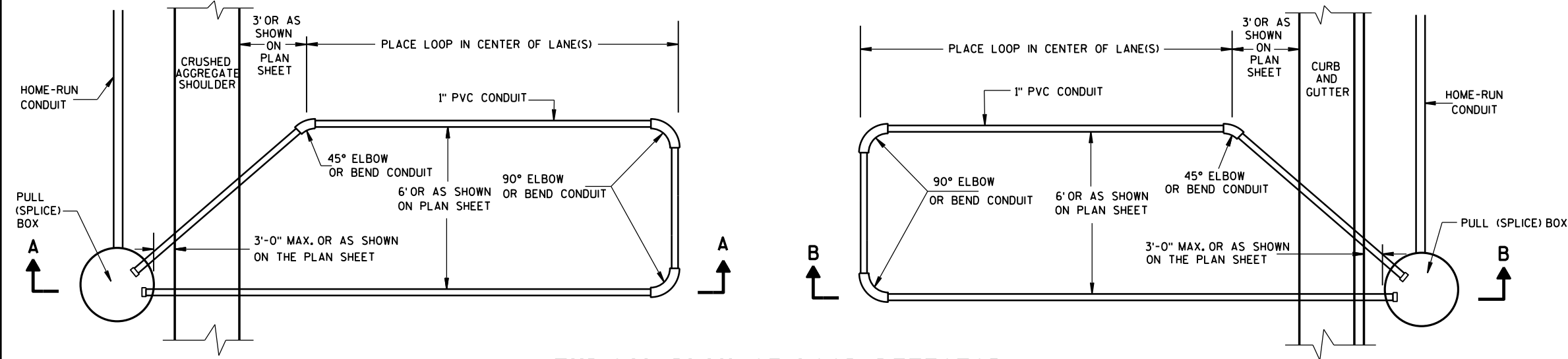
THE #12 AWG. LOOP WIRE IN THE PULL (SPlice) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPlice) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPlice) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPlice) BOX, AND BE INSTALLED IN ONE, NON-SPICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

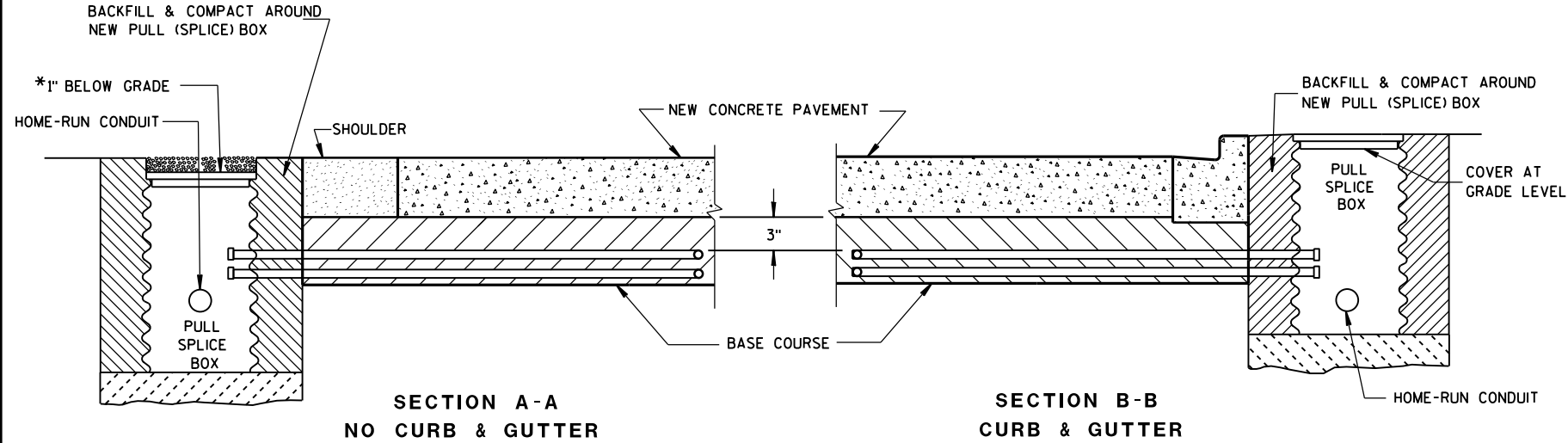


TYPICAL PLAN OF LOOP DETECTOR WITH 18\"/>

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 1)

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED	
Sept. 2014	/S/ Ahmet Demirbilek
DATE	STATE ELECTRICAL ENGINEER
FHWA	



*RECESS PULL (SPlice) BOX SO THAT THE COVER IS 3\"/>

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPlice) BOX.

SPlices SHALL BE INSTALLED BY USING CAST IN PLACE SPlice KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPlices TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPlices SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPlice KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPlicing THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

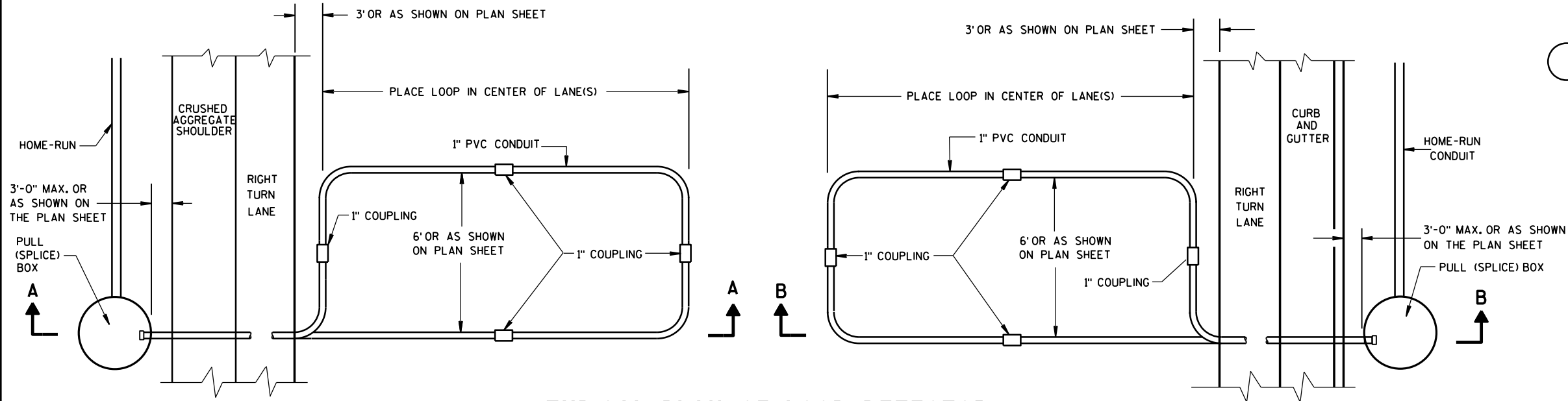
THE #12 AWG. LOOP WIRE IN THE PULL (SPlice) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPliced TO THE LOOP LEAD-IN CABLE.

SPlices OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPlice) BOXES AT THE SIDE OF THE ROAD.

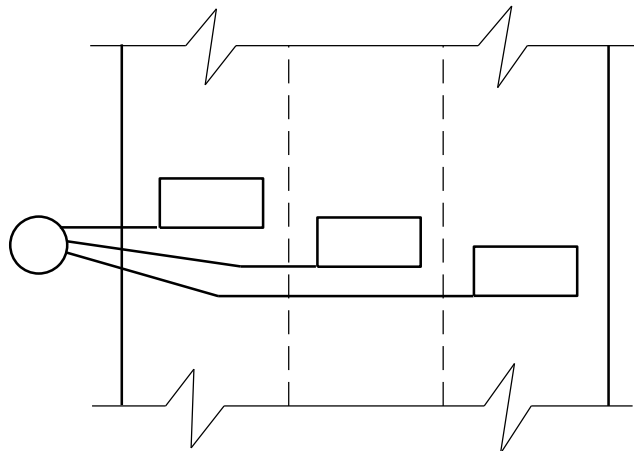
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPlice) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPlice) BOX, AND BE INSTALLED IN ONE, NON-SPliced CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR
WITH 24\"/>

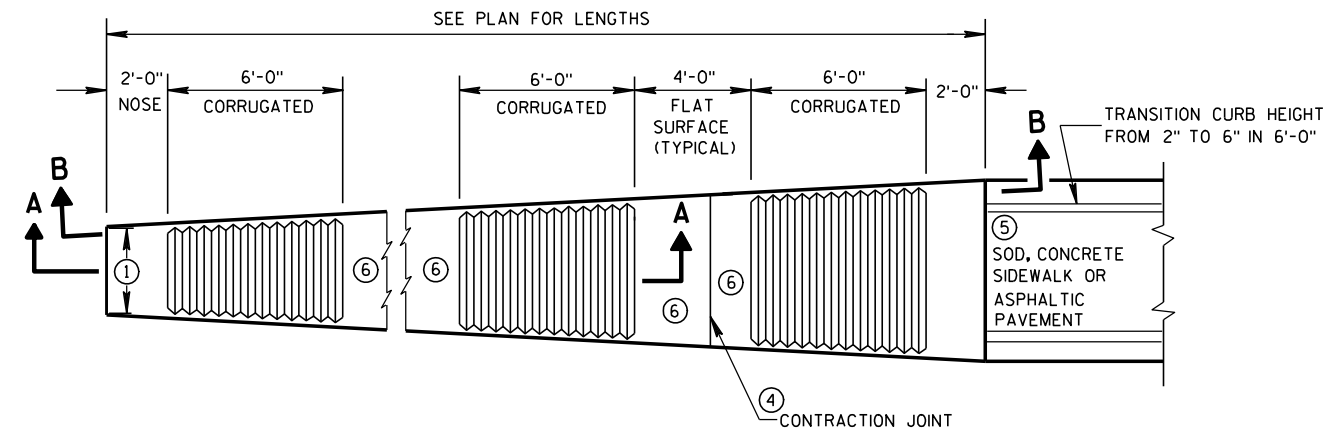


MULTI-LANE INSTALLATION

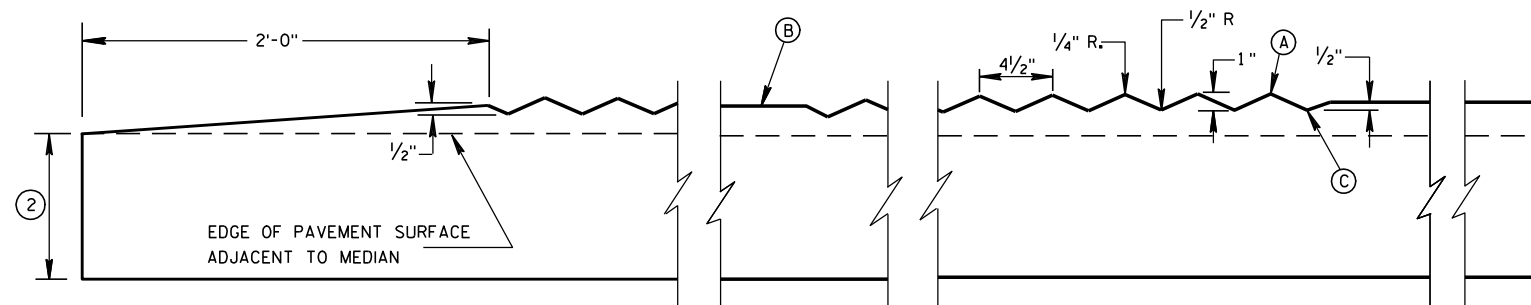
LOOP DETECTOR INSTALLED IN
BASE COURSE WITH PULL (SPlice)
BOX OFF ROADWAY
(OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

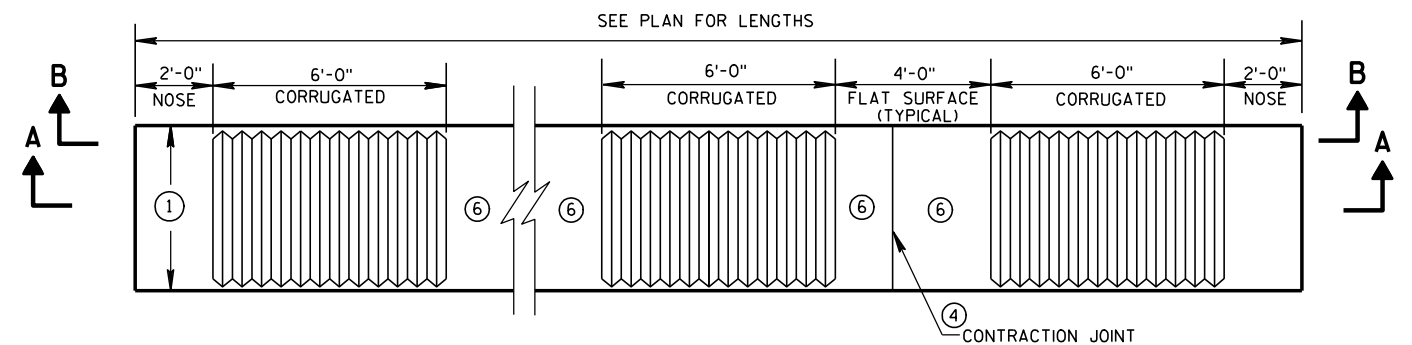
APPROVED
DATE: Sept. 2014
STATE ELECTRICAL ENGINEER
/S/ Ahmet Demirelek
FWHA



PLAN VIEW
VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



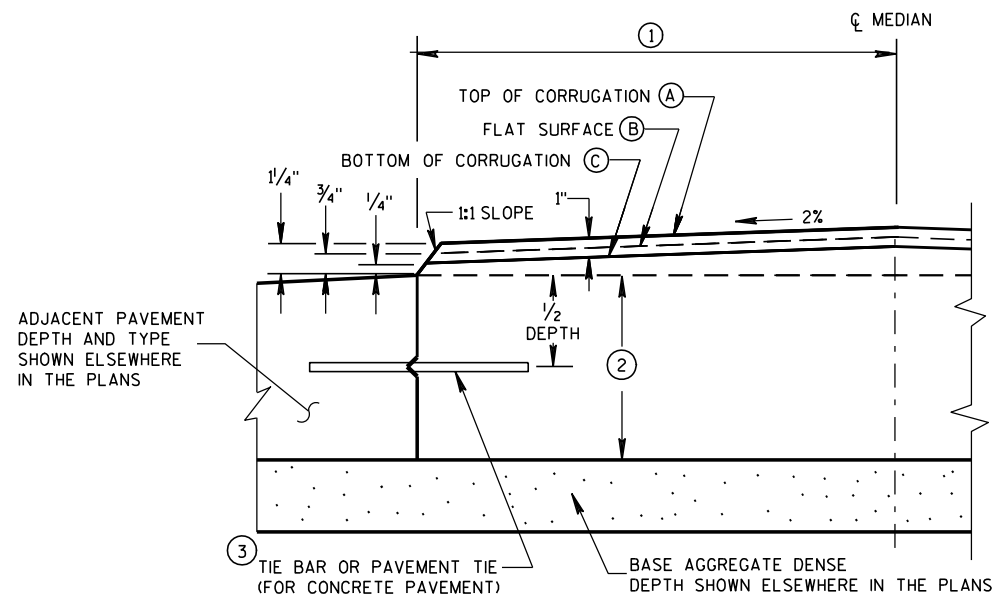
SECTION A-A
LONGITUDINAL SECTION



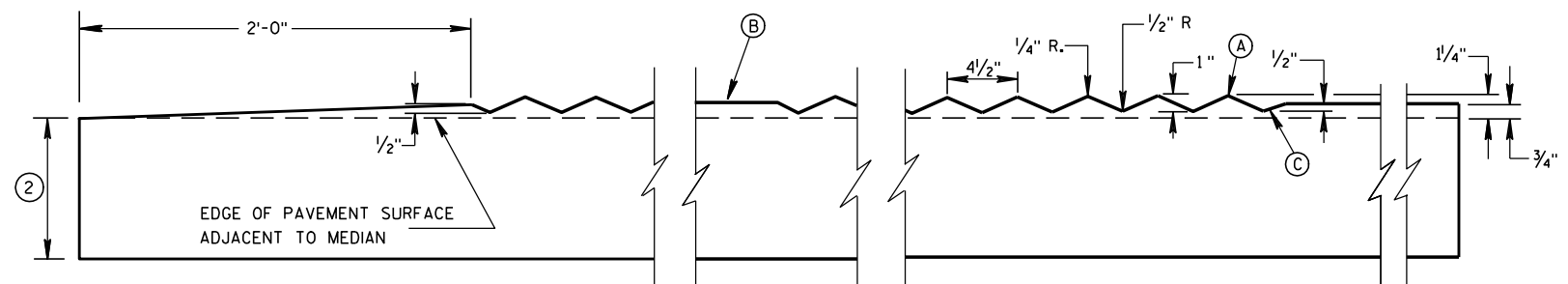
PLAN VIEW
UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN

GENERAL NOTES

- ① SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.
- ② THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.
 - (3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.
- ③ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C. INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP). PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ④ CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE, TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.
- ⑤ SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.
- ⑥ YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION
② CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B
LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

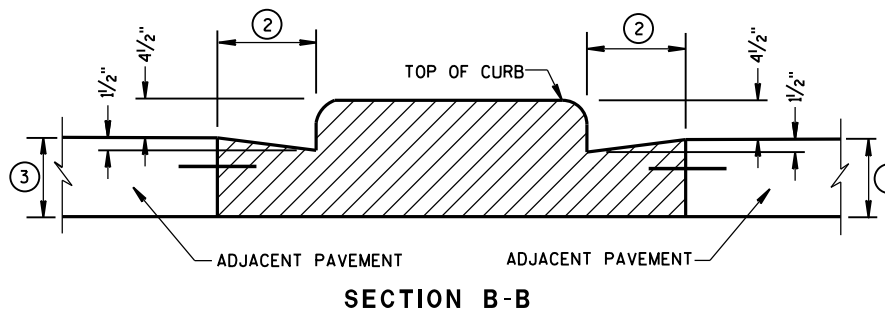
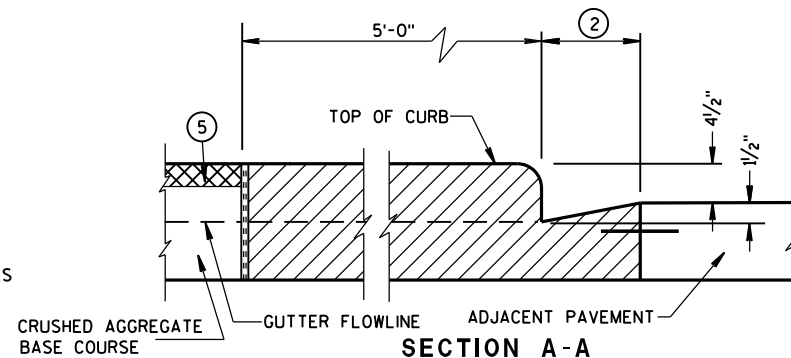
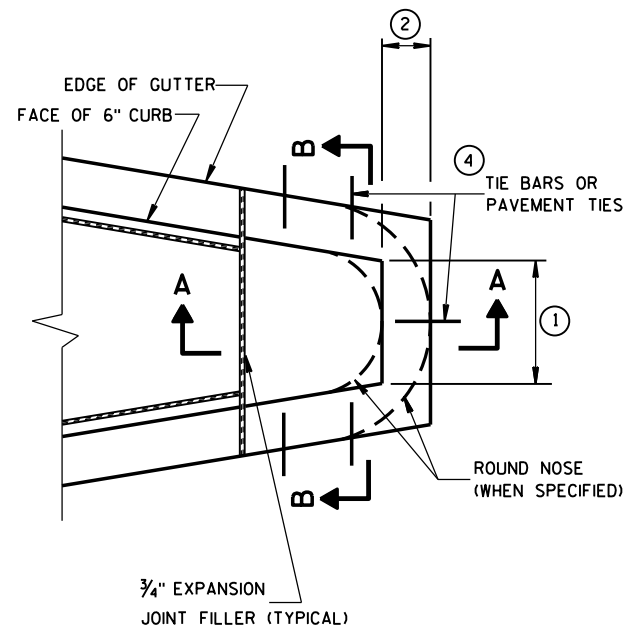
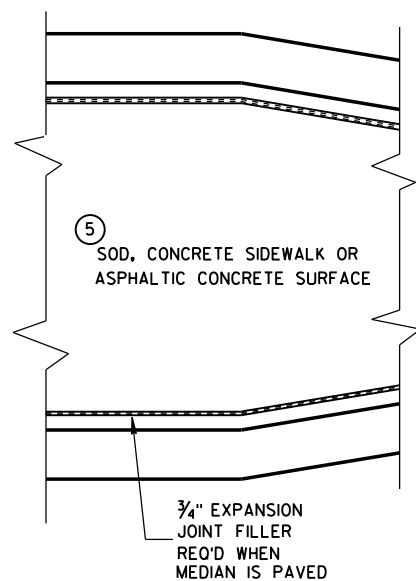
APPROVED

12/17/07

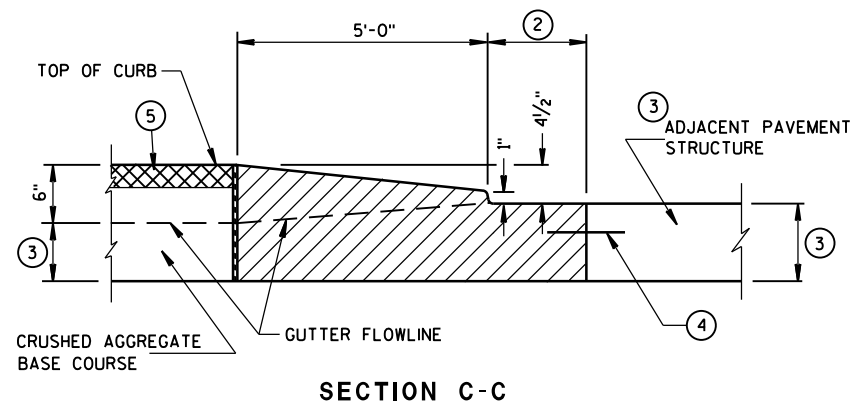
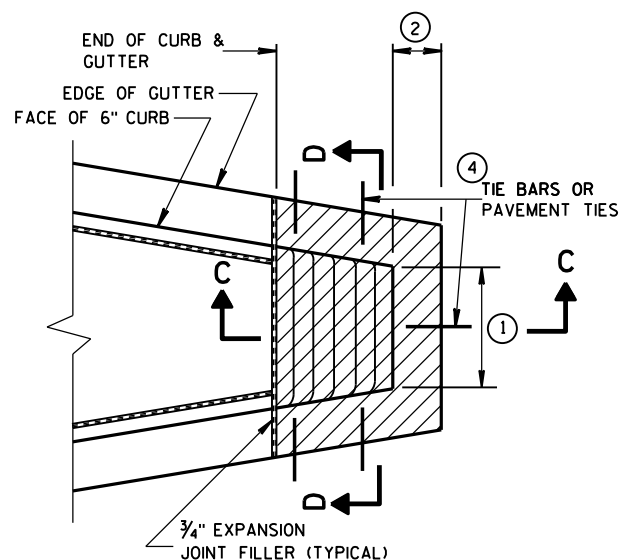
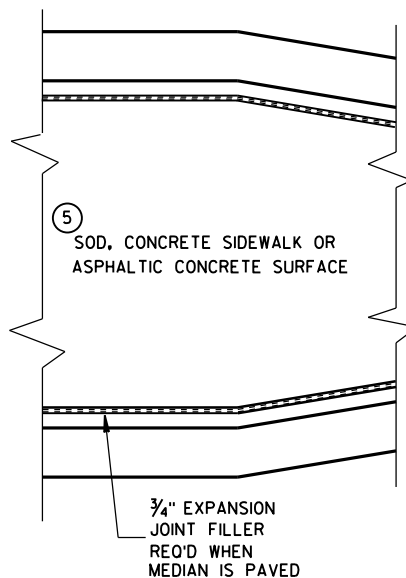
DATE

FHWA

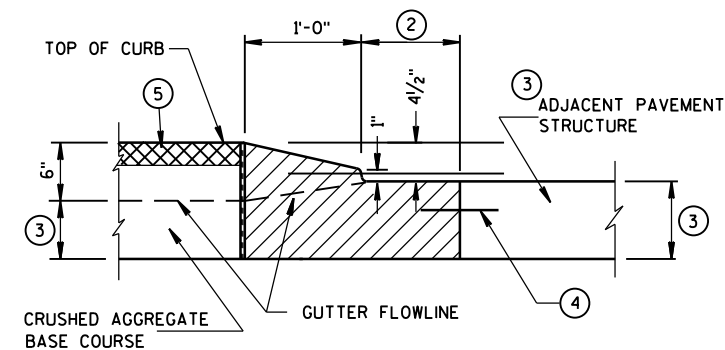
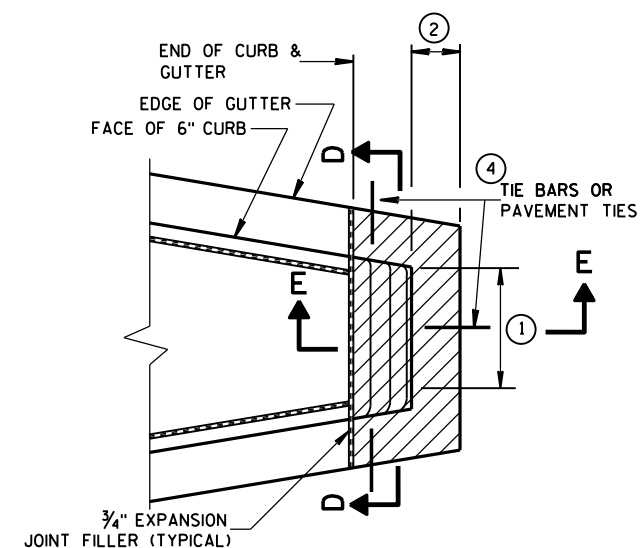
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



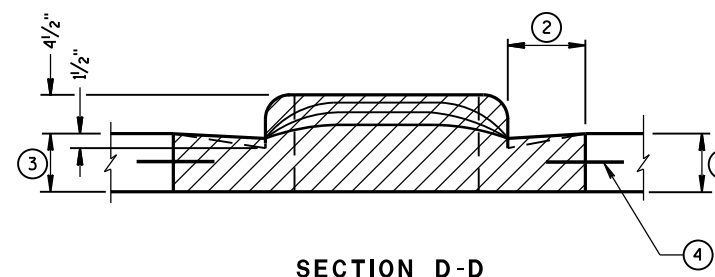
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



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 SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

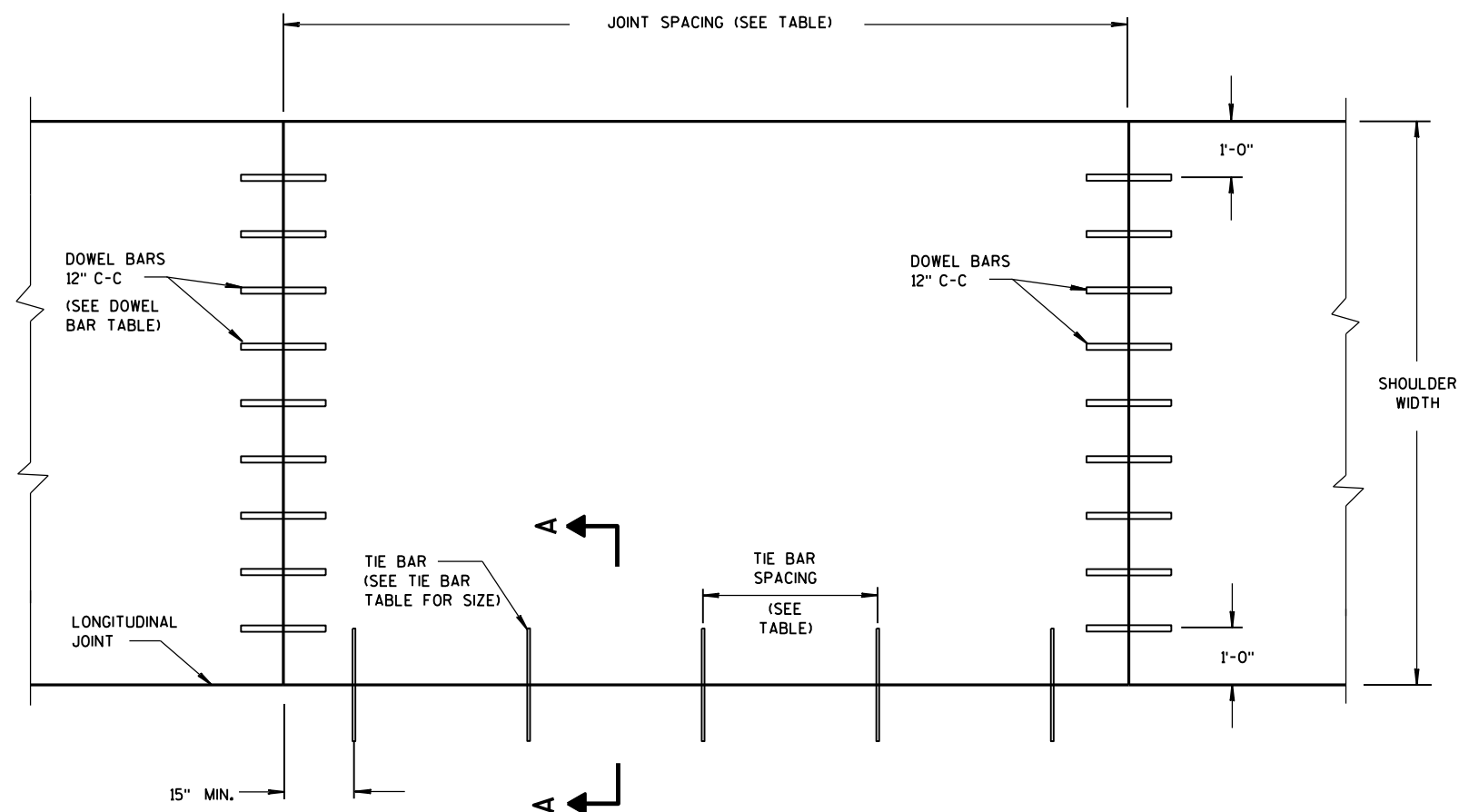
APPROVED

6/8/2006

DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g., AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

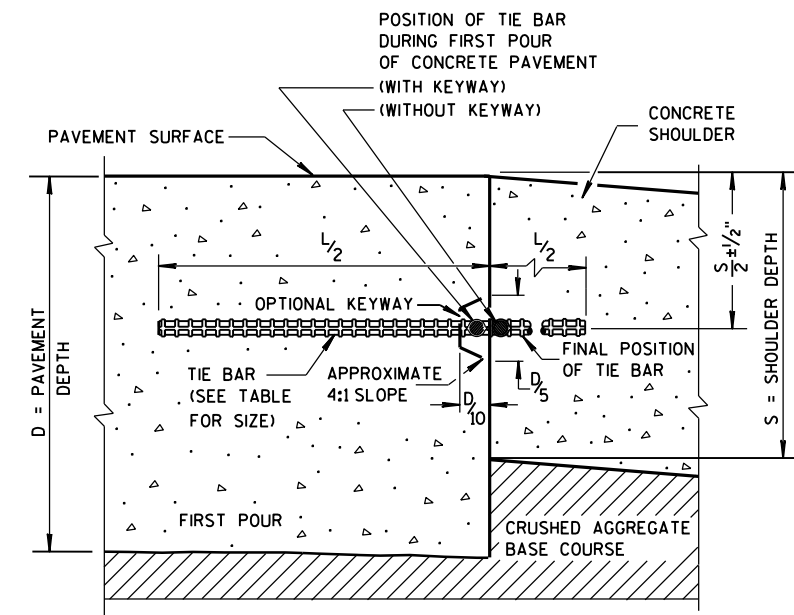
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

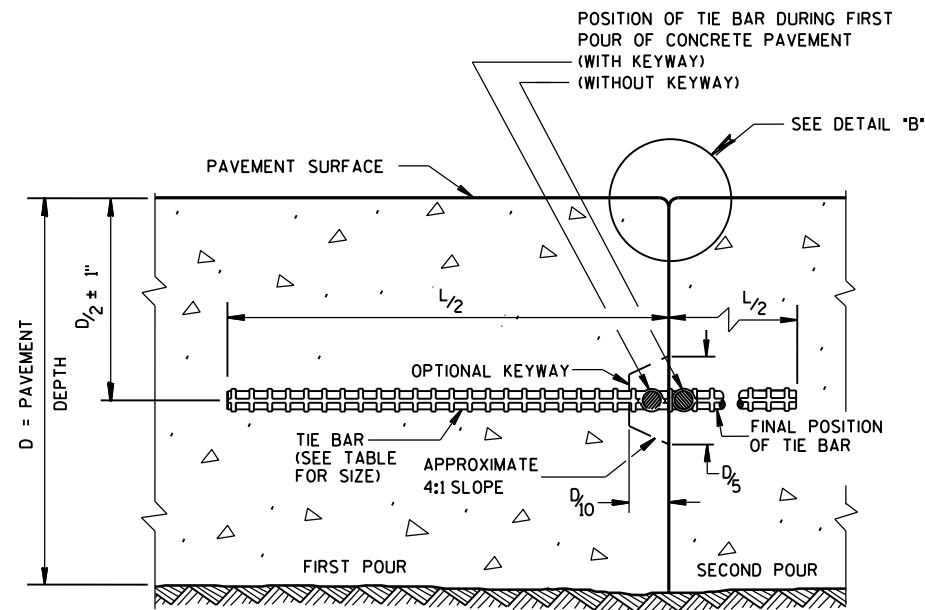
June, 2015

DATE

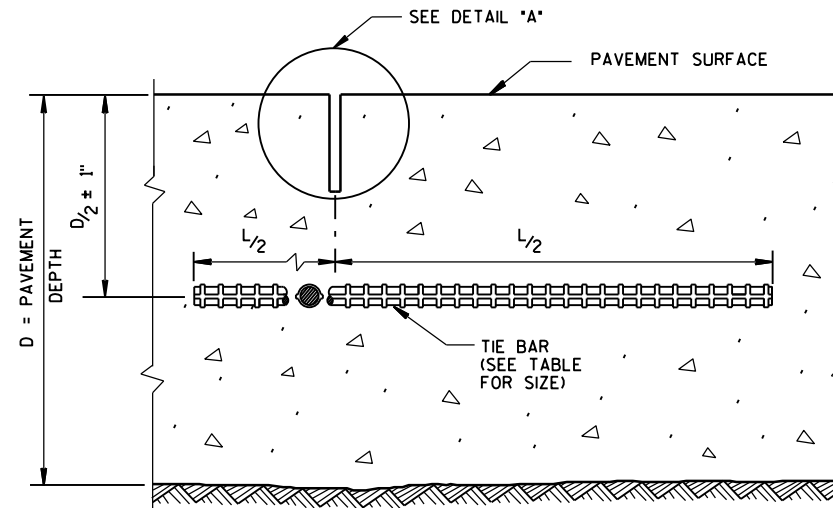
FHWA

/S/ Peter Kemp, P.E.

PAVEMENT SUPERVISOR



CONSTRUCTION JOINT



SAWED JOINT

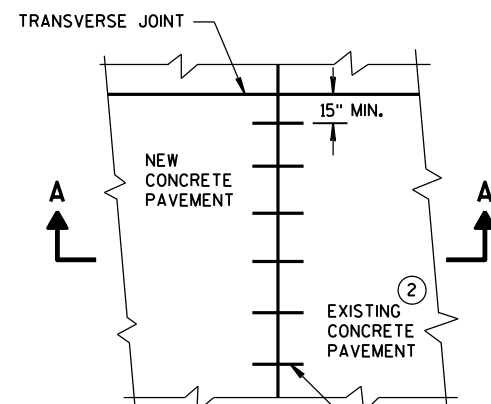
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

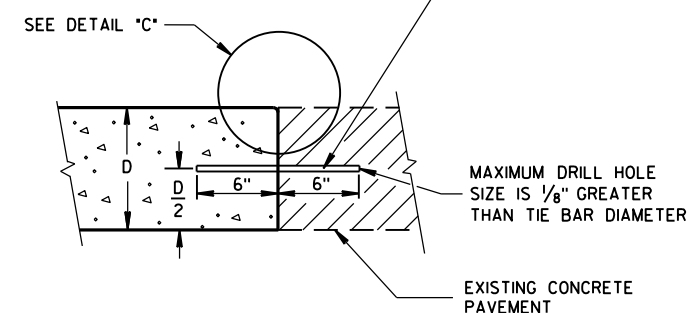
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

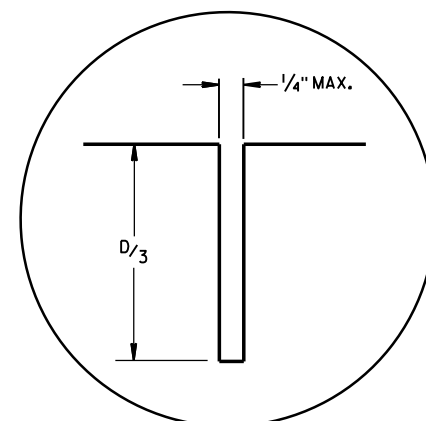
- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



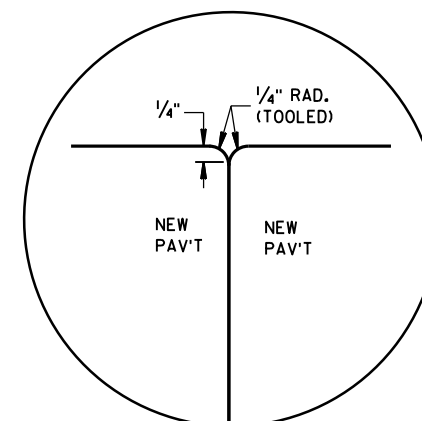
PLAN VIEW



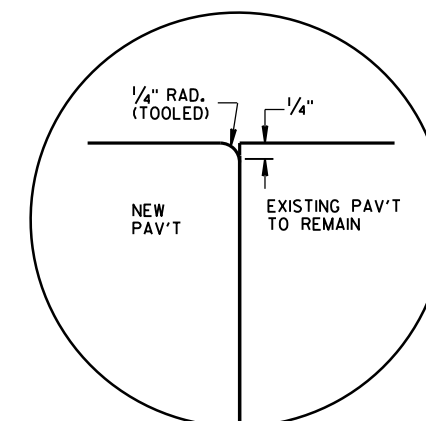
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



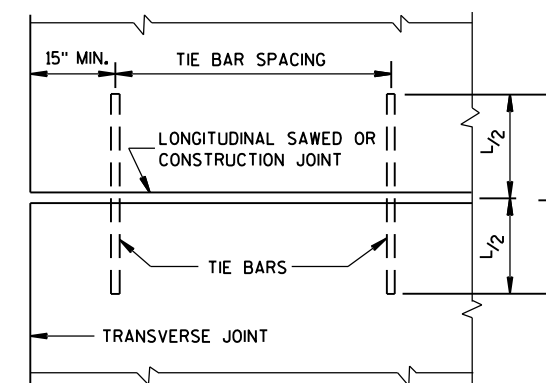
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

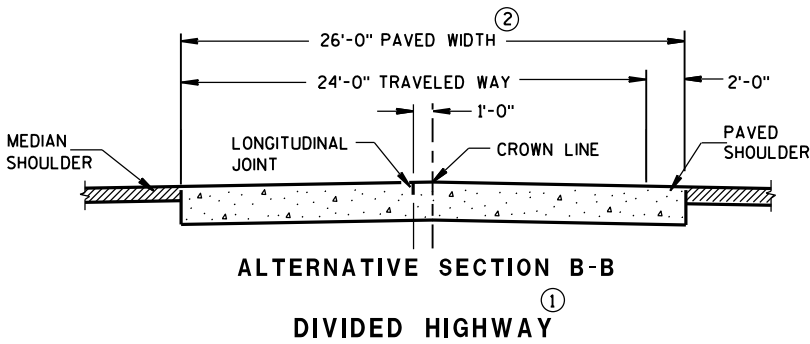
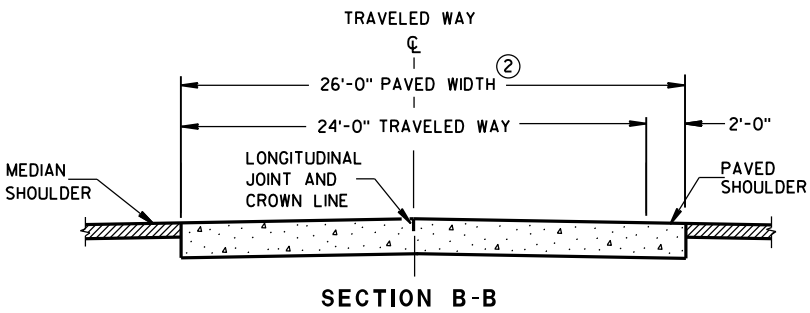
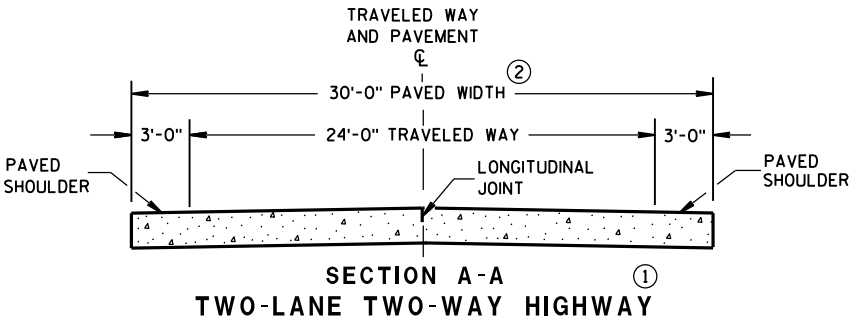


PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

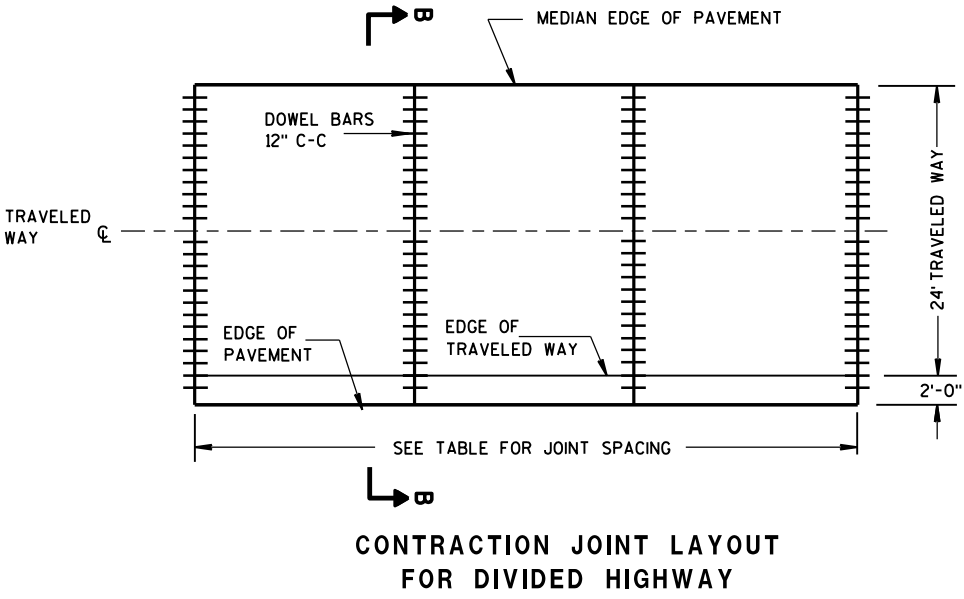
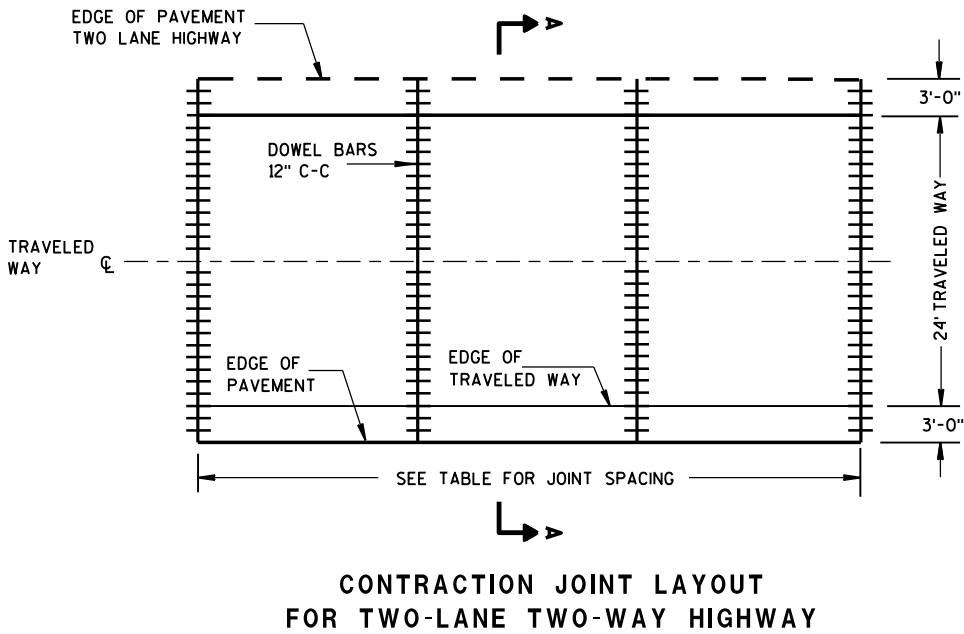
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

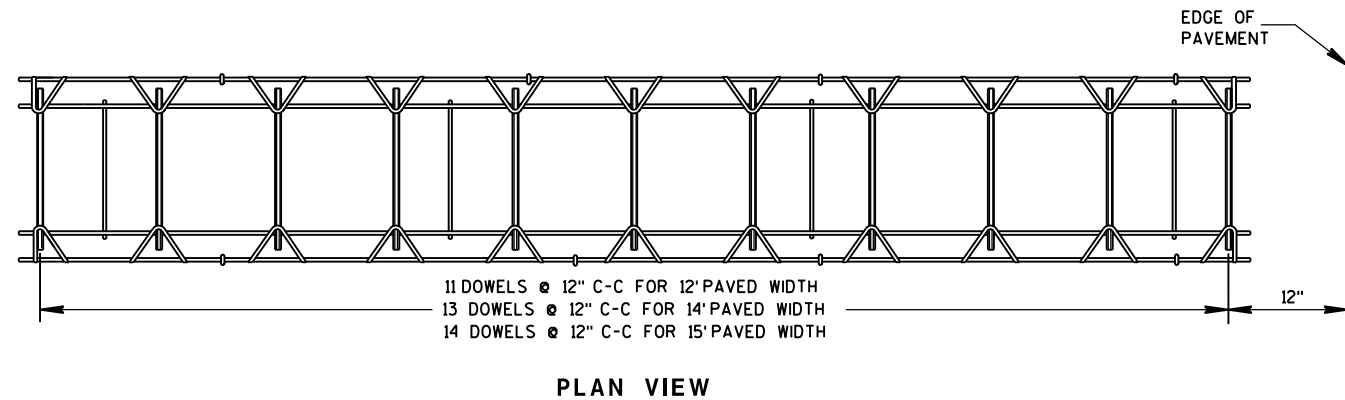
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

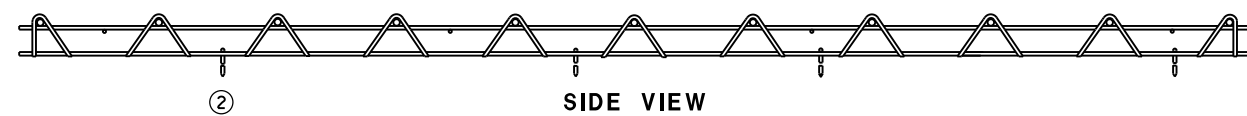


RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

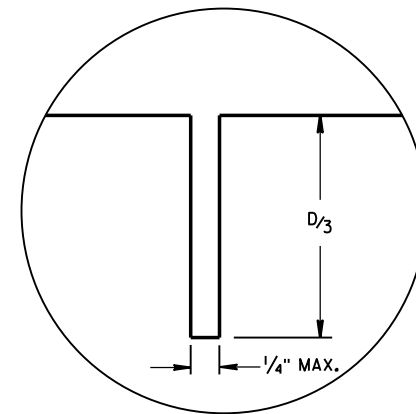


PLAN VIEW

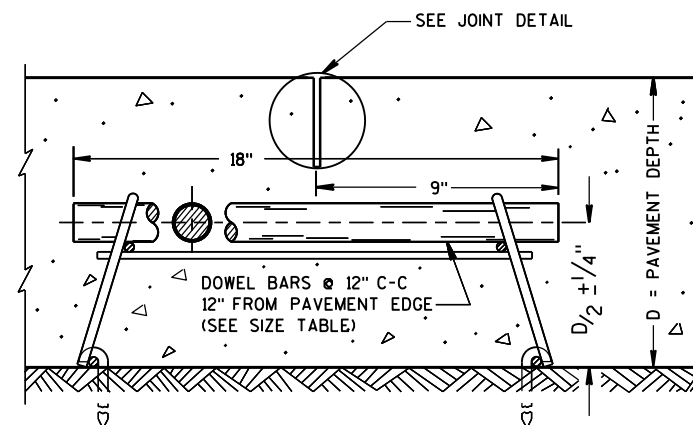


SIDE VIEW

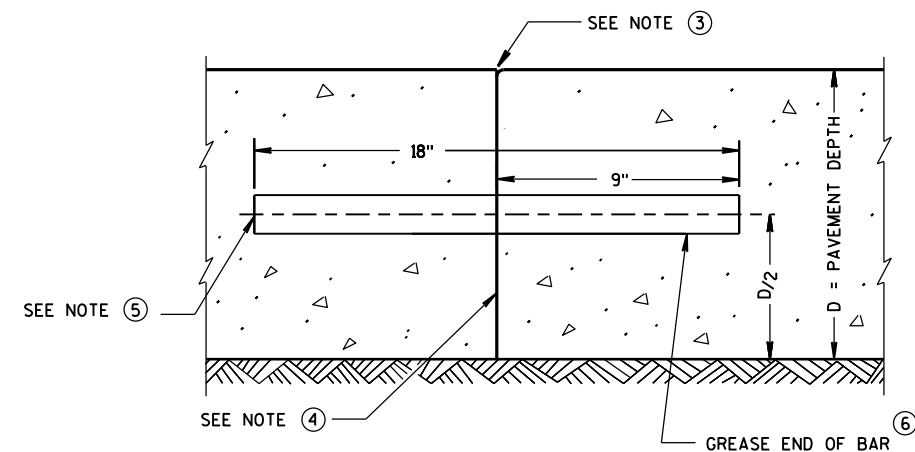
(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY^①

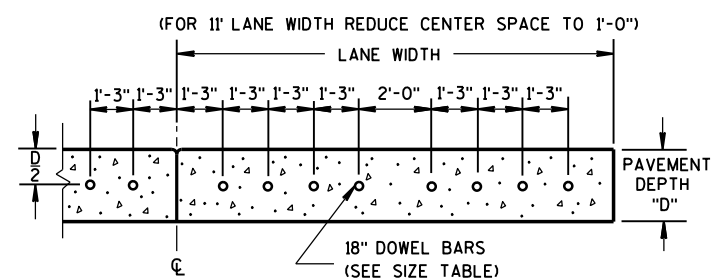
JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT

DRILLED DOWEL BAR CONSTRUCTION JOINT^⑦

GENERAL NOTES

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A $1/4$ -INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS $1/8$ -INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

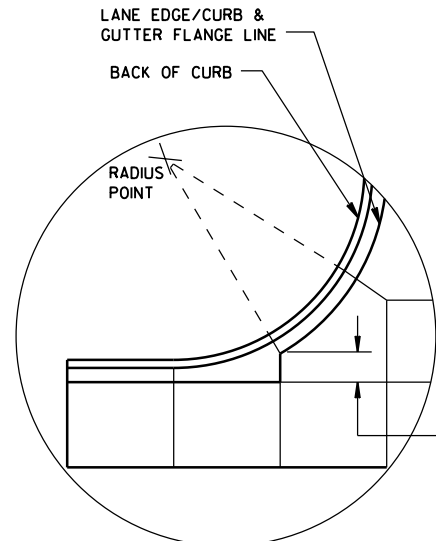
RURAL DOWELED
CONCRETE PAVEMENTSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

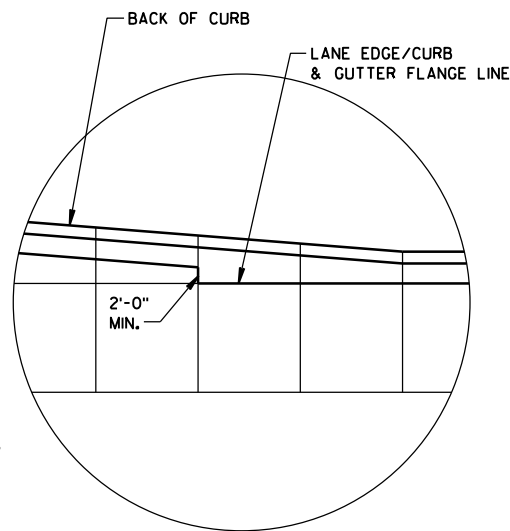
5/3/2013
DATE

FHWA

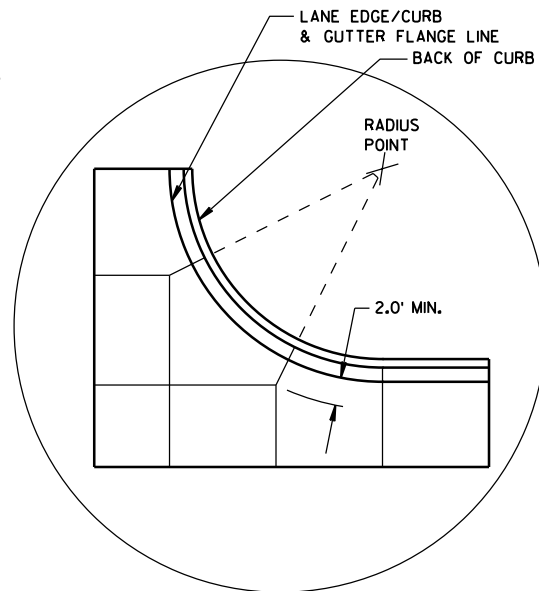
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



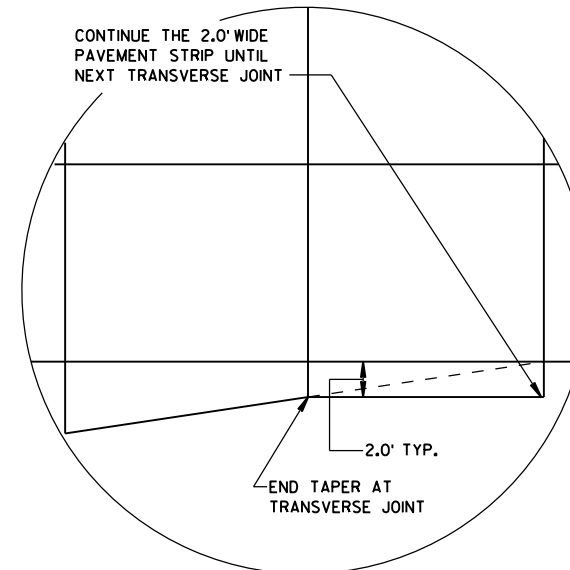
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

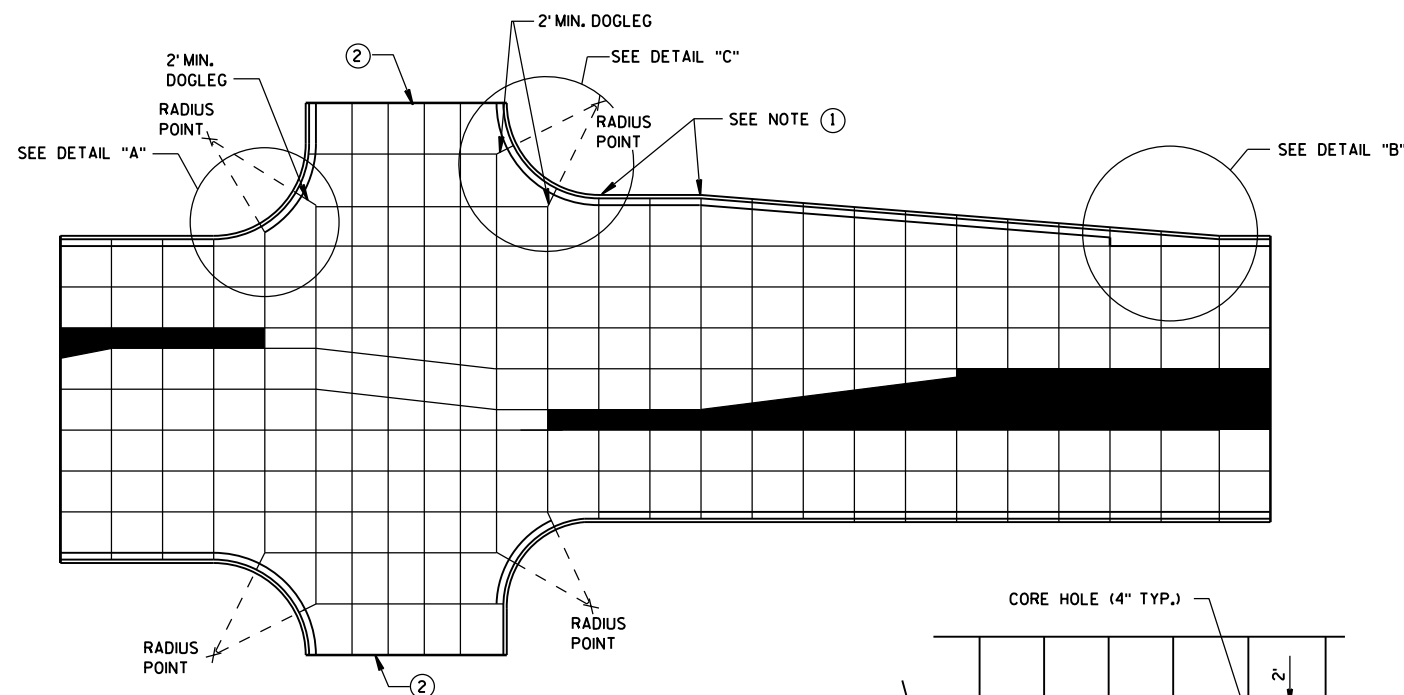
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

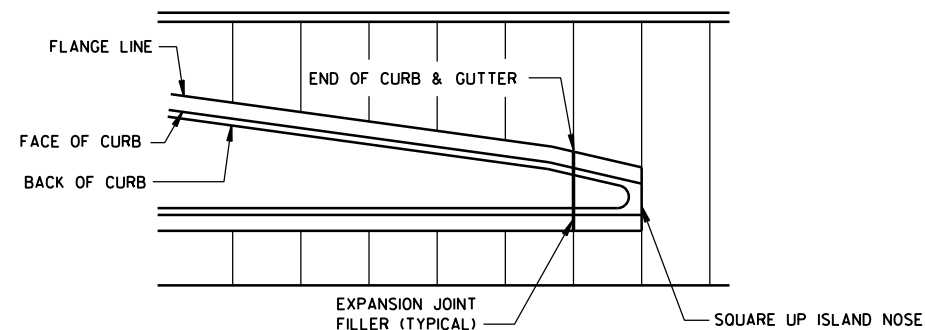
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

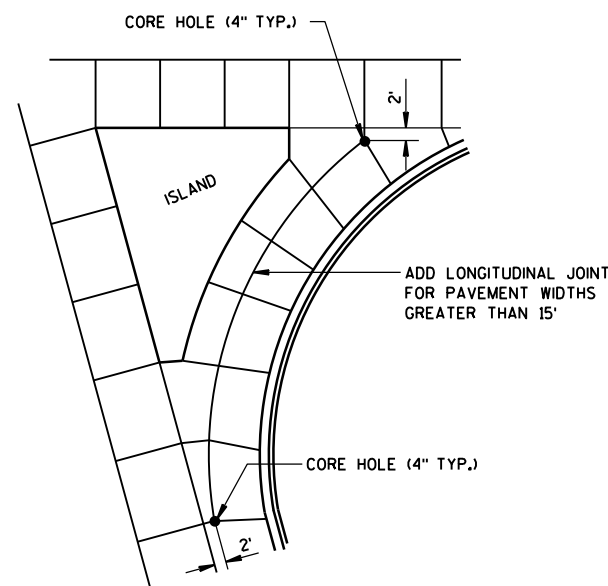
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



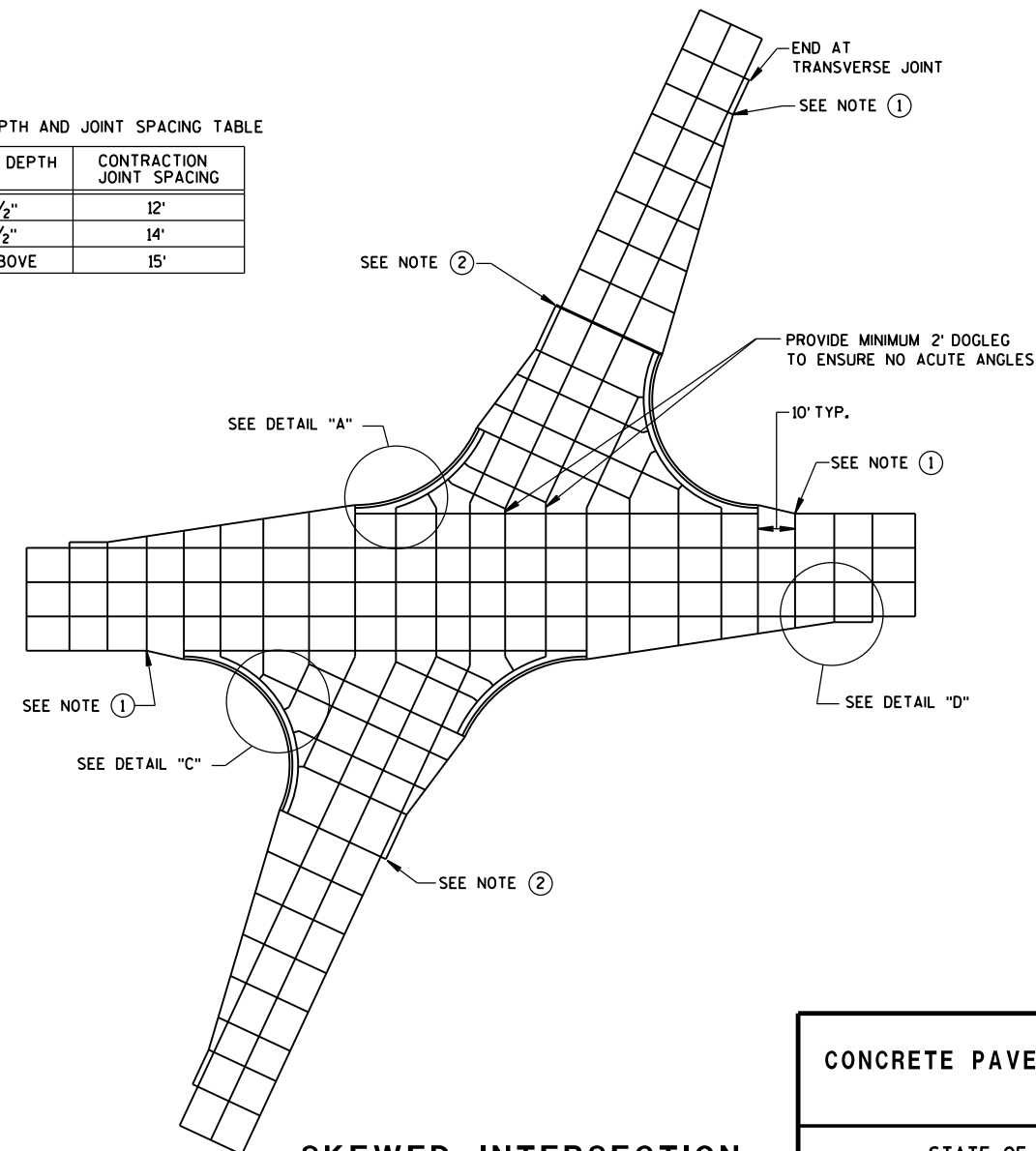
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



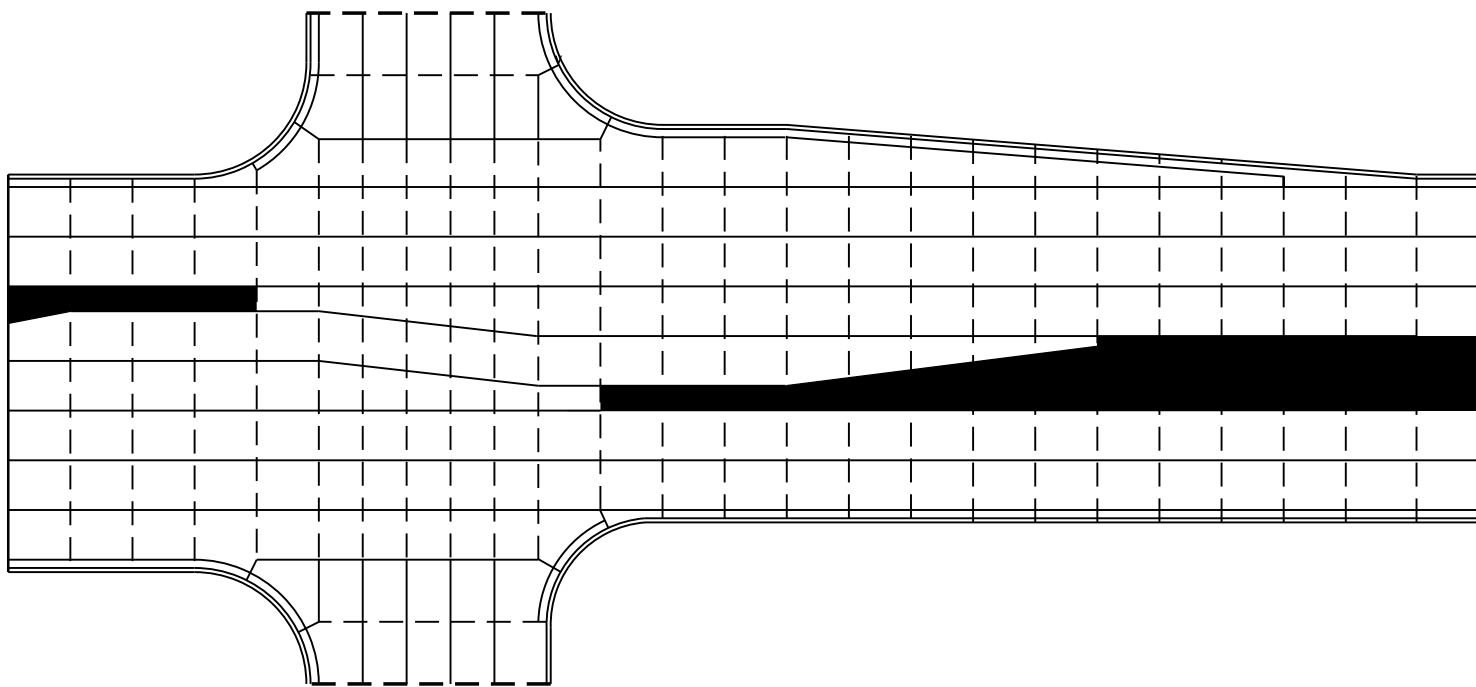
SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

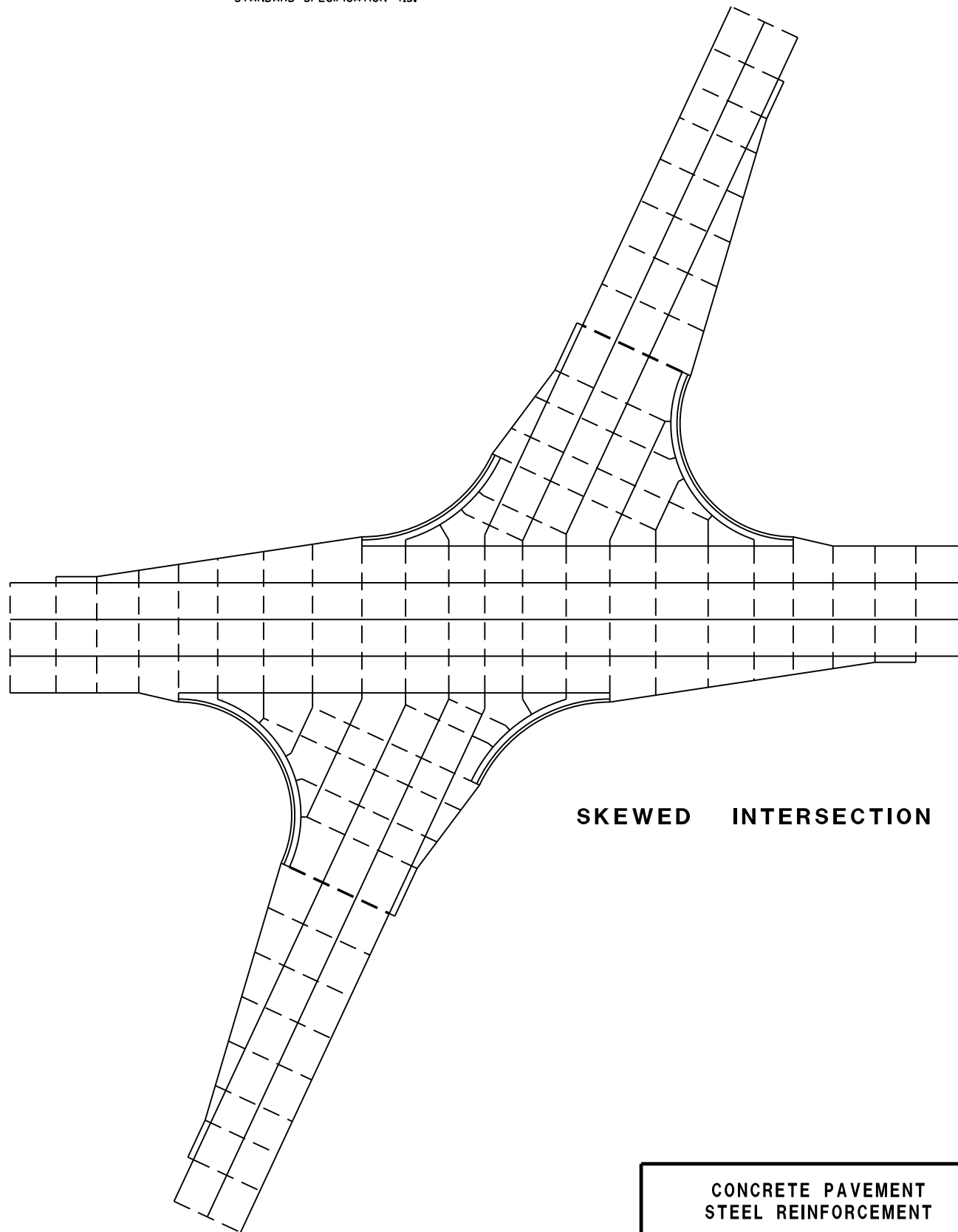
- POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

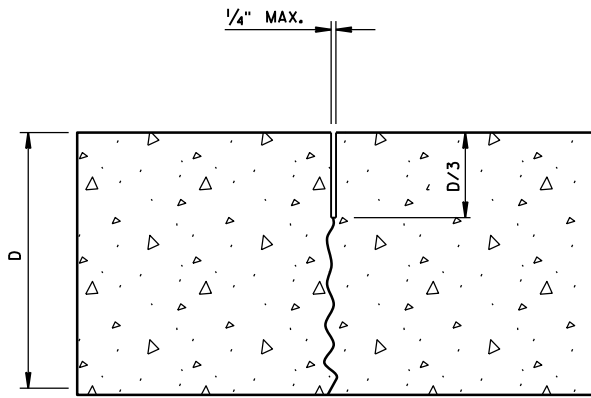
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



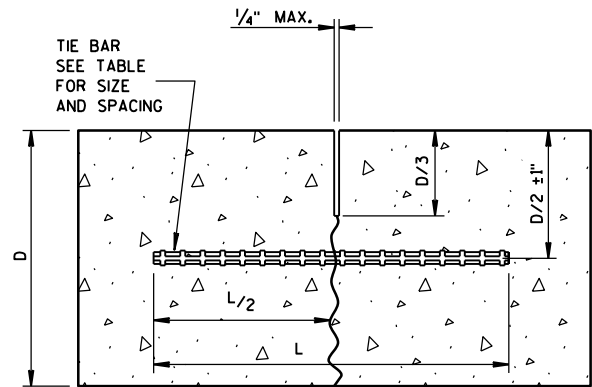
SKewed INTERSECTION

**CONCRETE PAVEMENT
STEEL REINFORCEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

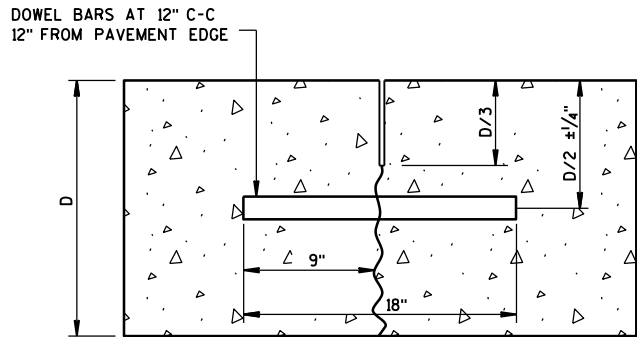
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

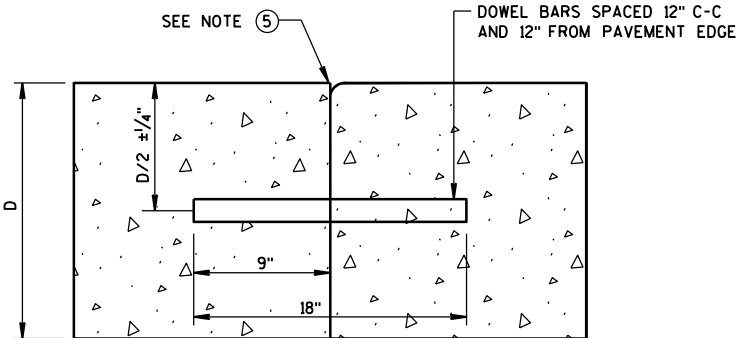
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



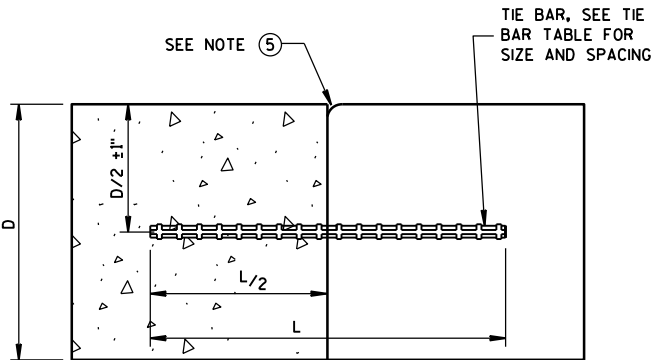
DOWELED-TRANSVERSE

CONTRACTION JOINTS

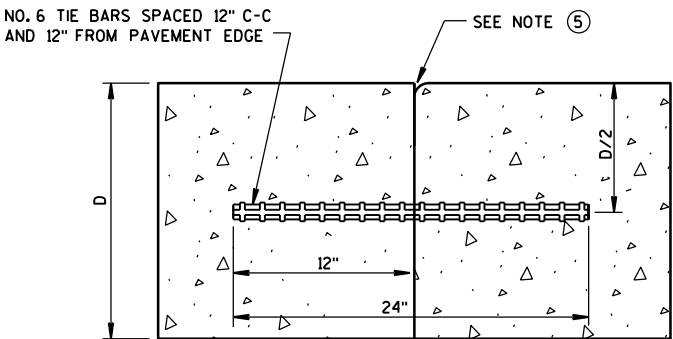
SEE NOTE ②



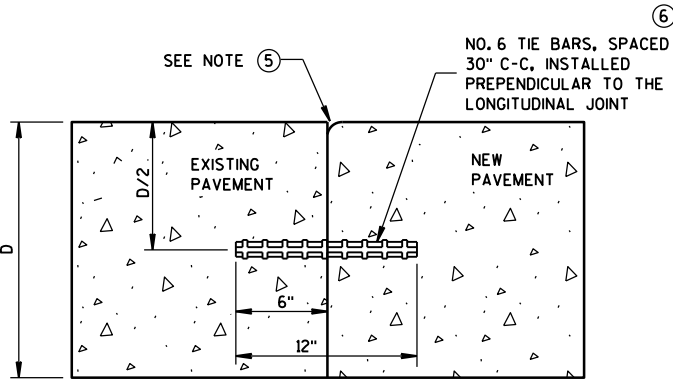
DOWELED TRANSVERSE ③



TIED LONGITUDINAL



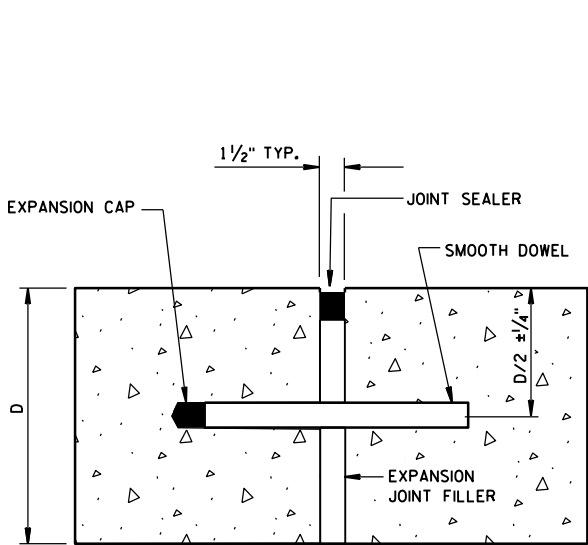
TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



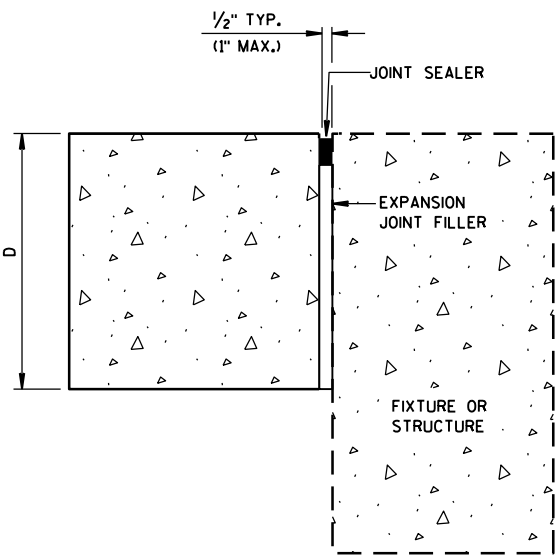
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ④



DOWELED-TRANSVERSE
SEE NOTE ①

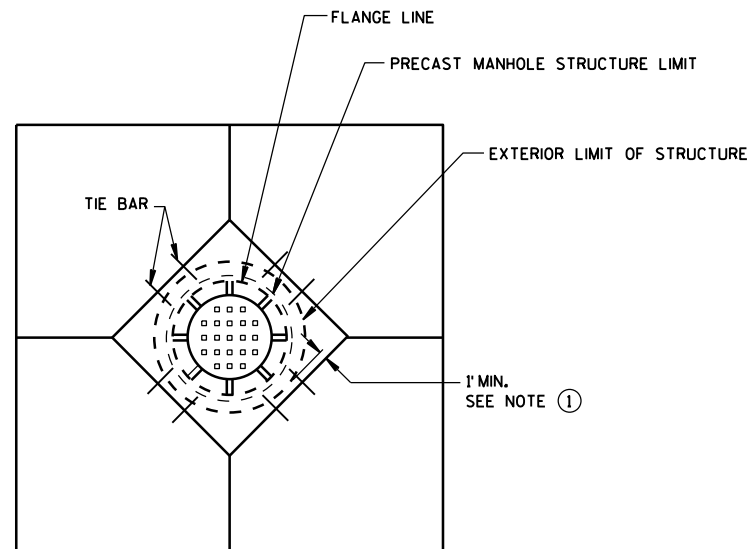


UNTIED-LONGITUDINAL

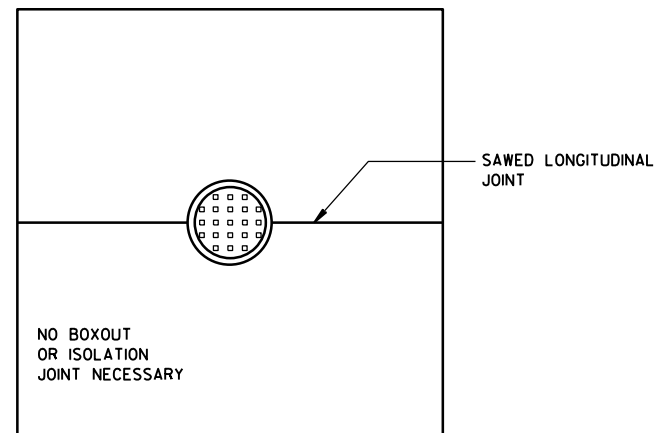
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

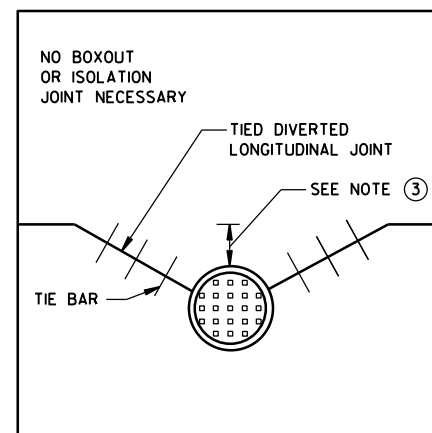
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



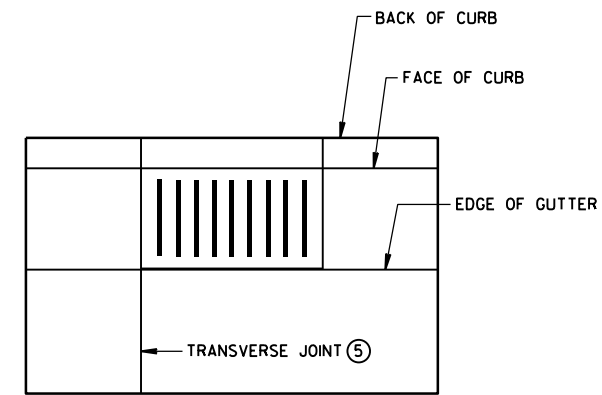
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



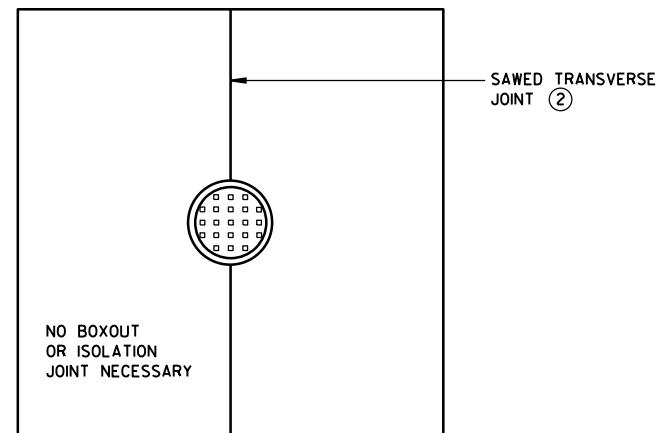
**MANHOLE WITH
LONGITUDINAL JOINT**



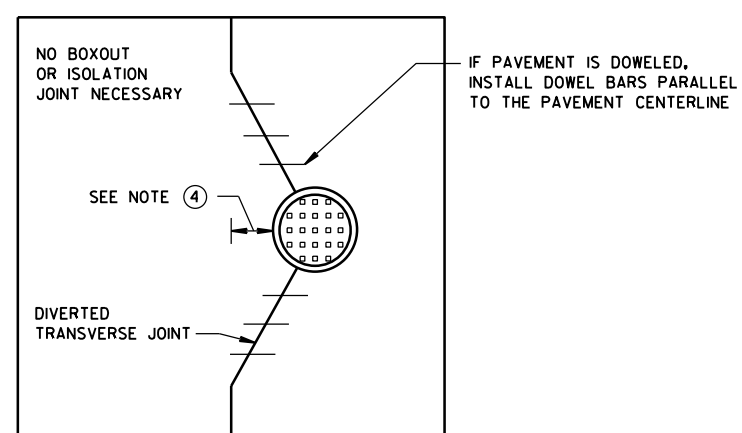
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

GENERAL NOTES

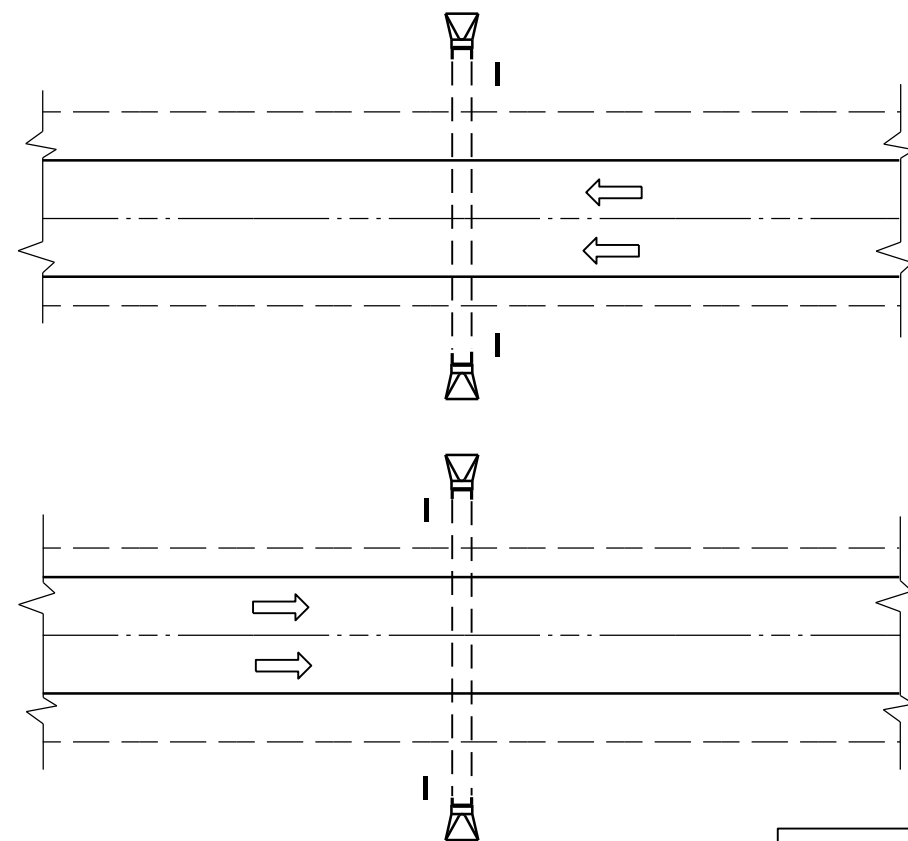
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

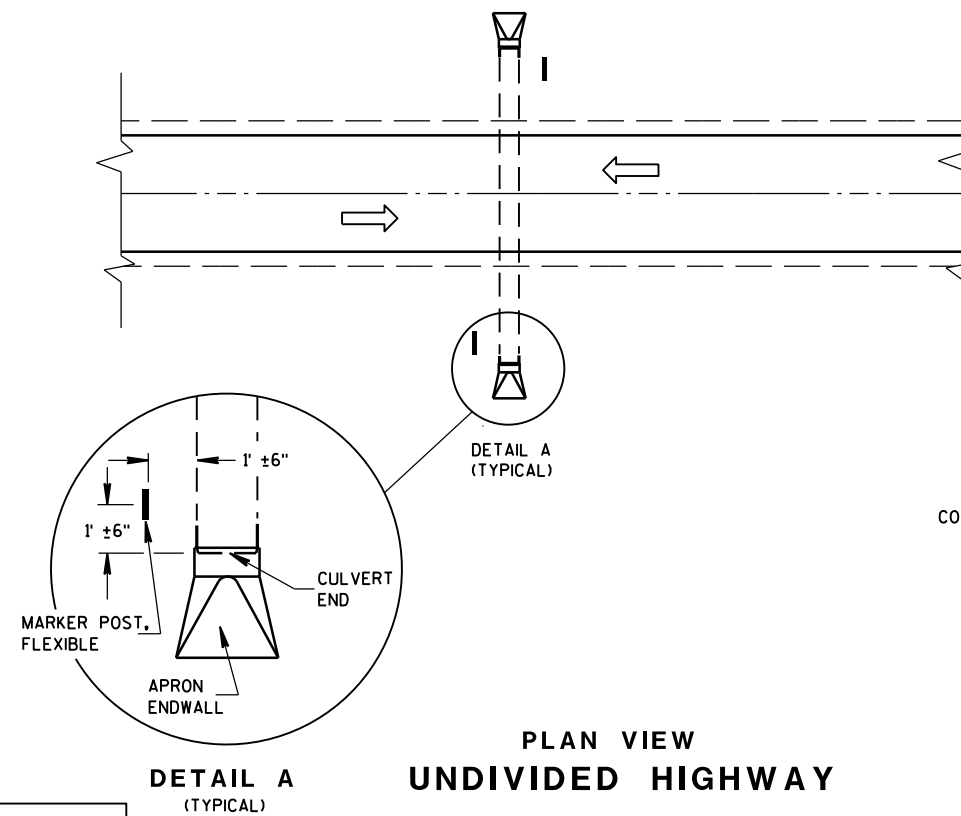
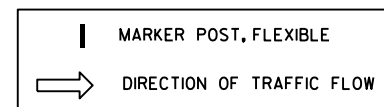
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR



PLAN VIEW
DIVIDED HIGHWAY

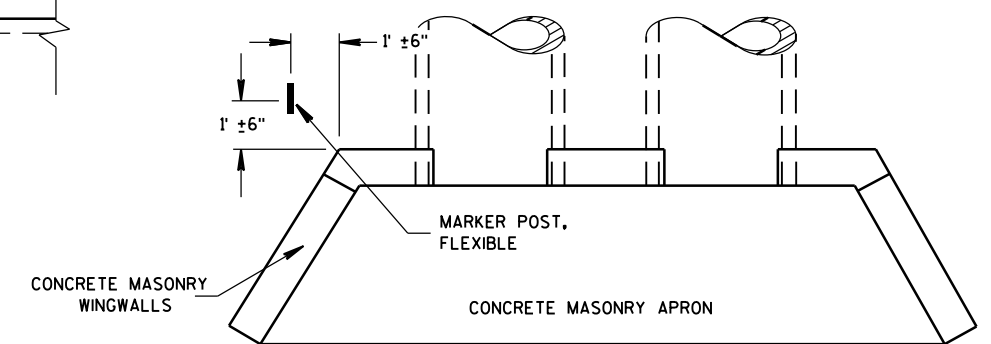


PLAN VIEW
UNDIVIDED HIGHWAY

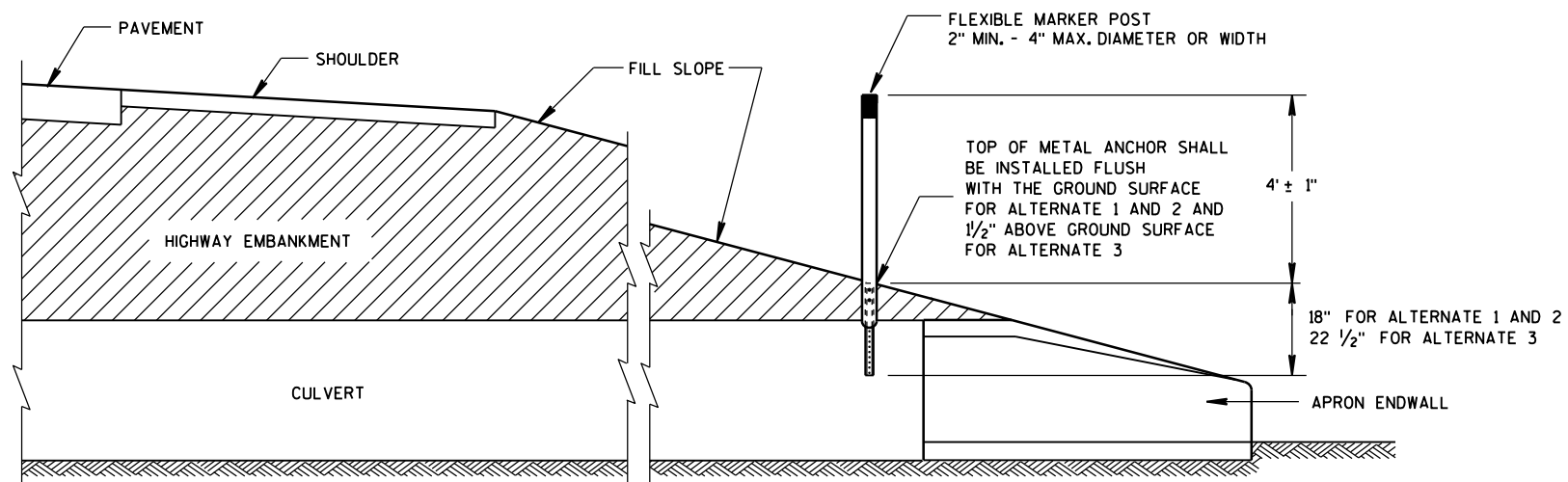
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



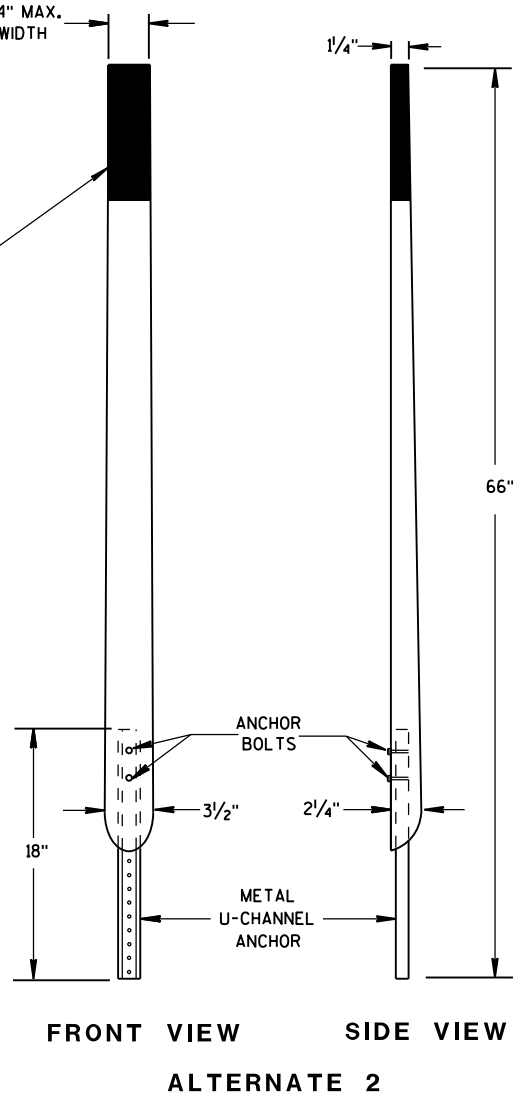
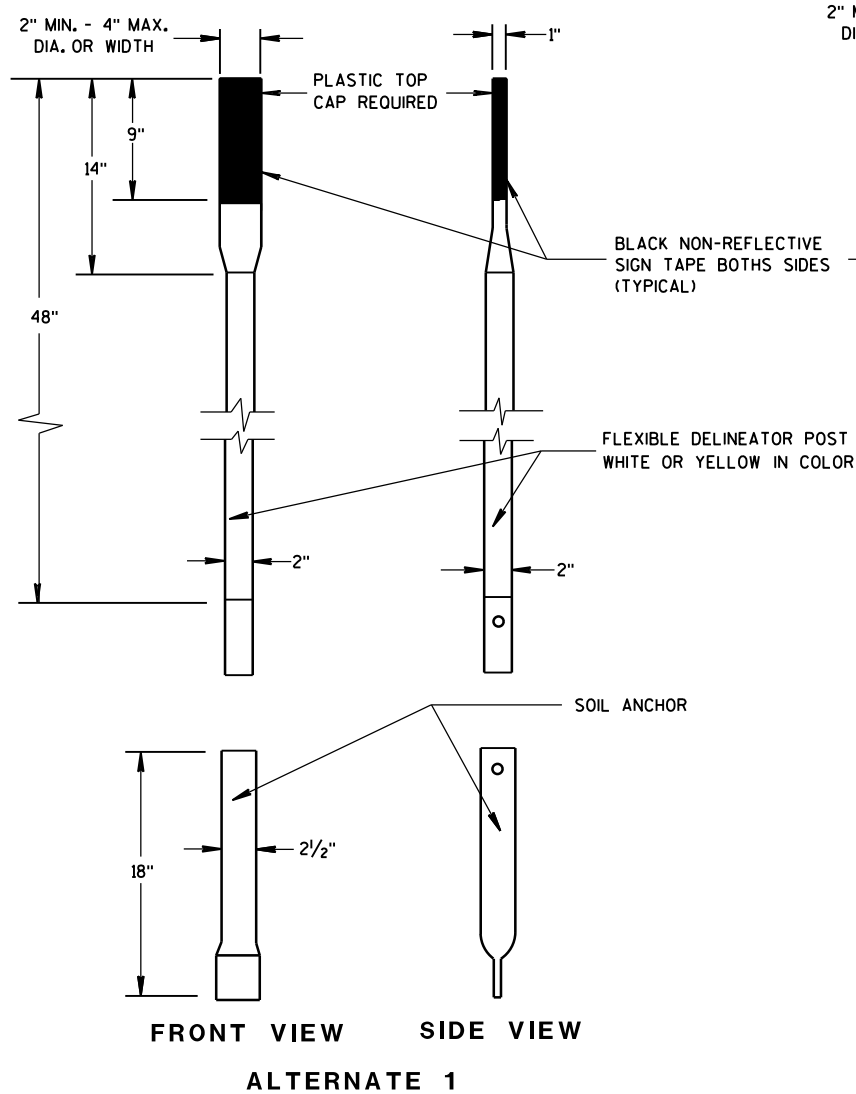
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



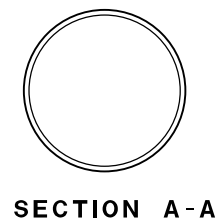
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

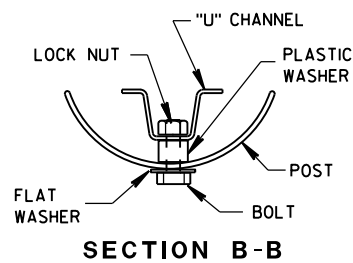
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



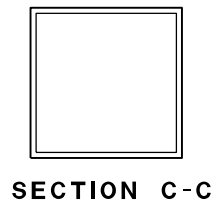
FLEXIBLE MARKER POSTS



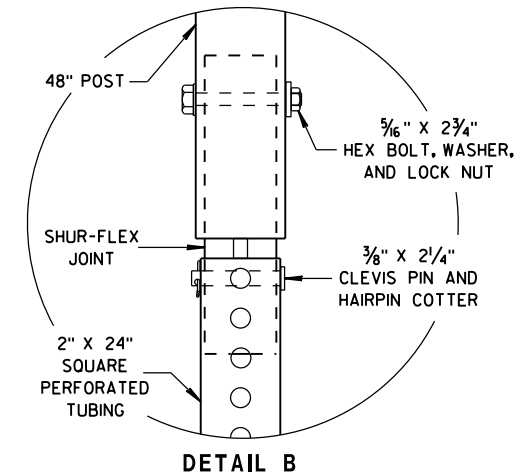
SECTION A-A



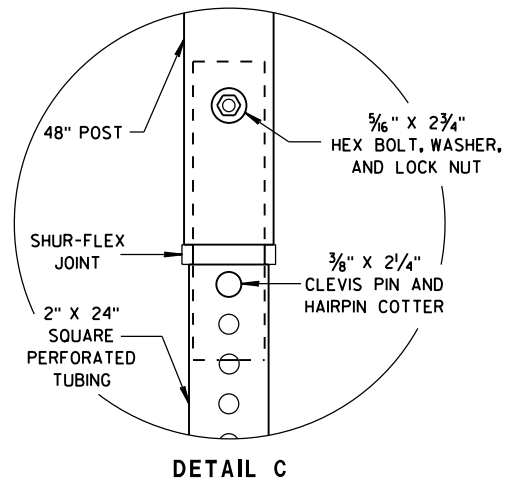
SECTION B-B



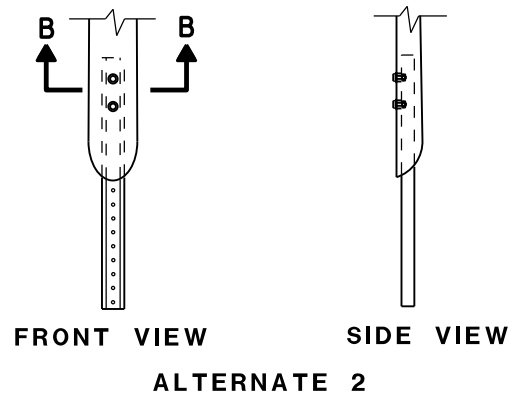
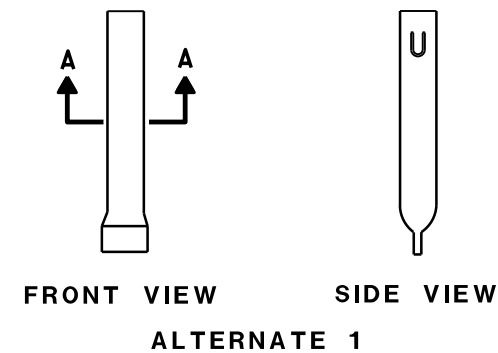
SECTION C-C



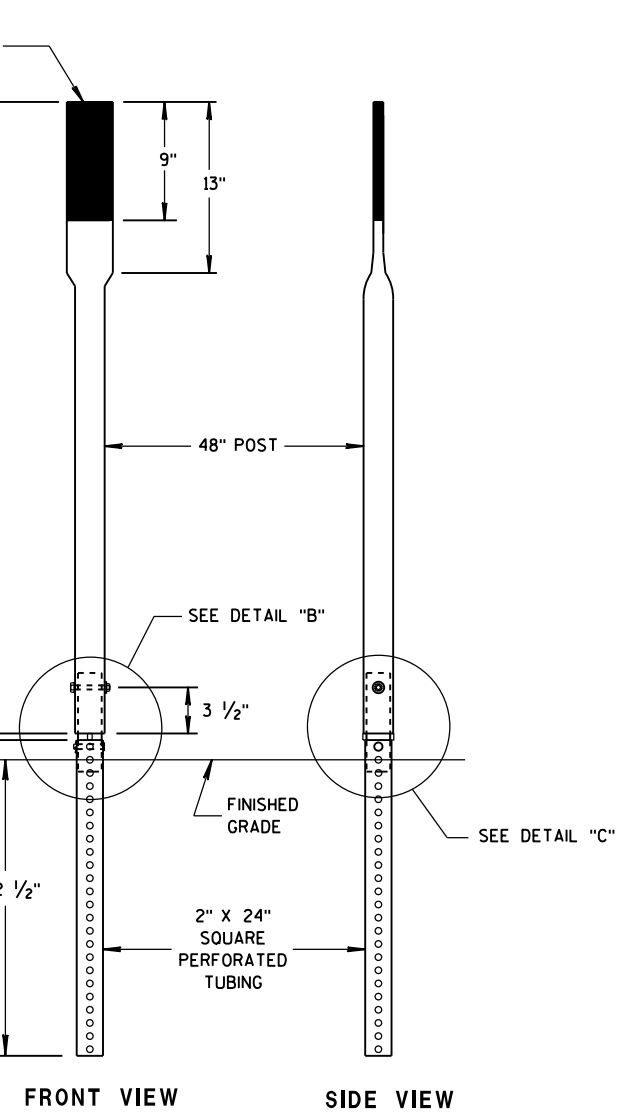
DETAIL B



DETAIL C

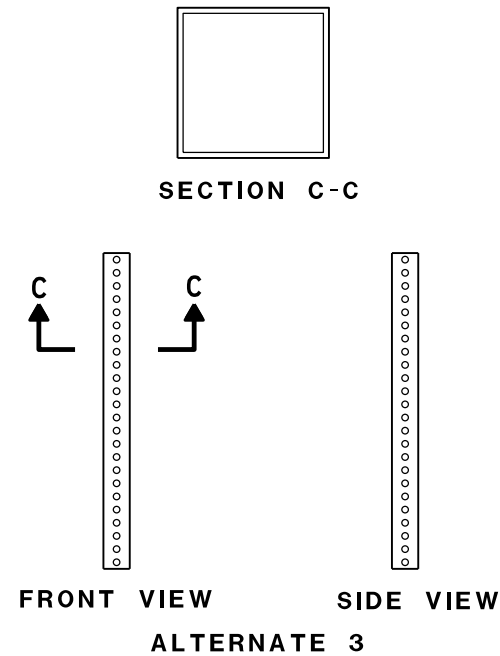


FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW

ALTERNATE 3



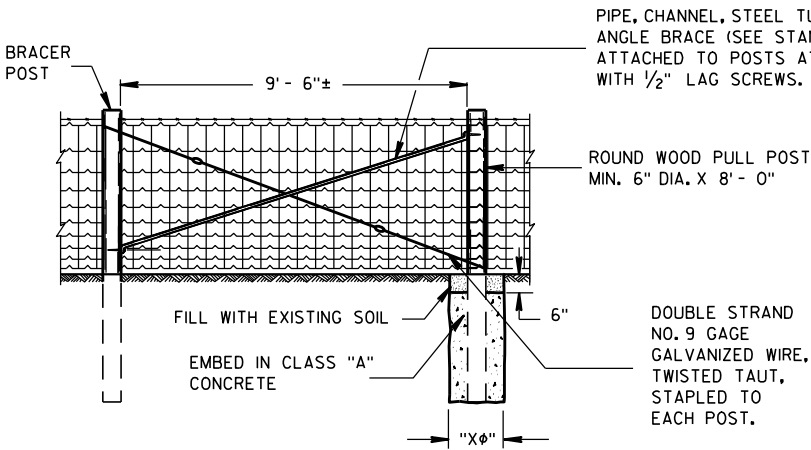
FRONT VIEW SIDE VIEW

ALTERNATE 3

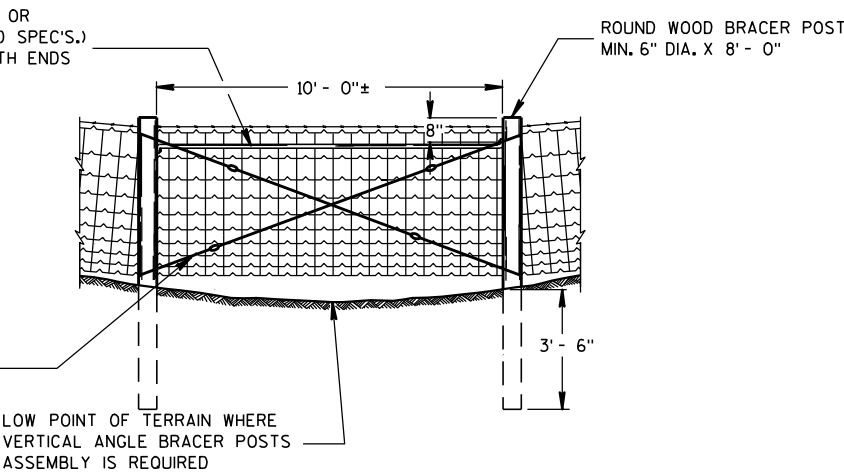
FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

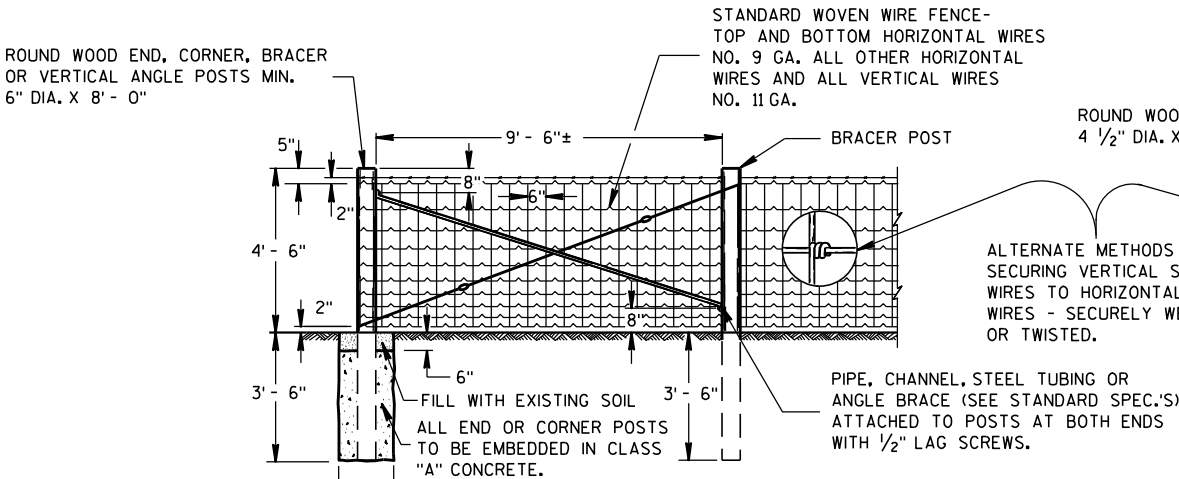
GENERAL NOTES

"Xφ" = DIAMETER OF THE POST PLUS 12".

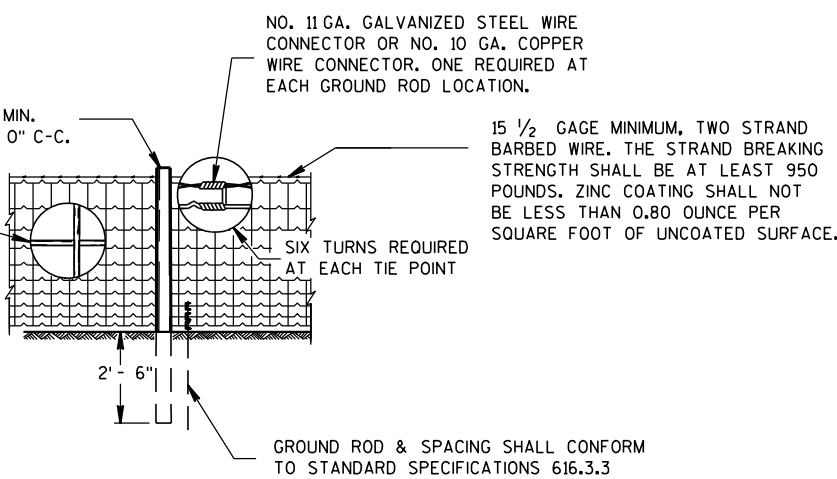
FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.

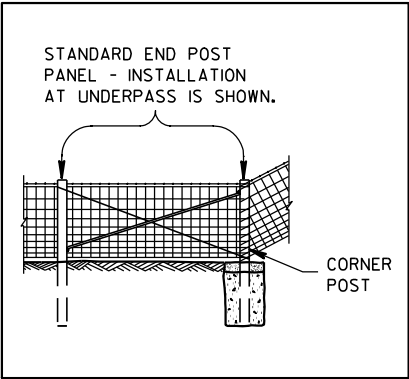


END OR CORNER POSTS ASSEMBLY

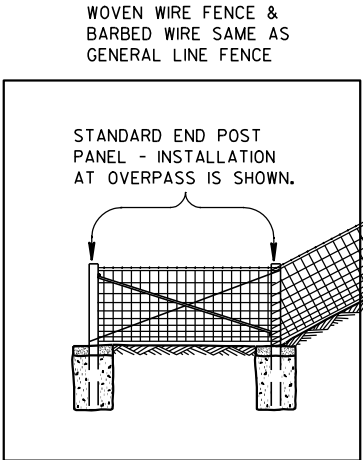


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



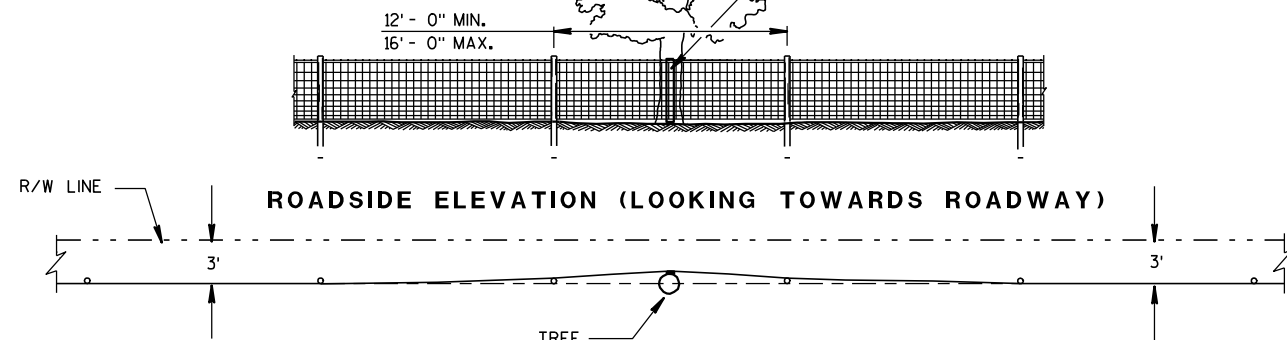
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

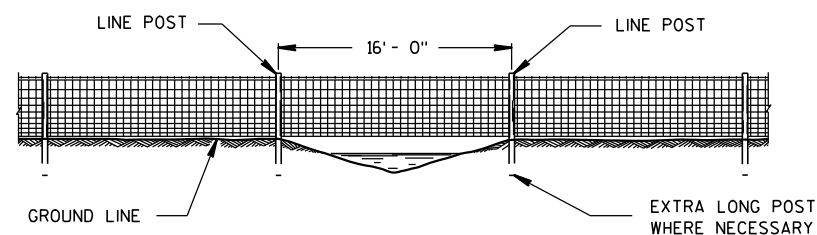
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

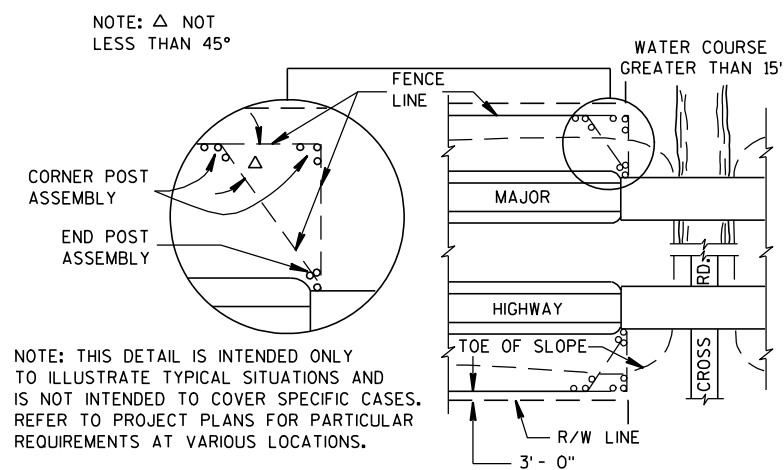
2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.



PLAN VIEW
FENCE DESIGN AT TREES REMAINING
IN NORMAL FENCE LINE

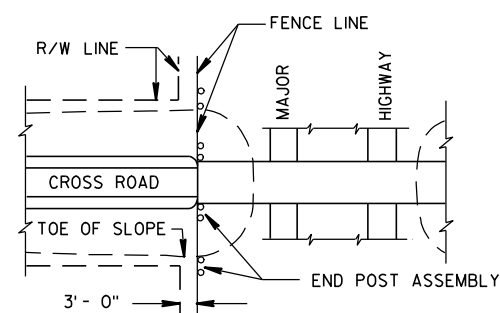


FENCE CONSTRUCTION OVER STREAM
COURSES OF 15 FT. OR LESS IN WIDTH

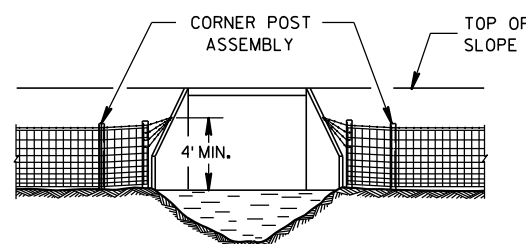


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE
CROSSING OF GREATER THAN 15 FT. IN WIDTH

FENCE LOCATION AT STRUCTURES

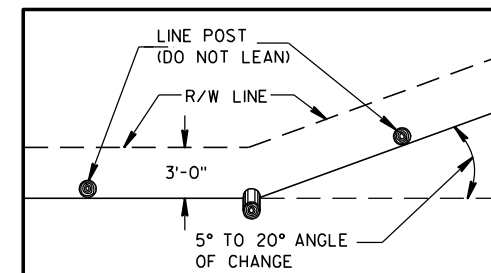
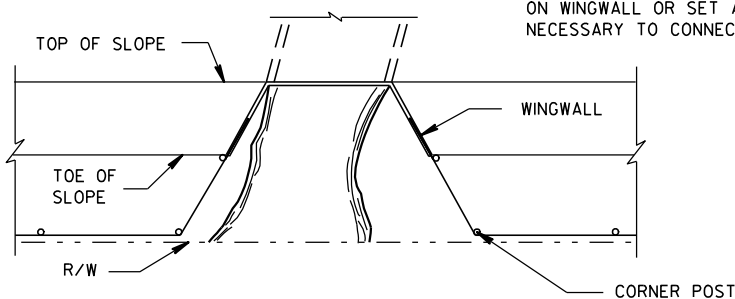


PLAN VIEW
MAJOR HIGHWAY UNDERPASS

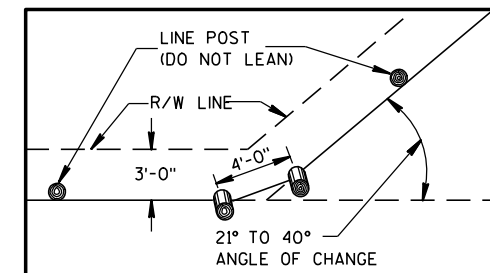


FENCE INSTALLATION TO WINGWALLS

NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



PLAN VIEW
SINGLE POST CORNER

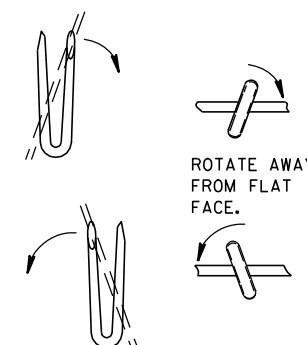


PLAN VIEW
DOUBLE POST CORNER

RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



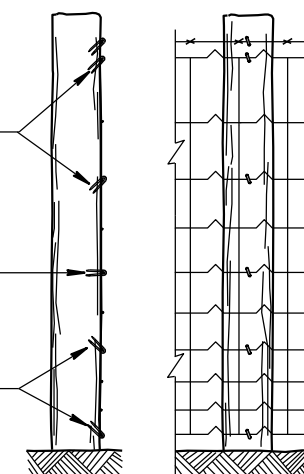
LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

STAPLES SLOPED DOWNWARD FOR SUSTAINED GRADES AND OVER KNOLLS.

STAPLES LEVEL FOR LEVEL GROUND.

SLOPE UPWARDS WHEN FENCE TENDS TO LIFT.



END ELEVATION
FARM SIDE ELEVATION
FENCE MOUNTING DETAIL

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

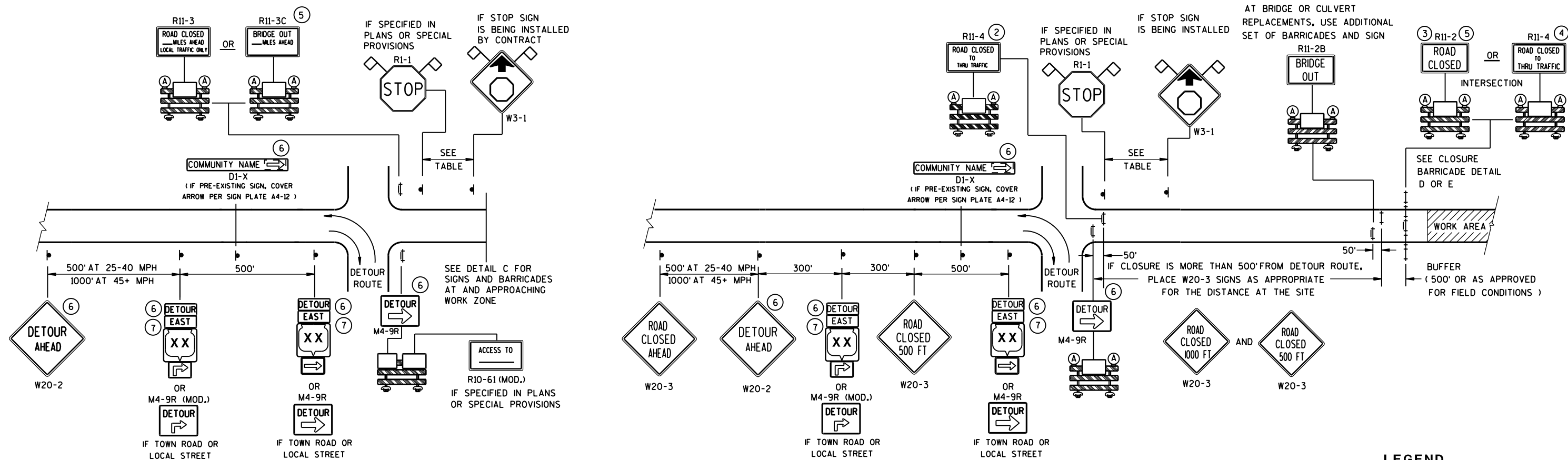
APPROVED

4/4/2008

DATE

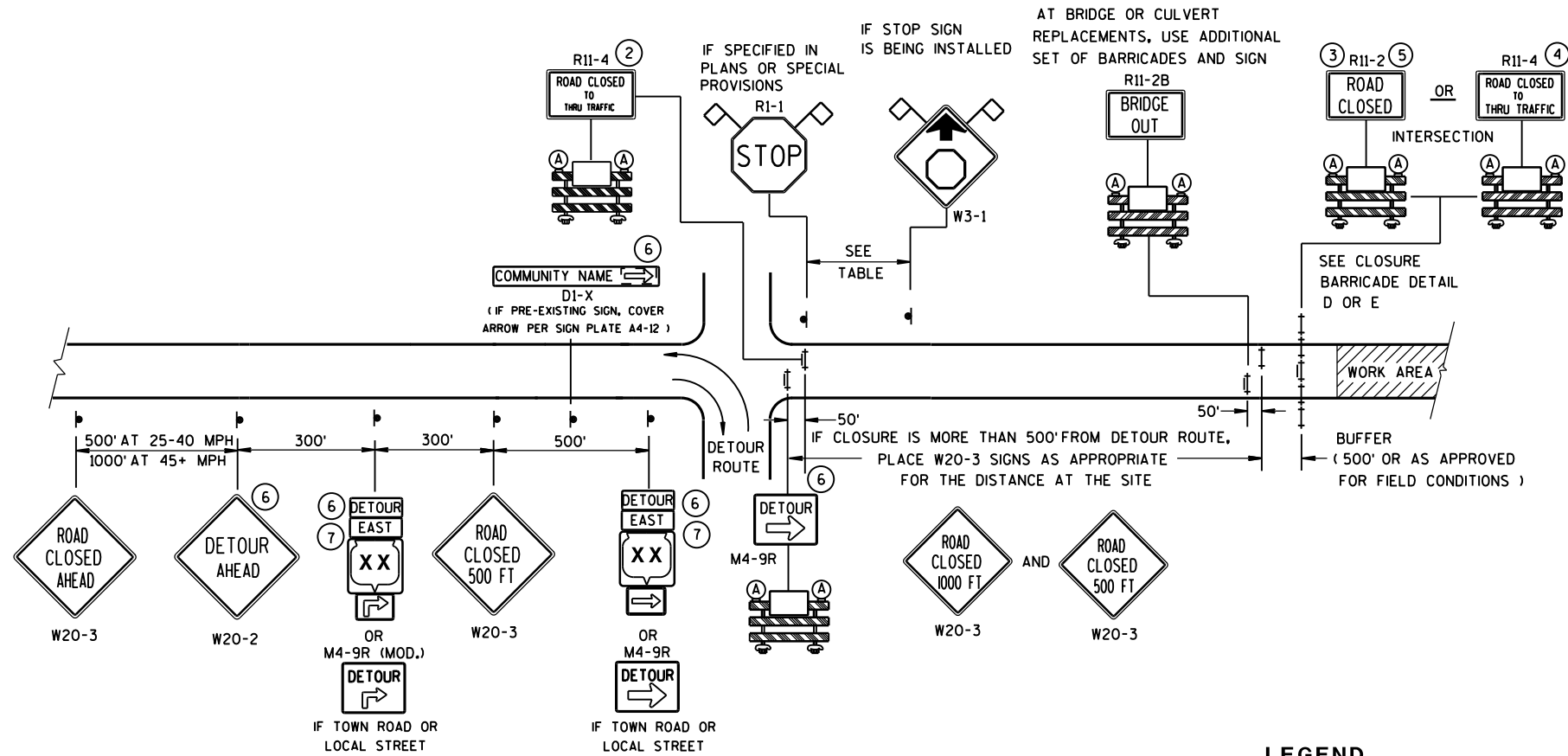
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

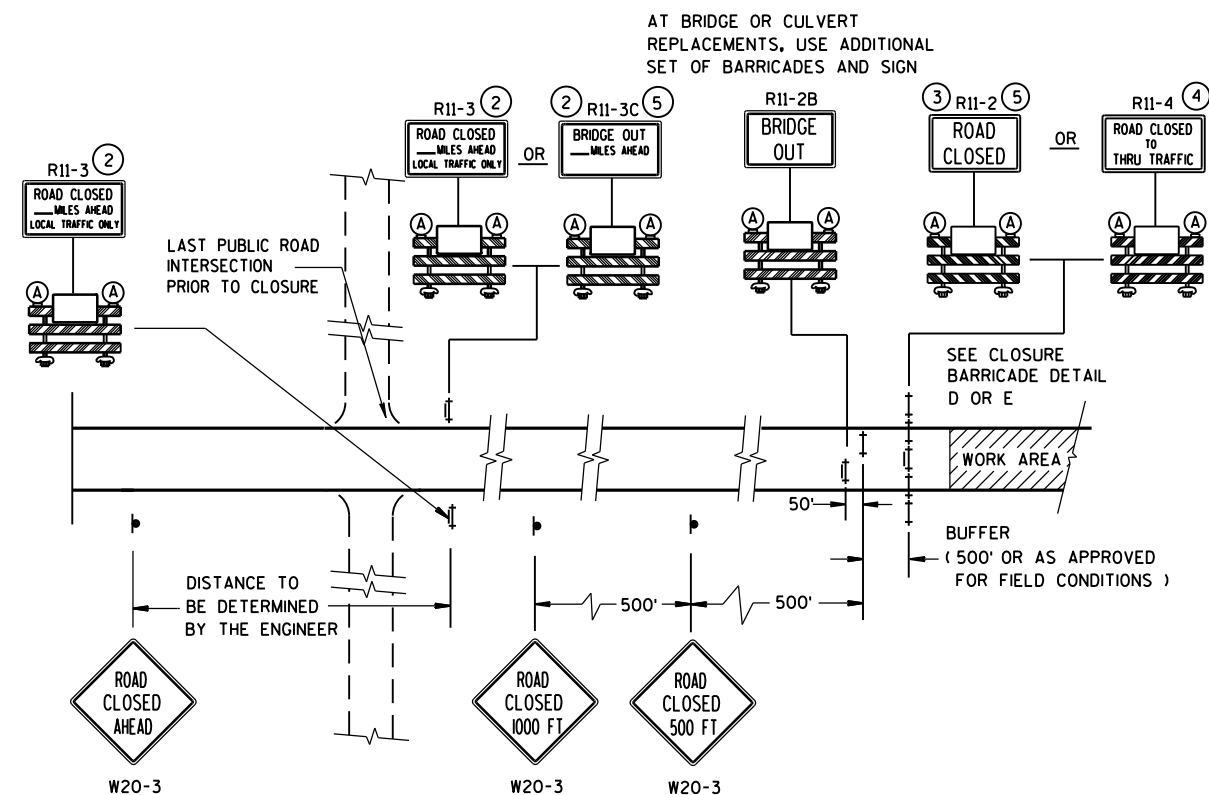
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- | | |
|---|---------------------------------------|
|  | SIGN ON PERMANENT SUPPORT |
|  | TYPE III BARRICADE |
|  | TYPE III BARRICADE WITH ATTACHED SIGN |
|  | TYPE "A" WARNING LIGHT (FLASHING) |

 WORK AREA

DETOUR M4-8
EAST M3-X

 OR  OR 

M1-4 M1-5A M1-6

 OR 
M05-1 M06-1

 FLAGS, 16" X 16" MIN., (ORANGE)

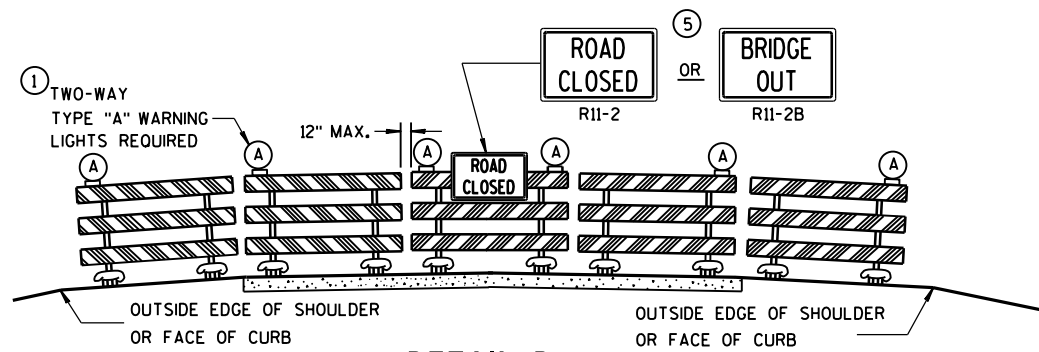
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

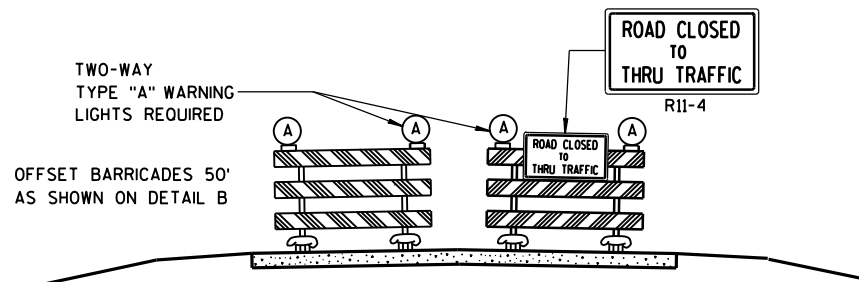
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

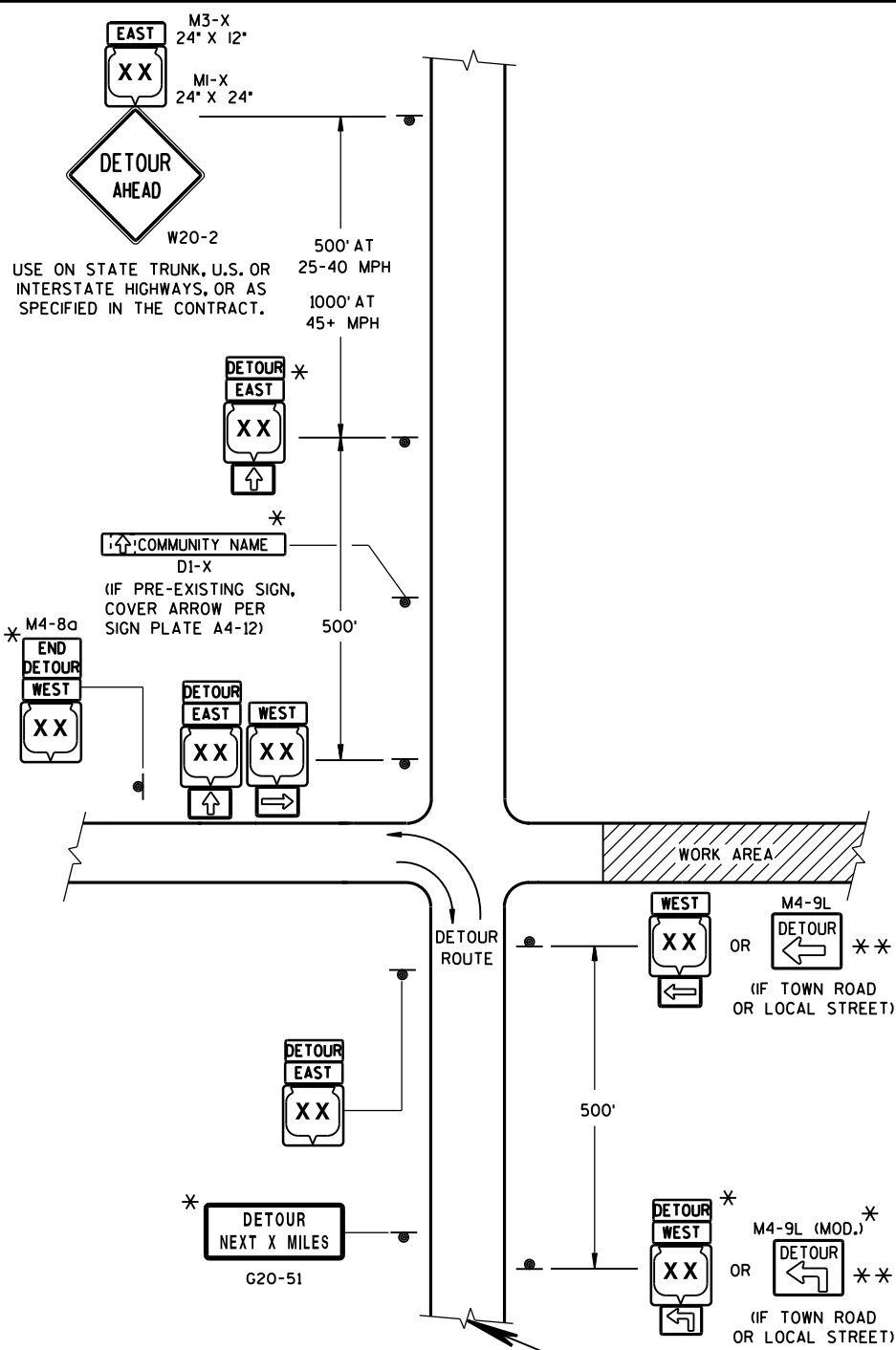
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



LEGEND

SIGN ON PERMANENT SUPPORT

WORK AREA

M4-8
M3-X

MI-4 MI-5A MI-6

M05-1 M06-1 M06-1

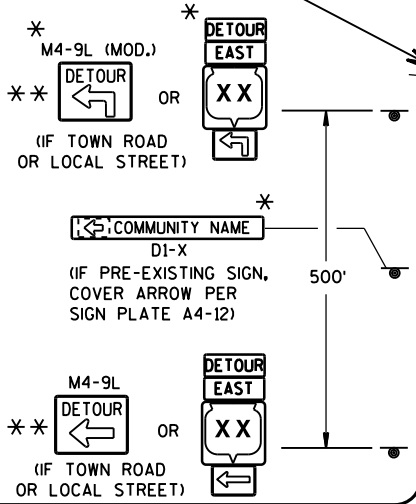
SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD 15C2-SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

DETAIL F
DETOUR SIGNING

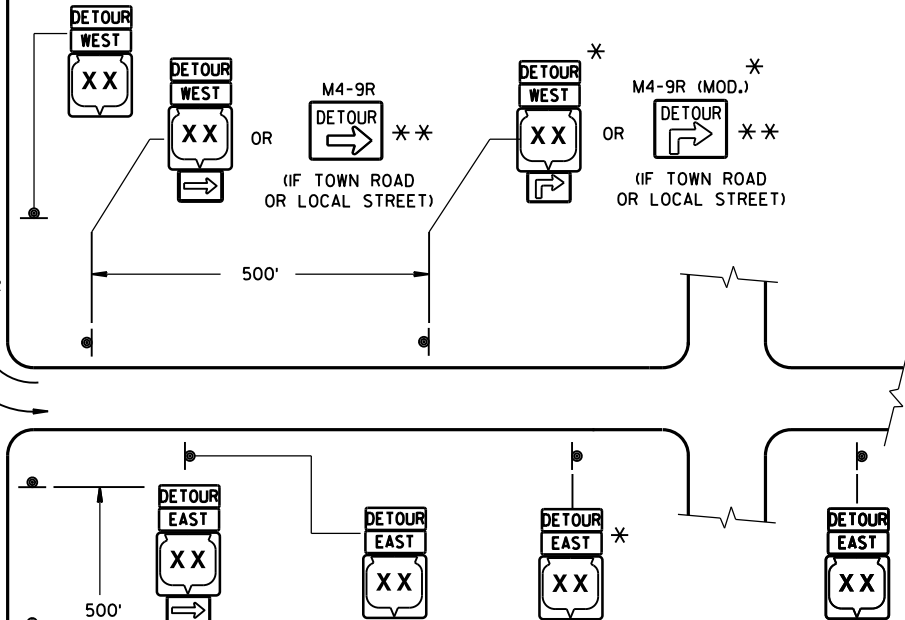
USE ON STATE TRUNK, U.S. OR
INTERSTATE HIGHWAYS, OR AS
SPECIFIED IN THE CONTRACT.



GENERAL NOTES

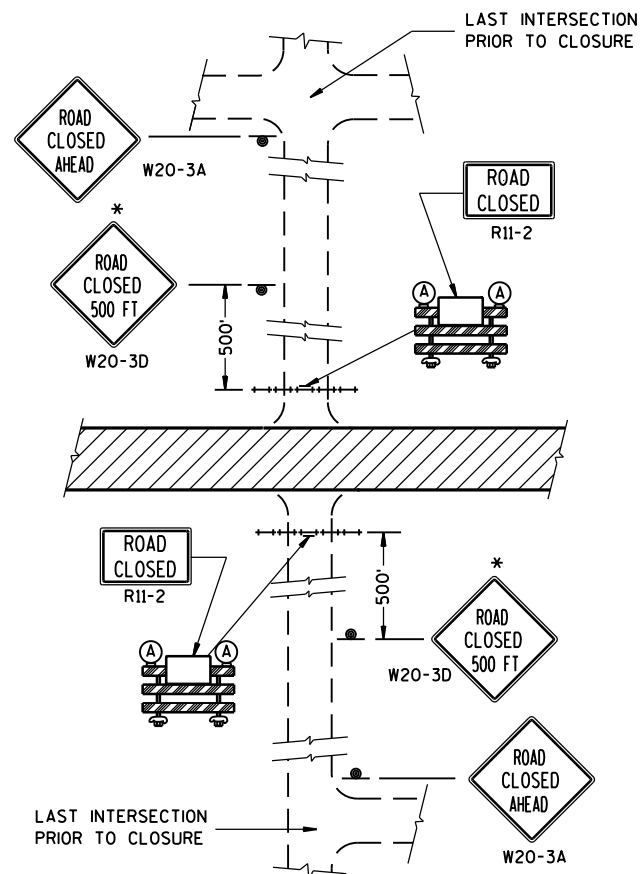
- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS, MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- SIGN SIZES SHALL BE AS FOLLOWS:
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M4-9 SHALL BE 30" X 24".
 - M4-8a SHALL BE 24" X 18".
 - G20-51 SHALL BE 60" X 24".
 - W20-2 SHALL BE 48" X 48".
 - D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

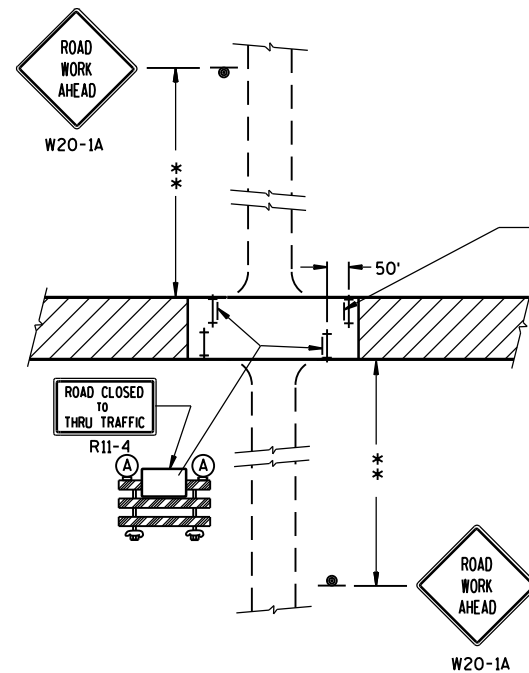


PLACE SIGNS BEYOND INTERSECTIONS WITH
STATE OR COUNTY TRUNK HIGHWAYS OR
AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF
URBAN AREA.)

