

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 = 226

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

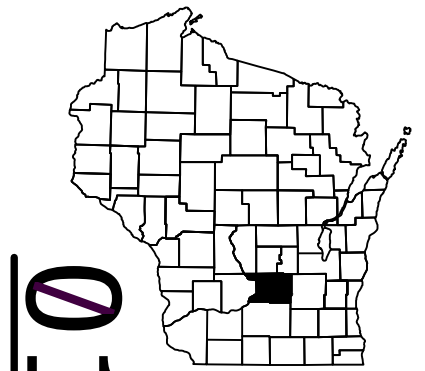
PLAN OF PROPOSED IMPROVEMENT

MADISON - PORTAGE

SOUTH COUNTY LINE TO STH 60
IH 39
COLUMBIA COUNTY

STATE PROJECT NUMBER
1011-00-82

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1011-00-82		



01

DESIGN DESIGNATION 1011-00-00

A.A.D.T. (2024)	=	60,300
A.A.D.T. (2044)	=	67,400
D.H.V.	=	8,560
D.D.	=	58/42
T.	=	22.7%
DESIGN SPEED	=	70 MPH
ESALS	=	22,000,000

CONVENTIONAL SYMBOLS

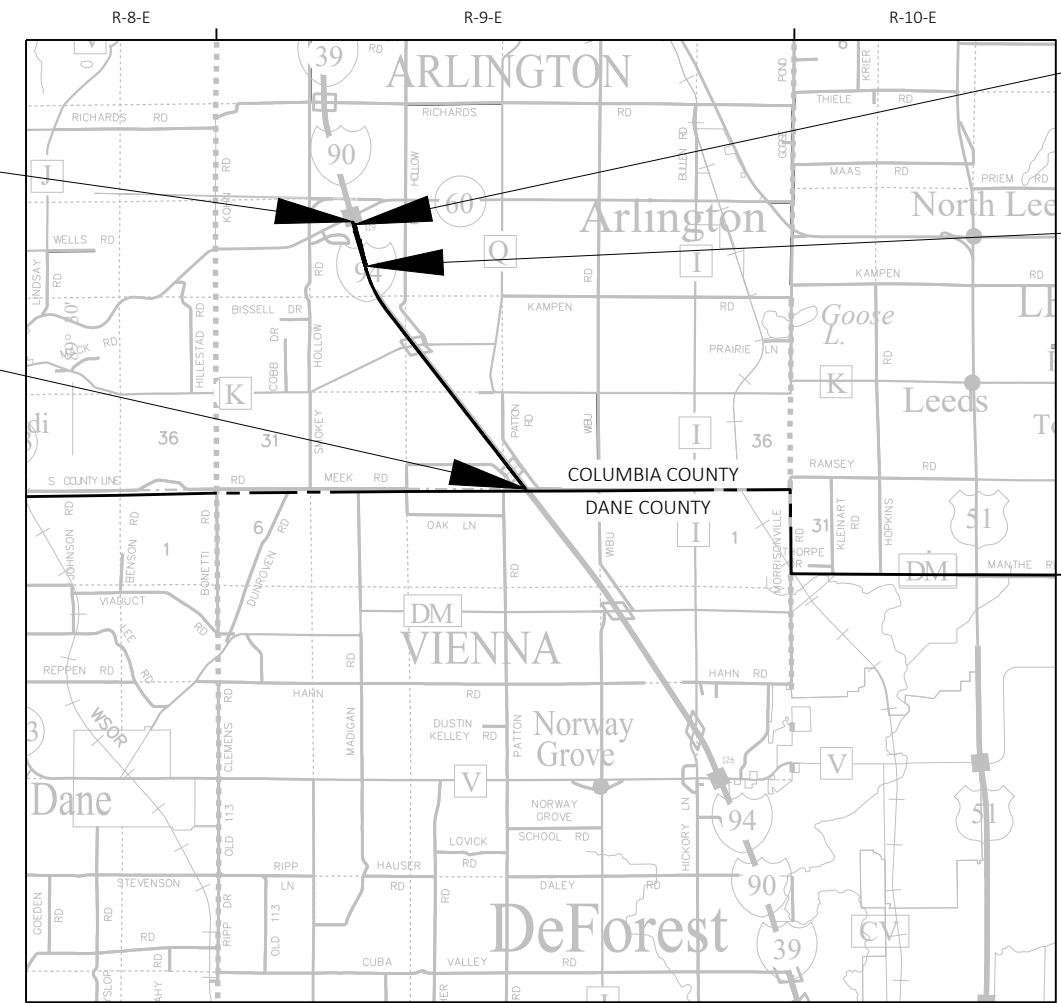
PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	
EXISTING RIGHT OF WAY		GRADE ELEVATION	
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	
EXISTING CULVERT		FIBER OPTIC	
PROPOSED CULVERT (Box or Pipe)		GAS	
COMBUSTIBLE FLUIDS		SANITARY SEWER	
MARSH AREA		STORM SEWER	
WOODED OR SHRUB AREA		TELEPHONE	
		WATER	
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

BEGIN PROJECT
STA 1572+97.14'EB'
Y = 319,356.469
X = 539,263.025

END PROJECT
STA 1749+89.87'EB'

BEGIN CONSTRUCTION
STA 1574+82.92'WB'
Y = 319,194.188
X = 539,371.827

END CONSTRUCTION
STA 1598+00.00'WB'



LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 3.351 MI

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12-A.

ORIGINAL PLANS PREPARED BY

AECOM

ZACHARY R. LARSON
E-43030
MADISON
WI
PROFESSIONAL ENGINEER

DATE: 1/18/24

(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WISDOT/AECOM
Designer	AECOM
Project Manager	AMY COUGHLIN
Regional Examiner	SW REGION
Regional Supervisor	ALEX HAGEN

APPROVED FOR THE DEPARTMENT

DATE: 1/18/2024

(Signature)

E

GENERAL NOTES:

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR 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.

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT WILL NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

PLAN REMOVAL AREAS ARE APPROXIMATE. EXACT LIMITS SHALL BE DETERMINED IN THE FIELD.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

THE CONTRACTOR'S 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.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5-FEET.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

PAVEMENT MARKING SHALL FOLLOW STANDARD DETAIL DRAWING LONGITUDINAL MARKING (MAINLINE).

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO CONCRETE PAVEMENT SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF NEW HMA PAVEMENT.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

UTILITIES AND OTHER AGENCIES

COMMUNICATIONS

KENNETH M. NINE
AT&T LEGACY - COMMUNICATION LINE
110 N. MAIN ST
CULVER, IN 46511
(574) 936-5682
knine@jmceainc.com

JIM SAGAITIS
EVERSTREAM - COMMUNICATION LINE
324 E WISCONSIN AVE, SUITE 730
MILWAUKEE, WI 53202
(608) 201-5586
WI-Relocations@everstream.net

ELECTRICITY

RYAN SMEDEMA
ALLIANT ENERGY - ELECTRICITY
2777 COLUMBIA DR
PORTAGE, WI 53901
(608) 742-0848
ryansmedema@alliantenergy.com
wplroadplans@alliantenergy.com

DOUG VOSBERG
ATC MANAGEMENT, INC.
ELECTRICITY - TRANSMISSION
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
(608)877-7650
dvosberg@atcllc.com

ABBREVIATIONS

AHEAD AH
BACK BK
CENTERLINE CL or C/L
CONCRETE CONC
COUNTY TRUNK HIGHWAY CTH
EXISTING EX
GRID NORTH GN
LEFT LT
POINT OF TANGENCY PT
REFERENCE LINE RL or R/L
POINT OF CURVATURE PC
POINT OF INTERSECTION PI
REQUIRED REQ'D
RIGHT RT
RIGHT OF WAY RW or R/W
SQUARE FEET SF
STATE TRUNK HIGHWAY STH
STATION STA
VOLUME V

WISDOT DESIGN PROJECT MANAGER

AMY COUGHLIN
SOUTHWEST REGION, MADISON OFFICE
2101 WRIGHT ST
MADISON, WI 53704
(608) 245-5358
amy.coughlin@dot.wi.gov

WISDNR

WISDNR TRANSPORTATION LIAISON
ANDY BARTA
3911 FISH HATCHERY RD
FITCHBURG, WI 53711
(608) 235-2955
andrew.barta@wisconsin.gov

DESIGN CONTACT

AECOM
ZACH LARSON
1350 DEMING WAY, STE 100
MIDDLETON, WI 53562
(608) 828-8165
zachary.larson@aecom.com

WISDOT COMMUNICATIONS CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
JEFF MADSON
433 W ST PAUL AVE, STE 300
MILWAUKEE, WI 53203-3007
(414) 225-3723
Jeffrey.Madson@dot.wi.gov

4-INCH HMA PAVEMENT

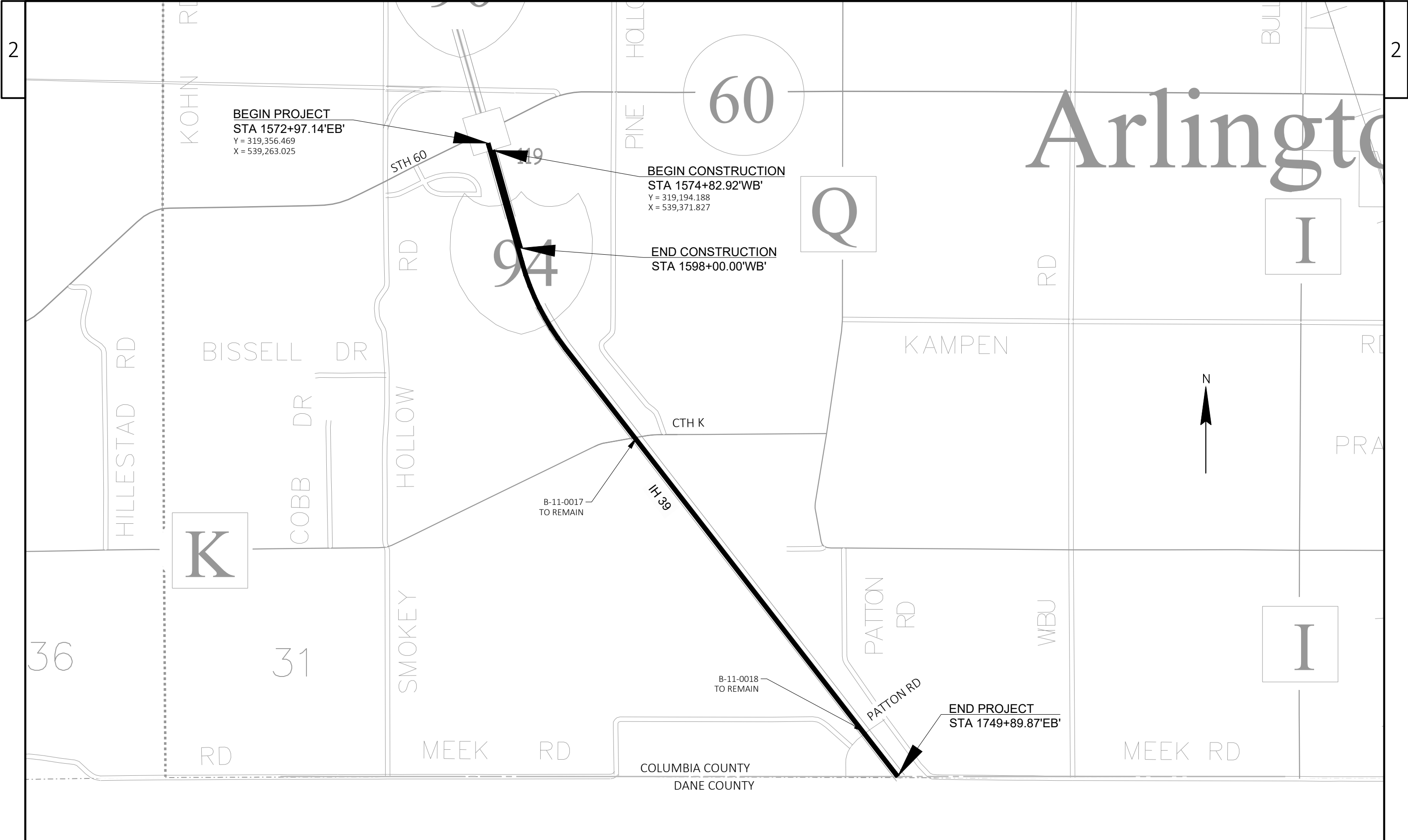
LAYER	THICKNESS	BID ITEM
TOP	2-INCHES	HMA PAVEMENT 4 SMA 58-28 V
BOTTOM	2-INCHES	HMA PAVEMENT 4 HT 58-28 H

DETAIL SHEET INDEX

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
BUTT JOINT DETAILS
GUARDRAIL DETAILS AND EROSION CONTROL
PERMANENT SIGNING AND PAVEMENT MARKINGS
TRAFFIC CONTROL - TYPICAL SECTIONS
DETOUR ROUTE
ALIGNMENT DETAILS



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



BEGIN PROJECT
 STA 1572+97.14'EB'
 Y = 319,356.469
 X = 539,263.025

BEGIN CONSTRUCTION
 STA 1574+82.92'WB'
 Y = 319,194.188
 X = 539,371.827

END CONSTRUCTION
 STA 1598+00.00'WB'

END PROJECT
 STA 1749+89.87'EB'

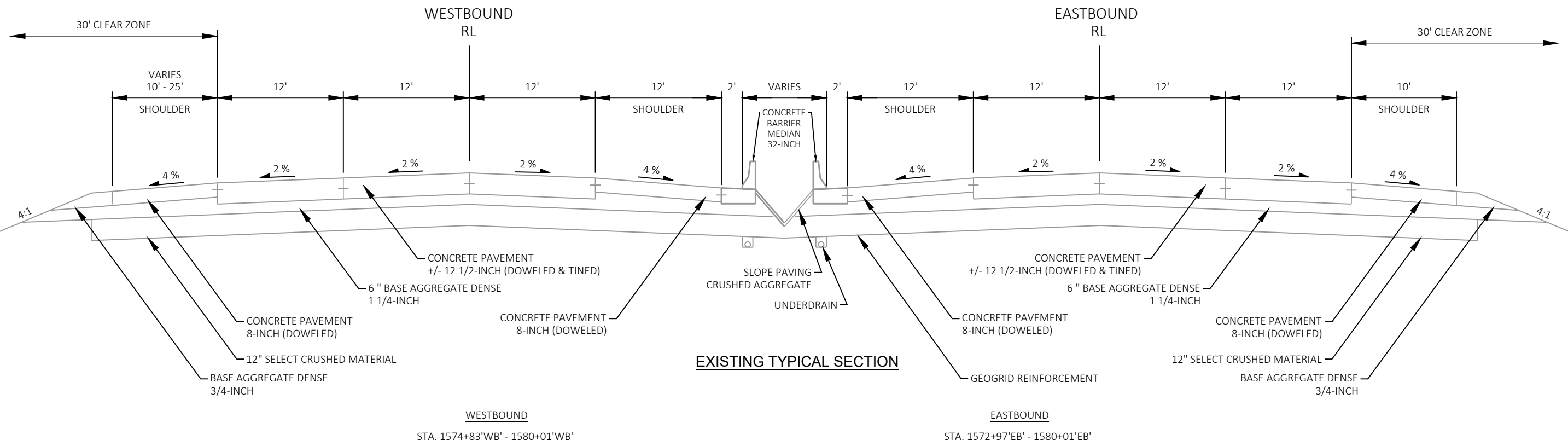
B-11-0017
 TO REMAIN

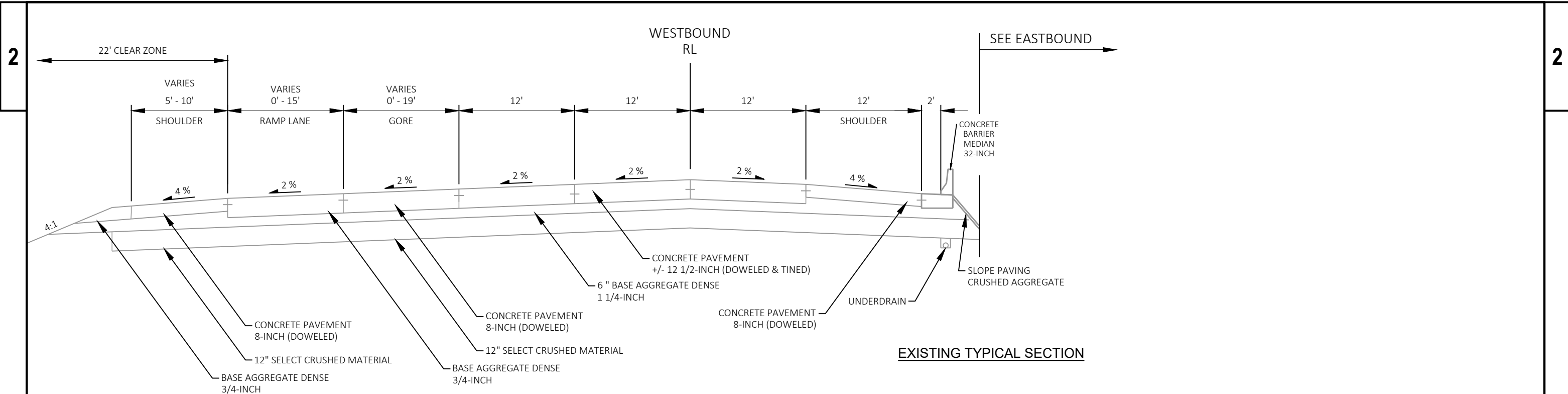
B-11-0018
 TO REMAIN

COLUMBIA COUNTY
 DANE COUNTY

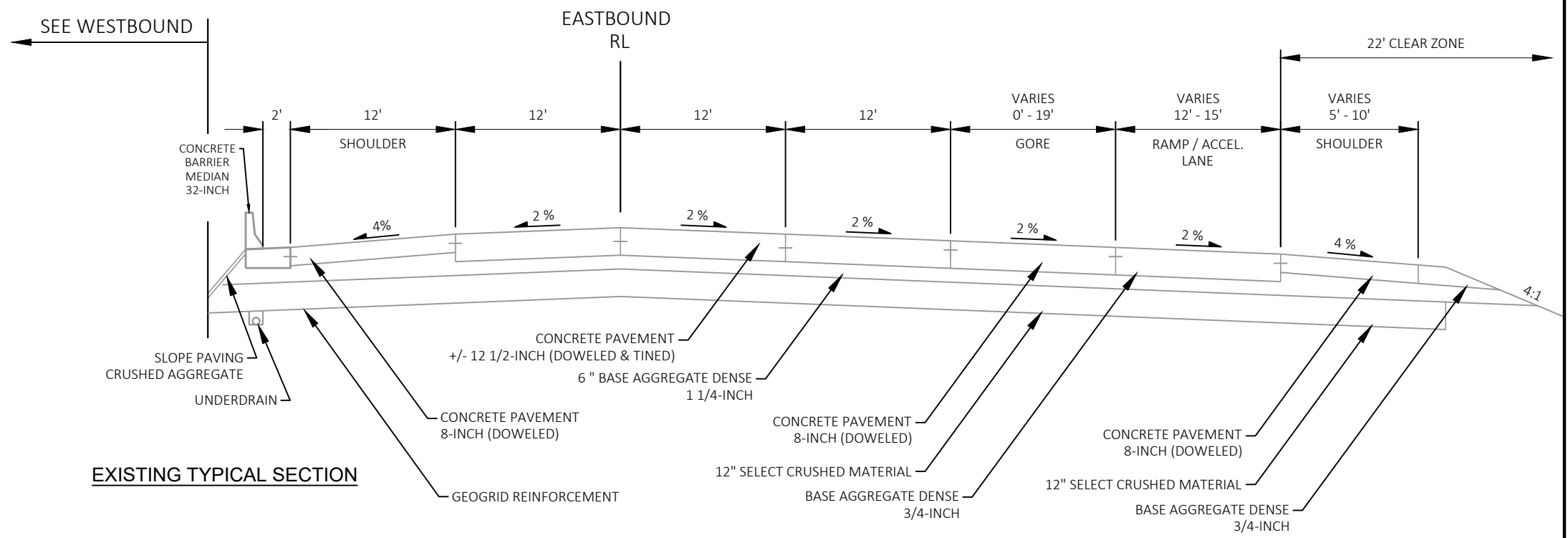
Arlington



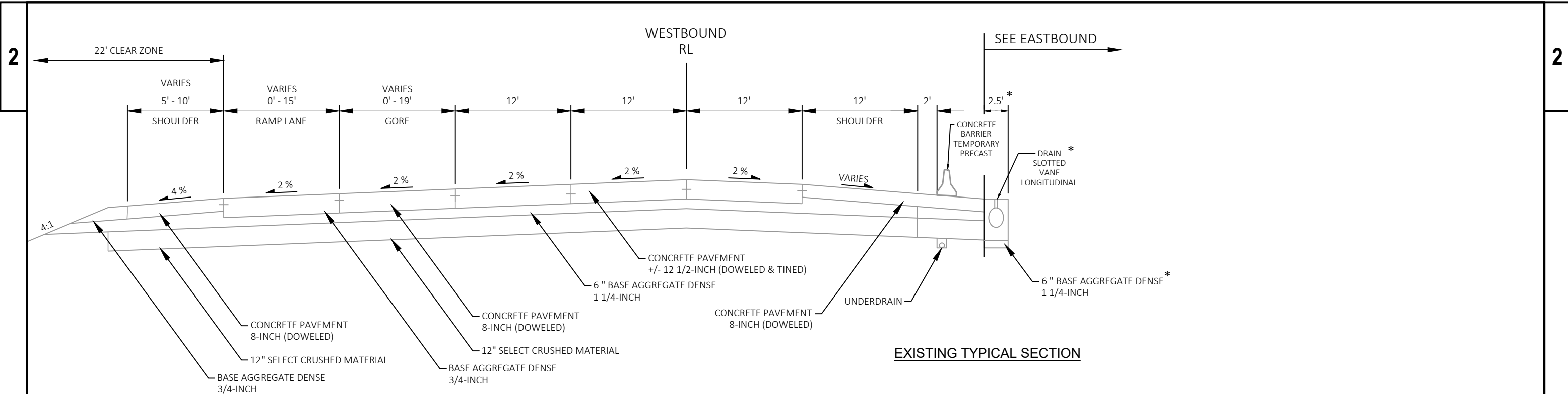




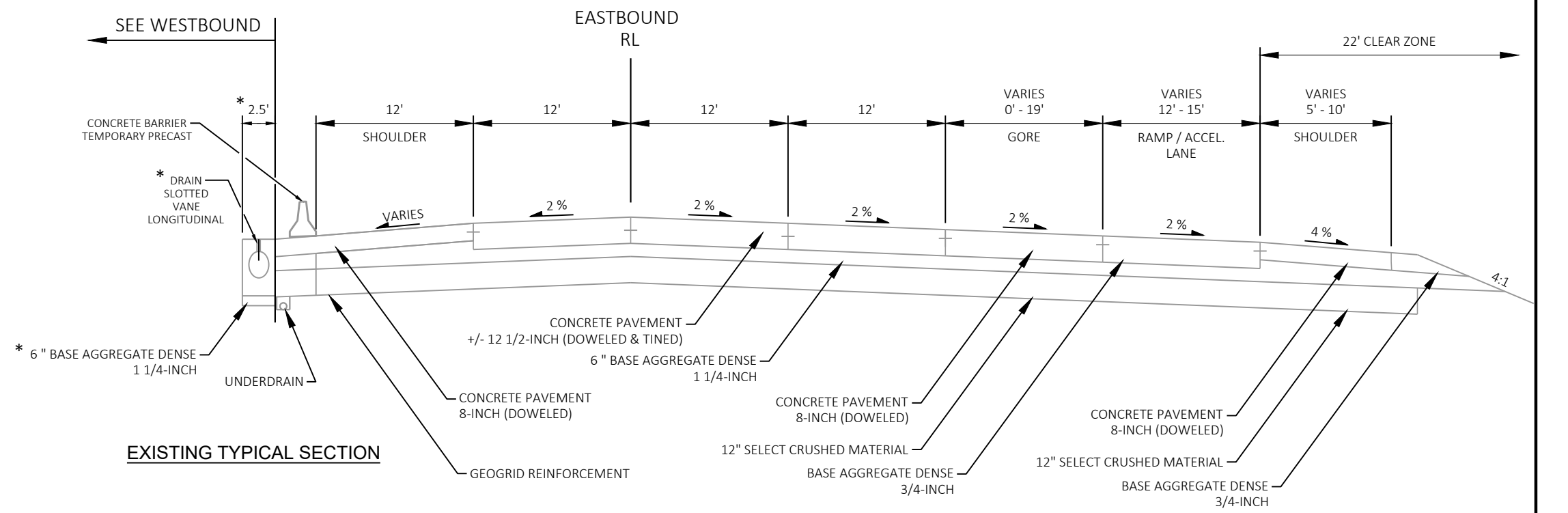
WESTBOUND
STA. 1580+01'WB' - 1585+59'WB'



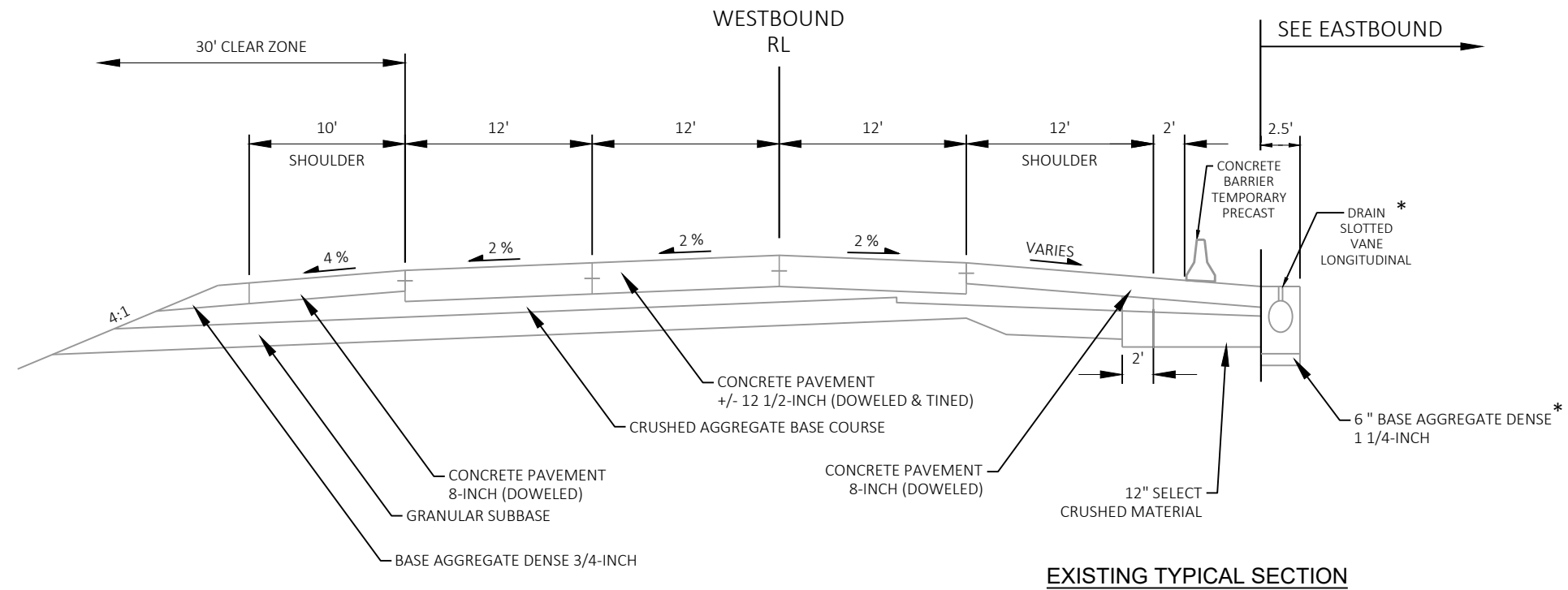
EASTBOUND
STA. 1580+01'EB' - 1585+31'EB'



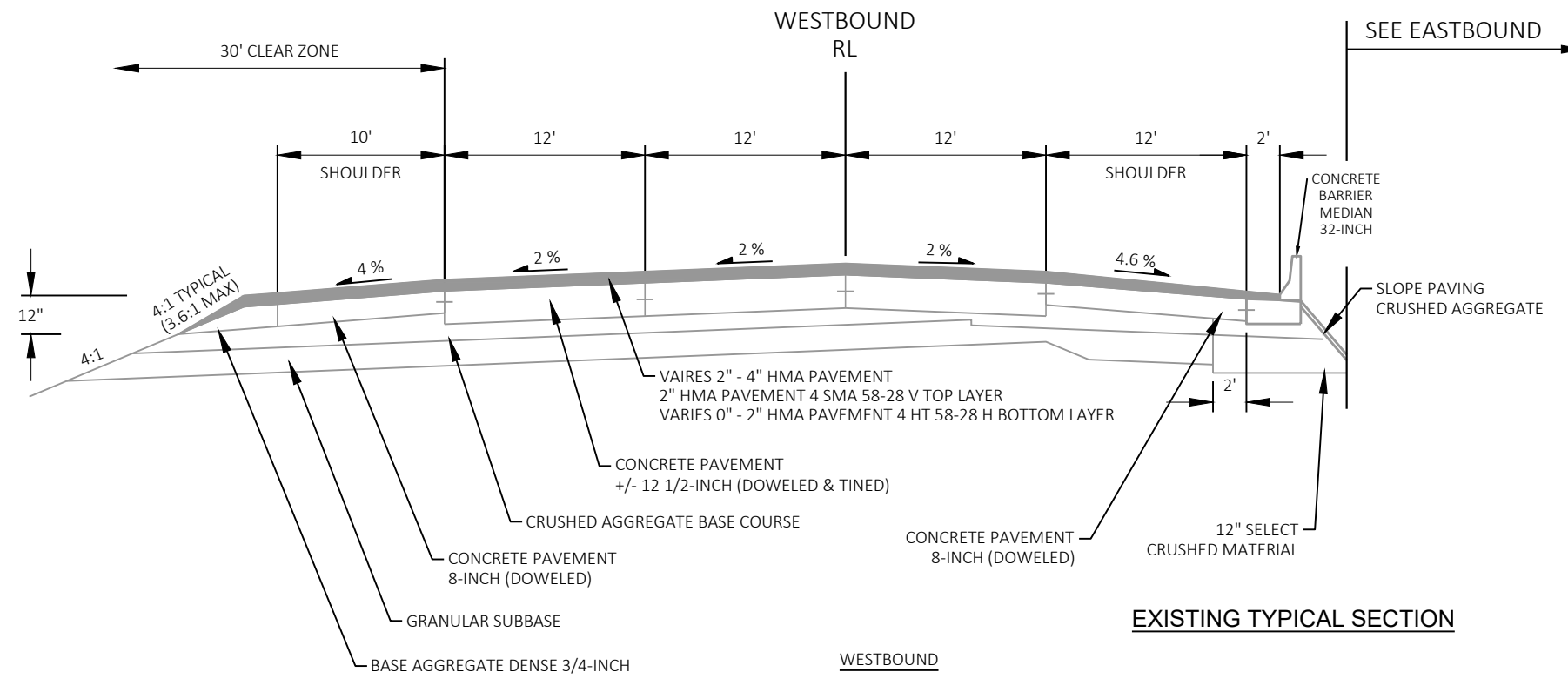
WESTBOUND
 STA. 1585+59'WB' - 1592+67'WB'
 * STA. 1589+17'WB' - 1592+67'WB'



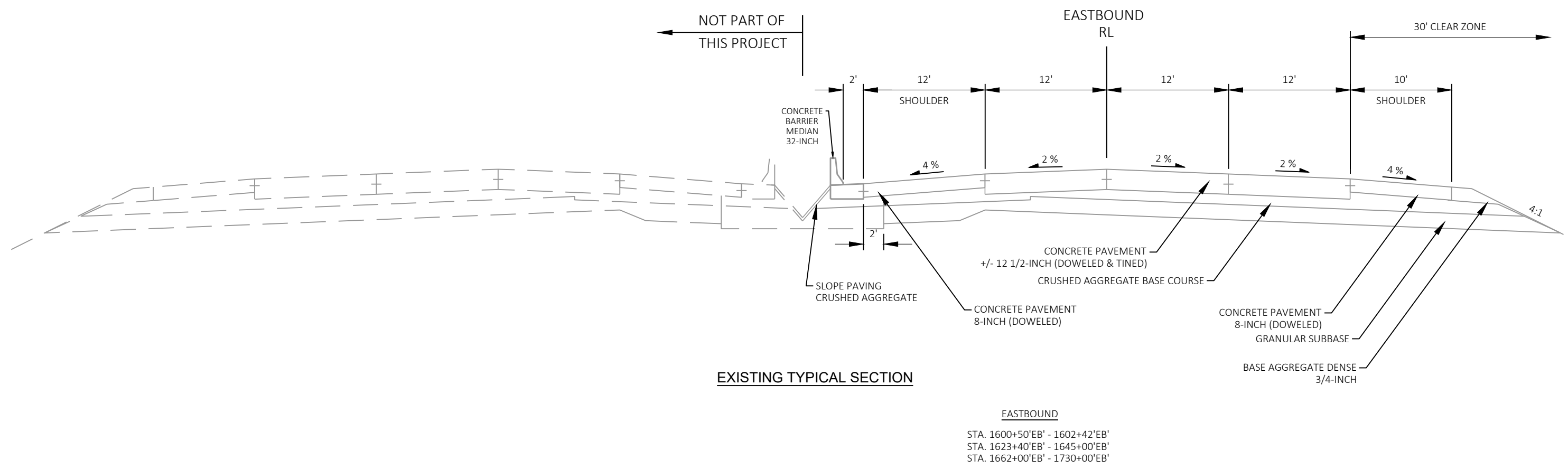
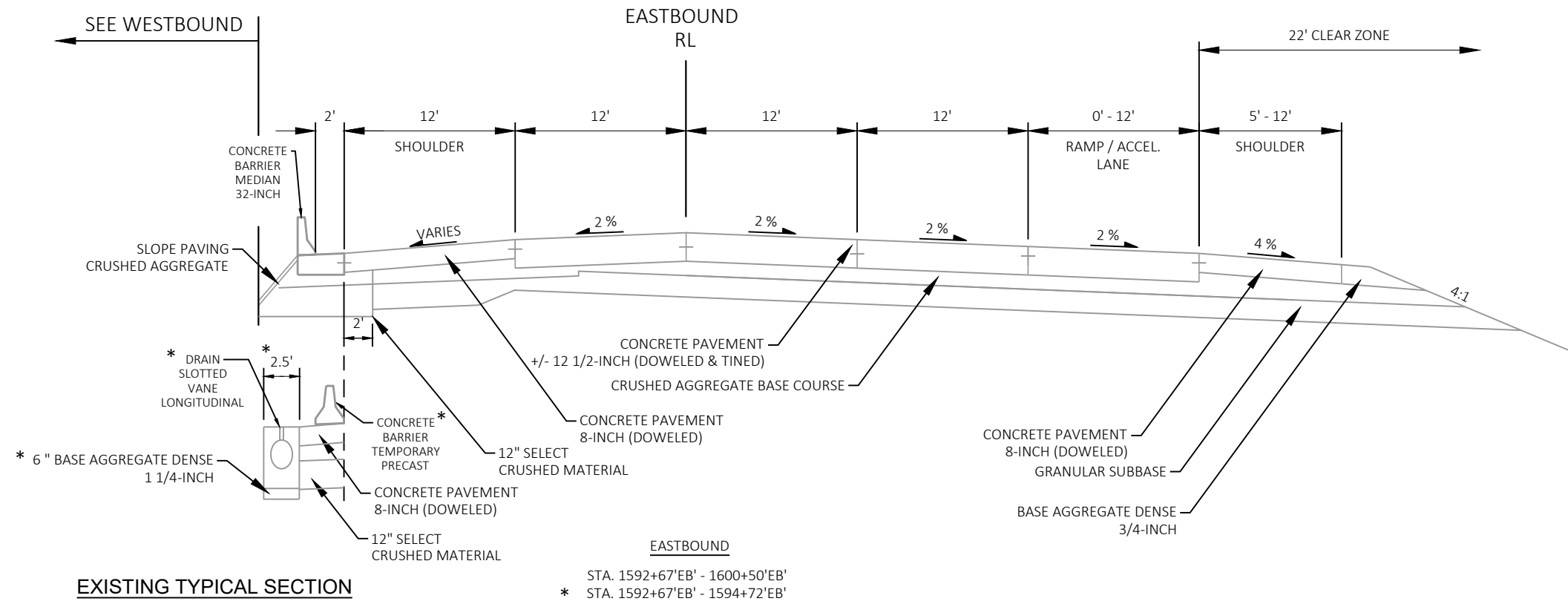
EASTBOUND
 STA. 1585+31'EB' - 1592+67'EB'
 * STA. 1589+17'EB' - 1592+67'EB'



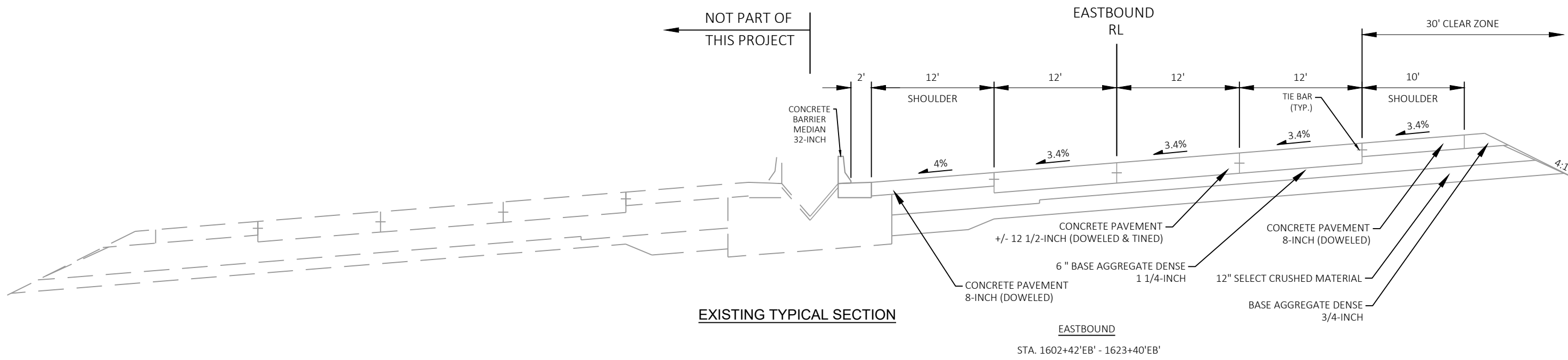
WESTBOUND
 STA. 1592+67'WB' - 1596+00'WB'
 * STA. 1592+67'WB' - 1594+72'WB'



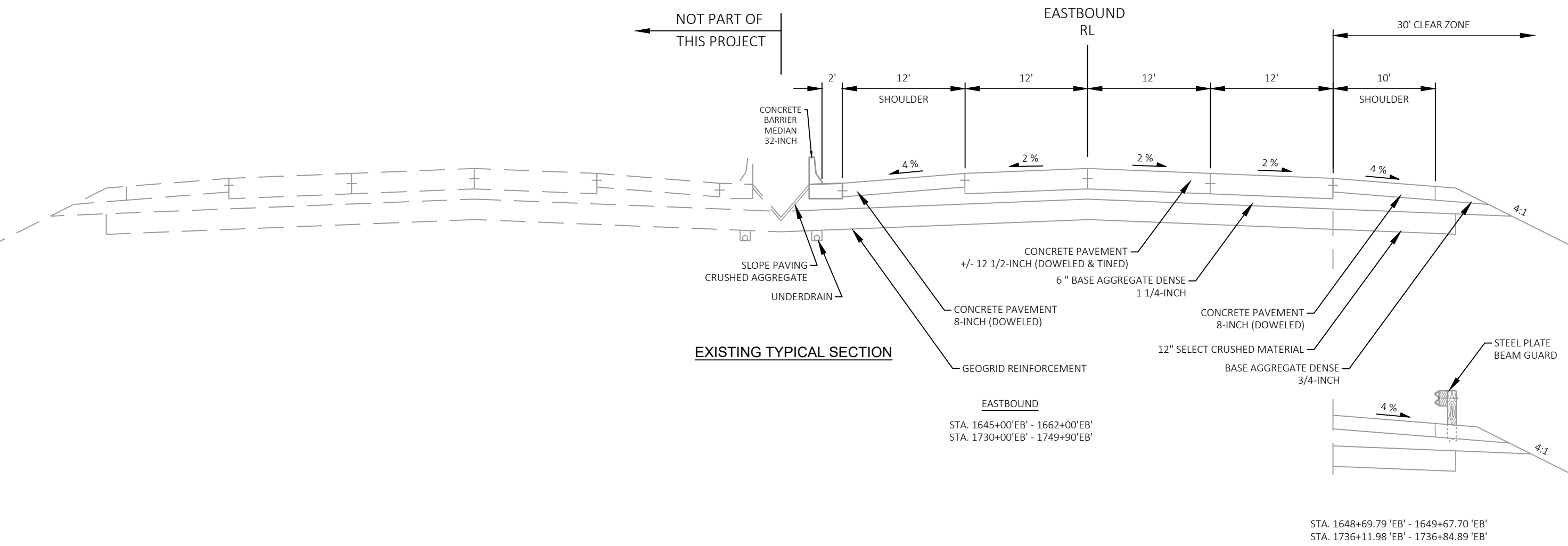
WESTBOUND
 STA. 1596+00'WB' - 1598+00'WB'

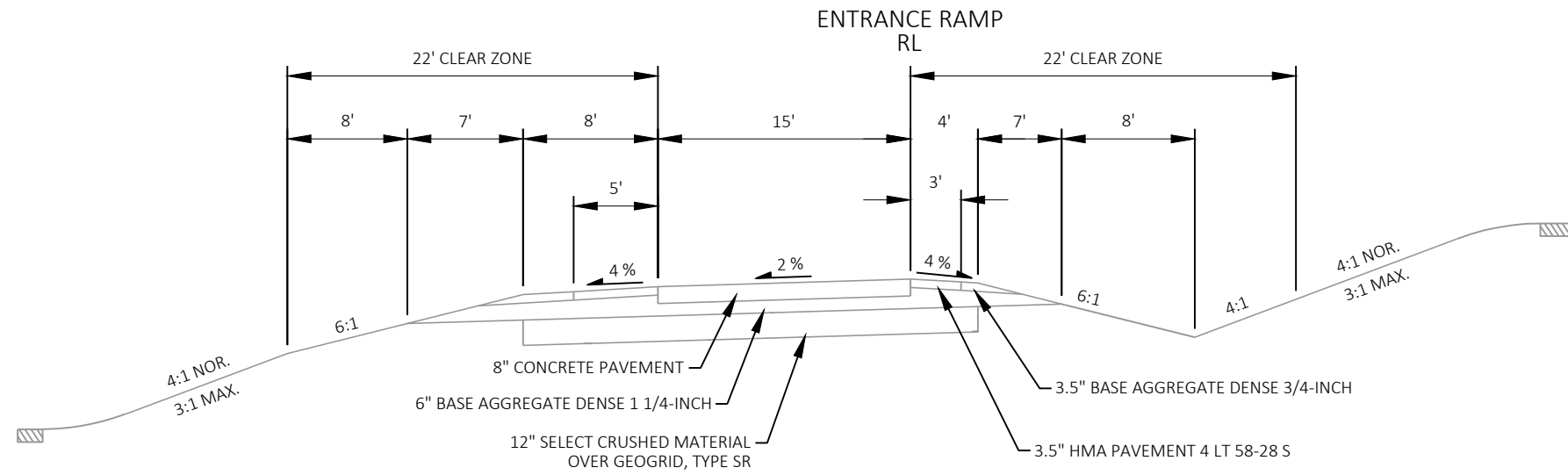


← NOT PART OF THIS PROJECT



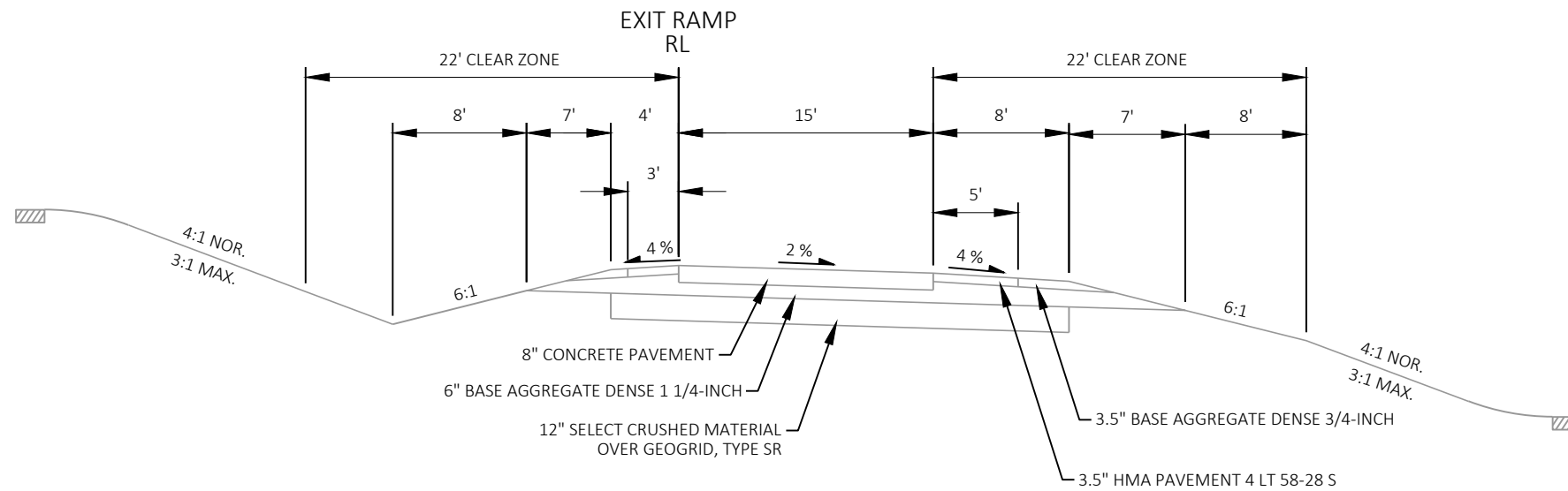
← NOT PART OF THIS PROJECT





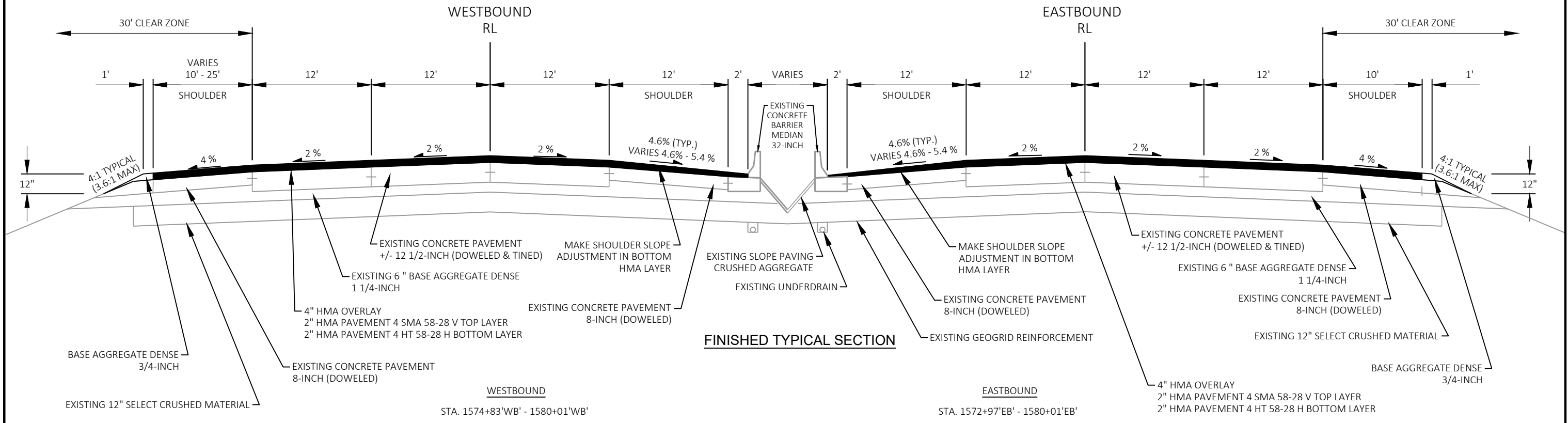
EXISTING TYPICAL SECTION

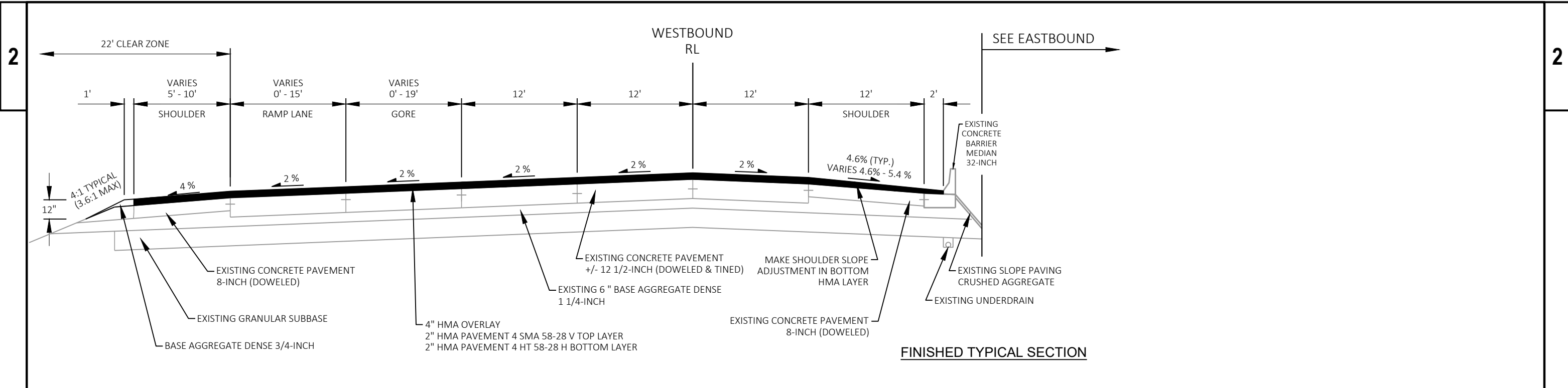
STA 244+57'SN' - 254+79'SN'



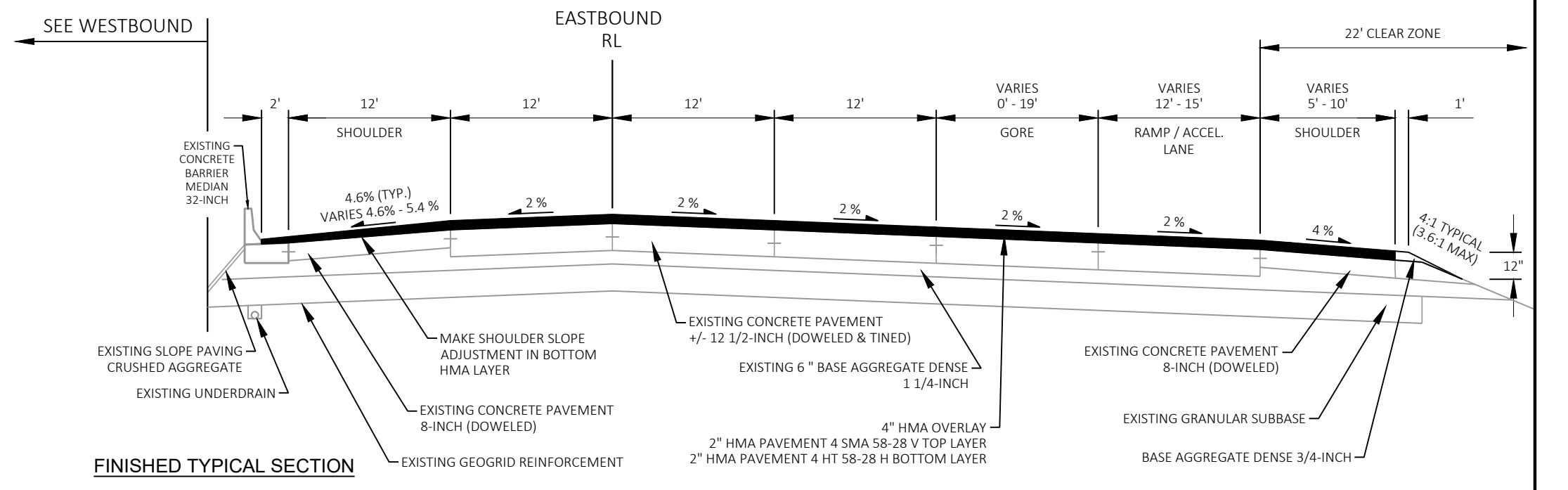
EXISTING TYPICAL SECTION

STA 245+00'NX' - 249+38'NX'

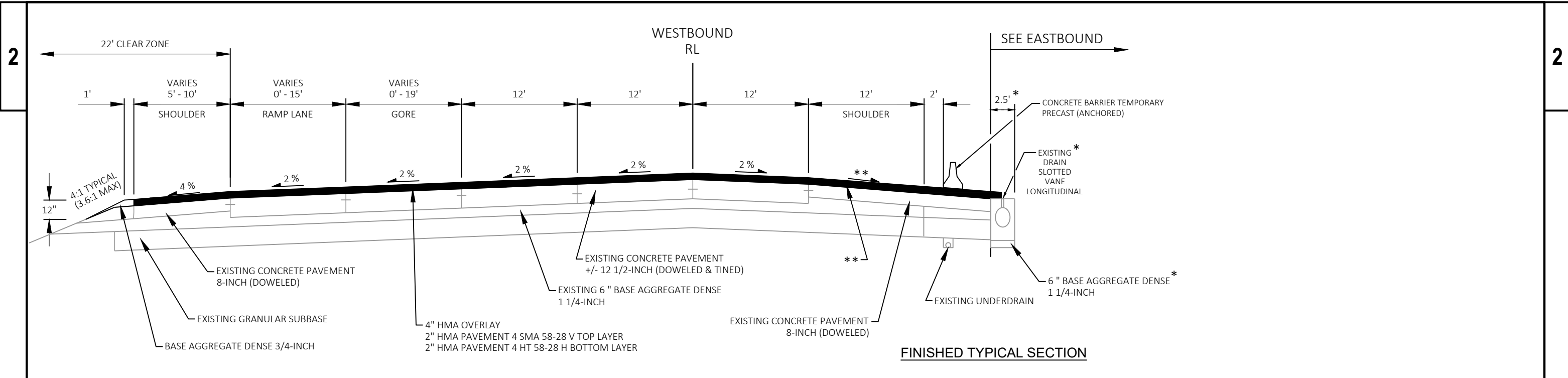




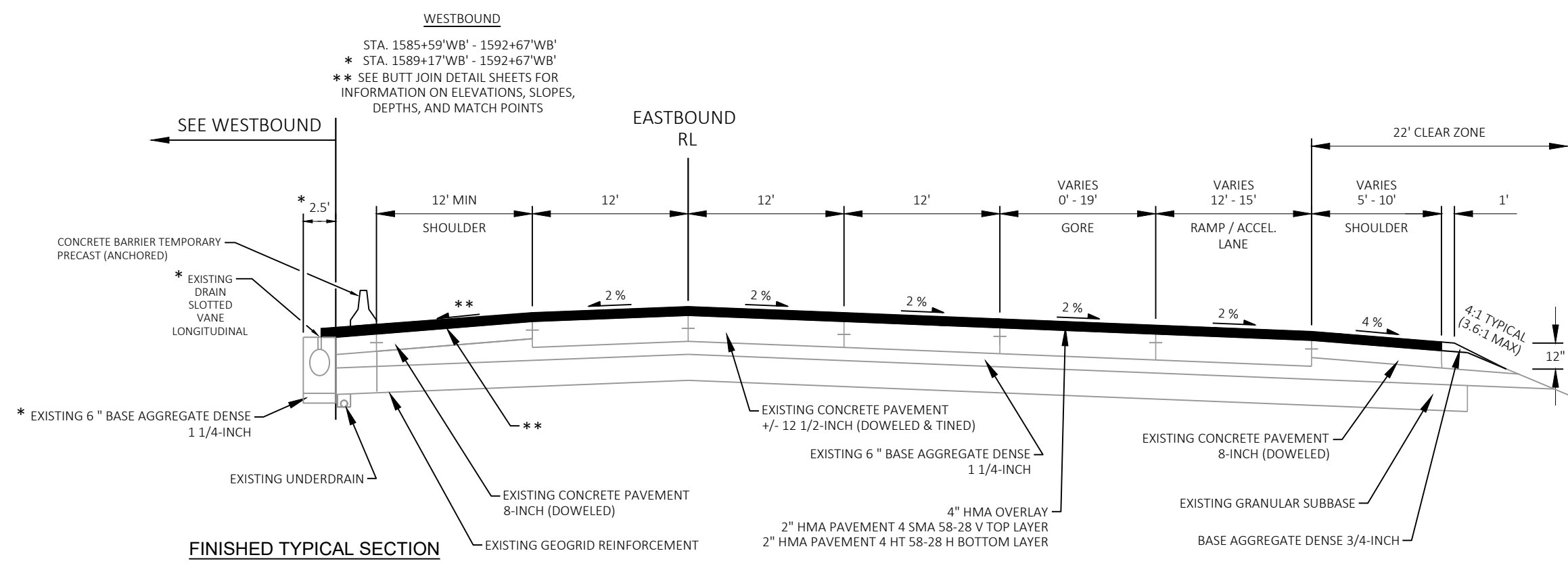
WESTBOUND
STA. 1580+01'WB' - 1585+59'WB'



EASTBOUND
STA. 1580+01'EB' - 1585+31'EB'



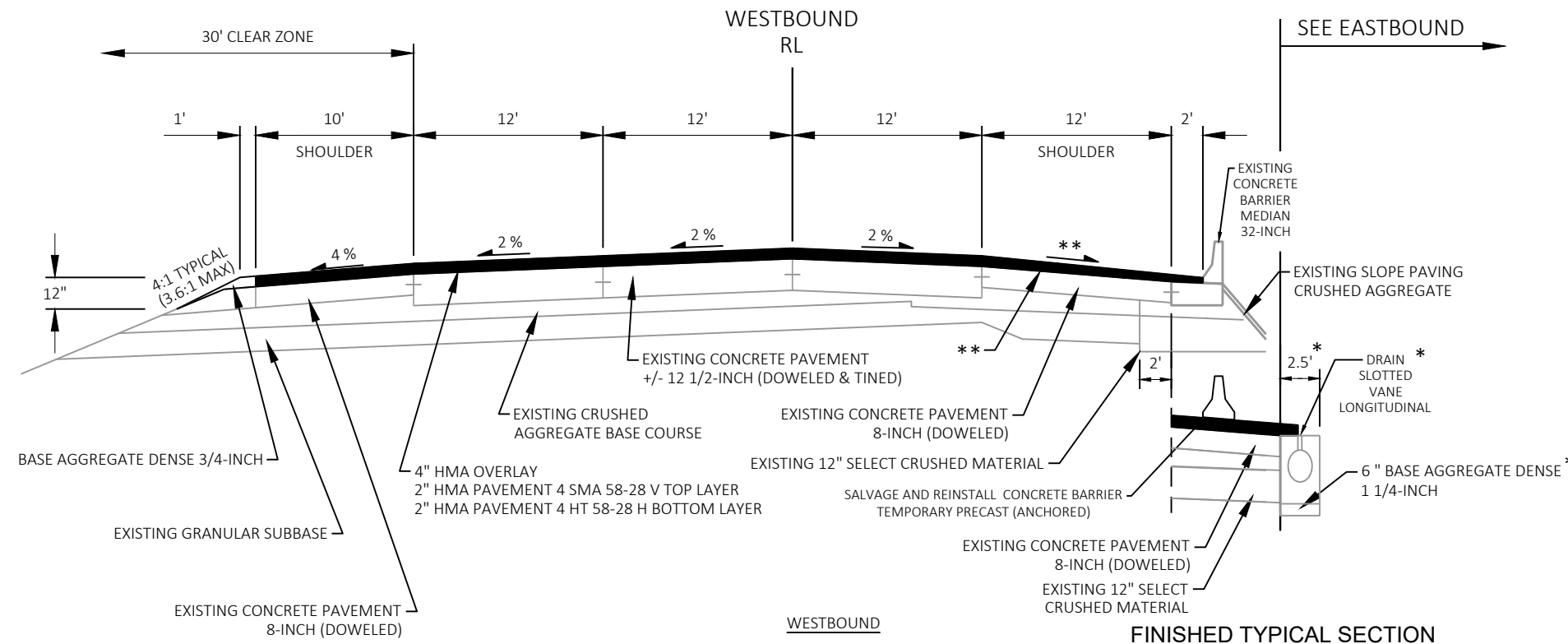
FINISHED TYPICAL SECTION



FINISHED TYPICAL SECTION

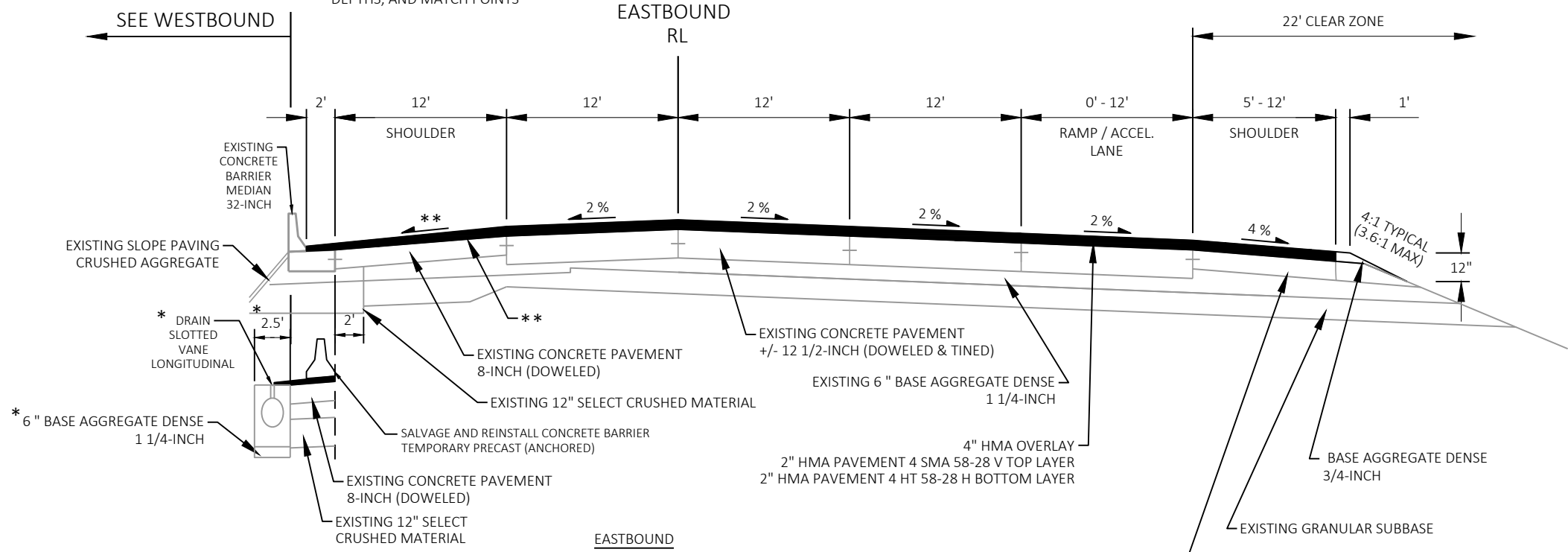
WESTBOUND
 STA. 1585+59'WB' - 1592+67'WB'
 * STA. 1589+17'WB' - 1592+67'WB'
 ** SEE BUTT JOIN DETAIL SHEETS FOR INFORMATION ON ELEVATIONS, SLOPES, DEPTHS, AND MATCH POINTS

EASTBOUND
 STA. 1585+31'EB' - 1592+67'EB'
 * STA. 1589+17'EB' - 1592+67'EB'
 ** SEE BUTT JOIN DETAIL SHEETS FOR INFORMATION ON ELEVATIONS, SLOPES, DEPTHS, AND MATCH POINTS



WESTBOUND
 STA. 1592+67'WB' - 1598+00'WB'
 * STA. 1592+67'WB' - 1594+72'WB'
 ** SEE BUTT JOIN DETAIL SHEETS FOR INFORMATION ON ELEVATIONS, SLOPES, DEPTHS, AND MATCH POINTS

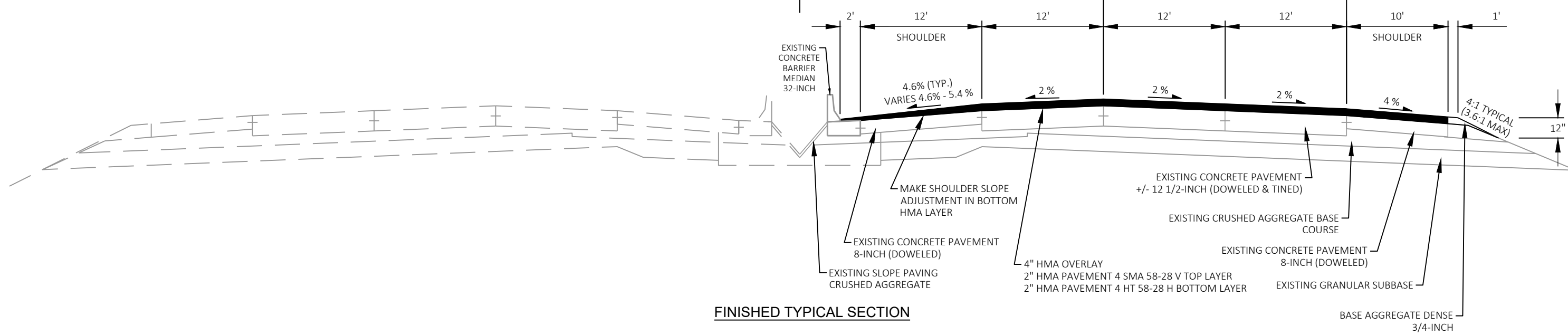
FINISHED TYPICAL SECTION



EASTBOUND
 STA. 1592+67'EB' - 1600+50'EB'
 * STA. 1592+67'EB' - 1594+72'EB'
 ** SEE BUTT JOIN DETAIL SHEETS FOR INFORMATION ON ELEVATIONS, SLOPES, DEPTHS, AND MATCH POINTS

FINISHED TYPICAL SECTION

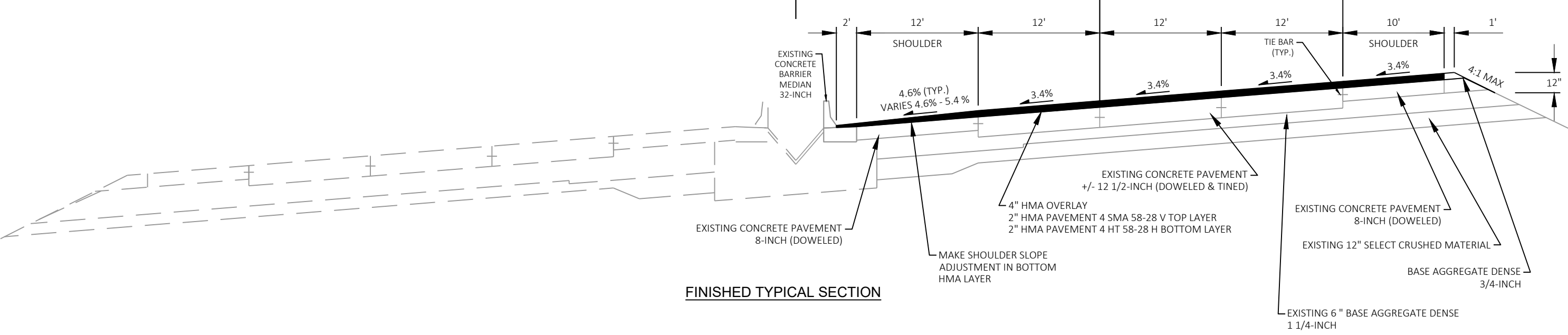
← NOT PART OF THIS PROJECT | EASTBOUND RL | 30' CLEAR ZONE →



FINISHED TYPICAL SECTION

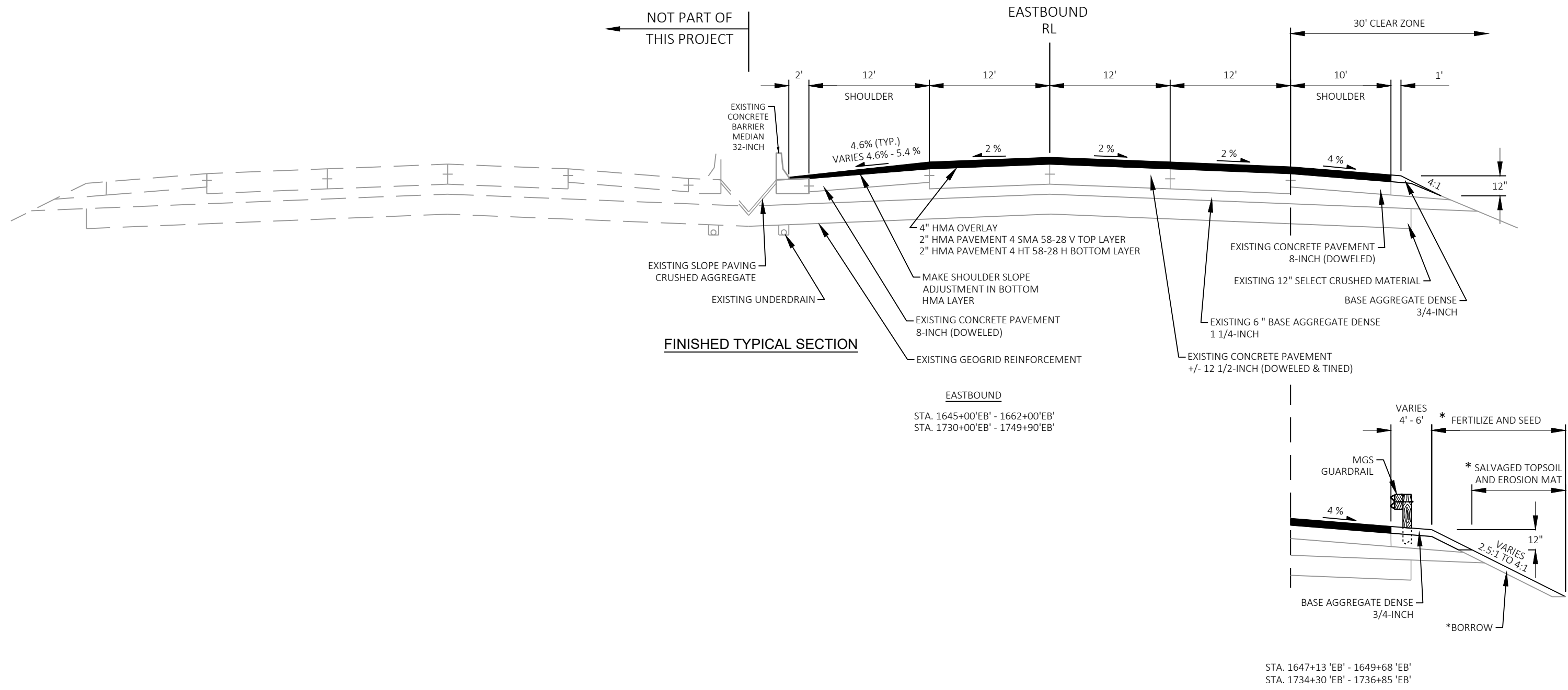
EASTBOUND
 STA. 1600+50'EB' - 1602+42'EB'
 STA. 1623+40'EB' - 1645+00'EB'
 STA. 1662+00'EB' - 1730+00'EB'

← NOT PART OF THIS PROJECT | EASTBOUND RL | 30' CLEAR ZONE →

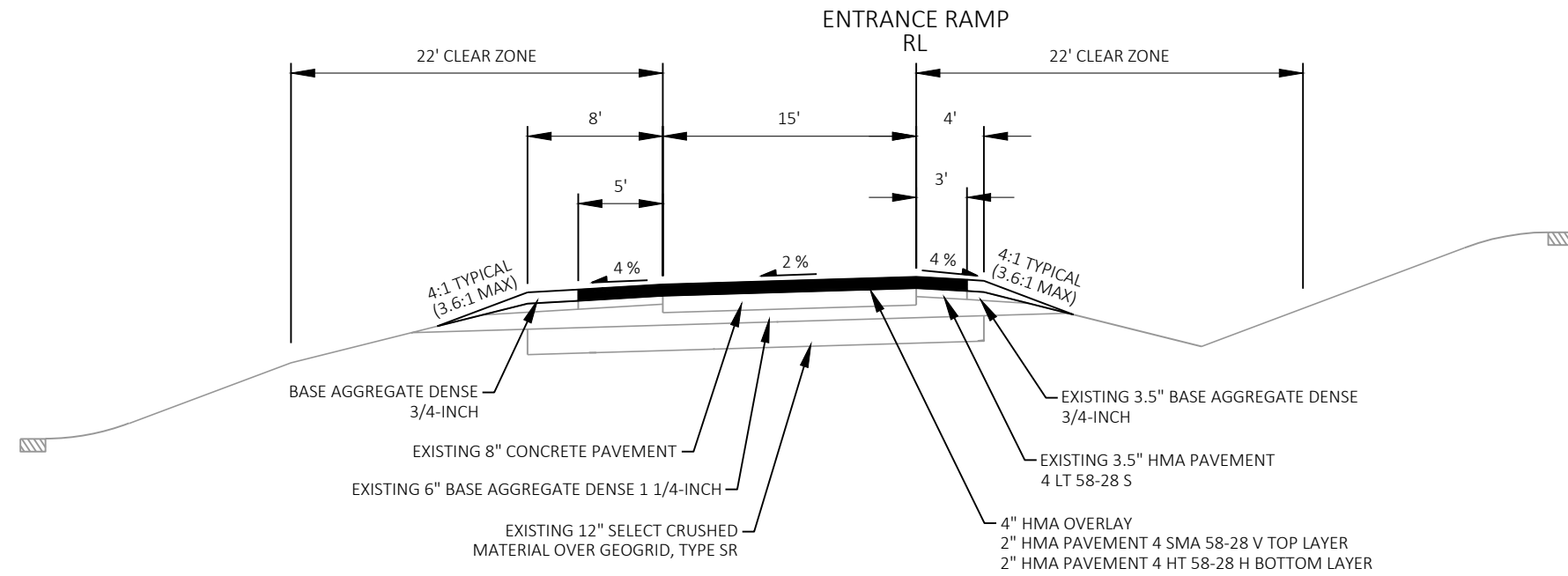


FINISHED TYPICAL SECTION

EASTBOUND
 STA. 1602+42'EB' - 1623+40'EB'

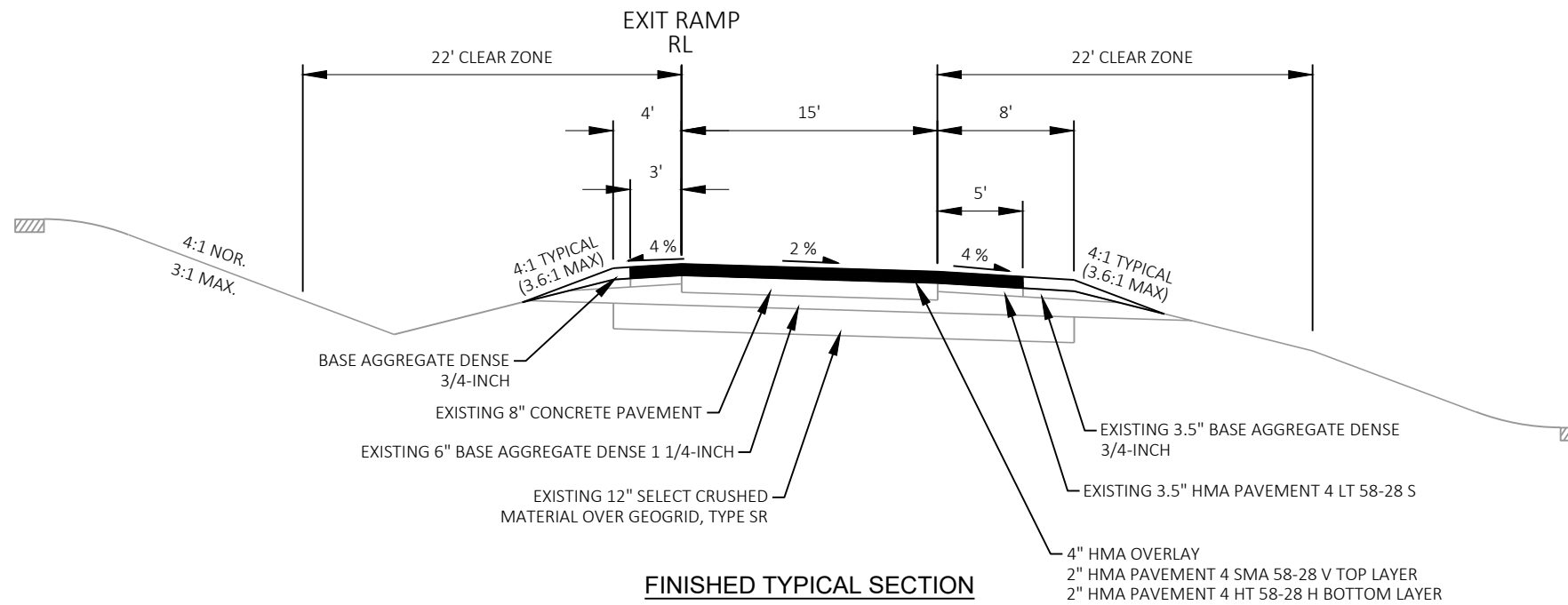


* TO BE PAID FOR UNDER THE "BARRIER SYSTEM GRADING SHAPING FINISHING" ITEM



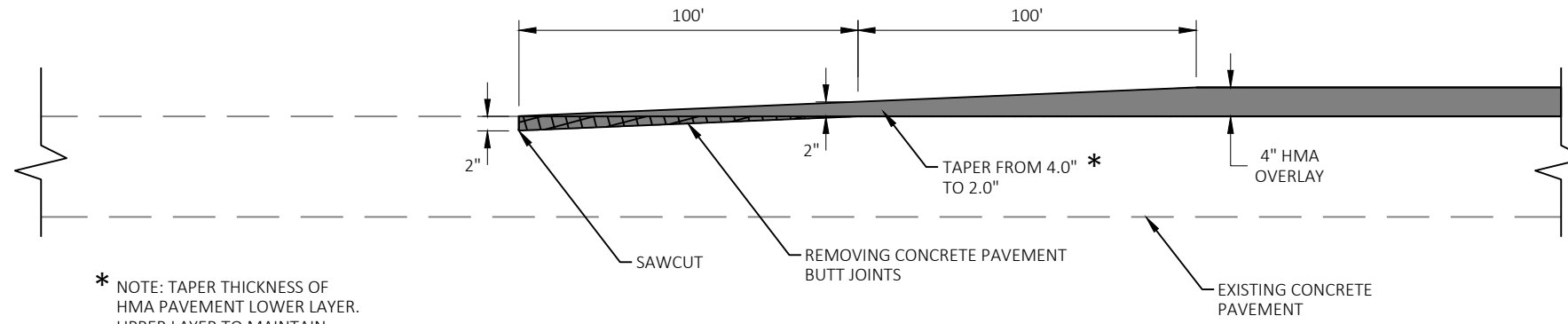
FINISHED TYPICAL SECTION

STA 244+57'SN' - 254+76'SN'



FINISHED TYPICAL SECTION

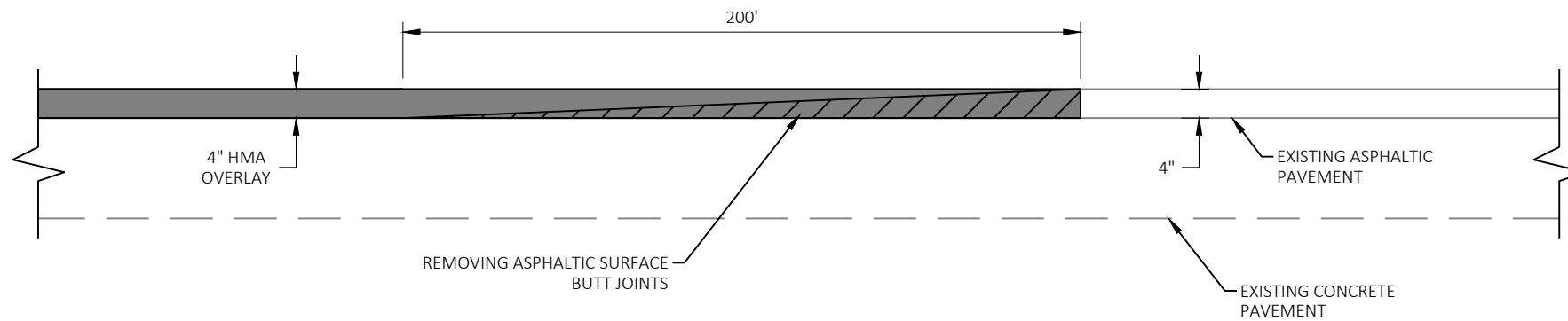
STA 245+00'NX' - 249+38'NX'



* NOTE: TAPER THICKNESS OF HMA PAVEMENT LOWER LAYER. UPPER LAYER TO MAINTAIN UNIFORM THICKNESS OF 2.0\".