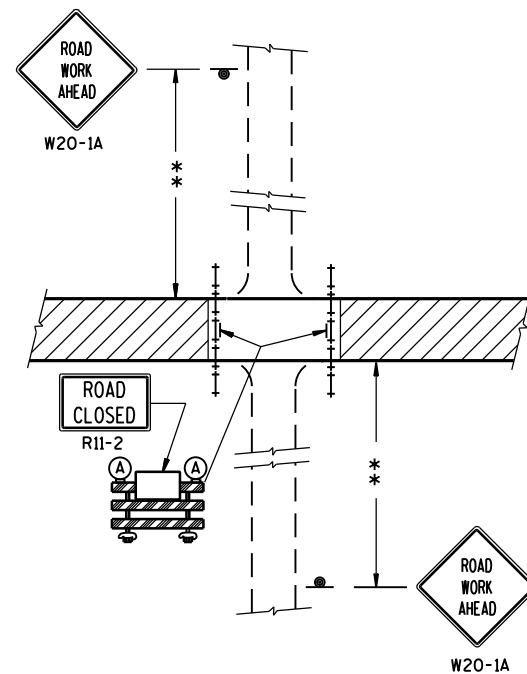
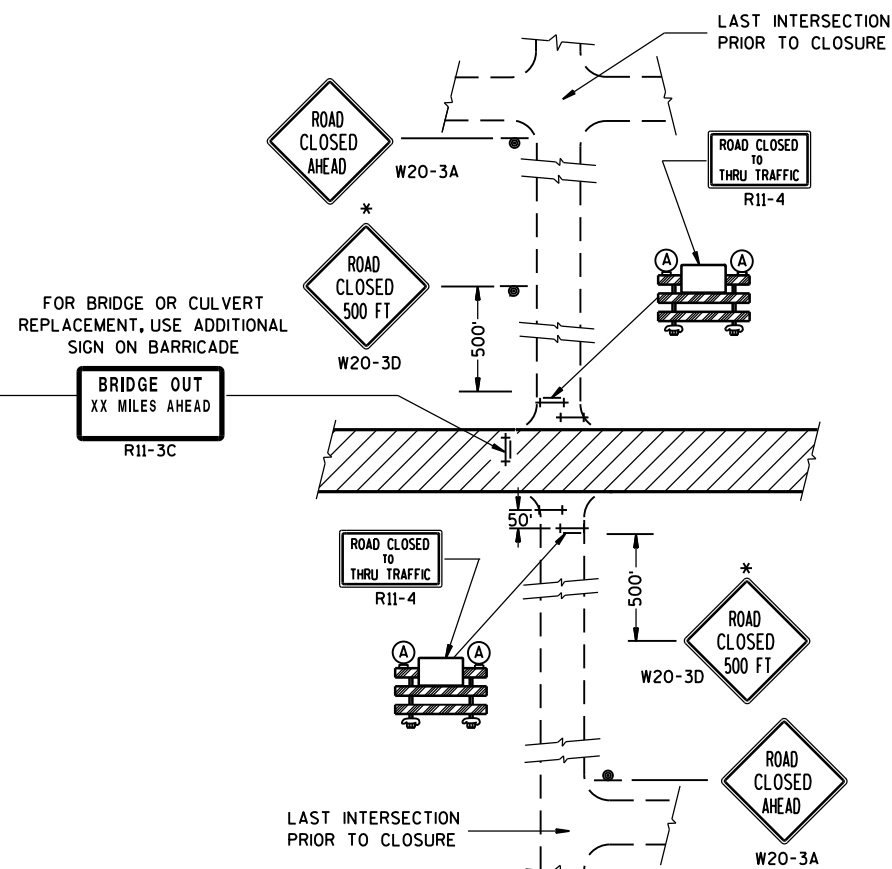
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

**DETAIL 1**

(NO ACCESS TO PROJECT)

**DETAIL 3**

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

**DETAIL 2**(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).**DETAIL 4**(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)**GENERAL NOTES**

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

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

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

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 RE-ESTABLISHED.

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015

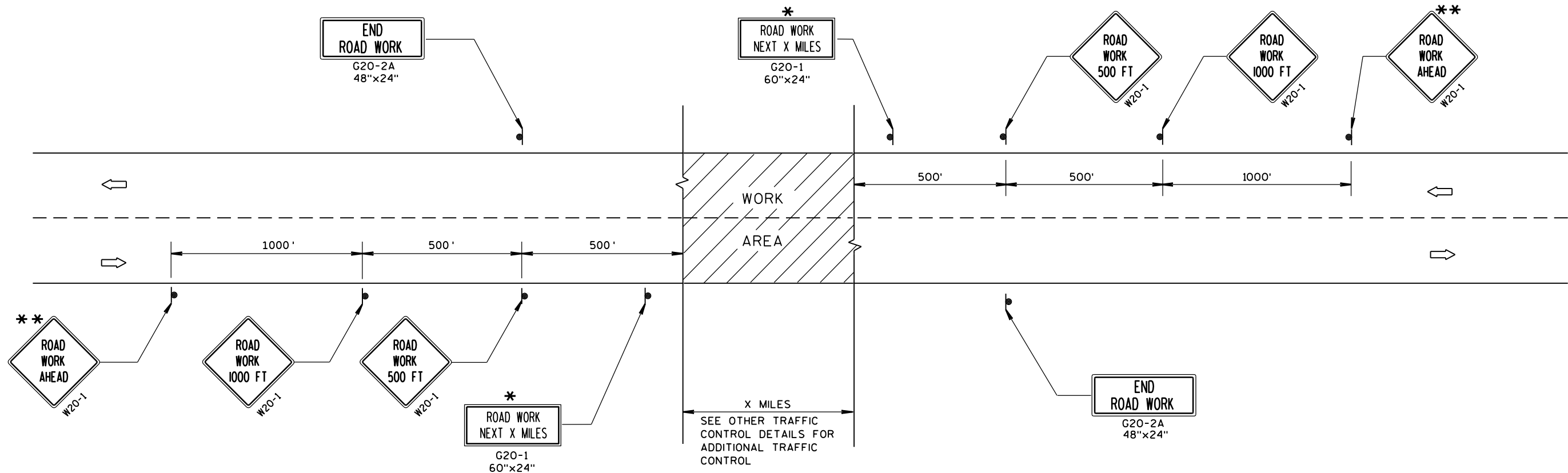
DATE

FHWA

/S/ Peter Amakobe Atepe

STATEWIDE WORK ZONE TRAFFIC

SAFETY ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

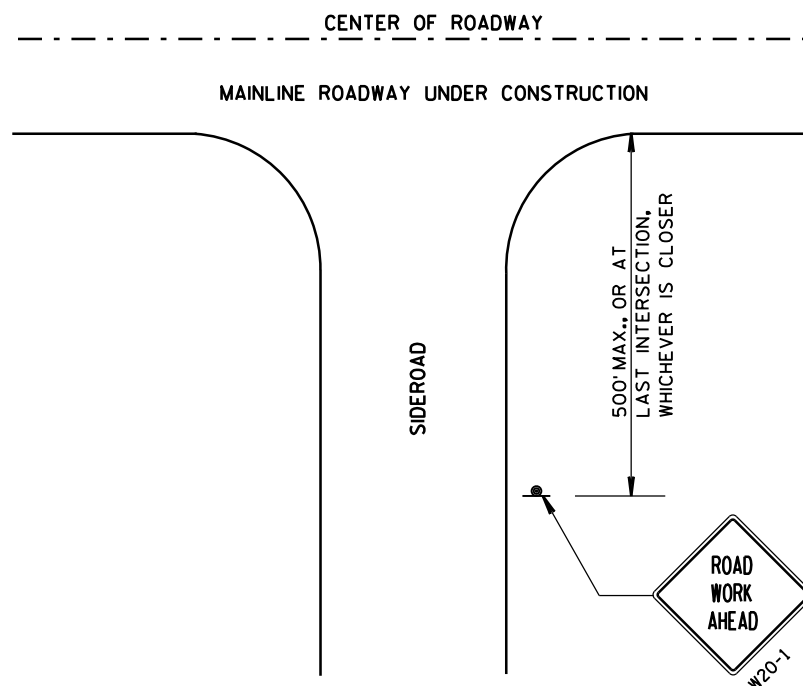
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "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

TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013

DATE

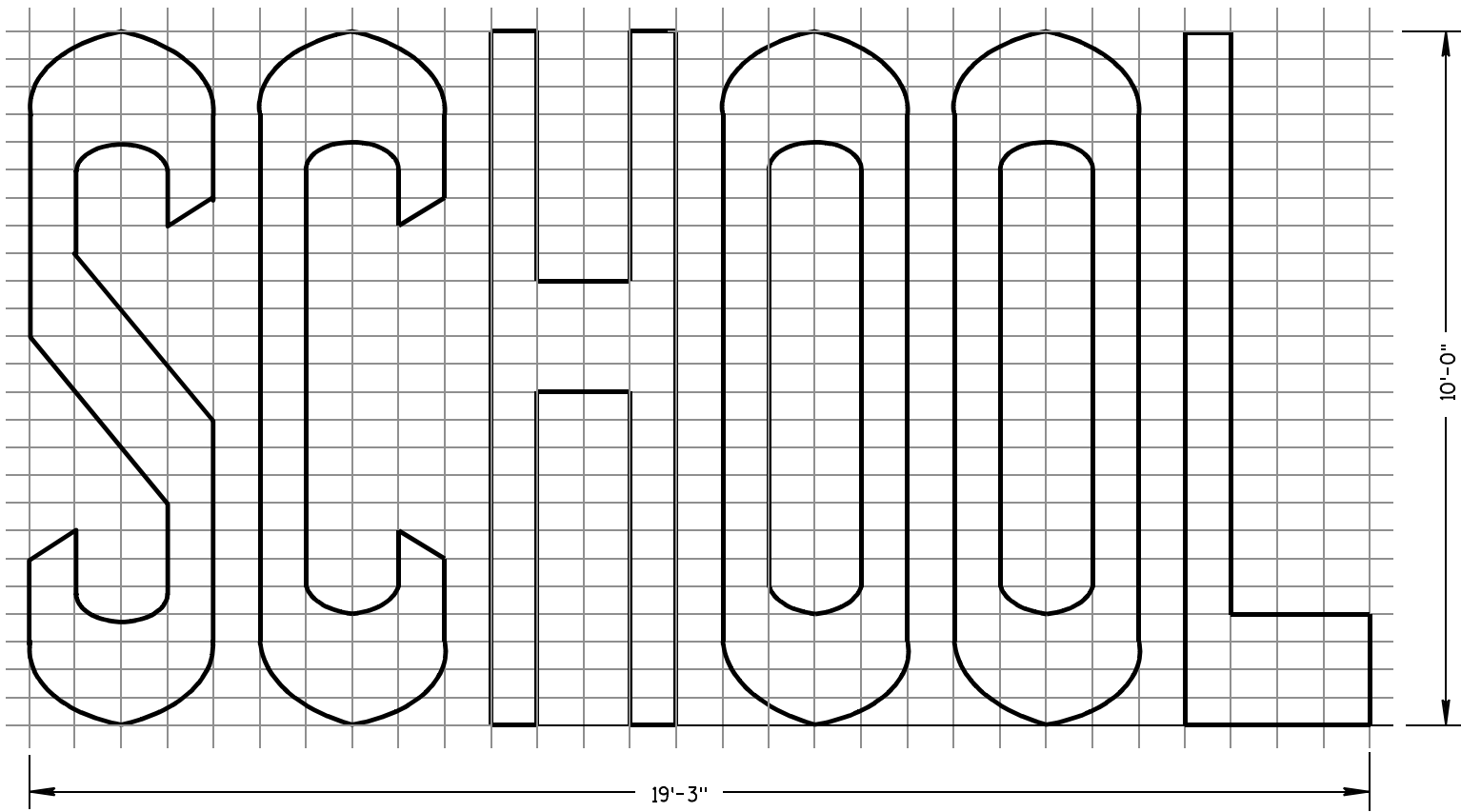
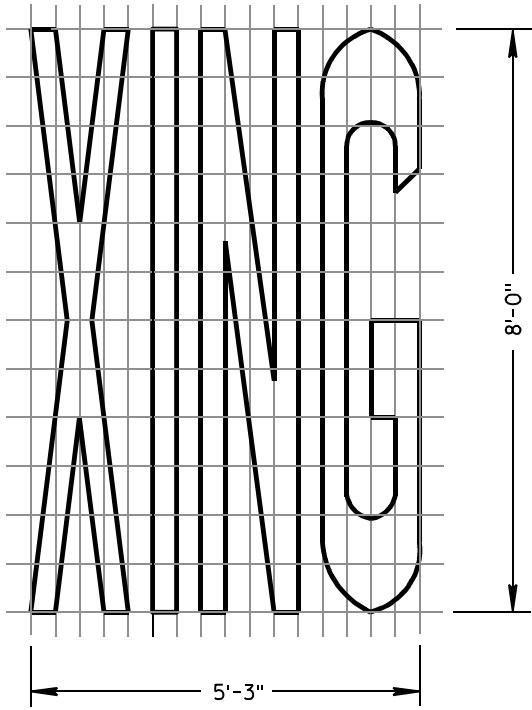
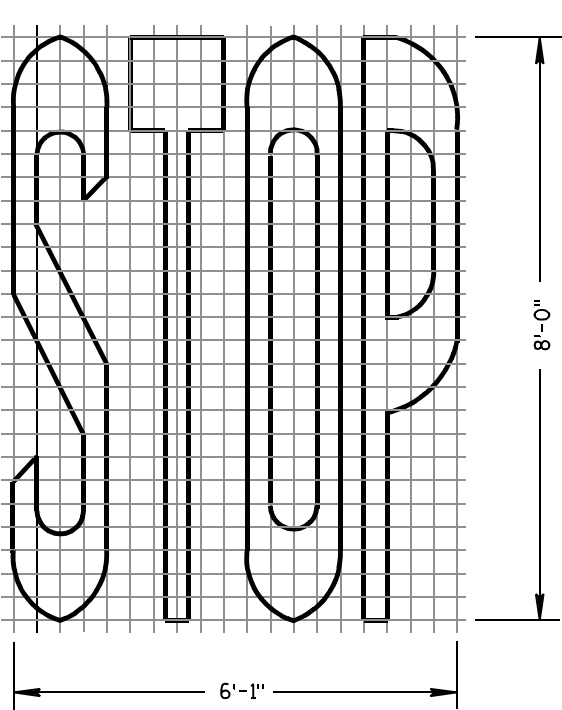
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

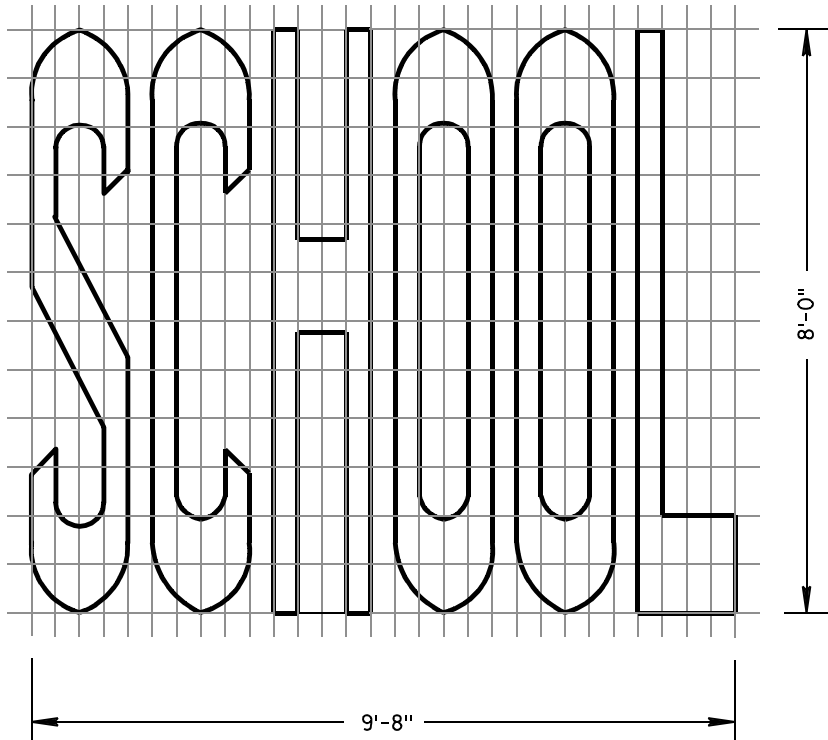
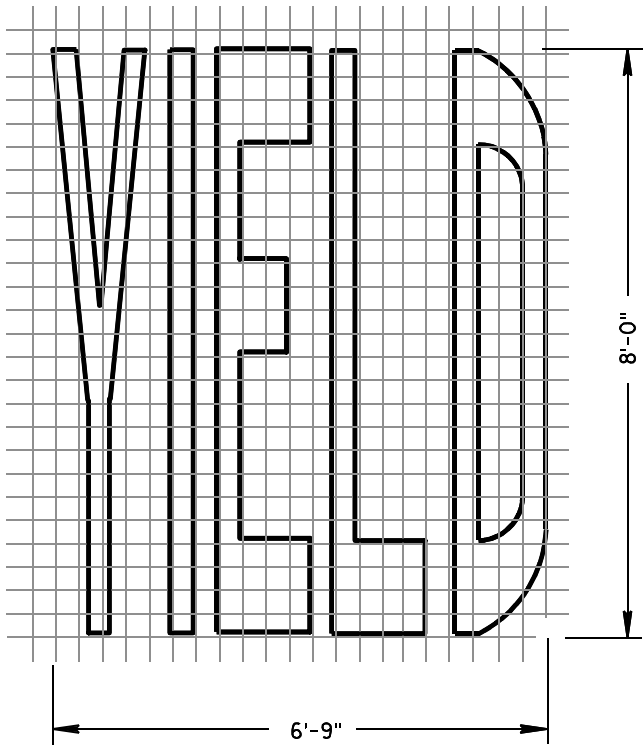
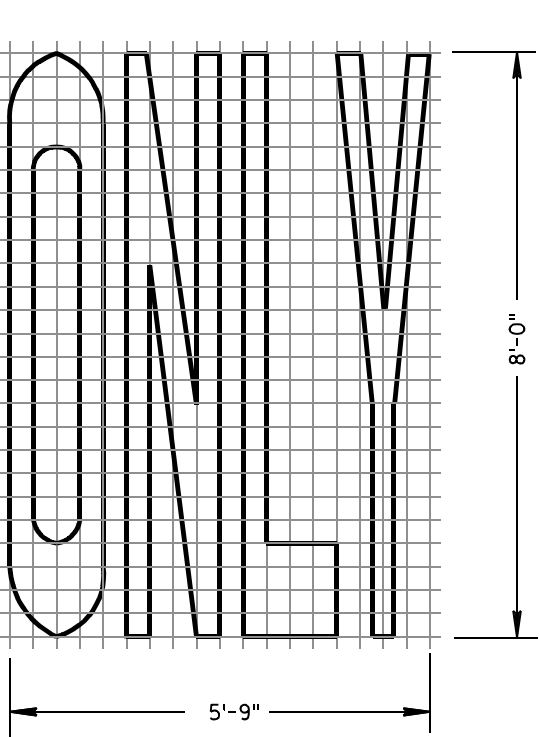
GENERAL NOTES

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

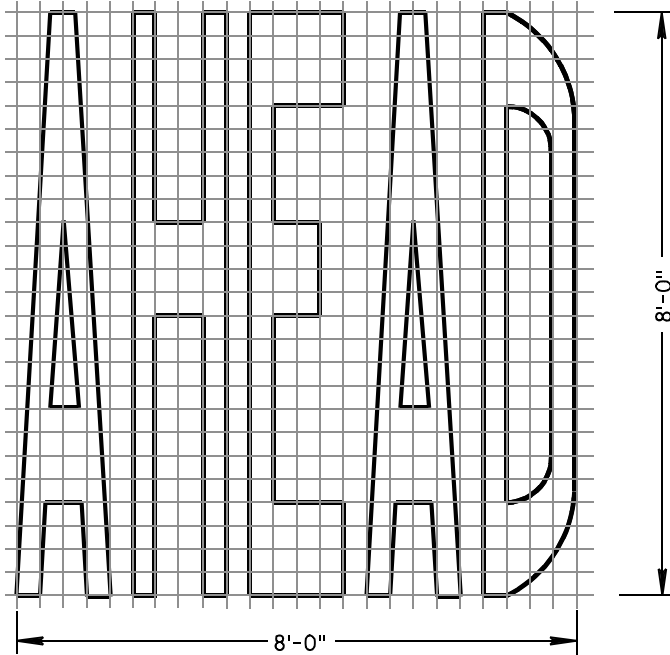
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TWO-LANE



SINGLE-LANE



PAVEMENT MARKING WORDS

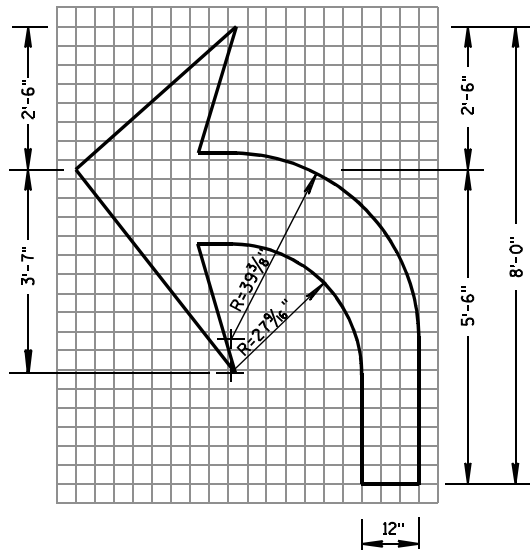
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

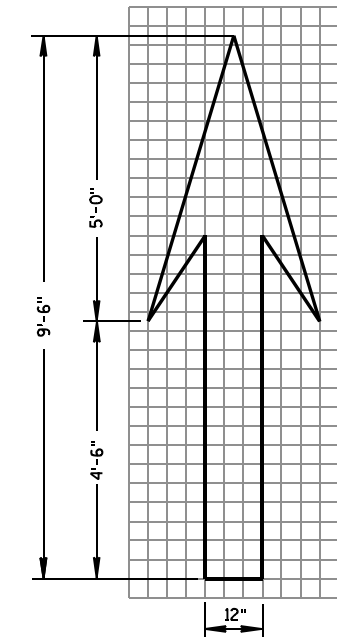
7-1-11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

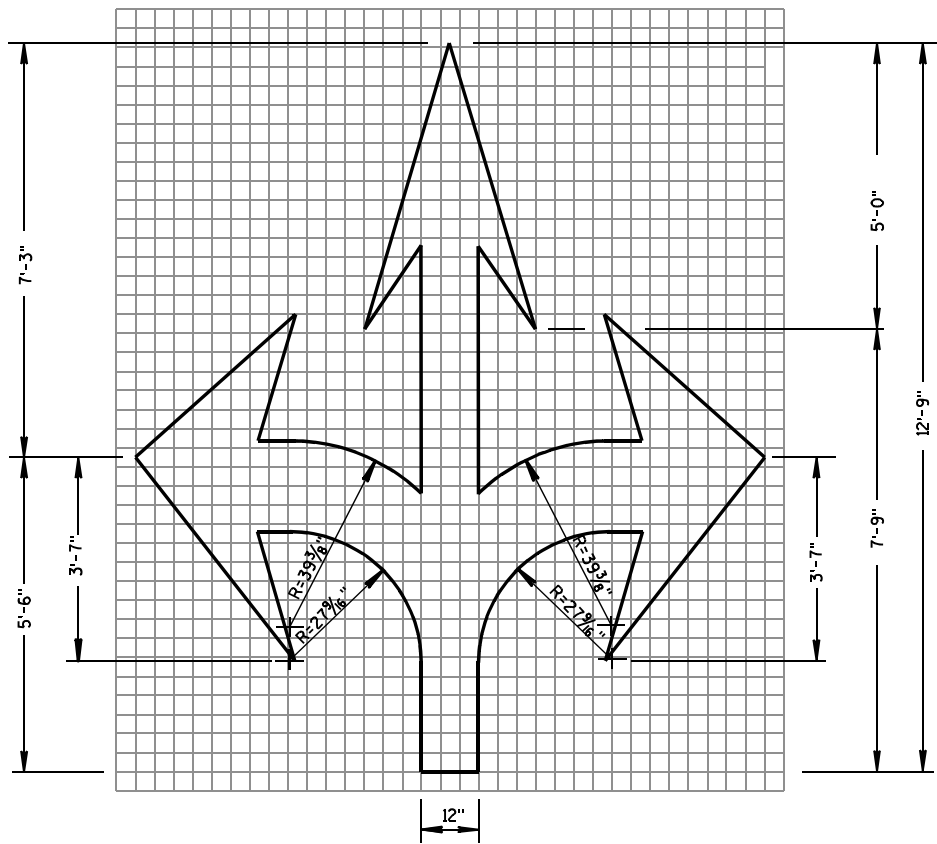
FHWA



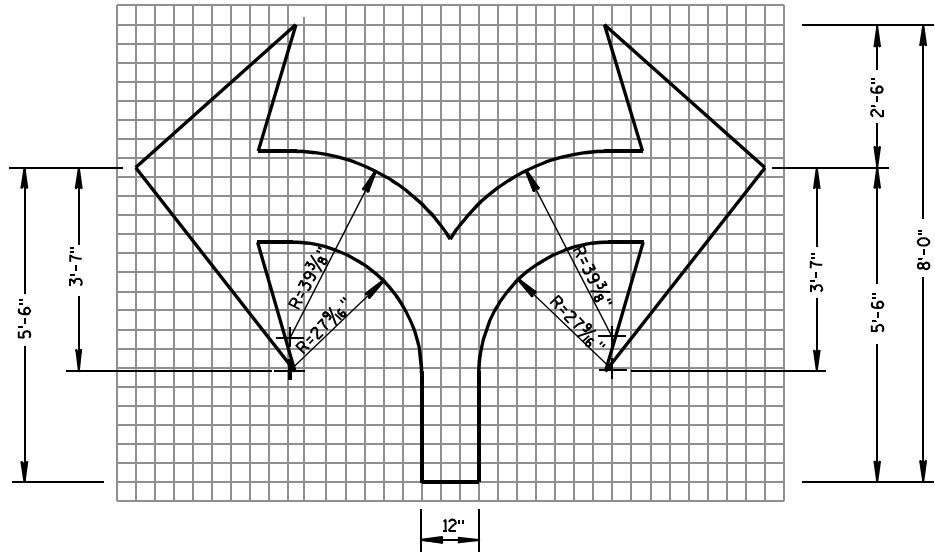
TYPE 2



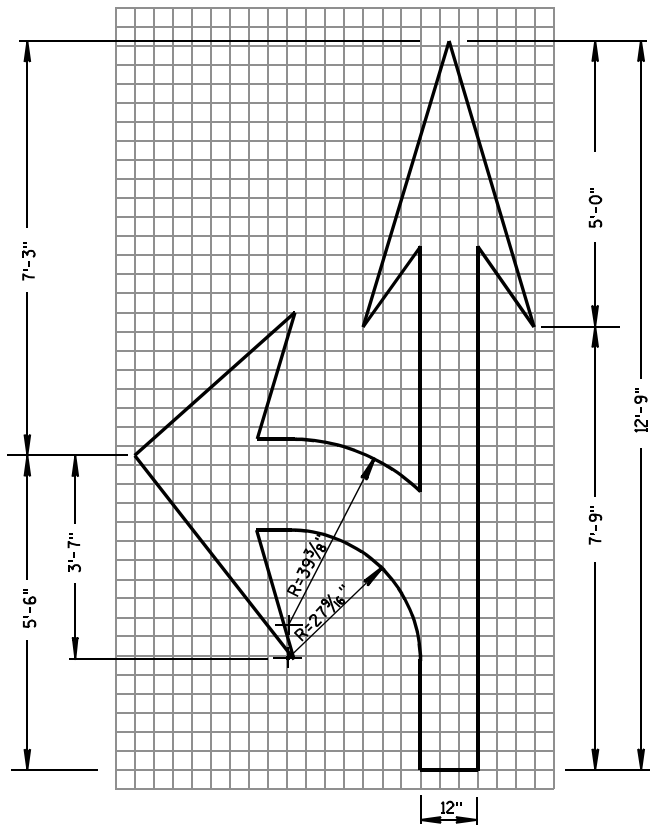
TYPE 1



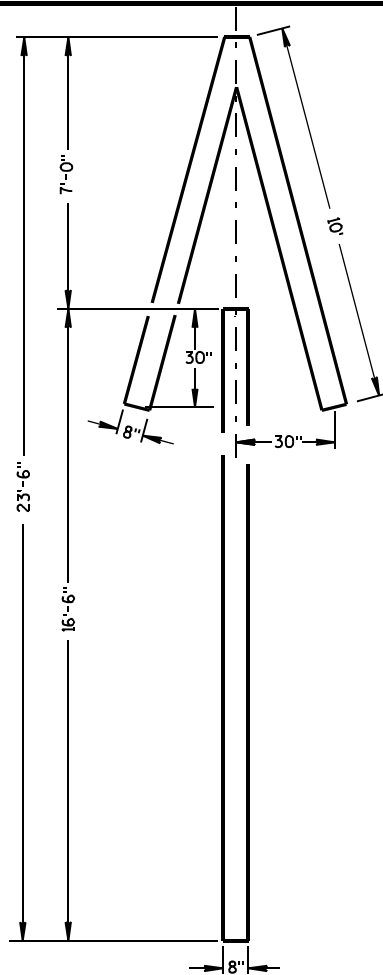
TYPE 6



TYPE 7



TYPE 3

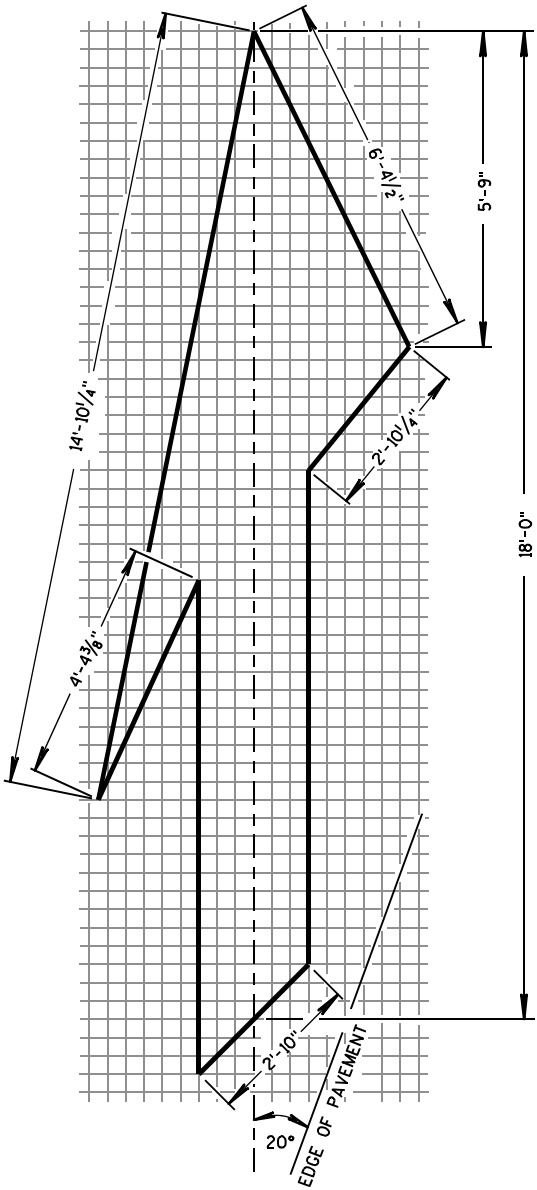


TYPE 4

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW

PAVEMENT MARKING ARROWS

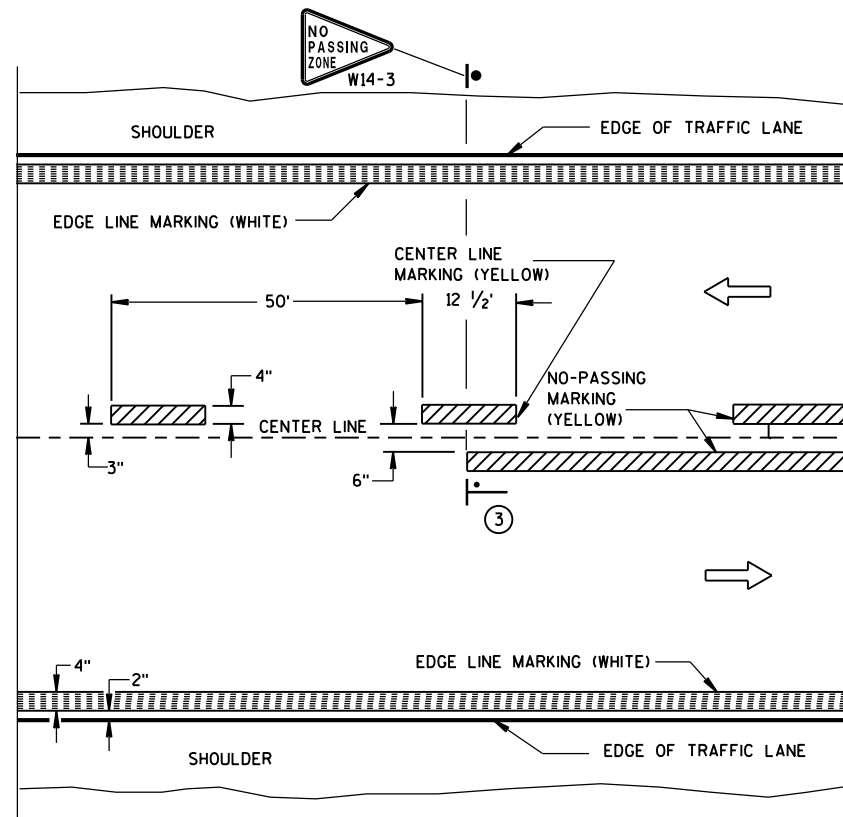
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

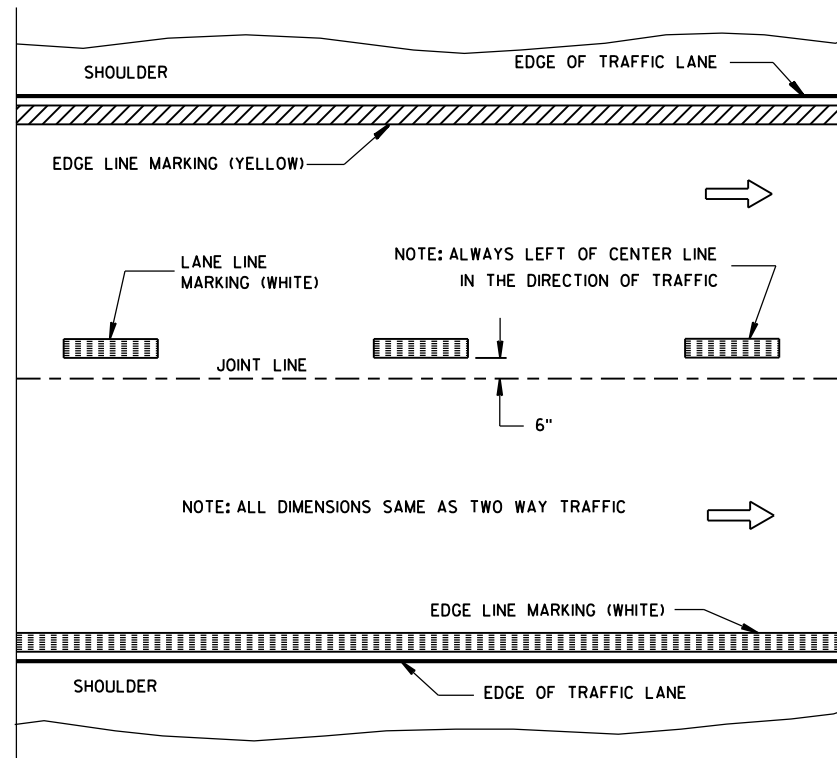
7/1/11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

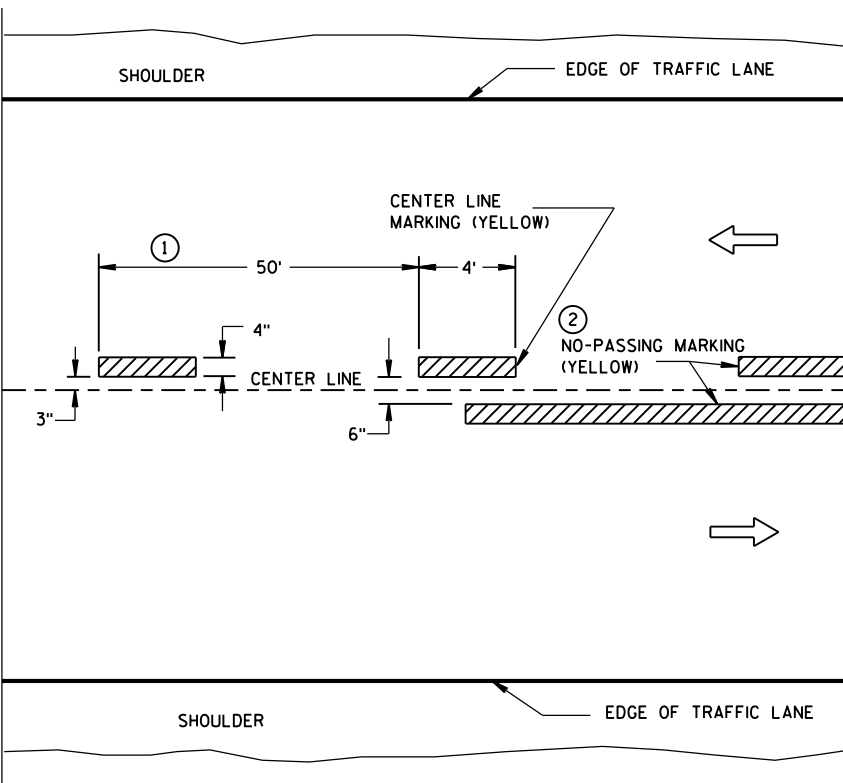


TWO WAY TRAFFIC

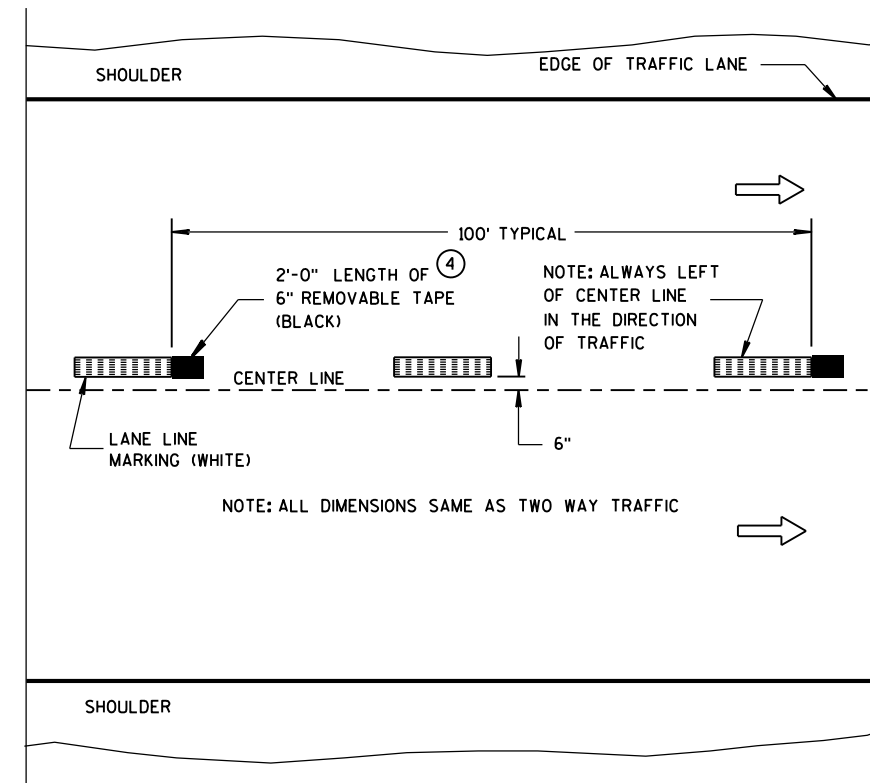


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

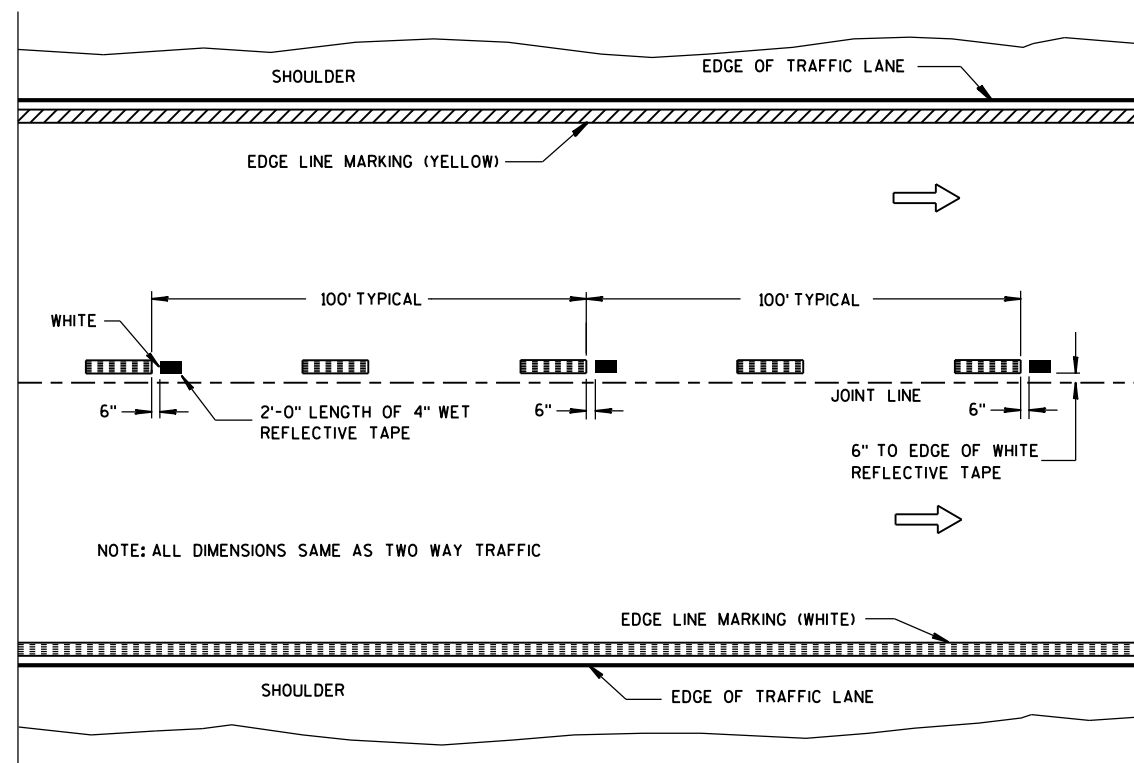
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

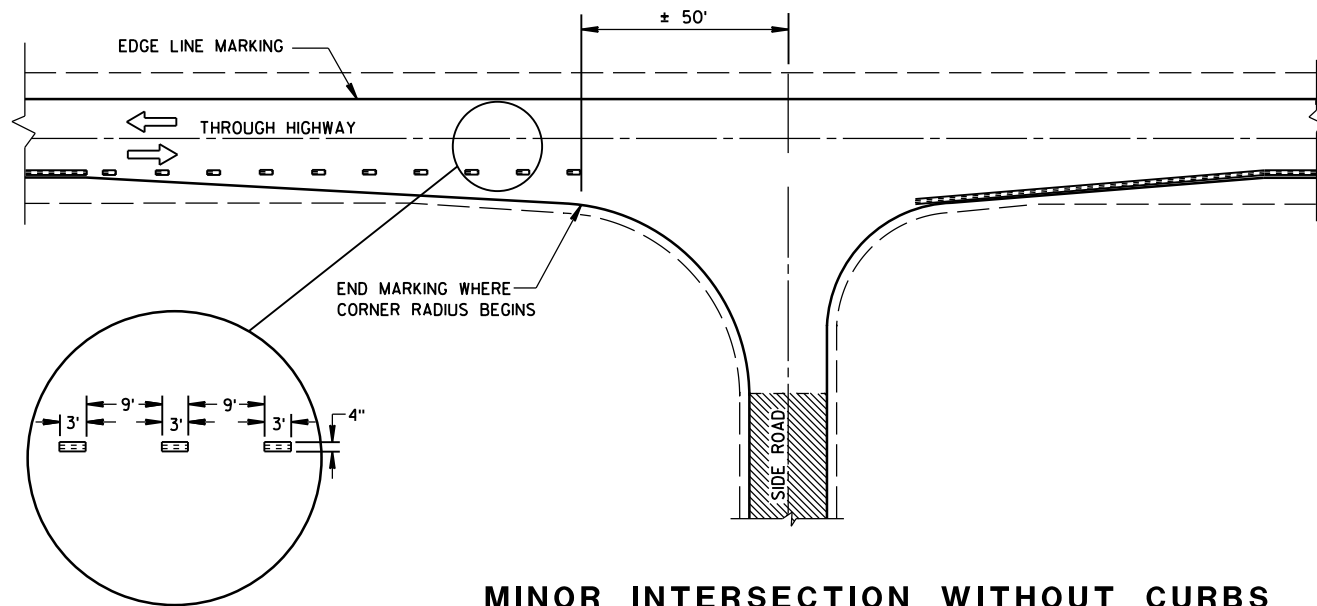
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013
DATE
FHWA

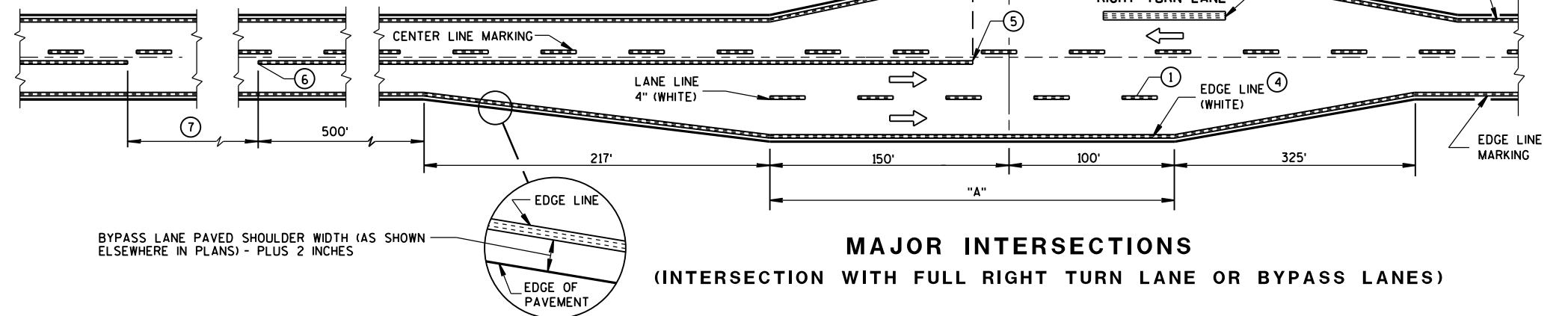
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



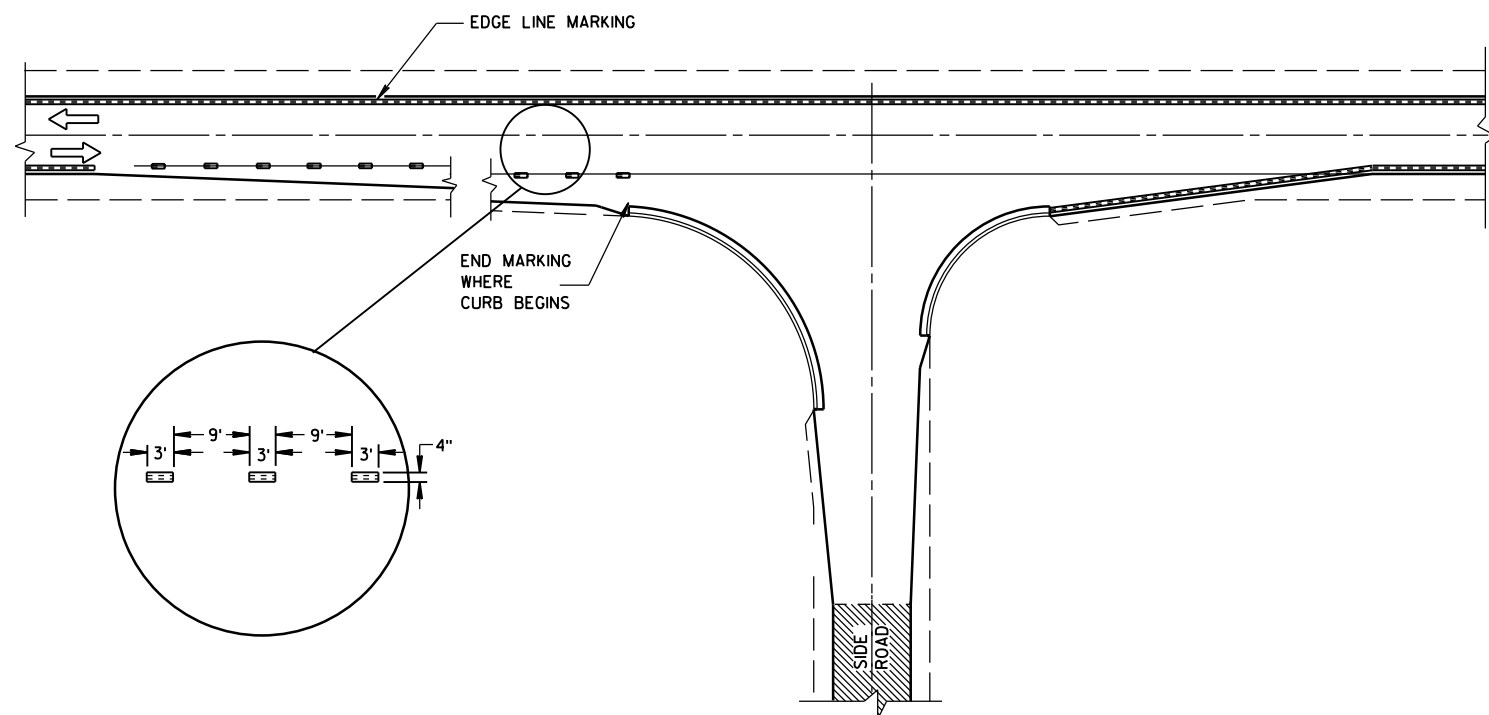
MINOR INTERSECTION WITHOUT CURBS

⑦

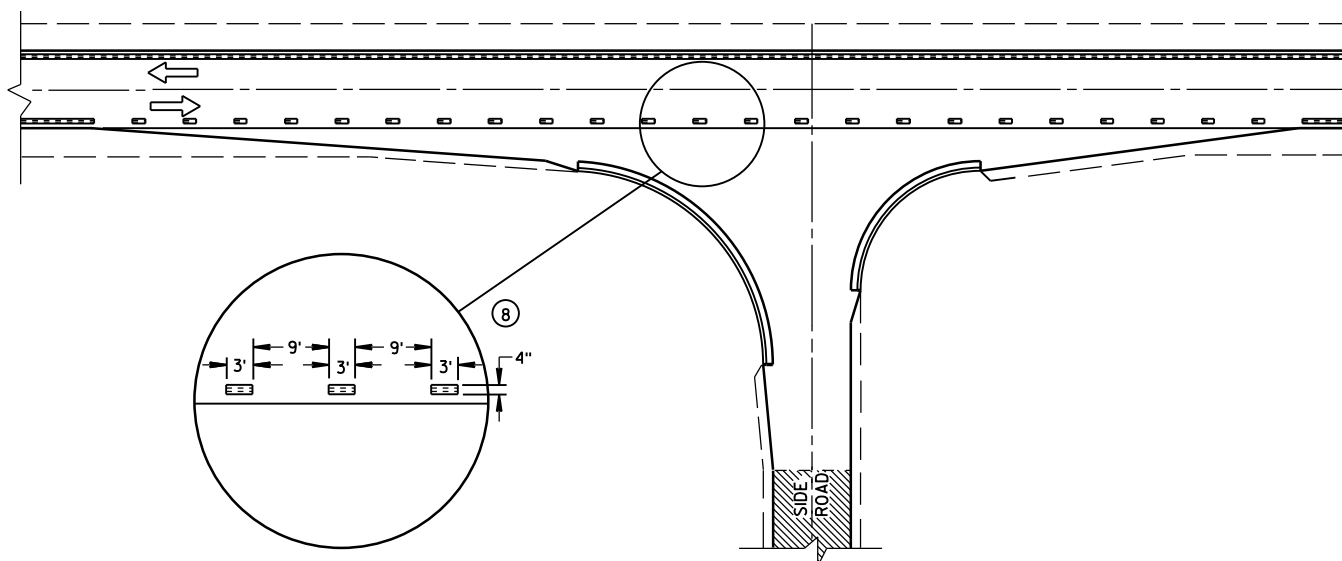
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



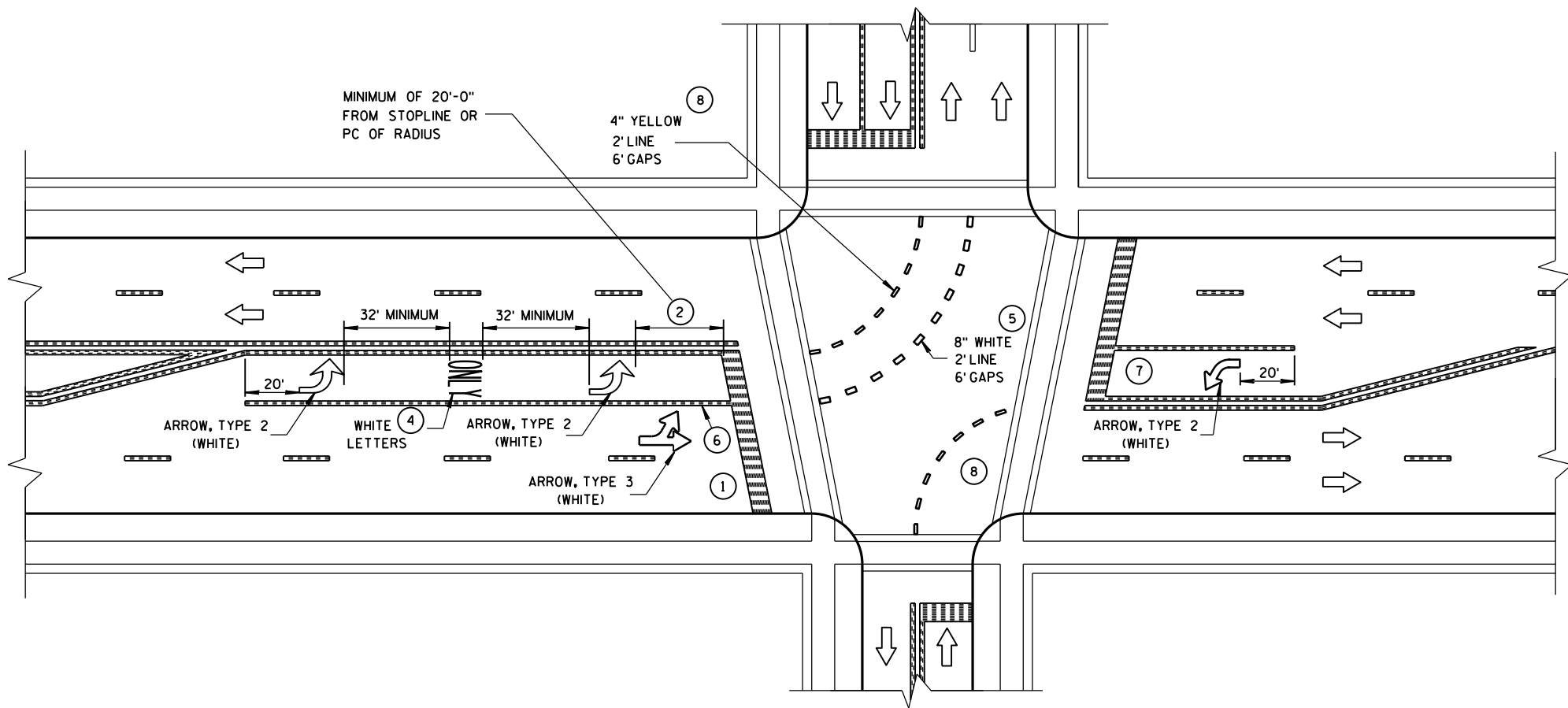
MINOR INTERSECTION WITH CURBS
⑧ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

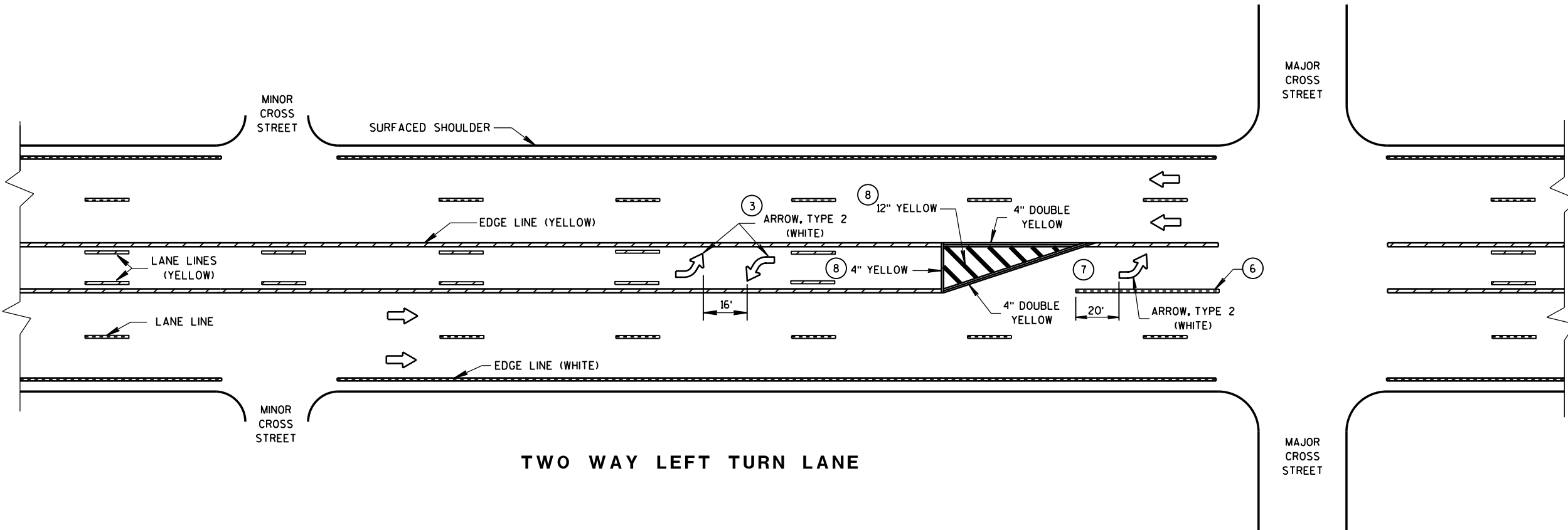
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

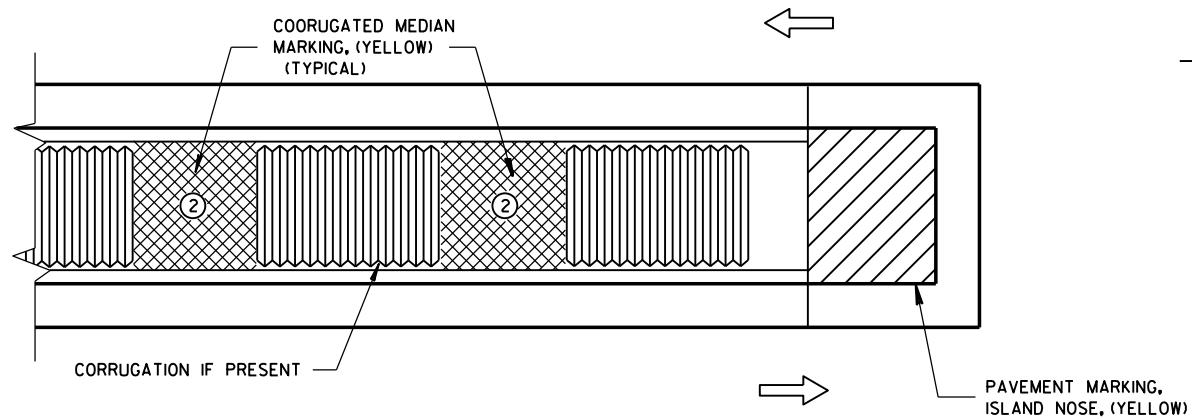
- 1 STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- 2 DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- 3 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 4 ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
- 5 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- 6 8" WHITE
- 7 ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
- 8 REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL

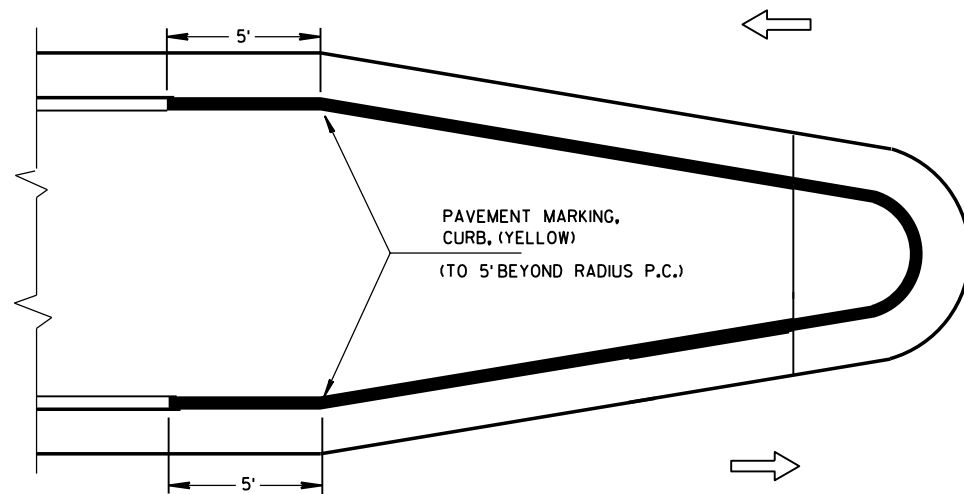


PAVEMENT MARKING
(LEFT TURN LANE)

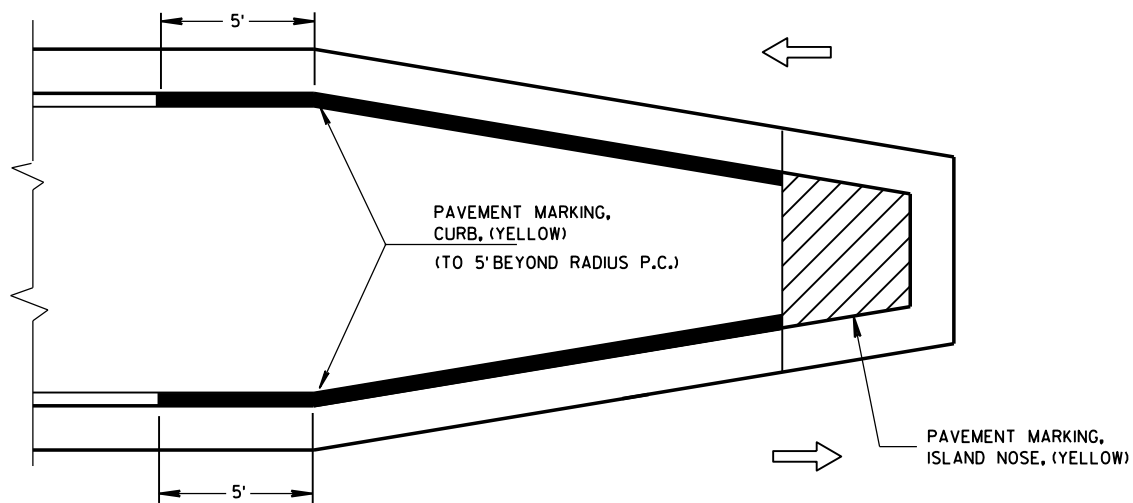
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

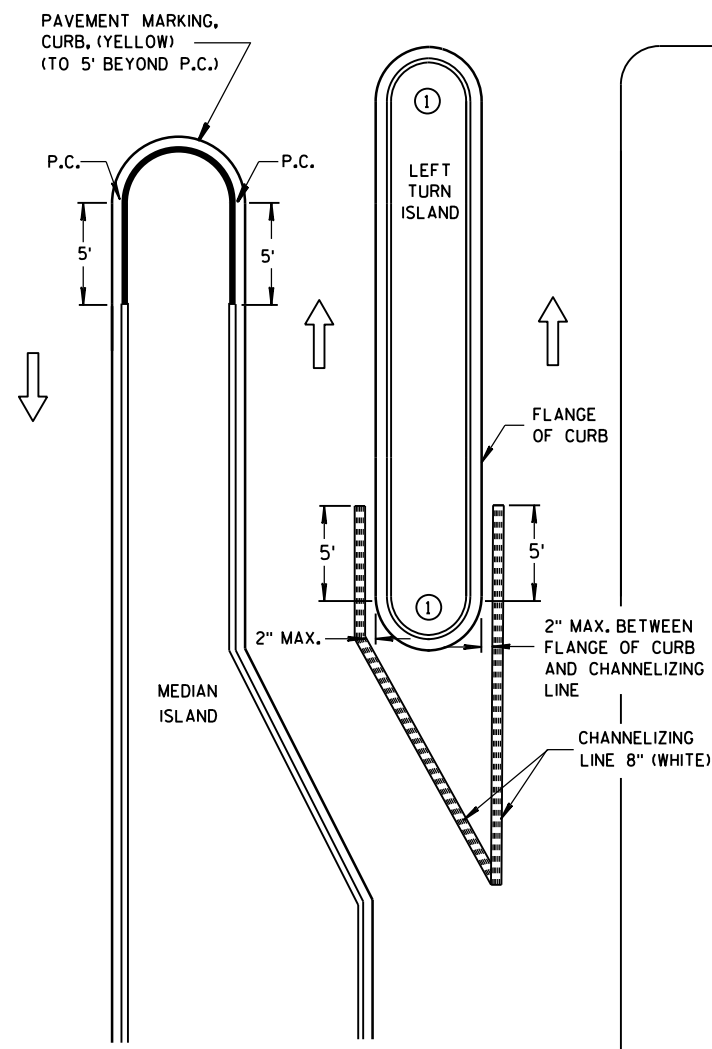


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

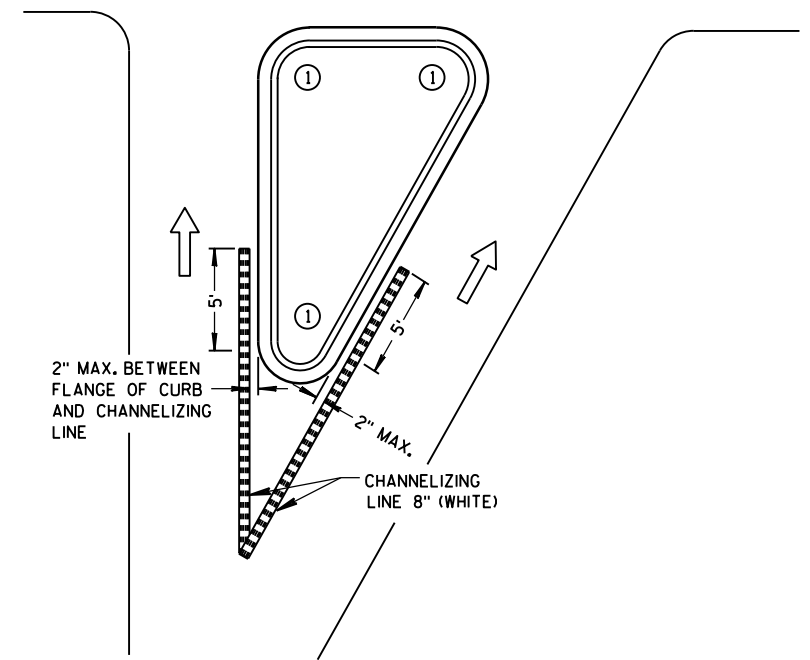
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- 1 DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- 2 WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



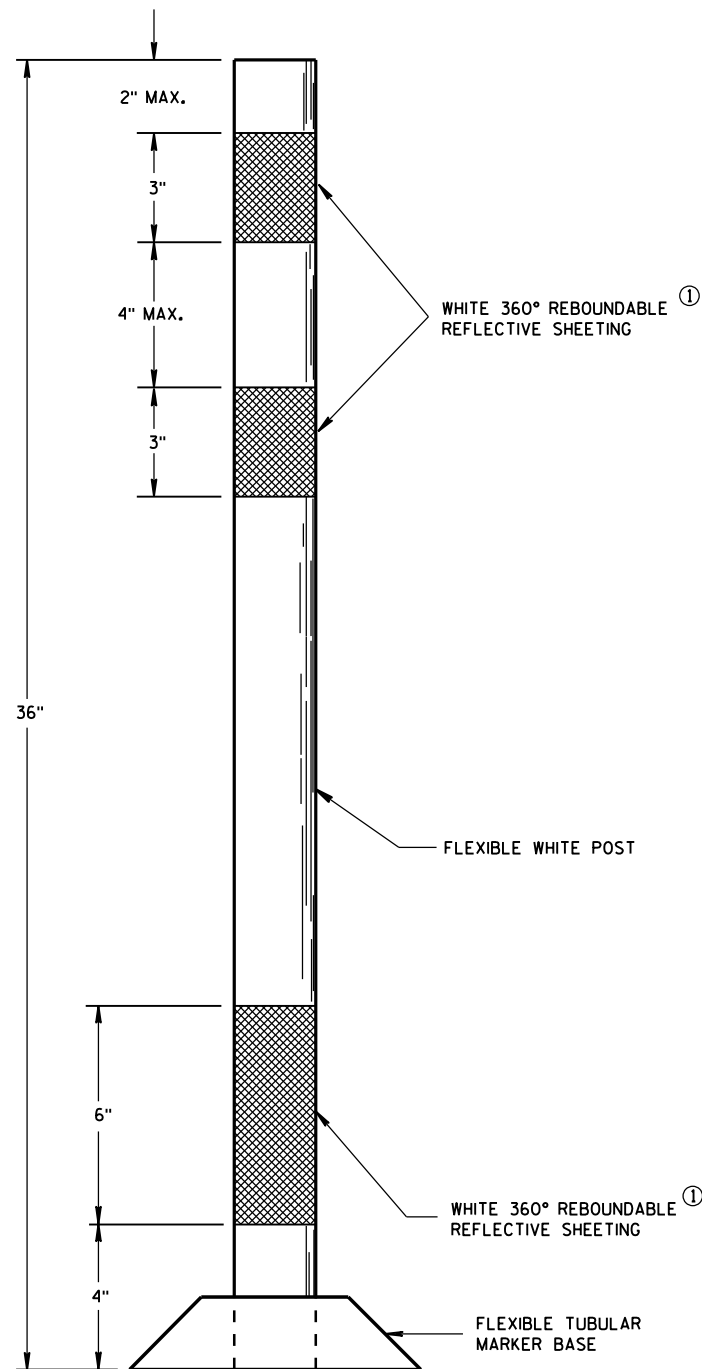
RIGHT TURN ISLAND

LEGEND

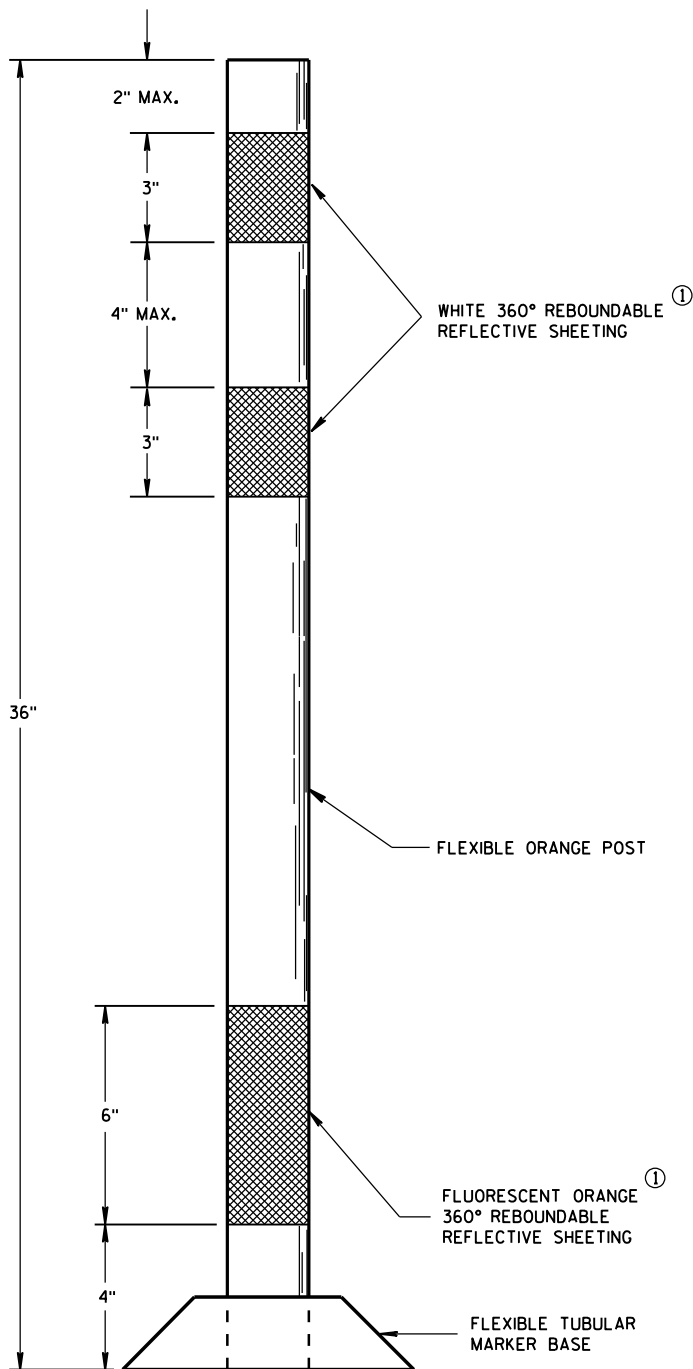
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

LEGEND

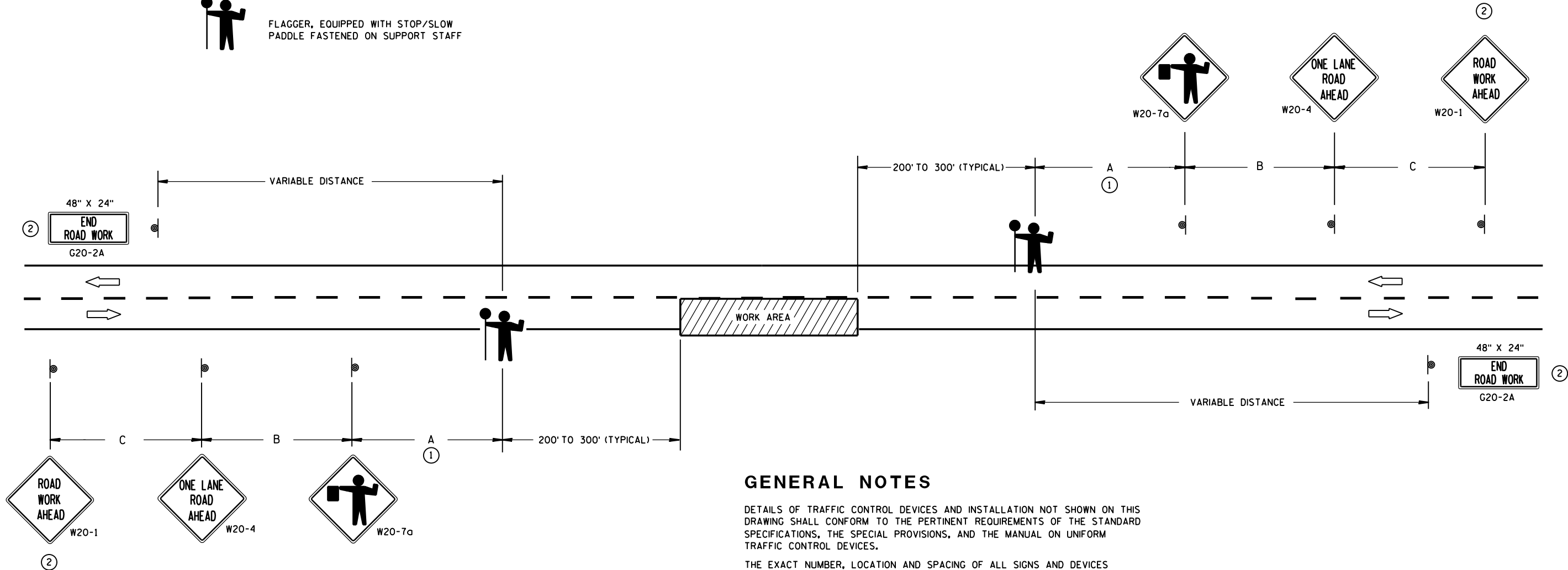
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

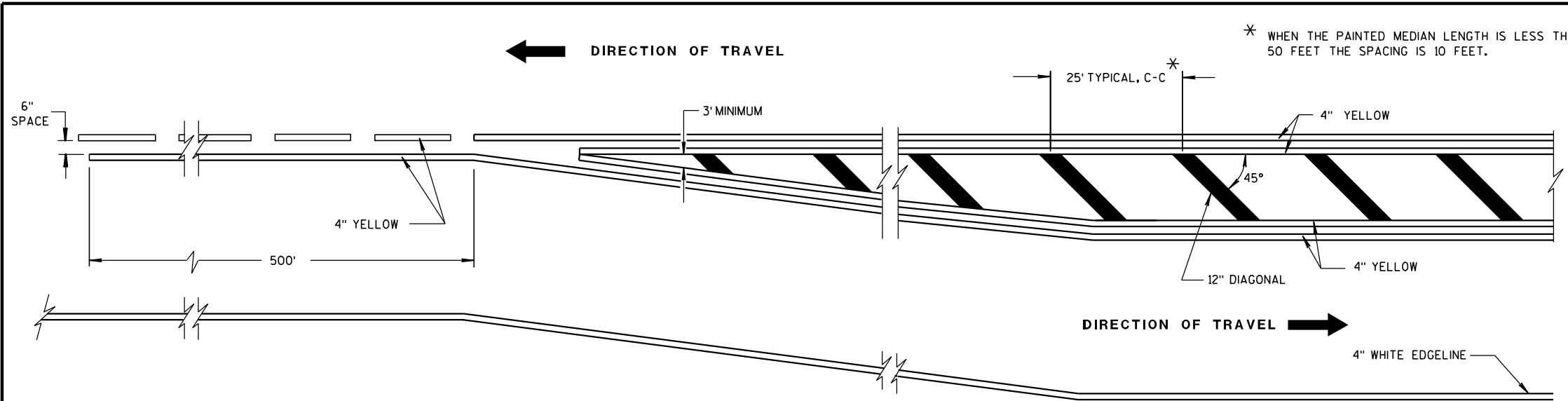
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

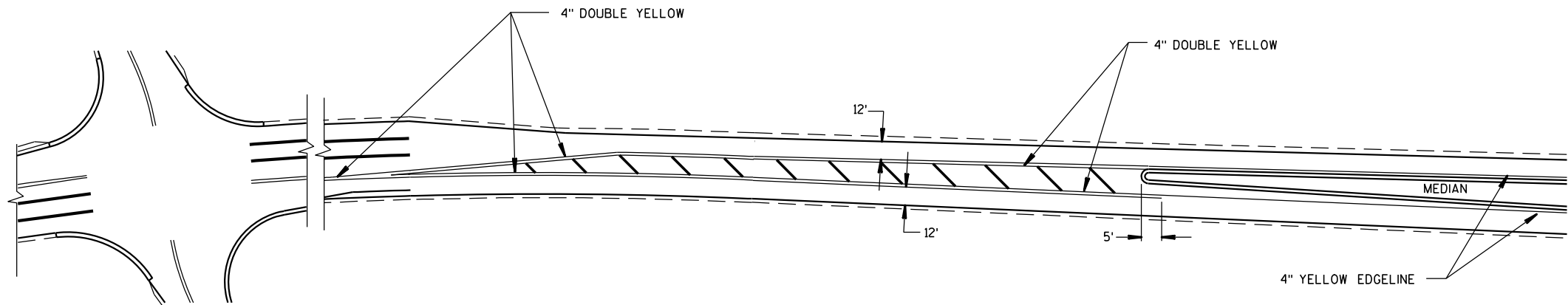
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



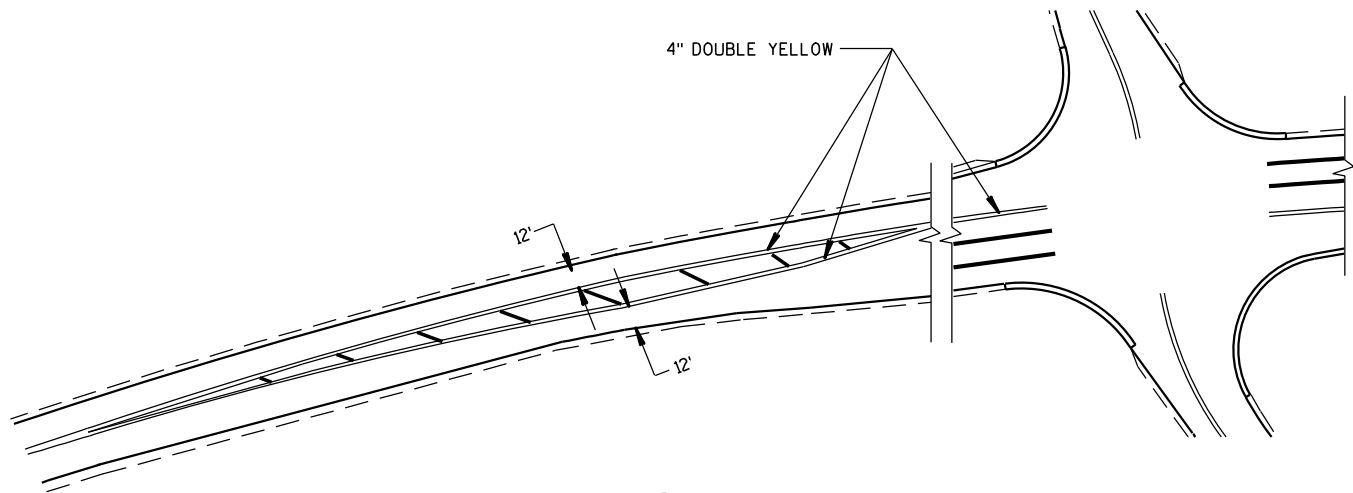
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

GENERAL NOTES

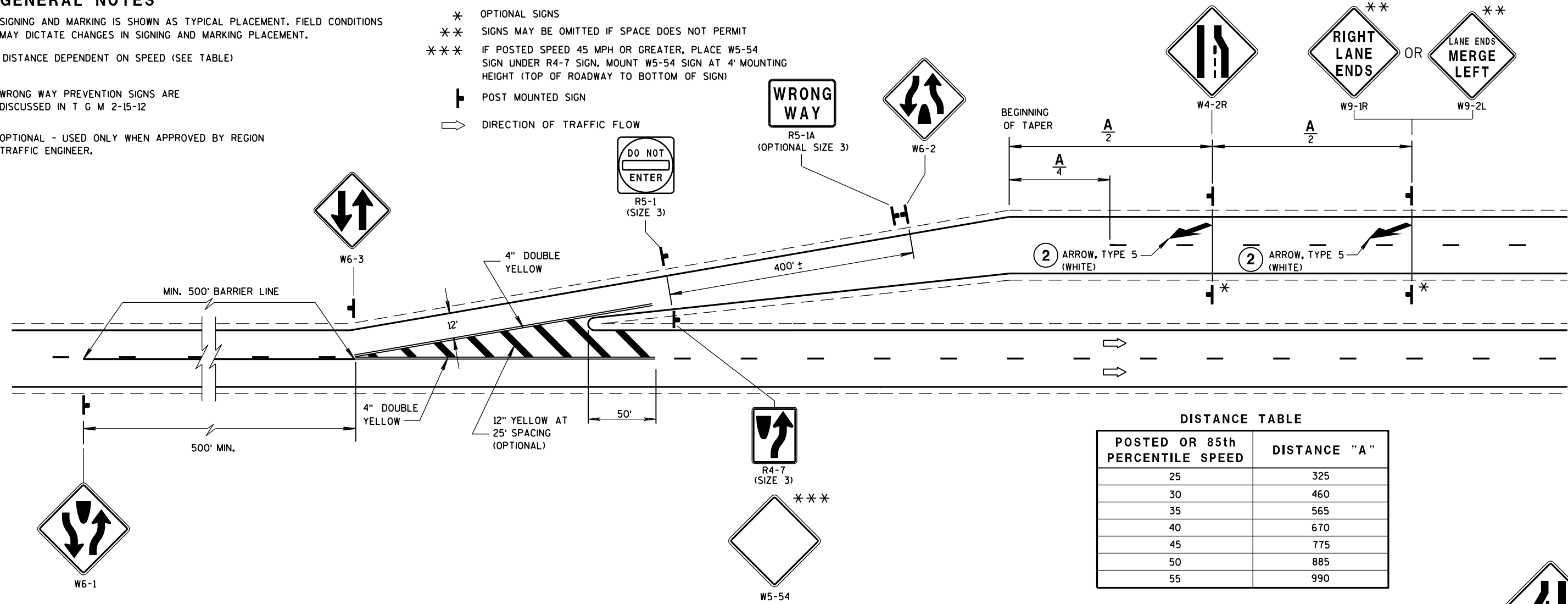
SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

- 1 WRONG WAY PREVENTION SIGNS ARE DISCUSSED IN T G M 2-15-12
- 2 OPTIONAL - USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

SYMBOLS

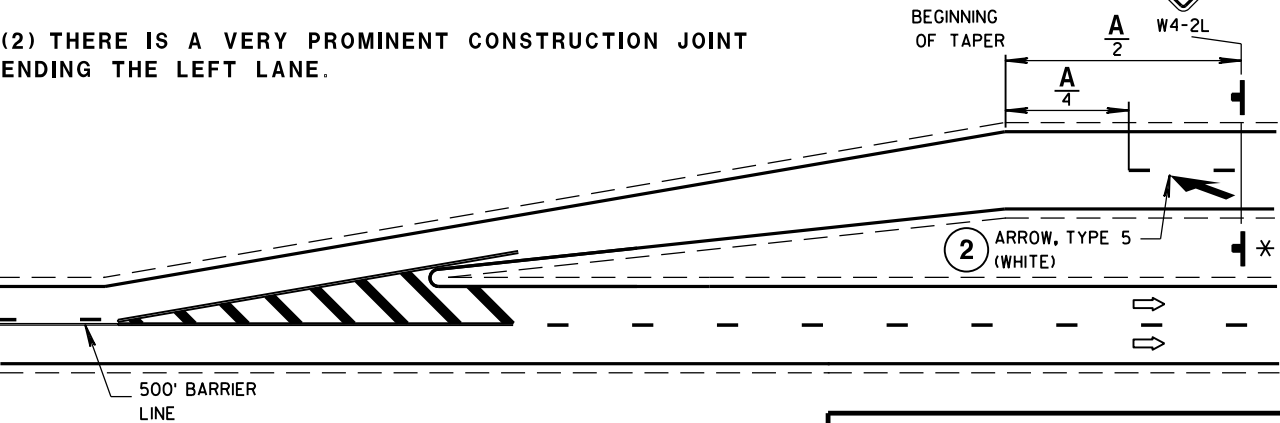
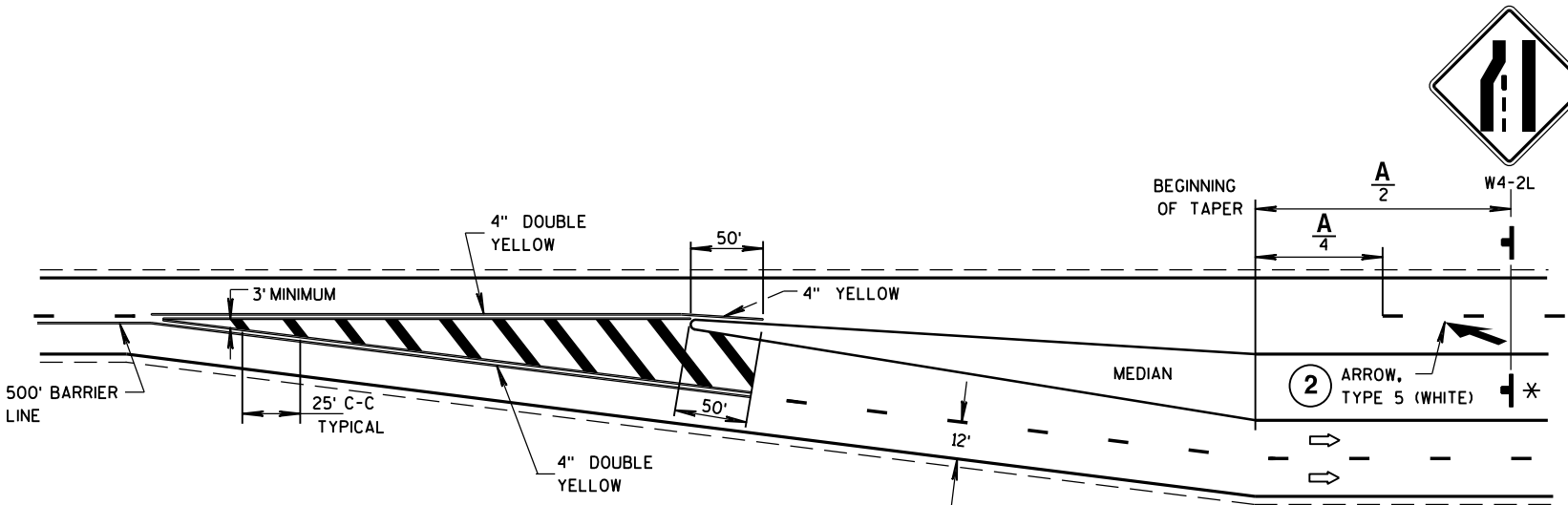
- * OPTIONAL SIGNS
- ** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT
- *** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW



(1) THE LEFT LANE IS PUSHED TO THE RIGHT:

USE W4-2L IF :
OR

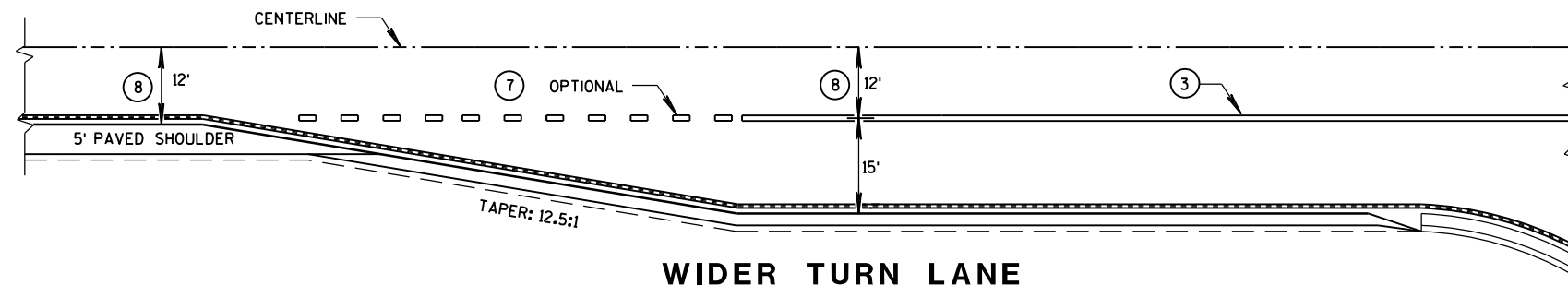
(2) THERE IS A VERY PROMINENT CONSTRUCTION JOINT ENDING THE LEFT LANE.



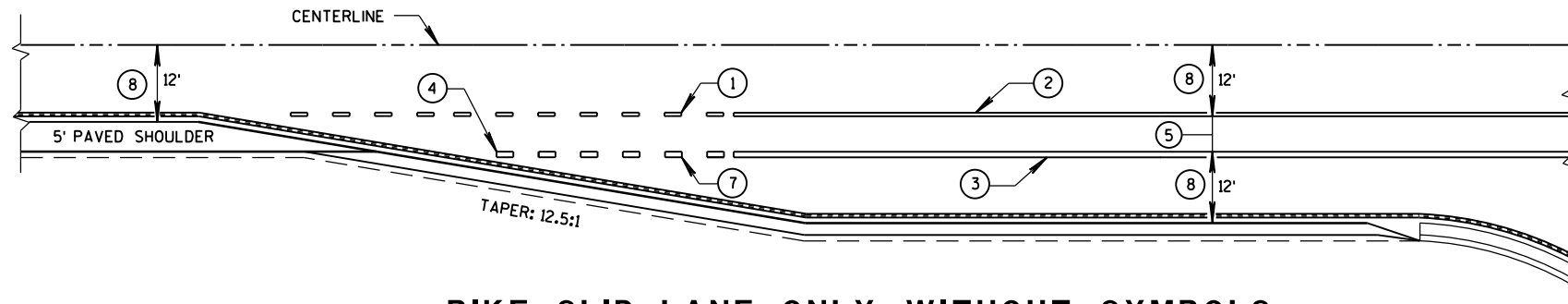
SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

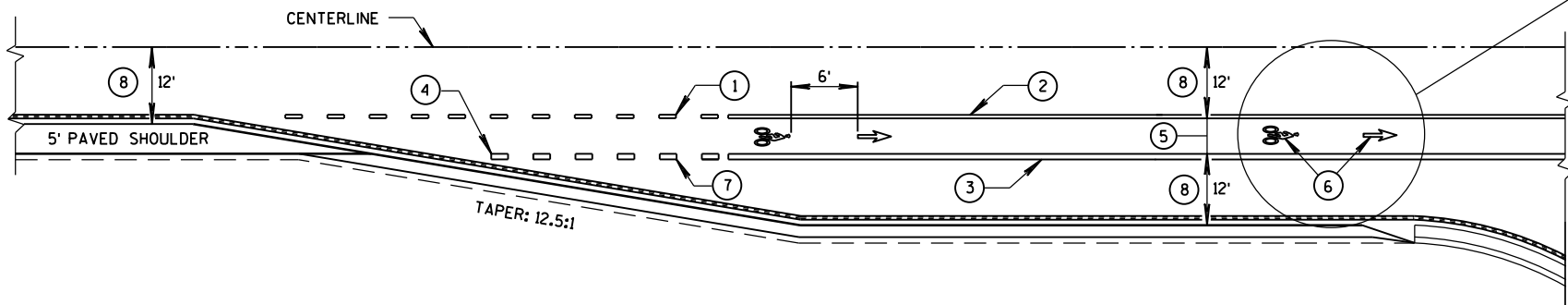
APPROVED
June, 2015 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



BIKE SLIP LANE ONLY WITHOUT SYMBOLS

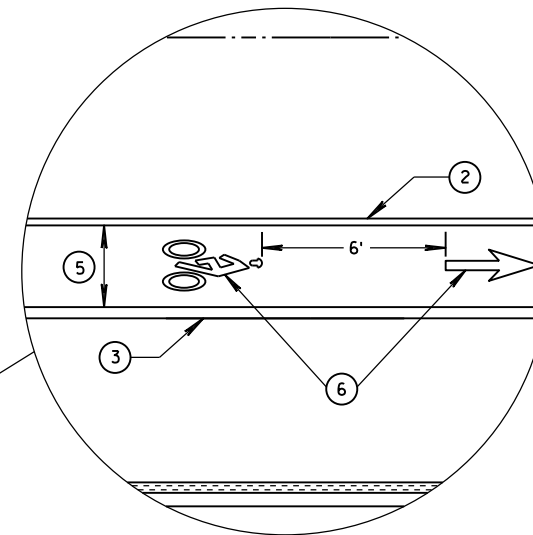


BIKE LANE WITH SYMBOLS



GENERAL NOTES

- ① 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
- ② 4-INCH, WHITE.
- ③ 8-INCH, WHITE.
- ④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE. BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
- ⑥ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ⑦ 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
- ⑧ REFER TO CONTRACT PLANS.



BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltz
STATE TRAFFIC ENGINEER

FHWA

GENERAL NOTES

- ① 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.

② 4-INCH, WHITE.

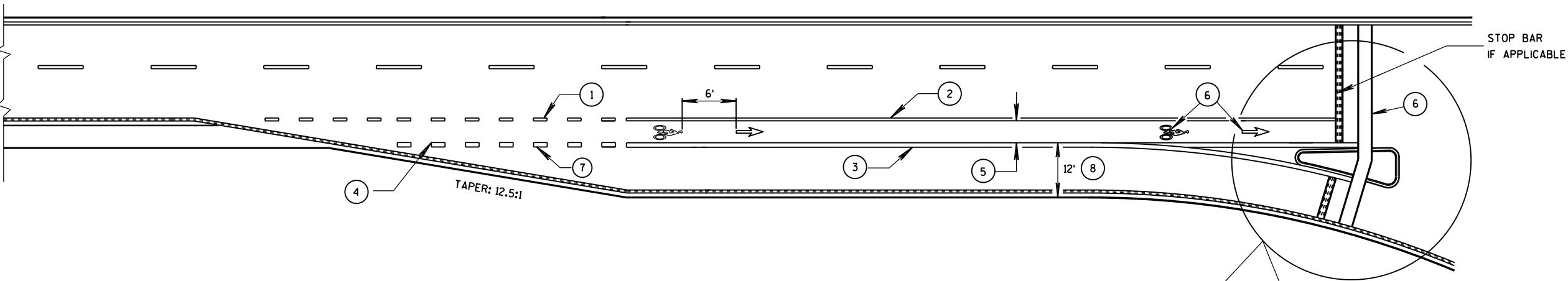
③ 8-INCH, WHITE.

④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ 5' TYPICAL.

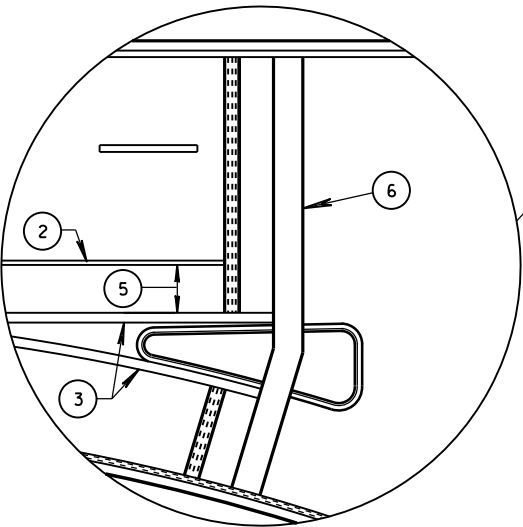
⑥ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

⑦ 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.

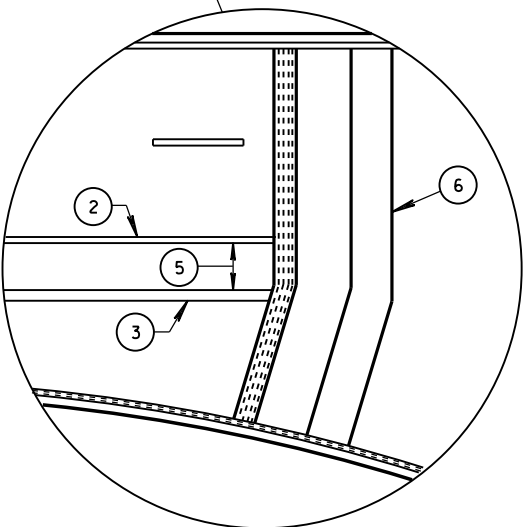
⑧ REFER TO CONTRACT PLANS.



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE



4 LANE DIVIDED WITH ISLAND



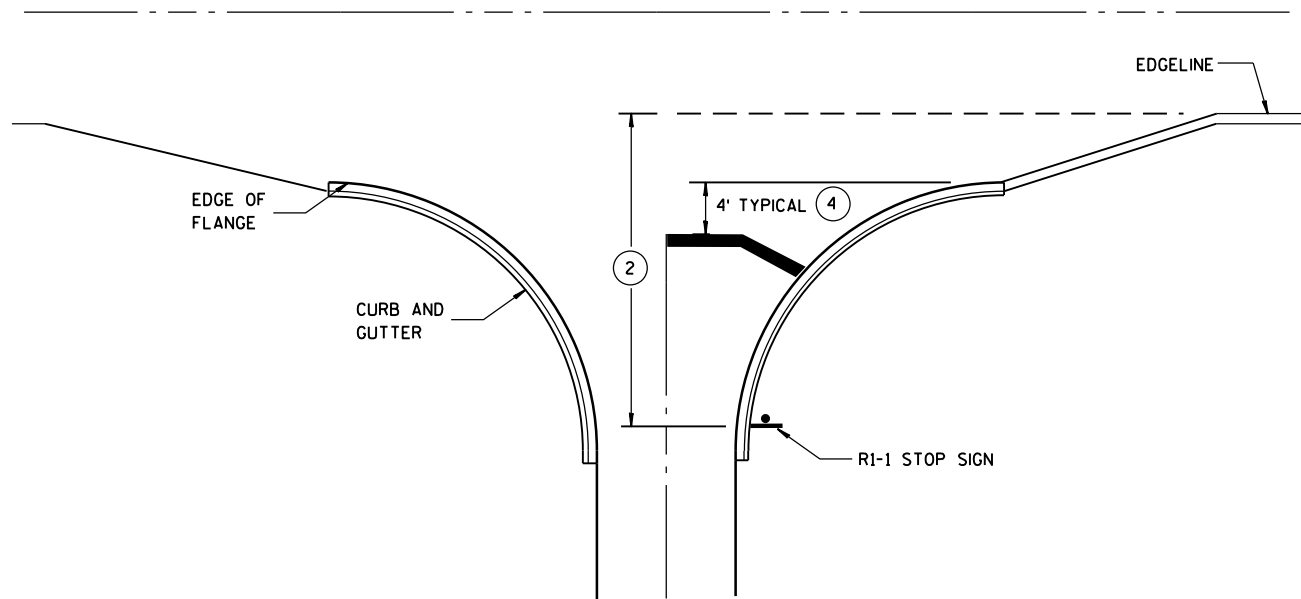
4 LANE DIVIDED WITHOUT ISLAND

BICYCLE LANE MARKING

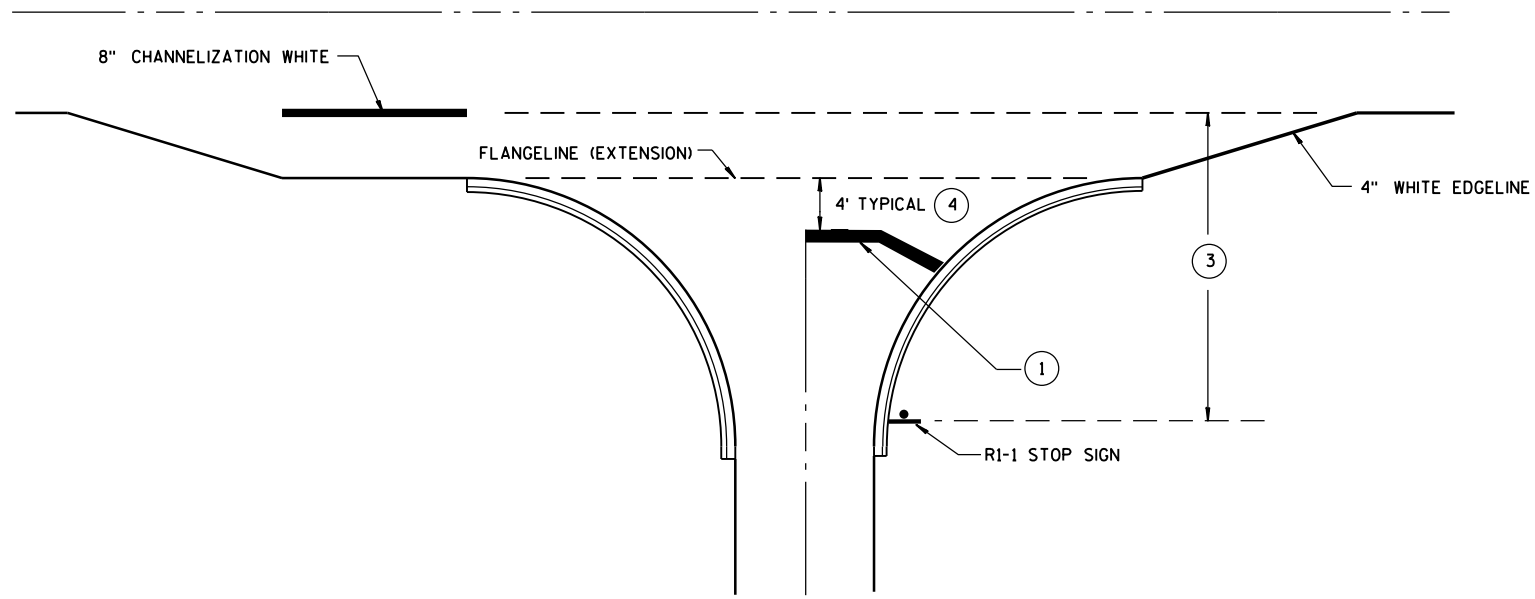
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013
DATE
FHWA

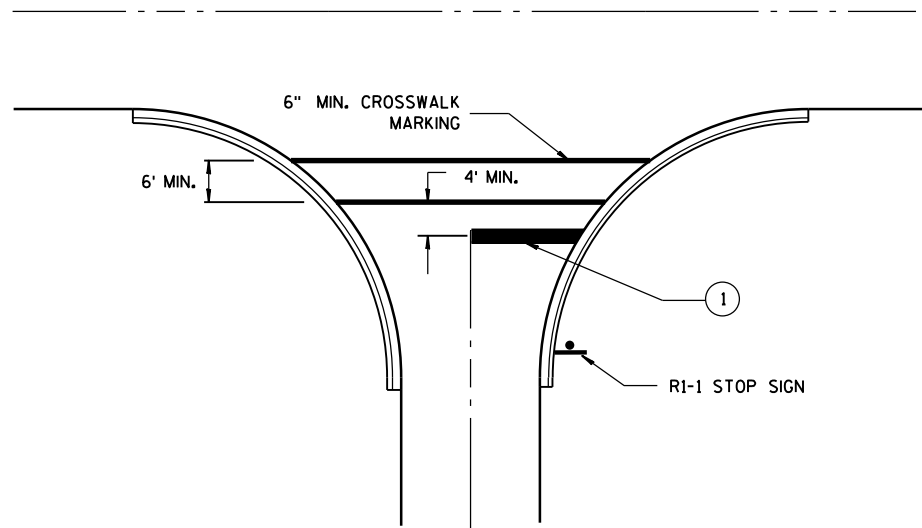
/S/ Travis Feltz
STATE TRAFFIC ENGINEER



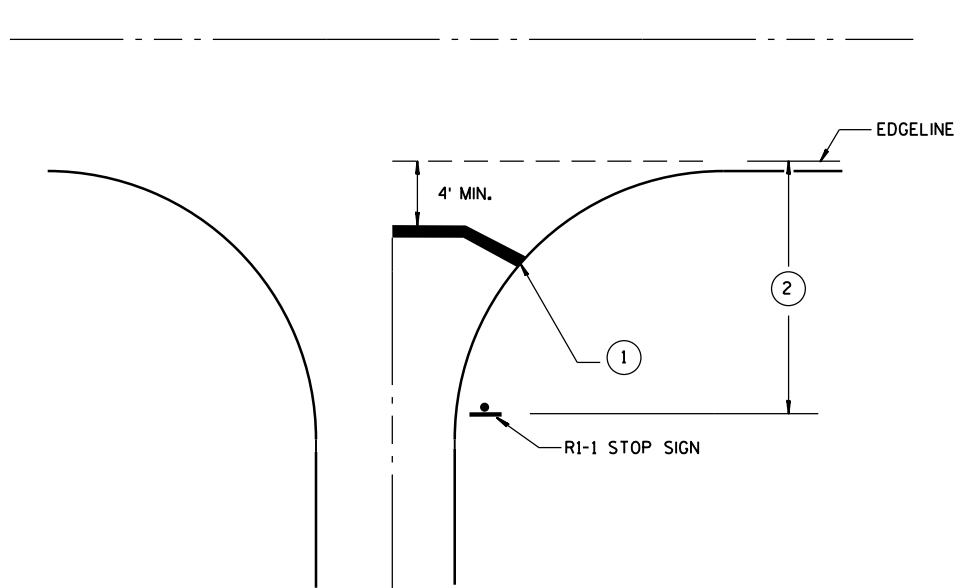
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

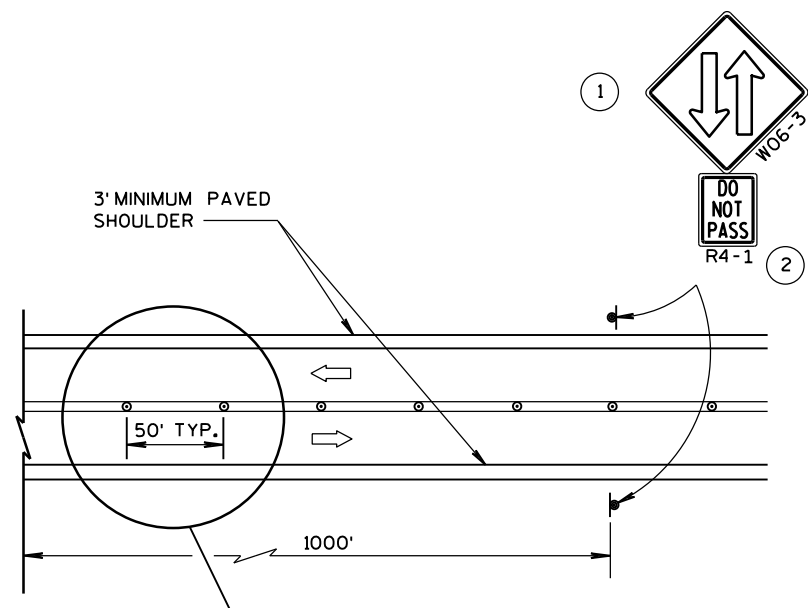
GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

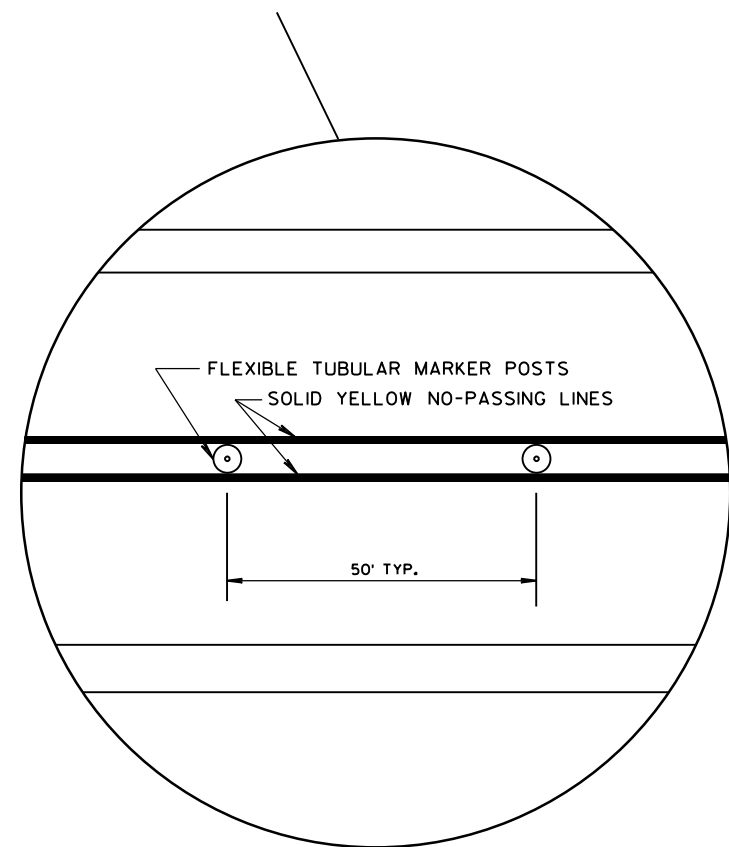
STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE /S/ Travis Feltz
STATE TRAFFIC ENGINEER
FHWA



TWO LANE, TWO WAY OPERATION



LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

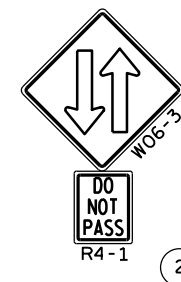
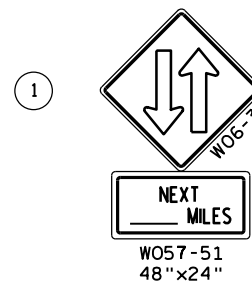
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE WO6-3 WITH THE WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE WO6-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN WO6-3 SIGNS.

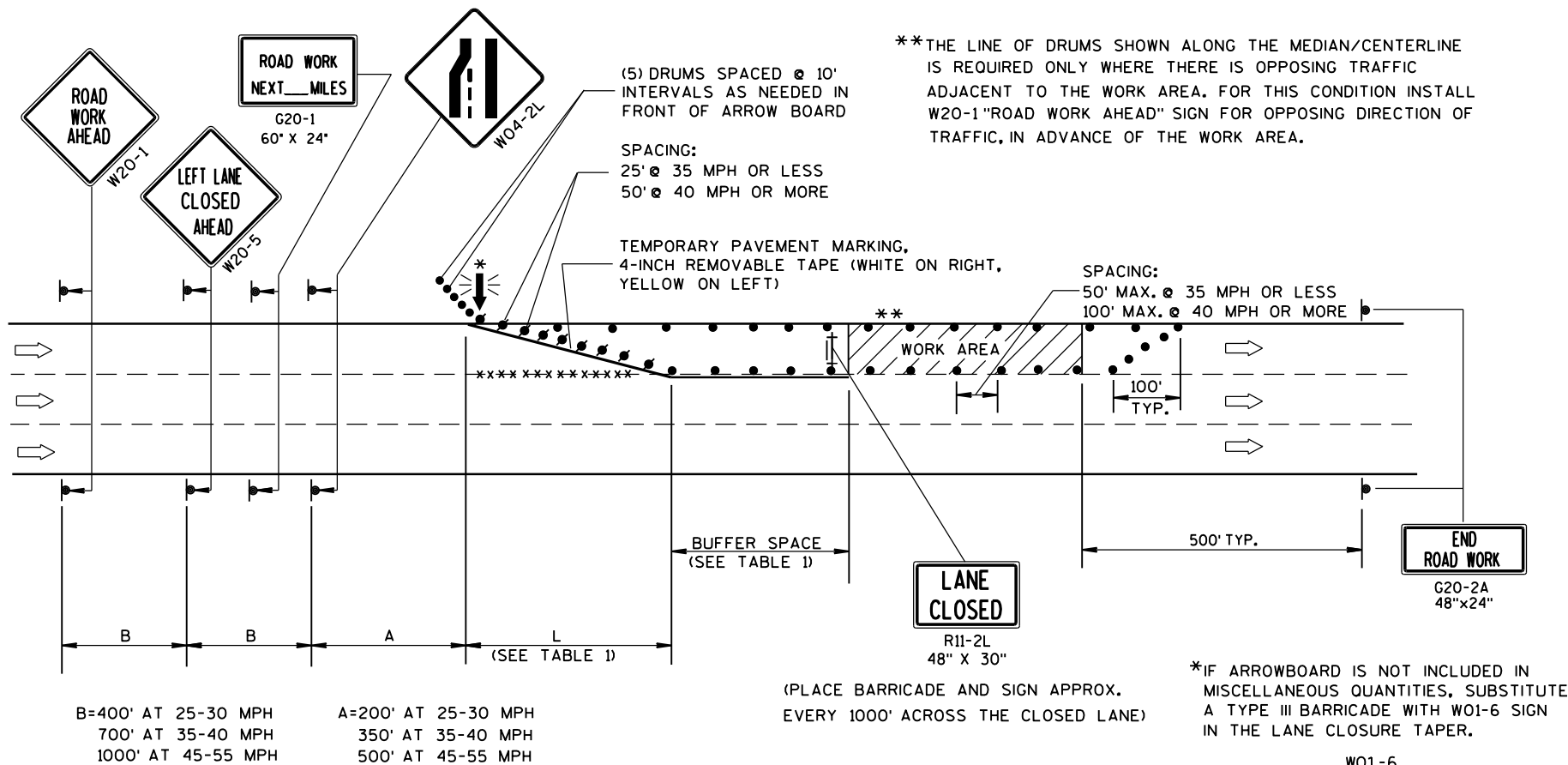
CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

TRAFFIC CONTROL,
TWO LANE TWO
WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

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 DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

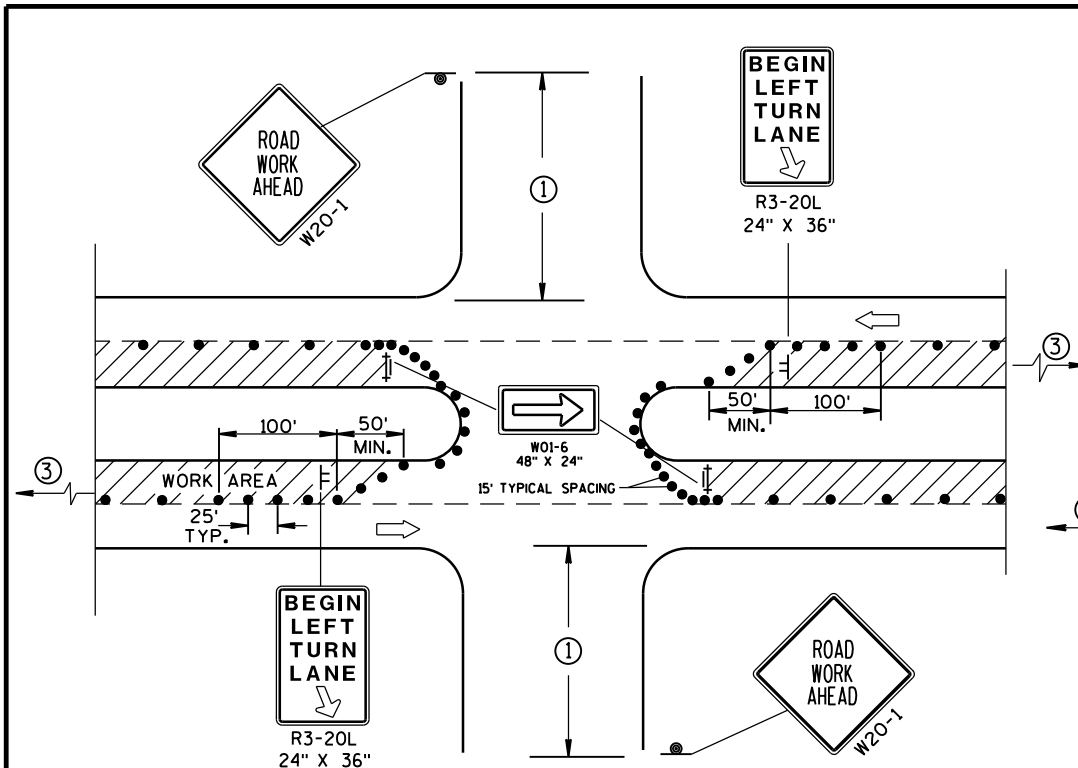
LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

TRAFFIC CONTROL,
SINGLE LANE CLOSURE,
NON-FREEWAY/EXPRESSWAY

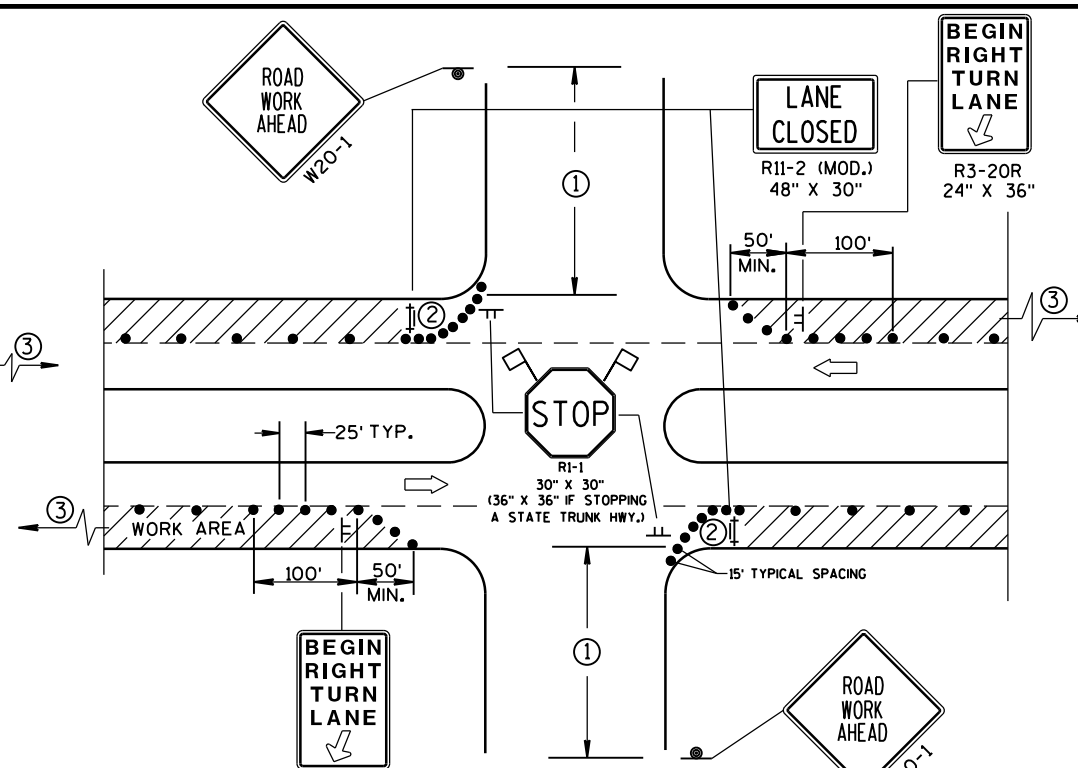
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT
INTERSECTIONS WHENEVER
STAGING OF WORK ALLOWS.
TAPER AND TURN LANE
LENGTHS BASED ON FIELD
CONDITIONS AS APPROVED
BY THE ENGINEER.



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

GENERAL NOTES

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

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

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 DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

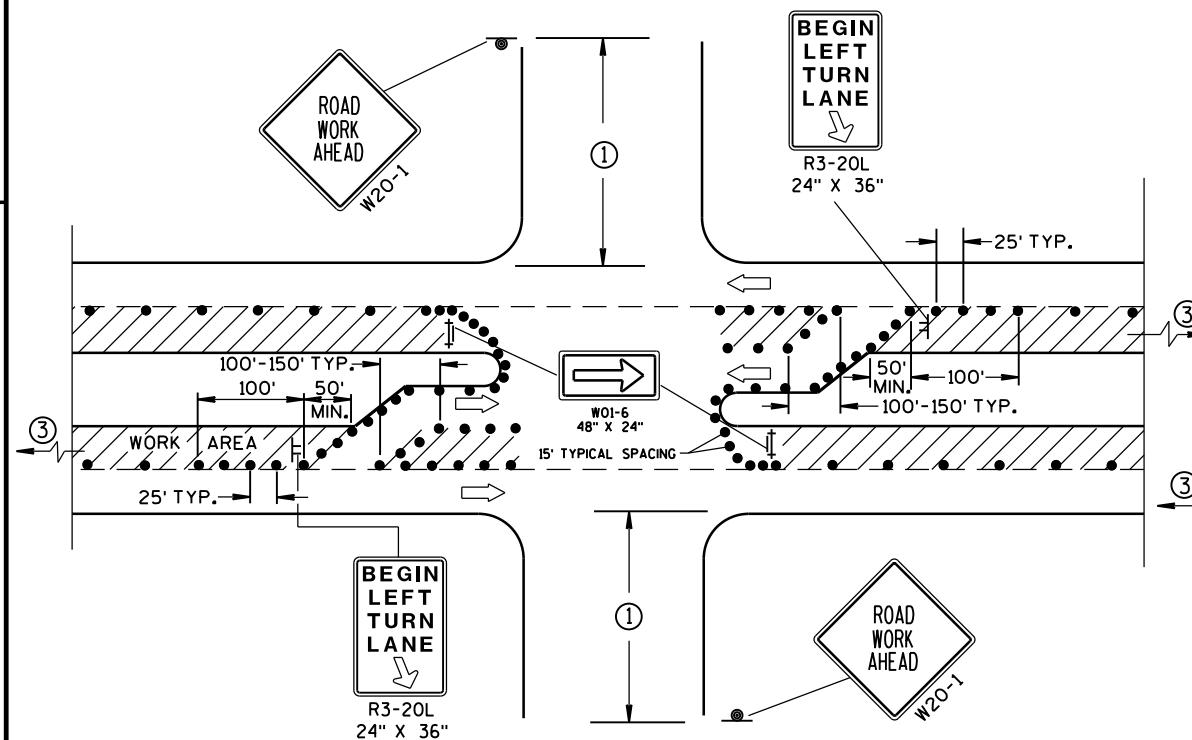
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

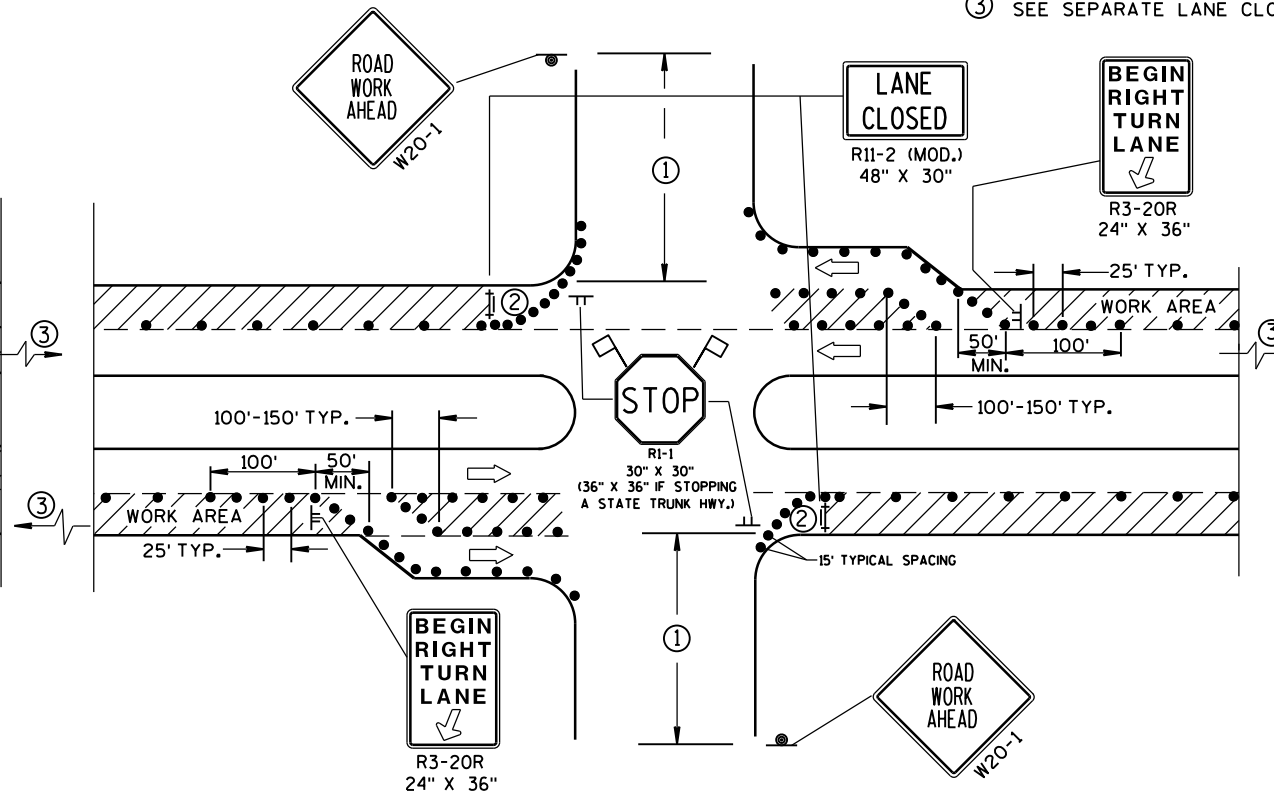
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ⚑ FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

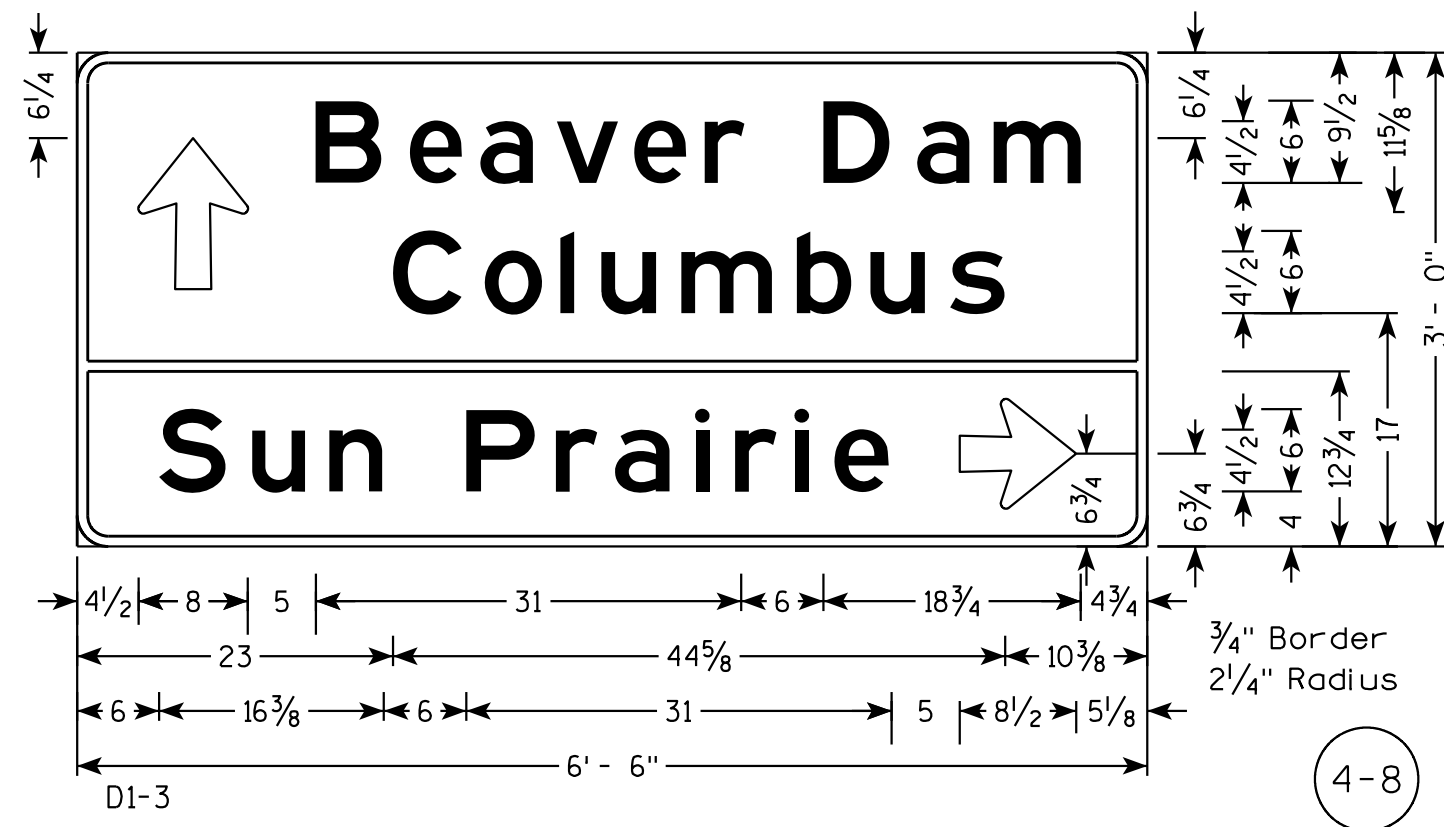
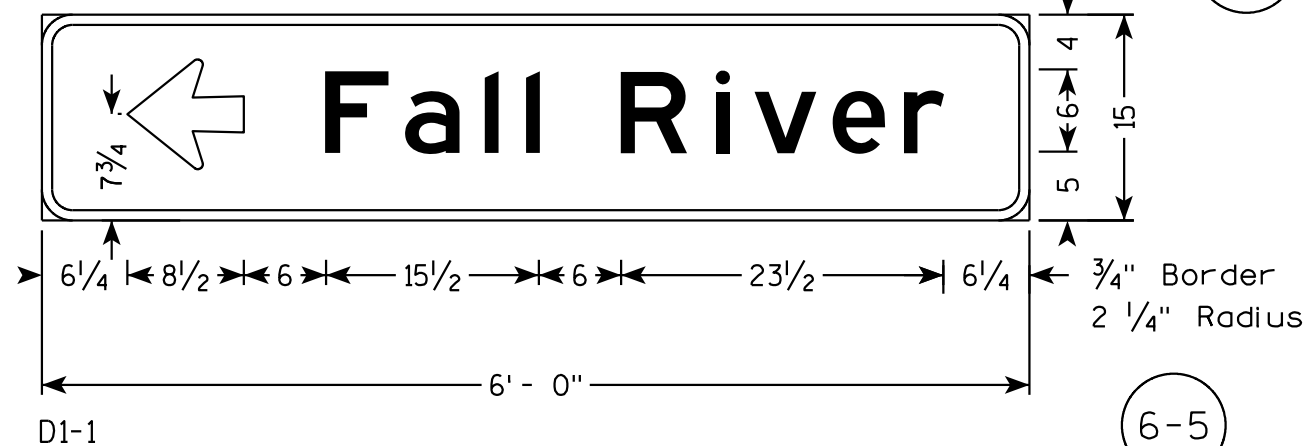
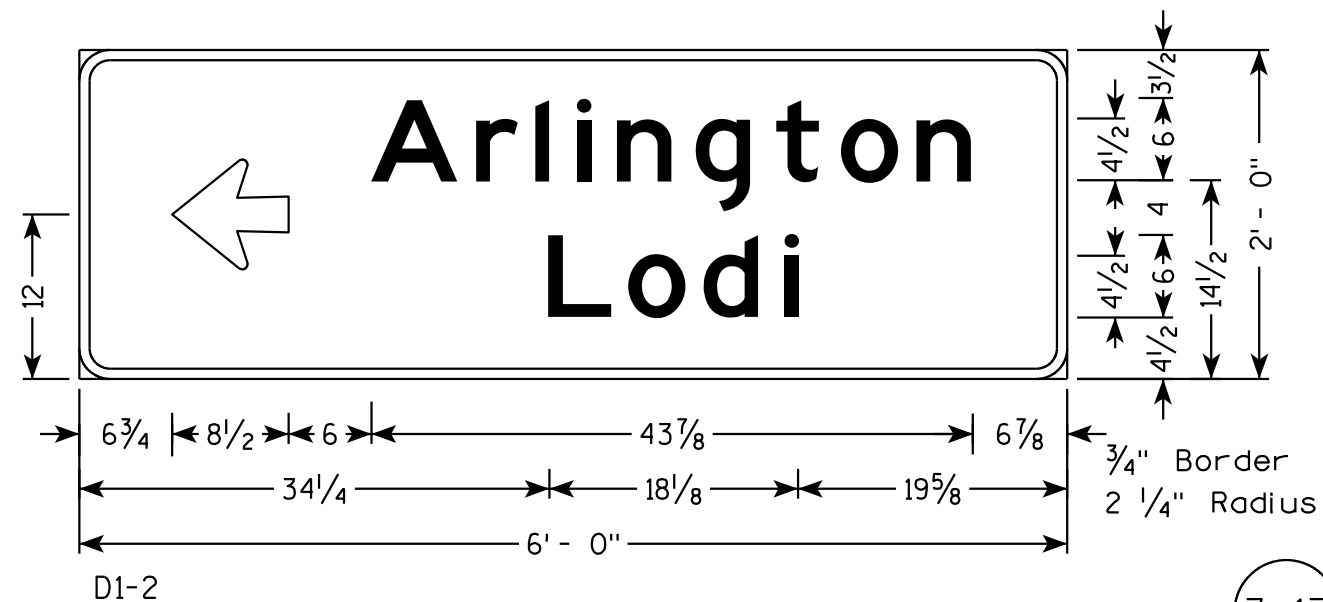
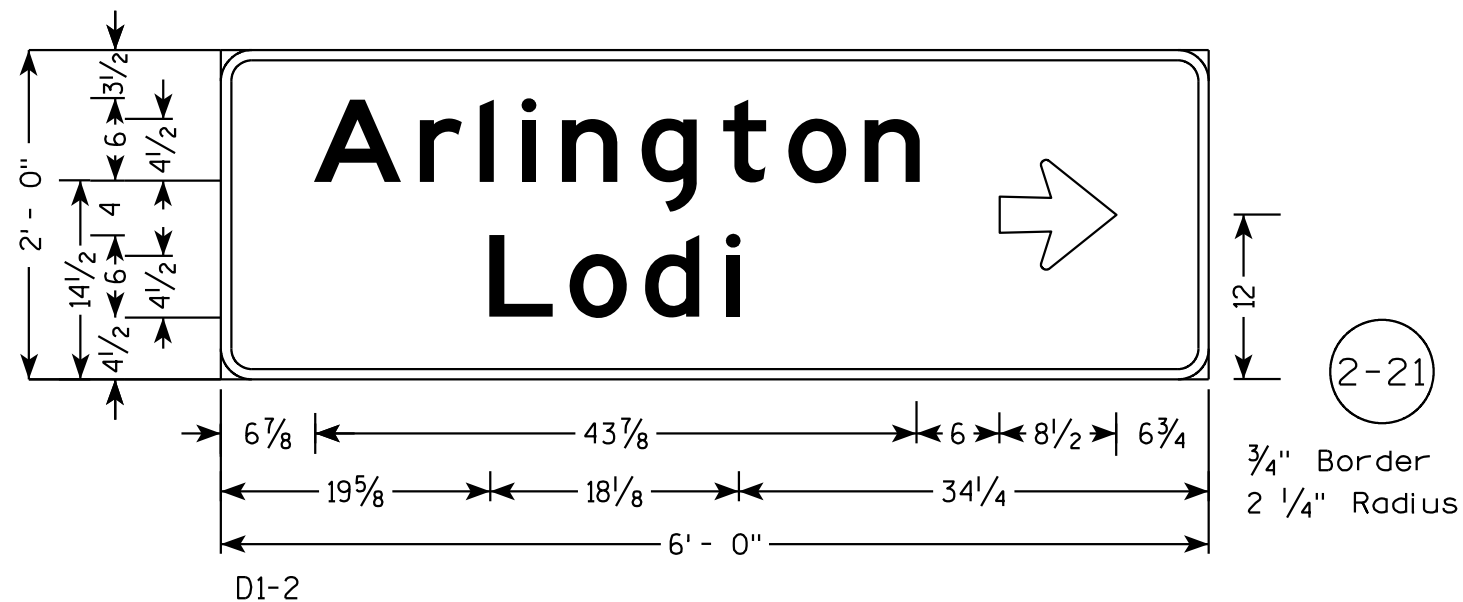
TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

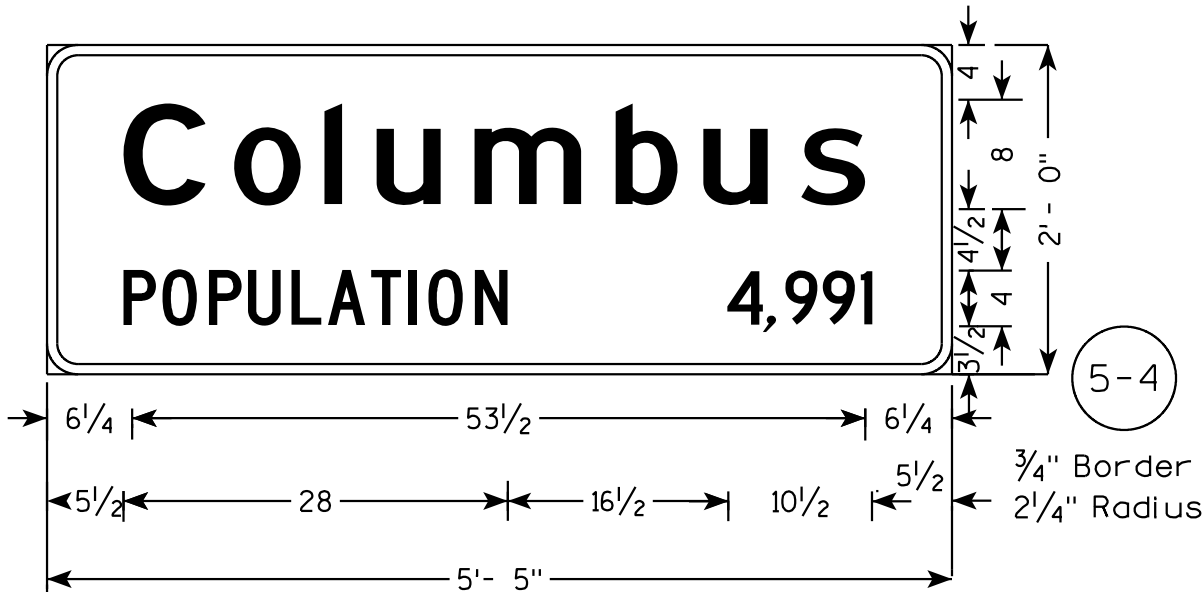
NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E, unless noted
4. Unless otherwise noted, all signs shown on this sheet shall have "Type A" or "Type C" arrows.
See standard sign plates for further details.

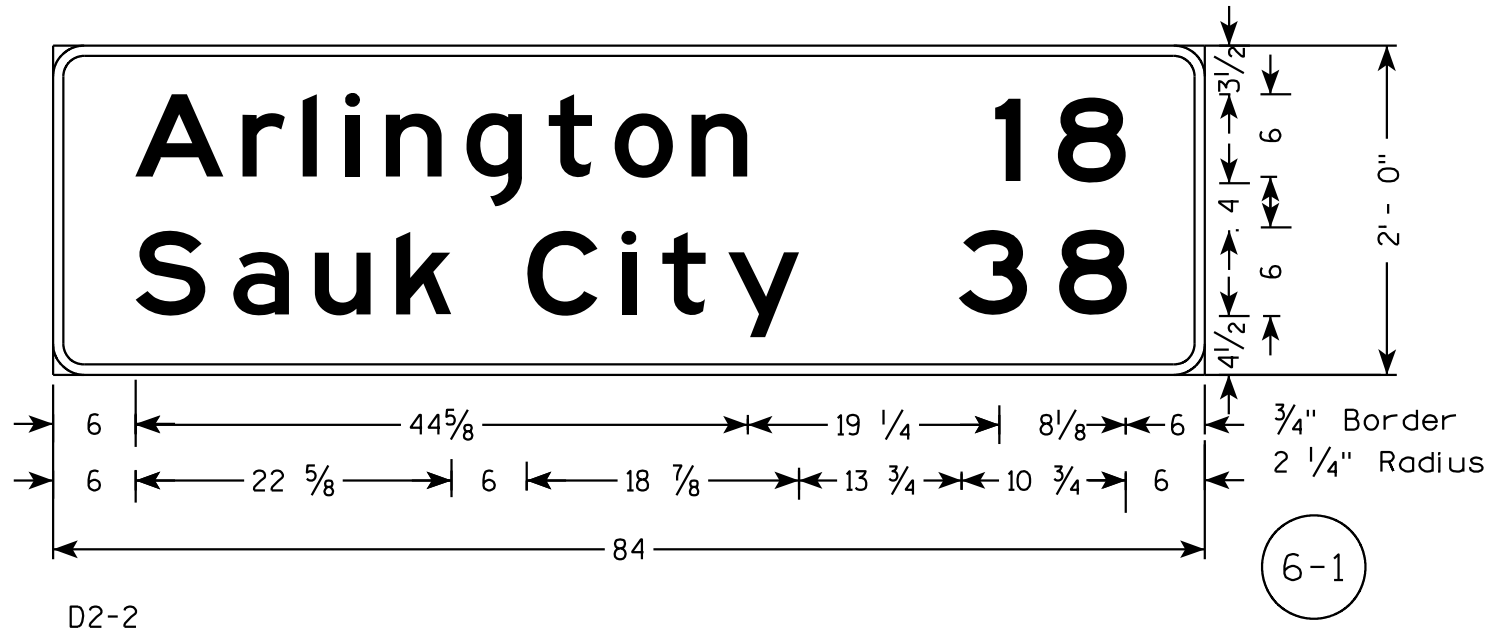


NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E, unless noted
4. Unless otherwise noted, all signs shown on this sheet shall have "Type A" or "Type C" arrows. See standard sign plates for further details.

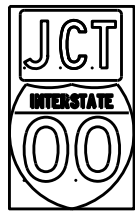


12-3 "Columbus" Message Series D;
"POPULATION" Message Series C;
'4.991" Message Series C

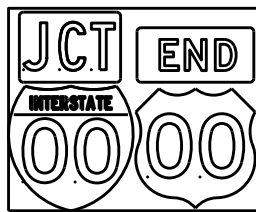


D2-2

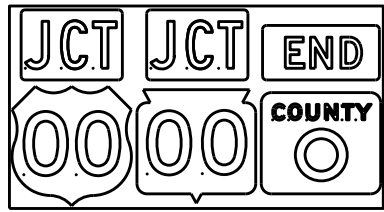
TYPICAL ASSEMBLIES



J1-1



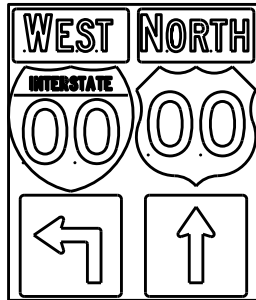
J1-2



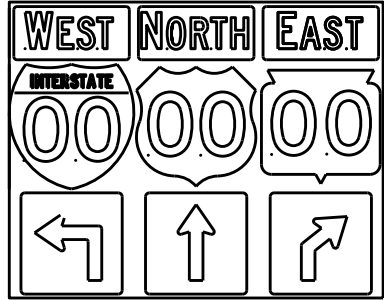
J1-3



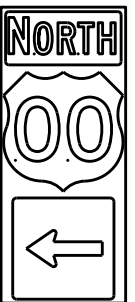
J2-1



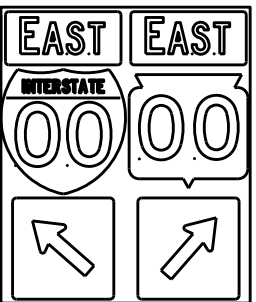
J2-2



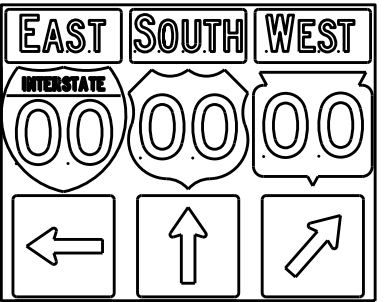
J2-3



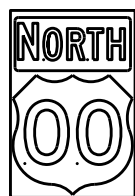
J3-1



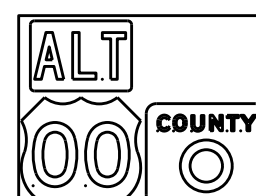
J3-2



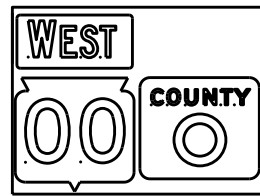
J3-3



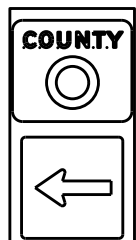
J4-1



J4-2



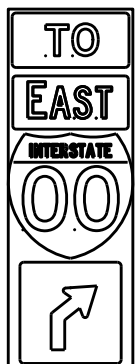
J4-2



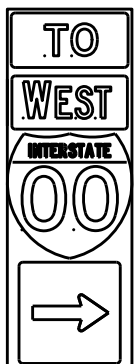
J13-1



J12-1



J32-1



J33-1



J23-1

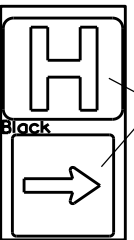


J22-1



JV

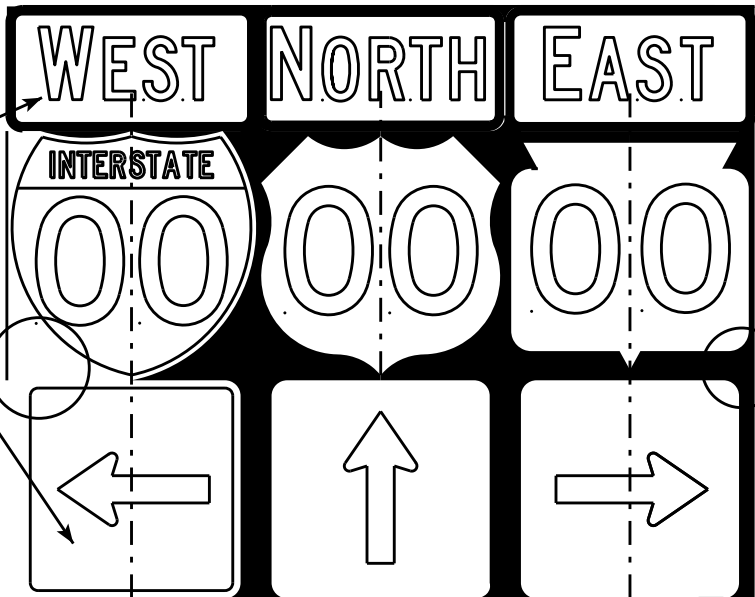
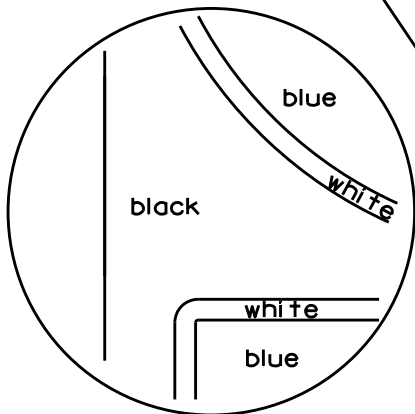
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

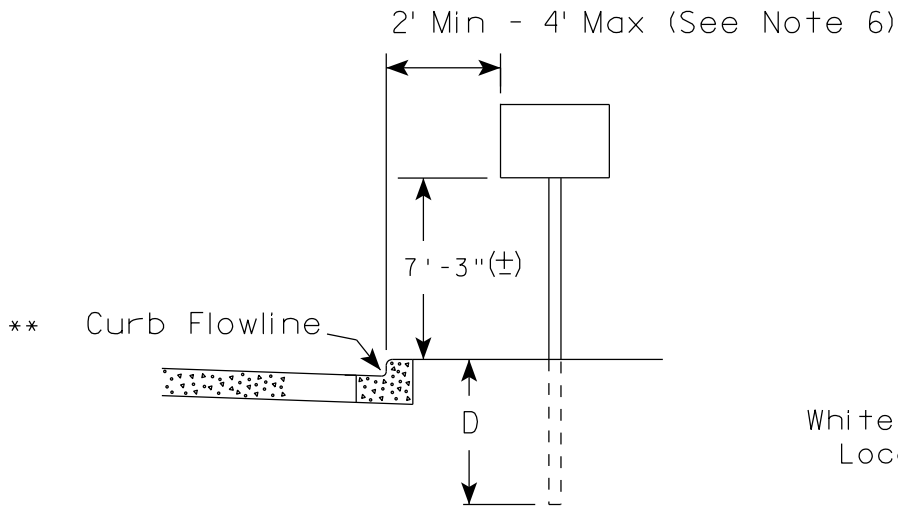
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

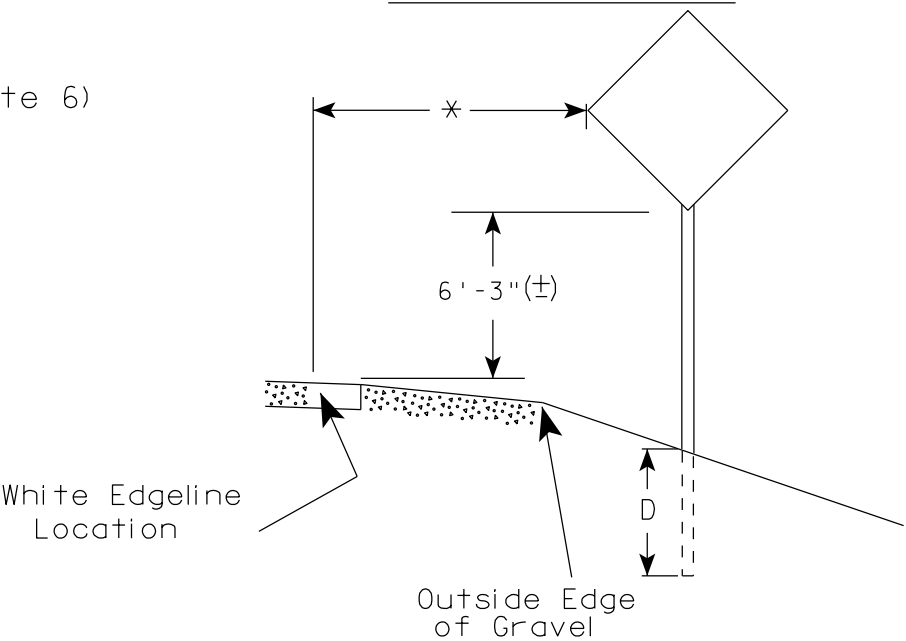
NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

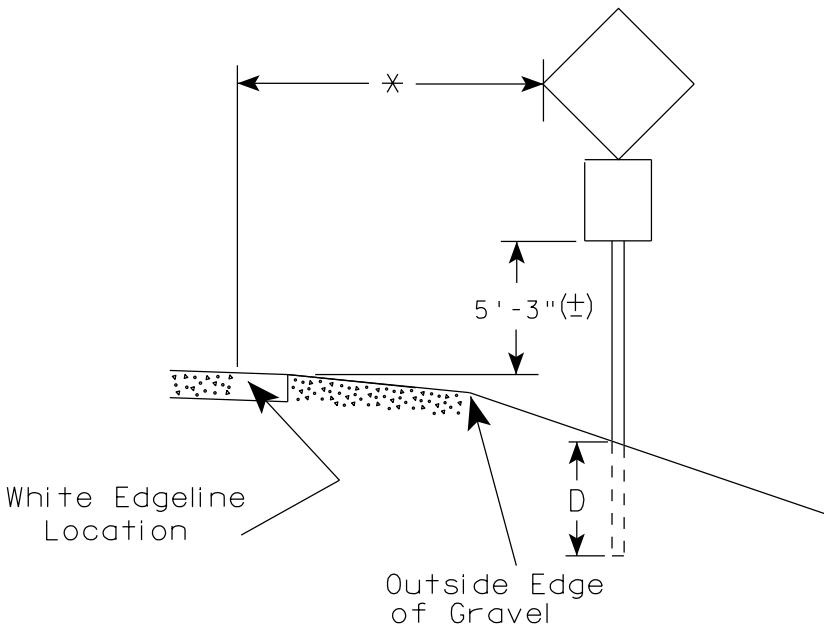
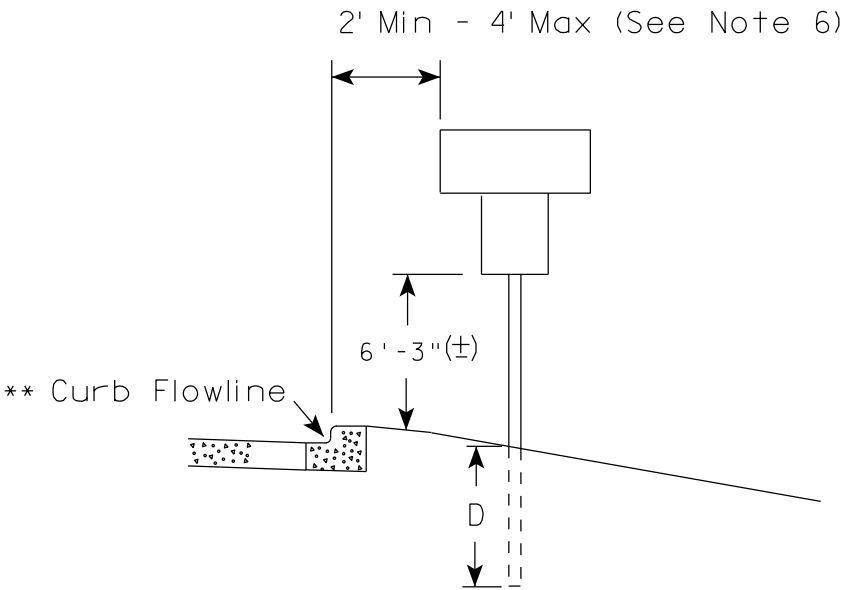
URBAN AREA



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 barrier wall, see A4-10 sign plate.
 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 J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. The (±) tolerance for mounting height is 3 inches.
 8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
 9. 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), 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" (±).



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.

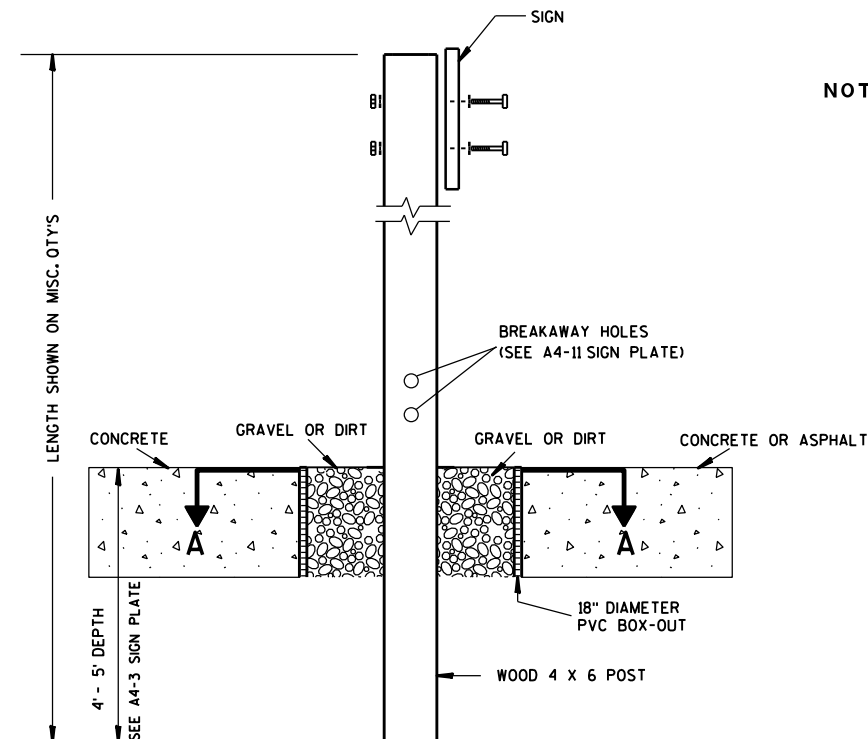
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

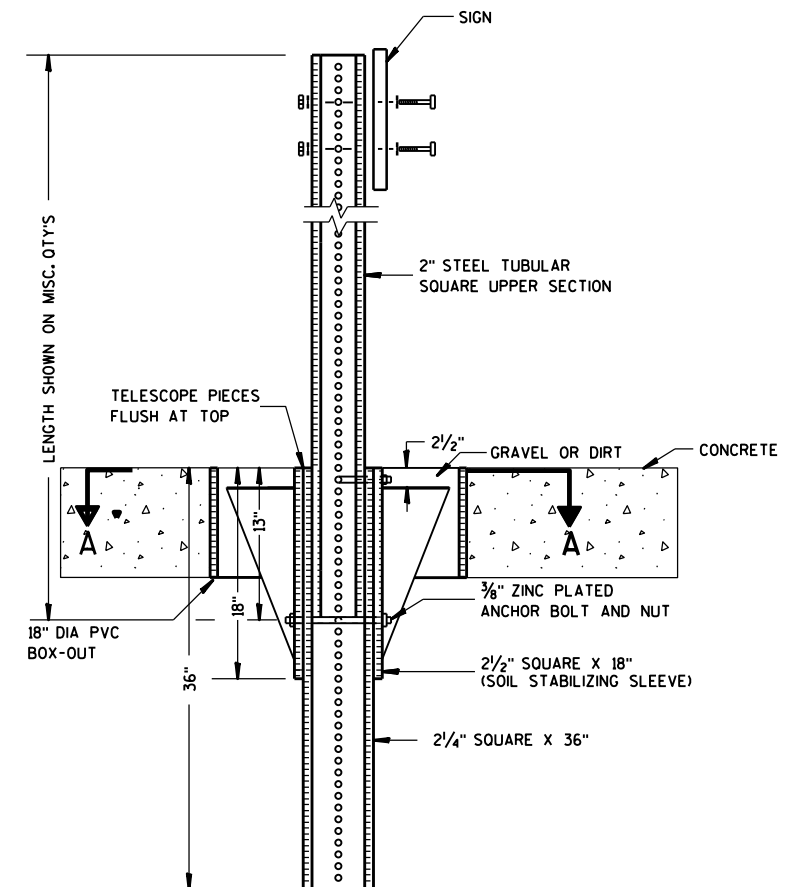
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

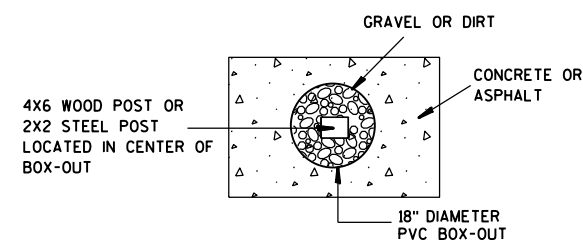
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

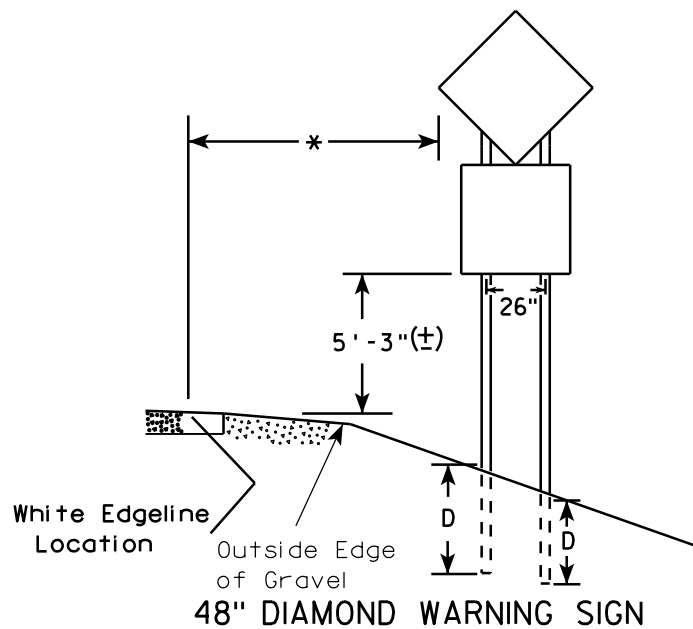
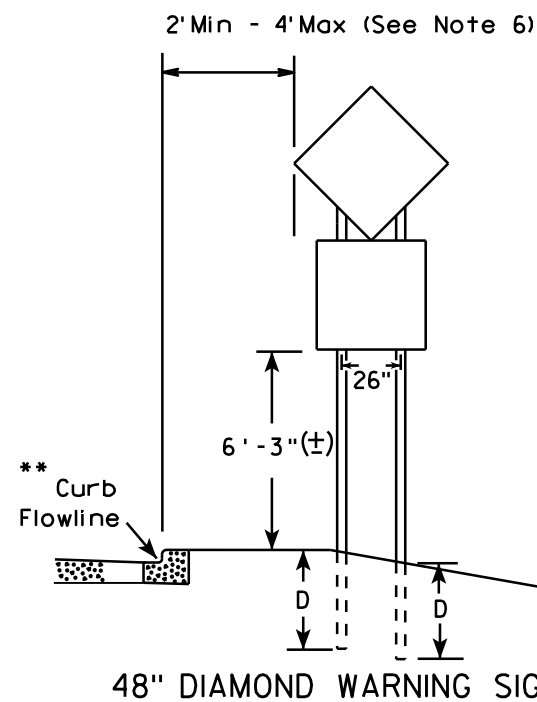
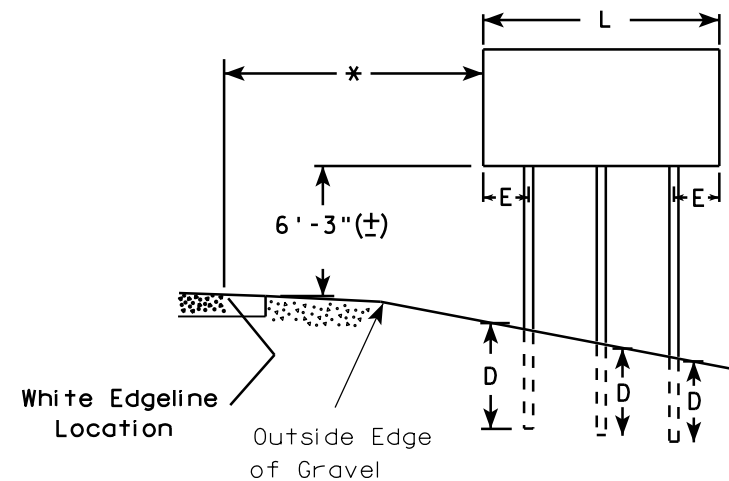
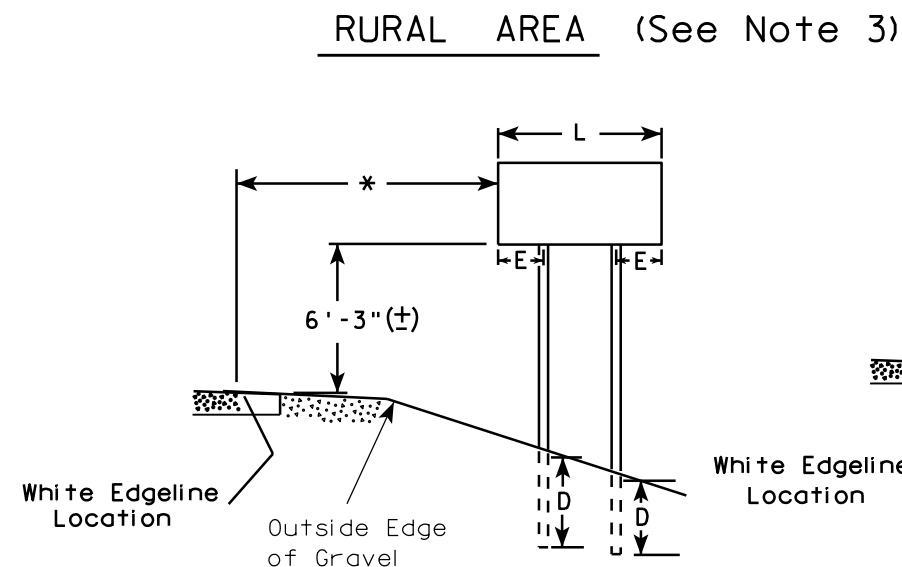
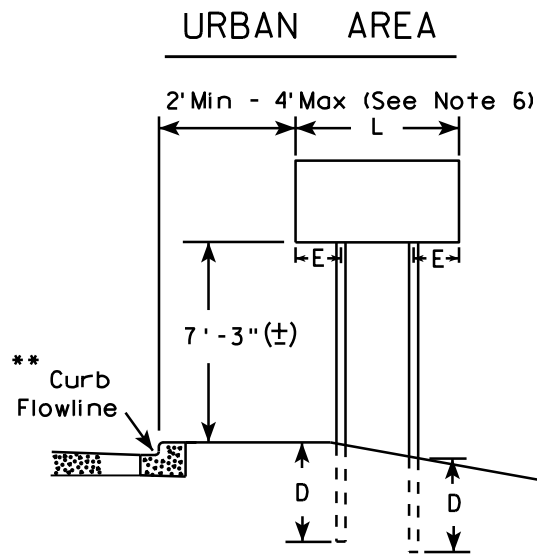
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 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" (±).

* 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.

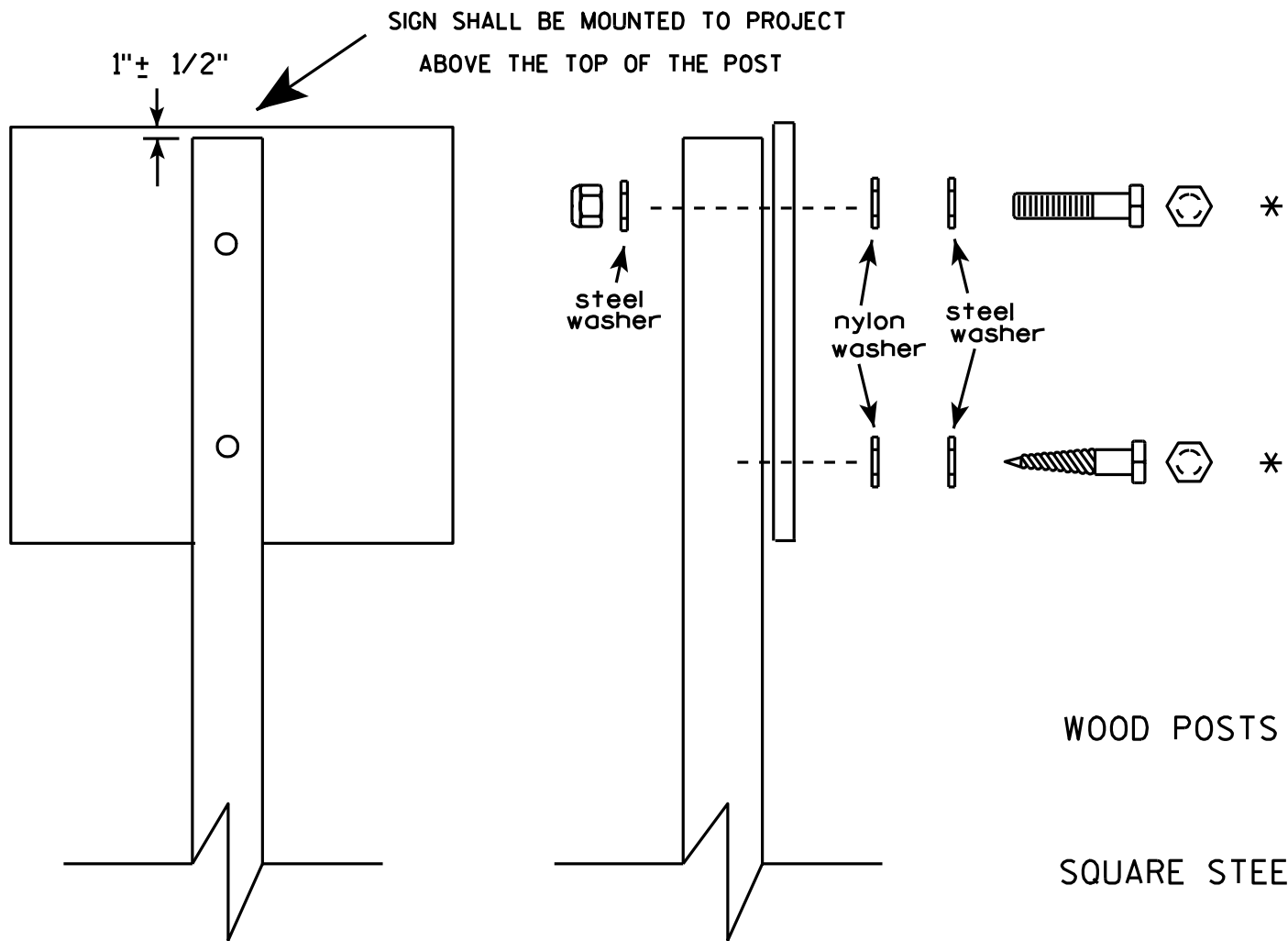
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	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	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. A4-4.14

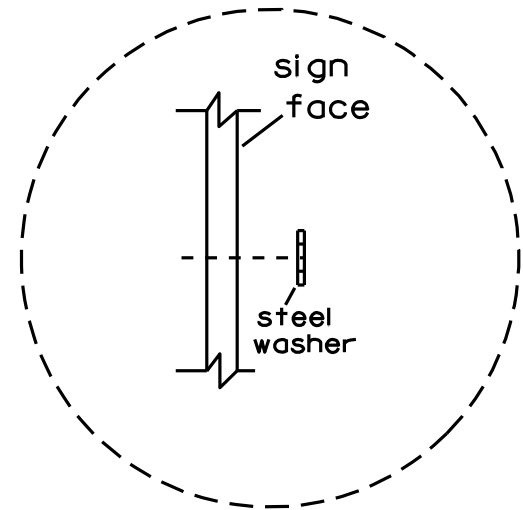


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3"
- MACHINE BOLTS - $\frac{5}{16}$ " X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts
- 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 for all Type H signs.

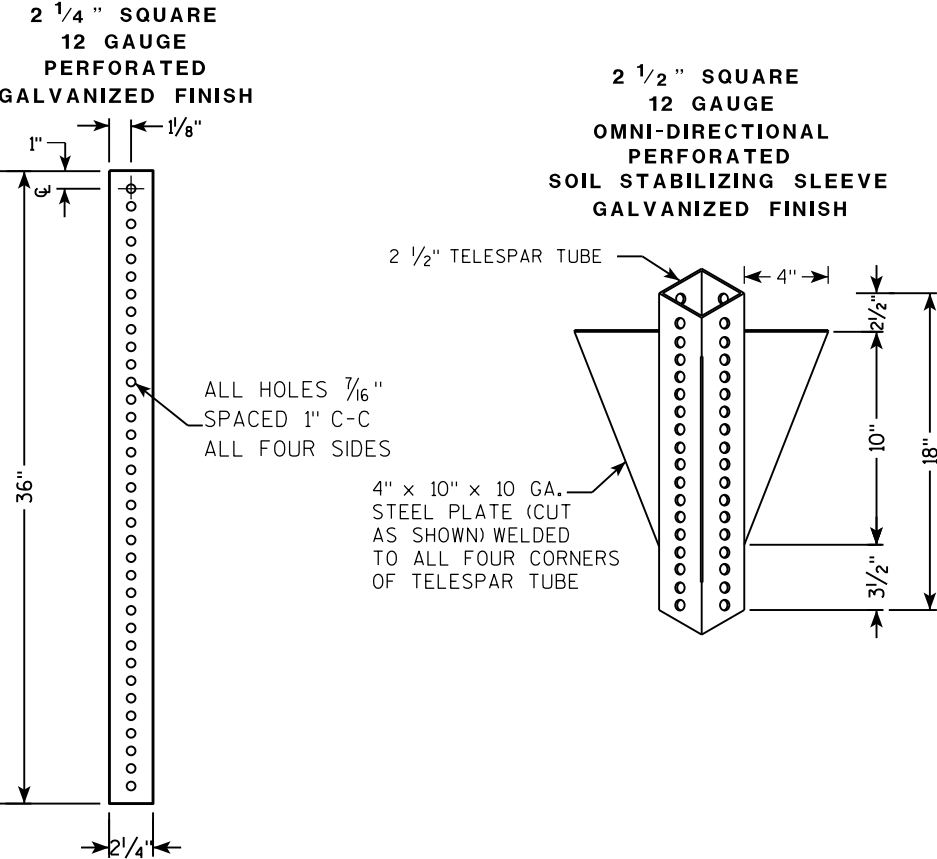


Washer Placement when Sign Has Other Than Type H or Type F Face

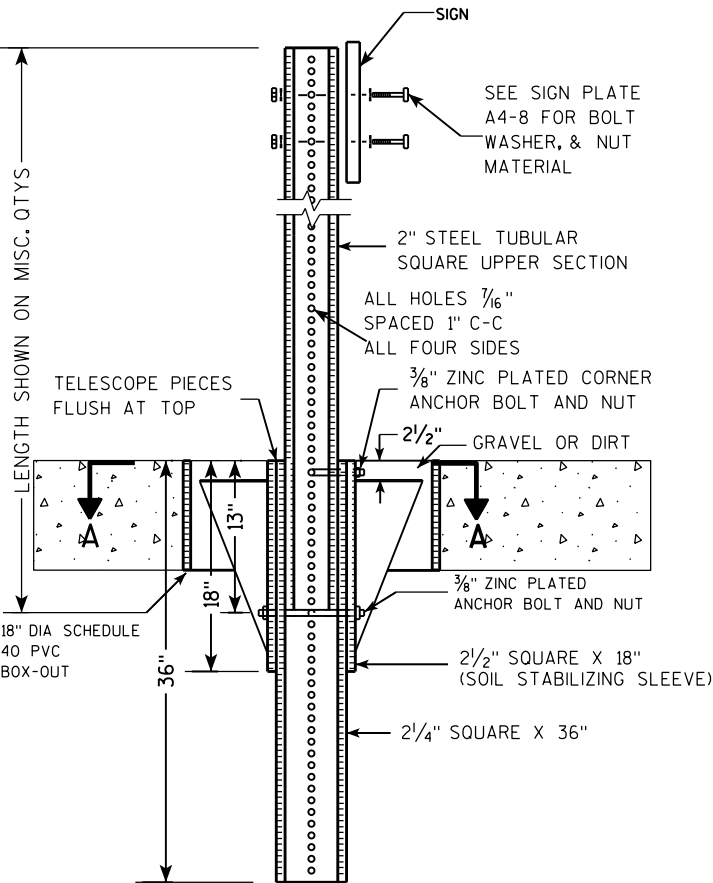
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require 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 3/23/10	PLATE NO. A4-8.7

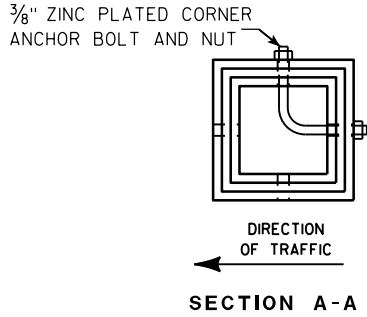
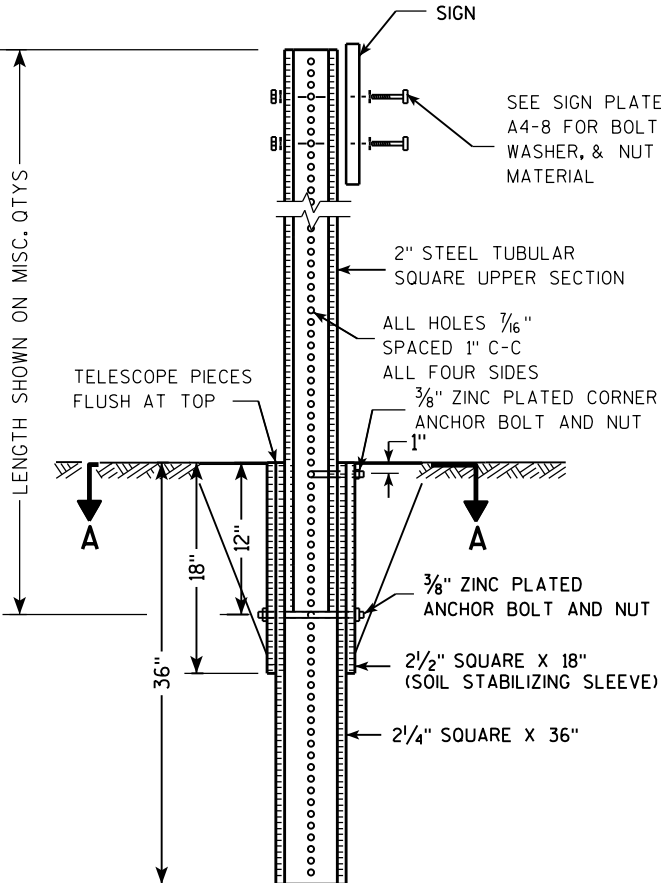
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

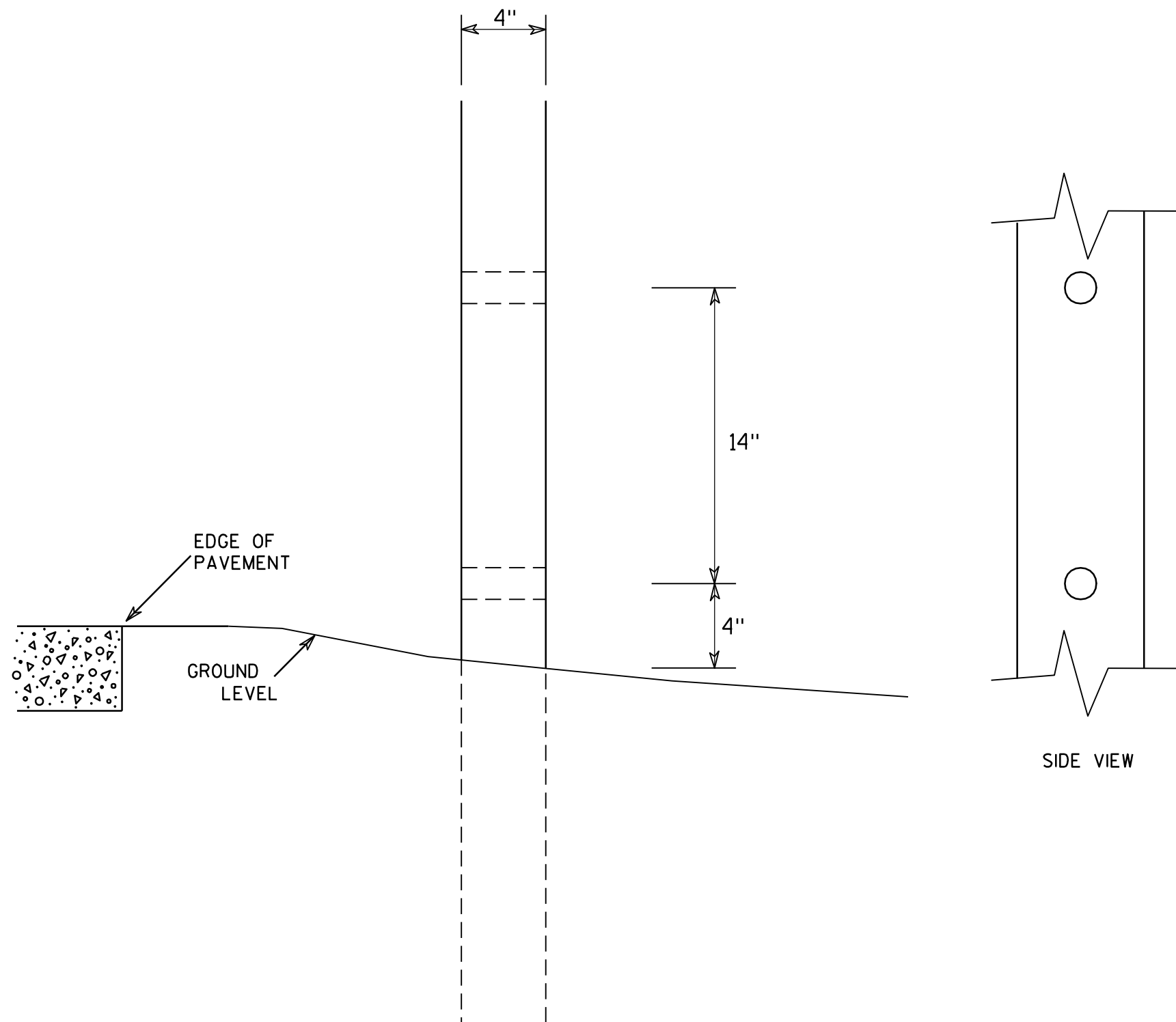
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

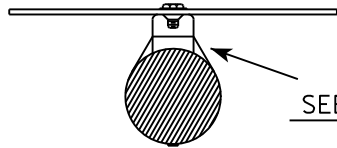
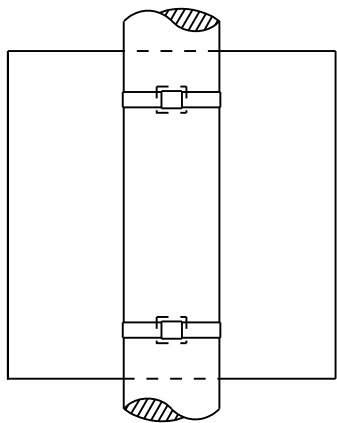
COUNTY:

SHEET NO:

E

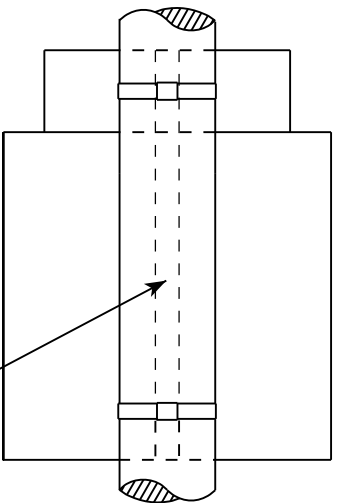
BANDING

SINGLE SIGN

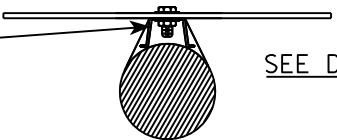


SEE DETAIL A

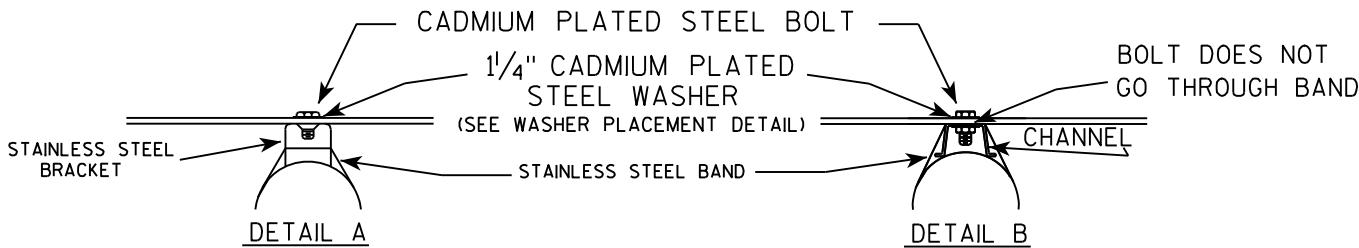
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



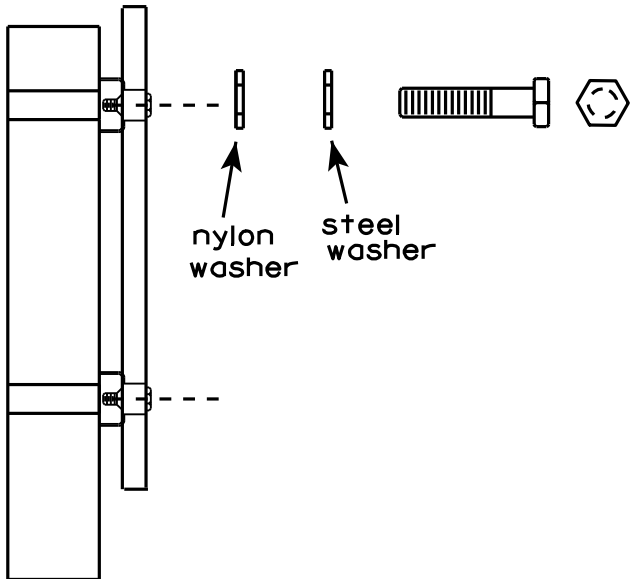
SEE DETAIL B



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



nylon washer
steel washer

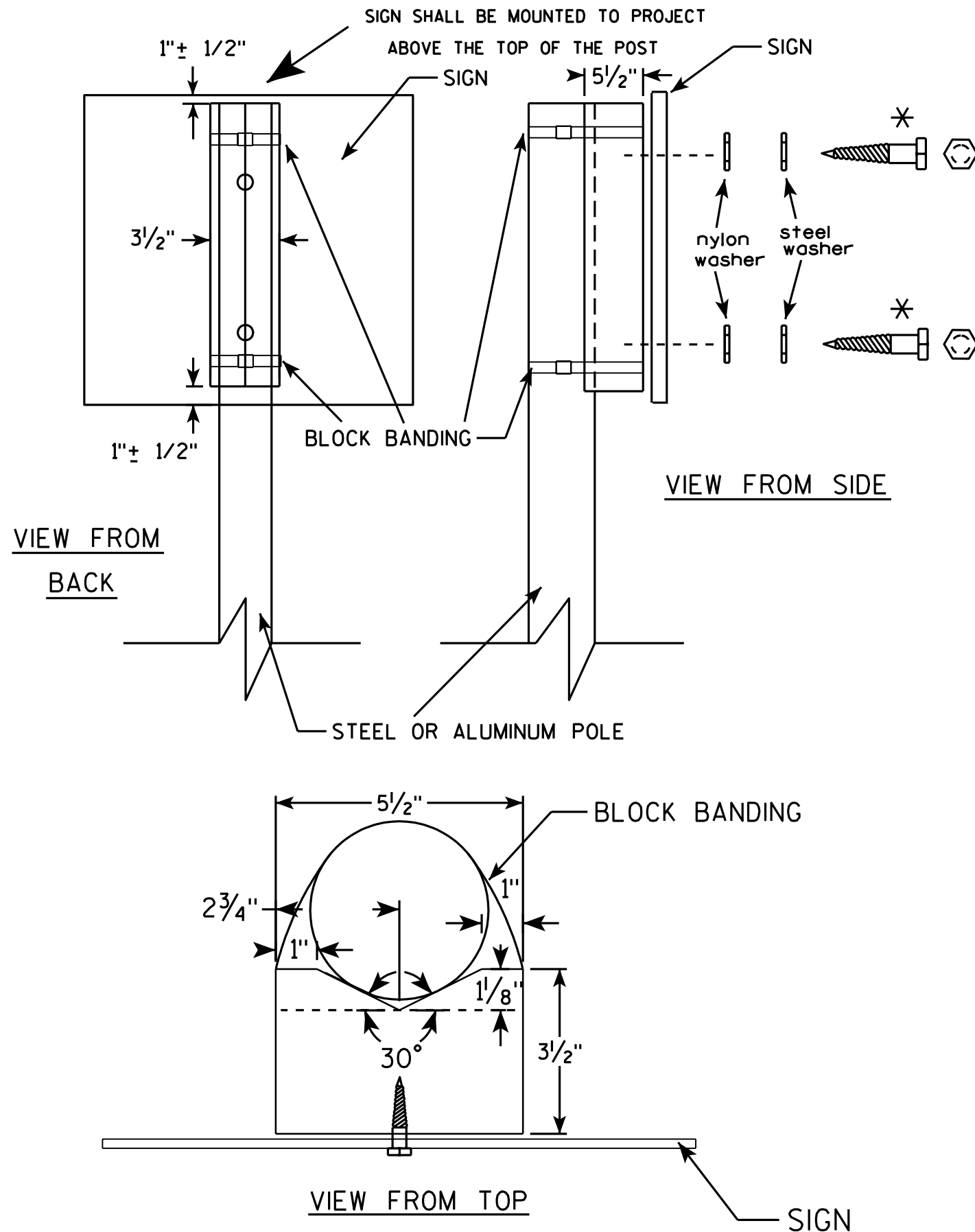
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



GENERAL NOTES

1. WOOD 4"x6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

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

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

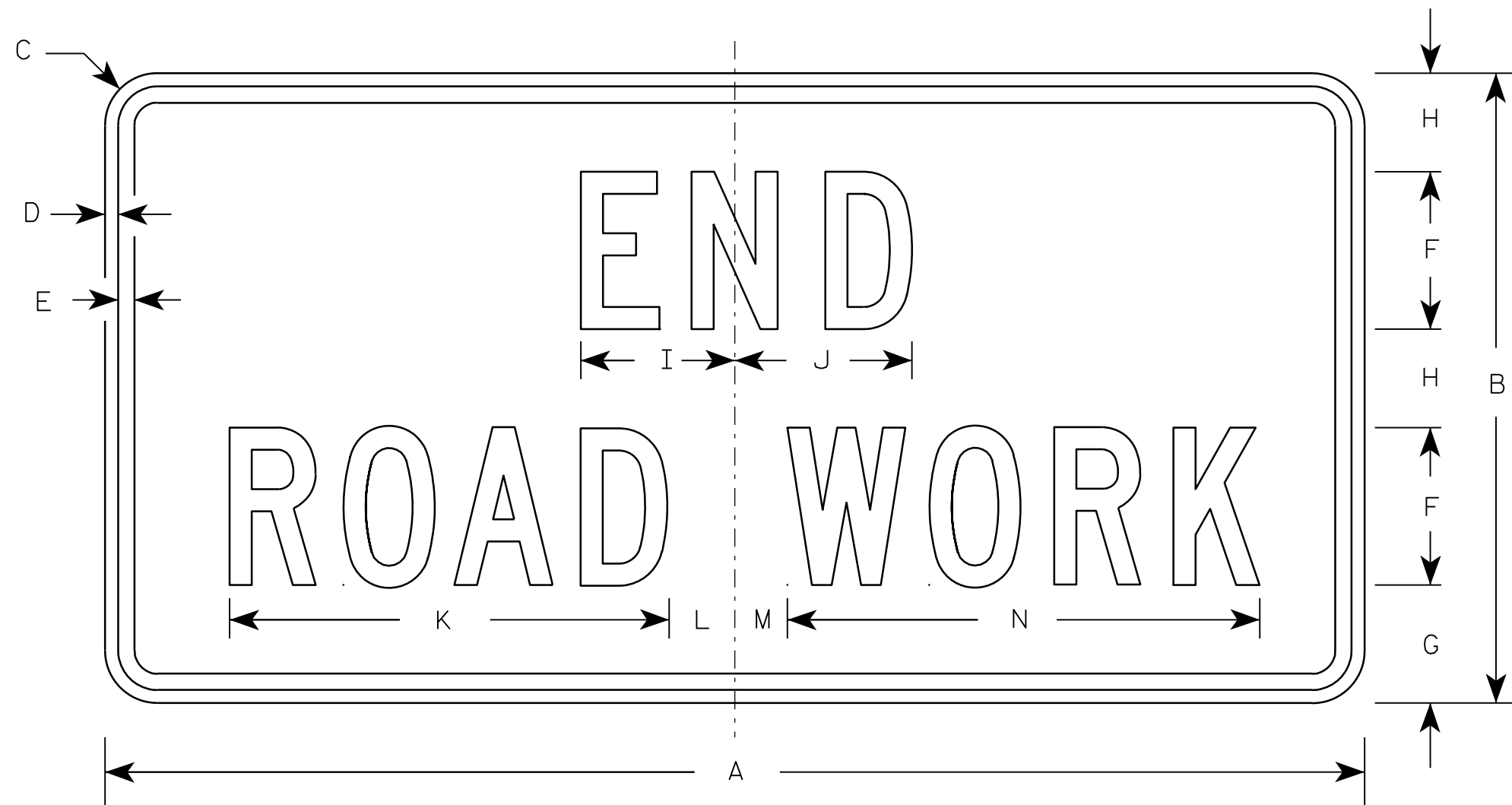
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO:

E

7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - C
- 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

PROJECT NO:

HWY:

COUNTY:

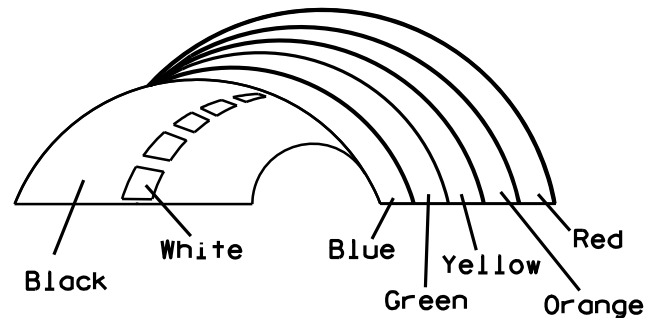
SHEET NO:

E



* VARIES

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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 - (See Note 5)
- 3. Message Series - (See Note 6)
- 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. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
- 6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
- 7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

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	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

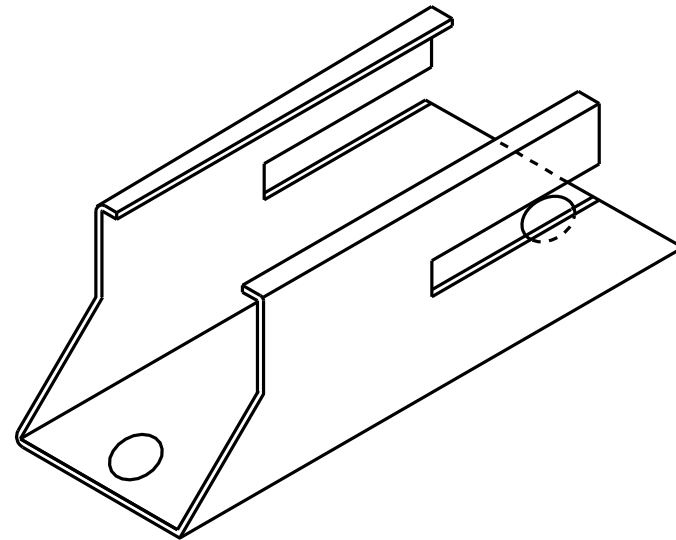
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

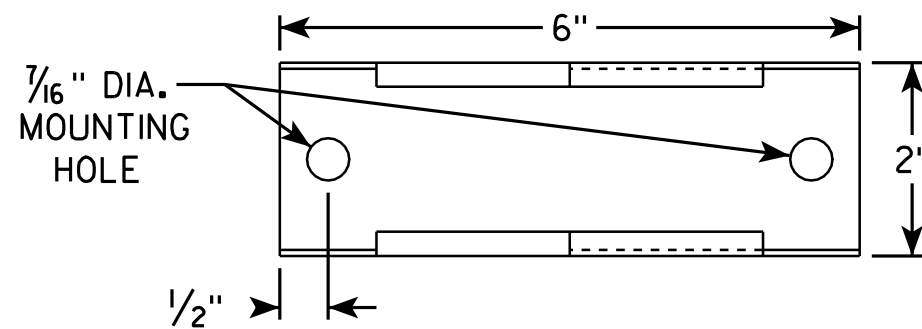
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

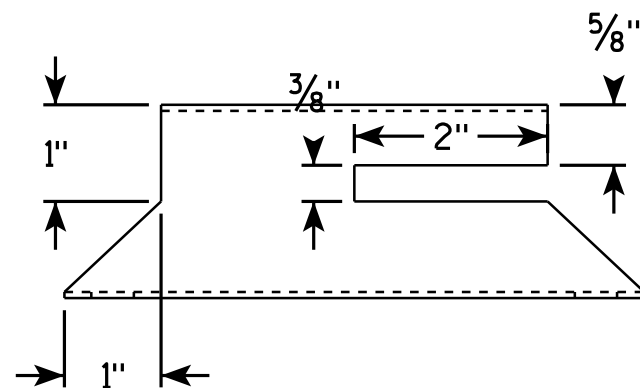
ISOMETRIC VIEW



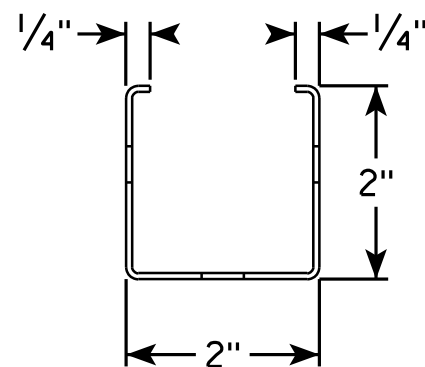
TOP VIEW



SIDE VIEW



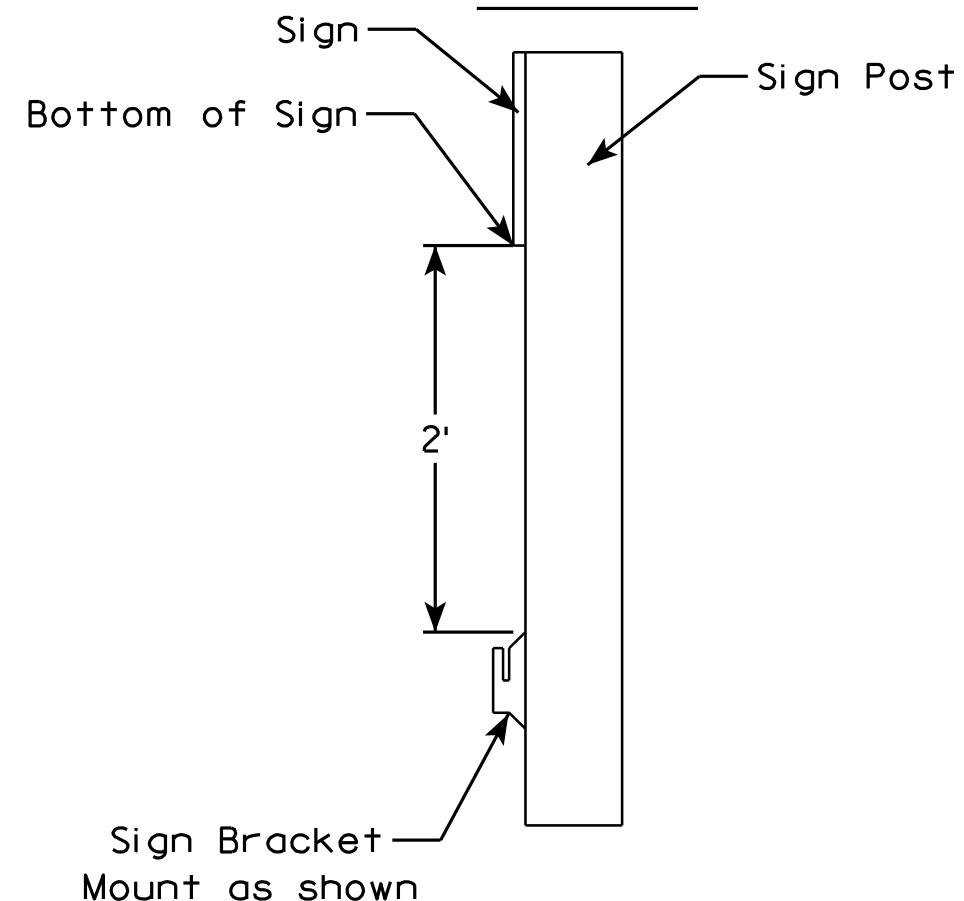
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:

HWY:

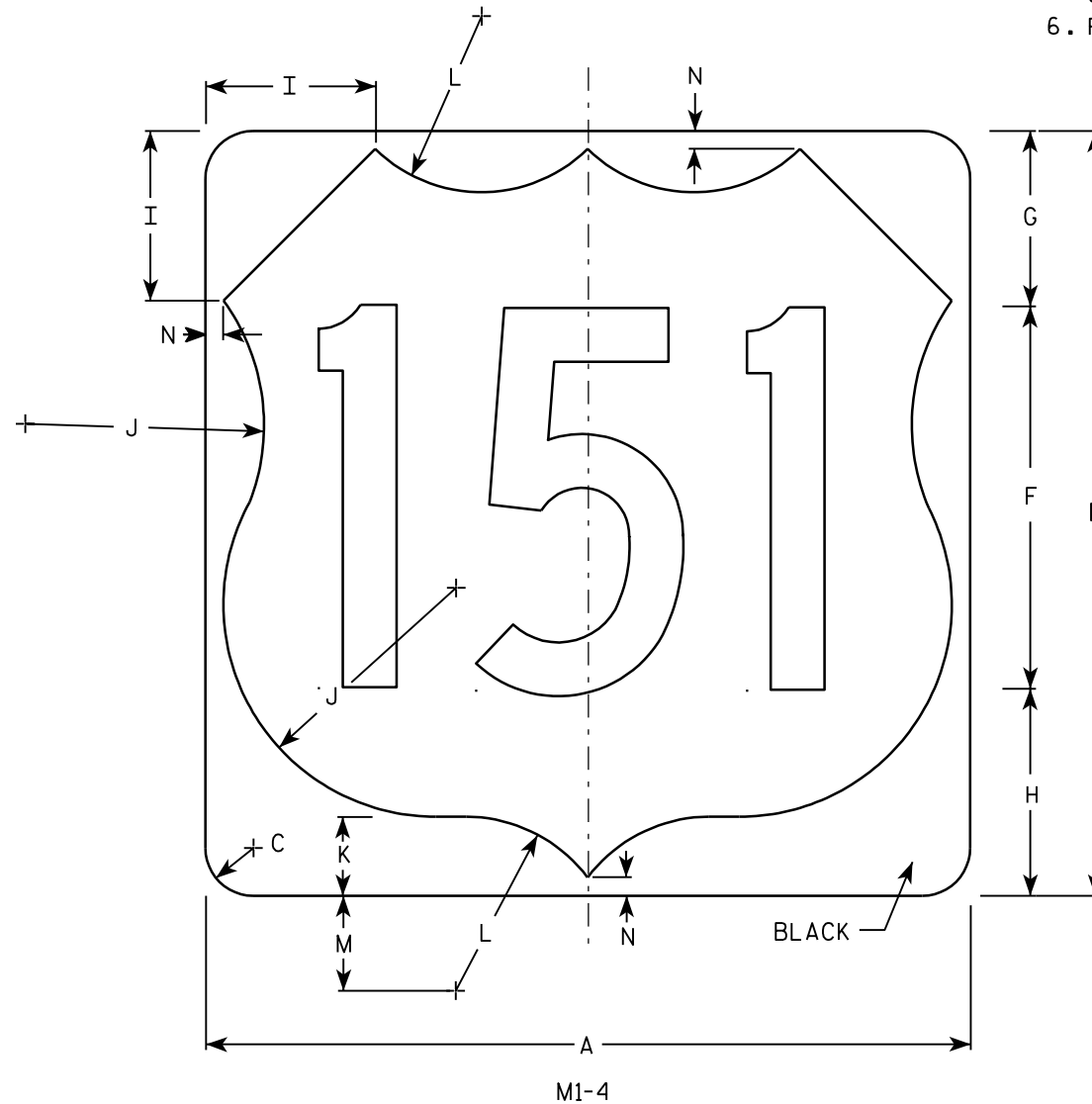
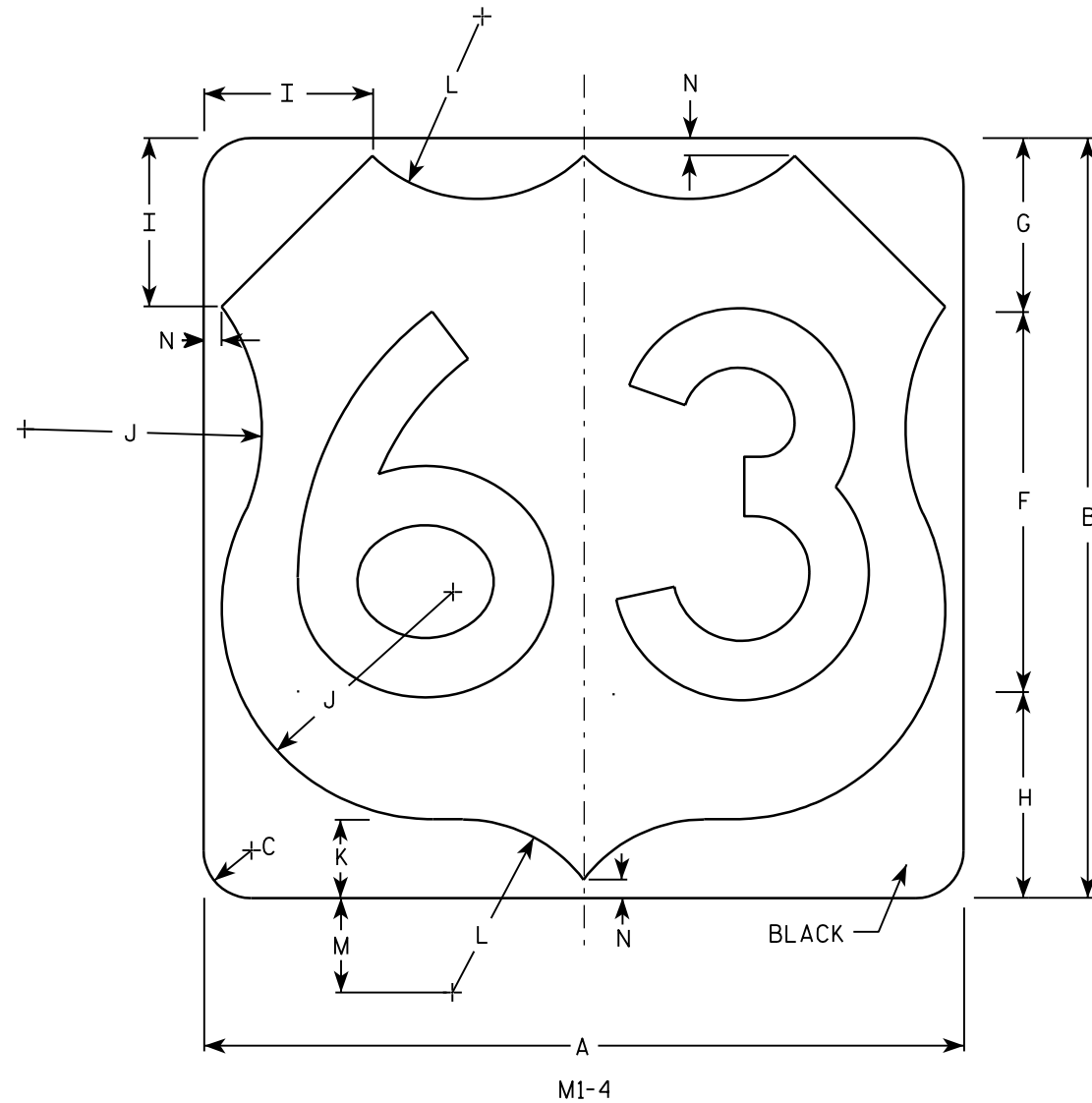
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



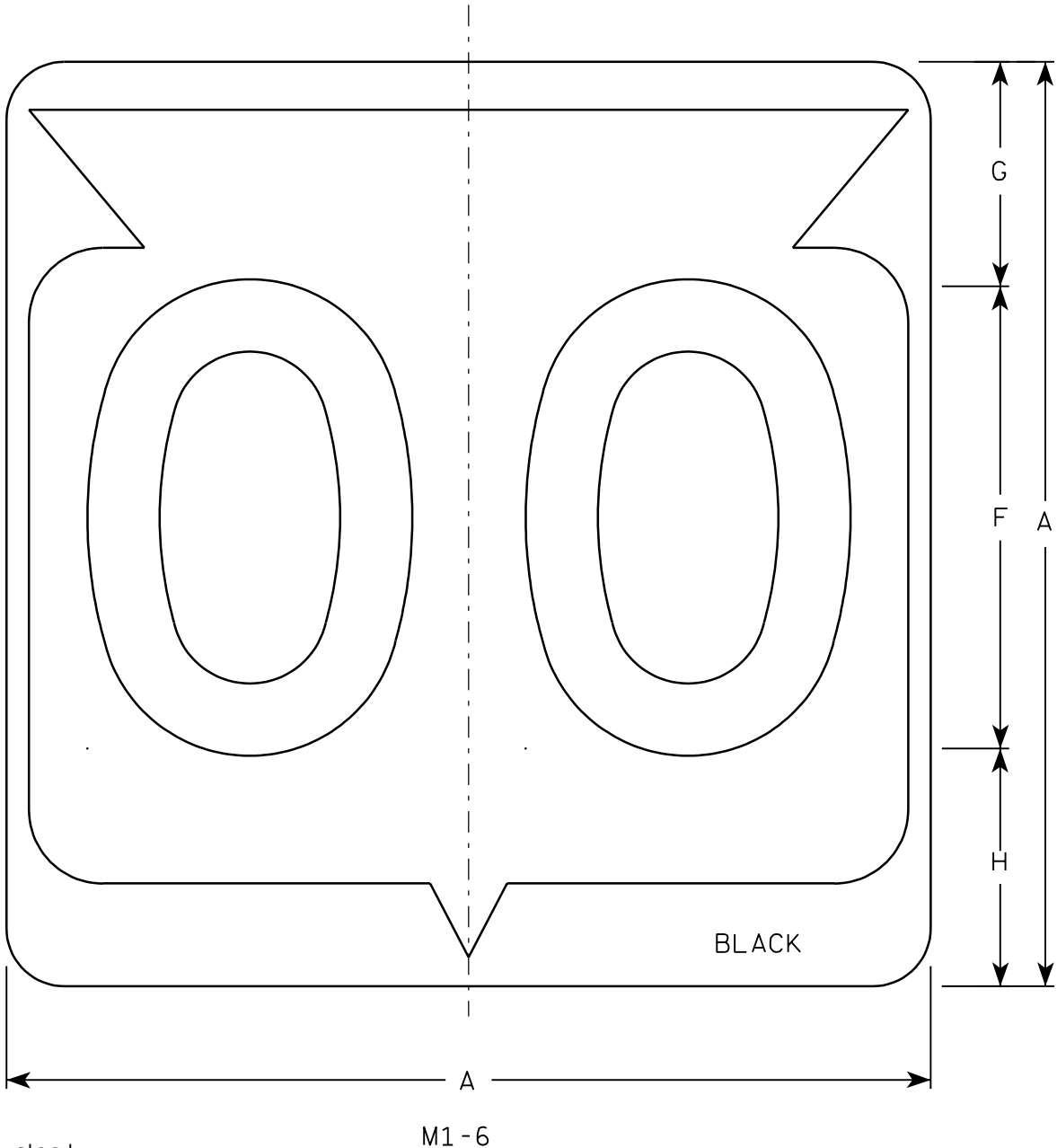
Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.	Area m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

PROJECT NO: HWY: COUNTY: SHEET NO: E

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

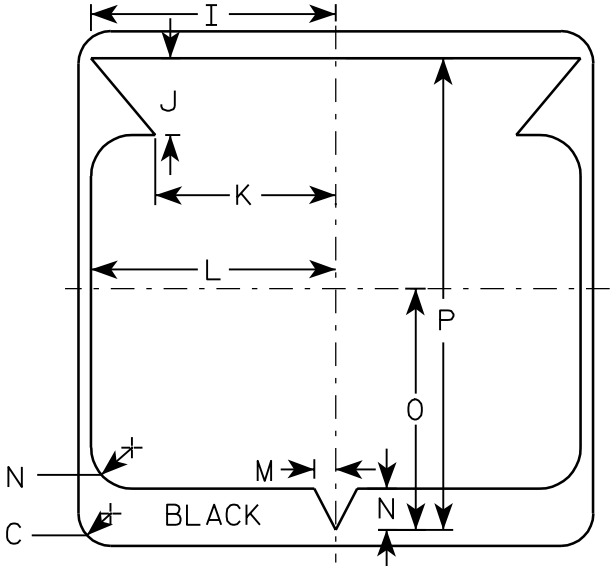
COUNTY:

SHEET NO:

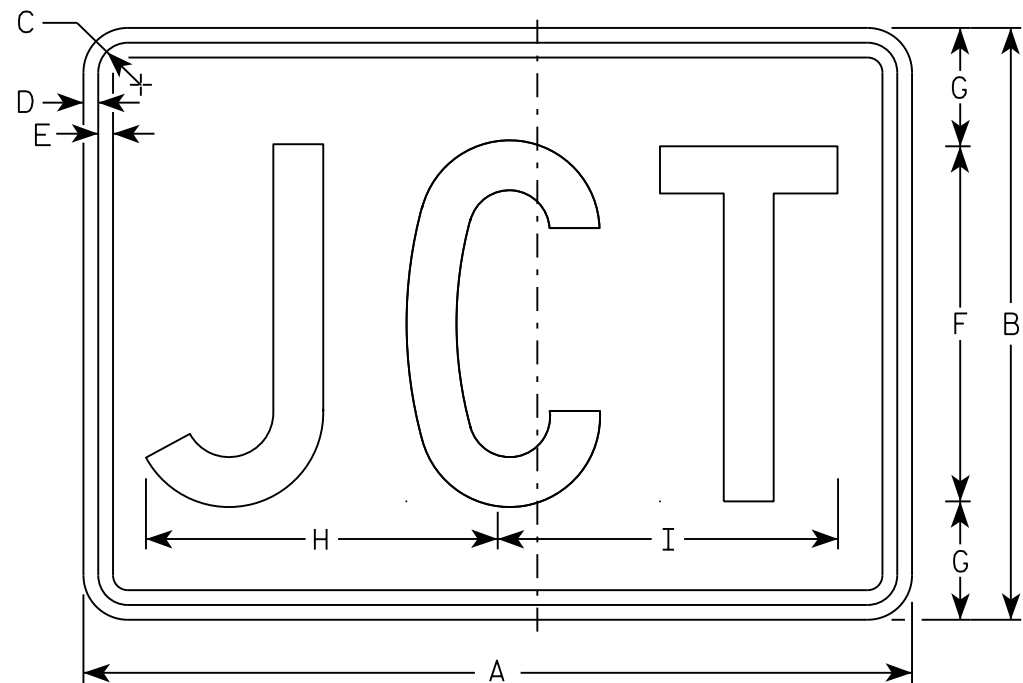
E

NOTES

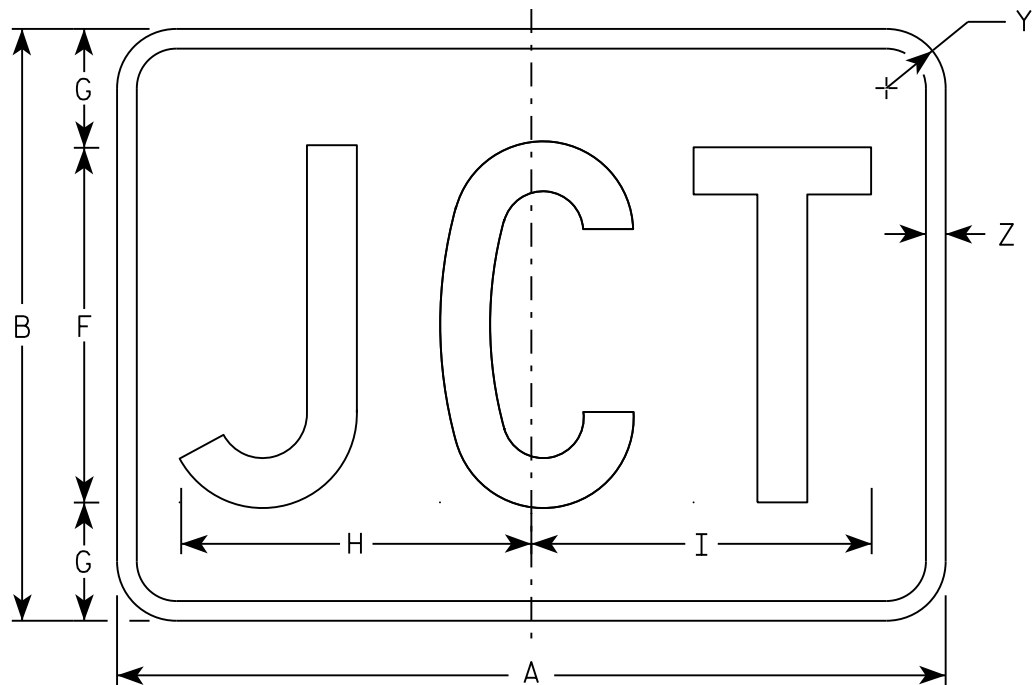
1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate Series numerals and
adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 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. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow

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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

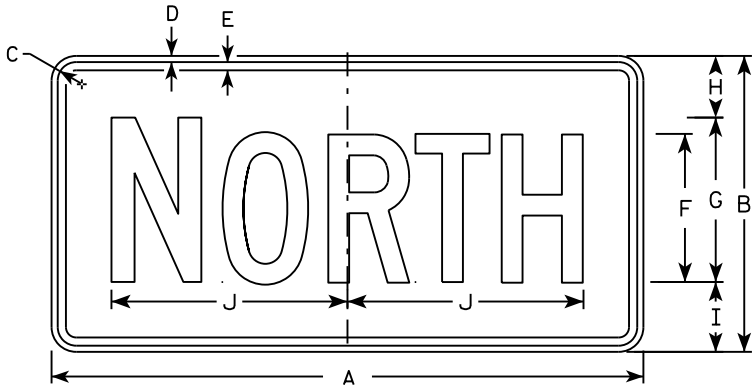
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

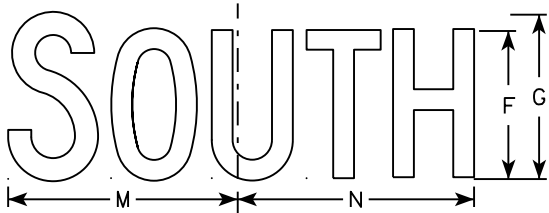
PLATE NO. M2-1.12



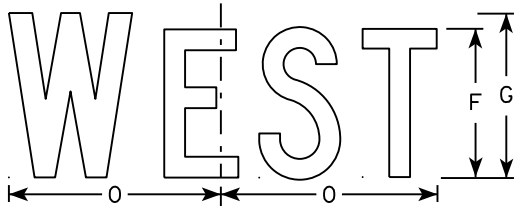
M3-1
MM3-1
MP3-1



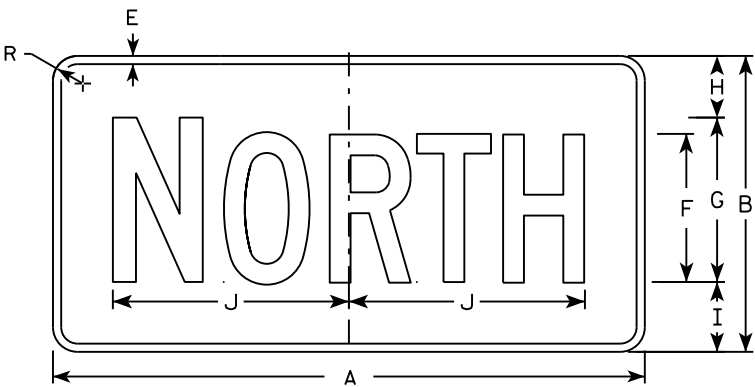
M3-2
MM3-2
MP3-2



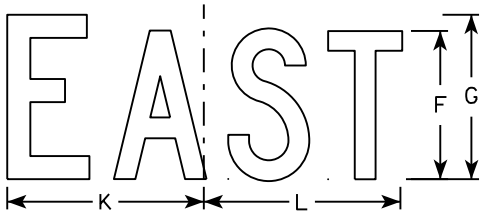
M3-3
MM3-3
MP3-3



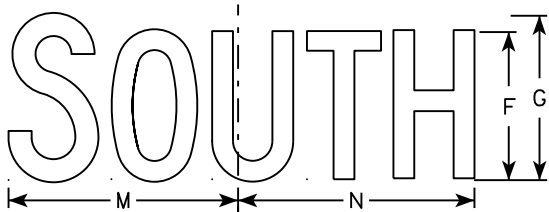
M3-4
MM3-4
MP3-4



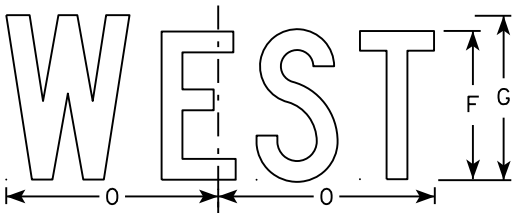
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
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. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

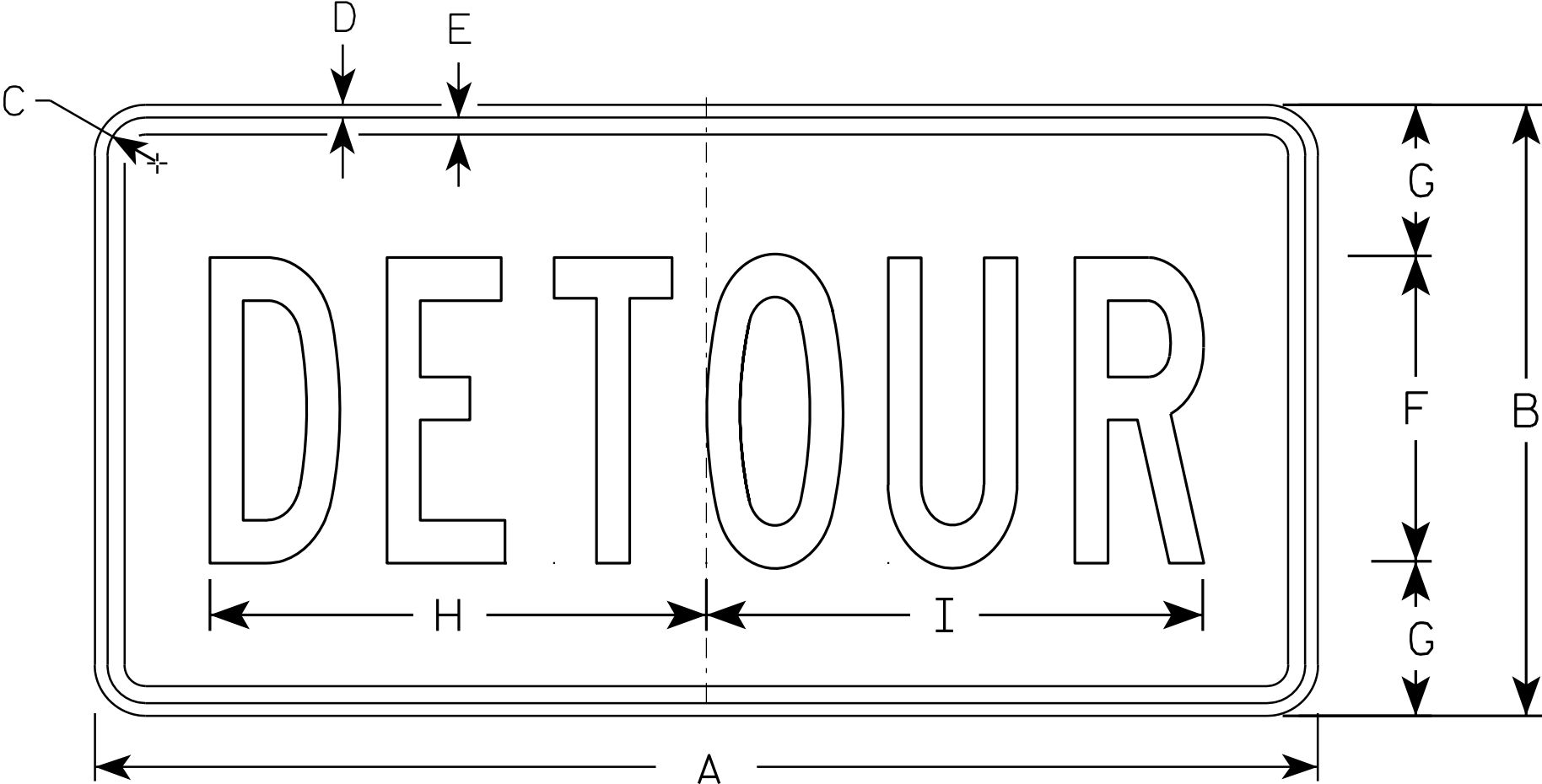
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

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



M4 - 8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

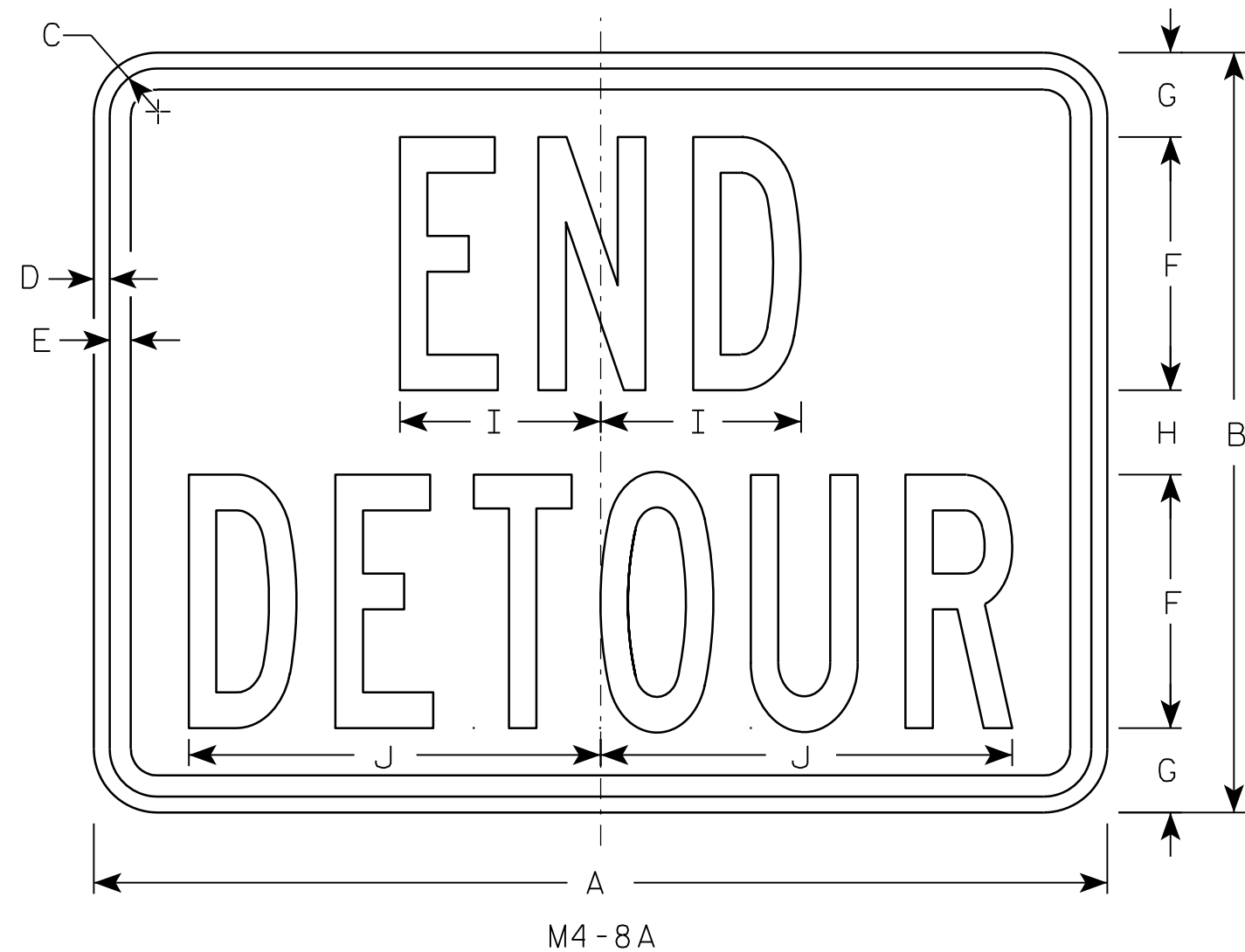
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

7



NOTES

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

7

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

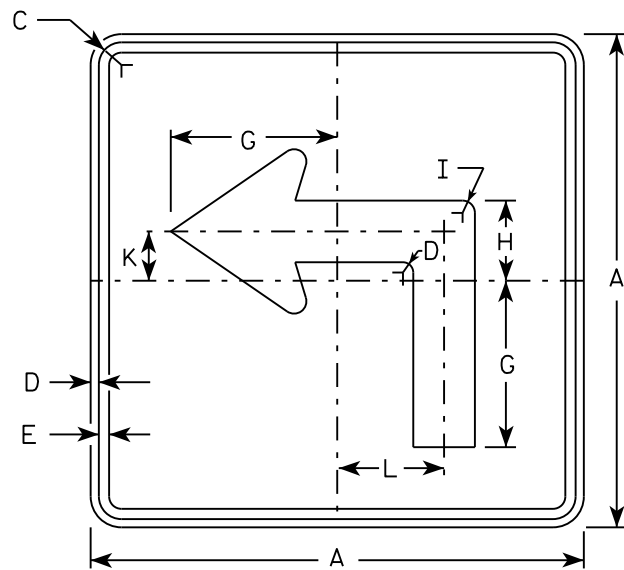
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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STANDARD SIGN
M4-8A

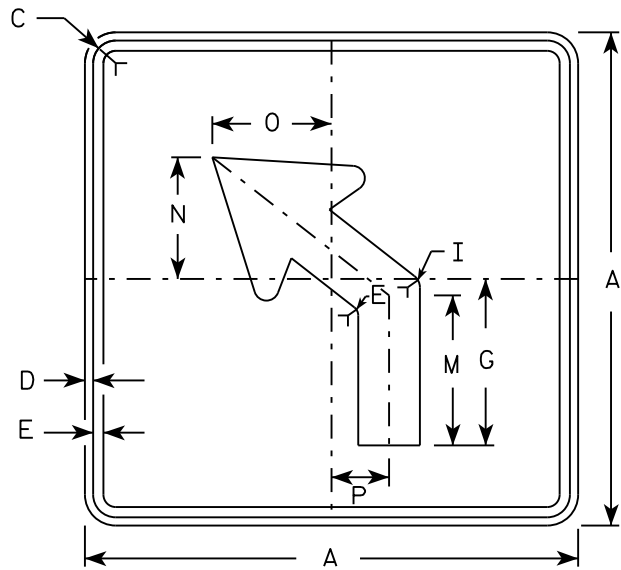
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

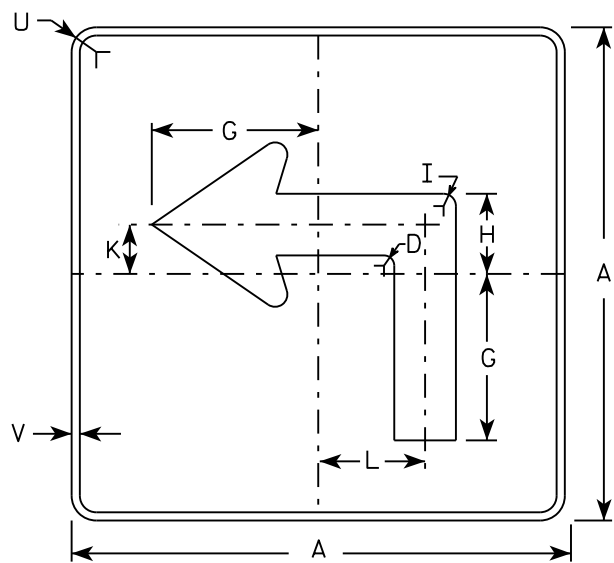
DATE 3/9/11 PLATE NO. M4-8A.2



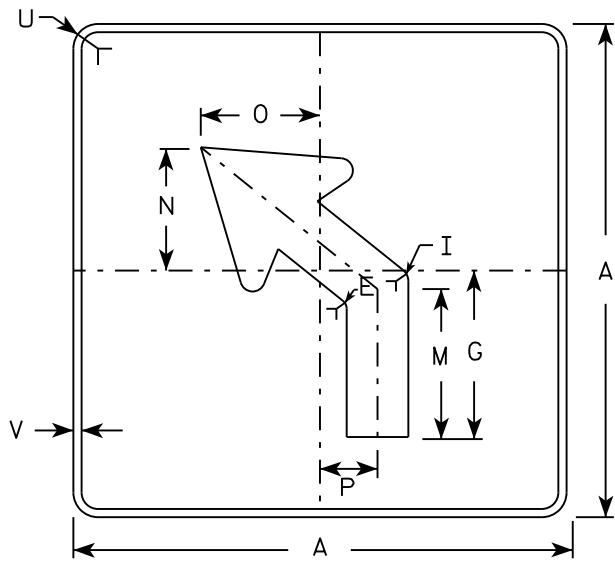
M5-1L
MM5-1L
M05-1L
MP5-1L



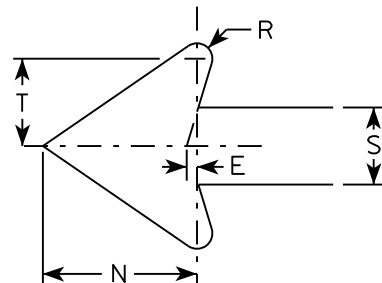
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 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.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN

M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

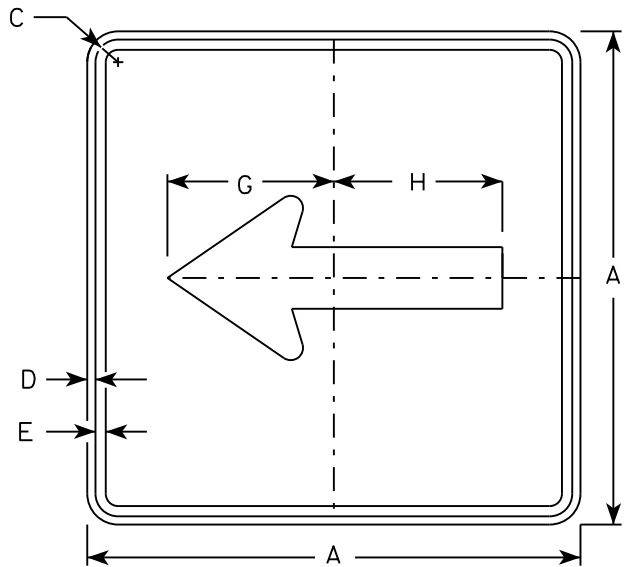
APPROVED

Matthew R. Rauch

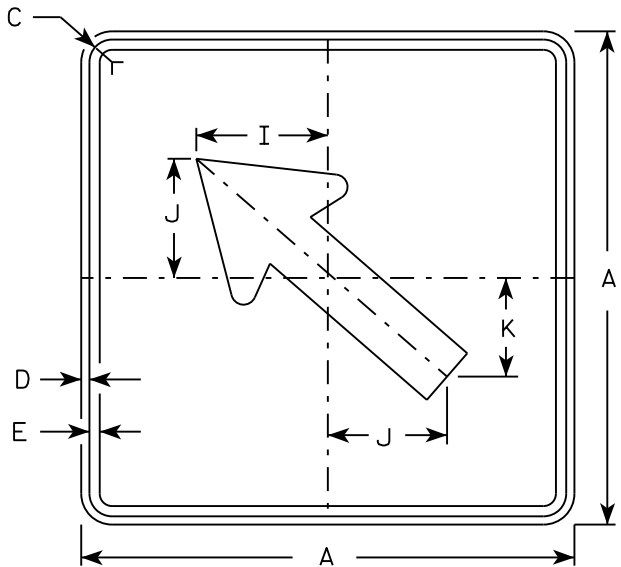
for State Traffic Engineer

DATE 10/15/15

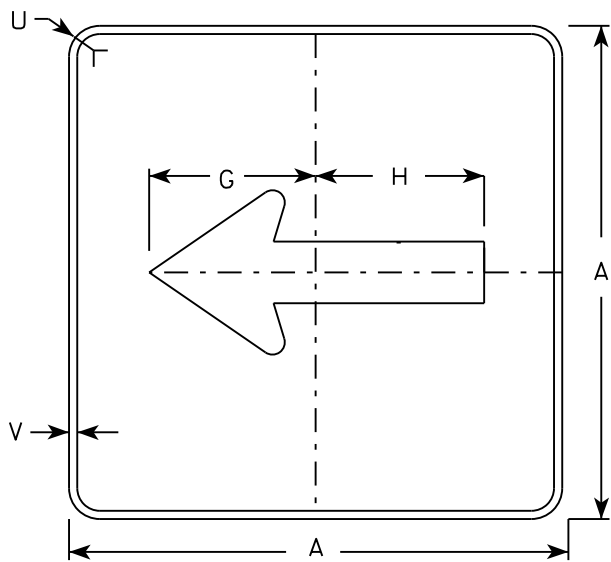
PLATE NO. M5-1.13



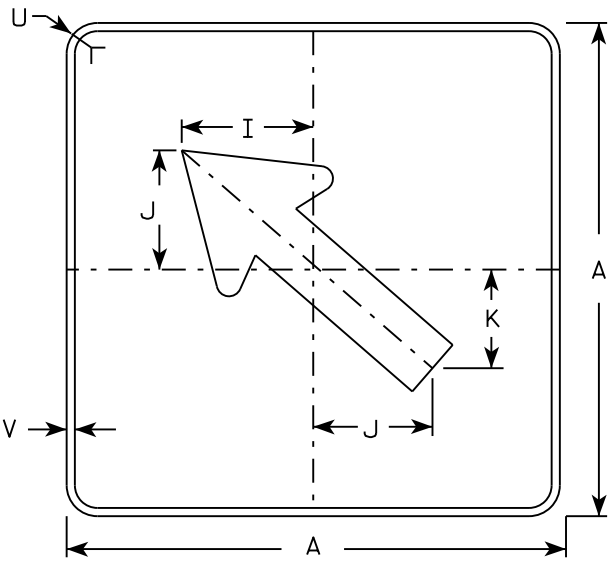
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



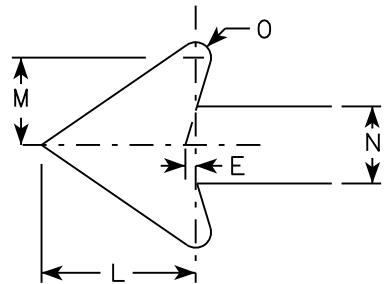
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 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.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

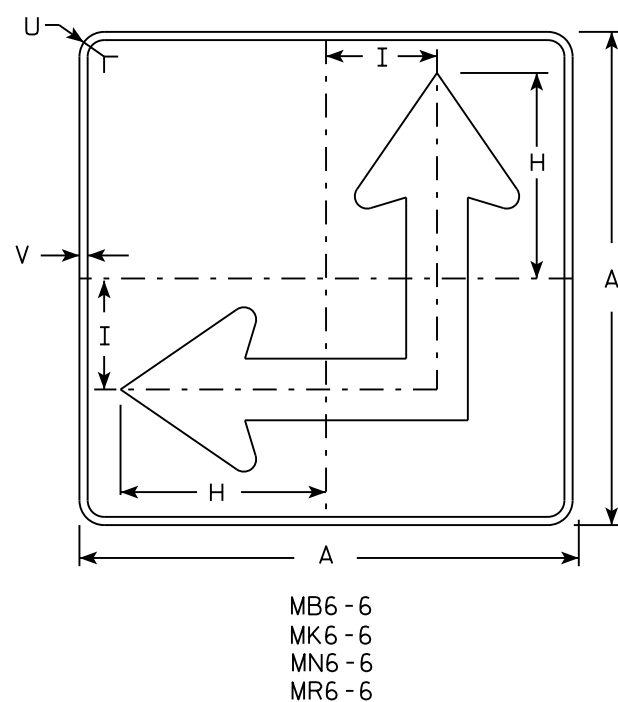
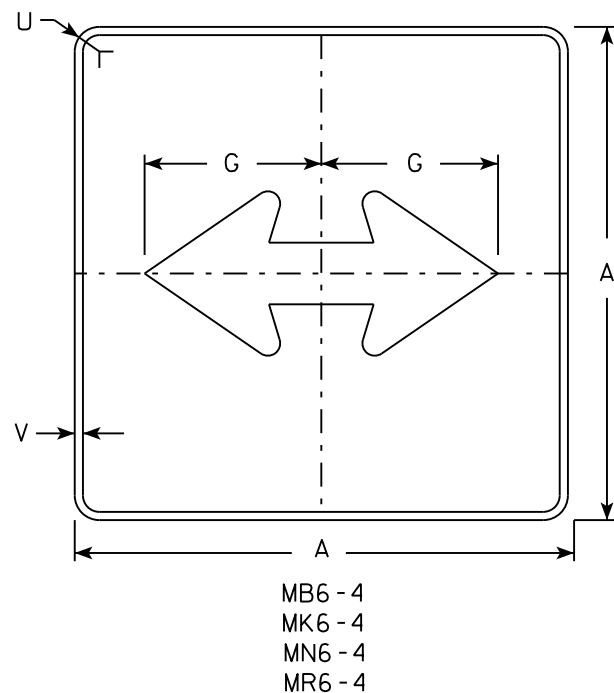
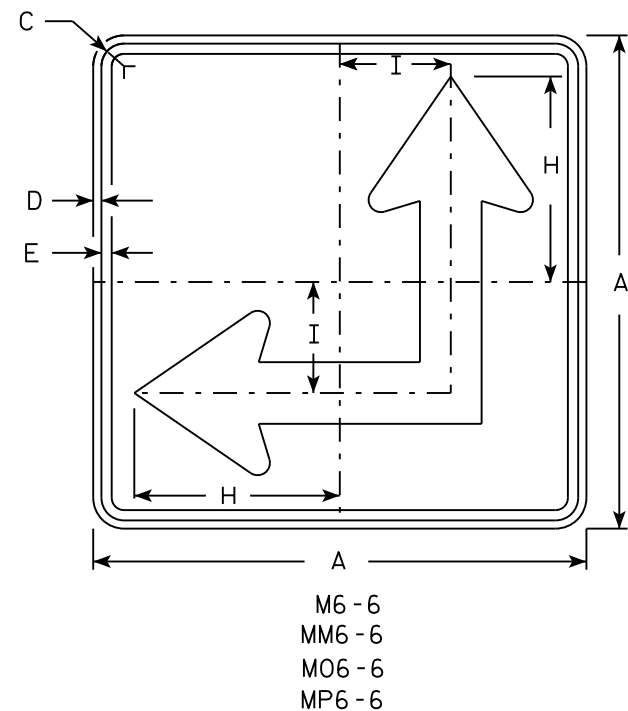
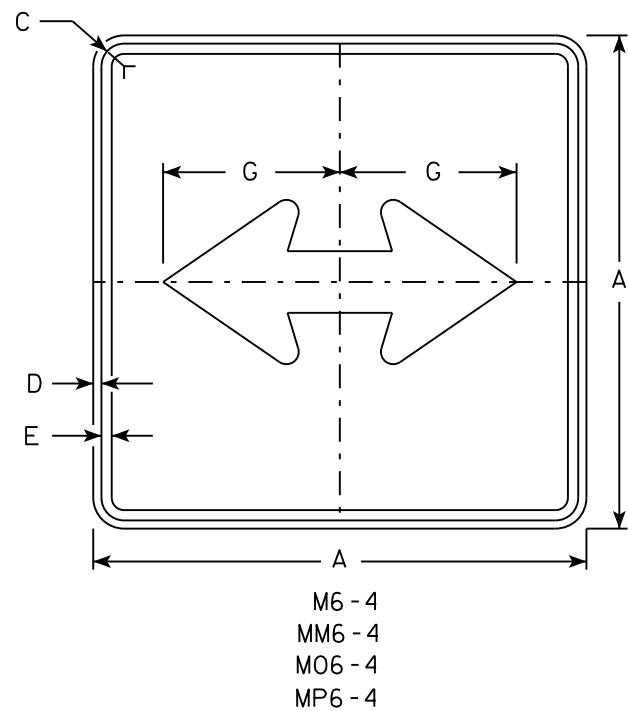
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

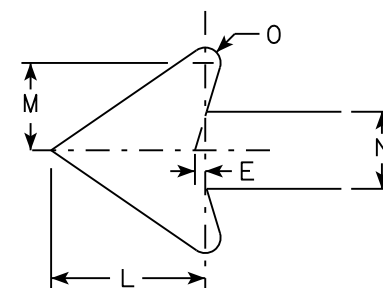
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 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.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
MO6-4 and MO6-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



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	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

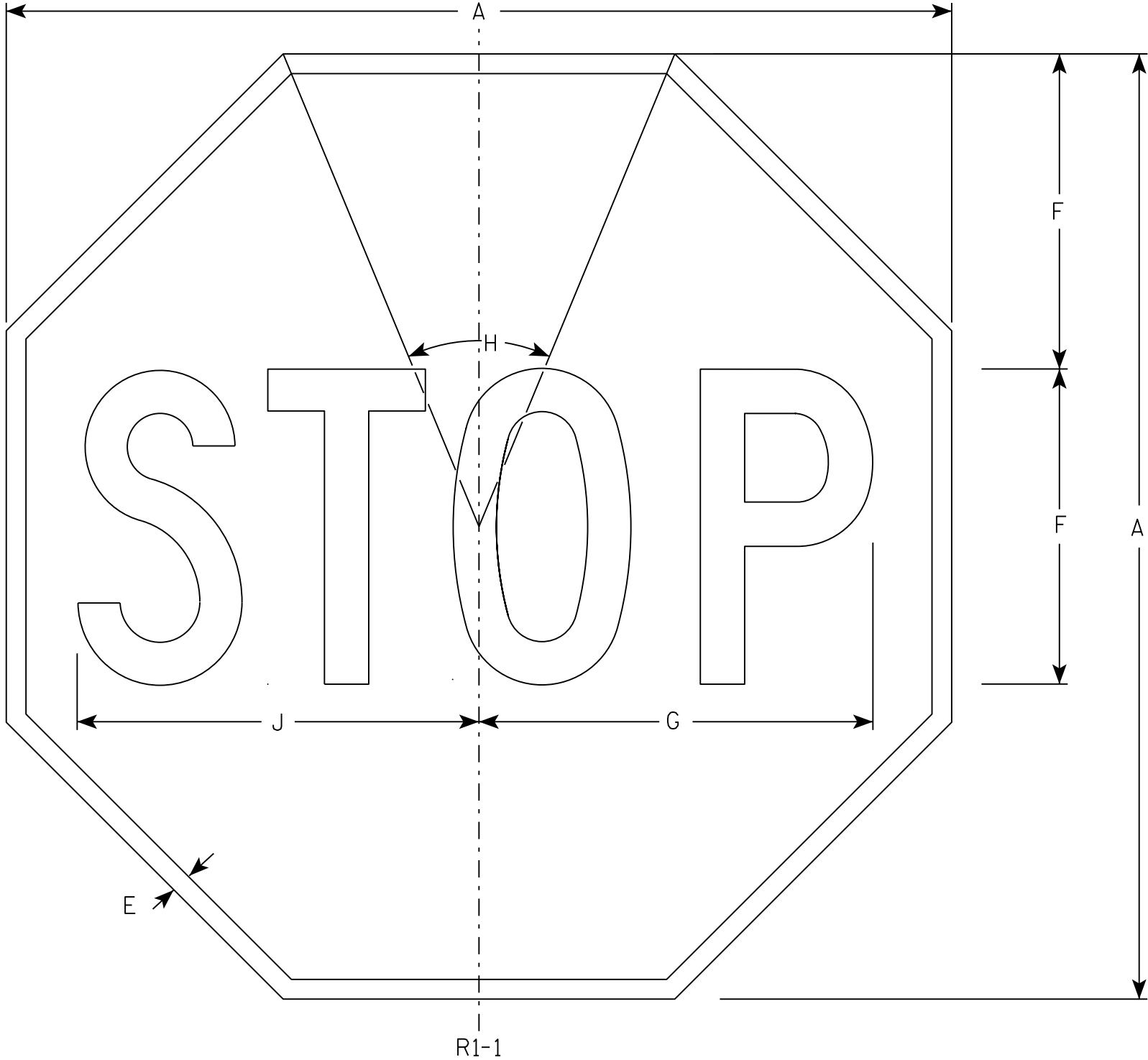
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10



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

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

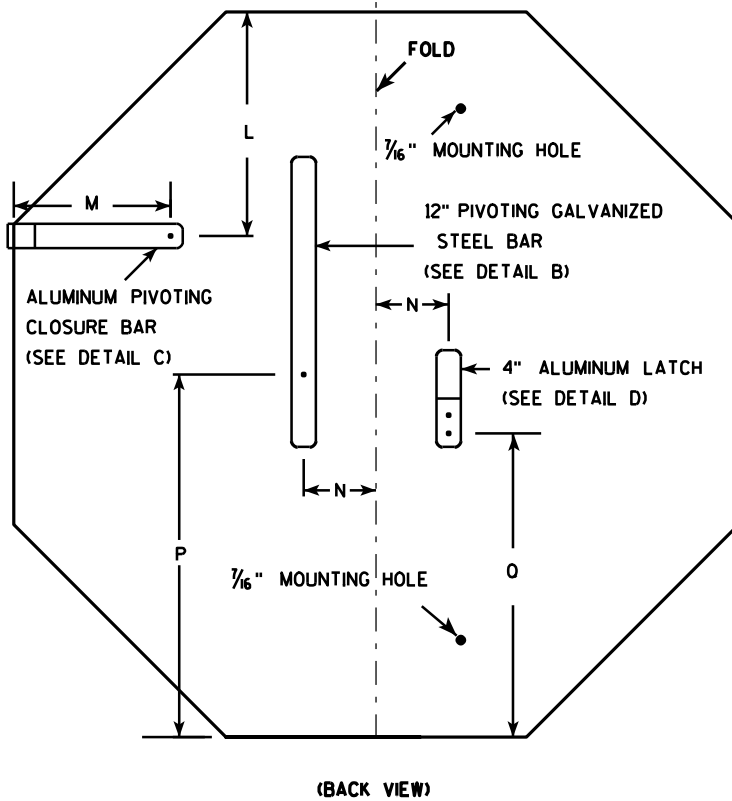
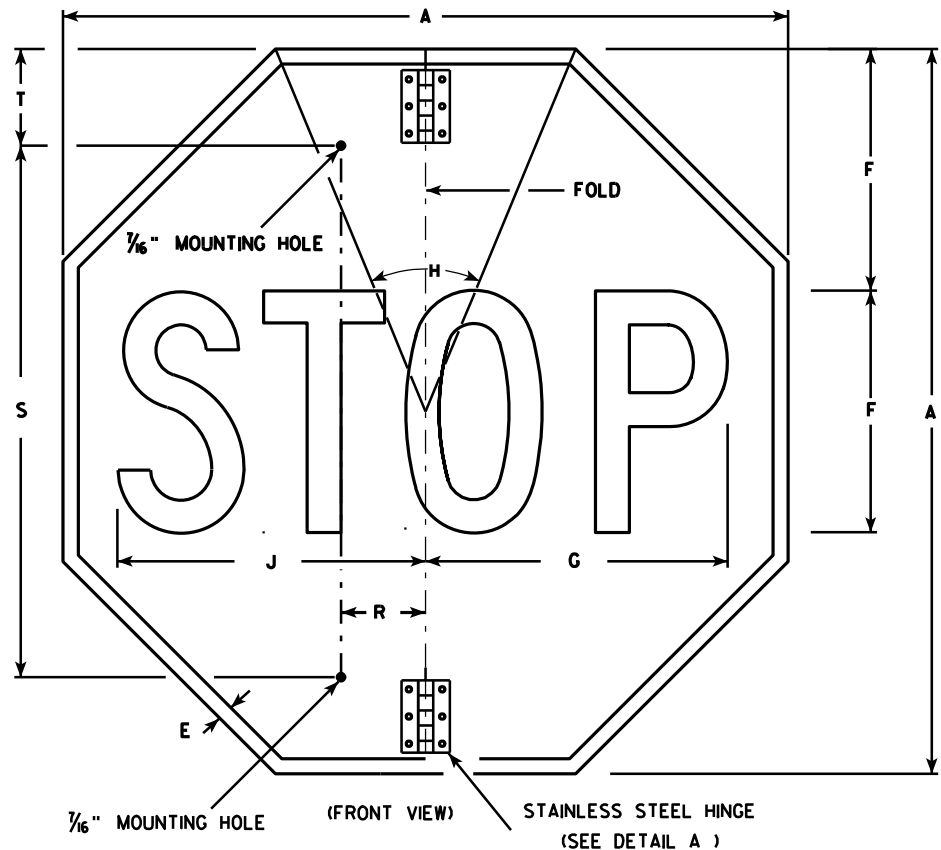
STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

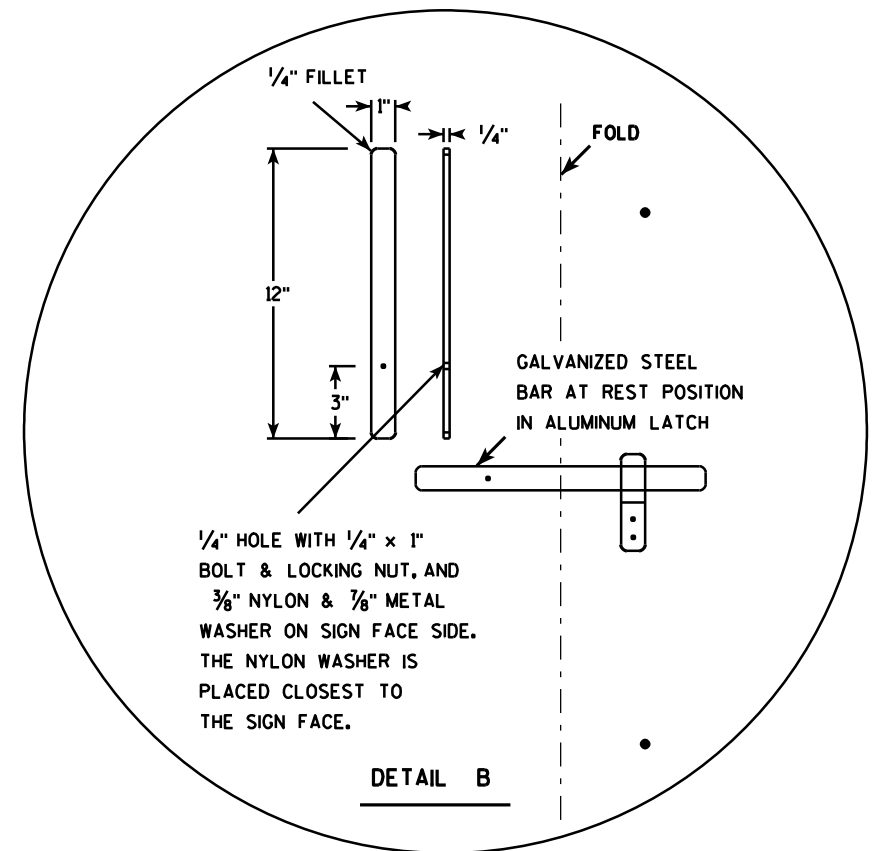
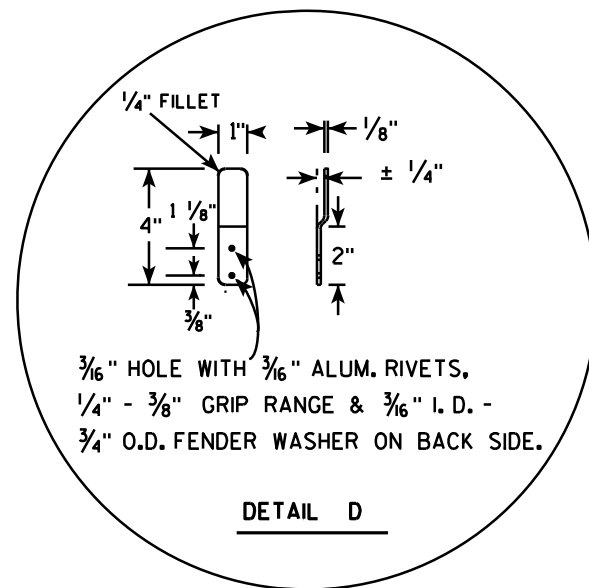
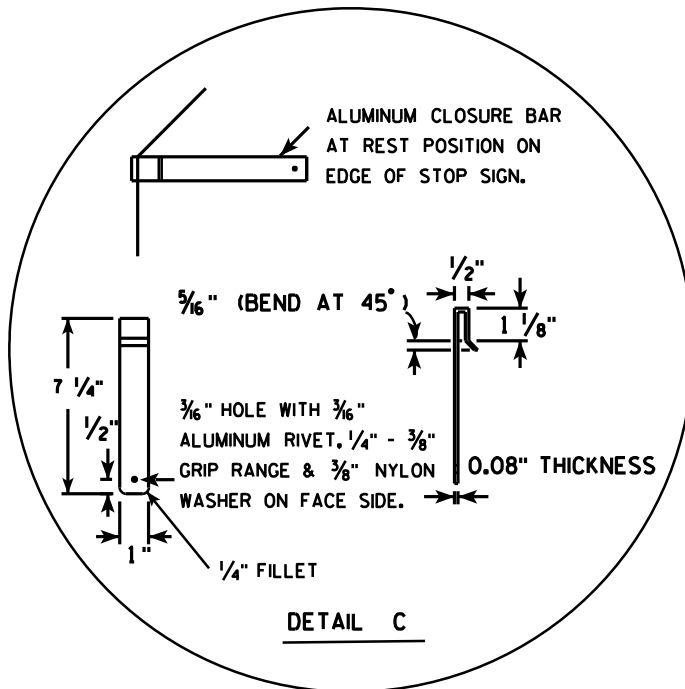
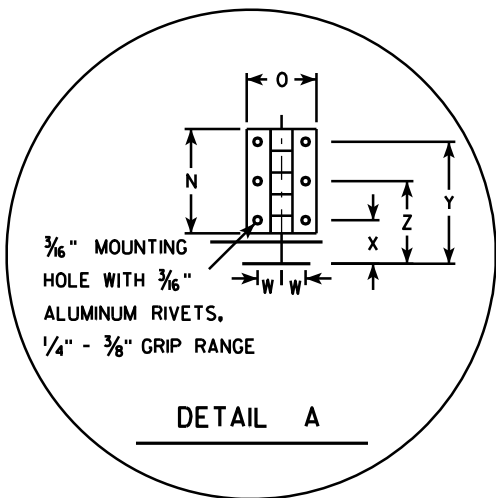
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



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	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45		12 $\frac{3}{4}$		9 $\frac{1}{4}$	6 $\frac{1}{2}$	3	2	15	12 $\frac{3}{8}$	2 $\frac{1}{2}$	22	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	5.18
2M	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
3	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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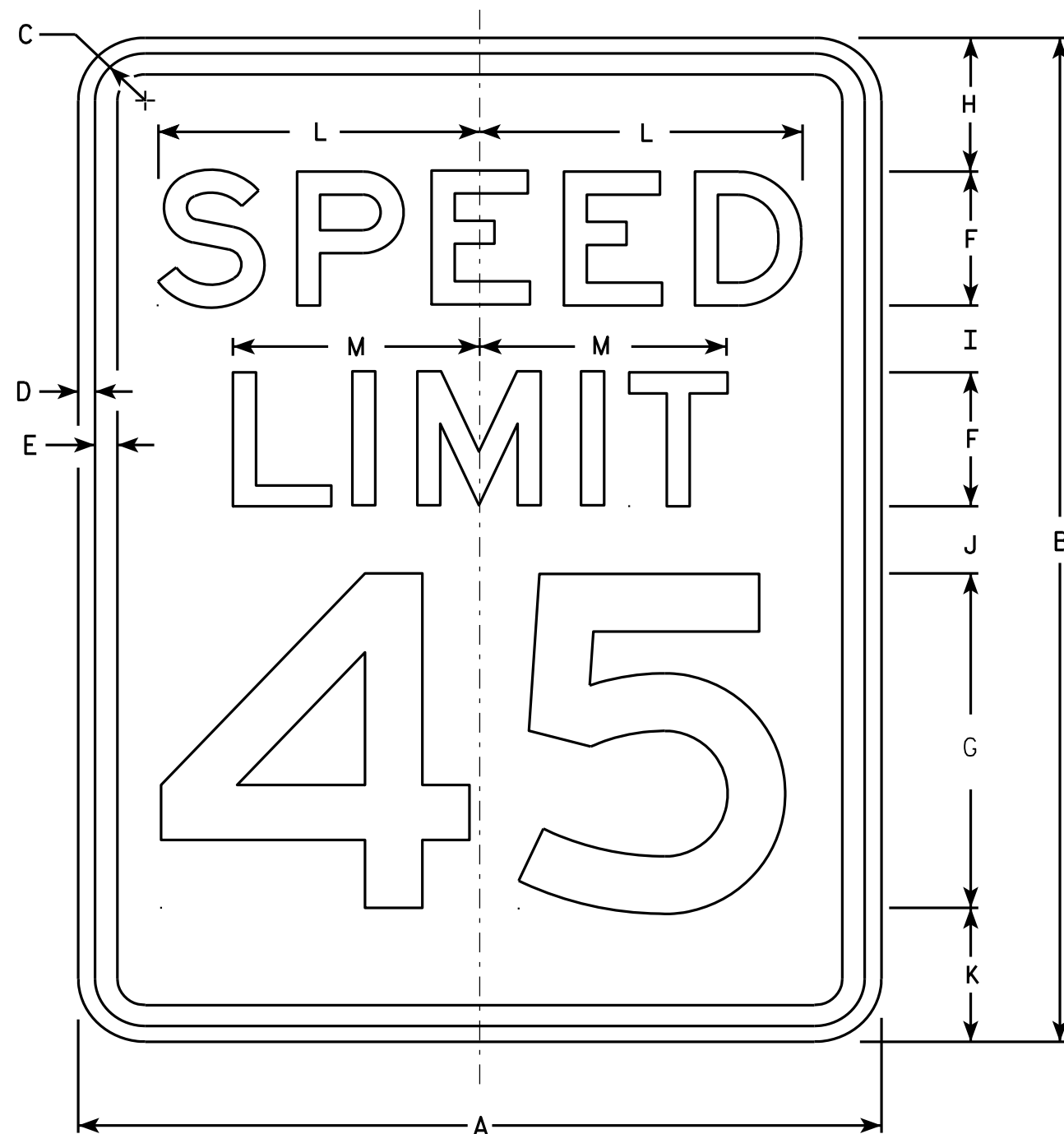
STANDARD SIGN

R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



R2-1

NOTES

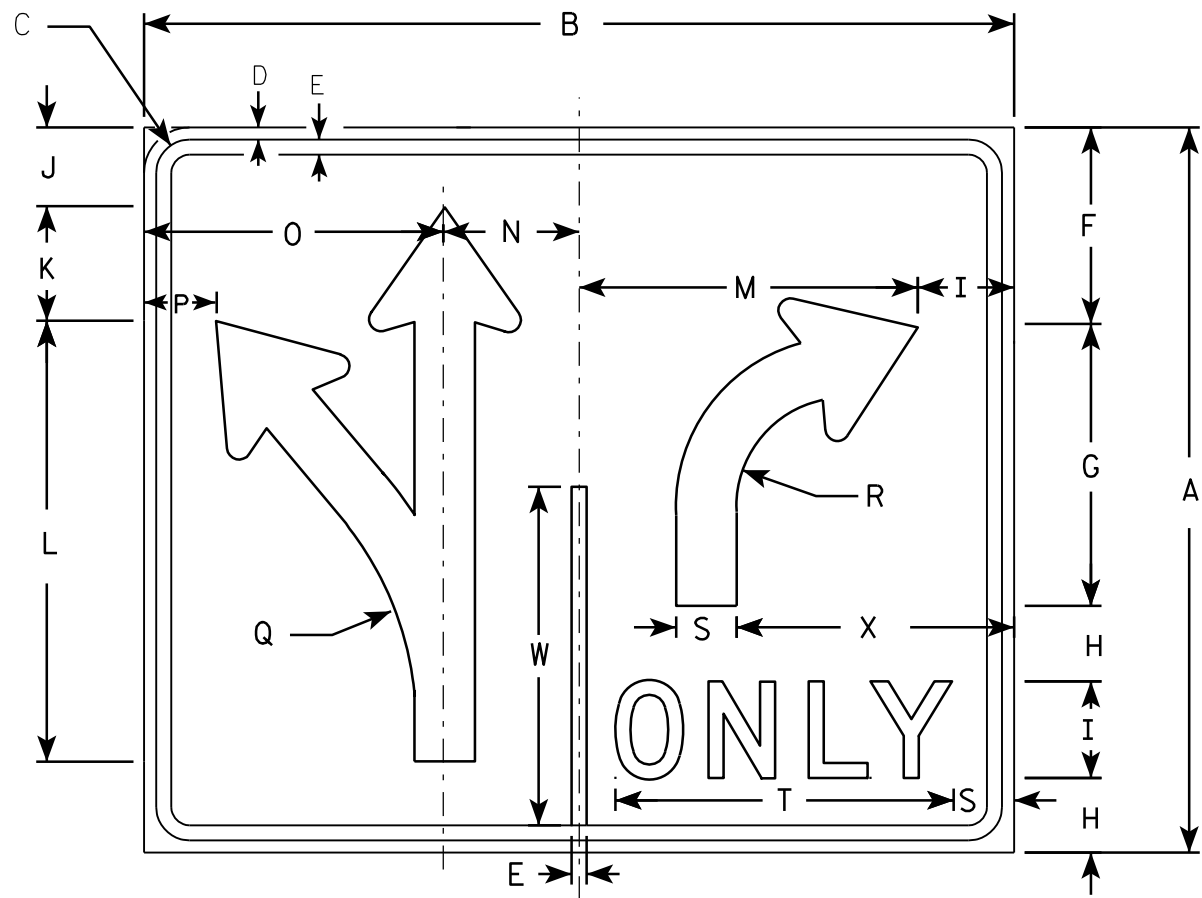
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

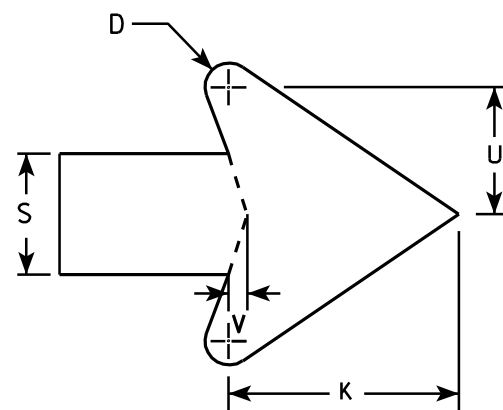
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



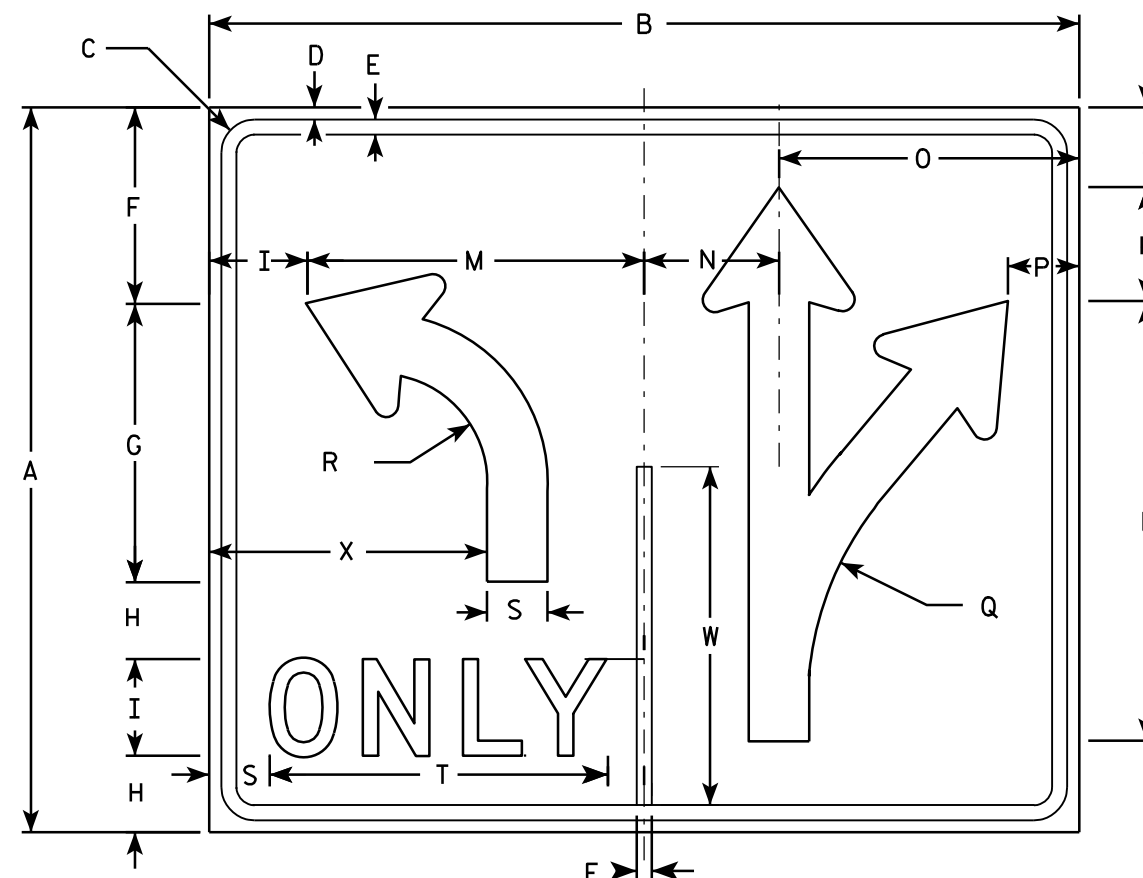
R3-8



ARROW DETAIL

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.



R3-8A

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	30	36	1 ³ / ₈	¹ / ₂	⁵ / ₈	8 ¹ / ₈	11 ⁵ / ₈	3 ¹ / ₈	4	3 ¹ / ₄	4 ³ / ₄	18 ¹ / ₄	14	5 ⁵ / ₈	12 ³ / ₈	3	13 ¹ / ₄	4 ¹ / ₂	2 ¹ / ₂	14	2 ⁵ / ₈	³ / ₈	14	11 ¹ / ₂			7.5
2M	30	36	1 ³ / ₈	¹ / ₂	⁵ / ₈	8 ¹ / ₈	11 ⁵ / ₈	3 ¹ / ₈	4	3 ¹ / ₄	4 ³ / ₄	18 ¹ / ₄	14	5 ⁵ / ₈	12 ³ / ₈	3	13 ¹ / ₄	4 ¹ / ₂	2 ¹ / ₂	14	2 ⁵ / ₈	³ / ₈	14	11 ¹ / ₂			7.5
3																											
4	48	54	2 ¹ / ₄	³ / ₄	1	13 ¹ / ₄	18 ¹ / ₂	5 ¹ / ₈	6	5 ¹ / ₄	7 ¹ / ₈	29 ¹ / ₈	21	8 ³ / ₈	18 ⁵ / ₈	4 ³ / ₈	21 ⁷ / ₈	7 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₈	4	⁵ / ₈	22 ³ / ₈	17 ¹ / ₄			18.0
5	48	54	2 ¹ / ₄	³ / ₄	1	13 ¹ / ₄	18 ¹ / ₂	5 ¹ / ₈	6	5 ¹ / ₄	7 ¹ / ₈	29 ¹ / ₈	21	8 ³ / ₈	18 ⁵ / ₈	4 ³ / ₈	21 ⁷ / ₈	7 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₈	4	⁵ / ₈	22 ³ / ₈	17 ¹ / ₄			18.0

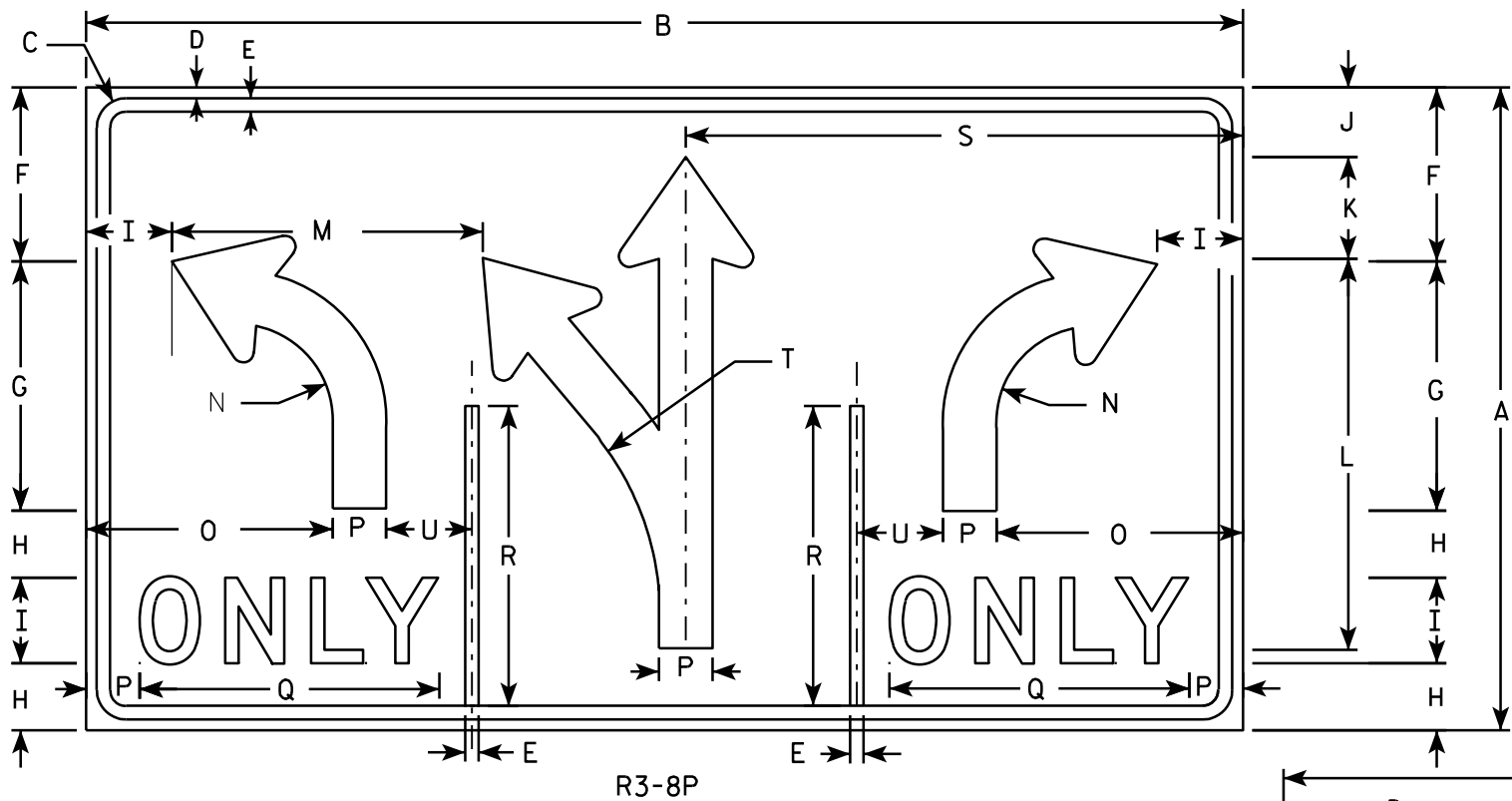
STANDARD SIGN R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

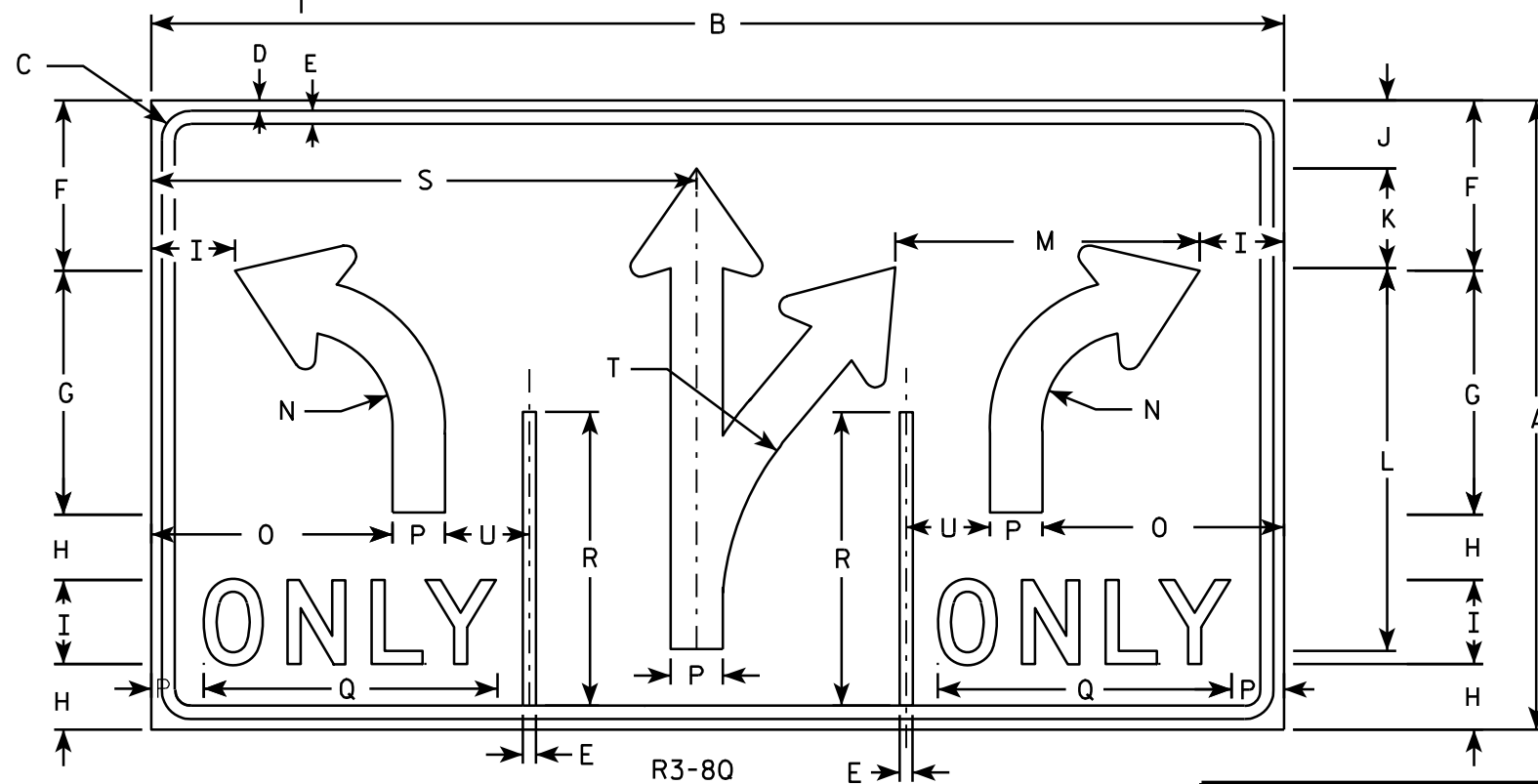
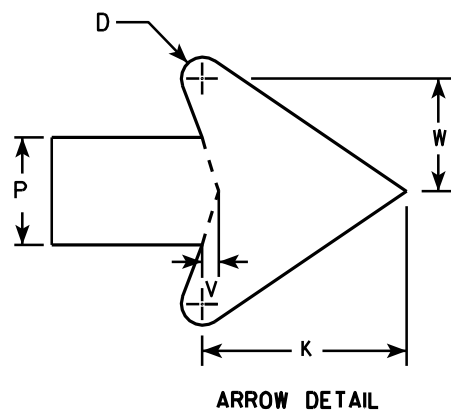
DATE 3/18/2011 PLATE NO. R3-8.5

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.