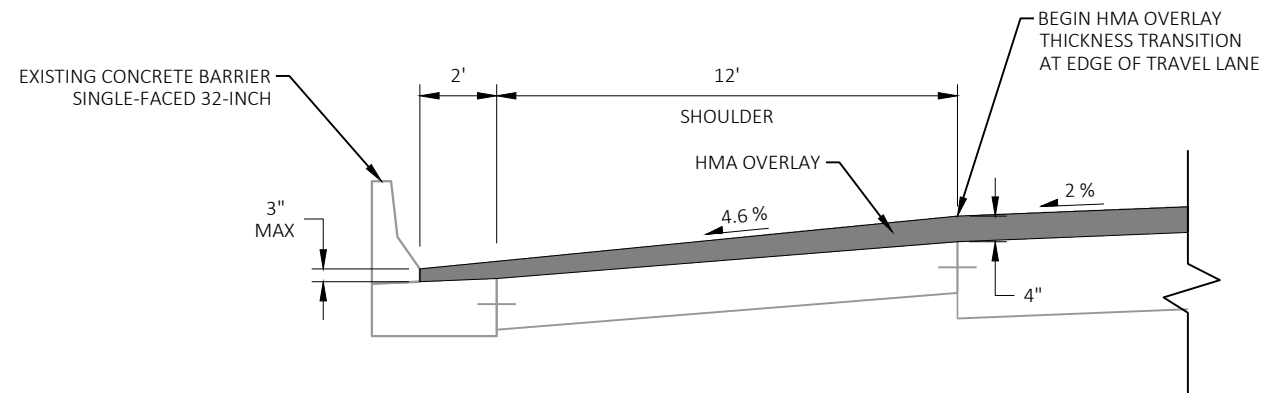
REMOVING CONCRETE PAVEMENT BUTT JOINTS

STA 1572+97.14'EB' - 1574+97'EB'
 STA 1574+82.92'WB' - 1576+83'WB'
 STA 1747+90'EB' - 1749+89.87'EB'
 STA 253+76'SN' - 254+75.66'SN'
 STA 248+38'NX' - 249+37.50'NX'

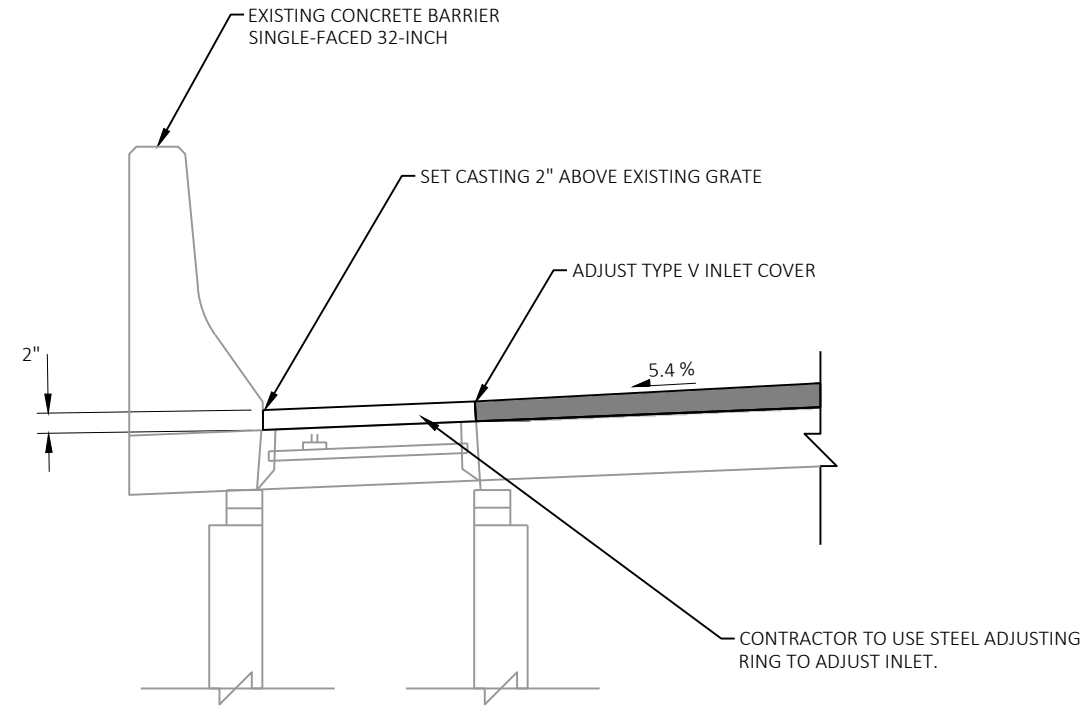


REMOVING ASPHALTIC SURFACE BUTT JOINTS

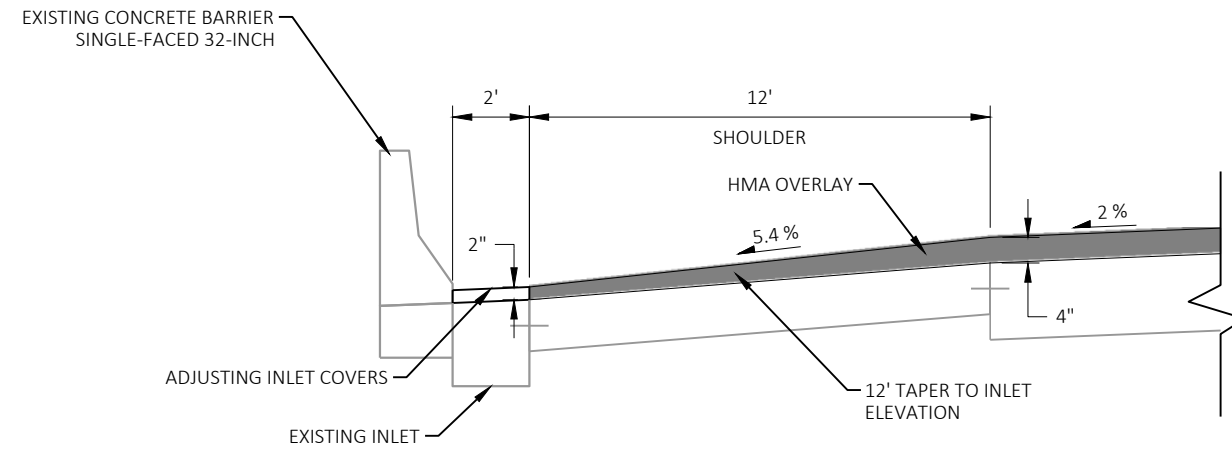
STA 1596+00'WB' - 1598+00'WB'



MATCH OVERLAY INTO CONCRETE BARRIER WALL

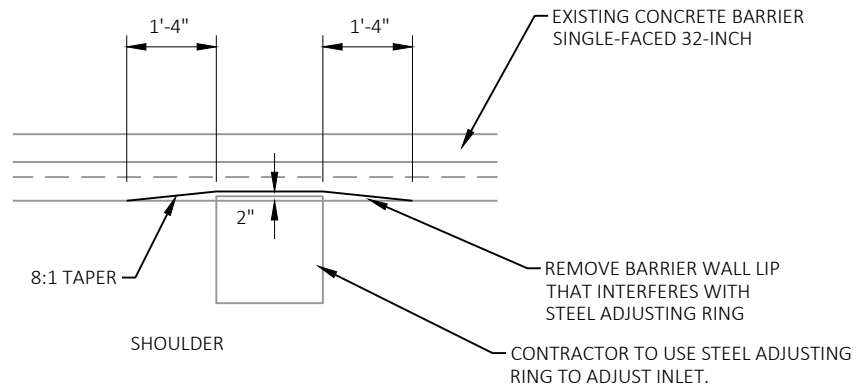


DETAIL OF INLET ADJUSTMENTS AT BARRIER

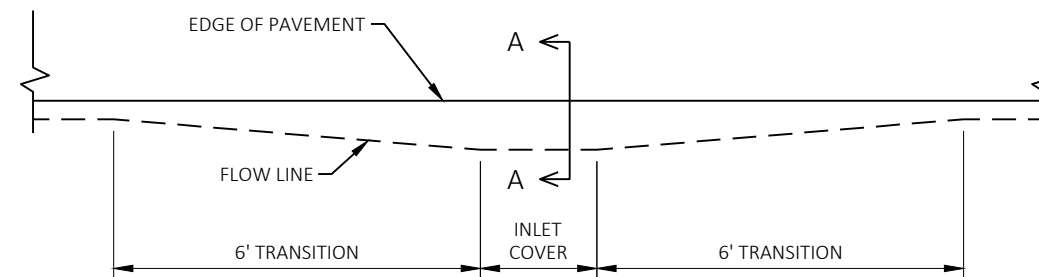


SECTION A - A

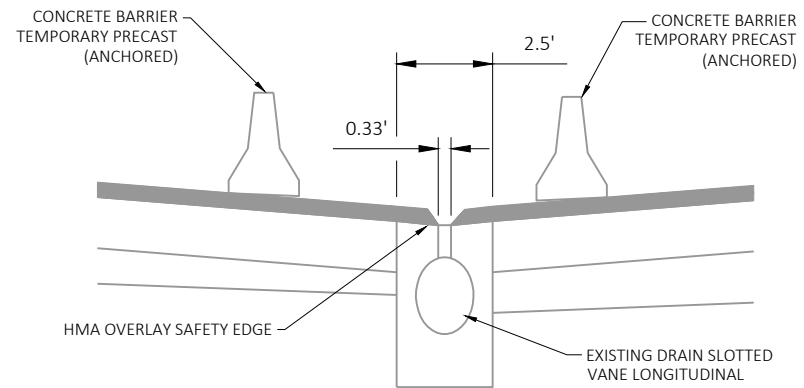
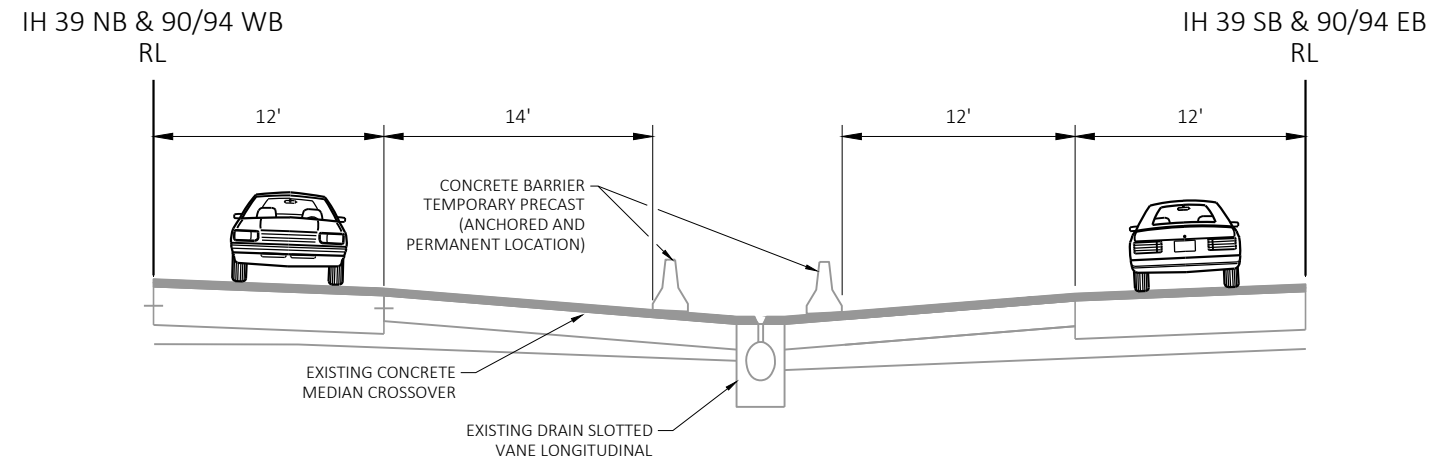
DETAIL OF PAVEMENT TAPER AT INLET LOCATIONS



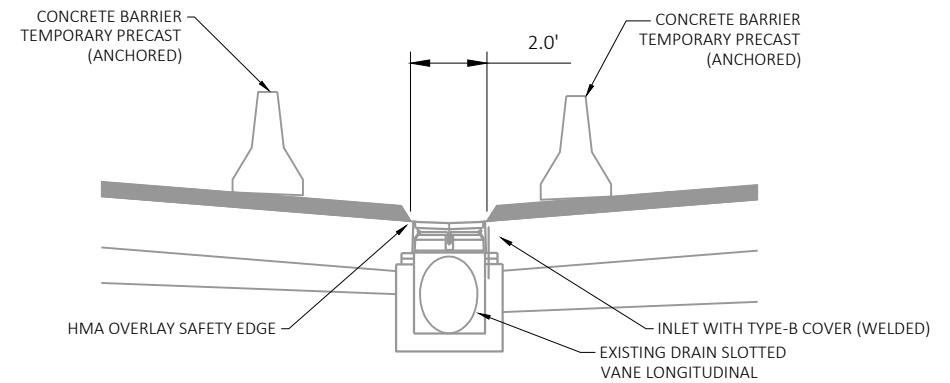
DETAIL OF REMOVING BARRIER WALL LIP



ELEVATION



HMA OVERLAY NEAR SLOTTED VANE DRAIN LONGITUDINAL



HMA OVERLAY NEAR INLETS ALONG SLOTTED VANE DRAIN LONGITUDINAL

WESTBOUND TRAVEL LANE ←

PAVED SHOULDER

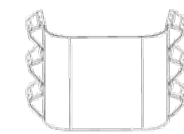
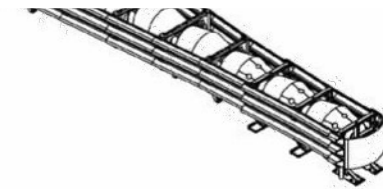


PAVED SHOULDER

→ EASTBOUND TRAVEL LANE

LOCATIONS
STA. 1594+90

CRASH CUSHION INSTALLATION DETAILS



W5-59L
18"X18"

CRASH CUSHION NOSE COVER CHEVRON DETAIL

STA 1595+35
STA 1749+43
STA 1749+72

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 TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

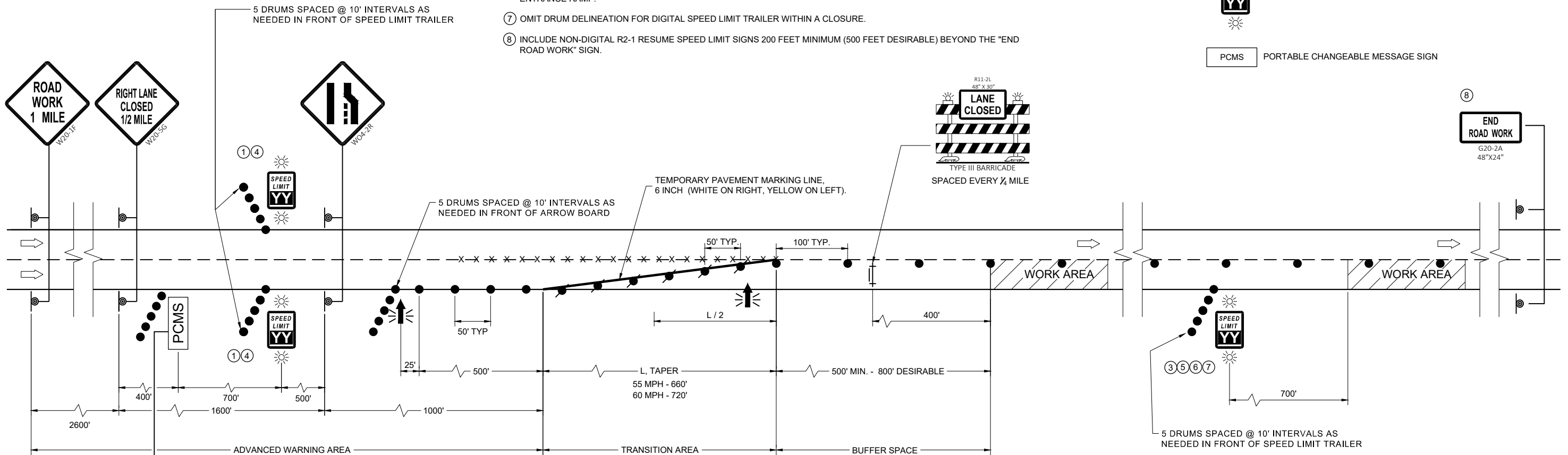
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
- ② PCMS SHALL FOLLOW ARROW BOARD STANDARDS WHEN DISPLAYING FLASHING FOUR CORNER CAUTION MODE.
- ③ PLACE A DIGITAL SPEED LIMIT TRAILER 700' FEET UPSTREAM OF EACH ACTIVE WORK AREA WHERE WORKERS ARE PRESENT.
- ④ A DIGITAL SPEED LIMIT TRAILER SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP.
- ⑤ IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
- ⑥ PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
- ⑦ OMIT DRUM DELINEATION FOR DIGITAL SPEED LIMIT TRAILER WITHIN A CLOSURE.
- ⑧ INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

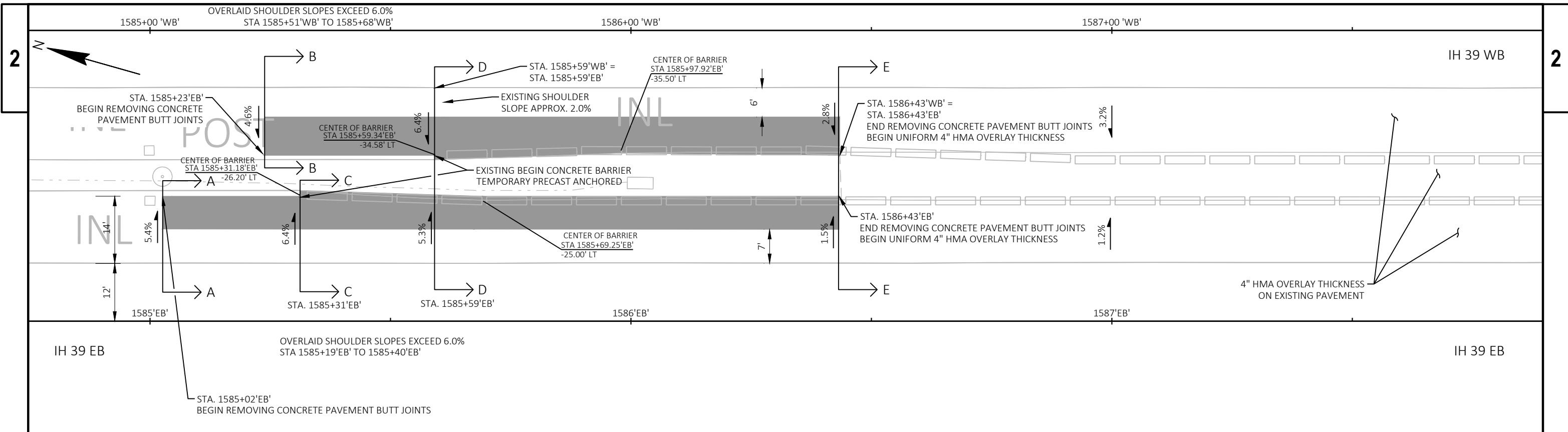
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ☀ TYPE "A" WARNING LIGHT (FLASHING)
- *-*-* REMOVING PAVEMENT MARKINGS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ➡ FLASHING ARROW BOARD
- ☀ SPEED LIMIT YY DIGITAL SPEED LIMIT TRAILER
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

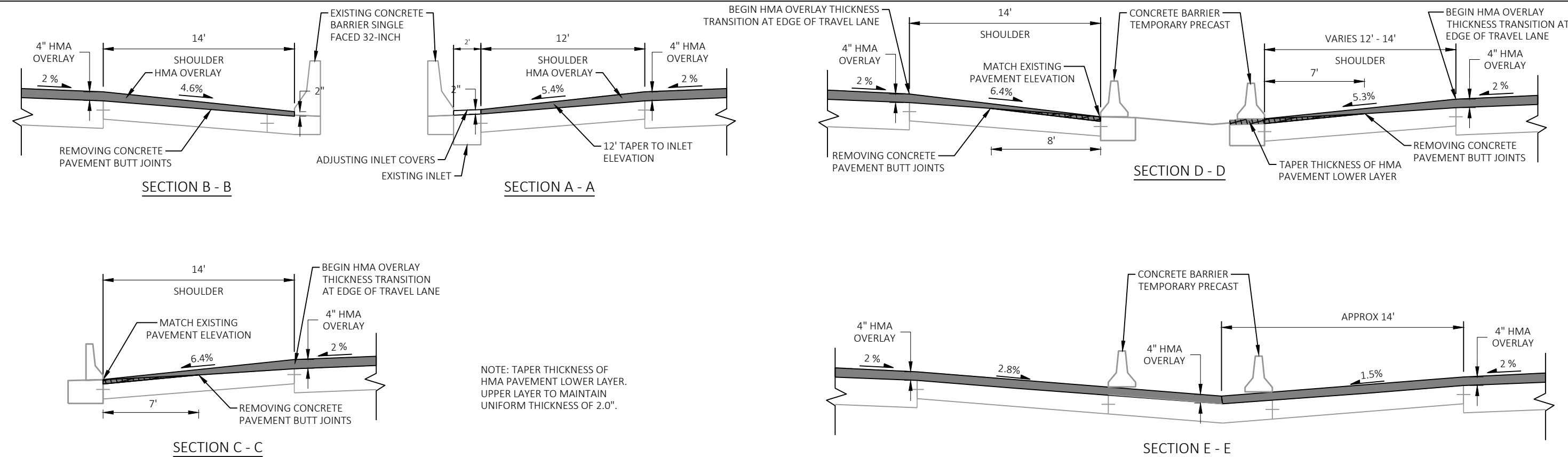


② PCMS MESSAGING

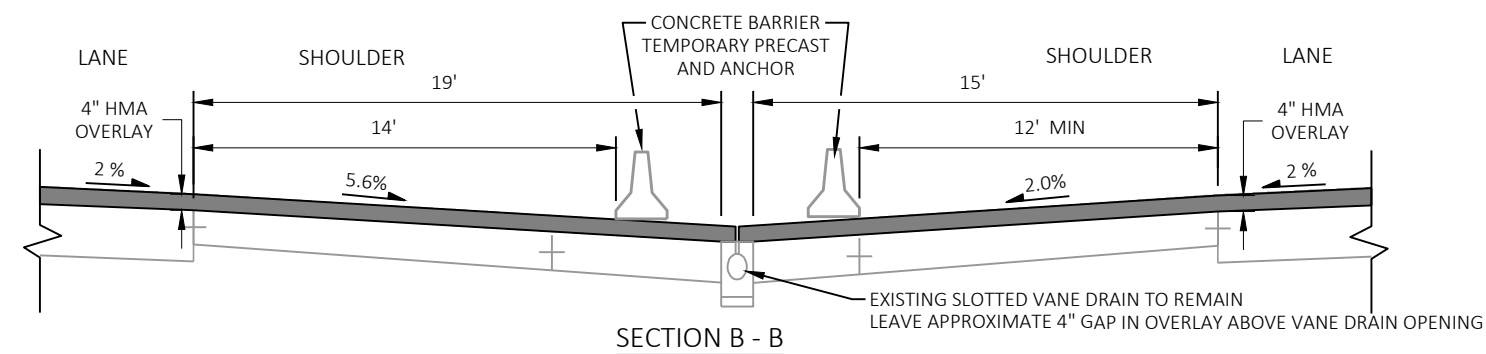
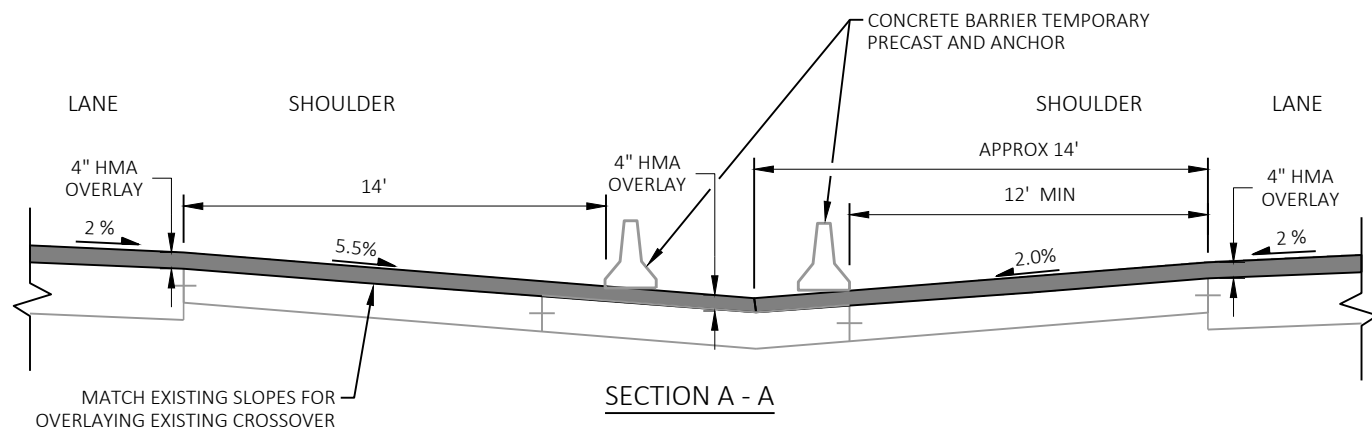
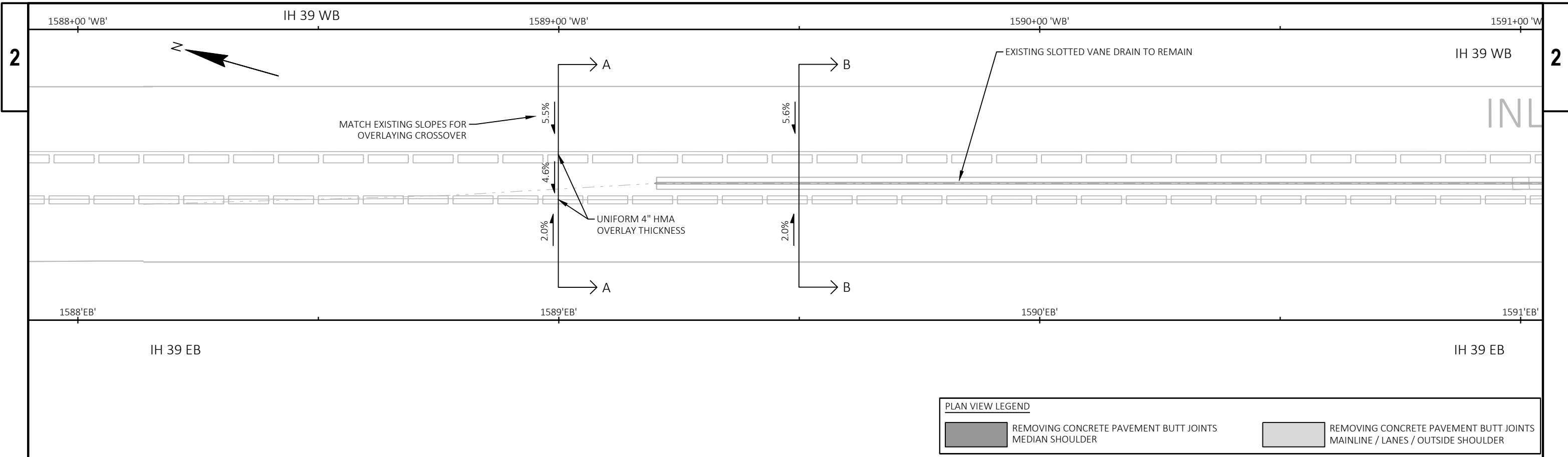
POSTED SPEED REDUCTION		NO SPEED REDUCTION
FRAME 1	FRAME 2	 (FLASHING CAUTION MODE)
REDUCED SPEED AHEAD	XX MPH	

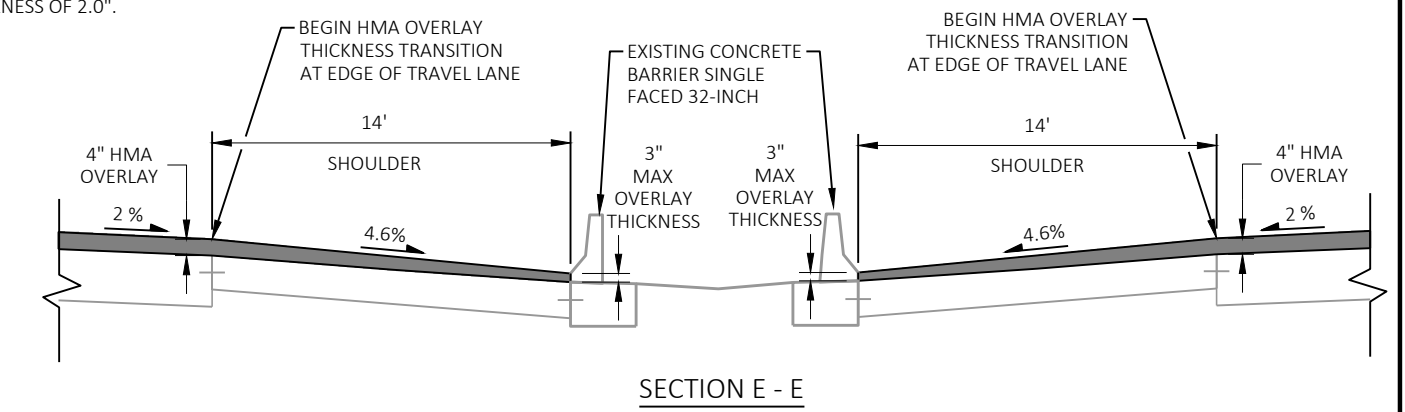
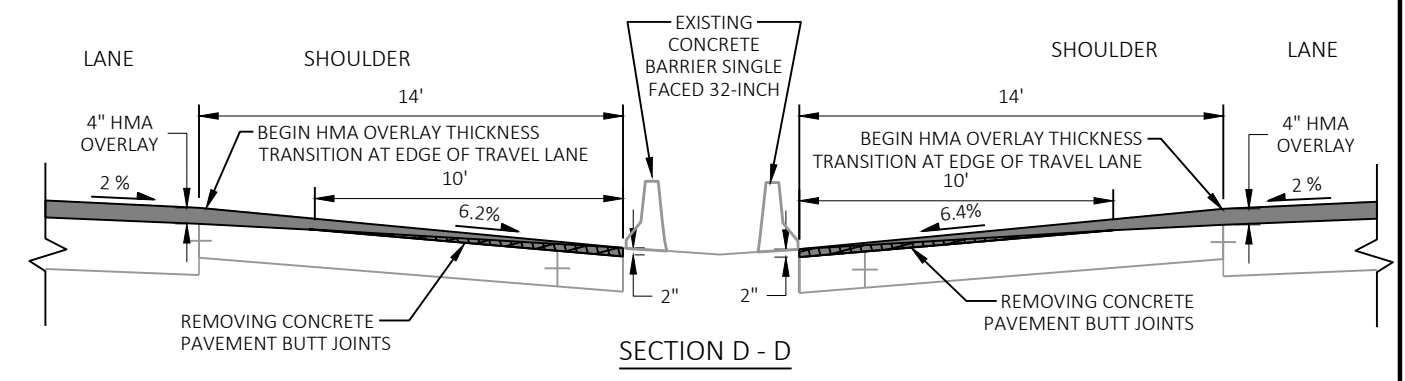
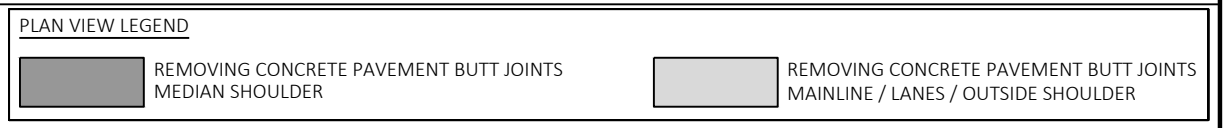
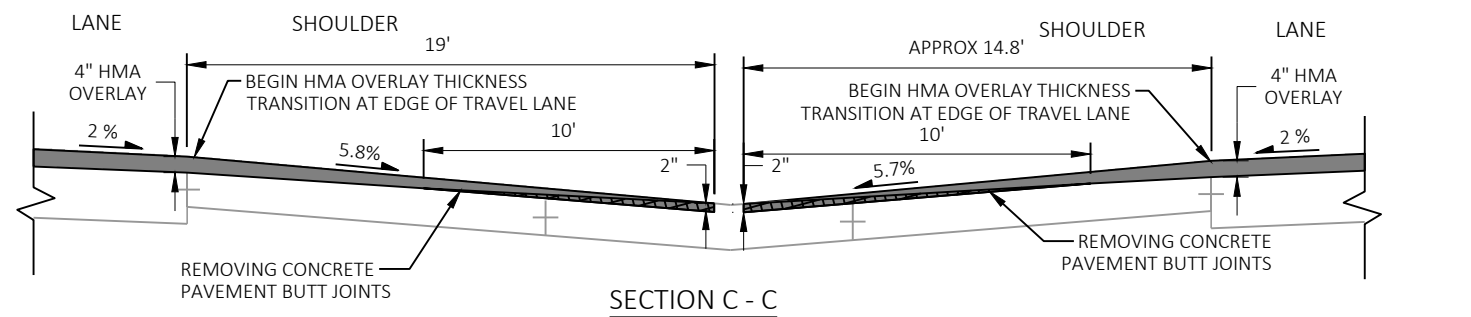
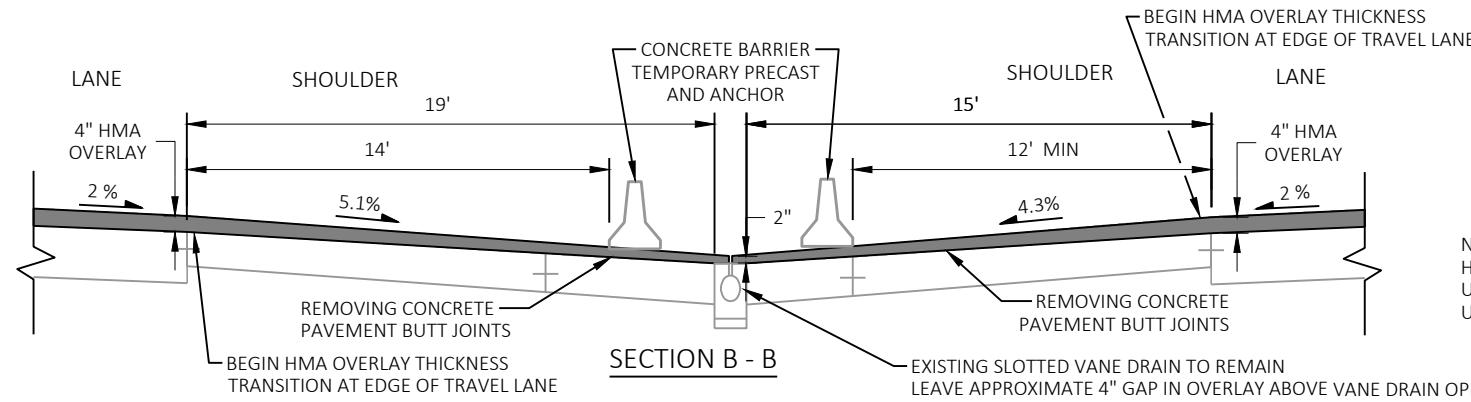
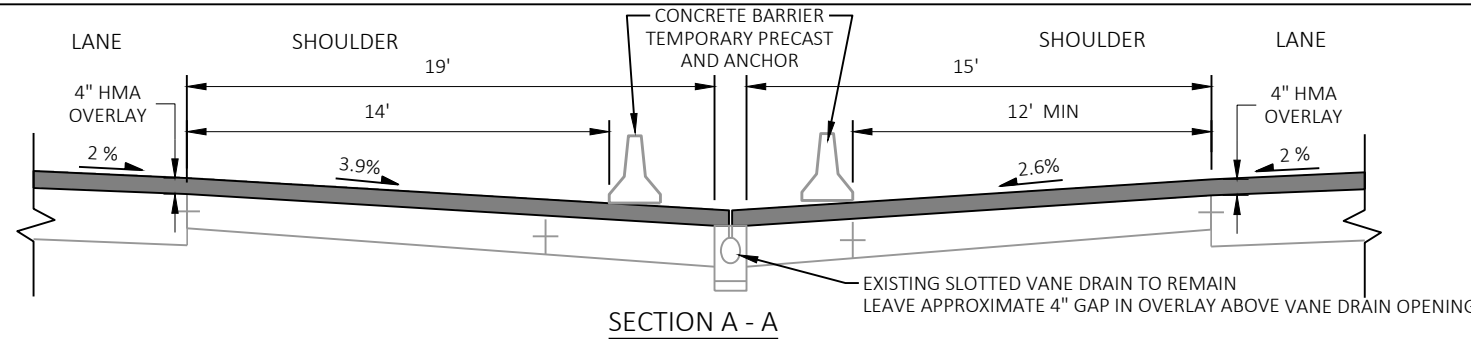
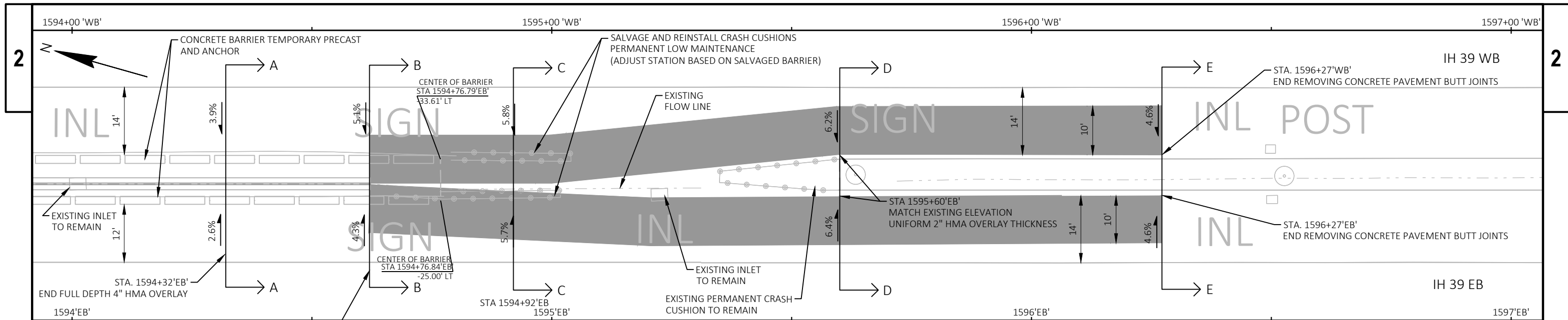


STH 60 TO IH 39 EB RAMP

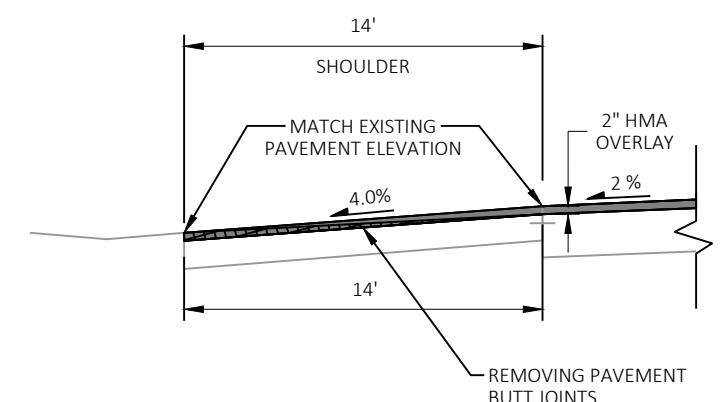
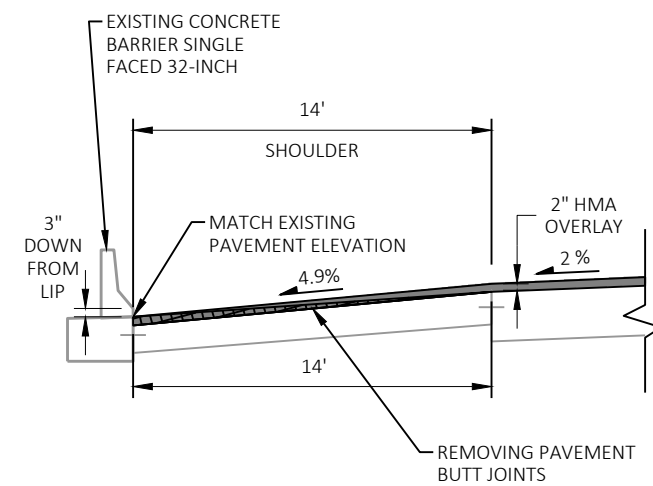
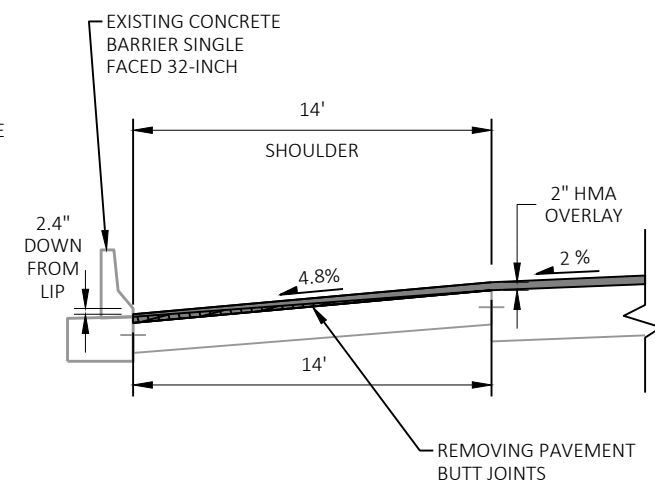
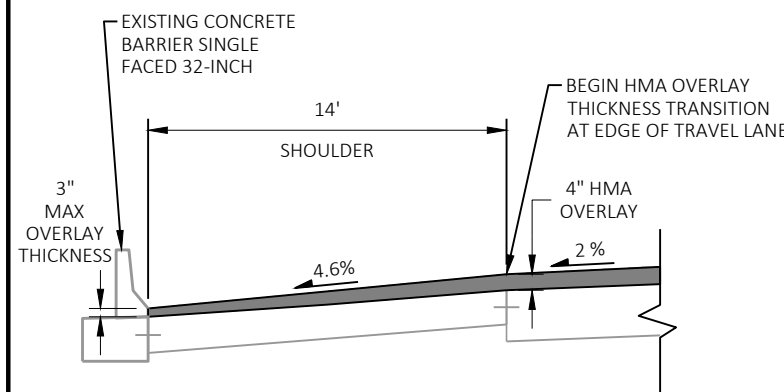
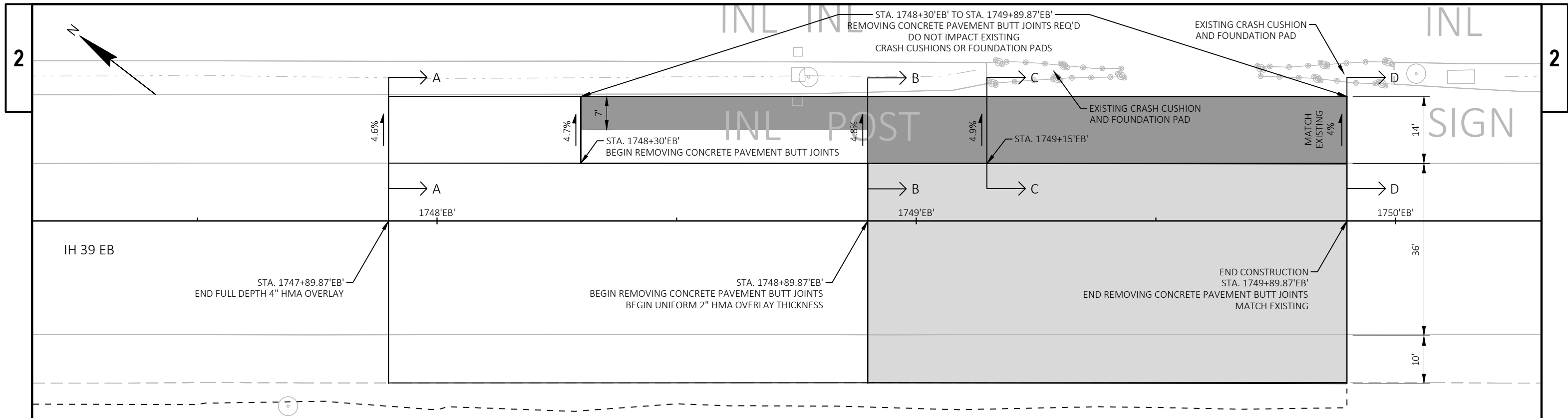


NOTE: TAPER THICKNESS OF HMA PAVEMENT LOWER LAYER. UPPER LAYER TO MAINTAIN UNIFORM THICKNESS OF 2.0\".

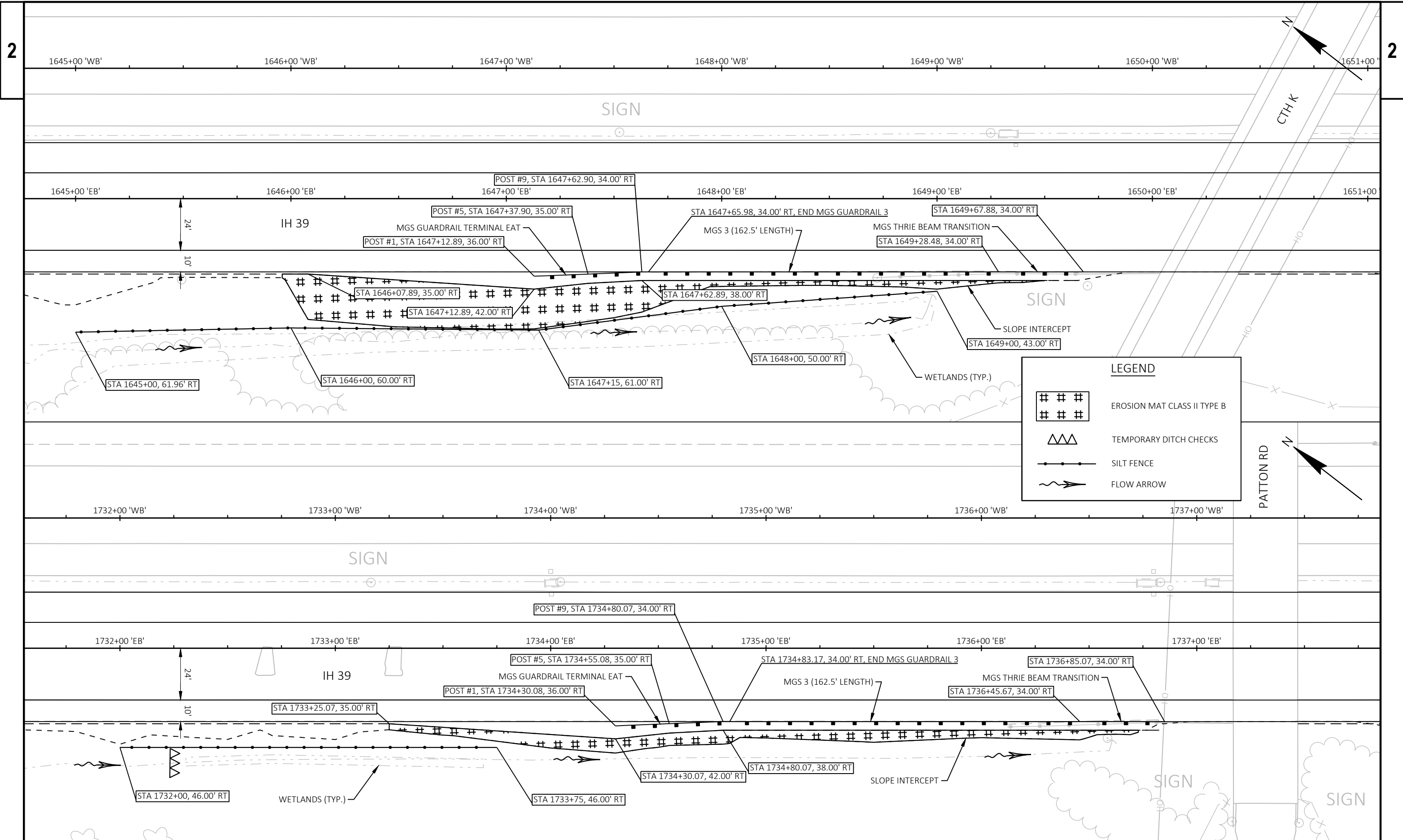


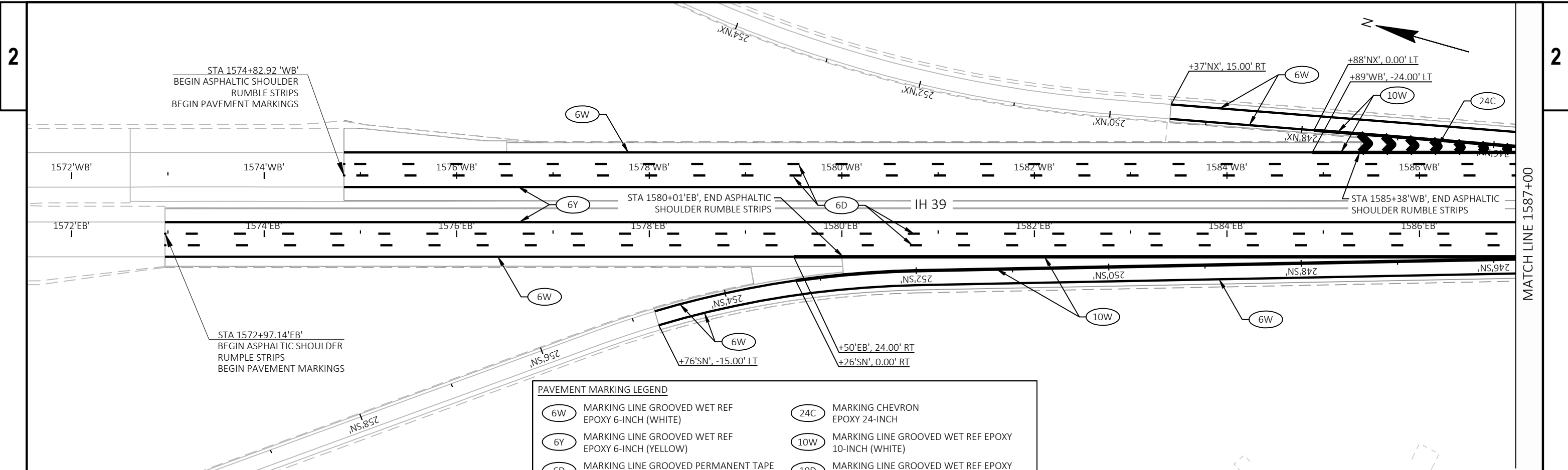


NOTE: TAPER THICKNESS OF HMA PAVEMENT LOWER LAYER. UPPER LAYER TO MAINTAIN UNIFORM THICKNESS OF 2.0".



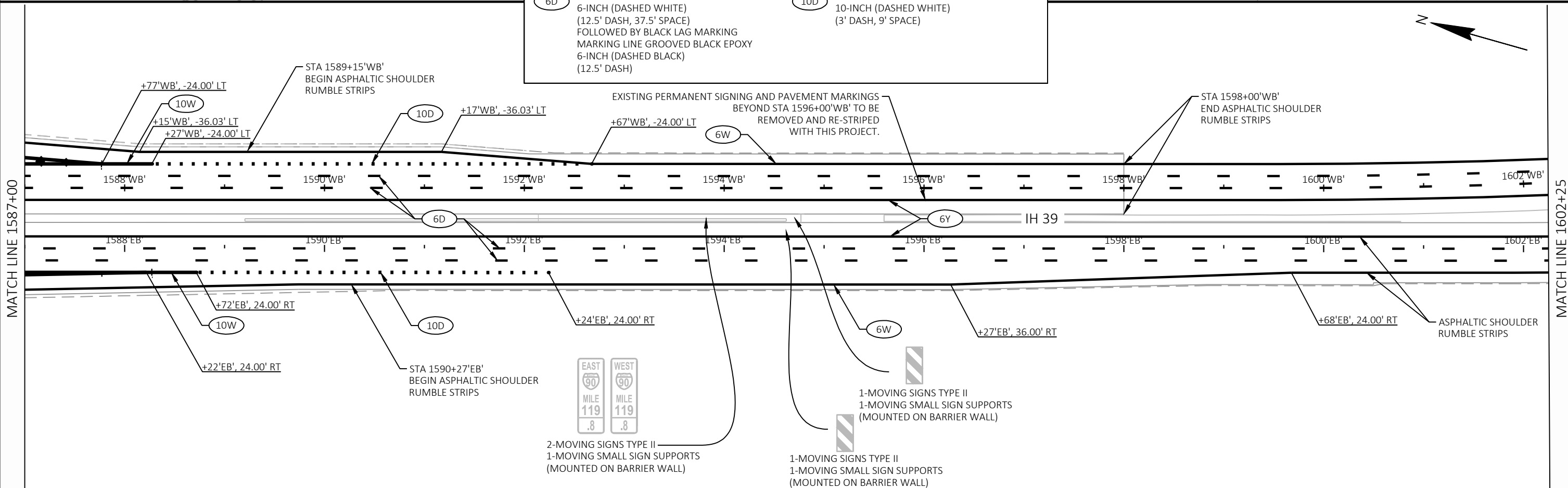
NOTE: TAPER THICKNESS OF HMA PAVEMENT LOWER LAYER. UPPER LAYER TO MAINTAIN UNIFORM THICKNESS OF 2.0".





PAVEMENT MARKING LEGEND

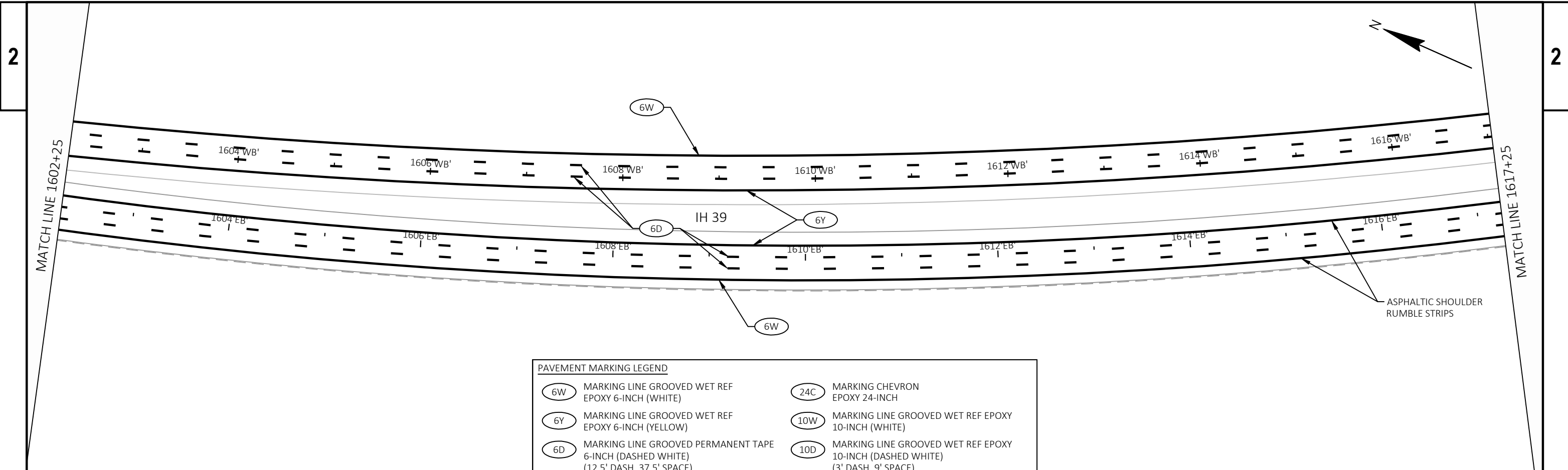
(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(24C)	MARKING CHEVRON EPOXY 24-INCH
(6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(10W)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6D)	MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	(10D)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)



2-MOVING SIGNS TYPE II
1-MOVING SMALL SIGN SUPPORTS
(MOUNTED ON BARRIER WALL)

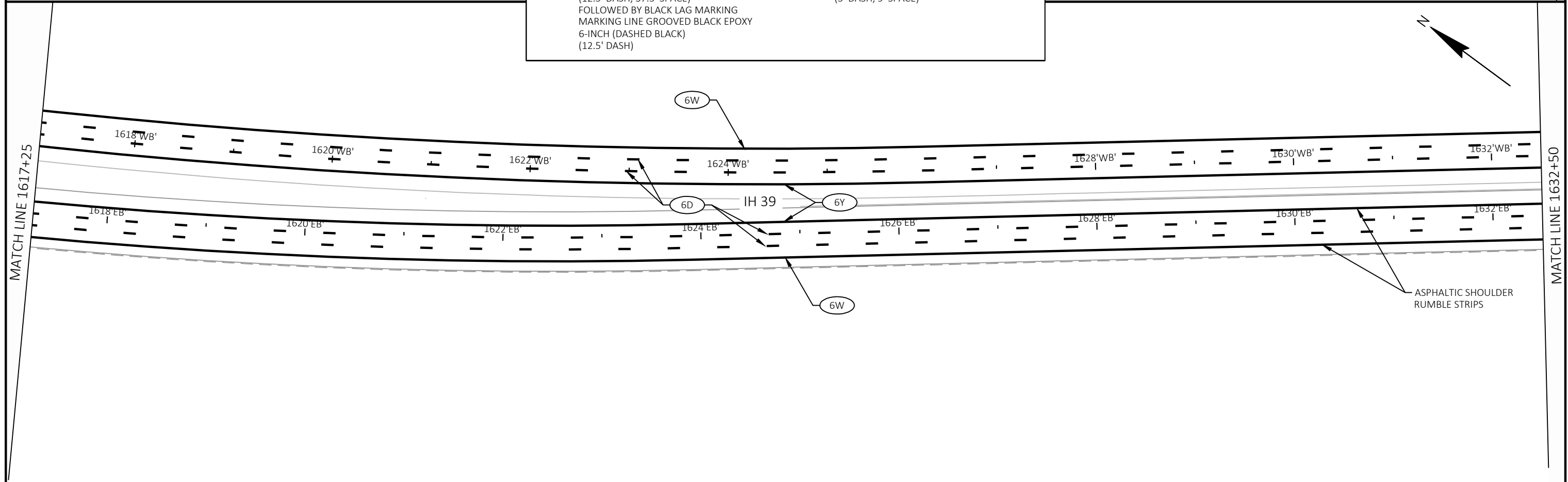
1-MOVING SIGNS TYPE II
1-MOVING SMALL SIGN SUPPORTS
(MOUNTED ON BARRIER WALL)

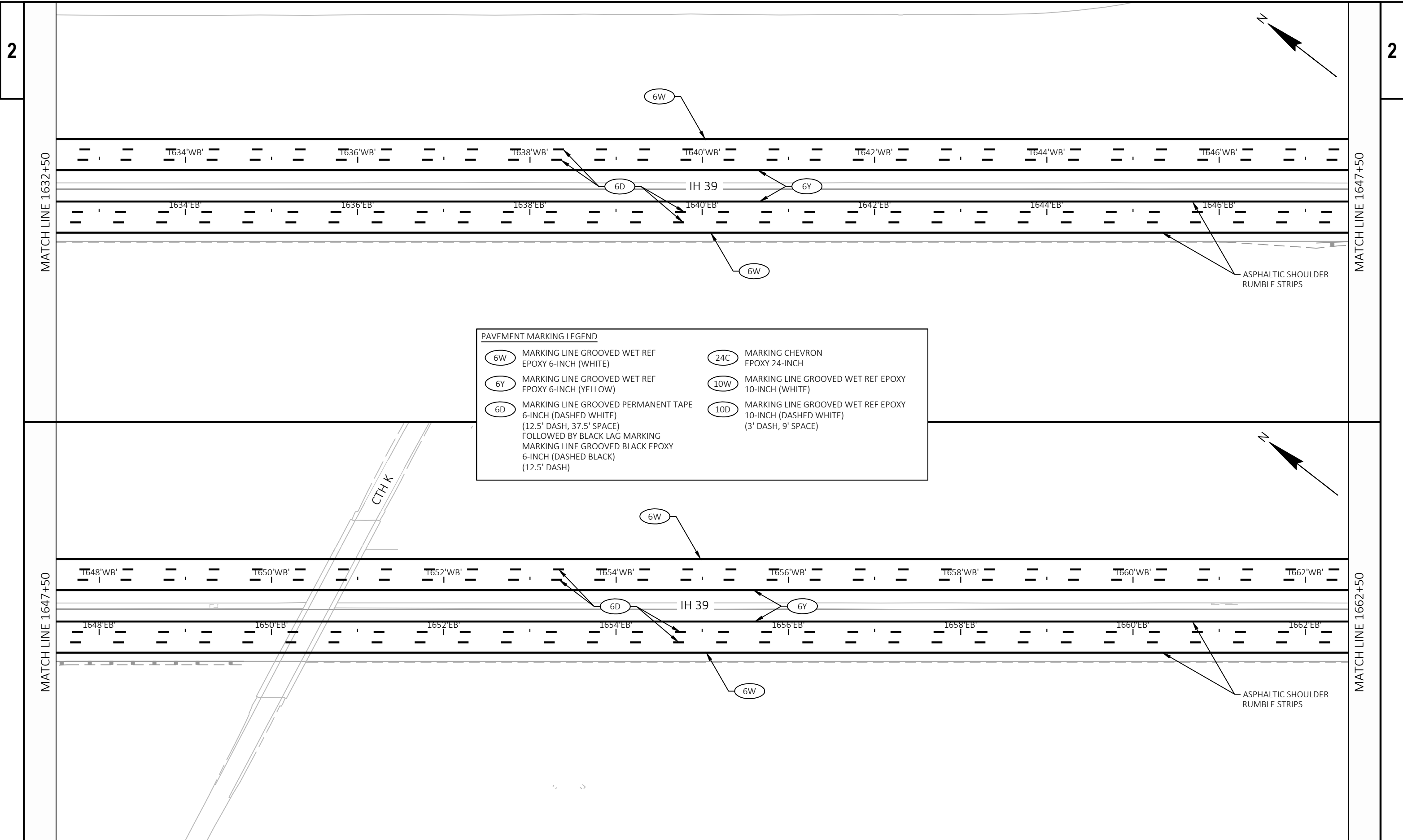
1-MOVING SIGNS TYPE II
1-MOVING SMALL SIGN SUPPORTS
(MOUNTED ON BARRIER WALL)



PAVEMENT MARKING LEGEND

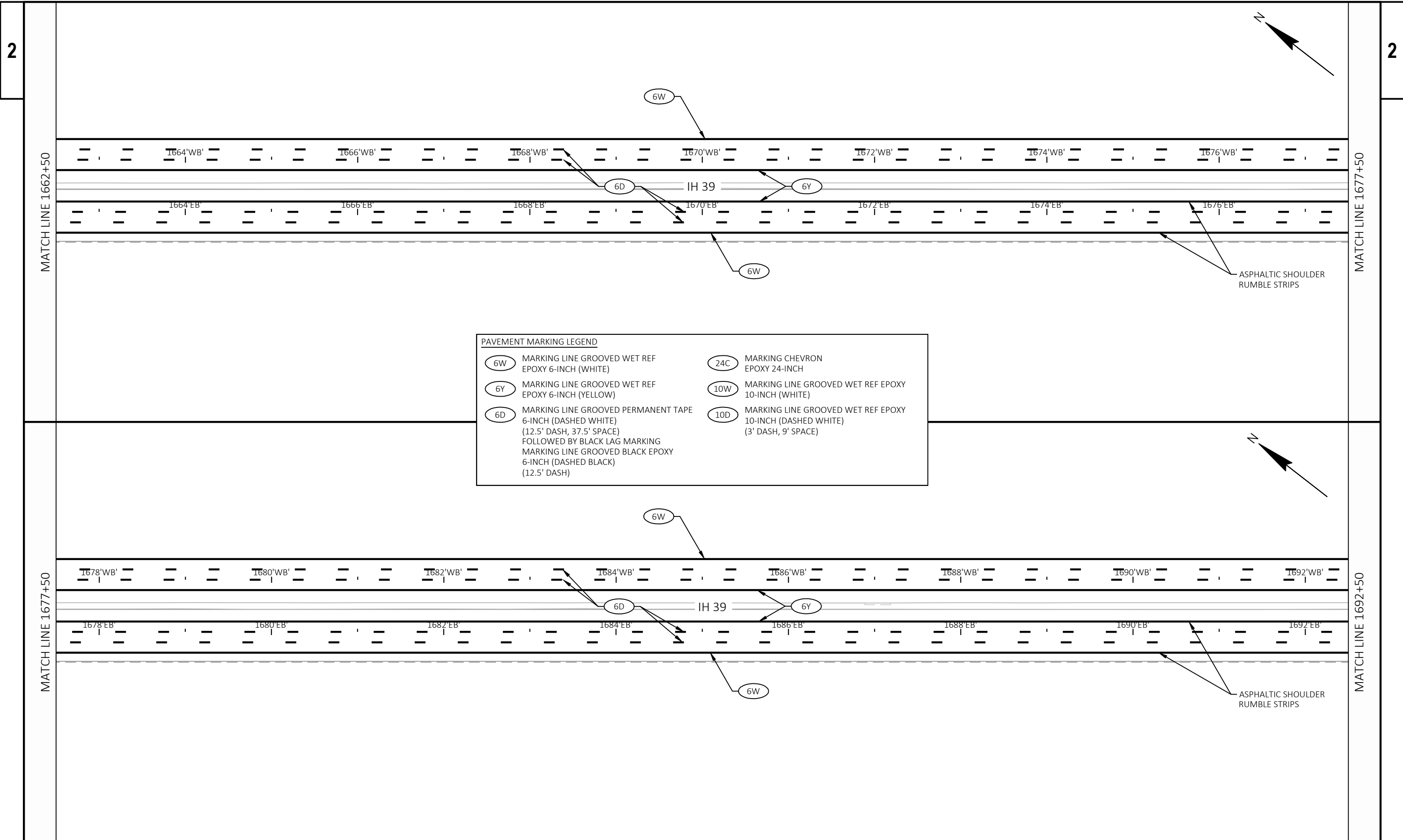
(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(24C)	MARKING CHEVRON EPOXY 24-INCH
(6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(10W)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6D)	MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	(10D)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)





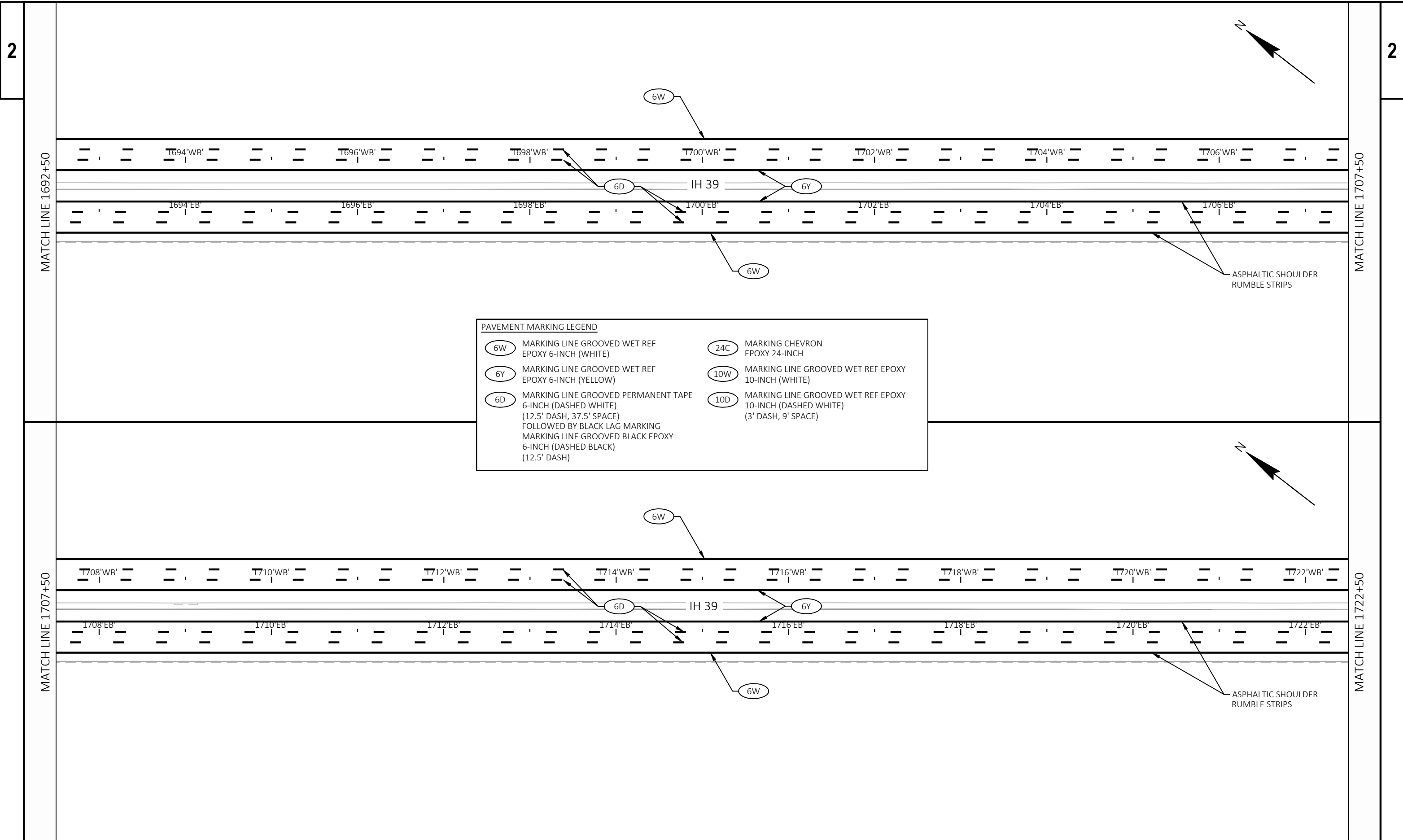
PAVEMENT MARKING LEGEND

(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(24C)	MARKING CHEVRON EPOXY 24-INCH
(6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(10W)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6D)	MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	(10D)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)



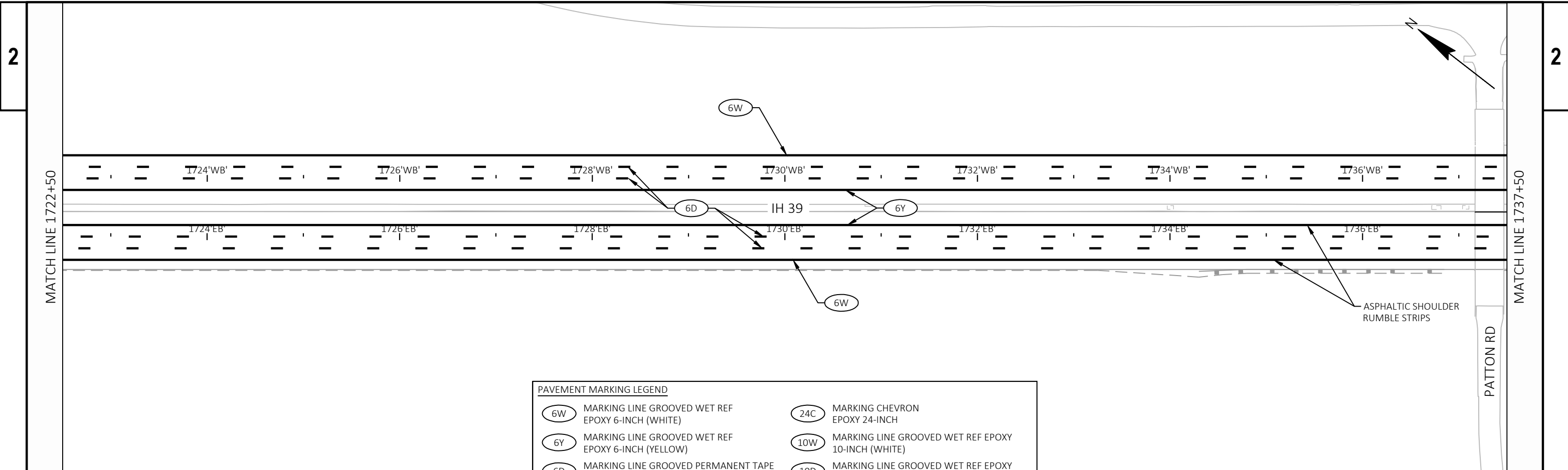
PAVEMENT MARKING LEGEND

(6W) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(24C) MARKING CHEVRON EPOXY 24-INCH
(6Y) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(10W) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6D) MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	(10D) MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)



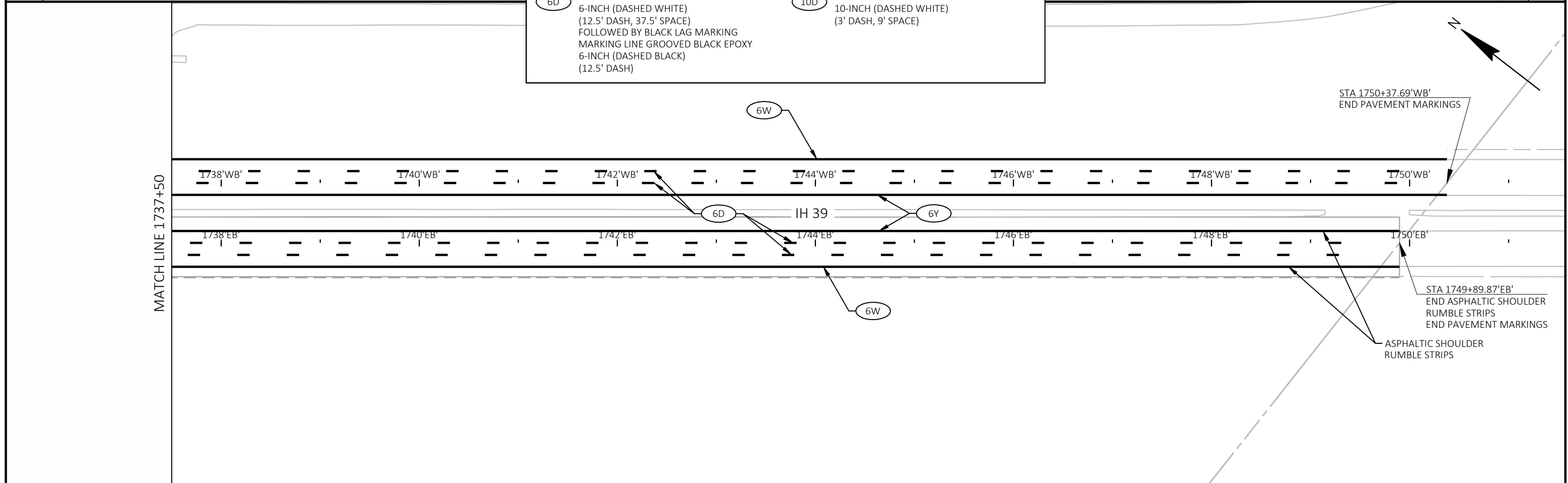
PAVEMENT MARKING LEGEND

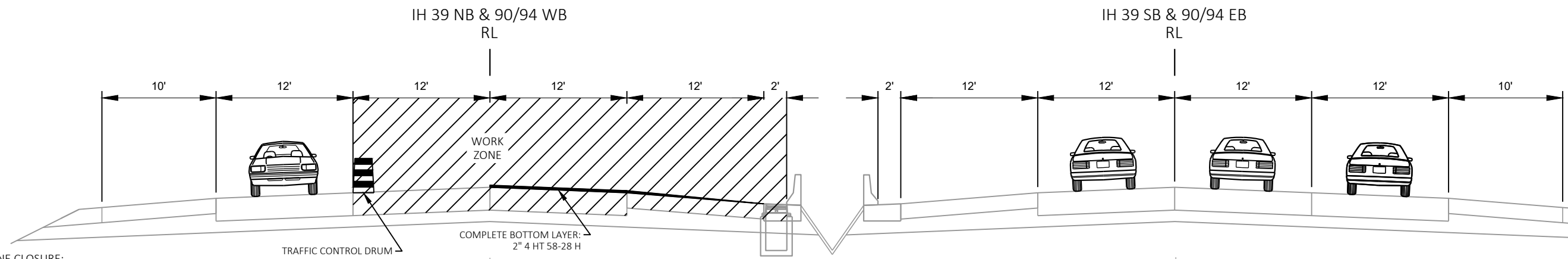
6W	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	24C	MARKING CHEVRON EPOXY 24-INCH
6Y	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	10W	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
6D	MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	10D	MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)



PAVEMENT MARKING LEGEND

(6W) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(24C) MARKING CHEVRON EPOXY 24-INCH
(6Y) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	(10W) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6D) MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5' DASH, 37.5' SPACE) FOLLOWED BY BLACK LAG MARKING	(10D) MARKING LINE GROOVED WET REF EPOXY 10-INCH (DASHED WHITE) (3' DASH, 9' SPACE)
MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED BLACK) (12.5' DASH)	





STAGE 1A DOUBLE LANE CLOSURE:

CONSTRUCTION ACTIVITIES

- 1) COMPLETE INSIDE LANE PATCHING.
- 2) MOVE EXISTING TEMPORARY PRECAST CONCRETE BARRIER.
- 3) COMPLETE INSIDE LANE AND INSIDE SHOULDER PAVING (FIRST LIFT).
- 4) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

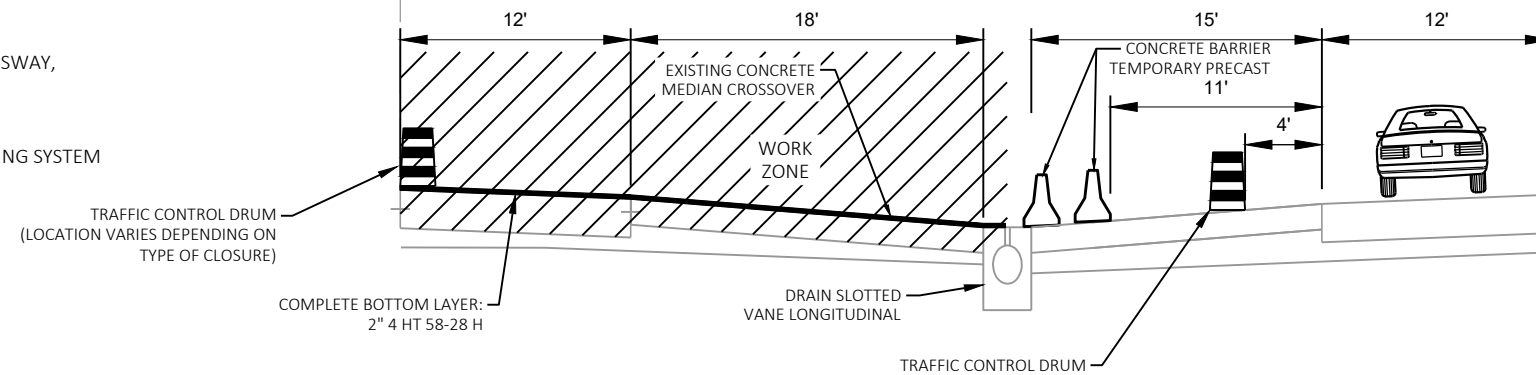
TRAFFIC

- 1) CENTER AND INSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

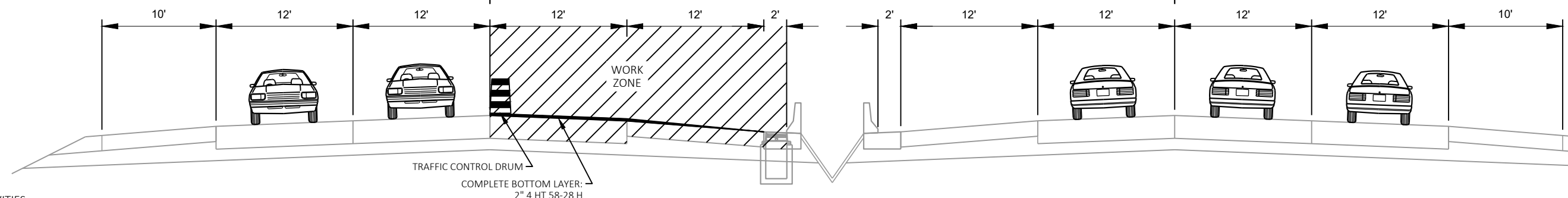
- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 1A DOUBLE LANE CLOSURE



IH 39 NB & 90/94 WB
RL

IH 39 SB & 90/94 EB
RL



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1A SINGLE LANE CLOSURE

STAGE 1A DAYTIME:

CONSTRUCTION ACTIVITIES

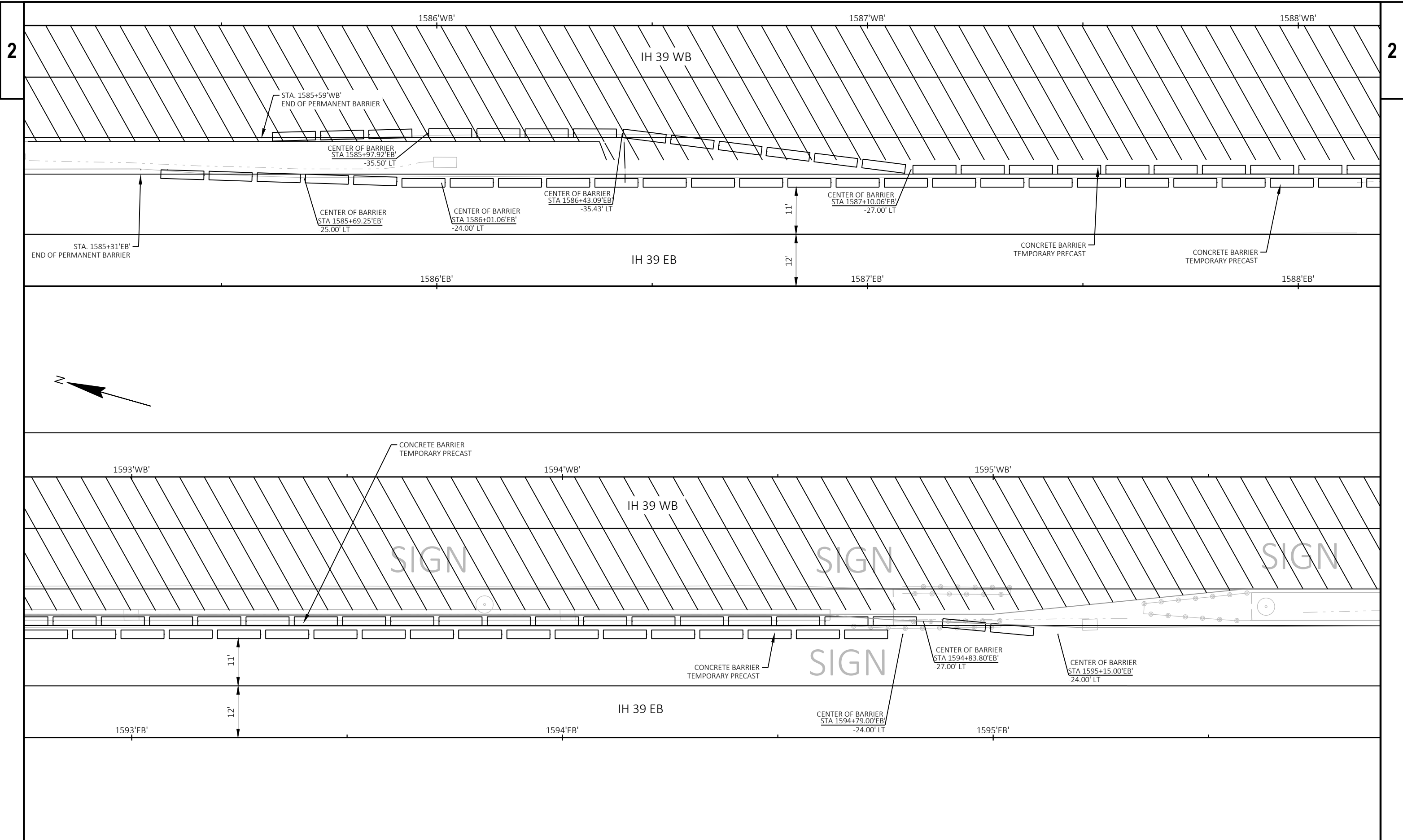
- 1) COMPLETE INSIDE LANE AND INSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

TRAFFIC

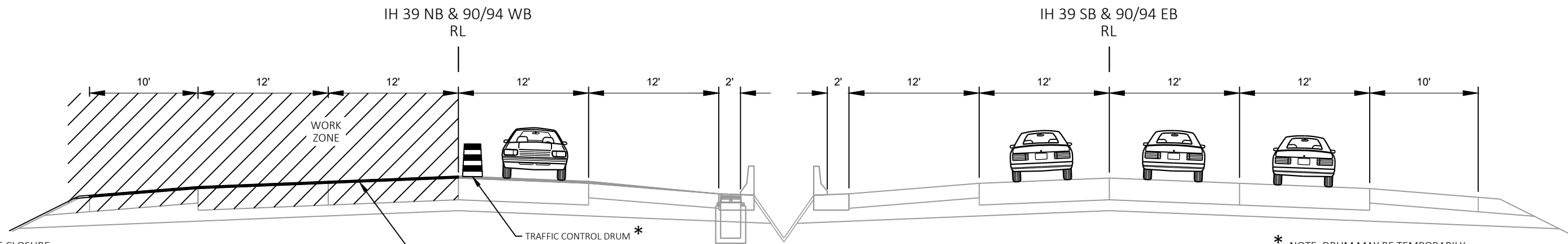
- 1) INSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY BARRIER LAYOUT - STAGE 1A	SHEET	E
------------------------	------------	------------------	-------------------------------------	-------	----------



STAGE 1B DOUBLE LANE CLOSURE:
CONSTRUCTION ACTIVITIES

- 1) COMPLETE CENTER LANE AND OUTSIDE LANE PATCHING.
- 2) COMPLETE CENTER LANE, OUTSIDE LANE, AND OUTSIDE SHOULDER PAVING (FIRST LIFT).
- 3) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

TRAFFIC

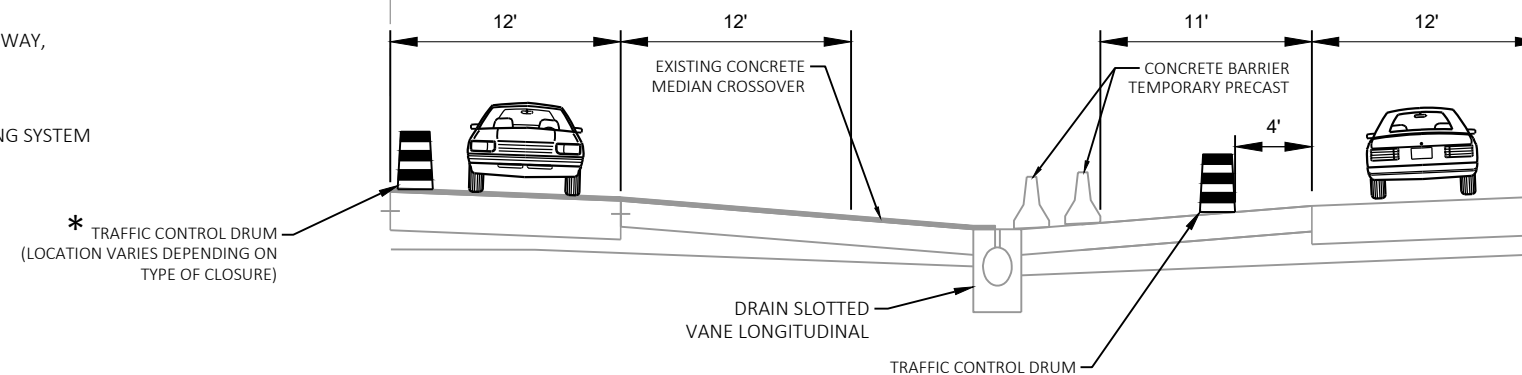
- 1) CENTER AND OUTSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 6) TRAFFIC CONTROL, EXIT RAMP CLOSURE

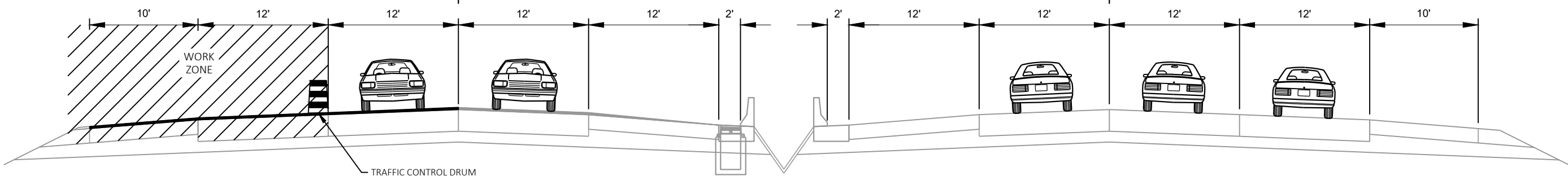
* NOTE: DRUM MAY BE TEMPORARILY MOVED INTO THE ADJACENT LANE WHILE PAVING CENTER LANE. VEHICLES MAY UTILIZE THE SHOULDER DURING THIS TIME. IMMEDIATELY MOVE DRUM BACK TO LOCATION SHOWN AFTER PAVING OPERATION COMPLETE.