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	30	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	3 1⁄4	4 3⁄4	18 1⁄4	14 1⁄2	4 1⁄2	11 1⁄2	2 1⁄2	14	14	26	13 1⁄4	4	3⁄8	2 5⁄8				11.25
2M	30	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	3 1⁄4	4 3⁄4	18 1⁄4	14 1⁄2	4 1⁄2	11 1⁄2	2 1⁄2	14	14	26	13 1⁄4	4	3⁄8	2 5⁄8				11.25
3																											
4	48	84	2 1⁄4	3⁄4	1	13 1⁄4	18 1⁄2	5 1⁄8	6	5 1⁄4	7 1⁄8	29 1⁄8	22 5⁄8	7 1⁄4	17 1⁄4	3 3⁄4	20 5⁄8	22 3⁄8	40 3⁄4	21 7⁄8	7	5⁄8	4				28.0
5	48	84	2 1⁄4	3⁄4	1	13 1⁄4	18 1⁄2	5 1⁄8	6	5 1⁄4	7 1⁄8	29 1⁄8	22 5⁄8	7 1⁄4	17 1⁄4	3 3⁄4	20 5⁄8	22 3⁄8	40 3⁄4	21 7⁄8	7	5⁄8	4				28.0

STANDARD SIGN R3-8P & R3-80

WISCONSIN DEPT OF TRANSPORTATION

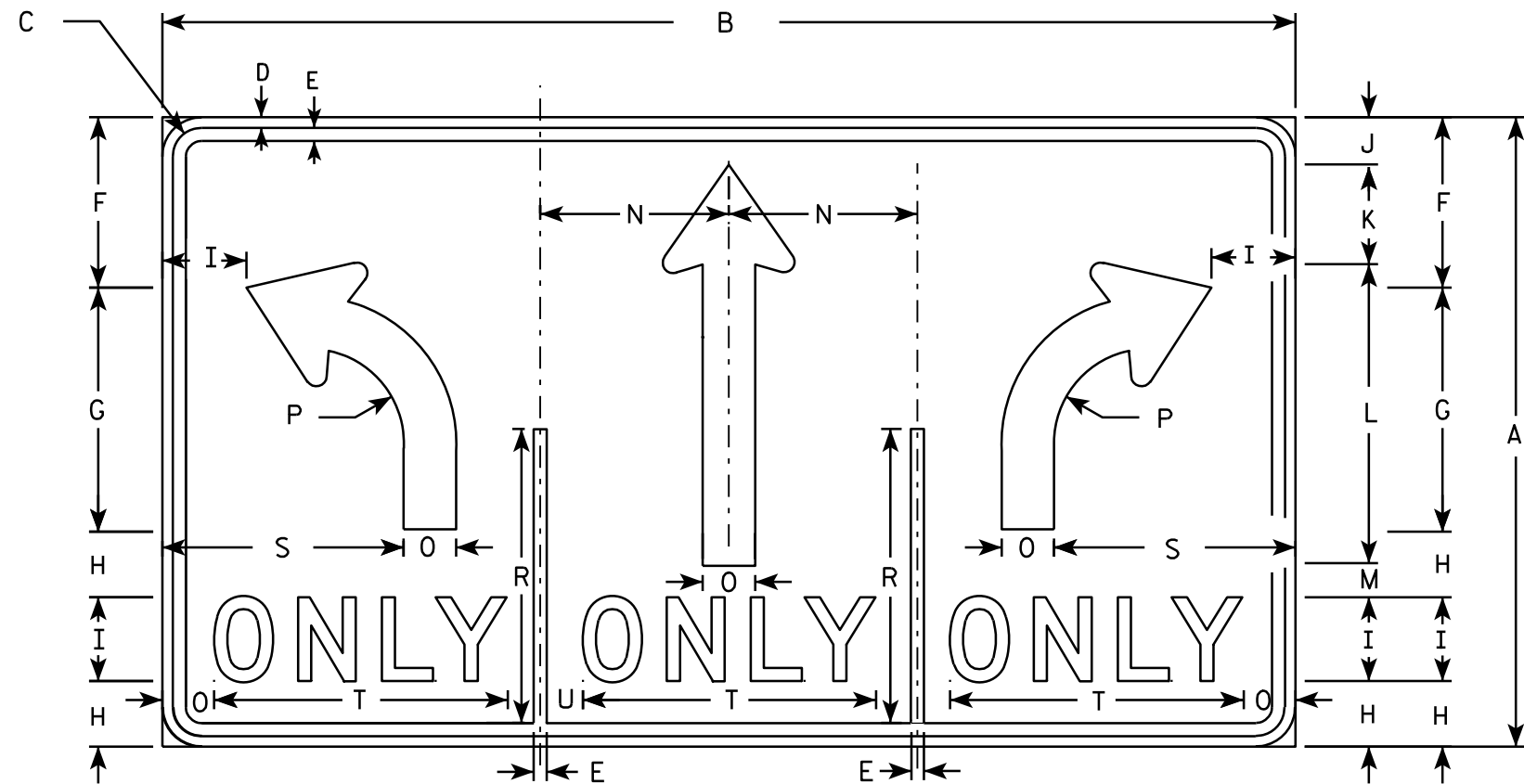
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8P.2

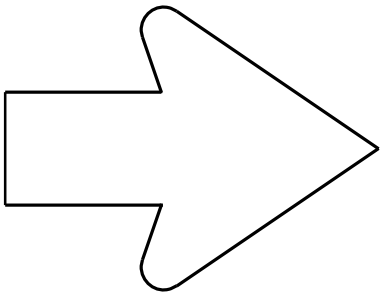
PROJECT NO:

SHEET NO:

E



R3-8W



SEE R3-8 FOR ARROW DETAIL

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3⁄8	½	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 ¼	4 ¾	14 ¼	1 5⁄8	9	2 ½	4 ½		14	11 ½	14	2						11.25
2M	30	54	1 3⁄8	½	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 ¼	4 ¾	14 ¼	1 5⁄8	9	2 ½	4 ½		14	11 ½	14	2						11.25
3																											
4	48	84	2 ¼	¾	1	13	18 ½	5 ¼	6	3 ¾	7	29 ⅛	2 ¾	14	3 ¾	7 ¼		22 ⅜	17 ¼	20 ½	3 ¼						28.0
5	48	84	2 ¼	¾	1	13	18 ½	5 ¼	6	3 ¾	7	29 ⅛	2 ⅞	14	3 ¾	7 ¼		22 ⅜	17 ¼	20 ½	3 ¼						28.0

PROJECT NO:

SHEET NO:

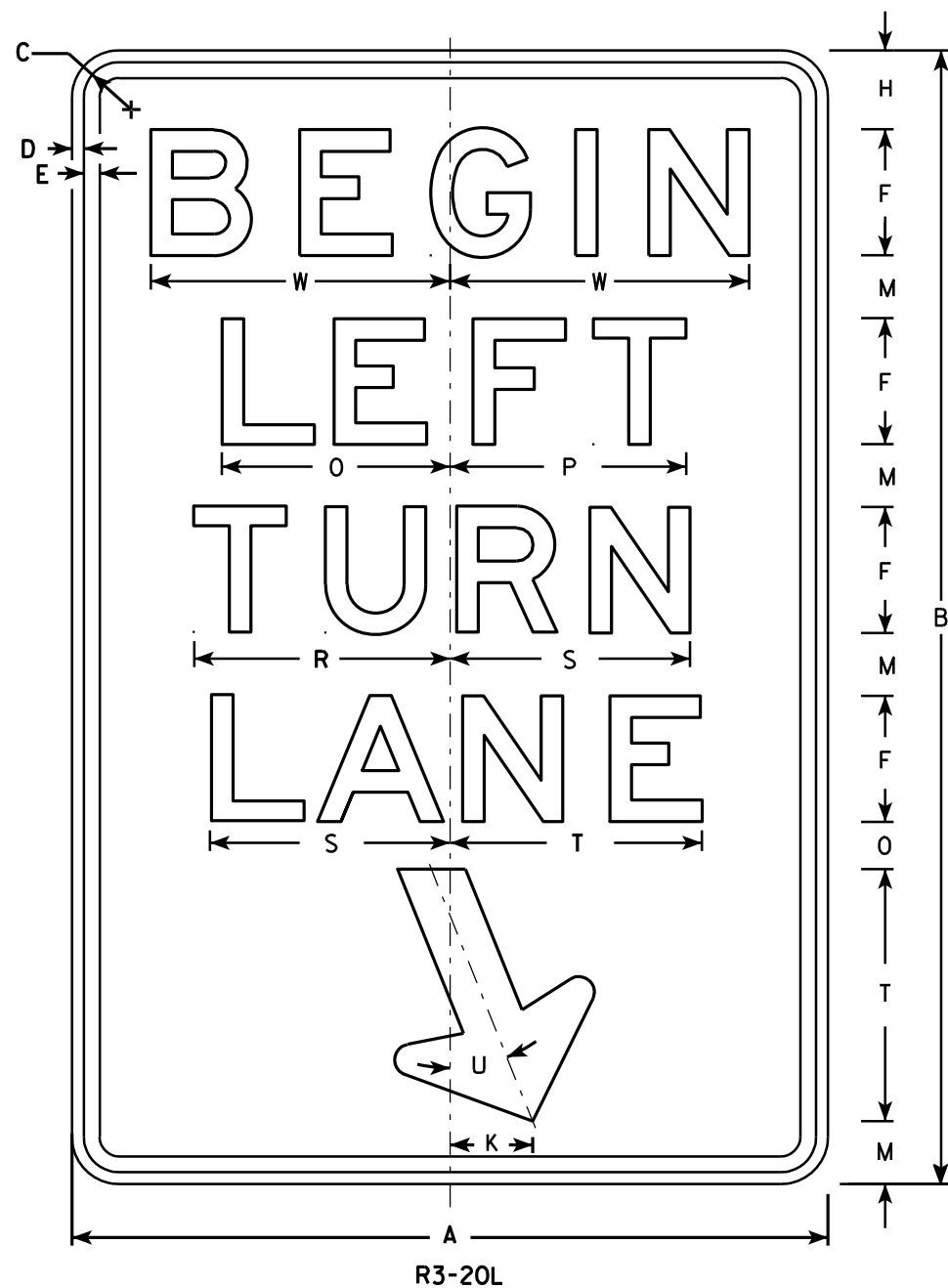
E

STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

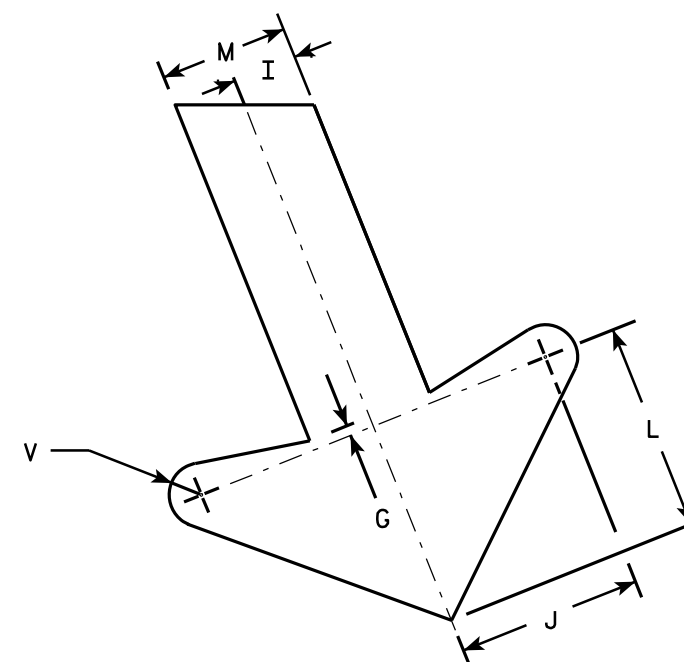
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8W.4



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 - E
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.



ARROW DETAIL

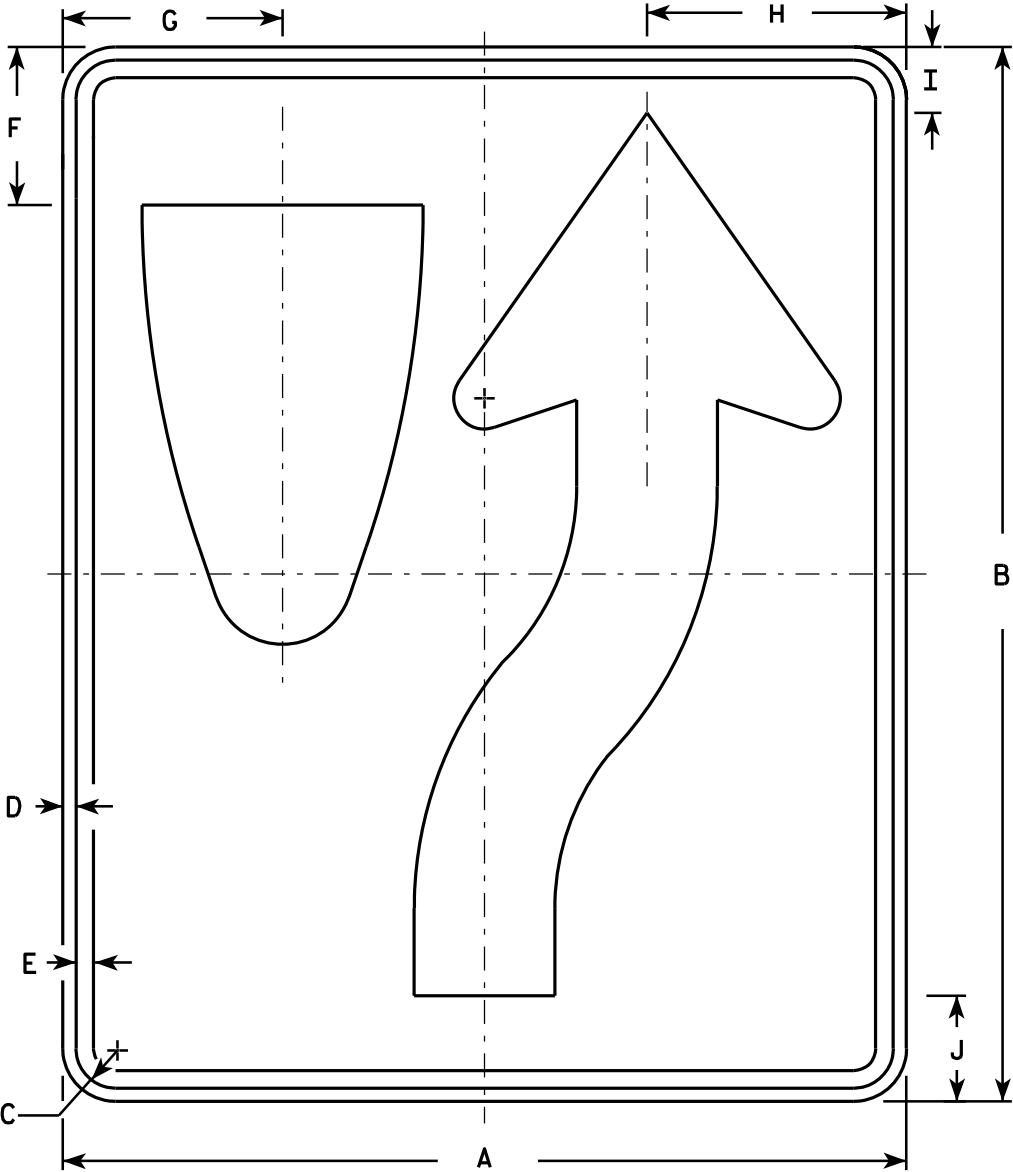
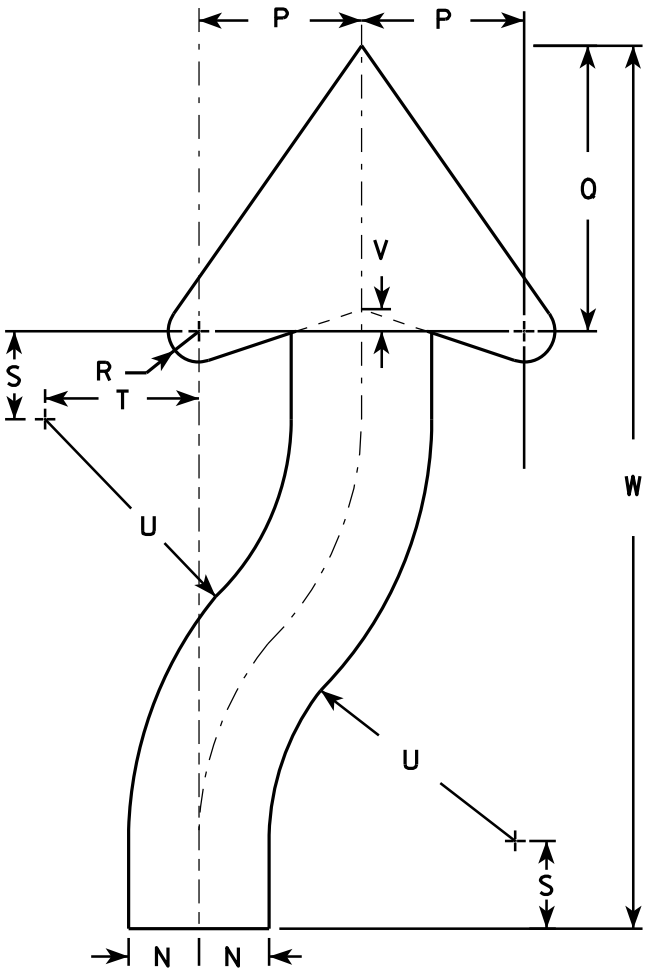
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN R3-20L	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20L.7

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

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
Background - White
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



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	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN

R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

HWY:

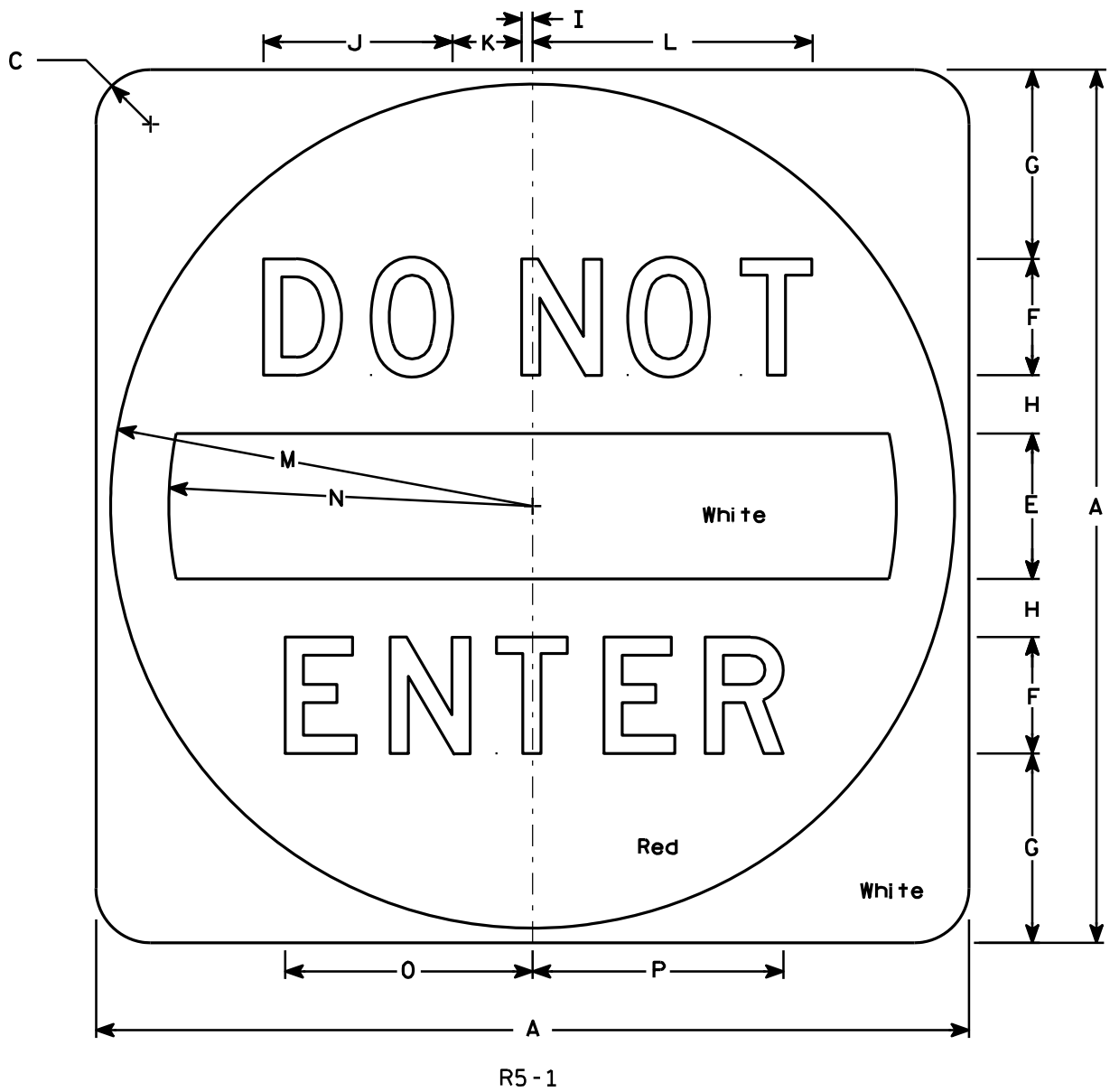
COUNTY:

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 - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



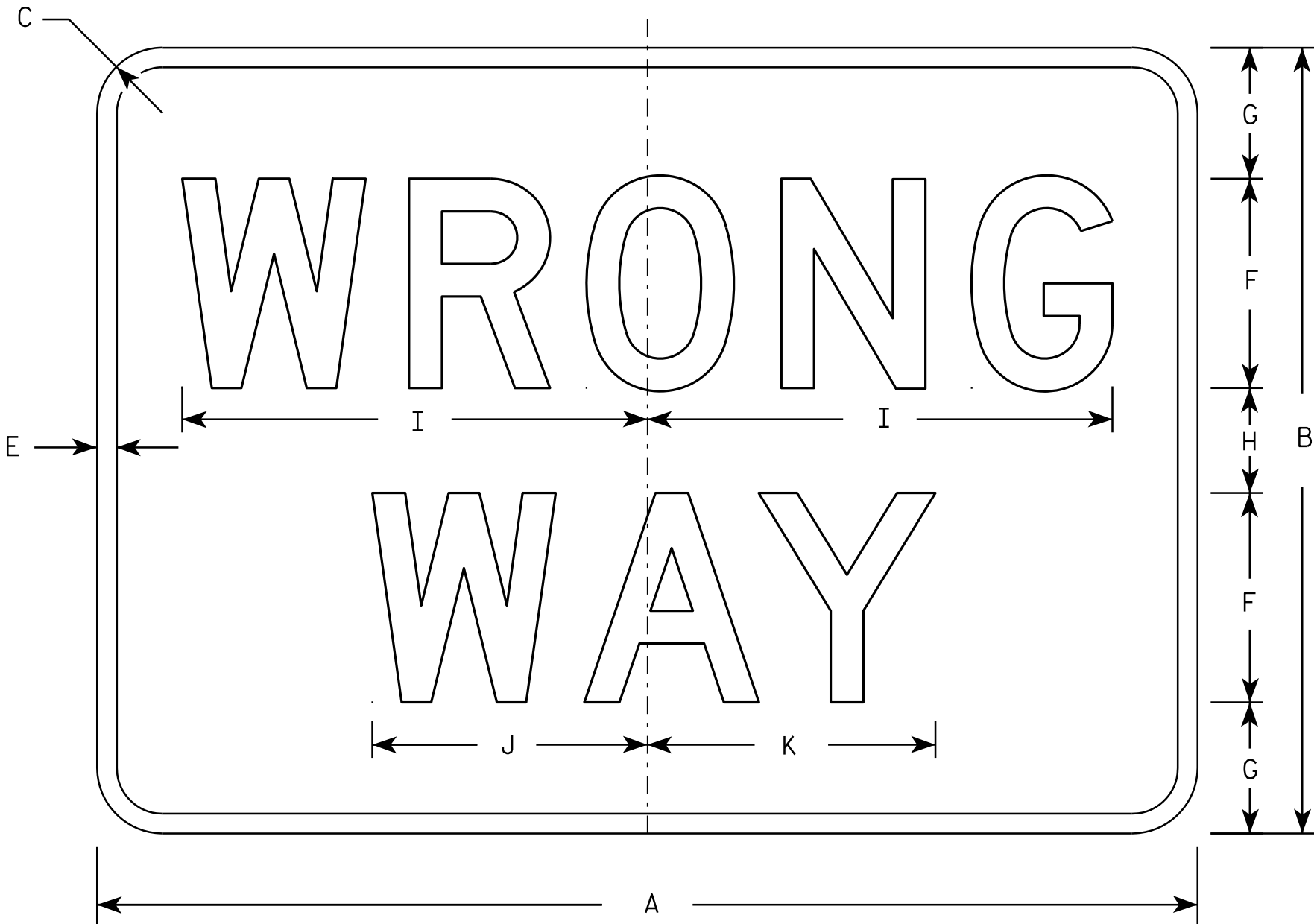
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN
R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15



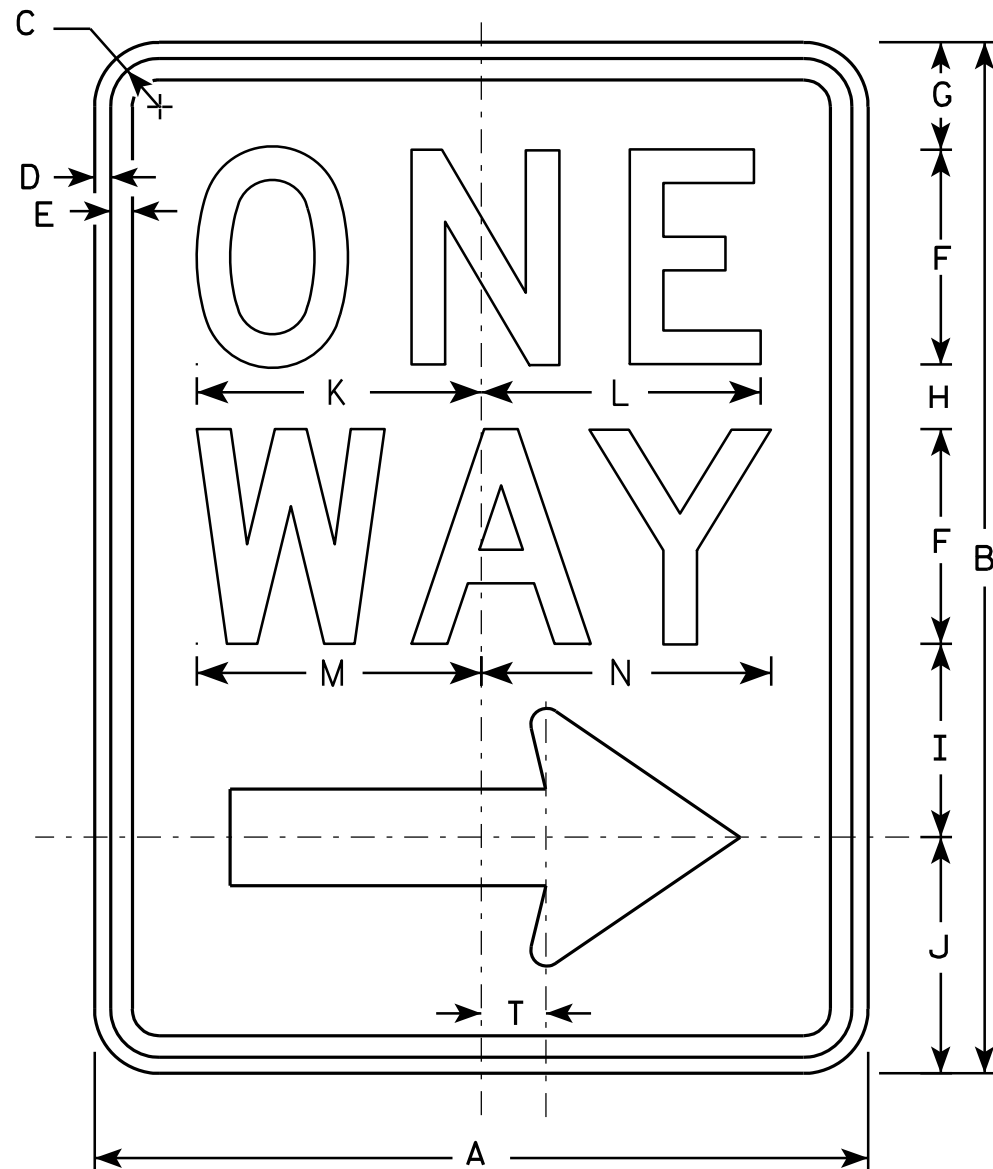
R5-1A

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 - 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.

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	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

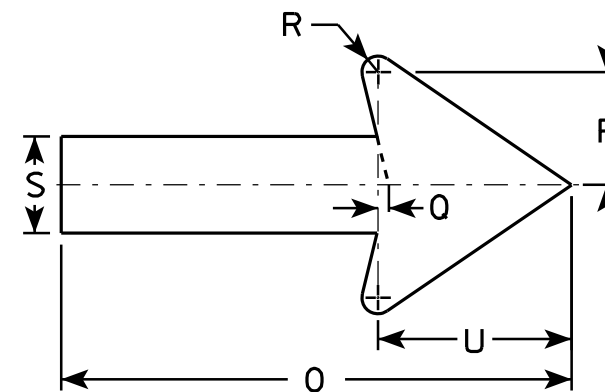
STANDARD SIGN R5-1A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/17/10	PLATE NO. R5-1A.2



R6-2R

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.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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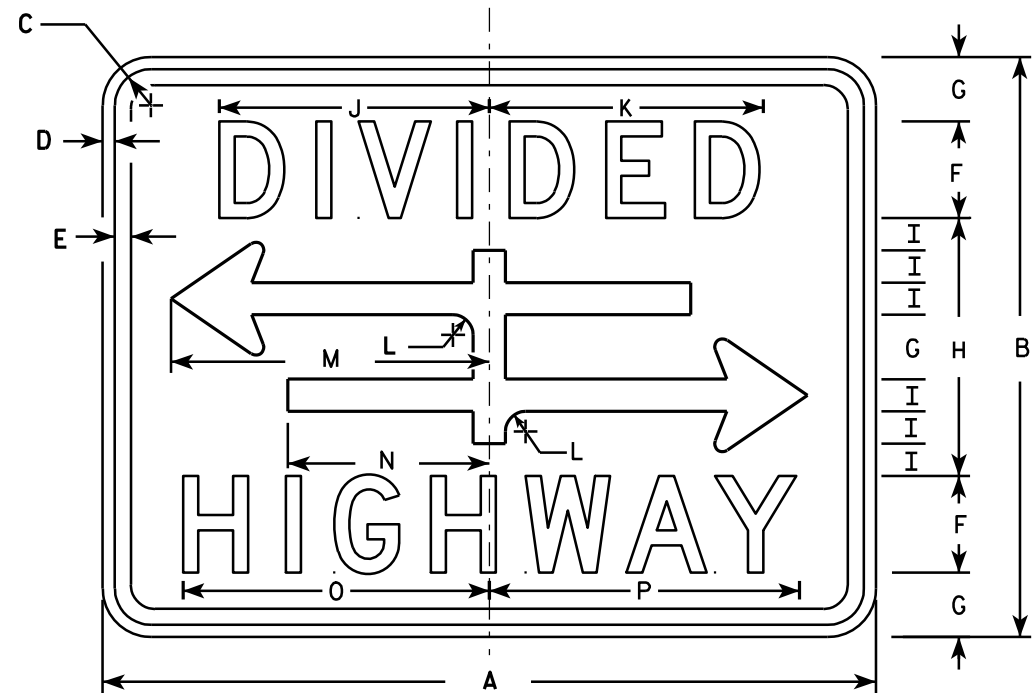
STANDARD SIGN

R6-2 R&L

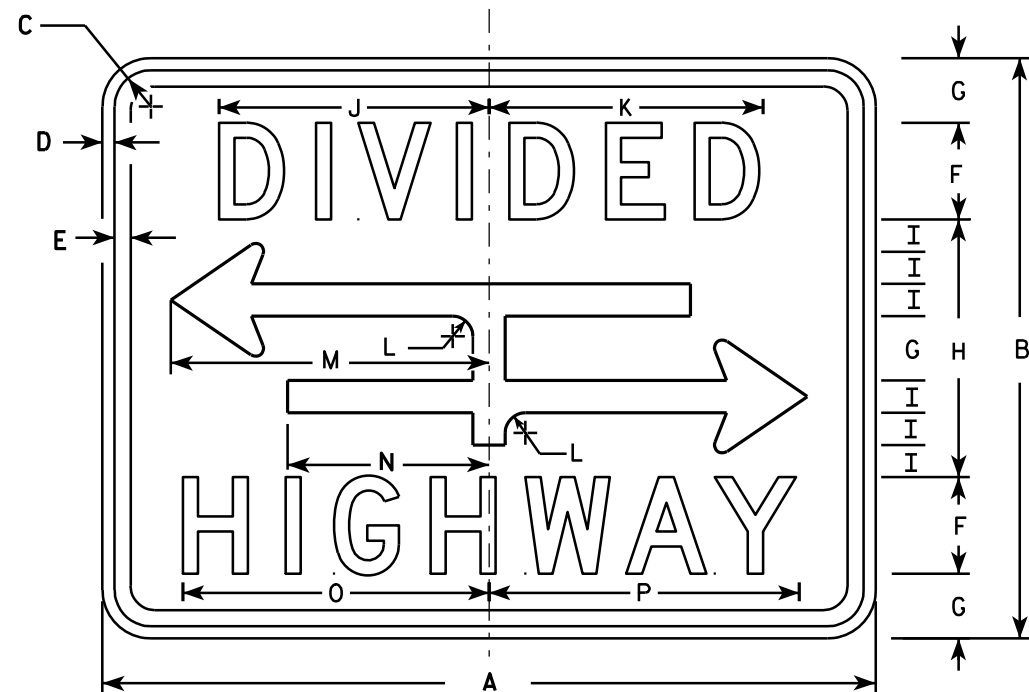
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8



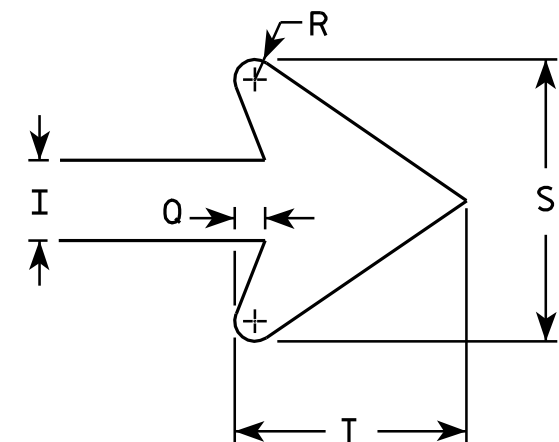
R6-3



R6-3A

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.



ARROW DETAIL

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

STANDARD SIGN R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

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.



R9-9

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	30	18	1 ¾	½	½	4	3 ½	3	10 ¾	8 ⅛																	3.75
2M	30	18	1 ¾	½	½	4	3 ½	3	10 ¾	8 ⅛																	3.75
3																											
4																											
5																											

STANDARD SIGN

R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

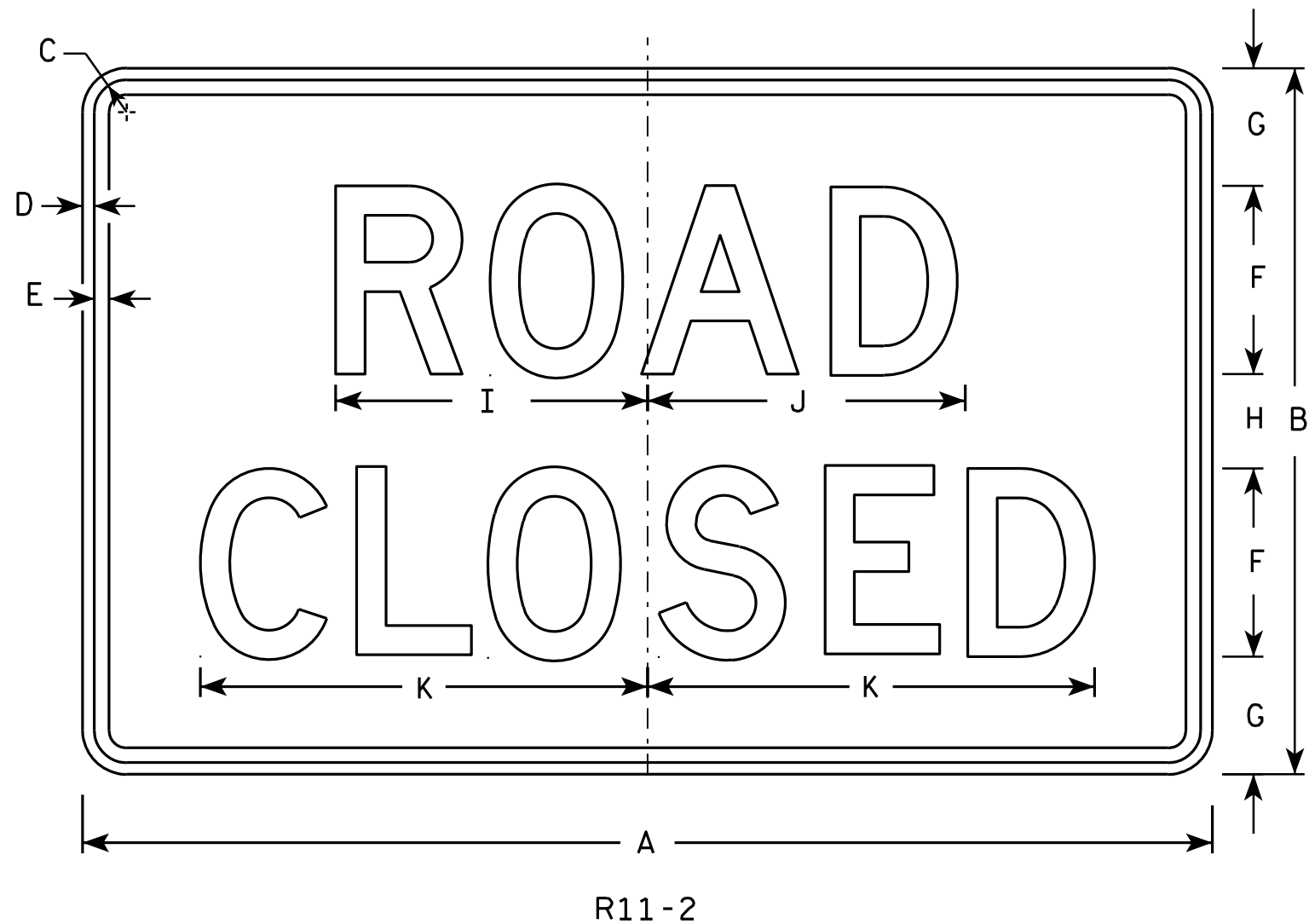
PROJECT NO:

HWY:

COUNTY:

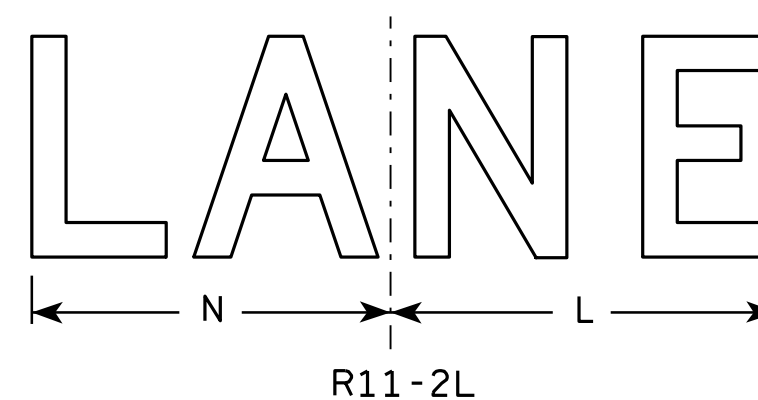
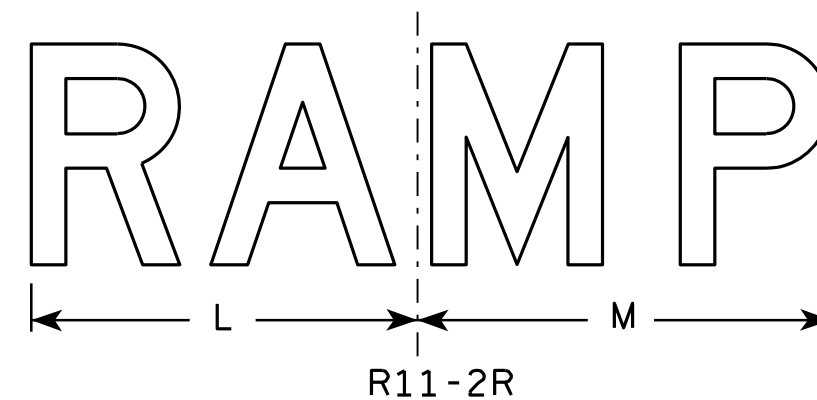
SHEET NO:

E



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White
Message - Black
- Message Series - D
- 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.
- Modify the message as required.

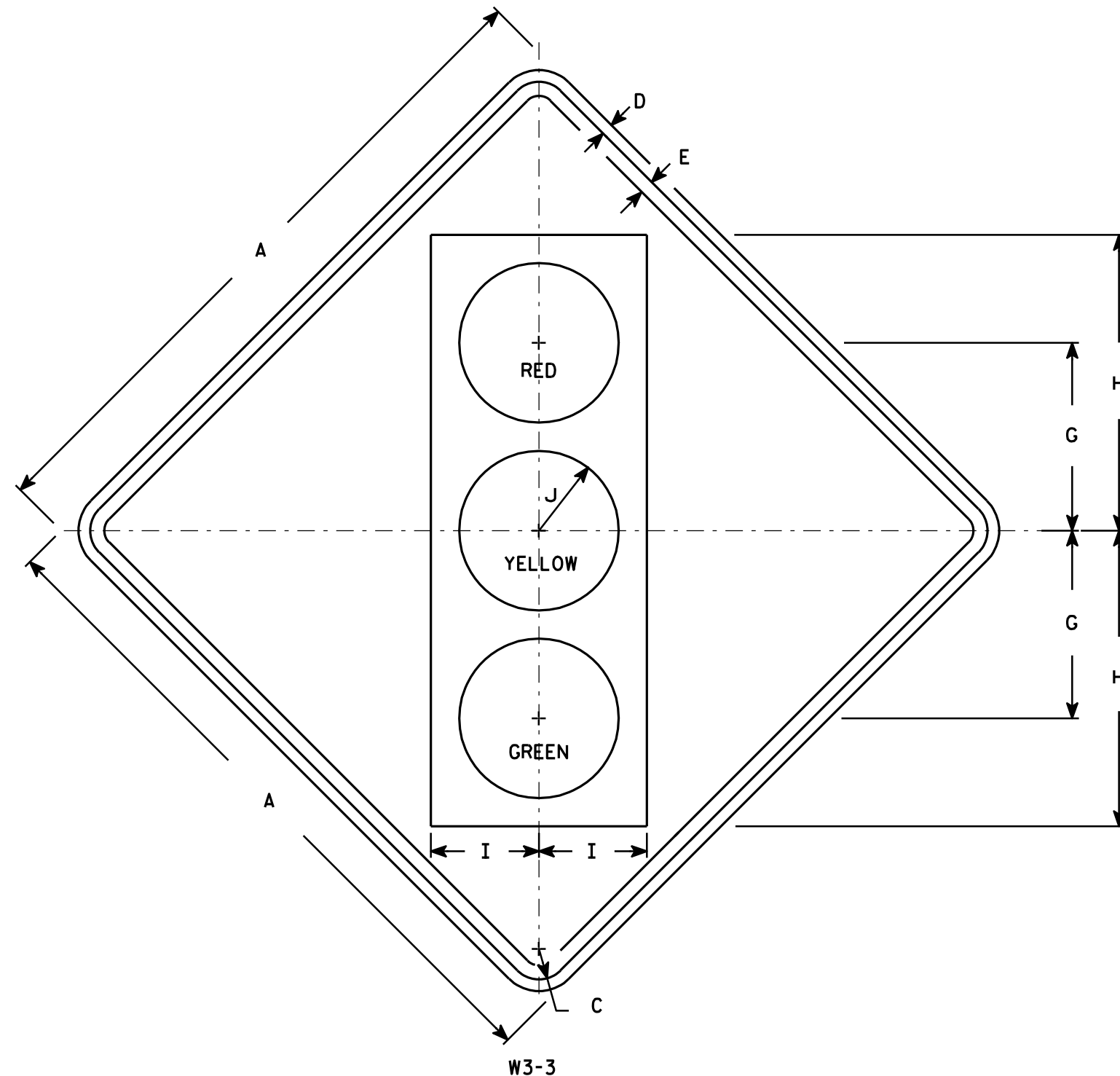


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

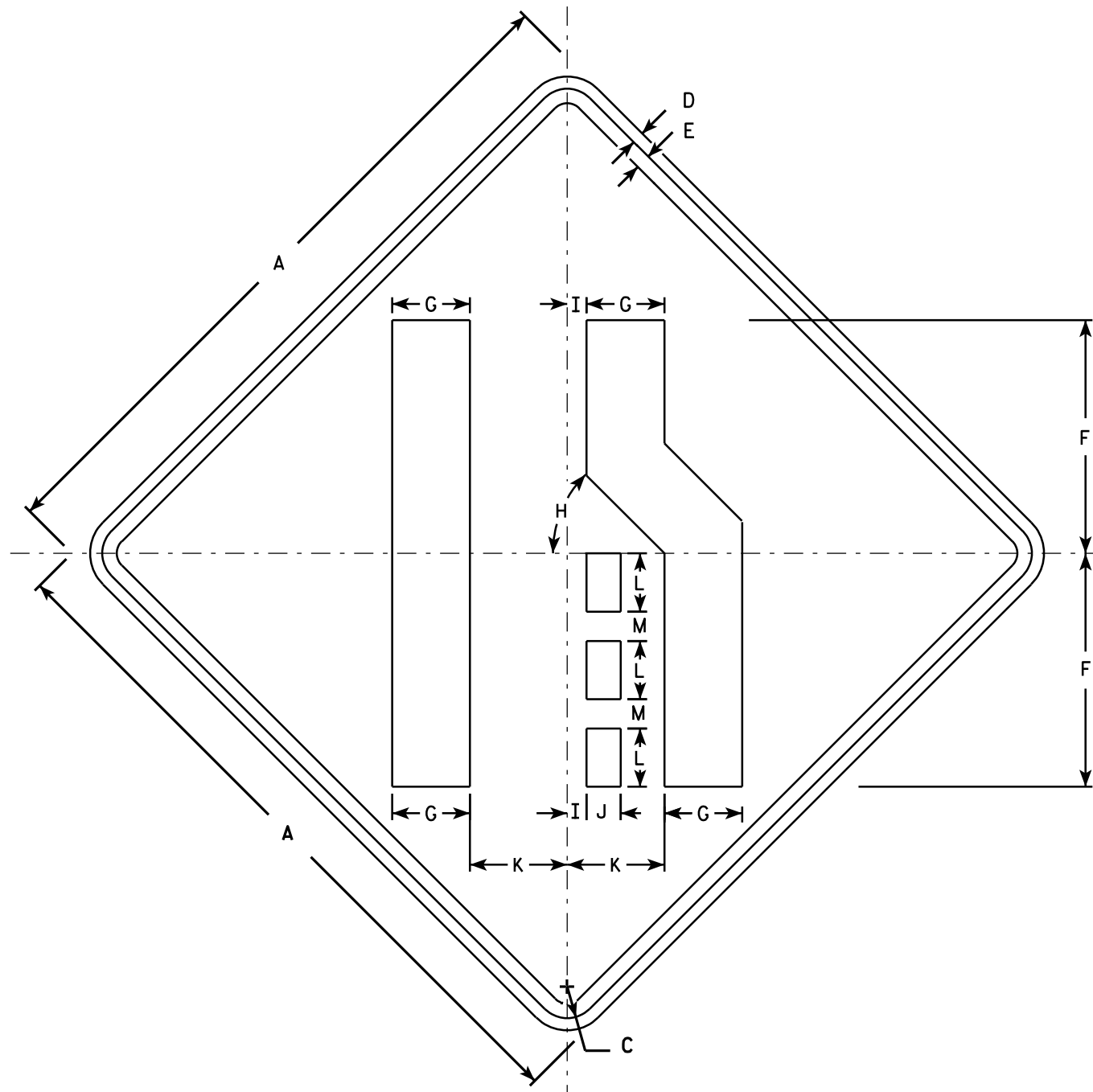
- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN W3-3

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-3.11

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 is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	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

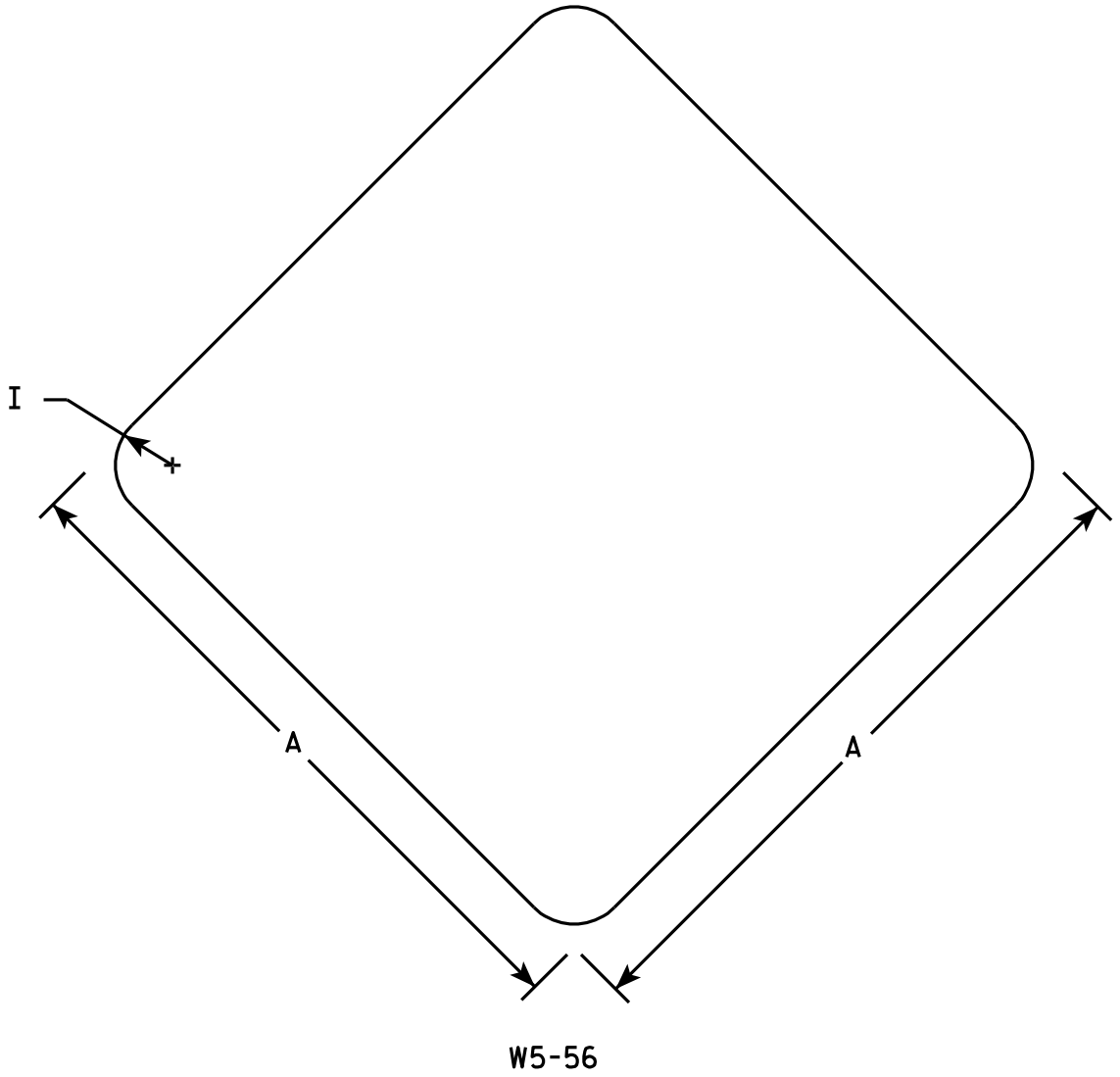
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
- 3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.



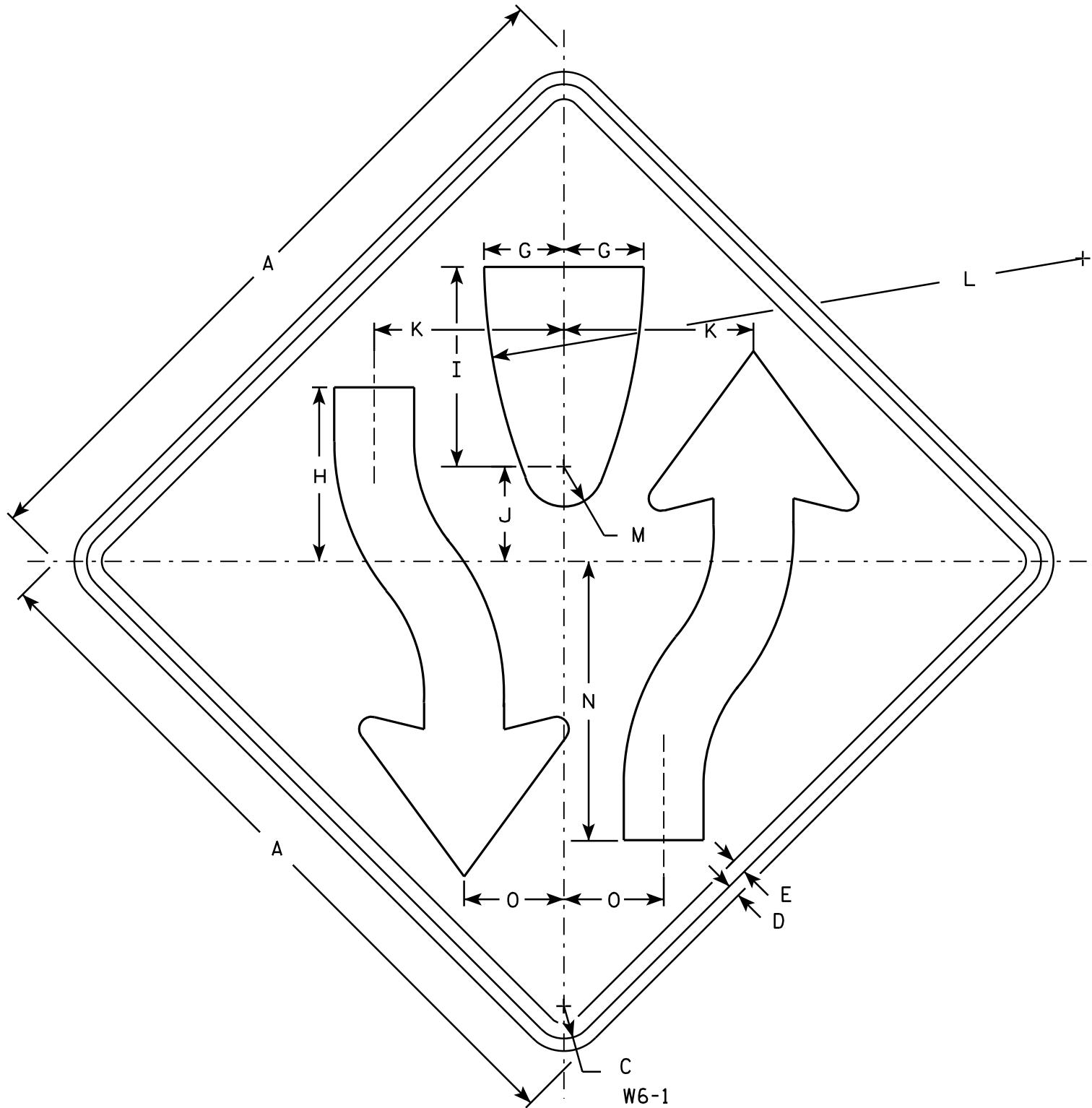
7

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	12								1																		1.0
2S	18								1 1/2																		2.25
2M	18								1 1/2																		2.25
3																											
4																											
5																											

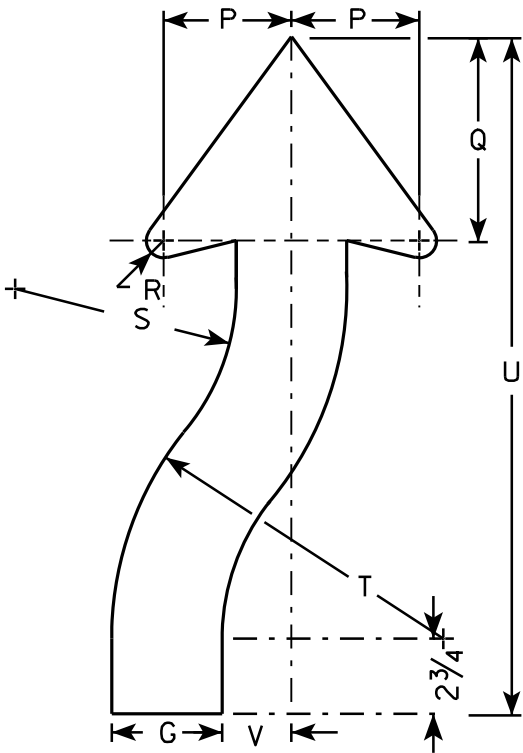
STANDARD SIGN	
W5 - 56	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/2/10	PLATE NO. W5-56.6

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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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. W6-2 same as W6-1 but is rotated 180° when mounted.



ARROW DETAIL

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		3 1⁄4	8	8 1⁄4	4 1⁄8	7 7⁄8	25	1 3⁄4	11 5⁄8	4 1⁄8	3 7⁄8	6 3⁄4	5⁄8	6 5⁄8	9 7⁄8	21 5⁄8	2					6.25
2S	36		1 5⁄8	5⁄8	3⁄4		4	8 3⁄4	10	4 3⁄4	9 1⁄2	30	2	14	5	4 5⁄8	7 3⁄8	7⁄8	8	12	24 1⁄2	2 1⁄2					9.0
2M	36		1 5⁄8	5⁄8	3⁄4		4	8 3⁄4	10	4 3⁄4	9 1⁄2	30	2	14	5	4 5⁄8	7 3⁄8	7⁄8	8	12	24 1⁄2	2 1⁄2					9.0
3																											
4	48		2 1⁄4	3⁄4	1		5 3⁄8	11 5⁄8	13 3⁄8	6 3⁄8	12 5⁄8	40	2 5⁄8	18 5⁄8	6 5⁄8	6 1⁄4	9 7⁄8	1 1⁄4	10 5⁄8	16	32 5⁄8	3 3⁄8					16.0
5	48		2 1⁄4	3⁄4	1		5 3⁄8	11 5⁄8	13 3⁄8	6 3⁄8	12 5⁄8	40	2 5⁄8	18 5⁄8	6 5⁄8	6 1⁄4	9 7⁄8	1 1⁄4	10 5⁄8	16	32 5⁄8	3 3⁄8					16.0

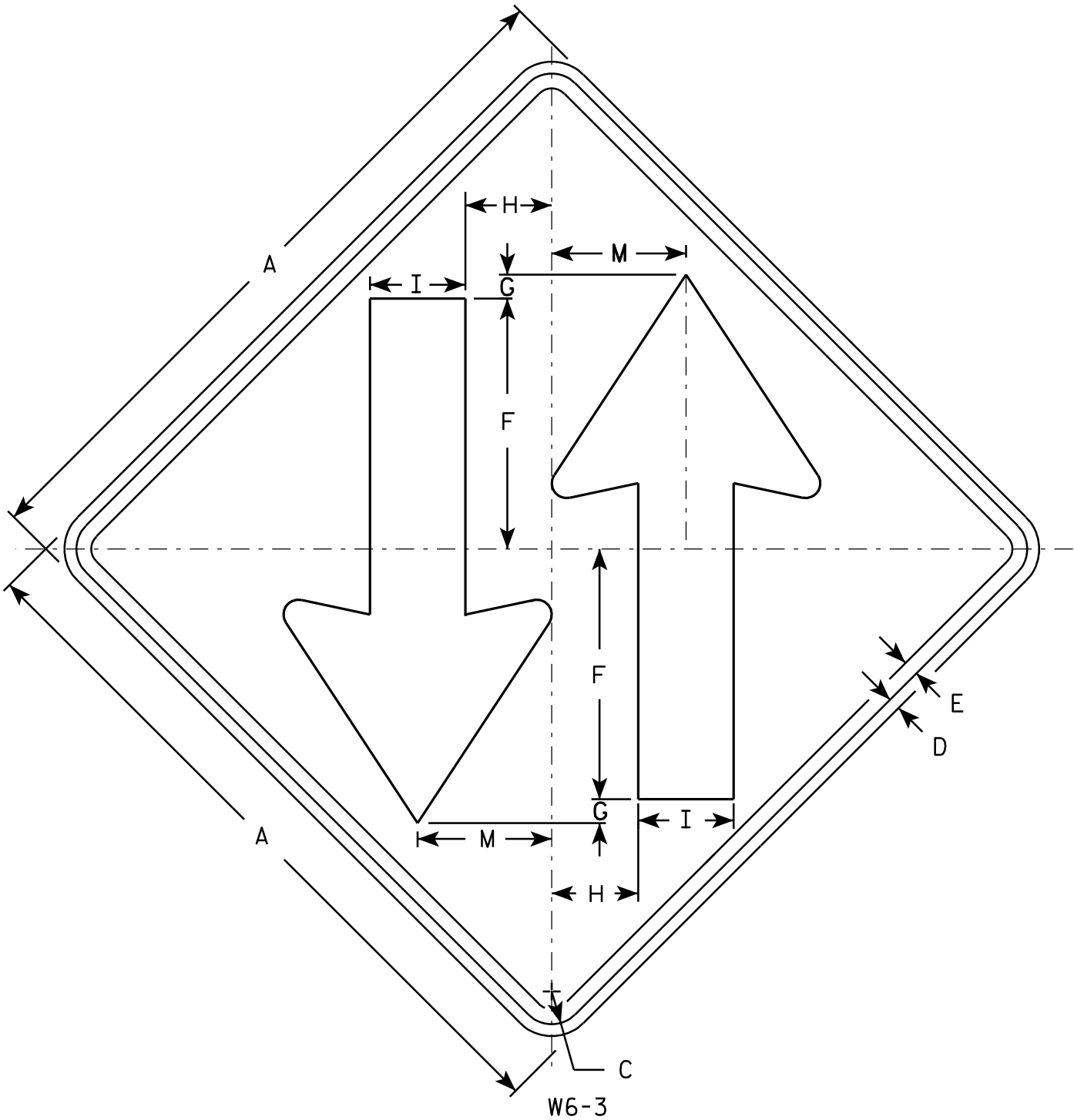
STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

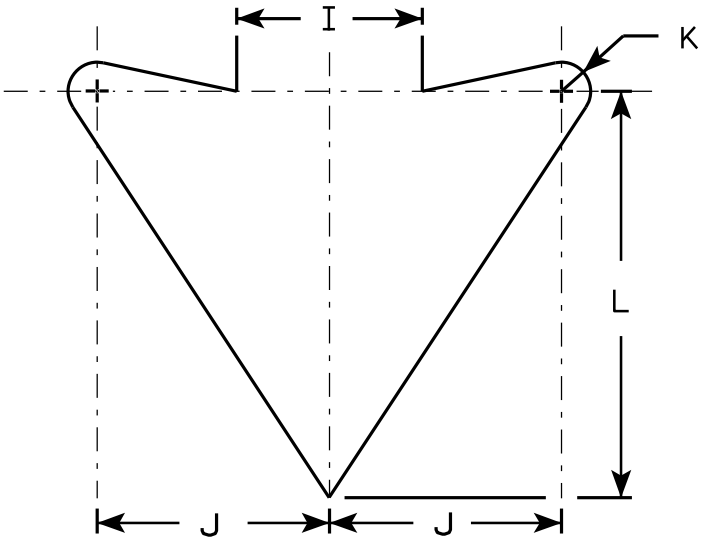
7



W6-3

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.



ARROW DETAIL

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10 1/2	1	3 5/8	4	5	5/8	8 3/4	5 5/8														6.25
2S	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2M	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
3																											
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

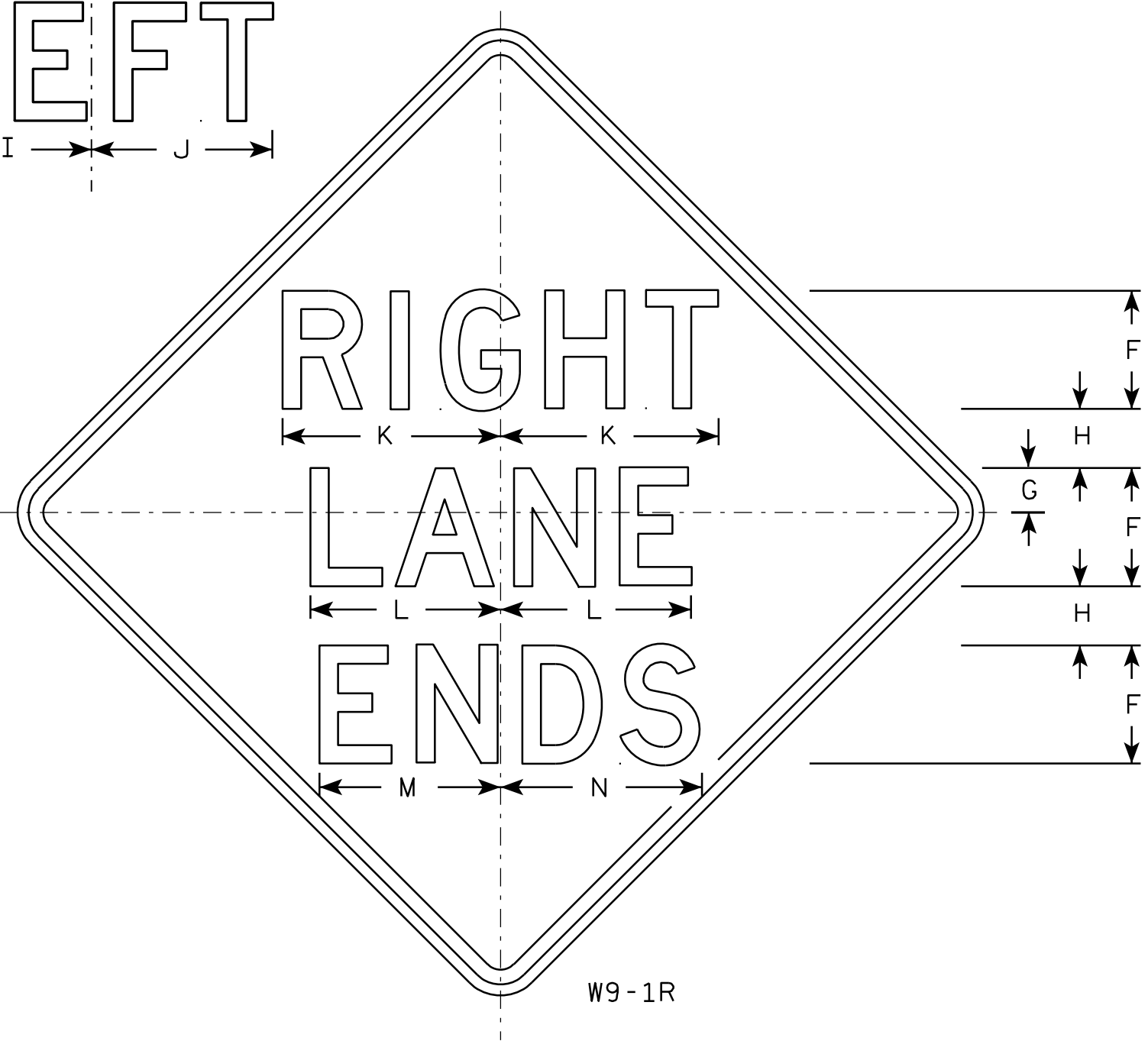
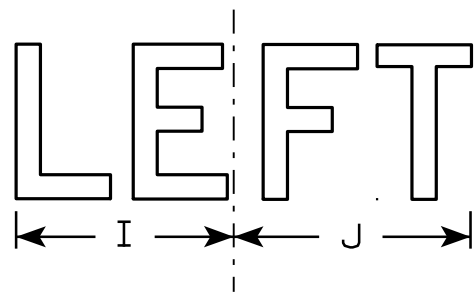
STANDARD SIGN

W6 - 3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-3.10



W9-1R

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

PROJECT NO:

SHEET NO:

E

STANDARD SIGN

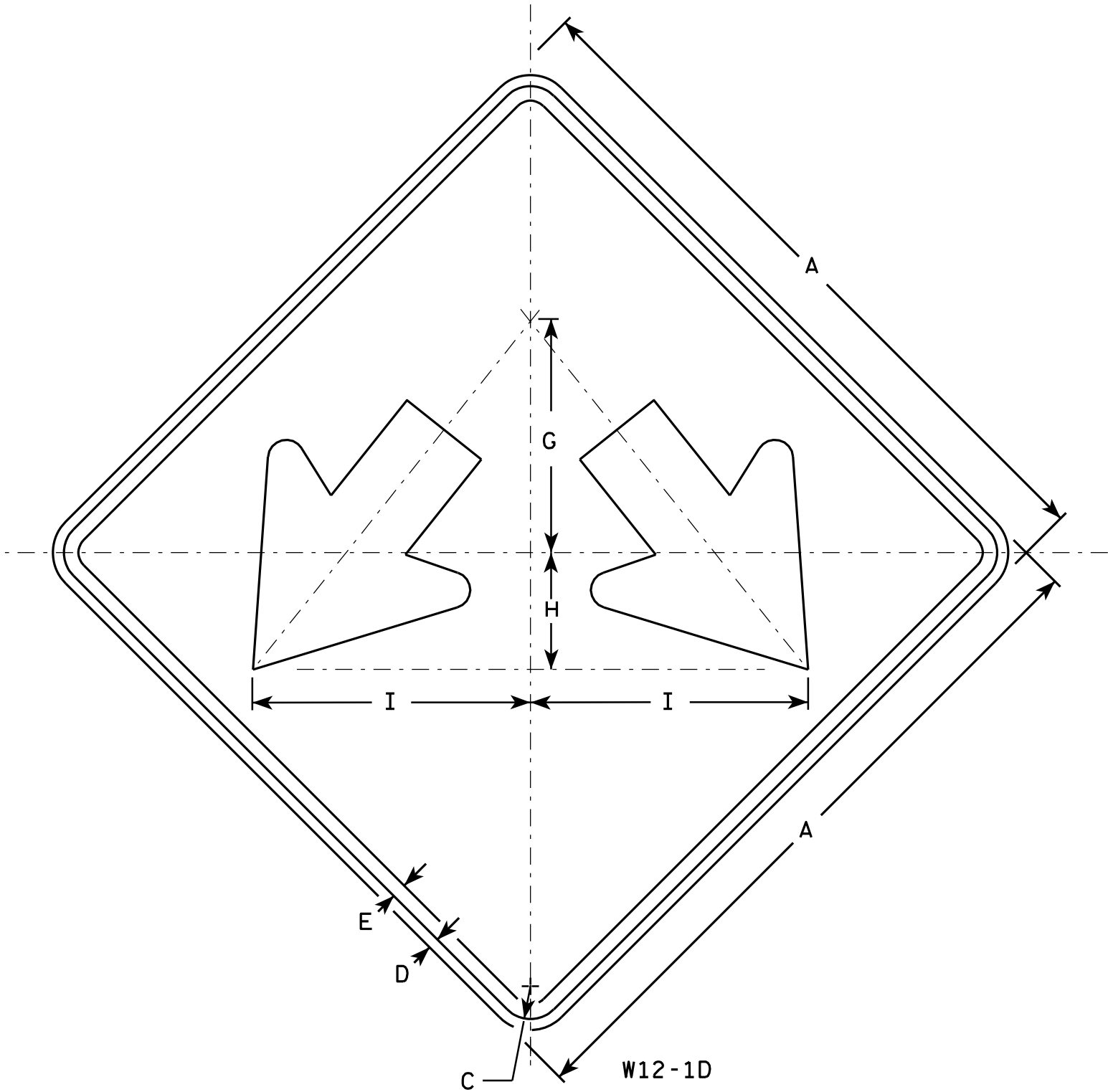
W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

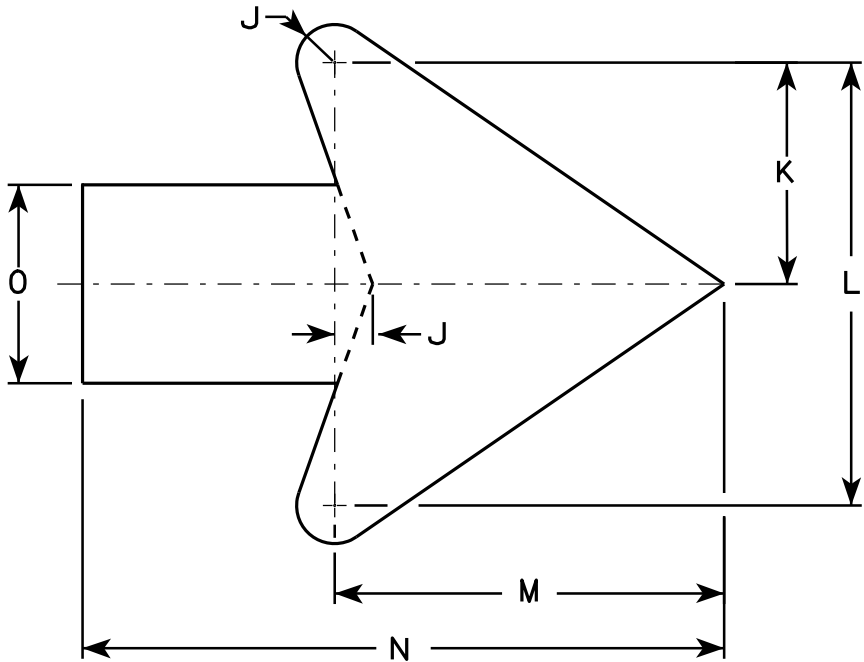
DATE 03/18/13

PLATE NO. W9-1.8



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.



Arrow Detail

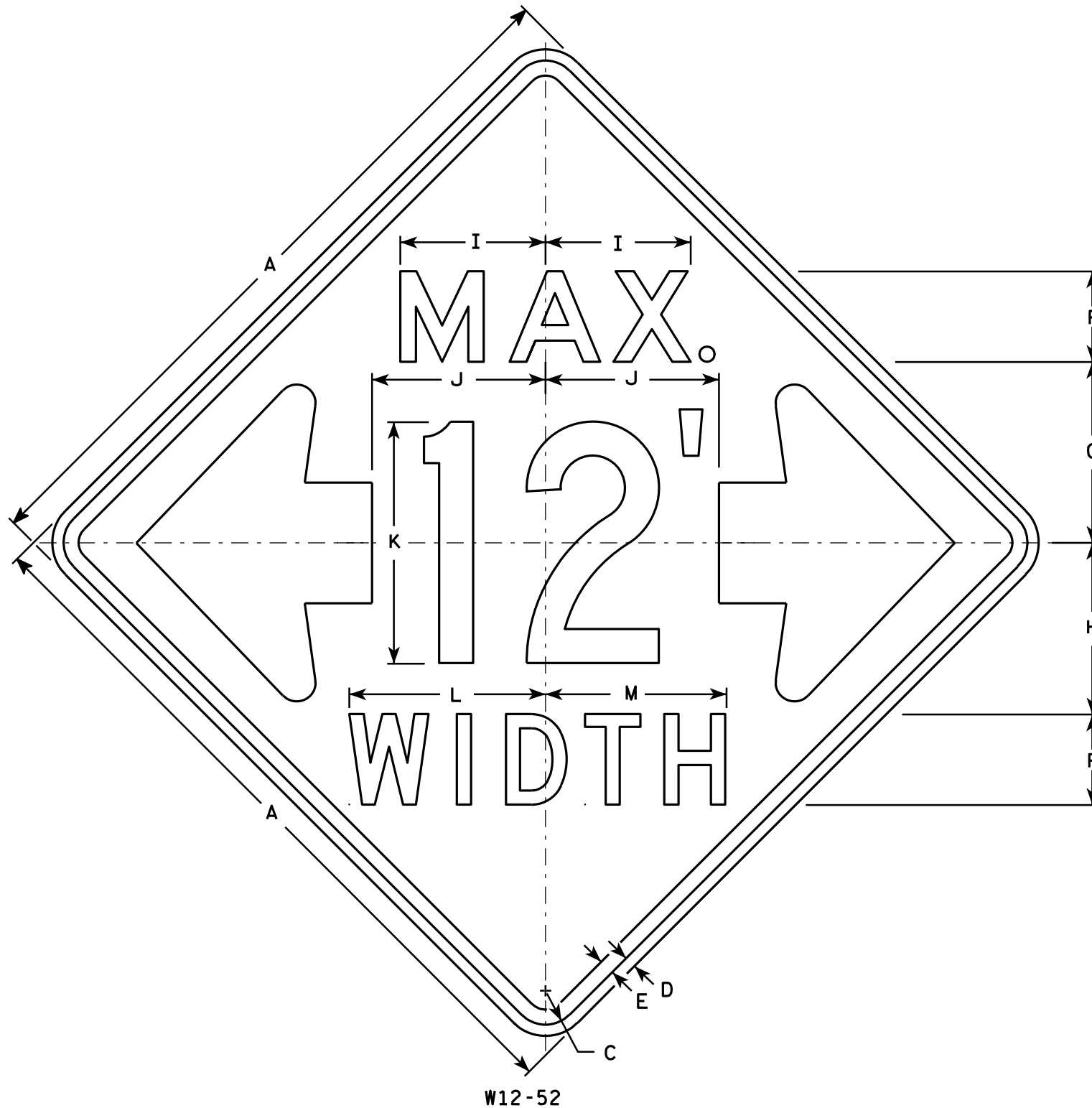
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

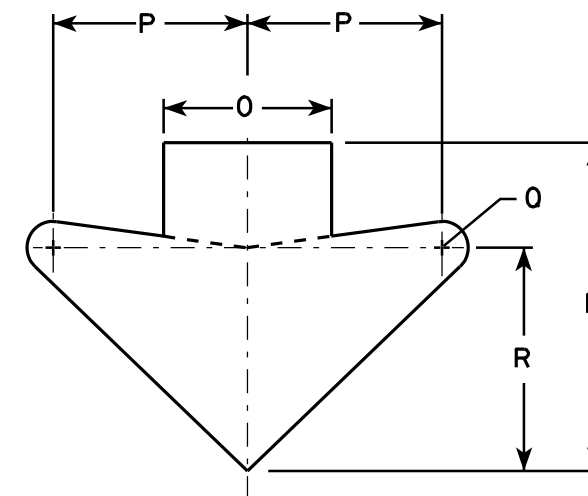
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15



NOTES

- Sign Is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- 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.
- The top line is series E, the numerals are series C, and the bottom line is series D.
- Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

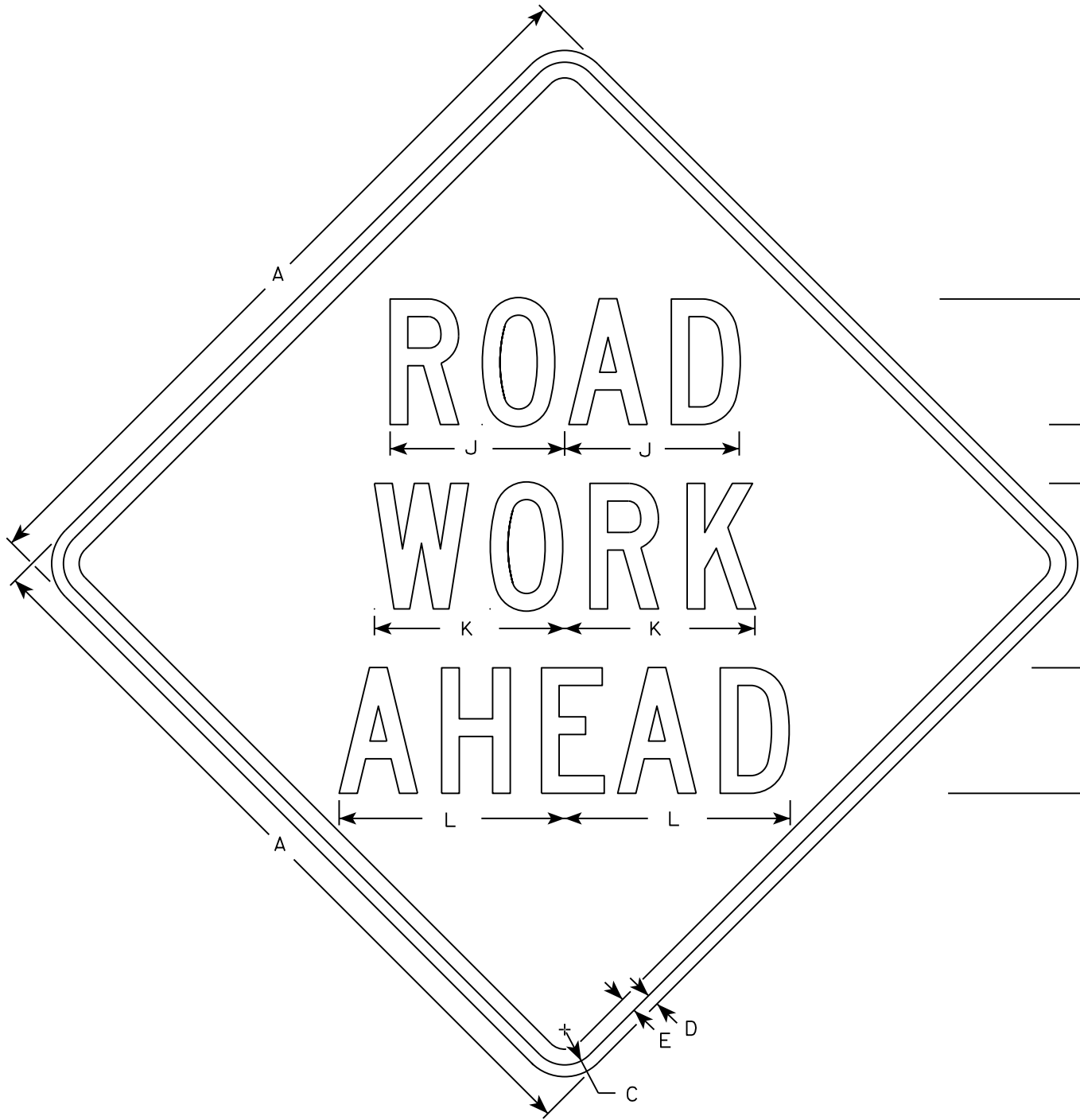
PROJECT NO:

HWY:

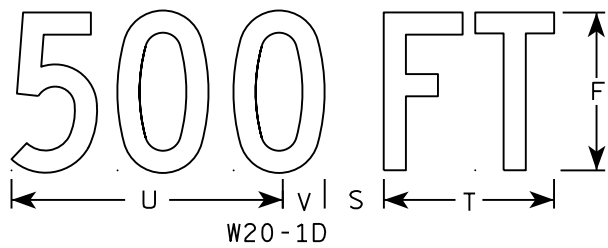
COUNTY:

SHEET NO:

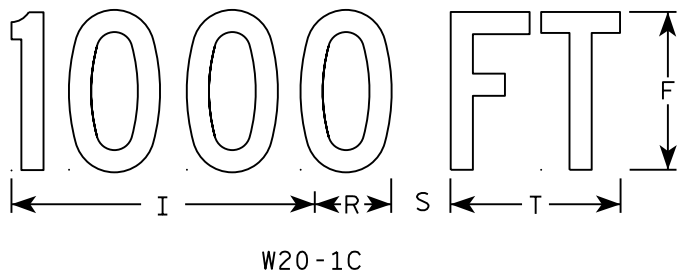
E



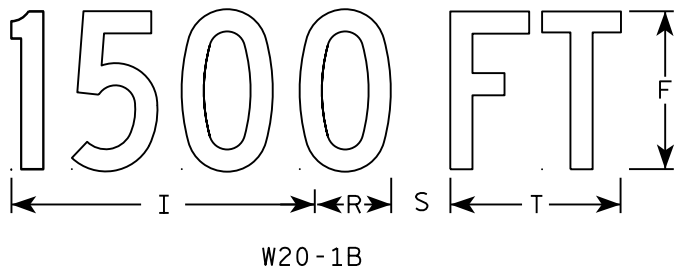
W20-1A



W20-1D



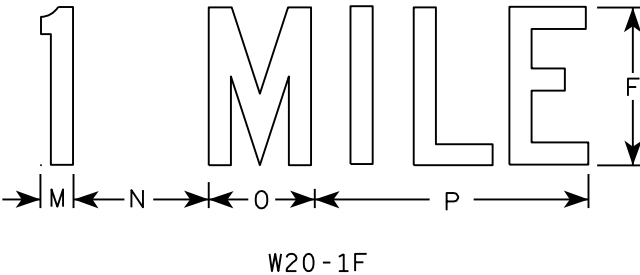
W20-1C



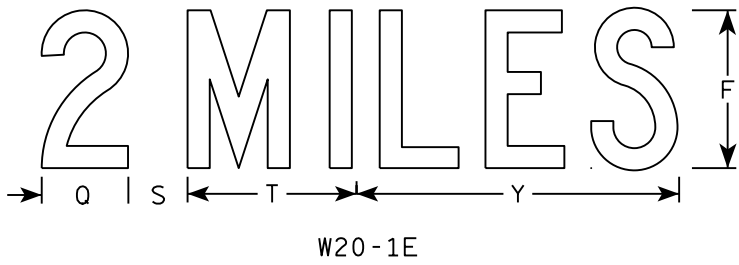
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

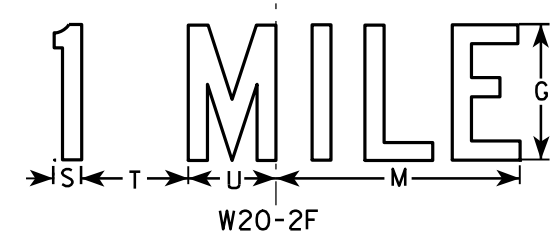
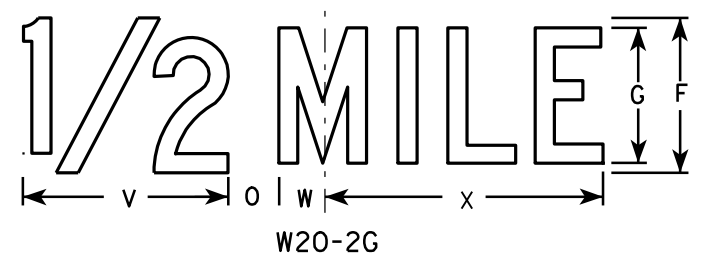
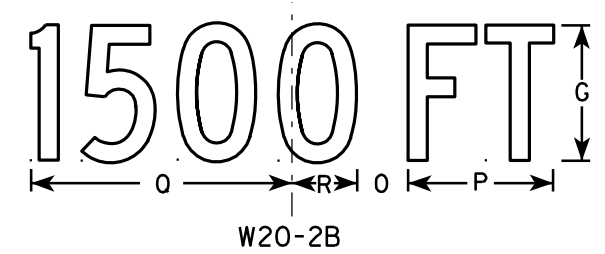
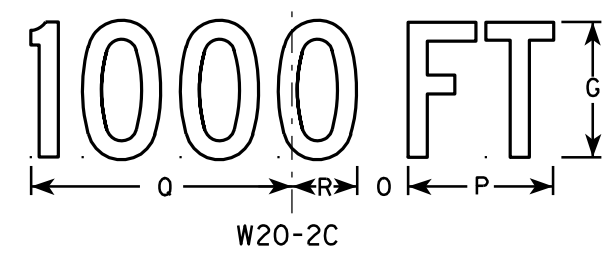
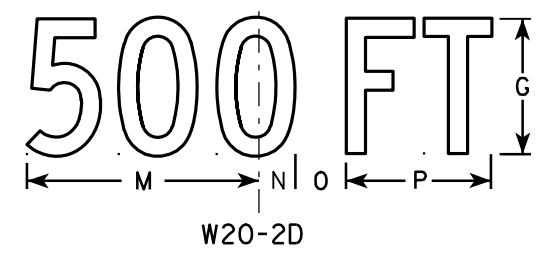
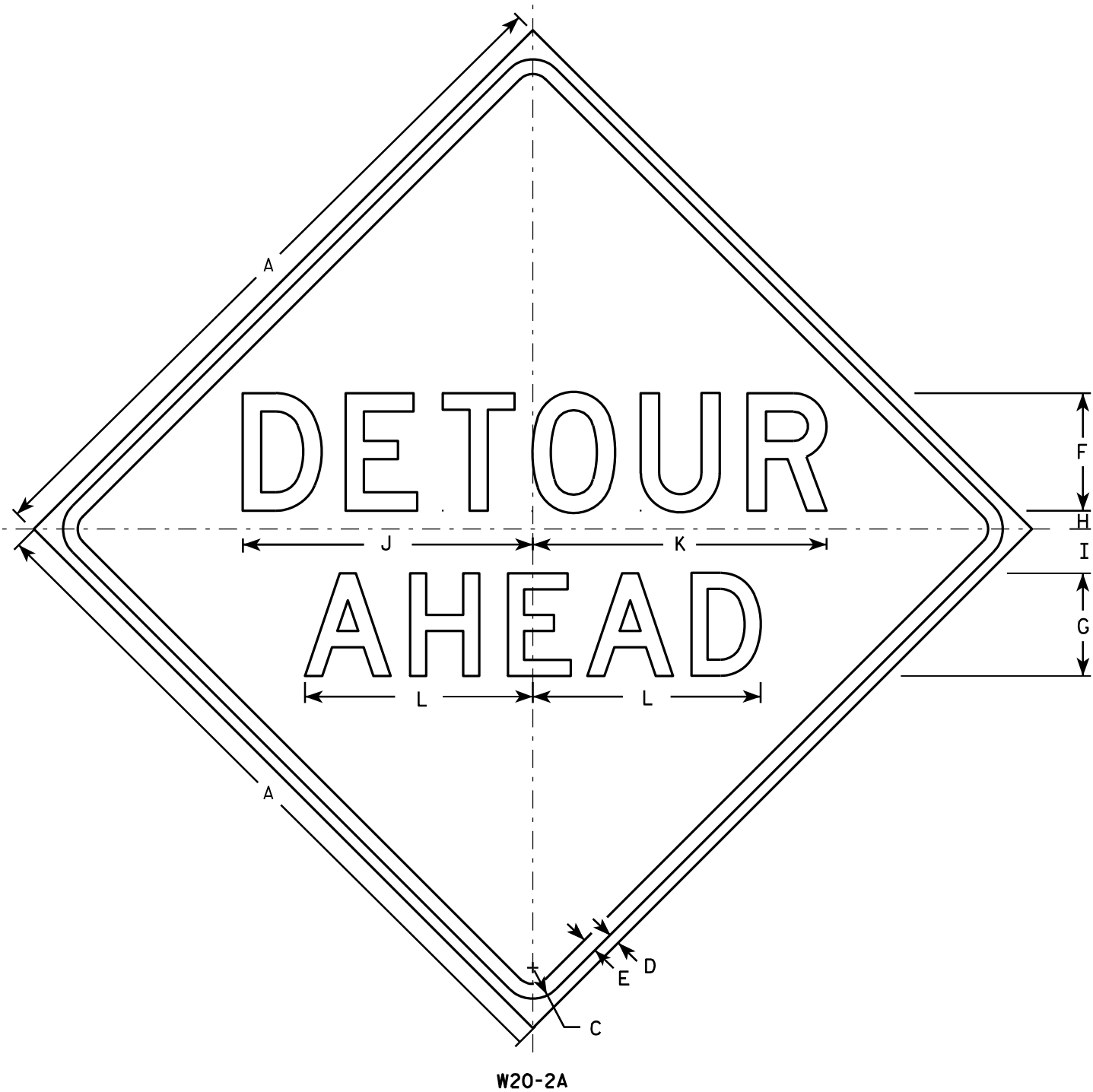
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

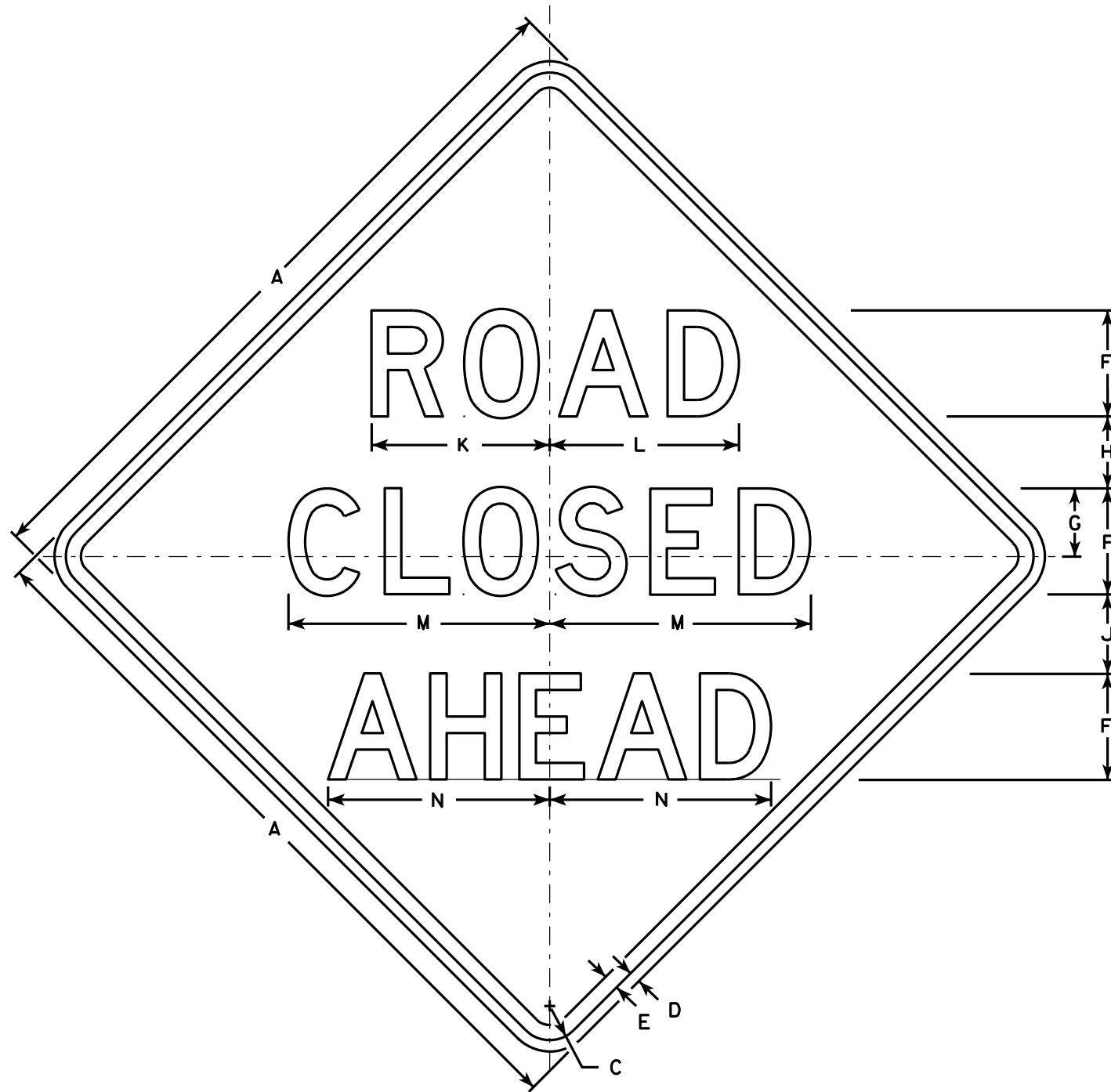
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

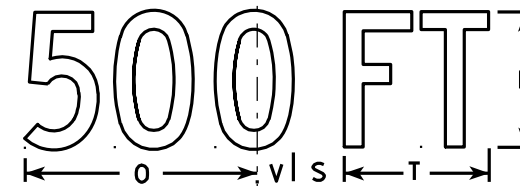
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch* for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:
HWY:
COUNTY:
SHEET NO:

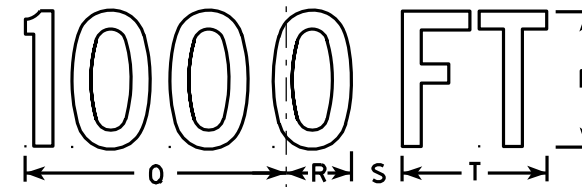
E



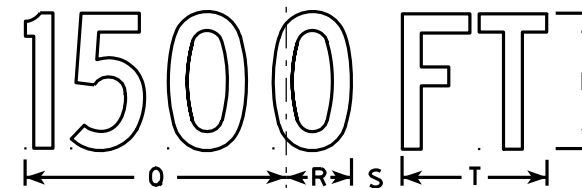
W20-3A



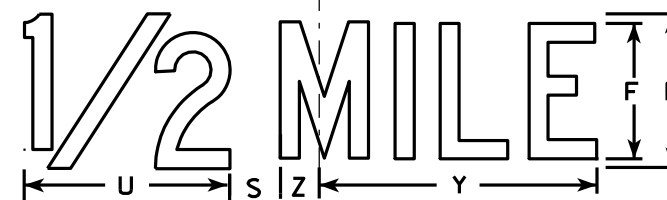
W20-3D



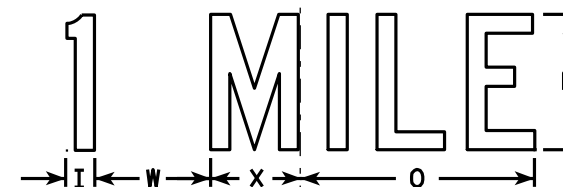
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

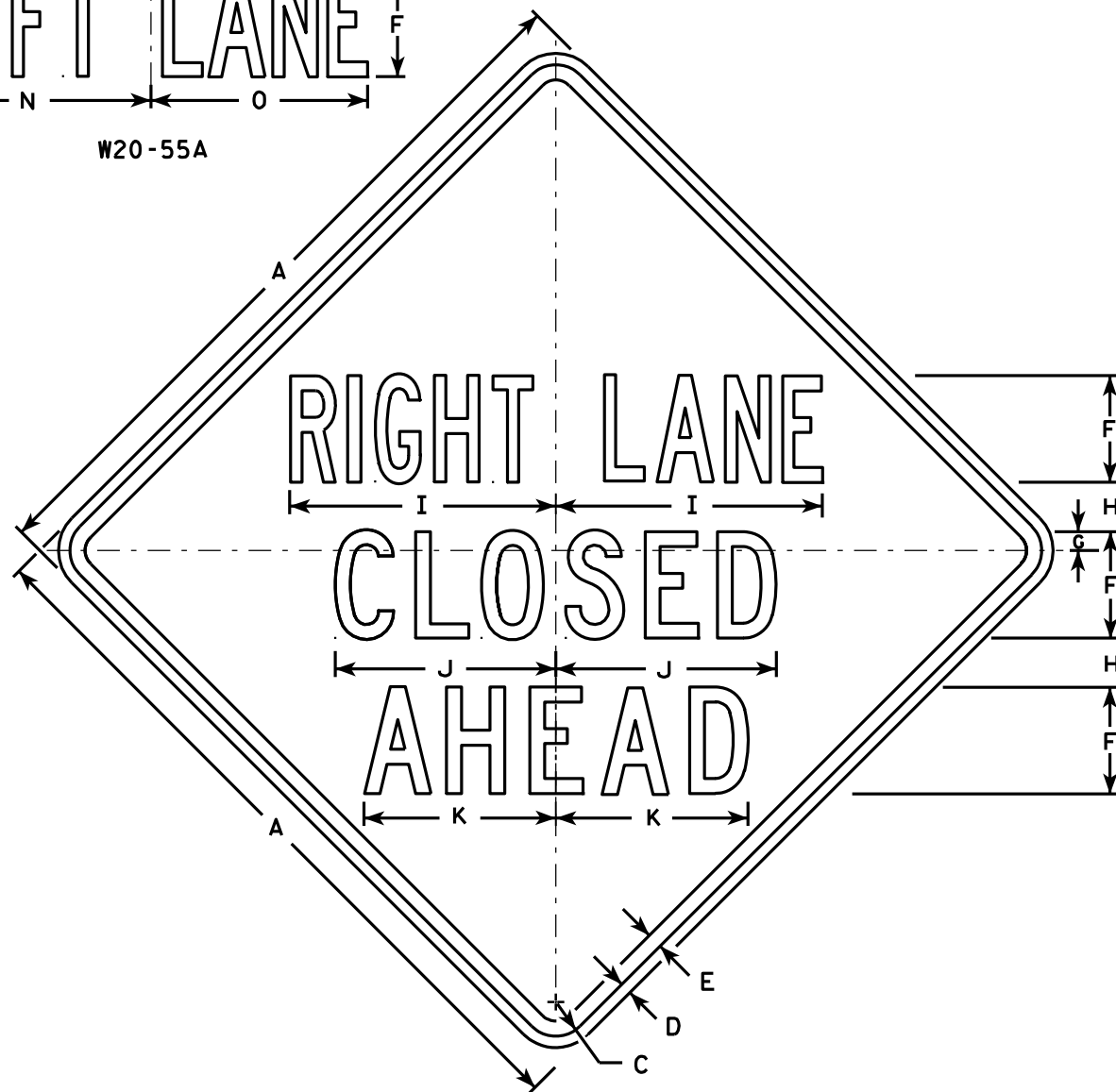
E

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. "----- LANE" is Series B.
All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

PROJECT NO:

HWY:

COUNTY:

STANDARD SIGN
W20-5A, B, C, D, F & G

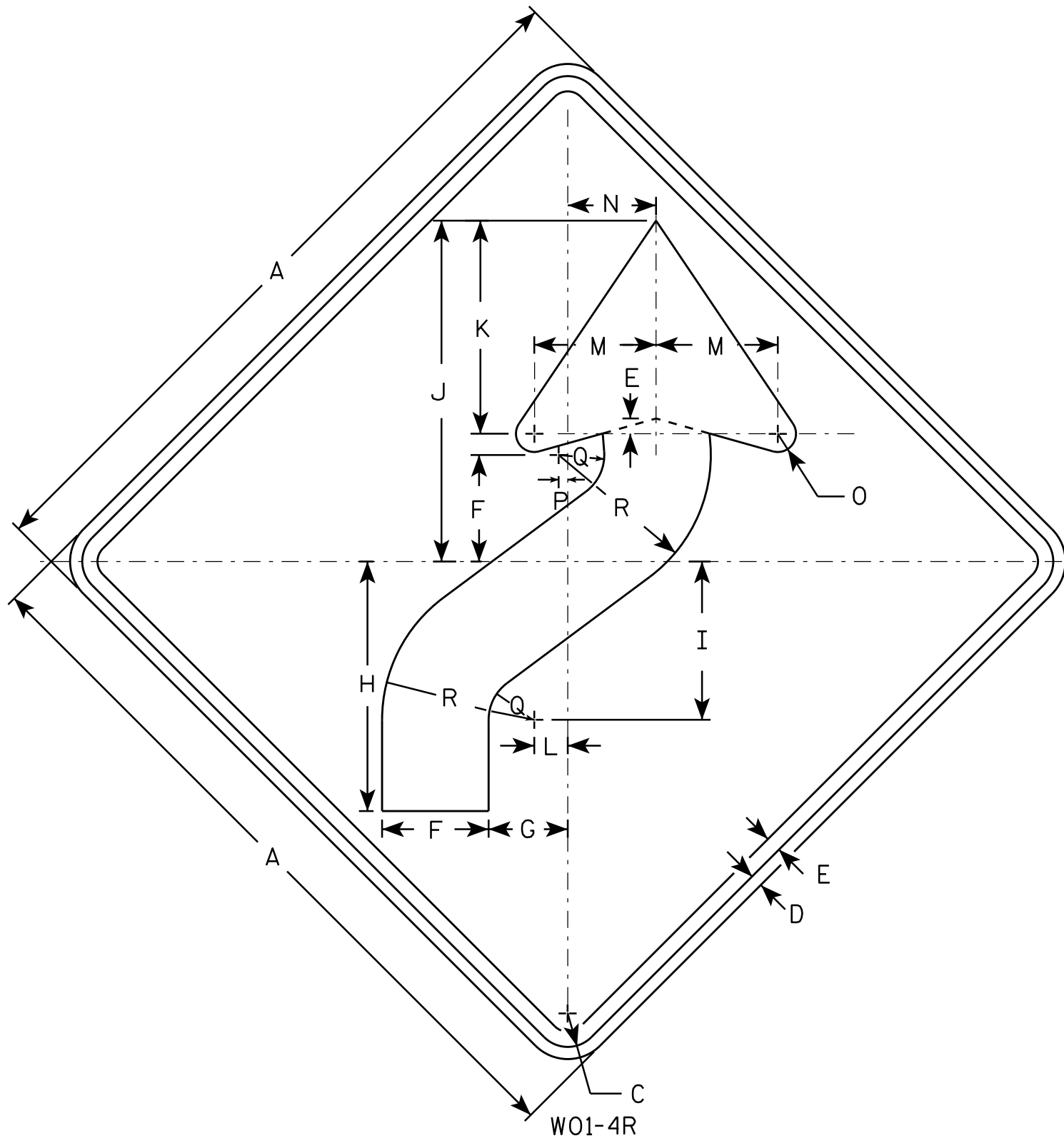
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
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. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN W01-4

WISCONSIN DEPT OF TRANSPORTATION

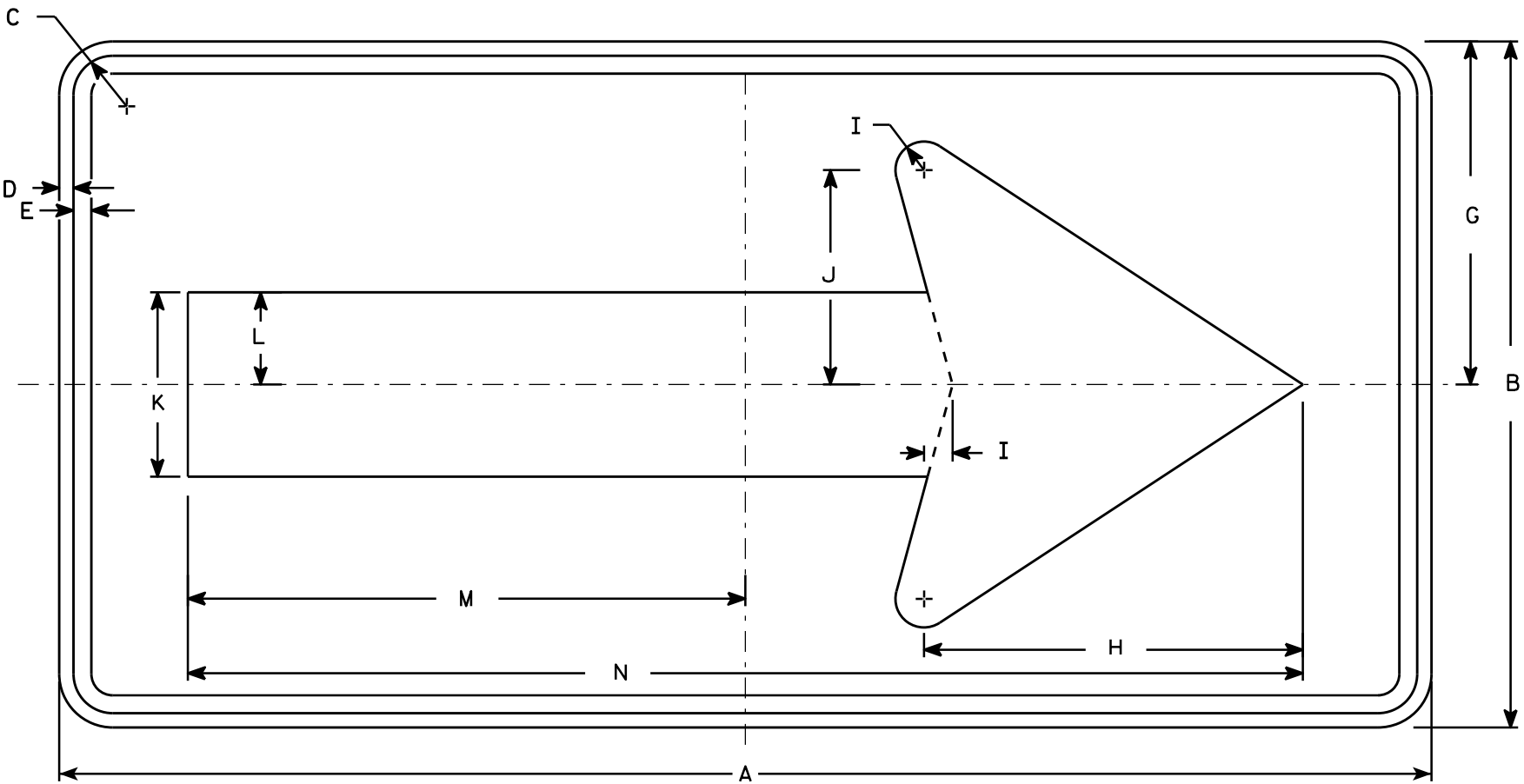
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
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.



W01-6

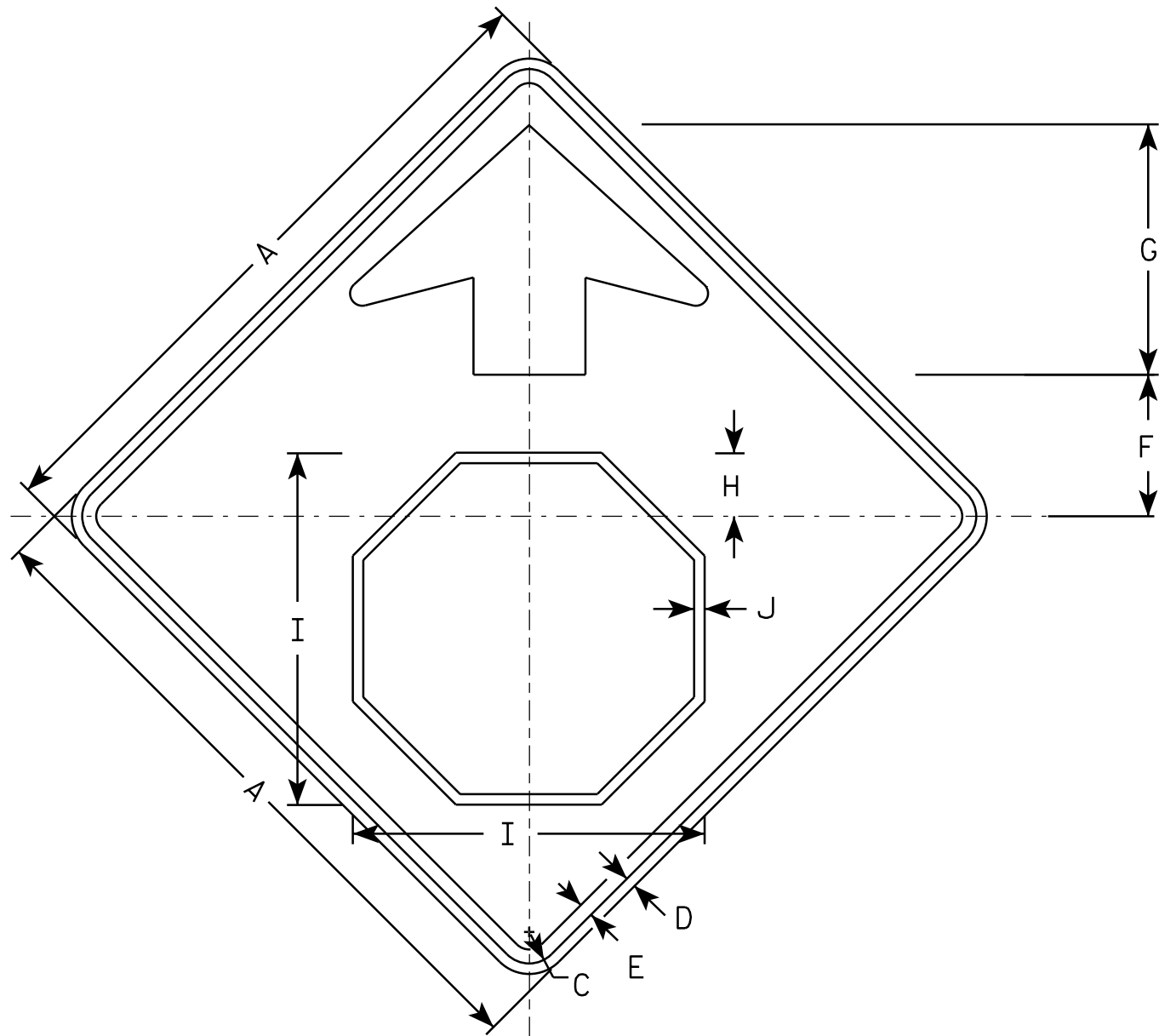
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

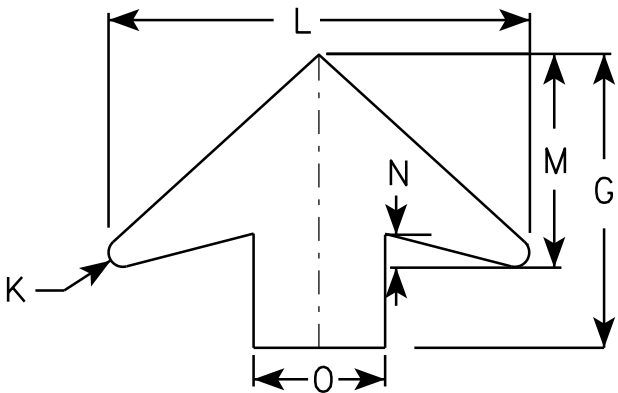
DATE 11/18/13 PLATE NO. W01-6.1



W03-1

NOTES

- 1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - ORANGE
 - Arrow & Border - BLACK
 - Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:

SHEET NO:

E

STANDARD SIGN

W03-1

WISCONSIN DEPT OF TRANSPORTATION

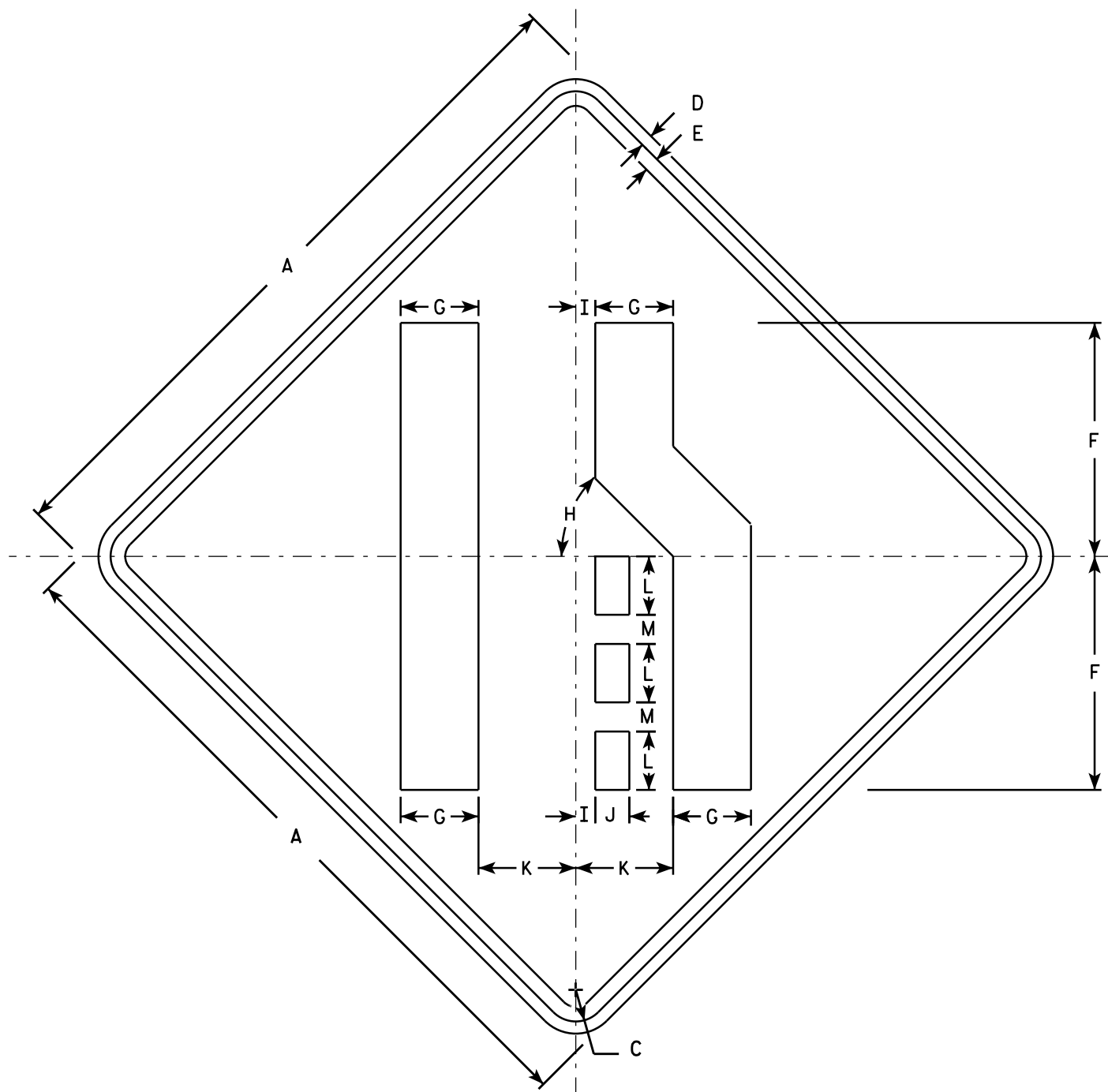
APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 11/20/13

PLATE NO. W03-1.1



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
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. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

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

W04-2

WISCONSIN DEPT OF TRANSPORTATION

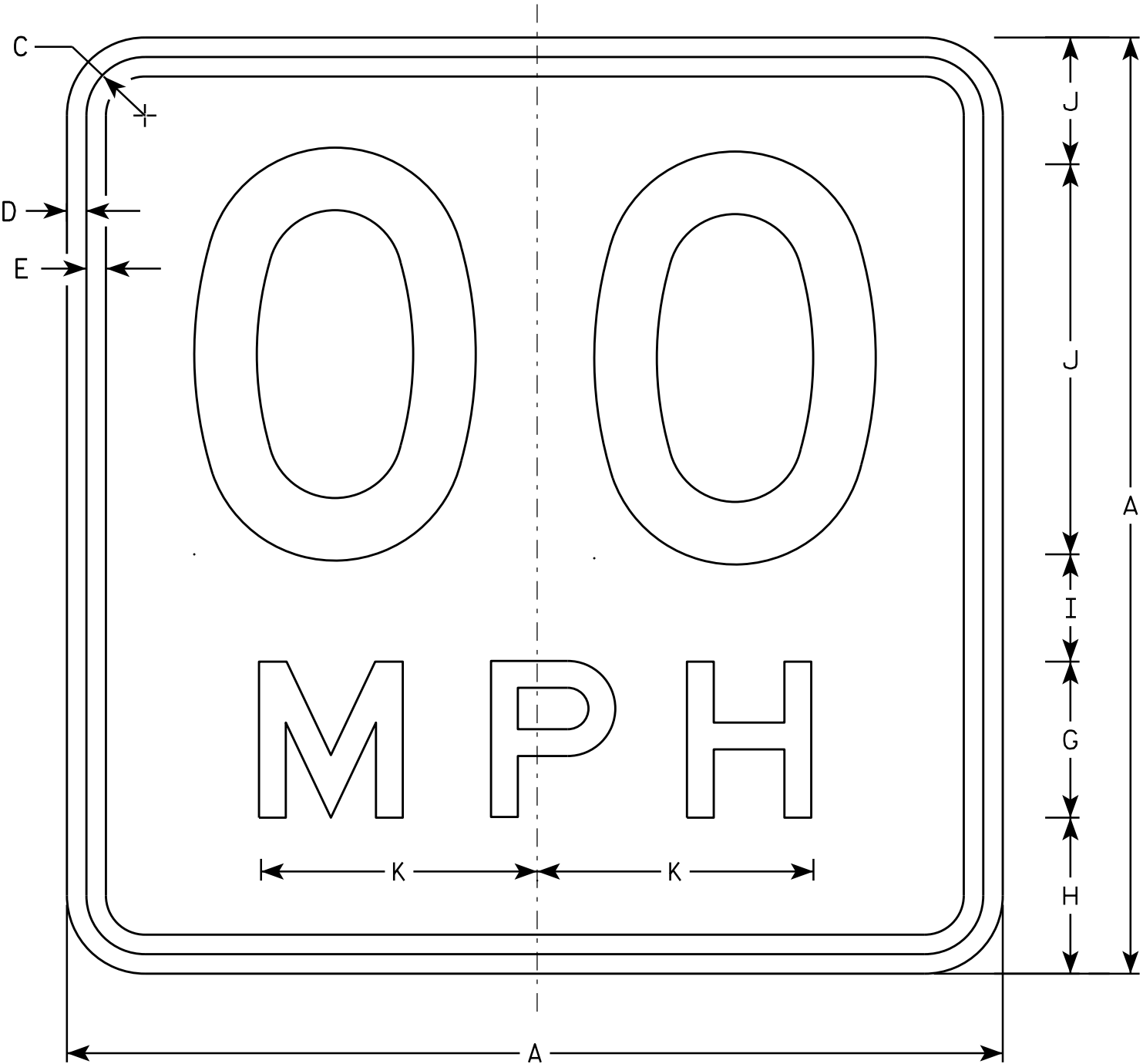
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 11/20/13

PLATE NO. W04-2.1



W013-1

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - See Note 6
- 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. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
- 6. Line 1 is Series D
Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 11/21/13 PLATE NO. W013-1.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STH 16 TEMPORARY WIDENING - STAGE 1A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
219+29	21929.00	--	14	--	3	--	--	--	--	--	--	--	--
219+50	21950.00	21	13	--	7	--	11	--	4	--	11	5	6
219+75	21975.00	25	12	--	15	--	12	--	10	--	22	18	5
219+90	21990.00	15	25	--	--	--	10	--	4	--	33	23	10
SUBTOTALS							33	0	18	0			
226+80	22680.00	--	8	--	13	--	--	--	--	--	--	--	10
227+00	22700.00	20	14	--	0	--	8	--	5	--	8	6	12
227+20	22720.00	20	12	--	--	--	10	--	0	--	18	6	21
SUBTOTALS							18	0	5	0			
228+05	22805.00	--	18	--	--	--	--	--	--	--	--	--	21
228+25	22825.00	20	11	--	4	--	11	--	1	--	11	2	30
228+50	22850.00	25	12	--	9	--	11	--	6	--	21	9	33
228+75	22875.00	25	9	--	6	--	10	--	7	--	31	18	35
229+00	22900.00	25	6	--	6	--	7	--	5	--	38	24	35
229+25	22925.00	25	5	--	6	--	5	--	5	--	43	31	33
229+50	22950.00	25	6	--	6	--	5	--	6	--	48	38	31
229+75	22975.00	25	7	--	6	--	6	--	6	--	54	45	30
230+00	23000.00	25	6	--	5	--	6	--	5	--	60	52	29
230+25	23025.00	25	6	--	5	--	6	--	5	--	65	58	29
230+50	23050.00	25	6	--	6	--	5	--	5	--	71	65	27
230+75	23075.00	25	5	--	7	--	5	--	6	--	76	72	25
231+00	23100.00	25	5	--	7	--	5	--	7	--	81	81	21
231+25	23125.00	25	4	--	7	--	4	--	7	--	85	89	17
231+50	23150.00	25	5	--	4	--	4	--	5	--	89	96	14
231+75	23175.00	25	5	--	1	--	5	--	2	--	93	99	16
232+00	23200.00	25	6	--	0	--	5	--	1	--	99	99	20
232+25	23225.00	25	6	--	--	--	5	--	0	--	104	99	26
232+50	23250.00	25	5	--	--	--	5	--	--	--	109	99	31
232+75	23275.00	25	4	--	--	--	4	--	--	--	113	99	35
SUBTOTALS							113	0	80	0			

STH 16 TEMPORARY WIDENING - STAGE 1A CONTINUED													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
235+75	23575.00	--	6	--	--	--	--	--	--	--	--	35	
236+00	23600.00	25	6	--	4	--	5	--	2	--	5	2	38
236+25	23625.00	25	6	--	10	--	6	--	6	--	11	10	36
236+50	23650.00	25	10	--	11	--	7	--	10	--	18	22	31
236+75	23675.00	25	10	--	9	--	9	--	9	--	27	34	29
237+00	23700.00	25	10	--	6	--	9	--	7	--	37	43	29
237+25	23725.00	25	9	--	4	--	9	--	5	--	46	49	32
237+50	23750.00	25	9	--	4	--	8	--	4	--	54	54	35
237+75	23775.00	25	12	--	2	--	9	--	3	--	63	57	41
238+00	23800.00	25	12	--	1	--	11	--	2	--	74	59	50
238+25	23825.00	25	13	--	0	--	11	--	1	--	86	60	61
238+40	23840.00	15	19	--	--	--	9	--	0	--	95	60	70
SUBTOTALS							95	0	48	0			
TOTALS							258	0	151	0			

STH 60 TEMPORARY WIDENING - STAGE 1A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+50	1050.00	--	11	--	23	--	--	--	--	--	--	--	
11+00	1100.00	50	13	--	12	--	22	--	32	--	22	40	-18
11+50	1150.00	50	15	--	7	--	26	--	18	--	49	62	-14
12+00	1200.00	50	15	--	5	--	28	--	11	--	77	76	0
12+50	1250.00	50	15	--	6	--	28	--	11	--	105	89	15
13+00	1300.00	50	13	--	11	--	26	--	15	--	131	109	22
13+50	1350.00	50	10	--	17	--	21	--	26	--	151	141	10
14+00	1400.00	50	10	--	13	--	18	--	28	--	169	176	-6
14+50	1450.00	50	9	--	20	--	18	--	30	--	187	213	-26
15+00	1500.00	50	9	--	18	--	16	--	35	--	203	257	-53
15+50	1550.00	50	8	--	18	--	16	--	33	--	219	298	-79
16+00	1600.00	50	24	--	0	--	30	--	16	--	249	319	-70
16+50	1650.00	50	14	--	11	--	34	--	10	--	283	331	-48
17+00	1700.00	50	16	--	17	--	27	--	26	--	310	364	-53
17+50	1750.00	50	21	--	21	--	34	--	36	--	344	408	-64
18+00	1800.00	50	23	--	30	--	41	--	47	--	385	468	-83
18+50	1850.00	50	16	--	23	--	36	--	49	--	421	528	-107
19+00	1900.00	50	28	--	17	--	41	--	37	--	462	574	-113
19+50	1950.00	50	30	--	19	--	54	--	33	--	515	616	-100
20+00	2000.00	50	20	--	22	--	47	--	37	--	562	663	-101
20+50	2050.00	50	37	--	28	--	53	--	46	--	615	720	-105
21+00	2100.00	50	27	--	0	--	60	--	26	--	675	753	-78
21+50	2150.00	50	54	--	58	--	76	--	54	--	751	820	-69
22+00	2200.00	50	40	--	68	--	88	--	116	--	838	965	-127
22+50	2250.00	50	18	--	22	--	54	--	83	--	892	1,070	-177
22+75	2275.00	25	36	--	1	--	25	--	11	--	917	1,083	-166
TOTALS							917	0	866	0			

COLUMBUS FALL RIVER ROAD TEMPORARY WIDENING - STAGE 1A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+50	1050.00	--	16	--	--	--	--	--	--	--	--	--	--
10+75	1075.00	25	13	--	--	--	14	--	--	--	14	--	14
11+00	1100.00	25	13	--	--	--	12	--	--	--	26	--	26
11+25	1125.00	25	4	--	8	--	8	--	4	--	34	5	29
11+50	1150.00	25	6	--	5	--	5	--	6	--	38	12	26
11+75	1175.00	25	6	--	3	--	5	--	4	--	44	17	27
12+00	1200.00	25	6	--	2	--	5	--	2	--	49	20	29
12+25	1225.00	25	7	--	1	--	6	--	1	--	55	21	34
12+50	1250.00	25	9	--	0	--	7	--	1	--	62	22	40
12+75	1275.00	25	9	--	0	--	8	--	0	--	70	22	48
			TOTALS				70	0	18	0			

FRONTAGE ROAD NORTH TEMPORARY WIDENING - STAGE 1A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25 Note 1	
10+35	1035.00	--	23	--	0	--	--	--	--	--	--	--	
10+50	1050.00	15	33	--	--	--	16	--	0	--	16	0	
10+75	1075.00	25	17	--	0	--	23	--	0	--	39	0	
11+00	1100.00	25	18	--	8	--	16	--	4	--	55	5	
11+25	1125.00	25	13	--	--	--	15	--	3	--	69	9	
			TOTALS				69	0	7	0			

HEIN DRIVEWAY - STAGE 1A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
													Note 1
00+57	57.00	--	44	--	14	--	--	--	--	--	--	--	
00+75	75.00	18	23	--	8	--	22	--	7	--	22	9	13
01+00	100.00	25	0	--	26	--	11	--	16	--	33	29	4
01+25	125.00	25	--	--	57	--	0	--	39	--	33	78	-45
01+50	150.00	25	--	--	69	--	--	--	58	--	33	151	-118
01+75	175.00	25	--	--	54	--	--	--	57	--	33	222	-189
02+00	200.00	25	--	--	48	--	--	--	47	--	33	281	-248
02+25	225.00	25	--	--	44	--	--	--	43	--	33	334	-301
02+50	250.00	25	--	--	41	--	--	--	39	--	33	383	-350
02+75	275.00	25	--	--	34	--	--	--	35	--	33	427	-394
03+00	300.00	25	--	--	25	--	--	--	28	--	33	461	-428
03+25	325.00	25	--	--	51	--	--	--	35	--	33	505	-472
03+50	350.00	25	--	--	29	--	--	--	37	--	33	552	-519
03+75	375.00	25	--	--	15	--	--	--	20	--	33	577	-544
04+00	400.00	25	--	--	8	--	--	--	10	--	33	590	-557
04+25	425.00	25	--	--	4	--	--	--	5	--	33	597	-564
04+50	450.00	25	--	--	25	--	--	--	13	--	33	613	-580
04+75	475.00	25	--	--	39	--	--	--	29	--	33	650	-617
05+00	500.00	25	--	--	44	--	--	--	38	--	33	698	-665
05+25	525.00	25	--	--	50	--	--	--	44	--	33	753	-719
05+50	550.00	25	--	--	30	--	--	--	37	--	33	798	-765
05+75	575.00	25	15	--	1	--	7	--	14	--	40	816	-776
06+00	600.00	25	18	--	--	--	15	--	1	--	55	817	-762
06+25	625.00	25	22	--	--	--	18	--	--	--	74	817	-743
06+50	650.00	25	22	--	--	--	20	--	--	--	94	817	-723
06+75	675.00	25	21	--	--	--	20	--	--	--	114	817	-703
06+86	686.00	11	21	--	--	--	9	--	--	--	123	817	-694
TOTAL							123	0	654	0			

STH 16 WB - STAGE 1B													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
215+00	21500.00	--	83	--	0	--	--	--	--	--	--	--	--
215+50	21550.00	50	96	--	--	--	167	--	0	--	167	0	167
216+00	21600.00	50	106	--	--	--	187	--	--	--	354	0	354
216+50	21650.00	50	117	--	--	--	206	--	--	--	560	0	560
217+00	21700.00	50	127	--	--	--	226	--	--	--	786	0	786
217+50	21750.00	50	137	--	--	--	244	--	--	--	1,030	0	1,030
218+00	21800.00	50	148	--	--	--	264	--	--	--	1,294	0	1,294
218+50	21850.00	50	145	--	0	--	271	--	0	--	1,565	0	1,565
219+00	21900.00	50	149	--	0	--	272	--	0	--	1,837	0	1,837
219+31	21931.00	31	162	--	0	--	179	--	0	--	2,016	0	2,016
SUBTOTALS							2,016	0	0	0			
220+21	22021.00	--	119	--	--	--	--	--	--	--	--	0	2,016
220+50	22050.00	29	188	--	--	--	165	--	--	--	165	0	2,181
221+00	22100.00	50	115	--	--	--	280	--	--	--	445	0	2,461
221+50	22150.00	50	173	--	--	--	266	--	--	--	711	0	2,727
222+00	22200.00	50	133	--	0	--	283	--	0	--	994	0	3,010
222+50	22250.00	50	122	--	0	--	236	--	0	--	1,230	0	3,246
223+00	22300.00	50	127	--	0	--	230	--	0	--	1,460	0	3,476
223+50	22350.00	50	143	--	--	--	250	--	0	--	1,711	1	3,726
224+00	22400.00	50	148	--	2	--	270	--	2	--	1,980	3	3,994
224+50	22450.00	50	169	--	2	--	293	--	4	--	2,273	8	4,282
225+00	22500.00	50	168	--	1	--	312	--	4	--	2,585	12	4,589
225+50	22550.00	50	167	--	2	--	311	--	3	--	2,896	16	4,896
226+00	22600.00	50	179	--	4	--	321	--	5	--	3,216	23	5,210
226+50	22650.00	50	206	--	--	--	356	--	3	--	3,573	27	5,562
226+58	22658.00	8	220	--	--	--	63	--	--	--	3,636	27	5,625
SUBTOTALS							3,636	0	22	0			

STH 16 WB - STAGE 1B CONTINUED													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
227+41	22741.00	--	187	--	--	--	--	--	--	--	--	5,625	
227+50	22750.00	9	188	--	--	63	--	--	--	63	--	5,687	
228+00	22800.00	50	262	--	35	417	--	33	--	480	41	6,064	
228+50	22850.00	50	185	--	35	414	--	65	--	894	122	6,397	
229+00	22900.00	50	194	--	37	351	--	67	--	1,245	205	6,664	
229+44	22944.00	44	201	--	38	322	--	61	--	1,567	282	6,910	
229+50	22950.00	6	183	--	38	43	--	8	--	1,609	292	6,942	
230+00	23000.00	50	195	--	46	350	--	78	--	1,959	389	7,195	
230+50	23050.00	50	187	--	62	353	--	100	--	2,312	514	7,423	
231+00	23100.00	50	175	--	130	336	--	178	--	2,648	737	7,536	
231+03	23103.00	3	175	--	128	19	--	14	--	2,667	755	7,537	
231+50	23150.00	47	185	--	63	314	--	166	--	2,981	962	7,644	
232+00	23200.00	50	207	--	48	364	--	103	--	3,344	1,090	7,879	
232+50	23250.00	50	189	--	50	367	--	90	--	3,711	1,203	8,133	
233+00	23300.00	50	189	--	54	349	--	96	--	4,061	1,323	8,363	
233+50	23350.00	50	177	--	56	339	--	102	--	4,399	1,450	8,574	
234+00	23400.00	50	177	--	59	328	--	107	--	4,728	1,583	8,769	
234+50	23450.00	50	151	--	61	304	--	110	--	5,031	1,721	8,935	
235+00	23500.00	50	125	--	66	255	--	117	--	5,286	1,868	9,044	
235+50	23550.00	50	122	--	48	229	--	105	--	5,515	1,999	9,141	
236+00	23600.00	50	120	--	41	224	--	83	--	5,739	2,102	9,262	
236+12	23612.00	12	122	--	42	54	--	18	--	5,793	2,126	9,293	
SUBTOTALS						5,793	0	1,700	0				
TOTALS						11,445	0	1,722	0				

COLUMBUS FALL RIVER ROAD - STAGE 1B													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+25	1025.00	--	126	--	--	--	--	--	--	--	--	--	--
10+50	1050.00	25	82	--	--	--	96	--	--	--	96	--	96
11+00	1100.00	50	53	--	--	--	125	--	--	--	221	--	221
11+50	1150.00	50	41	--	--	--	87	--	--	--	308	--	308
12+00	1200.00	50	32	--	9	--	68	--	8	--	376	11	365
12+50	1250.00	50	40	--	1	--	67	--	9	--	443	22	421
12+88	1288.00	38	45	--	--	--	60	--	1	--	503	23	480
			TOTALS				503	0	19	0			

FRONTAGE ROAD NORTH - STAGE 1B													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+15	1015.00	--	253	--	--	--	--	--	--	--	--	--	
10+50	1050.00	35	140	--	50	--	254	--	33	--	254	41	214
10+70	1070.00	20	168	--	7	--	114	--	21	--	368	67	301
11+00	1100.00	30	115	--	6	--	157	--	7	--	525	76	449
11+50	1150.00	50	116	--	9	--	214	--	14	--	739	94	645
12+00	1200.00	50	114	--	17	--	213	--	23	--	952	123	829
12+50	1250.00	50	147	--	15	--	241	--	30	--	1,193	160	1,033
12+68	1268.00	18	153	--	3	--	100	--	6	--	1,293	168	1,126
TOTALS							1,293	0	134	0			

STH 16 WB - STAGE 1C													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
219+31	21931.00	--	111	--	12	--	--	--	--	--	--	--	--
219+50	21950.00	19	145	--	1	--	90	--	5	--	90	6	85
220+00	22000.00	50	77	--	--	--	206	--	1	--	296	6	289
220+20	22020.00	20	70	--	--	--	54	--	--	--	350	6	344
SUBTOTALS							350	--	5	--			
226+59	22659.00	639	164	--	22	--	--	--	--	--	--	--	344
227+00	22700.00	41	207	--	--	--	281	--	17	--	281	21	604
227+38	22738.00	38	173	--	--	--	267	--	--	--	548	21	871
SUBTOTALS							548	0	17	0			
TOTALS							898	0	22	0			

STH 60 EB - STAGE 1 C													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+50	1050.00	--	43	--	11	--	--	--	--	--	--	--	
11+00	1100.00	50	42	--	15	--	79	--	25	--	79	31	48
11+50	1150.00	50	44	--	16	--	80	--	29	--	159	67	91
12+00	1200.00	50	44	--	19	--	82	--	33	--	241	108	133
12+50	1250.00	50	49	--	17	--	87	--	33	--	327	150	178
13+00	1300.00	50	56	--	16	--	97	--	30	--	424	187	237
13+50	1350.00	50	60	--	14	--	107	--	28	--	532	222	310
14+00	1400.00	50	63	--	12	--	114	--	24	--	646	252	394
14+50	1450.00	50	65	--	3	--	119	--	13	--	765	269	496
15+00	1500.00	50	68	--	--	--	124	--	2	--	889	272	617
15+50	1550.00	50	28	--	--	--	89	--	--	--	978	272	706
16+00	1600.00	50	26	--	--	--	50	--	--	--	1,028	272	755
16+50	1650.00	50	27	--	--	--	49	--	--	--	1,076	272	804
17+00	1700.00	50	53	--	12	--	74	--	11	--	1,150	286	864
17+50	1750.00	50	56	--	18	--	101	--	28	--	1,251	321	930
18+00	1800.00	50	61	--	20	--	108	--	35	--	1,359	365	993
18+50	1850.00	50	68	--	67	--	119	--	80	--	1,477	466	1,012
19+00	1900.00	50	68	--	66	--	126	--	124	--	1,603	620	983
19+50	1950.00	50	66	--	73	--	125	--	129	--	1,728	782	946
20+00	2000.00	50	70	--	72	--	127	--	134	--	1,854	949	905
20+50	2050.00	50	85	--	75	--	144	--	136	--	1,998	1,119	879
21+00	2100.00	50	83	--	88	--	155	--	151	--	2,153	1,308	846
21+50	2150.00	50	84	--	100	--	155	--	174	--	2,309	1,526	783
22+00	2200.00	50	123	--	112	--	192	--	196	--	2,500	1,771	730
22+11	2211.00	11	109	--	130	--	47	--	49	--	2,548	1,832	715
TOTALS							2,548	0	1,466	0			

COLUMBUS FALL RIVER ROAD - STAGE 1C													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+15	1015.00	--	205	--	--	--	--	--	--	--	--	--	
10+50	1050.00	35	133	--	4	--	219	--	3	--	219	4	215
11+00	1100.00	50	60	--	--	--	179	--	4	--	398	9	389
11+50	1150.00	50	76	--	0	--	126	--	0	--	523	9	515
12+00	1200.00	50	63	--	0	--	129	--	0	--	652	9	643
12+50	1250.00	50	50	--	--	--	105	--	0	--	757	9	747
12+88	1288.00	38	55	--	0	--	74	--	0	--	831	9	821
TOTALS							831	0	8	0			

FRONTAGE ROAD NORTH - STAGE 1C													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+15	1015.00	--	206	--	--	--	--	--	--	--	--	--	--
10+50	1050.00	35	98	--	22	--	196	--	14	--	196	18	179
10+70	1070.00	20	112	--	2	--	77	--	9	--	274	29	245
11+00	1100.00	30	84	--	27	--	108	--	16	--	382	48	334
11+50	1150.00	50	186	--	--	--	250	--	25	--	632	79	553
12+00	1200.00	50	79	--	--	--	245	--	--	--	878	79	799
12+50	1250.00	50	20	--	--	--	91	--	--	--	969	79	890
12+68	1268.00	18	1	--	--	--	7	--	--	--	976	79	897
			TOTALS				976	0	63	0			

STH 16 EB - STAGE 2A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
215+00	21500.00	--	95	--	2	--	--	--	--	--	--	--	--
215+50	21550.00	50	102	--	8	--	182	--	9	--	182	12	170
216+00	21600.00	50	109	--	12	--	195	--	18	--	377	35	343
216+50	21650.00	50	119	--	2	--	211	--	13	--	588	51	538
217+00	21700.00	50	125	--	40	--	226	--	39	--	815	99	716
217+50	21750.00	50	133	--	36	--	239	--	70	--	1,054	187	867
218+00	21800.00	50	137	--	53	--	250	--	83	--	1,303	290	1,013
218+50	21850.00	50	110	--	67	--	229	--	111	--	1,532	429	1,103
219+00	21900.00	50	115	--	63	--	208	--	120	--	1,740	579	1,161
219+50	21950.00	50	123	--	43	--	221	--	98	--	1,961	702	1,259
220+00	22000.00	50	184	--	9	--	285	--	48	--	2,245	763	1,483
220+50	22050.00	50	189	--	7	--	346	--	15	--	2,591	782	1,810
221+00	22100.00	50	141	--	19	--	306	--	24	--	2,897	812	2,085
221+50	22150.00	50	139	--	27	--	259	--	43	--	3,157	865	2,291
222+00	22200.00	50	150	--	24	--	268	--	48	--	3,424	925	2,500
222+50	22250.00	50	183	--	18	--	308	--	39	--	3,732	974	2,758
223+00	22300.00	50	209	--	6	--	363	--	23	--	4,095	1,003	3,092
223+50	22350.00	50	217	--	3	--	395	--	9	--	4,490	1,014	3,476
224+00	22400.00	50	196	--	10	--	383	--	12	--	4,873	1,029	3,844
224+50	22450.00	50	205	--	12	--	372	--	20	--	5,245	1,054	4,191
225+00	22500.00	50	206	--	8	--	381	--	18	--	5,625	1,076	4,549
225+50	22550.00	50	201	--	7	--	378	--	14	--	6,003	1,094	4,909
226+00	22600.00	50	191	--	4	--	363	--	11	--	6,366	1,107	5,259
226+50	22650.00	50	187	--	12	--	350	--	15	--	6,716	1,126	5,590
SUBTOTALS							6,716	0	901	0			

STH 16 EB - STAGE 2A CONTINUED													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
227+65	22765.00	115	364	--	--	--	--	--	--	--	--	5,590	
228+00	22800.00	35	283	--	19	--	419	--	13	--	419	16	5,994
228+50	22850.00	50	218	--	95	--	464	--	106	--	883	148	6,325
229+00	22900.00	50	242	--	97	--	426	--	177	--	1,310	370	6,530
229+50	22950.00	50	244	--	87	--	450	--	170	--	1,760	583	6,767
230+00	23000.00	50	246	--	85	--	453	--	159	--	2,213	781	7,022
230+50	23050.00	50	253	--	84	--	462	--	156	--	2,675	976	7,289
231+00	23100.00	50	246	--	90	--	462	--	161	--	3,137	1,178	7,549
231+25	23125.00	25	233	--	150	--	221	--	111	--	3,358	1,317	7,632
231+50	23150.00	25	234	--	113	--	216	--	122	--	3,574	1,469	7,696
232+00	23200.00	50	227	--	58	--	427	--	158	--	4,001	1,666	7,926
232+50	23250.00	50	195	--	26	--	391	--	78	--	4,392	1,763	8,219
233+00	23300.00	50	159	--	55	--	328	--	75	--	4,721	1,857	8,453
233+50	23350.00	50	156	--	51	--	292	--	98	--	5,013	1,980	8,623
234+00	23400.00	50	154	--	51	--	287	--	94	--	5,300	2,098	8,792
234+50	23450.00	50	136	--	59	--	268	--	101	--	5,568	2,225	8,934
235+00	23500.00	50	120	--	73	--	236	--	122	--	5,805	2,377	9,018
235+50	23550.00	50	110	--	72	--	213	--	134	--	6,018	2,544	9,064
235+66	23566.00	16	106	--	57	--	64	--	38	--	6,082	2,592	9,080
SUBTOTALS							6,082	0	2,074	0			
TOTALS							12,799	0	2,975	0			

STH 60 EB - STAGE 2A													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
22+11	2211.00	--	156	--	--	--	--	--	--	--	--	--	
22+50	2250.00	39	140	--	13	--	214	--	9	--	214	12	202
22+80	2280.00	30	221	--	--	--	201	--	7	--	414	21	393
			TOTALS				414	0	17	0			

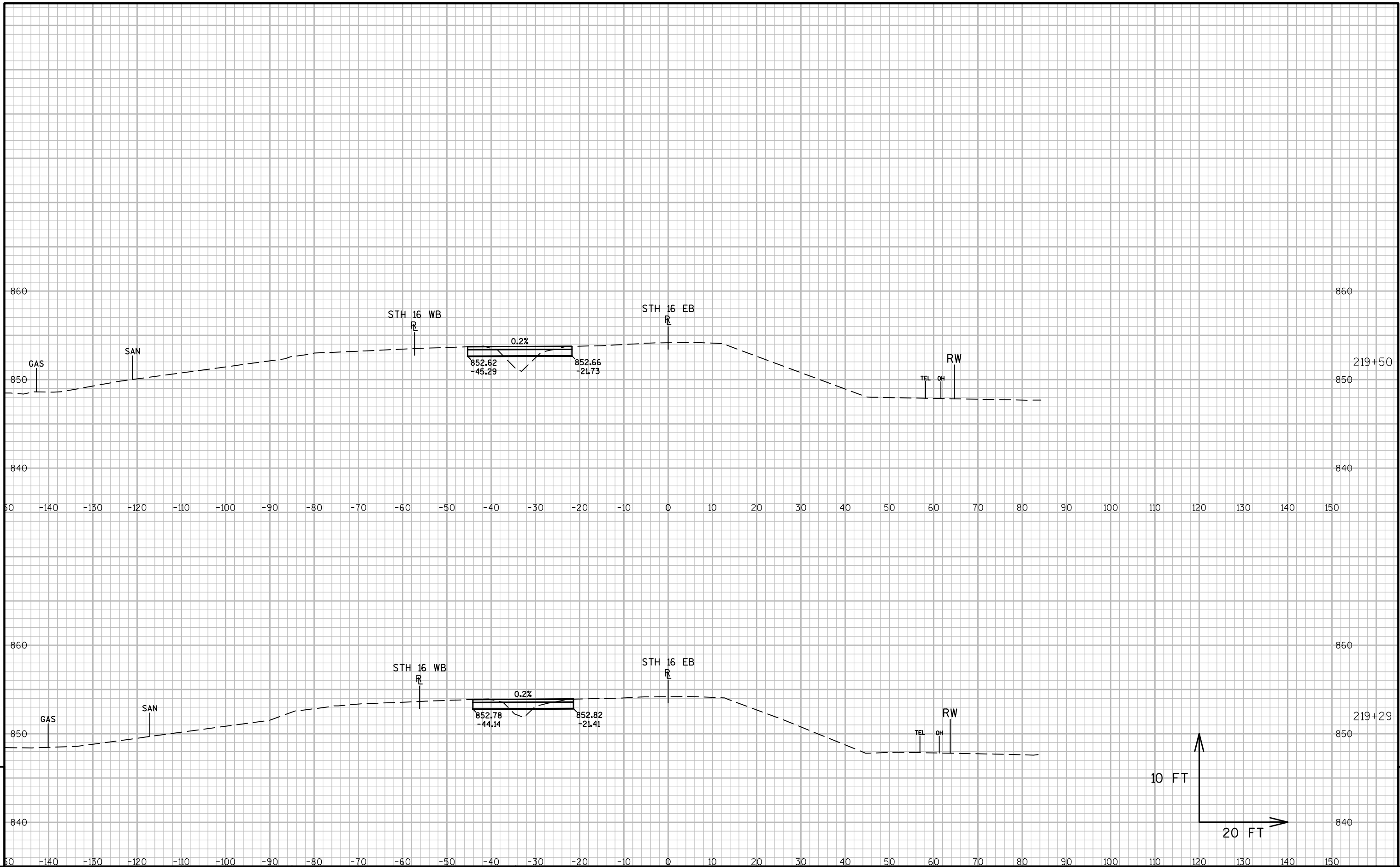
STH 16 EB - STAGE 2B													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
226+51	22651.00	--	140	--	5	--	--	--	--	--	--	--	
227+00	22700.00	49	213	--	85	--	320	--	82	--	320	103	
227+50	22750.00	50	141	--	--	--	328	--	79	--	648	202	
227+58	22758.00	8	127	--	--	--	40	--	--	--	688	202	
TOTALS													
							688	0	161	0			

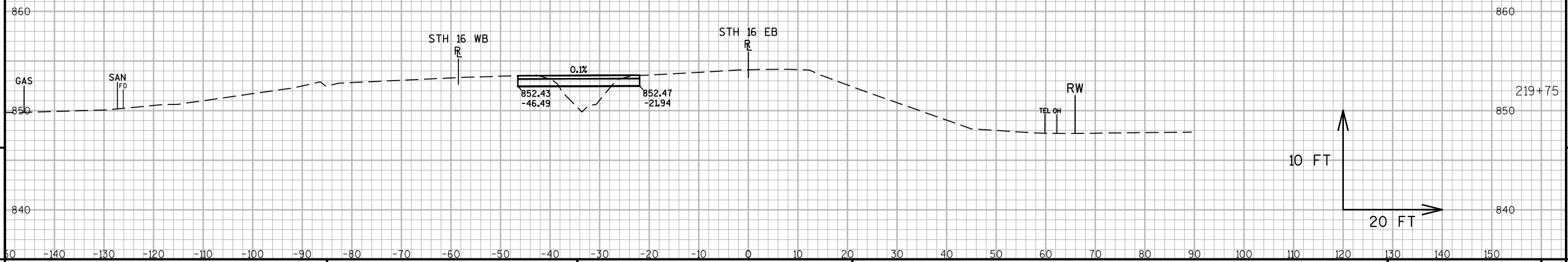
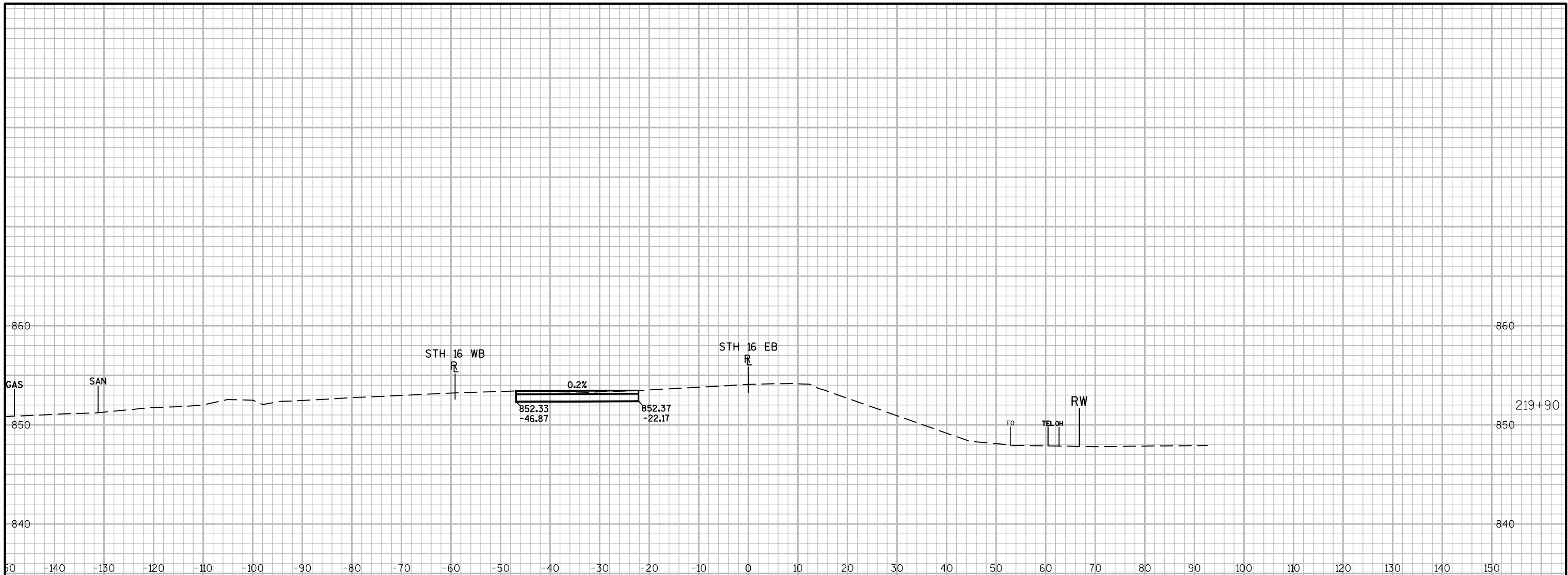
STH 60 WB - STAGE 2B													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
10+50	1050.00	--	82	--	--	--	--	--	--	--	--	--	
11+00	1100.00	50	79	--	0	--	149	--	0	--	149	0	149
11+50	1150.00	50	74	--	0	--	142	--	0	--	291	0	291
12+00	1200.00	50	84	--	--	--	146	--	0	--	437	0	437
12+50	1250.00	50	82	--	--	--	153	--	--	--	590	0	590
13+00	1300.00	50	86	--	--	--	155	--	--	--	745	0	745
13+50	1350.00	50	95	--	--	--	168	--	--	--	913	0	913
14+00	1400.00	50	104	--	--	--	185	--	--	--	1,098	0	1,098
14+50	1450.00	50	100	--	--	--	189	--	--	--	1,288	0	1,287
15+00	1500.00	50	94	--	--	--	180	--	--	--	1,468	0	1,468
15+50	1550.00	50	85	--	0	--	167	--	0	--	1,634	0	1,634
16+00	1600.00	50	69	--	2	--	143	--	2	--	1,777	3	1,775
16+50	1650.00	50	77	--	8	--	135	--	9	--	1,912	14	1,898
17+00	1700.00	50	93	--	8	--	158	--	15	--	2,070	33	2,037
17+50	1750.00	50	105	--	8	--	183	--	15	--	2,253	51	2,202
18+00	1800.00	50	109	--	8	--	198	--	15	--	2,451	70	2,381
18+50	1850.00	50	96	--	11	--	190	--	17	--	2,640	91	2,549
19+00	1900.00	50	110	--	14	--	190	--	23	--	2,830	120	2,710
19+50	1950.00	50	109	--	15	--	202	--	27	--	3,032	154	2,878
20+00	2000.00	50	93	--	19	--	187	--	32	--	3,219	194	3,025
20+50	2050.00	50	101	--	23	--	180	--	39	--	3,399	242	3,157
21+00	2100.00	50	252	--	--	--	327	--	21	--	3,726	269	3,457
21+50	2150.00	50	115	--	30	--	340	--	27	--	4,066	303	3,763
22+00	2200.00	50	118	--	24	--	216	--	49	--	4,282	365	3,917
22+50	2250.00	50	164	--	63	--	261	--	80	--	4,543	465	4,078
22+80	2280.00	30	73	--	--	--	132	--	35	--	4,675	509	4,167
			TOTALS				4,675	0	407	0			

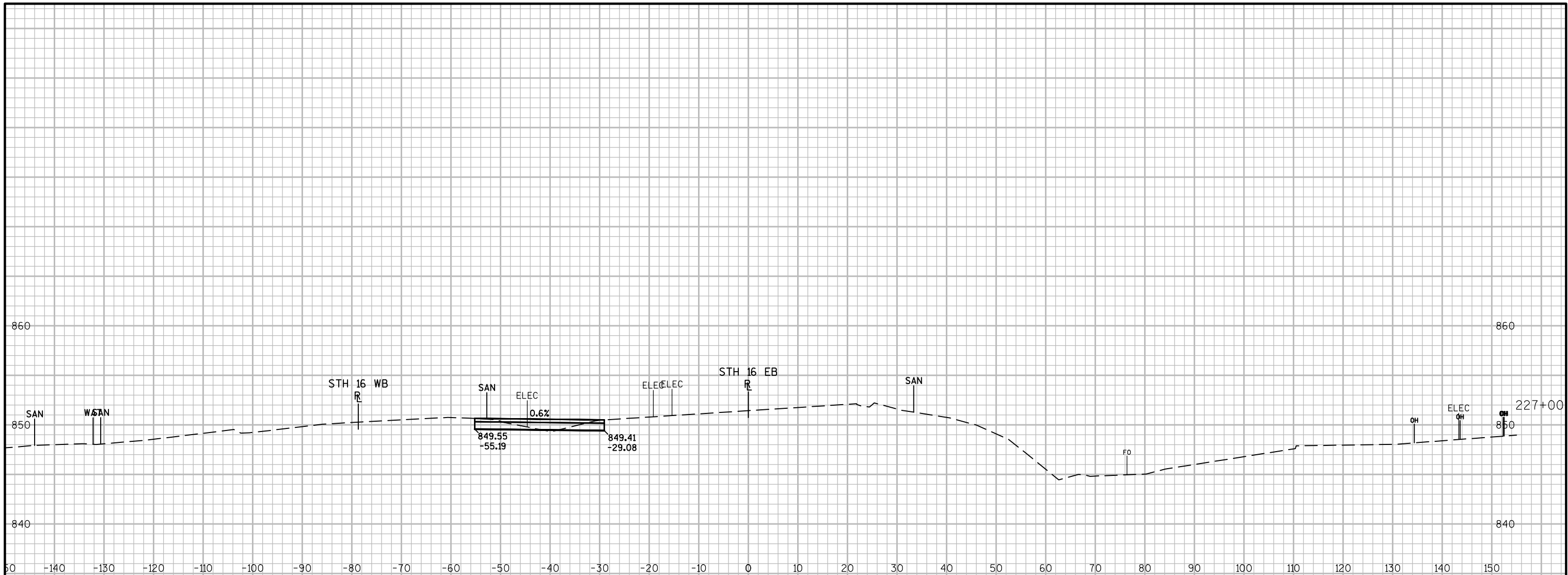
STH 16 MEDIAN - STAGE 3													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
223+80	22380.00	--	22	--	--	--	--	--	--	--	--	--	--
224+00	22400.00	20	32	--	--	--	20	--	--	--	20	--	20
224+50	22450.00	50	27	--	--	--	55	--	--	--	75	--	75
225+00	22500.00	50	27	--	--	--	51	--	--	--	126	--	126
225+50	22550.00	50	27	--	--	--	51	--	--	--	177	--	177
226+00	22600.00	50	27	--	--	--	51	--	--	--	228	--	228
226+50	22650.00	50	27	--	--	--	51	--	--	--	279	--	279
227+00	22700.00	50	27	--	--	--	51	--	--	--	330	--	330
SUBTOTALS							330	0	0	0			
228+09	22809.00	109	55	--	--	--	166	--	--	--	--	--	330
228+50	22850.00	41	32	--	--	--	66	--	--	--	66	--	395
229+00	22900.00	50	31	--	--	--	58	--	--	--	124	--	454
229+50	22950.00	50	31	--	--	--	57	--	--	--	181	--	511
230+00	23000.00	50	31	--	--	--	57	--	--	--	238	--	568
230+50	23050.00	50	30	--	--	--	56	--	--	--	294	--	624
231+00	23100.00	50	27	--	--	--	52	--	--	--	346	--	676
231+30	23130.00	30	28	--	--	--	31	--	--	--	377	--	707
SUBTOTAL							543	0	0	0			
TOTALS							873	0	0	0			

STH 60 EB - STAGE 3													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
15+33	1,533	--	33	--	21	--	--	--	--	--	--	--	
15+50	1,550	17	41	--	5	--	23	--	8	--	23	10	13
16+00	1,600	50	107	--	--	--	137	--	4	--	160	15	145
16+50	1,650	50	36	--	43	--	132	--	39	--	292	65	228
17+00	1,700	50	10	--	65	--	42	--	100	--	335	190	145
17+50	1,750	50	10	--	55	--	18	--	111	--	353	329	24
18+00	1,800	50	10	--	59	--	18	--	106	--	371	461	-90
18+16	1,816	16	10	--	52	--	6	--	33	--	377	502	-125
TOTALS							377	0	401	0			

COMMERCE DRIVE - STAGE 3													
STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
			Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	
00+12	12.00	--	58	--	--	--	--	--	--	--	--	--	--
00+25	25.00	13	55	--	--	--	27	--	--	--	27	--	27
00+50	50.00	25	120	--	71	--	81	--	33	--	108	41	67
00+66	66.00	16	105	--	74	--	67	--	43	--	175	94	81
TOTALS							175	0	75	0			



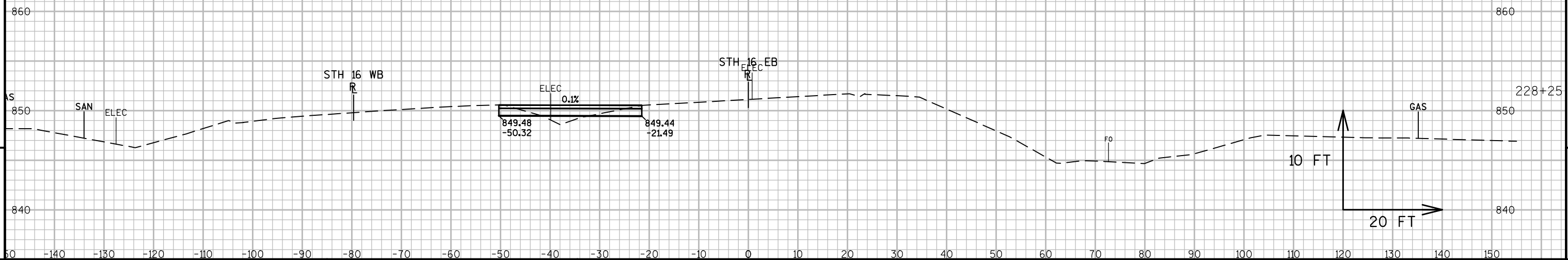
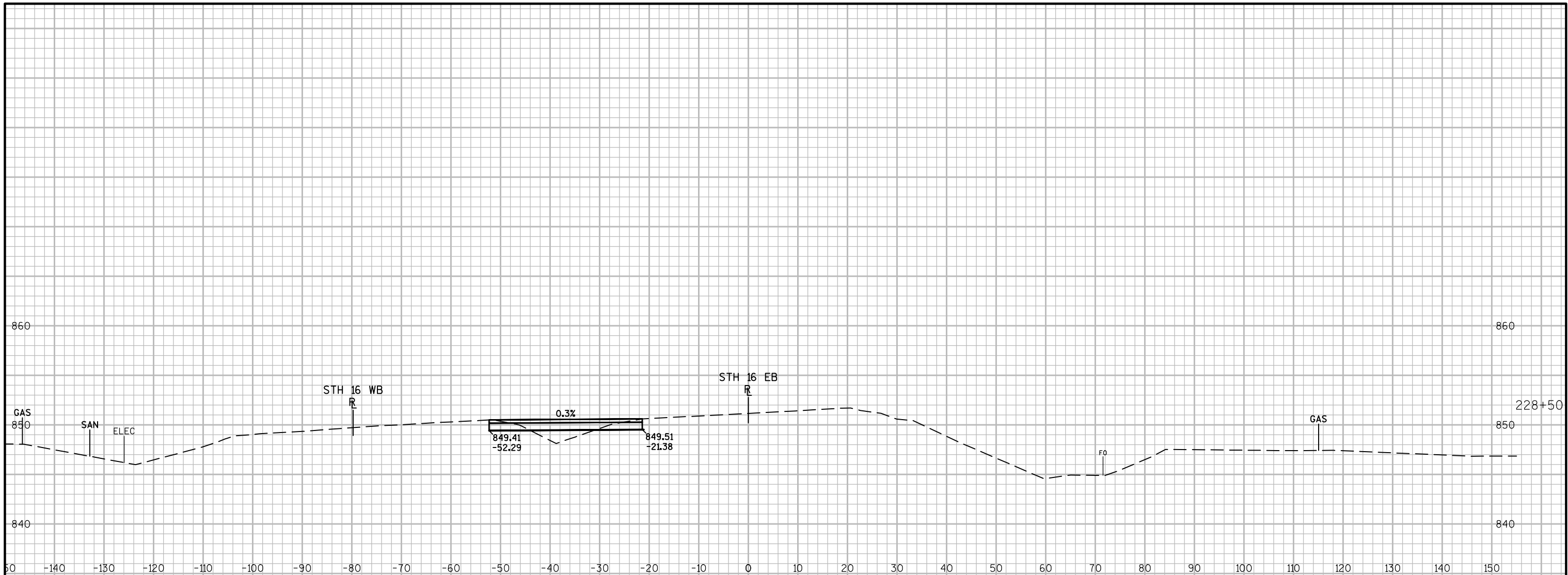




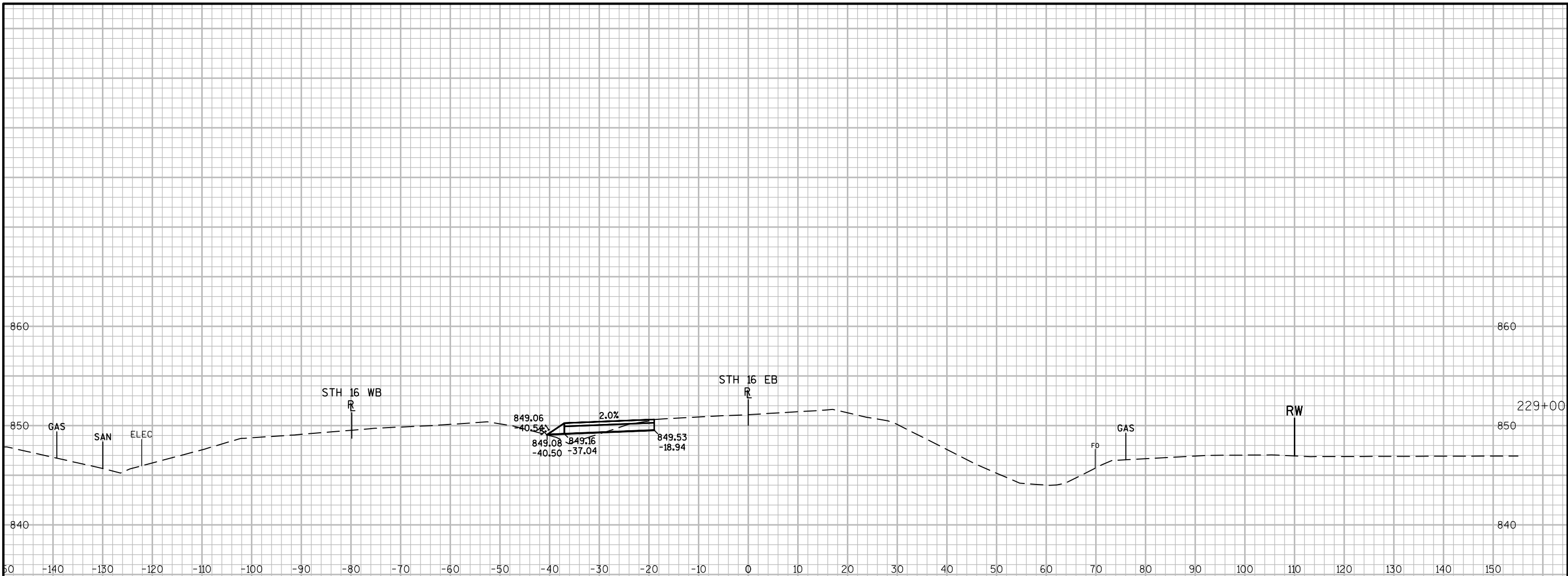
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 1A	SHEET	E
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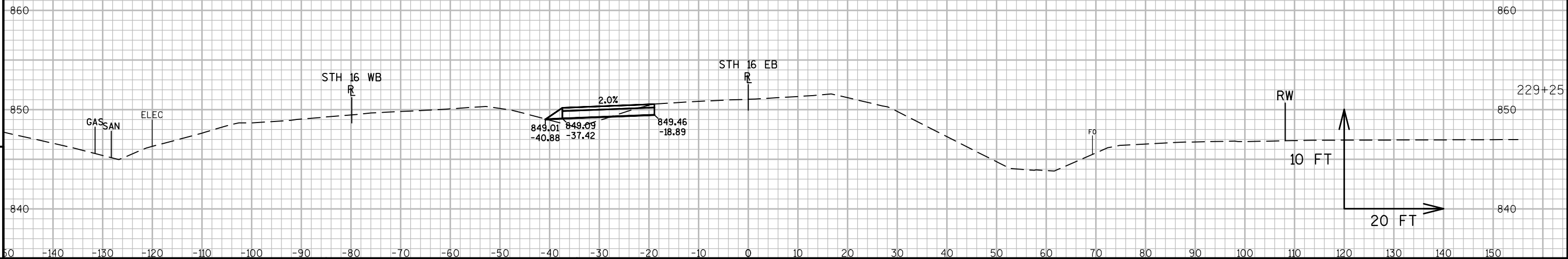
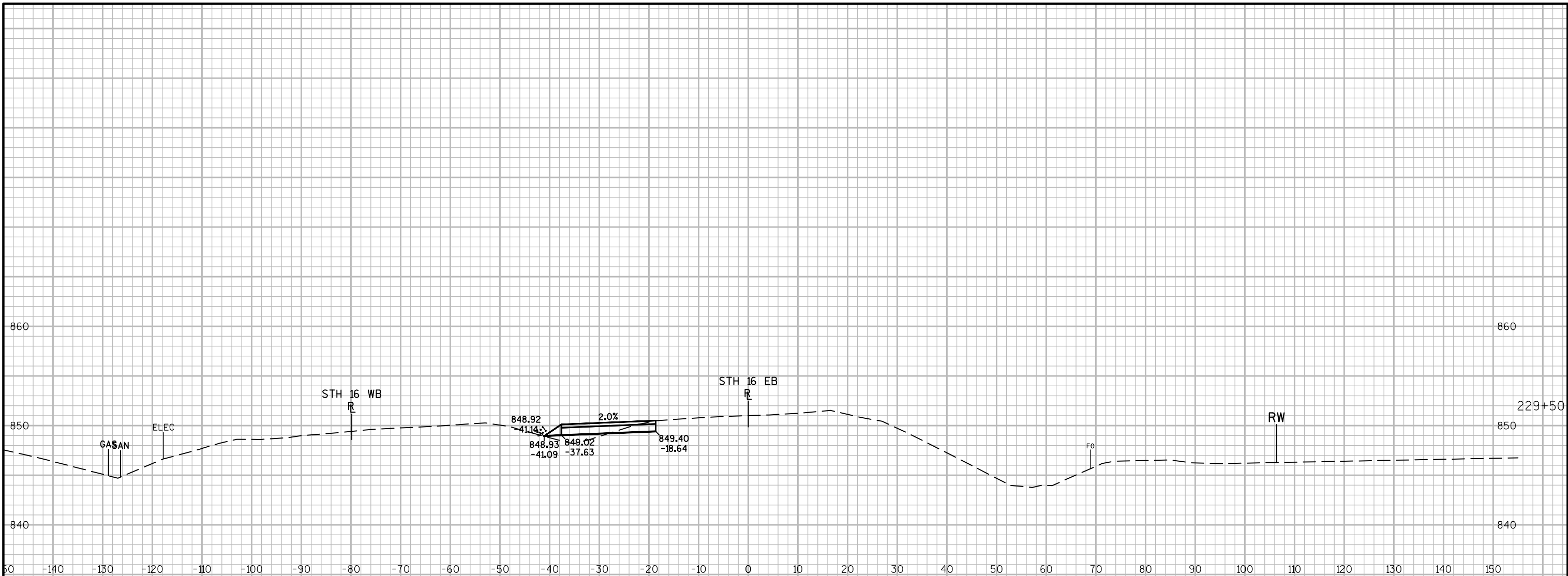


PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 1A	SHEET	E
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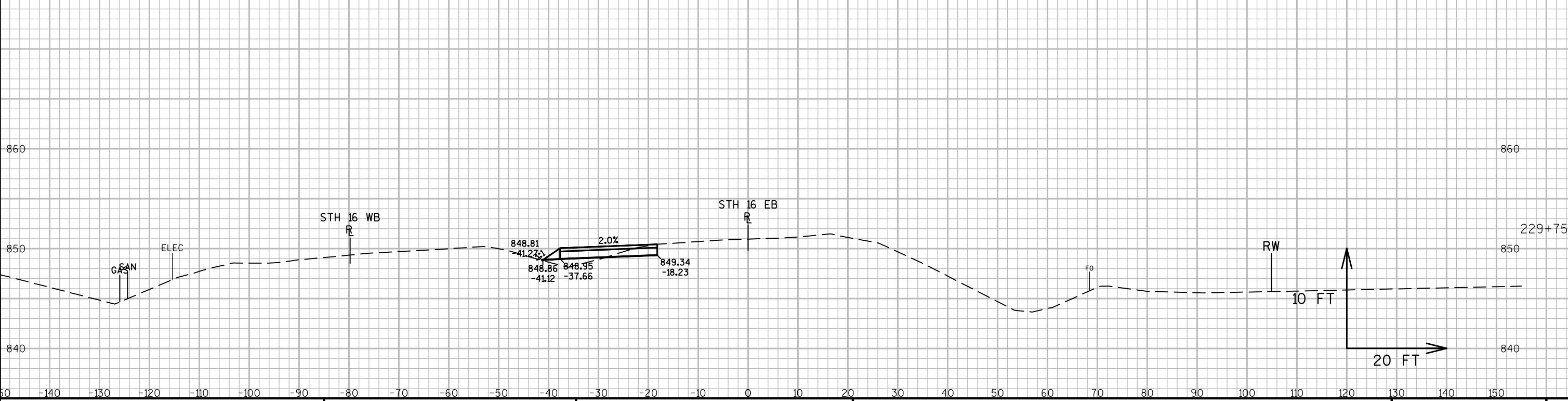


PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 1A	SHEET	E
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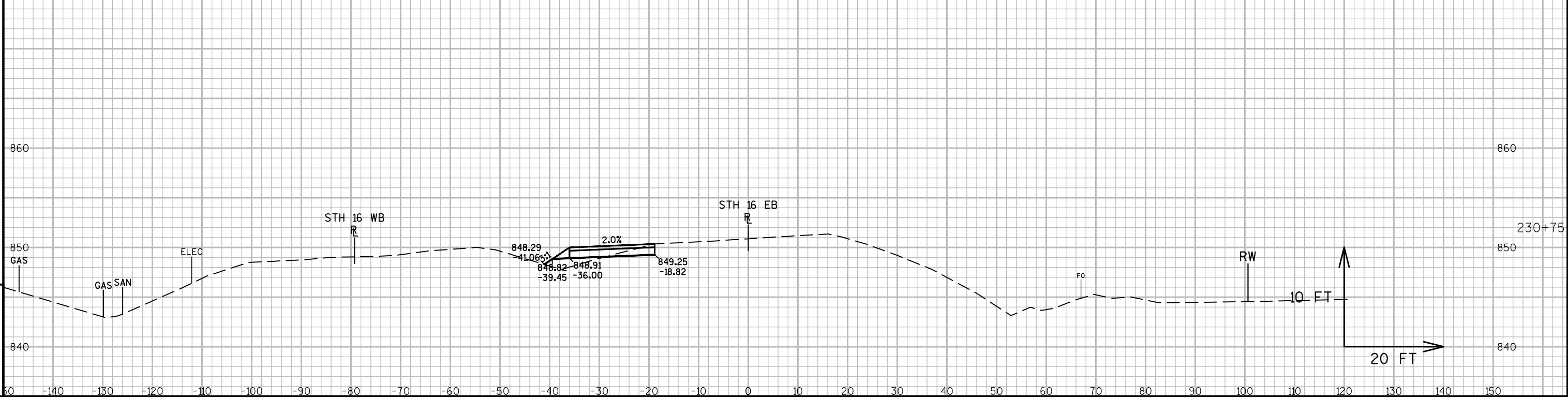
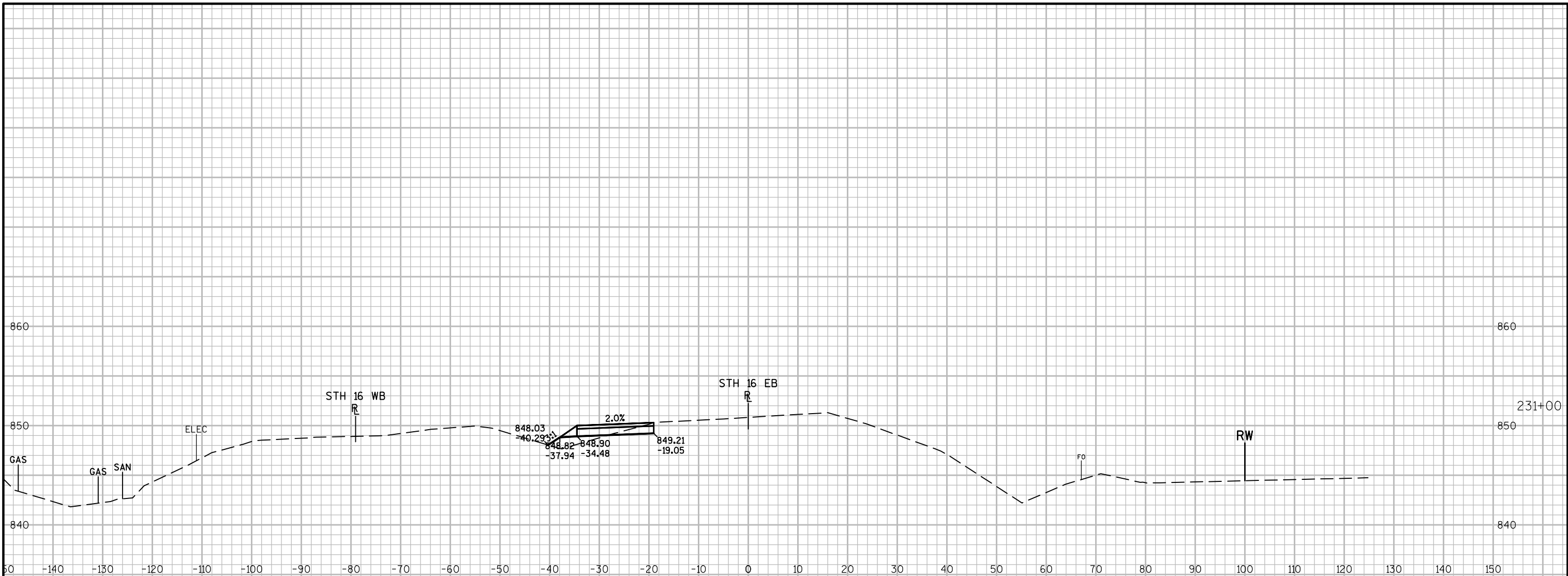


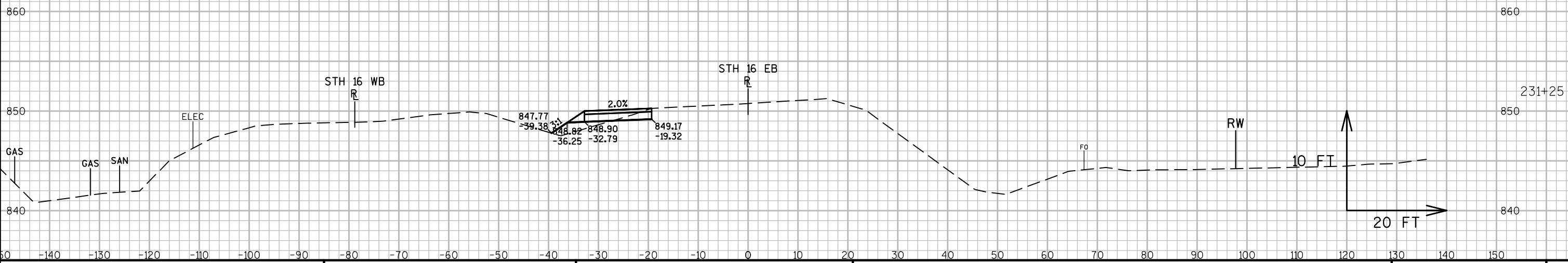


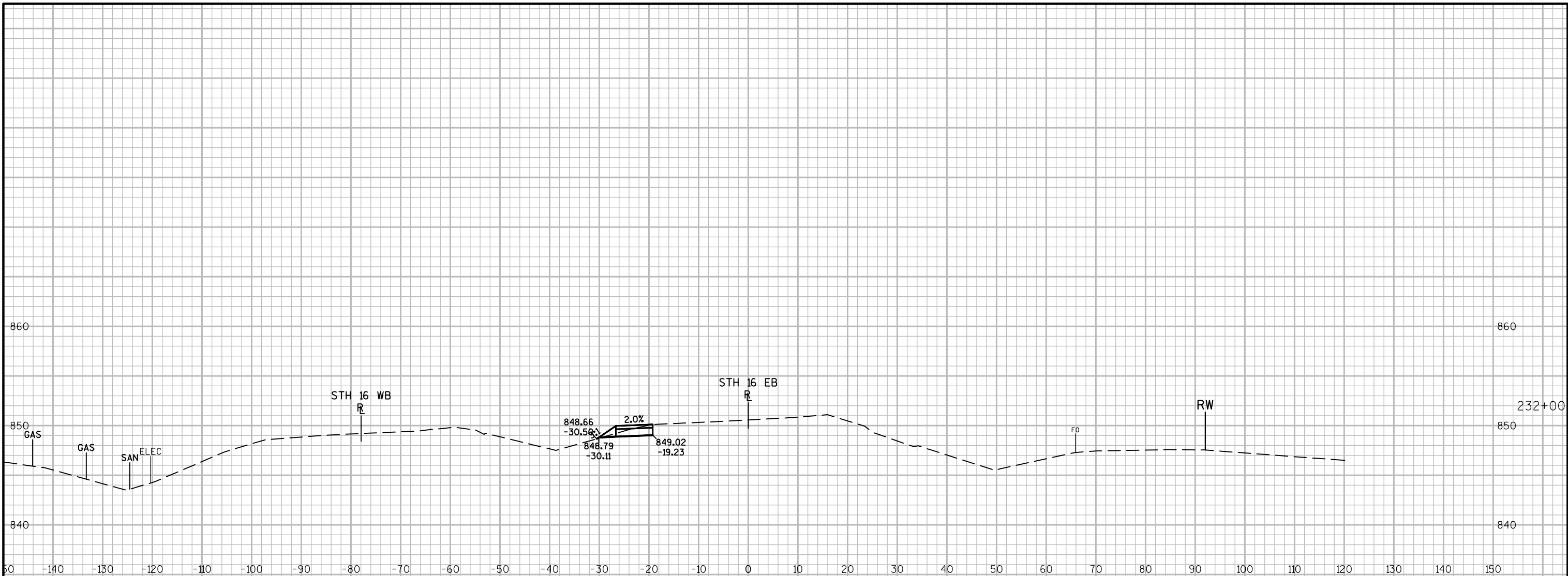
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 1A	SHEET	E
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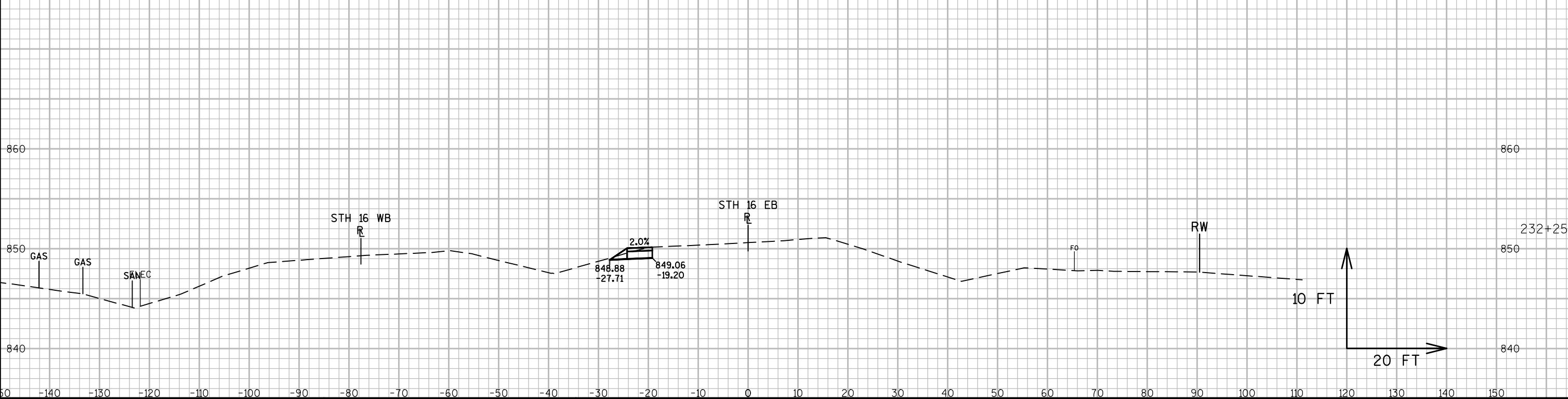


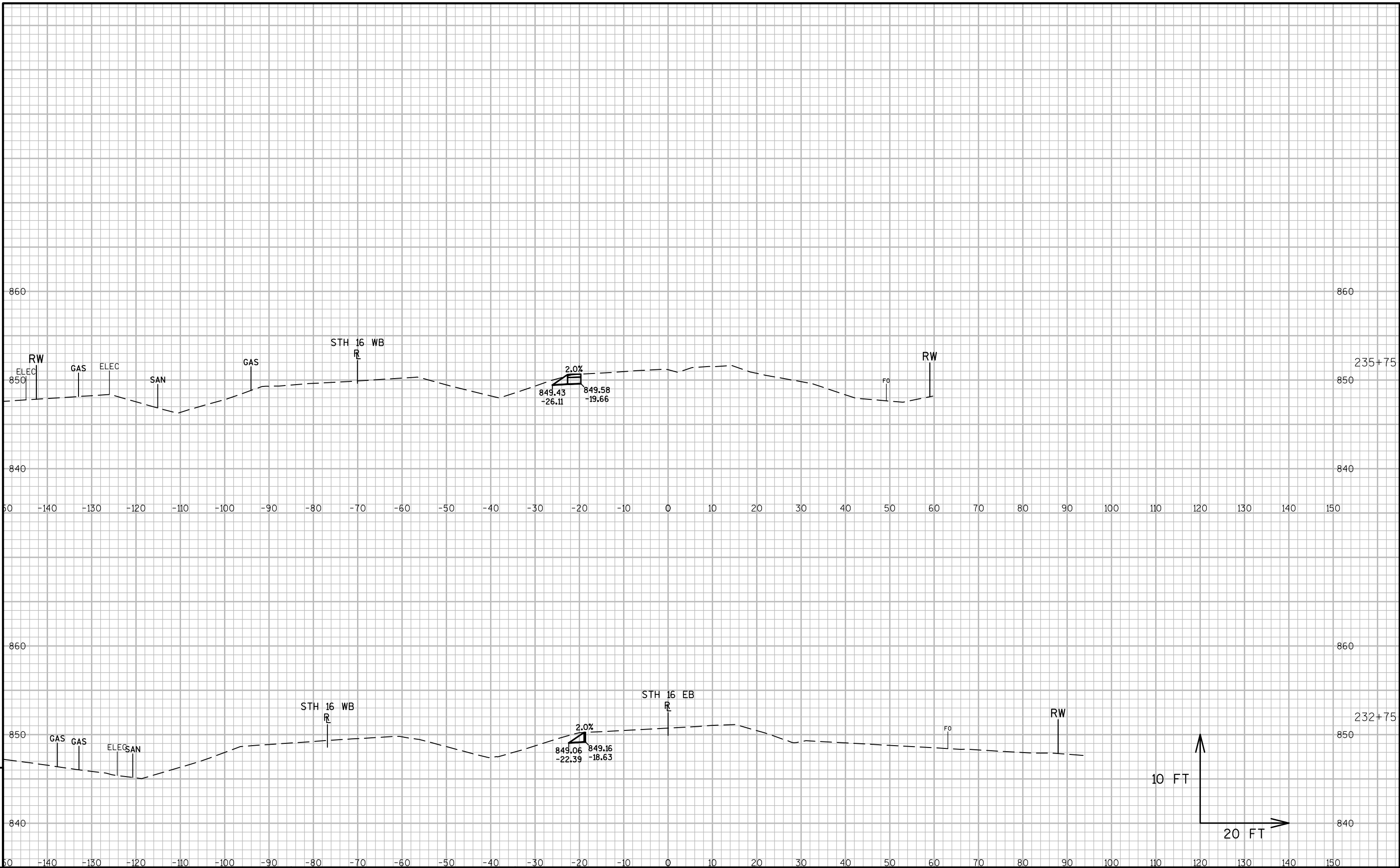
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 1A	SHEET	E
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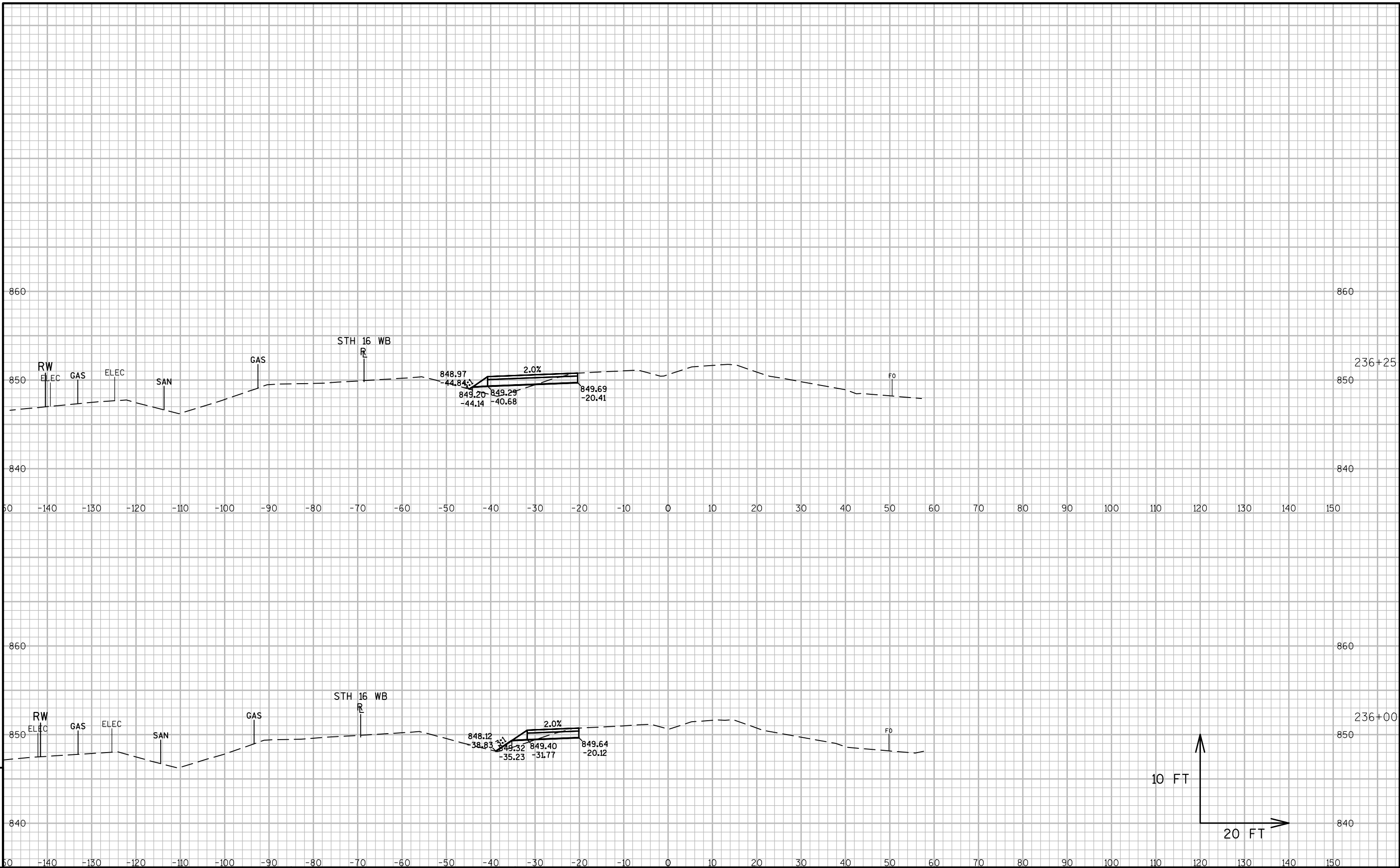


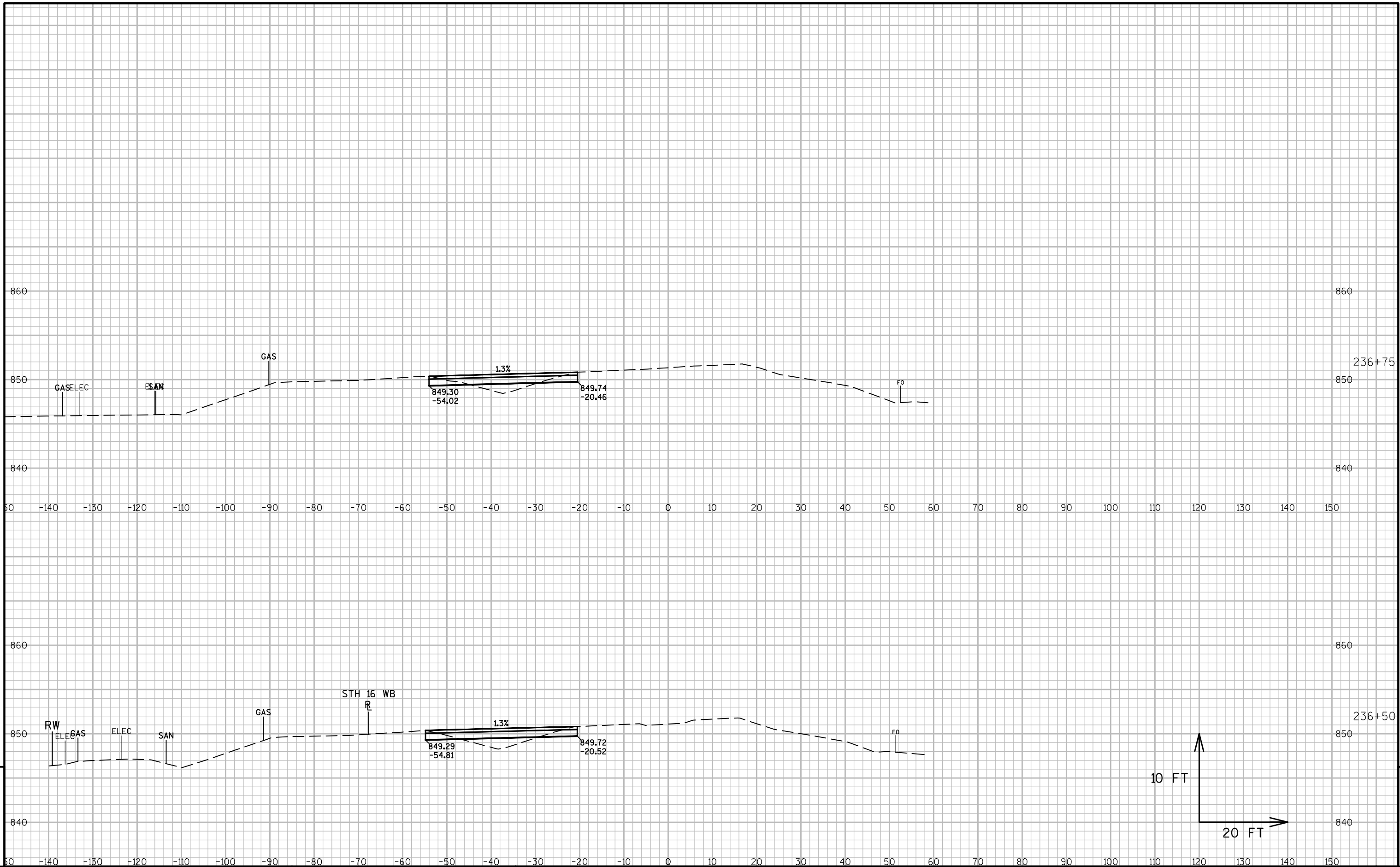


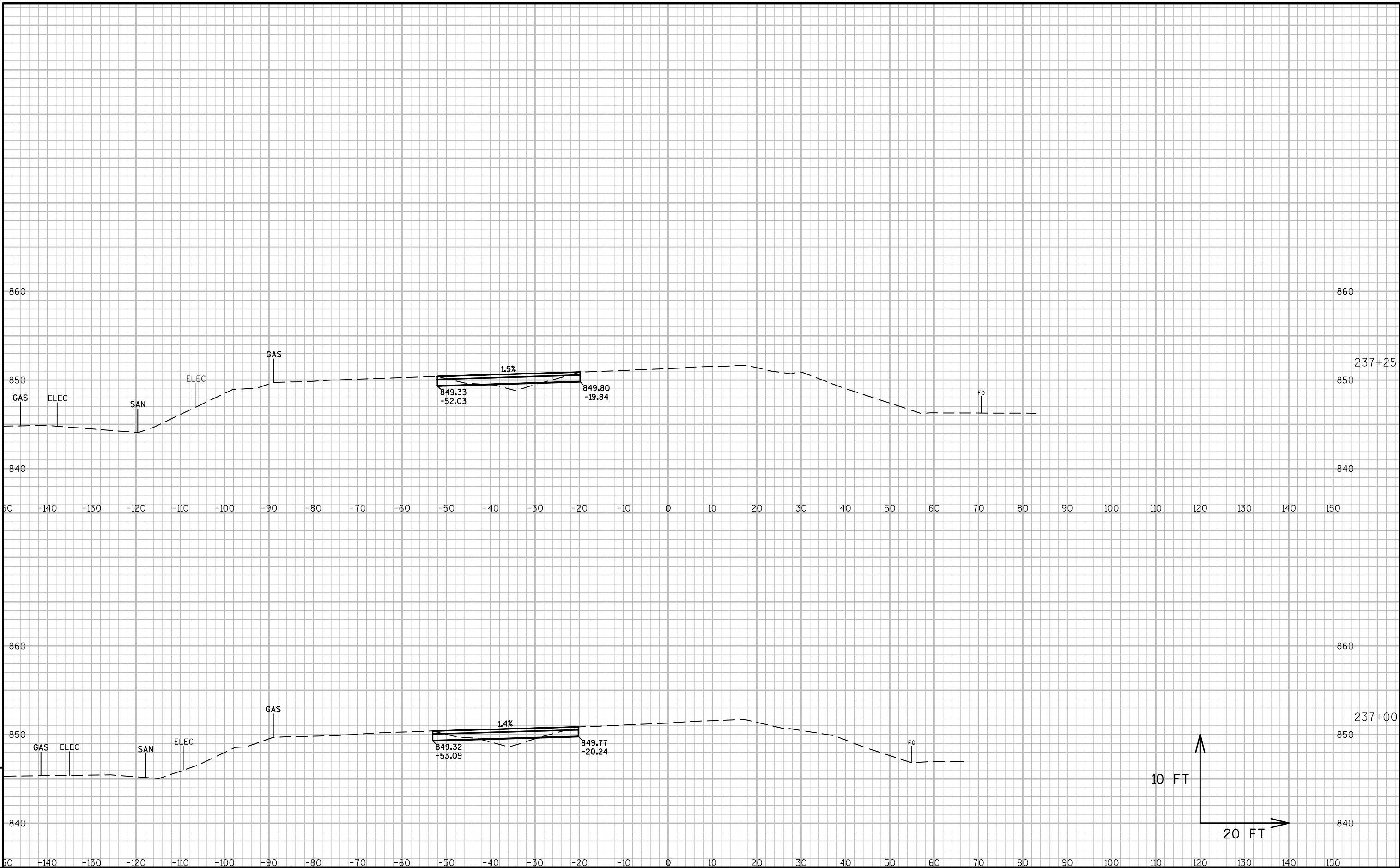


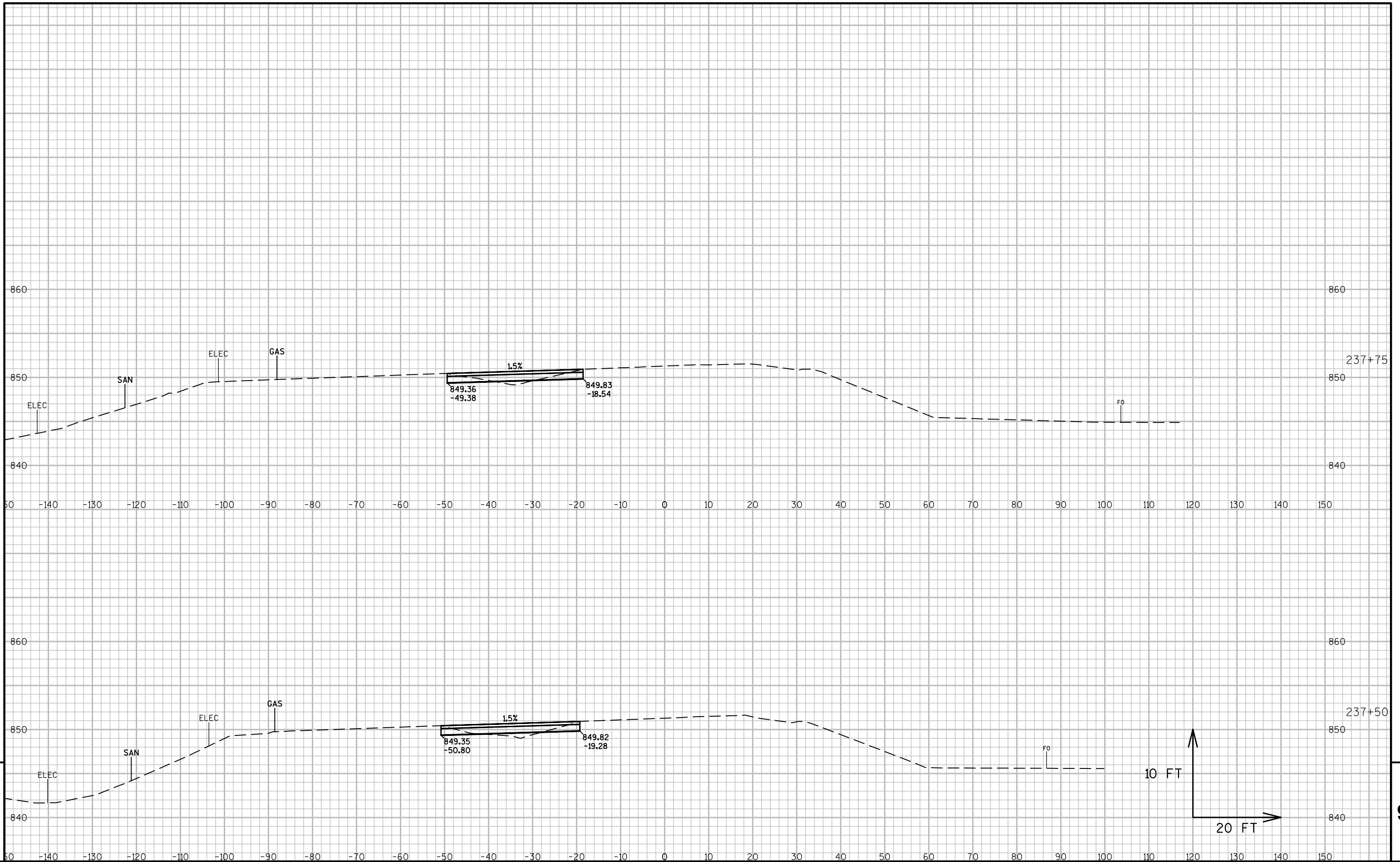




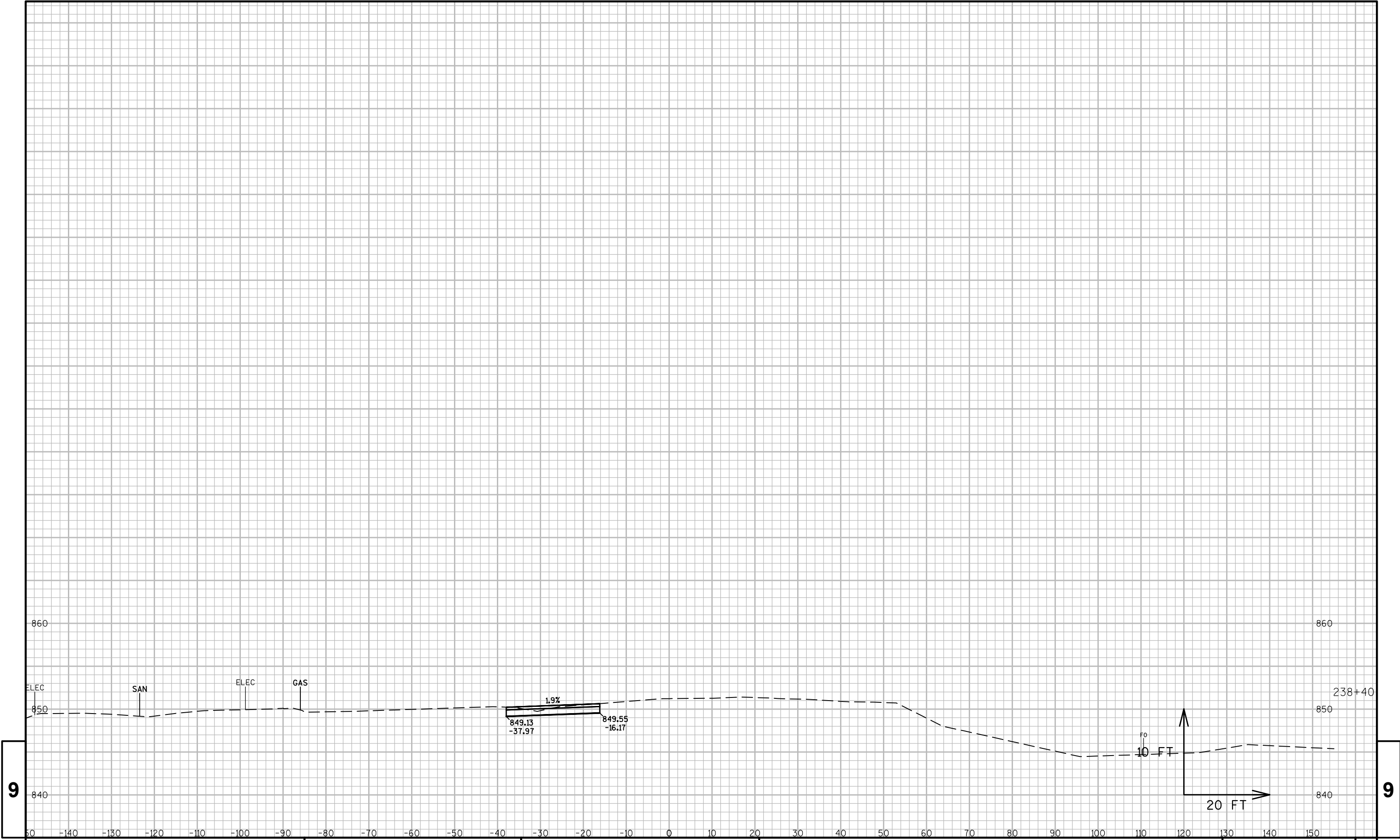


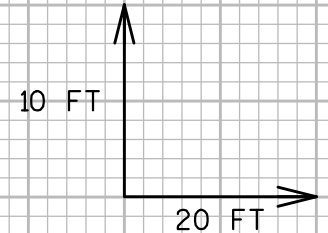
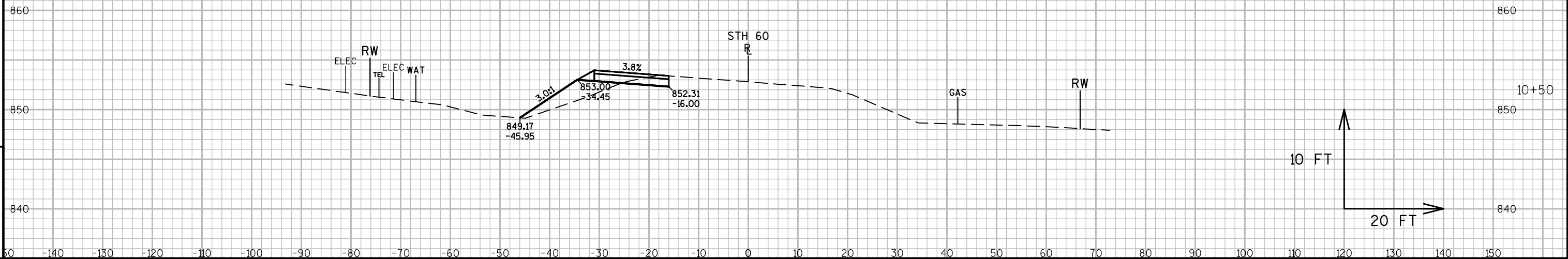
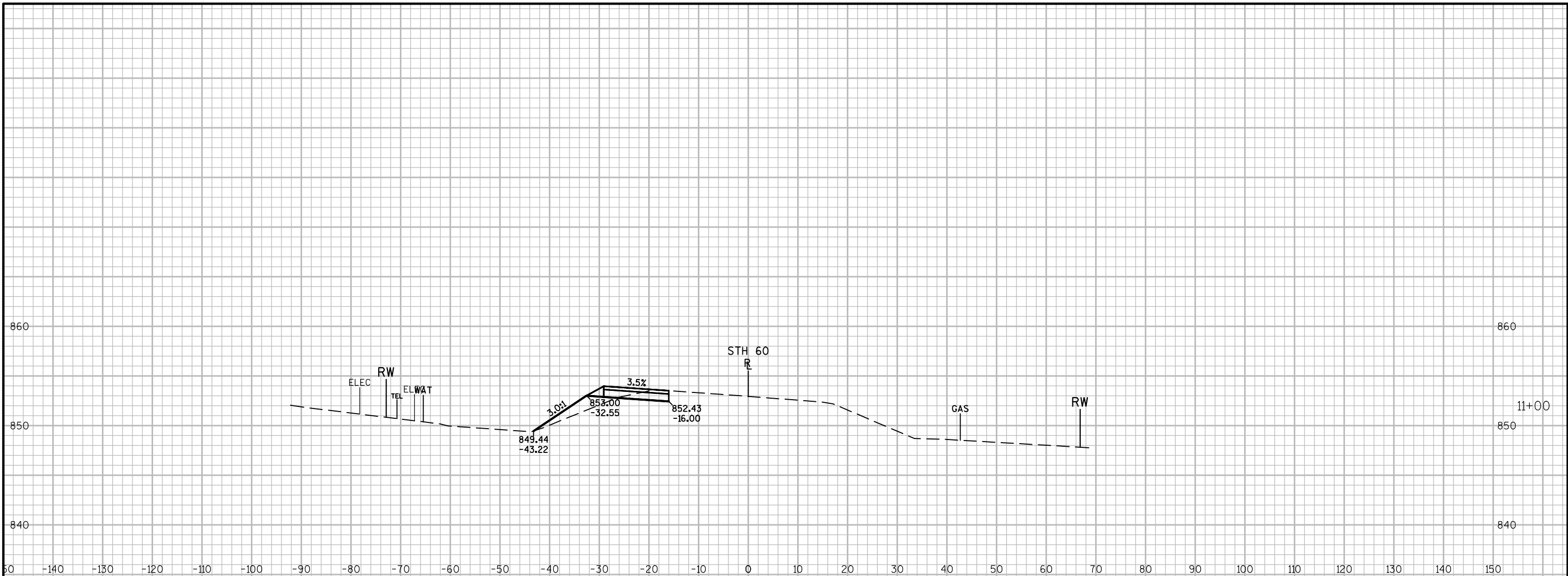


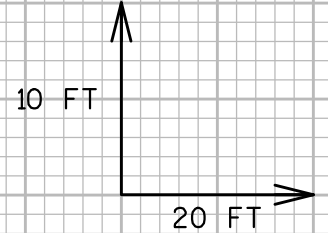
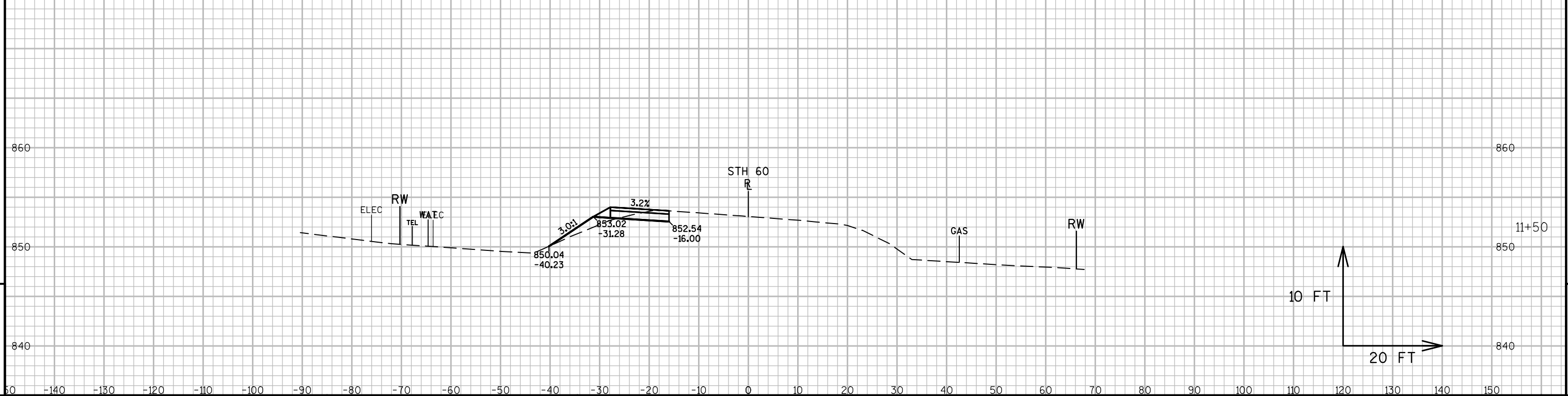


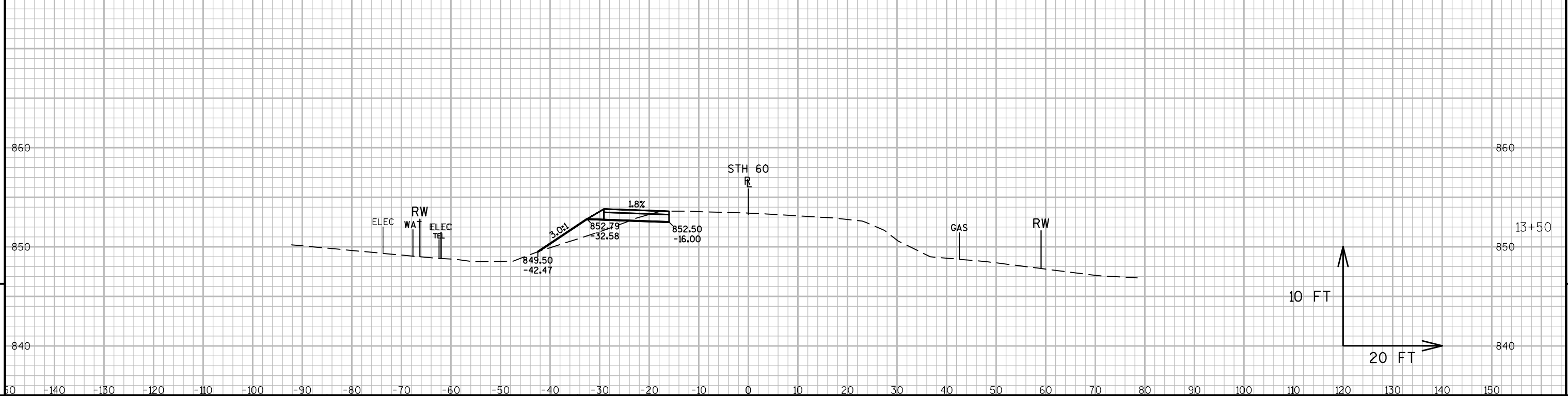
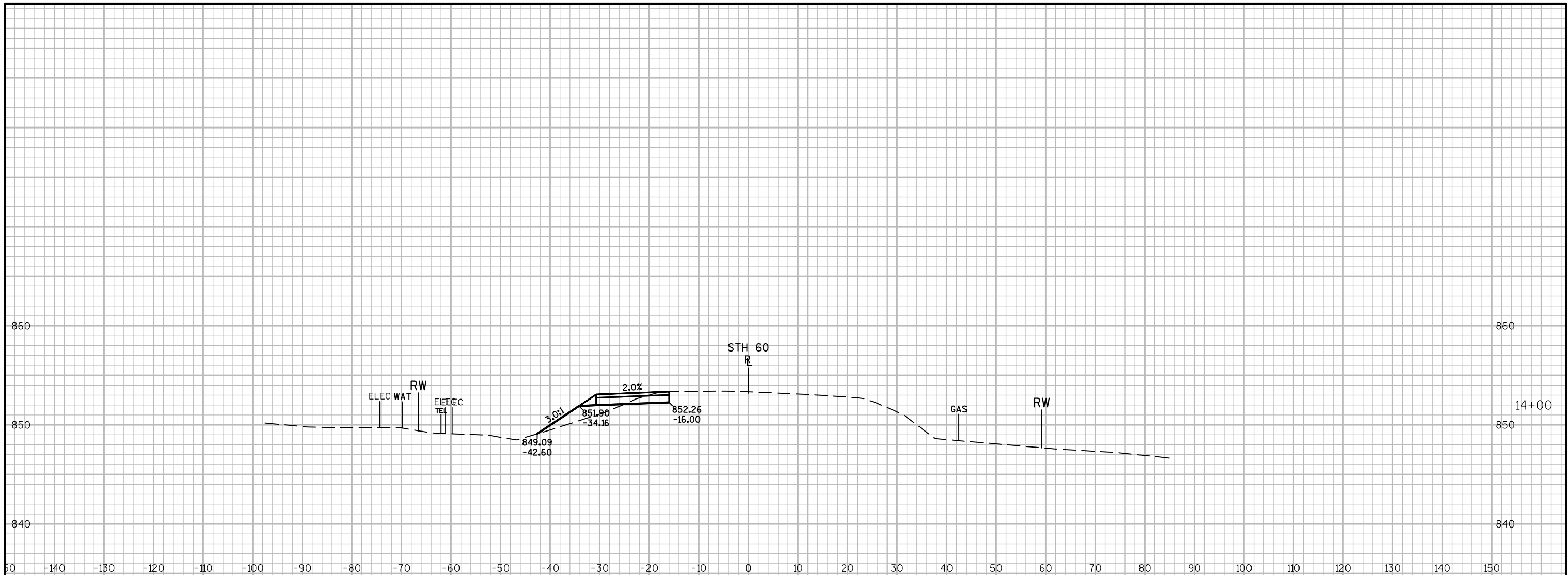


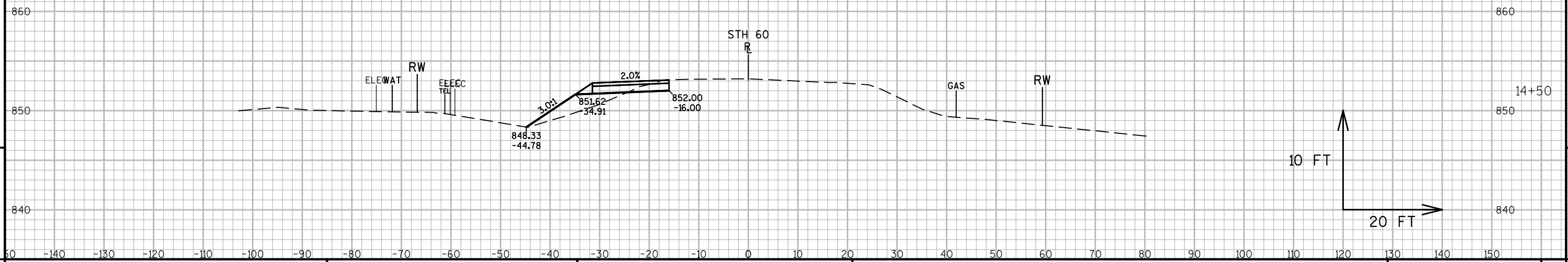
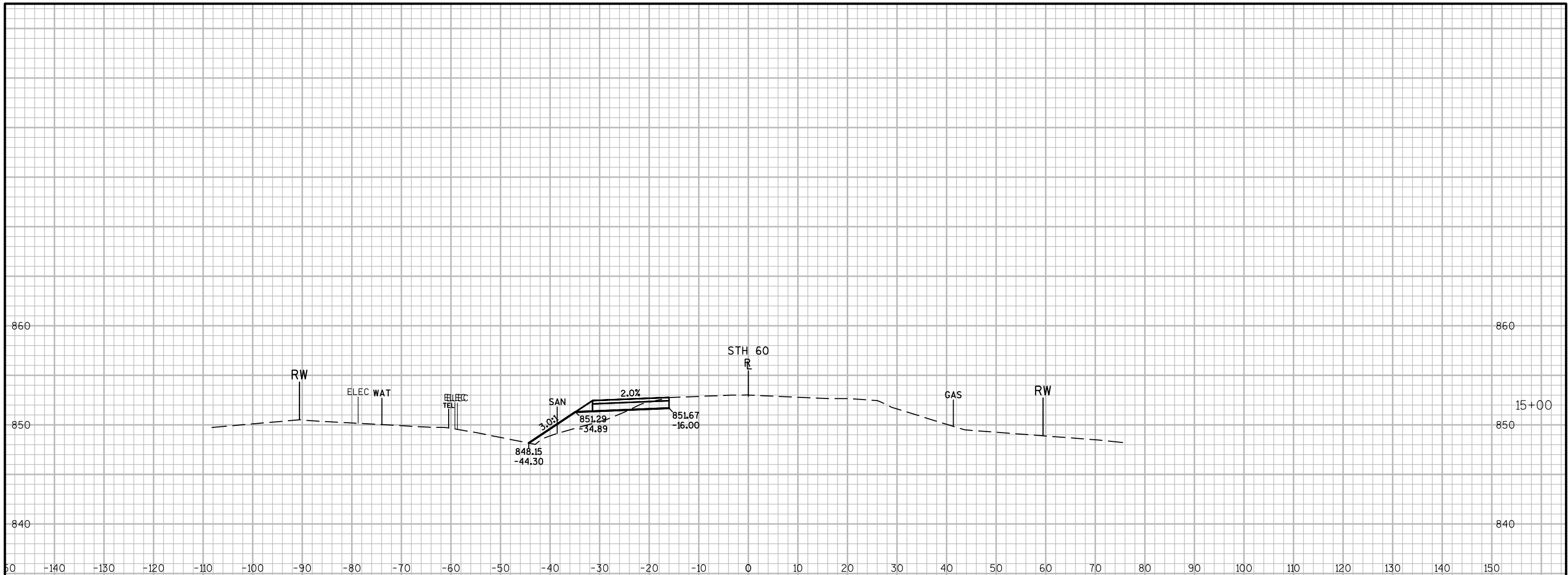




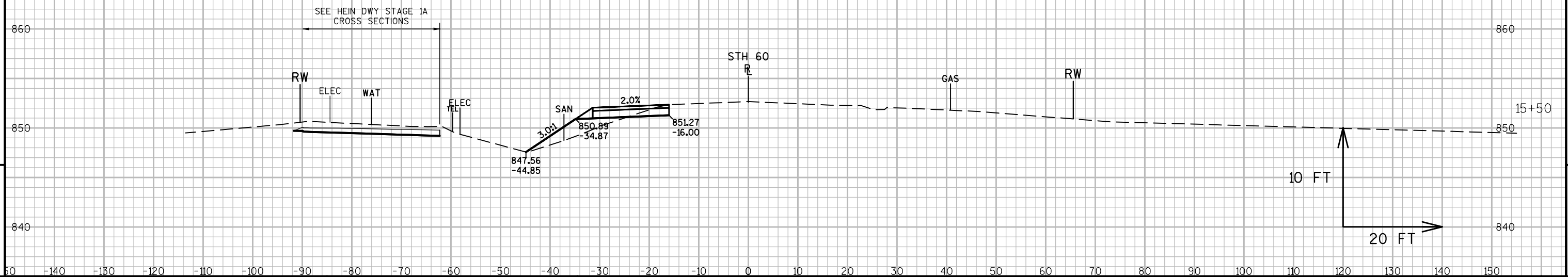
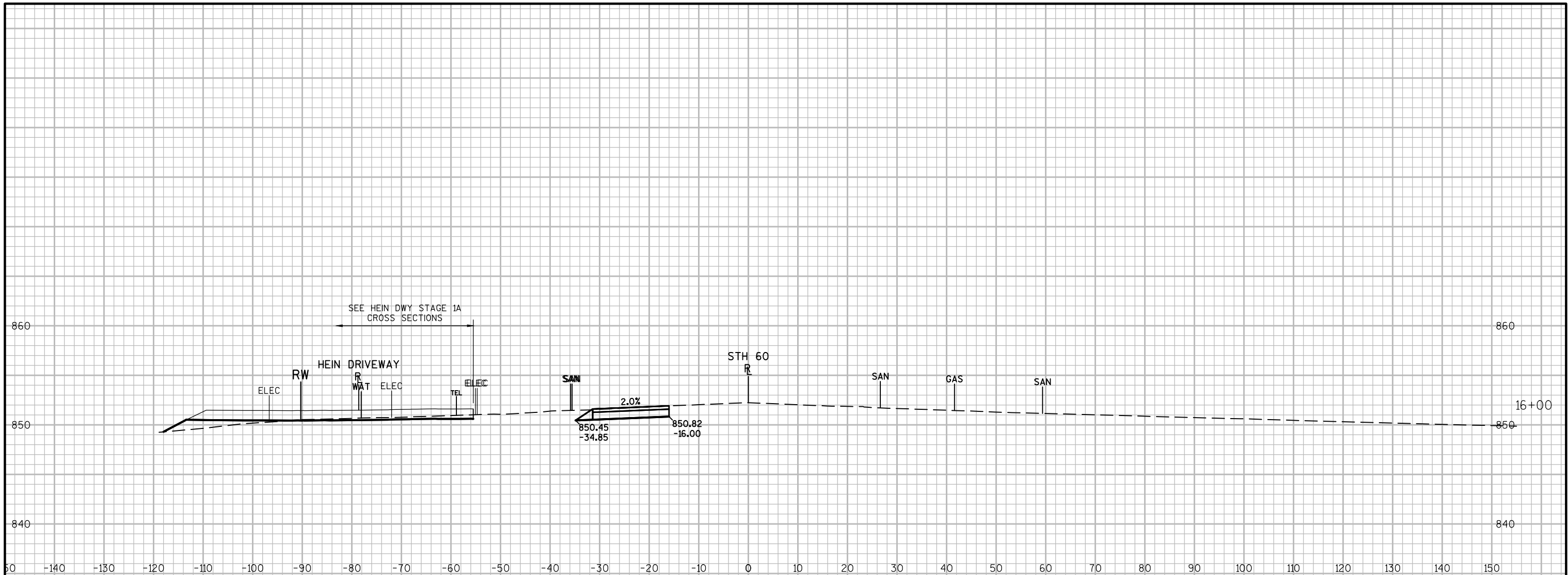


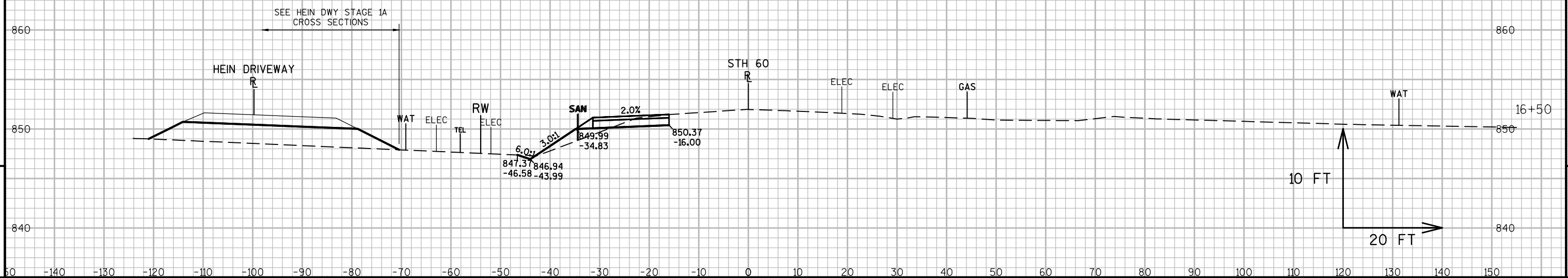


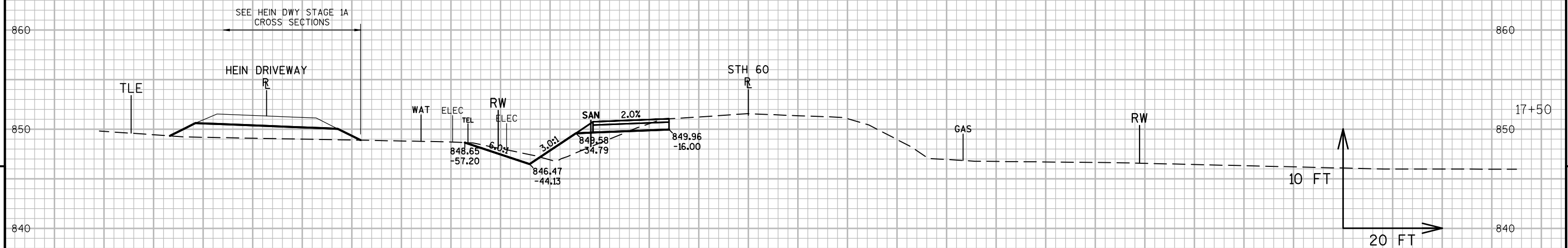
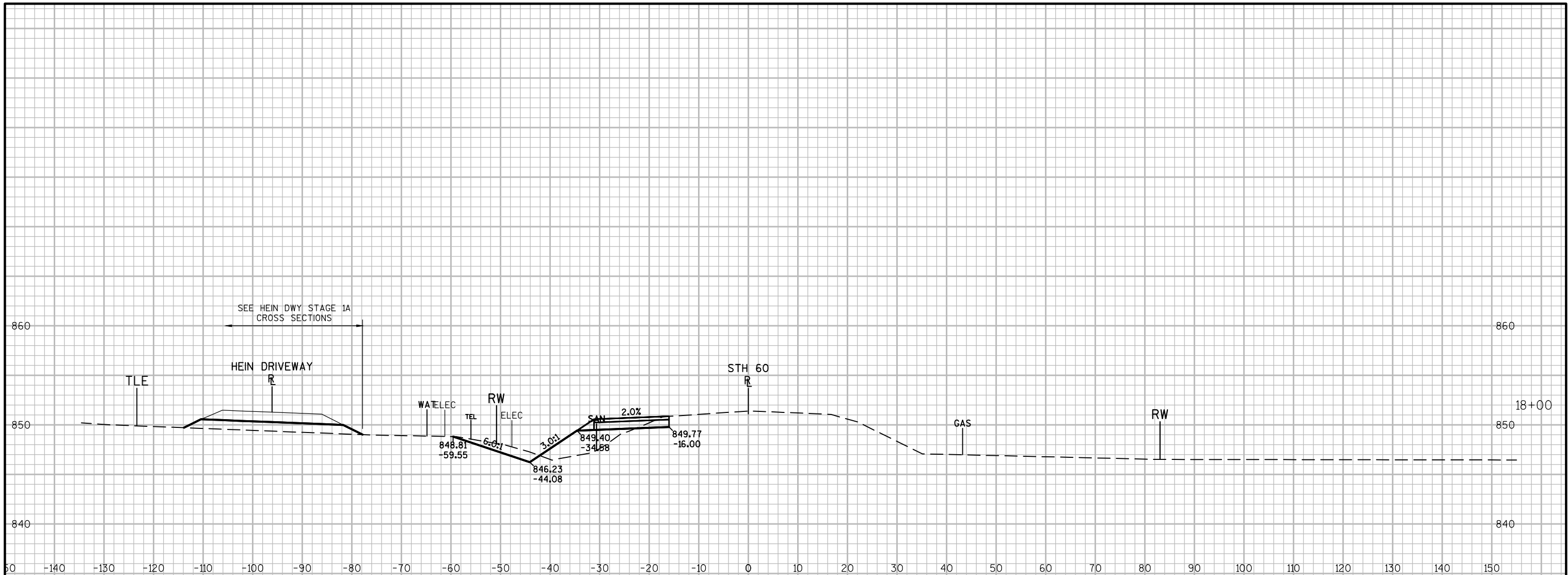


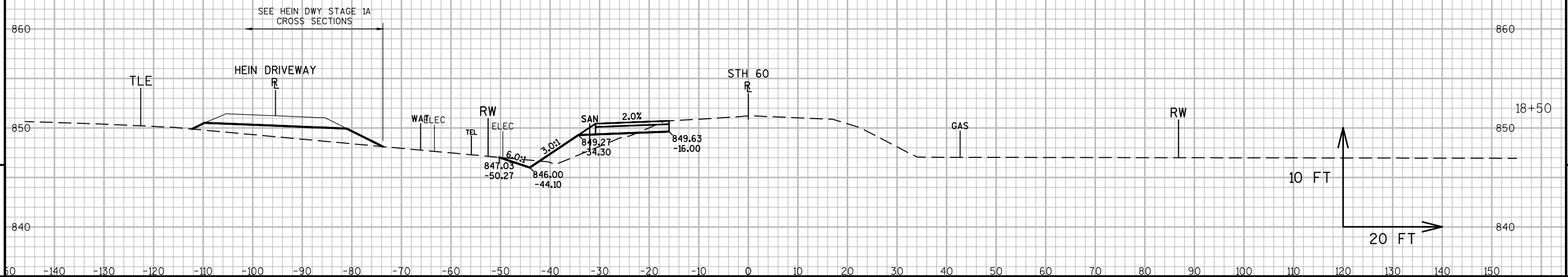
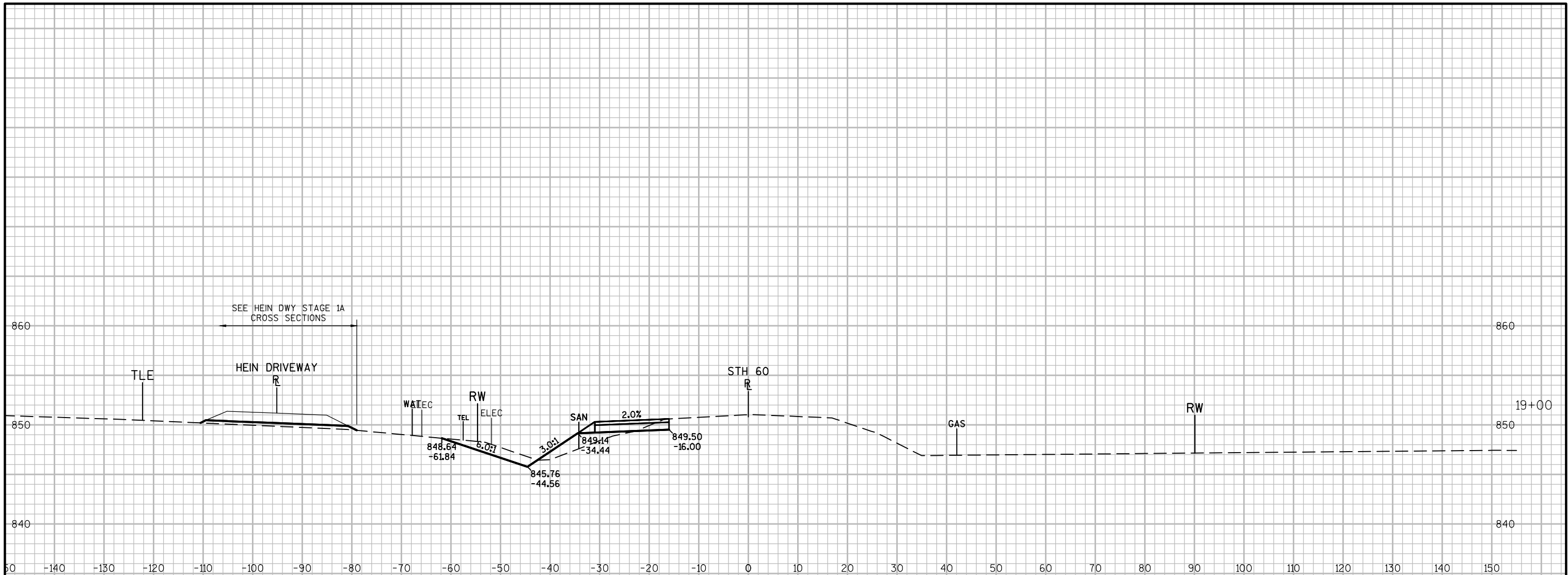


PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 60 - STAGE 1A	SHEET	E
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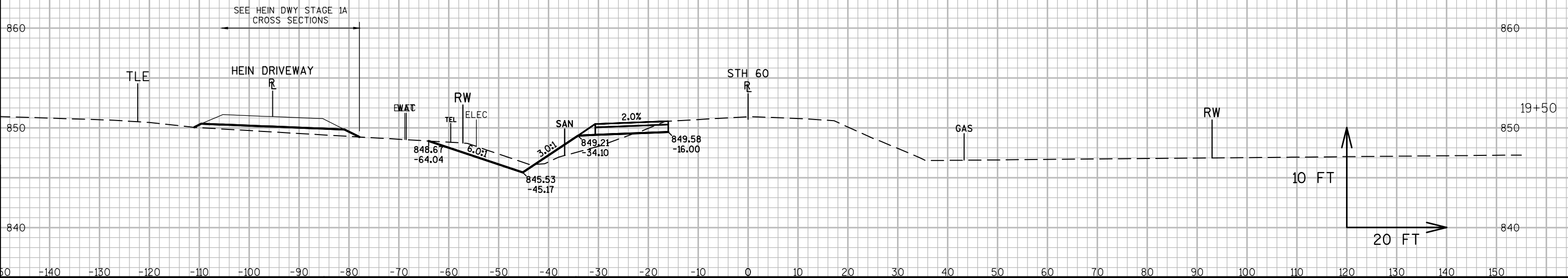
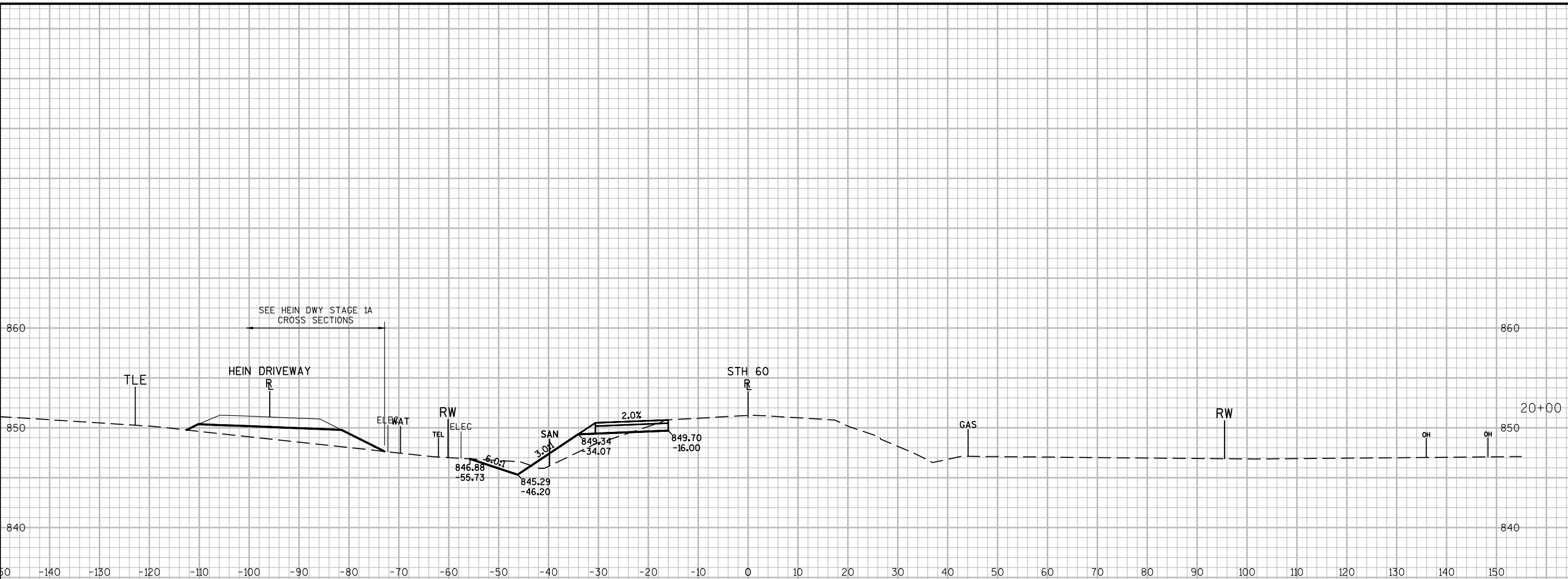


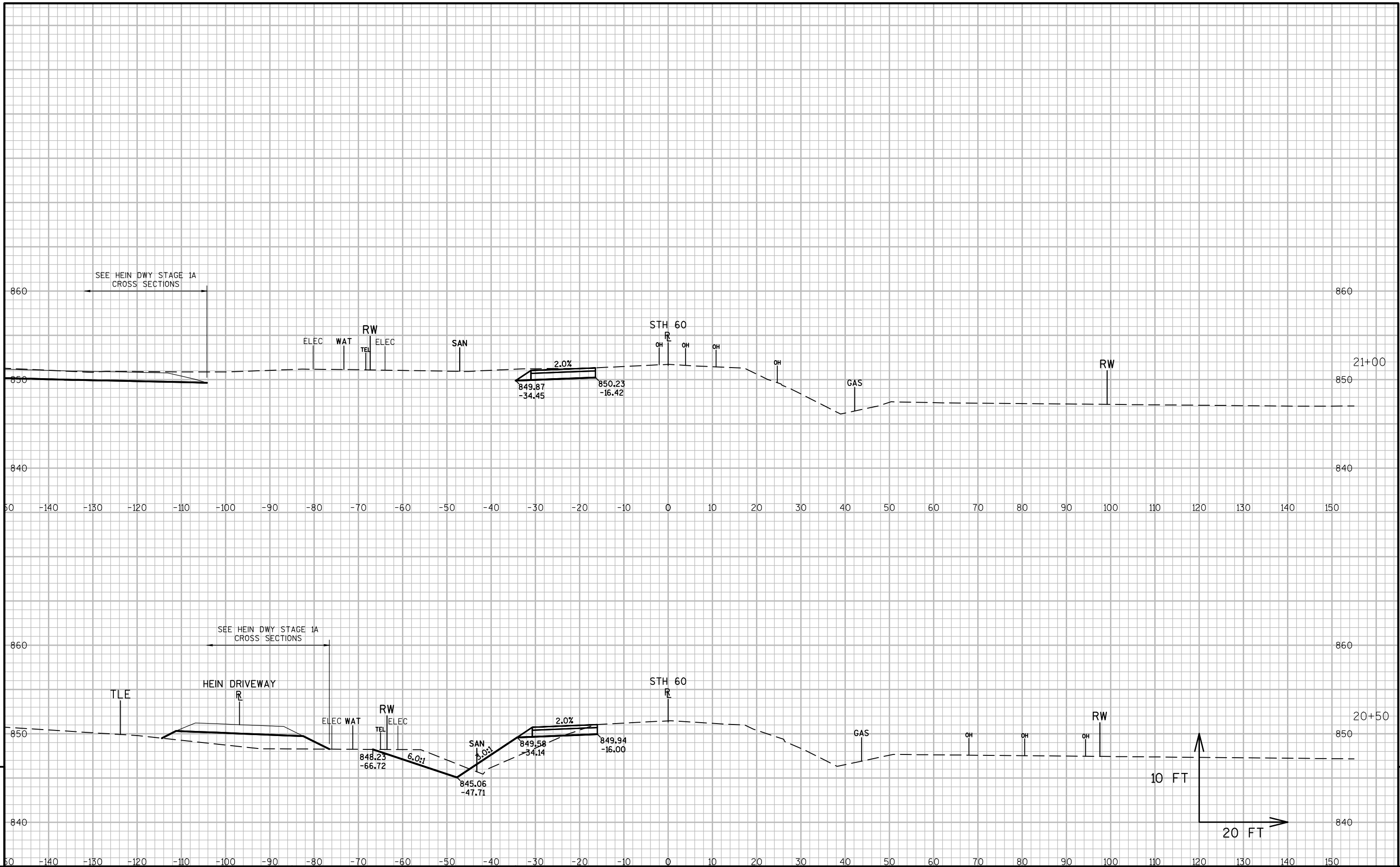


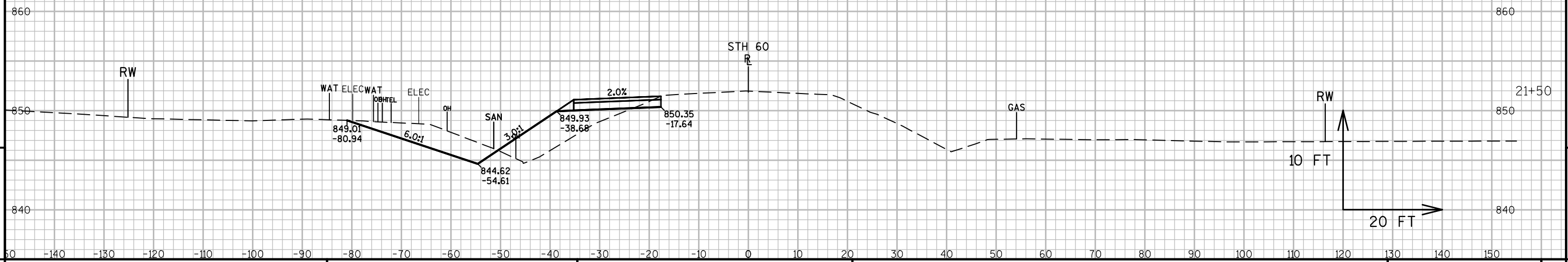
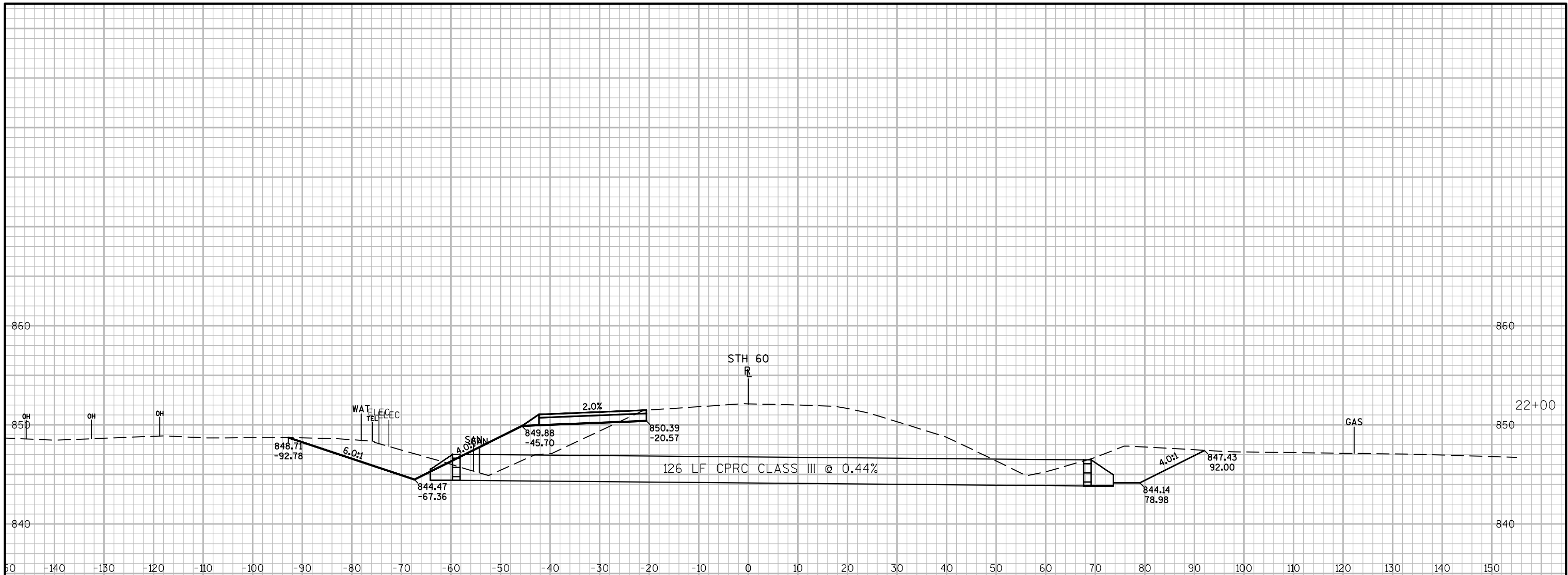


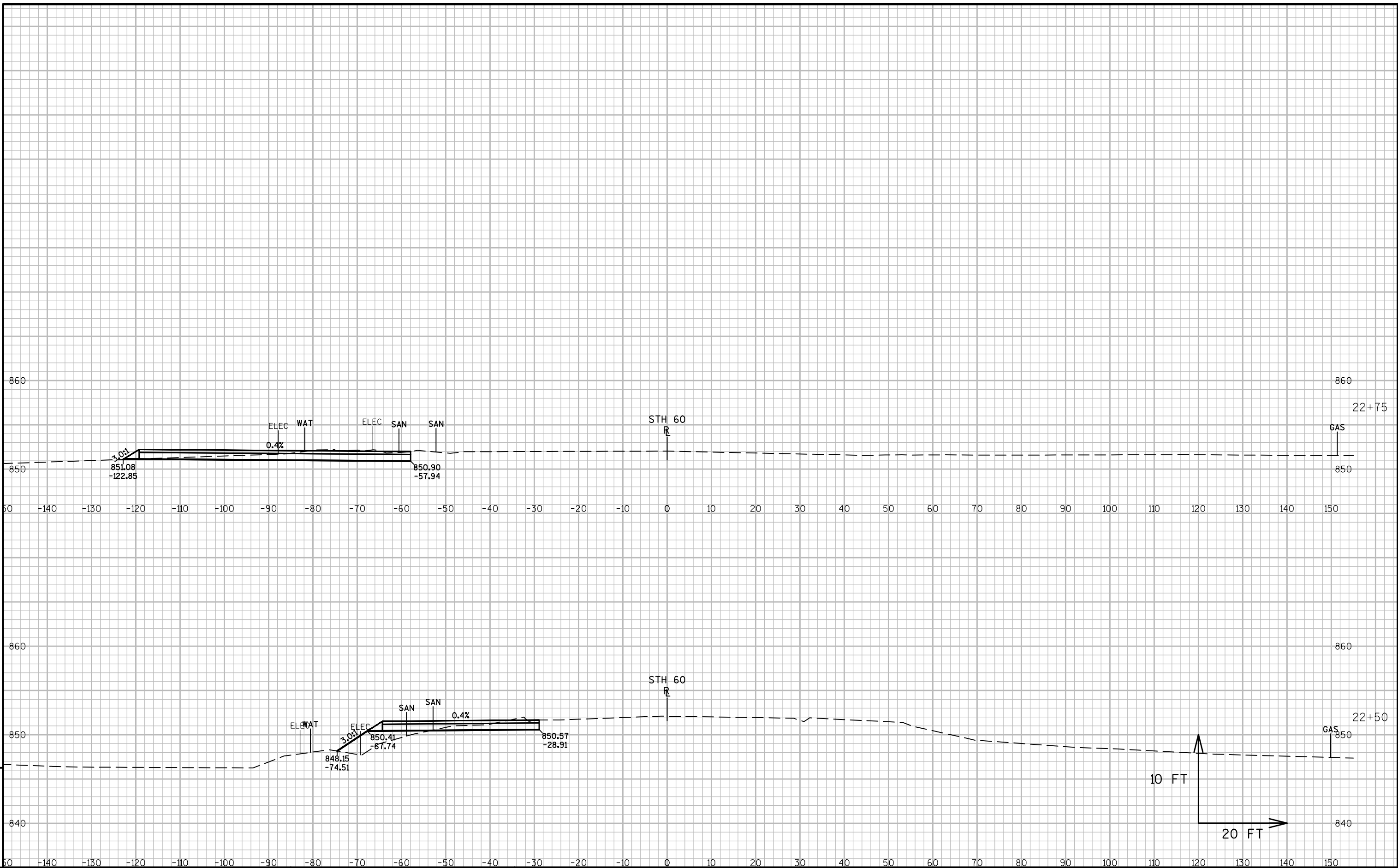


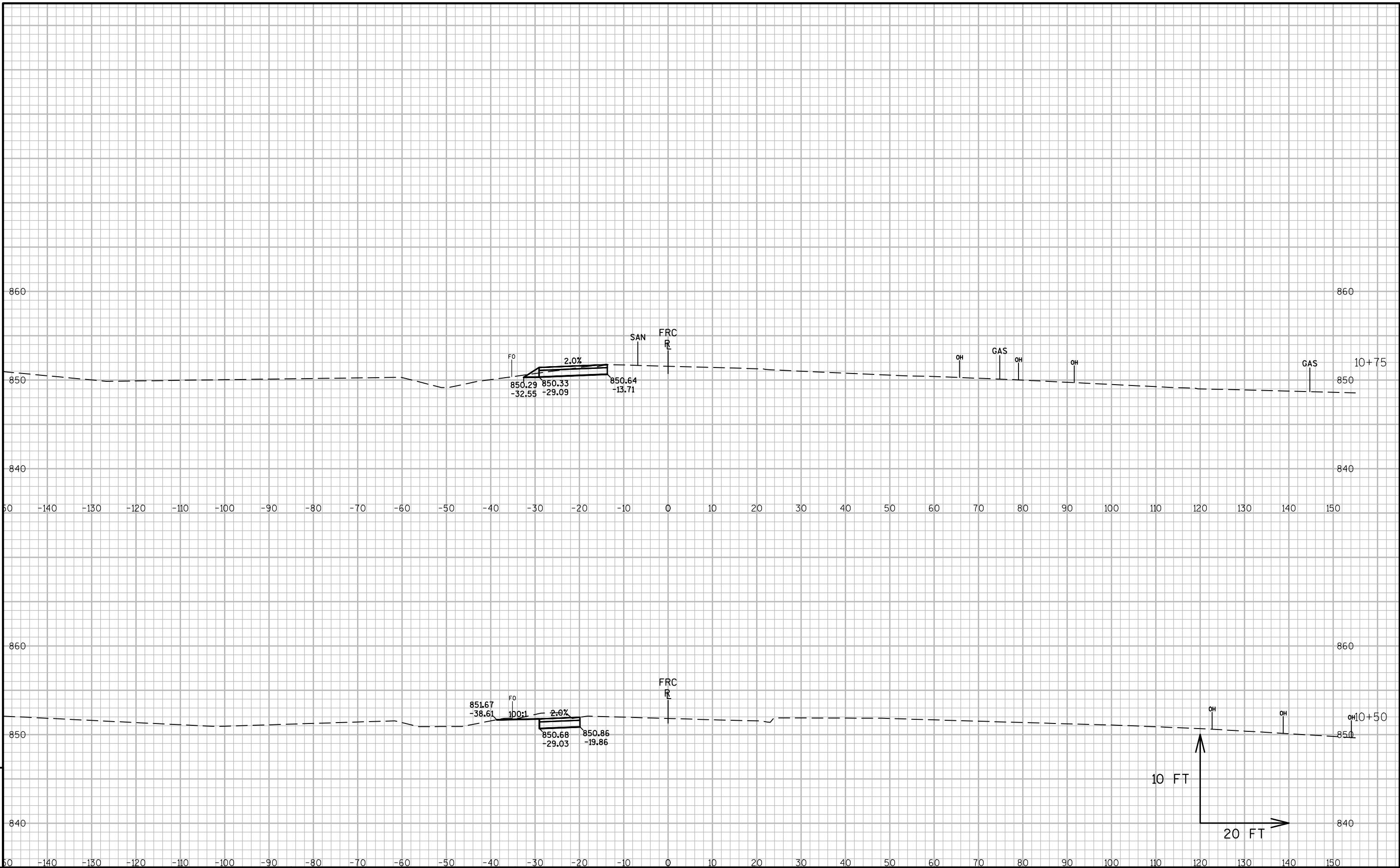
PROJECT NO:1401-02-72	HWY: STH 16	COUNTY: COLUMBIA	CROSS SECTIONS: STH 60 - STAGE 1A	SHEET	E
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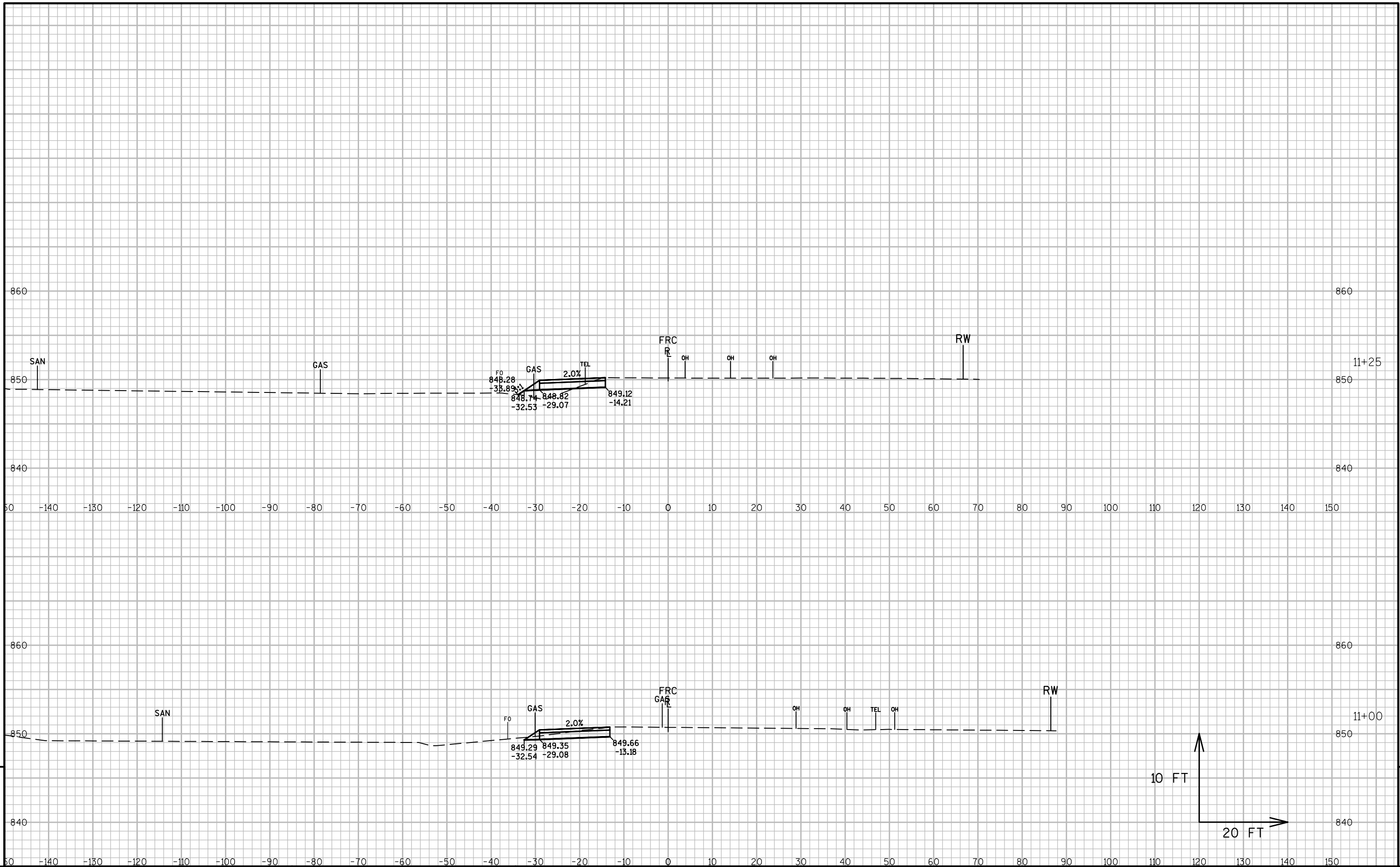


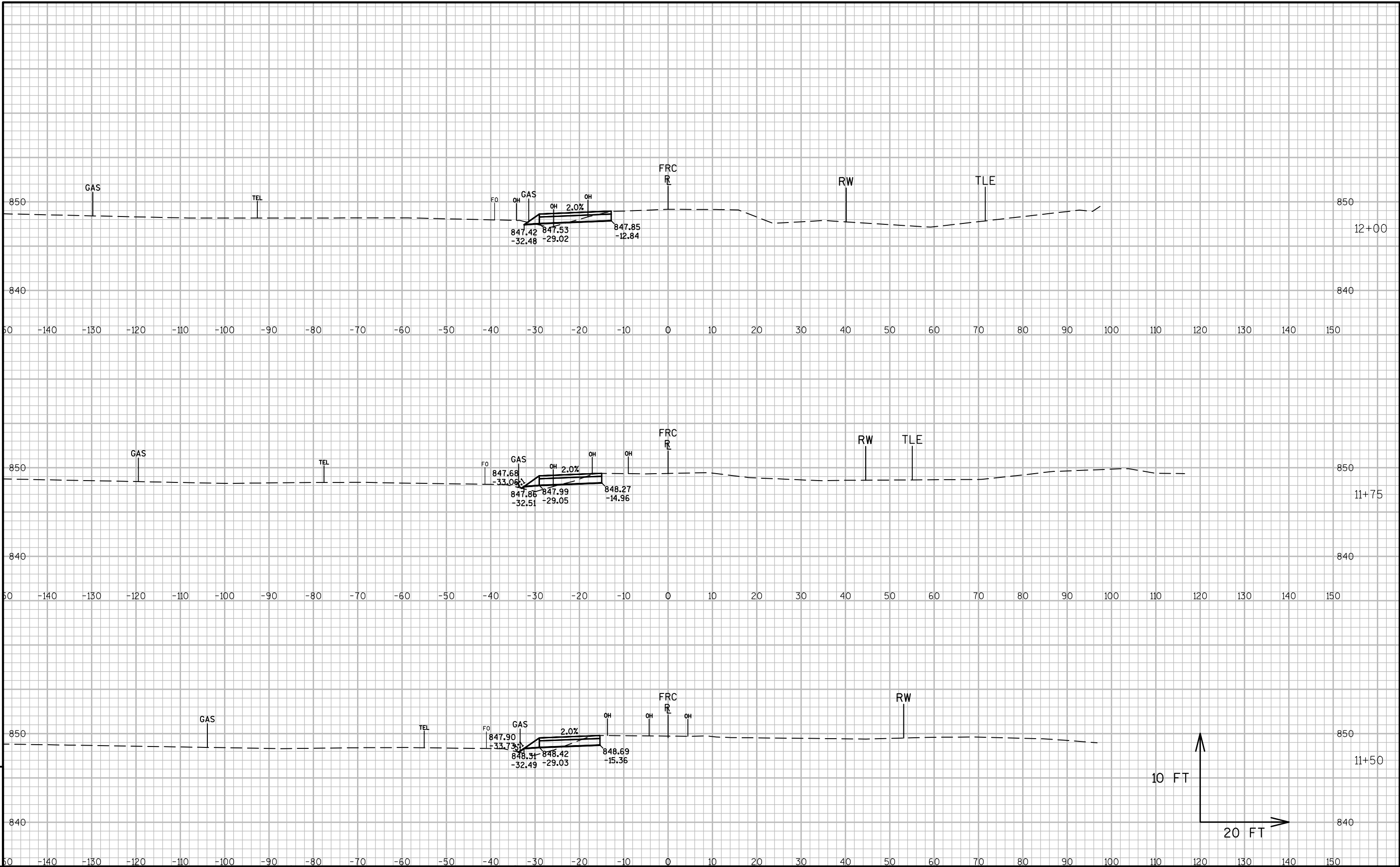


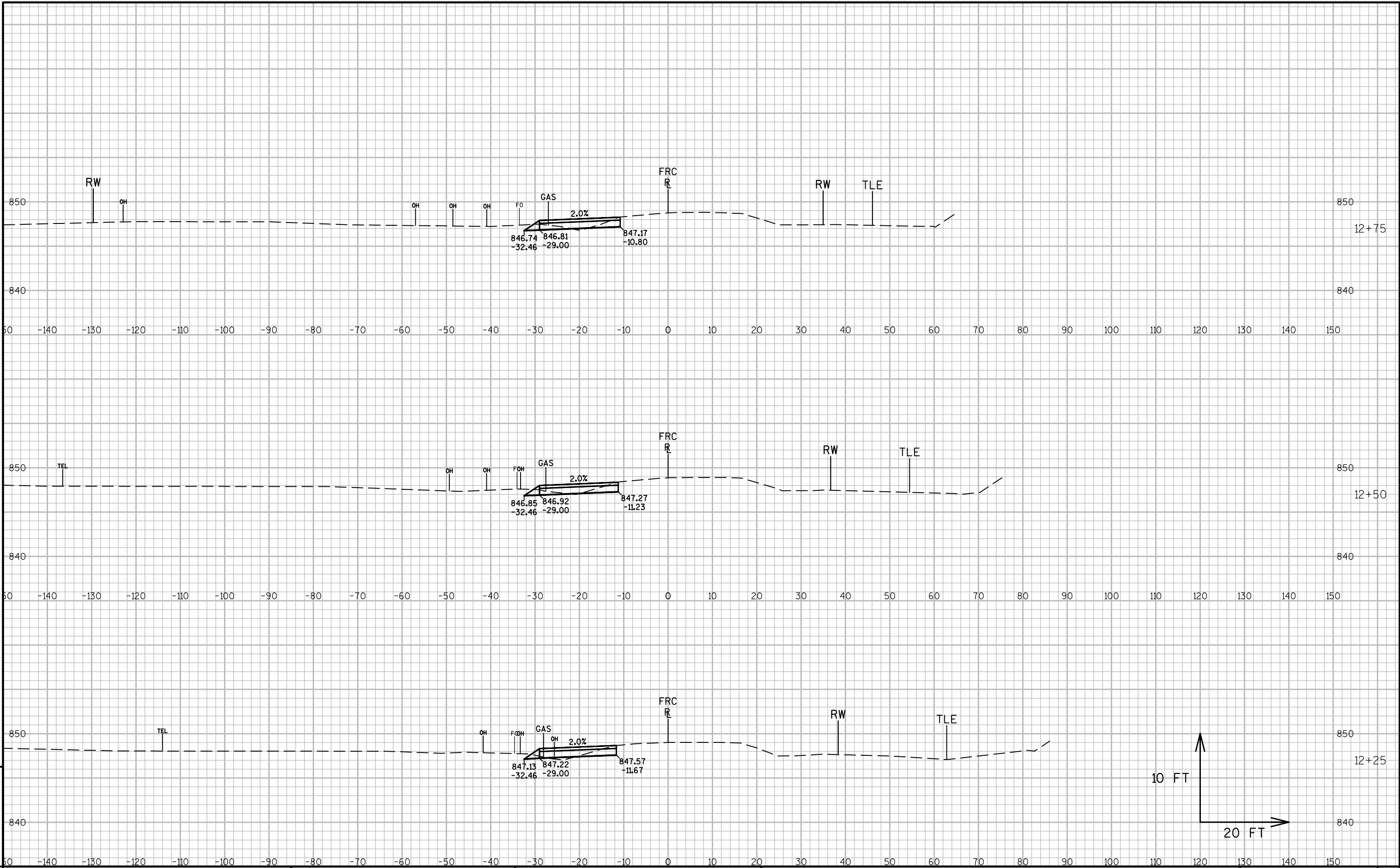


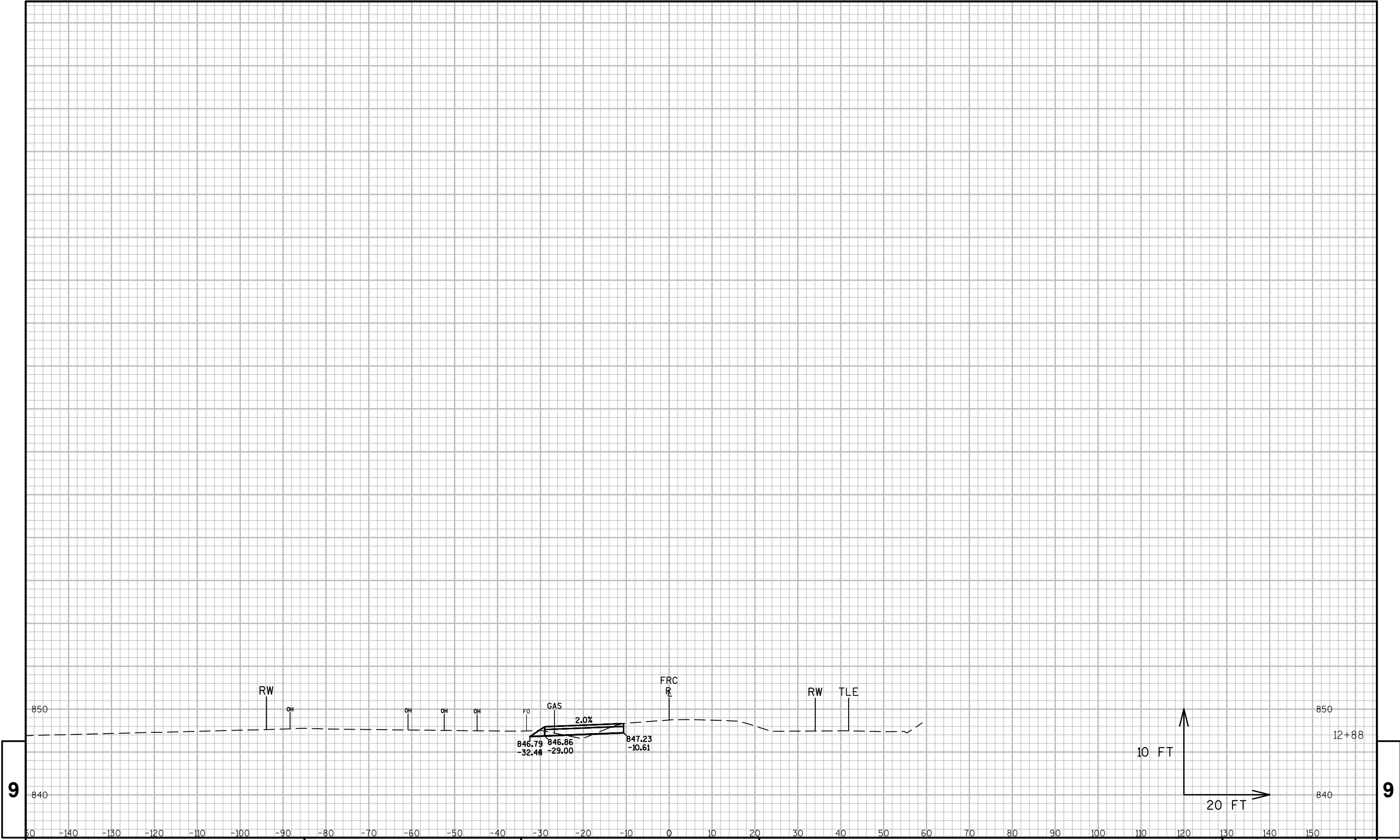






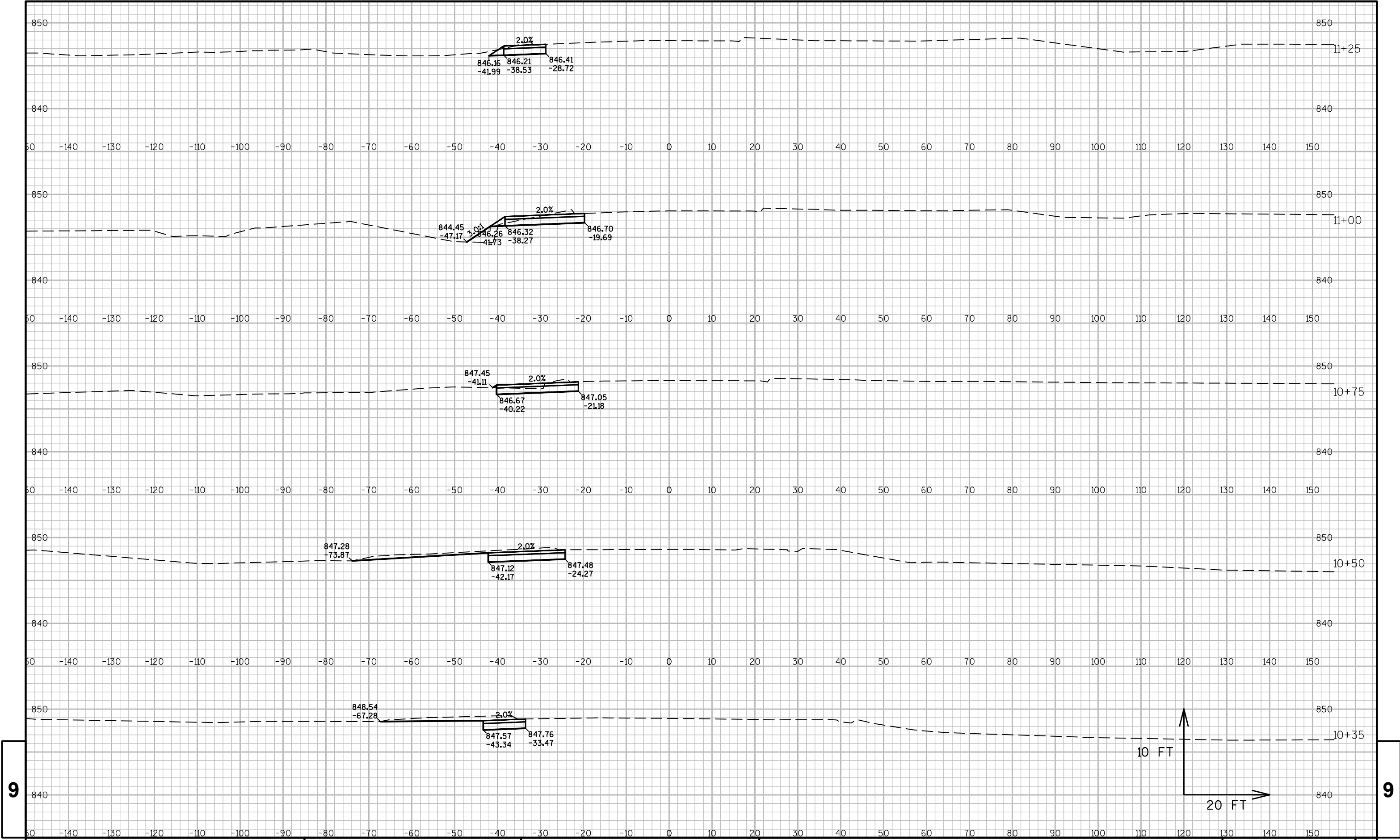






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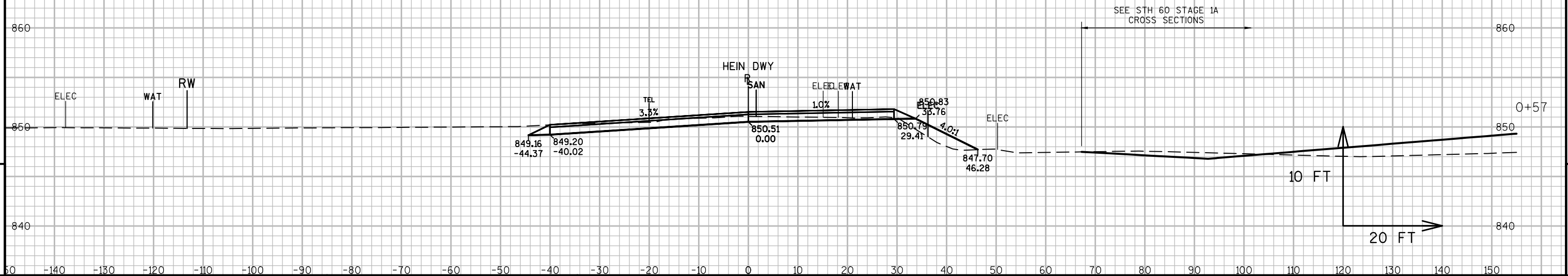
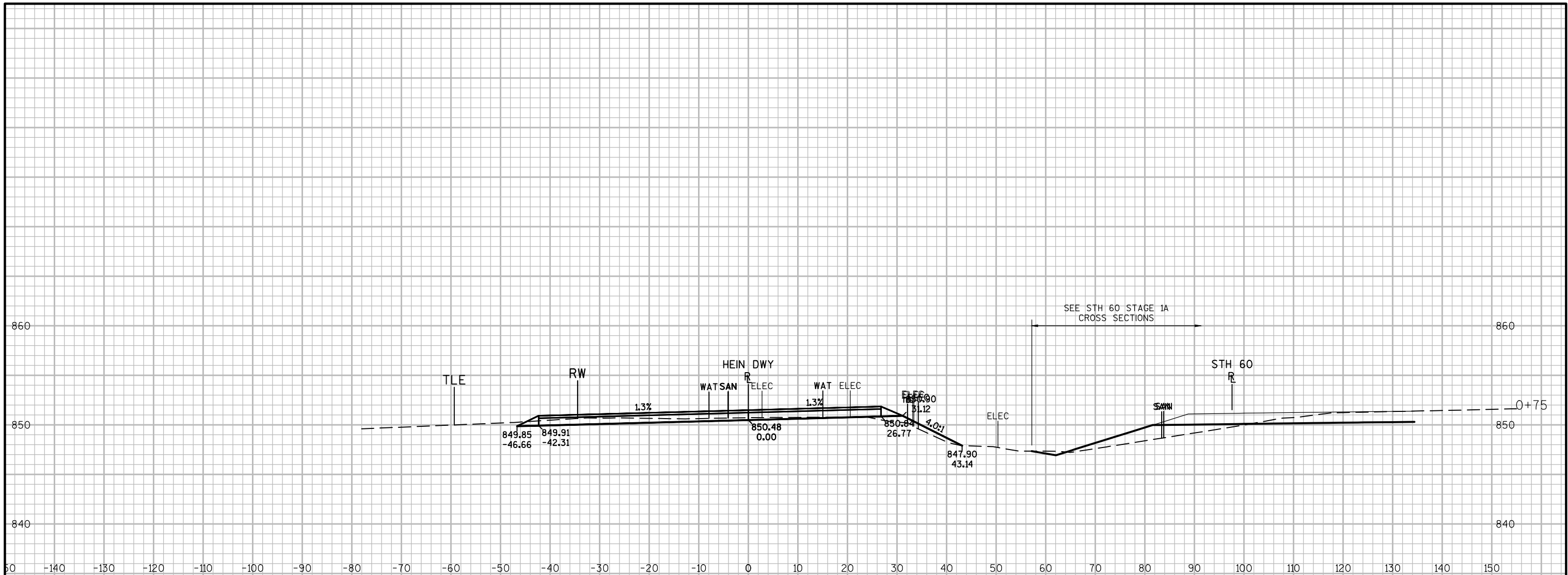
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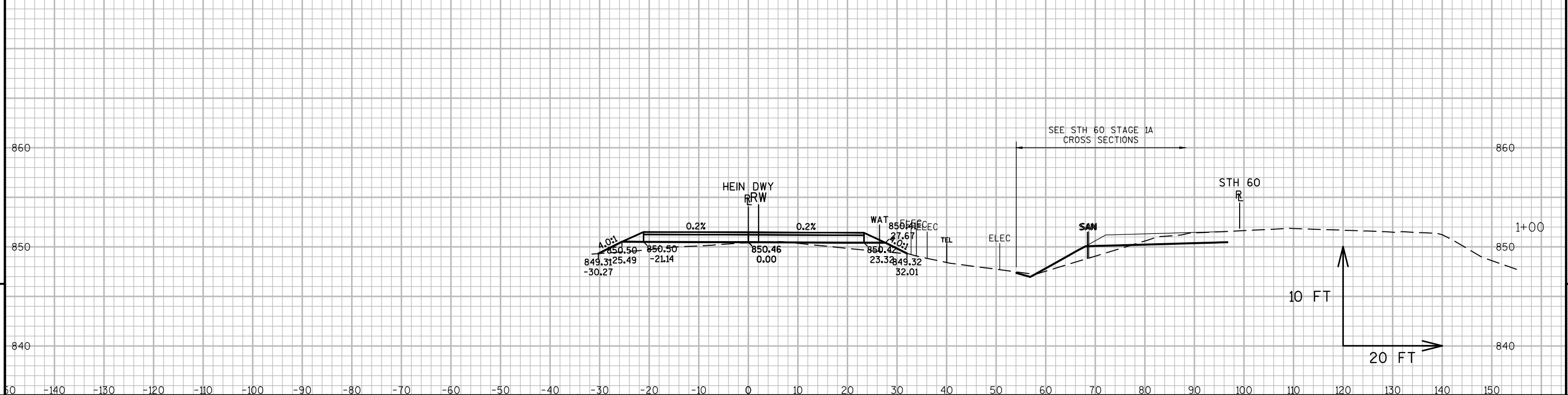
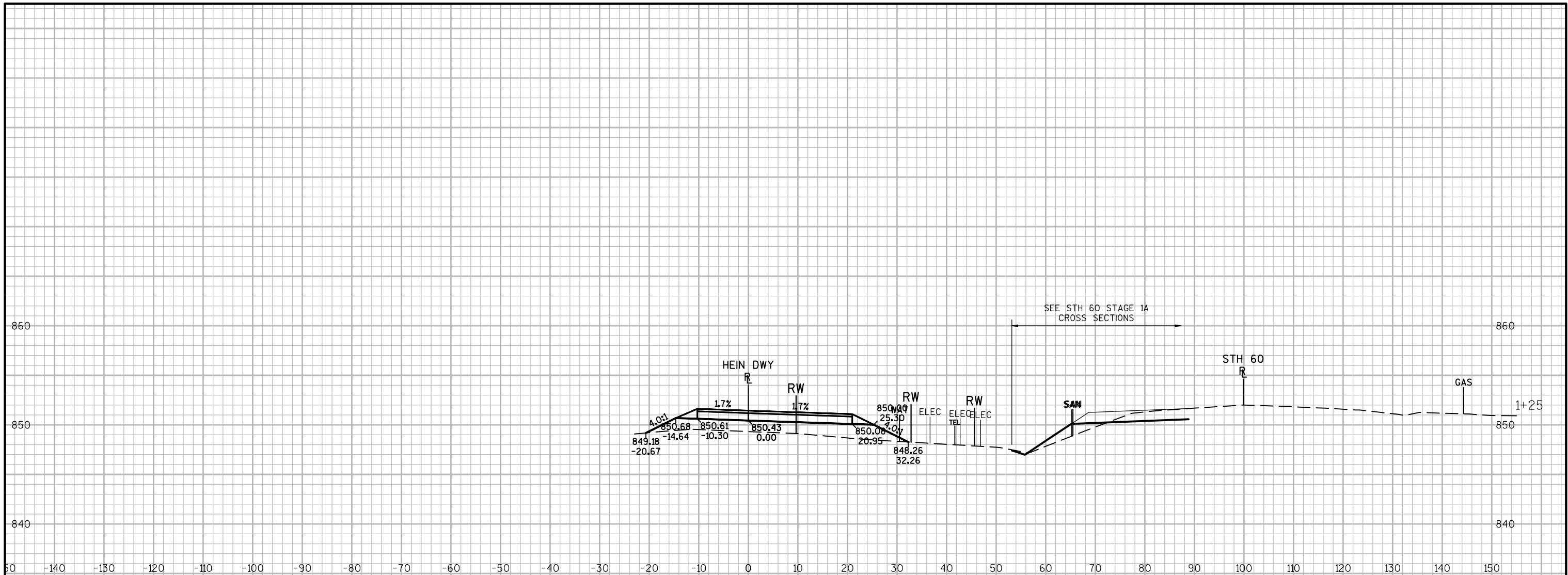