TRAFFIC CONTROL TYPICAL SECTION
STAGE 1B DOUBLE LANE CLOSURE



IH 39 NB & 90/94 WB
RL

IH 39 SB & 90/94 EB
RL



STAGE 1B DAYTIME:
CONSTRUCTION ACTIVITIES

- 1) COMPLETE OUTSIDE LANE AND OUTSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

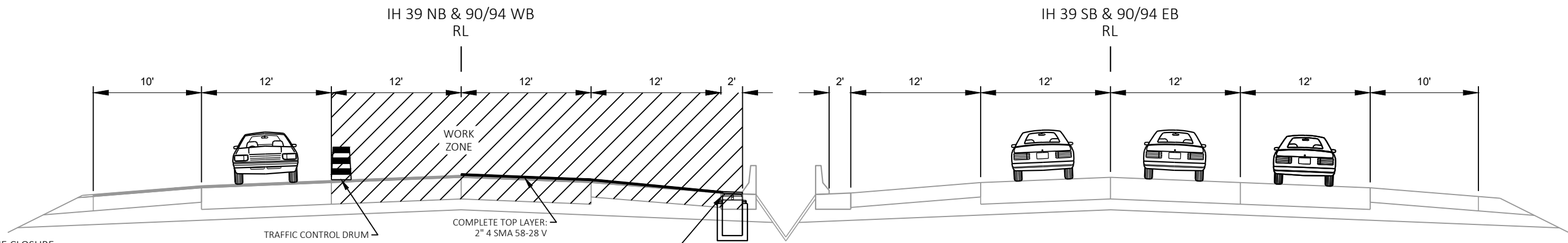
TRAFFIC

- 1) OUTSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 5) TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE

TRAFFIC CONTROL TYPICAL SECTION
STAGE 1B SINGLE LANE CLOSURE



STAGE 2A DOUBLE LANE CLOSURE:

CONSTRUCTION ACTIVITIES

- 1) COMPLETE INLET ADJUSTMENTS PRIOR TO PAVING SECOND LIFT.
- 2) COMPLETE INSIDE LANE AND INSIDE SHOULDER PAVING (SECOND LIFT).
- 3) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

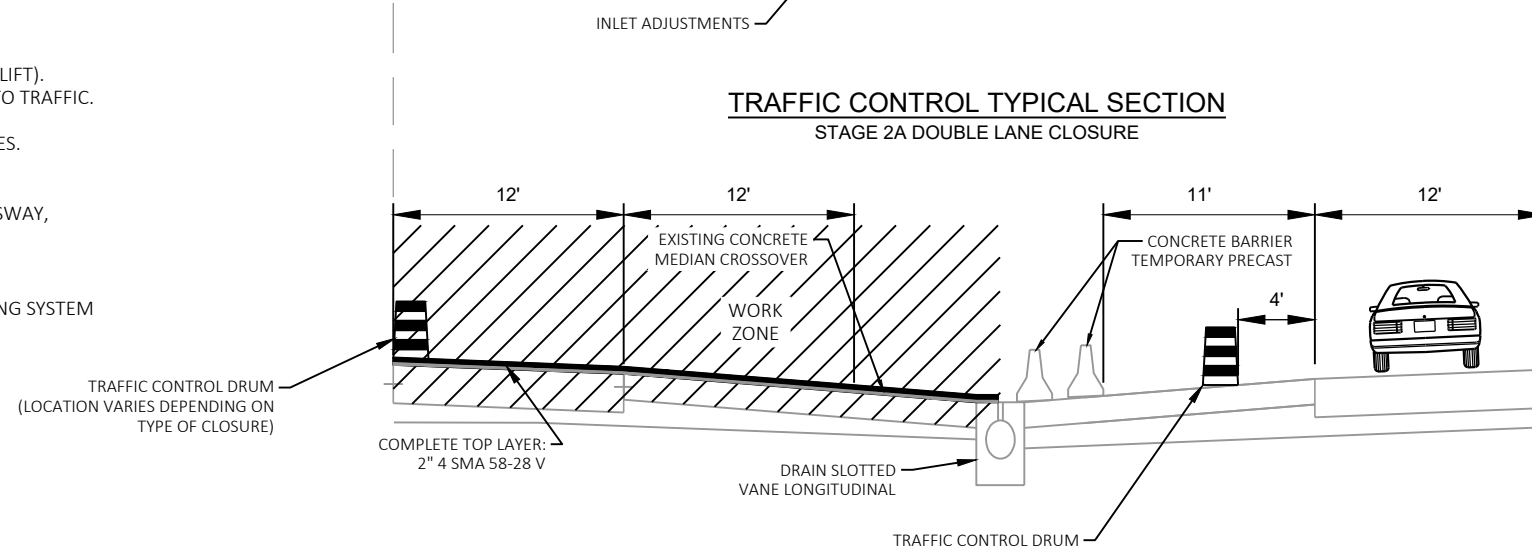
TRAFFIC

- 1) CENTER AND INSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

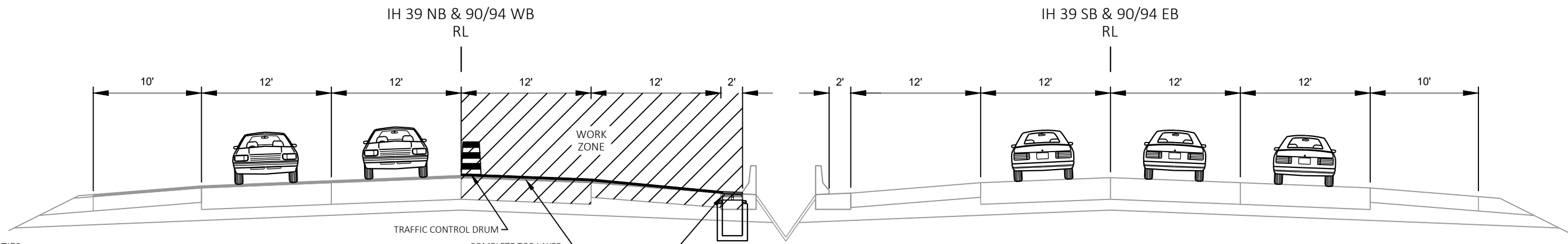
STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 2A DOUBLE LANE CLOSURE



TRAFFIC CONTROL TYPICAL SECTION
STAGE 2A SINGLE LANE CLOSURE



STAGE 2A DAYTIME:

CONSTRUCTION ACTIVITIES

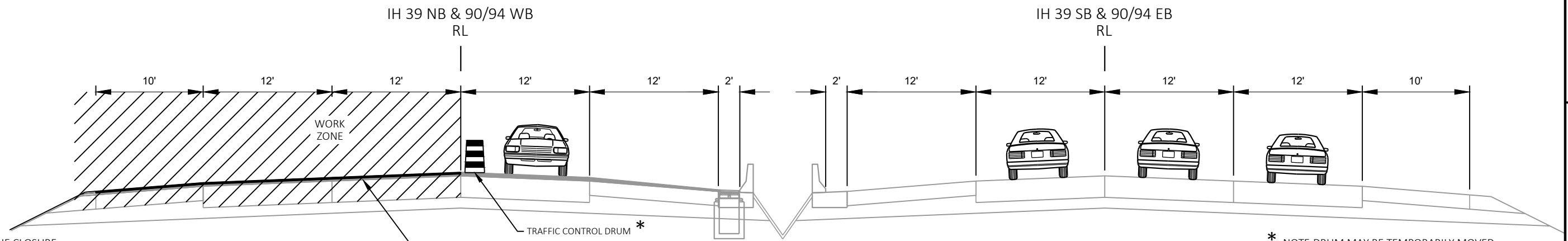
- 1) COMPLETE INLET ADJUSTMENTS PRIOR TO PAVING SECOND LIFT.
- 2) COMPLETE INSIDE LANE AND INSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 3) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

TRAFFIC

- 1) INSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM



**STAGE 2B DOUBLE LANE CLOSURE:
CONSTRUCTION ACTIVITIES**

- 1) COMPLETE CENTER LANE, OUTSIDE LANE, AND OUTSIDE SHOULDER PAVING (SECOND LIFT).
- 2) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

TRAFFIC

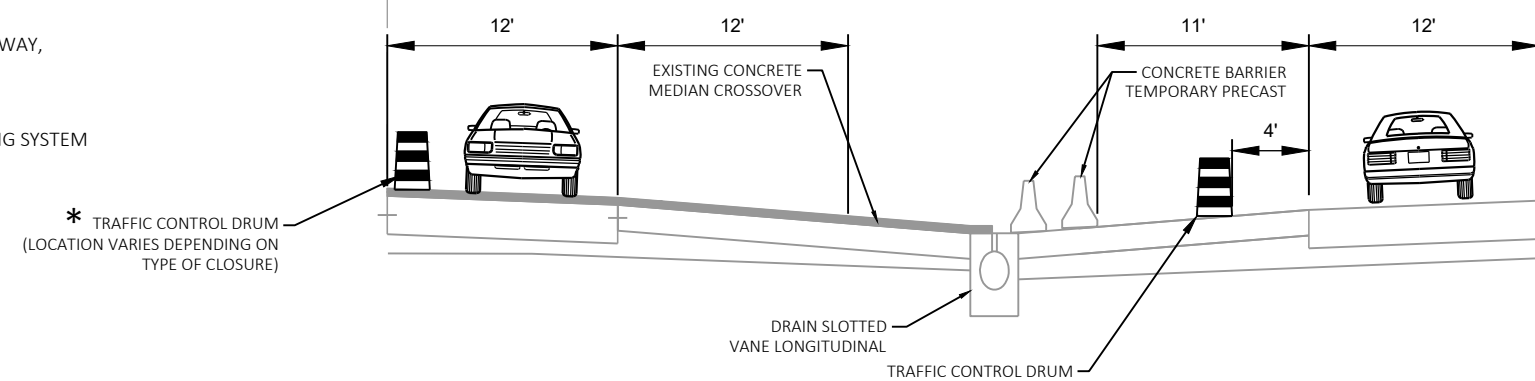
- 1) CENTER AND OUTSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

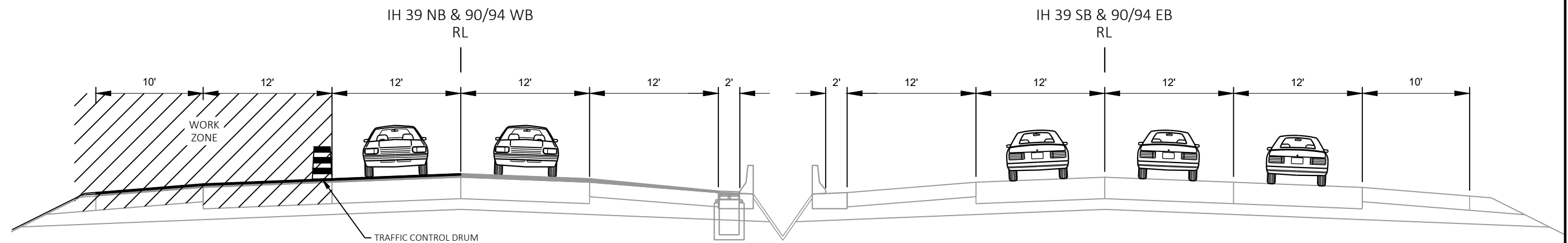
- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 6) TRAFFIC CONTROL, EXIT RAMP CLOSURE

* NOTE: DRUM MAY BE TEMPORARILY MOVED INTO THE ADJACENT LANE WHILE PAVING CENTER LANE. VEHICLES MAY UTILIZE THE SHOULDER DURING THIS TIME. IMMEDIATELY MOVE DRUM BACK TO LOCATION SHOWN AFTER PAVING OPERATION COMPLETE.

**TRAFFIC CONTROL TYPICAL SECTION
STAGE 2B DOUBLE LANE CLOSURE**



* TRAFFIC CONTROL DRUM
(LOCATION VARIES DEPENDING ON TYPE OF CLOSURE)



**STAGE 2B DAYTIME:
CONSTRUCTION ACTIVITIES**

- 1) COMPLETE OUTSIDE LANE AND OUTSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

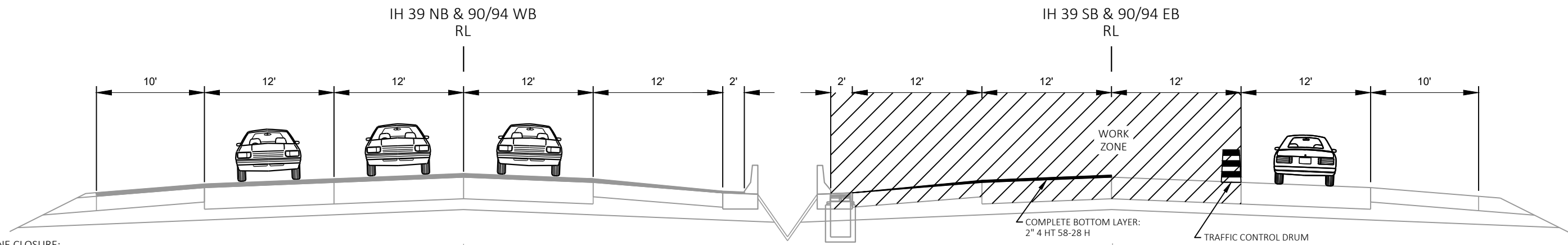
TRAFFIC

- 1) OUTSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 5) TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE

**TRAFFIC CONTROL TYPICAL SECTION
STAGE 2B SINGLE LANE CLOSURE**



STAGE 3A DOUBLE LANE CLOSURE:

CONSTRUCTION ACTIVITIES

- 1) MOVE EXISTING TEMPORARY PRECAST CONCRETE BARRIER. ANCHOR CONCRETE BARRIER IN FINAL CONFIGURATION ALONG IH 39 NB / 90/94 WB.
- 2) COMPLETE INSIDE LANE PATCHING.
- 3) COMPLETE INSIDE LANE AND INSIDE SHOULDER PAVING (FIRST LIFT).
- 4) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

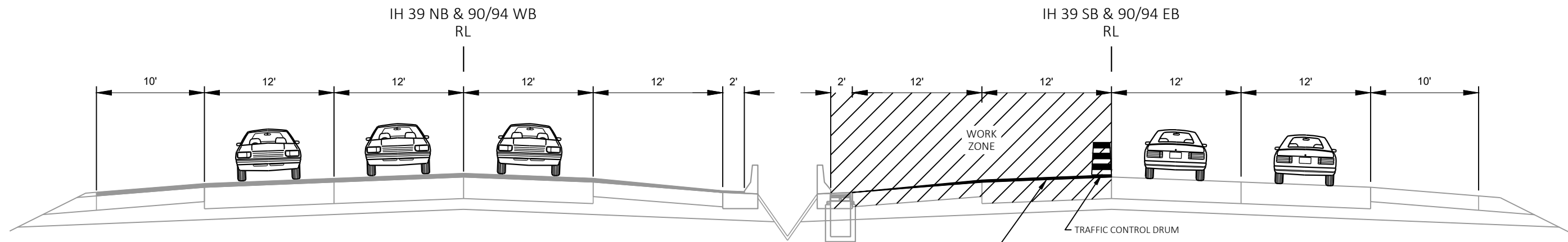
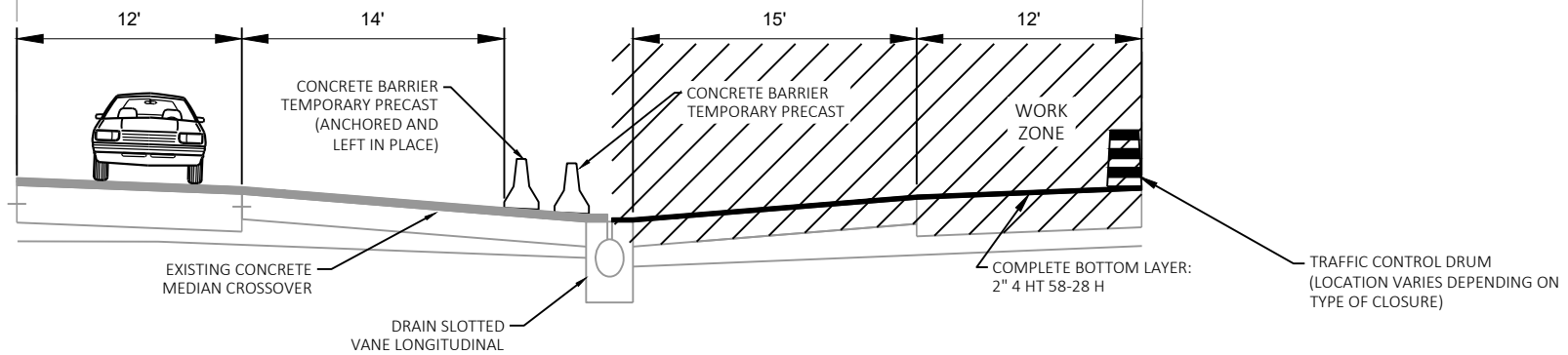
TRAFFIC

- 1) CENTER AND INSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 3A DOUBLE LANE CLOSURE



STAGE 3A DAYTIME:

CONSTRUCTION ACTIVITIES

- 1) COMPLETE INSIDE LANE AND INSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

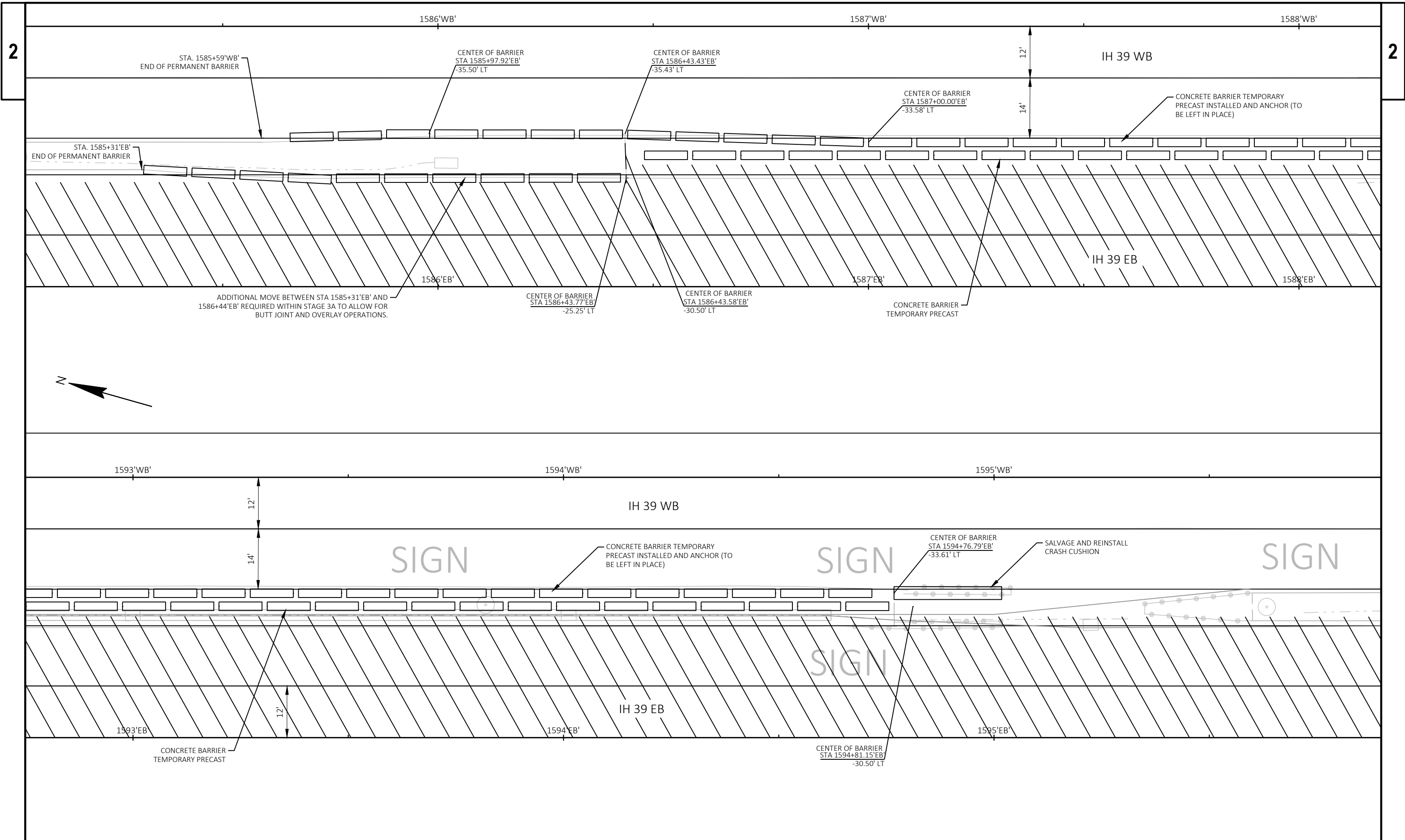
TRAFFIC

- 1) INSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC

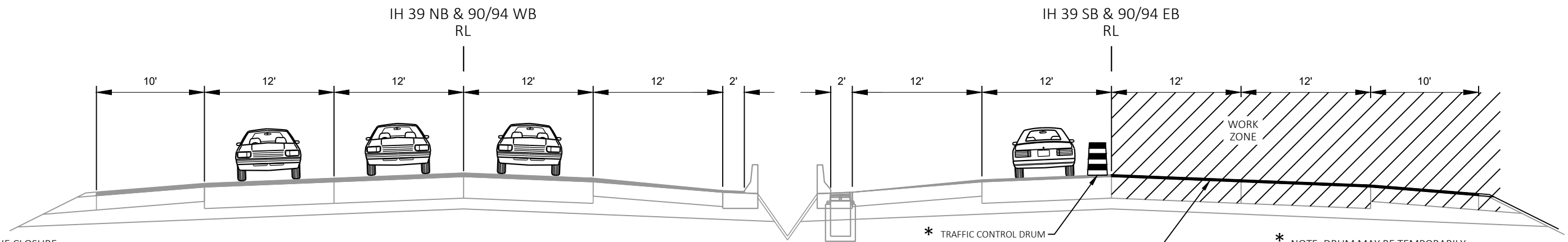
STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 3A SINGLE LANE CLOSURE



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY BARRIER LAYOUT - STAGE 3A	SHEET	E
------------------------	------------	------------------	-------------------------------------	-------	----------



STAGE 3B DOUBLE LANE CLOSURE:
CONSTRUCTION ACTIVITIES

- 1) COMPLETE CENTER LANE AND OUTSIDE LANE PATCHING.
- 2) COMPLETE CENTER LANE, OUTSIDE LANE, AND OUTSIDE SHOULDER PAVING (FIRST LIFT).
- 3) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

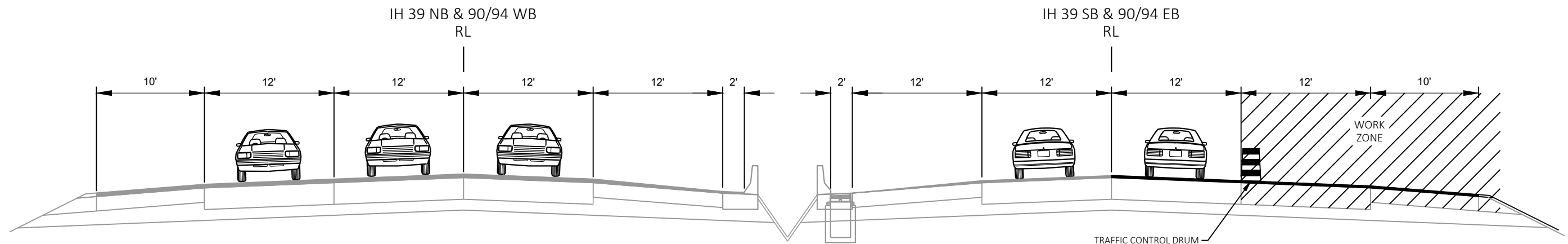
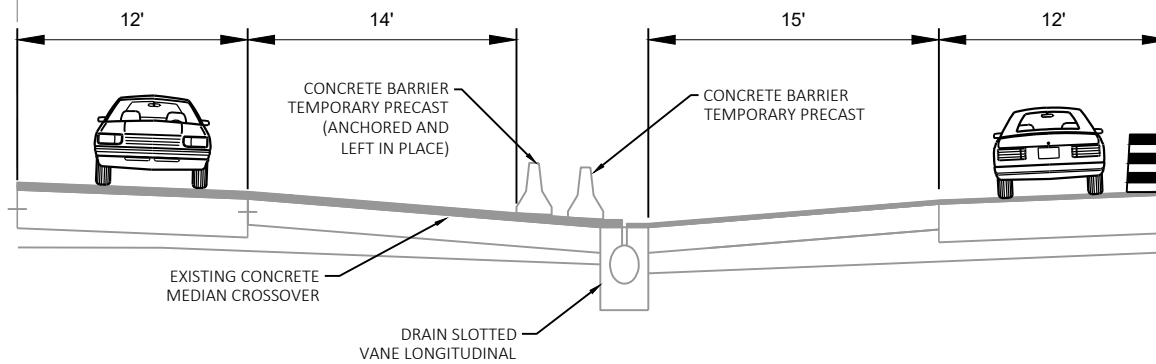
TRAFFIC

- 1) CENTER AND OUTSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 6) MARKING AND SIGNING, BARRICADES AND SIGN FOR VARIOUS CLOSURES
- 7) MARKING AND SIGNING, ON-RAMP LANE CLOSURE

TRAFFIC CONTROL TYPICAL SECTION
STAGE 3B DOUBLE LANE CLOSURE



STAGE 3B DAYTIME:
CONSTRUCTION ACTIVITIES

- 1) COMPLETE OUTSIDE LANE AND OUTSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL TEMPORARY MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

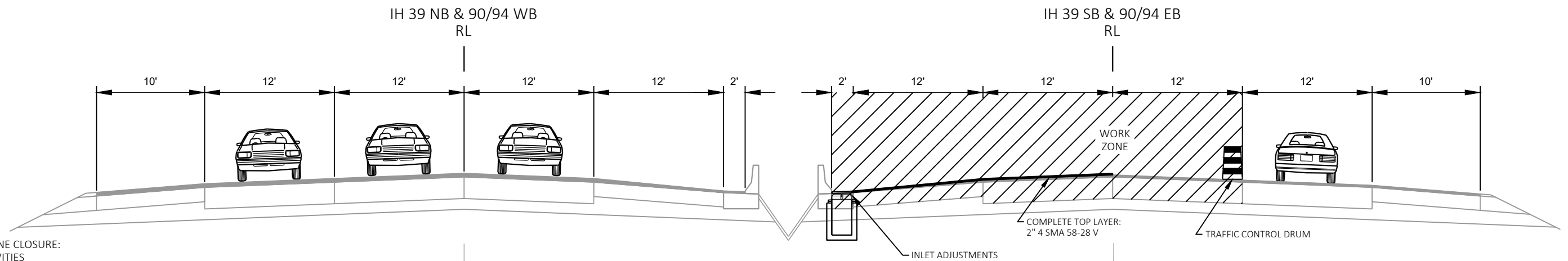
TRAFFIC

- 1) OUTSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 5) TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
- 6) MARKING AND SIGNING, ON-RAMP LANE CLOSURE

TRAFFIC CONTROL TYPICAL SECTION
STAGE 3B SINGLE LANE CLOSURE



STAGE 4A DOUBLE LANE CLOSURE:

CONSTRUCTION ACTIVITIES

- 1) COMPLETE INLET ADJUSTMENTS PRIOR TO PAVING SECOND LIFT.
- 2) COMPLETE INSIDE LANE AND INSIDE SHOULDER PAVING (SECOND LIFT).
- 3) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

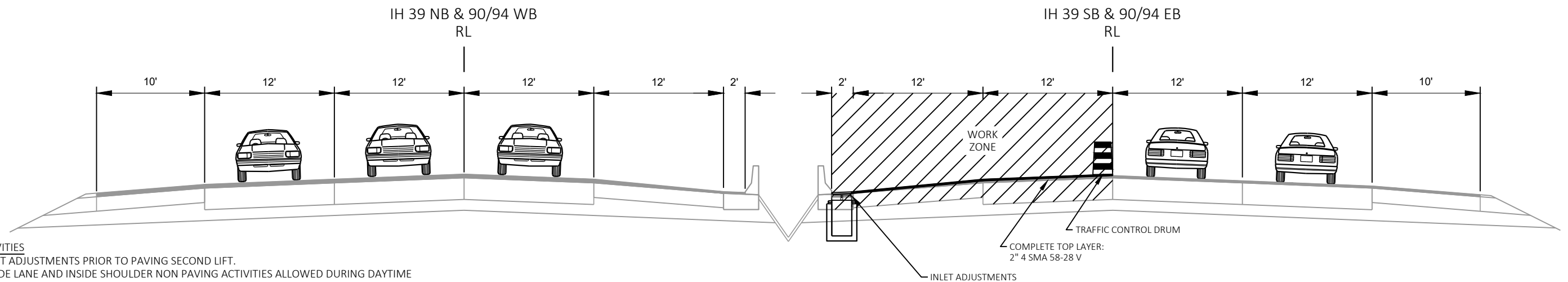
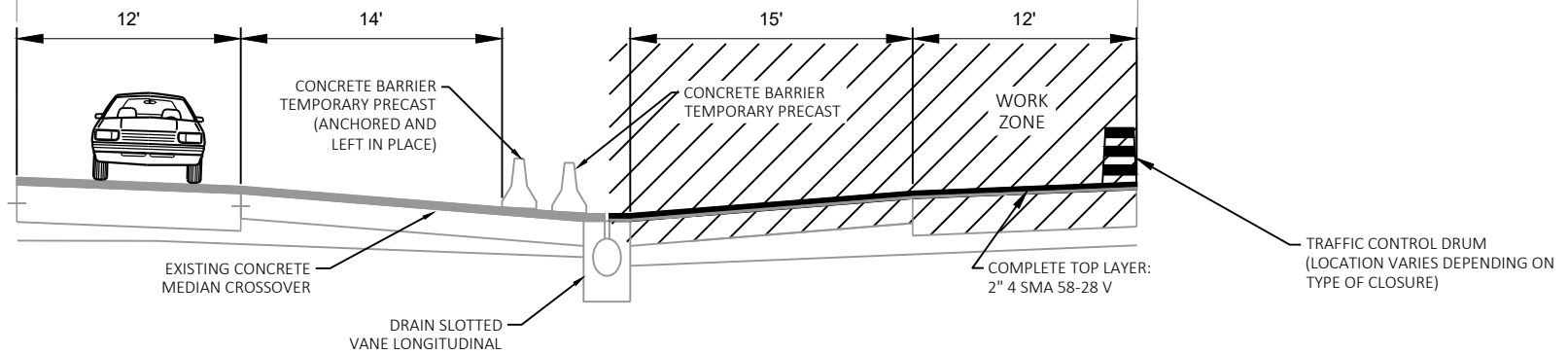
TRAFFIC

- 1) CENTER AND INSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 4A DOUBLE LANE CLOSURE



STAGE 4A DAYTIME:

CONSTRUCTION ACTIVITIES

- 1) COMPLETE INLET ADJUSTMENTS PRIOR TO PAVING SECOND LIFT.
- 2) COMPLETE INSIDE LANE AND INSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 3) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

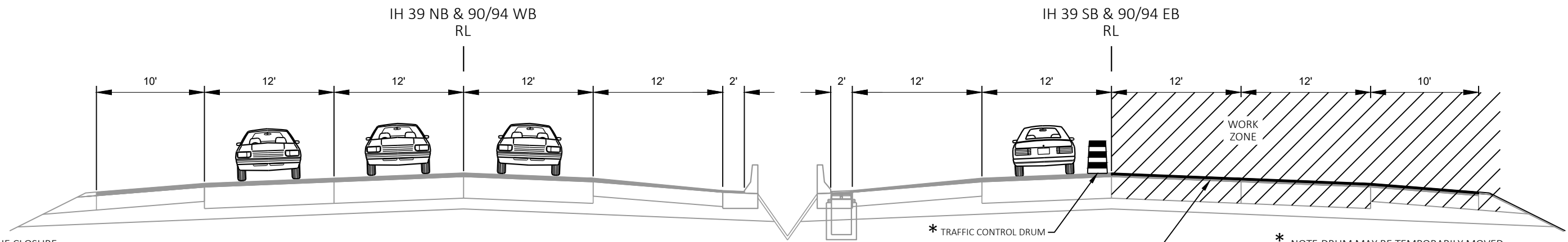
TRAFFIC

- 1) INSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

TRAFFIC CONTROL TYPICAL SECTION
STAGE 4A SINGLE LANE CLOSURE



STAGE 4B DOUBLE LANE CLOSURE:
CONSTRUCTION ACTIVITIES

- 1) COMPLETE CENTER LANE, OUTSIDE LANE, AND OUTSIDE SHOULDER PAVING (SECOND LIFT).
- 2) MOVE EXISTING TEMPORARY PRECAST CONCRETE BARRIER. ANCHOR CONCRETE BARRIER IN FINAL CONFIGURATION ALONG IH 39 SB / 90/94 EB.
- 3) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

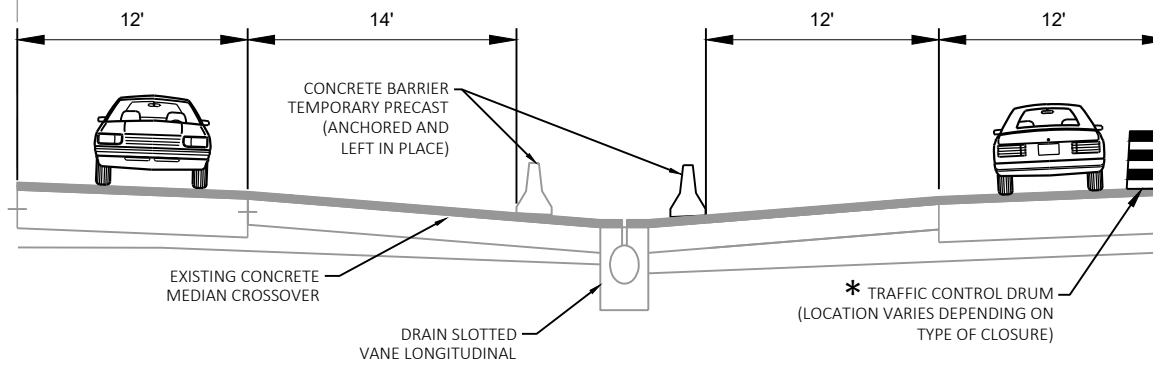
TRAFFIC

- 1) CENTER AND OUTSIDE LANES CLOSED DURING THE ALLOWABLE TIMES.

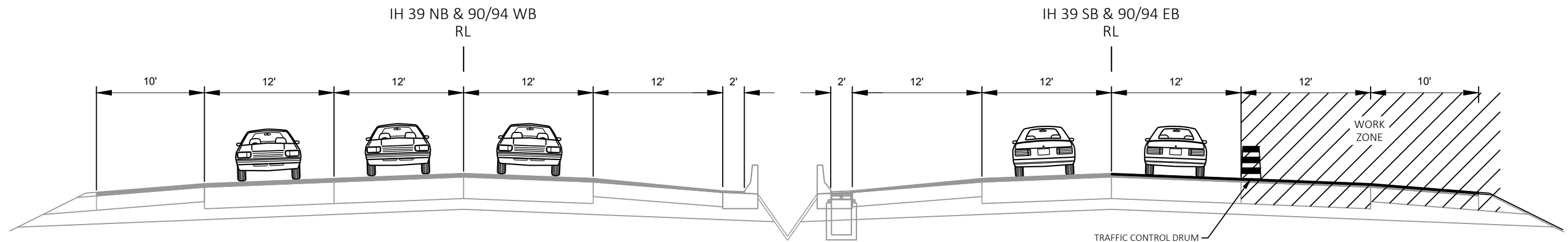
STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- 3) TRAFFIC CONTROL, LANE CLOSURE
- 4) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 5) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 6) MARKING AND SIGNING, BARRICADES AND SIGN FOR VARIOUS CLOSURES
- 7) MARKING AND SIGNING, ON-RAMP LANE CLOSURE

TRAFFIC CONTROL TYPICAL SECTION
STAGE 4B DOUBLE LANE CLOSURE



* NOTE: DRUM MAY BE TEMPORARILY MOVED INTO THE ADJACENT LANE WHILE PAVING CENTER LANE. VEHICLES MAY UTILIZE THE SHOULDER DURING THIS TIME. IMMEDIATELY MOVE DRUM BACK TO LOCATION SHOWN AFTER PAVING OPERATION COMPLETE.



TRAFFIC CONTROL TYPICAL SECTION
STAGE 4B SINGLE LANE CLOSURE

STAGE 4B DAYTIME:
CONSTRUCTION ACTIVITIES

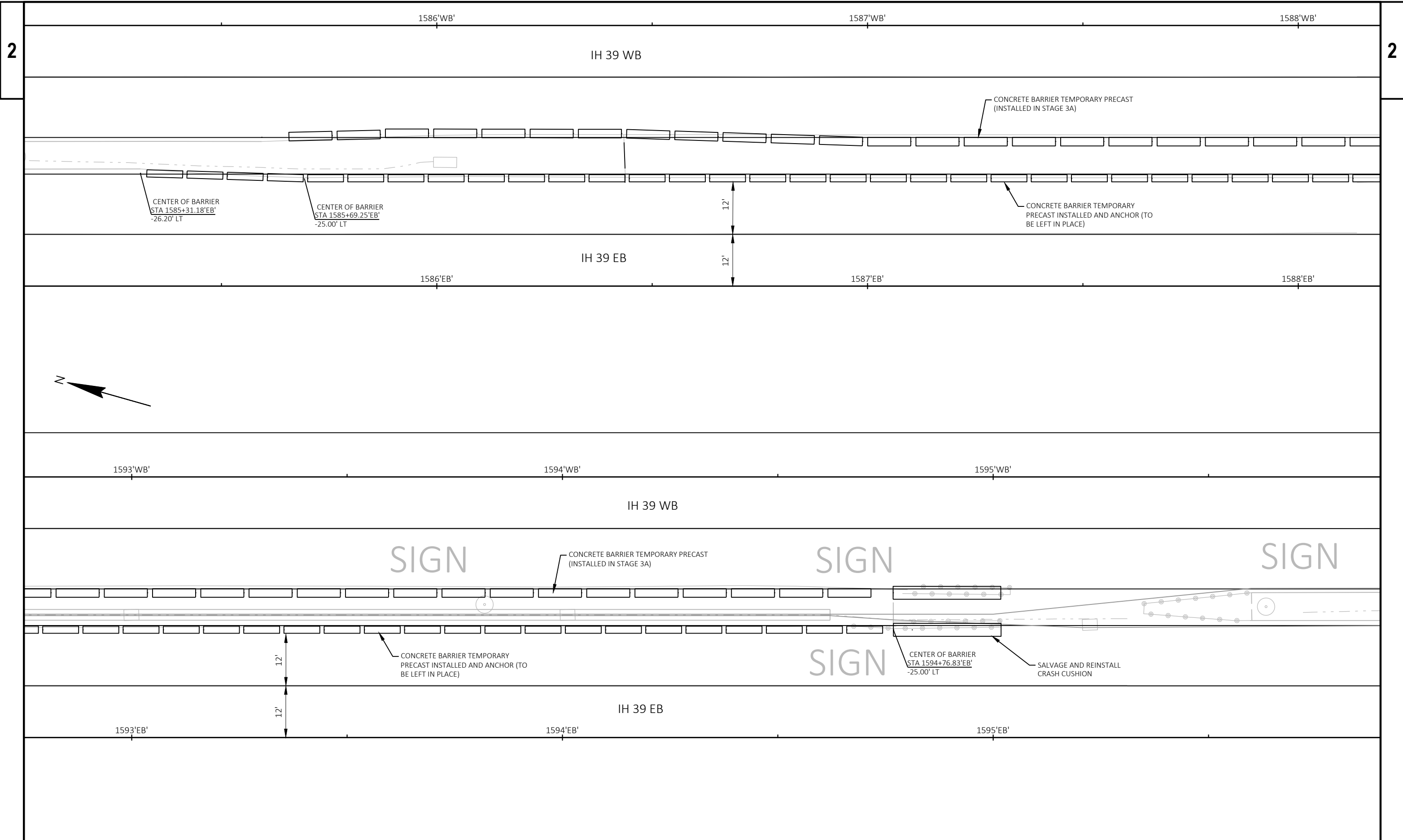
- 1) COMPLETE OUTSIDE LANE AND OUTSIDE SHOULDER NON PAVING ACTIVITIES ALLOWED DURING DAYTIME CLOSURES.
- 2) INSTALL PERMANENT MARKING LINES PRIOR TO OPENING LANES TO TRAFFIC.

TRAFFIC

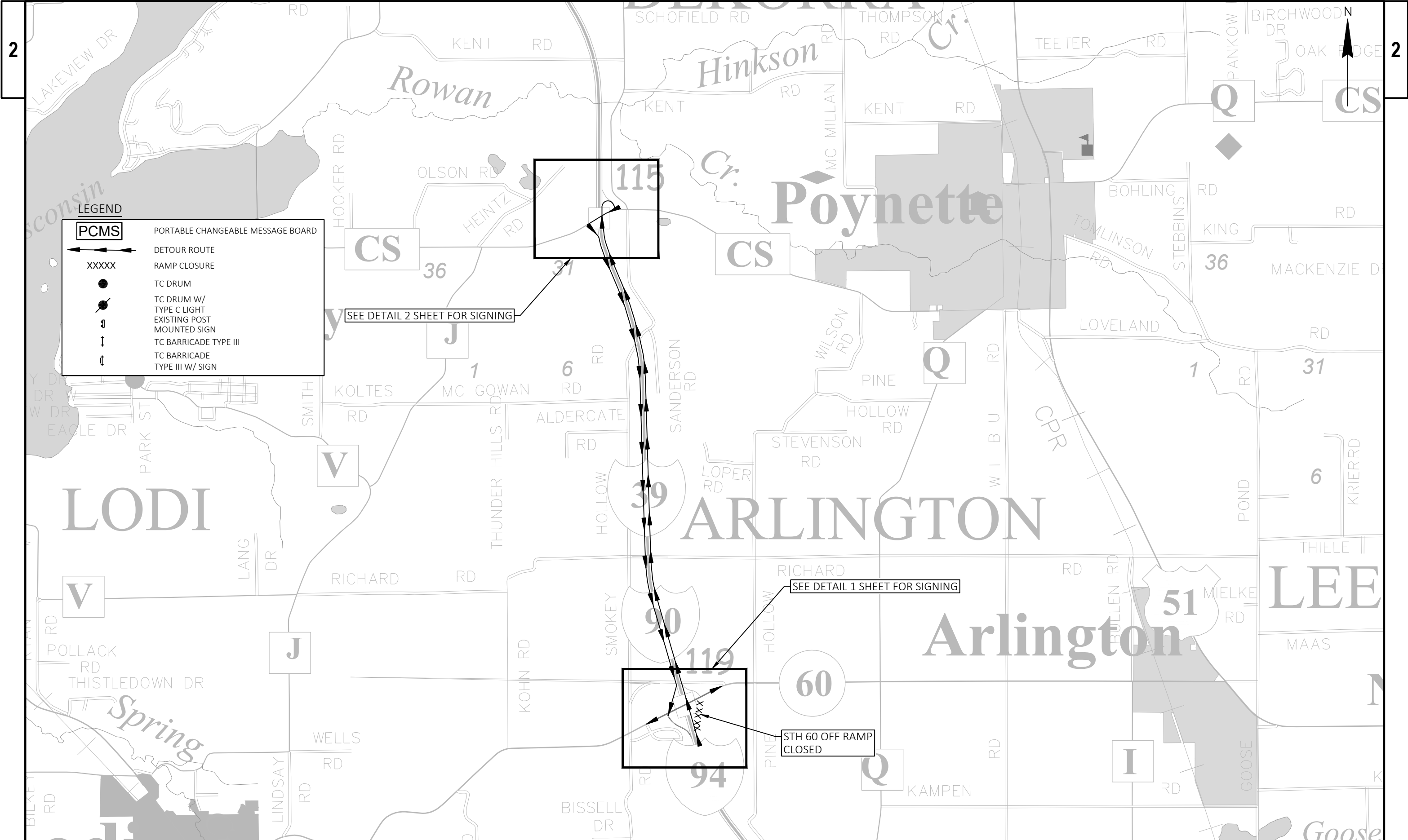
- 1) OUTSIDE LANE CLOSED DURING THE ALLOWABLE TIMES.
- 2) WHEN OUTSIDE THE ALLOWABLE TIMES FOR LANE CLOSURES, ALL THREE LANES OPEN TO TRAFFIC.

STANDARD DETAIL DRAWINGS REQUIRED

- 1) TRAFFIC CONTROL, DROP OFF SIGNING
- 2) TRAFFIC CONTROL, LANE CLOSURE
- 3) TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- 4) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
- 5) TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
- 6) MARKING AND SIGNING, ON-RAMP LANE CLOSURE



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	TEMPORARY BARRIER LAYOUT - STAGE 4B	SHEET	E
------------------------	------------	------------------	-------------------------------------	-------	----------



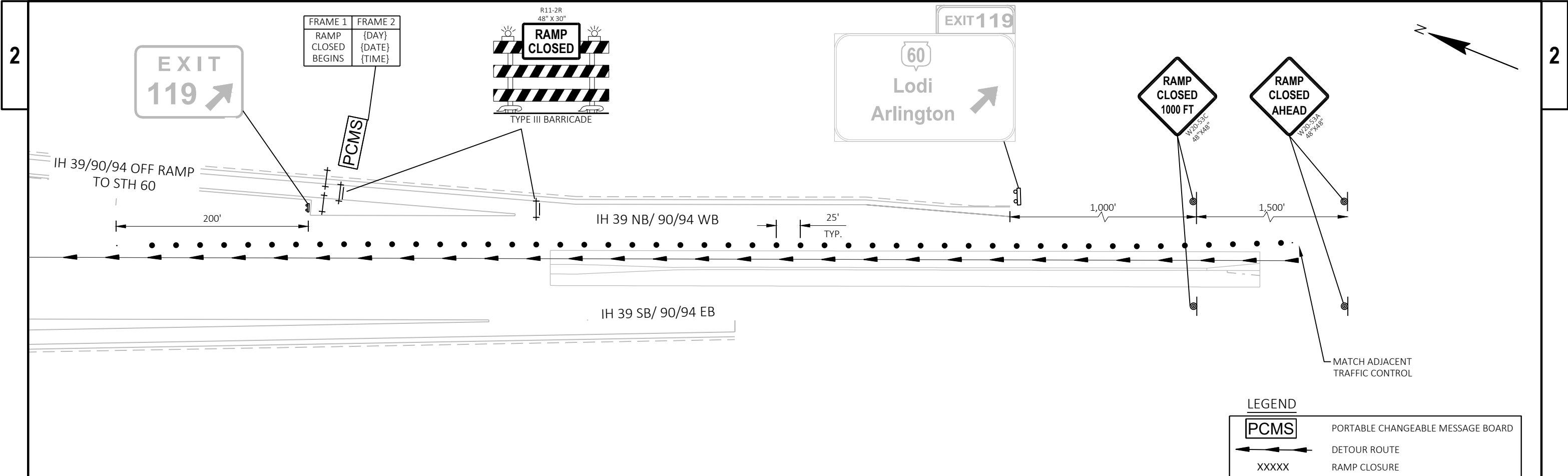
LEGEND

PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
	DETOUR ROUTE
	RAMP CLOSURE
	TC DRUM
	TC DRUM W/ TYPE C LIGHT
	EXISTING POST MOUNTED SIGN
	TC BARRICADE TYPE III
	TC BARRICADE TYPE III W/ SIGN

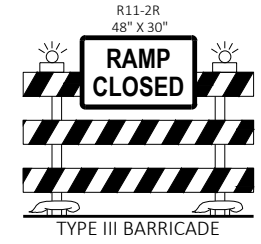
SEE DETAIL 2 SHEET FOR SIGNING

SEE DETAIL 1 SHEET FOR SIGNING

STH 60 OFF RAMP
CLOSED



FRAME 1	FRAME 2
RAMP CLOSED BEGINS	{DAY} {DATE} {TIME}



LEGEND

	PORTABLE CHANGEABLE MESSAGE BOARD
	DETOUR ROUTE
	RAMP CLOSURE
	TC DRUM
	TC DRUM W/ TYPE C LIGHT
	EXISTING POST MOUNTED SIGN
	TC BARRICADE TYPE III
	TC BARRICADE TYPE III W/ SIGN

NOTE: REFER TO SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE"



DURING CLOSURE

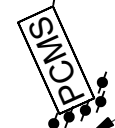
FRAME 1	FRAME 2
TO WIS 60	TURN RIGHT

DURING CLOSURE

FRAME 1	FRAME 2
TO WIS 60	TURN LEFT

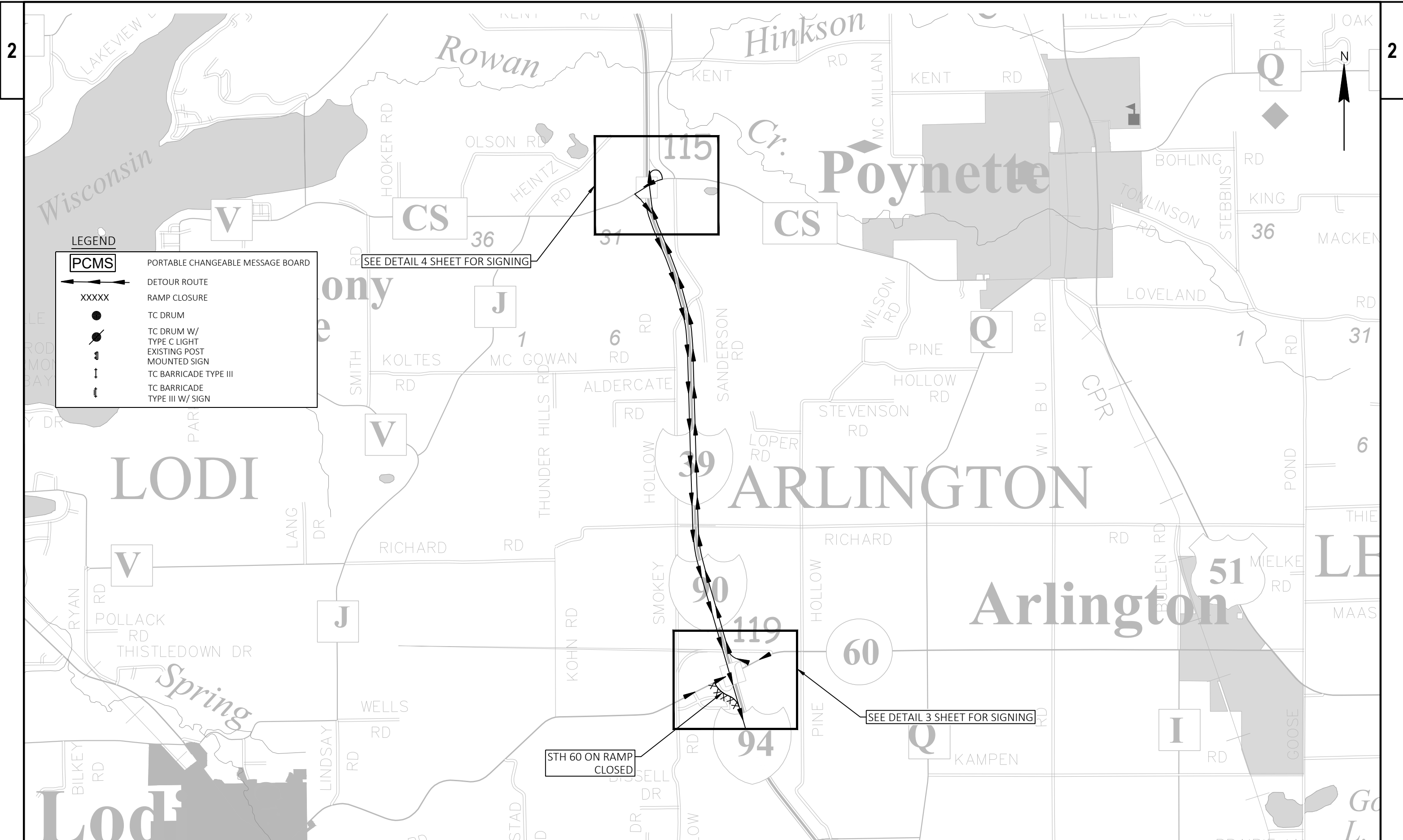
DURING CLOSURE

FRAME 1	FRAME 2
TO WIS 60	USE EXIT 115



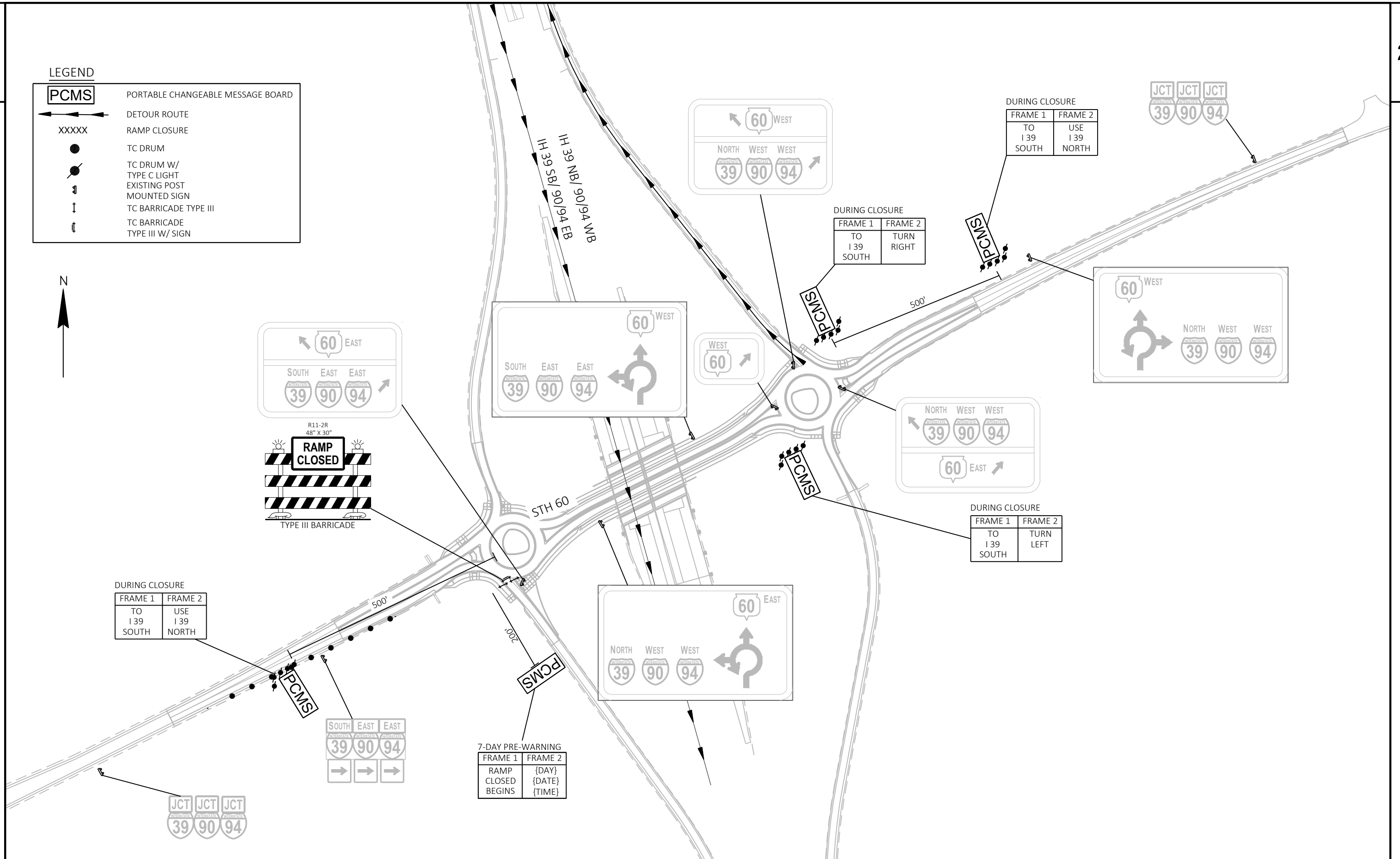
LEGEND

	PORTABLE CHANGEABLE MESSAGE BOARD
	DETOUR ROUTE
	RAMP CLOSURE
	TC DRUM
	TC DRUM W/ TYPE C LIGHT
	EXISTING POST MOUNTED SIGN
	TC BARRICADE TYPE III
	TC BARRICADE TYPE III W/ SIGN



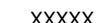







LEGEND

	PORTABLE CHANGEABLE MESSAGE BOARD
	DETOUR ROUTE
	RAMP CLOSURE
	TC DRUM
	TC DRUM W/ TYPE C LIGHT
	EXISTING POST
	MOUNTED SIGN
	TC BARRICADE TYPE III
	TC BARRICADE TYPE III W/ SIGN



LEGEND

-  PORTABLE CHANGEABLE MESSAGE BOARD
-  DETOUR ROUTE
-  RAMP CLOSURE
-  TC DRUM
-  TC DRUM W/
TYPE C LIGHT
-  EXISTING POST
MOUNTED SIGN
-  TC BARRICADE TYPE III
-  TC BARRICADE
TYPE III W/ SIGN

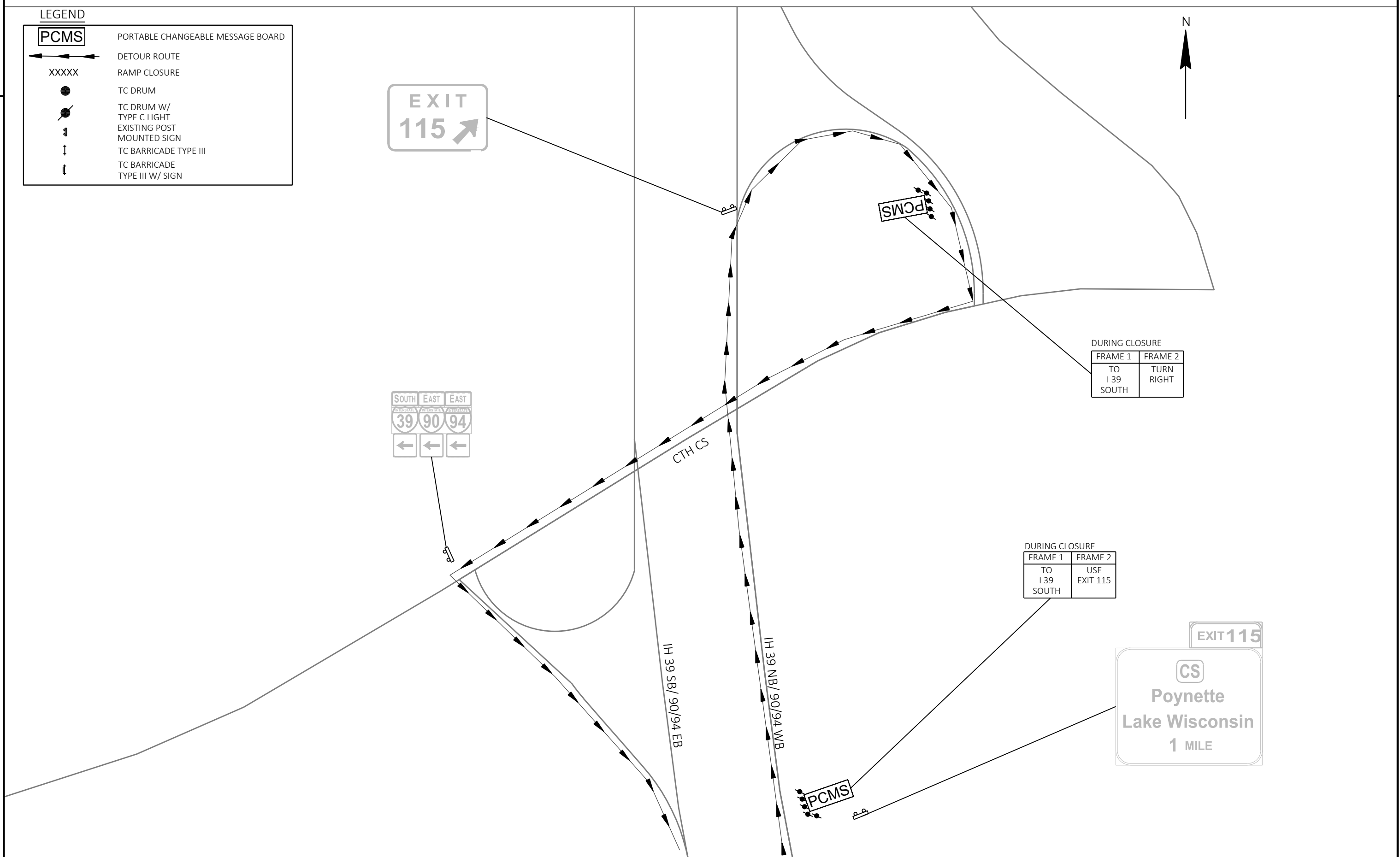


DURING CLOSURE

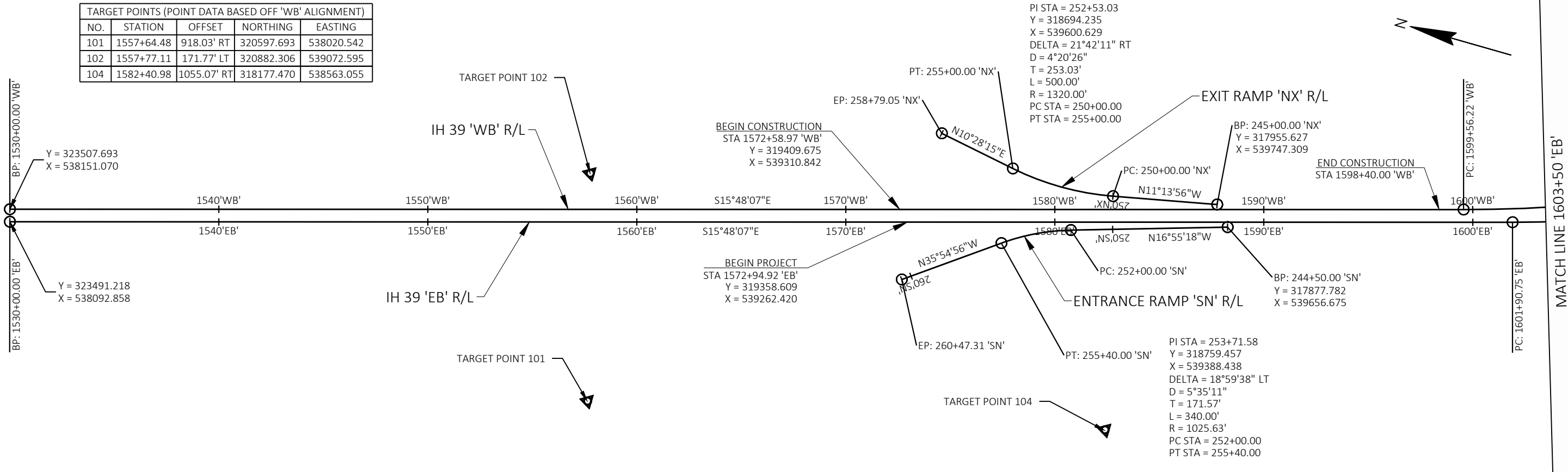
FRAME 1	FRAME 2
TO I 39 SOUTH	TURN RIGHT

DURING CLOSURE

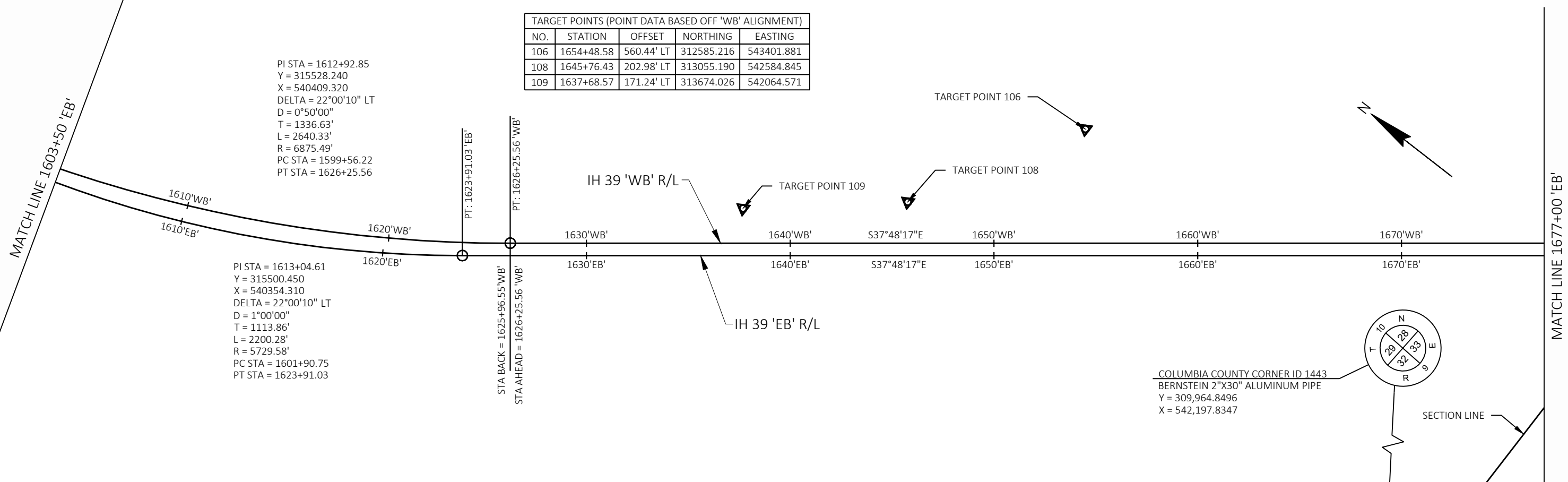
FRAME 1	FRAME 2
TO I 39 SOUTH	USE EXIT 115

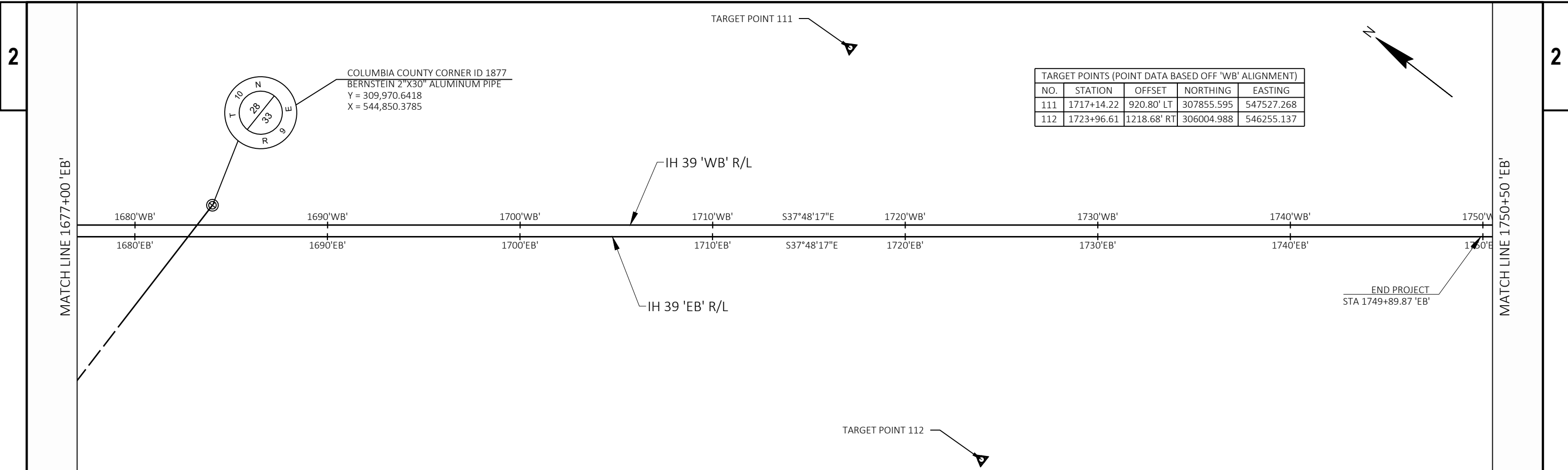


TARGET POINTS (POINT DATA BASED OFF 'WB' ALIGNMENT)				
NO.	STATION	OFFSET	NORTHING	EASTING
101	1557+64.48	918.03' RT	320597.693	538020.542
102	1557+77.11	171.77' LT	320882.306	539072.595
104	1582+40.98	1055.07' RT	318177.470	538563.055

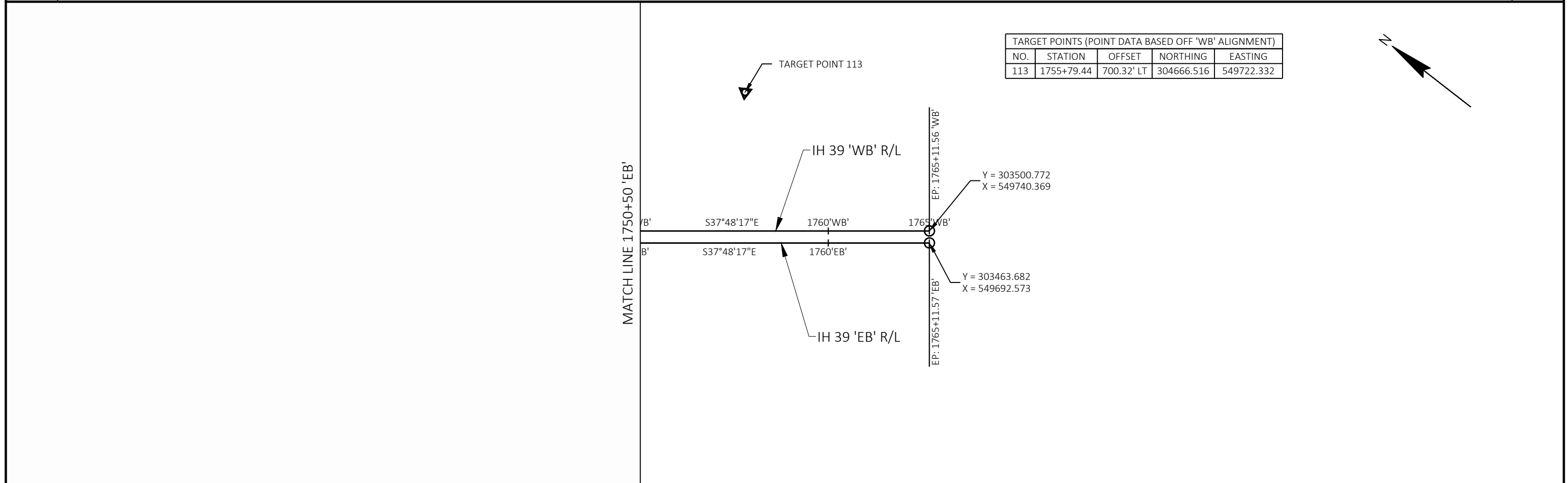


TARGET POINTS (POINT DATA BASED OFF 'WB' ALIGNMENT)				
NO.	STATION	OFFSET	NORTHING	EASTING
106	1654+48.58	560.44' LT	312585.216	543401.881
108	1645+76.43	202.98' LT	313055.190	542584.845
109	1637+68.57	171.24' LT	313674.026	542064.571





TARGET POINTS (POINT DATA BASED OFF 'WB' ALIGNMENT)				
NO.	STATION	OFFSET	NORTHING	EASTING
111	1717+14.22	920.80' LT	307855.595	547527.268
112	1723+96.61	1218.68' RT	306004.988	546255.137



TARGET POINTS (POINT DATA BASED OFF 'WB' ALIGNMENT)				
NO.	STATION	OFFSET	NORTHING	EASTING
113	1755+79.44	700.32' LT	304666.516	549722.332

Estimate Of Quantities

1011-00-82

Line	Item	Item Description	Unit	Total	Qty
0002	204.0105	Removing Concrete Pavement Butt Joints	SY	3,130.000	3,130.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,520.000	1,520.000
0006	204.0126.S	Removing Asphaltic Longitudinal Notched Wedge Joint Milling	LF	80,979.000	80,979.000
0008	204.0165	Removing Guardrail	LF	172.000	172.000
0010	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1011-00-82	EACH	1.000	1.000
0012	213.0100	Finishing Roadway (project) 01. 1011-00-82	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,274.000	1,274.000
0016	390.0100	Removing Pavement for Base Patching	CY	240.000	240.000
0018	390.0405	Base Patching Concrete SHES	CY	240.000	240.000
0020	416.0610	Drilled Tie Bars	EACH	260.000	260.000
0022	416.0620	Drilled Dowel Bars	EACH	1,040.000	1,040.000
0024	455.0605	Tack Coat	GAL	10,610.000	10,610.000
0026	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0028	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0030	460.0115.S	HMA Pavement Test Strip Volumetrics	EACH	1.000	1.000
0032	460.0120.S	HMA Pavement Test Strip Density	EACH	1.000	1.000
0034	460.2000	Incentive Density HMA Pavement	DOL	10,040.000	10,040.000
0036	460.2005	Incentive Density PWL HMA Pavement	DOL	8,960.000	8,960.000
0038	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	16,008.000	16,008.000
0040	460.2010	Incentive Air Voids HMA Pavement	DOL	14,540.000	14,540.000
0042	460.7424	HMA Pavement 4 HT 58-28 H	TON	14,540.000	14,540.000
0044	460.8624	HMA Pavement 4 SMA 58-28 V	TON	15,680.000	15,680.000
0046	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0048	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	38,650.000	38,650.000
0050	603.8125	Concrete Barrier Temporary Precast Installed	LF	4,789.000	4,789.000
0052	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	1,863.000	1,863.000
0054	611.8115	Adjusting Inlet Covers	EACH	55.000	55.000
0056	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0058	614.2300	MGS Guardrail 3	LF	325.000	325.000
0060	614.2500	MGS Thrie Beam Transition	LF	79.000	79.000
0062	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0064	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1011-00-82	EACH	1.000	1.000
0066	619.1000	Mobilization	EACH	1.000	1.000
0068	624.0100	Water	MGAL	19.900	19.900
0070	628.1504	Silt Fence	LF	575.000	575.000
0072	628.1520	Silt Fence Maintenance	LF	575.000	575.000
0074	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0076	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0078	628.7504	Temporary Ditch Checks	LF	15.000	15.000
0080	638.2102	Moving Signs Type II	EACH	2.000	2.000
0082	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0300	Traffic Control Drums	DAY	24,277.000	24,277.000
0088	643.0420	Traffic Control Barricades Type III	DAY	625.000	625.000
0090	643.0705	Traffic Control Warning Lights Type A	DAY	851.000	851.000
0092	643.0715	Traffic Control Warning Lights Type C	DAY	1,286.000	1,286.000
0094	643.0800	Traffic Control Arrow Boards	DAY	209.000	209.000
0096	643.0900	Traffic Control Signs	DAY	2,501.000	2,501.000
0098	643.0920	Traffic Control Covering Signs Type II	EACH	45.000	45.000
0100	643.1050	Traffic Control Signs PCMS	DAY	120.000	120.000

Estimate Of Quantities

1011-00-82

Line	Item	Item Description	Unit	Total	Qty
0102	643.1205.S	Basic Traffic Queue Warning System	DAY	56.000	56.000
0104	643.1500	Traffic Control Speed Radar Trailer	DAY	336.000	336.000
0106	643.3165	Temporary Marking Line Paint 6-Inch	LF	51,982.000	51,982.000
0108	643.4100	Traffic Control Interim Lane Closure	EACH	56.000	56.000
0110	643.5000	Traffic Control	EACH	1.000	1.000
0112	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	17,630.000	17,630.000
0114	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	69,835.000	69,835.000
0116	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	17,630.000	17,630.000
0118	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,617.000	2,617.000
0120	646.4705	Marking Line Same Day Paint 6-Inch	LF	49,365.000	49,365.000
0122	646.4805	Marking Line Same Day Paint 10-Inch	LF	2,617.000	2,617.000
0124	646.7220	Marking Chevron Epoxy 24-Inch	LF	141.000	141.000
0126	650.8000	Construction Staking Resurfacing Reference	LF	17,693.000	17,693.000
0128	650.9911	Construction Staking Supplemental Control (project) 01. 1011-00-82	EACH	1.000	1.000
0130	690.0250	Sawing Concrete	LF	2,600.000	2,600.000
0132	740.0440	Incentive IRI Ride	DOL	22,739.000	22,739.000
0134	SPV.0045	Special 01. Digital Speed Reduction System	DAY	56.000	56.000
0136	SPV.0060	Special 01. Removing Barrier Wall Lip	EACH	55.000	55.000
0138	SPV.0060	Special 02. Salvage and Reinstall Crash Cushion	EACH	2.000	2.000
0140	SPV.0060	Special 03. Crash Cushion Nose Cover Chevron	EACH	3.000	3.000

3

REMOVING BUTT JOINTS, MILLING, AND PAVEMENT FOR BASE PATCHING

STATION - STATION	LOCATION	204.0105 REMOVING CONCRETE PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY
1572+97 - 1574+97	IH 39 'EB'	670	--	--
1574+83 - 1576+83	IH 39 'WB'	800	--	--
1585+02 - 1586+43	IH 39 'EB', MEDIAN	110	--	--
1585+24 - 1586+43	IH 39 'WB', MEDIAN	110	--	--
1594+62 - 1596+27	IH 39 'EB', MEDIAN	190	--	--
1594+62 - 1596+27	IH 39 'WB', MEDIAN	190	--	--
1596+00 - 1598+00	IH 39 'WB'	--	1340	--
1748+30 - 1748+90	IH 39 'EB', MEDIAN	50	--	--
1748+90 - 1749+90	IH 39 'EB'	670	--	--
253+76 - 254+76	STH 60 ON-RAMP 'SN'	170	90	--
248+38 - 249+38	STH 60 OFF-RAMP 'XN'	170	90	--
UNDISTRIBUTED		--	--	240
PROJECT TOTALS		3,130	1,520	240

REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING

STATION - STATION	LOCATION	204.0126.S REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING LF
1572+97 - 1749+90	IH 39 'EB'	70,771
1574+83 - 1598+00	IH 39 'WB'	9,268
244+57 - 254+79	STH 60 ON-RAMP 'SN'	725
245+00 - 249+38	STH 60 OFF-RAMP 'XN'	215
PROJECT TOTALS		80,979