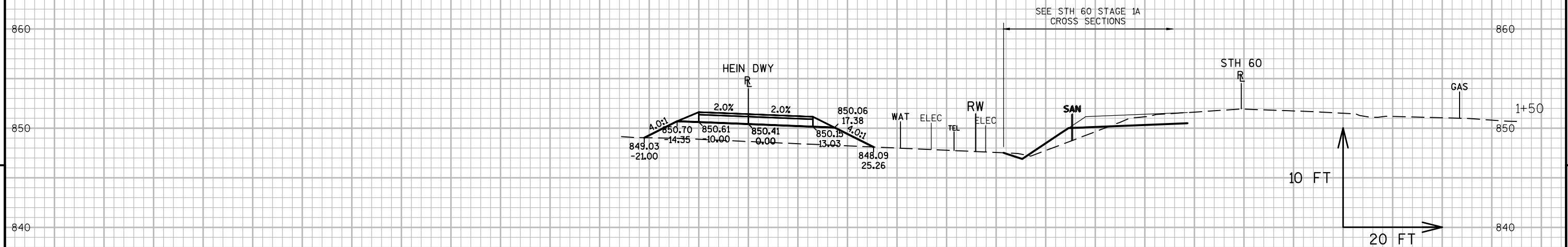
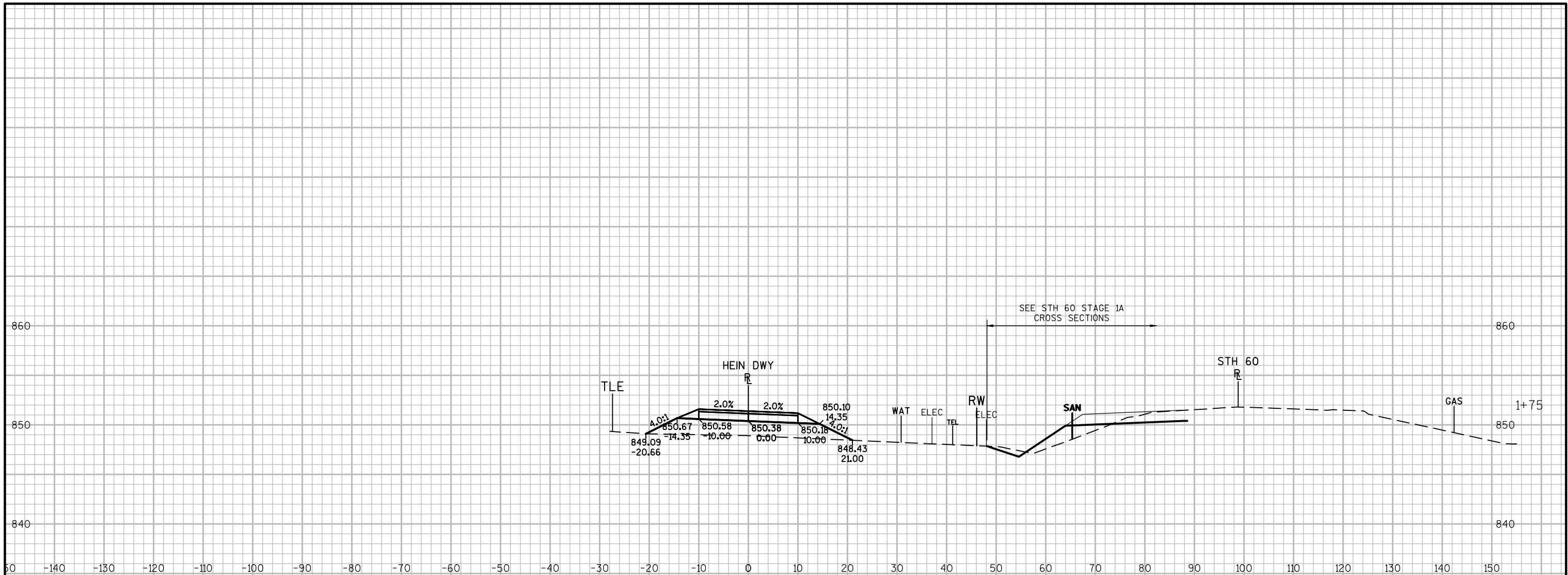
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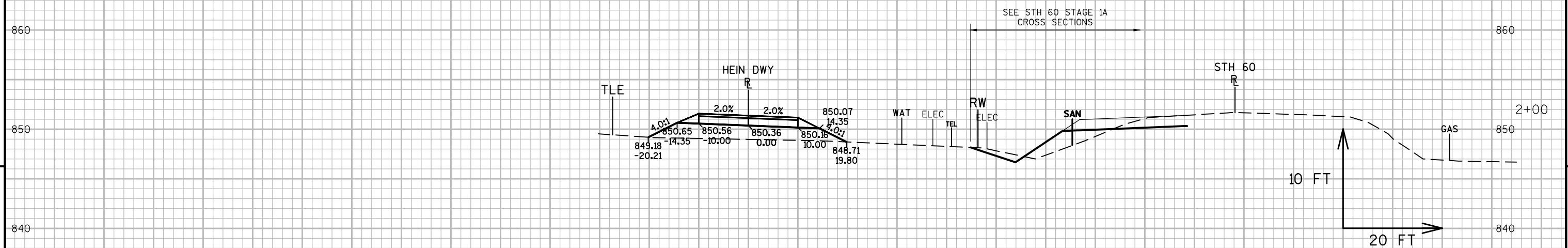
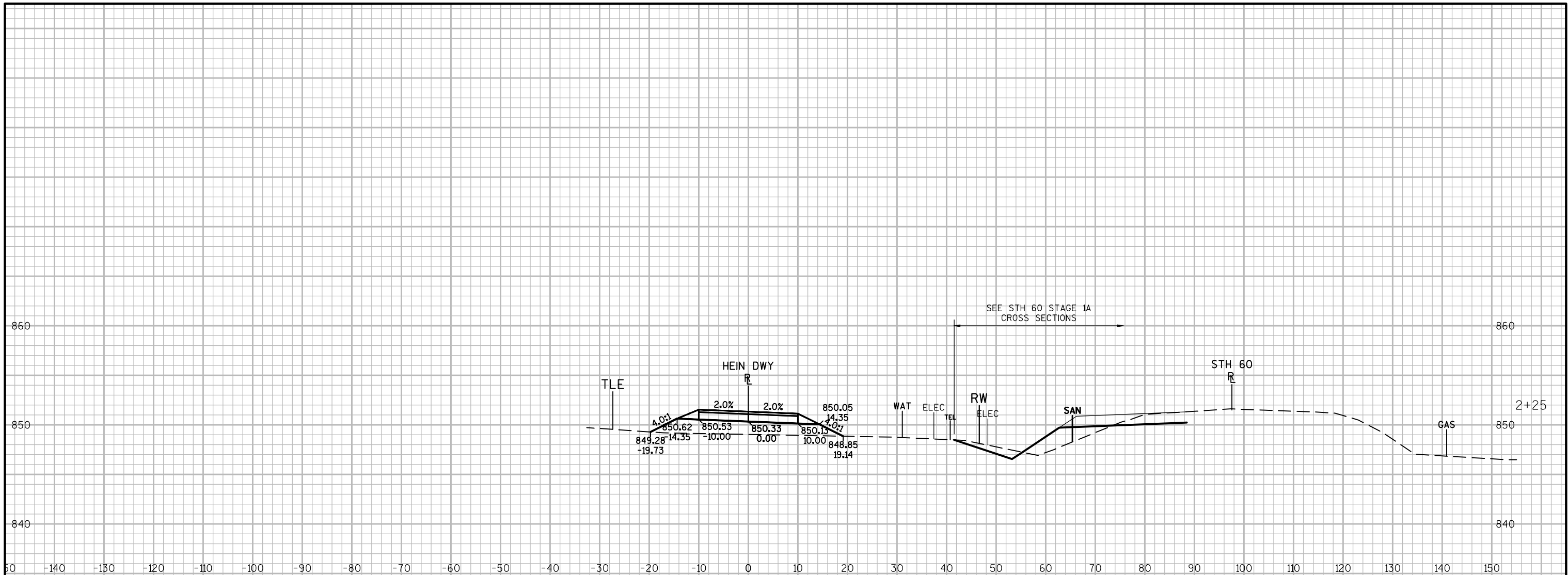
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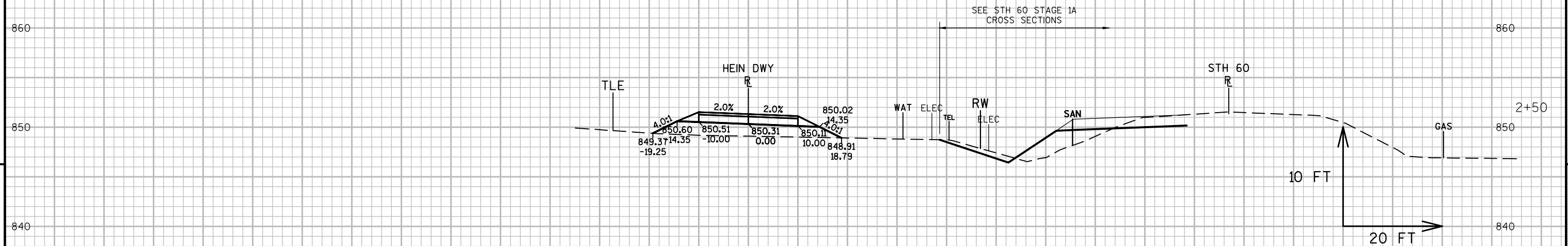
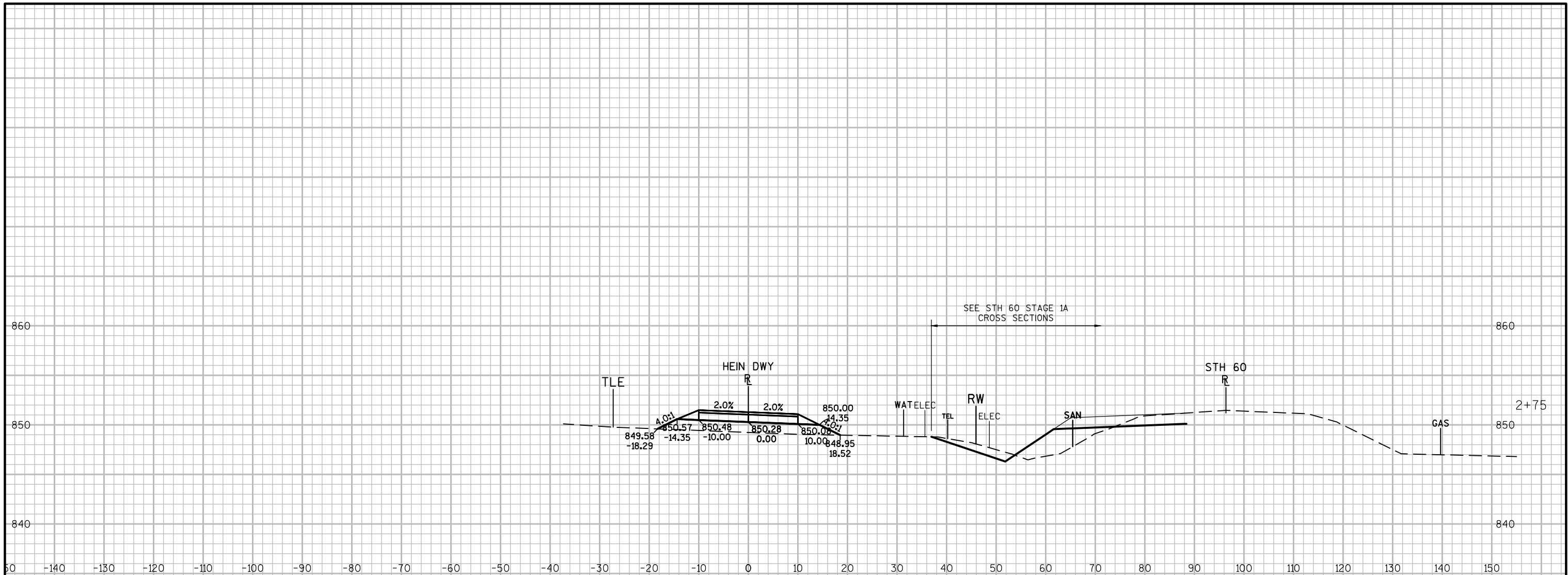
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: FRN - STAGE 1A	SHEET	E
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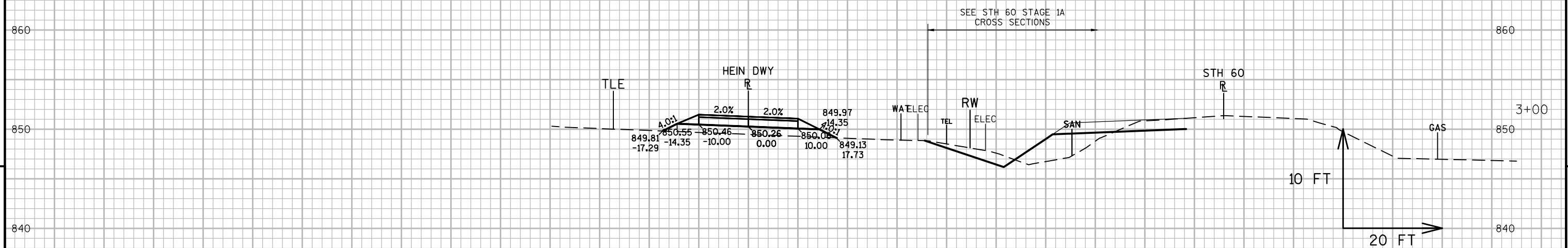
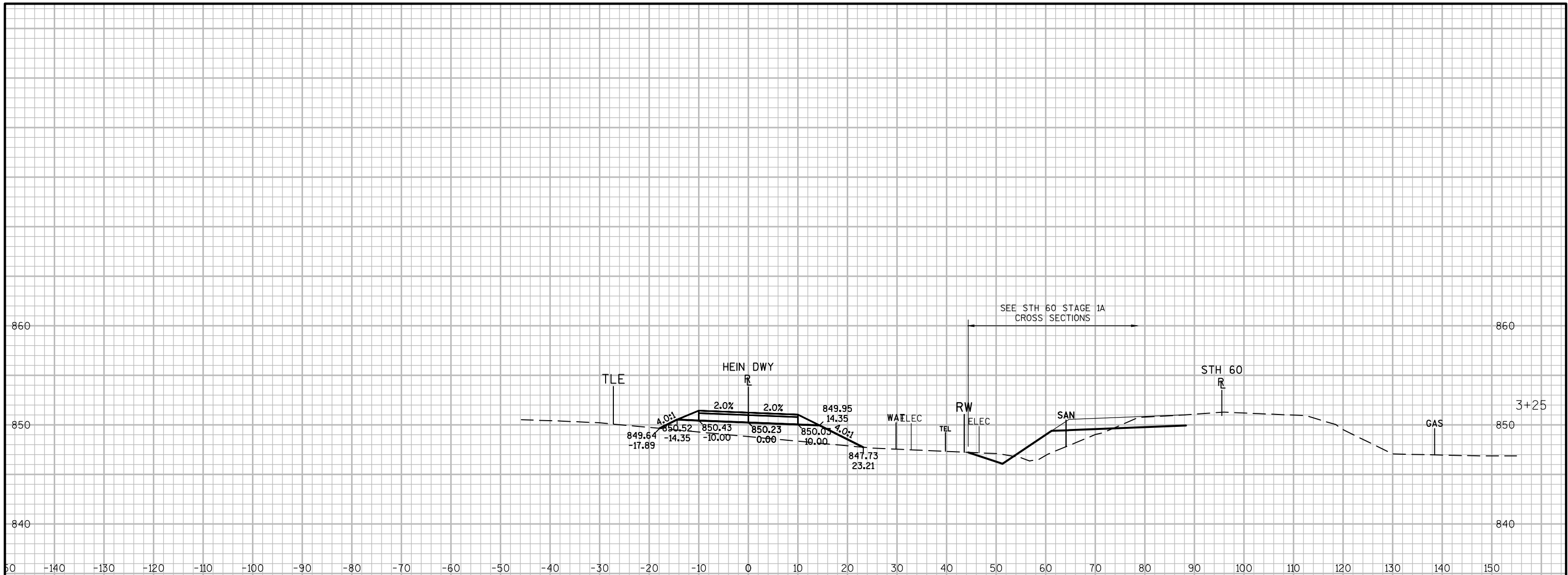


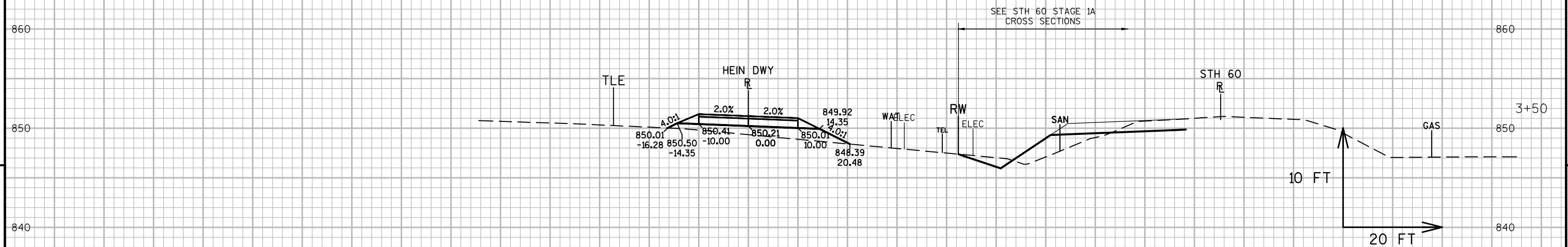
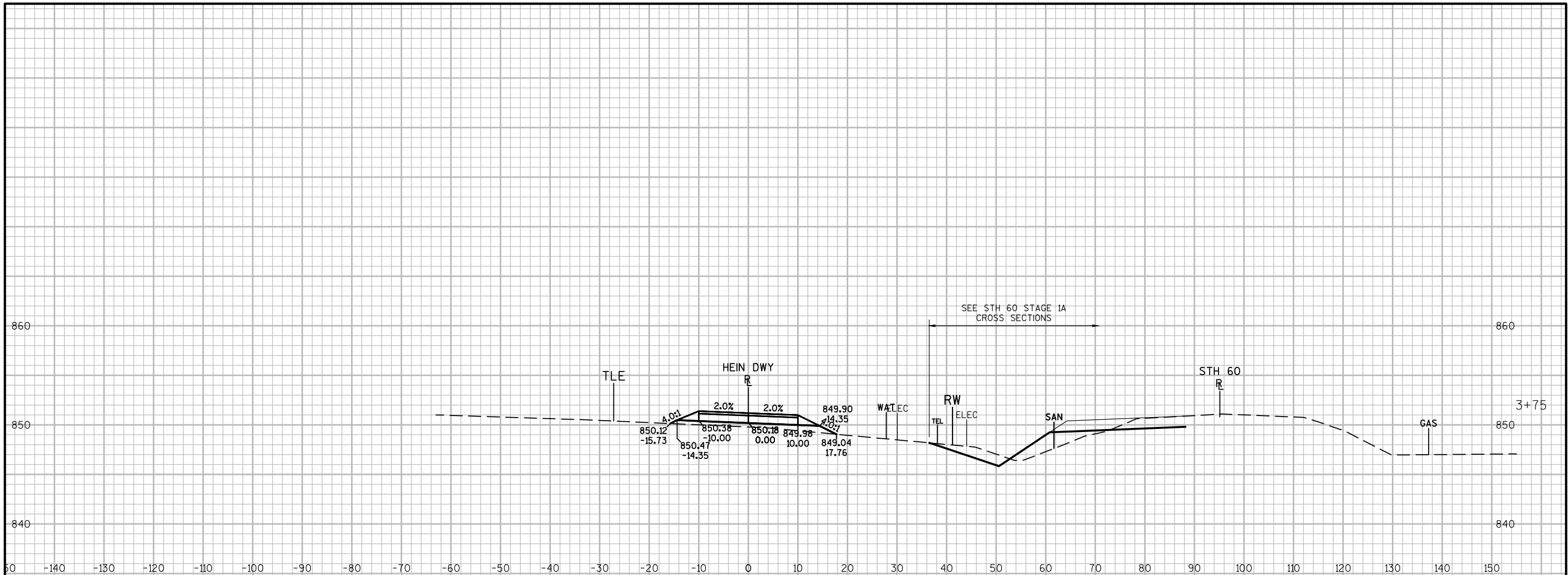


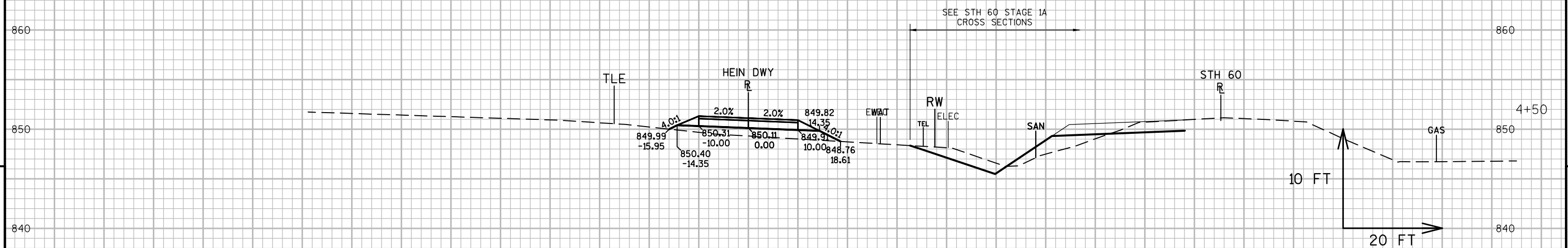
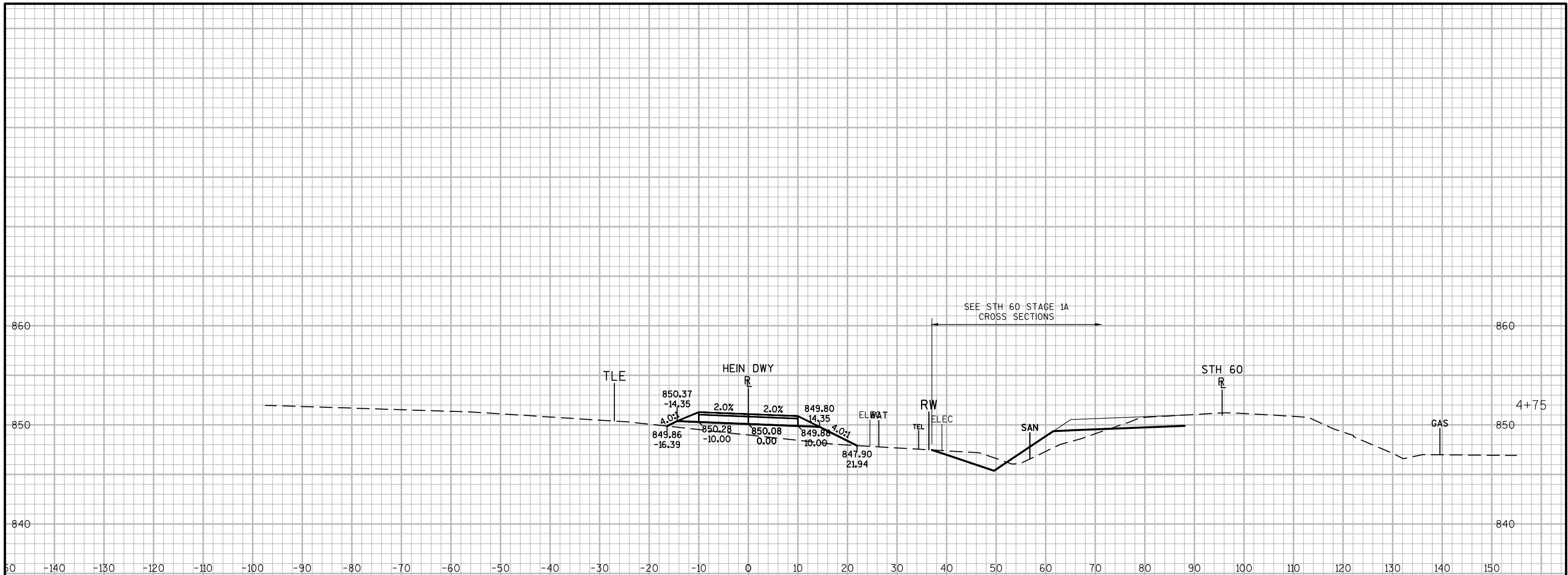


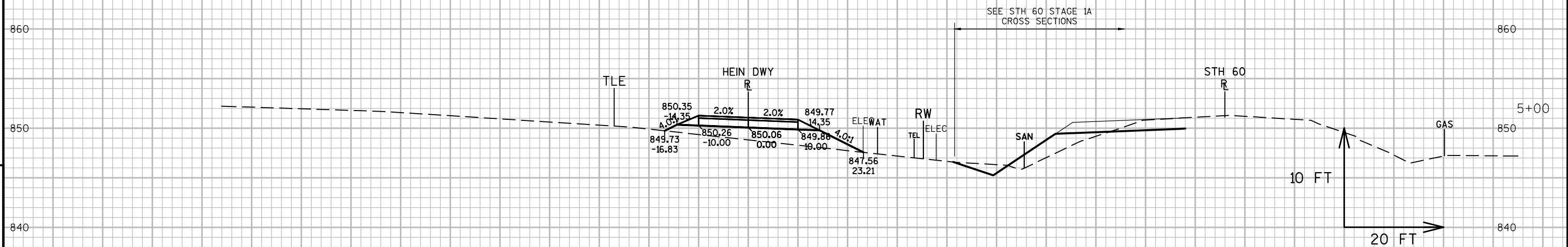
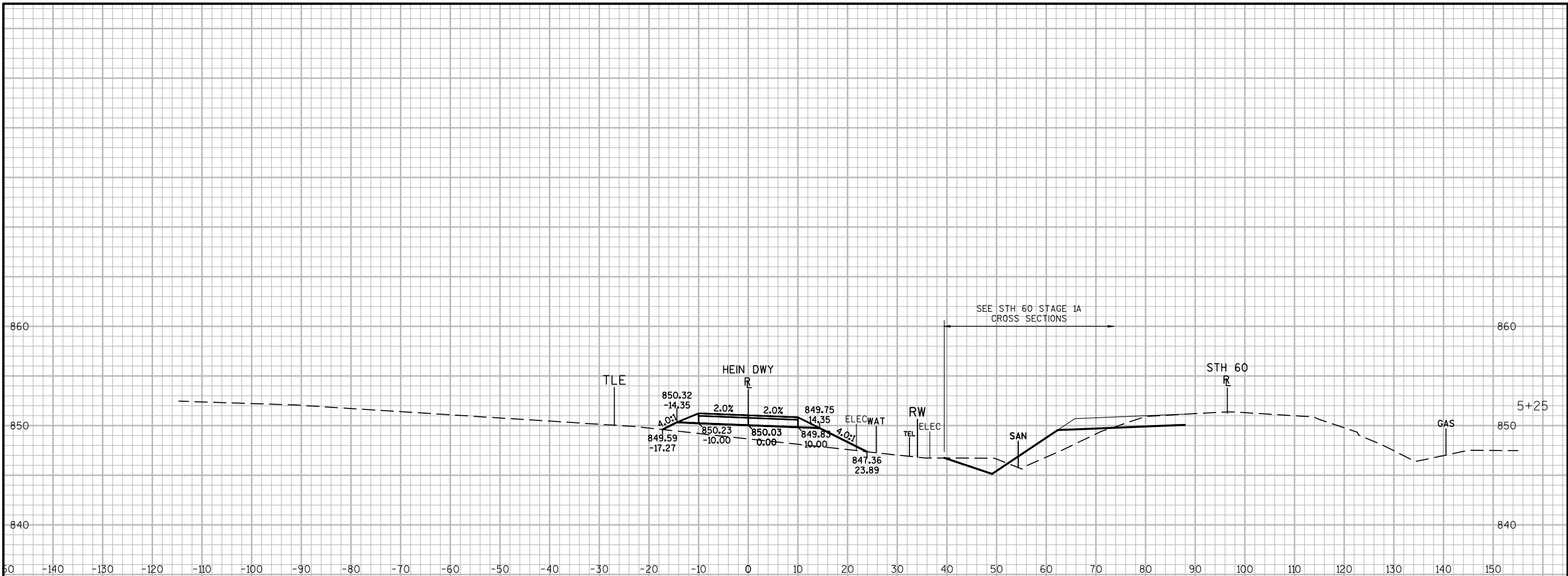


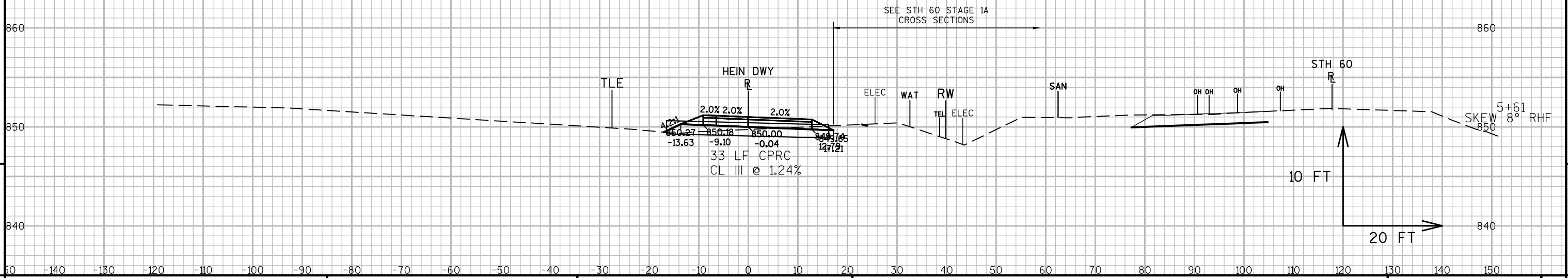
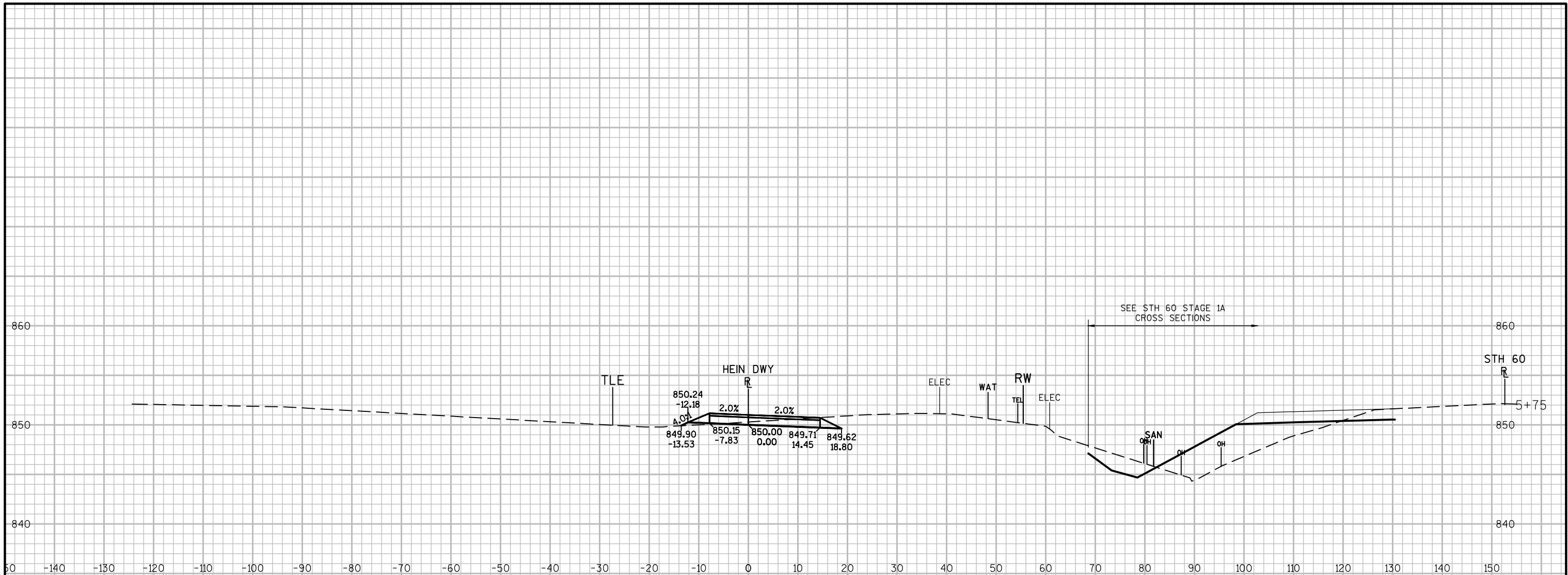


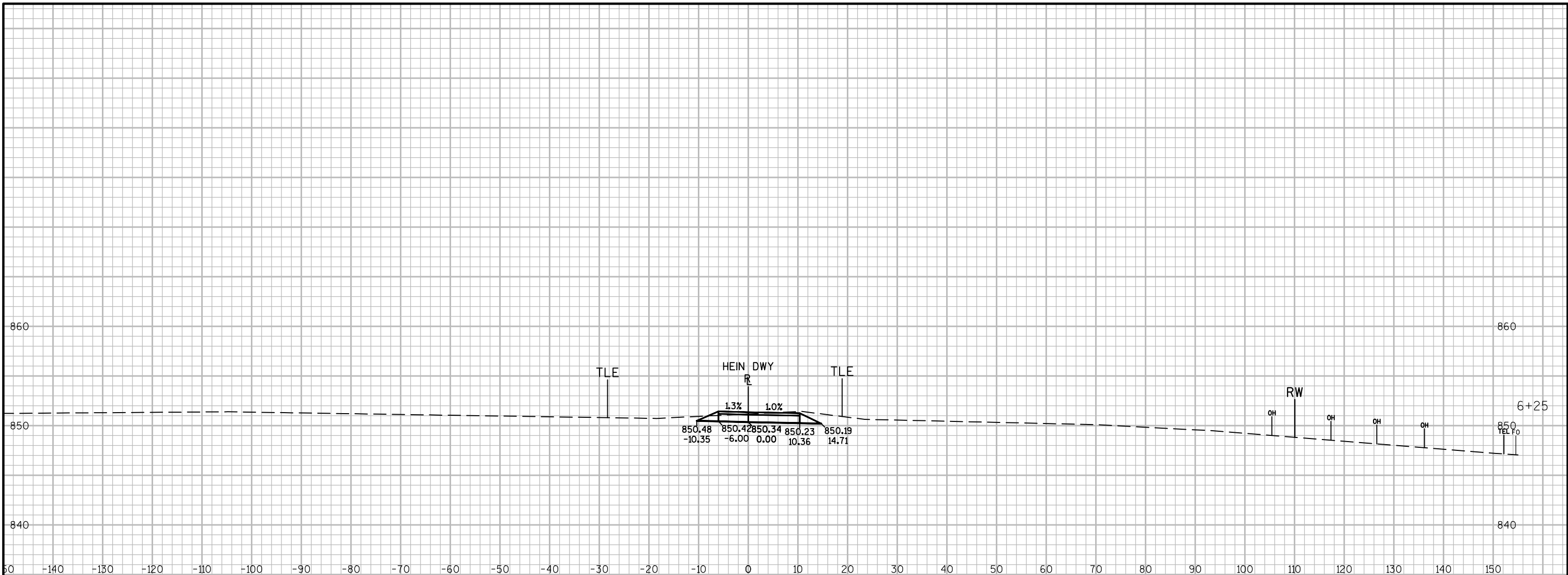


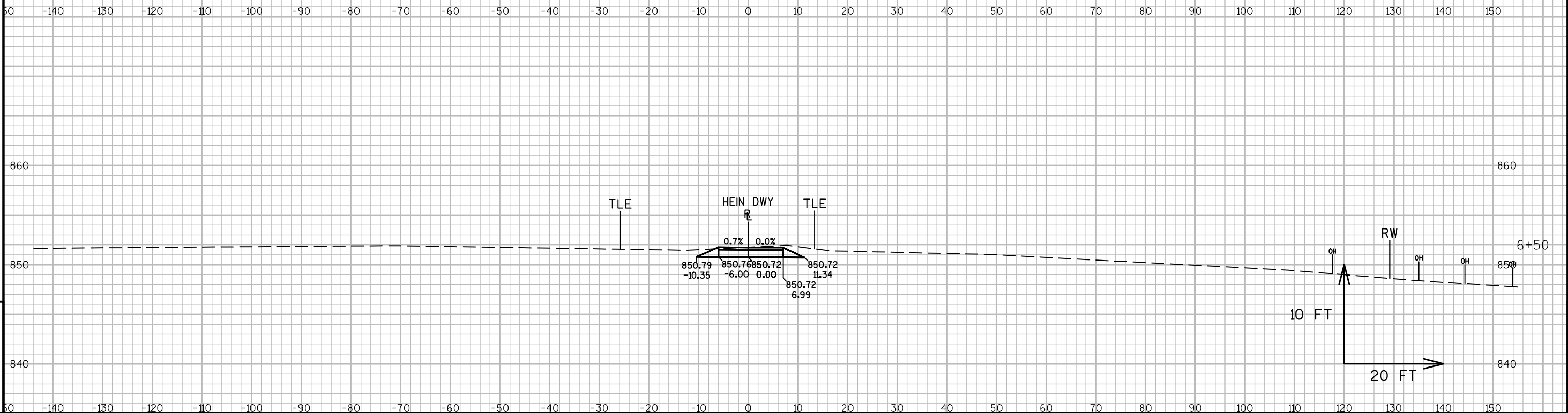
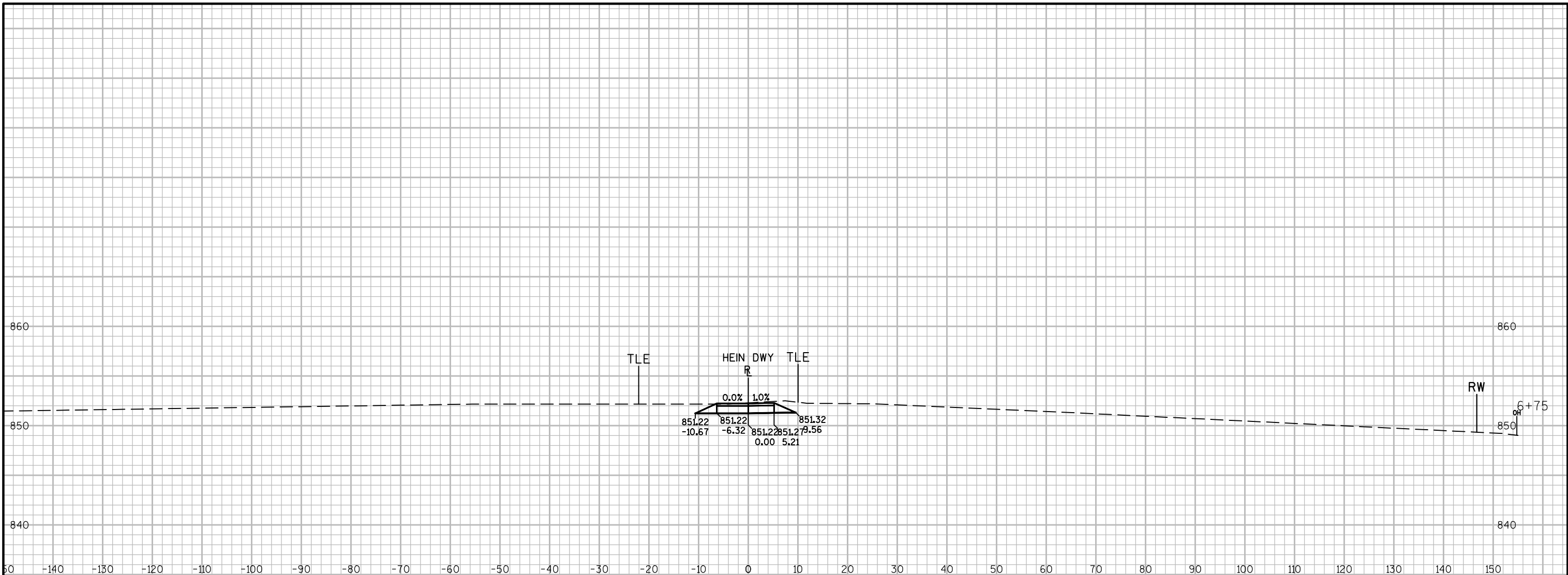


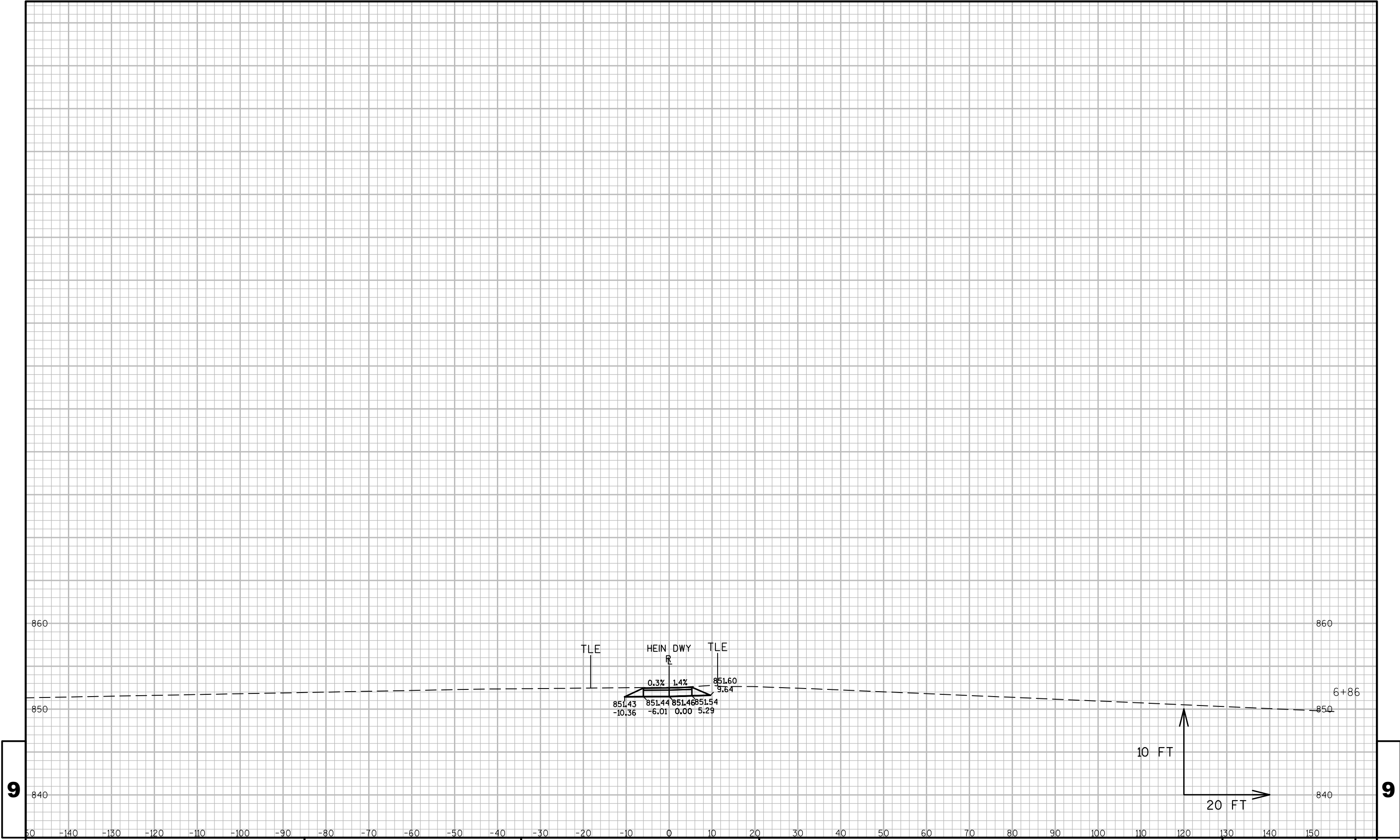


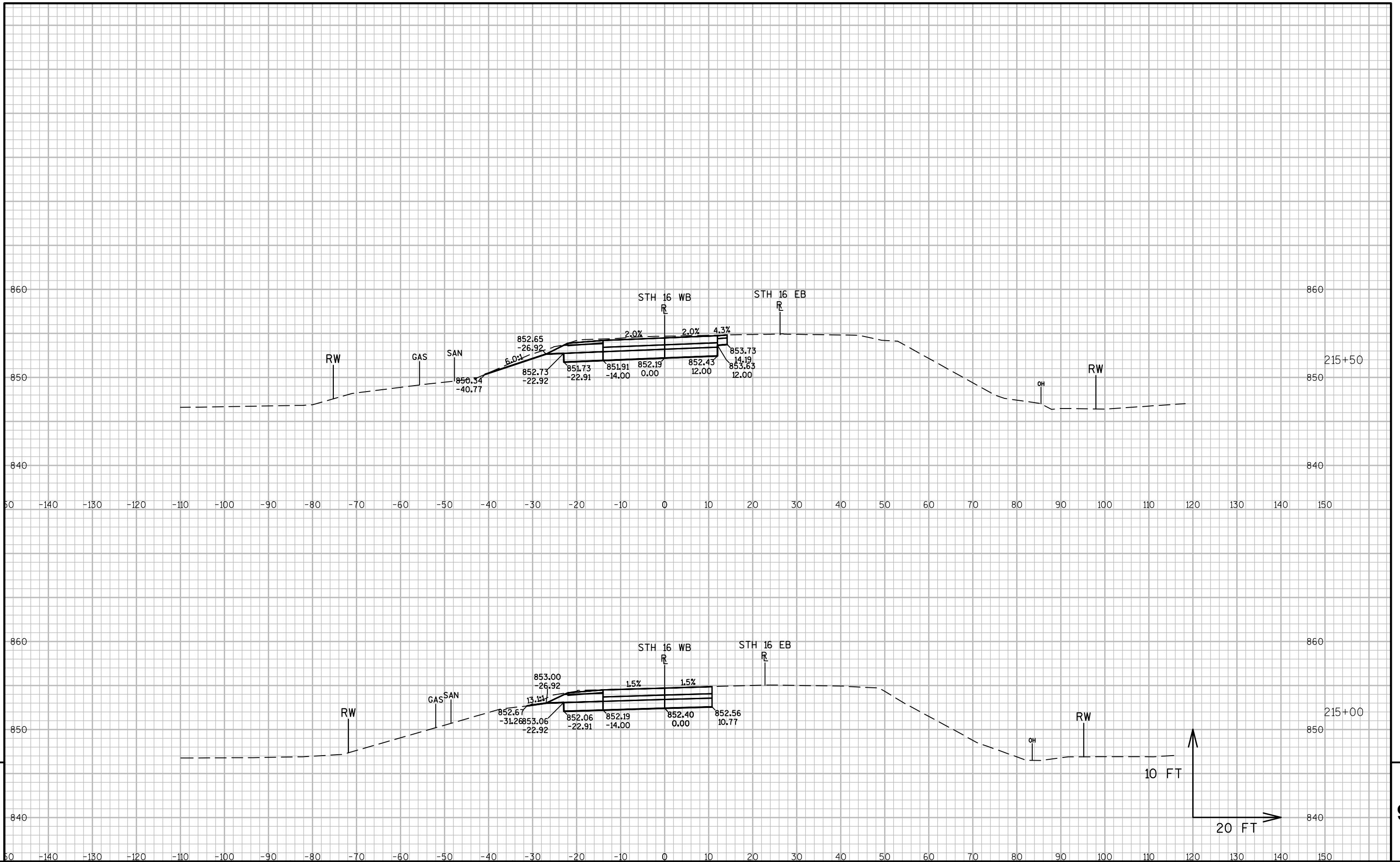


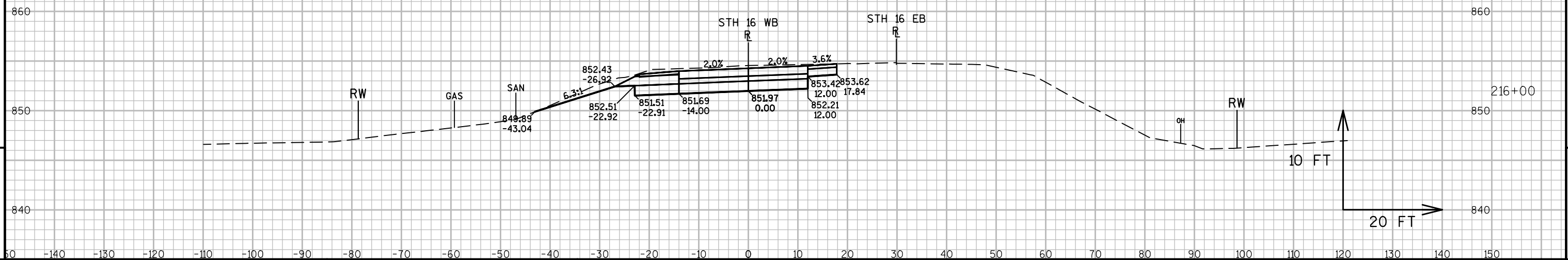
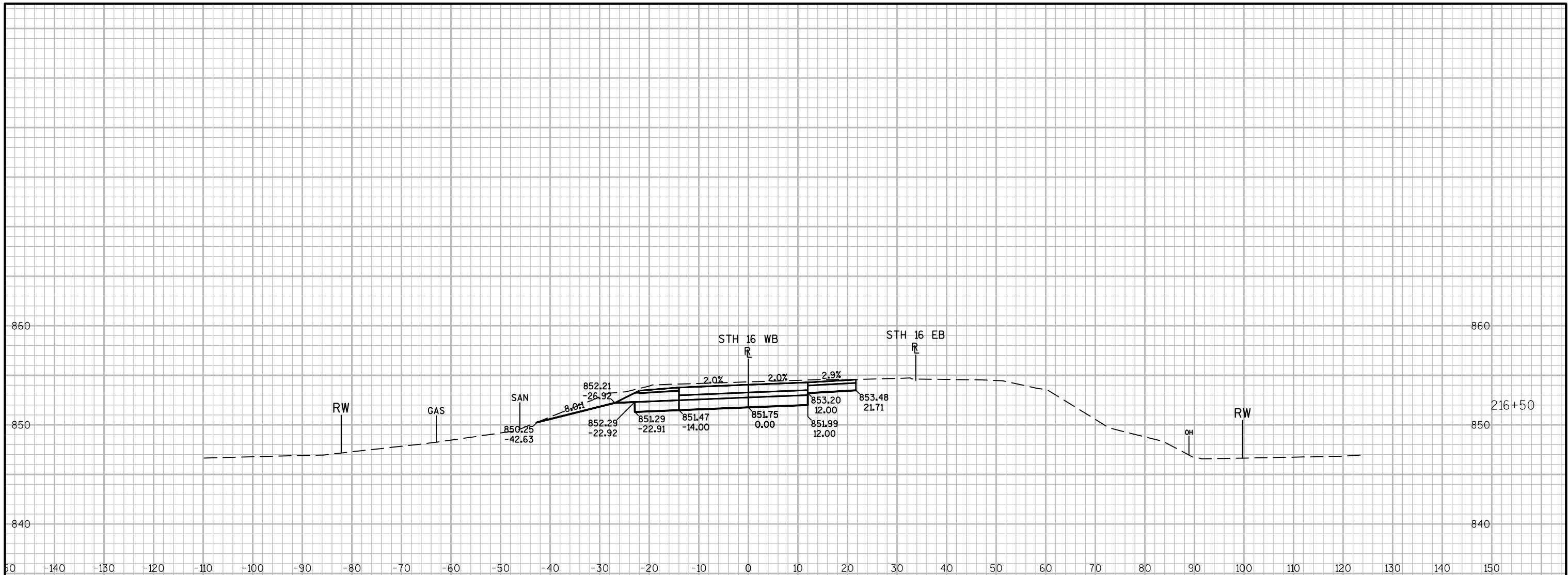


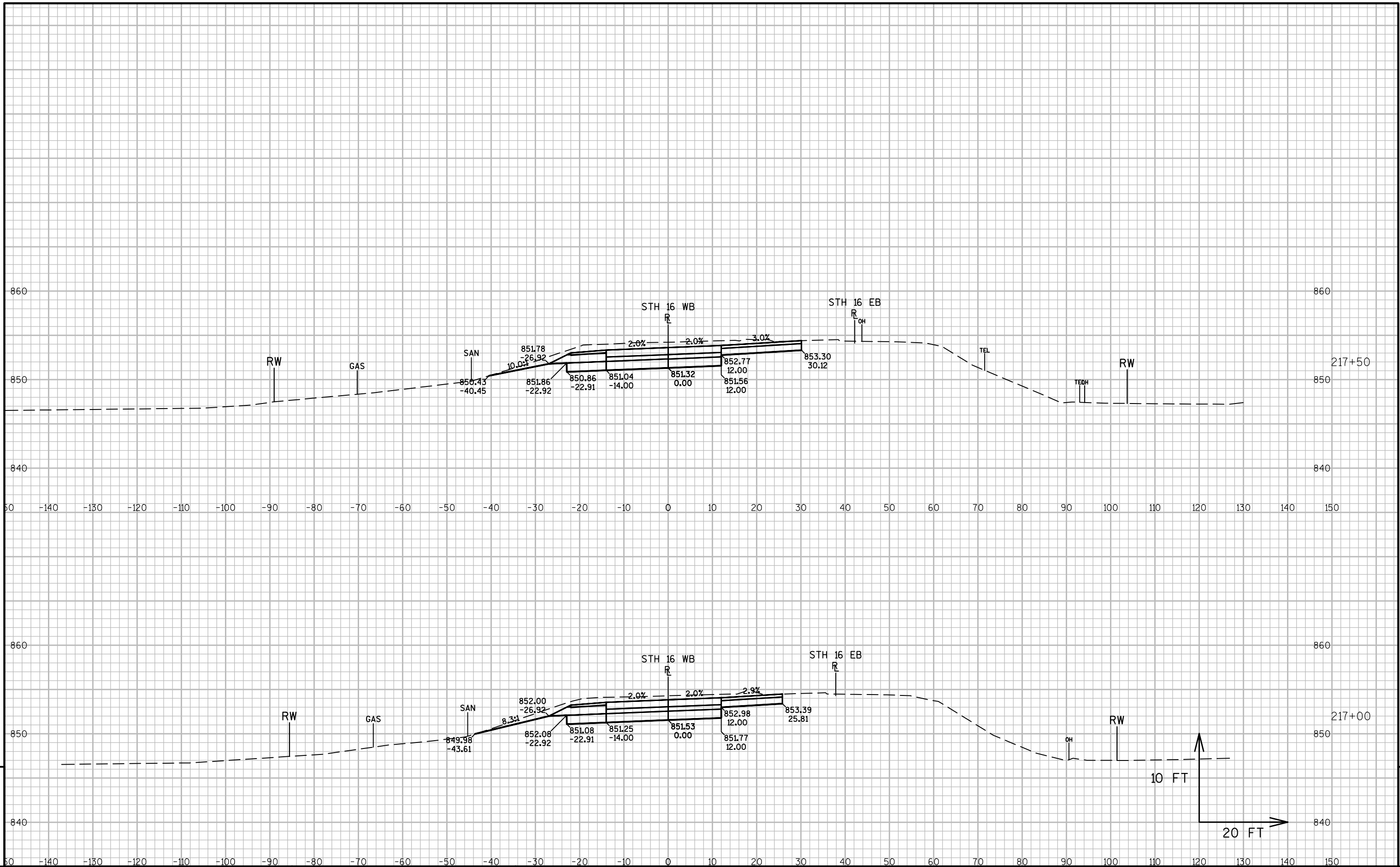


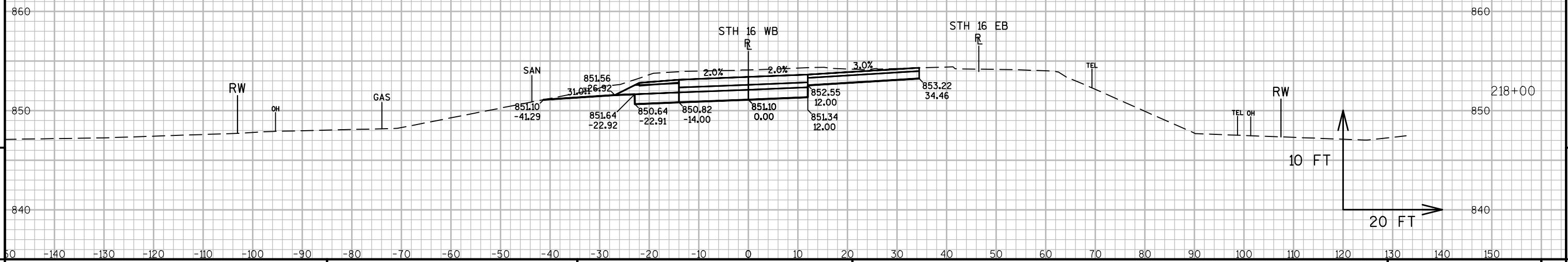
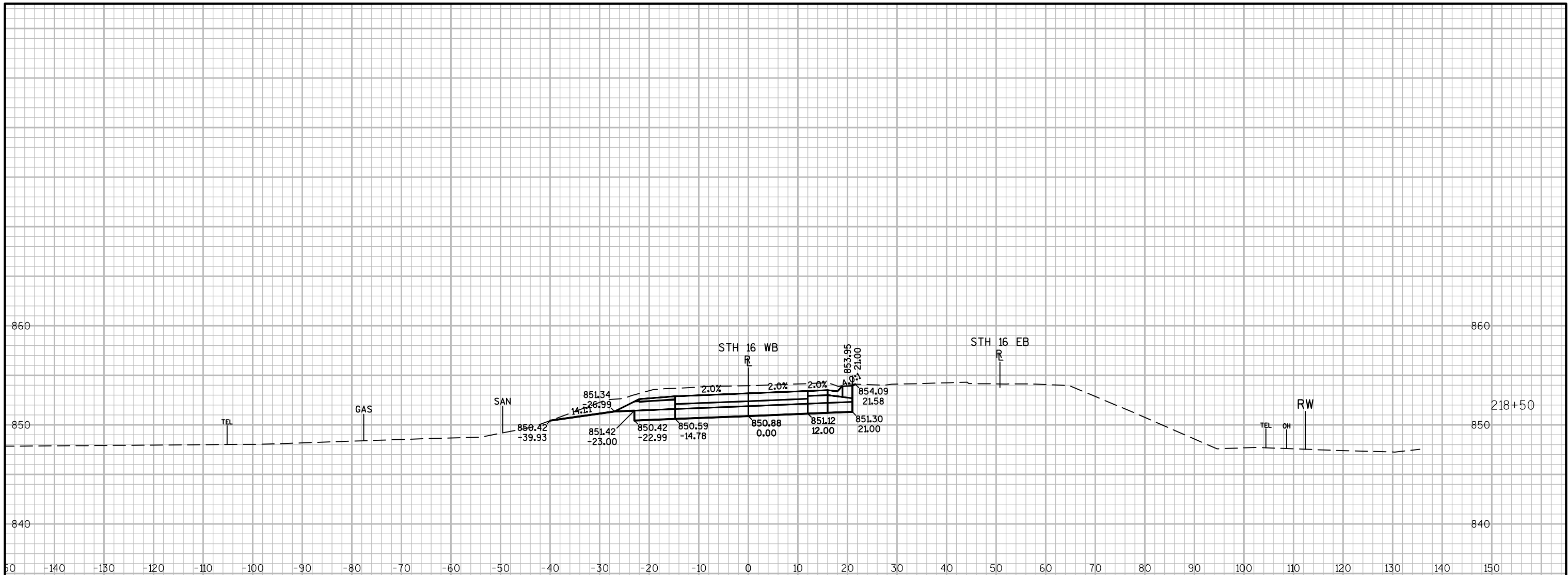


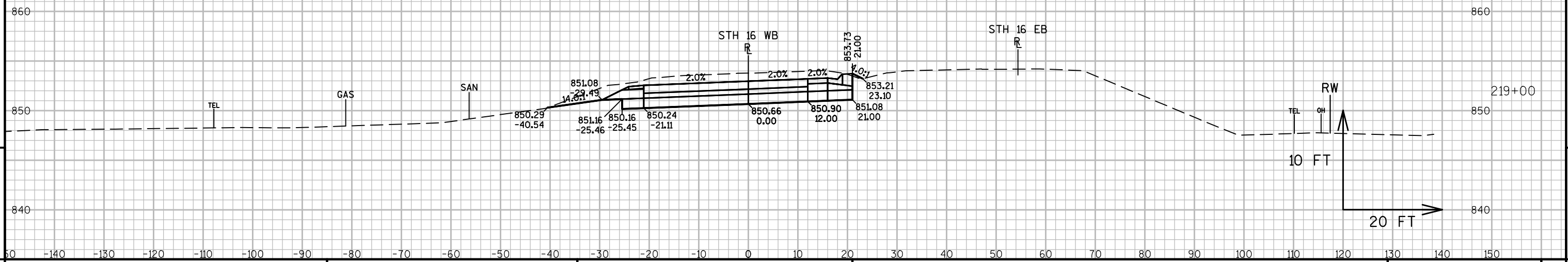
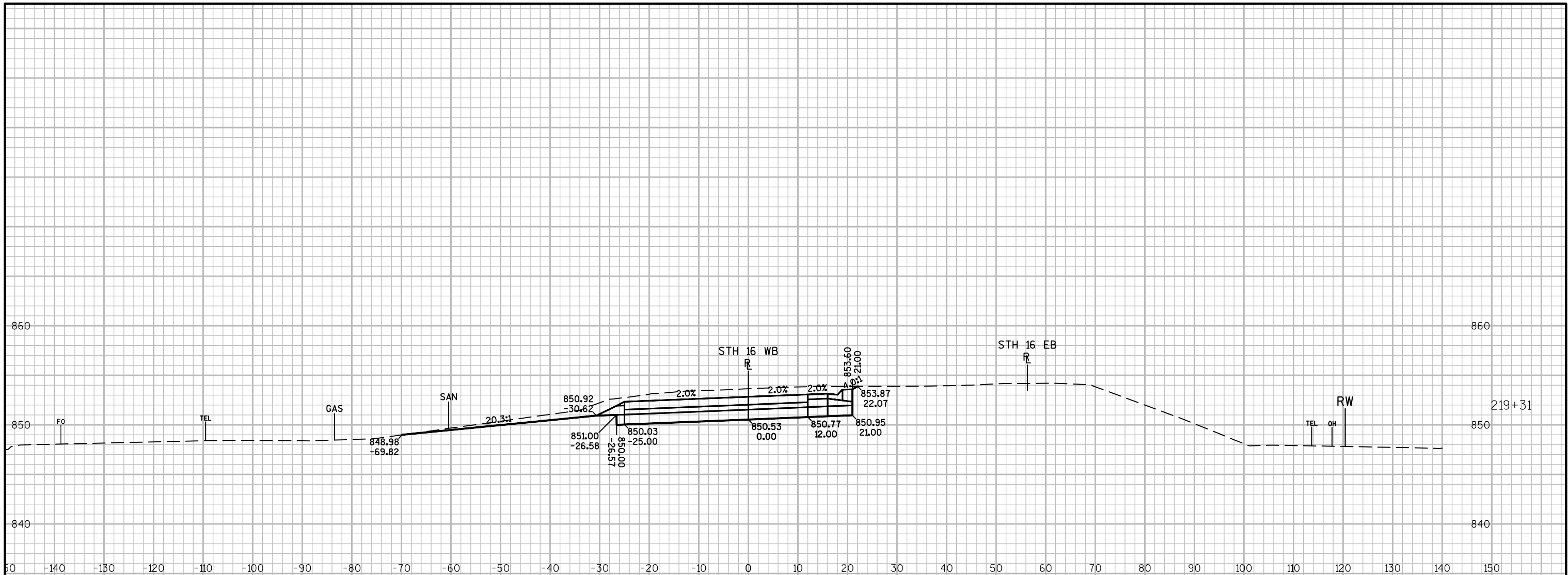


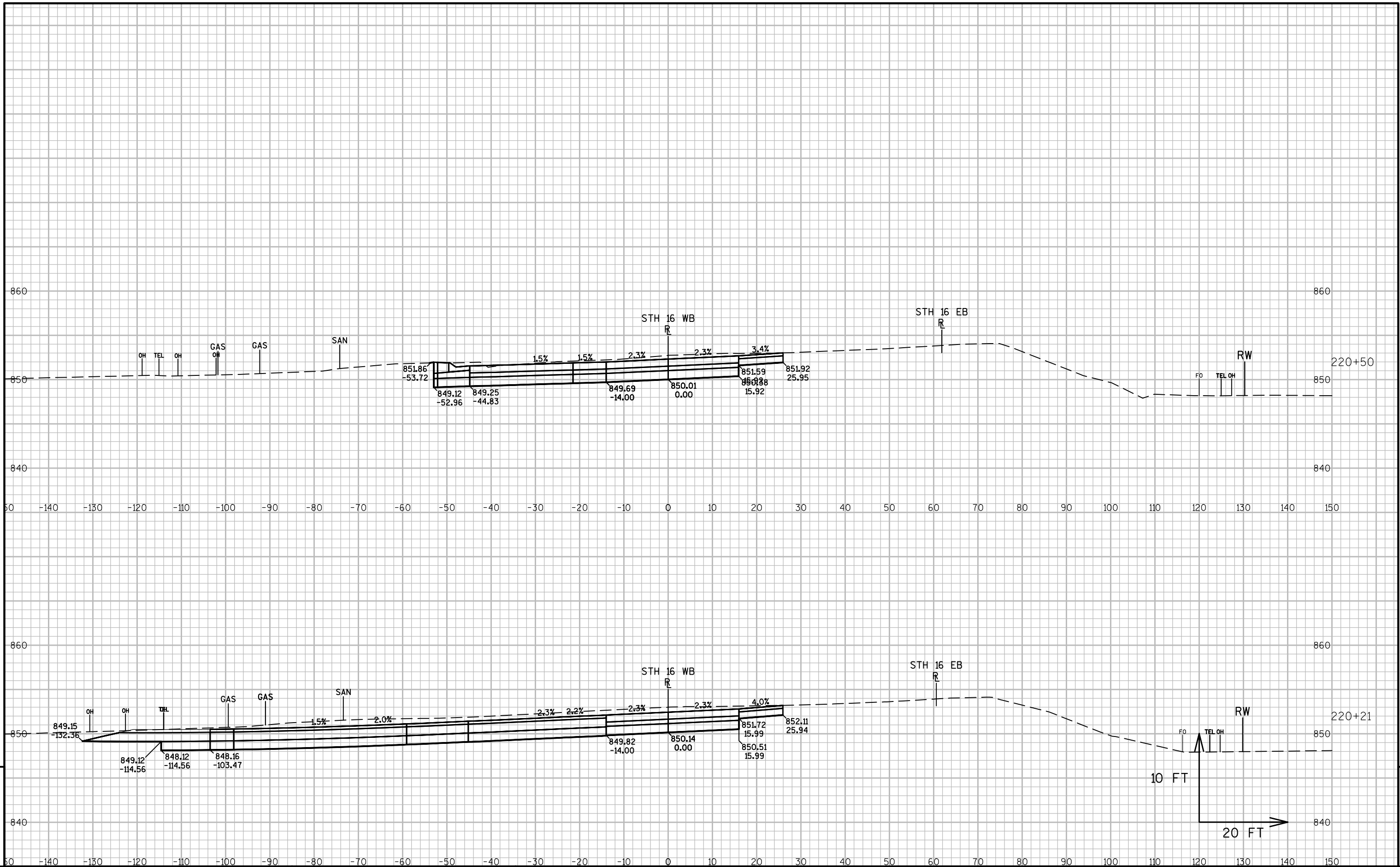


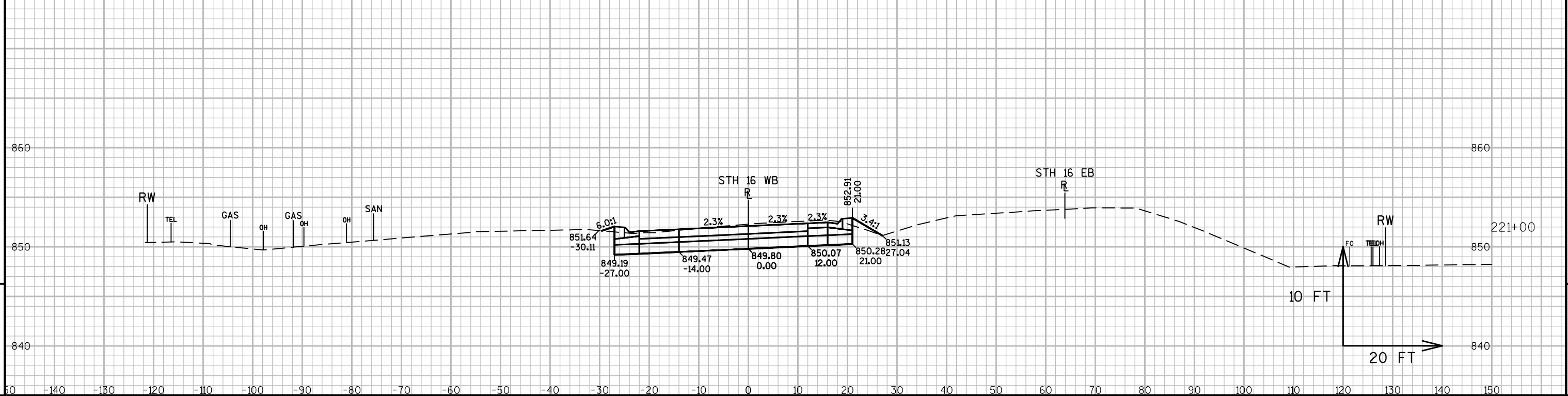
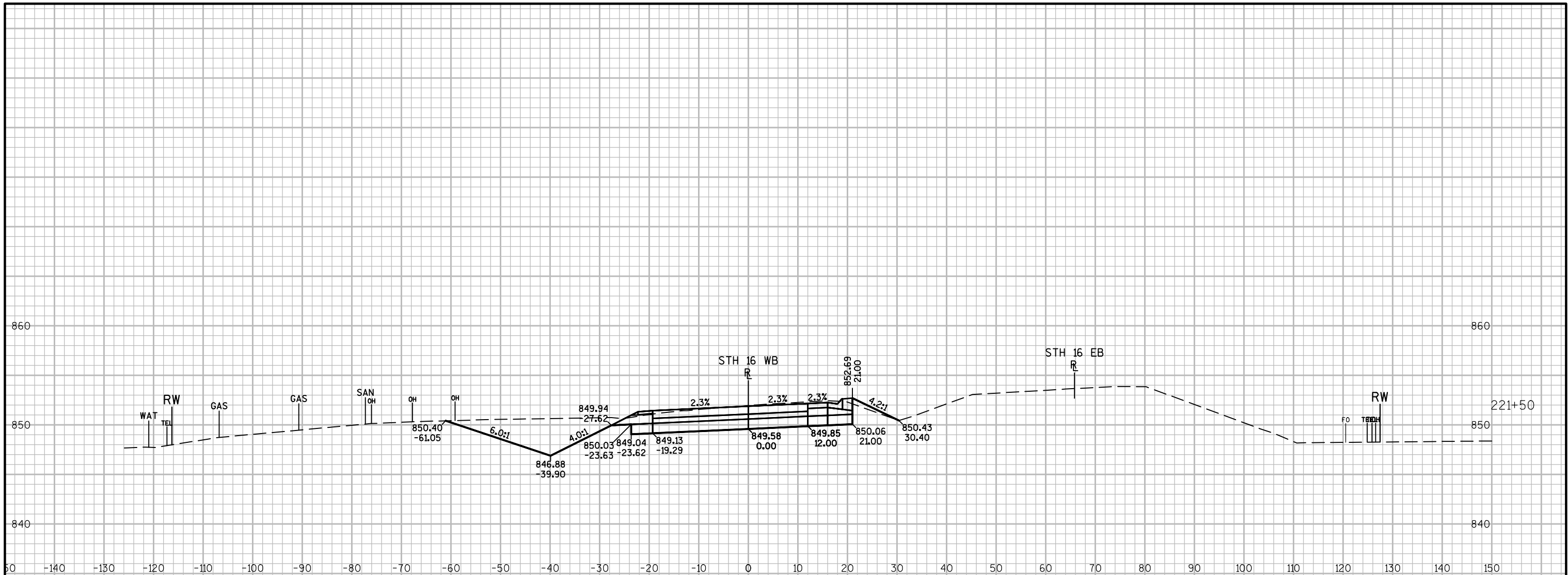




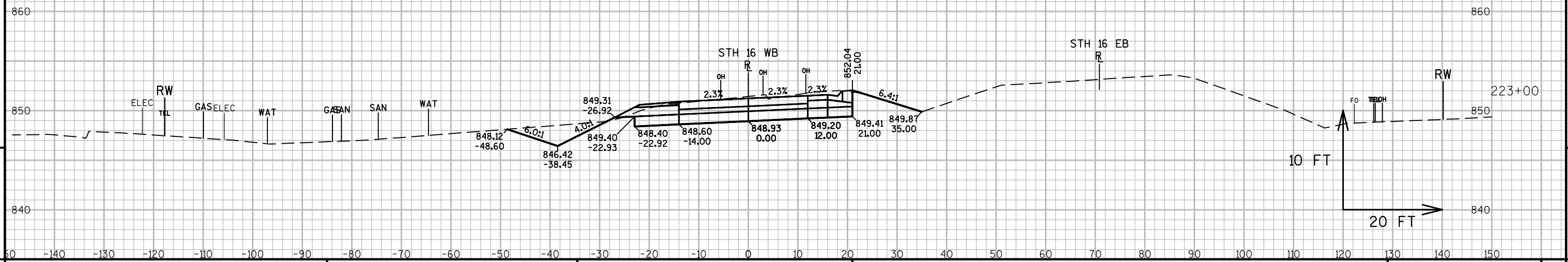
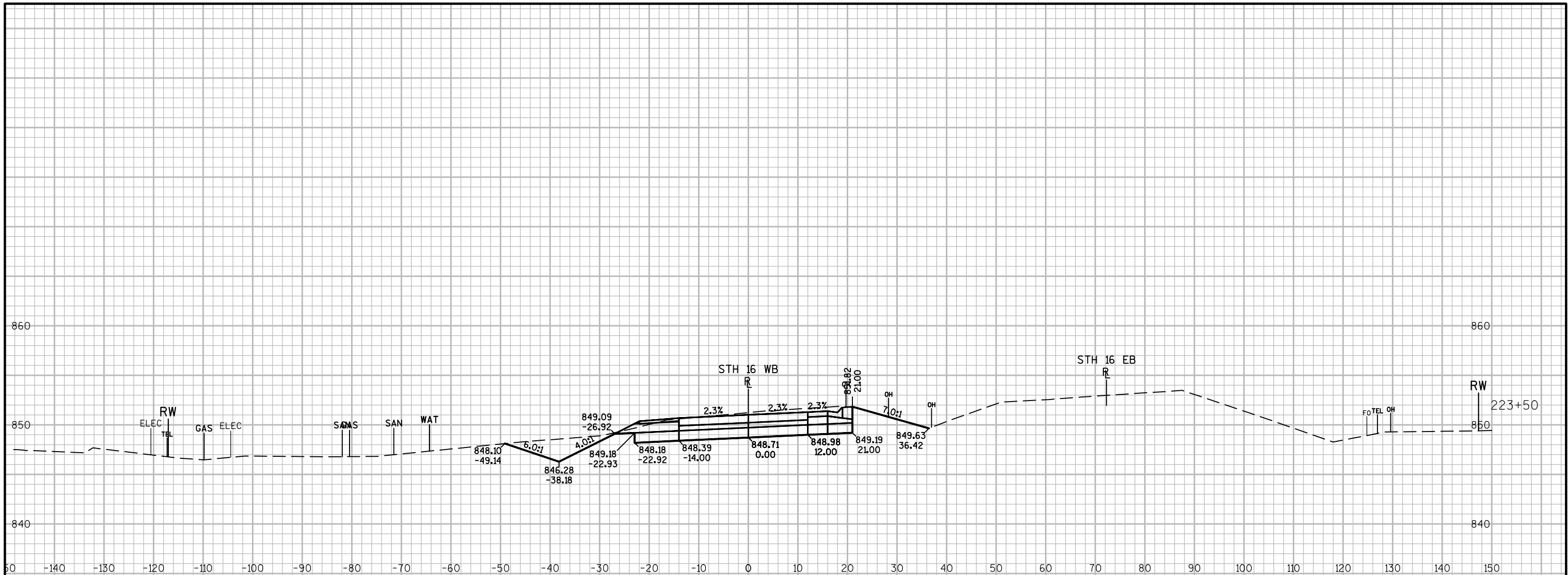




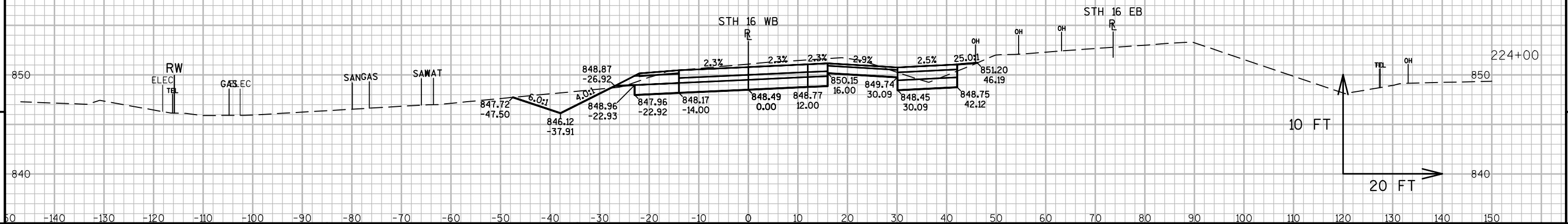
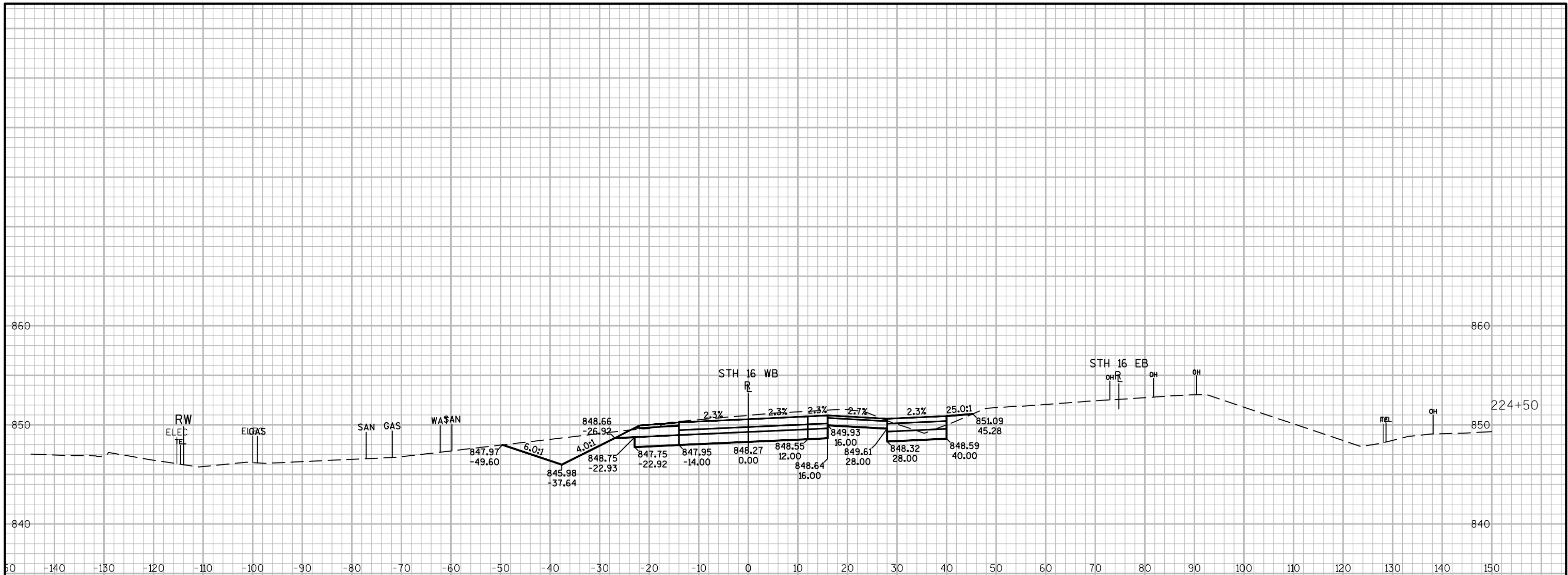


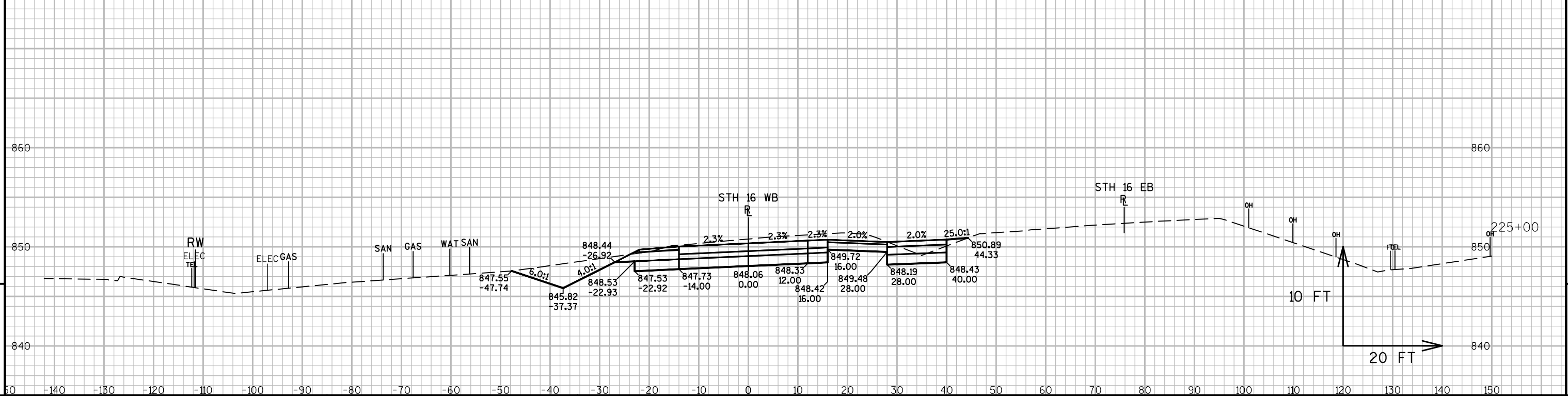
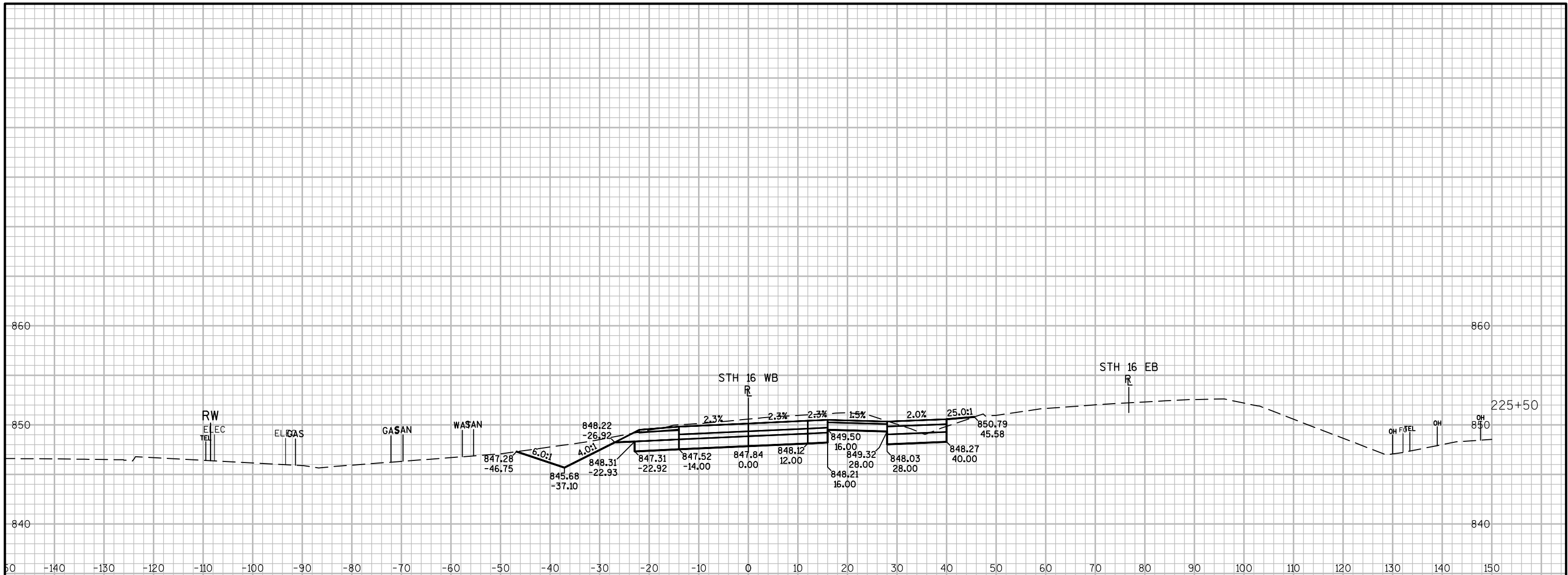


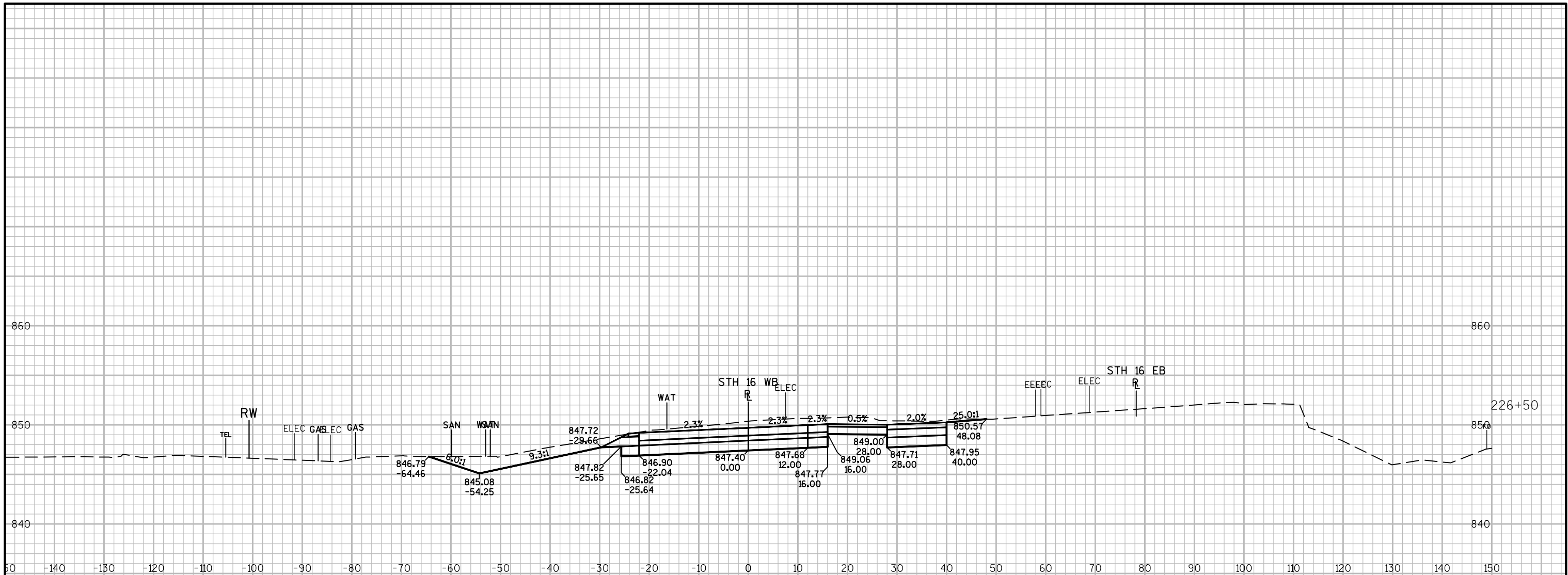
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 WB -STAGE 1B	SHEET	E
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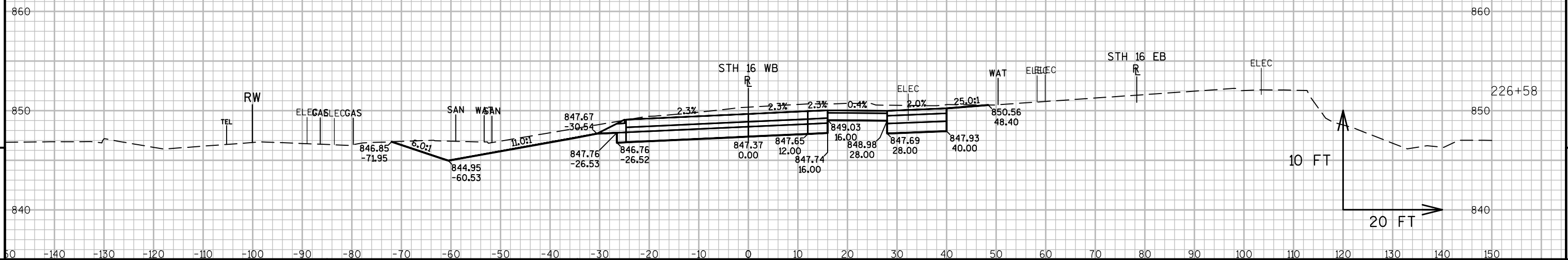
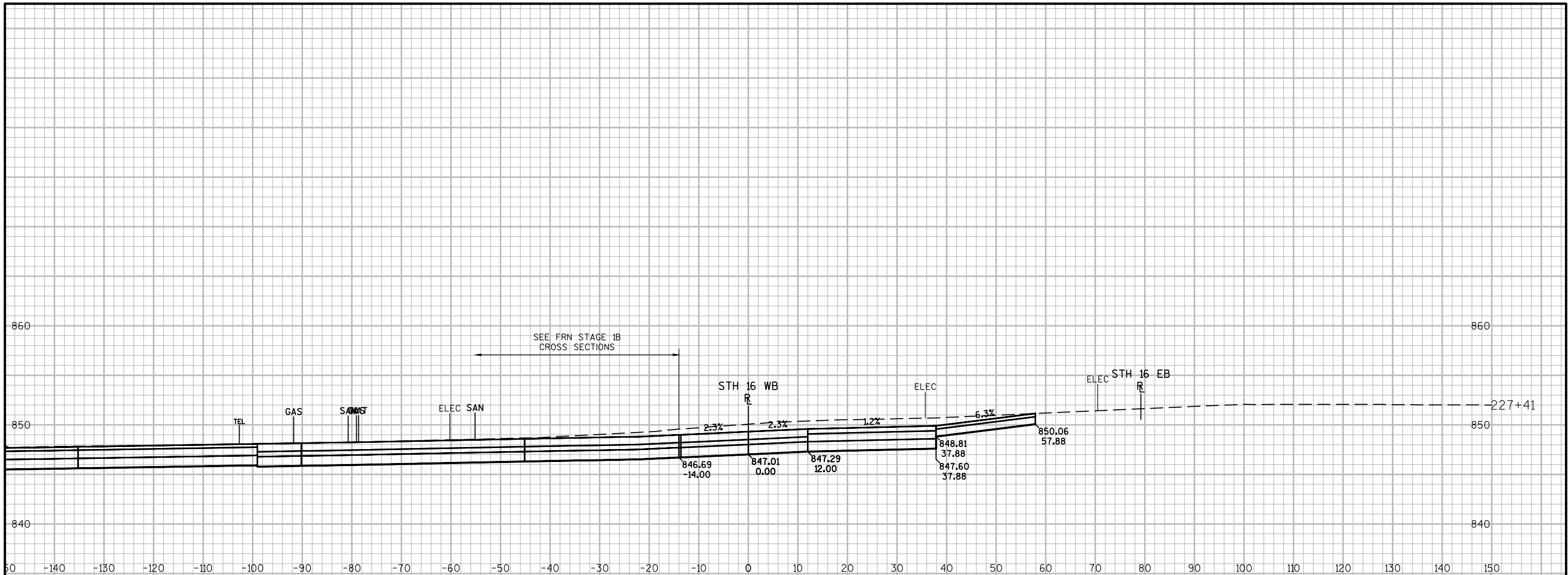


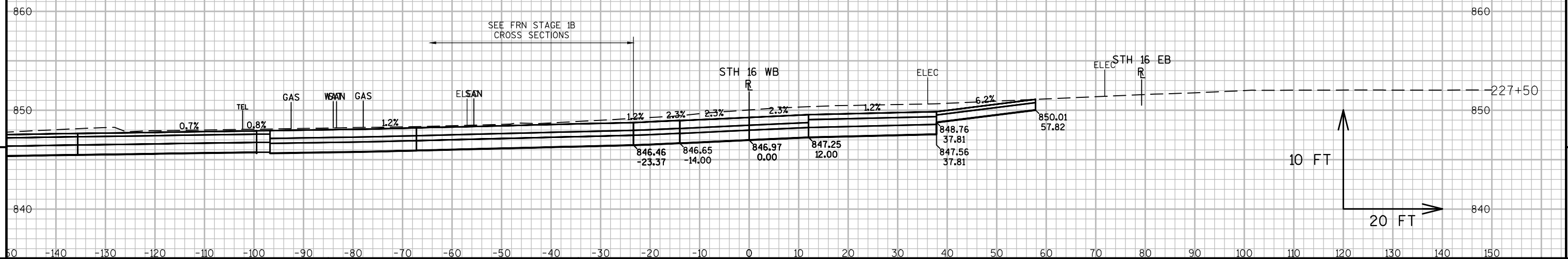
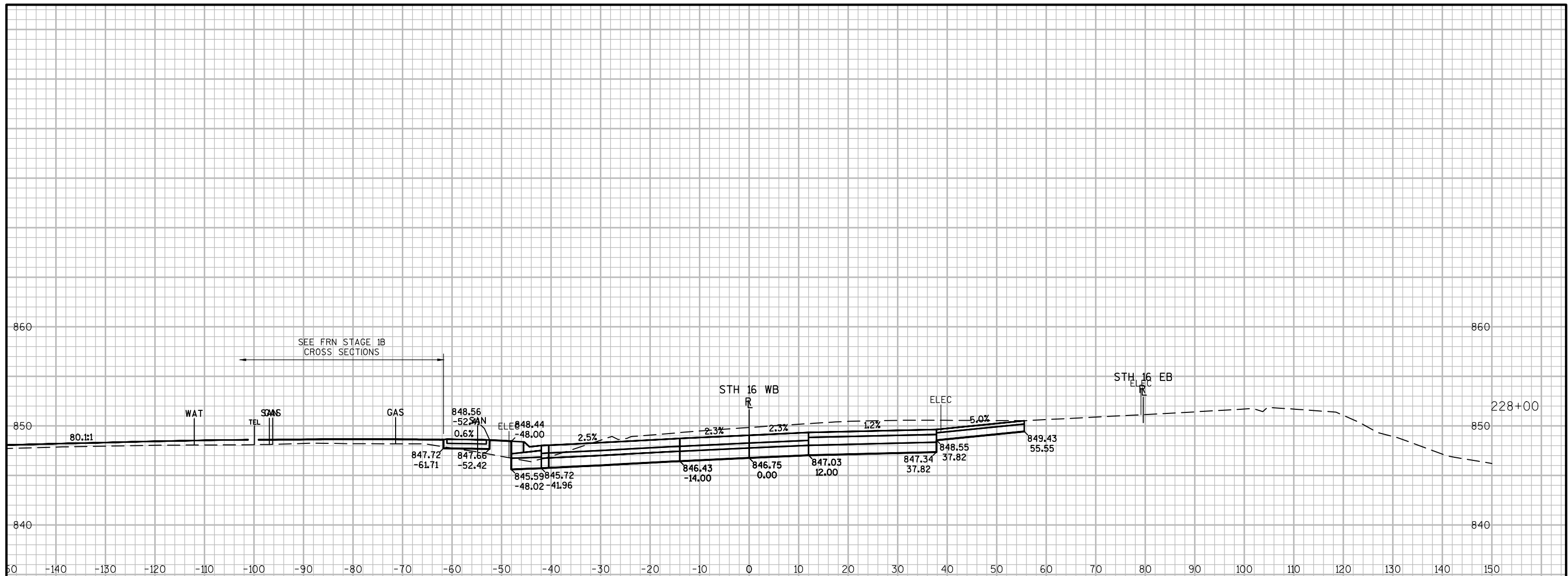
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 WB -STAGE 1B	SHEET	E
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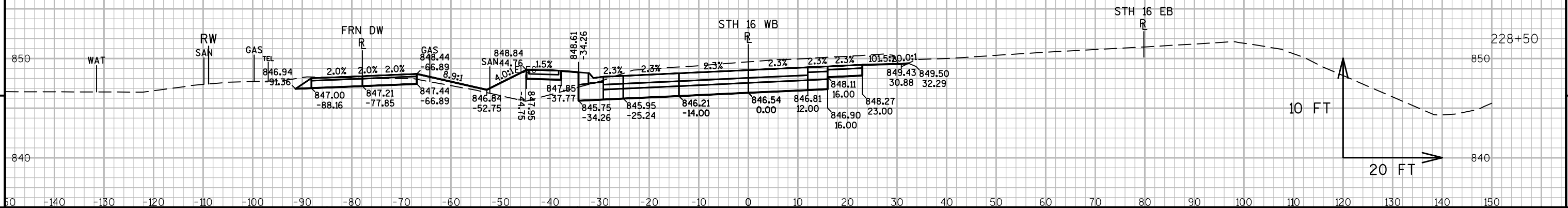
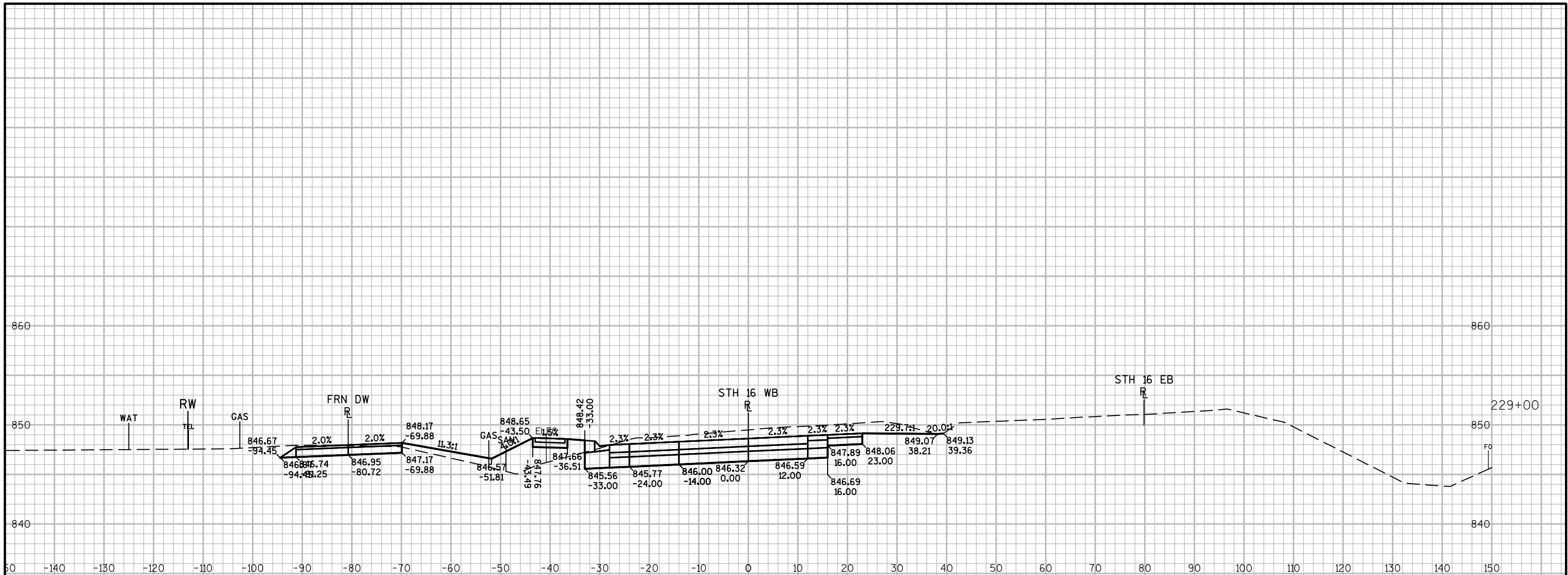


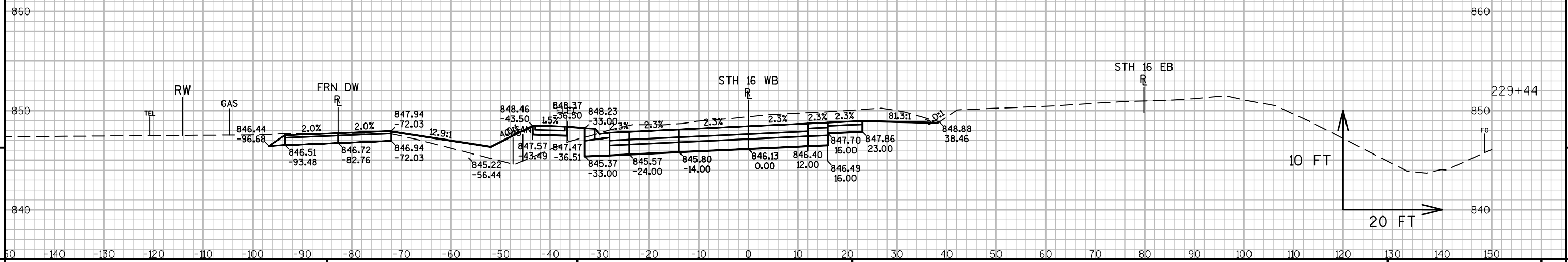
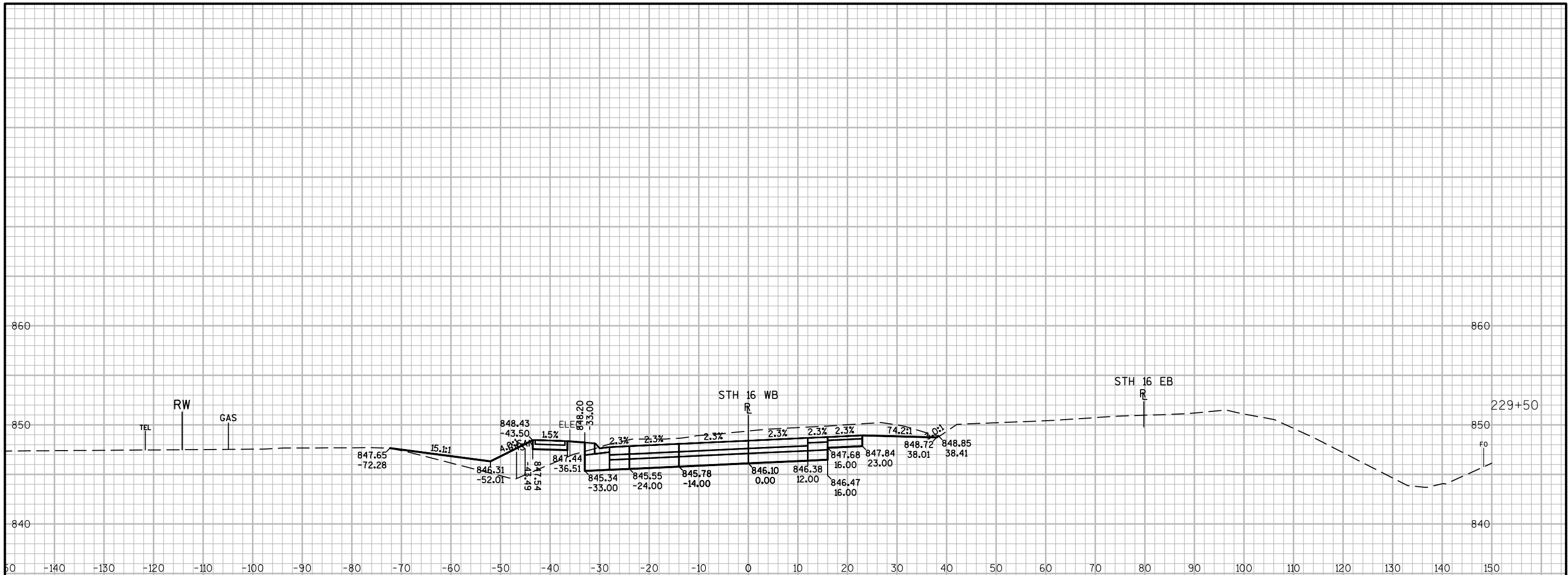


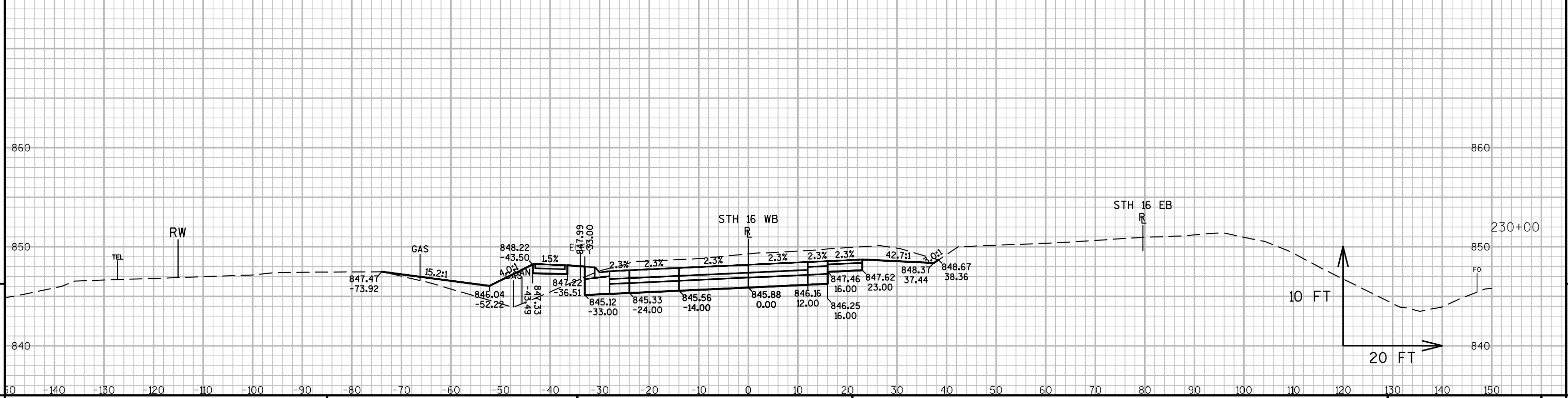
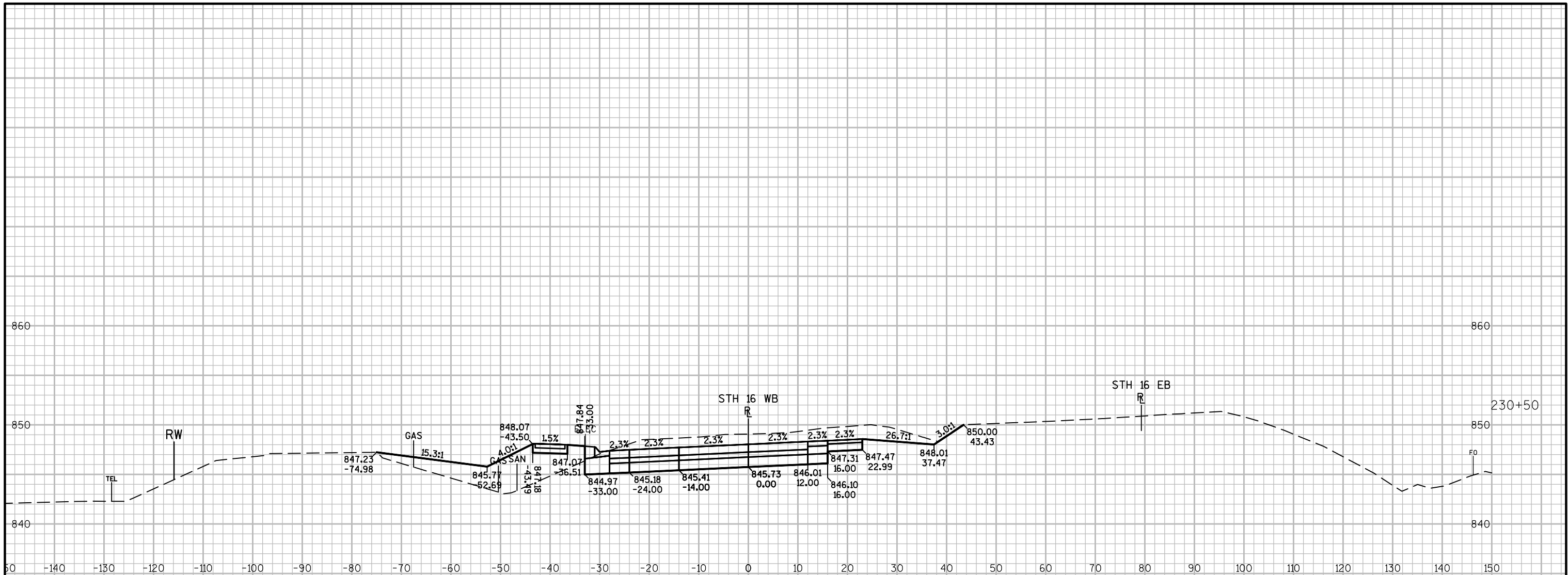




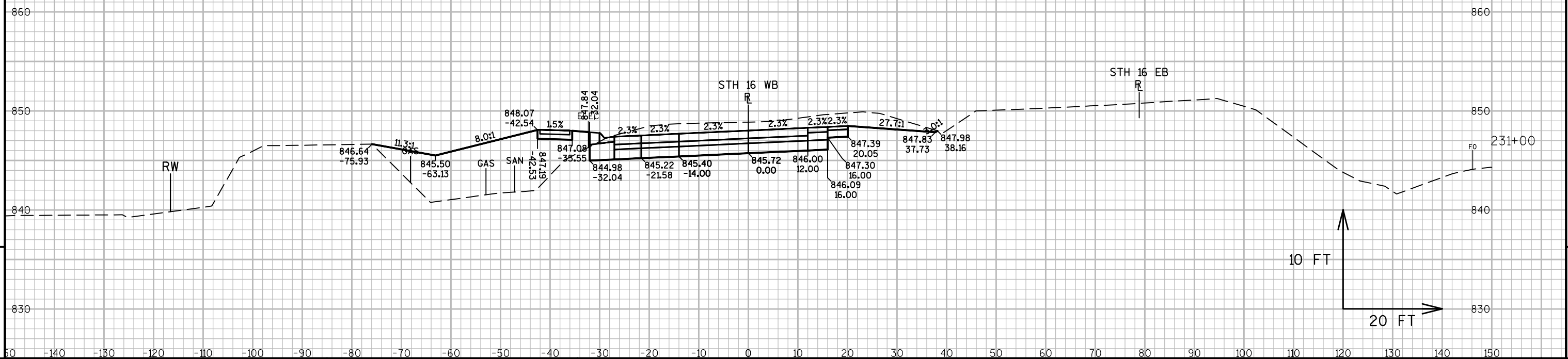
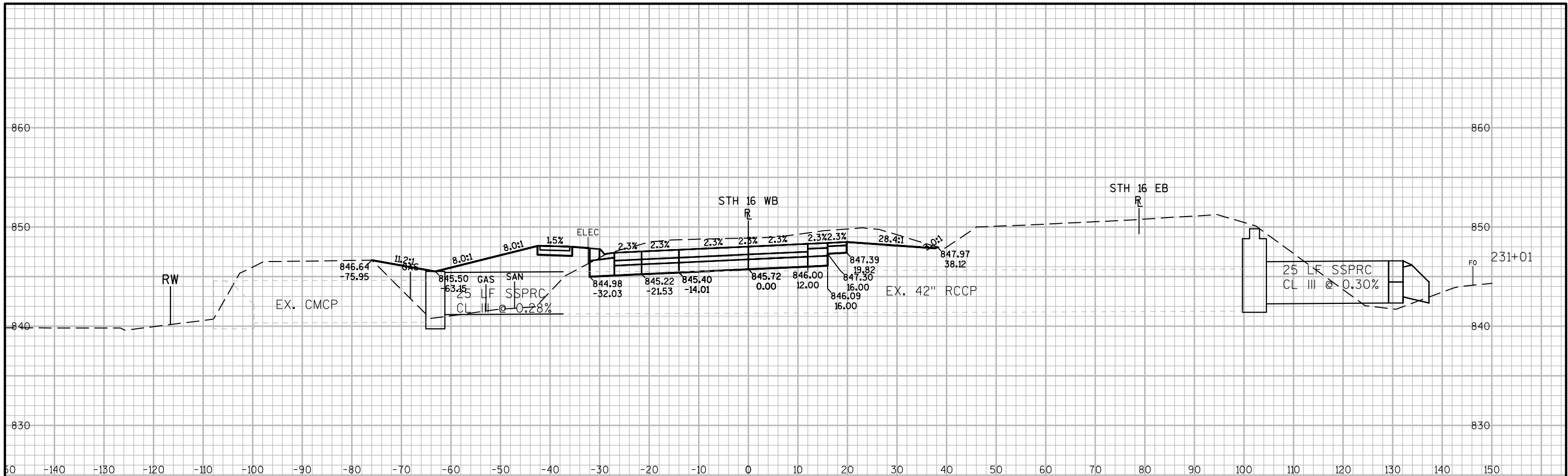








PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 WB -STAGE 1B	SHEET	E
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PROJECT NO:1401-02-72

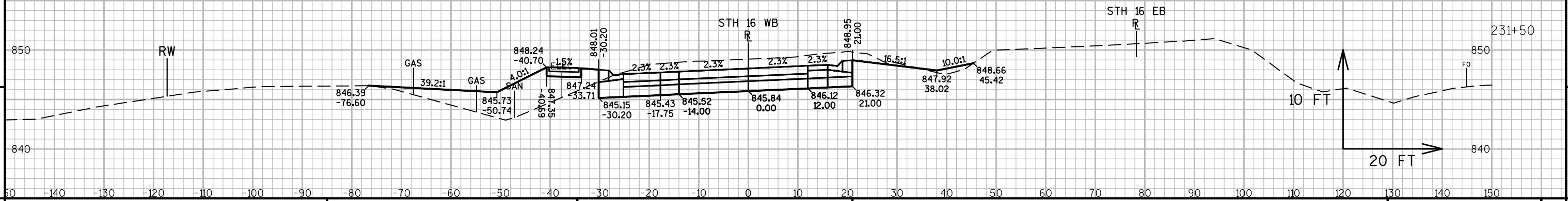
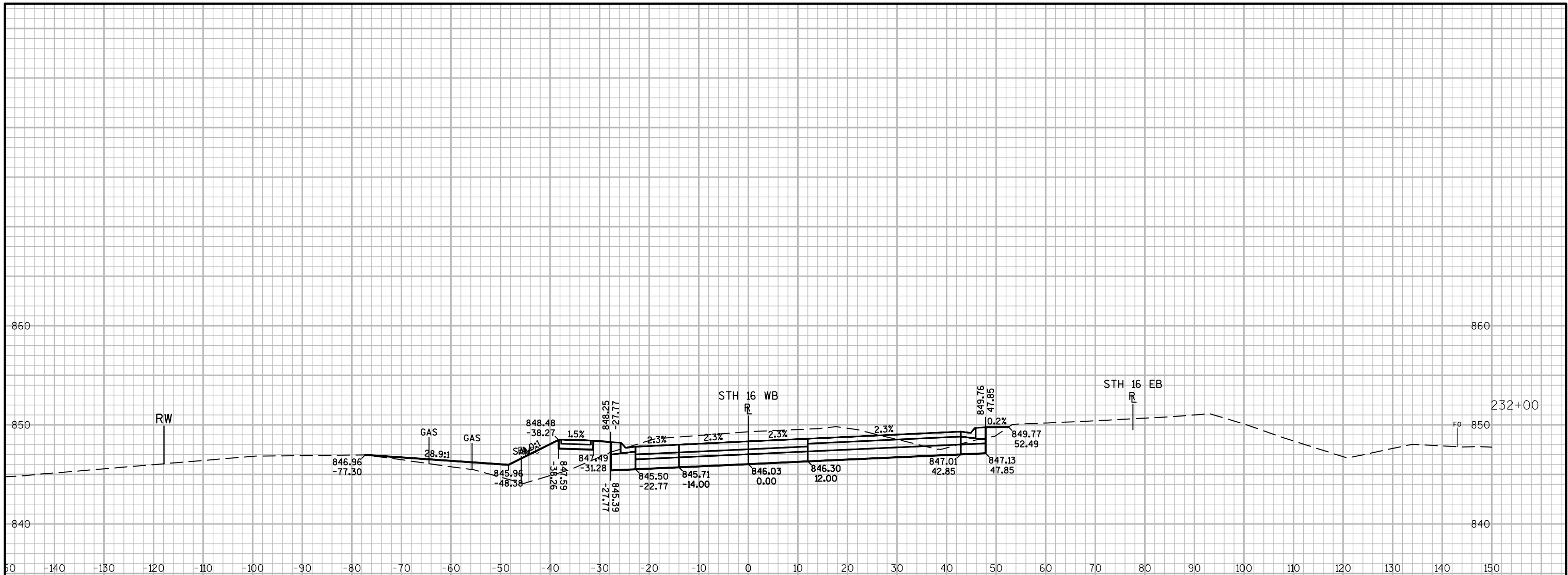
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COUNTY:COLUMBIA

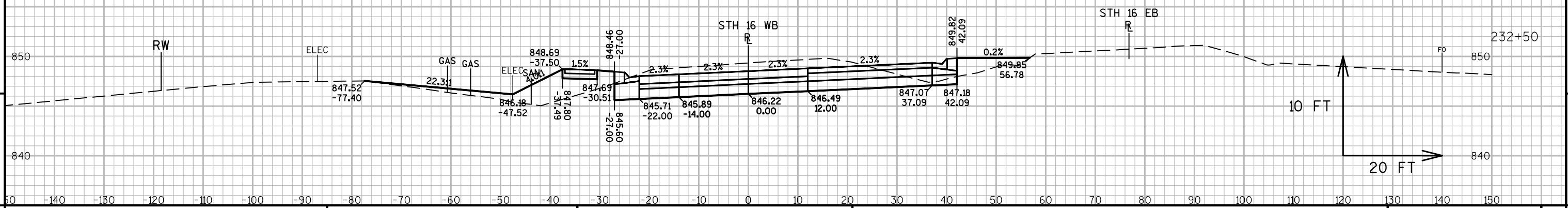
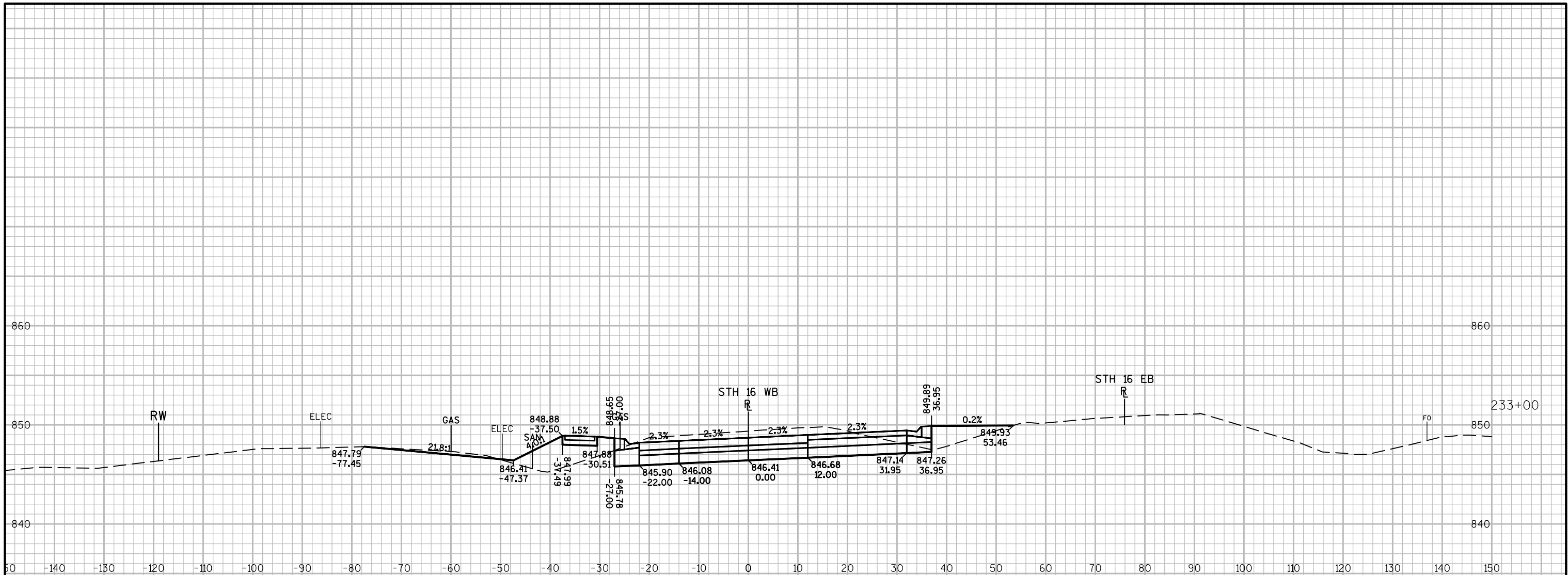
CROSS SECTIONS: STH 16 WB -STAGE 1B

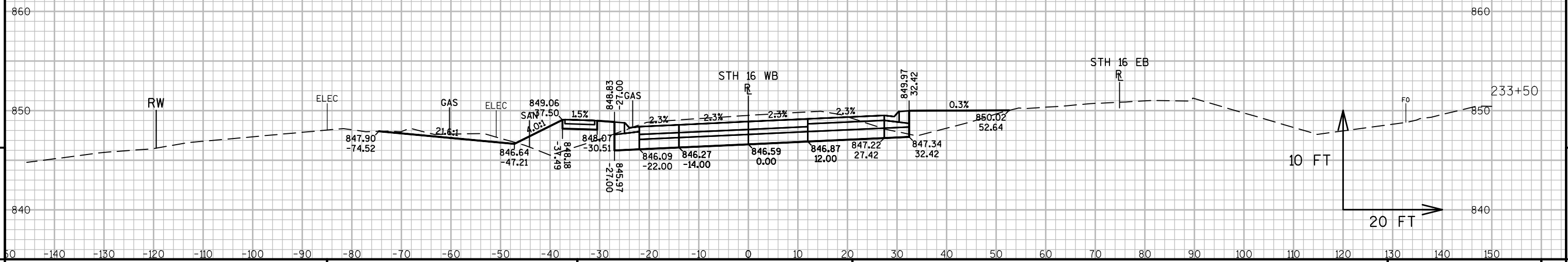
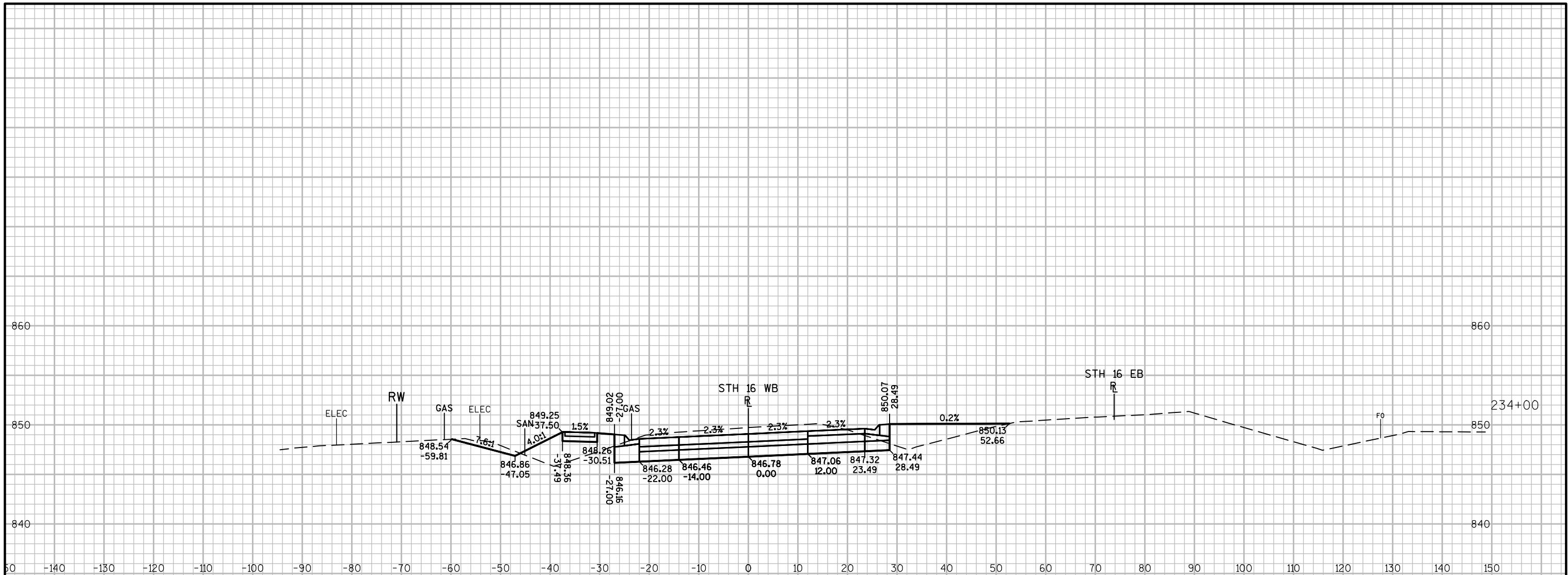
SHEET

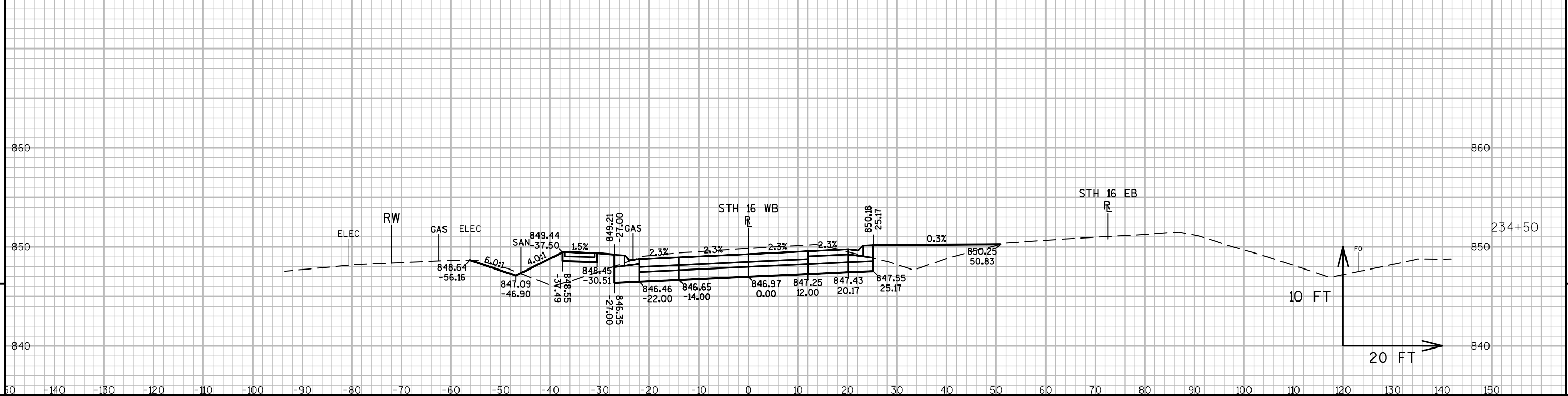
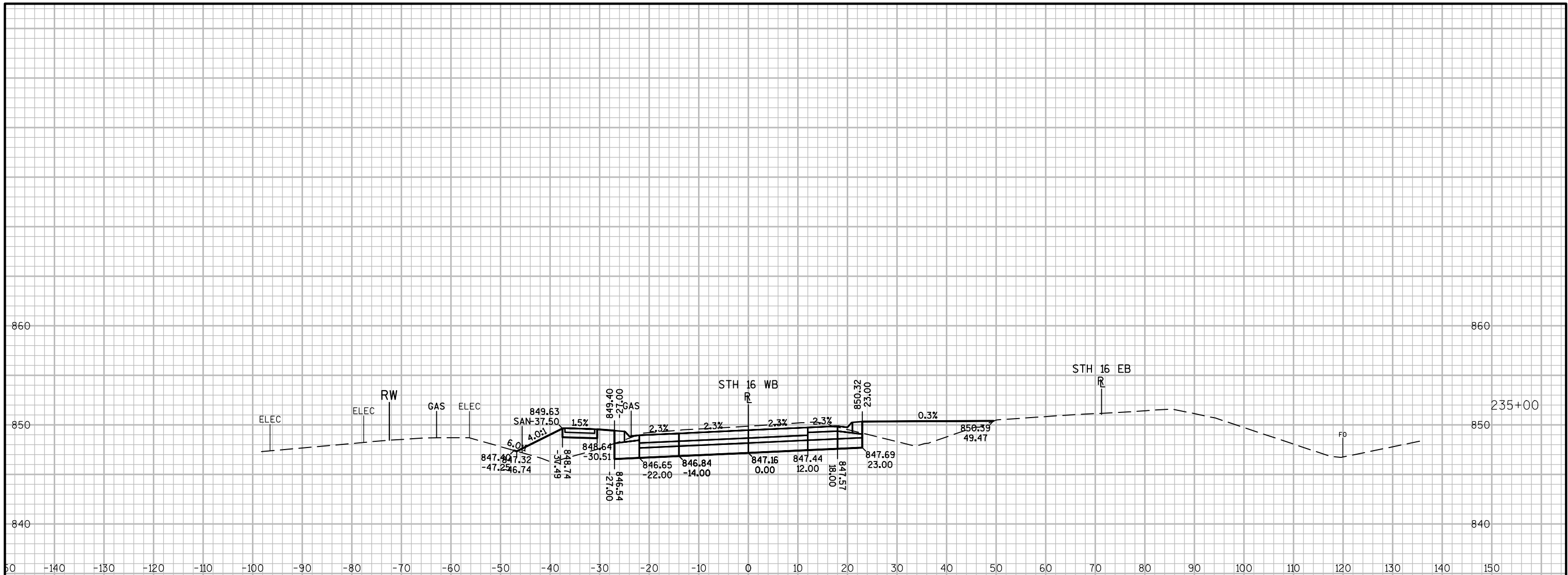
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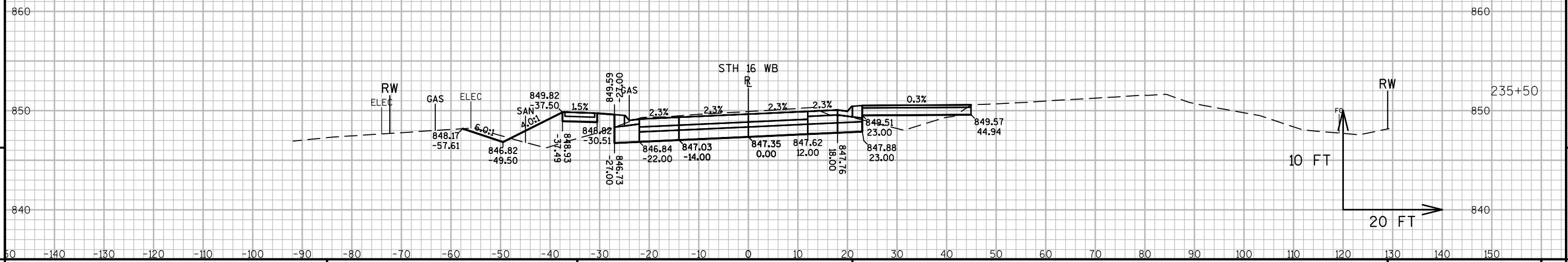
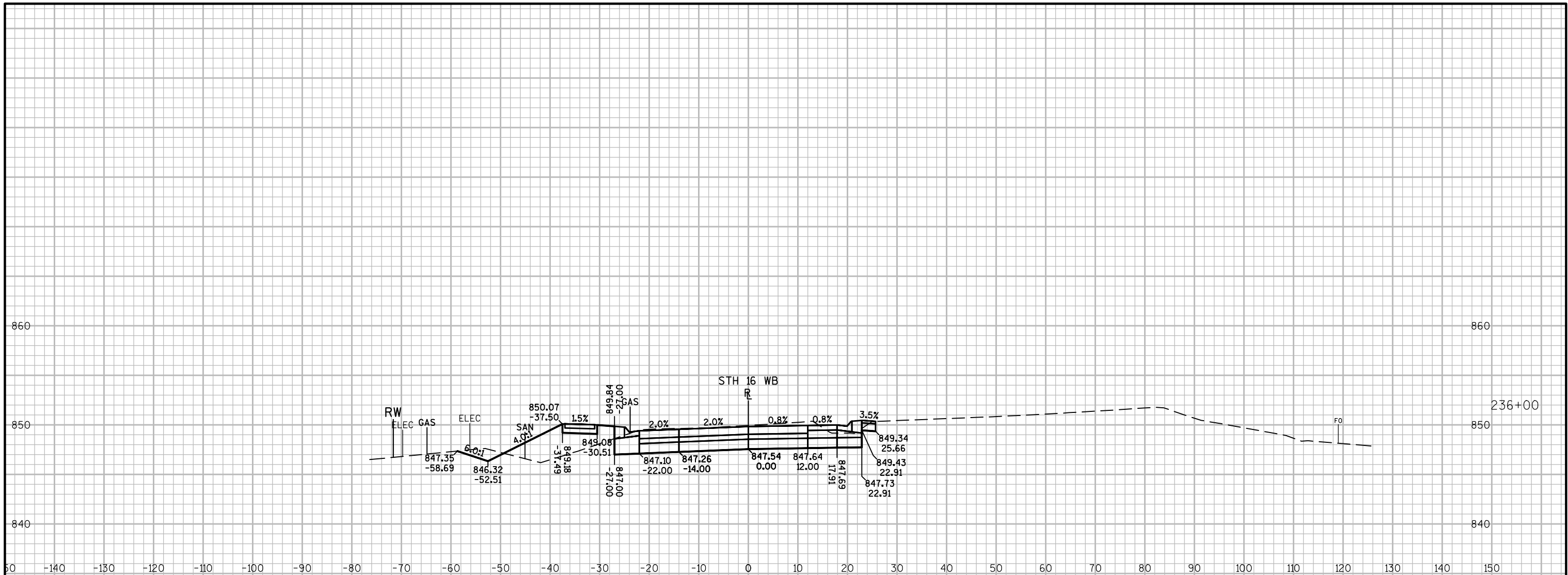