NOTE: ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT AND AS DIRECTED BY ENGINEER

3

REMOVING GUARDRAIL

STATION - STATION	OFFSET	204.0165 REMOVING GUARDRAIL LF
1648+70 - 1649+68	RT	99
1736+12 - 1736+85	RT	73
PROJECT TOTALS		172

BASE AGGREGATE DENSE

STATION - STATION	ALIGNMENT	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL
1572+97 - 1580+00	EB	IH 39, SHOULDER	33	0.5
1588+72 - 1646+07	EB	IH 39, SHOULDER	267	4.1
1646+07 - 1649+68	EB	IH 39, GUARDRAIL AREA SHOULDER	72	1.1
1649+68 - 1733+25	EB	IH 39, SHOULDER	389	5.9
1733+25 - 1736+85	EB	IH 39, GUARDRAIL AREA SHOULDER	69	1.1
1736+85 - 1749+90	EB	IH 39, SHOULDER	61	1.0
1574+83 - 1585+40	WB	IH 39, SHOULDER	49	0.8
1588+15 - 1598+00	WB	IH 39, SHOULDER	46	0.7
244+57 - 253+69	SN	RAMP OUTSIDE SHOULDERS	89	1.4
253+69 - 254+76	SN	RAMP BOTH SHOULDERS	15	0.3
245+00 - 247+38	NX	RAMP OUTSIDE SHOULDERS	23	0.4
247+38 - 249+38	NX	RAMP BOTH SHOULDERS	29	0.5
UNDISTRIBUTED			133	2.1
PROJECT TOTALS			1,274	19.9

BASE PATCHING CONCRETE SHES

STATION - STATION	LOCATION	390.0405 BASE PATCHING CONCRETE SHES CY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	690.0250 SAWING CONCRETE LF
UNDISTRIBUTED	IH 39, MAINLINE	240	260	1,040	2,600
PROJECT TOTALS		240	260	1,040	2,600

3

3

ASPHALTIC ITEMS

ROADWAY	STATION	- STATION	LOCATION	455.0605	460.7424	460.8624	460.0105.S	460.0110.S	460.0115.S	460.0120.S	460.9000.S	NOTES
				TACK COAT	HMA PAVEMENT 4 HT 58-28 H	HMA PAVEMENT 4 SMA 58-28 V	HMA PWL TEST STRIP VOLUMETRICS	HMA PWL TEST STRIP DENSITY	HMA PAVEMENT TEST STRIP VOLUMETRICS	HMA PAVEMENT TEST STRIP DENSITY	MATERIAL TRANSFER VEHICLE	
IH 39 SOUTHBOUND / IH 90/94 EASTBOUND	1572+97	- 1574+97	CONCRETE PAVEMENT BUTT JOINT	100	80	150	--	--	--	--	--	
	1574+97	- 1747+90	MAINLINE	5,230	7,750	7,750	--	--	--	--	--	
	1574+97	- 1580+00	OUTSIDE SHOULDER	50	70	70	--	--	--	--	--	
	1599+68	- 1747+90	OUTSIDE SHOULDER	1,250	1,850	1,850	--	--	--	--	--	
	1574+97	- 1747+90	MEDIAN SHOULDER	2,060	2,280	3,040	--	--	--	--	--	
	1747+90	- 1749+90	CONCRETE PAVEMENT BUTT JOINT	100	80	150	--	--	--	--	--	
IH 39 NORTHBOUND / IH 90/94 WESTBOUND	1574+83	- 1576+83	CONCRETE PAVEMENT BUTT JOINT	100	100	150	--	--	--	--	--	
	1576+83	- 1598+00	MAINLINE	650	950	950	--	--	--	--	--	
	1574+83	- 1585+40	OUTSIDE SHOULDER	90	140	140	--	--	--	--	--	
	1592+67	- 1598+00	OUTSIDE SHOULDER	50	70	70	--	--	--	--	--	
	1574+83	- 1598+00	MEDIAN SHOULDER	280	320	420	--	--	--	--	--	
STH 60 ON-RAMP	252+79	- 254+76	CONCRETE PAVEMENT BUTT JOINT	50	30	80	--	--	--	--	--	
	244+50	- 252+79	15' RAMP LANE	110	160	160	--	--	--	--	--	
	1588+29	- 1589+74	RAMP LANE TAPER	20	30	30	--	--	--	--	--	
	1589+74	- 1596+27	12' RAMP LANE	70	100	100	--	--	--	--	--	
	1596+27	- 1599+68	RAMP LANE TAPER	20	30	30	--	--	--	--	--	
	244+50	- 252+79	OUTSIDE SHOULDER	40	60	60	--	--	--	--	--	
	1588+29	- 1596+27	OUTSIDE SHOULDER	40	50	50	--	--	--	--	--	
	1596+27	- 1599+68	OUTSIDE SHOULDER TAPER	30	40	40	--	--	--	--	--	
	1580+00	- 1587+25	GORE	70	100	100	--	--	--	--	--	
STH 60 OFF-RAMP	247+38	- 249+38	CONCRETE PAVEMENT BUTT JOINT	40	30	60	--	--	--	--	--	
	245+00	- 247+38	15' RAMP LANE	30	50	50	--	--	--	--	--	
	1587+77	- 1588+15	RAMP LANE TAPER	10	10	10	--	--	--	--	--	
	1588+15	- 1591+17	12' RAMP LANE	40	50	50	--	--	--	--	--	
	1591+17	- 1592+67	RAMP LANE TAPER	10	20	20	--	--	--	--	--	
	245+00	- 247+38	OUTSIDE SHOULDER	10	20	20	--	--	--	--	--	
	1587+77	- 1592+05	OUTSIDE SHOULDER	20	30	30	--	--	--	--	--	
	1592+05	- 1592+67	OUTSIDE SHOULDER TAPER	10	10	10	--	--	--	--	--	
	1585+39	- 1587+52	GORE	20	30	30	--	--	--	--	--	
MEDIAN OPENING	1595+00	MEDIAN	10	--	10	--	--	--	--	--		
	PROJECT LIMITS	TEST STRIP	--	--	--	1	--	--	--	--	ONE PER HMA MIX TYPE	
	PROJECT LIMITS	TEST STRIP	--	--	--	--	1	--	--	--	ONE PER MAT OF HMA	
	PROJECT LIMITS	TEST STRIP	--	--	--	--	--	1	1	--	ONE PER SMA MIX TYPE	
	PROJECT LIMITS	IH 39	--	--	--	--	--	--	--	1		
PROJECT TOTALS				10,610	14,540	15,680	1	1	1	1	1	

3

3

PWL MIXTURE USE TABLE								
STATION	LOCATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							DENSITY ACCEPTANCE	MIXTURE ACCEPTANCE
1572+97 - 1749+90	IH 39, MAINLINE	UPPER LAYER	4 HT 58-28 H	4 SMA 58-28 V	9,150	2"	INCENTIVE DENSITY HMA PAVEMENT 460.2000	QMP AS PER SS 460
1572+97 - 1749+90	IH 39, SHOULDERS	UPPER LAYER	4 HT 58-28 H	4 SMA 58-28 V	5,590	2"	INCENTIVE DENSITY HMA PAVEMENT 460.2000	QMP AS PER SS 460
1572+97 - 1749+90	IH 39, MAINLINE	LOWER LAYER	CONCRETE PAVEMENT	4 HT 58-28 H	8,960	2"	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010
1572+97 - 1749+90	IH 39, SHOULDERS	LOWER LAYER	CONCRETE PAVEMENT	4 HT 58-28 H	4,730	2"	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010
244+50'SN' - 254+76'SN', 245+00'NX' - 249+38'NX', 1580+00 - 1599+68	IH 39, RAMPS	UPPER LAYER	4 HT 58-28 H	4 SMA 58-28 V	590	2"	INCENTIVE DENSITY HMA PAVEMENT 460.2000	QMP AS PER SS 460
244+50'SN' - 254+76'SN', 245+00'NX' - 249+38'NX', 1580+00 - 1599+68	IH 39, RAMP SHOULDERS	UPPER LAYER	4 HT 58-28 H	4 SMA 58-28 V	350	2"	INCENTIVE DENSITY HMA PAVEMENT 460.2000	QMP AS PER SS 460
244+50'SN' - 254+76'SN', 245+00'NX' - 249+38'NX', 1580+00 - 1599+68	IH 39, RAMPS	LOWER LAYER	CONCRETE PAVEMENT	4 HT 58-28 H	510	2"	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010
244+50'SN' - 254+76'SN', 245+00'NX' - 249+38'NX', 1580+00 - 1599+68	IH 39, RAMP SHOULDERS	LOWER LAYER	CONCRETE PAVEMENT	4 HT 58-28 H	340	2"	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010

ASPHALTIC RUMBLE STRIPS

465.0510
ASPHALTIC
RUMBLE STRIPS
SHOULDER
DIVIDED ROADWAY

STATION	-	STATION	LOCATION	LF
1572+97	-	1749+90	IH 39, 'EB', MEDIAN	17,700
1572+97	-	1580+01	IH 39, 'EB', OUTSIDE	710
1590+27	-	1749+90	IH 39, 'EB', OUTSIDE	15,970
1574+83	-	1598+00	IH 39, 'WB', MEDIAN	2,320
1574+83	-	1585+38	IH 39, 'WB', OUTSIDE	1,060
1589+15	-	1598+00	IH 39, 'WB', OUTSIDE	890
PROJECT TOTALS				38,650

ADJUSTING INLET COVERS

611.8115 SPV.0060.01
ADJUSTING REMOVING
INLET BARRIER
COVERS WALL LIP
EACH EACH

STATION	LOCATION	EACH	EACH
1573+00	'EB' MEDIAN	1	1
1576+00	'EB' MEDIAN	1	1
1576+00	'WB' MEDIAN	1	1
1579+00	'EB' MEDIAN	1	1
1579+00	'WB' MEDIAN	1	1
1582+25	'EB' MEDIAN	1	1
1582+25	'WB' MEDIAN	1	1
1585+00	'EB' MEDIAN	1	1
1585+00	'WB' MEDIAN	1	1
1596+50	'EB' MEDIAN	1	1
1596+50	'WB' MEDIAN	1	1
1600+20	'EB' MEDIAN	1	1
1603+00	'EB' MEDIAN	1	1
1605+20	'EB' MEDIAN	1	1
1609+75	'EB' MEDIAN	1	1
1612+50	'EB' MEDIAN	1	1
1615+15	'EB' MEDIAN	1	1
1618+00	'EB' MEDIAN	1	1
1621+15	'EB' MEDIAN	1	1
1625+00	'EB' MEDIAN	1	1
1628+00	'EB' MEDIAN	1	1
1635+50	'EB' MEDIAN	1	1
1640+15	'EB' MEDIAN	1	1
1644+50	'EB' MEDIAN	1	1
1649+35	'EB' MEDIAN	1	1
1653+00	'EB' MEDIAN	1	1
1656+15	'EB' MEDIAN	1	1
1659+00	'EB' MEDIAN	1	1
1662+00	'EB' MEDIAN	1	1
1664+20	'EB' MEDIAN	1	1
1668+00	'EB' MEDIAN	1	1
1671+00	'EB' MEDIAN	1	1
1674+20	'EB' MEDIAN	1	1
1678+00	'EB' MEDIAN	1	1
1682+20	'EB' MEDIAN	1	1
1685+00	'EB' MEDIAN	1	1
1688+00	'EB' MEDIAN	1	1
1692+15	'EB' MEDIAN	1	1
1695+00	'EB' MEDIAN	1	1
1698+00	'EB' MEDIAN	1	1
1701+15	'EB' MEDIAN	1	1
1705+00	'EB' MEDIAN	1	1
1709+15	'EB' MEDIAN	1	1
1712+00	'EB' MEDIAN	1	1
1715+00	'EB' MEDIAN	1	1
1718+75	'EB' MEDIAN	1	1
1722+00	'EB' MEDIAN	1	1
1726+15	'EB' MEDIAN	1	1
1730+00	'EB' MEDIAN	1	1
1734+00	'EB' MEDIAN	1	1
1736+80	'EB' MEDIAN	1	1
1740+00	'EB' MEDIAN	1	1
1743+00	'EB' MEDIAN	1	1
1745+15	'EB' MEDIAN	1	1
1748+75	'EB' MEDIAN	1	1
PROJECT TOTALS		55	55

GUARDRAIL

614.0010 614.2300 614.2500 614.2610
BARRIER SYSTEM MGS MGS MGS
GRADING GUARDRAIL THRIE BEAM GUARDRAIL
SHAPING 3 THRIE BEAM TERMINAL
FINISHING 3 TRANSITION EAT
EACH LF LF EACH

STATION	STATION	OFFSET	EACH	LF	LF	EACH
1646+08	- 1649+68	RT	1	---	---	---
1647+13	- 1647+66	RT	---	---	---	1
1647+66	- 1649+28	RT	---	162.5	---	---
1649+28	- 1649+68	RT	---	---	39.4	---
1733+25	- 1736+85	RT	1	---	---	---
1734+30	- 1734+83	RT	---	---	---	1
1734+83	- 1736+46	RT	---	162.5	---	---
1736+46	- 1736+85	RT	---	---	39.4	---
PROJECT TOTALS			2	325	79	2

BARRIER SYSTEM GRADING SHAPING FINISHING, ITEM 614.0010 *

STATION	STATION	LOCATION	BORROW CY	SALVAGED TOPSOIL SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 70A LB	SEEDING NURSE CROP LB	SEED WATER MGAL	EROSION MAT CLASS II TYPE B SY	CONSTRUCTION STAKING SLOPE LF
1645+00	- 1649+68	RT	91	424	1	2	3	10	424	468
1732+00	- 1736+85	RT	32	179	1	1	1	4	179	485
PROJECT TOTALS			123	602	2	2	4	14	602	953

* ITEMS AND QUANTITIES IN THIS TABLE LISTED FOR BID INFORMATION ONLY

PROJECT NO: 1011-00-82

HWY: IH 39

COUNTY: COLUMBIA

MISCELLANEOUS QUANTITIES

SHEET

E

STAGE	STATION	STATION	OFFSET	LOCATION	603.8125 BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORAY PRECAST LF	SPV.0060.02 SALVAGE AND REINSTALL CRASH CUSHION EACH	** BACK WIDTH FT	** OBJECT MARKING PATTERN	** CRASH TEST LEVEL	** TRAFFIC DIRECTION	** TRAFFIC LOCATION	** CRASH CUSHION SHIELDS
1A	1585+31'EB - 1594+72'EB	LT		EB MEDIAN	950	--	--	2	OM-3C (W5-58M)	TL-3	BIDIRECTIONAL	LT/RT	CONCRETE BARRIER
	1585+59'WE - 594+72'WE	RT		WB MEDIAN	913	--	--	2	OM-3C (W5-58M)	TL-3	BIDIRECTIONAL	LT/RT	CONCRETE BARRIER
3A	.594+90'WB'	RT		MEDIAN	--	--	--	2	OM-3C (W5-58M)	TL-3	BIDIRECTIONAL	LT/RT	CONCRETE BARRIER
	1585+31'EB - 1594+72'EB	LT		EB MEDIAN	1063	--	--	--	--	--	--	--	--
	1585+59'WE - 594+72'WE	RT		WB MEDIAN	913	913	1	2	OM-3C (W5-58M)	TL-3	BIDIRECTIONAL	LT/RT	CONCRETE BARRIER
4A	1585+31'EB - 1594+72'EB	LT		EB MEDIAN	950	950	--	--	--	--	--	--	--
	1594+72'EB'	LT		MEDIAN	--	--	1	2	OM-3C (W5-58M)	TL-3	BIDIRECTIONAL	LT/RT	CONCRETE BARRIER
PROJECT TO PROJECT TOTALS					4,789	1,863	2						

** FOR INFORMATION ONLY

EROSION CONTROL MOBILIZATION

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
	IH 39	2
PROJECT TOTALS	2	2

EROSION CONTROL

STATION	STATION	OFFSET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7504 TEMPORARY DITCH CHECKS LF	
			1645+00	-	1649+68	RT
1732+00	-	1736+85	RT	175	175	15
PROJECT TOTALS				575	575	15

3

3

MOVING SIGNS AND MOVING SIGN SUPPORTS

		638.2102		638.4000	
		MOVING SIGNS		MOVING SMALL SIGN	
		TYPE II		SUPPORTS	
STATION	LOCATION	EACH		EACH	
				SIGN MESSAGE	
1593+82	31'LT	1		1	
1593+82	31'LT	1		-	
PROJECT TOTALS		2		1	

TRAFFIC CONTROL - DRUMS, BARRICADES, WARNING LIGHTS, ARROW BOARDS, AND SIGNS CONTINUED

ROADWAY	DAYS IN SERVICE	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		643.1205.S		643.1500		643.4100	
		TRAFFIC CONTROL DRUMS	(DAY)	TRAFFIC CONTROL BARRICADES	(DAY)	TRAFFIC CONTROL WARNING LIGHTS	(DAY)	TRAFFIC CONTROL WARNING LIGHTS	(DAY)	TRAFFIC CONTROL ARROW BOARDS	(DAY)	TRAFFIC CONTROL SIGNS	(DAY)	TRAFFIC CONTROL PCMS	(DAY)	TRAFFIC CONTROL WARNING SYSTEM	(DAYS)	TRAFFIC CONTROL RADAR TRAILER	(DAY)	TRAFFIC CONTROL INTERIM LANE CLOSURE	(EACH)
<u>IH 39 PRE WARNING</u>																					
WB	7	5	35	--	--	--	--	--	--	--	--	--	--	1	7	--	--	--	--	--	--
EB	7	5	35	--	--	--	--	--	--	--	--	--	--	1	7	--	--	--	--	--	--
PCMS MESSAGE: ROAD WORK BEGINS XXXDAY X/X/XX																					
<u>IH 39 WB - STAGE 1A</u>																					
DOUBLE LANE CLOSURE	2	209	418	5	10	6	12	26	52	3	6	31	62	1	2	2	6	12	2		
SINGLE LANE CLOSURE	1	165	165	4	4	8	8	13	13	2	2	27	27	1	1	1	6	6	1		
SHOULDER CLOSURE	2	40	80	--	--	--	--	--	--	1	2	8	16	--	--	--	--	--	--		
<u>IH 39 WB - STAGE 1B</u>																					
DOUBLE LANE CLOSURE	3	209	627	5	15	6	18	26	78	3	9	31	93	1	3	3	6	18	3		
SINGLE LANE CLOSURE	1	204	204	4	4	8	8	13	13	2	2	27	27	1	1	1	6	6	1		
SHOULDER CLOSURE	2	40	80	--	--	--	--	--	--	1	2	8	16	--	--	--	--	--	--		
<u>IH 39 WB - STAGE 2A</u>																					
DOUBLE LANE CLOSURE	1	209	209	5	5	6	6	26	26	3	3	31	31	1	1	1	6	6	1		
SINGLE LANE CLOSURE	1	165	165	4	4	8	8	13	13	2	2	27	27	1	1	1	6	6	1		
SHOULDER CLOSURE	2	40	80	--	--	--	--	--	--	1	2	8	16	--	--	--	--	--	--		
<u>IH 39 WB - STAGE 2B</u>																					
DOUBLE LANE CLOSURE	1	209	209	5	5	6	6	26	26	3	3	31	31	1	1	1	6	6	1		
SINGLE LANE CLOSURE	1	165	165	4	4	8	8	13	13	2	2	27	27	1	1	1	6	6	1		
SHOULDER CLOSURE	2	40	80	--	--	--	--	--	--	1	2	8	16	--	--	--	--	--	--		
PAGE TOTAL		2,552		51		74		234		37		389		25		11		66		11	

TRAFFIC CONTROL - DRUMS, BARRICADES, WARNING LIGHTS, ARROW BOARDS, AND SIGNS CONTINUED

ROADWAY	DAYS IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS NO. (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. (DAY)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO. (DAY)	643.0800 TRAFFIC CONTROL ARROW BOARDS NO. (DAY)	643.0900 TRAFFIC CONTROL SIGNS NO. (DAY)	643.1050 TRAFFIC CONTROL PCMS NO. (DAY)	643.1205.S TRAFFIC QUEUE WARNING SYSTEM (DAYS)	643.1500 TRAFFIC CONTROL SPEED RADAR TRAILER NO. (DAY)	643.4100 TRAFFIC CONTROL INTERIM LANE CLOSURE (EACH)
IH 39 EB - STAGE 3A											
DOUBLE LANE CLOSURE	6	369 2,214	16 96	17 102	26 156	3 18	42 252	1 6	6	6 36	6
SINGLE LANE CLOSURE	2	165 330	4 8	8 16	13 26	2 4	27 54	1 2	2	6 12	2
SHOULDER CLOSURE	7	200 1,400	-- --	-- --	-- --	1 7	8 56	-- --	--	-- --	--
IH 39 EB - STAGE 3B											
DOUBLE LANE CLOSURE	10	369 3,690	16 160	17 170	26 260	3 30	42 420	1 10	10	6 60	10
SINGLE LANE CLOSURE	2	165 330	4 8	8 16	13 26	2 4	27 54	1 2	2	6 12	2
SHOULDER CLOSURE	16	200 3,200	-- --	-- --	-- --	1 16	8 128	-- --	--	-- --	--
IH 39 EB - STAGE 4A											
DOUBLE LANE CLOSURE	5	369 1,845	16 80	17 85	26 130	3 15	42 210	1 5	5	6 30	5
SINGLE LANE CLOSURE	4	315 1,260	14 56	28 112	13 52	2 8	37 148	1 4	4	6 24	4
SHOULDER CLOSURE	10	200 2,000	-- --	-- --	-- --	1 10	8 80	-- --	--	-- --	--
IH 39 EB - STAGE 4B											
DOUBLE LANE CLOSURE	8	209 1,672	5 40	5 40	26 208	3 24	30 240	1 8	8	6 48	8
SINGLE LANE CLOSURE	8	315 2,520	14 112	28 224	13 104	2 16	37 296	1 8	8	6 48	8
SHOULDER CLOSURE	20	40 800	-- --	-- --	-- --	1 20	8 160	-- --	--	-- --	--
DETOUR - IH 39 NB & 90/94 WB OFF-RAMP TO STH 60 RAMP PRE-WARN											
	2	55 110	4 8	4 8	15 30	-- --	6 12	4 8	--	-- --	--
	7	5 35	-- --	-- --	-- --	-- --	-- --	2 14	--	-- --	--
DETOUR - STH 60 ON-RAMP TO IH 39 SB & 90/94 EB RAMP PRE-WARN											
	2	142 284	3 6	2 4	30 60	-- --	1 2	7 14	--	-- --	--
	7	5 35	-- --	-- --	-- --	-- --	-- --	2 14	--	-- --	--
PAGE TOTAL		21,725	574	777	1,052	172	2,112	95	45	270	45
PROJECT TOTAL		24,277	625	851	1,286	209	2,501	120	56	336	56

BASIC TRAFFIC QUEUE WARNING SYSTEM (QWS ITEM 643.1205.S)				
LOCATION	STAGE	FLASHING BEACON SIGNS (FBS)	PORTABLE TRAFFIC SENSORS (PTS)	BASIC QUEUE WARNING SYSTEM (DAY)
IH 39 'WB'	1A, 1B, 2A, 2B	6	3	11
IH 39 'EB'	3A, 3B, 4A, 4B	6	3	45

* These items are part of the QWS and are paid for one complete system per roadway.

COVERING SIGNS FOR TRAFFIC CONTROL				
STAGE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II			COMMENTS
	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	
STAGE 3A	8	8	1	70 MPH SIGN, STA 1615+70'EB'+/-, RT
STAGE 3B	12	12	1	70 MPH SIGN, STA 1615+70'EB'+/-, RT
STAGE 4A	9	9	1	70 MPH SIGN, STA 1615+70'EB'+/-, RT
STAGE 4B	16	16	1	70 MPH SIGN, STA 1615+70'EB'+/-, RT
TOTAL	45			

3

3

PAVEMENT MARKING ITEMS

STATION - STATION	ROADWAY	LOCATION / TYPE	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH		646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH		646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH		646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH		646.4705 MARKING LINE SAME DAY PAINT 6-INCH		646.4805 MARKING LINE SAME DAY PAINT 10-INCH		646.7220 MARKING CHEVRON EPOXY 24-INCH
			YELLOW	WHITE	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	
			LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	
1572+97 - 1749+90	IH 39 'EB'	EDGE LINE (SOLID)	17,700	16,020	---	17,700	16,020	---	---	---	---	17,700	16,020	---	---	---
1572+97 - 1749+90	IH 39 'EB'	LANE LINE (DASHED)	---	8,850	8,850	---	---	---	8,850	---	---	---	8,850	---	---	---
1574+83 - 1598+00	IH 39 'WB'	EDGE LINE (SOLID)	2,320	1,520	---	2,320	1,520	---	---	---	---	2,320	1,520	---	---	---
1574+83 - 1598+00	IH 39 'WB'	LANE LINE (DASHED)	---	1,160	1,160	---	---	---	1,160	---	---	---	1,160	---	---	---
1598+00 - 1750+38	IH 39 'WB'	EDGE LINE (SOLID)	---	---	---	15,240	15,240	---	---	---	---	---	---	---	---	---
1598+00 - 1750+38	IH 39 'WB'	LANE LINE (DASHED)	---	---	7,620	---	---	---	7,620	---	---	---	---	---	---	---
244+50 - 254+76	STH 60 ON-RAMP	EDGE LINE (SOLID)	150	1,021	---	150	1,021	---	---	---	---	150	1,021	---	---	---
244+50 - 253+26	STH 60 ON-RAMP	GORE	---	1,881	---	---	---	---	---	---	1,881	---	---	---	1,881	---
245+00 - 249+38	STH 60 OFF-RAMP	EDGE LINE (SOLID)	150	474	---	150	474	---	---	---	---	150	474	---	---	---
245+00 - 247+89	STH 60 OFF-RAMP	GORE	---	736	---	---	---	---	---	---	736	---	---	---	736	141
PROJECT TOTALS			51,982		17,630	69,835		17,630		2,617		49,365		2,617		141

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE		650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1011-00-82)	
		LF	EACH	LF	EACH
1572+97 - 1749+90	IH 39	17,693	---	---	1
PROJECT TOTALS		17,693			1

CRASH CUSHION NOSE COVER CHEVRON

STATION	LOCATION	SPV.0060.03 CRASH CUSHION NOSE COVER CHEVRON	
		EACH	
1594+90'WB'	MEDIAN	1	
1749+43'EB'	MEDIAN	1	
1749+72'EB'	MEDIAN	1	
PROJECT TOTALS		3	

PROJECT NO: 1011-00-82

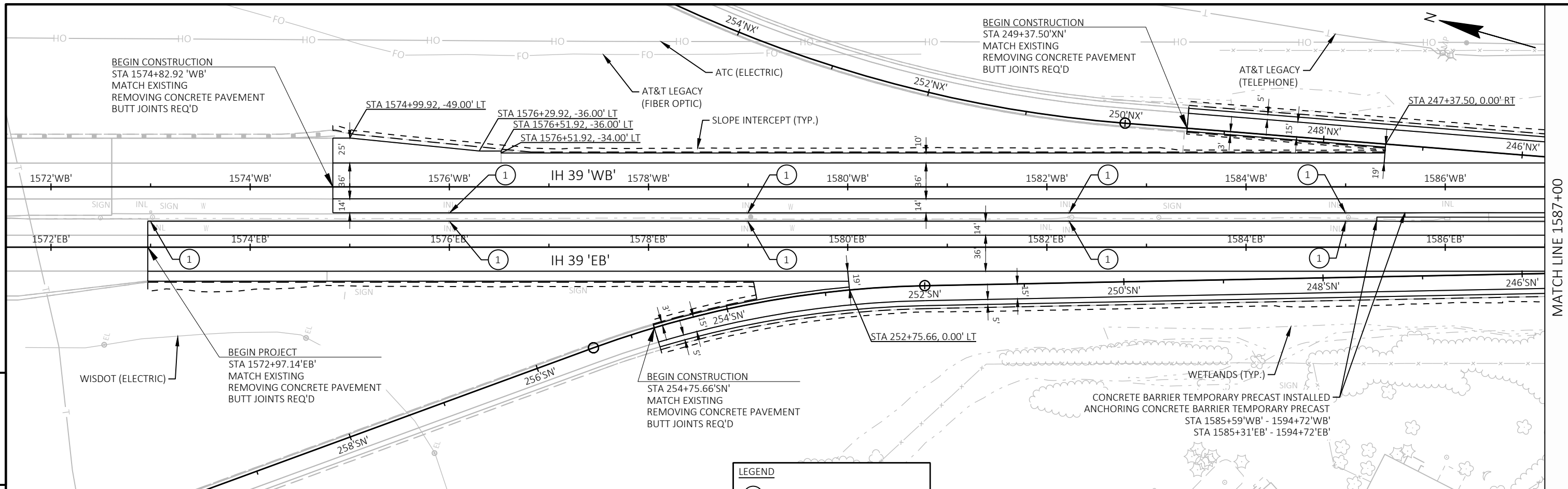
HWY: IH 39

COUNTY: COLUMBIA

MISCELLANEOUS QUANTITIES

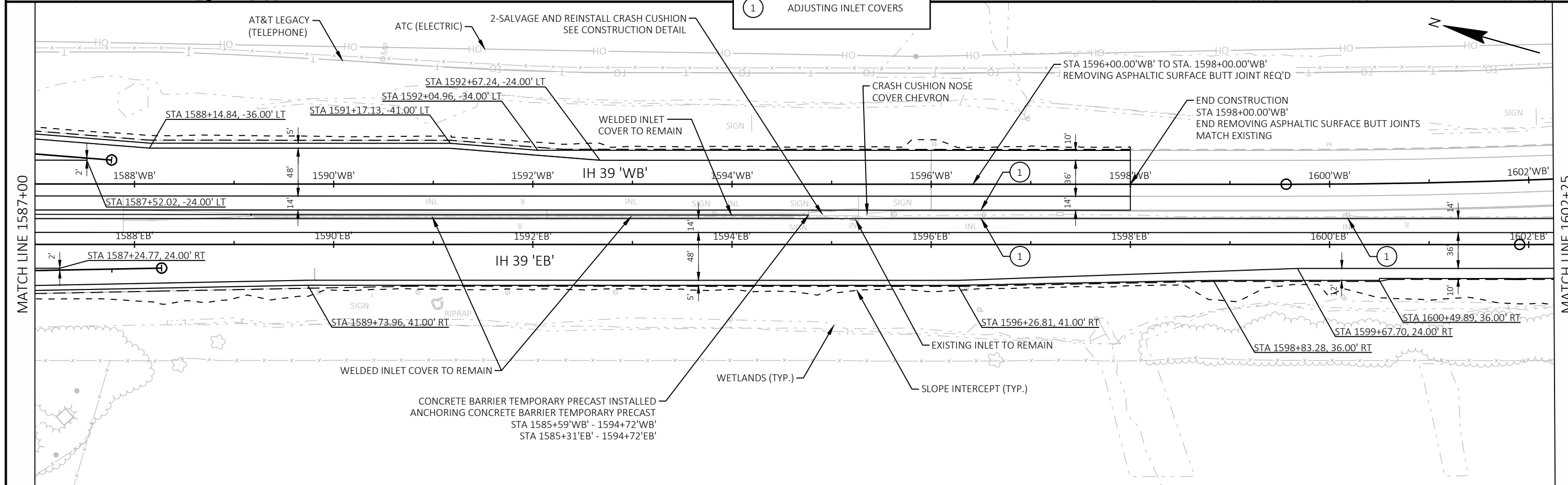
SHEET

E

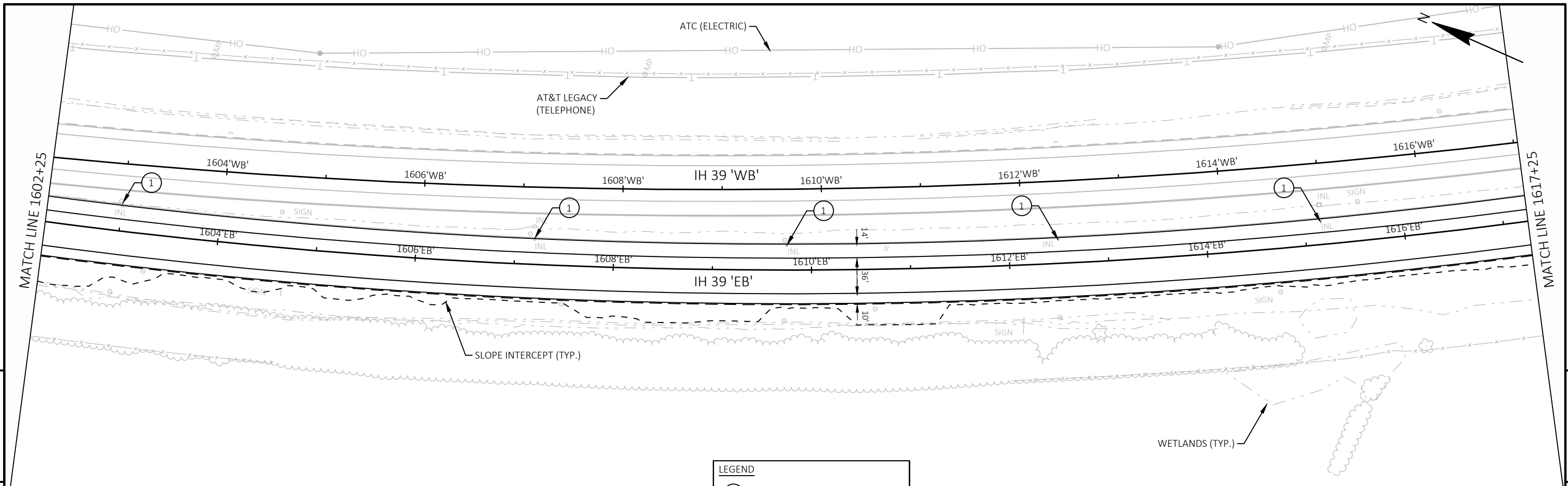


LEGEND

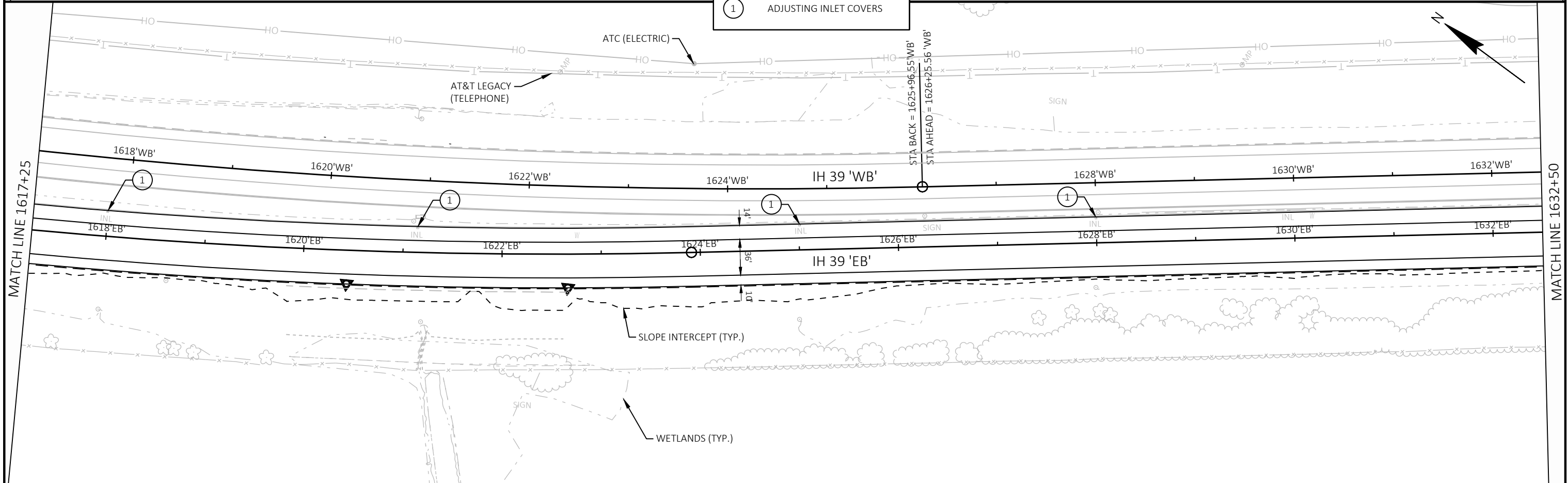
① ADJUSTING INLET COVERS



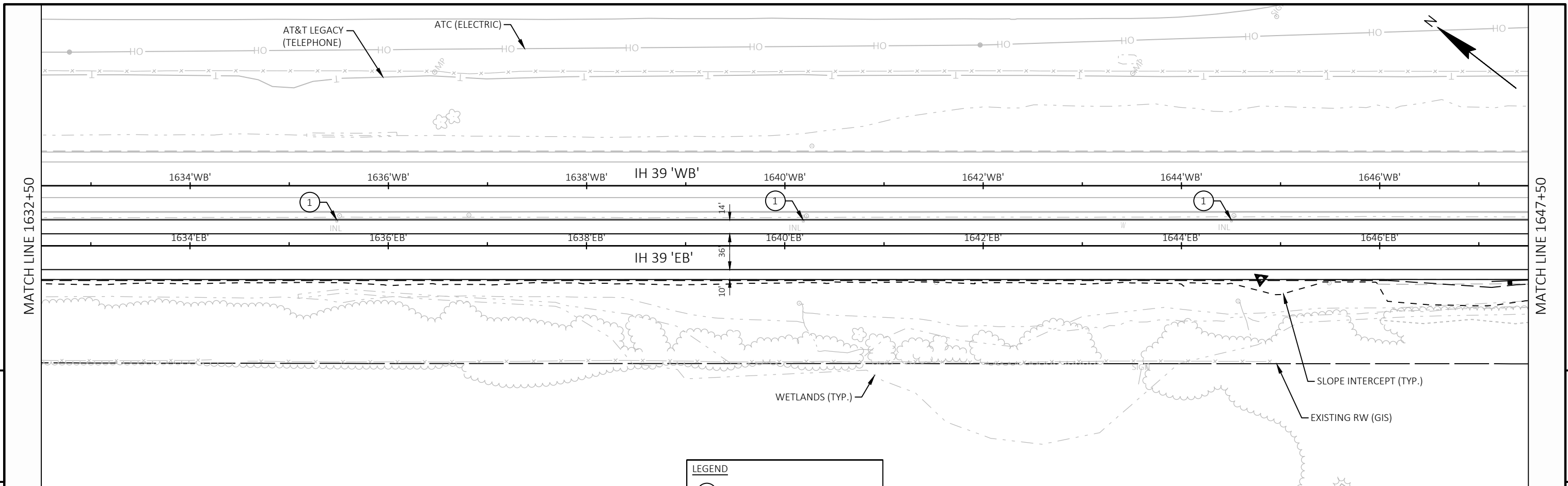
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	---



LEGEND
 (1) ADJUSTING INLET COVERS



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	----------

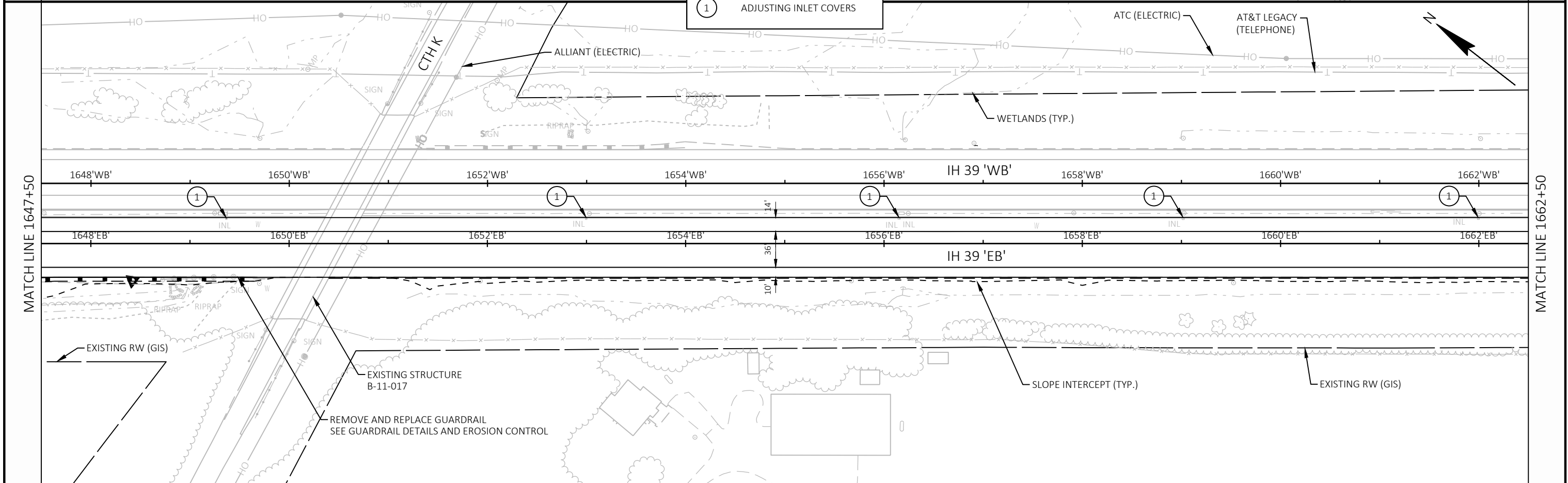


5

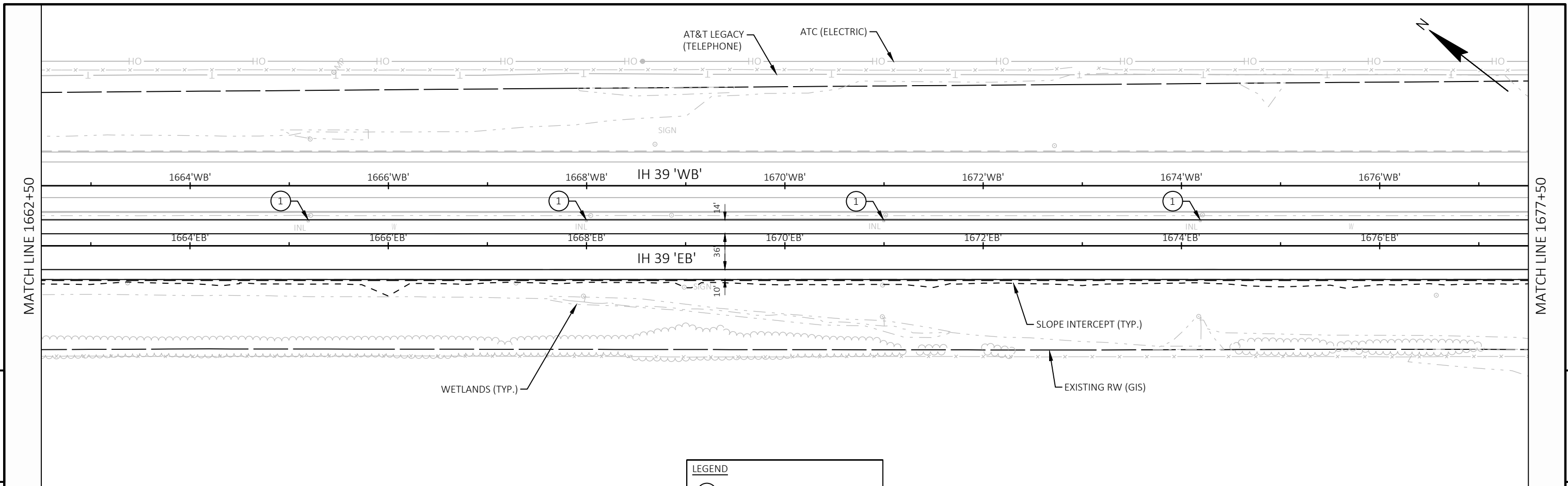
5

LEGEND

(1) ADJUSTING INLET COVERS



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	----------

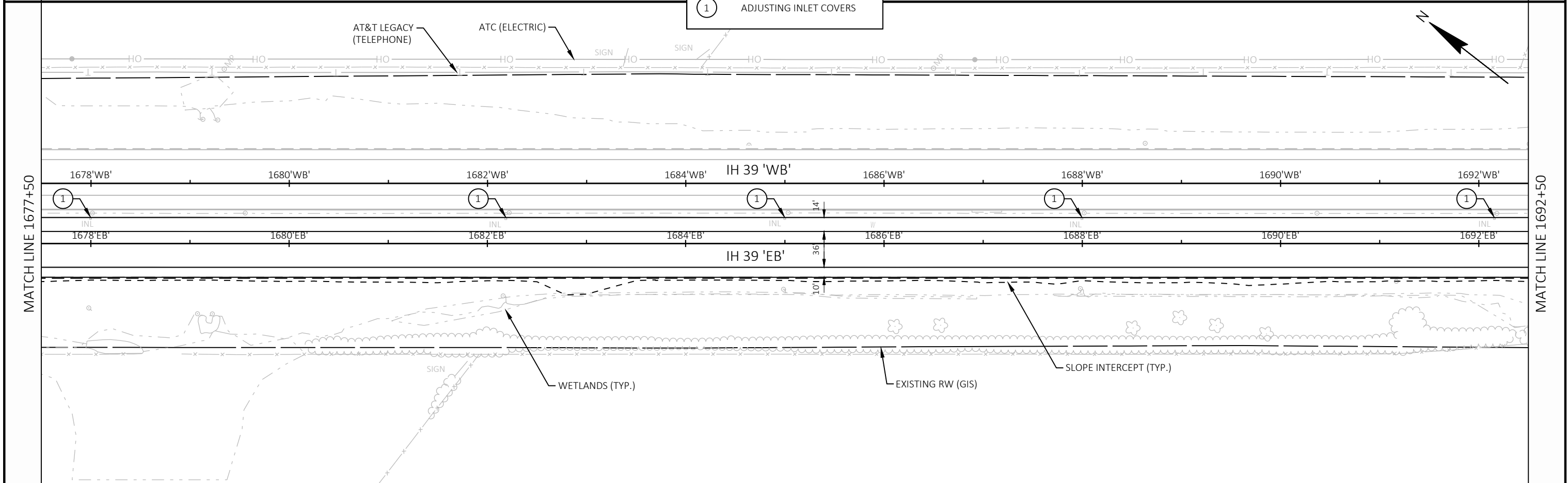


5

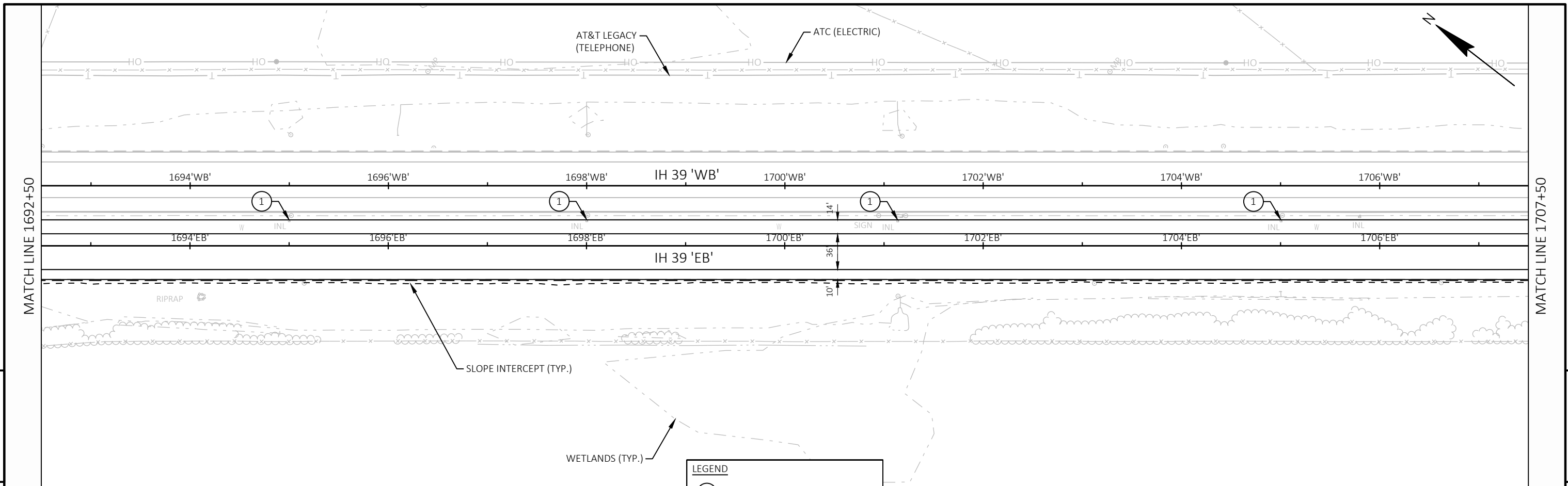
5

LEGEND

(1) ADJUSTING INLET COVERS

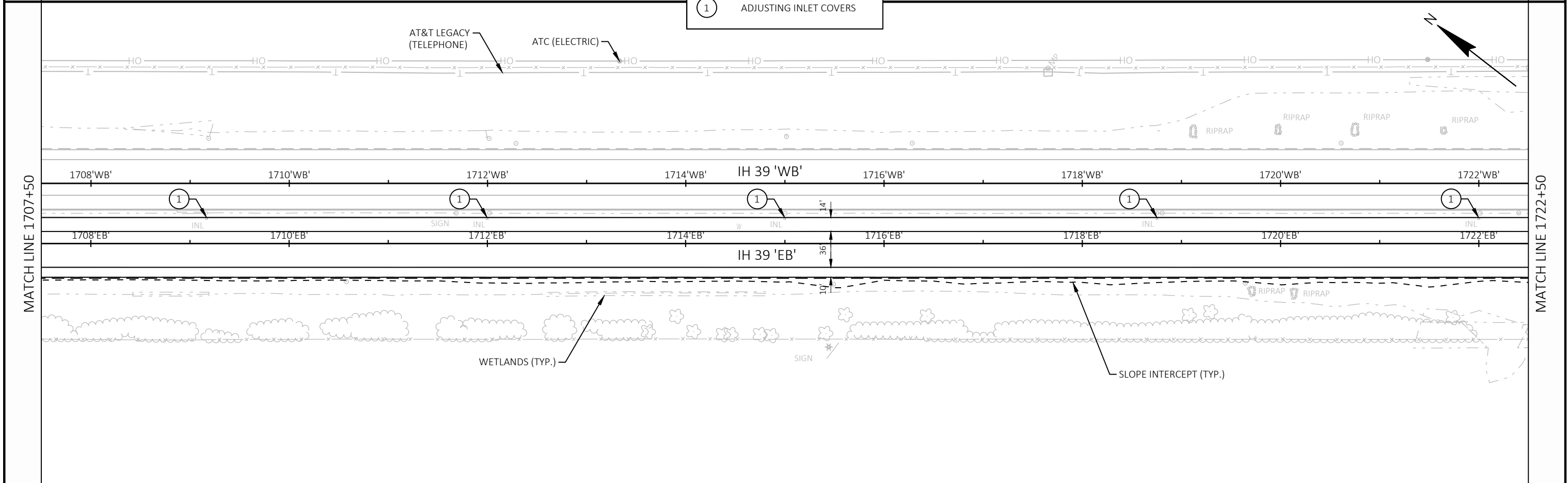


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	----------

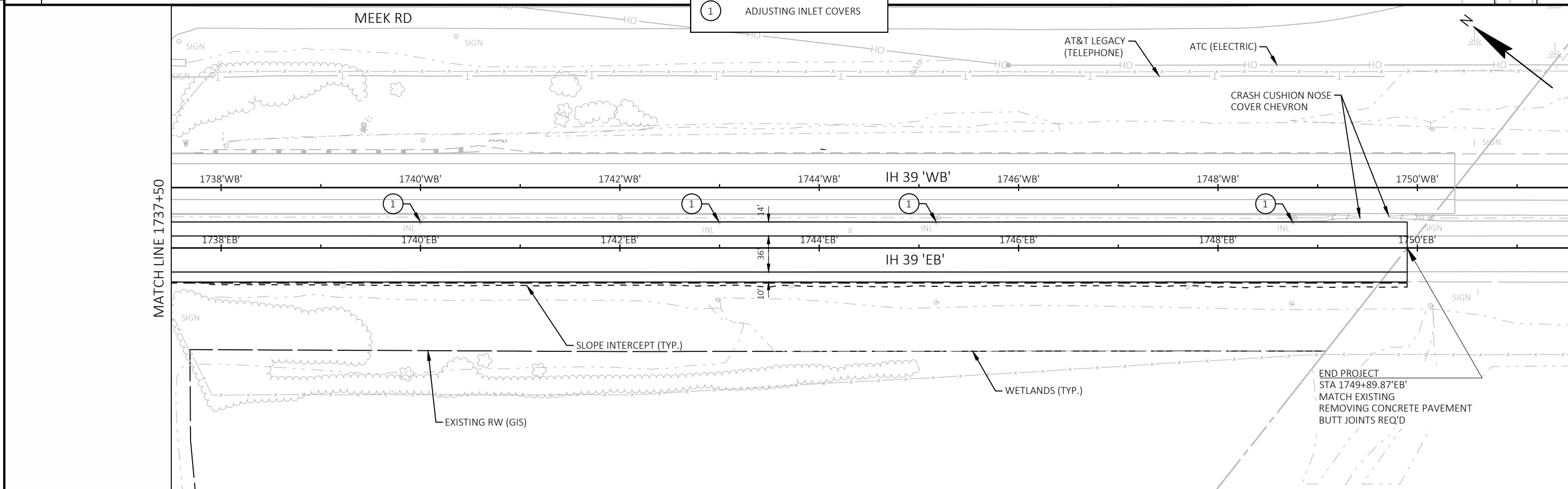
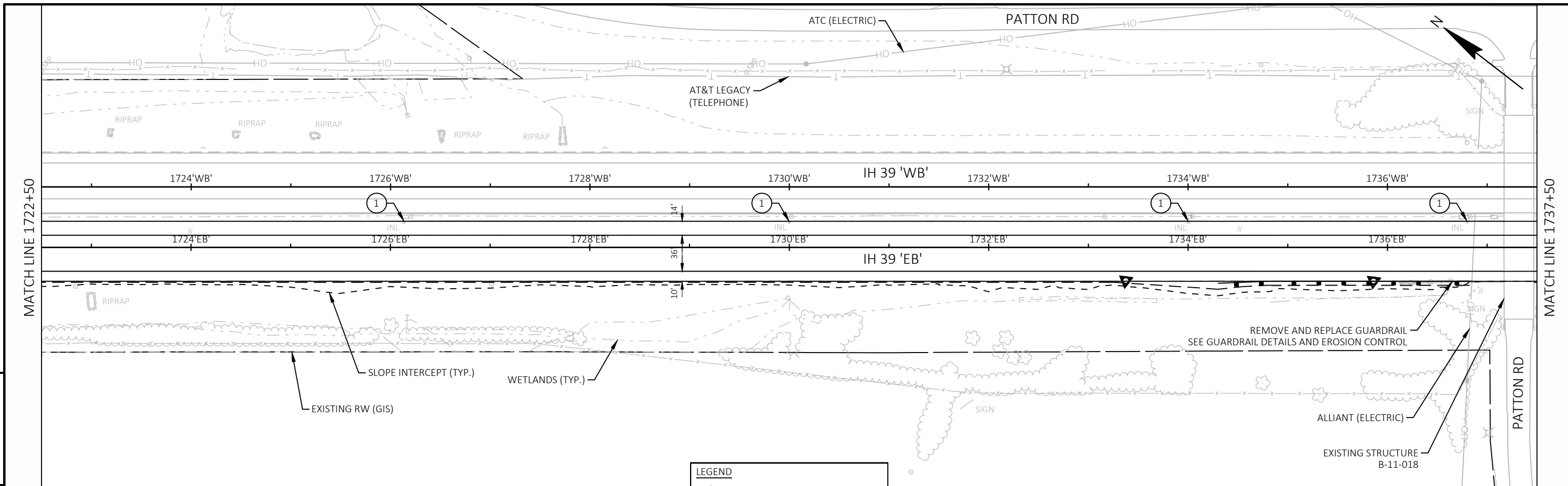


5

5



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	----------

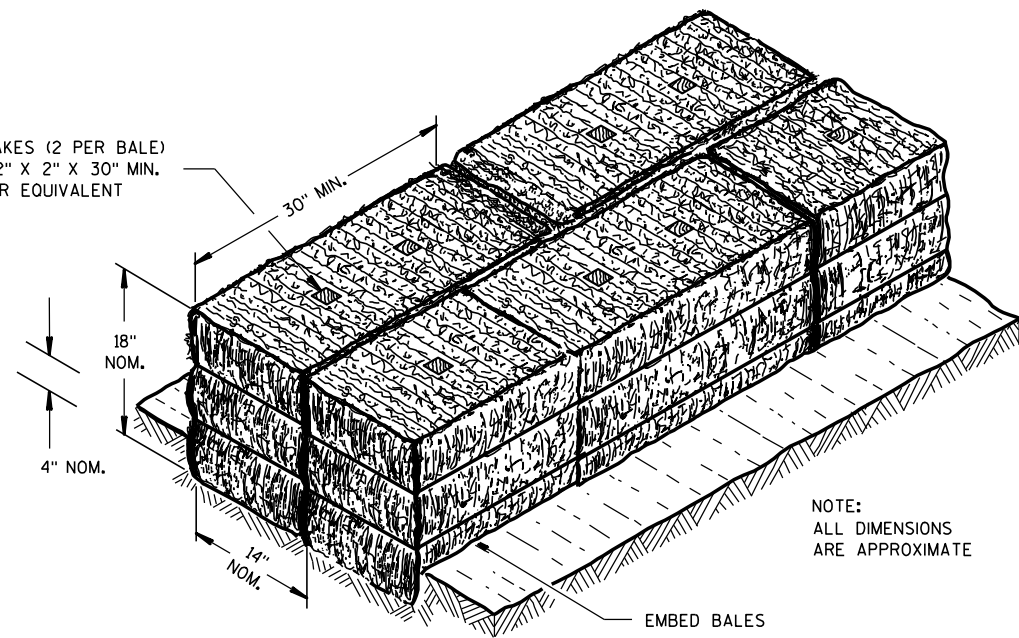


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	PLAN SHEETS	SHEET	E
------------------------	------------	------------------	-------------	-------	---

Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C19-08C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-06A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-06C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15D12-12A	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY RUMBLE STRIPS
15D12-12B	TEMPORARY EMERGENCY PULLOUTS
15D12-12D	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D14-06	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY
15D15-07A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D47-03A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER

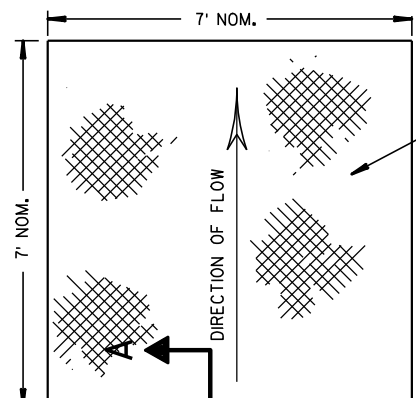
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



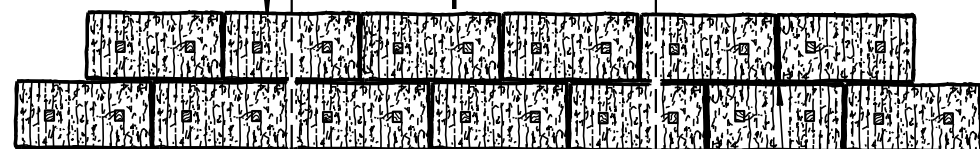
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A



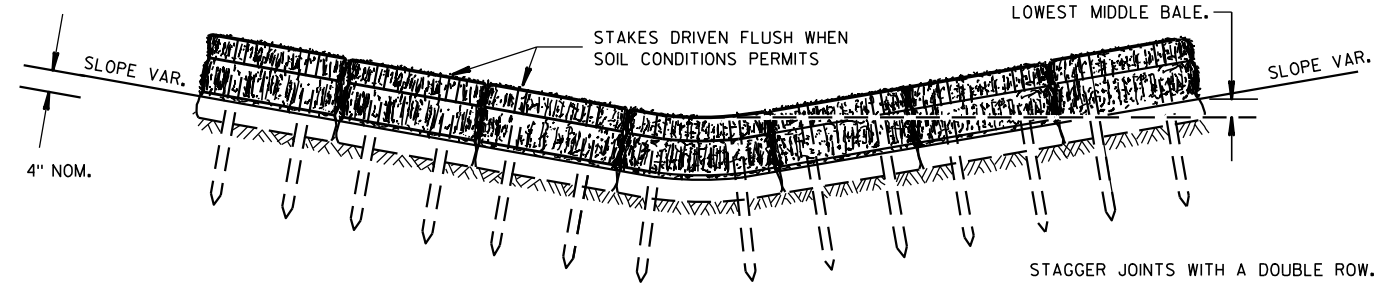
FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.



STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



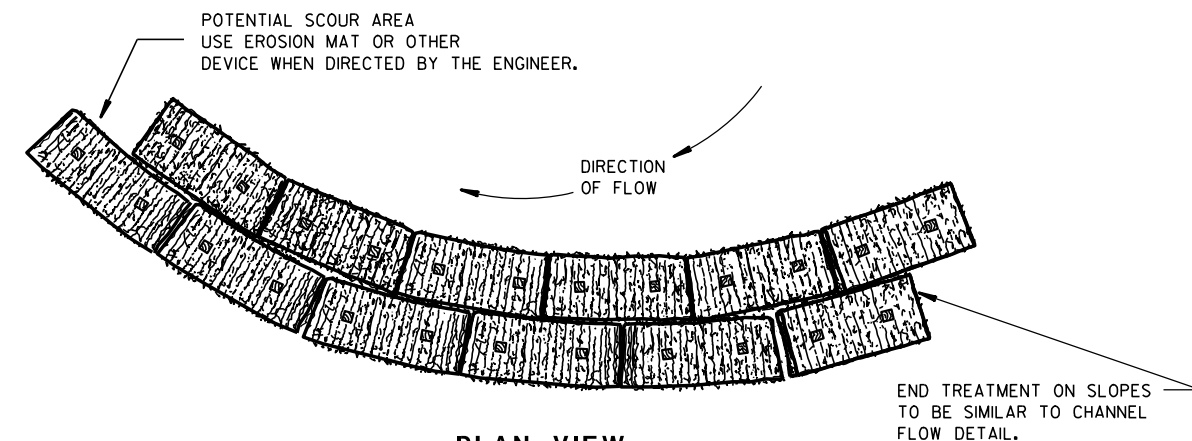
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

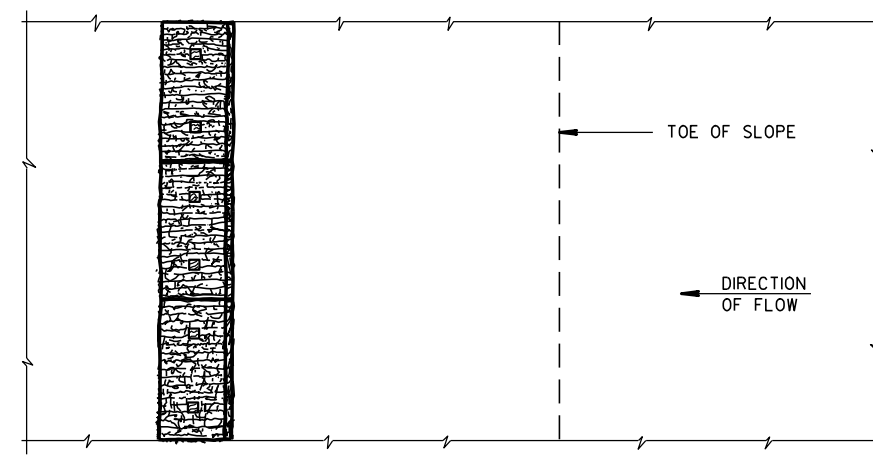
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

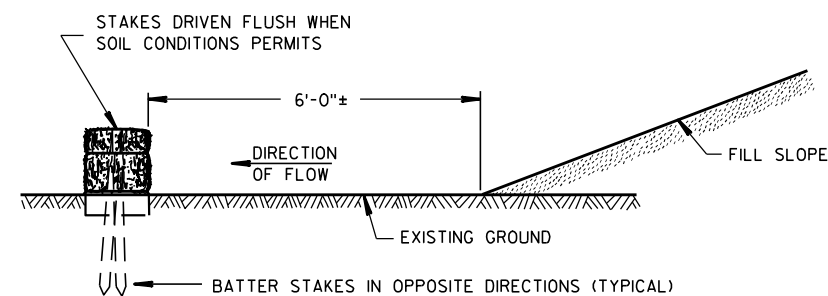


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

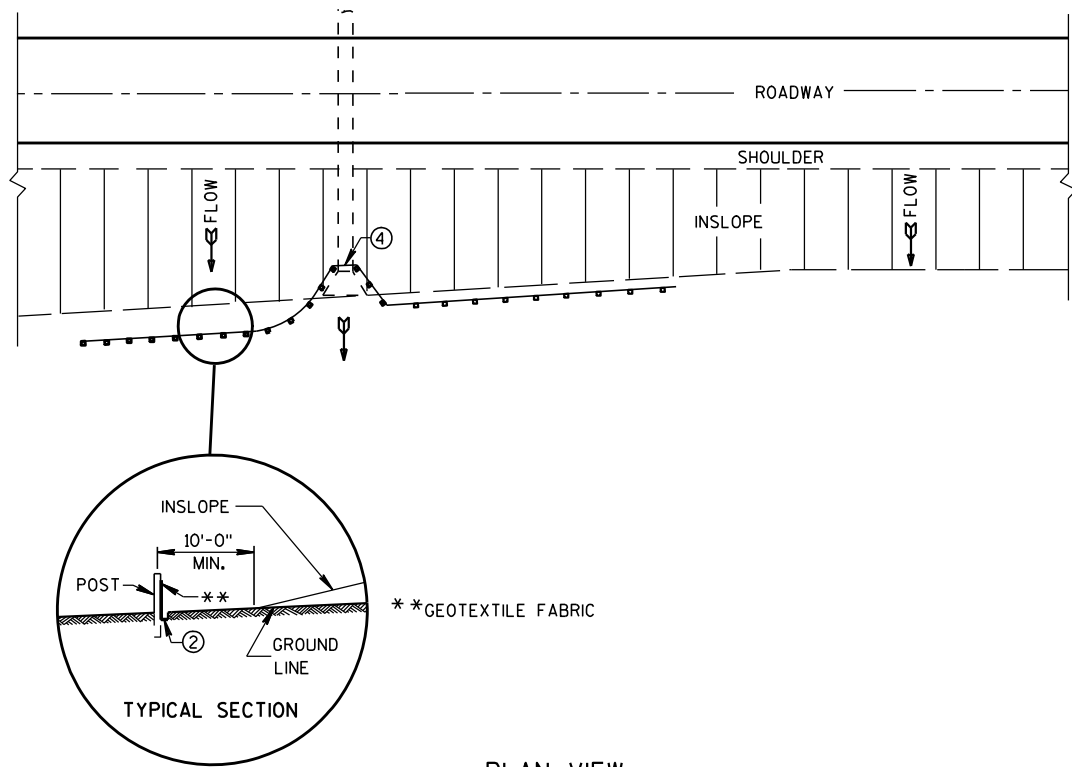
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

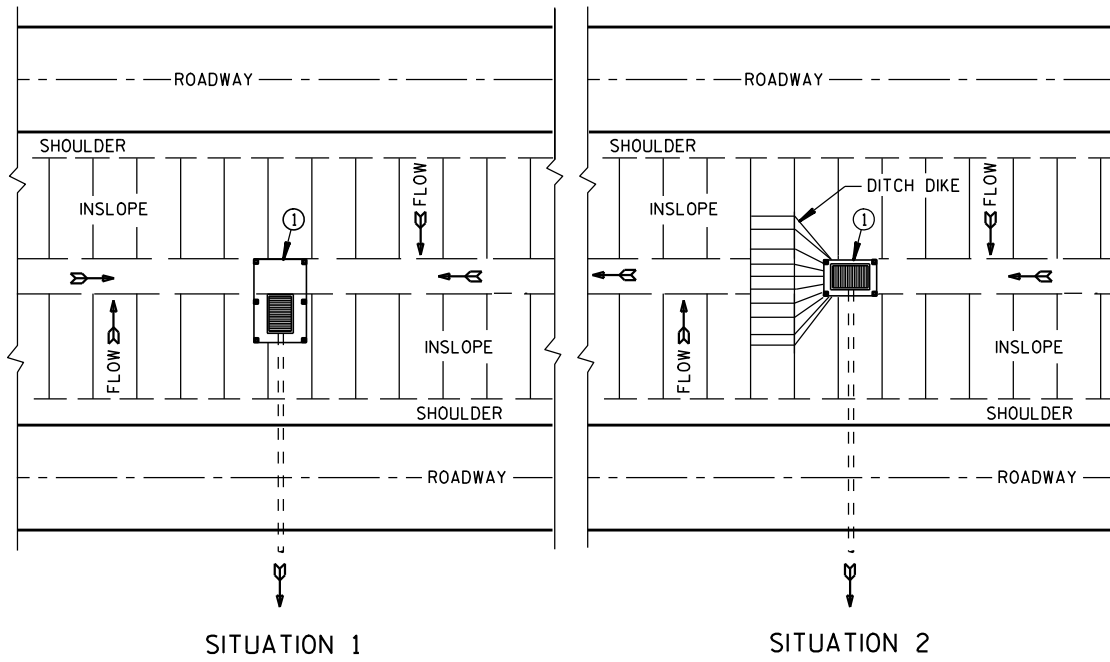
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

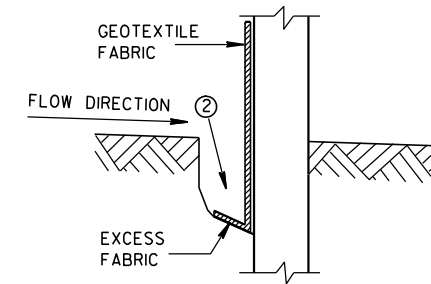


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

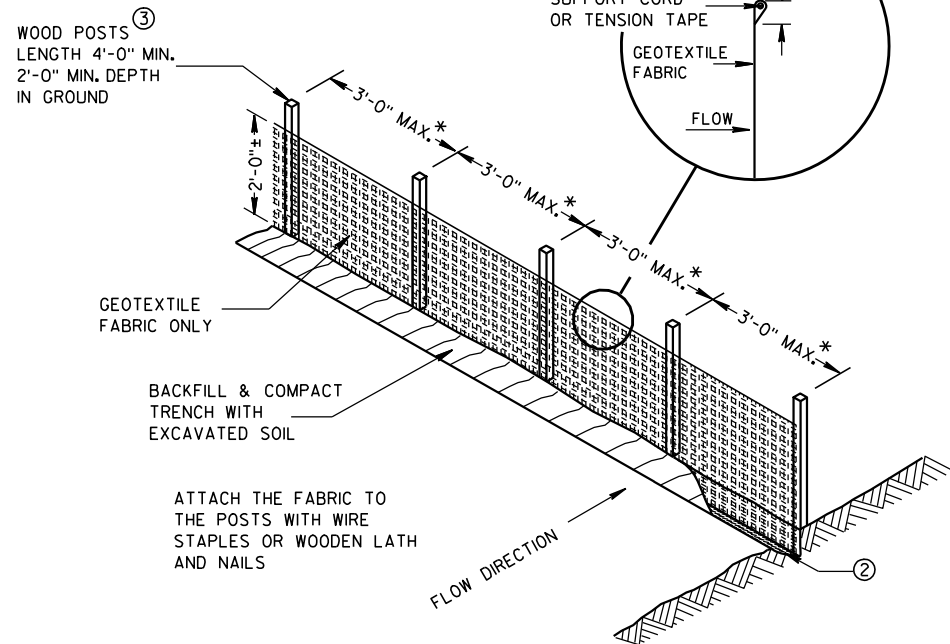
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



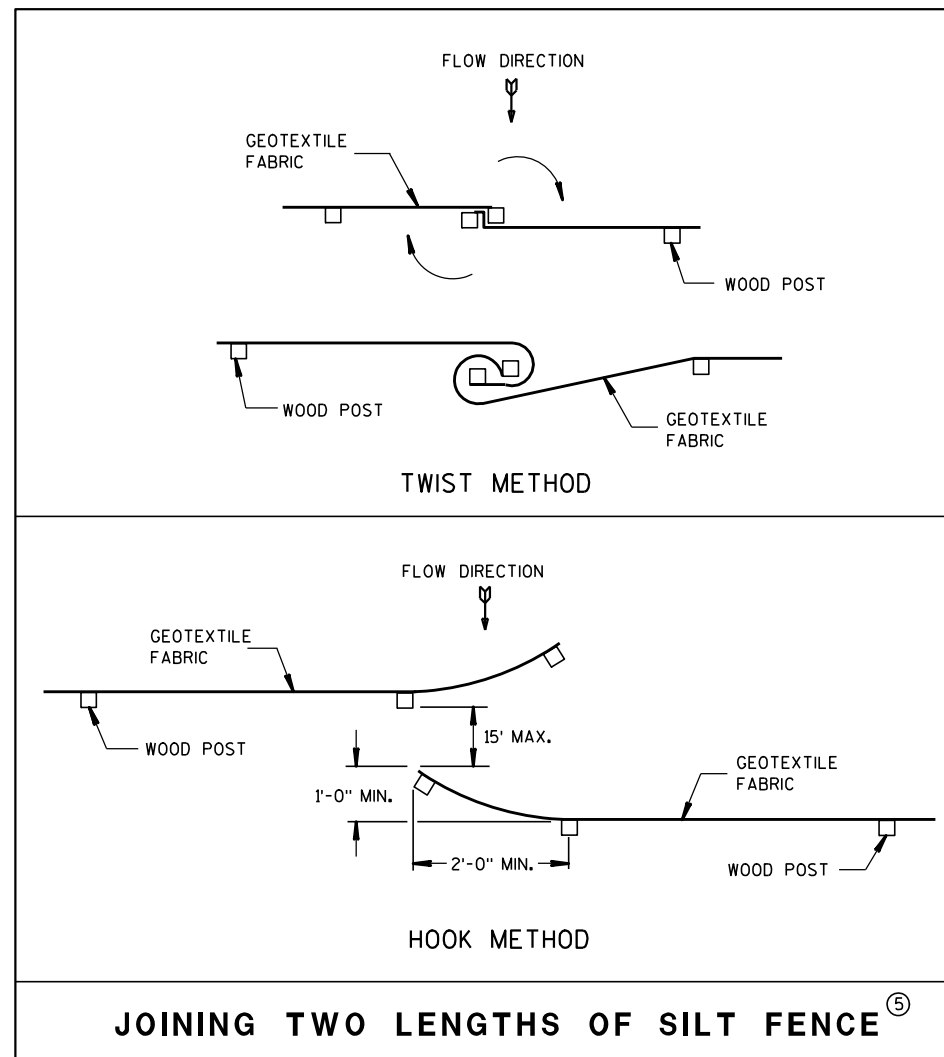
TRENCH DETAIL

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

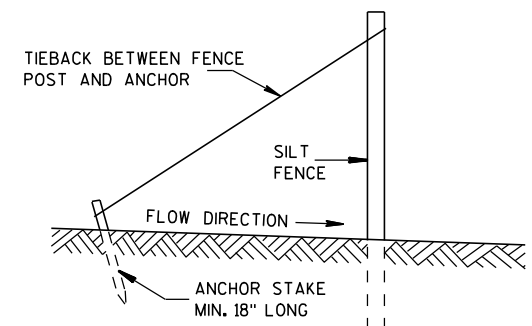


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

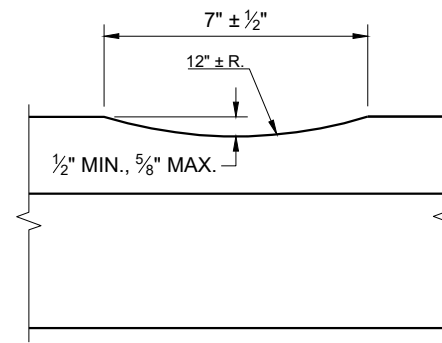
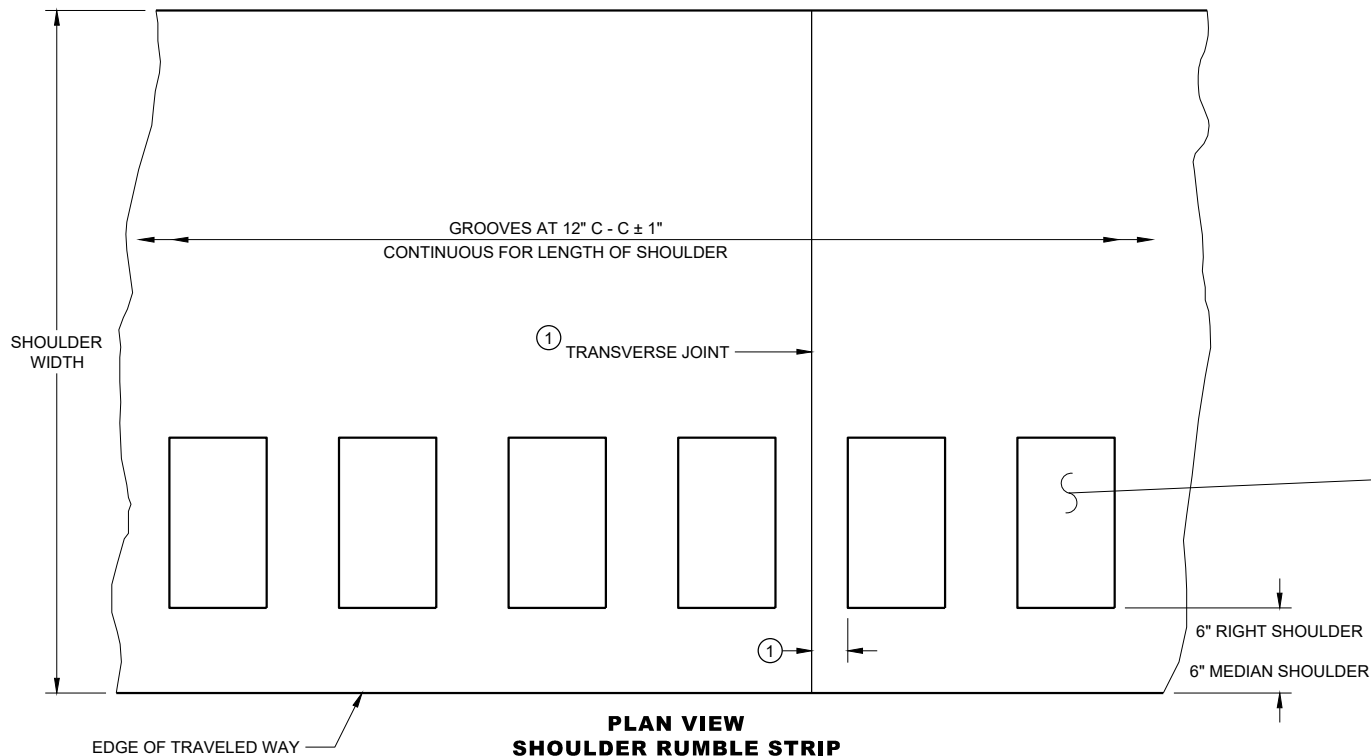


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

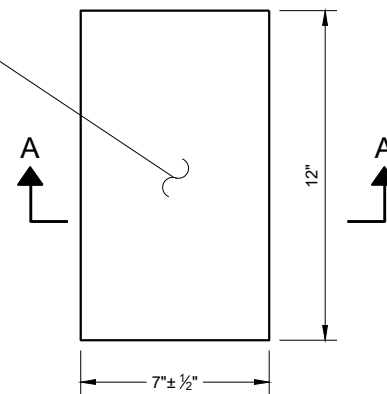
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



SECTION A - A

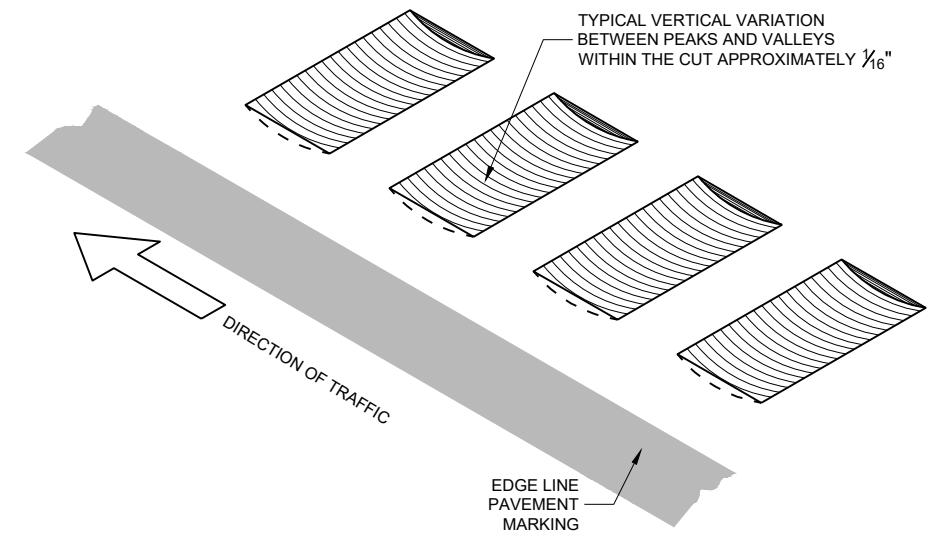


GENERAL NOTES

SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

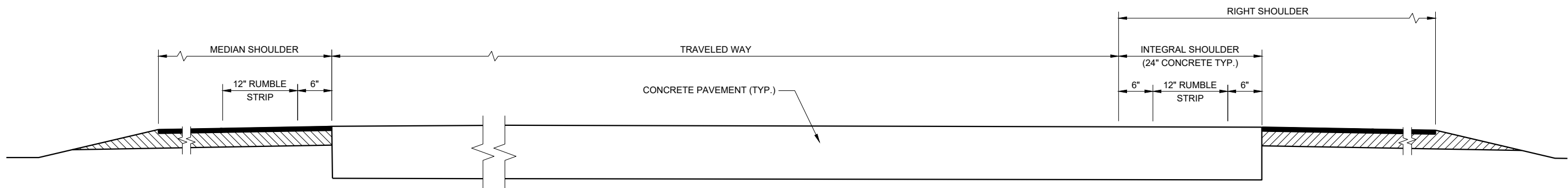
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

- ① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP

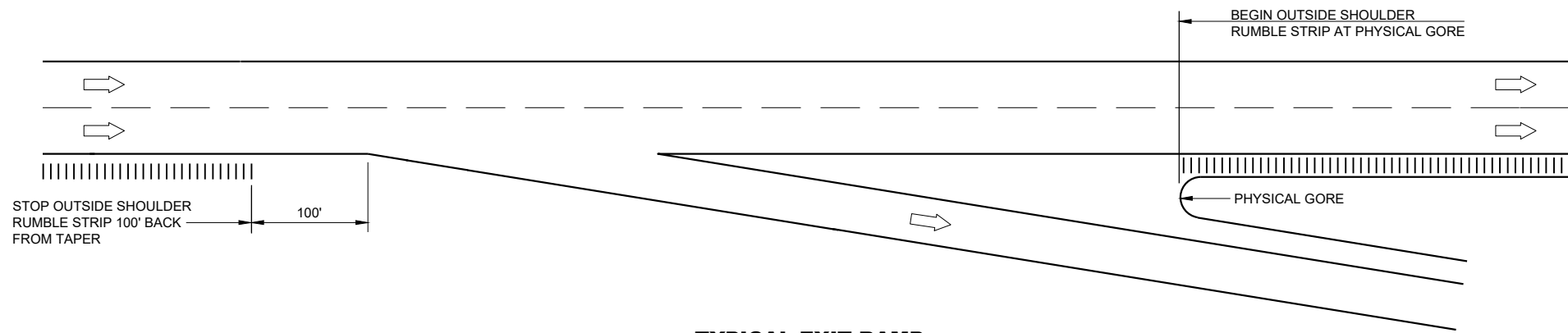


SECTION VIEW

**TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)**

**SHOULDER RUMBLE STRIPS,
DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TYPICAL EXIT RAMP

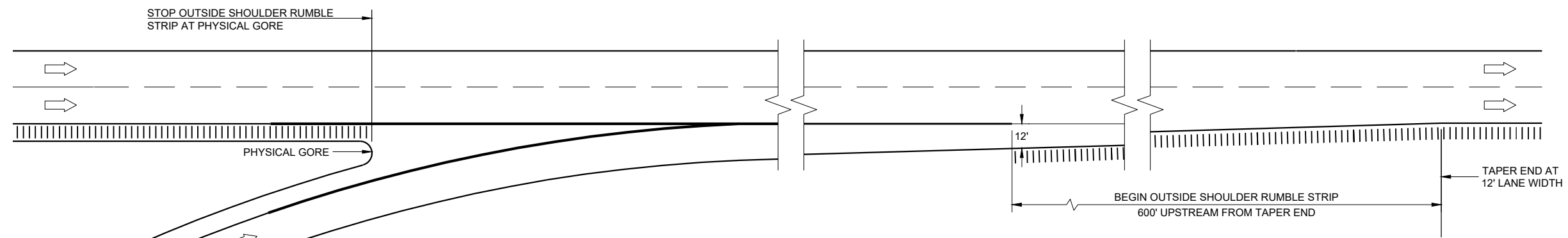
GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMP, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

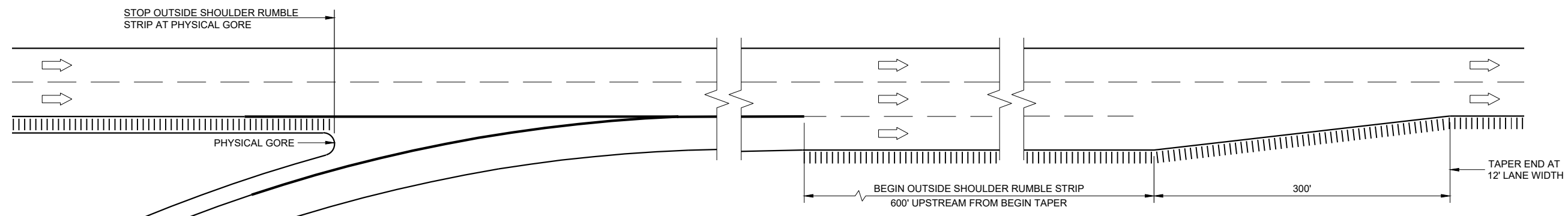
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

➡ DIRECTION OF TRAFFIC



**TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS**



**TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS**

6

6

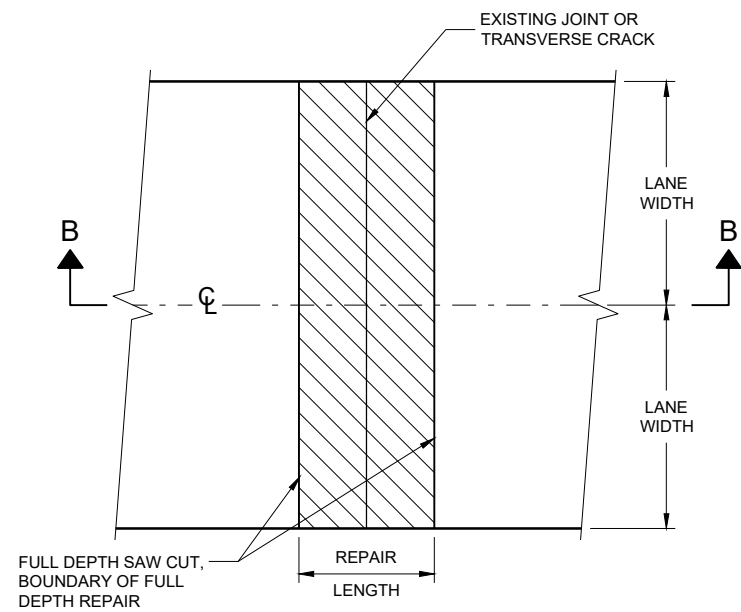
SDD 13A05-06b

SDD 13A05-06b

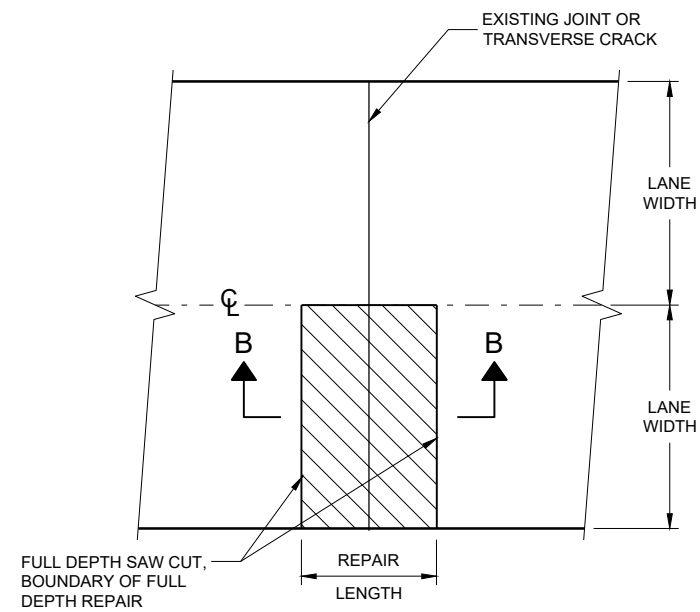
**SHOULDER RUMBLE STRIPS,
DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2023 /S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR
FHWA

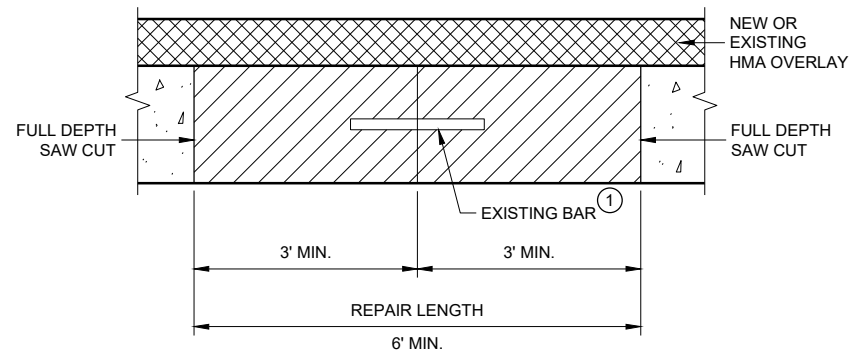


**PLAN VIEW
DOUBLE LANE REPAIR**



**PLAN VIEW
SINGLE LANE REPAIR**

FULL DEPTH CONCRETE PAVEMENT REMOVAL



**SECTION B - B
CONCRETE REMOVAL**

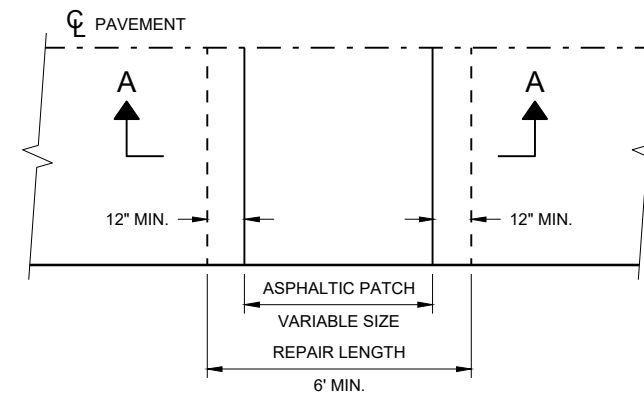
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

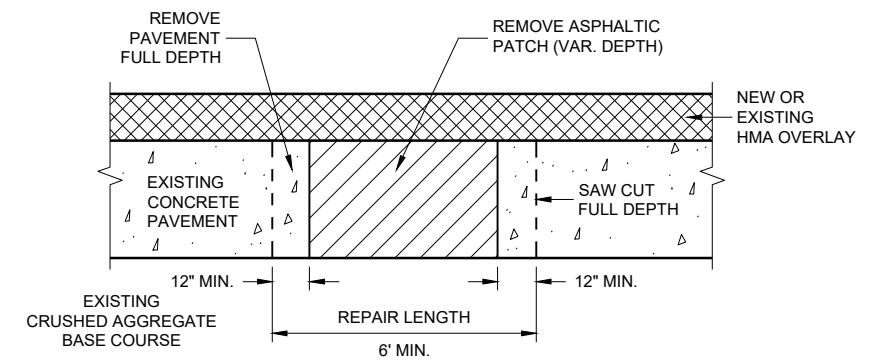
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW

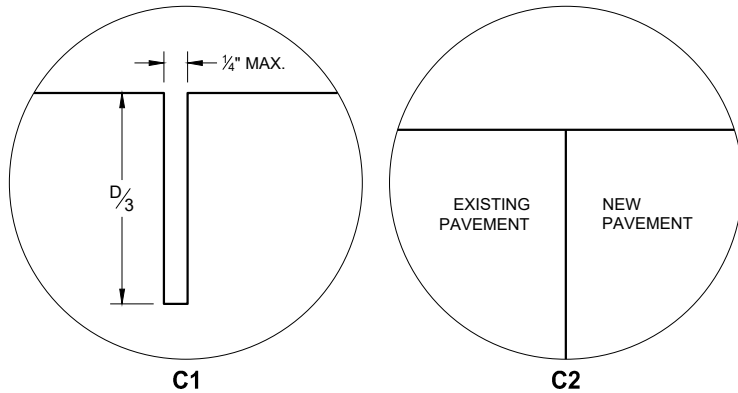


SECTION A - A

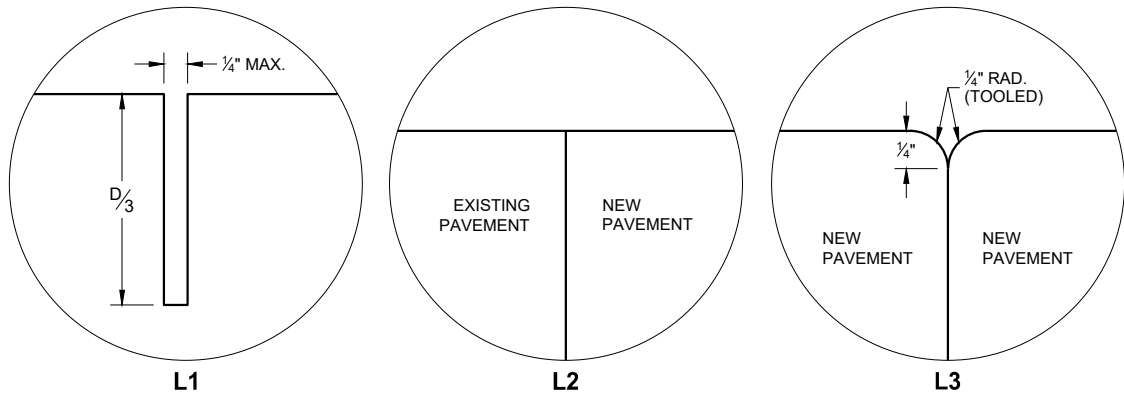
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

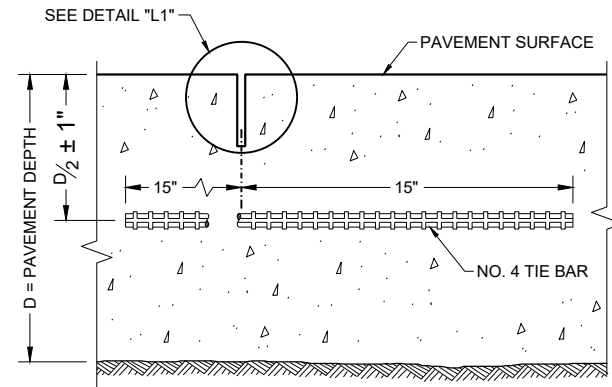
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



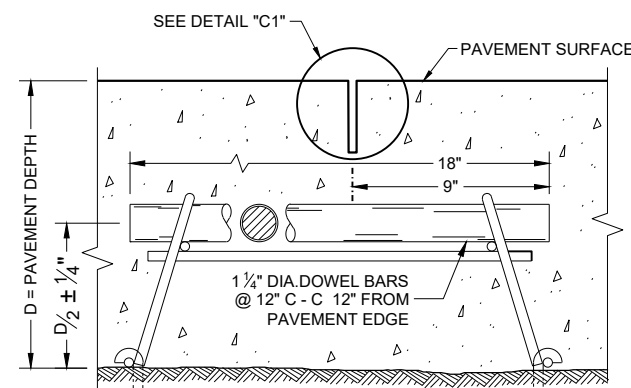
TRANSVERSE JOINTS



LONGITUDINAL JOINTS



**SECTION C - C
SAWED LONGITUDINAL JOINT**



**SECTION F - F
CONTRACTION JOINT**

GENERAL NOTES

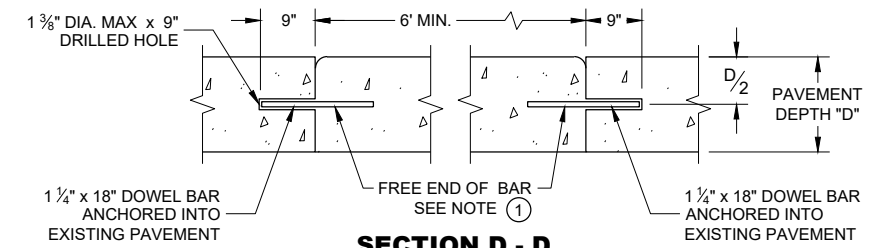
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

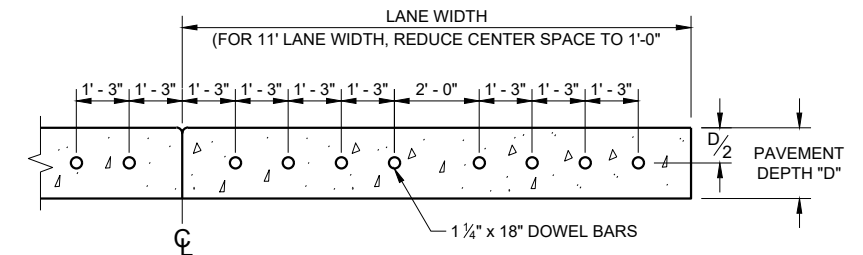
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

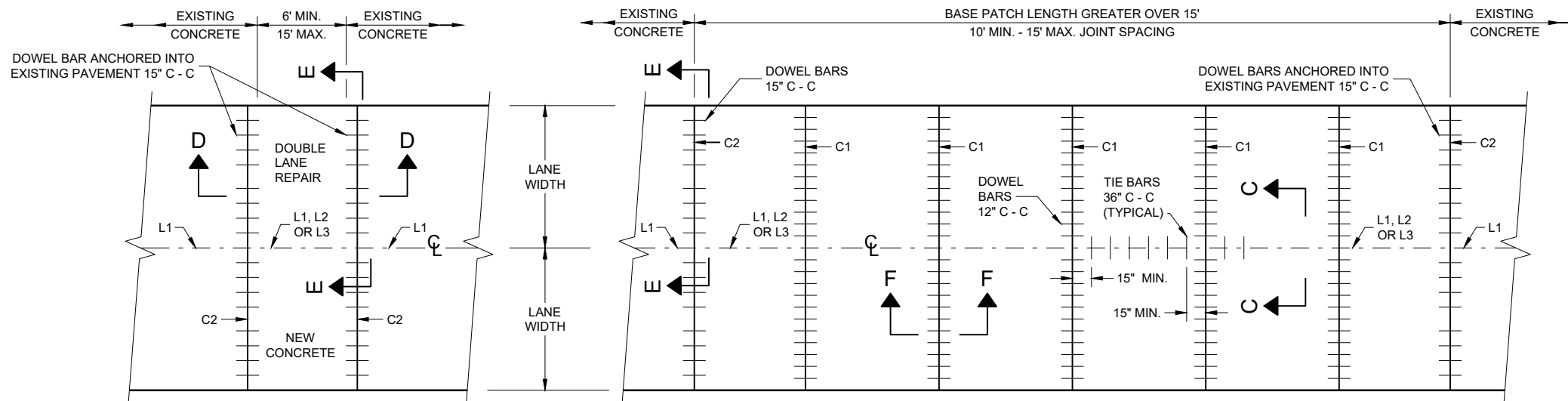
- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D - D



**SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT**

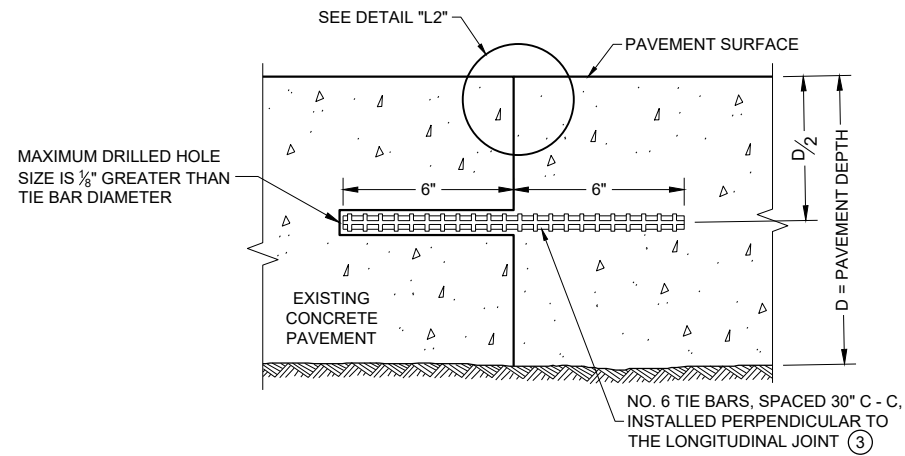


**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH**

**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH**

BASE PATCHING CONCRETE

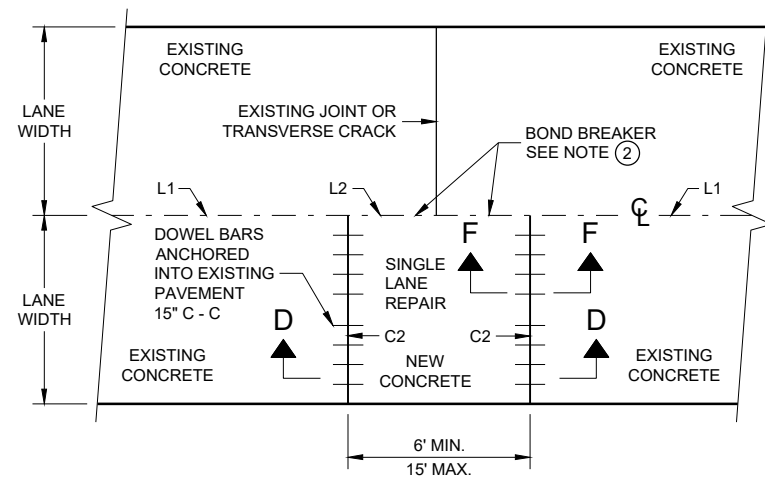
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



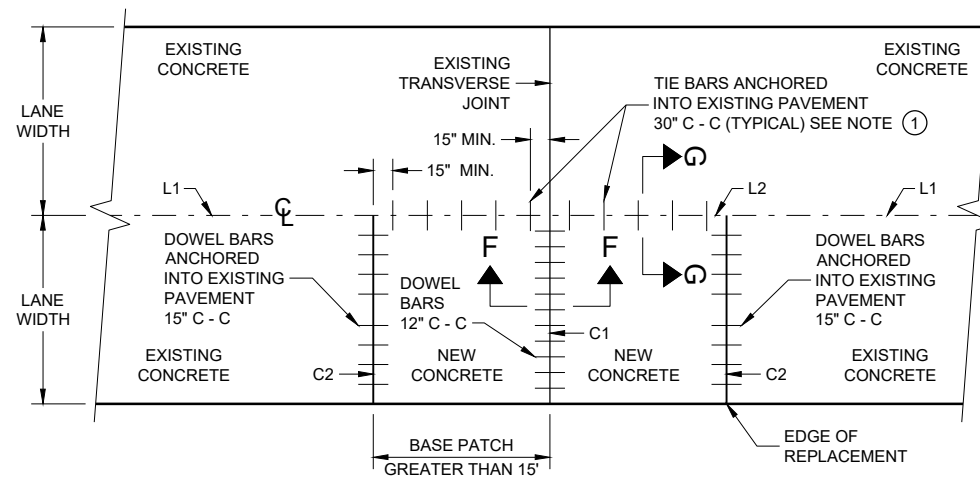
SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



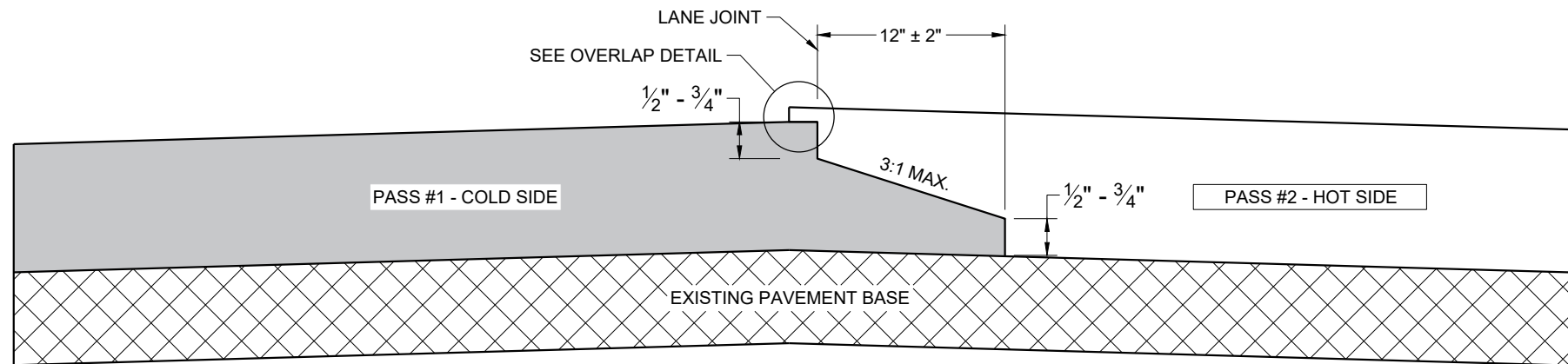
PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

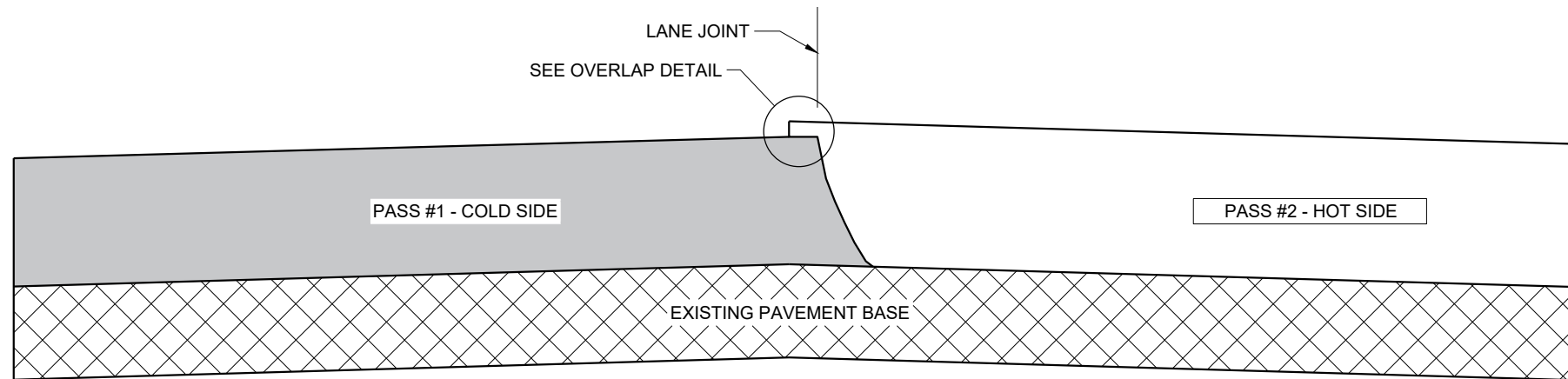
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

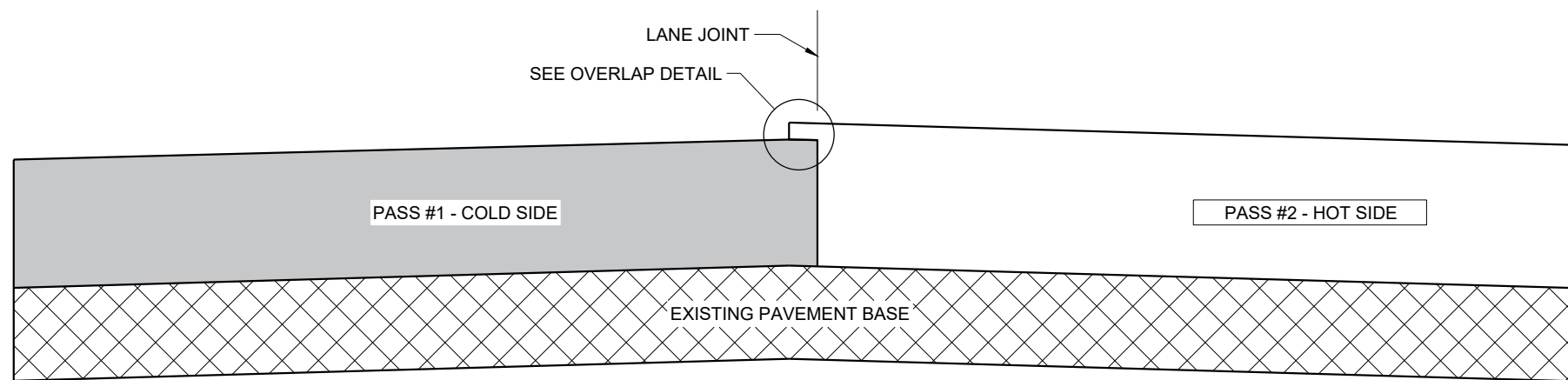
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

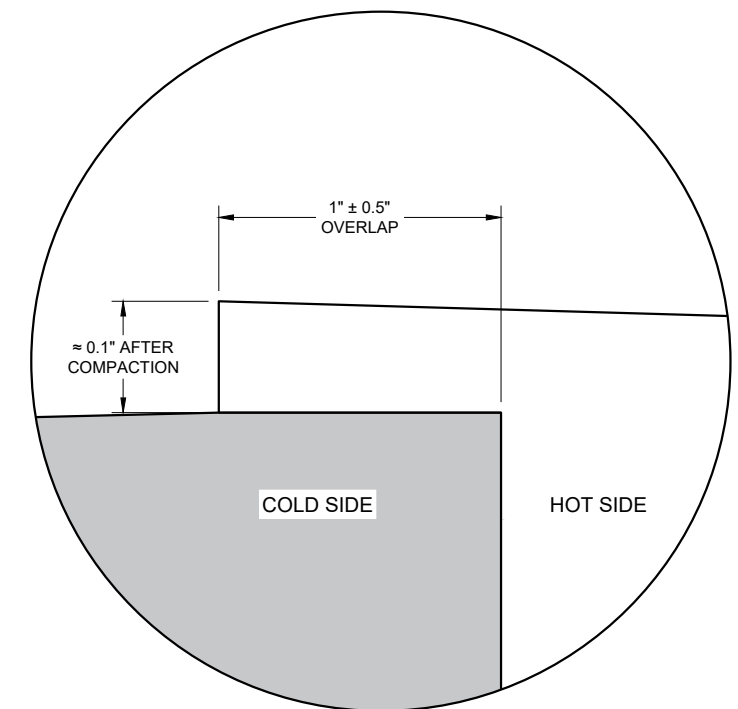
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

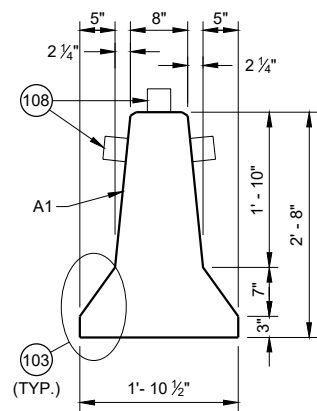
6

6

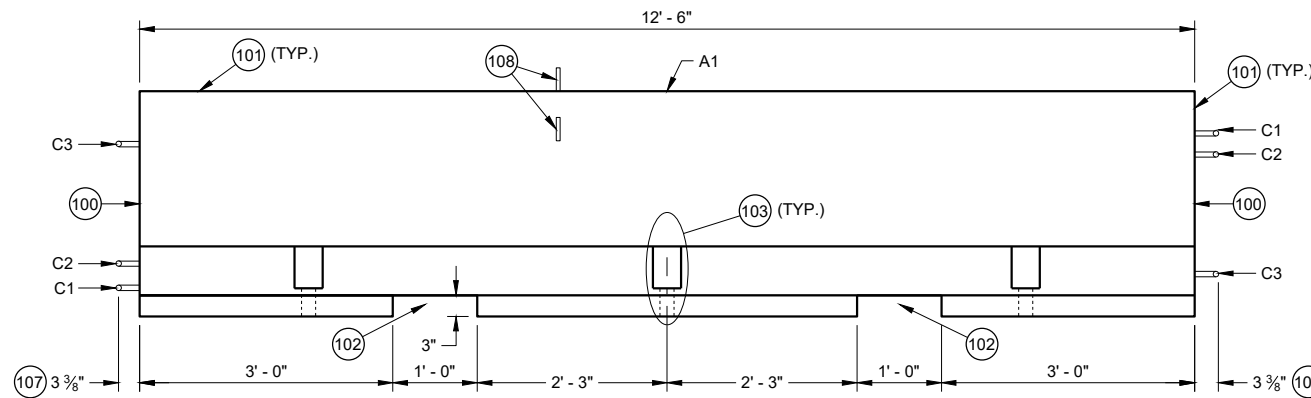
SDD 13C19 - 03

SDD 13C19 - 03

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



CROSS SECTION



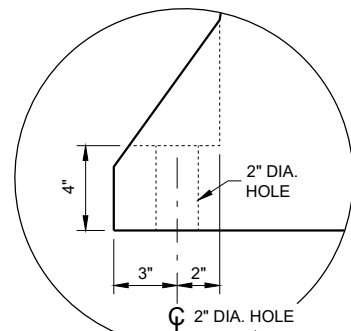
PROFILE VIEW

GENERAL NOTES

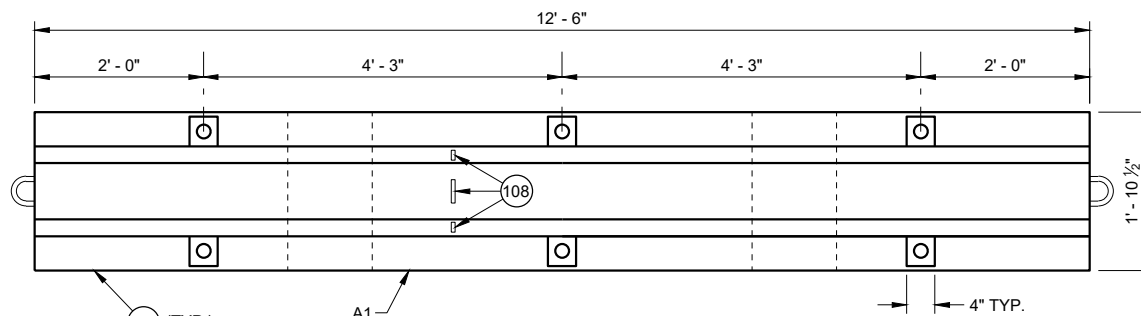
PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

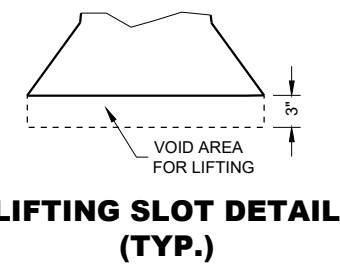
- (100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
A. TYPE OF BARRIER: WI-CBTP
B. MANUFACTURER
C. DATE OF MANUFACTURE (MONTH AND YEAR)
- (101) 1" OPTIONAL CHAMFER
- (102) SEE LIFTING SLOT DETAIL
- (103) SEE ANCHOR BLOCK DETAIL
- (104) 1 3/4" MIN. CLEAR COVER
- (105) 2" MIN. CLEAR COVER
- (106) 1" MIN. CLEAR COVER
- (107) ± 1/8" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)
- (108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TO MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.



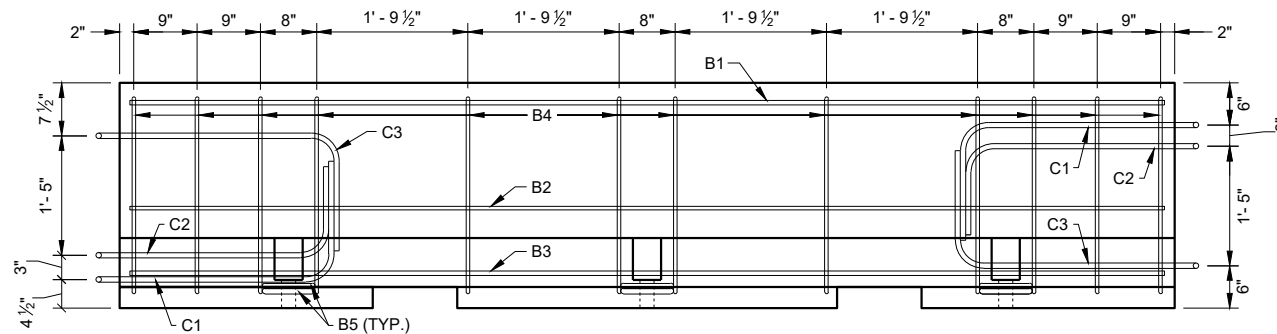
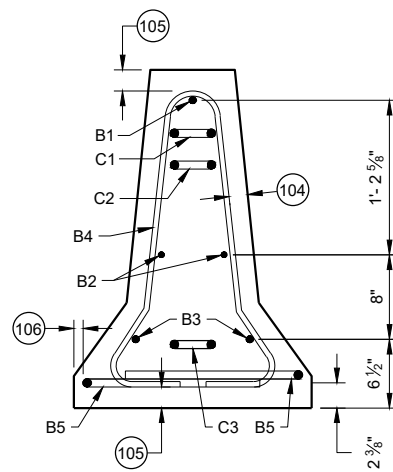
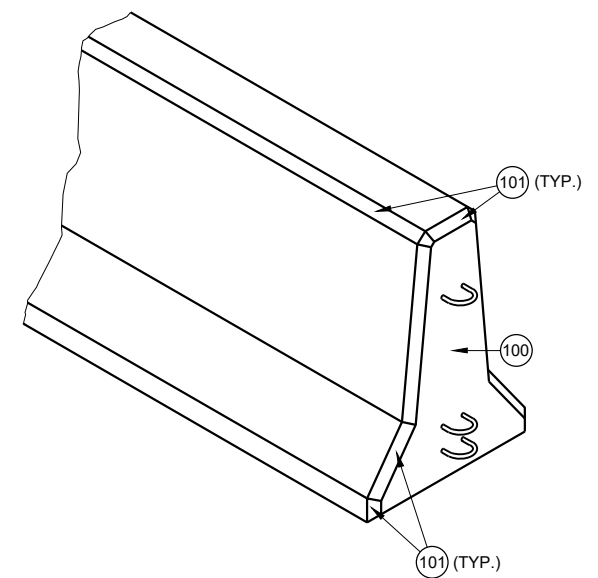
ANCHOR BLOCK DETAIL



**PLAN VIEW
TEMPORARY BARRIER**



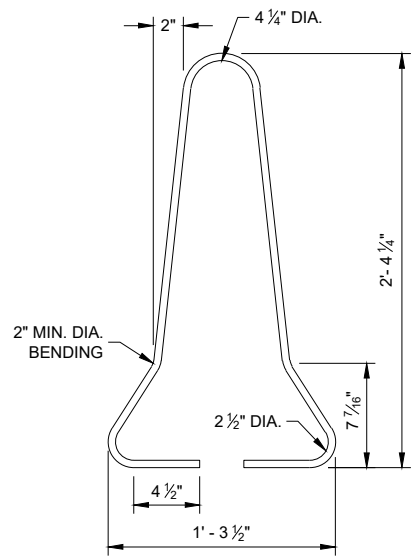
**LIFTING SLOT DETAIL
(TYP.)**



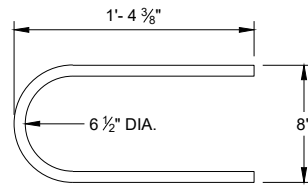
**PROFILE VIEW
TEMPORARY BARRIER REINFORCEMENT**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

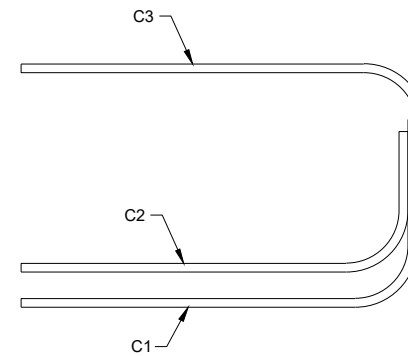
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



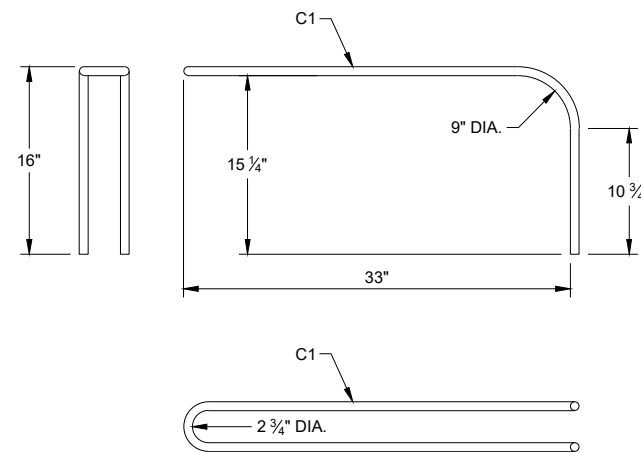
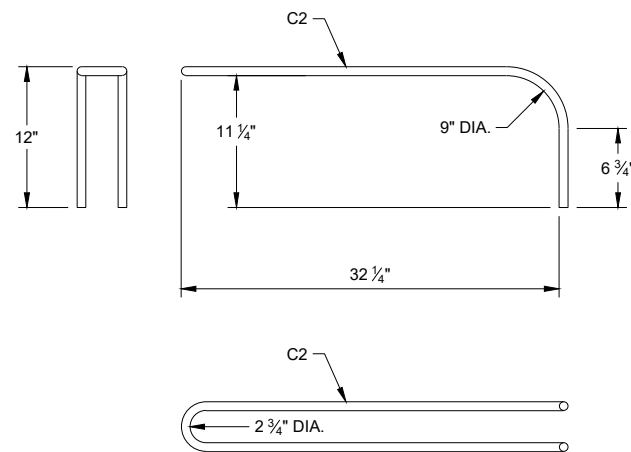
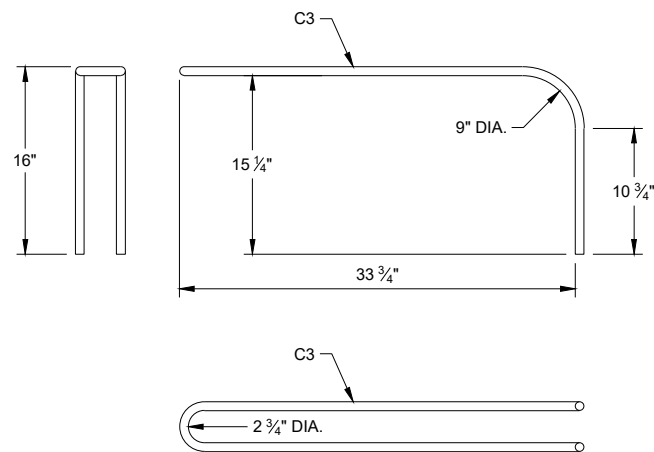
B4 BAR DETAIL



B5 BAR DETAIL



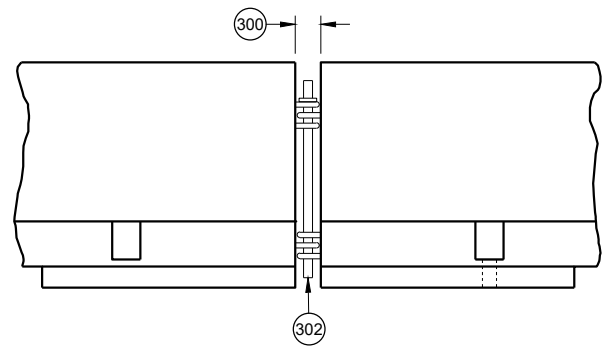
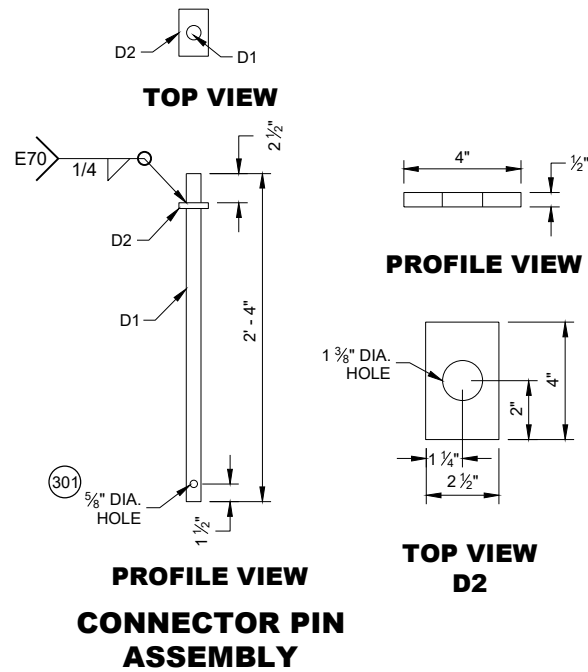
**PROFILE VIEW
LOOP BAR ASSEMBLY**



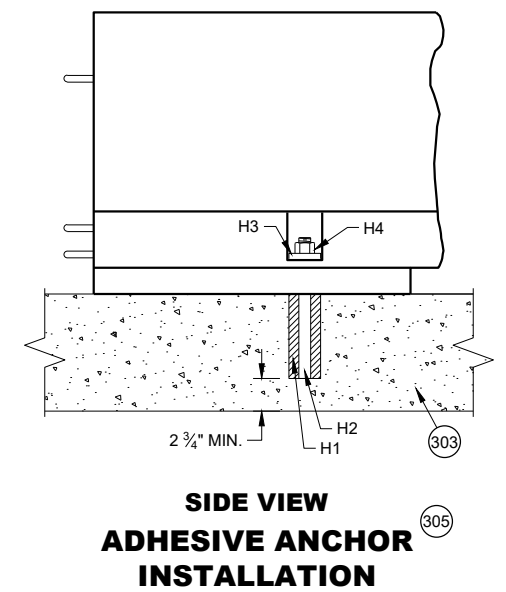
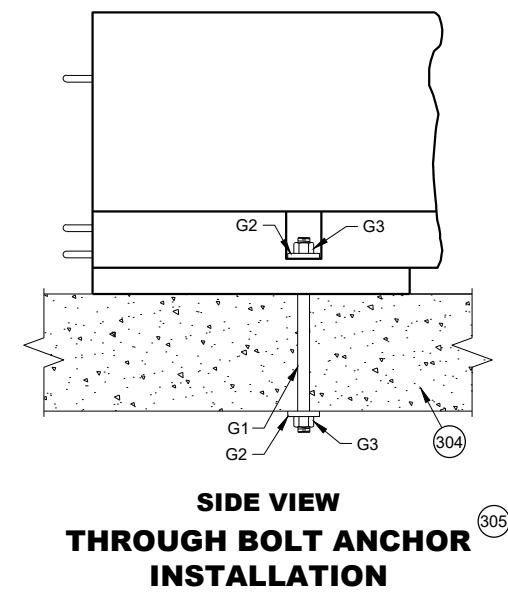
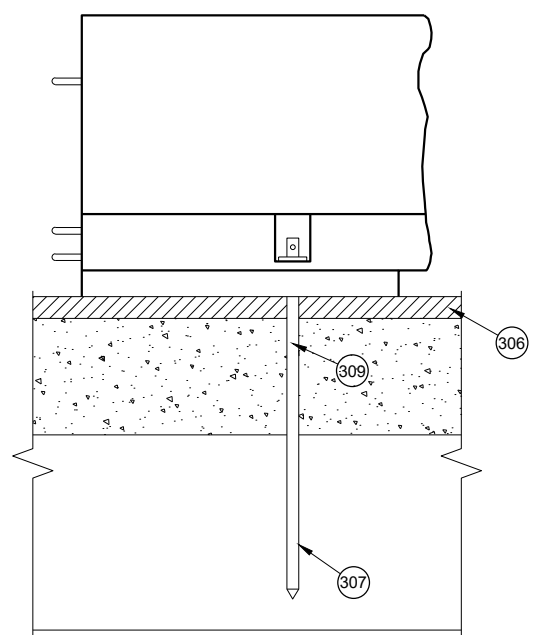
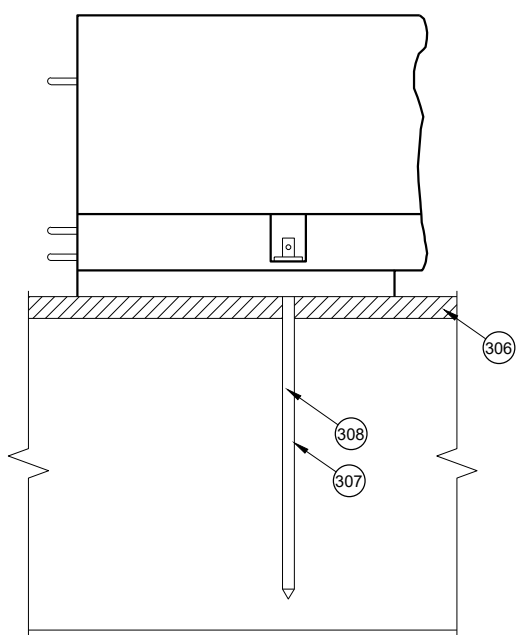
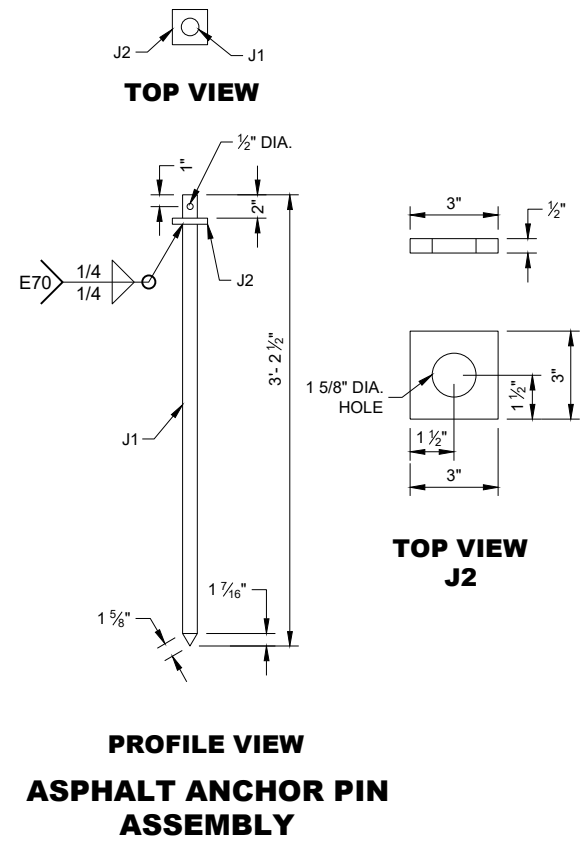
C BAR DETAILS

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



- GENERAL NOTES**
- (300) SET WITH 3 5/8" WOOD BLOCK.
 - (301) HOLE IS OPTIONAL.
 - (302) CONNECTOR PIN ASSEMBLY.
 - (303) CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.
 - (304) CONCRETE DECK.
 - (305) DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.
 - (306) MINIMUM OF 2" OF ASPHALT.
 - (307) ASPHALT ANCHOR PIN ASSEMBLY
 - (308) IF DRILLING A PILOT HOLE, THE MAX. DIA. OF THE HOLE IS 3/4"
 - (309) WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



6

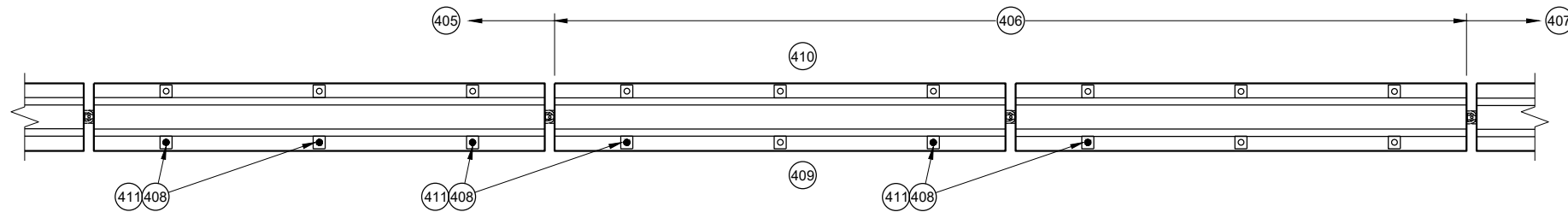
6

SDD 14B07-16C

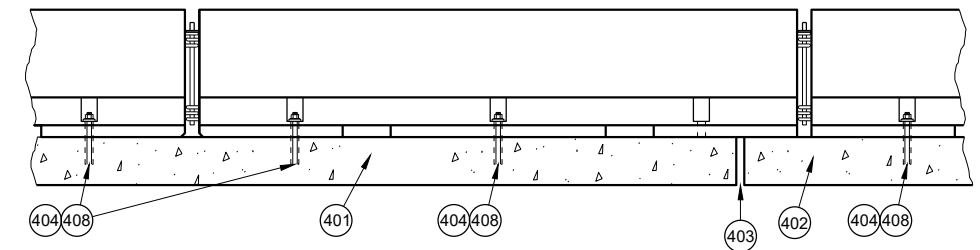
SDD 14B07-16C

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

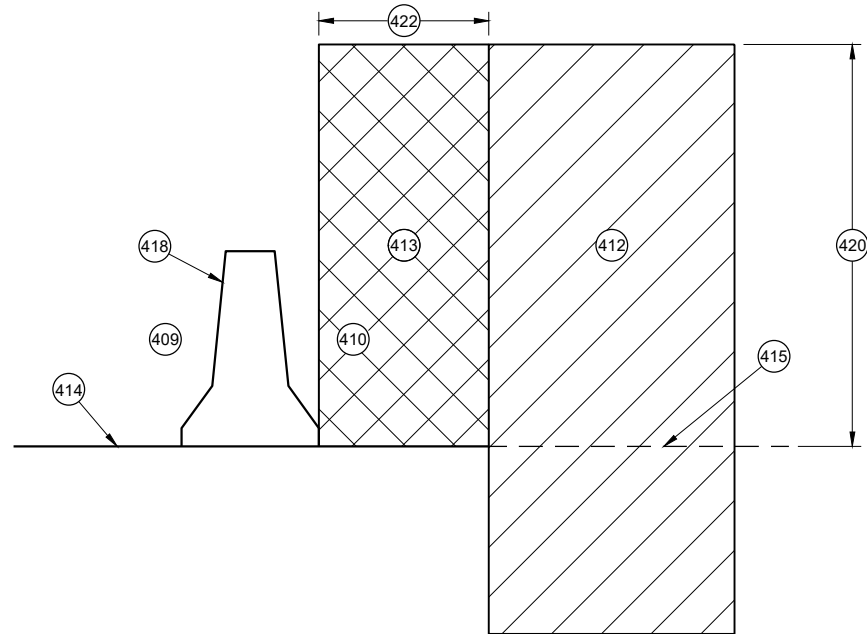
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



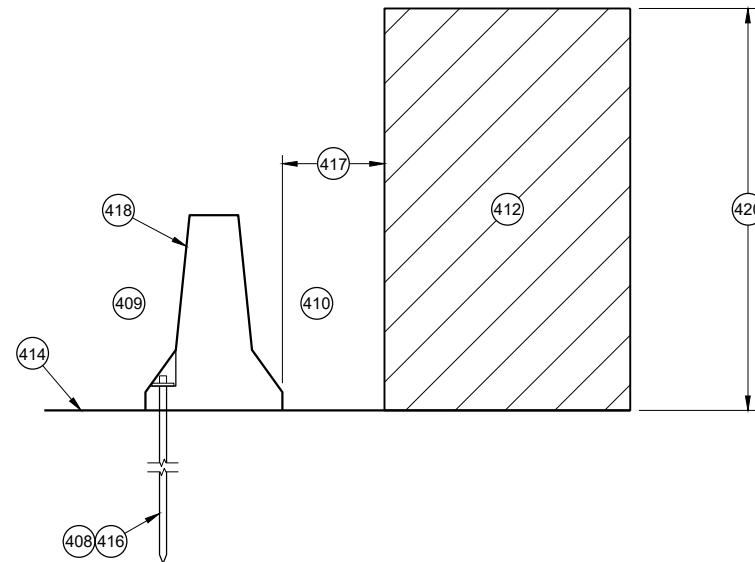
PLAN VIEW
TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



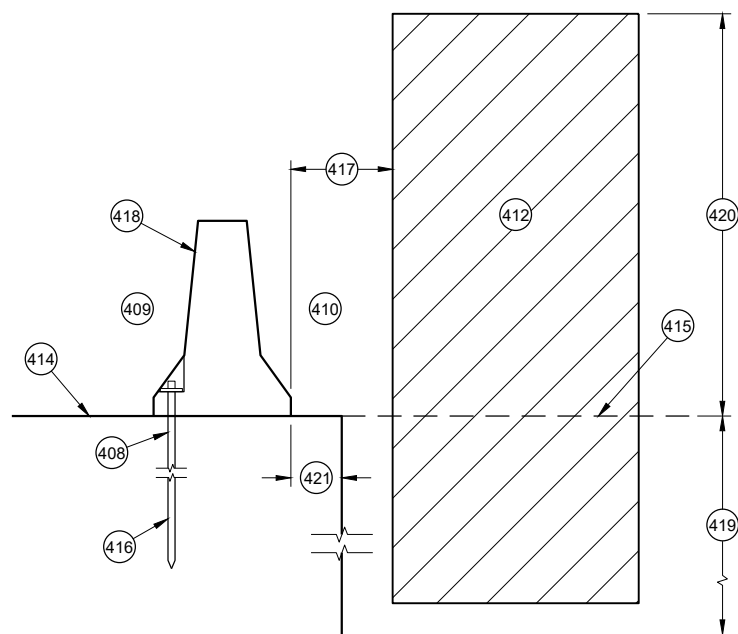
PROFILE VIEW
ANCHORED BARRIER NEAR EXPANSION JOINT



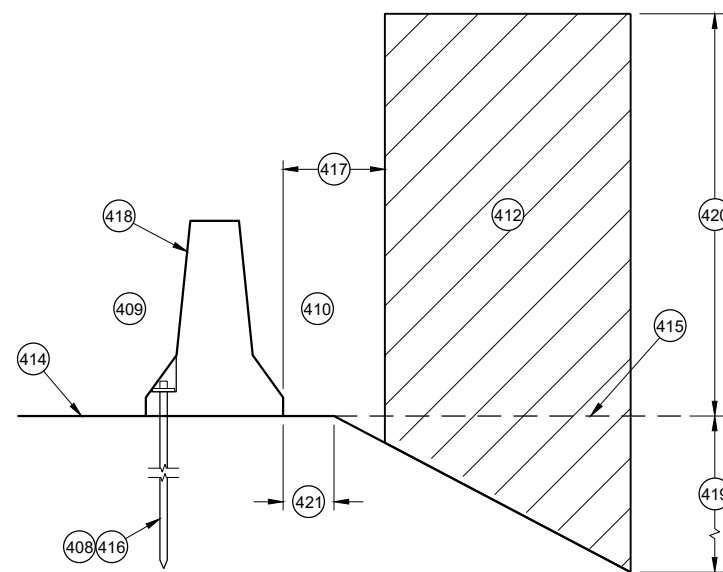
CROSS SECTION
FREE STANDING BARRIER



CROSS SECTION
ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION
ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION
ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

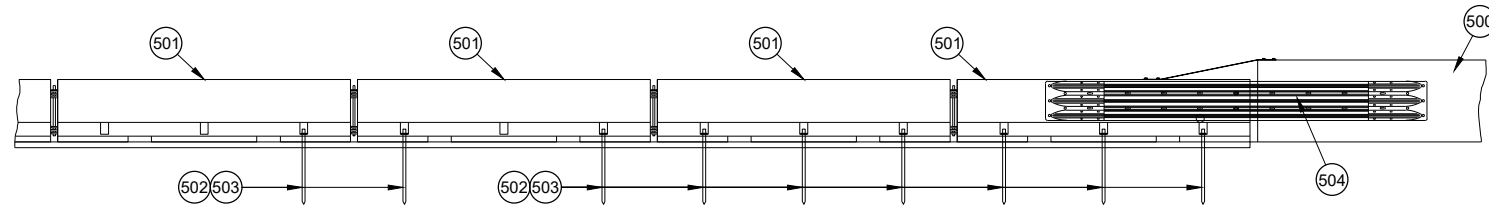
- (400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.
- (401) CONCRETE DECK
- (402) CONCRETE DECK OR APPROACH SLAB.
- (403) EXPANSION JOINT
- (404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.
- (405) ANCHORED TEMPORARY BARRIER
- (406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING
- (407) FREE STANDING BARRIER
- (408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.
- (409) TRAFFIC SIDE
- (410) NON-TRAFFIC SIDE
- (411) ANCHOR LOCATION. SEE ANCHORING DETAILS.
- (412) WORK AREA
- (413) AREA FREE OF OBJECTS AND WORKERS
- (414) GRADE LINE
- (415) EXTENDED GRADE LINE
- (416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.
- (417) WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.
- (418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.
- (419) DEPTHS OF 3 FEET OR MORE.
- (420) Y = 6.5'
- (421) OFFSET FROM BACK OF BARRIER EDGE:
 CONCRETE PAVEMENT 0.5'
 ASPHALT 0.5'
- (422) POSTED SPEED (MPH):
 45 OR GREATER 4.0'
 40 OR LOWER 2.0'

CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"

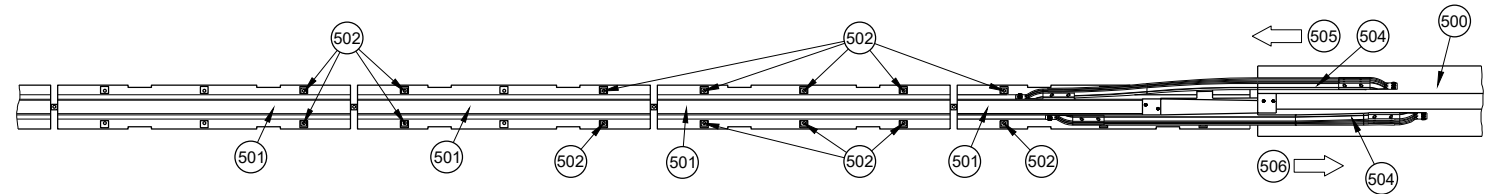
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

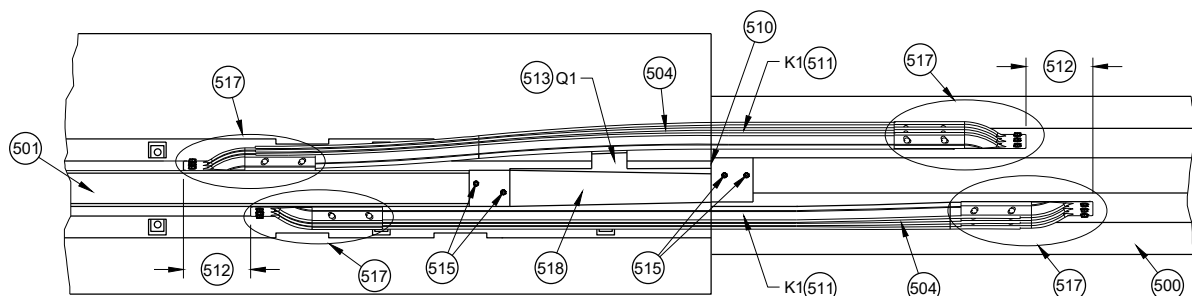
- (500) EXISTING RIGID BARRIERS (VARIES)
- (501) TEMPORARY BARRIER
- (502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).
- (503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.
- (504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.
- (505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.
- (506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.
- (507) VERTICAL BARRIER
- (508) SAFETY SHAPE BARRIER
- (509) SINGLE SLOPE BARRIER
- (510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.
- (511) BENT THRIE BEAM TO FIT.
- (512) THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
- (513) TWO (2) P1, P2 AND P3 ARE REQUIRED
- (514) FIVE (5) N1, N2 AND N3 ARE REQUIRED
- (515) TWO (2) R1, R2 AND R3 ARE REQUIRED
- (516) CUT WOOD BLOCK TO FIT.
- (517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.
- (518) CAP ASSEMBLY
- (519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.
- (520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



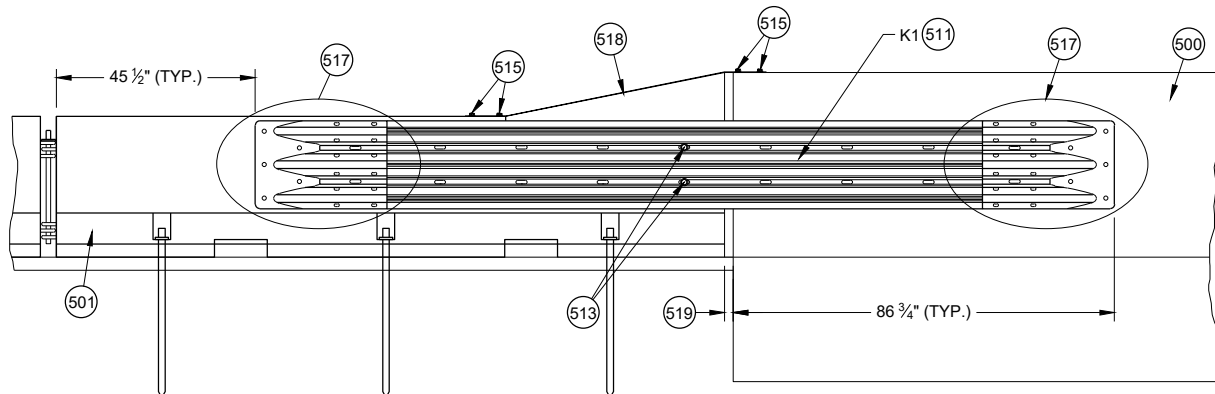
PROFILE VIEW



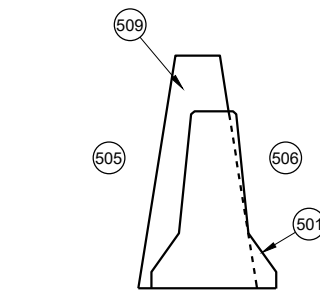
**PLAN VIEW
TRANSITION TO RIGID BARRIER**



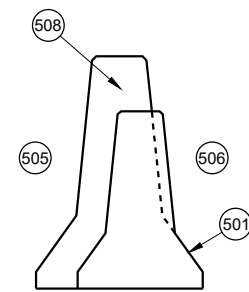
**PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER**



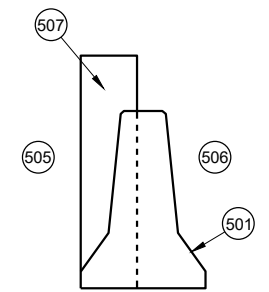
**FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER**



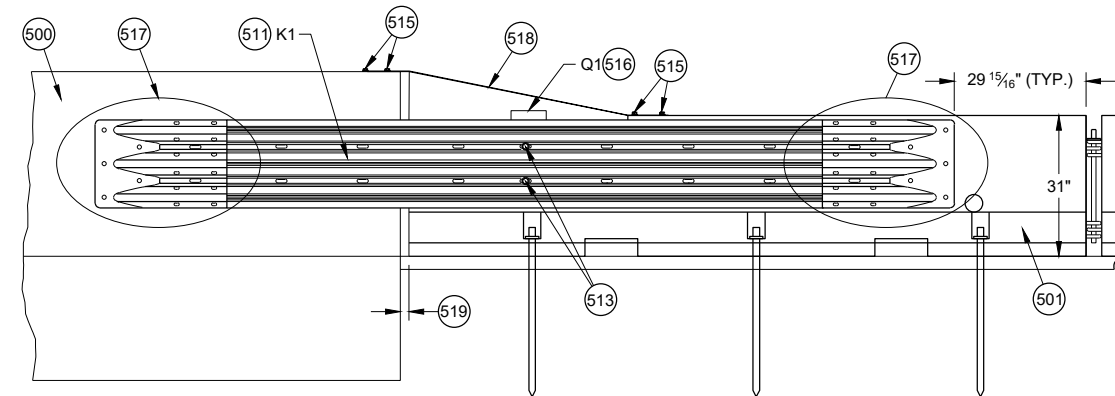
**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SINGLE SLOPE**



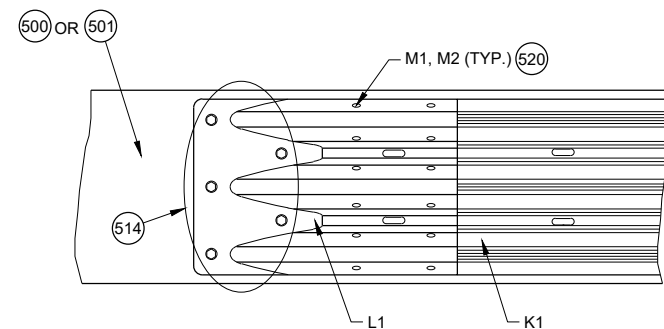
**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT SAFETY SHAPE**



**CROSS SECTION
TEMPORARY BARRIER
PLACEMENT VERTICAL**



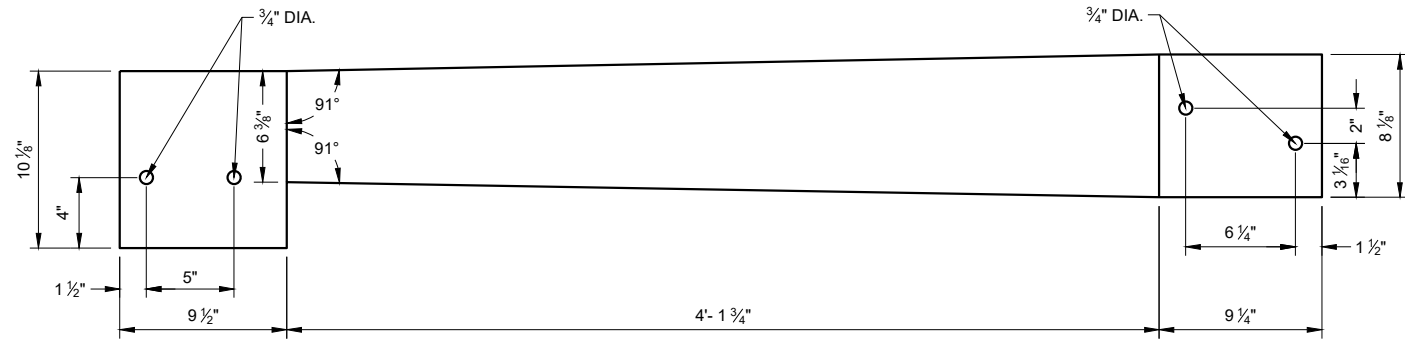
**BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER**



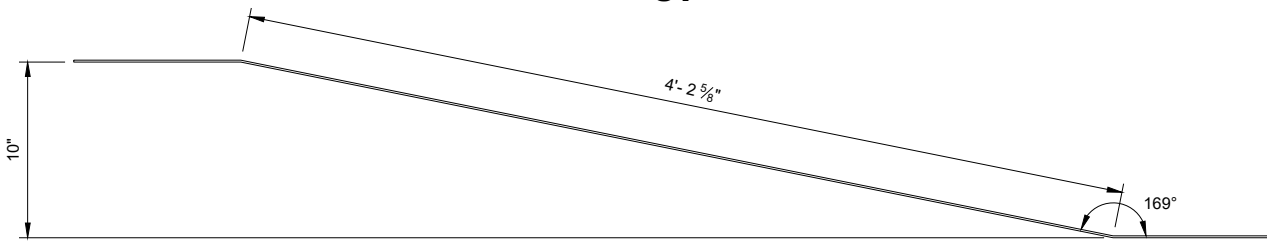
**(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

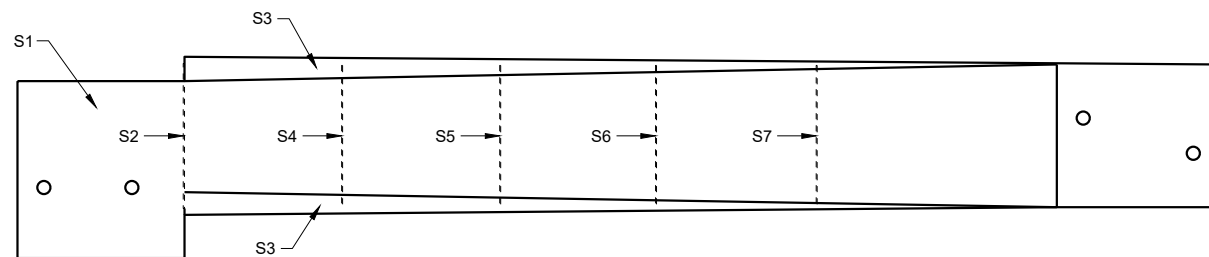
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



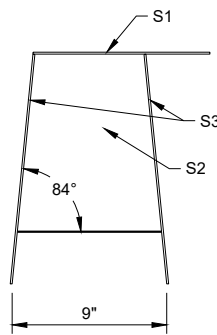
**TOP VIEW
S1**



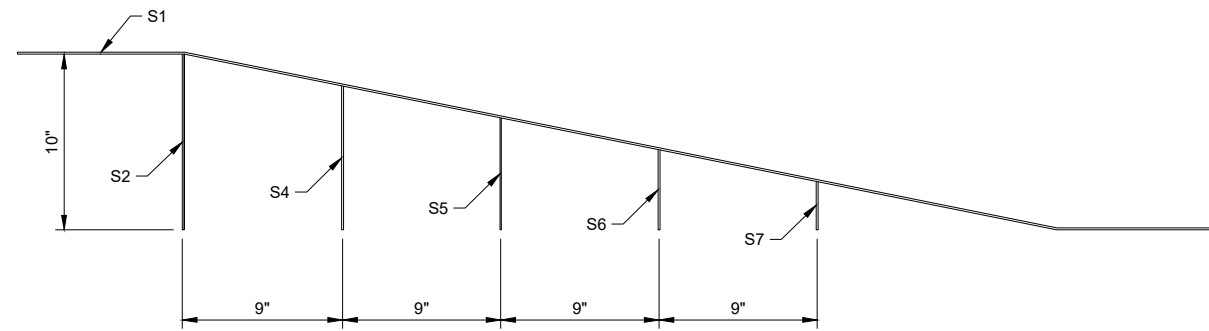
**ELEVATION VIEW
S1**



PLAN VIEW

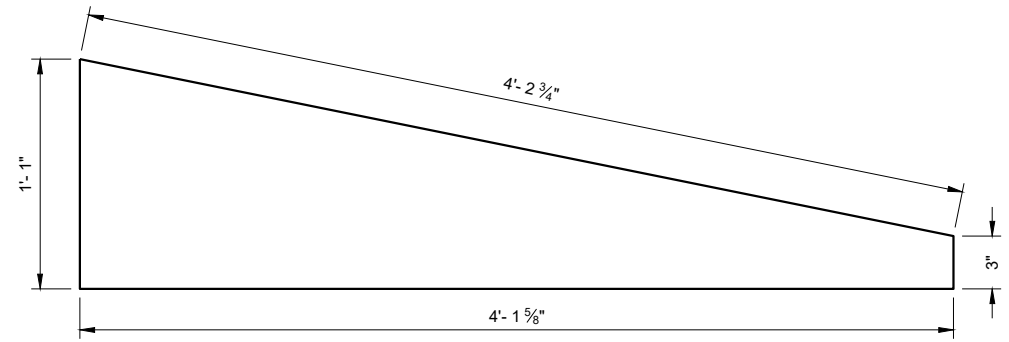


BACK VIEW

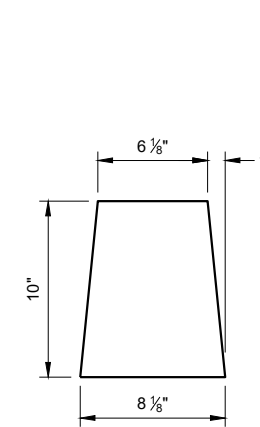


SIDE VIEW (600)

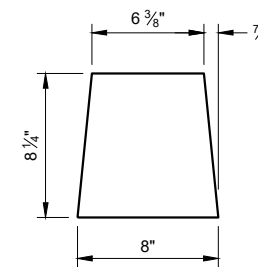
42" TOP CAP ASSEMBLY



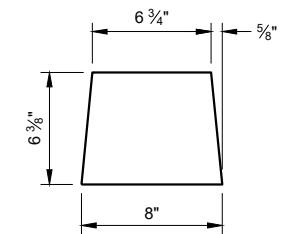
**SIDE VIEW
S3**



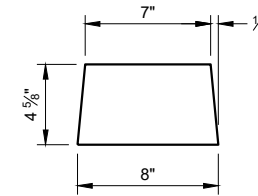
S2



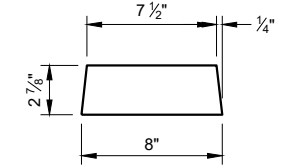
S4



S5



S6



S7

GENERAL NOTES

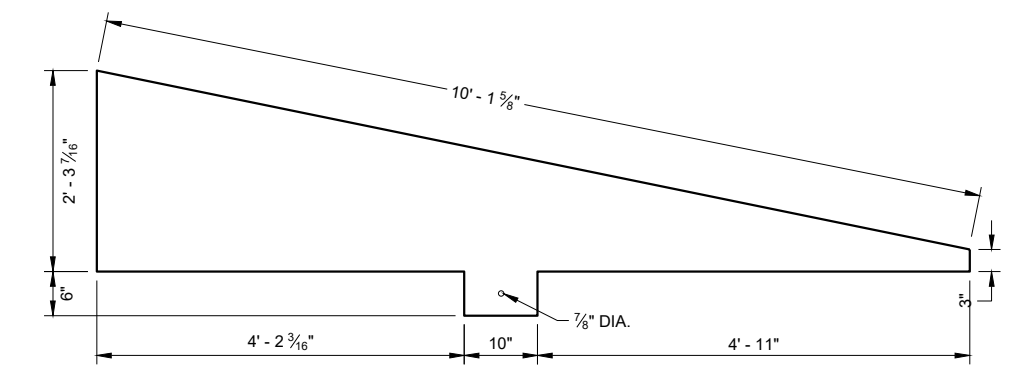
STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

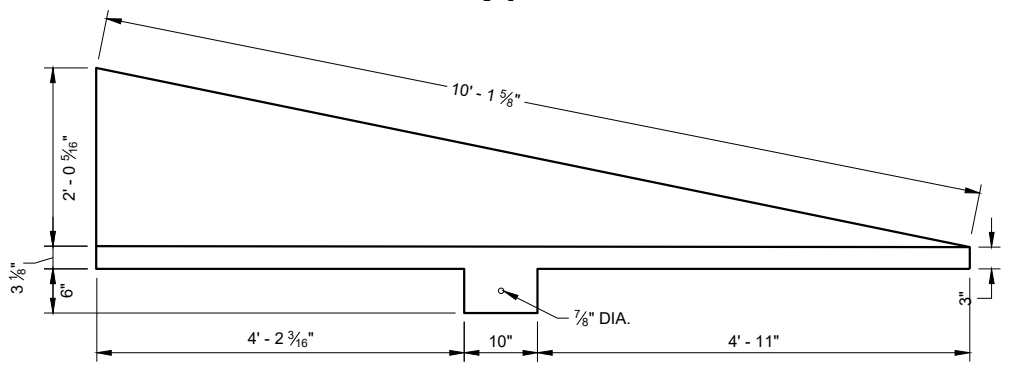
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SIDE VIEW
T4**



**SIDE VIEW
T3**

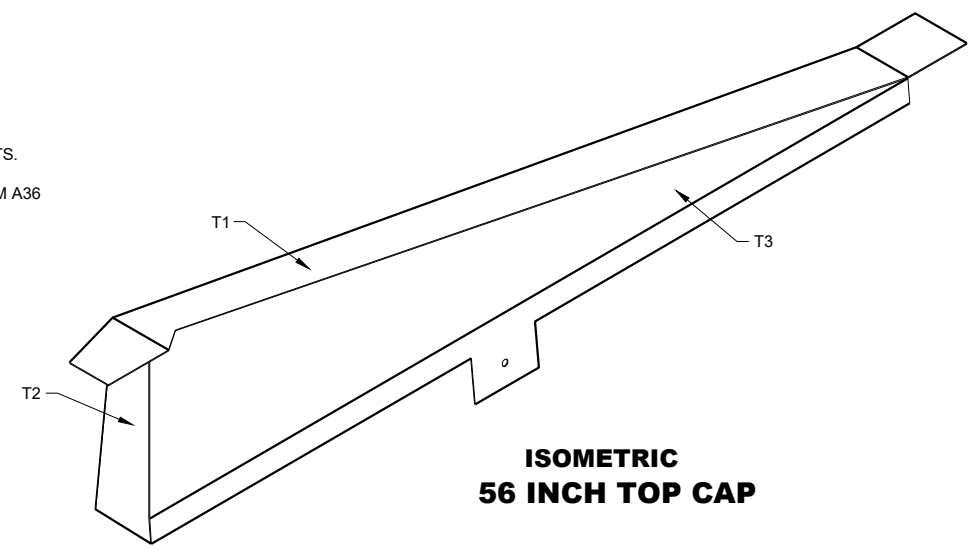
**END
VIEW**



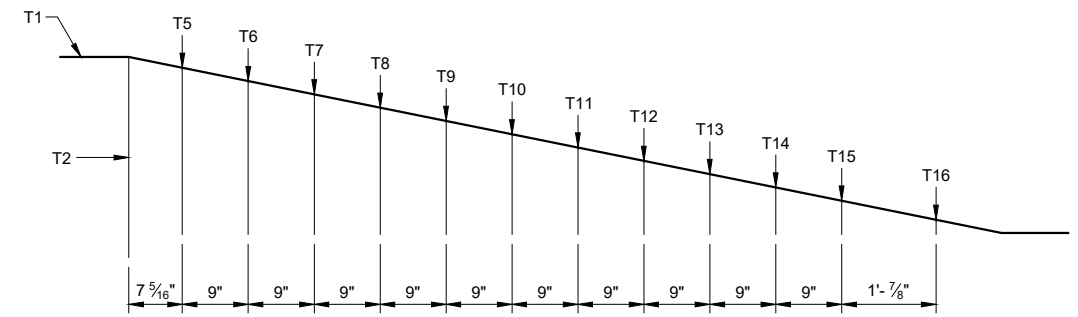
**END
VIEW**

GENERAL NOTES

- STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES
- STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.
- SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.
- (700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.