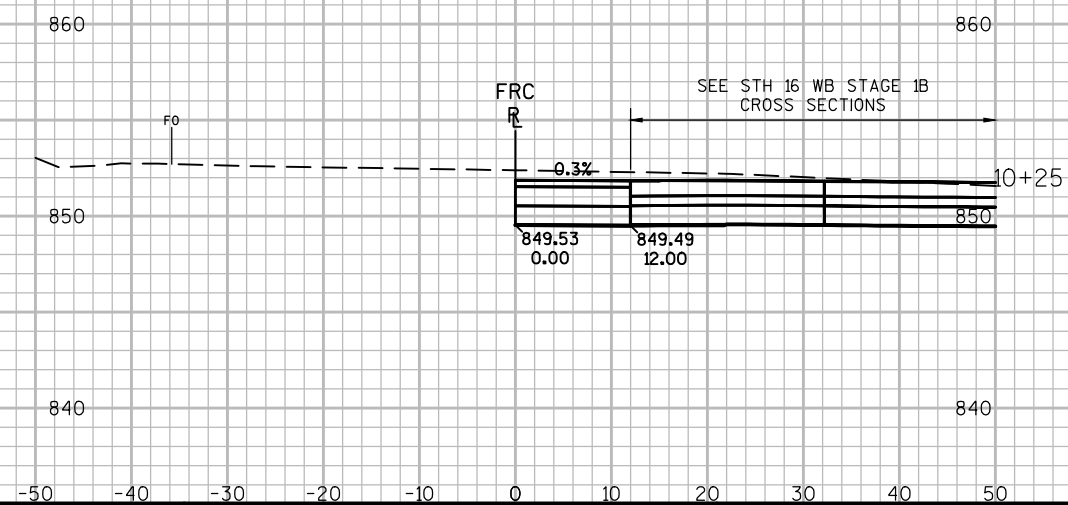
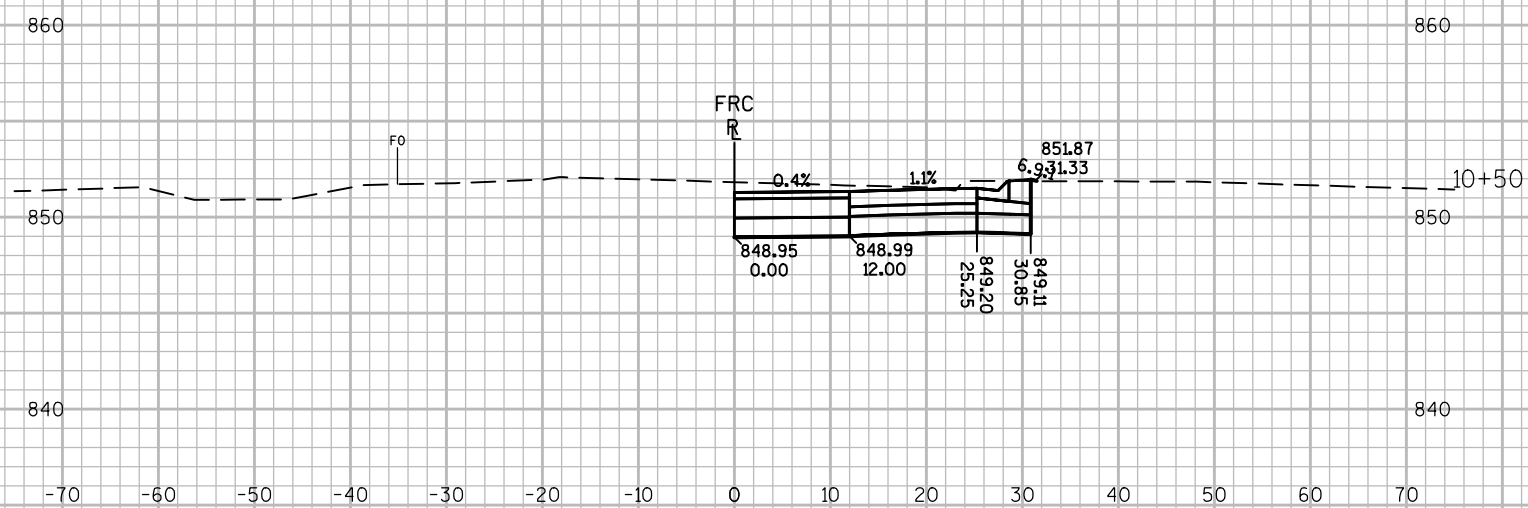
PROJECT NO:1401-02-72	HWY: STH 16	COUNTY: COLUMBIA	CROSS SECTIONS: STH 16 WB -STAGE 1B	SHEET	E
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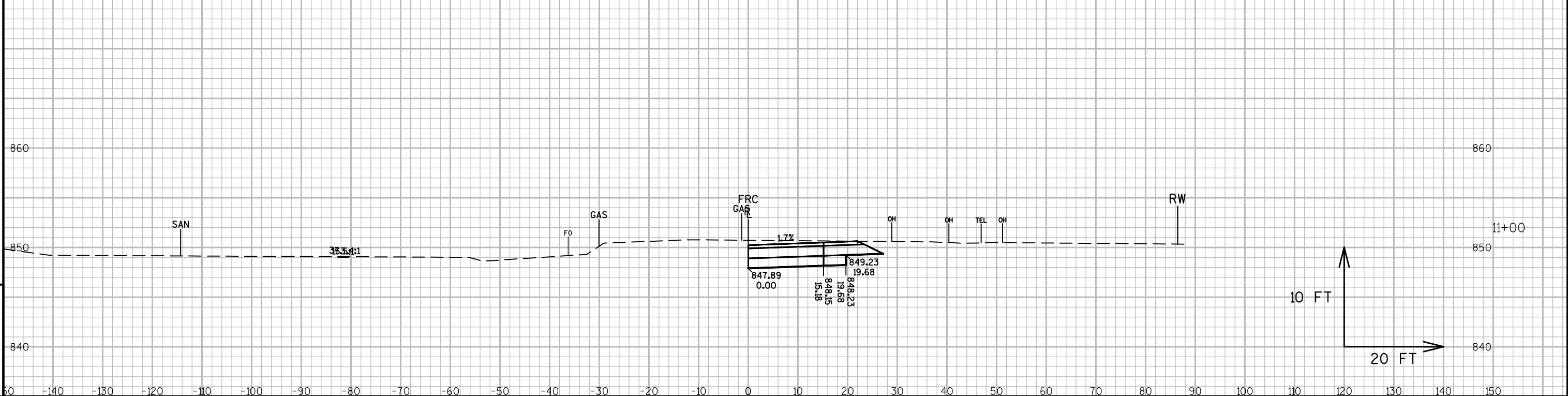
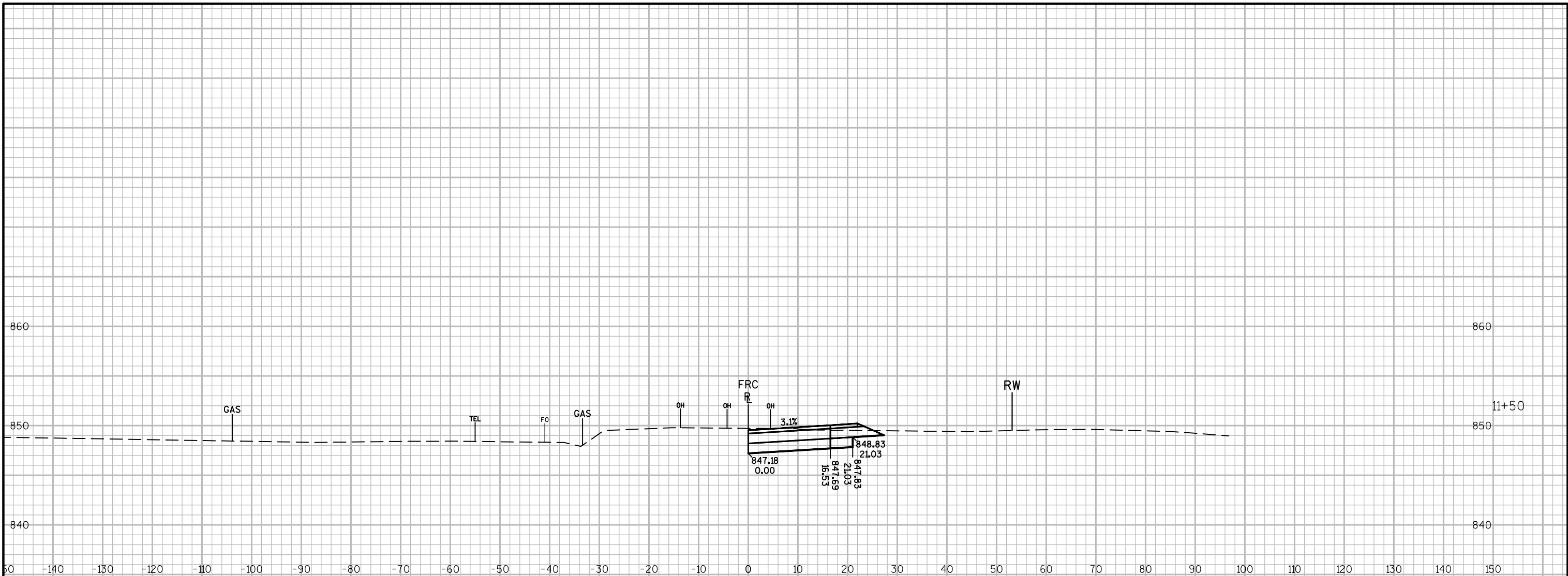


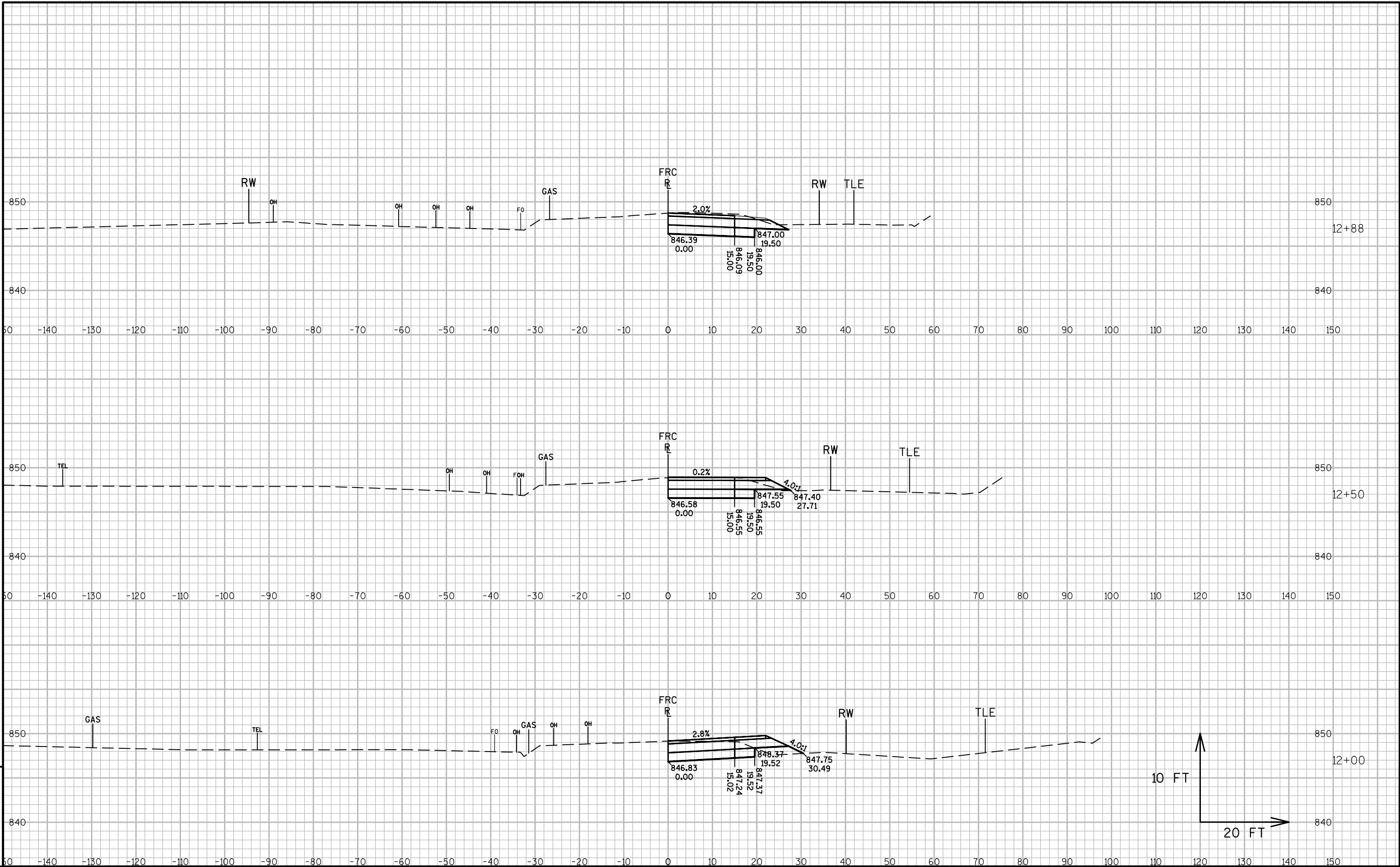


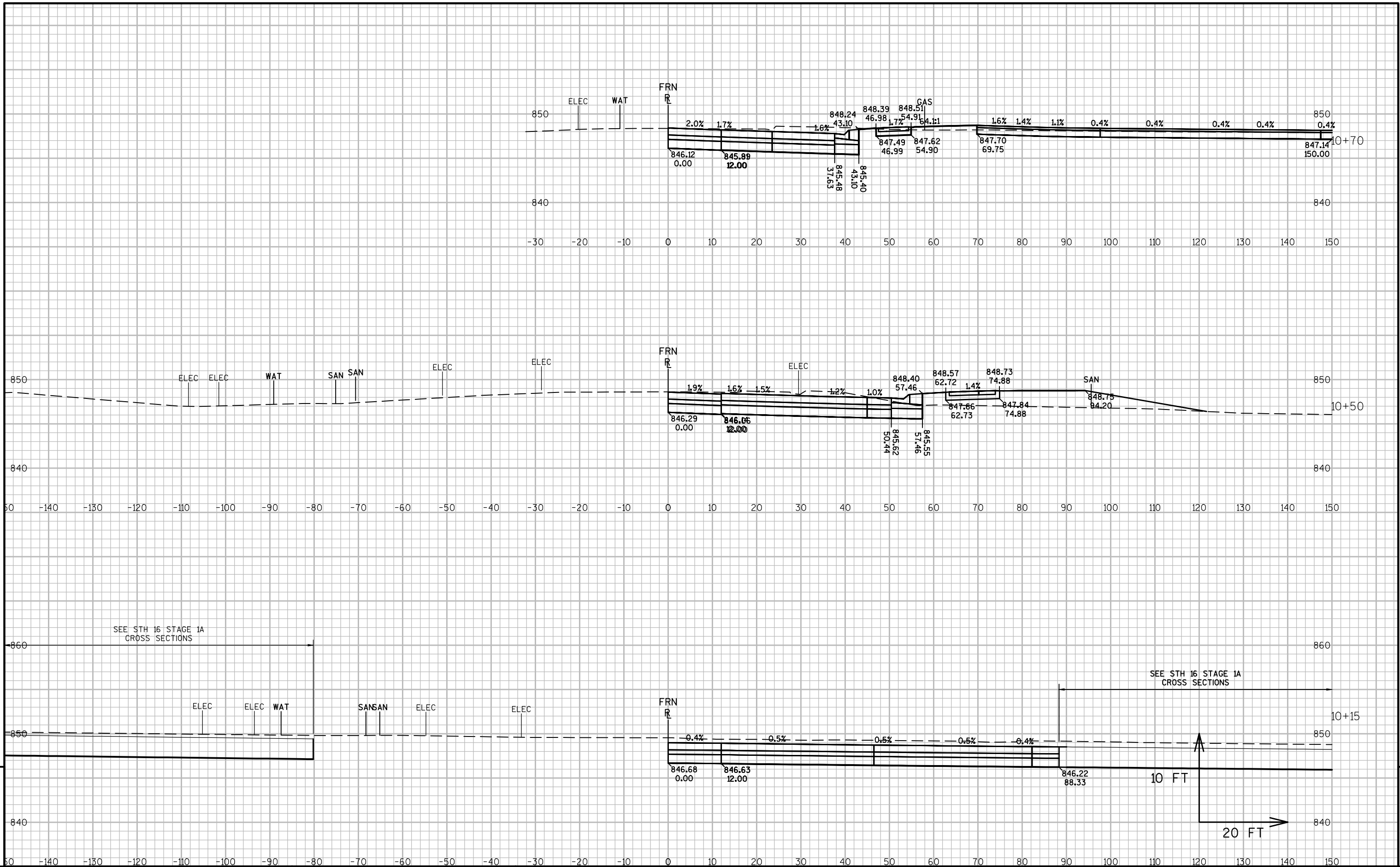


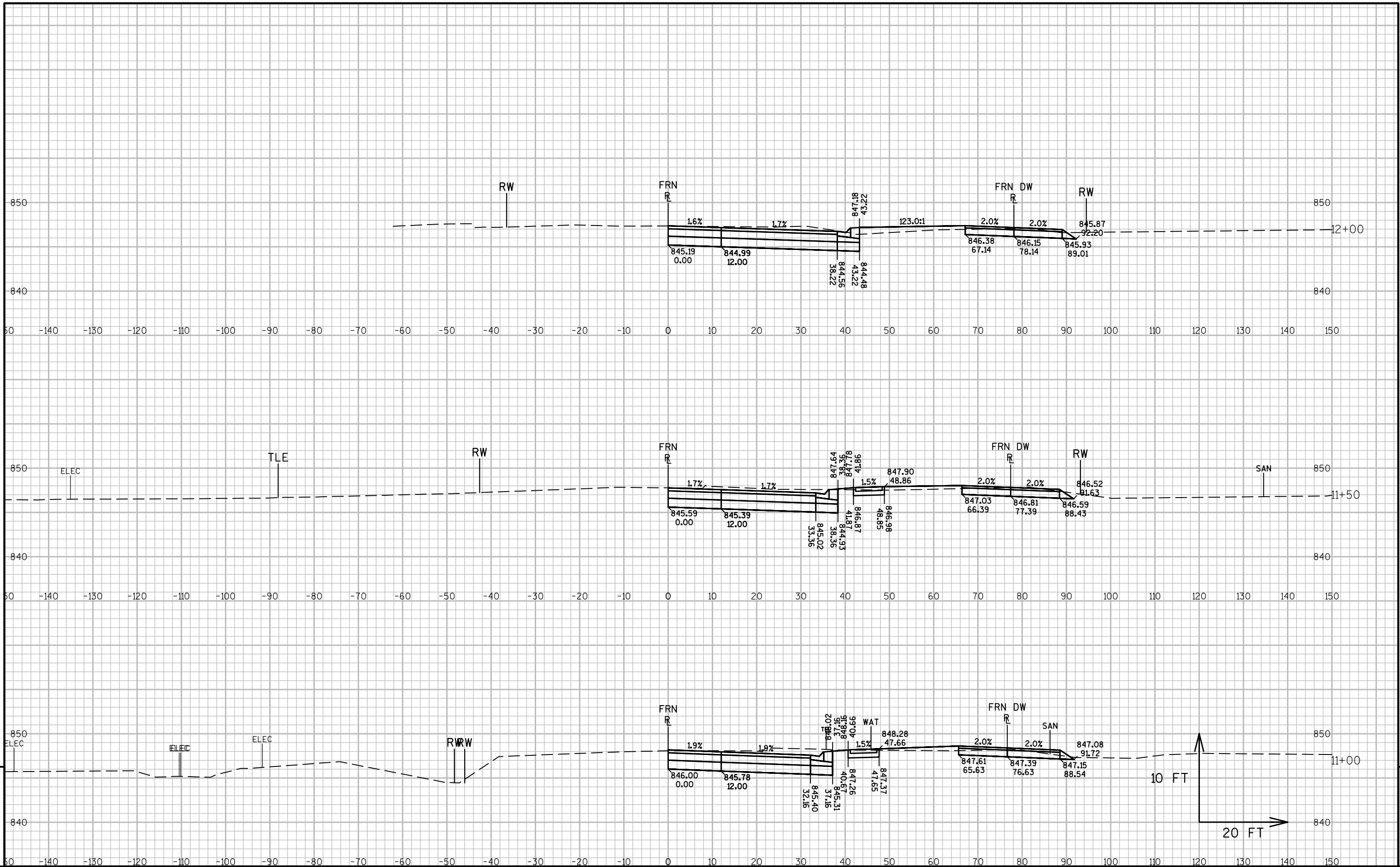


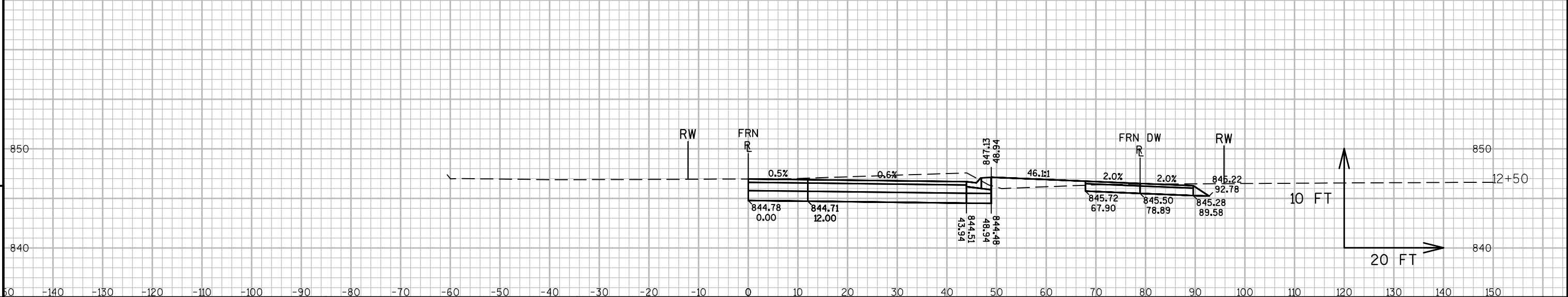
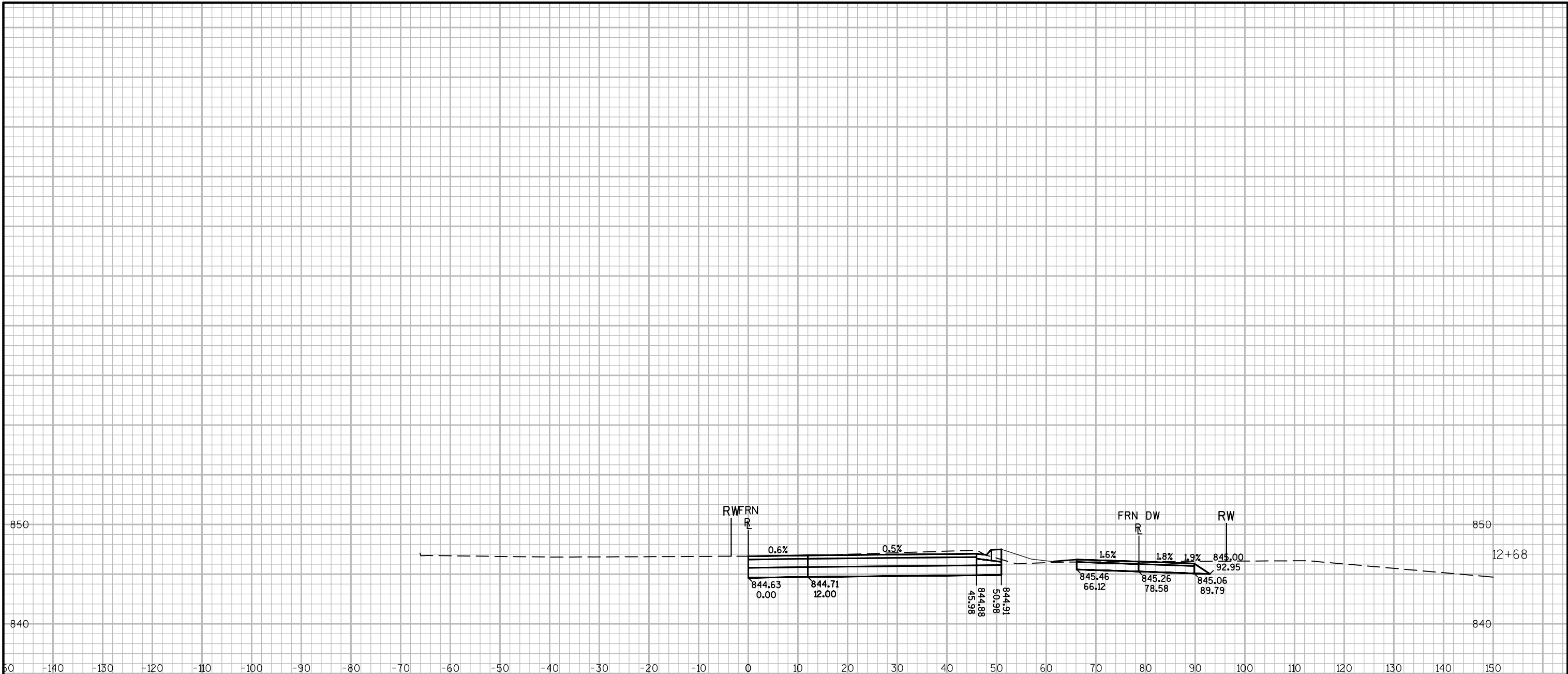


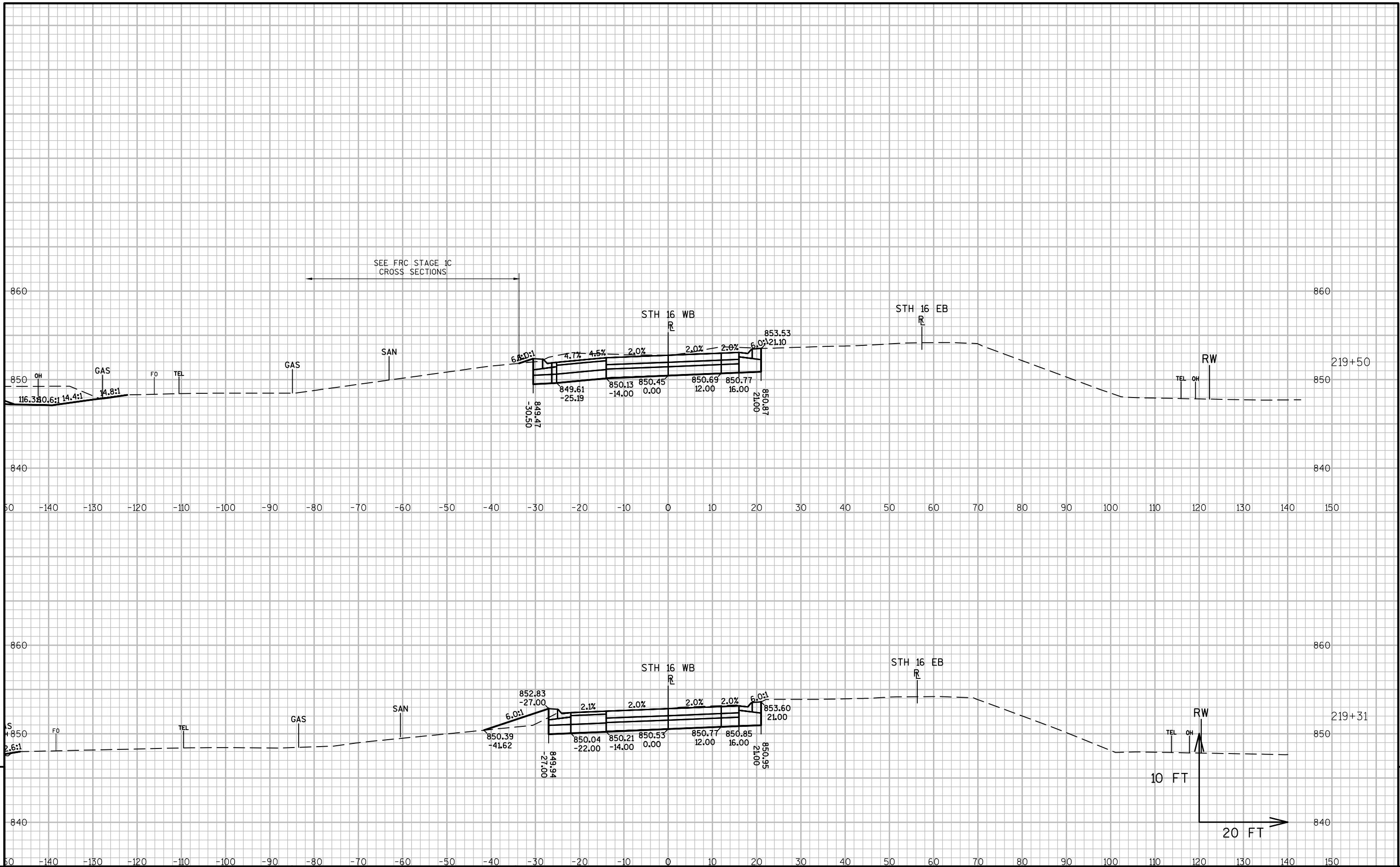


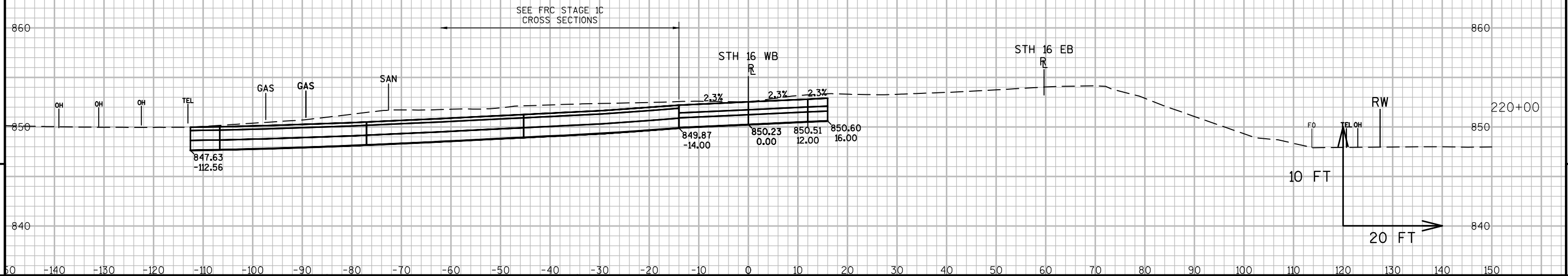
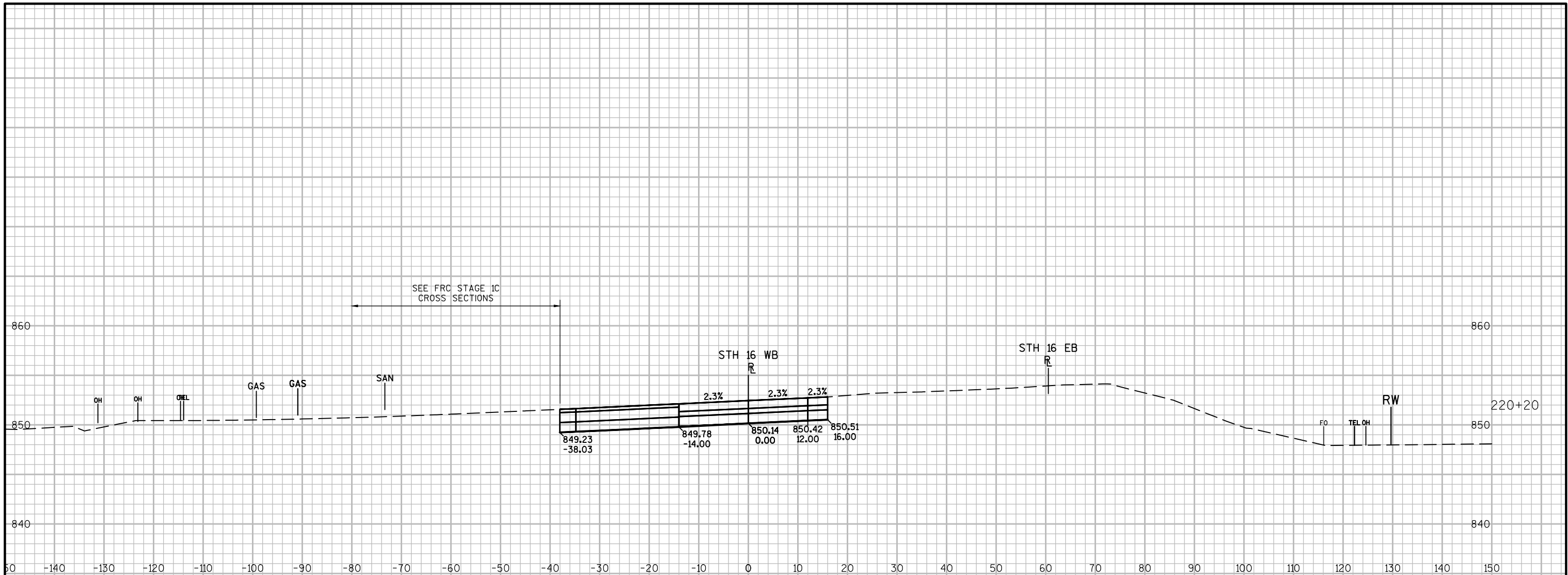


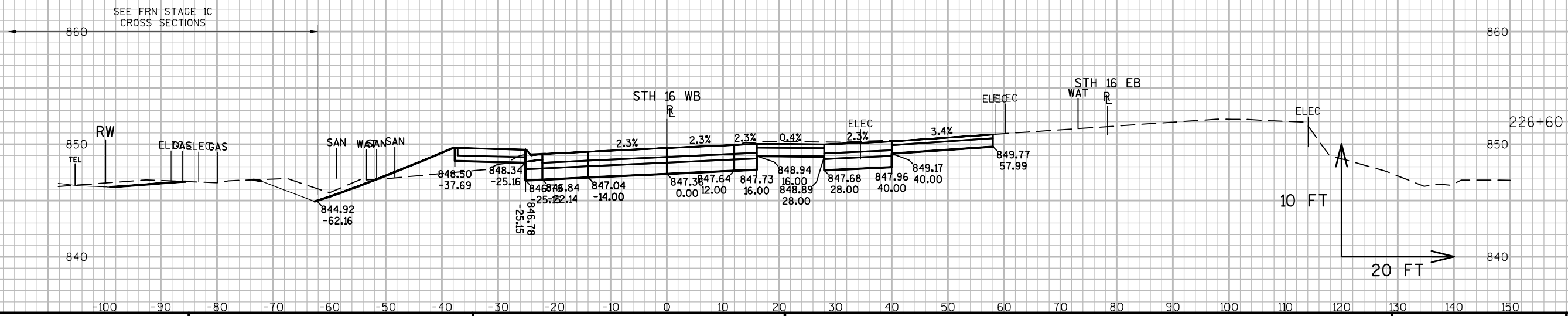
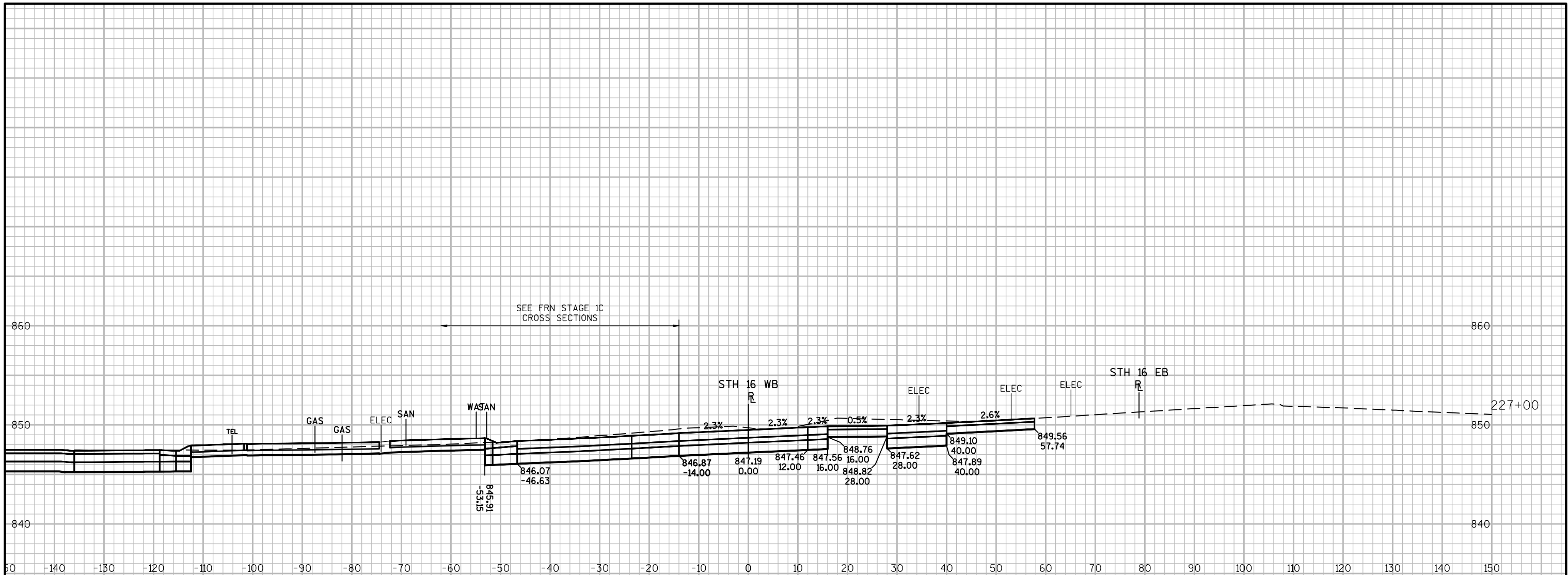


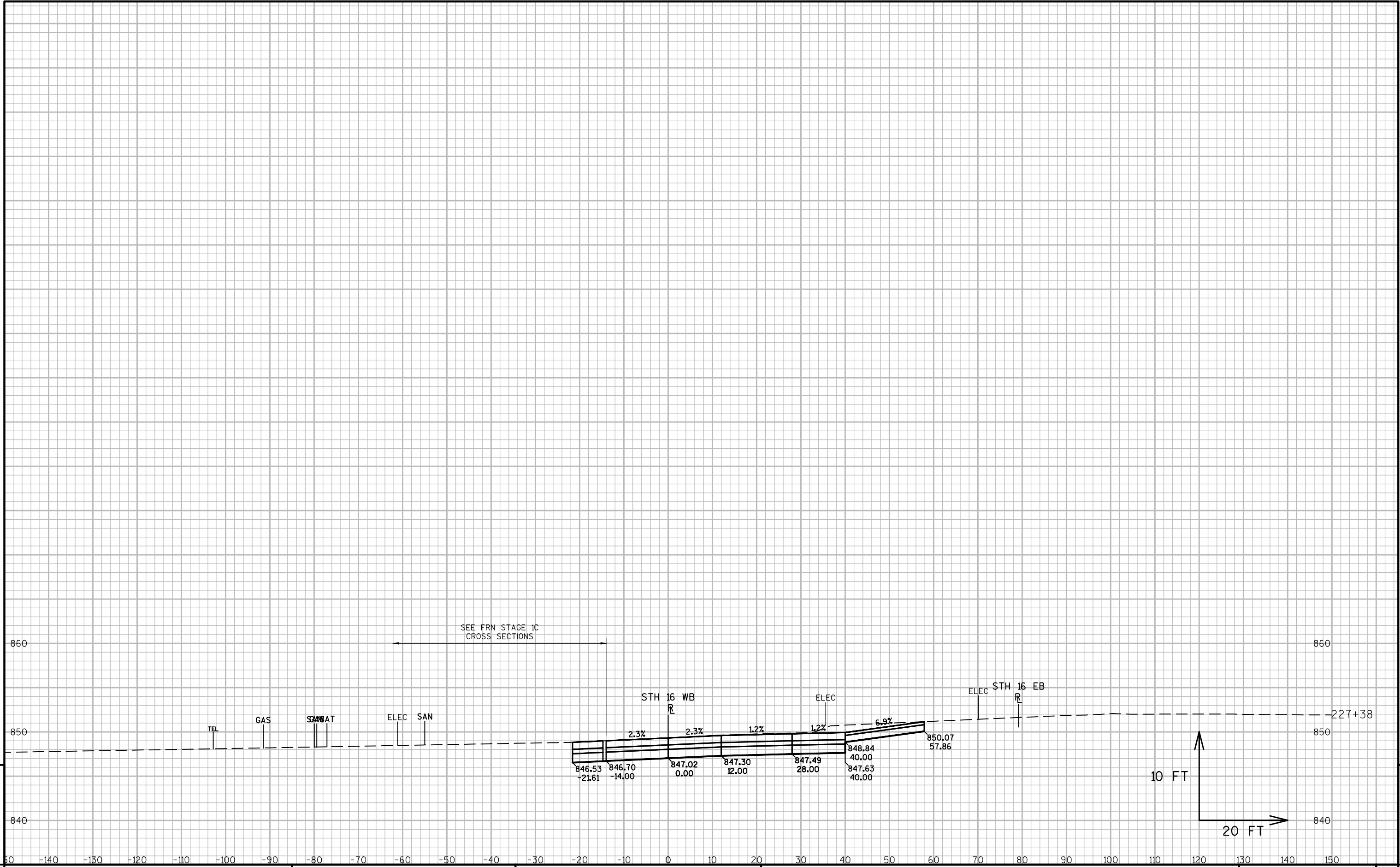


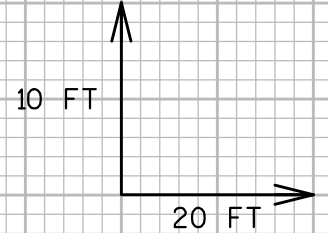
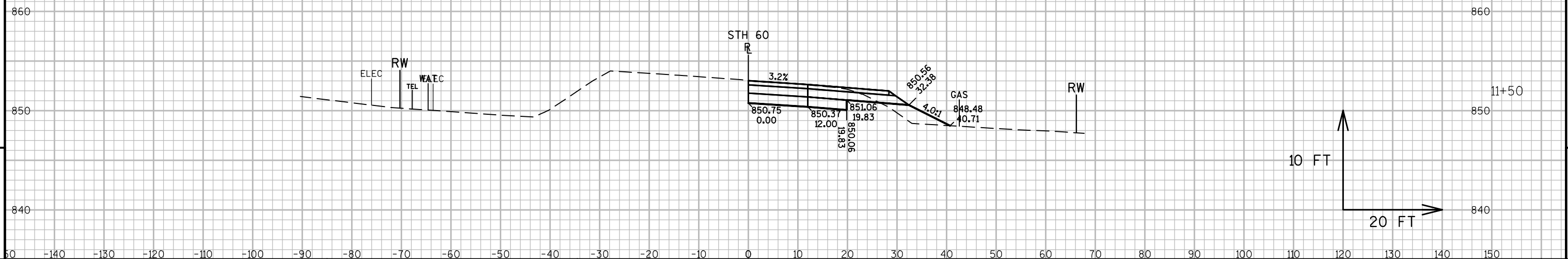
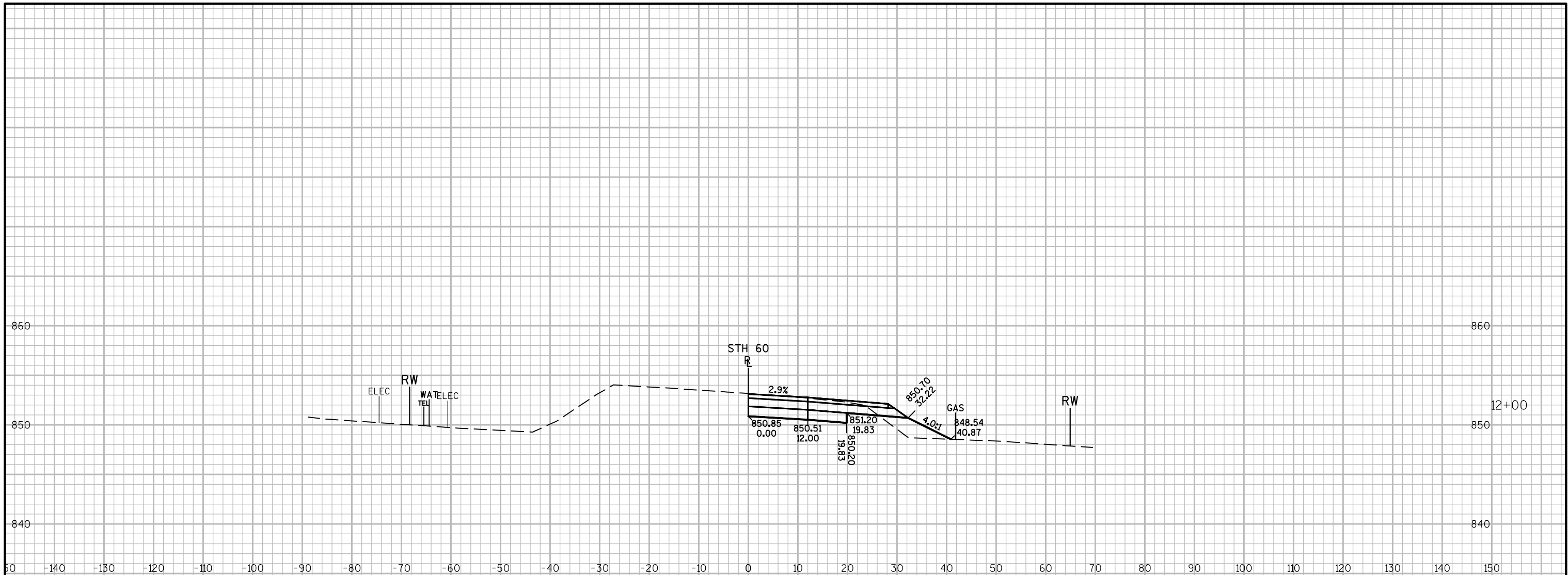


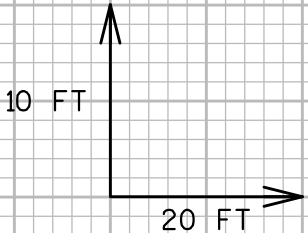
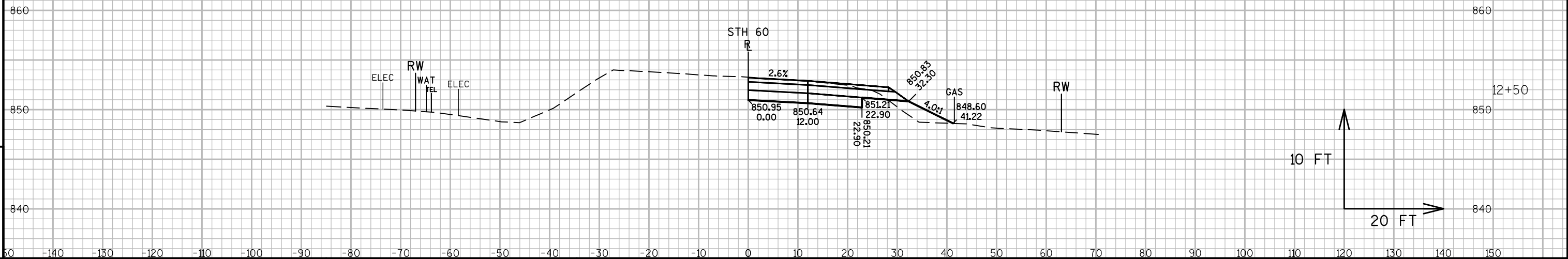
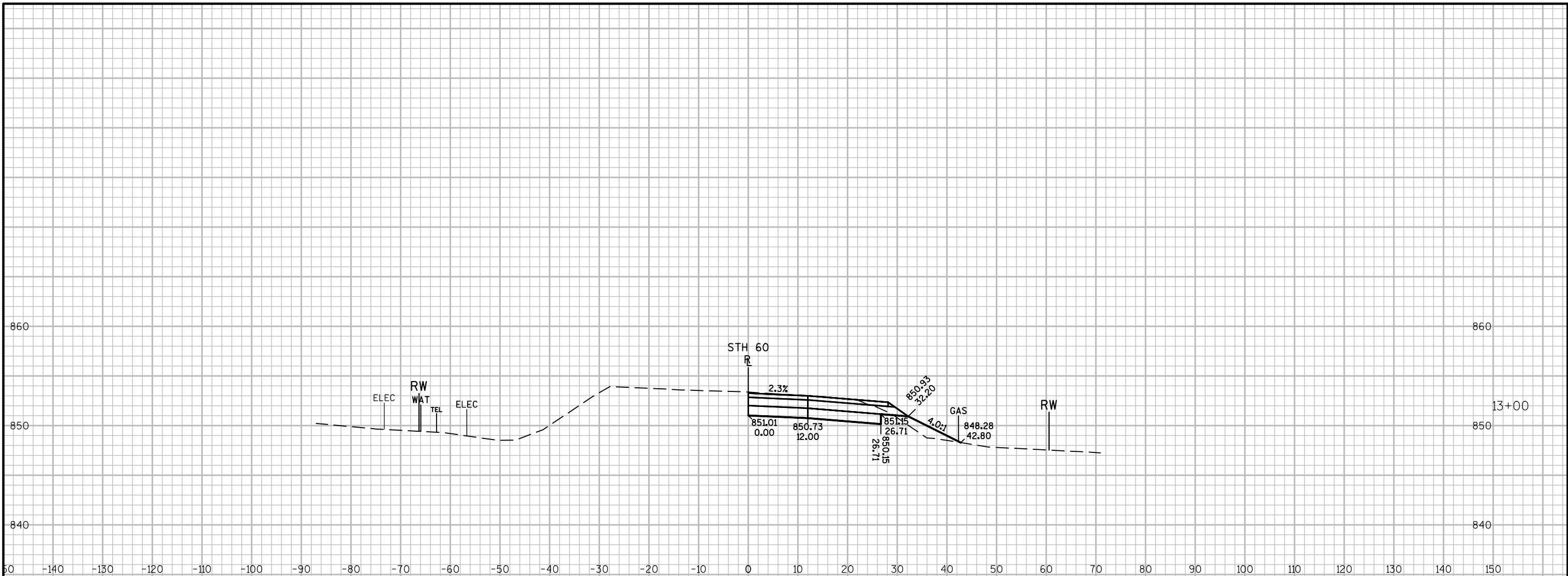


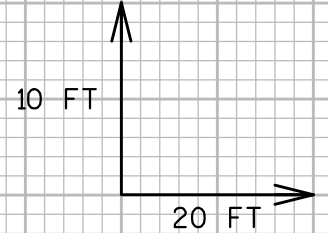
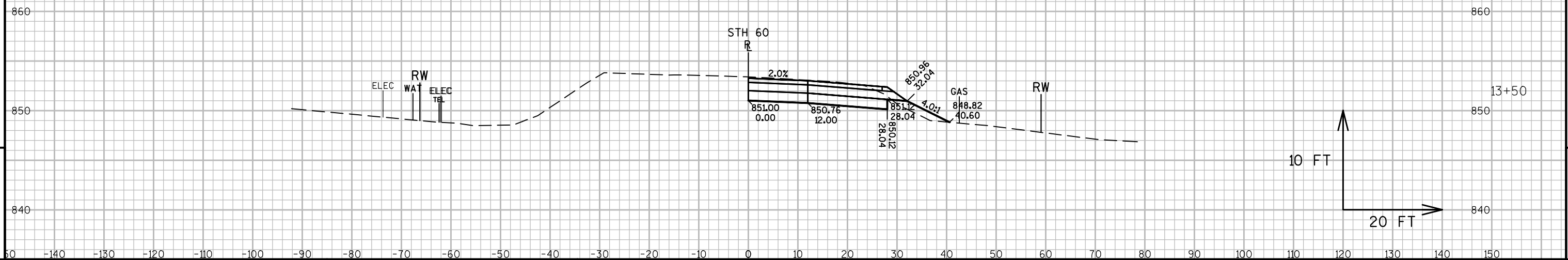
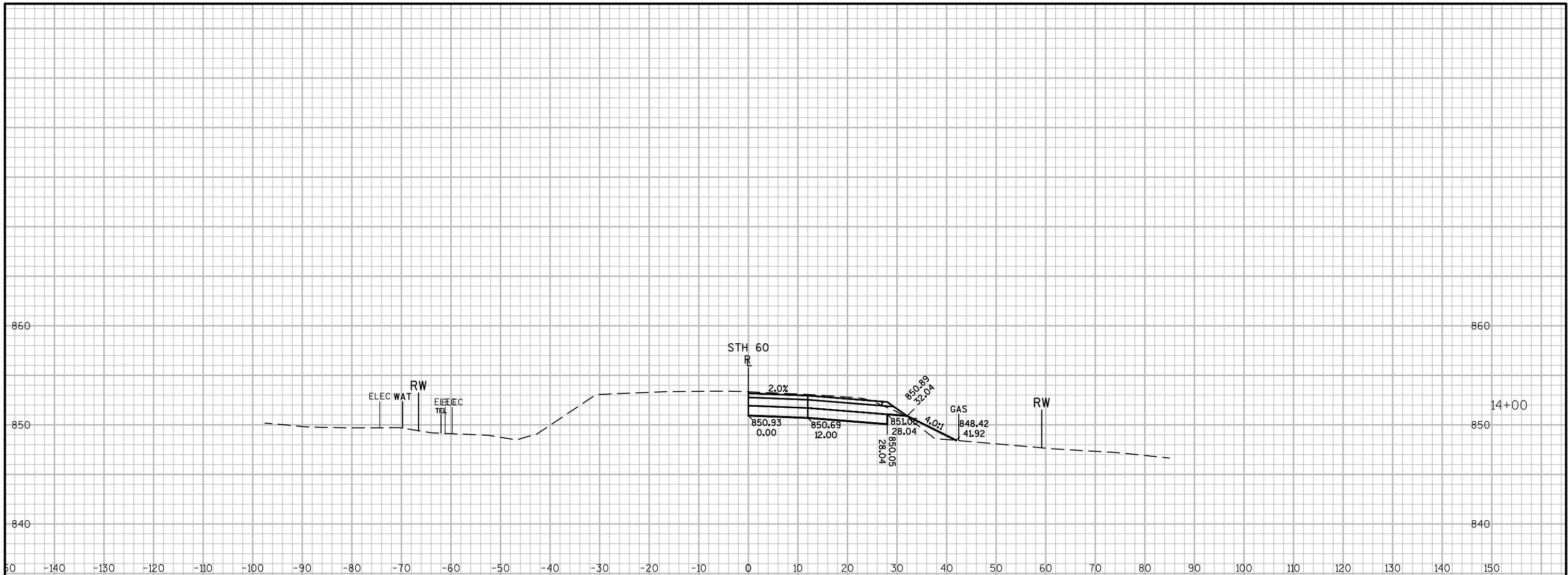


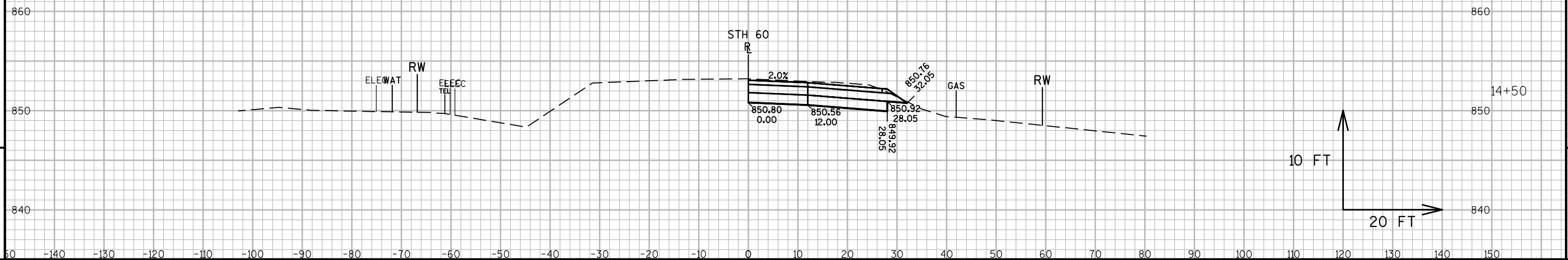
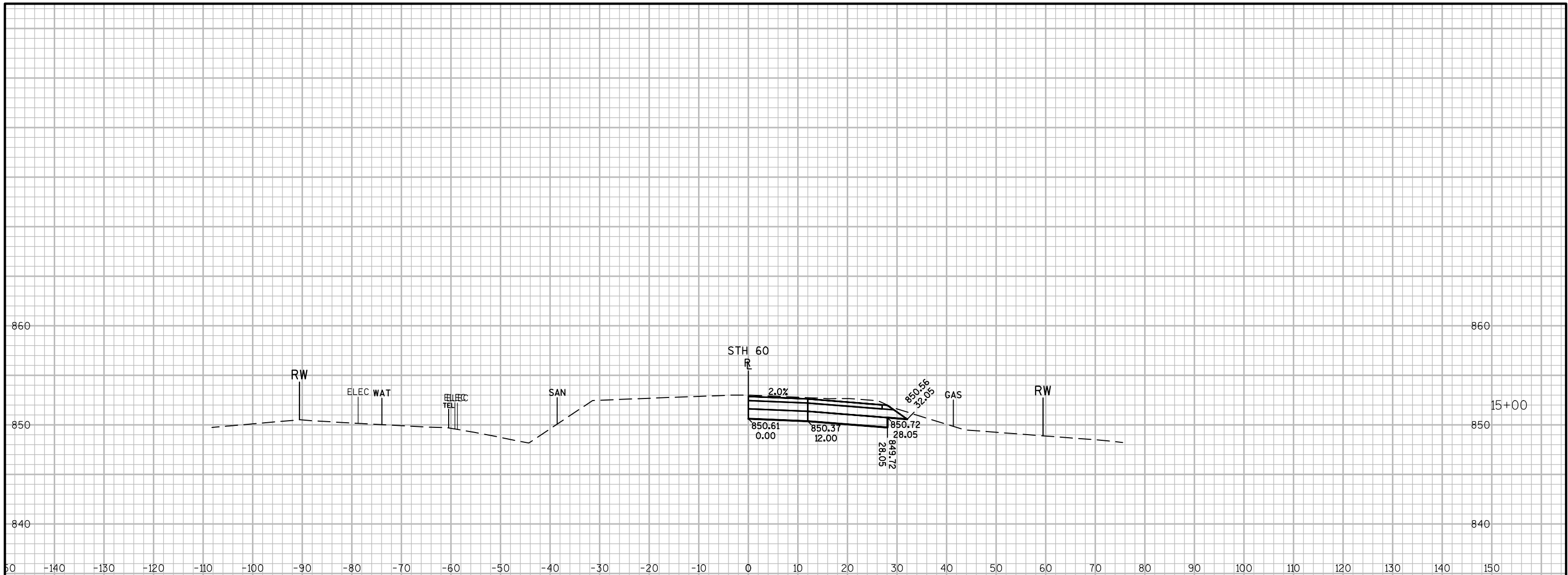


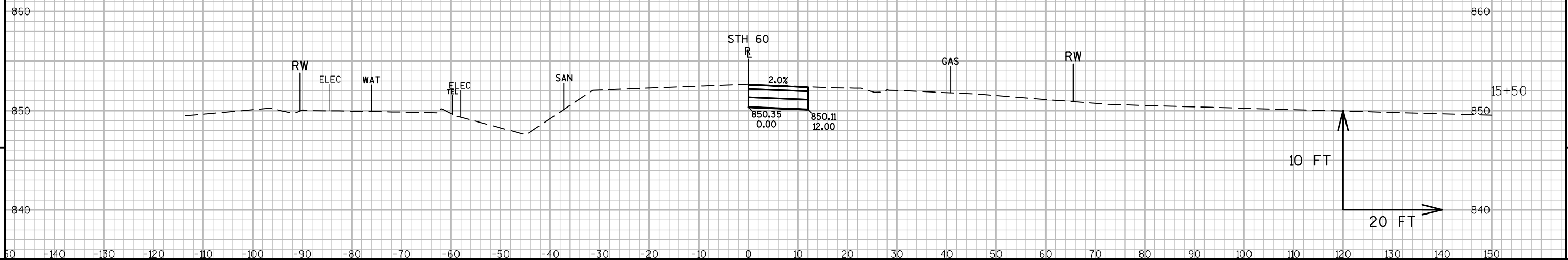
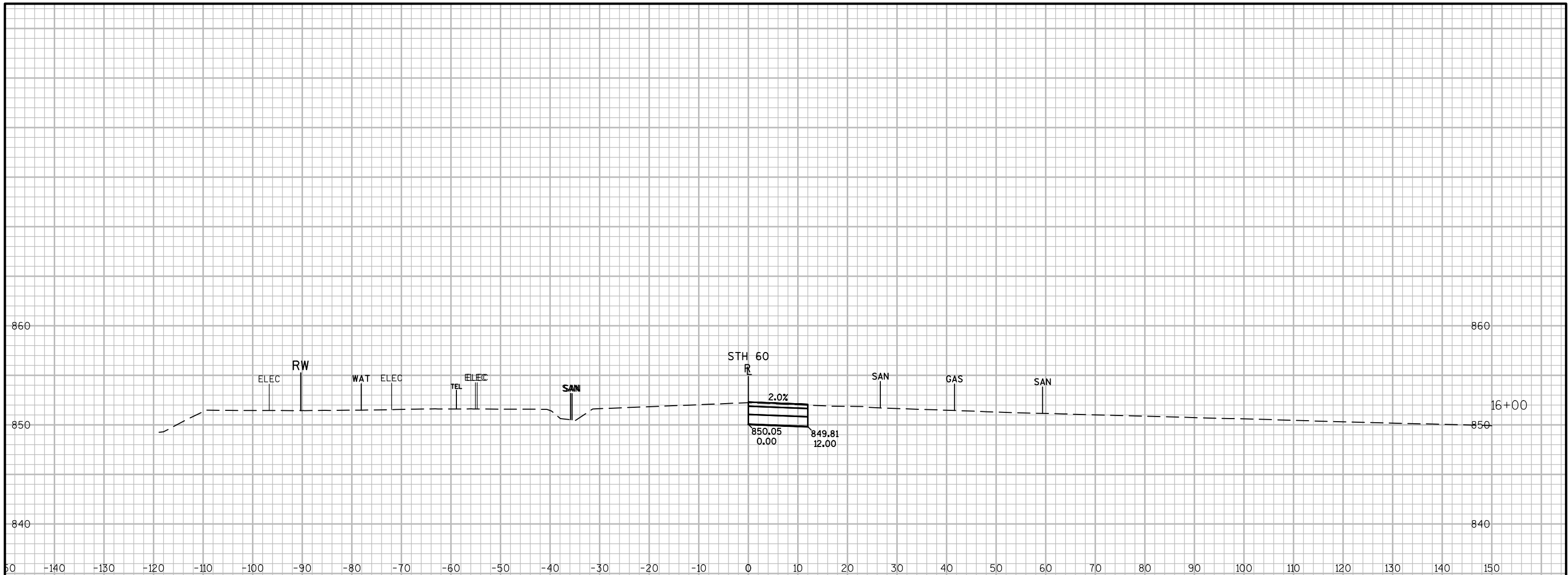


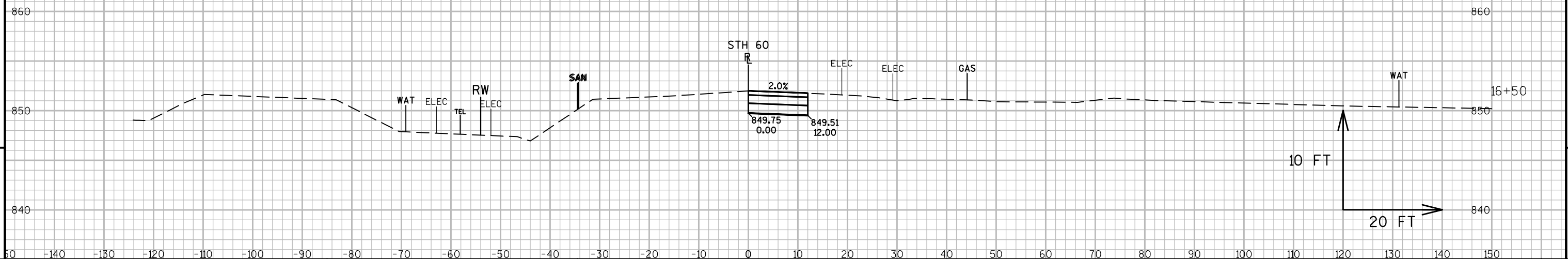
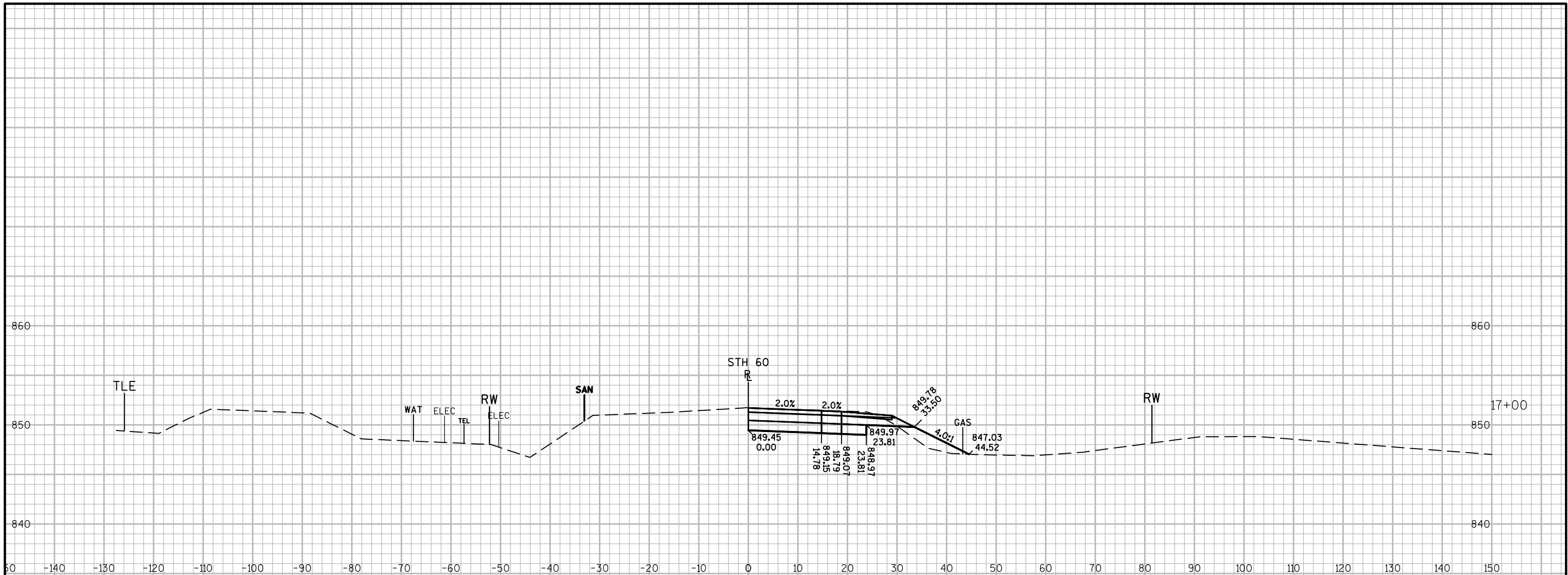


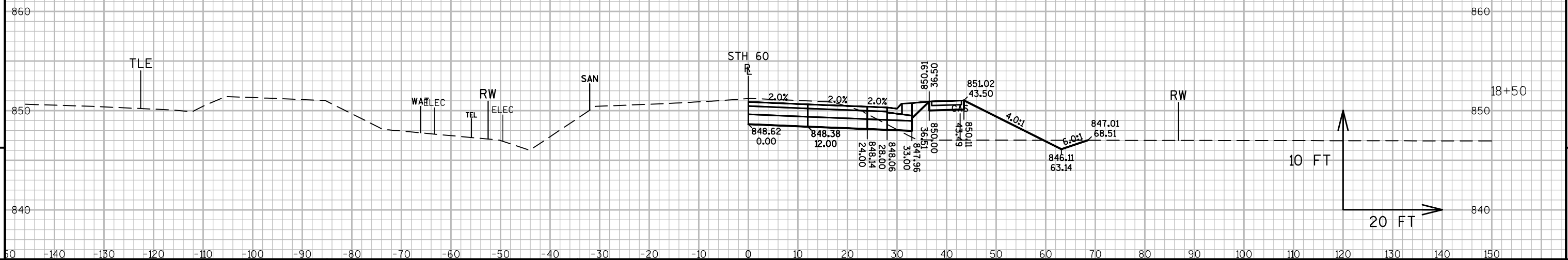
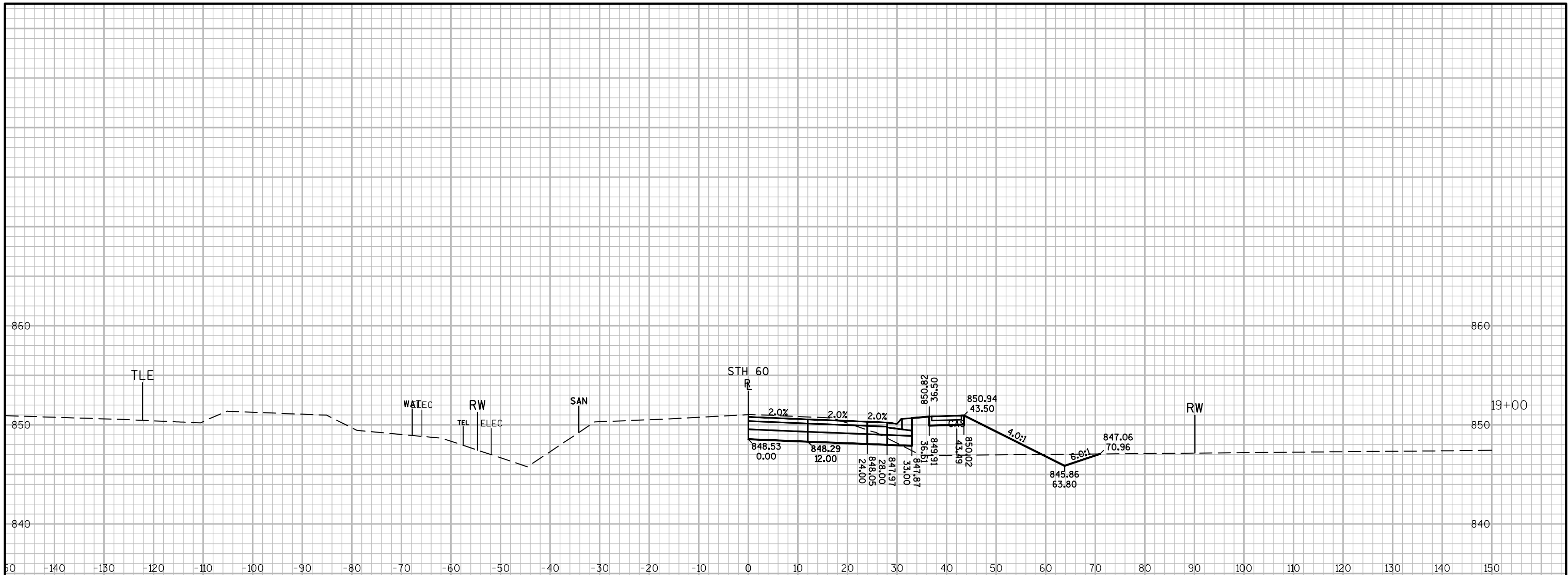


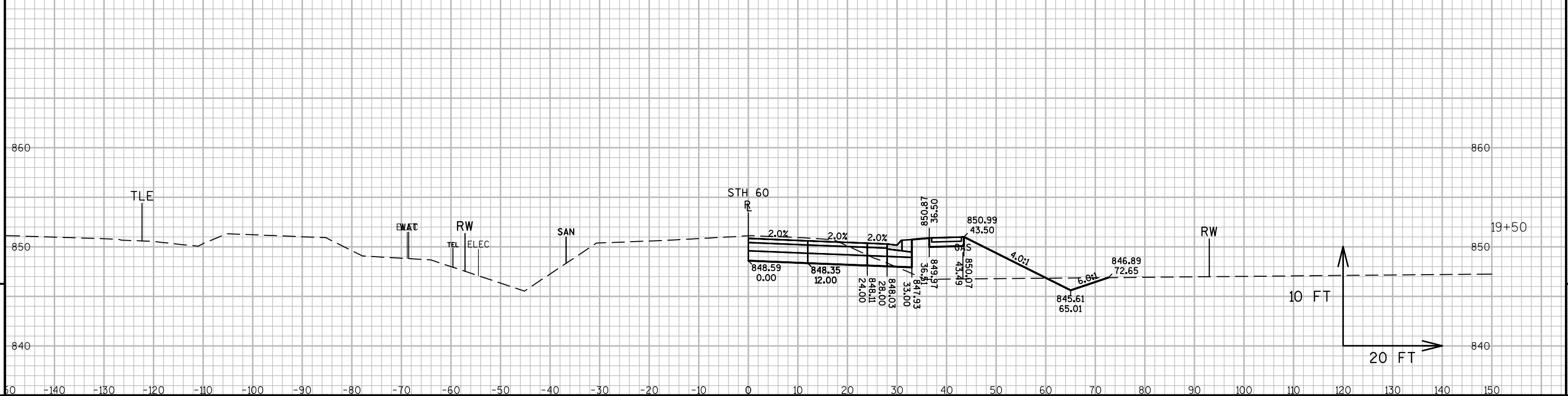
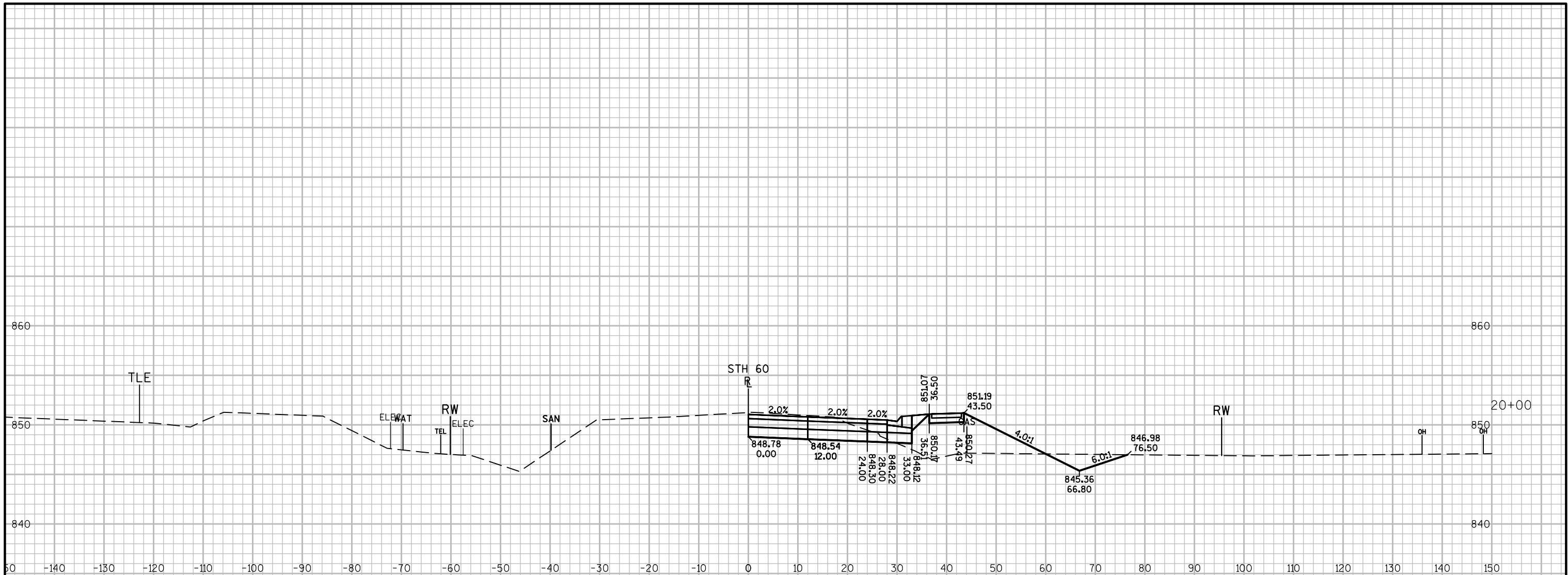




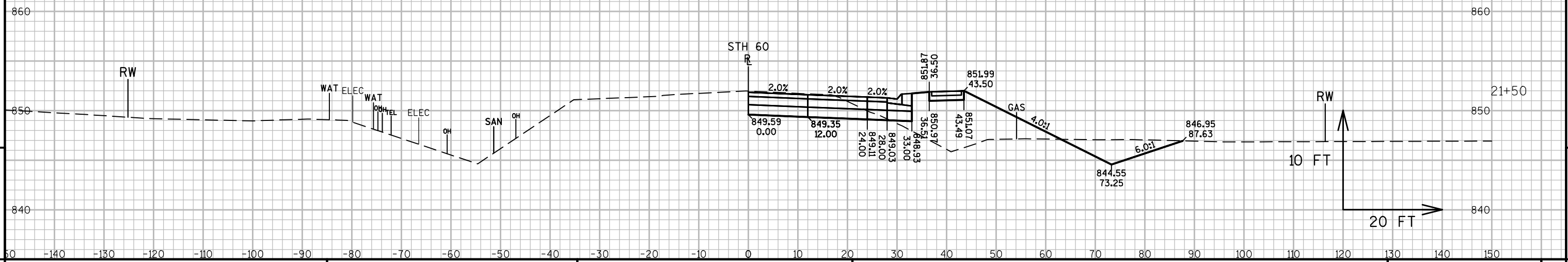
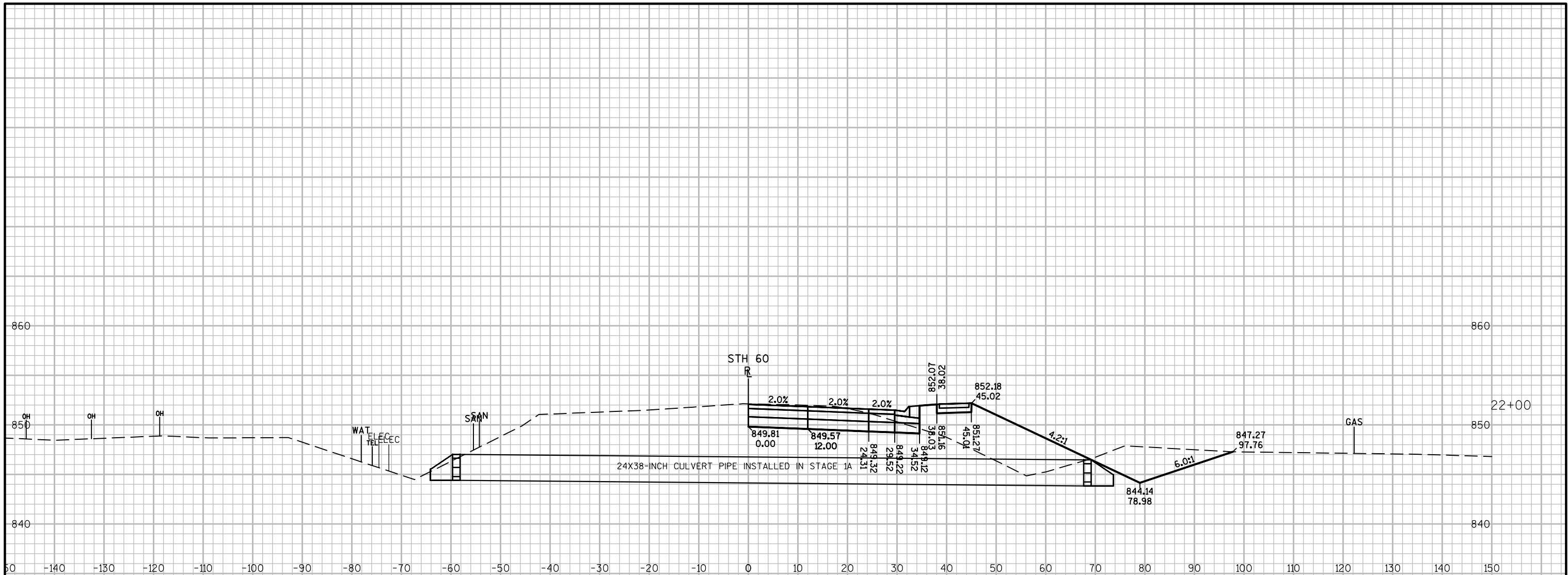


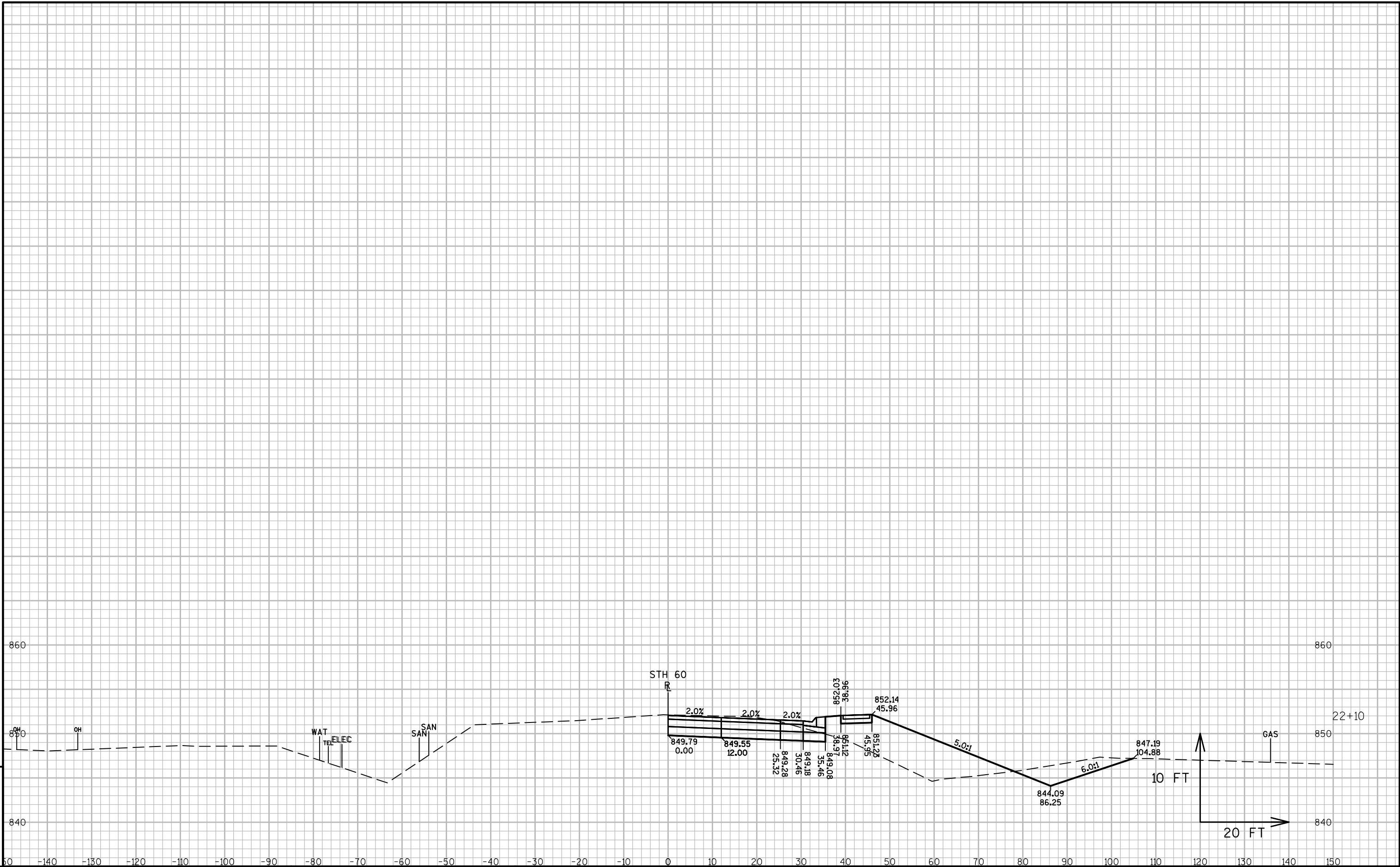


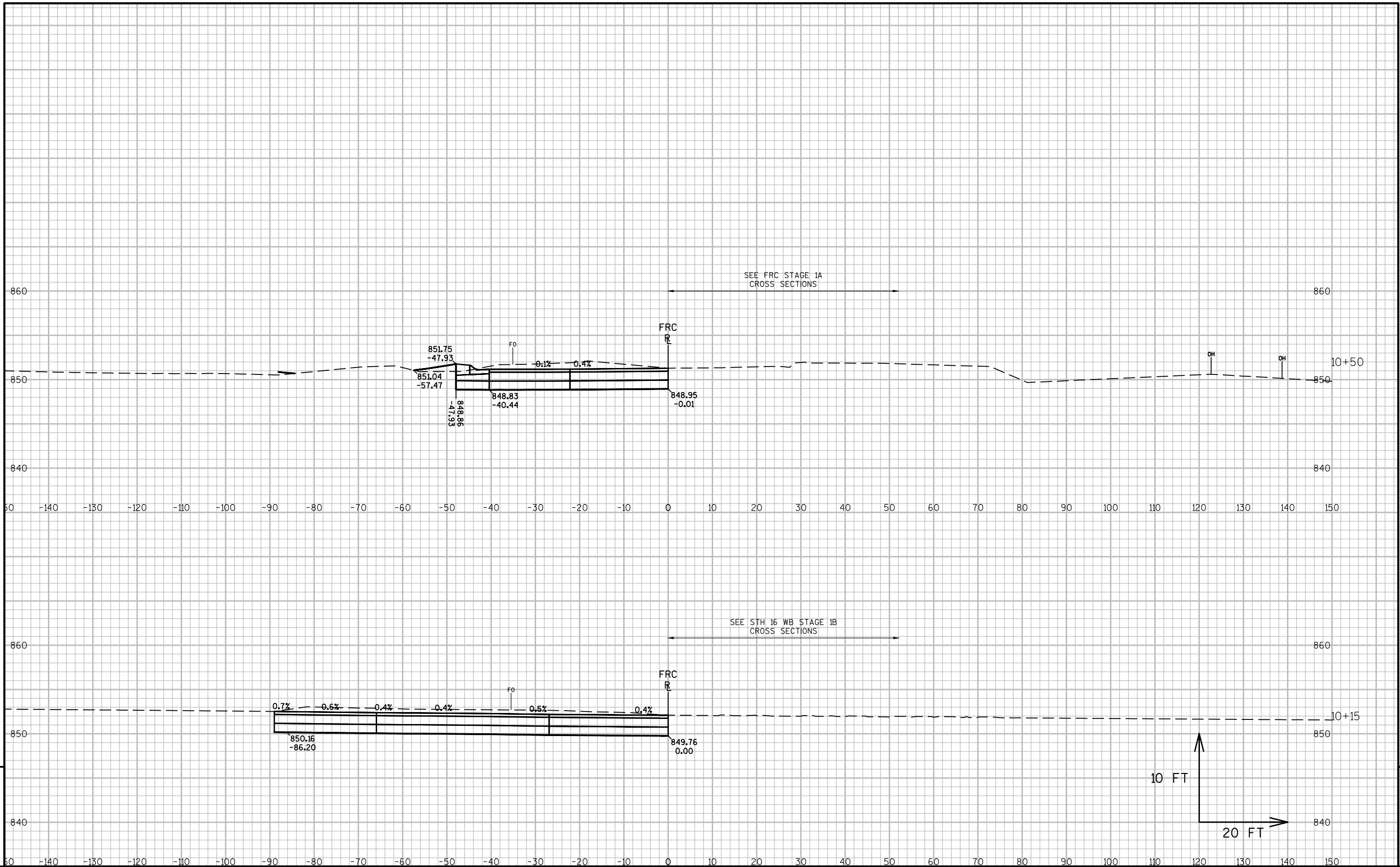


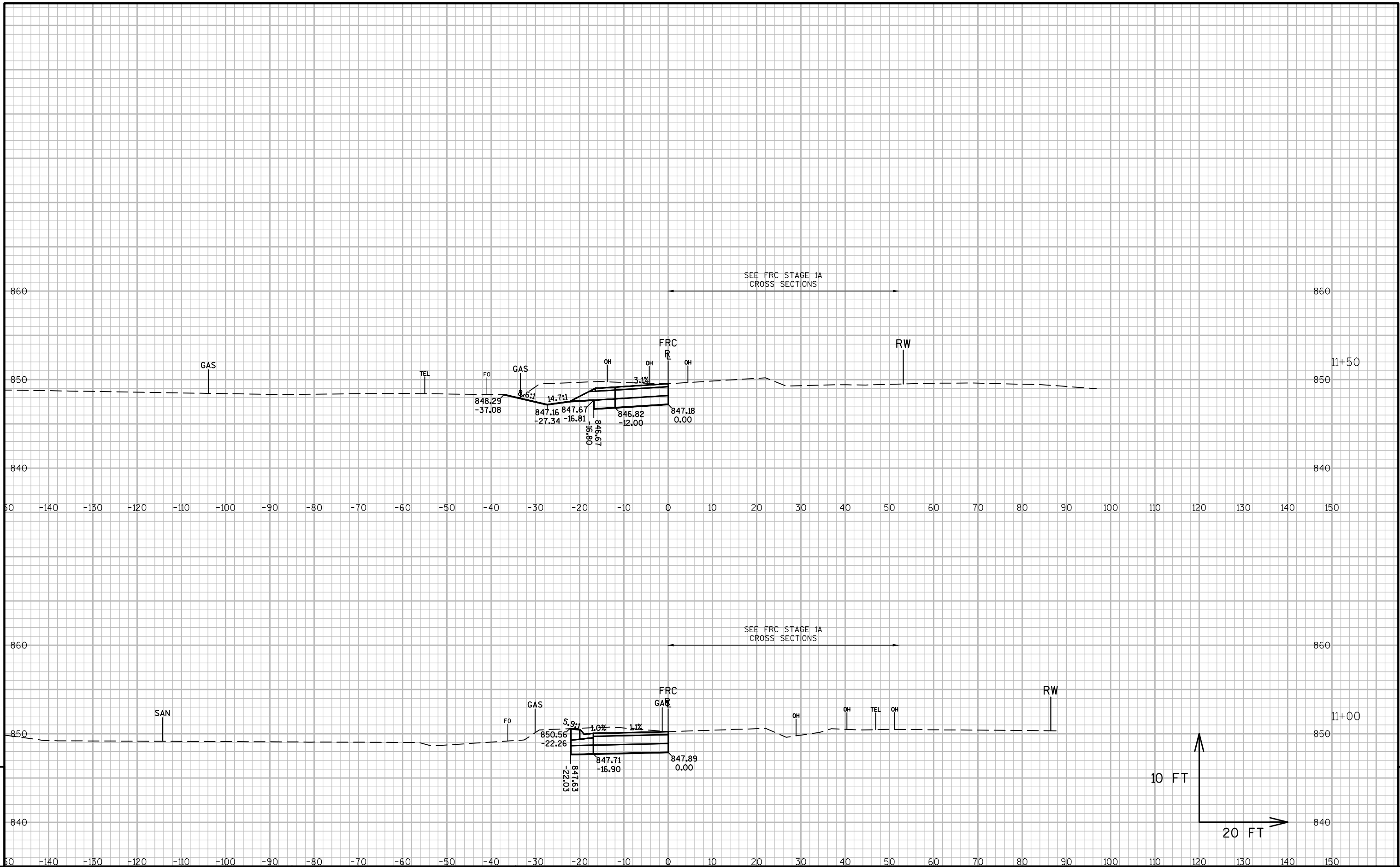


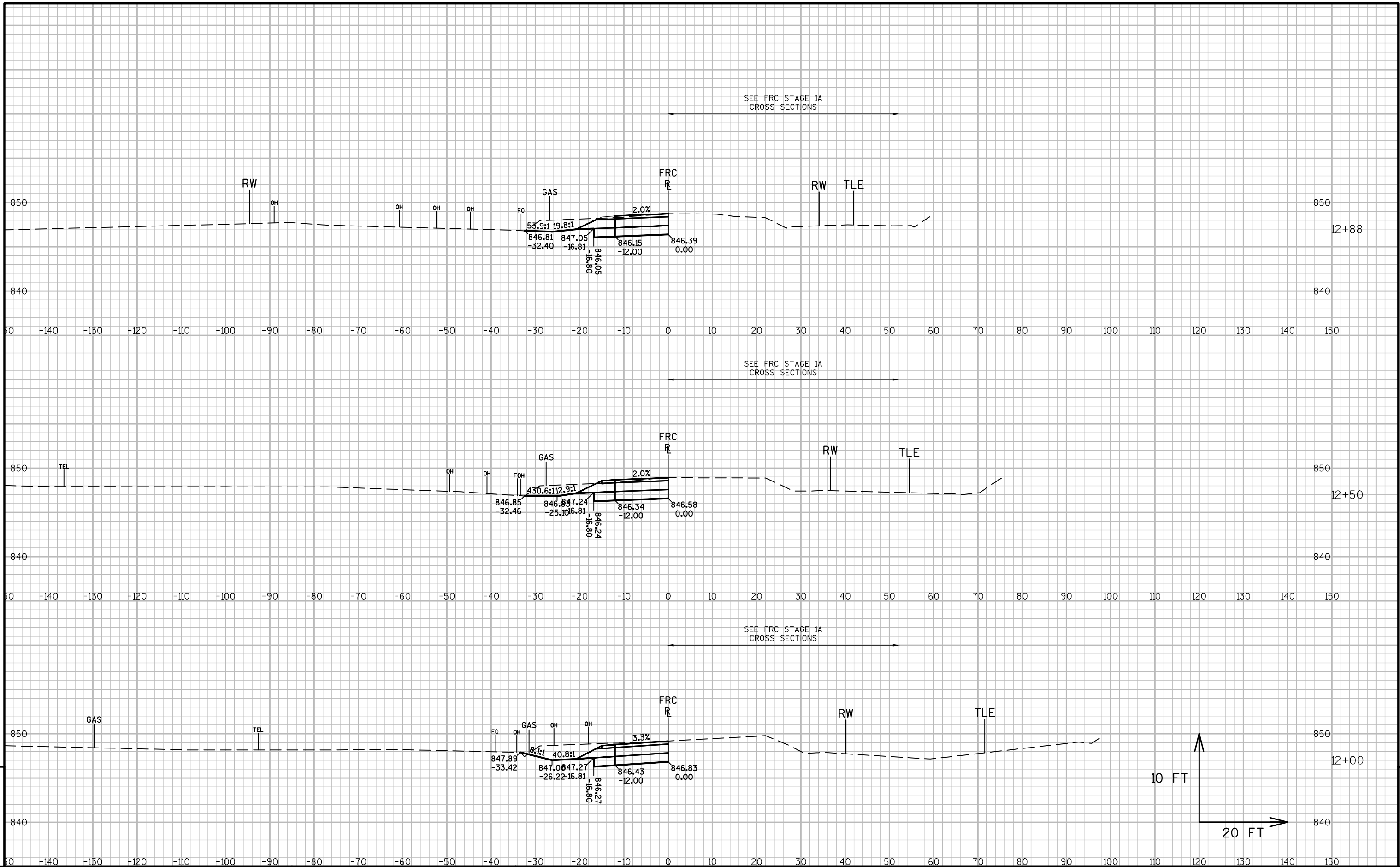


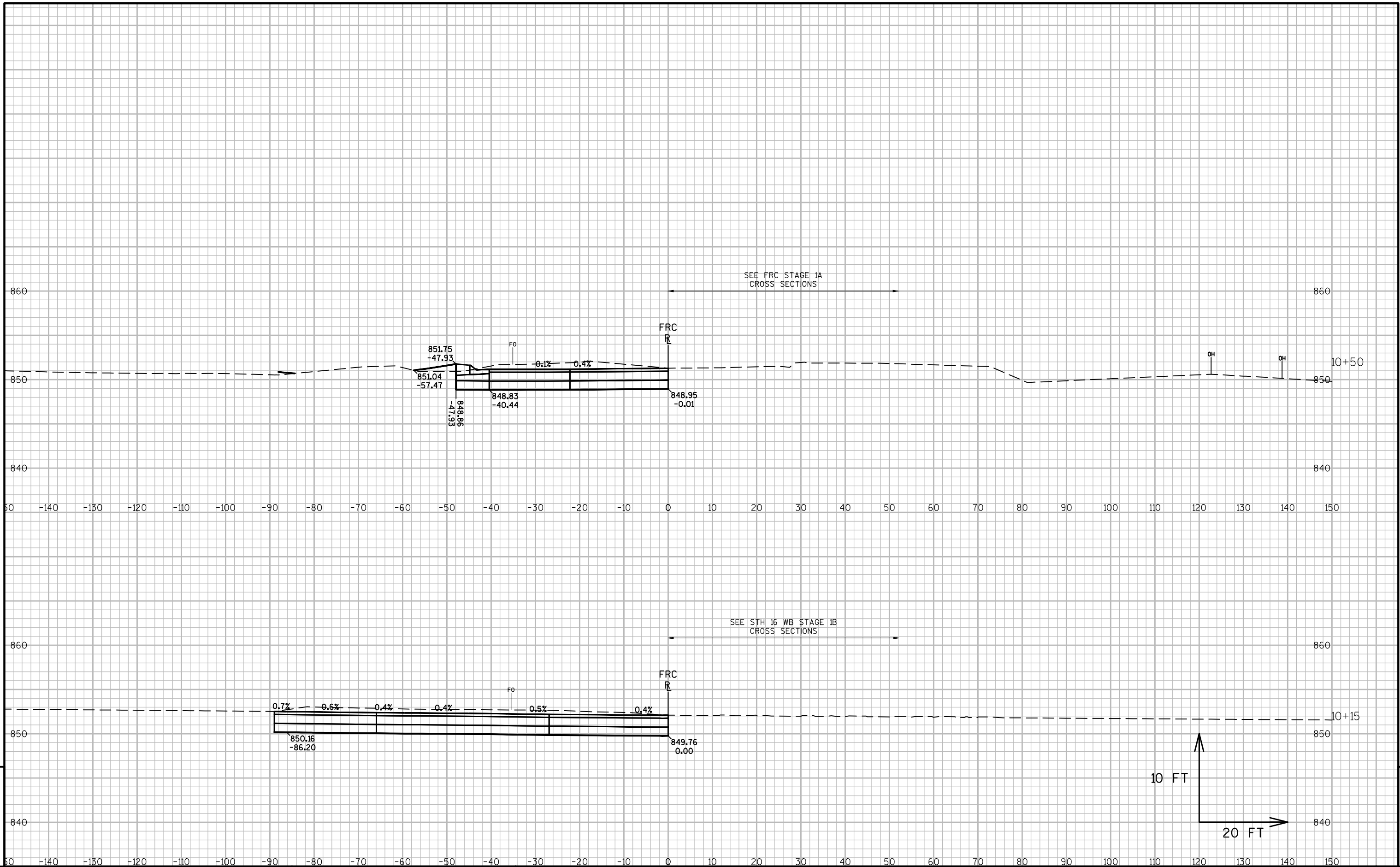


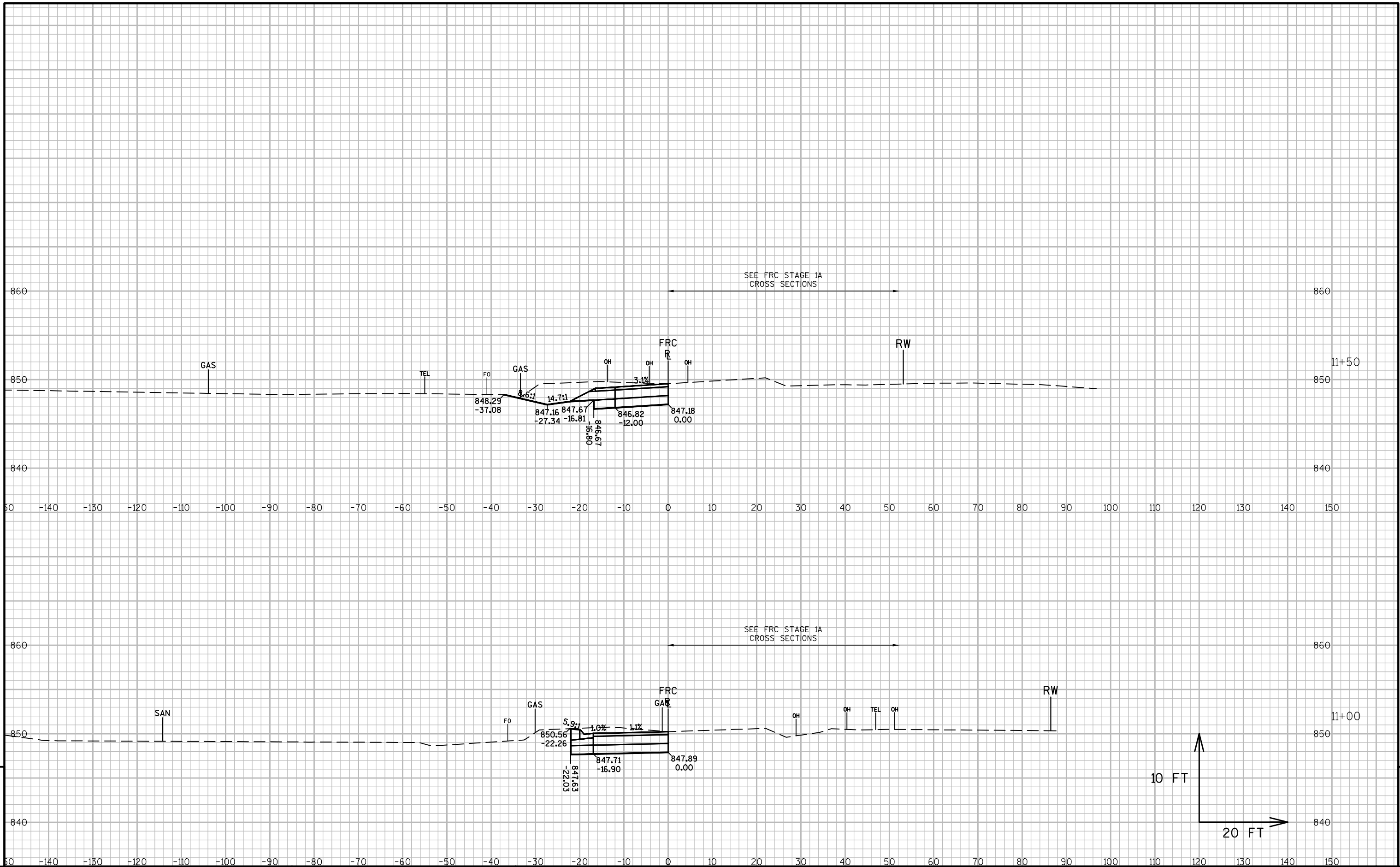


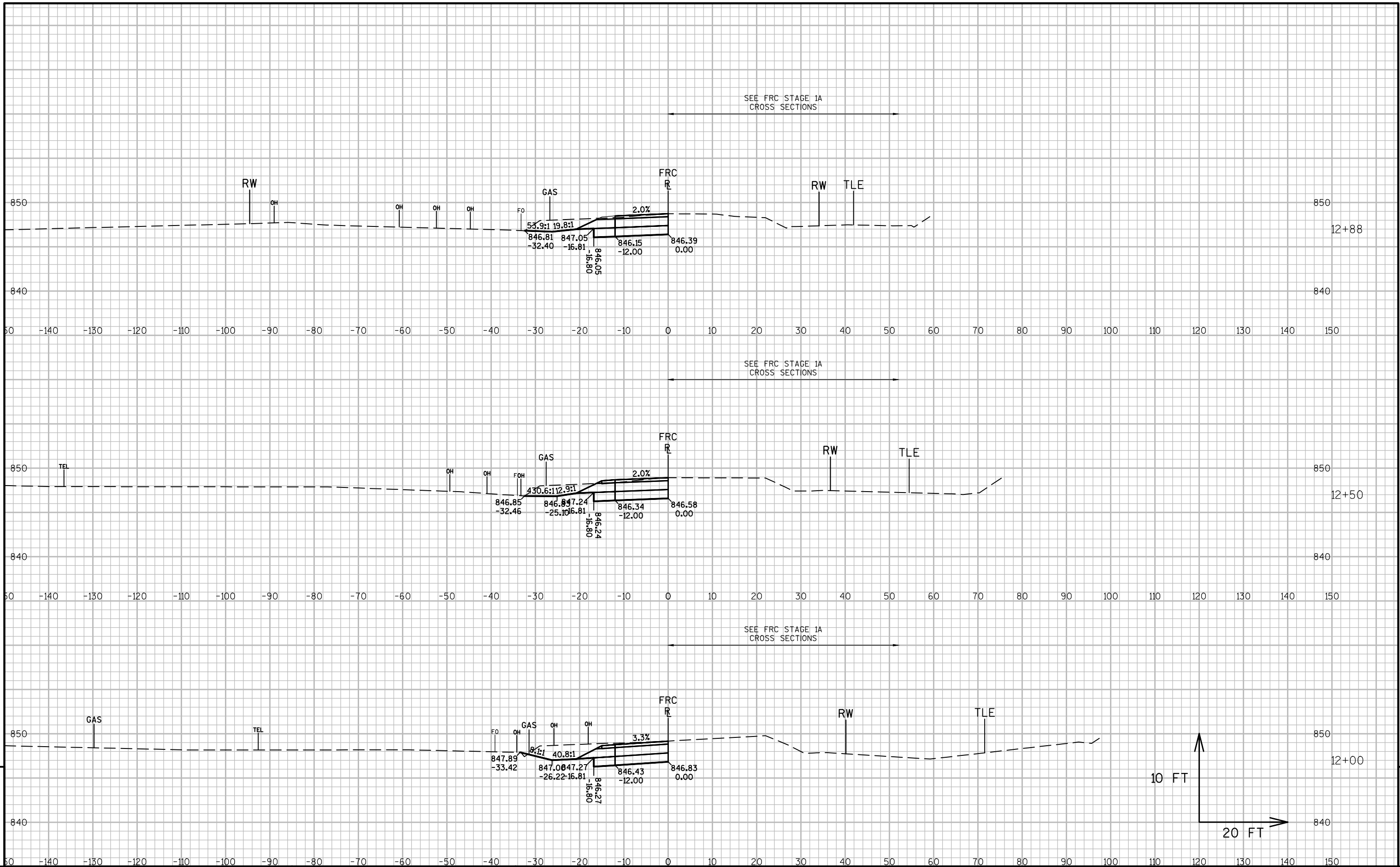


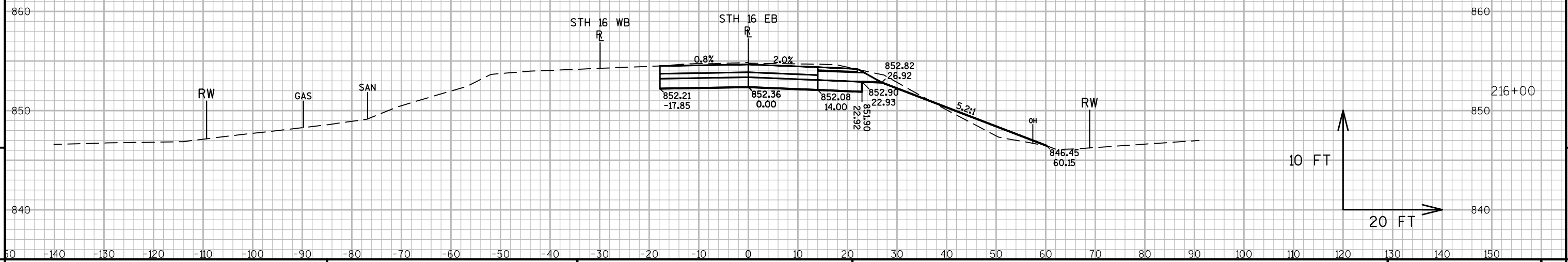
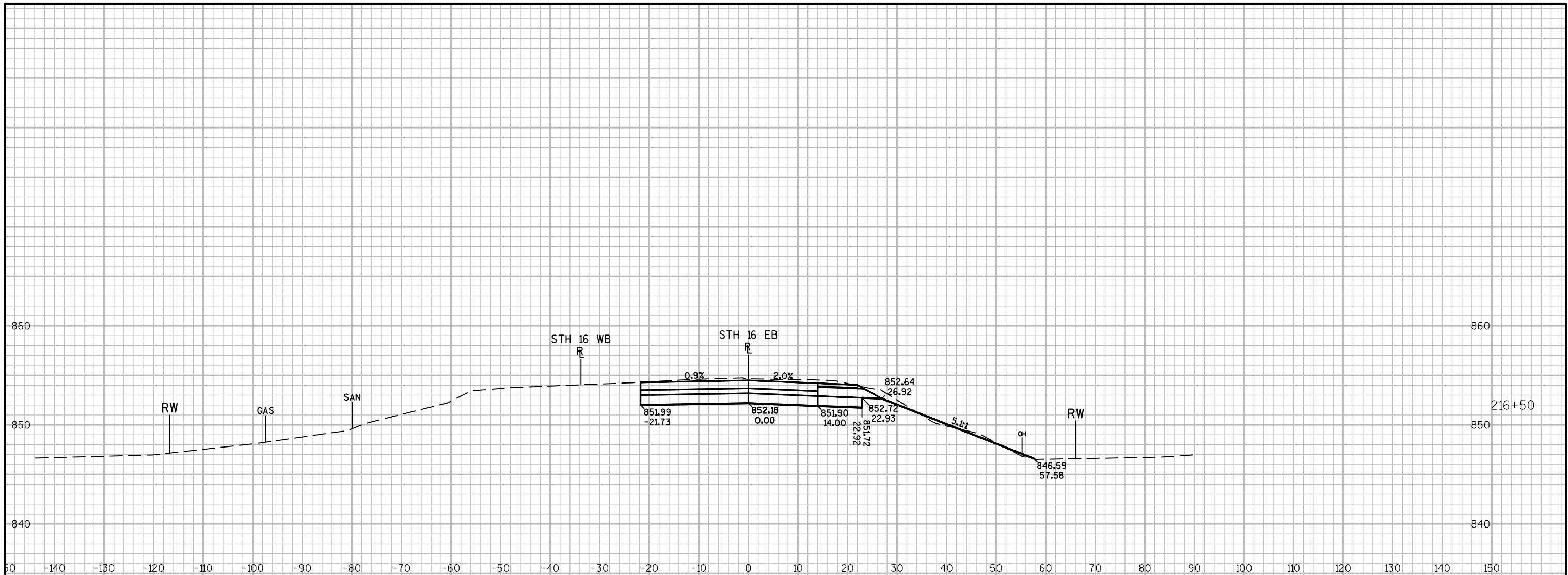


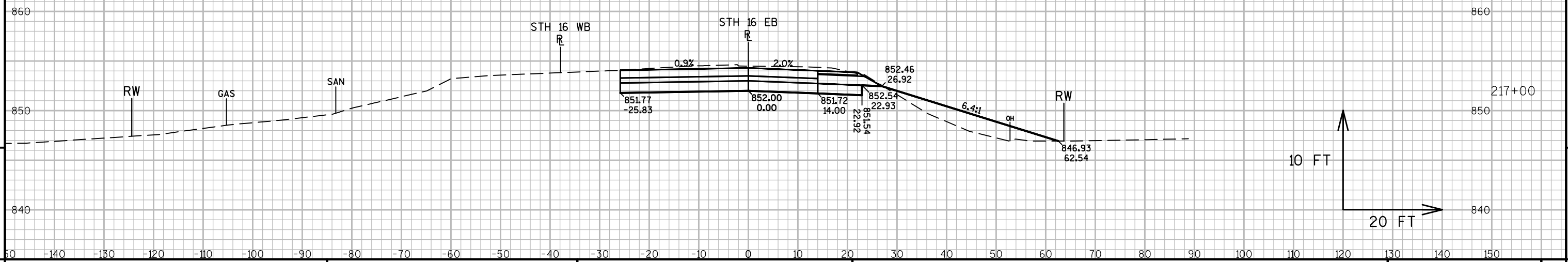
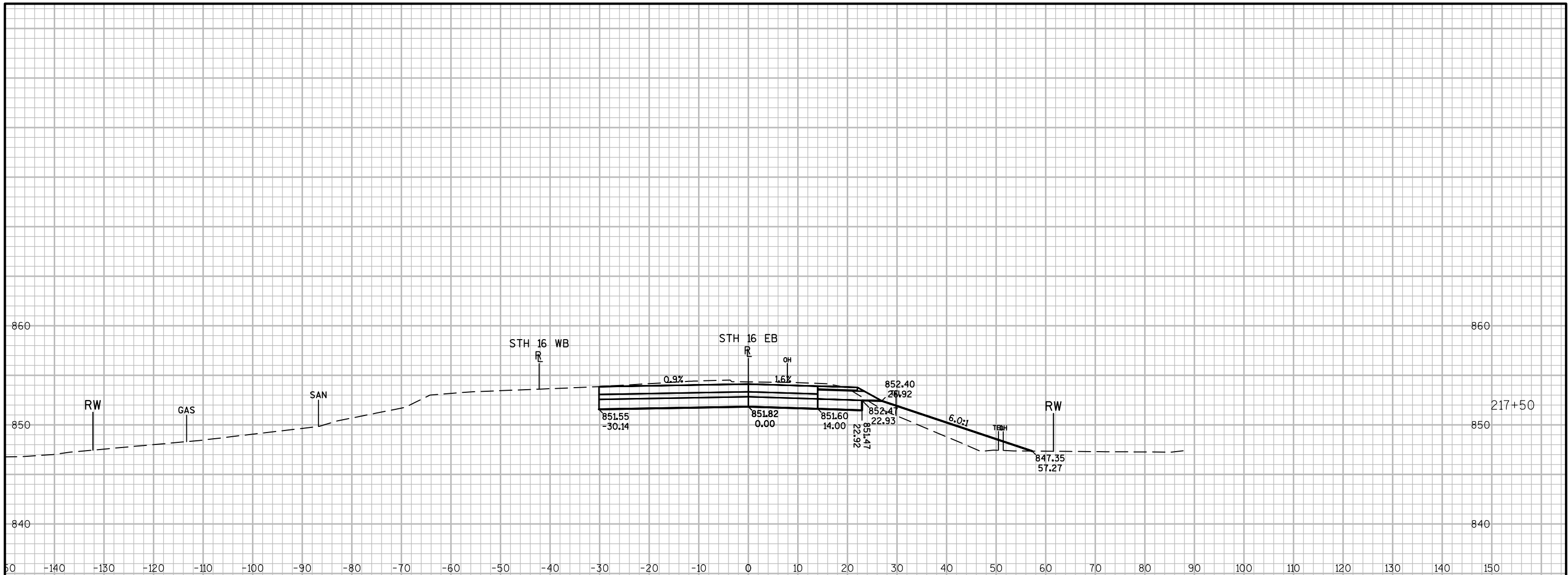


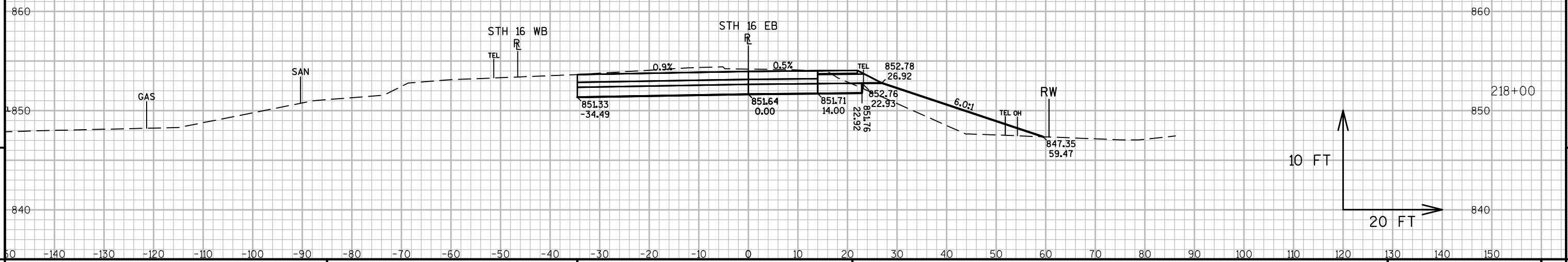
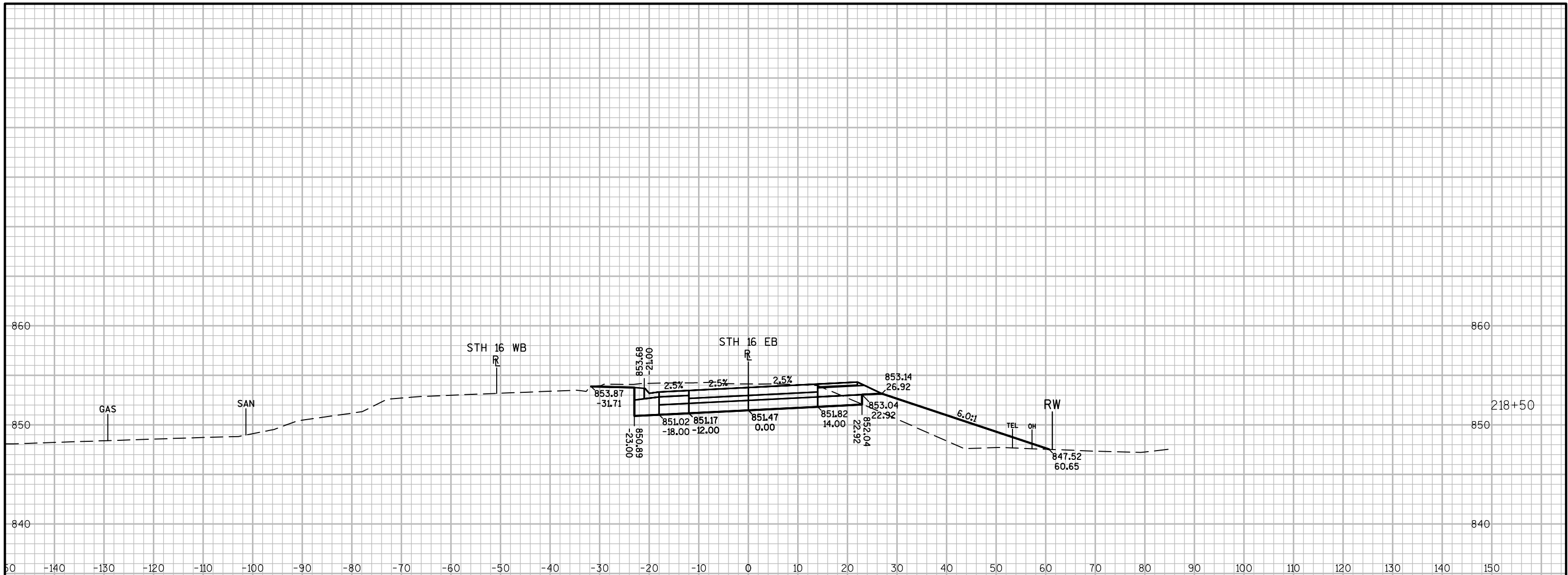




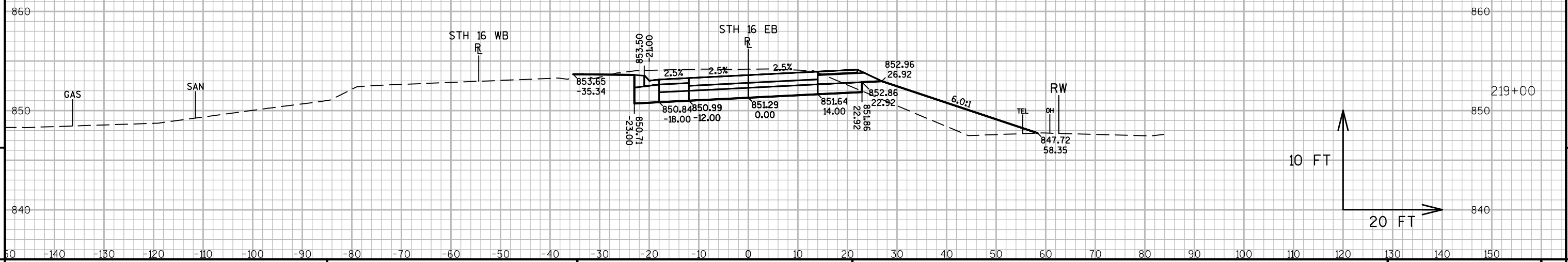
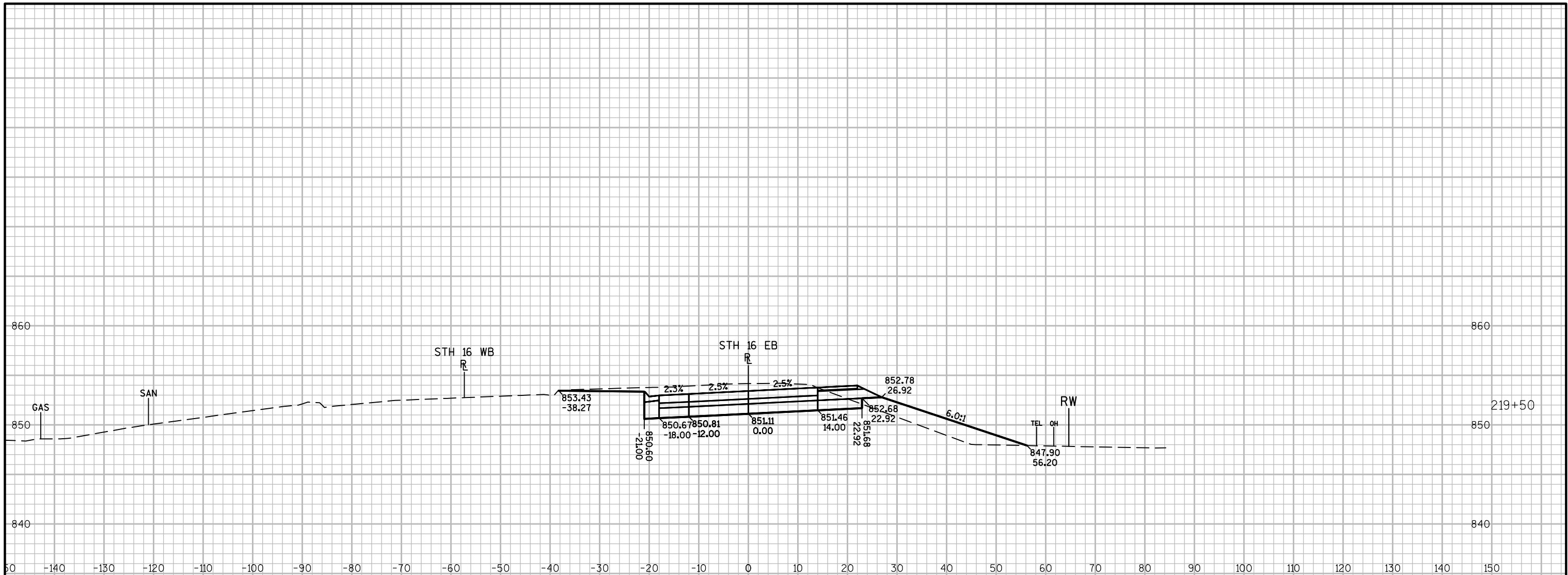


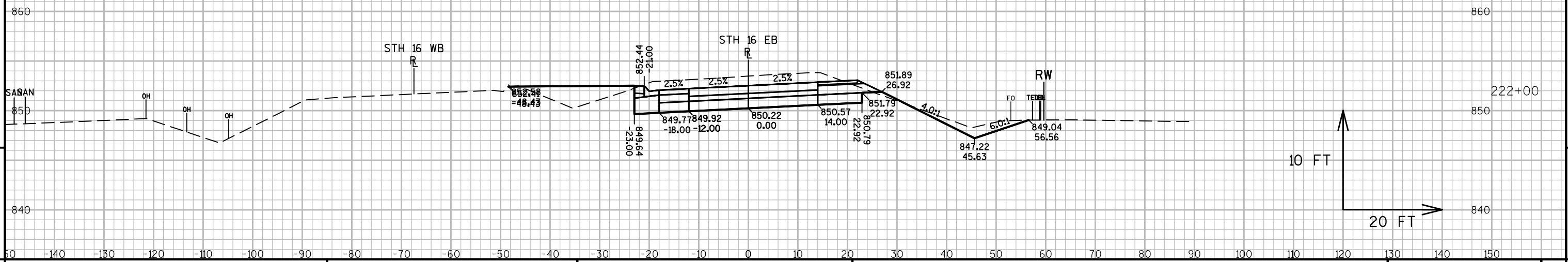
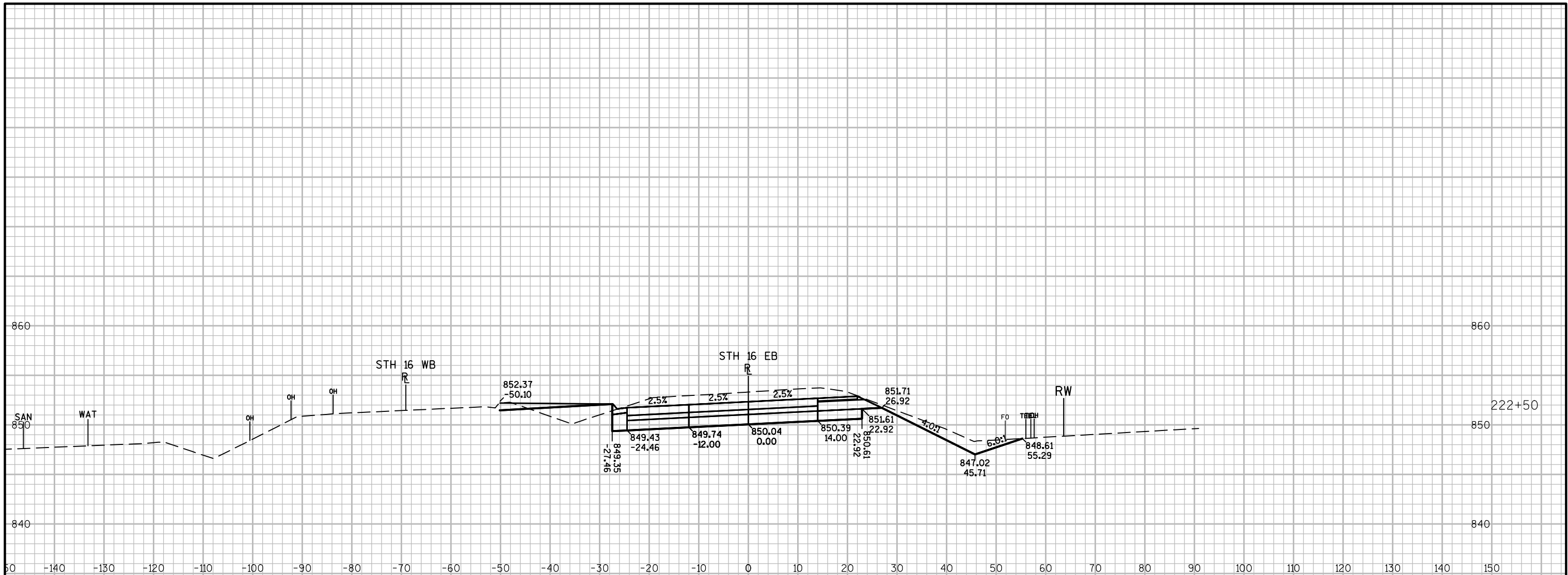


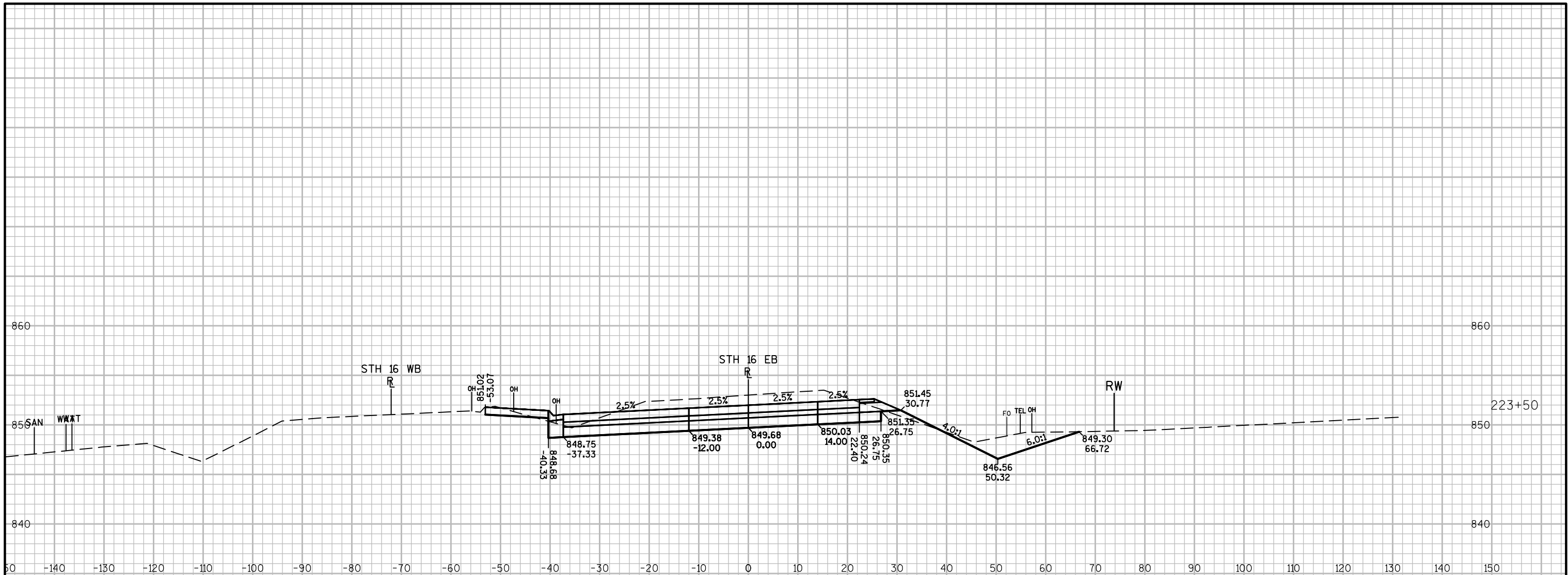


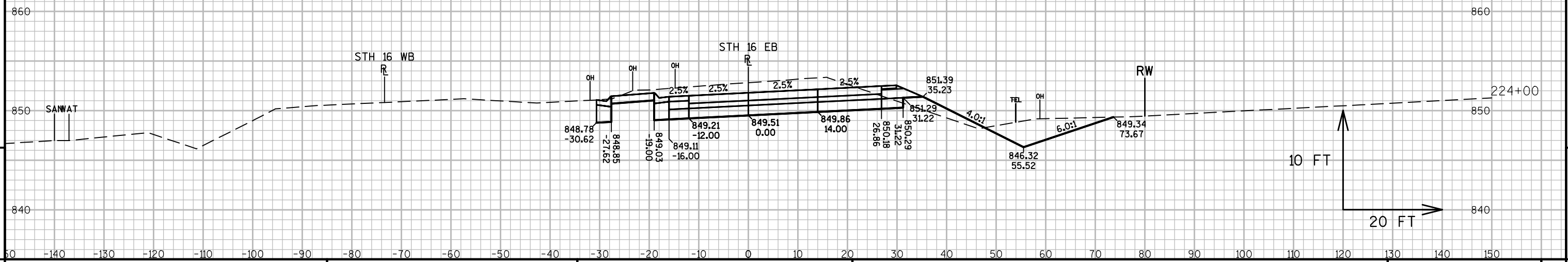
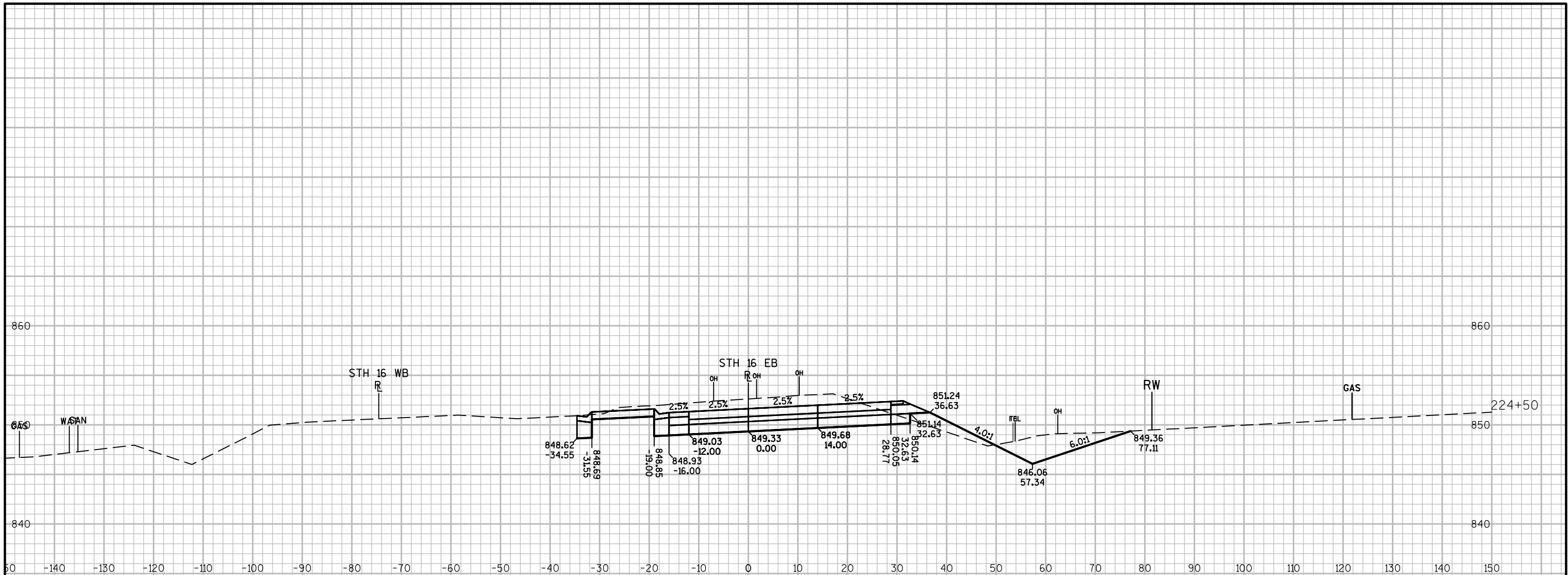


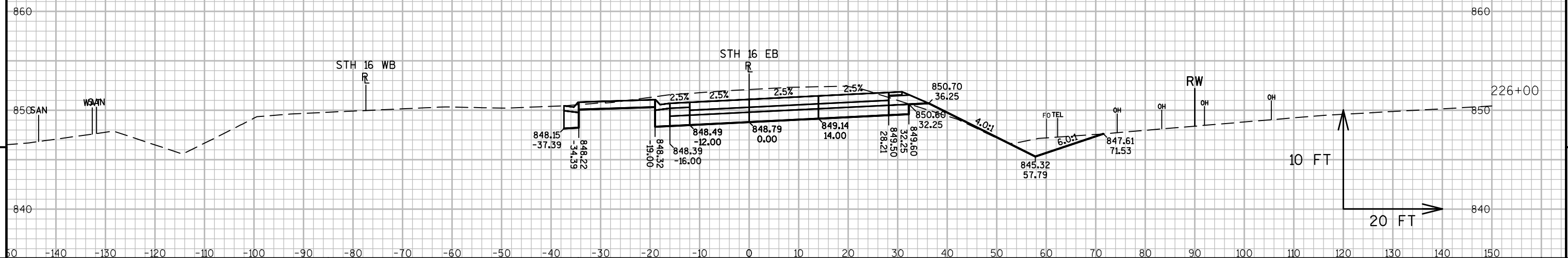
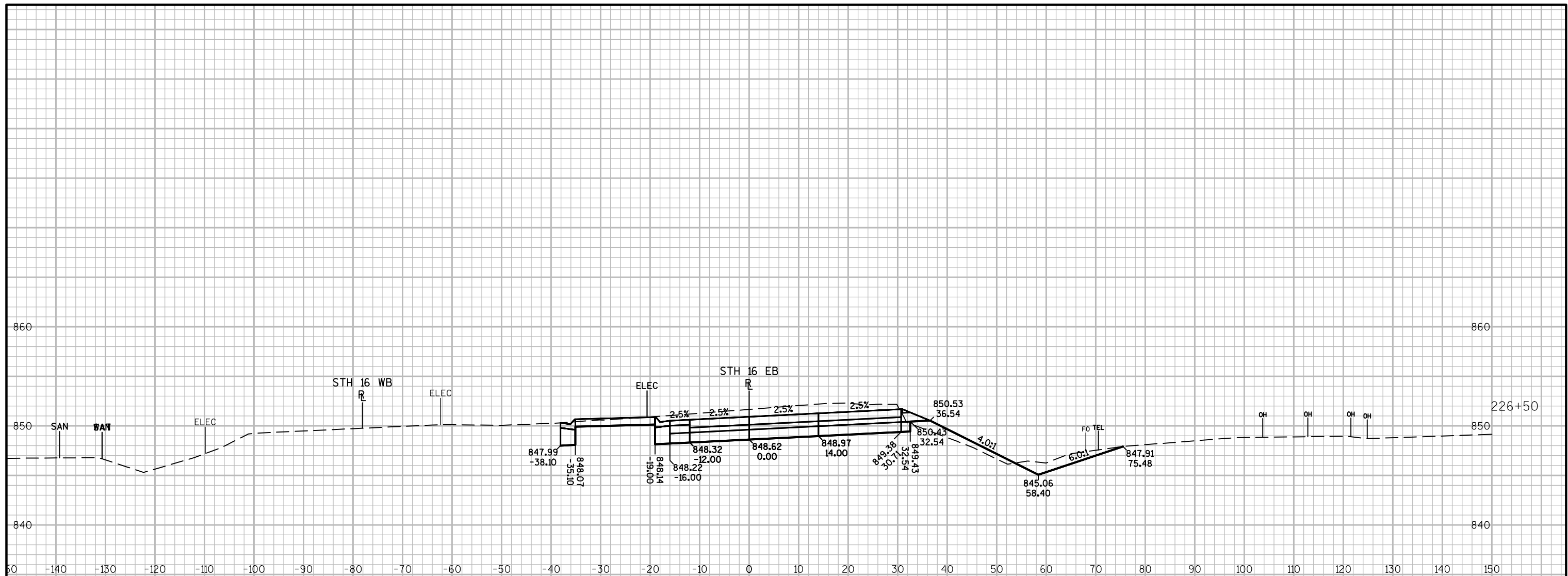
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 EB - STAGE 2A	SHEET	E
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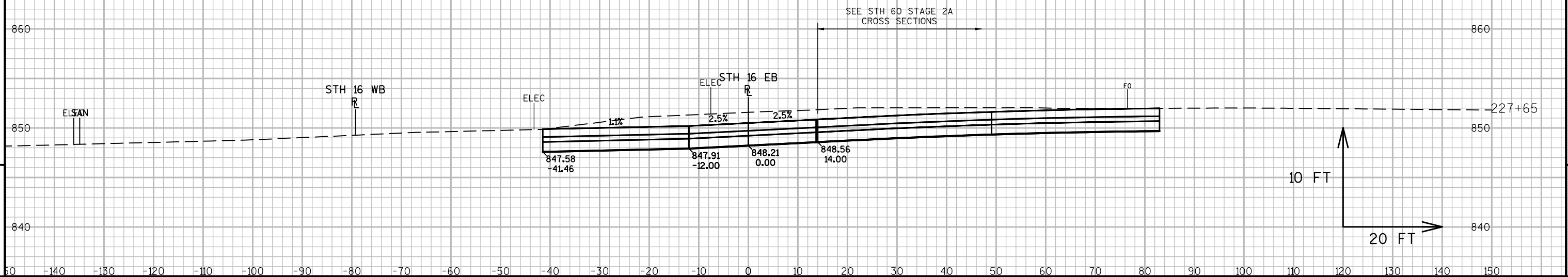
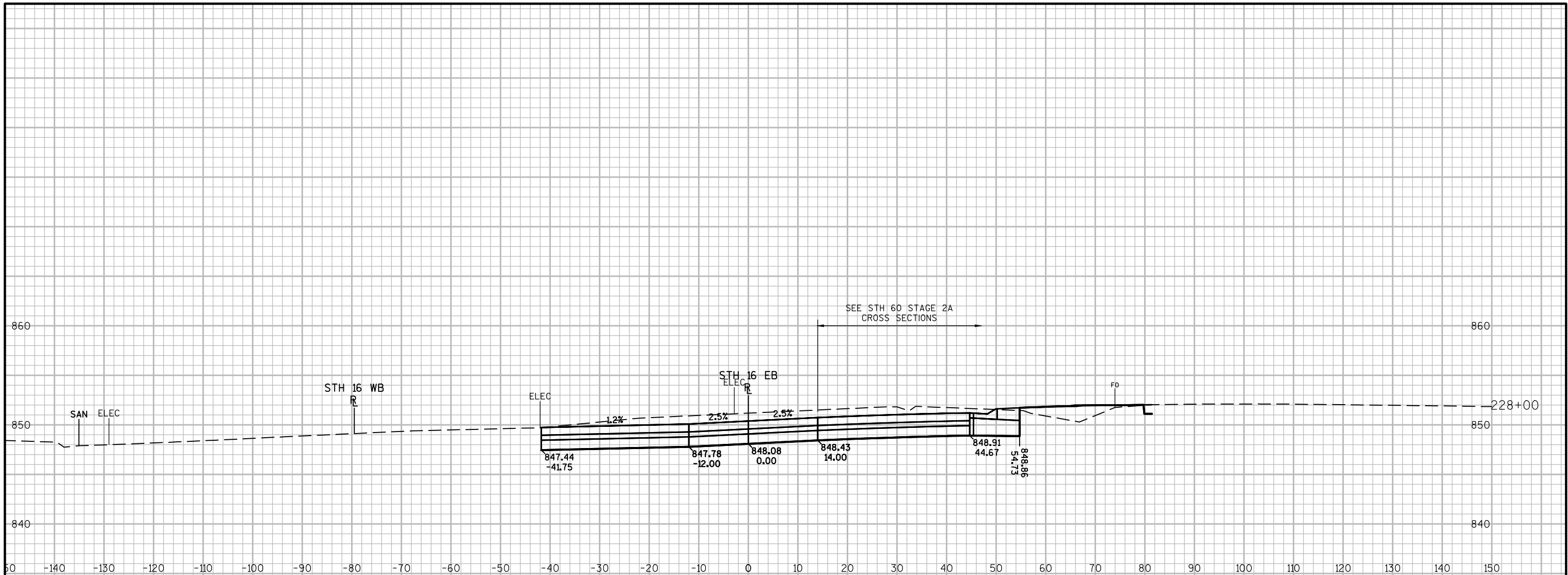