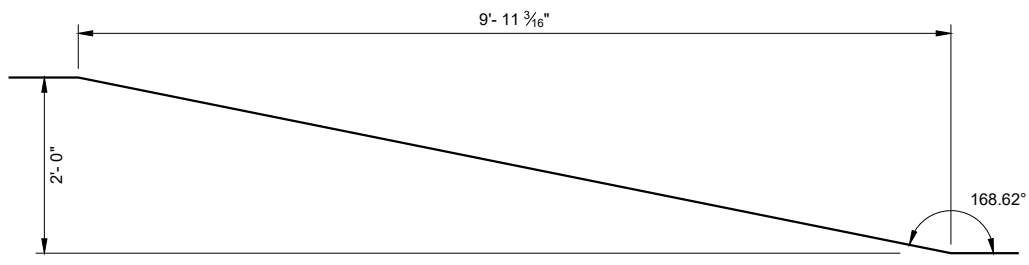
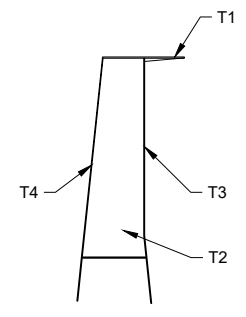


**ISOMETRIC
56 INCH TOP CAP**

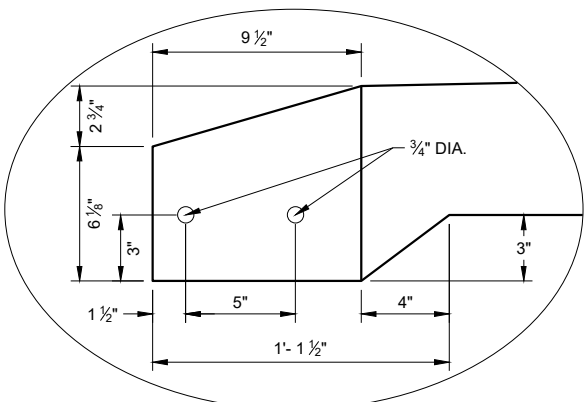


**SIDE VIEW
56 INCH TOP CAP (700)**

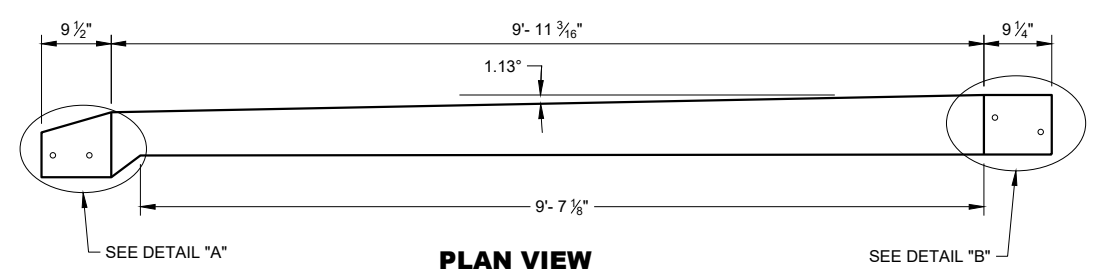
**END VIEW
56 INCH TOP CAP**



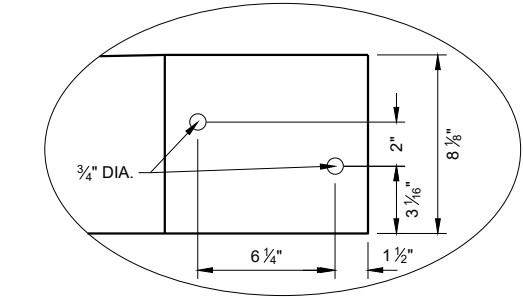
**SIDE VIEW
TOP PLATE T1**



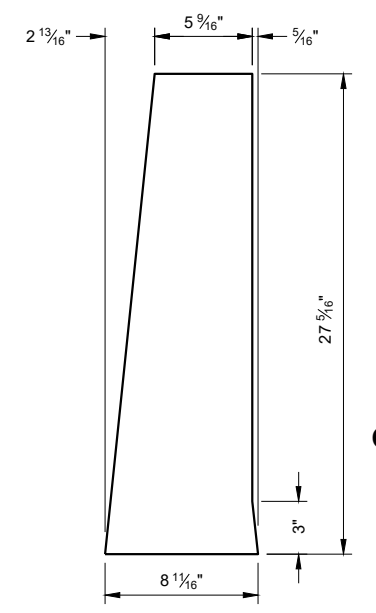
DETAIL "A"



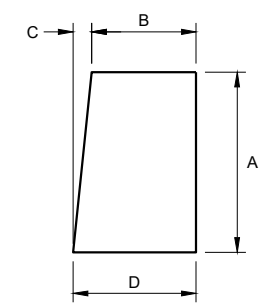
**PLAN VIEW
TOP PLATE T1**



DETAIL "B"



END PLATE T2

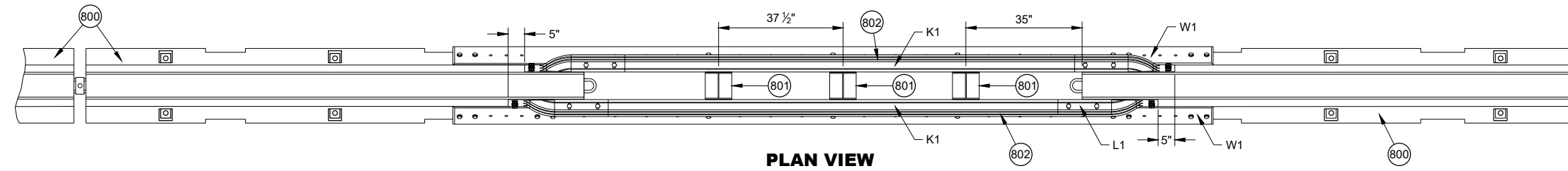
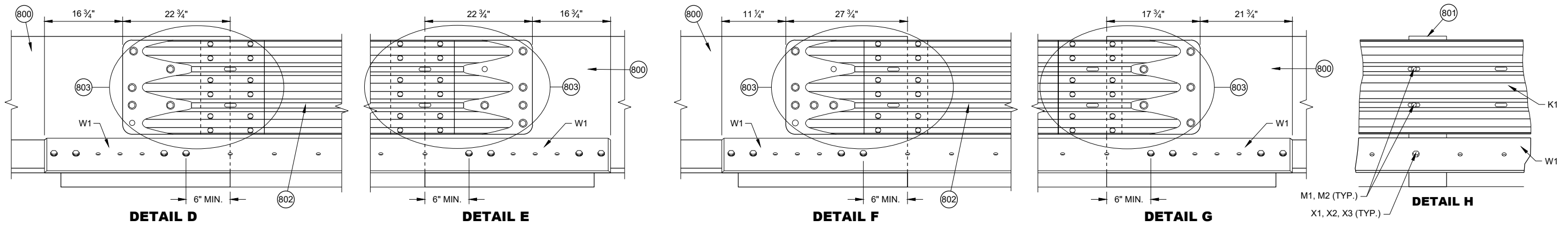


**GUSSET PLATES
T5 - T16**

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 13/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 9/16"	6 7/16"	1 1/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 1/16"	7 1/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

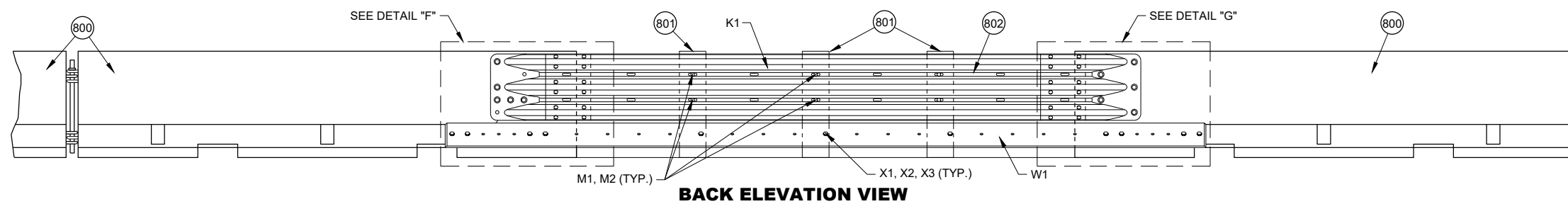
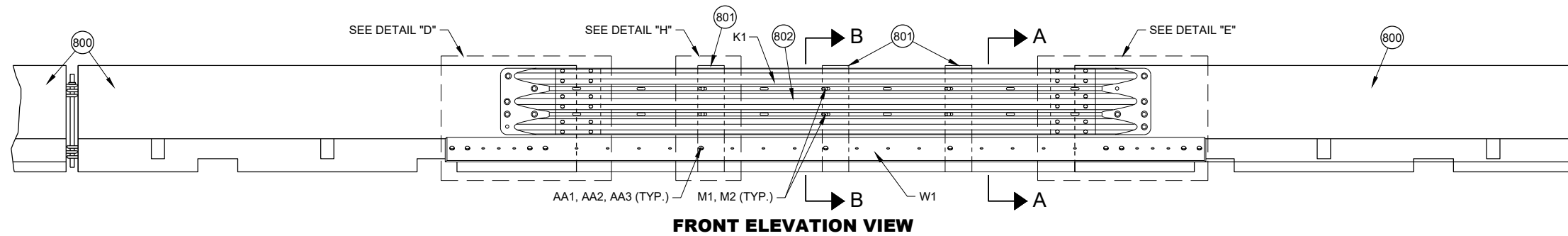
**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

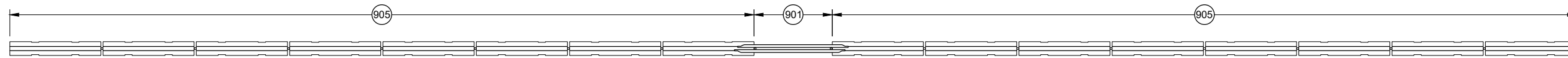
- 800 FREE STANDING TEMPORARY BARRIER
- 801 GAP STIFFENER ASSEMBLY
- 802 THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.
- 803 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



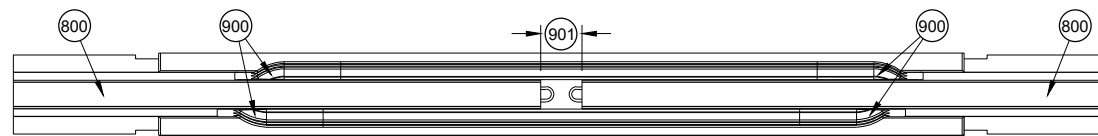
PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

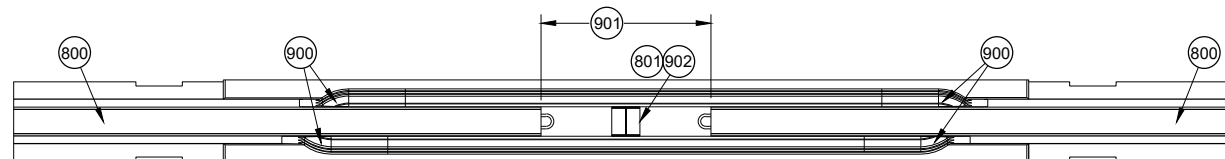
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



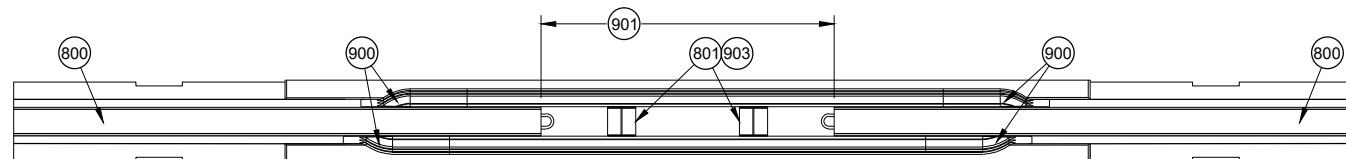
**PLAN VIEW
GAP WITHIN SPACING**



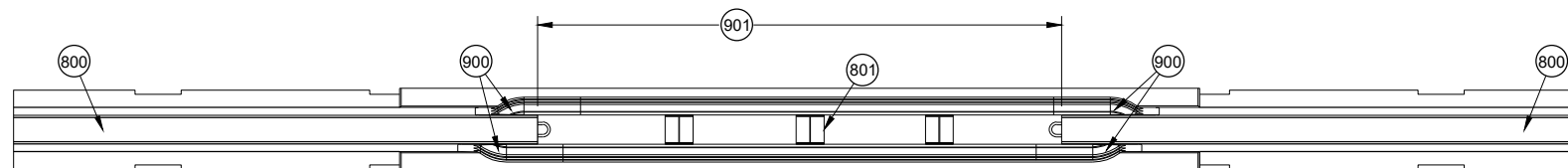
**PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. 904**



**PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. 904**



**PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. 904**



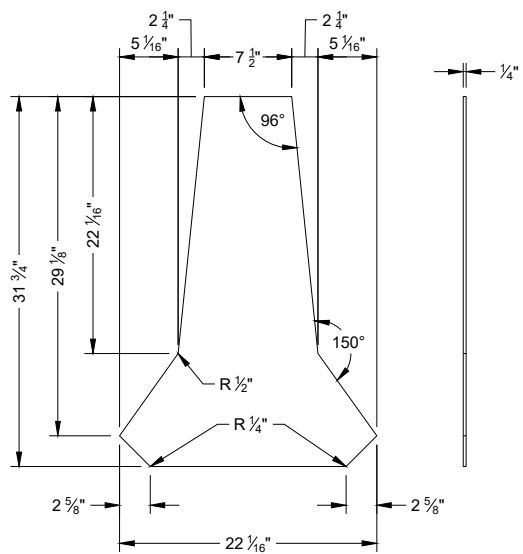
**PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. 904**

GENERAL NOTES

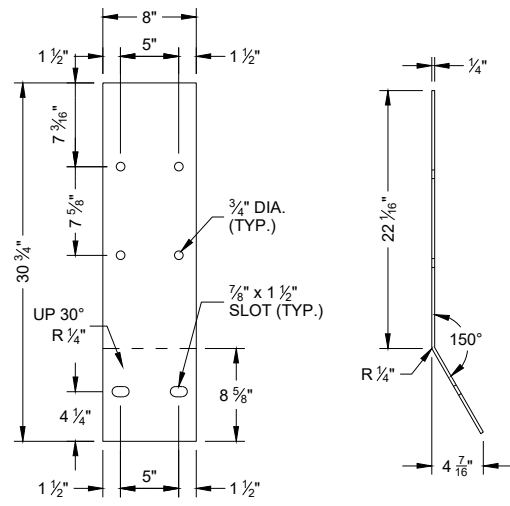
- 900 SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
- 901 TEMPORARY BARRIER GAP
- 902 GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
- 903 GAP STIFFENER ASSEMBLY IS OFFSET 18 3/4" FROM CENTER
- 904 MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
- 905 MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

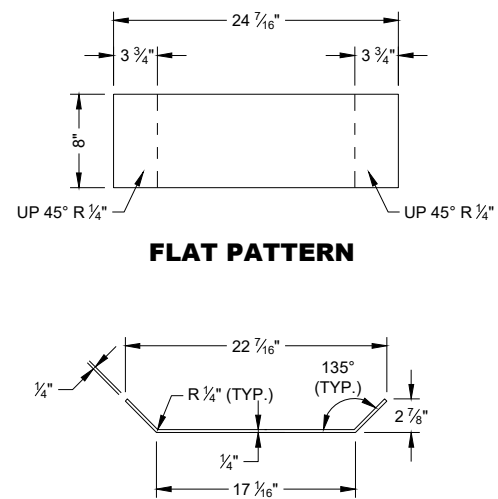
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



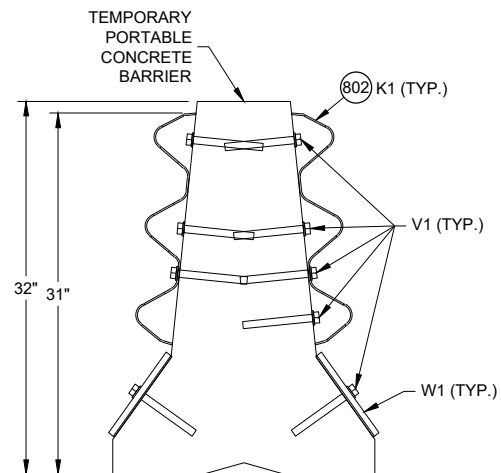
PROFILE VIEW **SIDE VIEW**
STIFFENER ASSEMBLY
CENTER PANEL U1



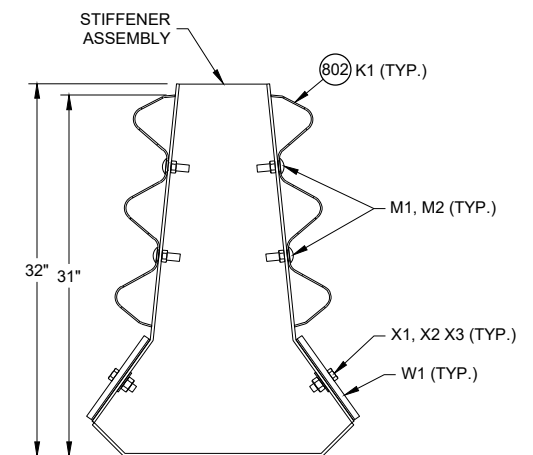
FLAT PATTERN **SIDE VIEW**
STIFFENER ASSEMBLY
SIDE PANEL U2



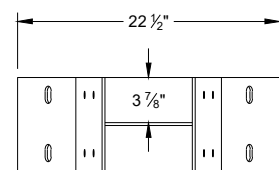
PROFILE VIEW
STIFFENER ASSEMBLY
BOTTOM PANEL U3



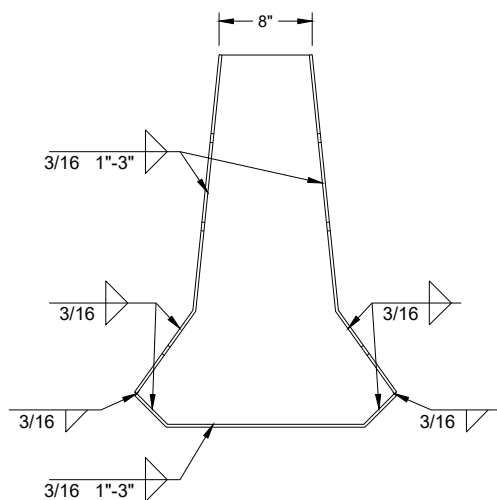
SECTION A - A



SECTION B - B

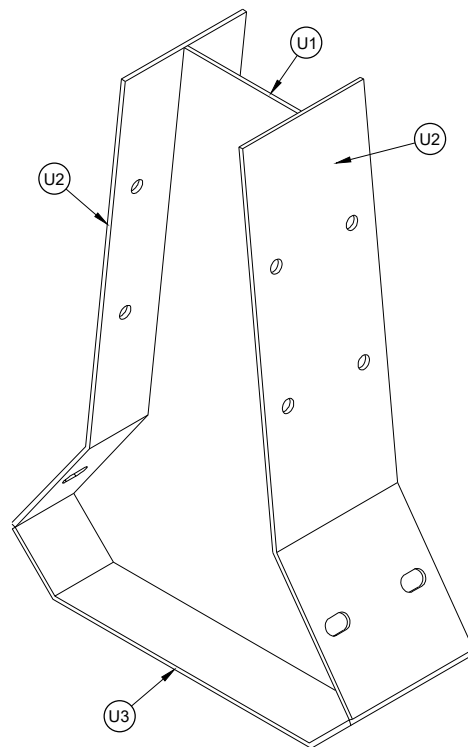


PLAN VIEW

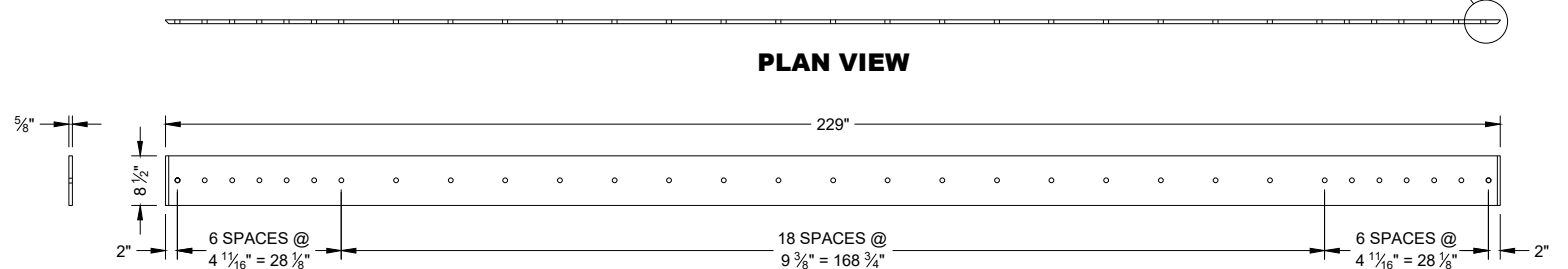
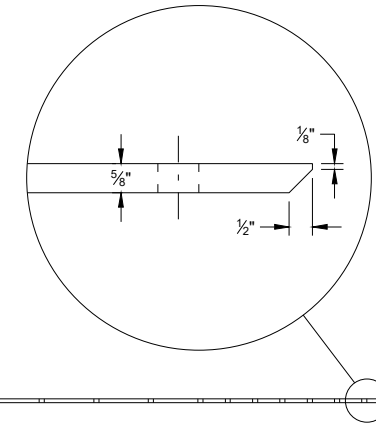


PROFILE VIEW **SIDE VIEW**

GAP STIFFENER ASSEMBLY



ISOMETRIC

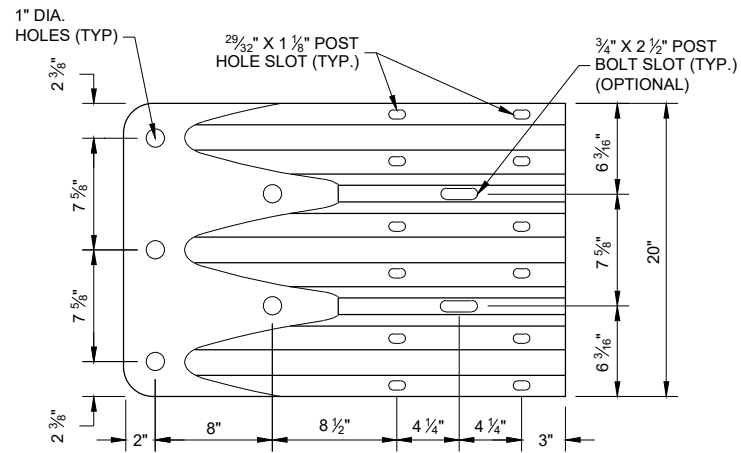


SIDE VIEW

ELEVATION VIEW
W1 TOE PLATE

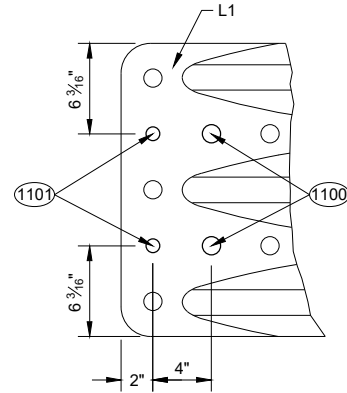
CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



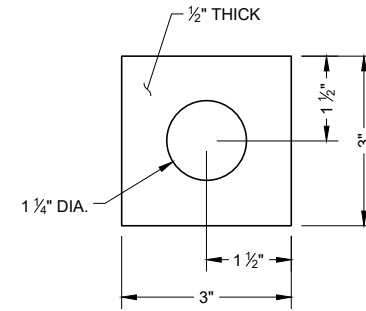
ELEVATION VIEW

**THRIE BEAM
TERMINAL CONNECTOR**



ELEVATION VIEW

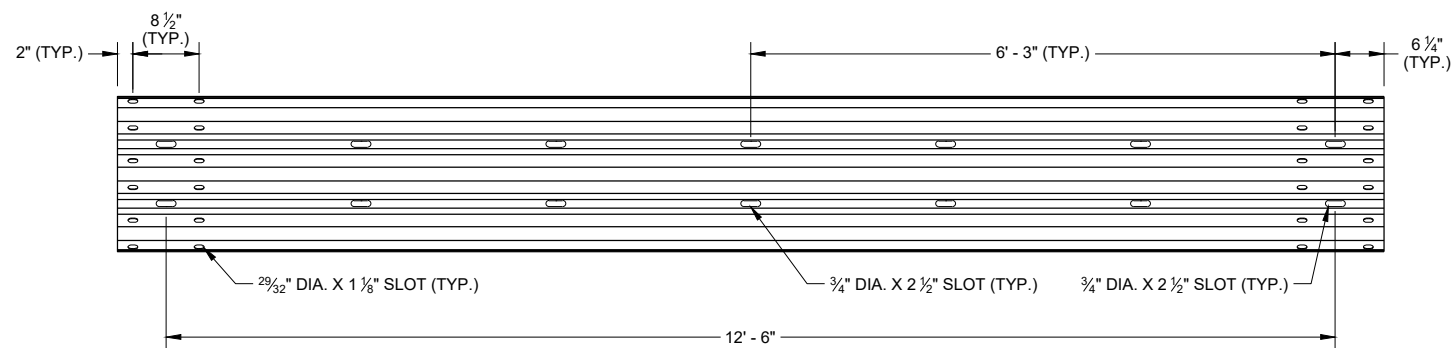
**ADDITIONAL THRIE BEAM
TERMINAL CONNECTOR HOLE DETAIL**



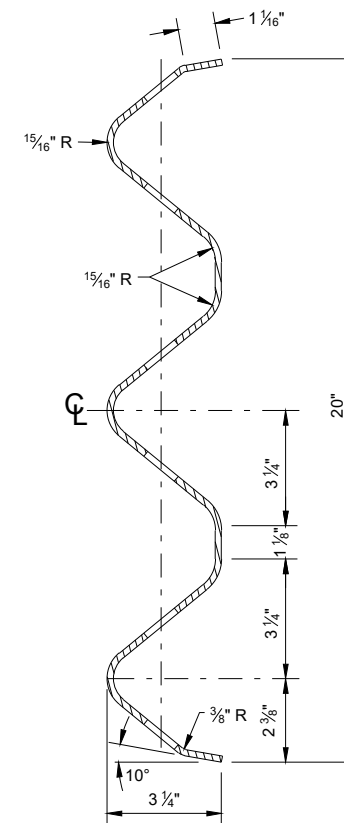
**PLATE WASHER DETAIL
G2, H3**

GENERAL NOTES

- (1100) 1" DIA. HOLE
- (1101) 3/4" DIA. HOLE
- (1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



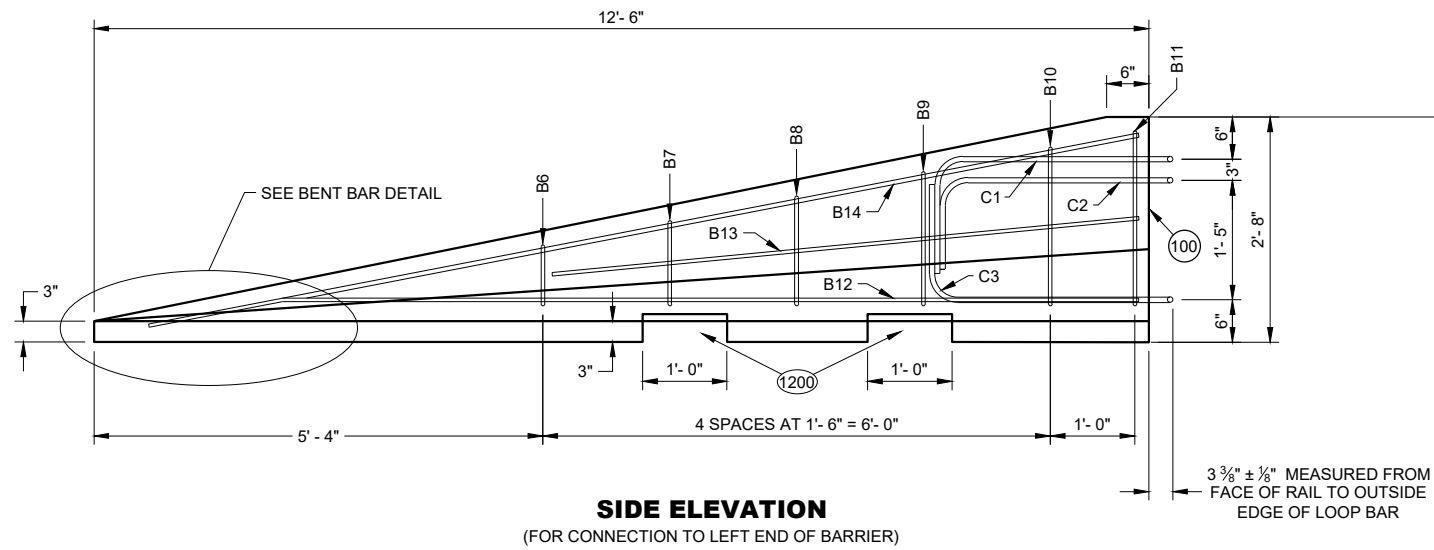
SLOTTED THRIE BEAM RAIL K1



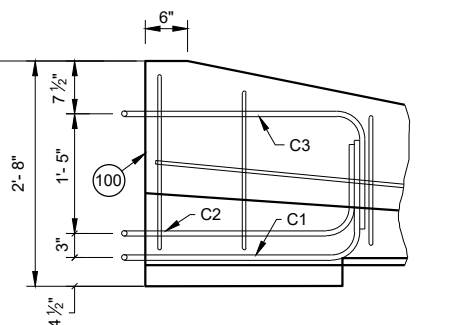
**SECTION THROUGH
BEAM K1**

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



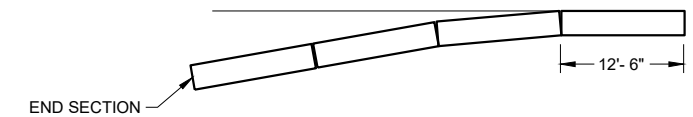
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

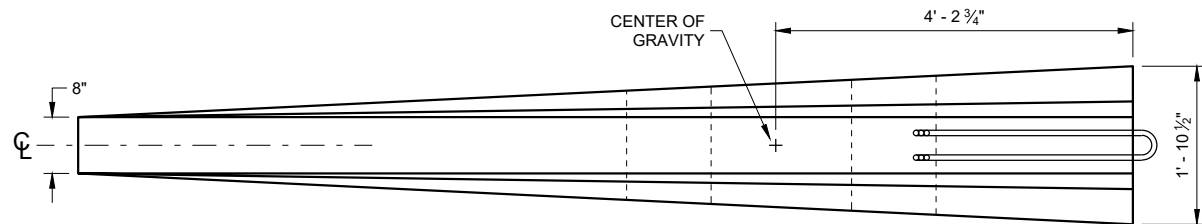
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

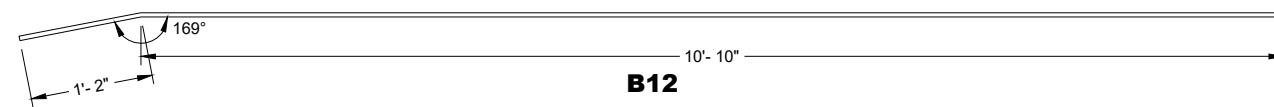


FLARE AT BARRIER END

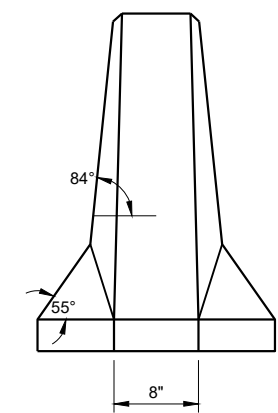
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



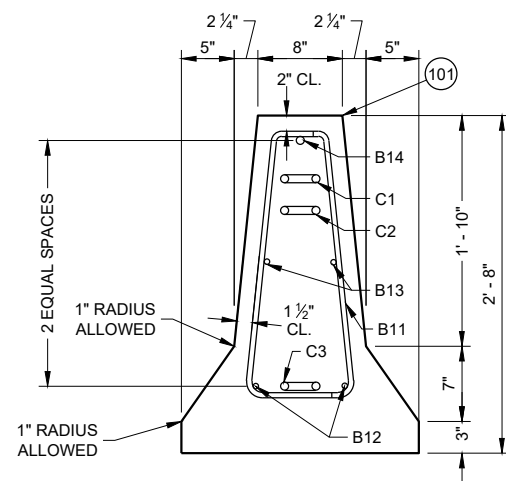
PLAN VIEW



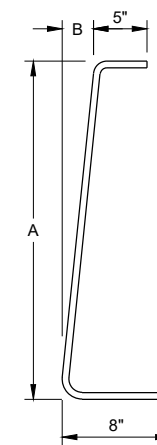
BENT BAR DETAIL



FRONT ELEVATION



END SECTION



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 1/4"
B8	1'- 5"	1 5/8"
B9	1'- 8"	1 7/8"
B10	2'- 0 1/2"	2 3/8"
B11	2'- 3"	2 3/4"

B BARS

2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f _c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ½" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ½" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	¾" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
R2	CAP - BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

6

SDD 14B07-16m

**CONCRETE BARRIER
TEMPORARY PRECAST,
12' - 6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

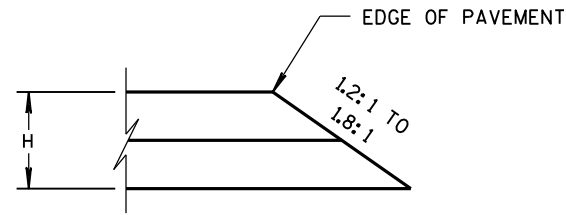
6

6

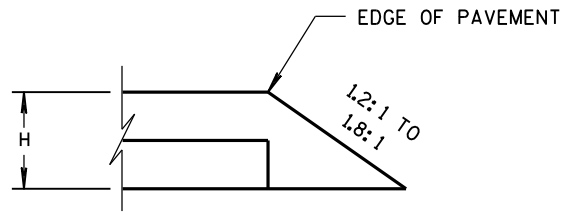
SDD 14B07-16n

SDD 14B07-16n

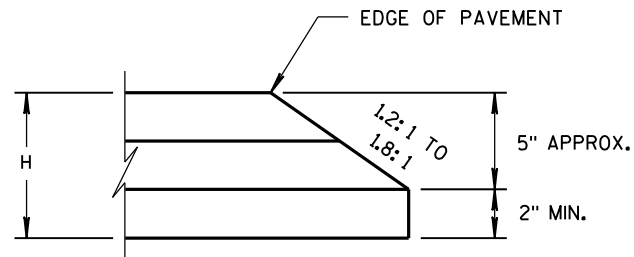
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



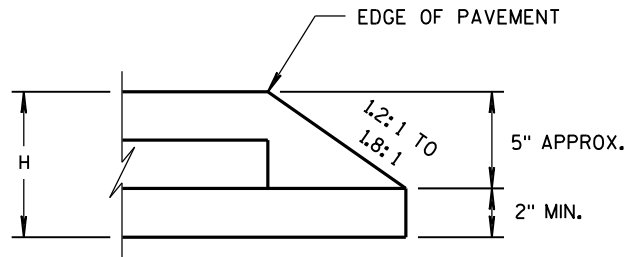
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

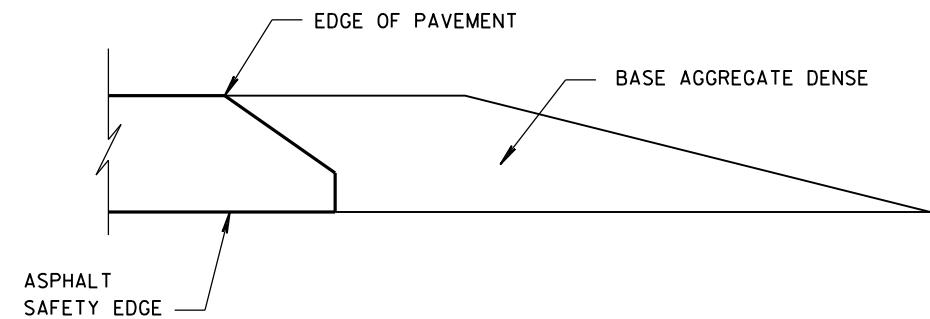


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

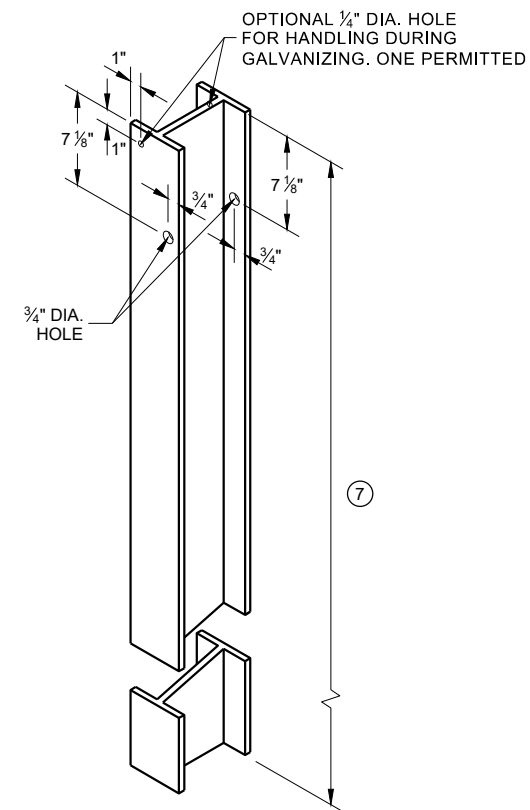
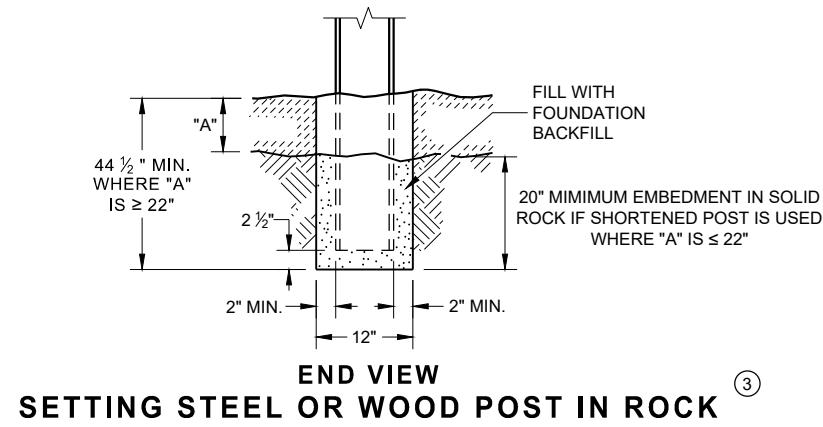
6

S.D.D. 14 B 29-1

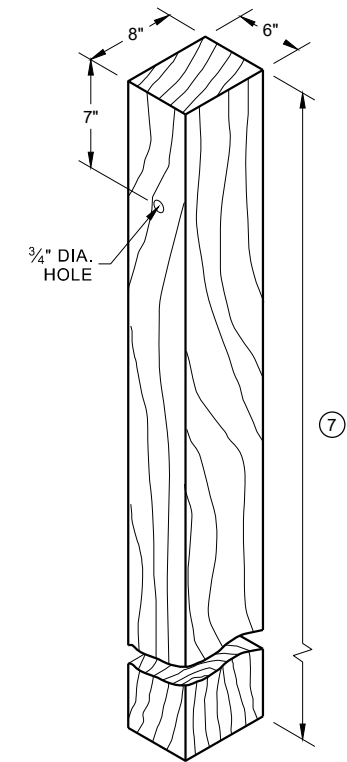
S.D.D. 14 B 29-1

SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

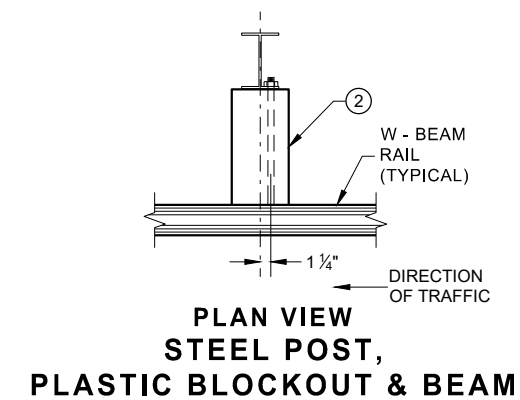
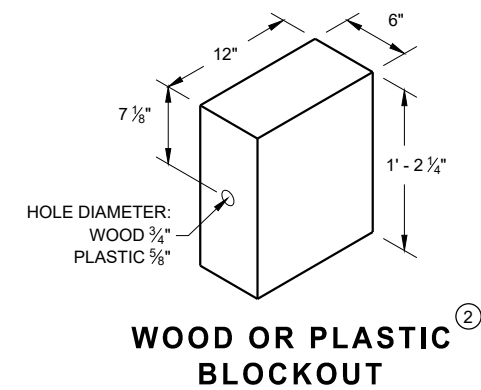
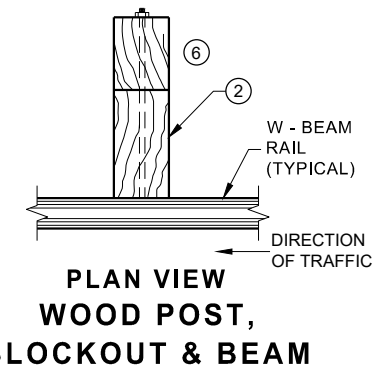
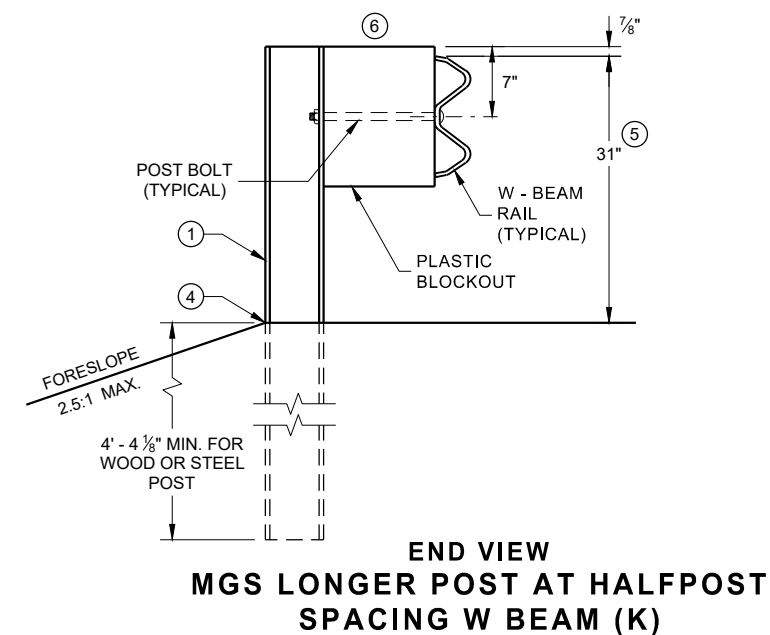
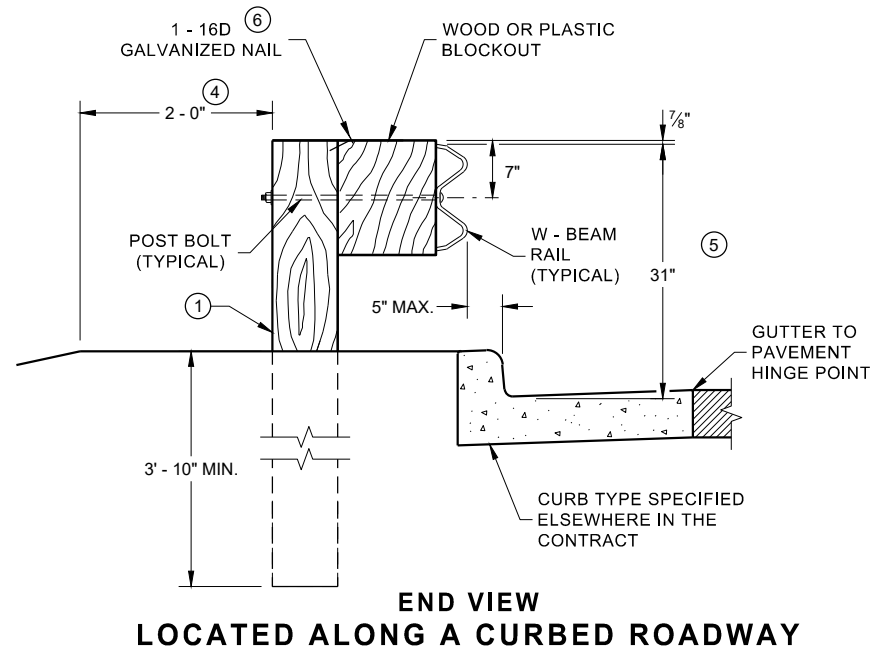
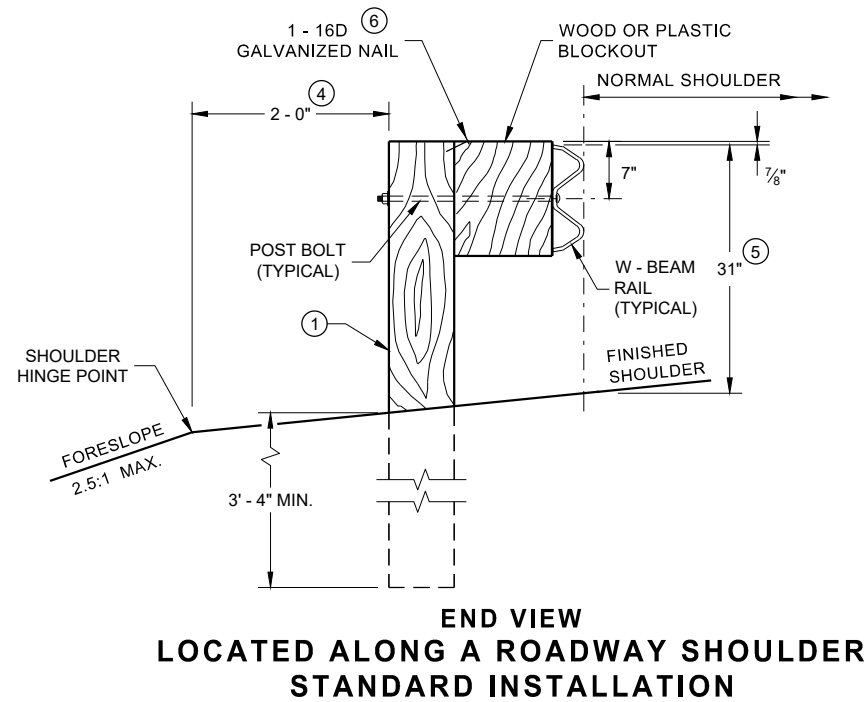
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL.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



STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) ①

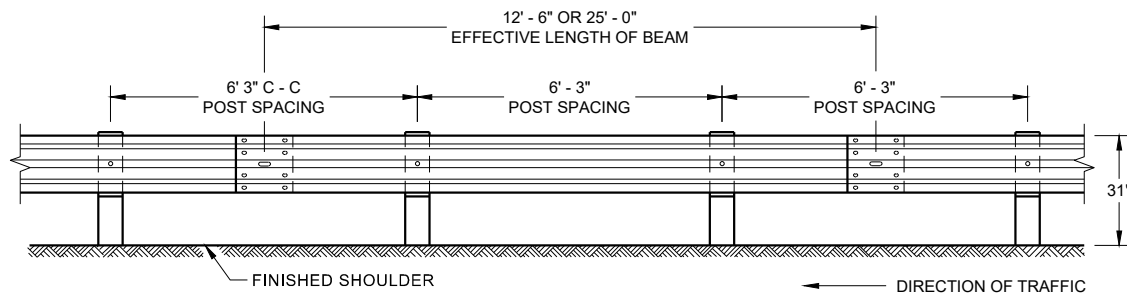


WOOD POST (6" X 8") NOMINAL ①

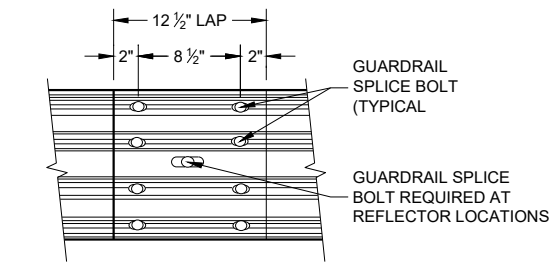


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



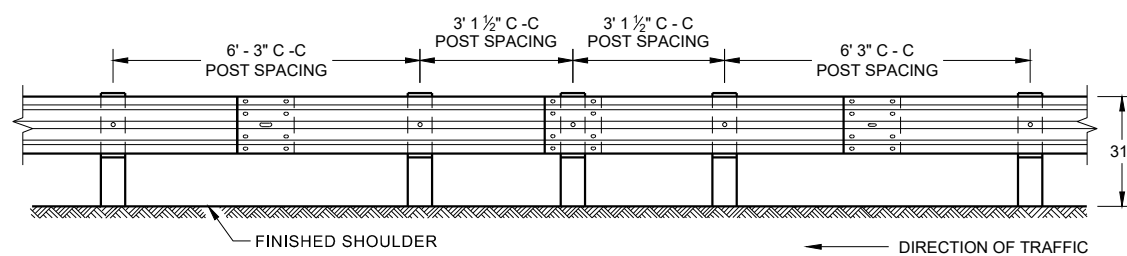
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



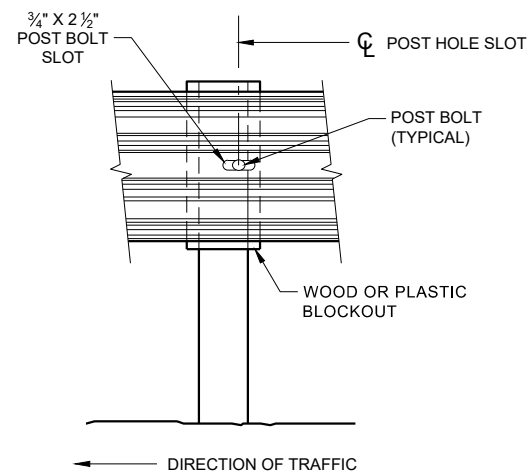
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

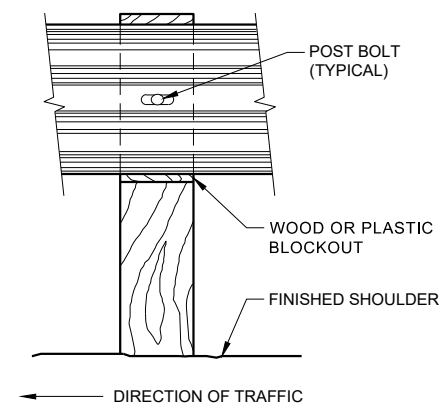
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



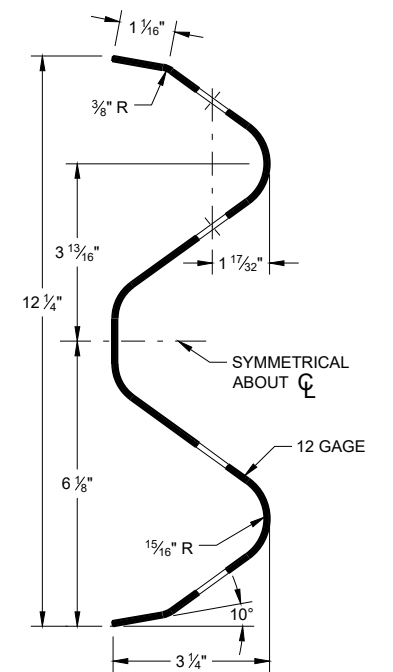
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



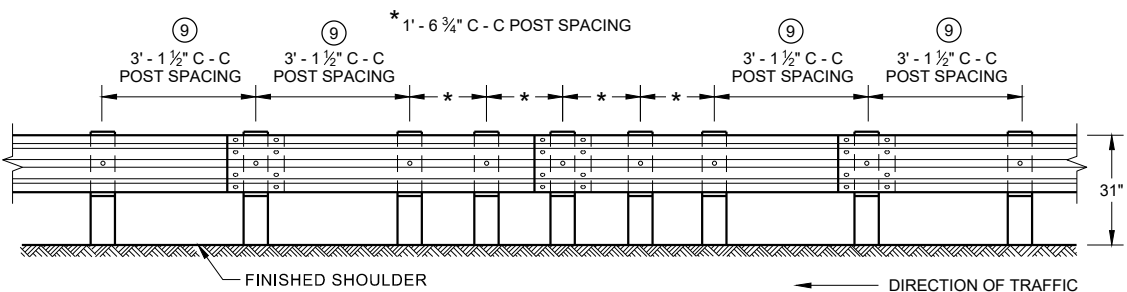
FRONT VIEW AT STEEL POST



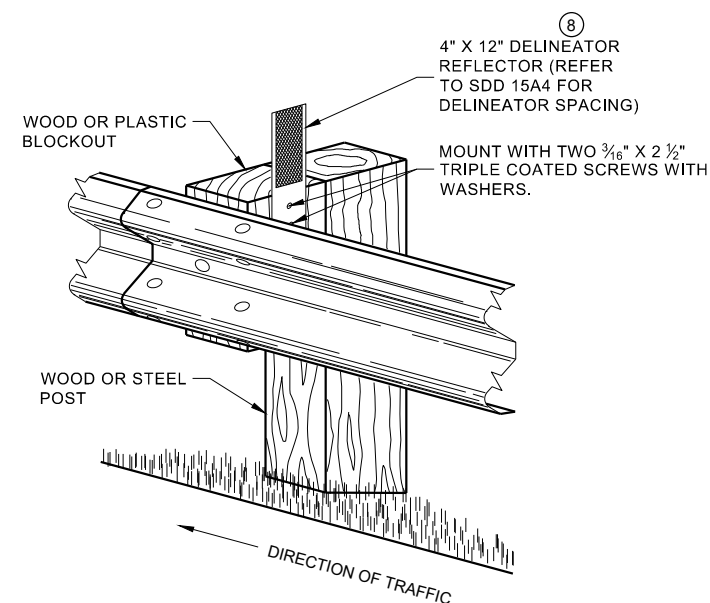
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

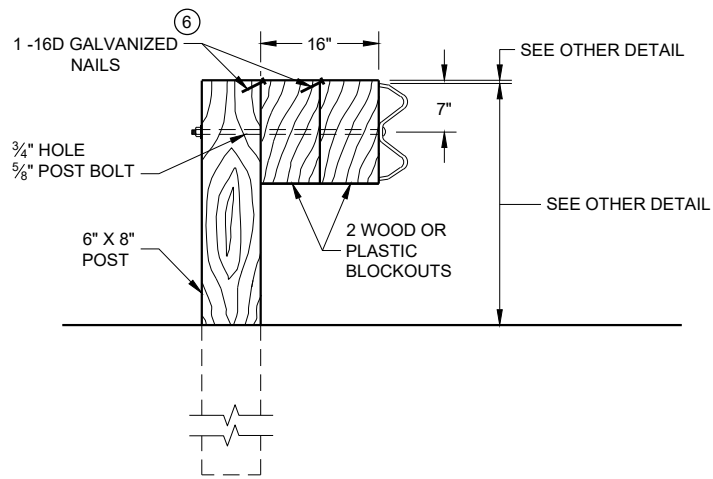
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

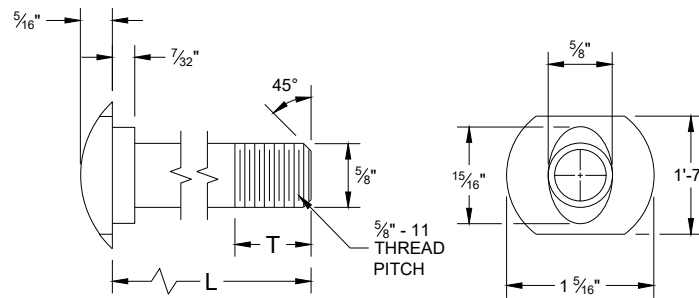


DETAIL FOR 16" BLOCKOUT DEPTH

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

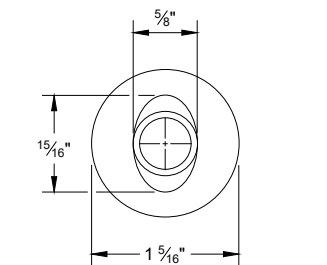
NOTE:

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

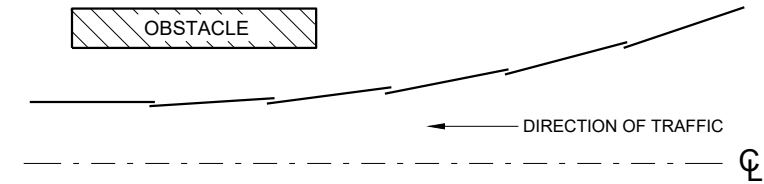


POST BOLT TABLE

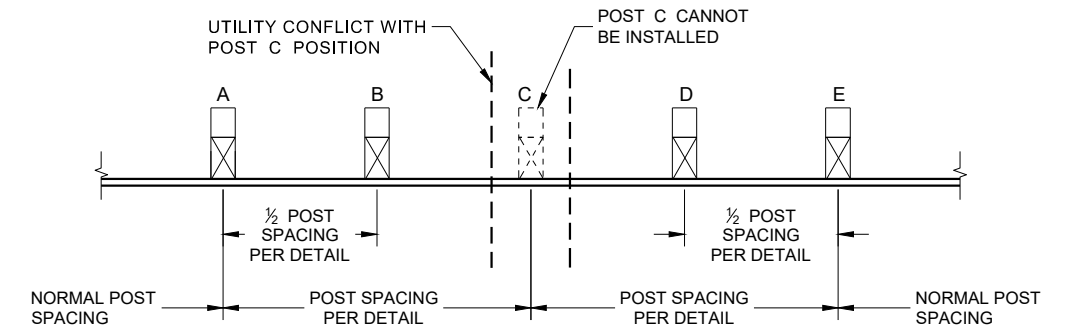
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



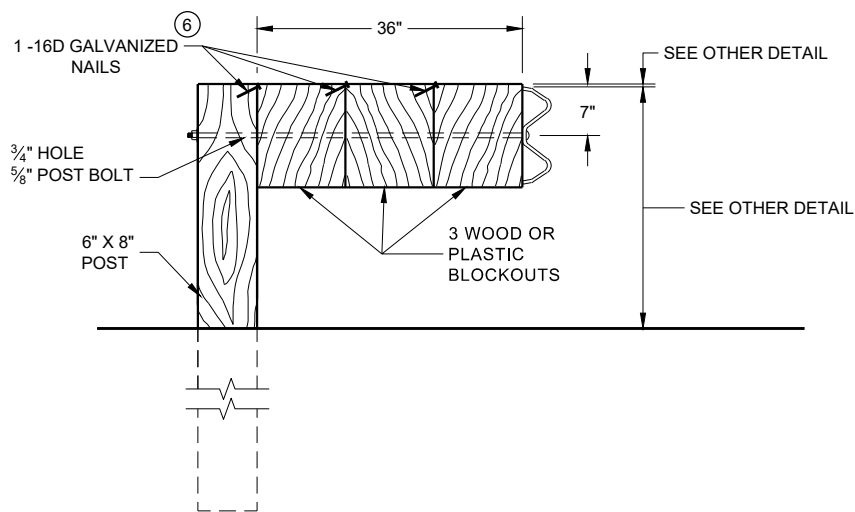
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

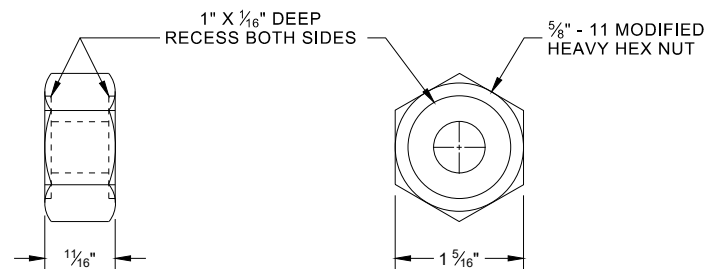


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

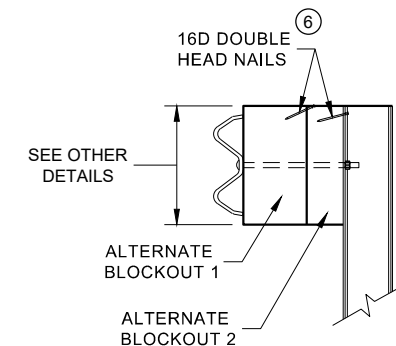


DETAIL FOR 36" BLOCKOUT DEPTH

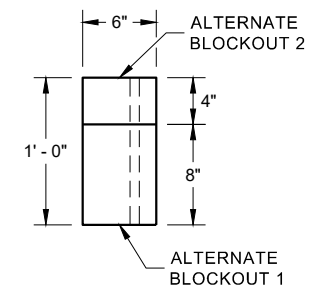
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**



SIDE VIEW



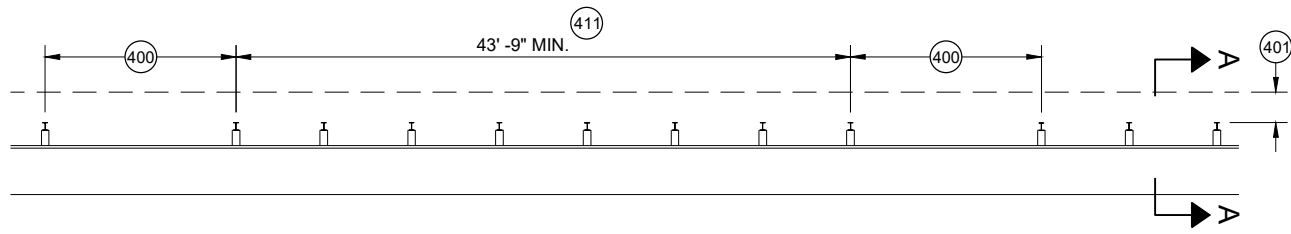
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

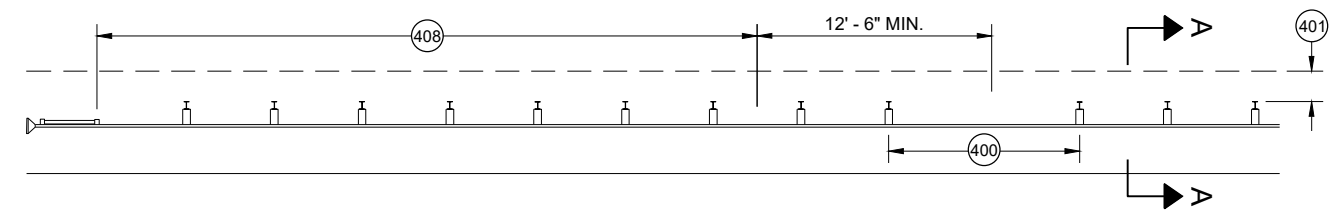
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

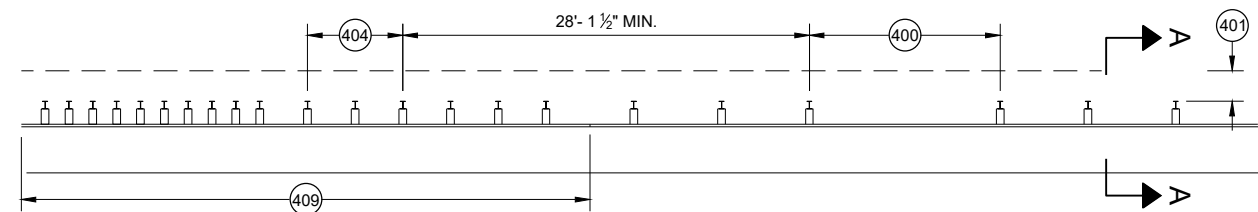
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



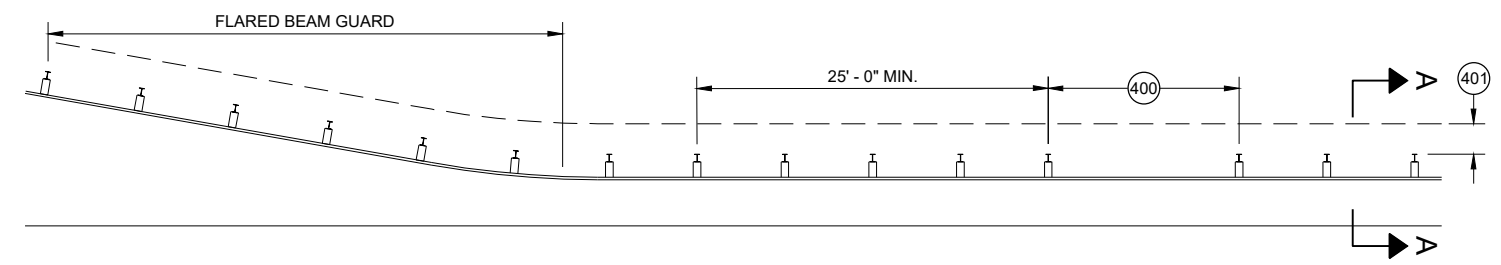
MISSING POST IN MGS GUARDRAIL



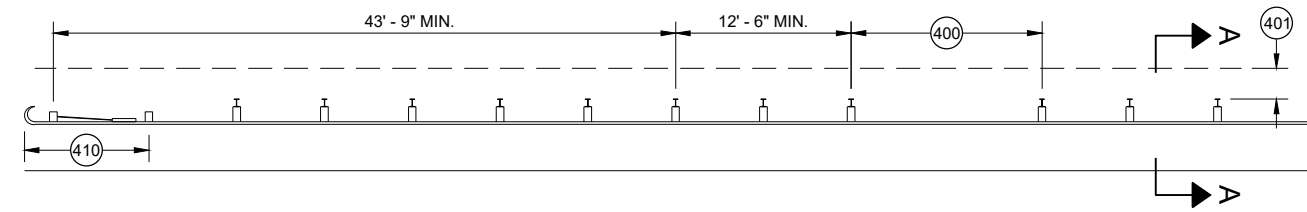
MISSING POST IN MGS GUARDRAIL NEAR EAT



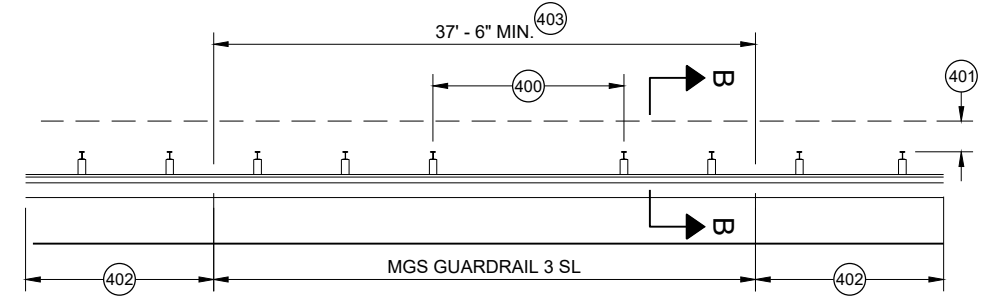
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

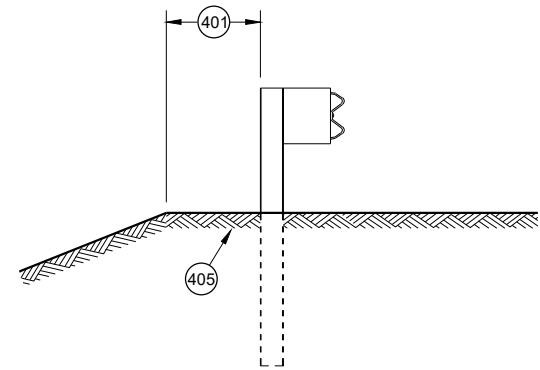


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

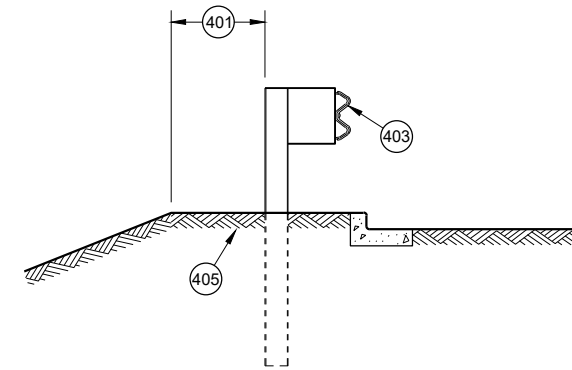


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

GENERAL NOTES

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

SEE SDD 14B42 FOR MORE INFORMATION.

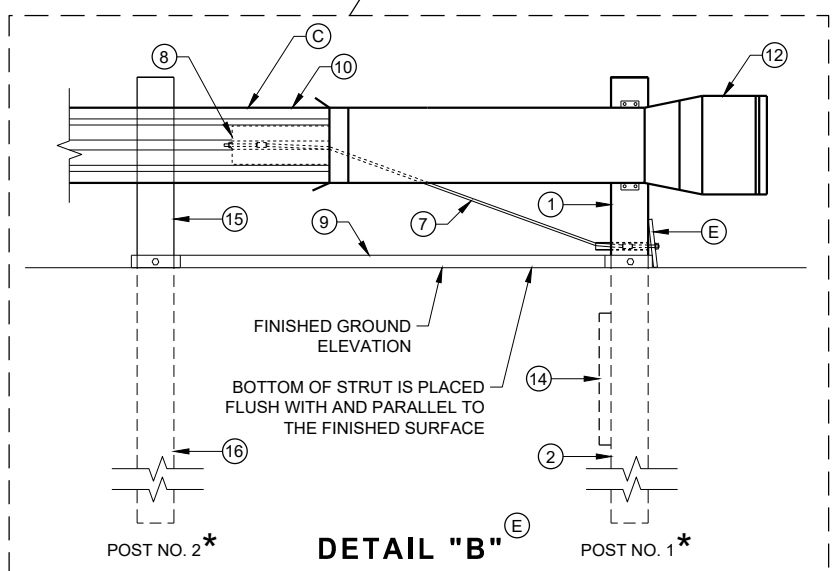
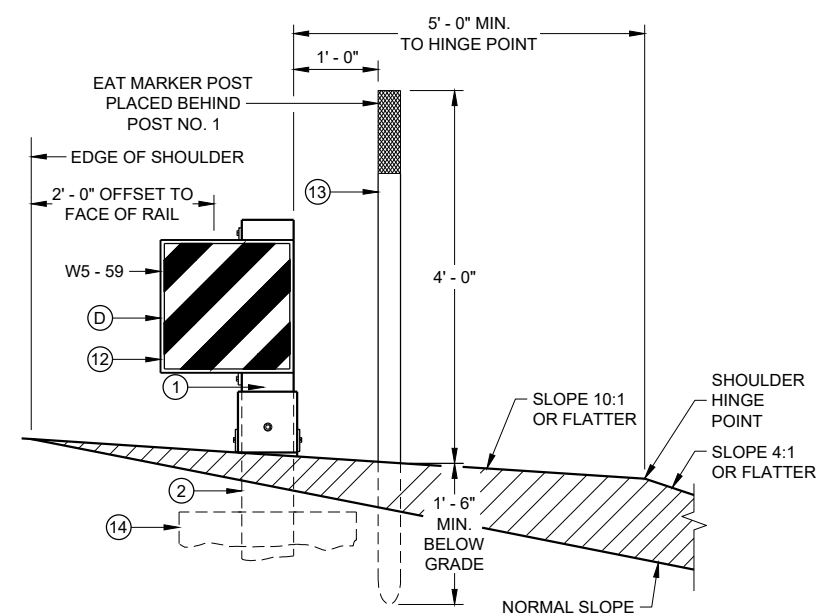
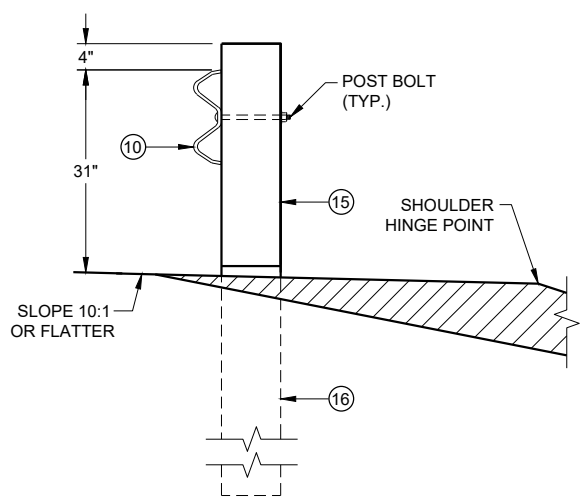
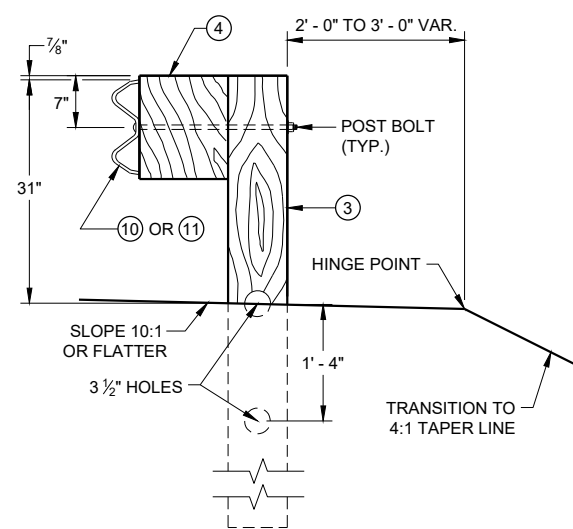
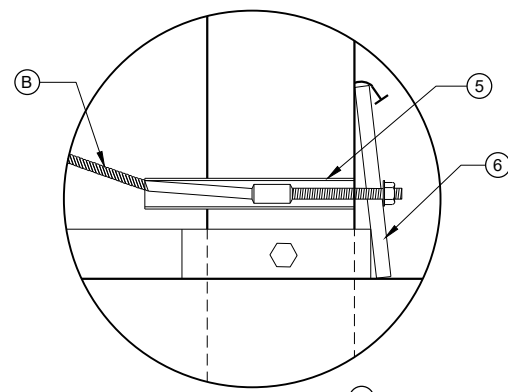
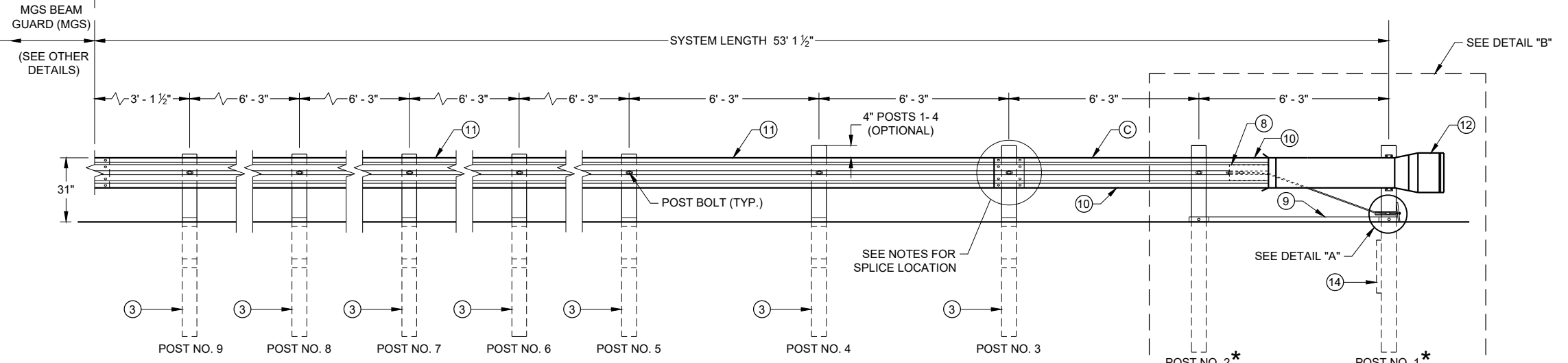
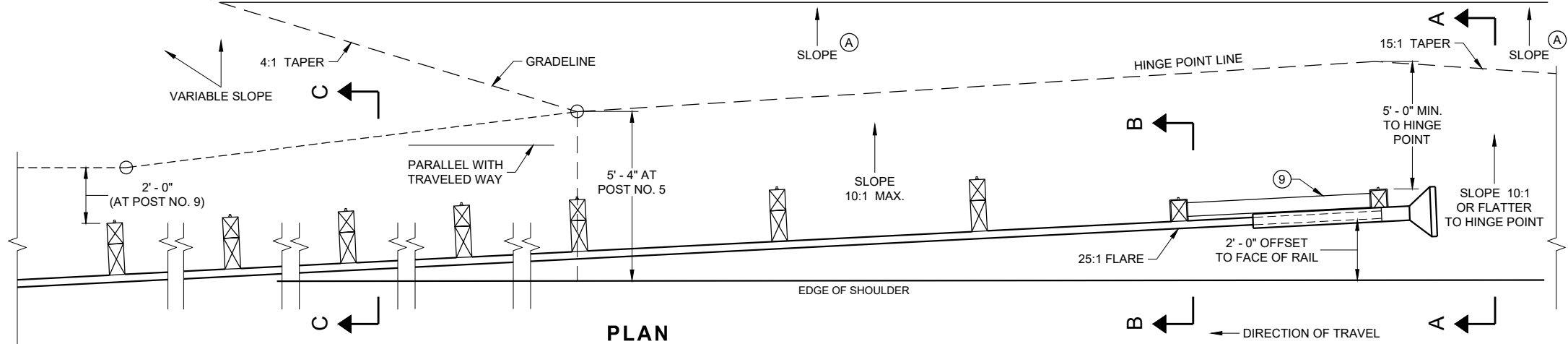
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

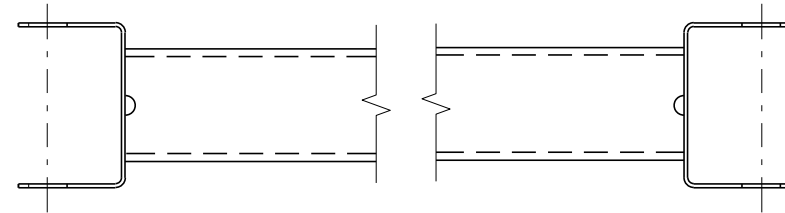
6

SDD 14B44 - 04a

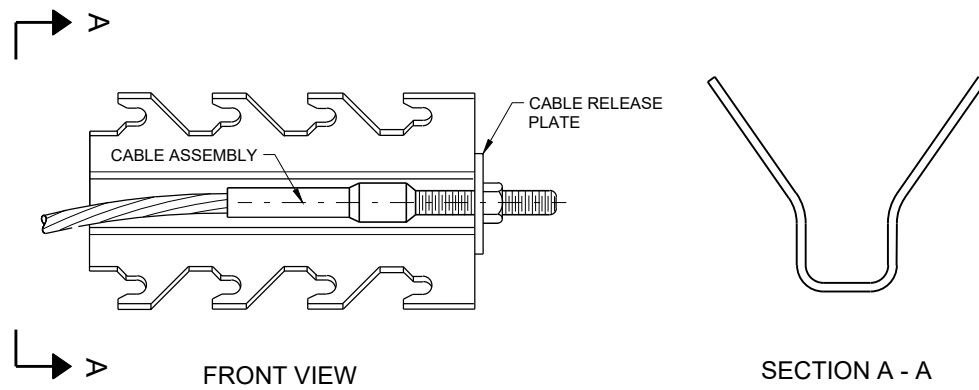
SDD 14B44 - 04a

BILL OF MATERIALS

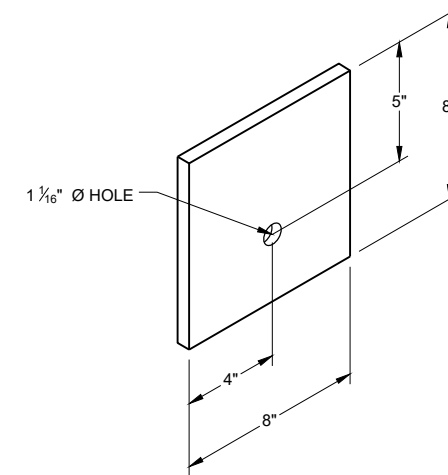
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



GENERIC GROUND STRUT ⑨ ⑤



GENERIC ANCHOR CABLE BOX ⑨ ⑤



BEARING PLATE ⑥ ⑤

6

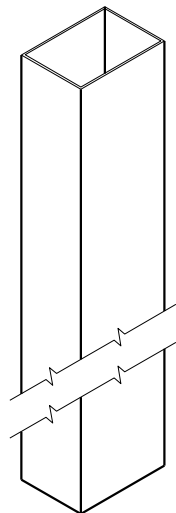
6

SDD 14B44 - 04b

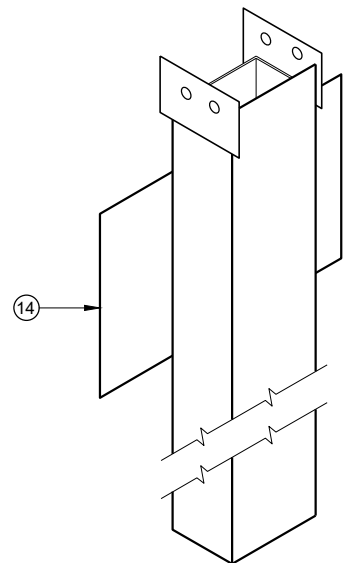
SDD 14B44 - 04b

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

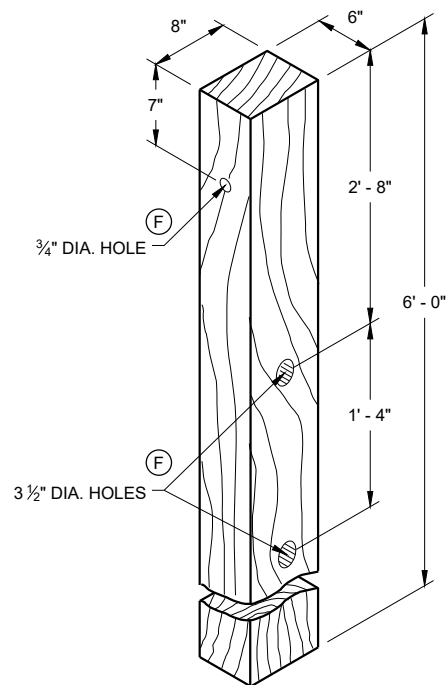
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



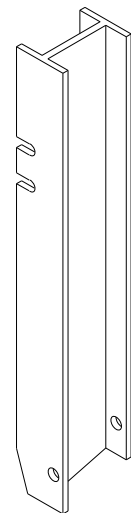
UPPER POST NO. 1 ⁽¹⁾ (E)



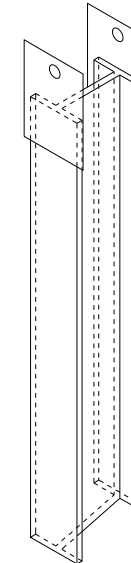
LOWER POST NO. 1 ⁽²⁾ (E)



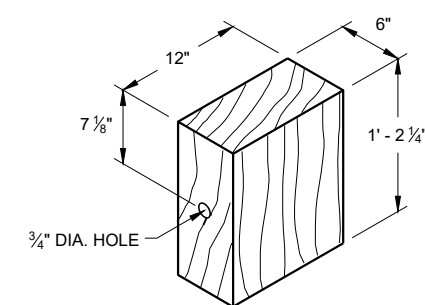
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

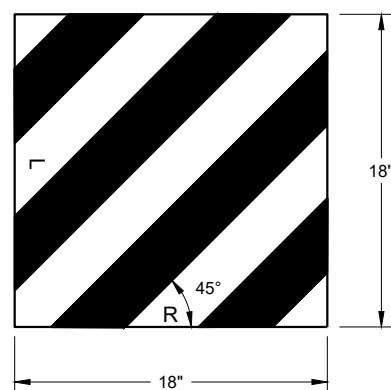


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

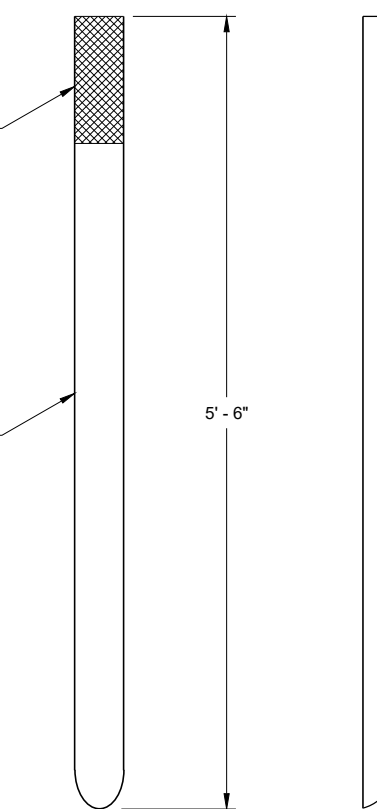
6



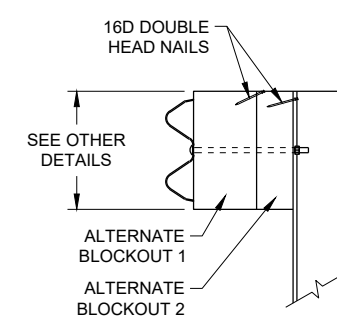
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

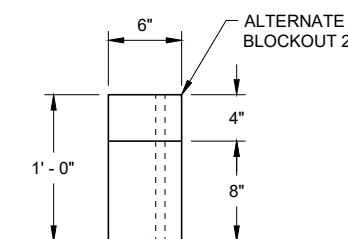
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

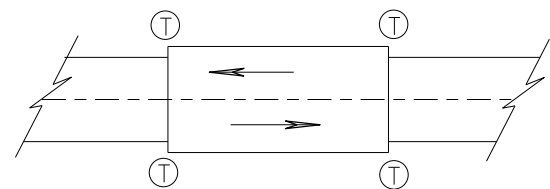
ALTERNATE WOOD
BLOCKOUT DETAIL

6

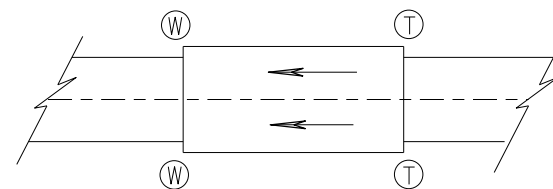
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

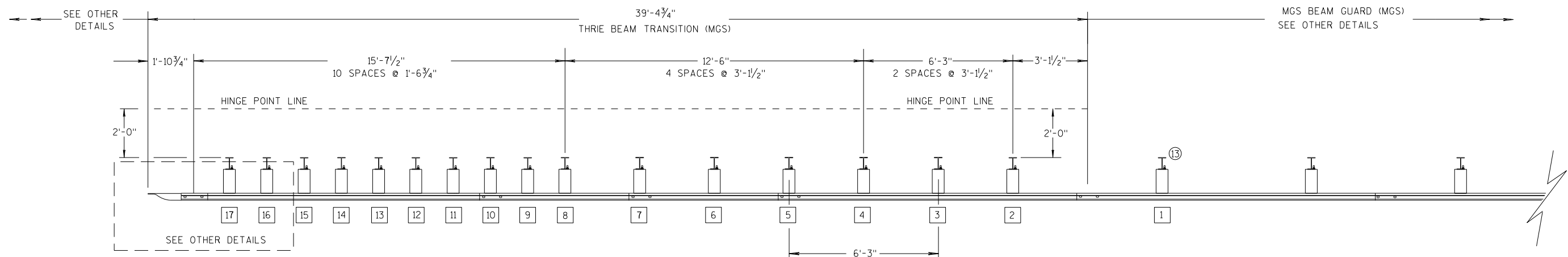
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

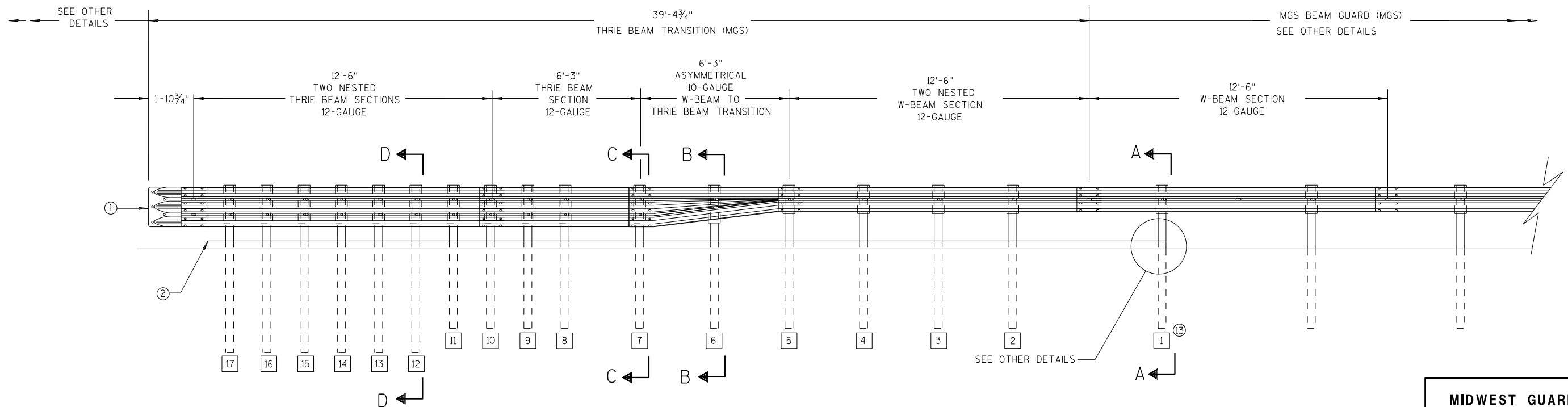
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

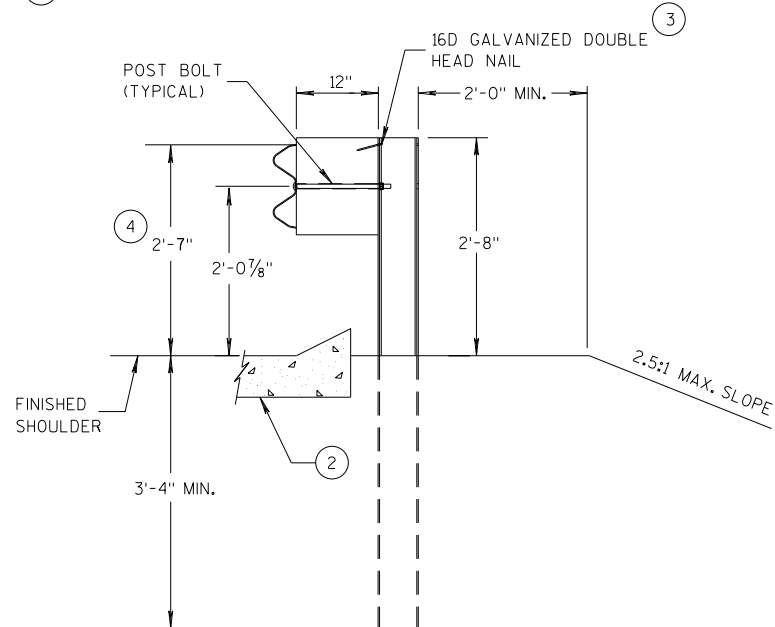
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

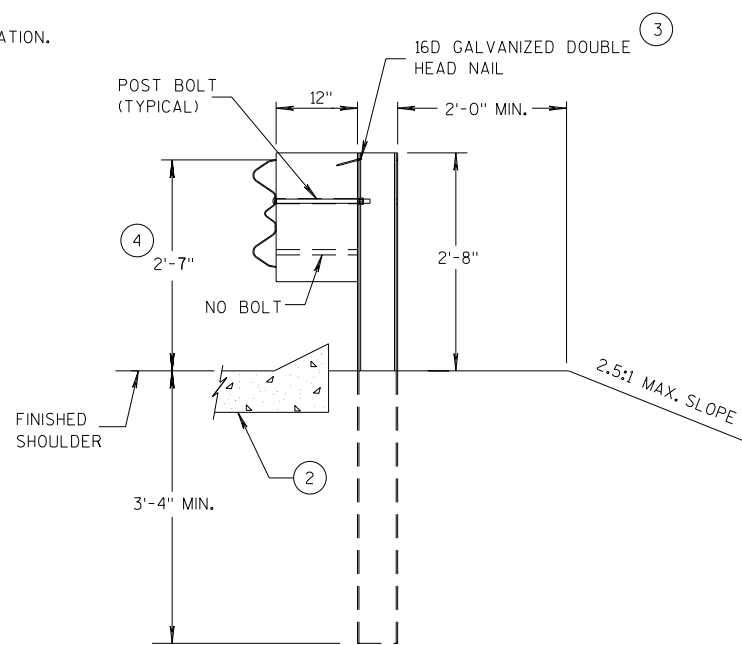
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

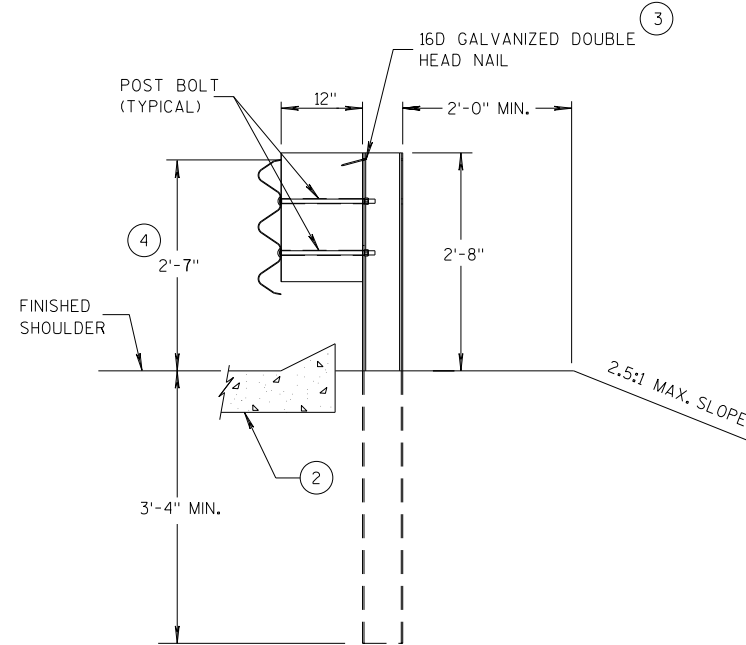
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**

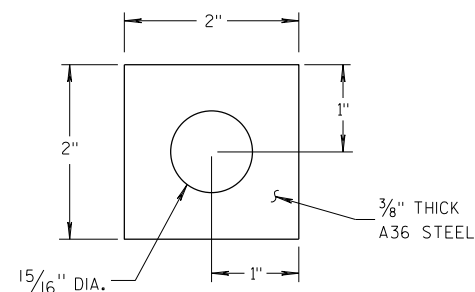
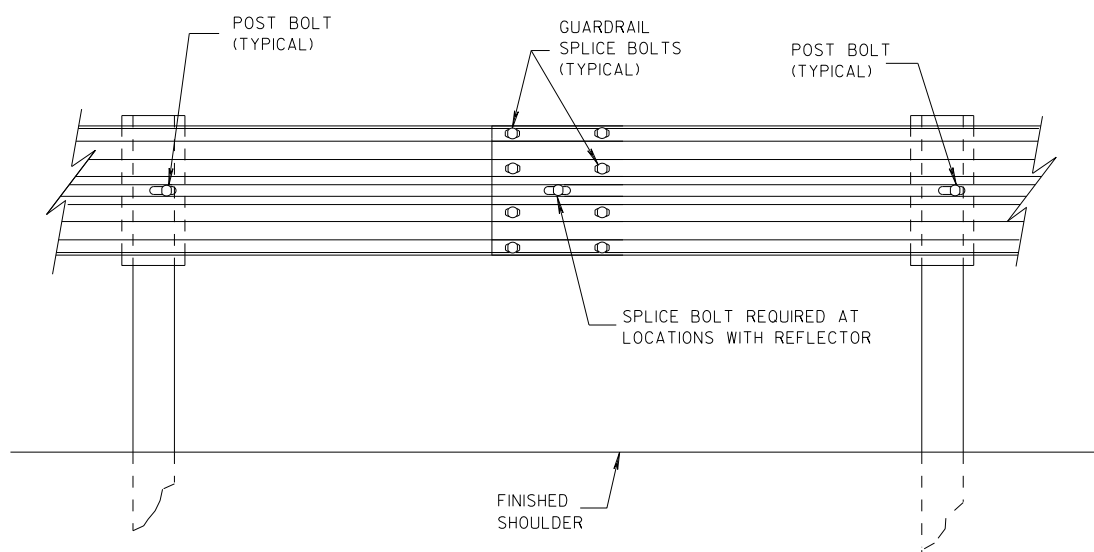
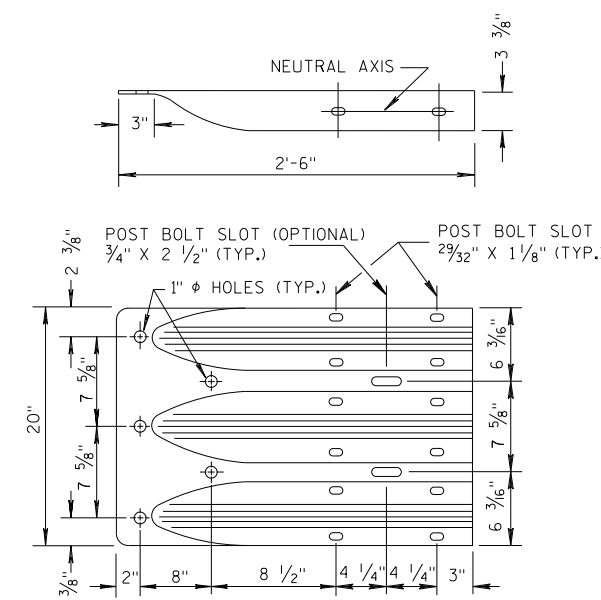


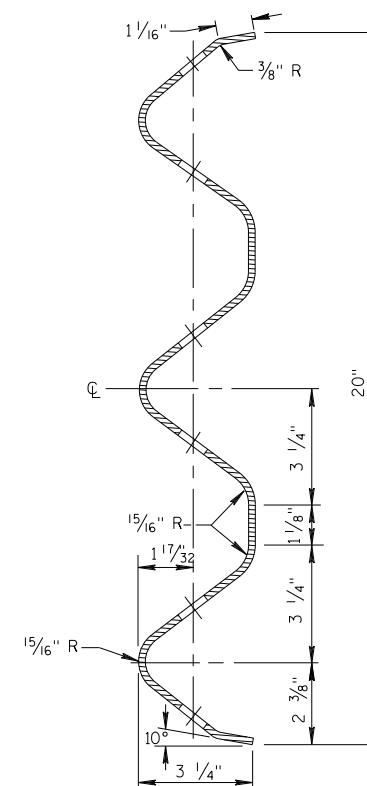
PLATE WASHER DETAIL



SPLICE DETAIL



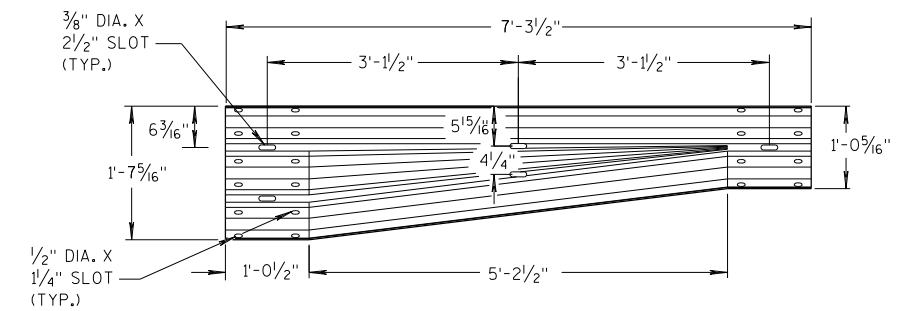
**THRIE BEAM
TERMINAL CONNECTOR**



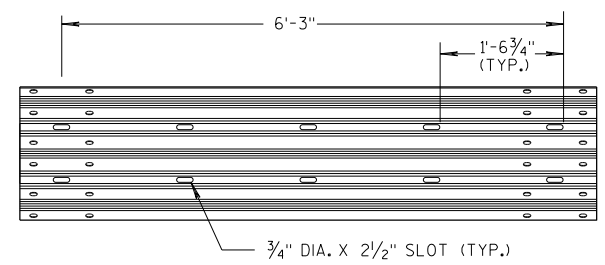
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

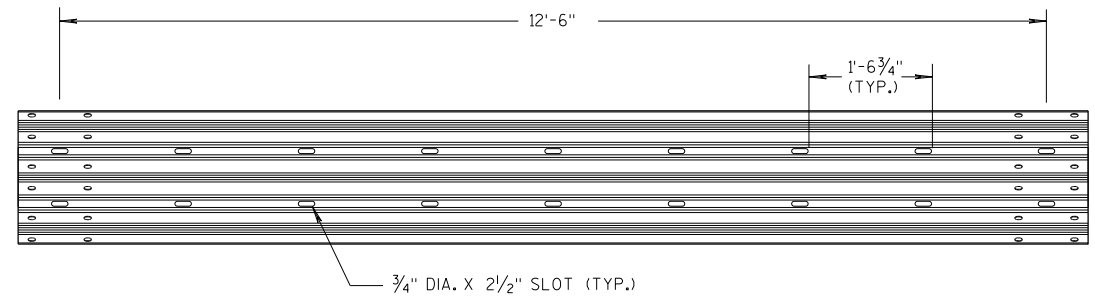
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



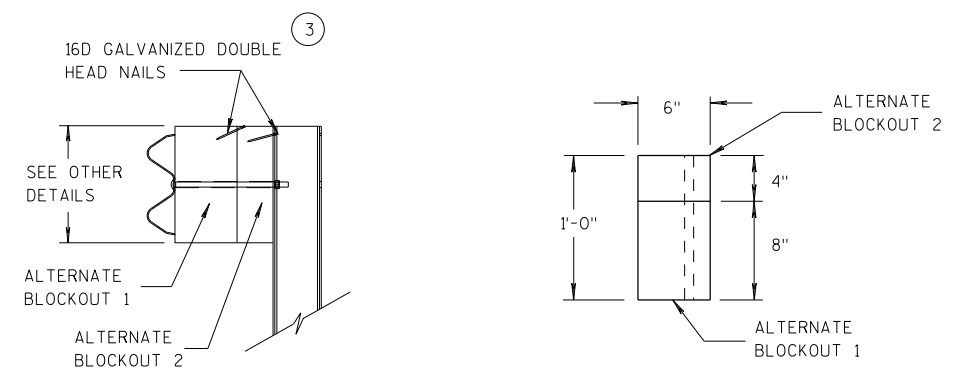
W-BEAM TO THRIE BEAM TRANSITION SECTION



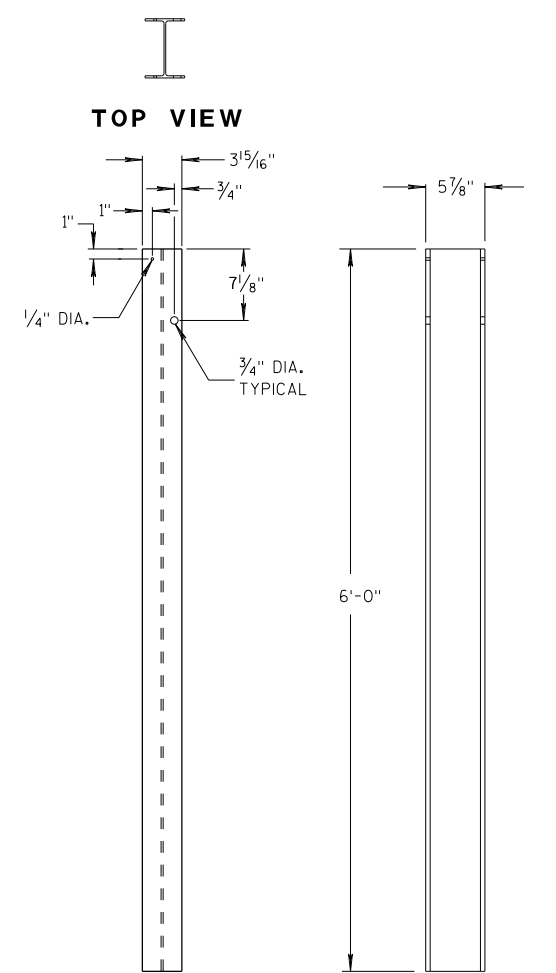
6'-3\"/>



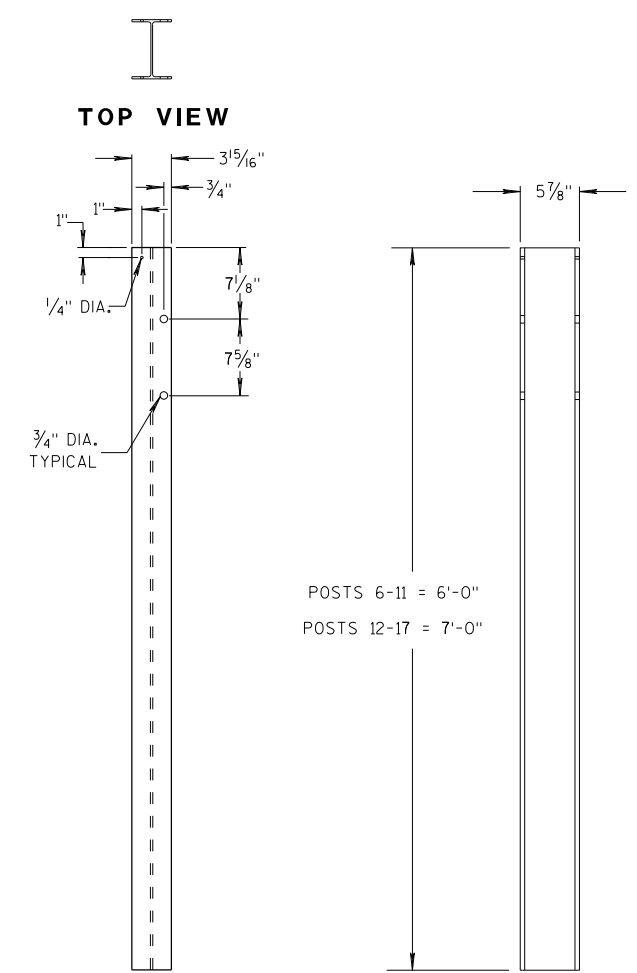
12'-6\"/>



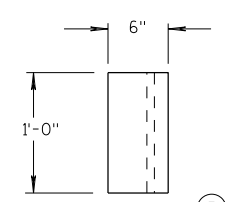
ALTERNATE WOOD BLOCKOUT DETAIL



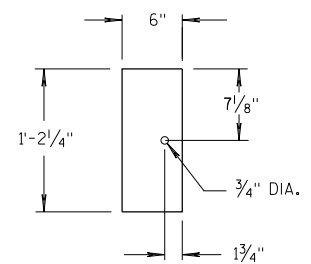
STEEL POSTS 1-5



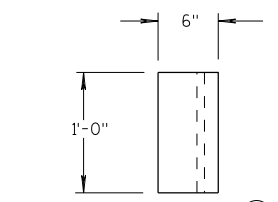
STEEL POSTS 6-17



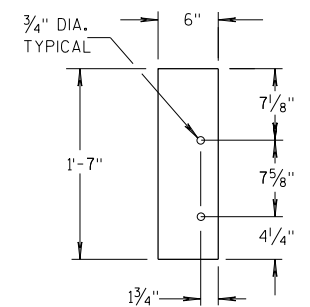
TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 1-5**



TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 6-17**

GENERAL NOTES

- STEEL POSTS ARE W6X9 OR W6X8.5.
- BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.
- (3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- (5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.
- (13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

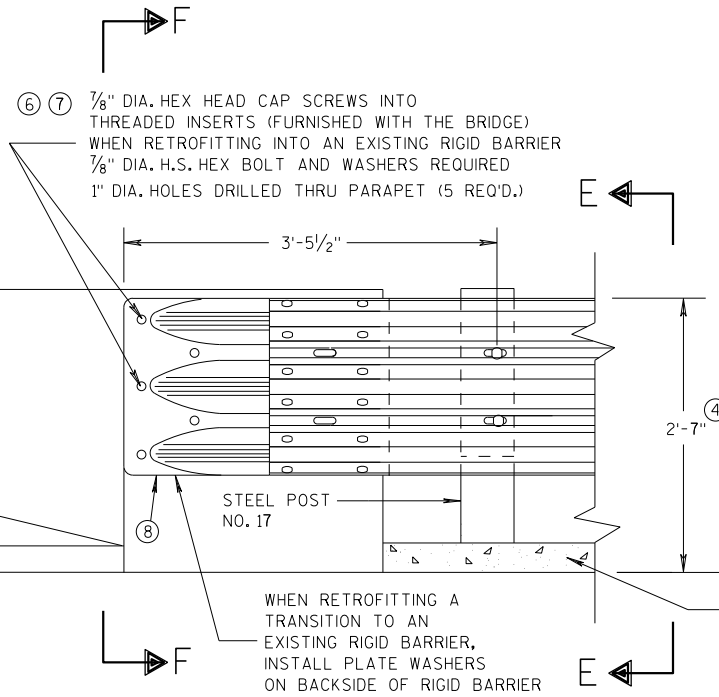
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

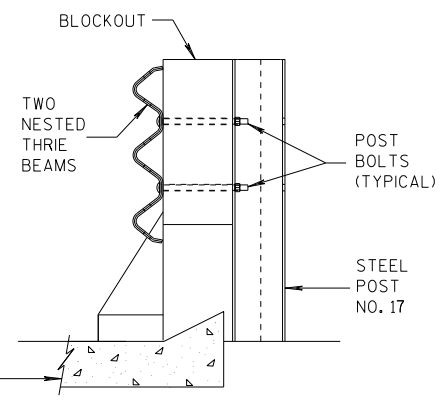
S.D.D. 14 B 45-5c

S.D.D. 14 B 45-5c



FRONT VIEW

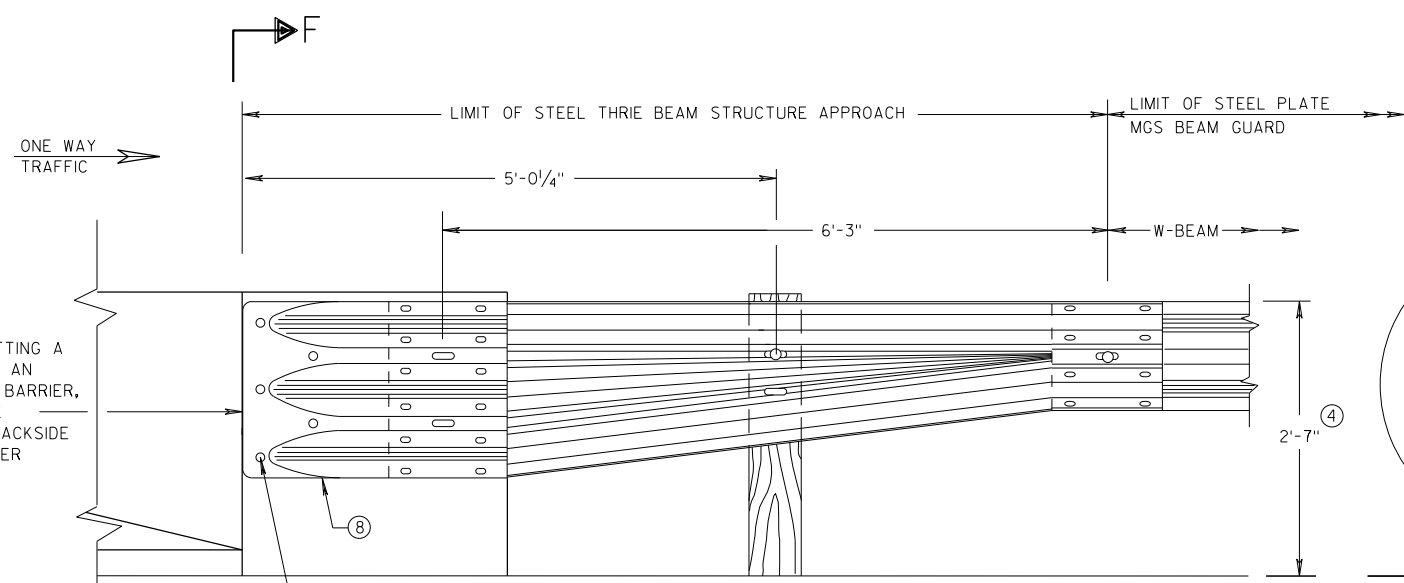
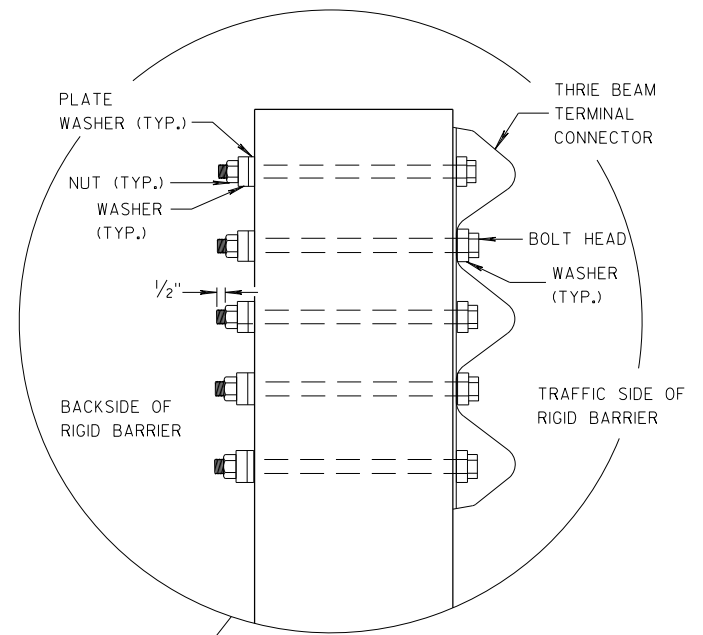
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



SECTION E-E

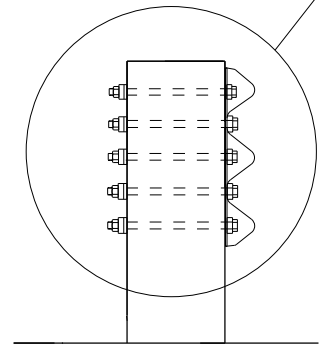
GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- (8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

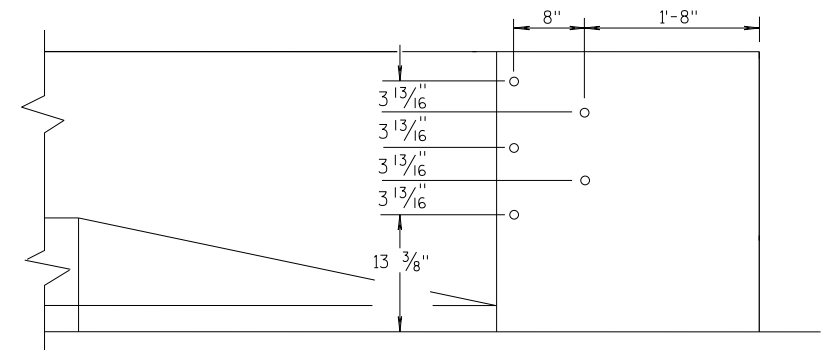


FRONT VIEW

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**



SECTION F-F



DRILL HOLE LOCATION

6

6

S.D.D. 14 B 45-5d

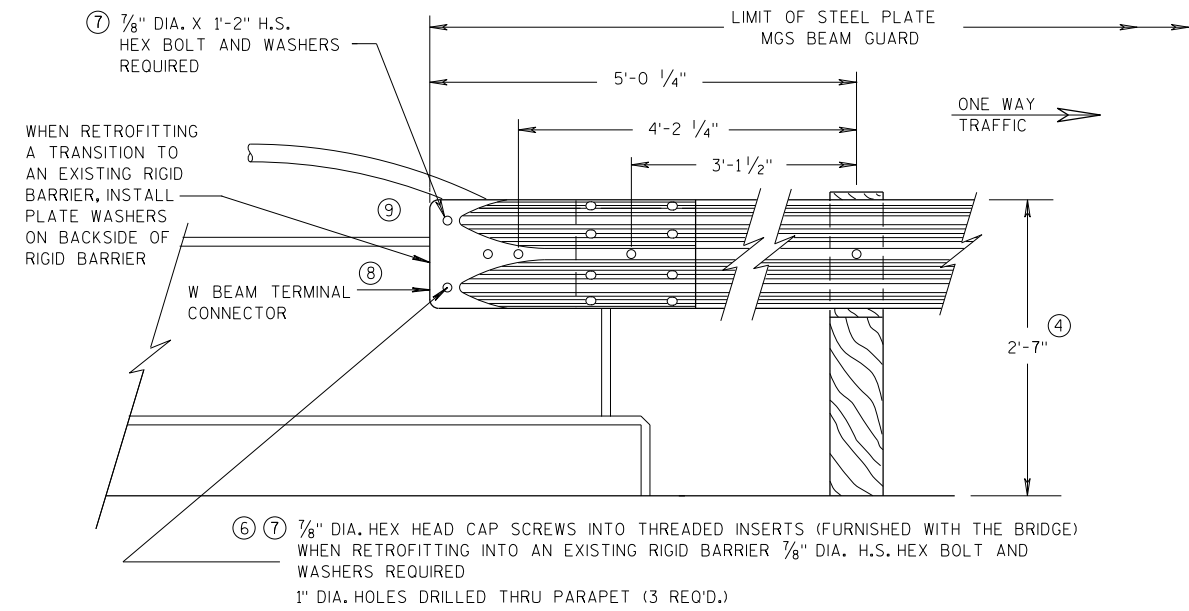
S.D.D. 14 B 45-5d

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

GENERAL NOTES

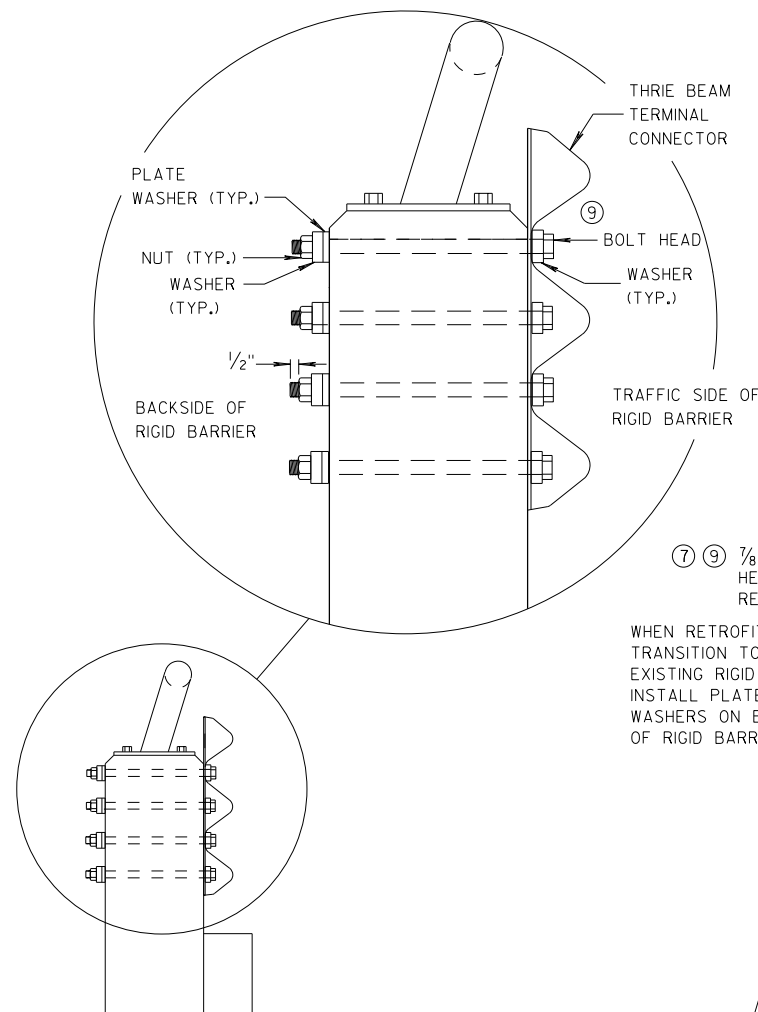
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

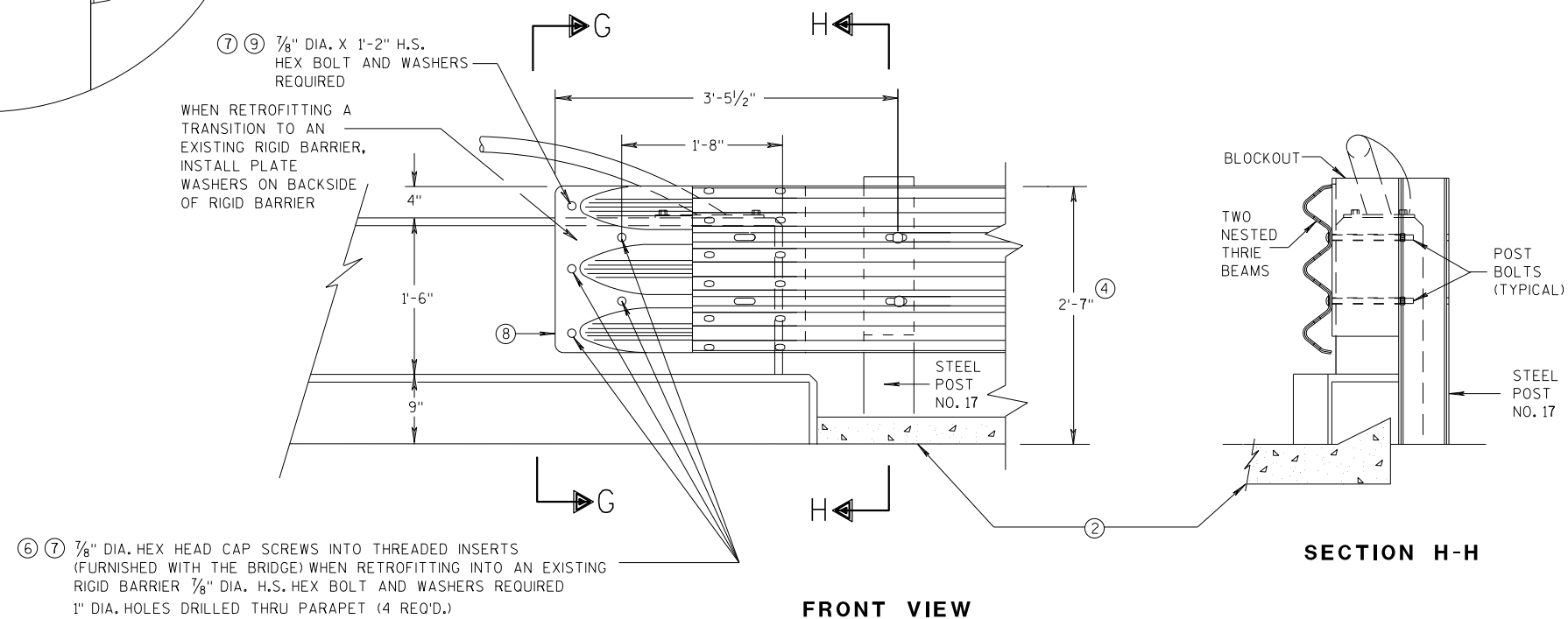


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

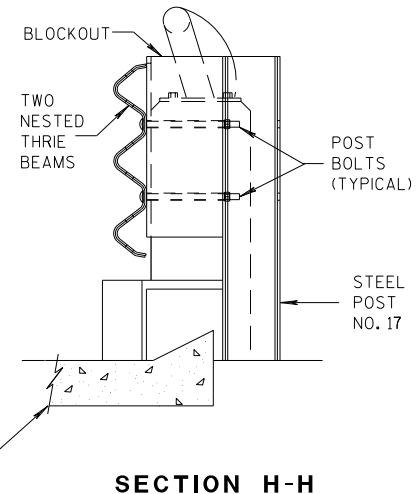


SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



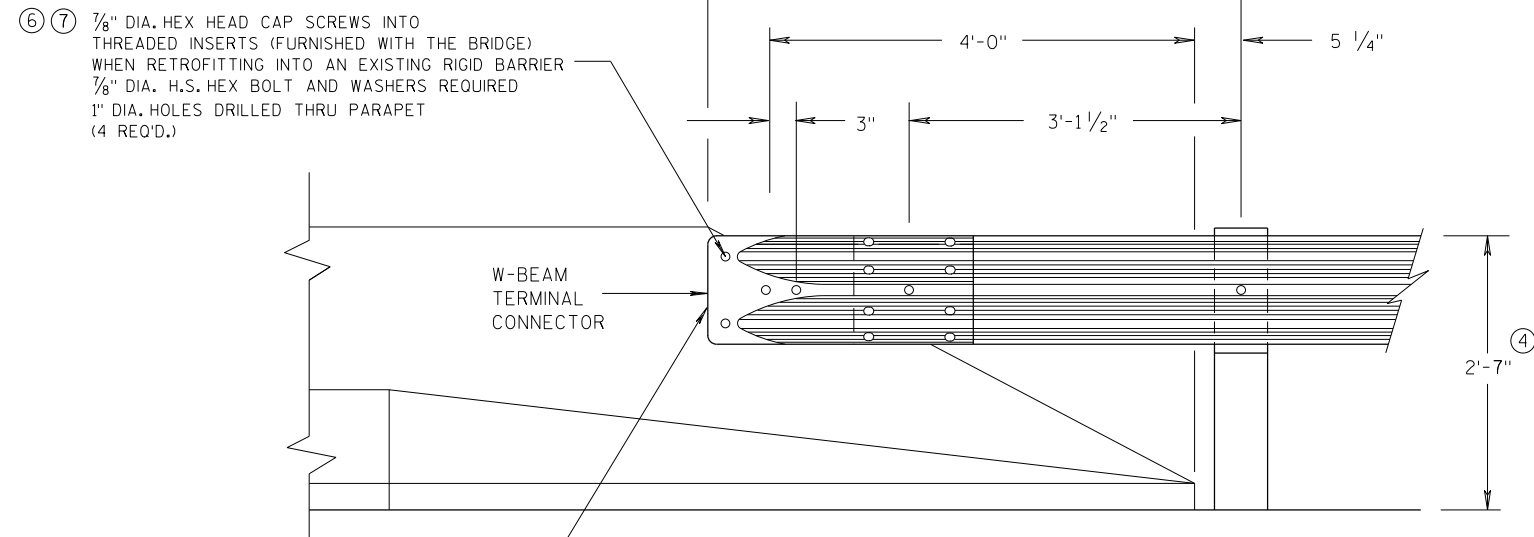
SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

ONE WAY
TRAFFIC



WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

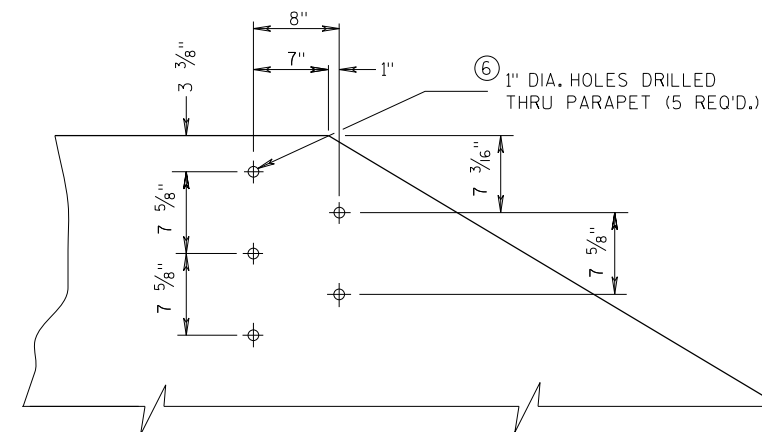
FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

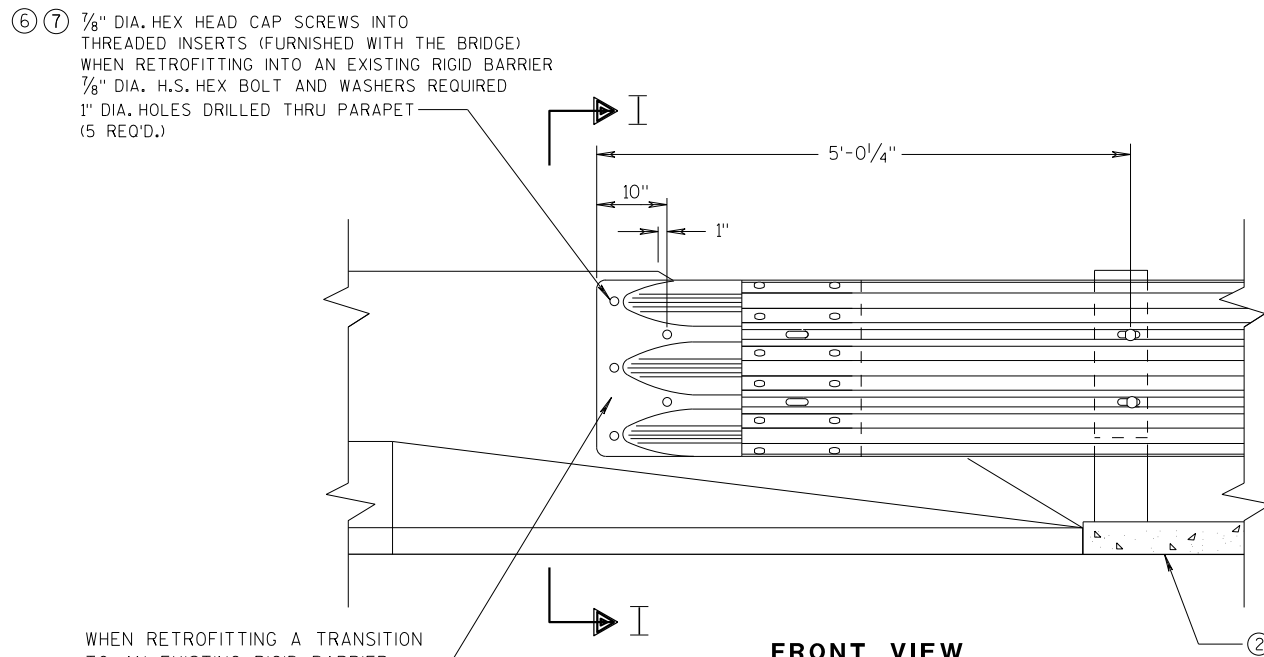
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



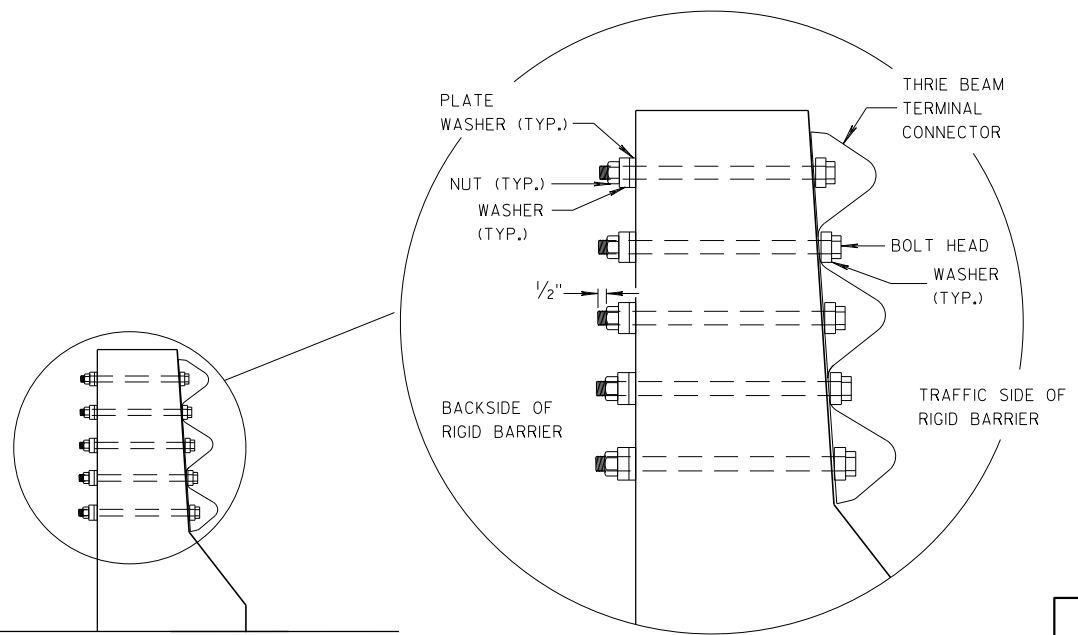
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.

FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

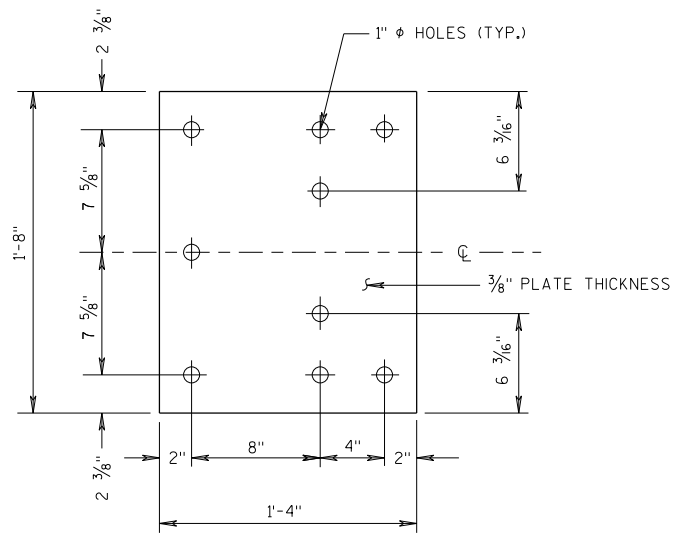


SECTION I-I

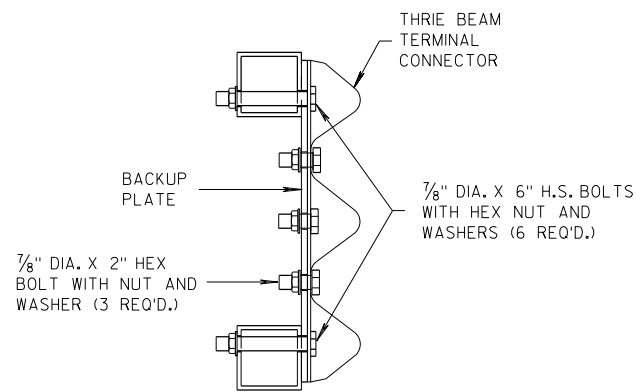
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

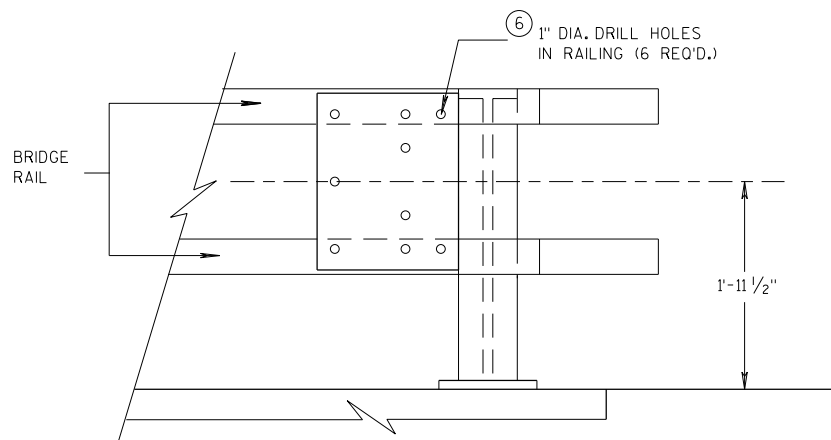
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



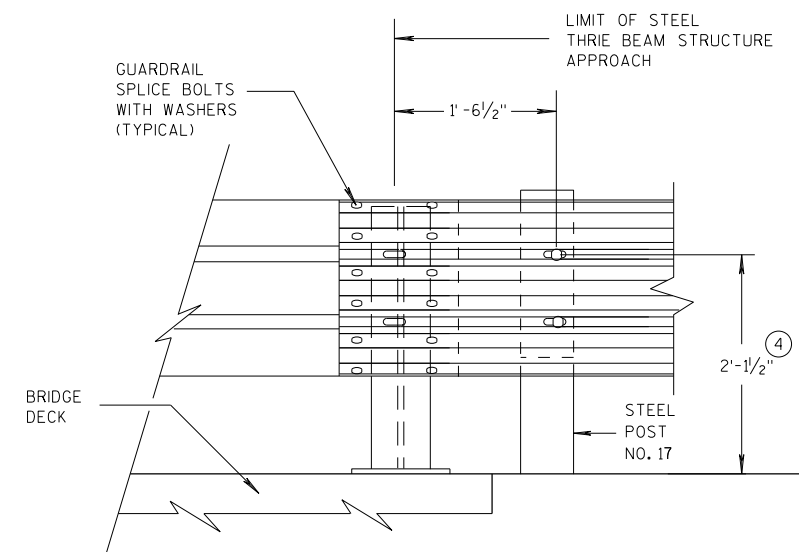
SECTION J-J



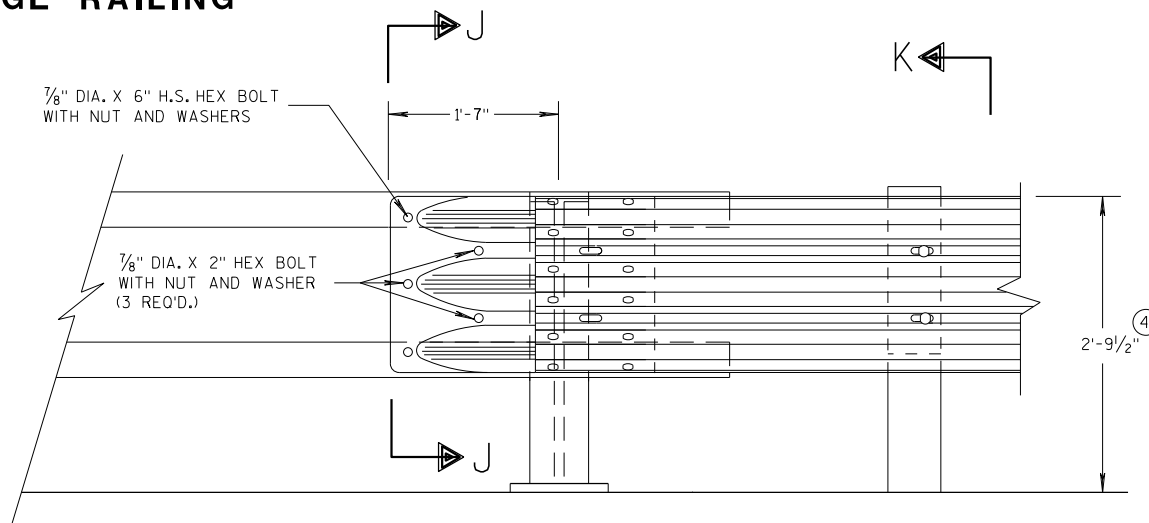
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

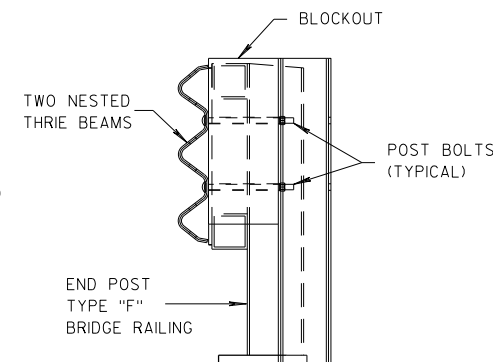


**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



FRONT VIEW

**THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**



SECTION K-K

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

6

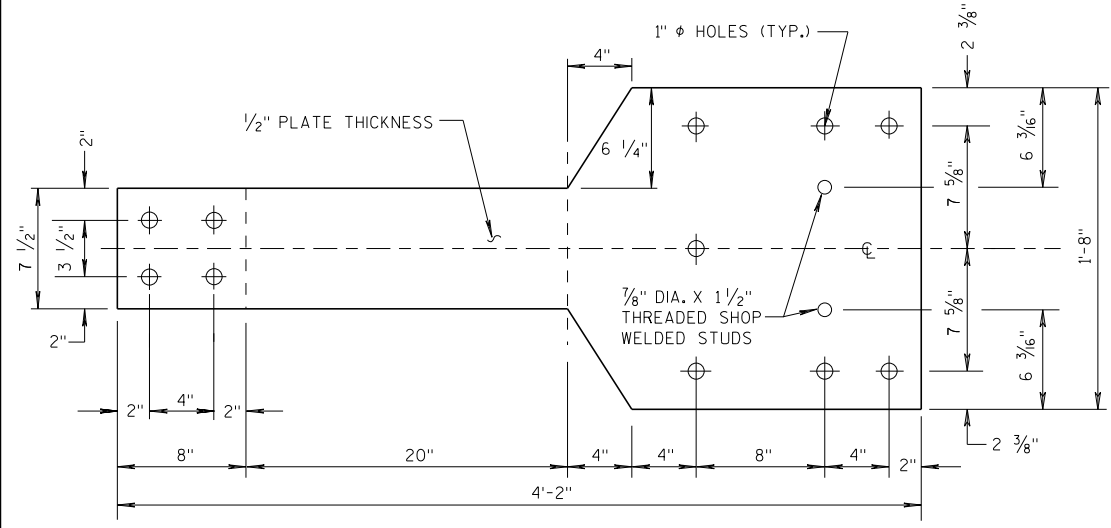
6

S.D.D. 14 B 45-59

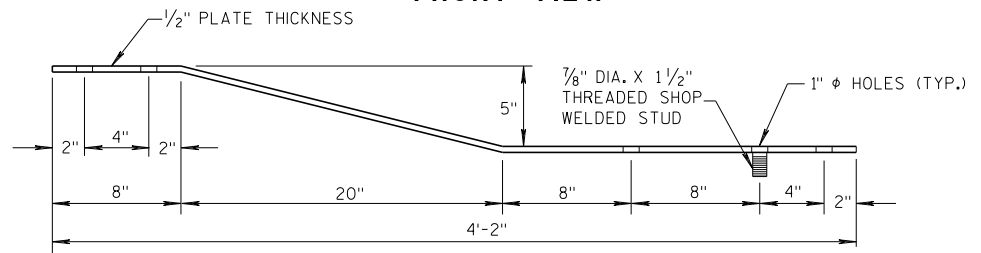
S.D.D. 14 B 45-59

GENERAL NOTES

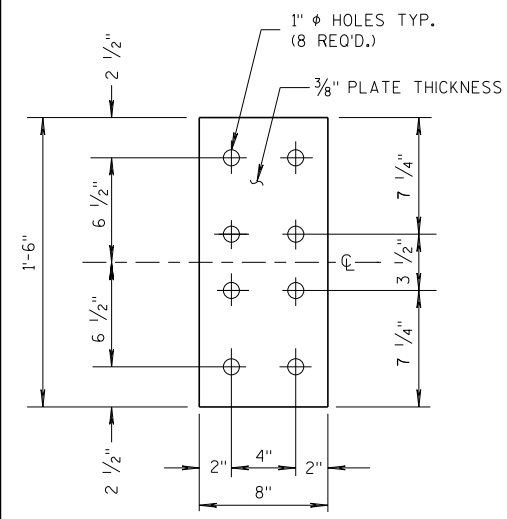
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



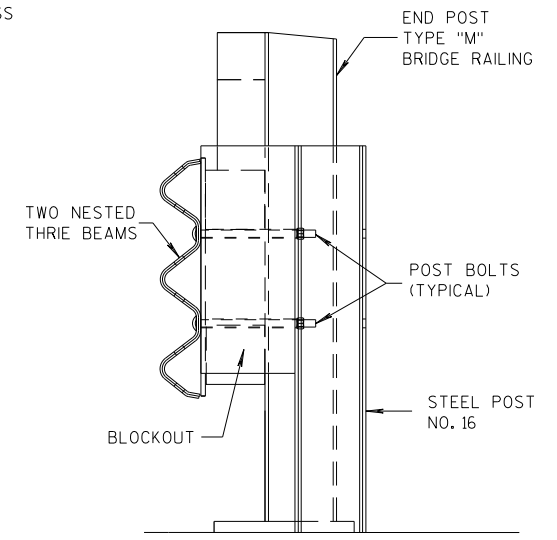
FRONT VIEW



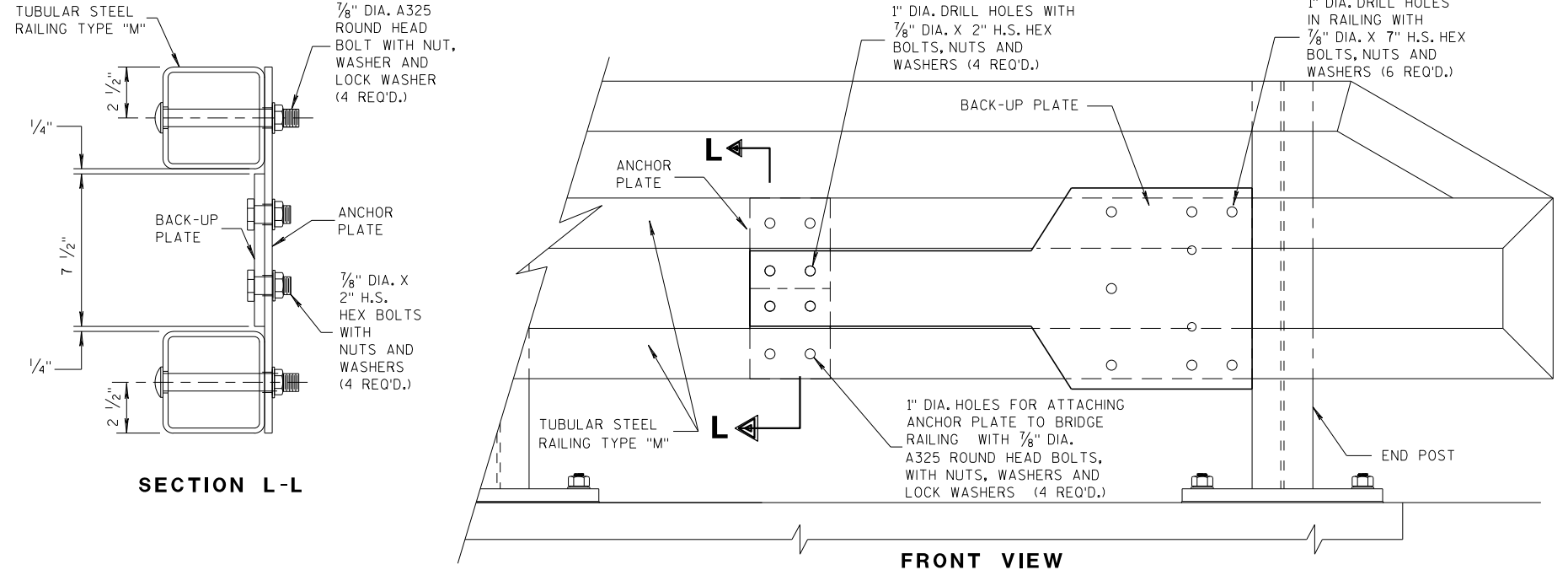
**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**



**FRONT VIEW
ANCHOR PLATE DETAIL,
TYPE "M"**



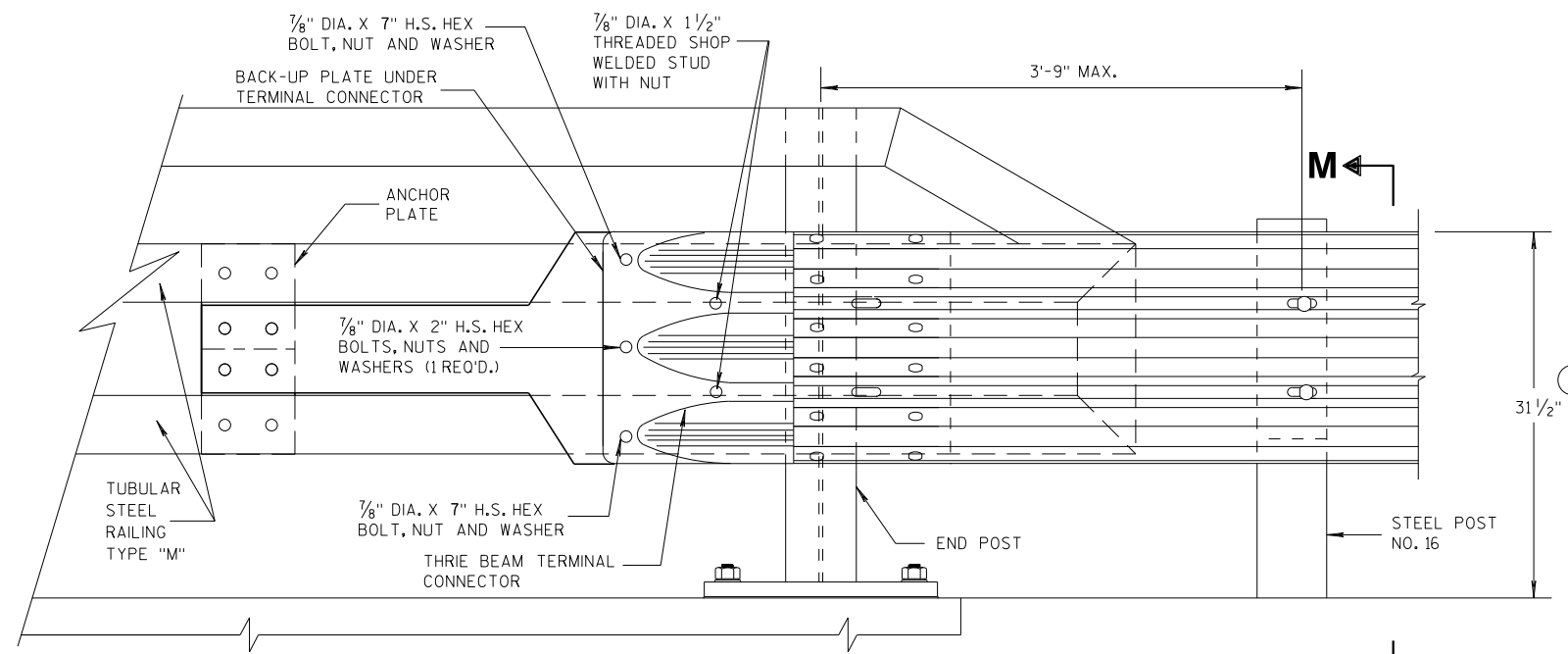
SECTION M-M



SECTION L-L

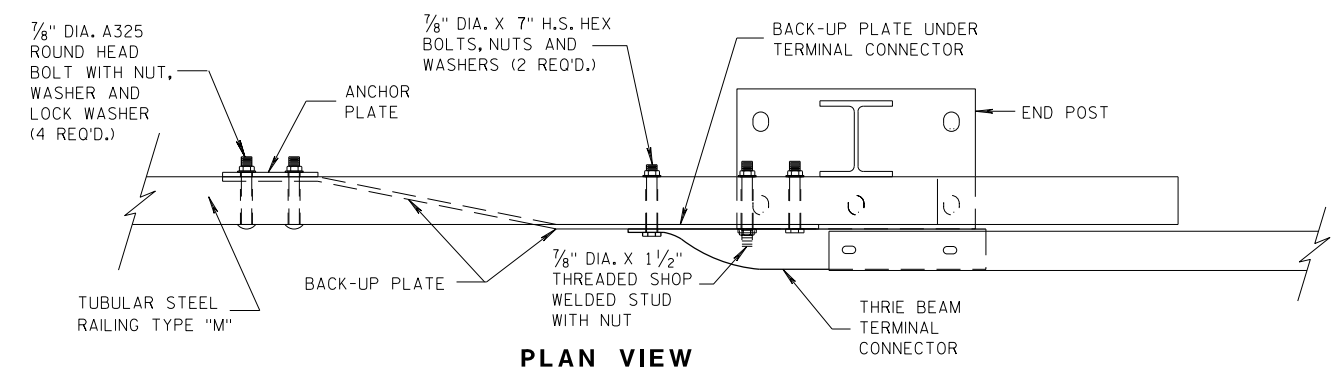
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW

M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

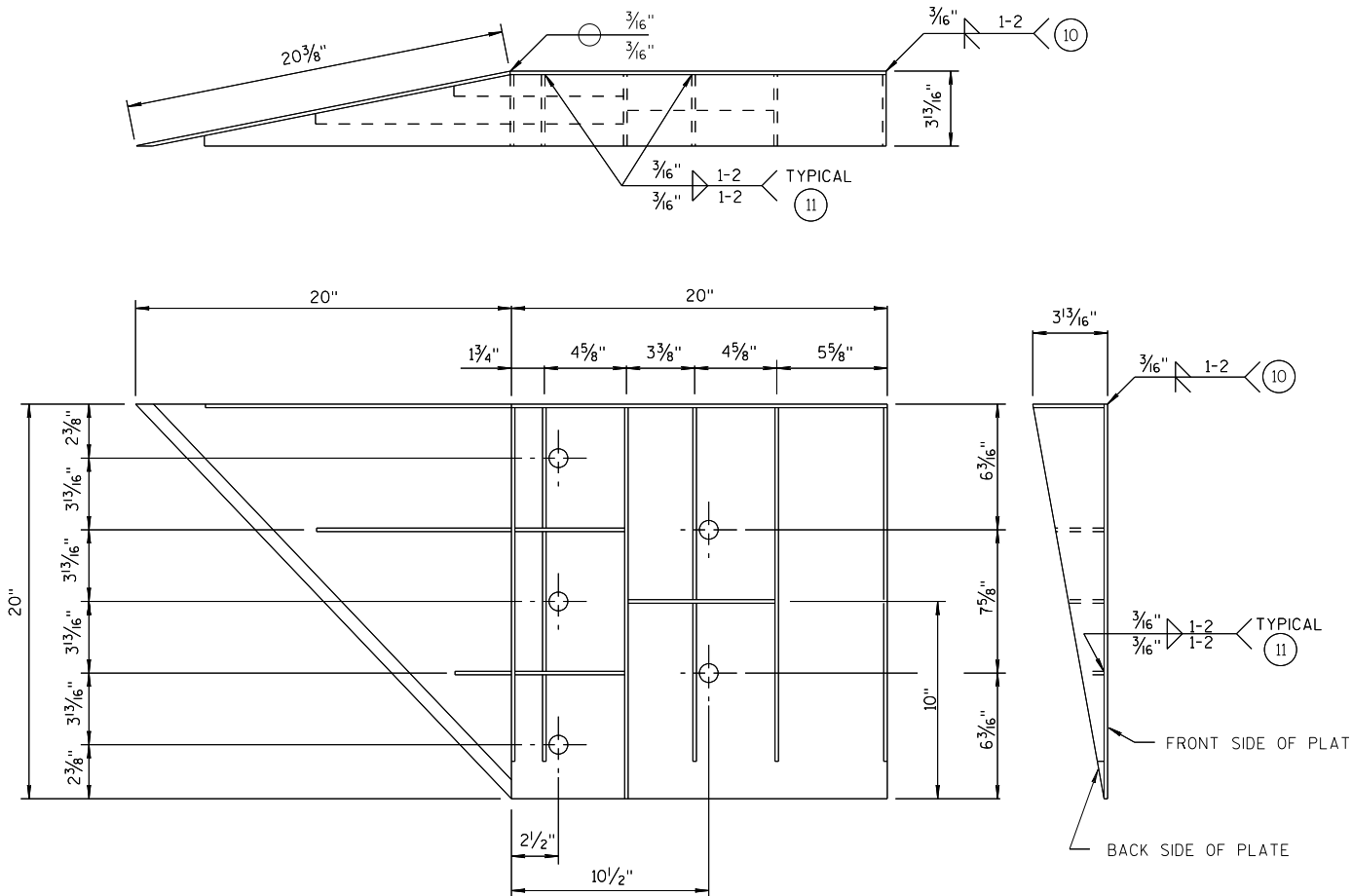
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- (10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

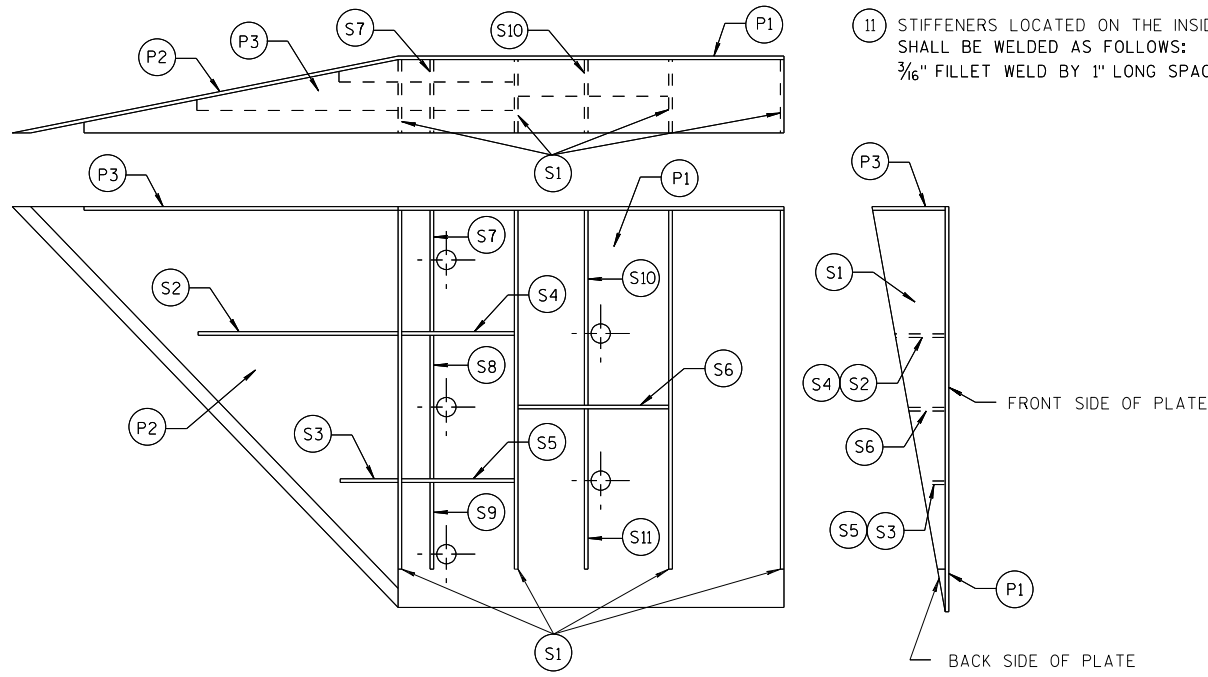


PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 3/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

**MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

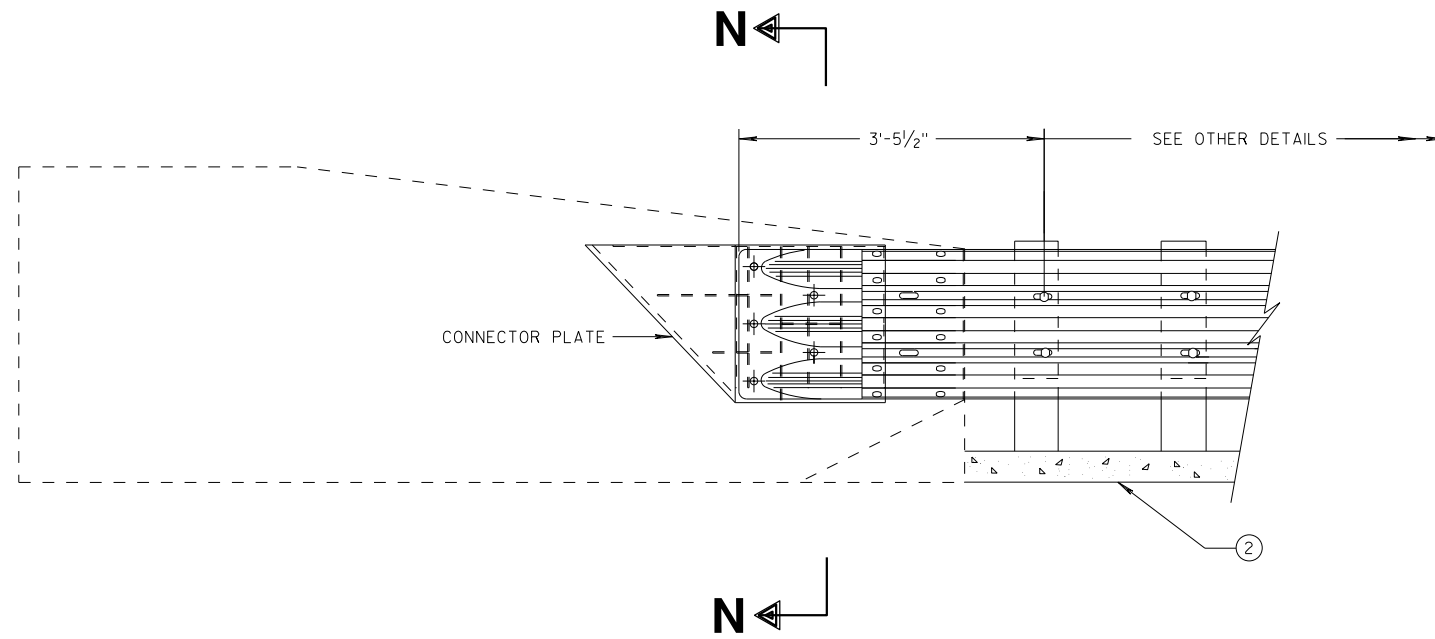
APPROVED: _____ /S/ Rodney Taylor
DATE: 7/2018 ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

GENERAL NOTES

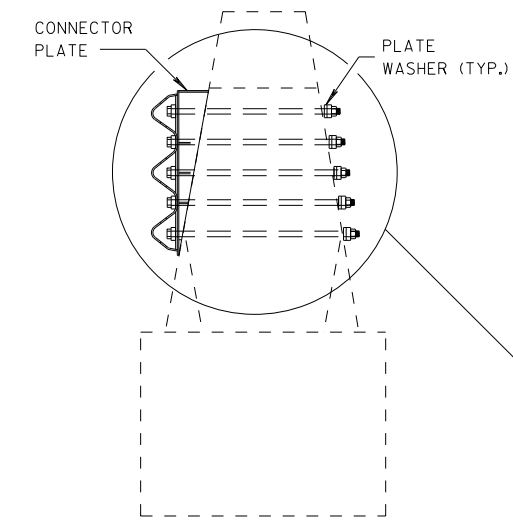
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

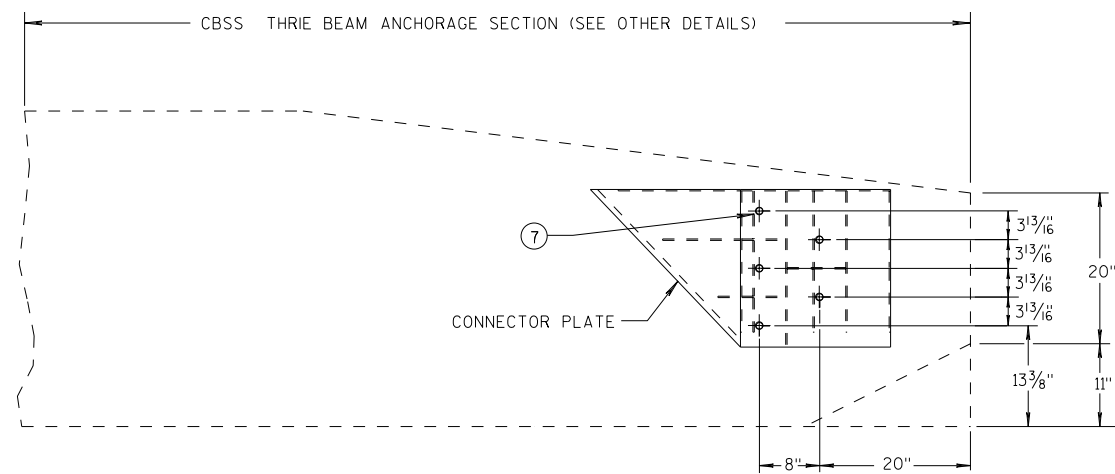
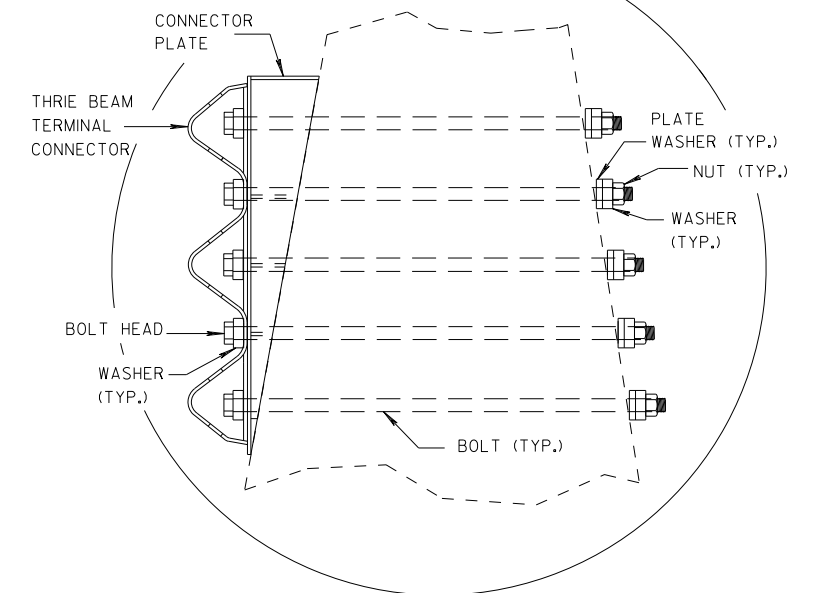
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

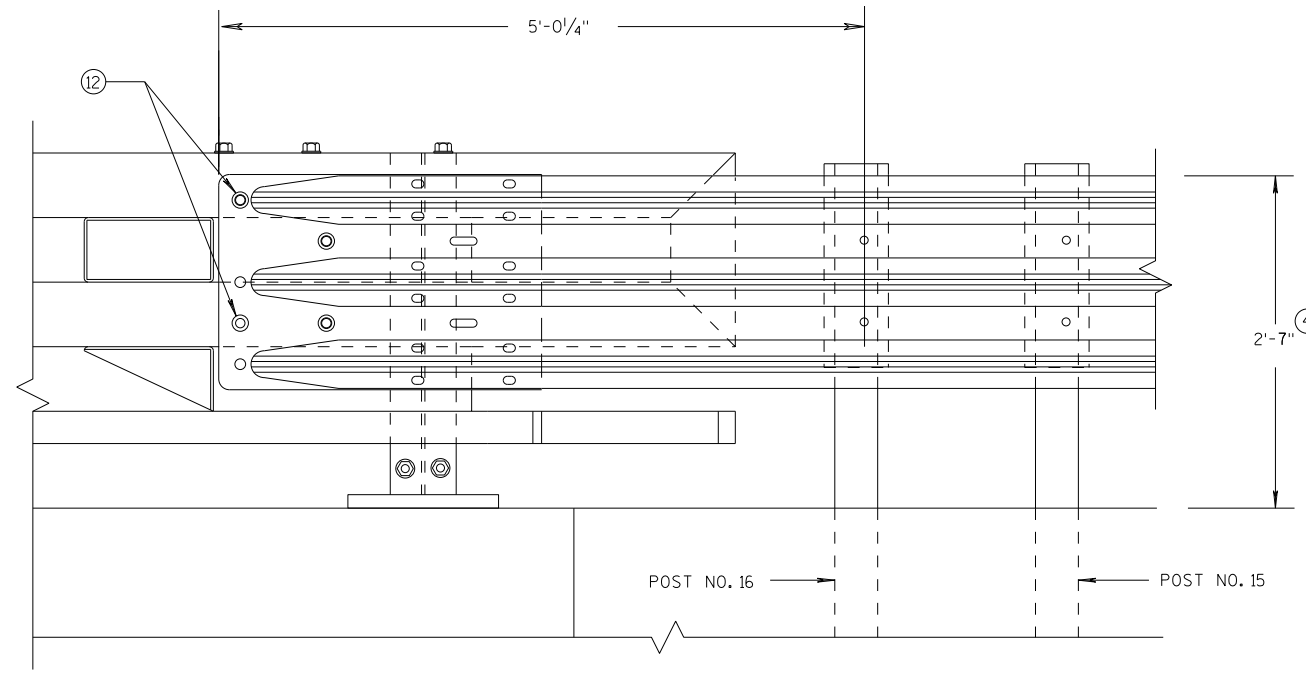


SINGLE SLOPE CONNECTION PLATE PLACEMENT

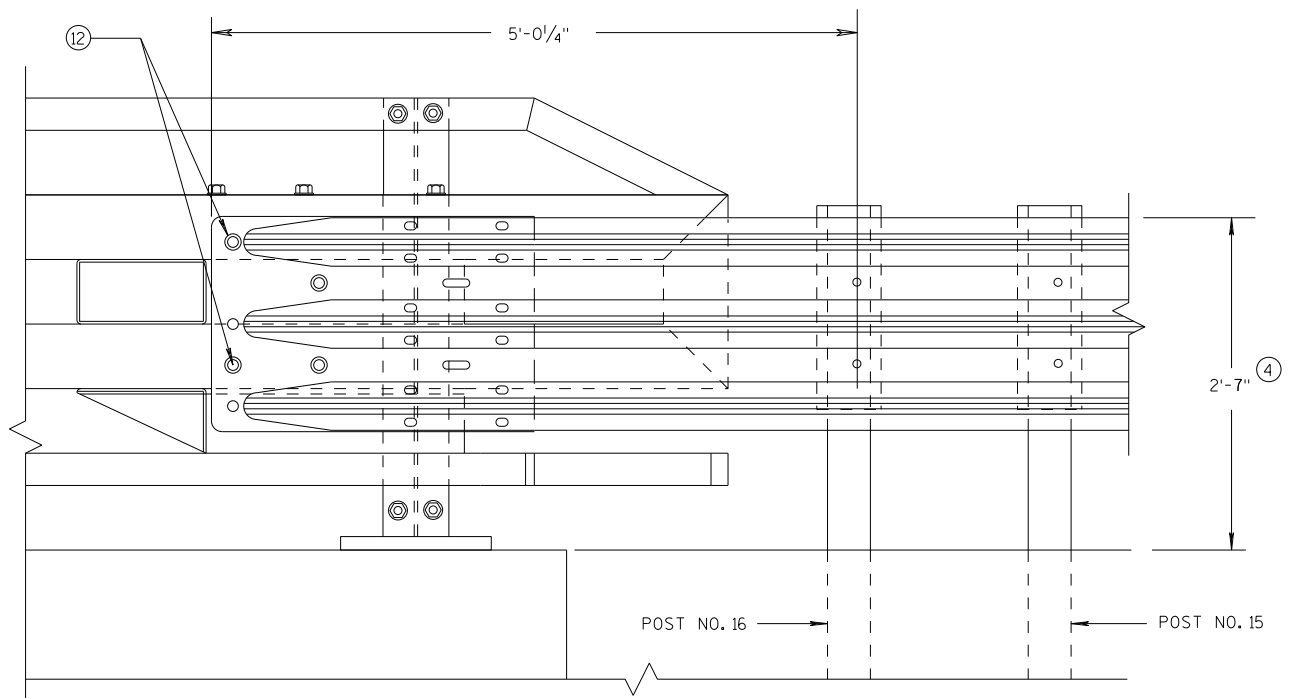
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

- (4) TOLERANCE FOR TOP OF BEAM IS ± 1".
- (12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

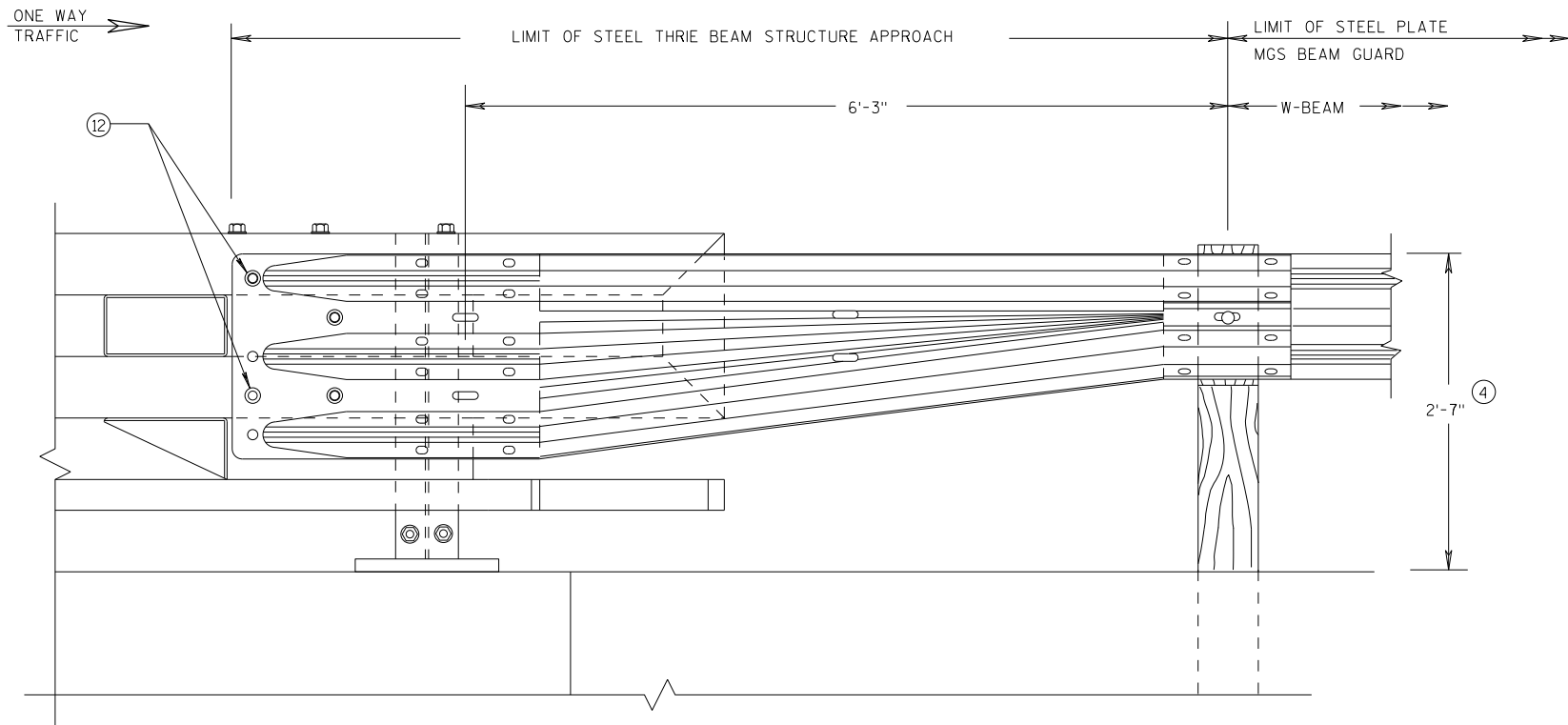
6

6

S.D.D. 14 B 45-5k

S.D.D. 14 B 45-5k

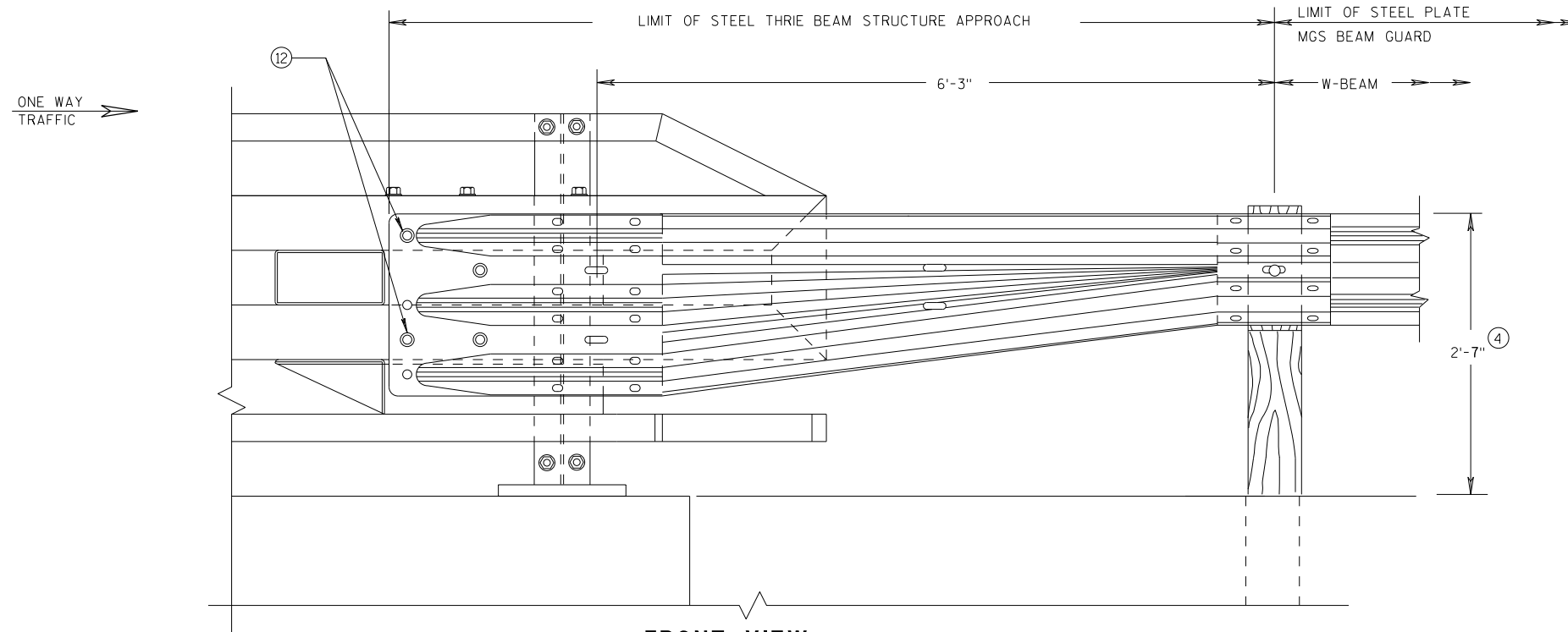
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.