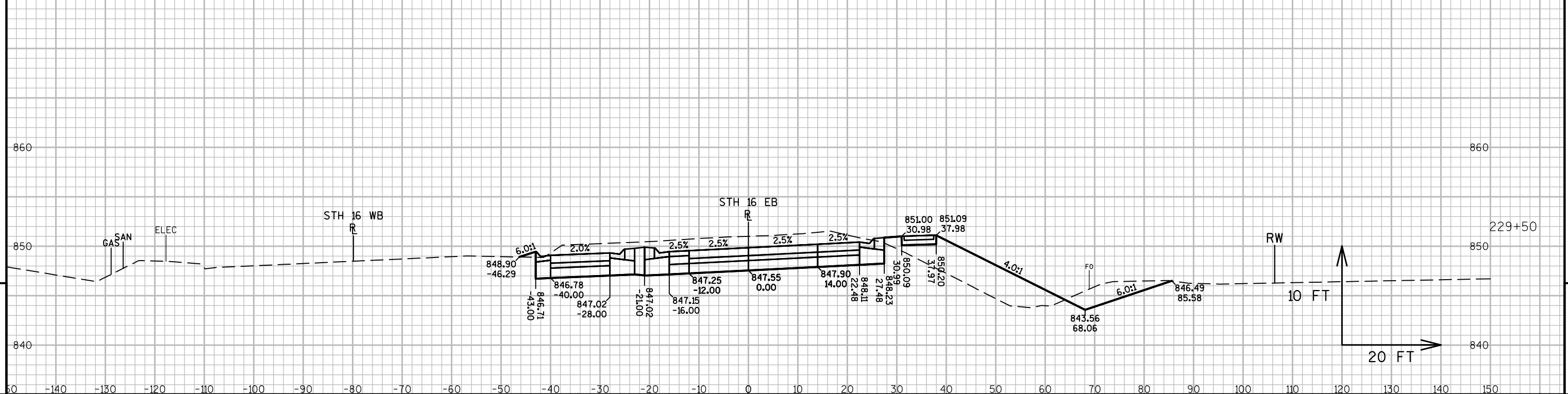
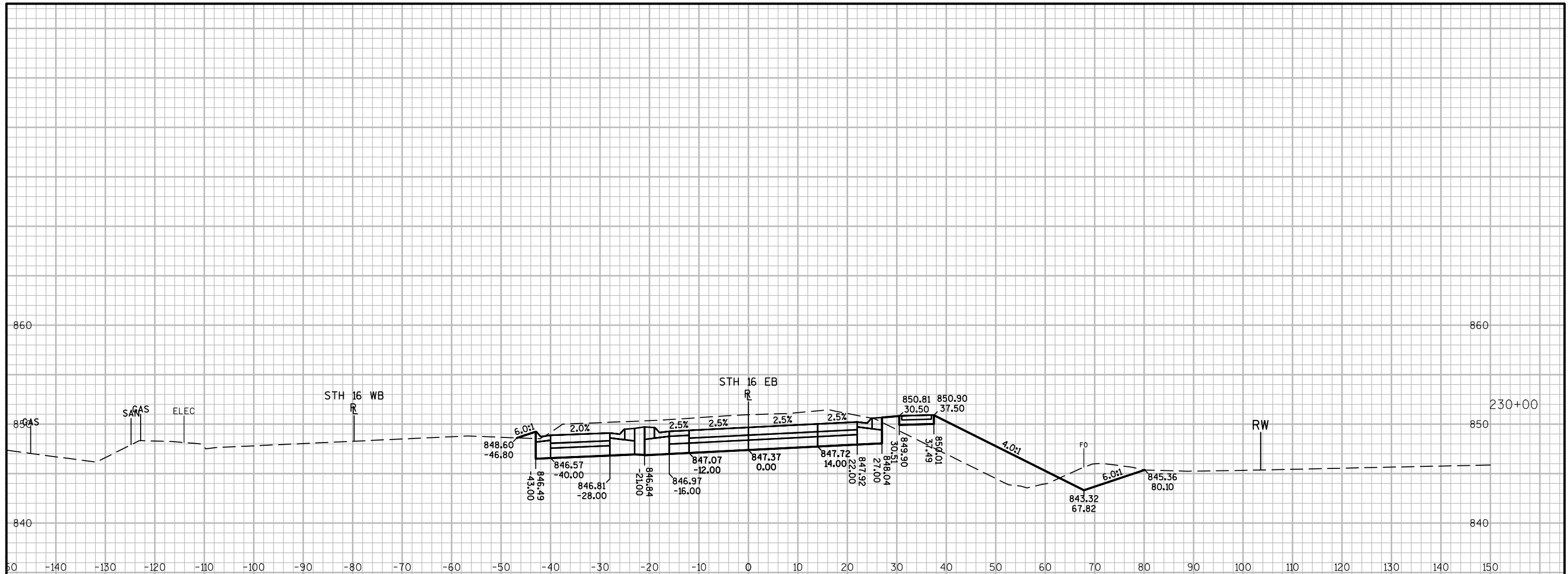


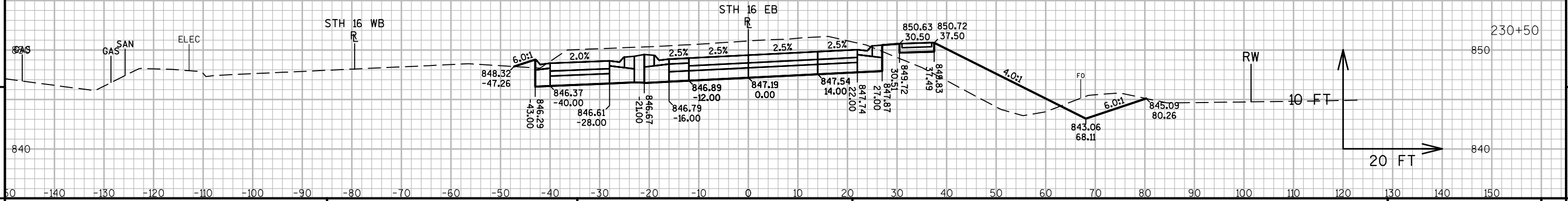
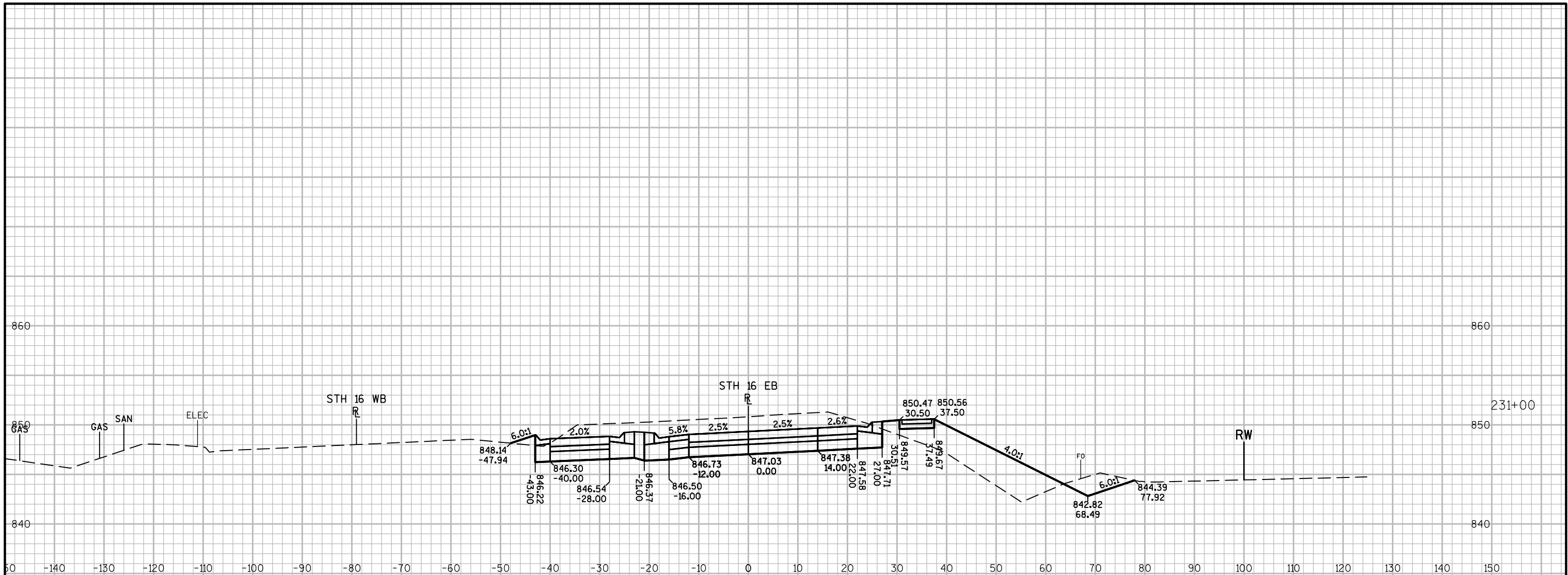


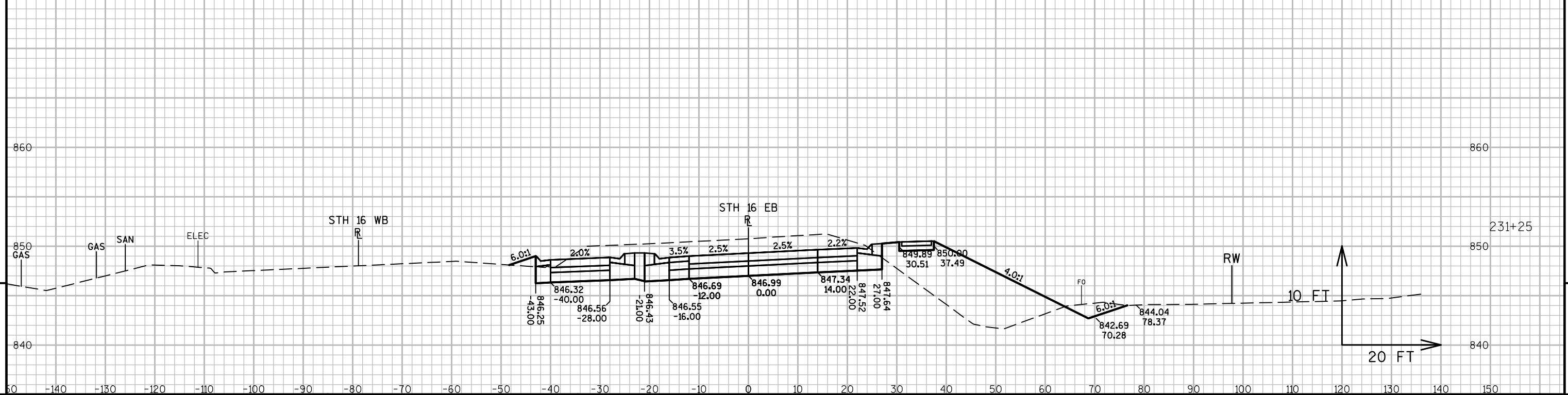
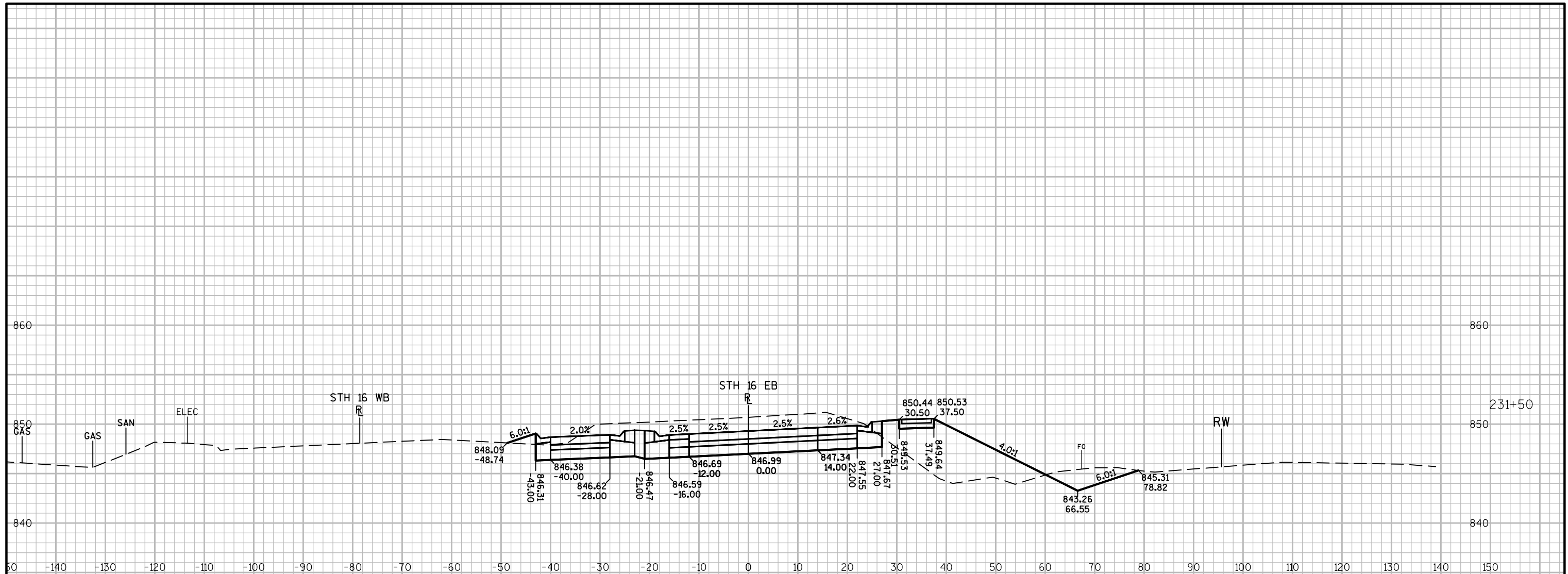




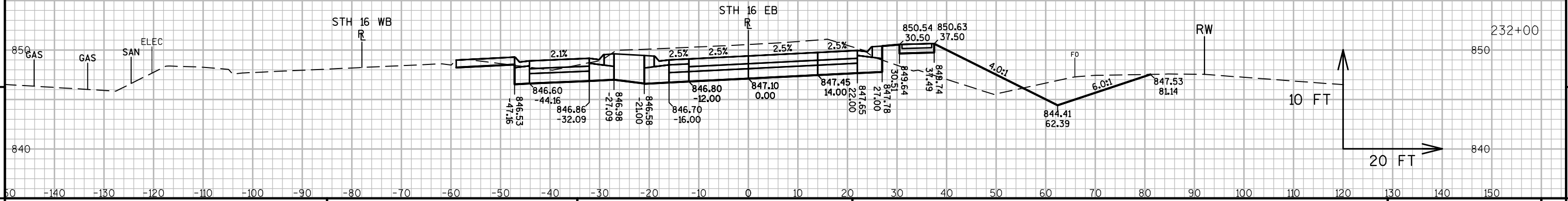
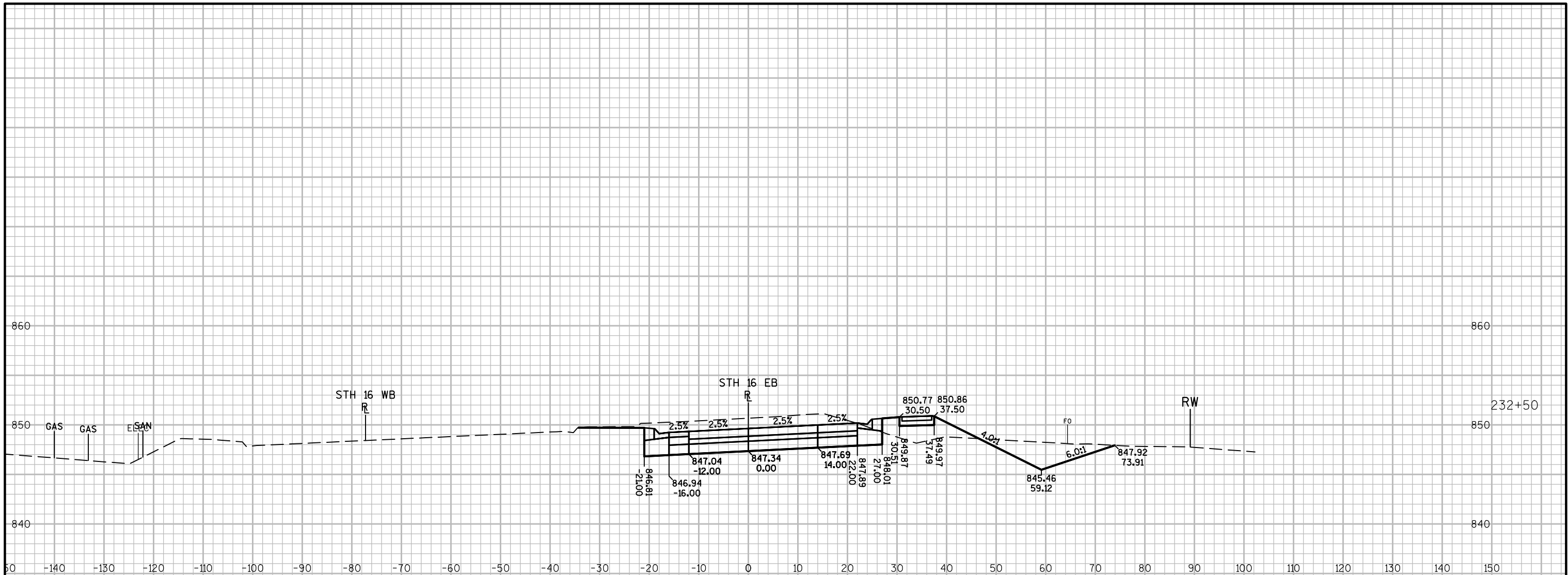


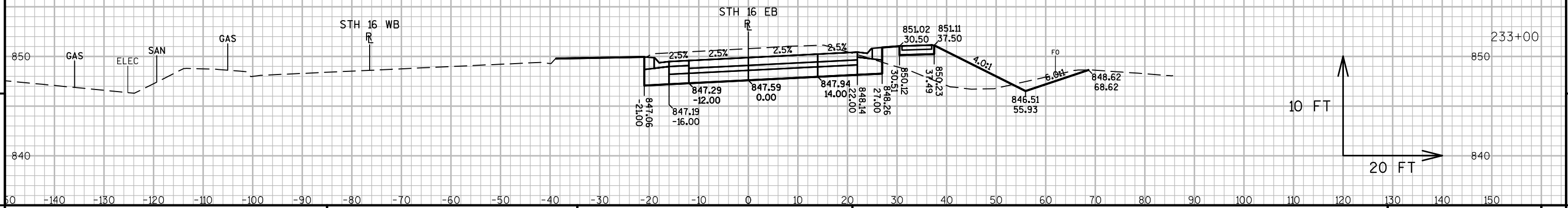
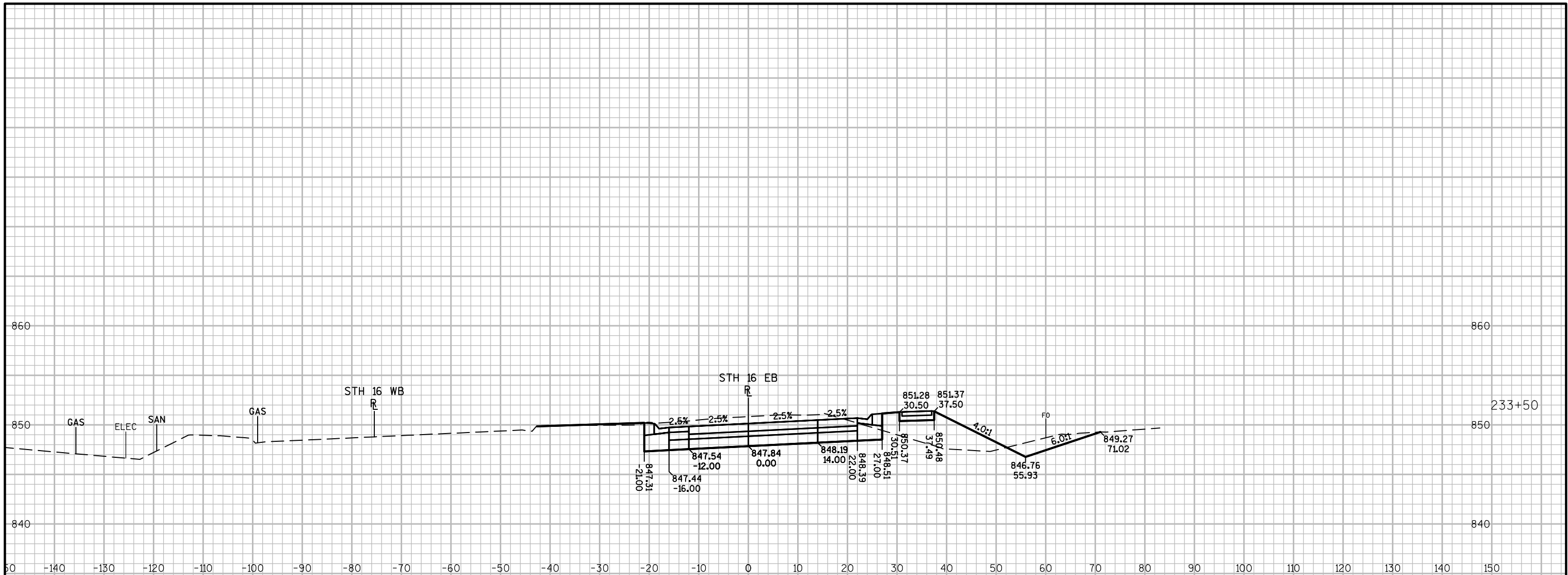


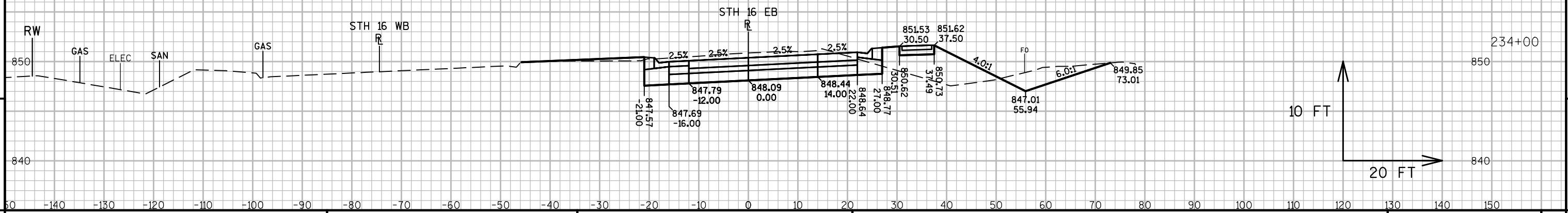
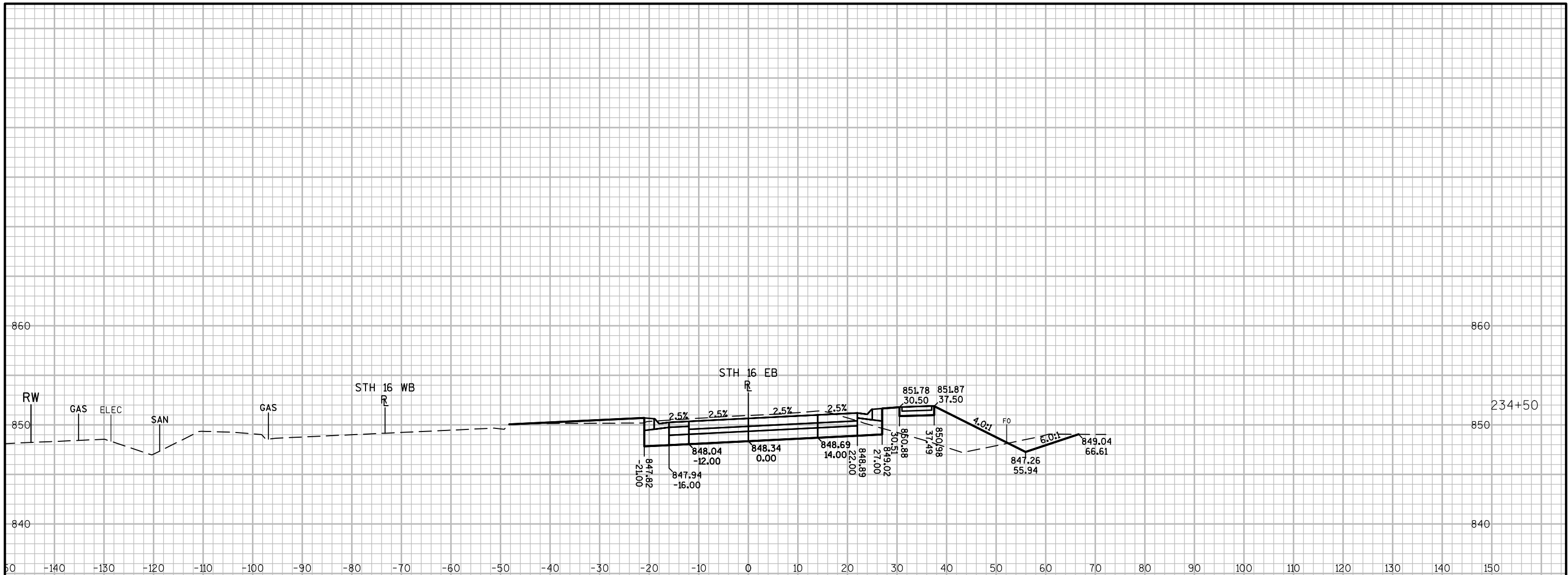


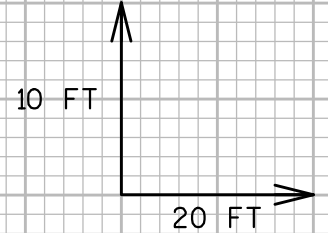
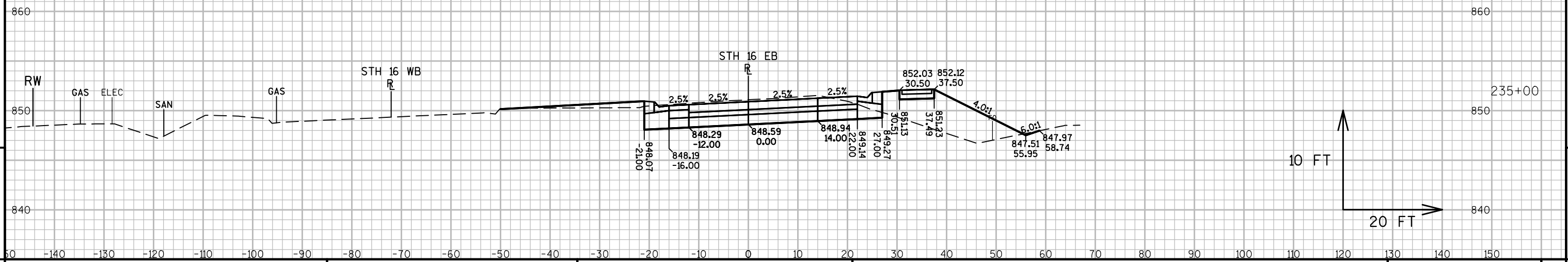
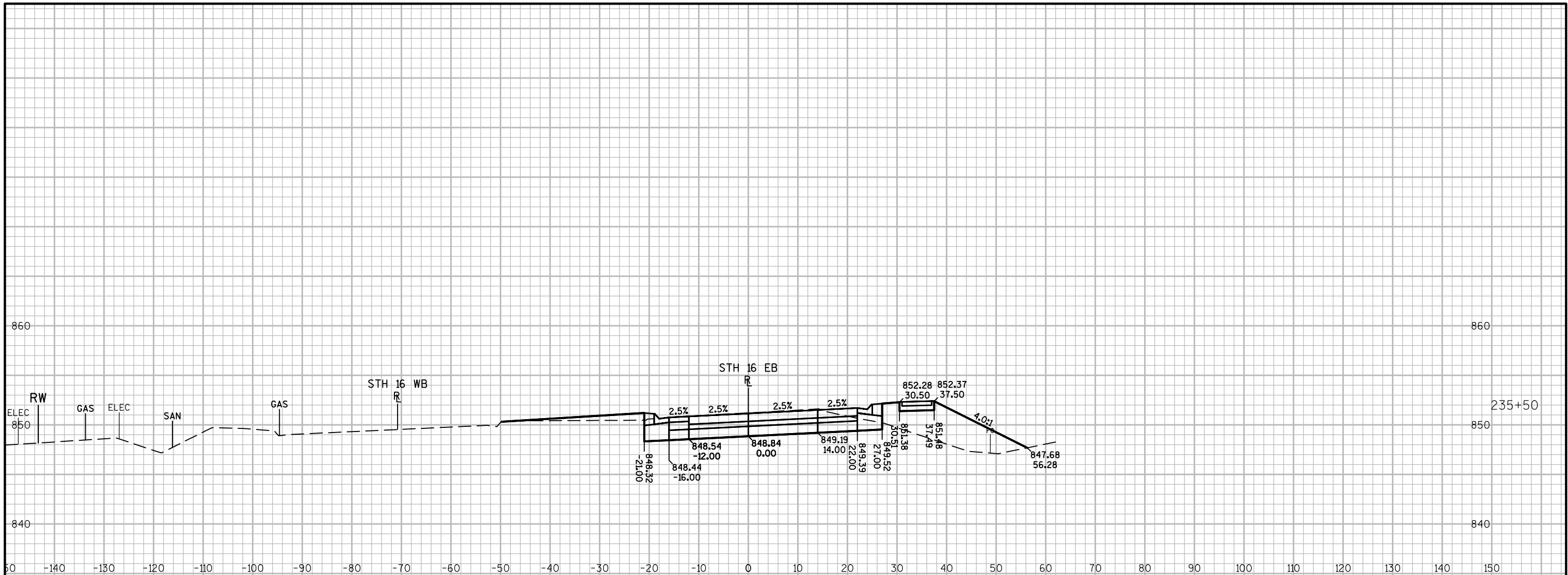


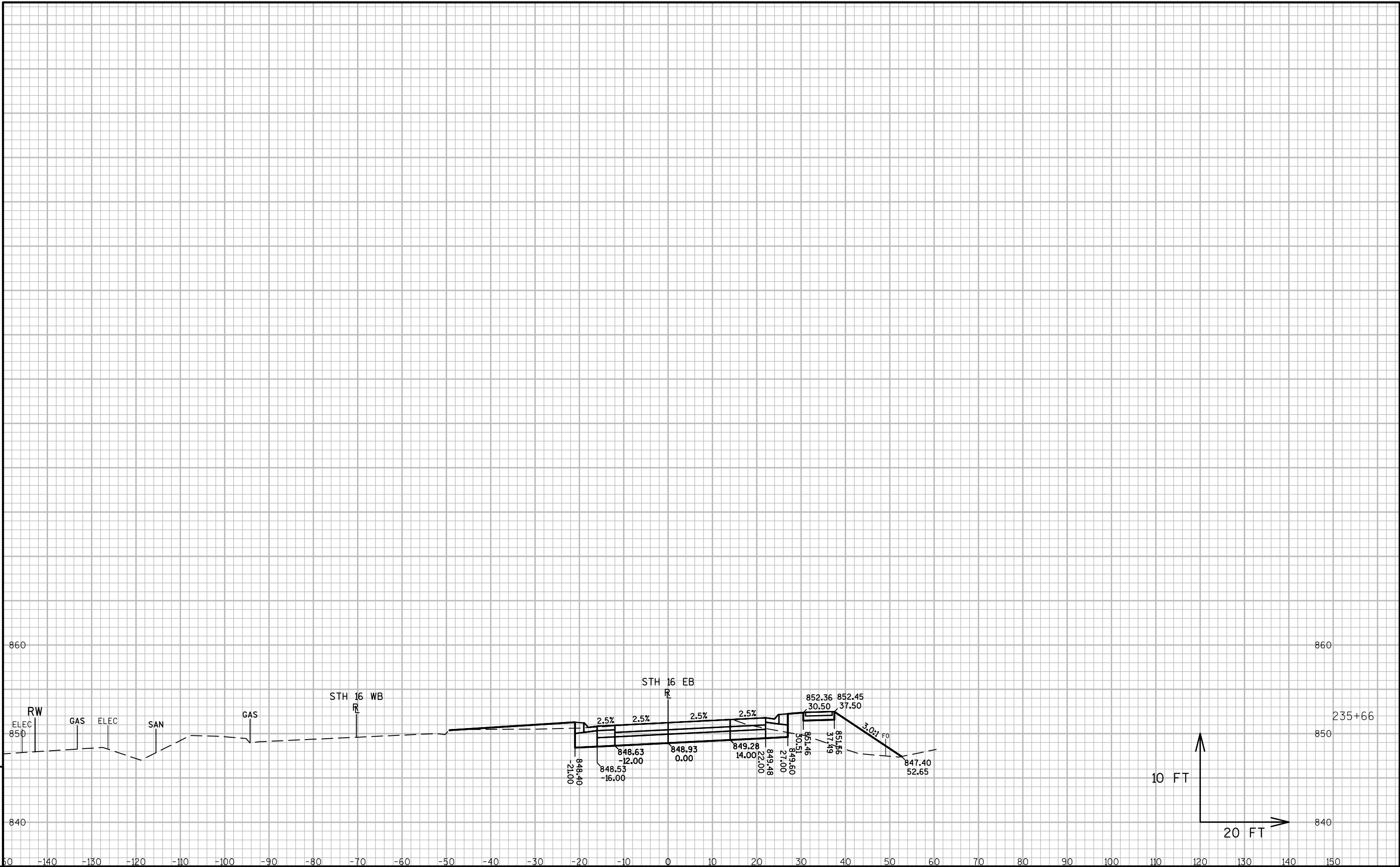
PROJECT NO:1401-02-72 HWY:STH 16 COUNTY:COLUMBIA CROSS SECTIONS: STH 16 EB - STAGE 2A SHEET E

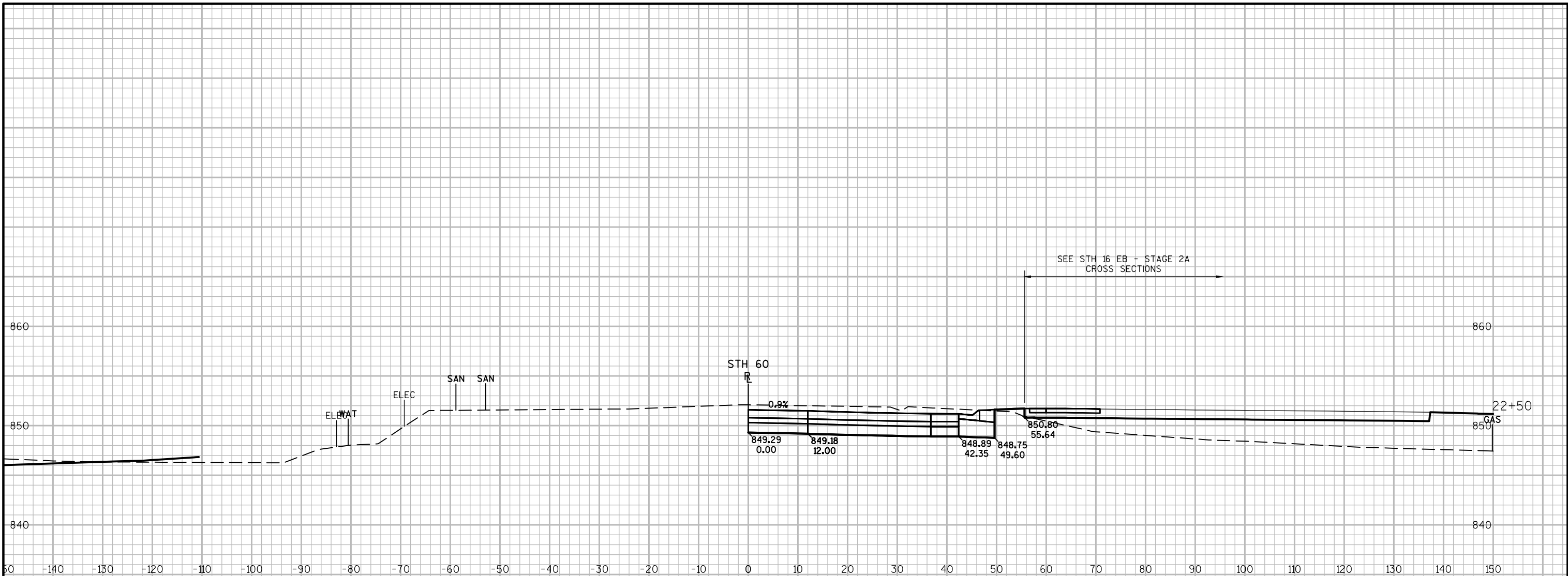


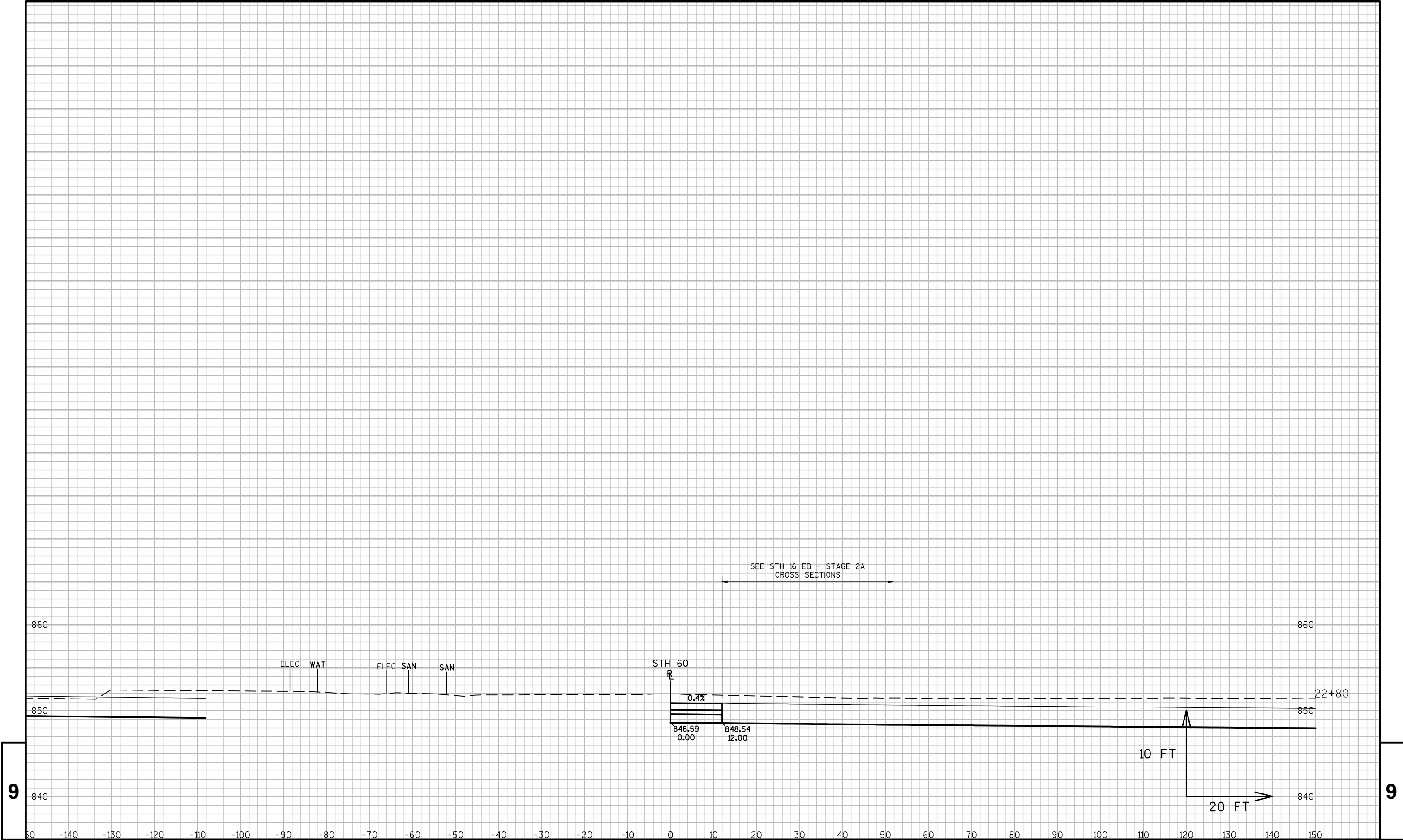






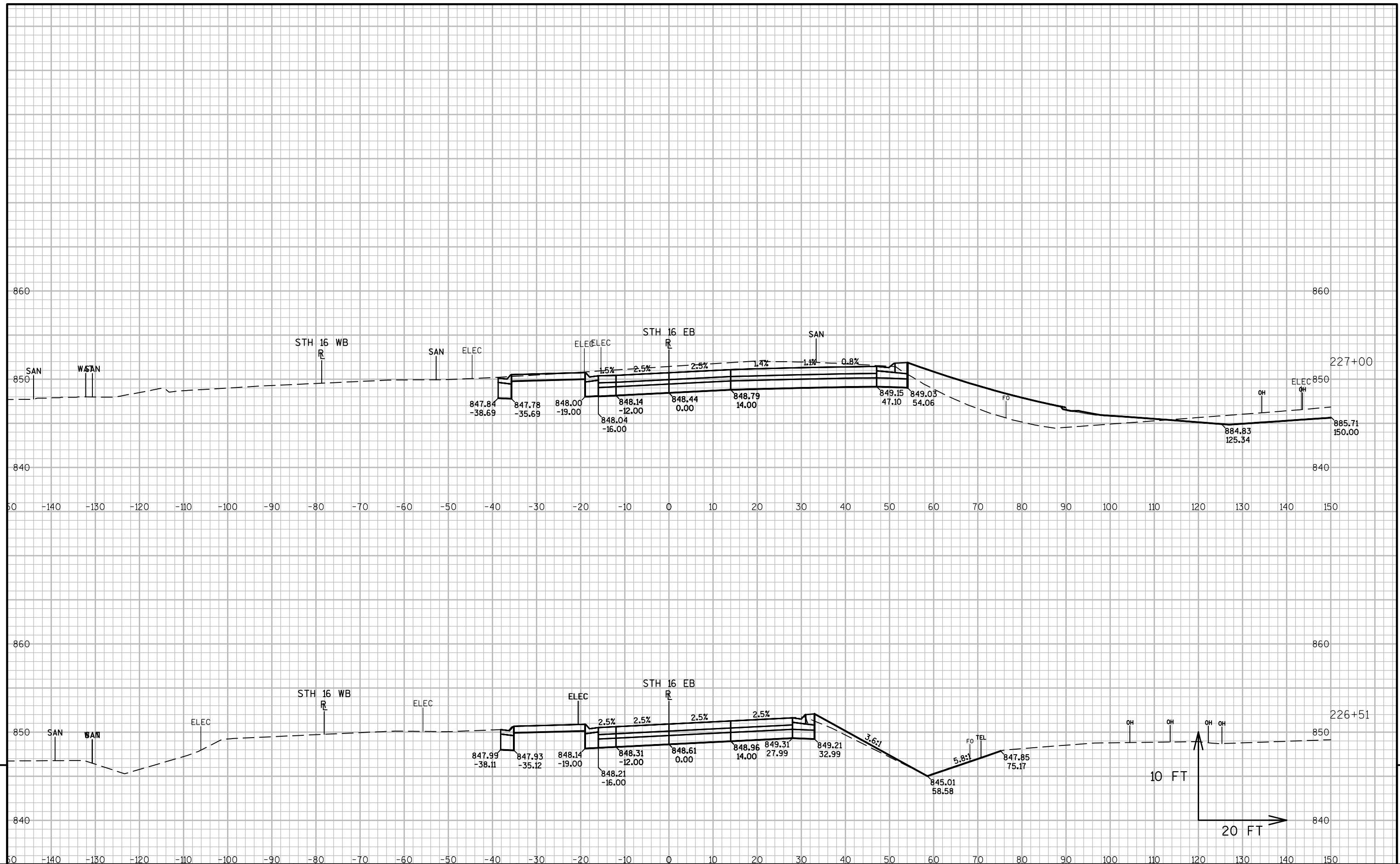


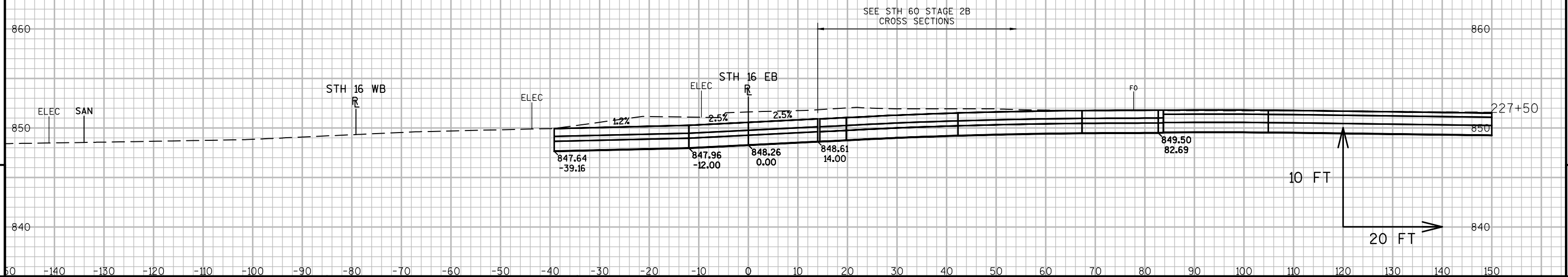
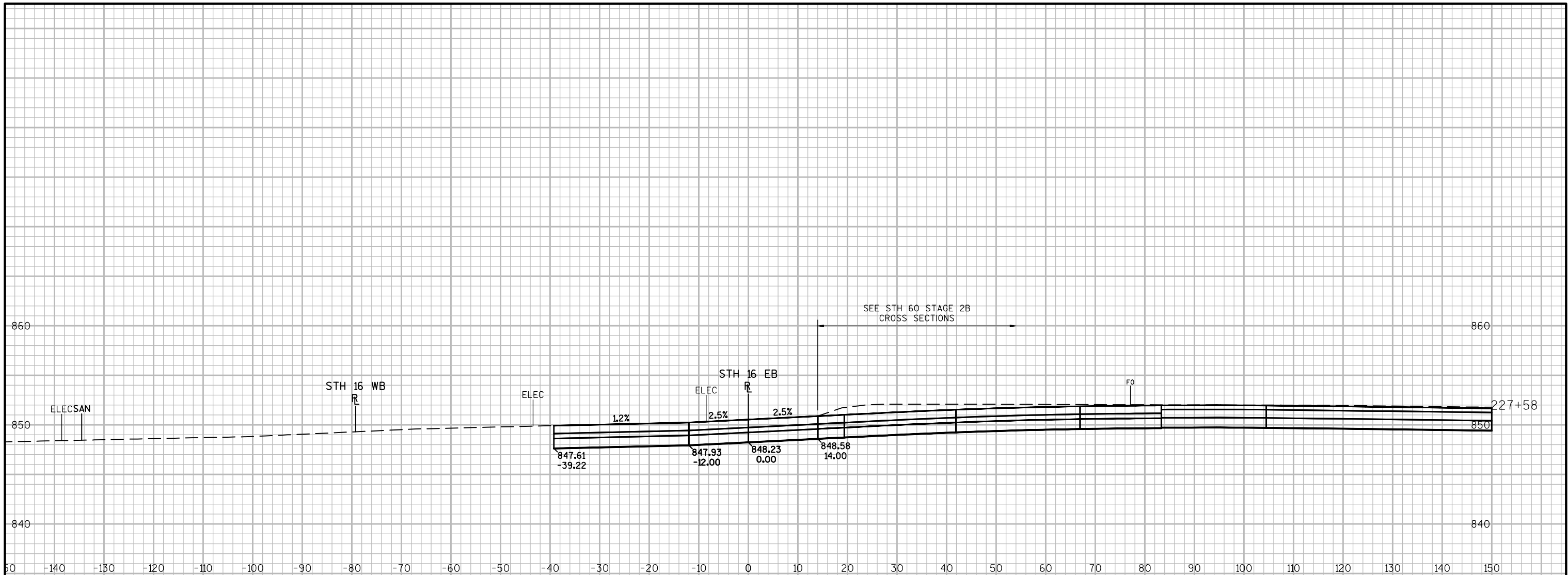


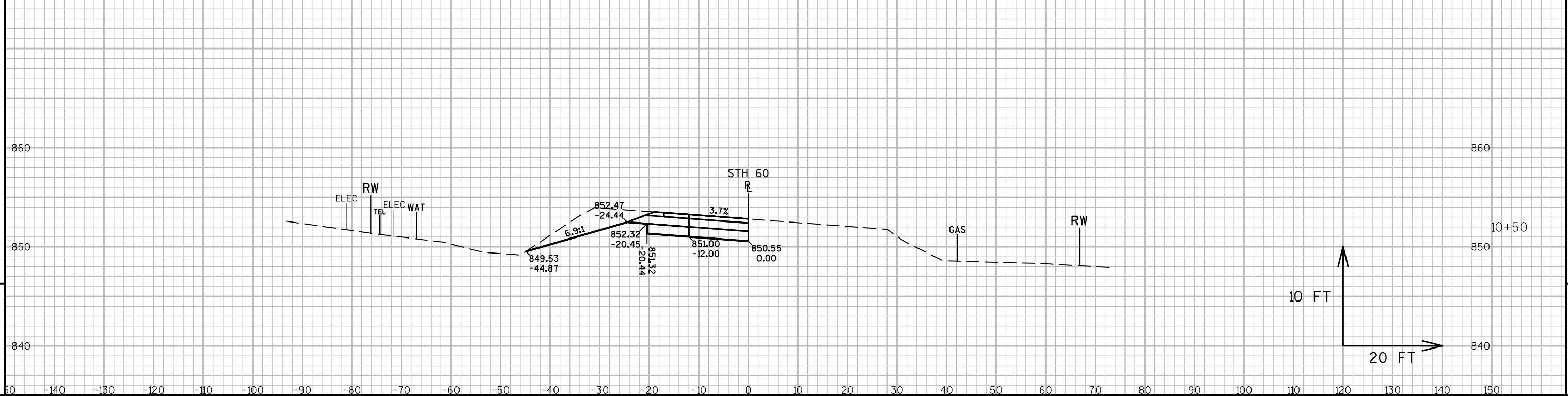
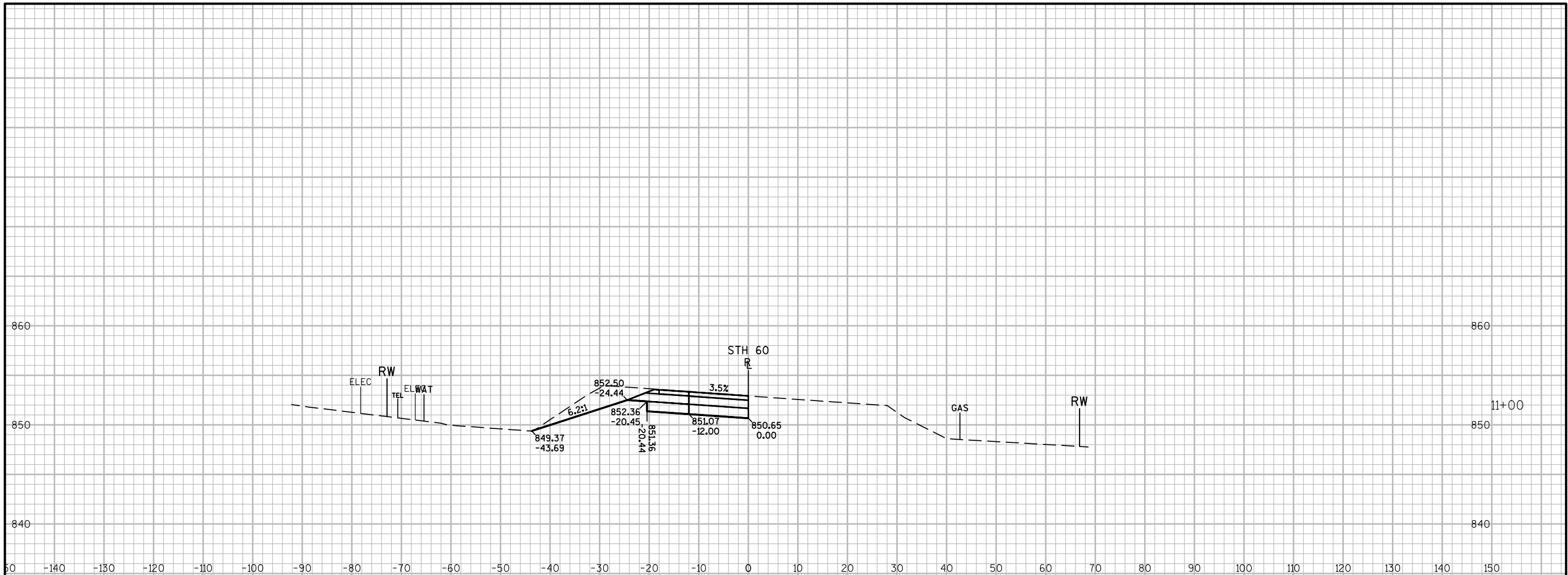


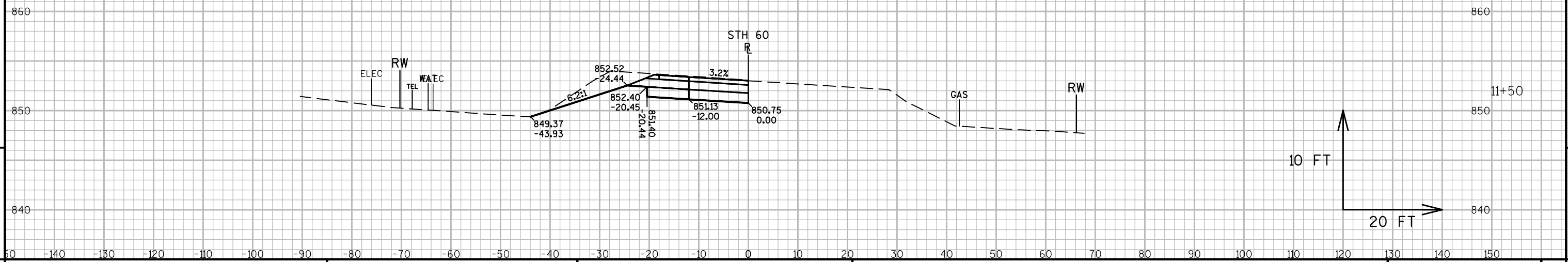
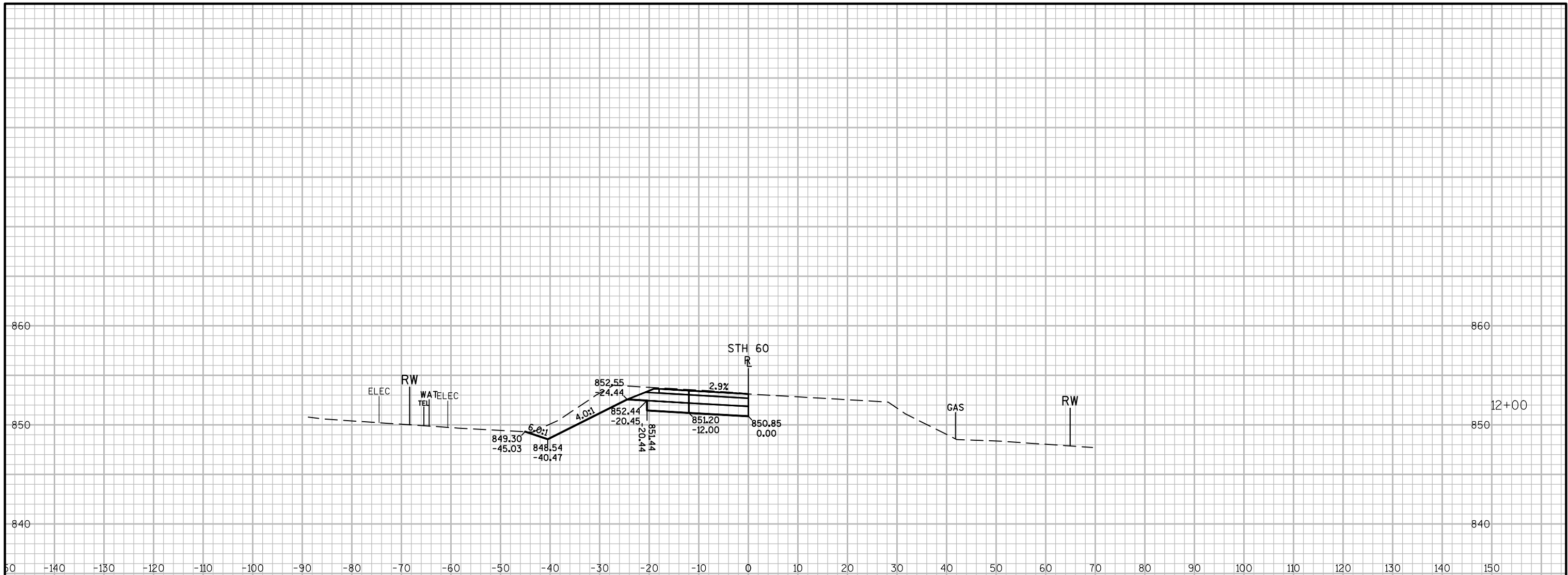
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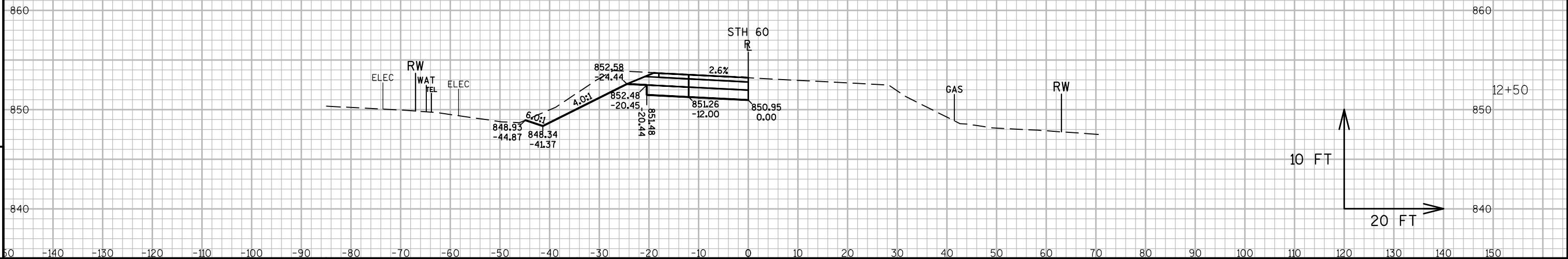
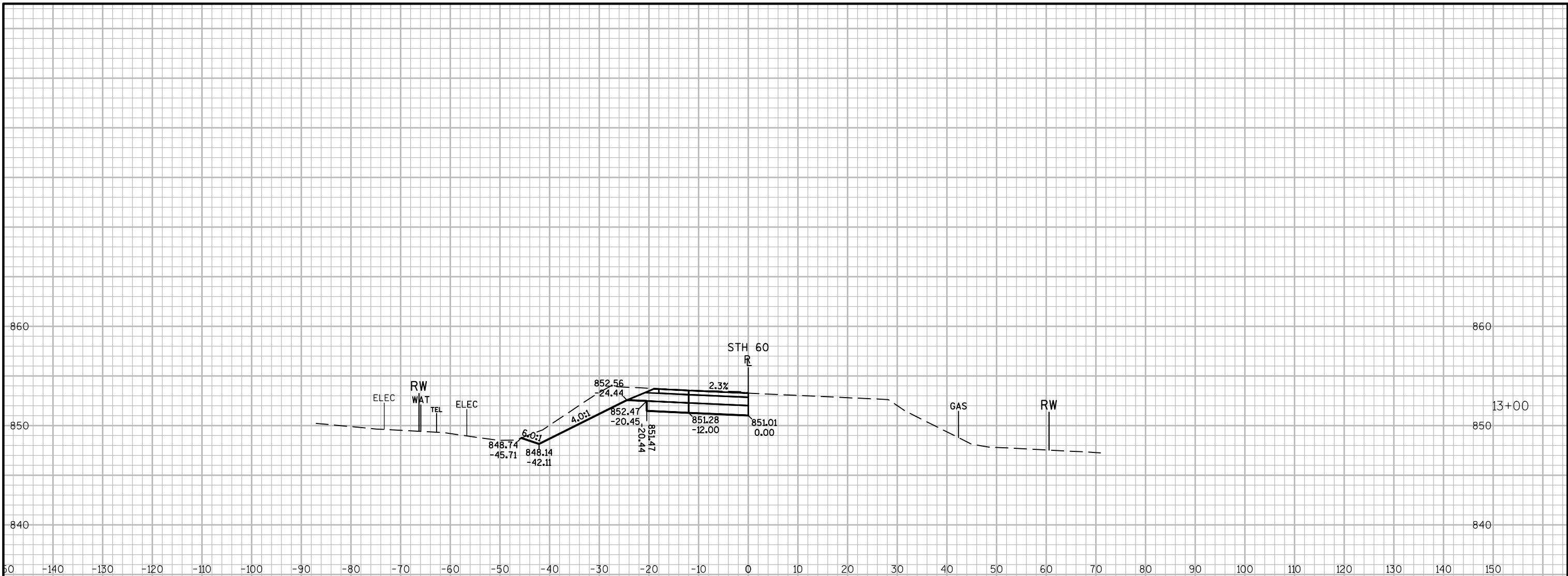
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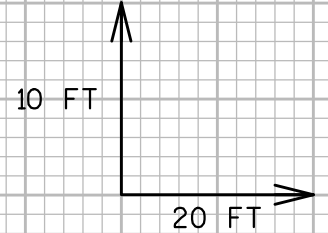
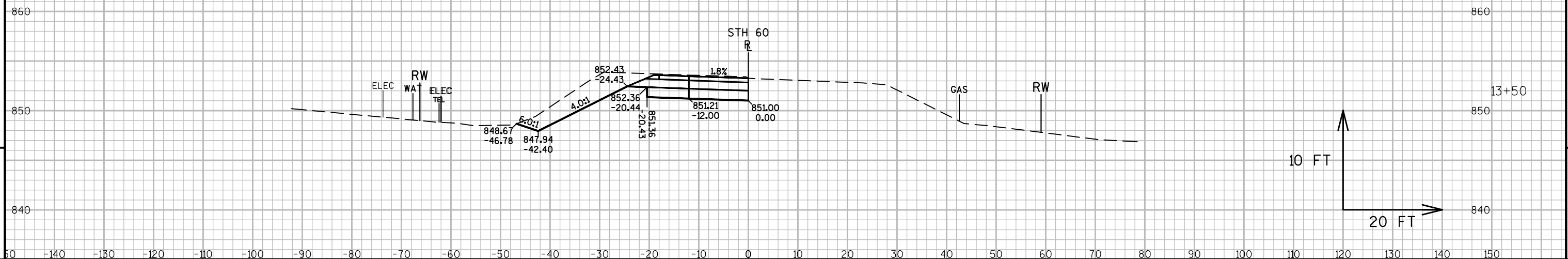
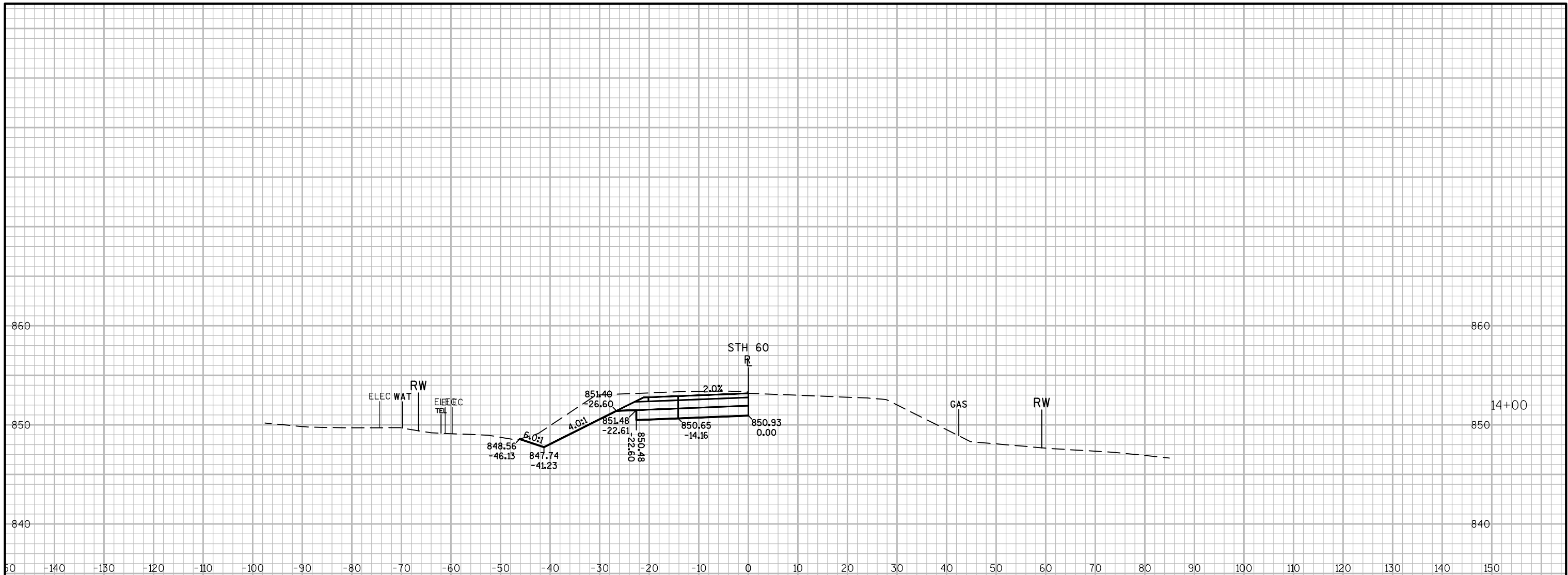


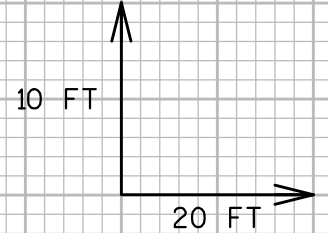
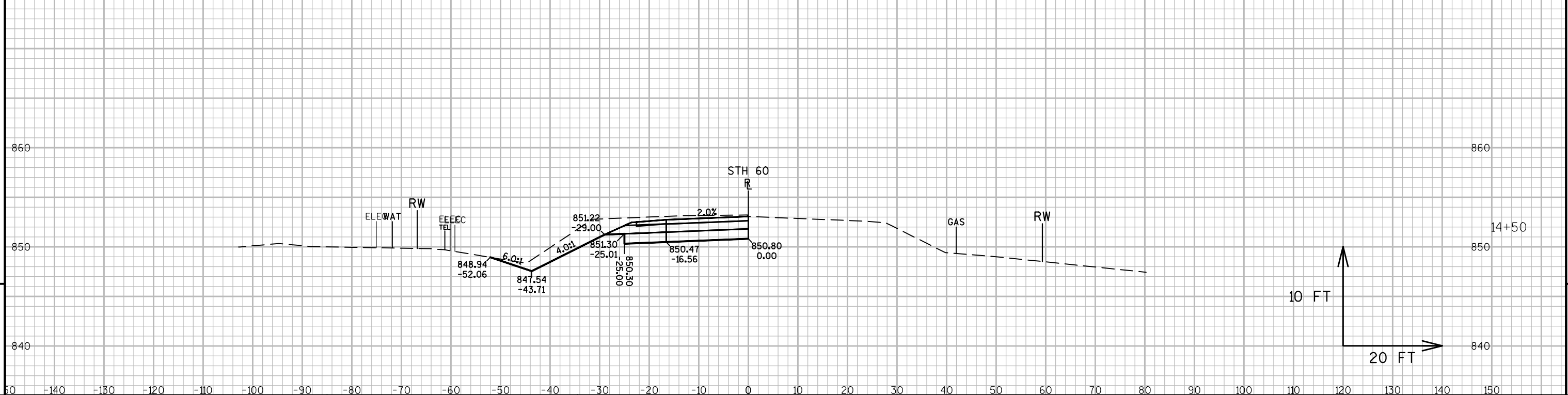
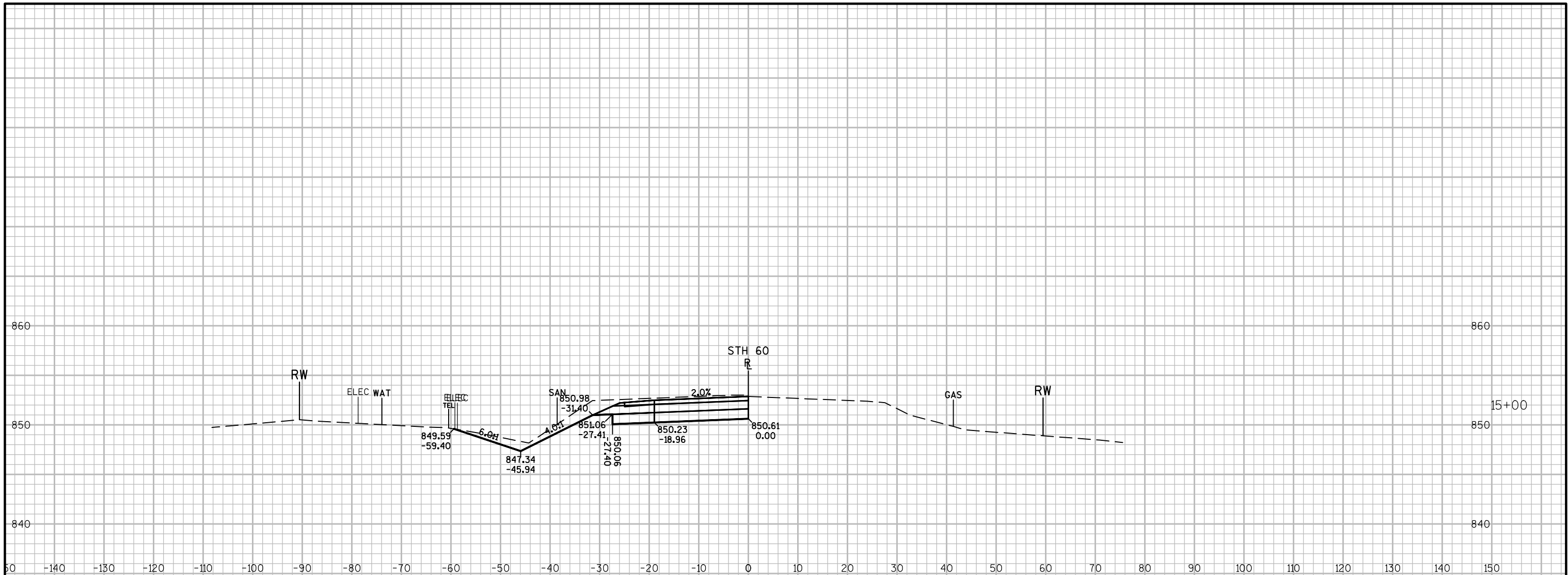


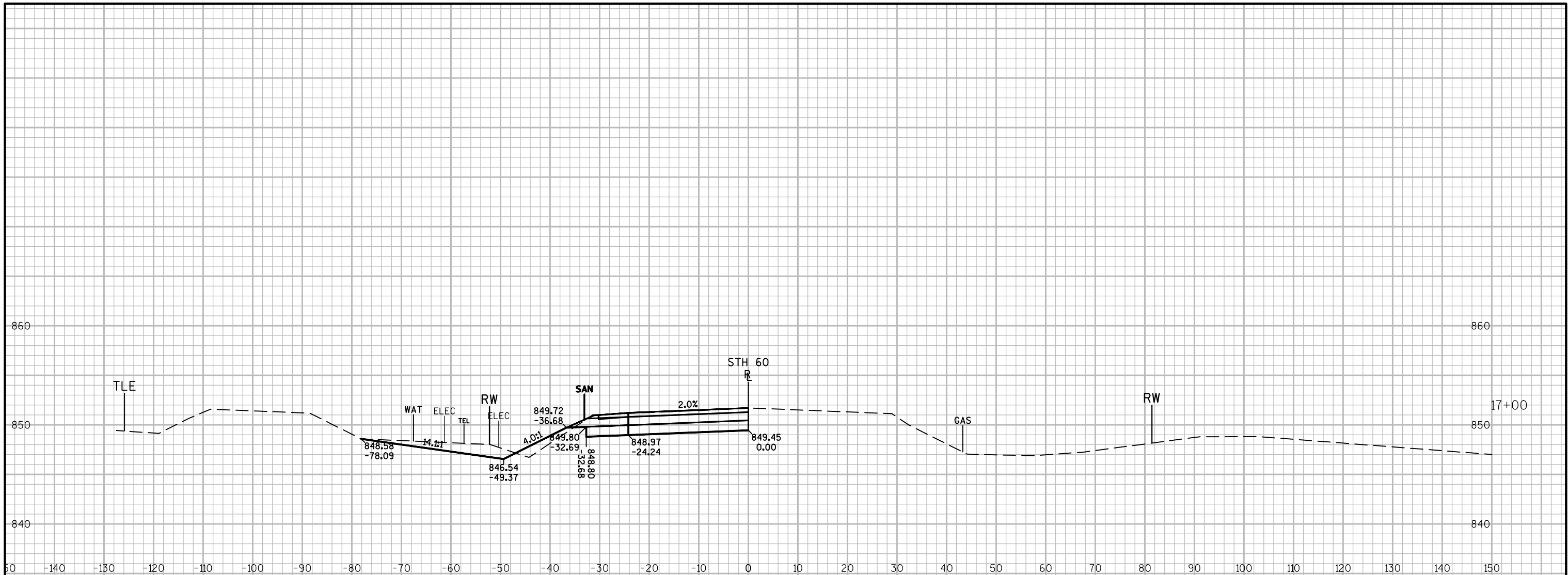




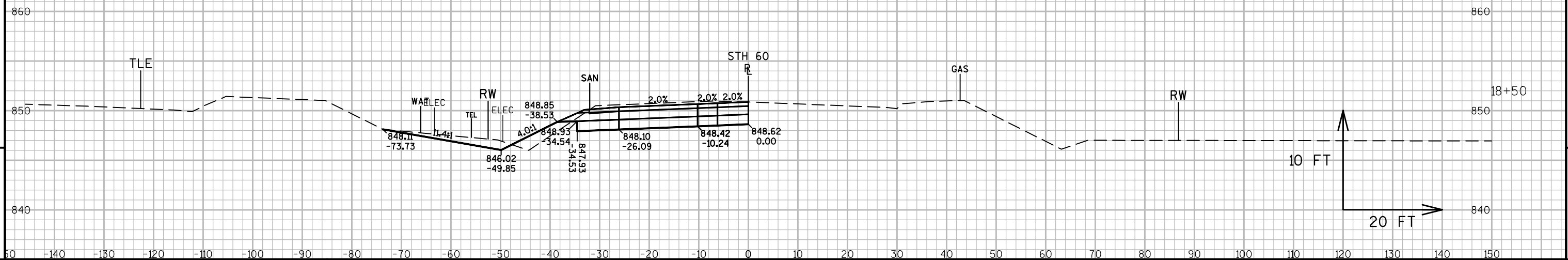
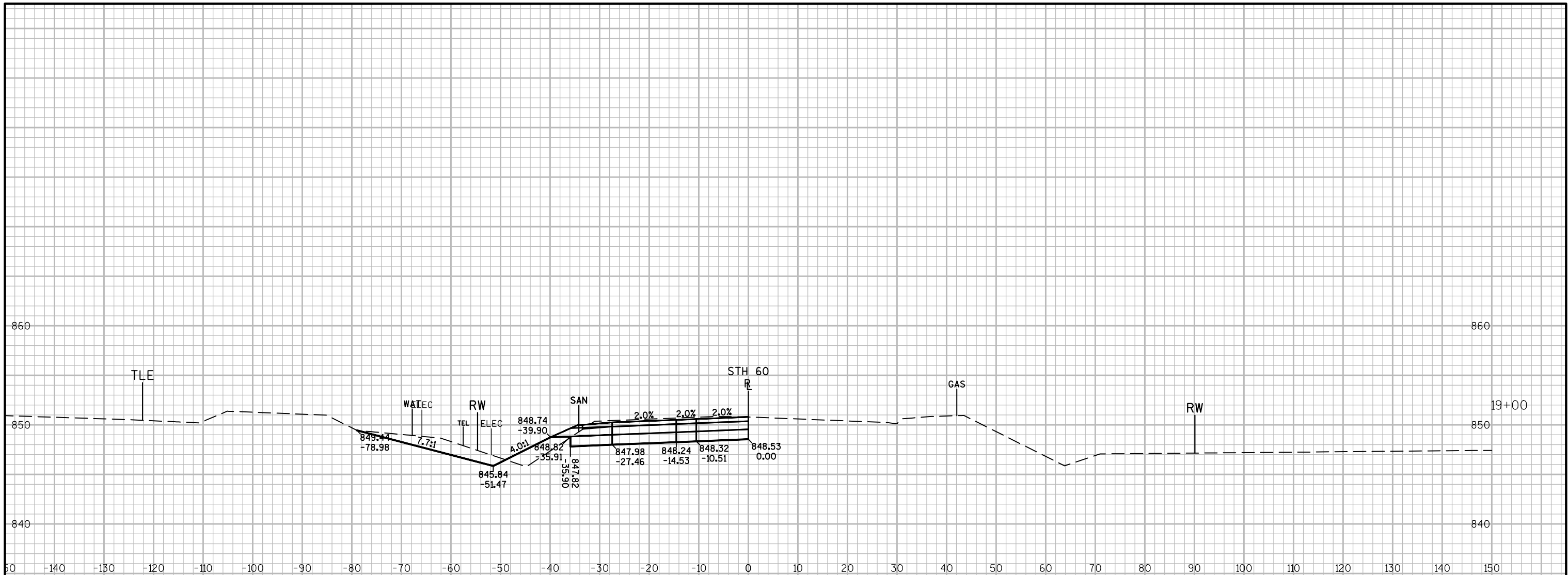


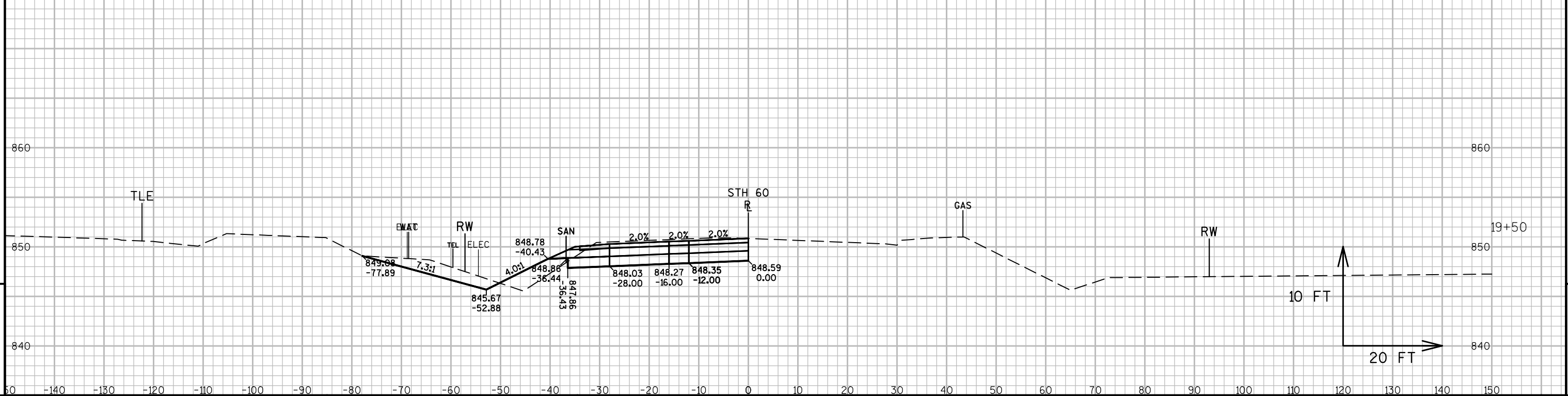
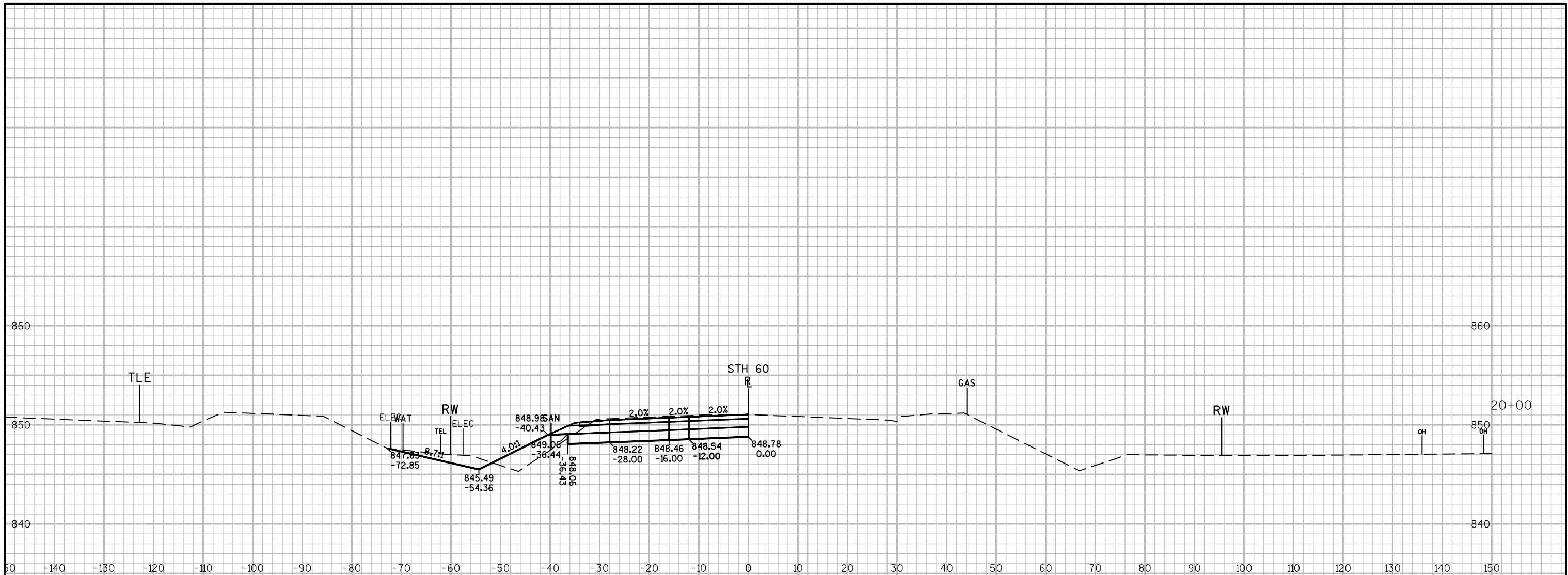


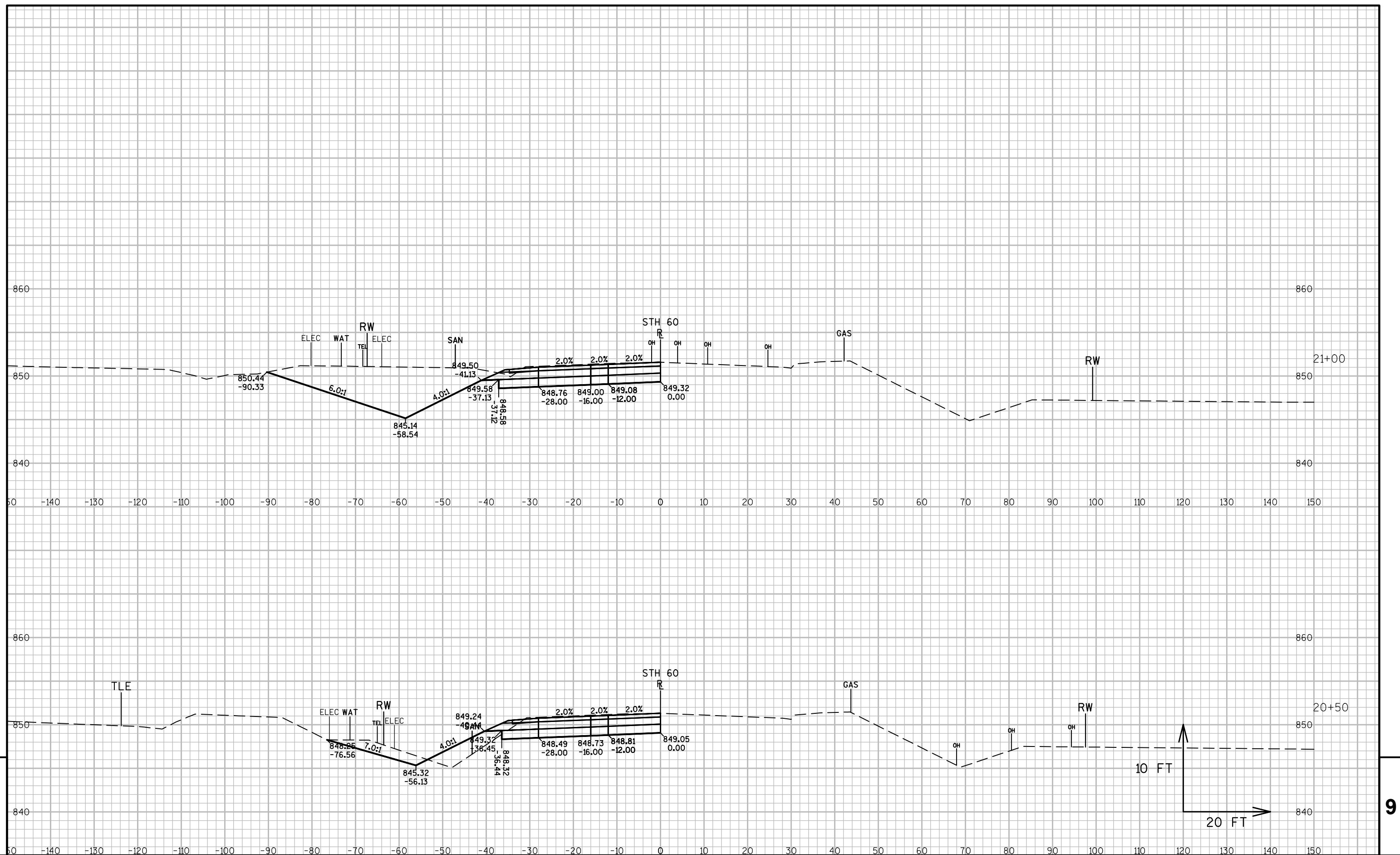


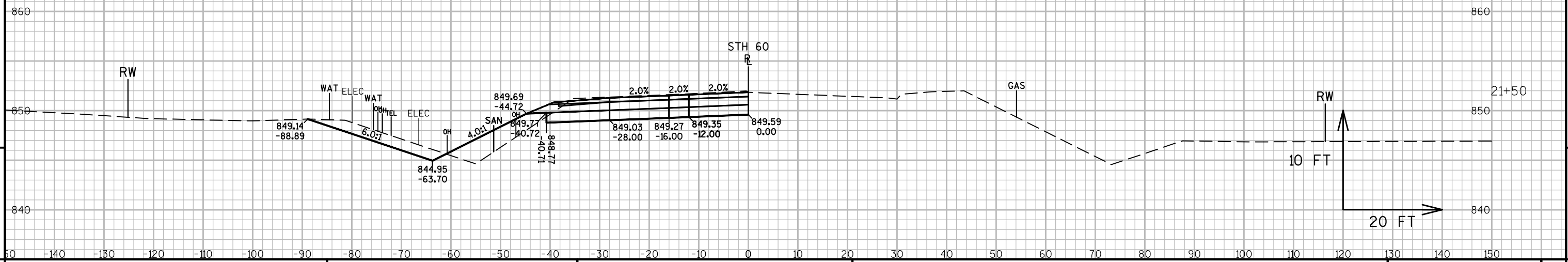
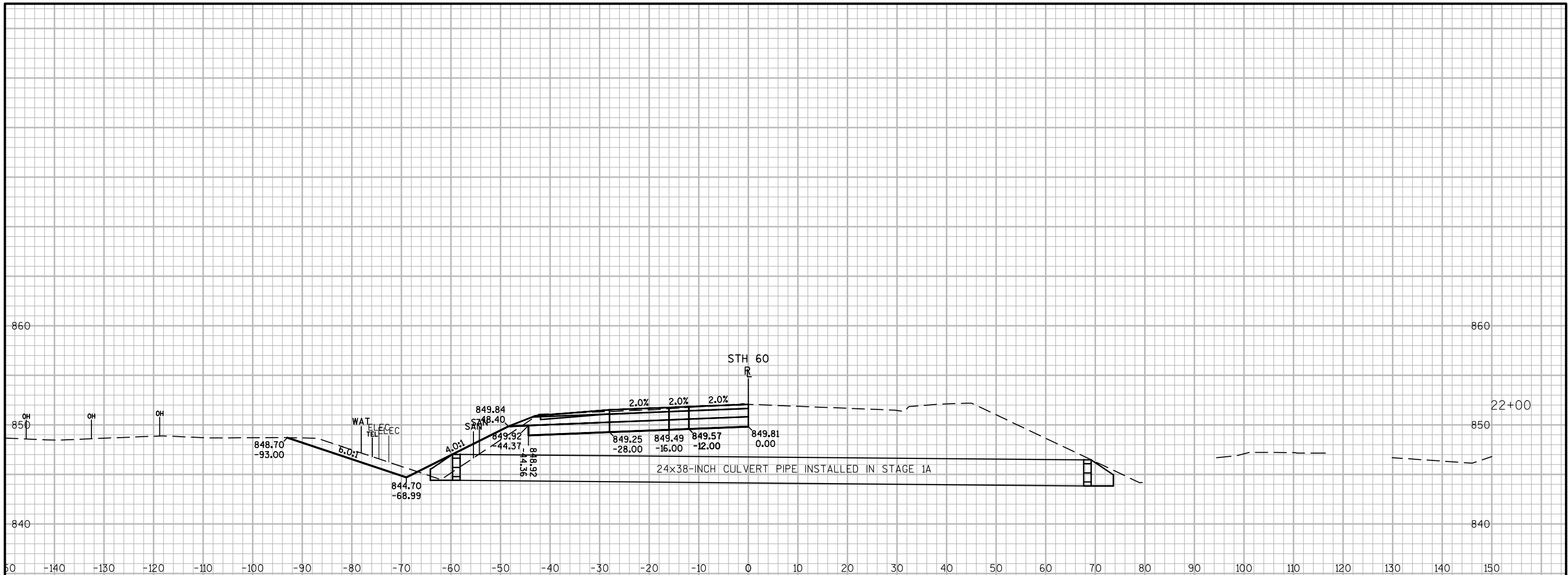


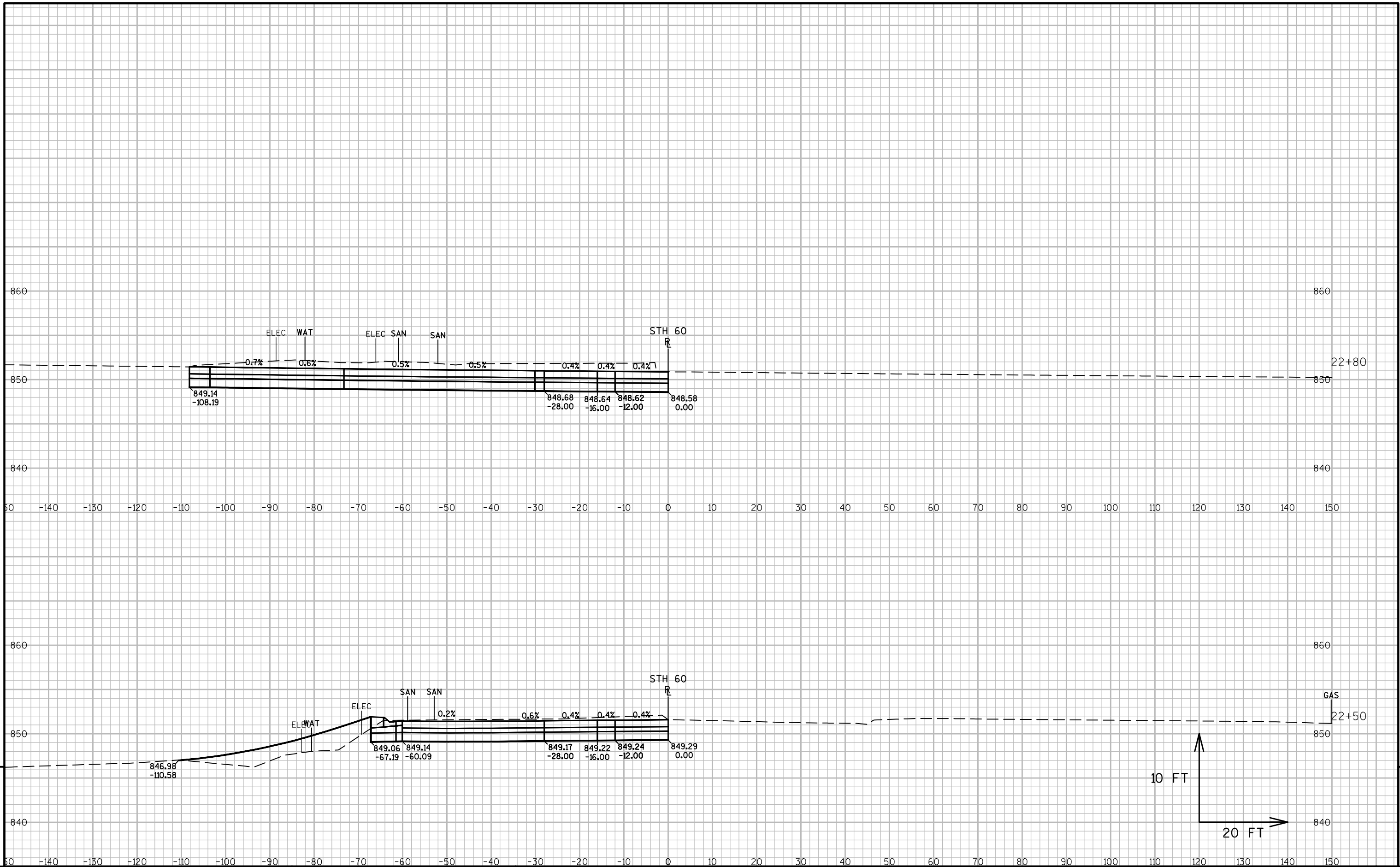




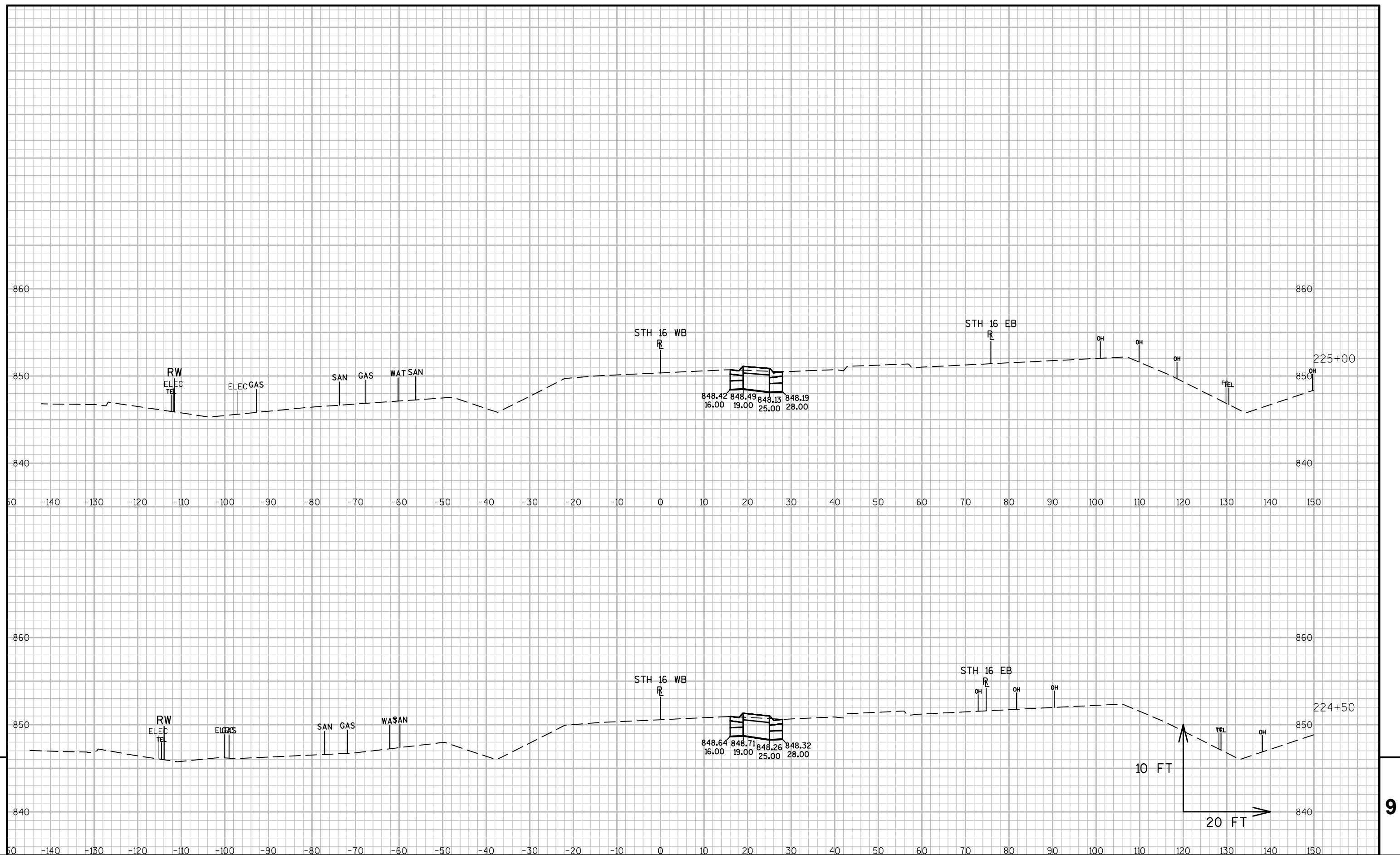


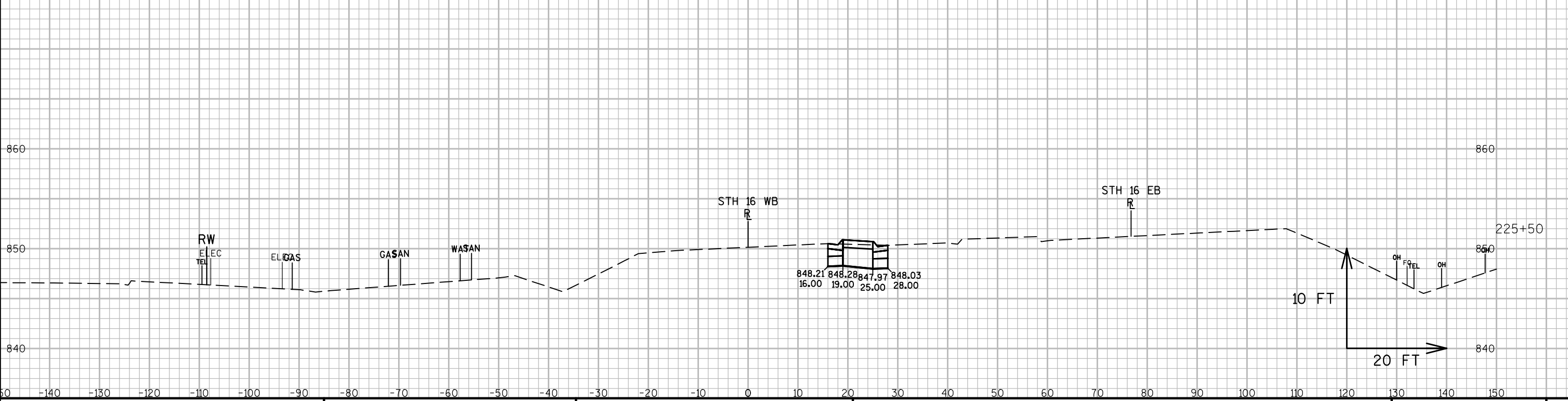
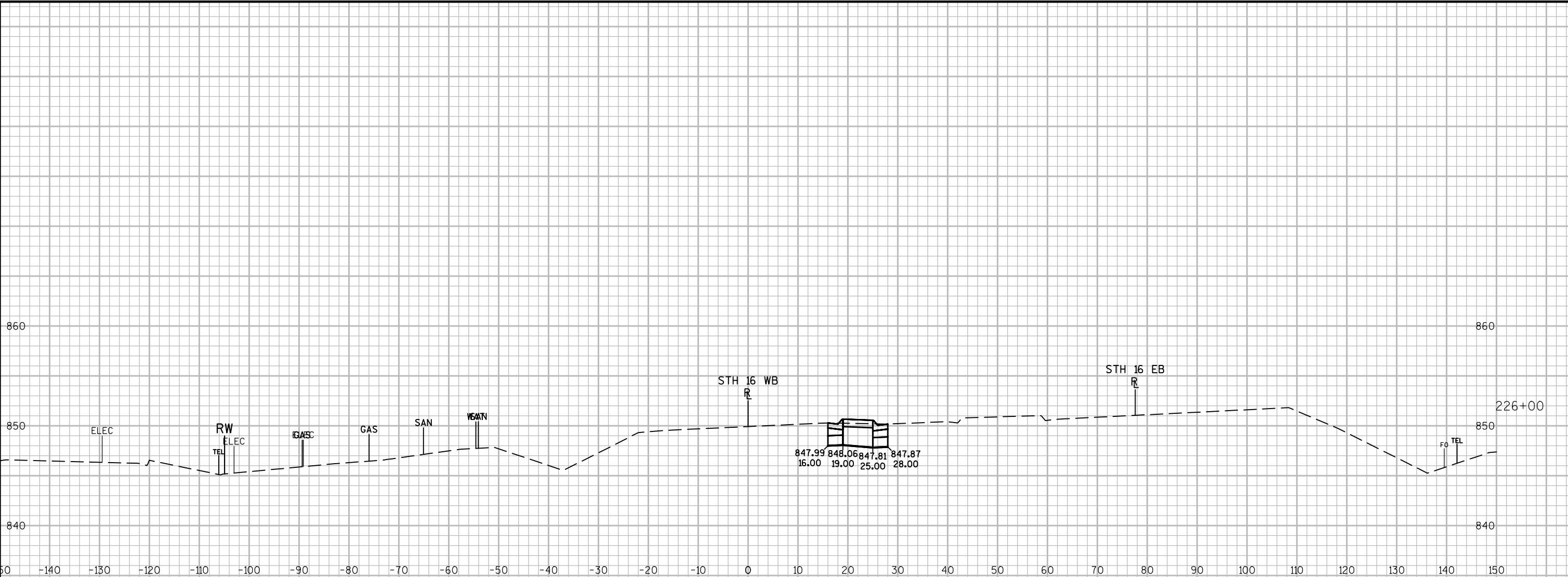


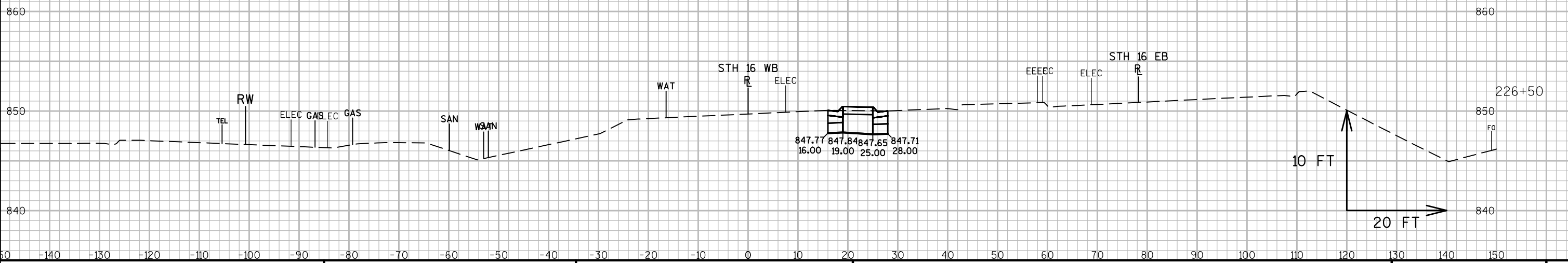
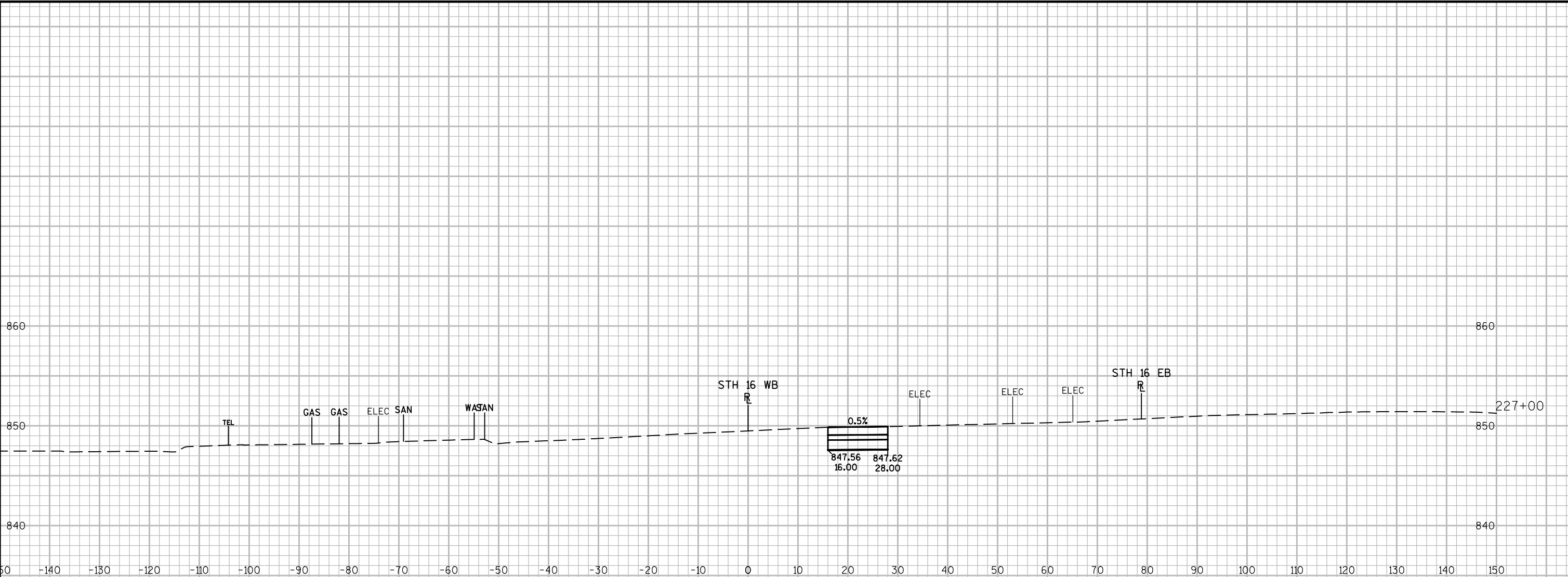




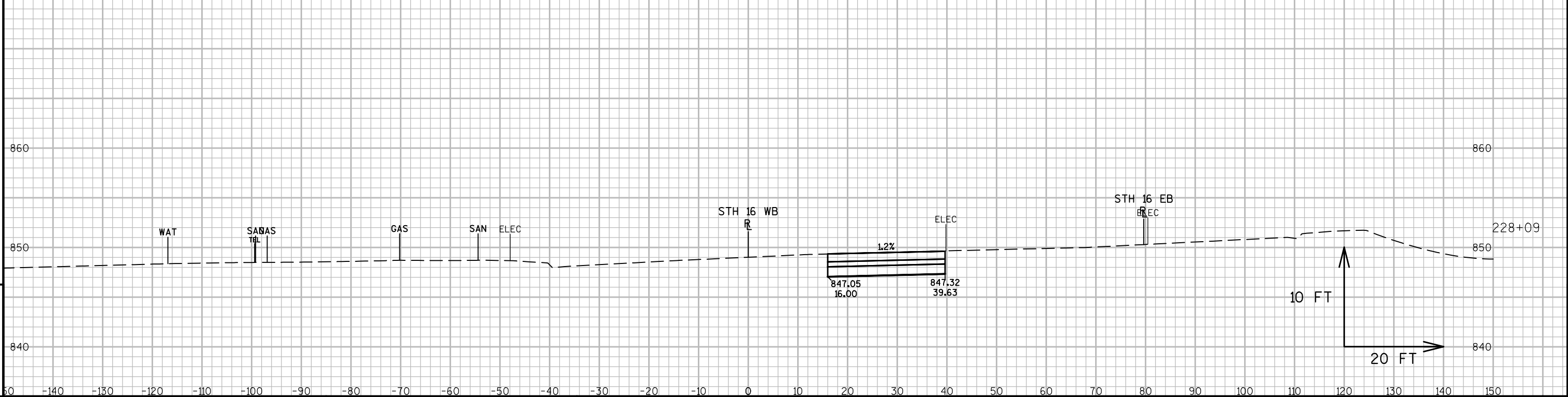




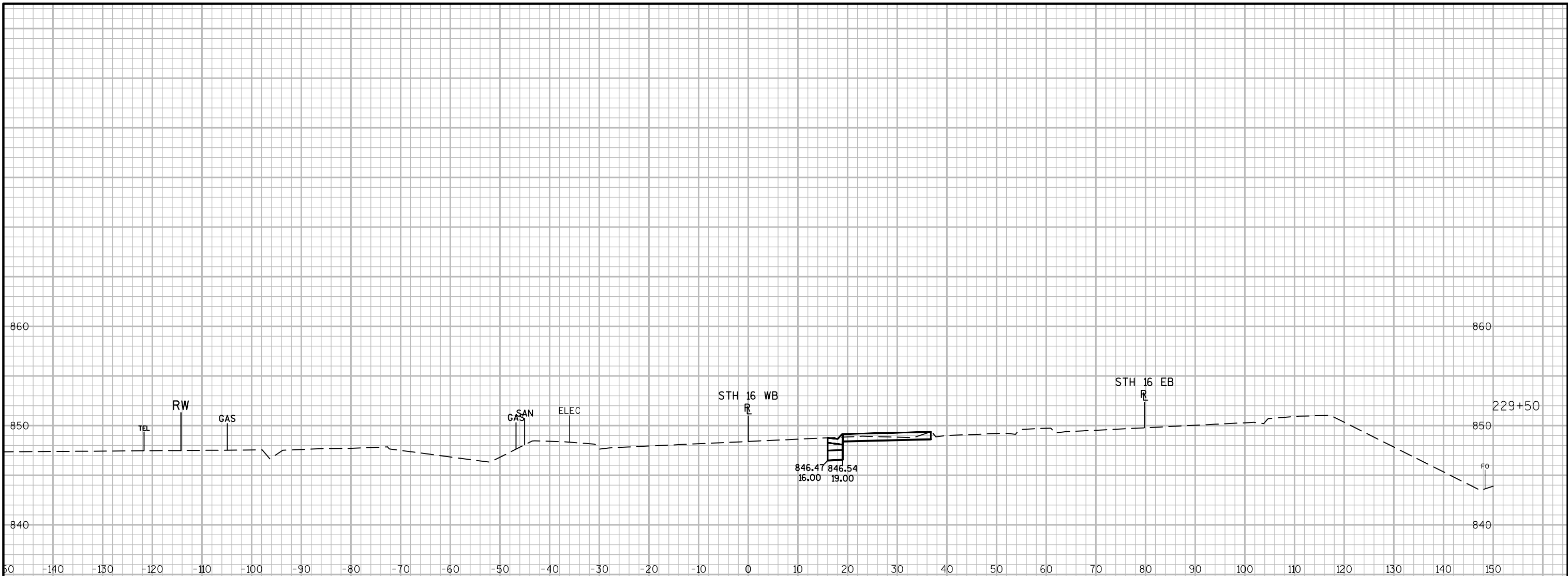


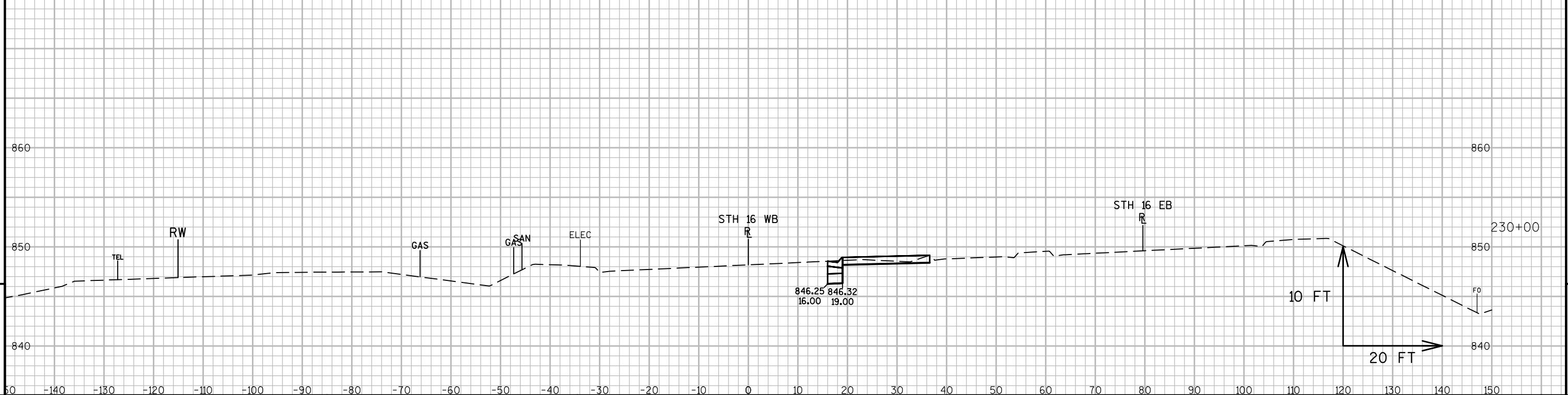
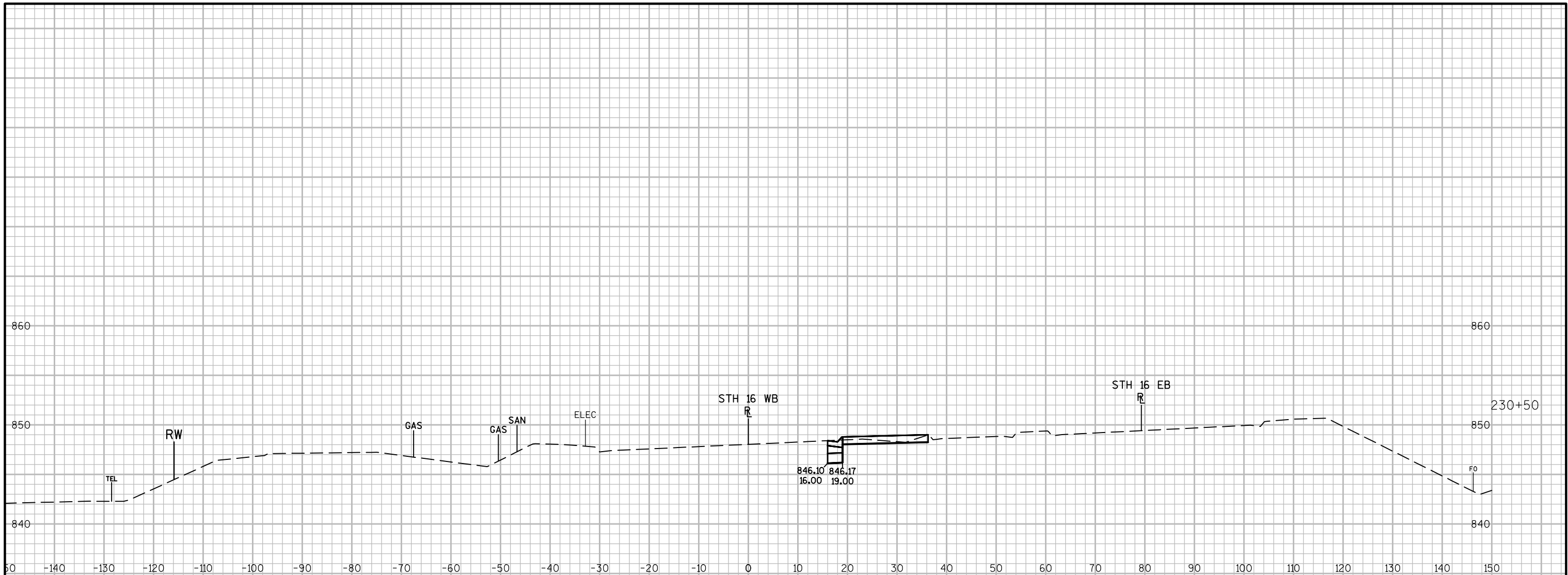


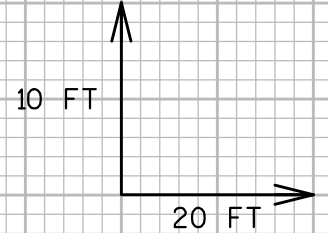
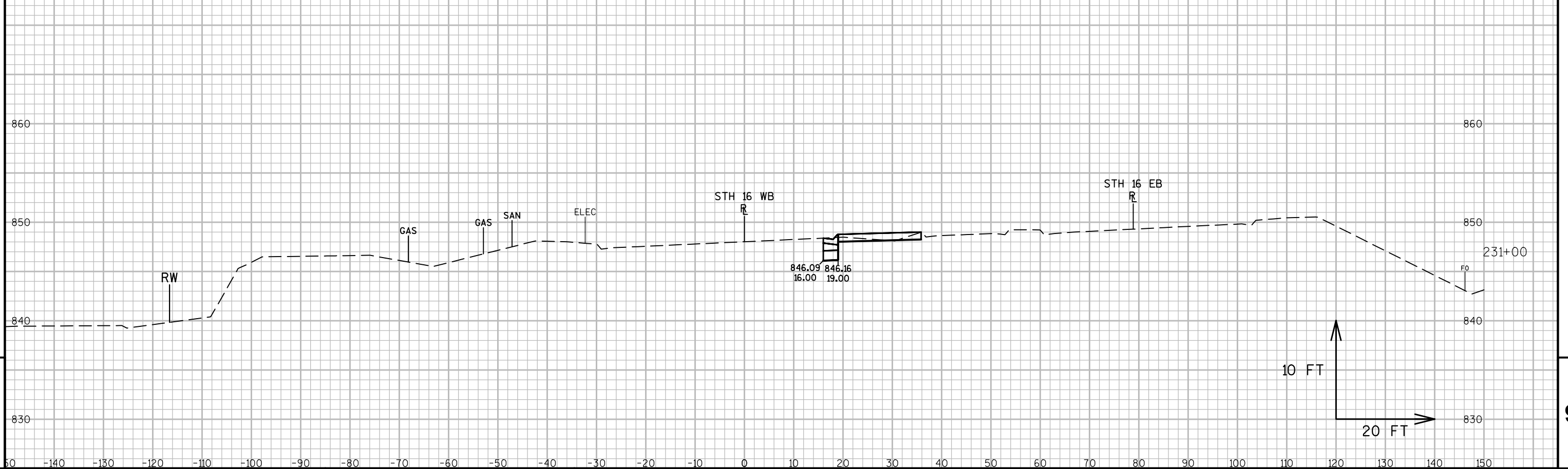
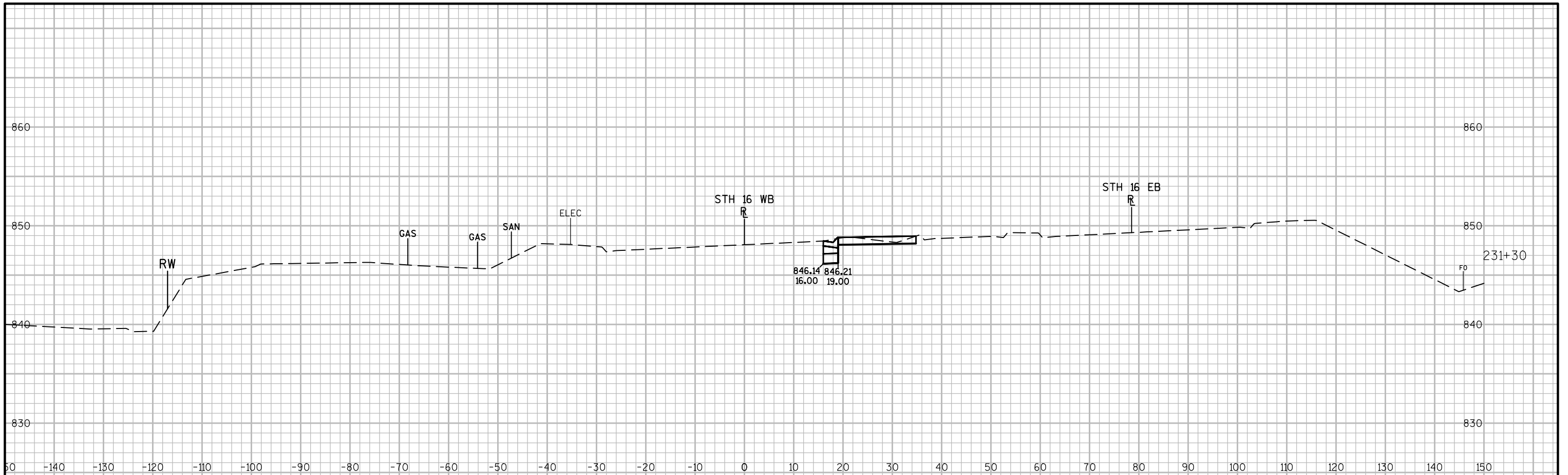
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 3	SHEET	E
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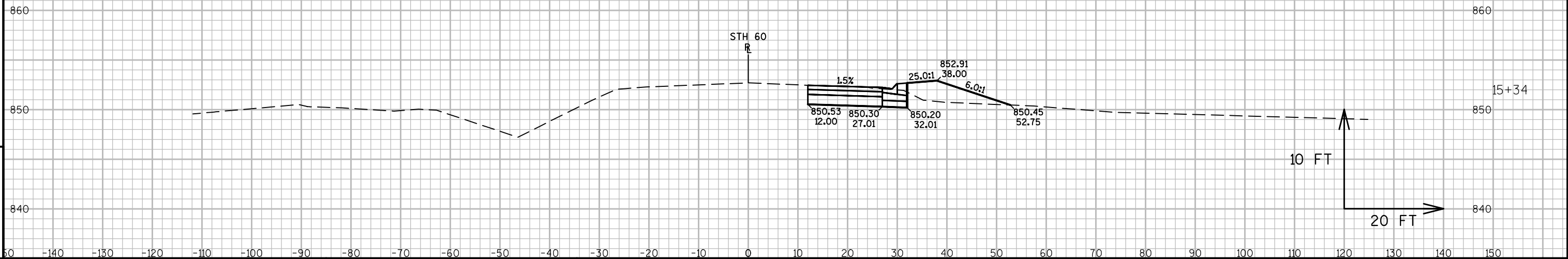
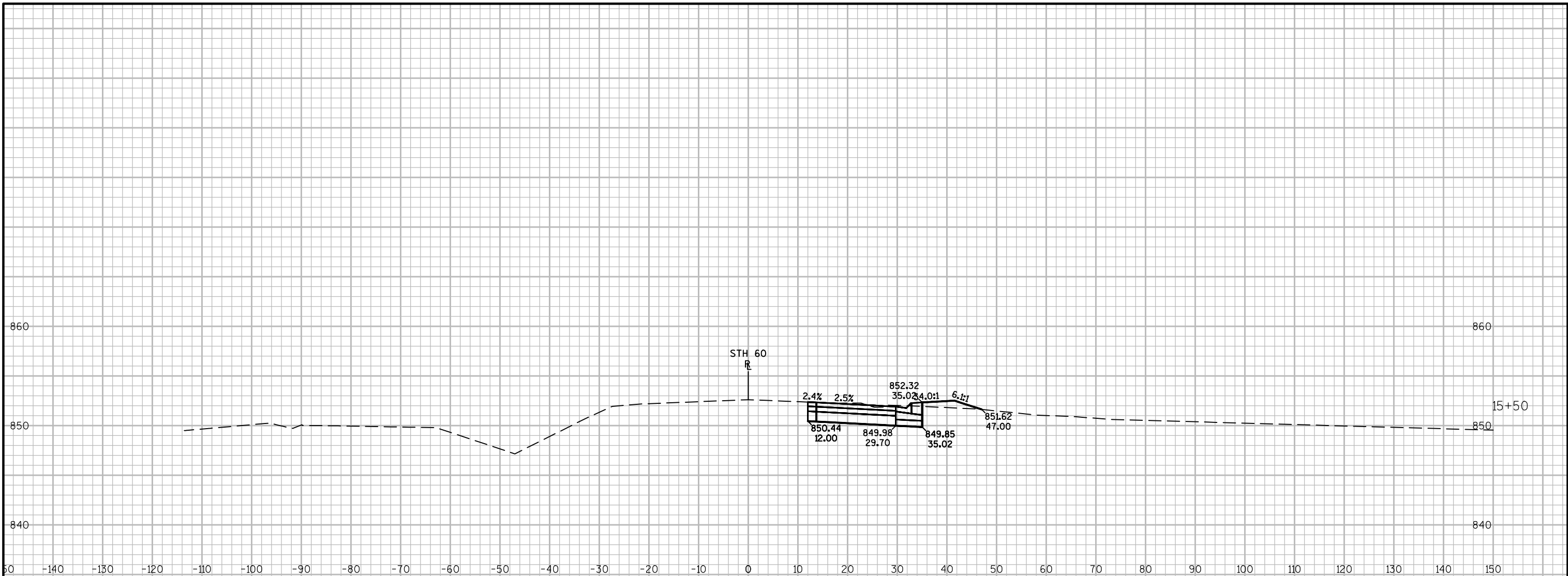


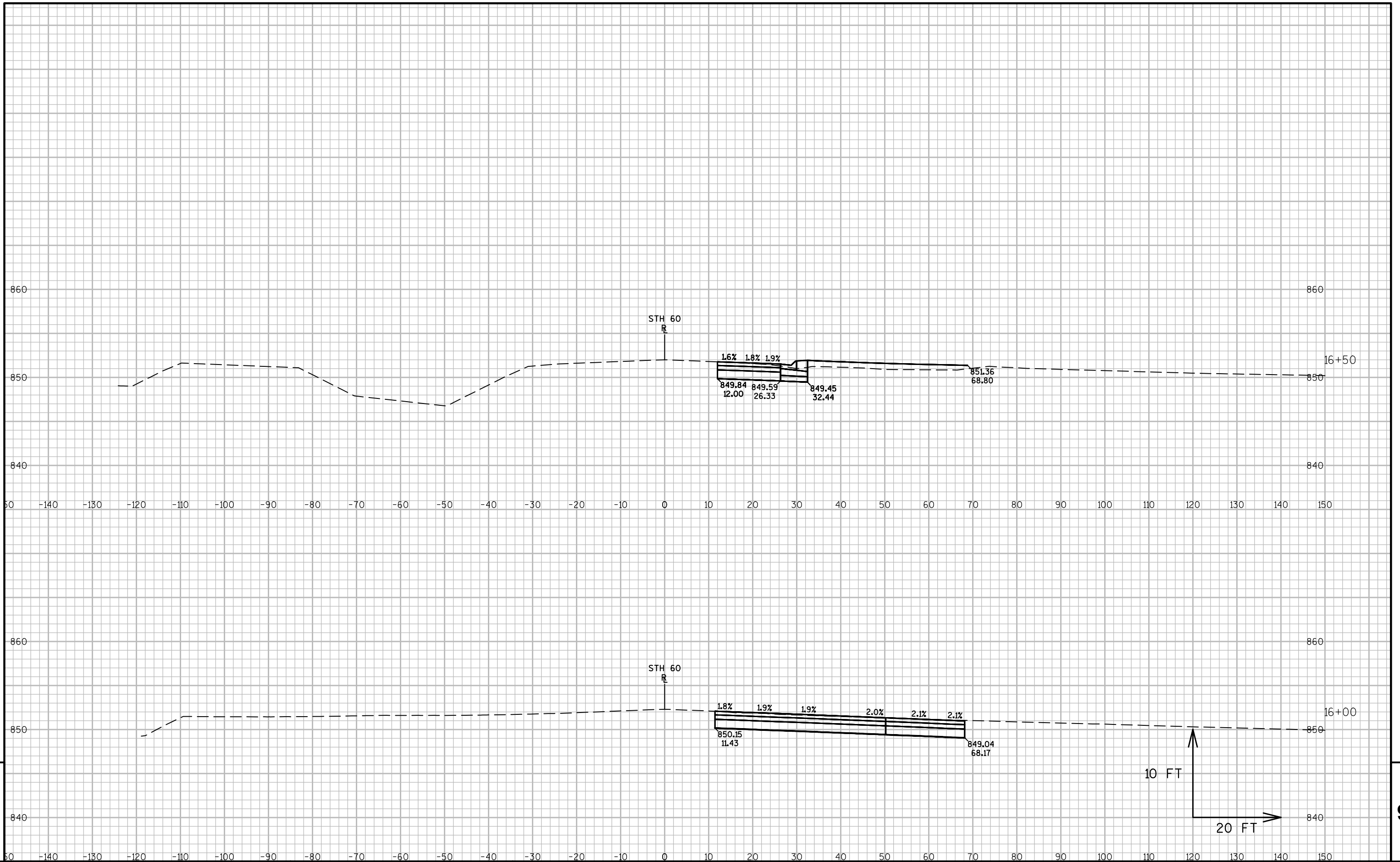
PROJECT NO:1401-02-72	HWY:STH 16	COUNTY:COLUMBIA	CROSS SECTIONS: STH 16 - STAGE 3	SHEET	E
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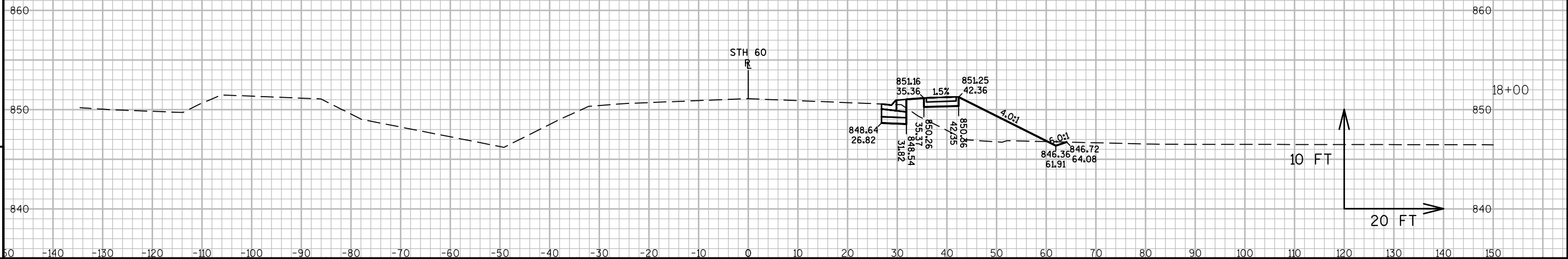
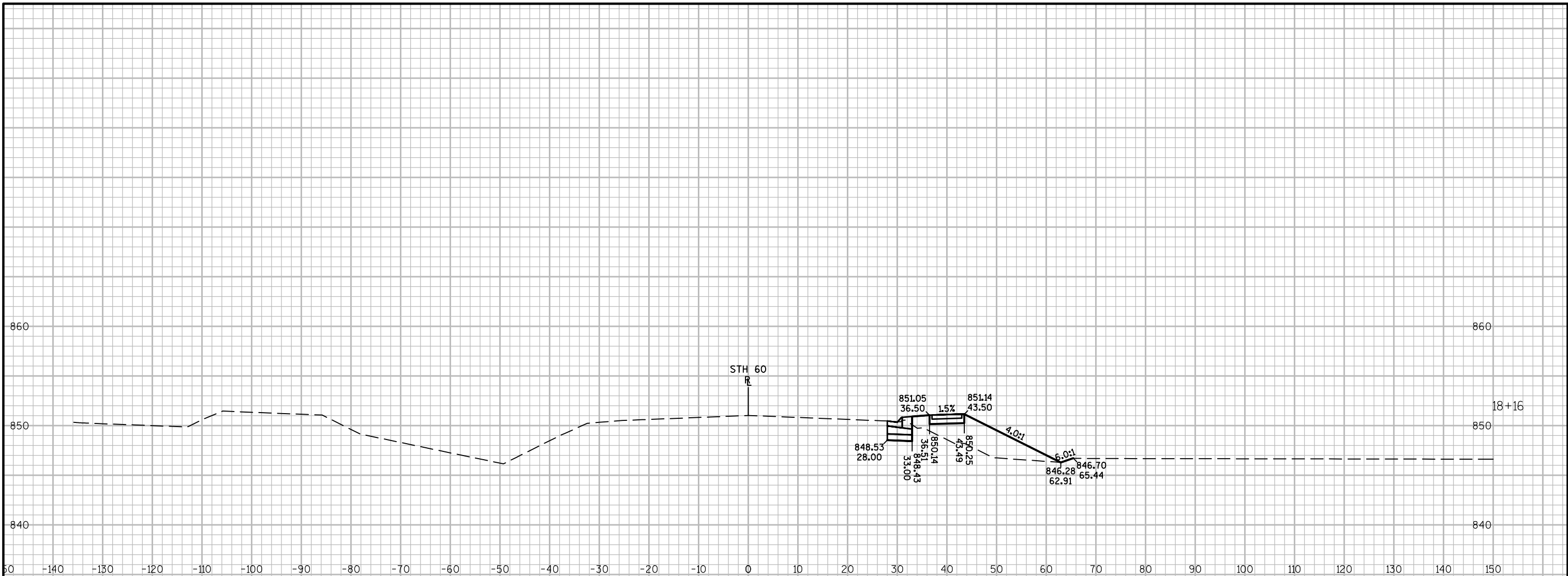




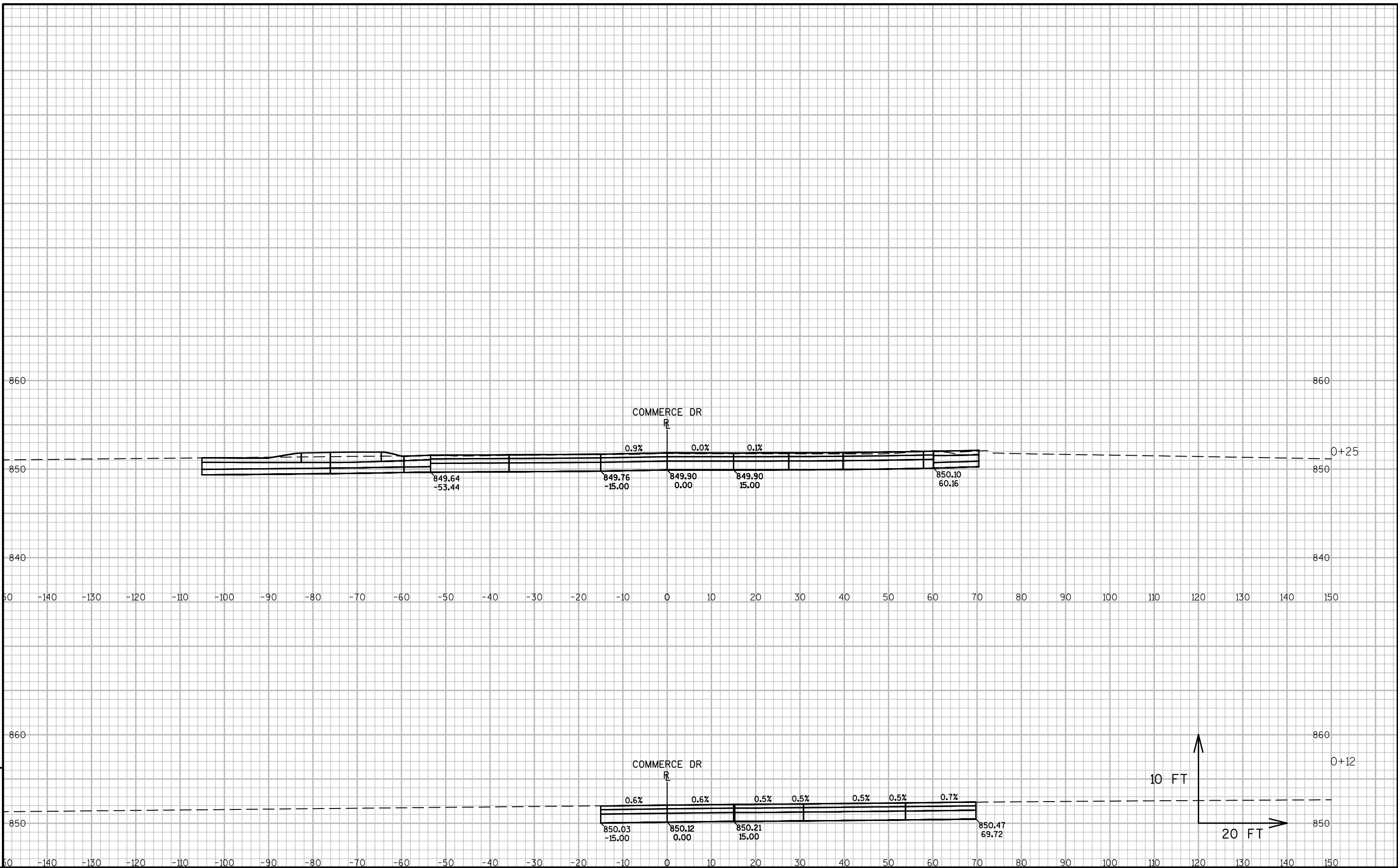


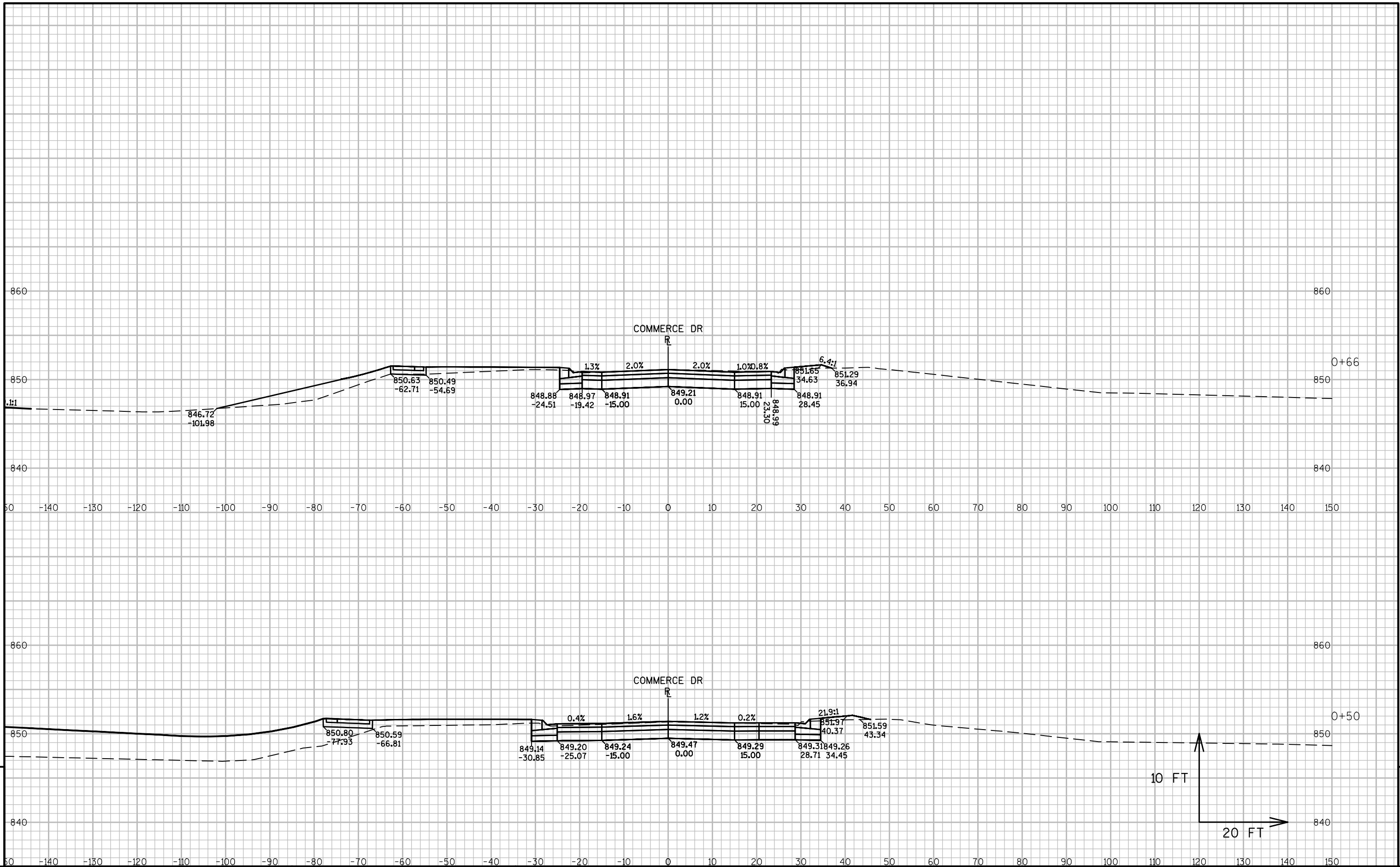


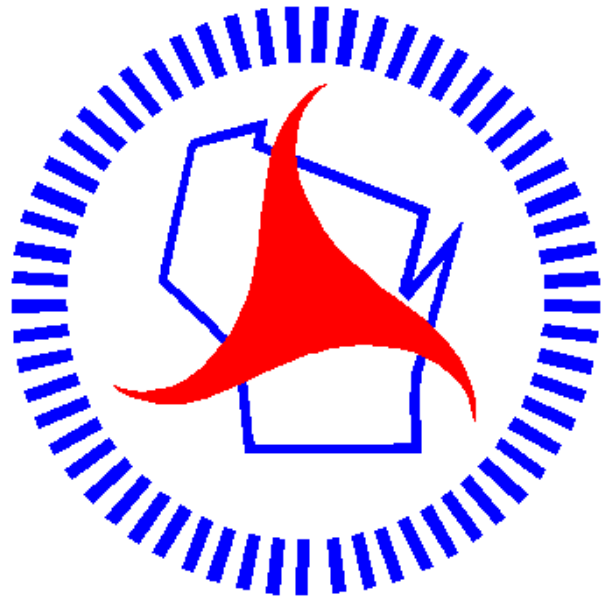




PROJECT NO:1401-02-72 HWY:STH 16 COUNTY:COLUMBIA CROSS SECTIONS: STH 60 - STAGE 3 SHEET E







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