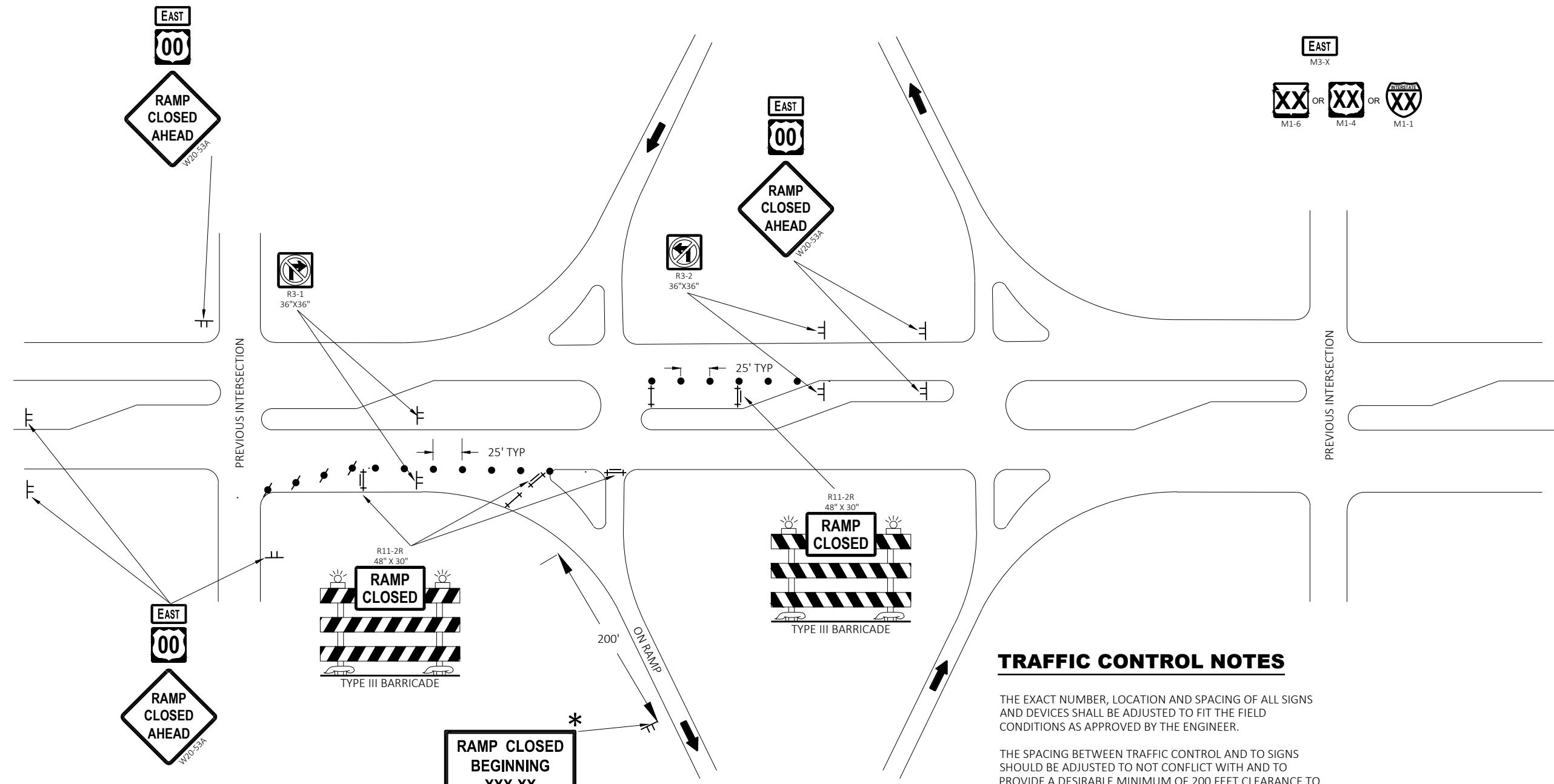


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- ↑ SIGN ON PERMANENT SUPPORT
- ↑ SIGN ON TEMPORARY SUPPORT
- ↓ DIRECTION OF TRAFFIC

**RAMP CLOSED BEGINNING
XXX-XX**
G20-58

OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXX DAY XX XX XX

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT THE FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- SIGNS THAT SHALL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- SIGN SIZES SHALL BE AS FOLLOWS:
 - M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
 - M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
 - W20-53A SHALL BE 48"x48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

**TRAFFIC CONTROL FOR
ENTRANCE RAMP CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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




FHWA

GENERAL NOTES

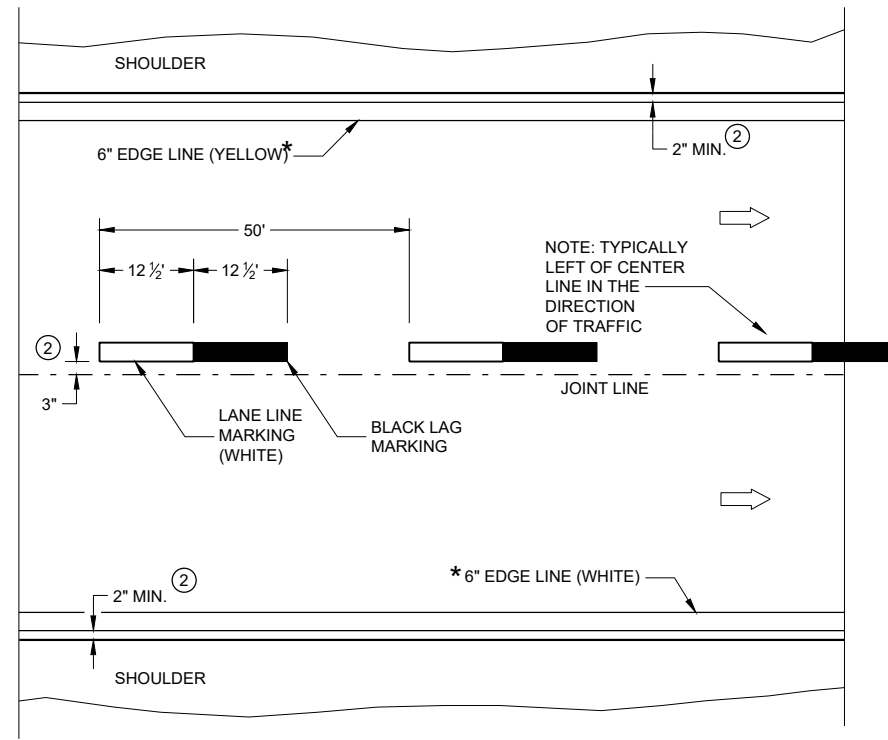
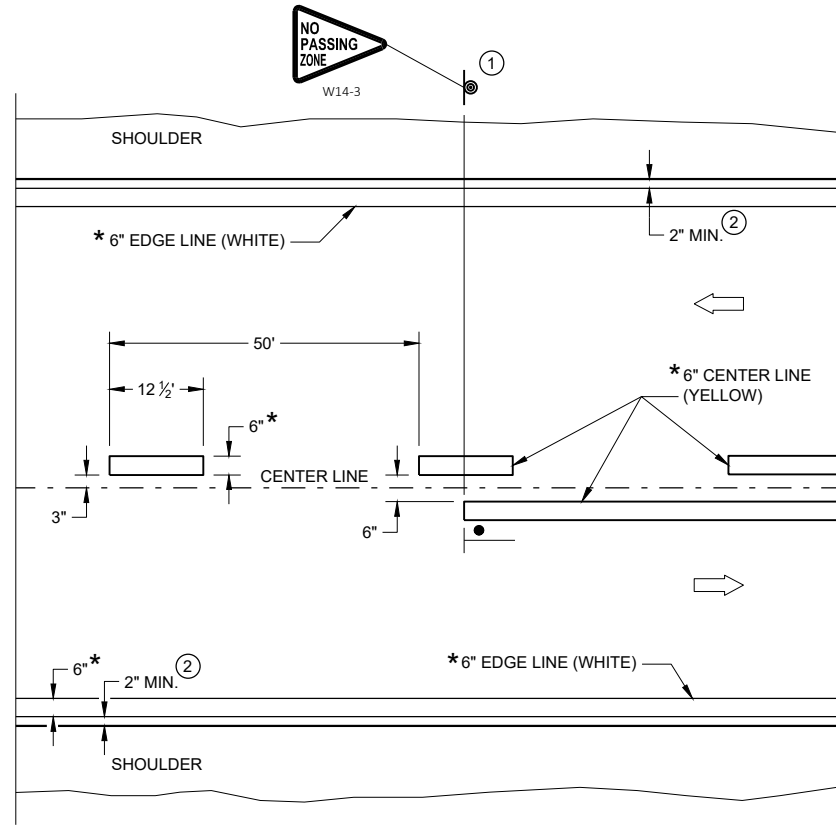
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

LEGEND

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

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



NOTE: TYPICALLY LEFT OF CENTER LINE IN THE DIRECTION OF TRAFFIC

LANE LINE MARKING (WHITE)
BLACK LAG MARKING

TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

6

SDD 15C08-23a

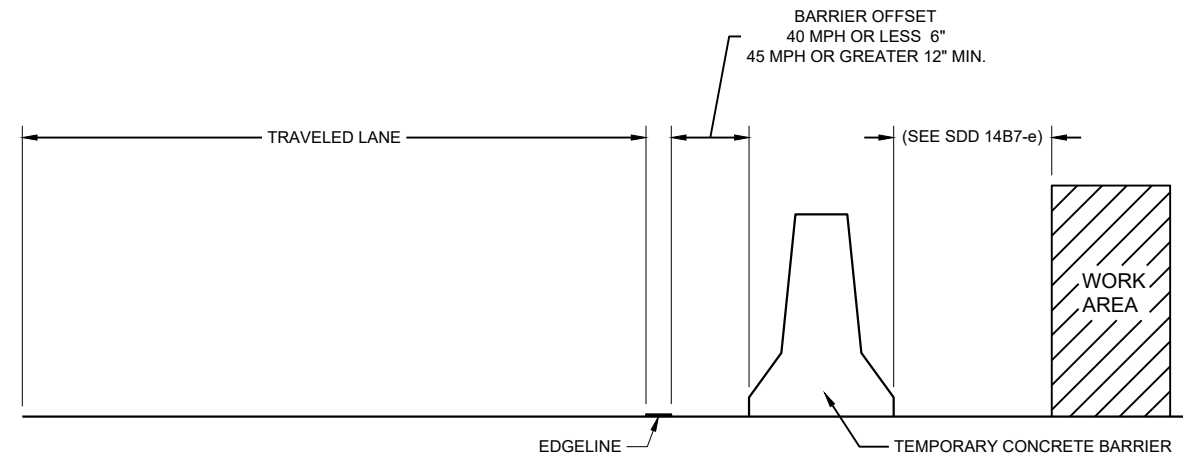
SDD 15C08-23a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



TEMPORARY BARRIER OFFSET FROM EDGELINE

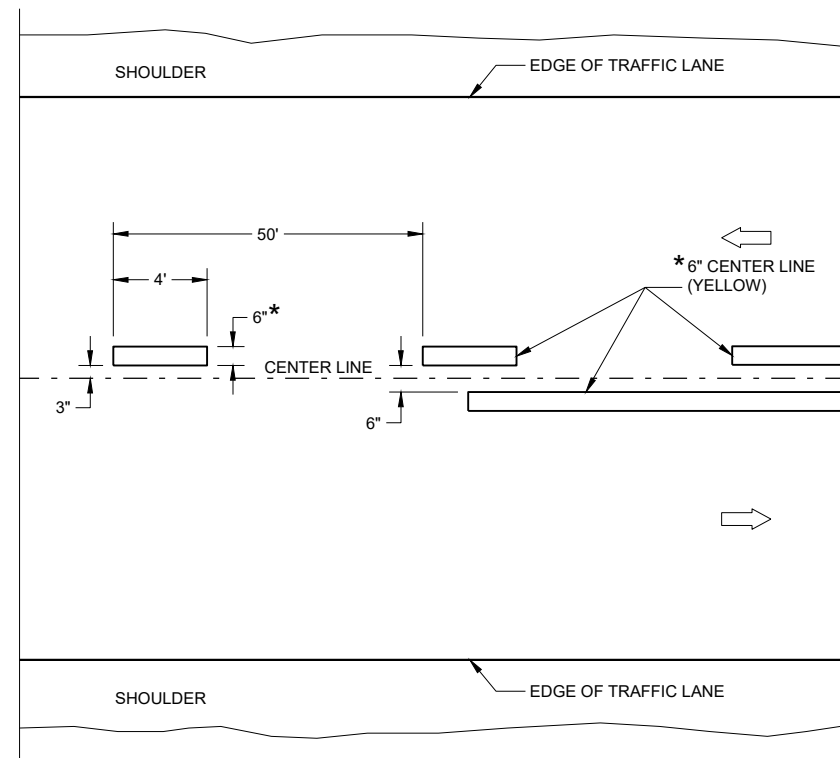
GENERAL NOTES

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

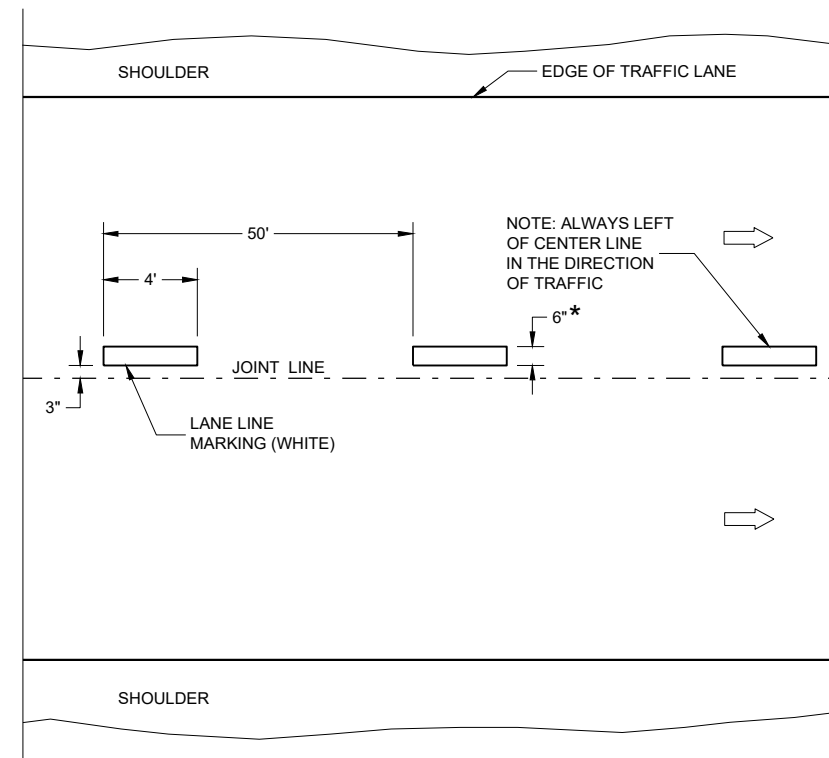
LEGEND

➡ DIRECTION OF TRAFFIC

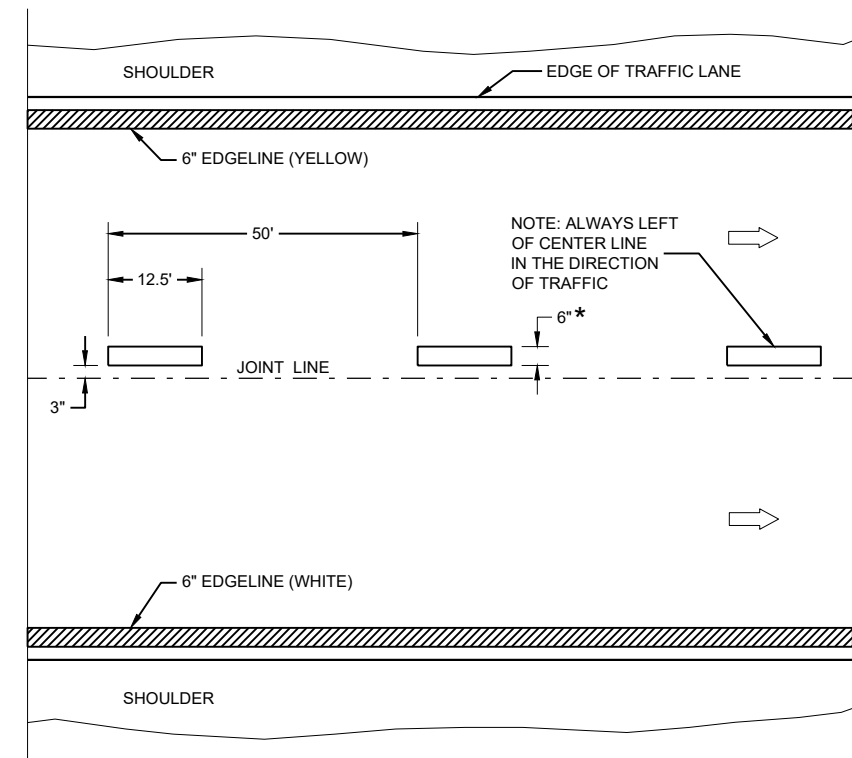
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

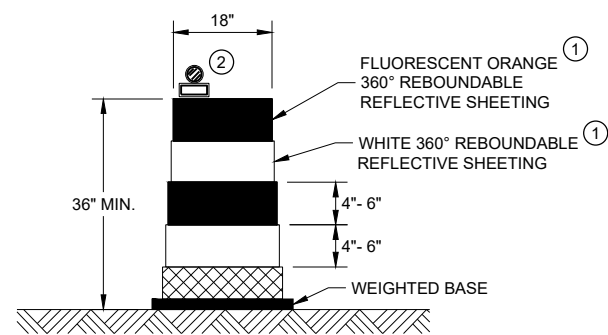
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

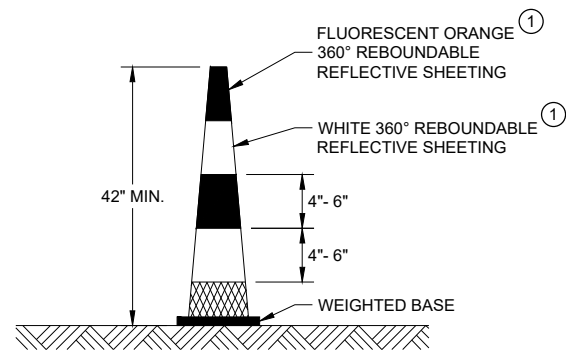
APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



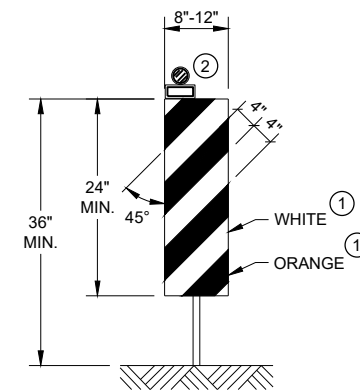
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

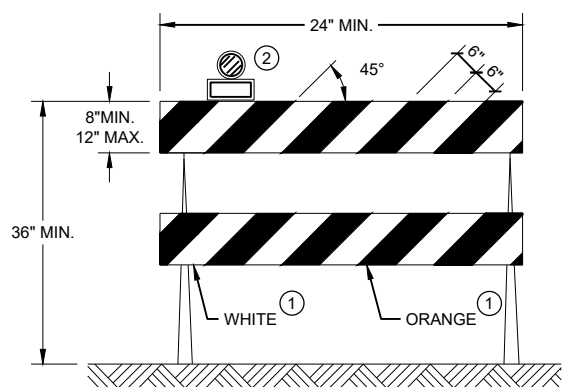


VERTICAL PANEL

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

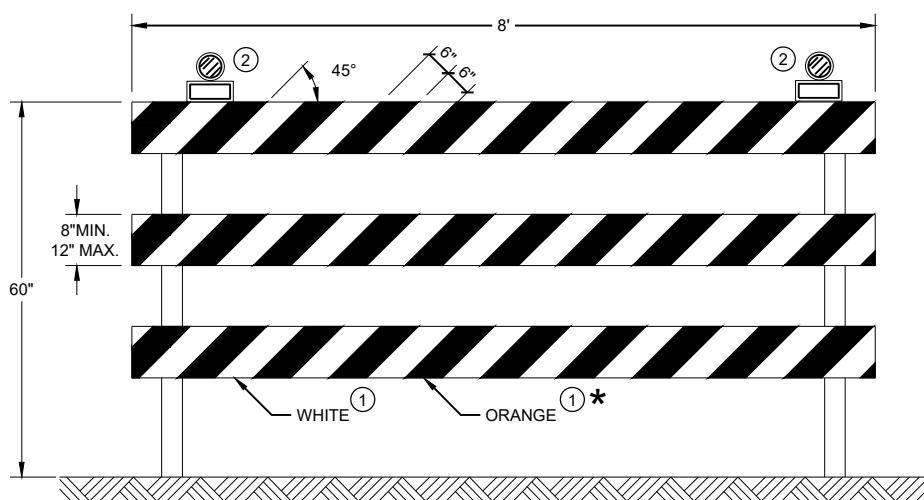
GENERAL NOTES

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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






* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

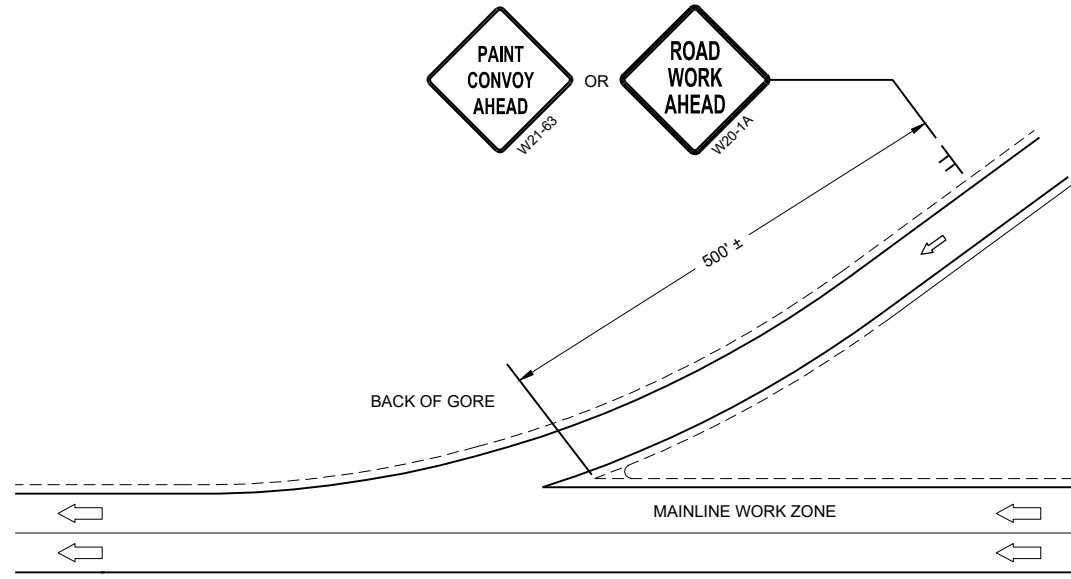
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

LEGEND

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



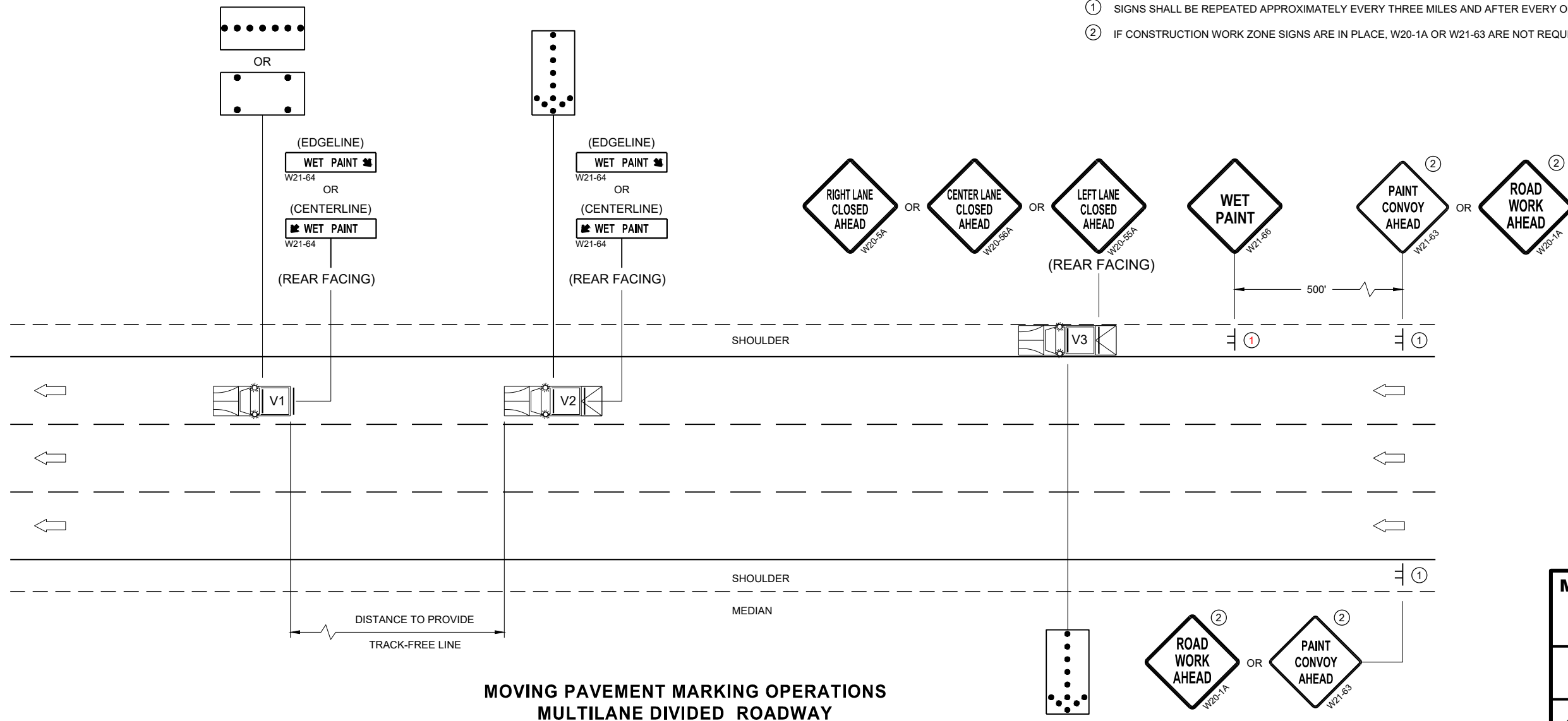
GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.
- WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.
- USE AN ATTENUATOR ON THE REAR MOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.
- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC
- CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

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

6

6



**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY**

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



SDD 15C19-08c

SDD 15C19-08c

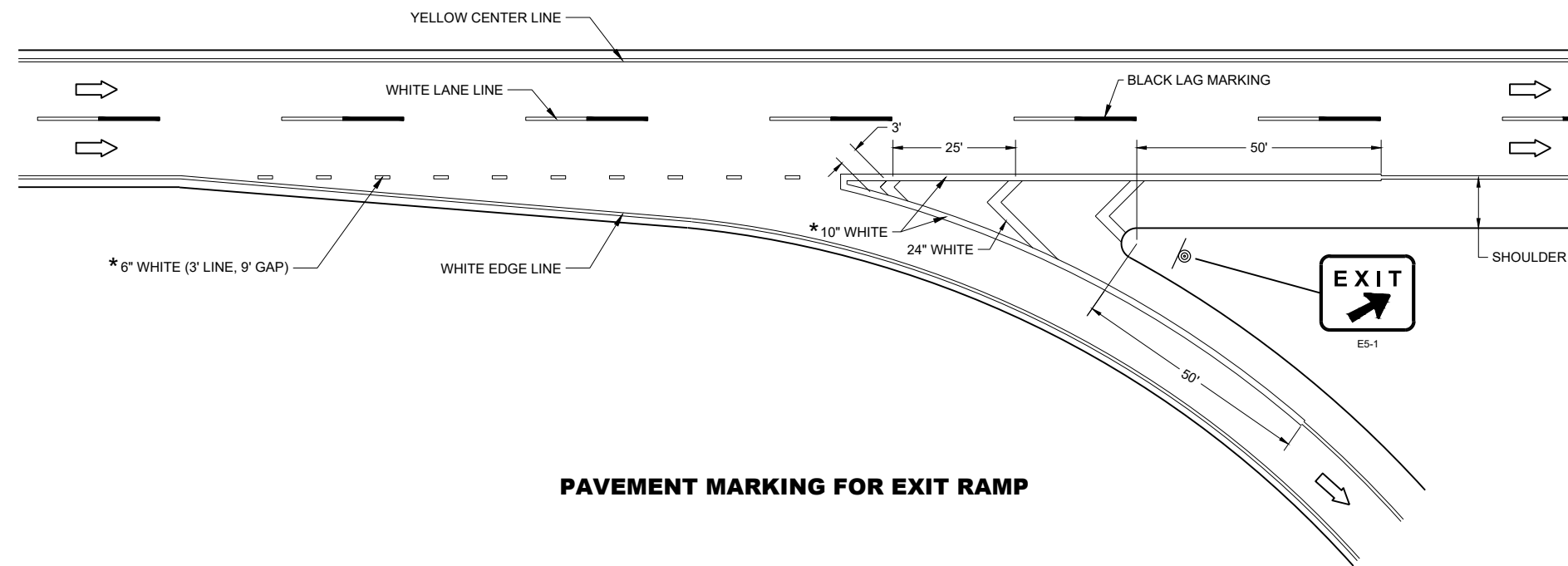
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

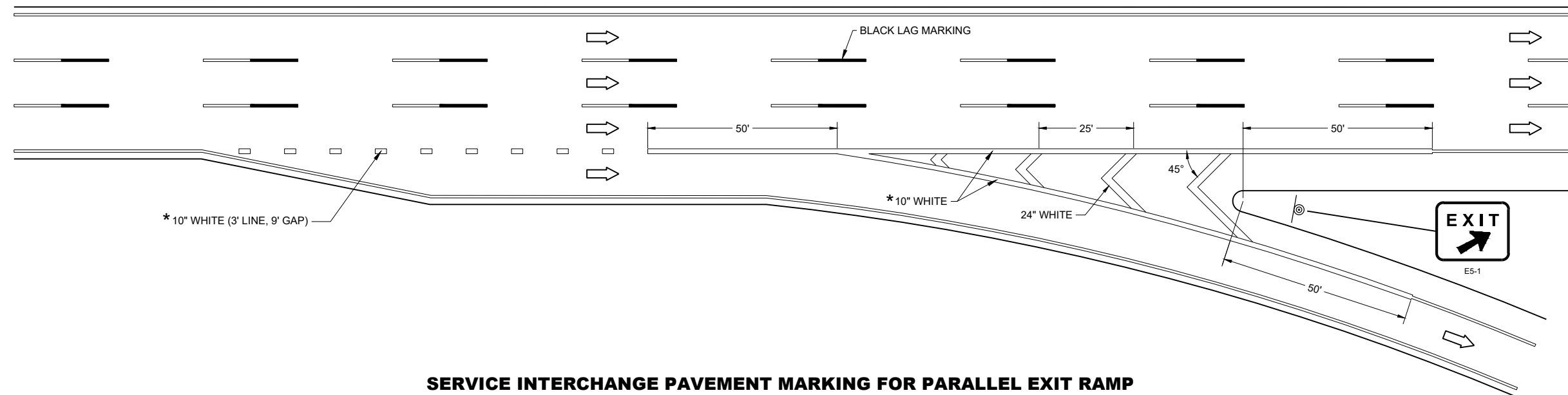
LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

**PAVEMENT MARKING,
EXIT RAMP AND
PARALLEL EXIT RAMP**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

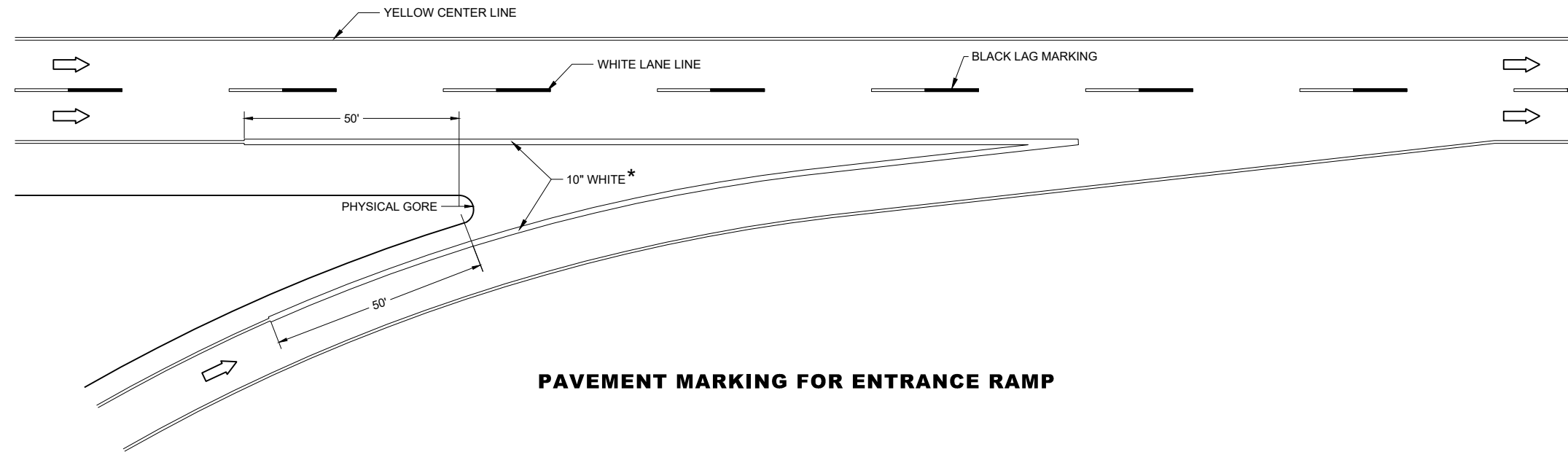
GENERAL NOTES

- PLACE GROOVE 3 INCHES LEFT OF JOINT.
- ① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

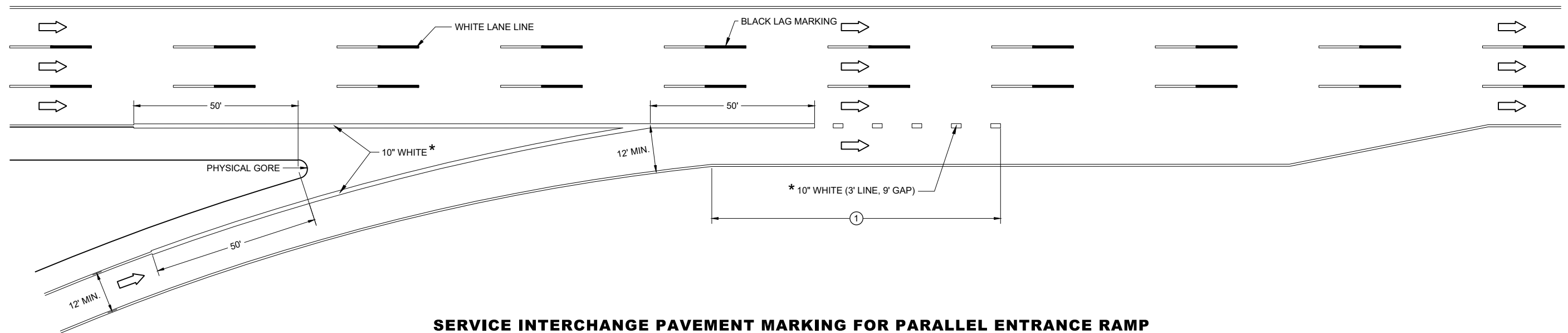
LEGEND

➡ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

6

SDD 15C31-06c

SDD 15C31-06c

**PAVEMENT MARKING,
ENTRANCE RAMP AND
PARALLEL ENTRANCE RAMP**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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 TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.










IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

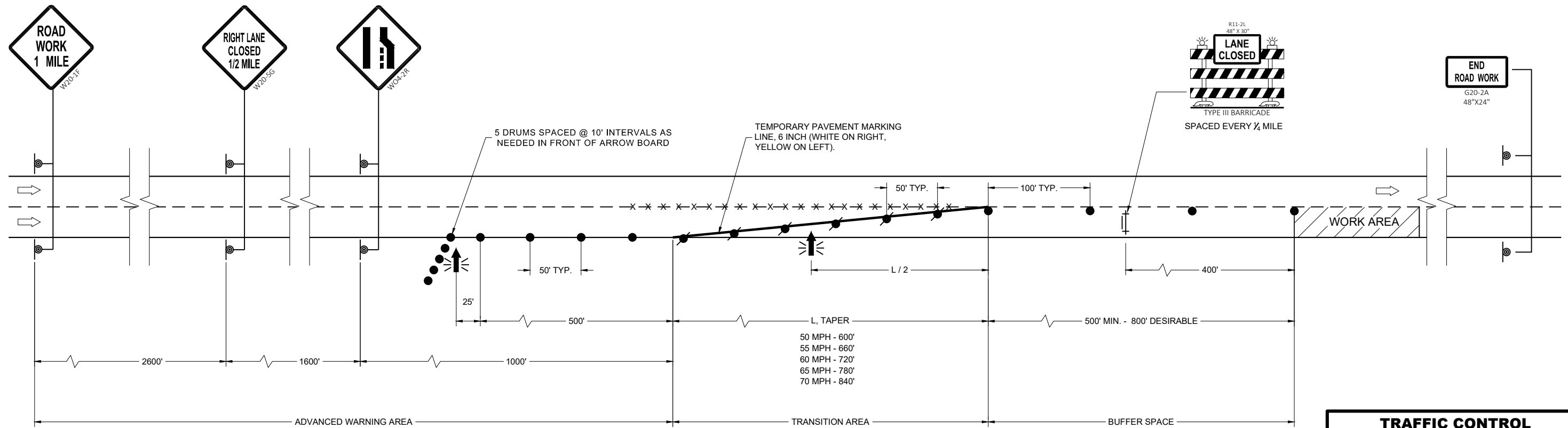
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD

6

SDD 15D12-12a



6

SDD 15D12-12a

TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED September 2023 DATE	/s/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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 TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

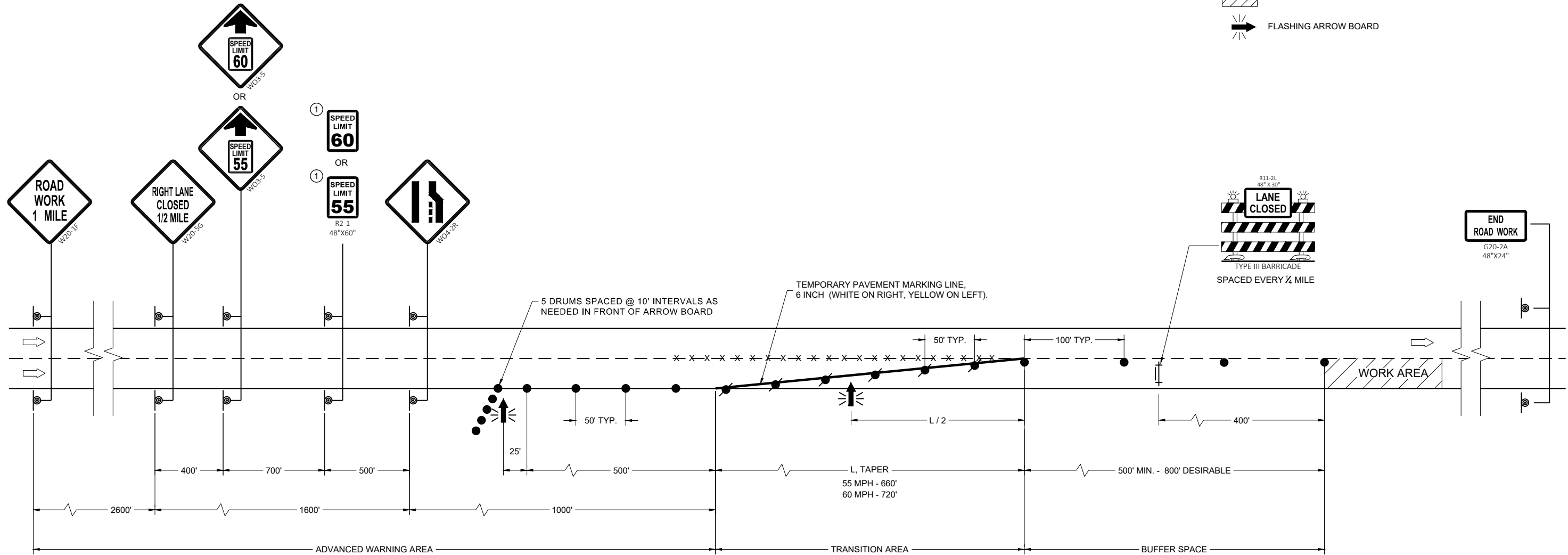
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- * * * REMOVING PAVEMENT MARKINGS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ➡ FLASHING ARROW BOARD

6

SDD 15D12-12b














6

SDD 15D12-12b

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED September 2023 DATE	/s/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD
-  PORTABLE TRAFFIC SENSOR (PTS)
-  FLASHING BEACON SIGN

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS 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) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS. WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

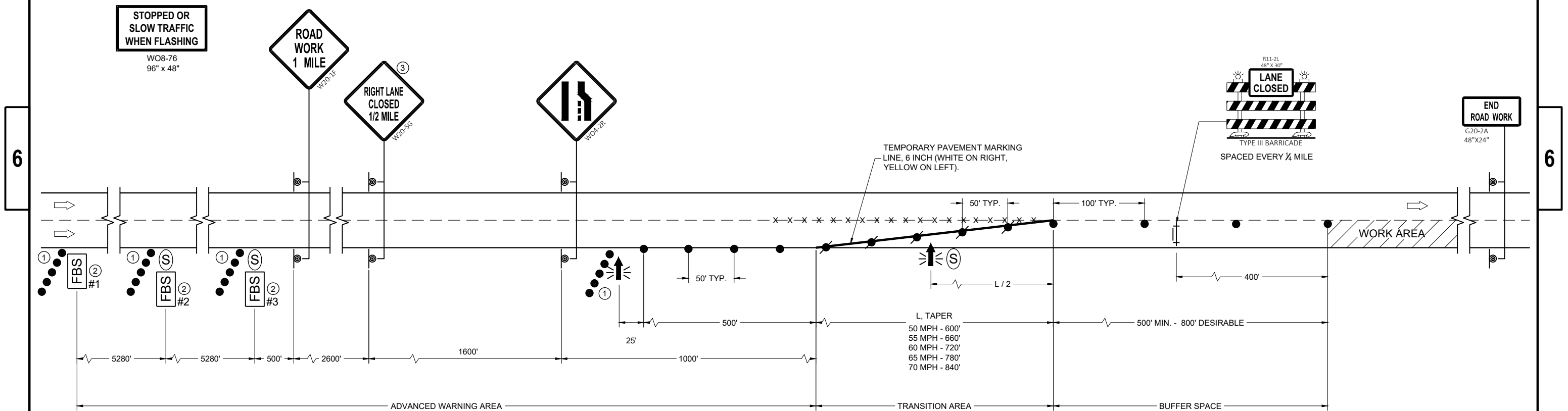
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

- ① 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
- ② IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
- ③ IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM











STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023 /S/ Erin Schwark
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

SDD 15D12-12d

SDD 15D12-12d

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. 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 TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

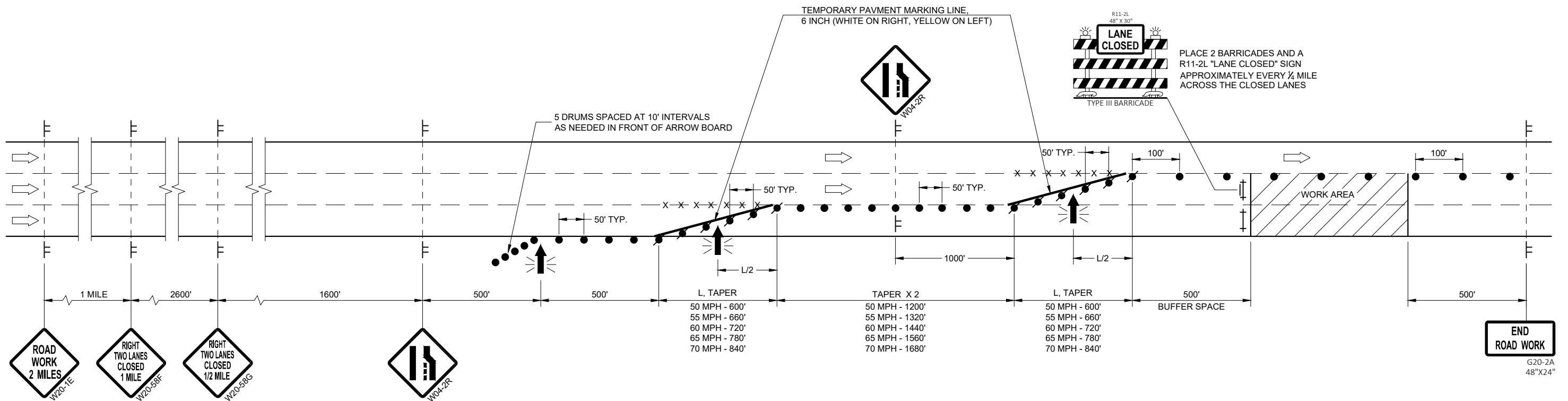
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

6

6



SDD 15D14-06

SDD 15D14-06

**TRAFFIC CONTROL, TWO LANE
CLOSURE ON FREEWAY
OR EXPRESSWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

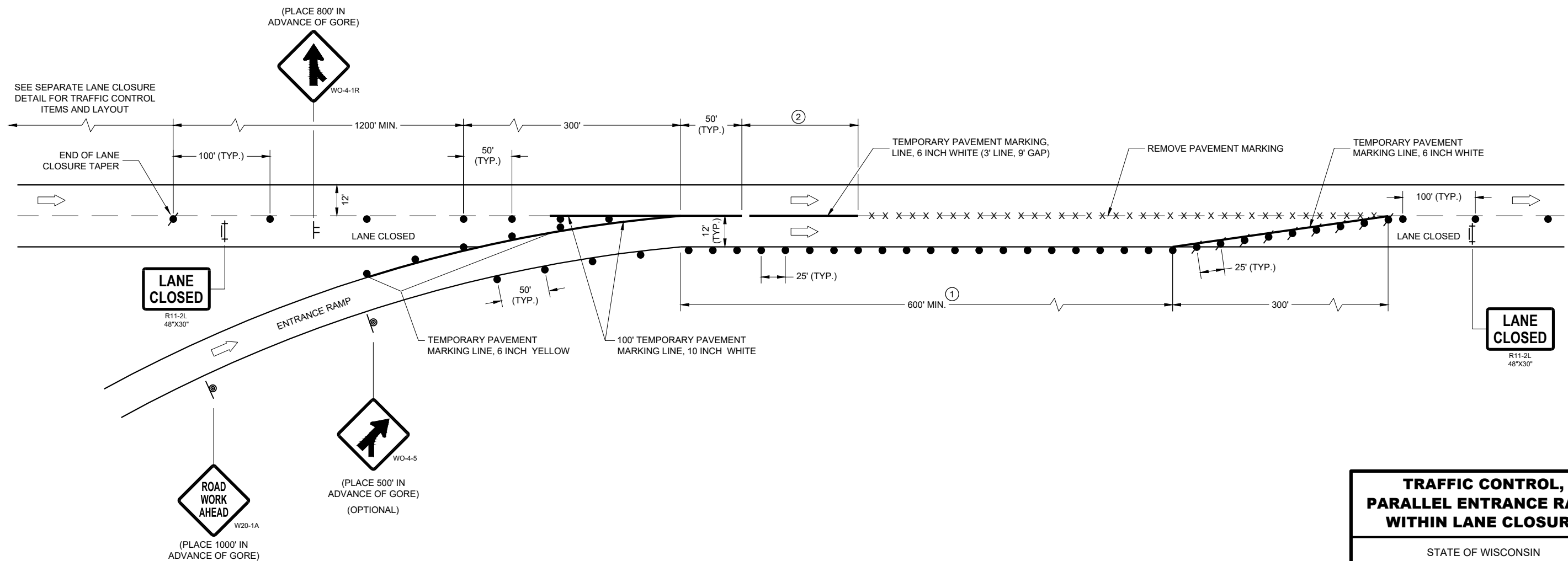
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.









WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

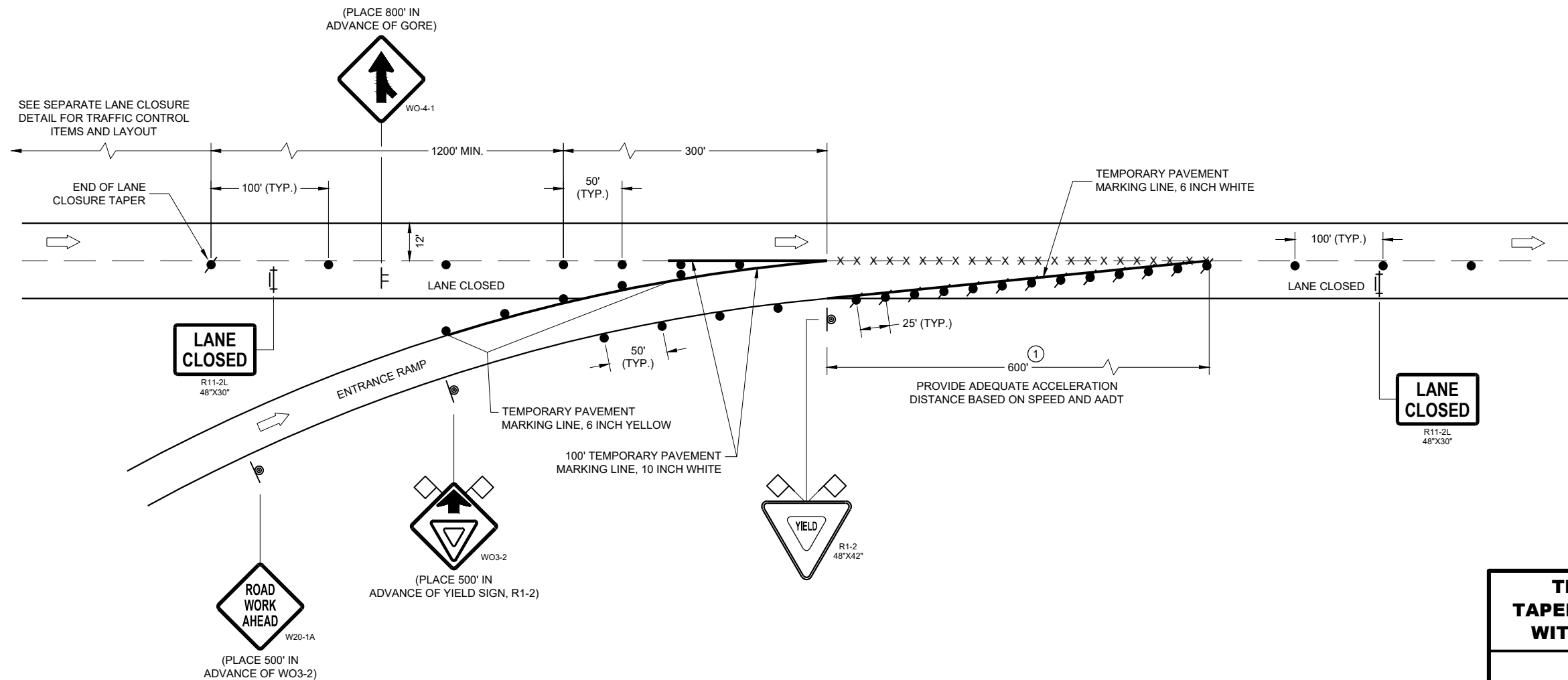
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

① CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



6

6

SDD 15D15-07c

SDD 15D15-07c








**TRAFFIC CONTROL,
TAPERED ENTRANCE RAMP
WITHIN LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

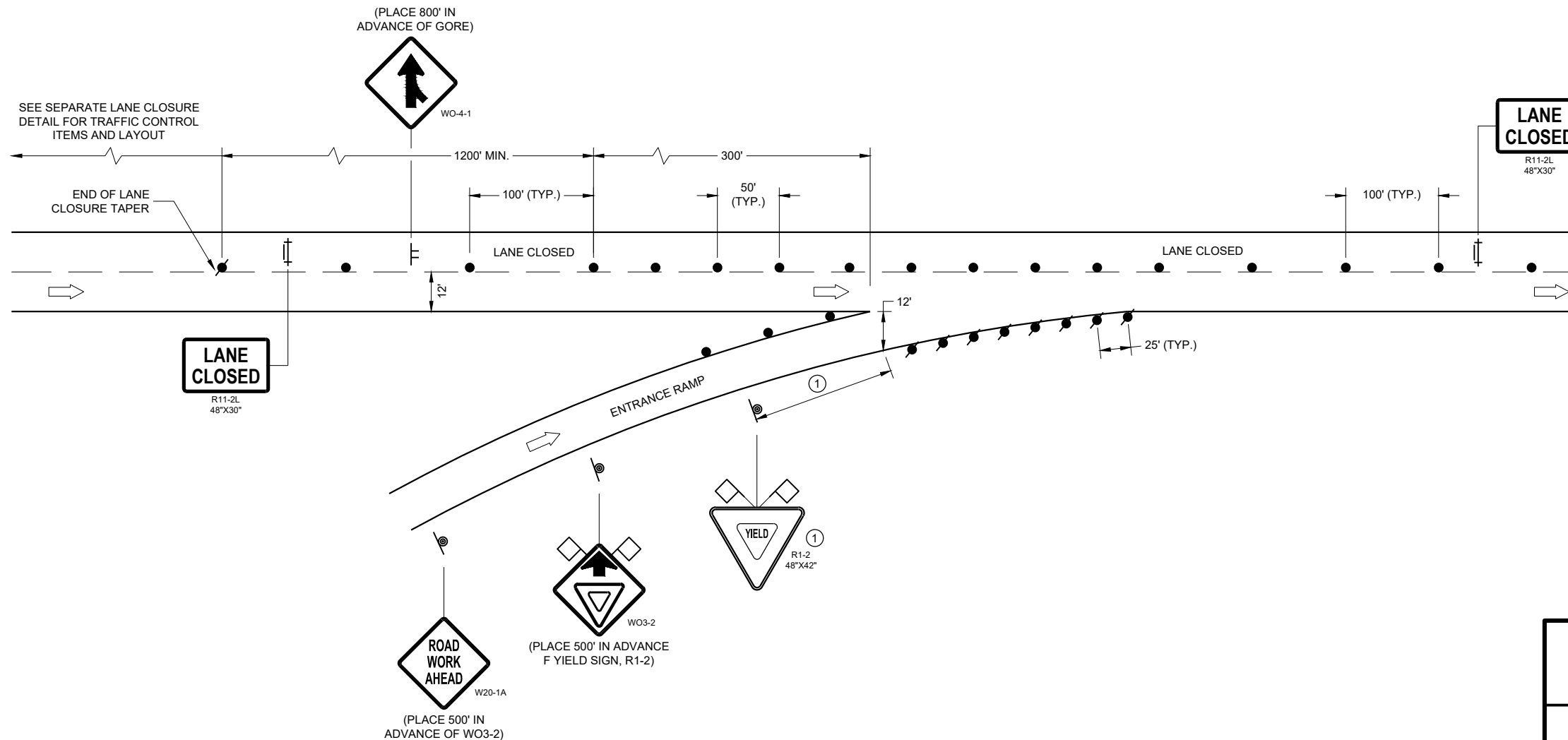
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



6

6

SDD 15D15-07d

SDD 15D15-07d

**TRAFFIC CONTROL,
TAPERED ENTRANCE RAMP
WITHIN LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊞ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ×-×-× REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

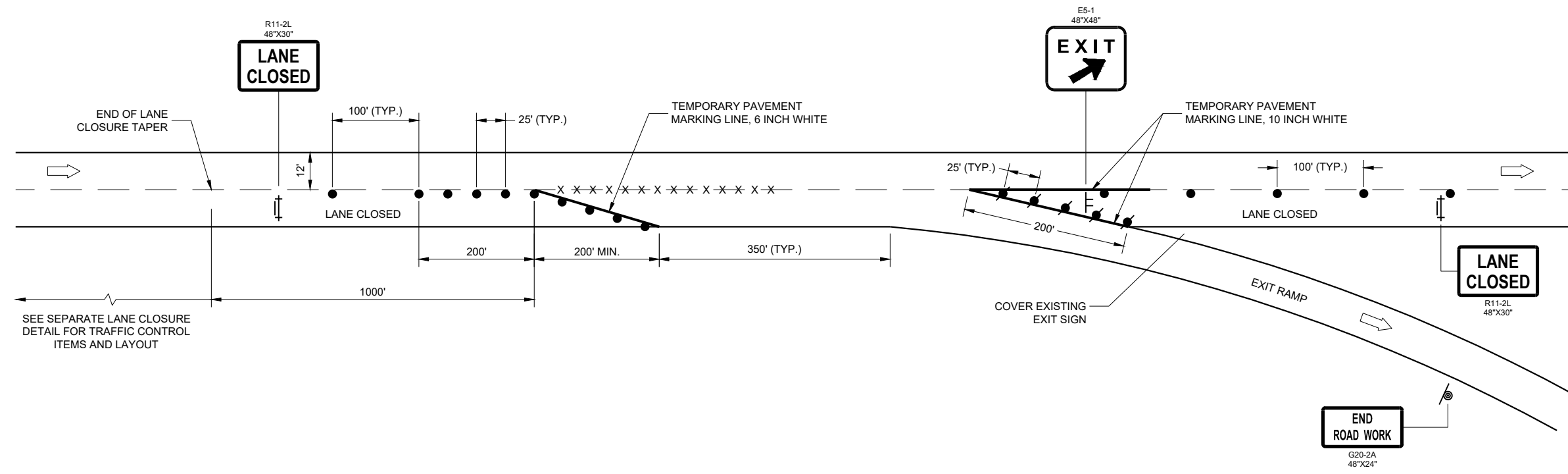
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



6







6

SDD 15D15-07e

SDD 15D15-07e

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  SIGN ON PERMANENT SUPPORT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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 MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS 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.

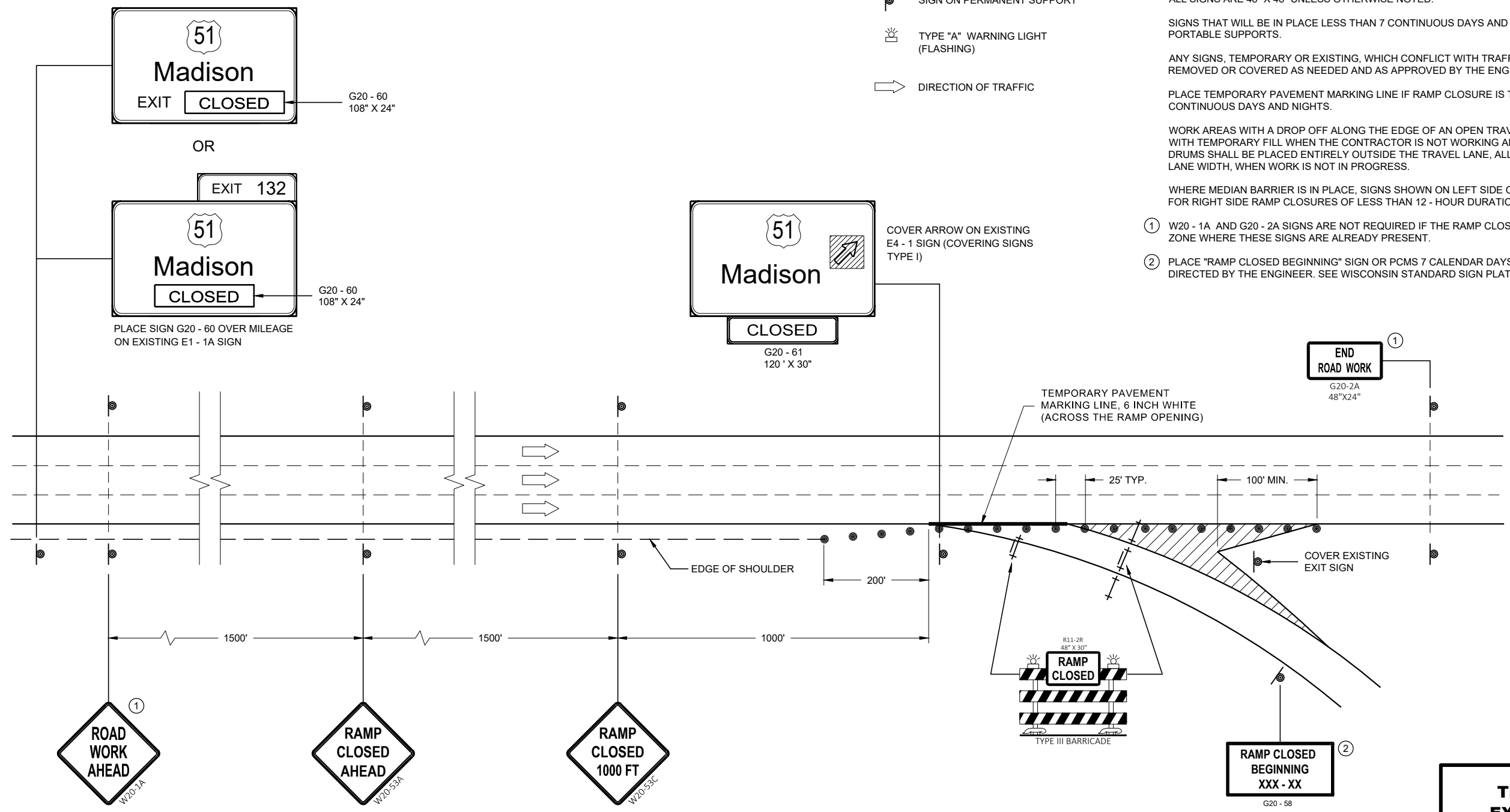
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

① W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

② PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



**TRAFFIC CONTROL,
EXIT RAMP CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

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 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.

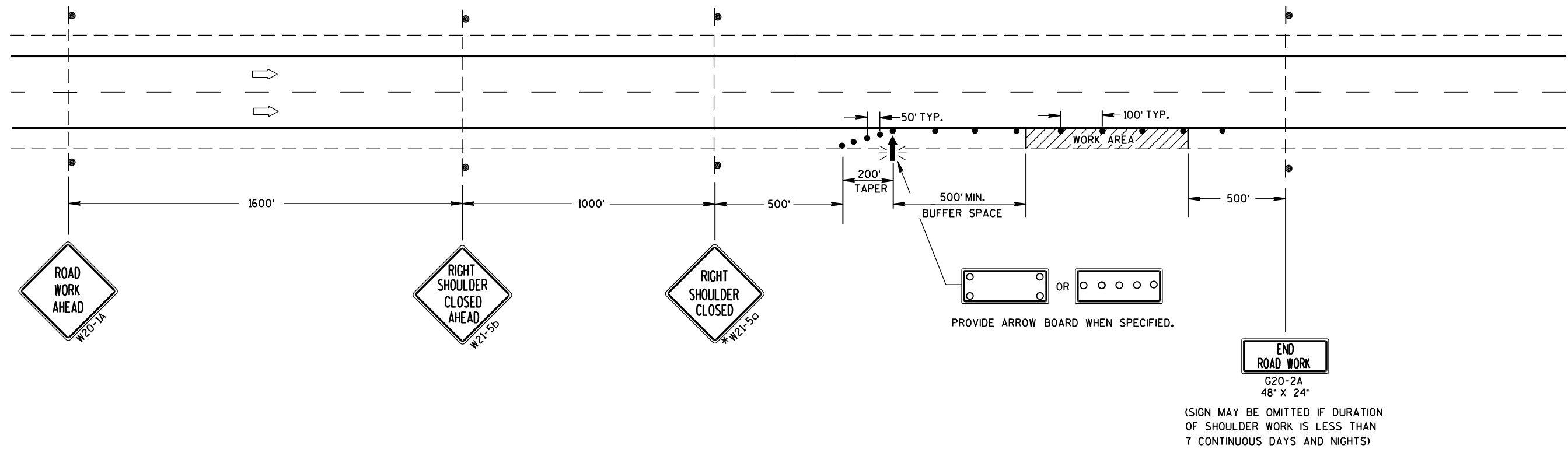
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

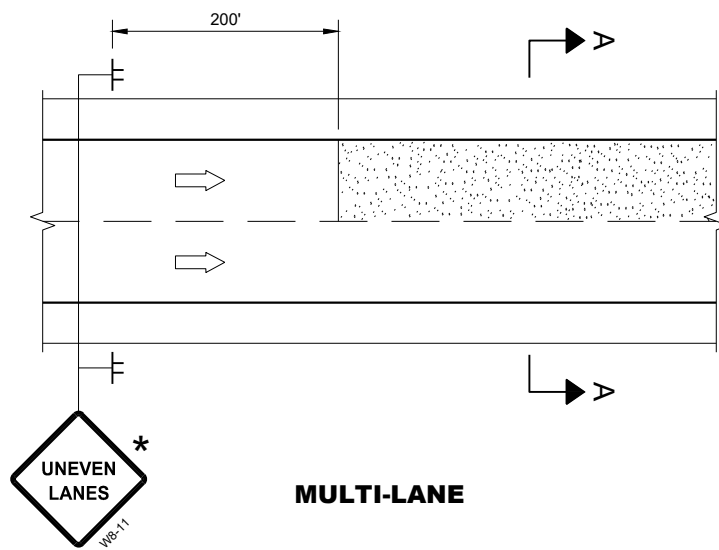
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-50 SIGN MAY BE OMITTED.

LEGEND

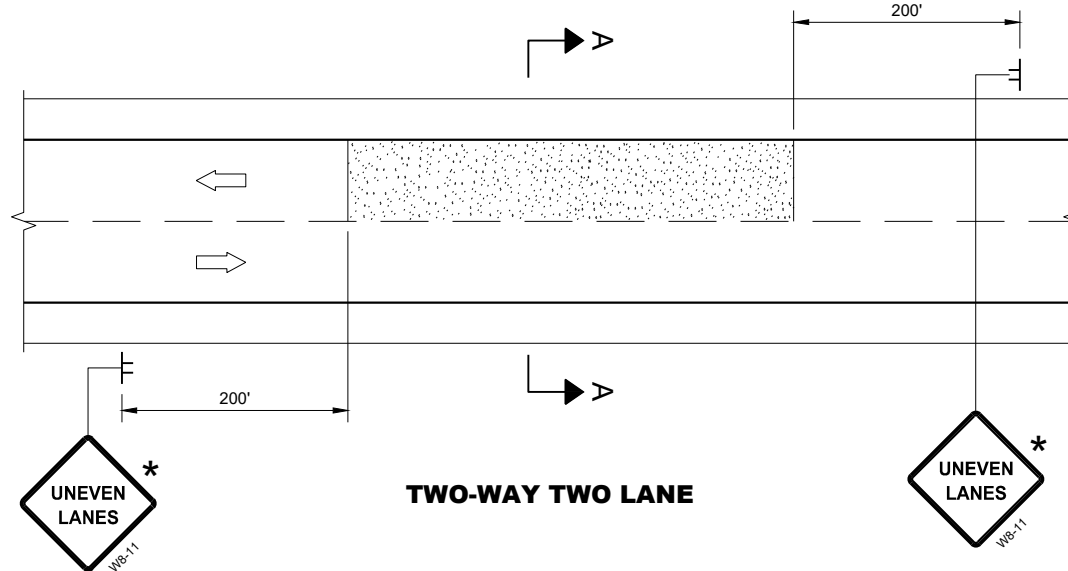
- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡ FLASHING ARROW BOARD
- ▨ WORK AREA



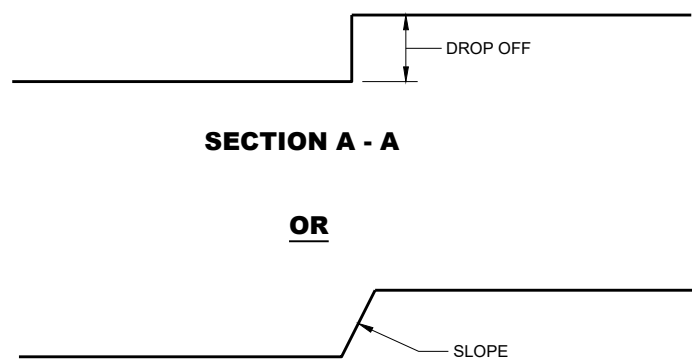
TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/s/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



MULTI-LANE



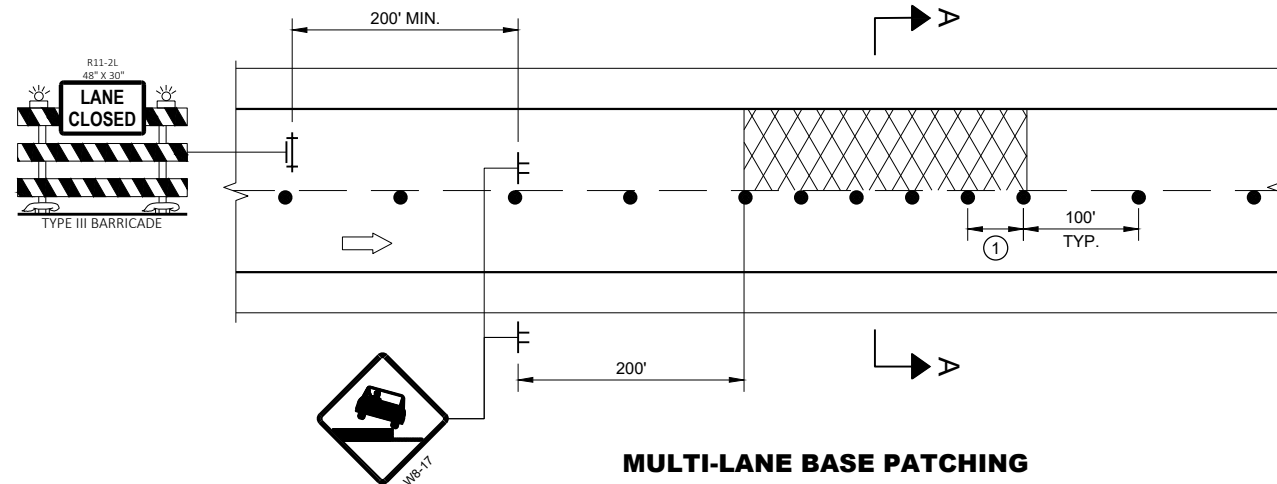
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

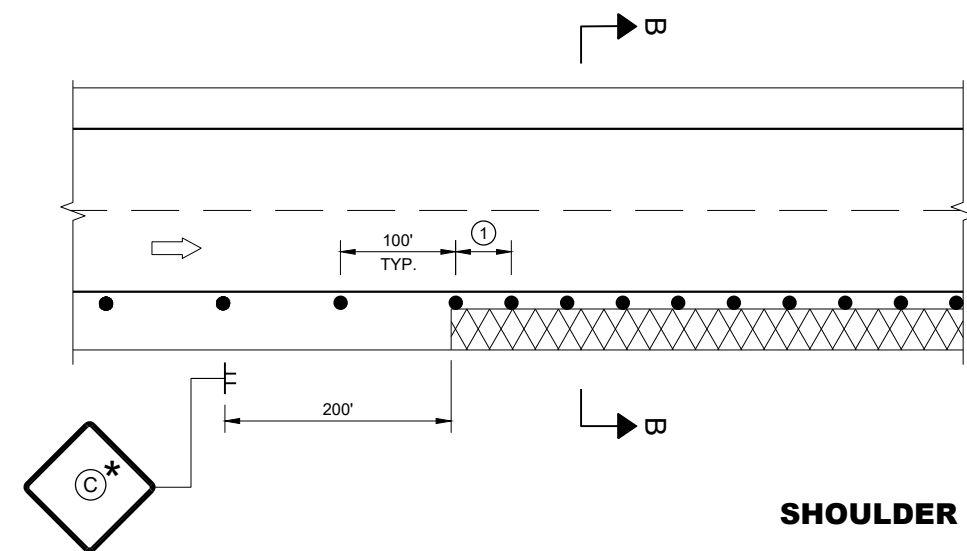
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF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

LEGEND

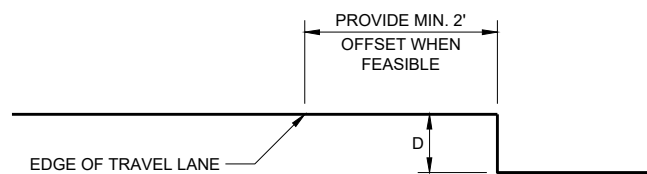
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

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

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA
- CRASH CUSHION TEMPORARY
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST

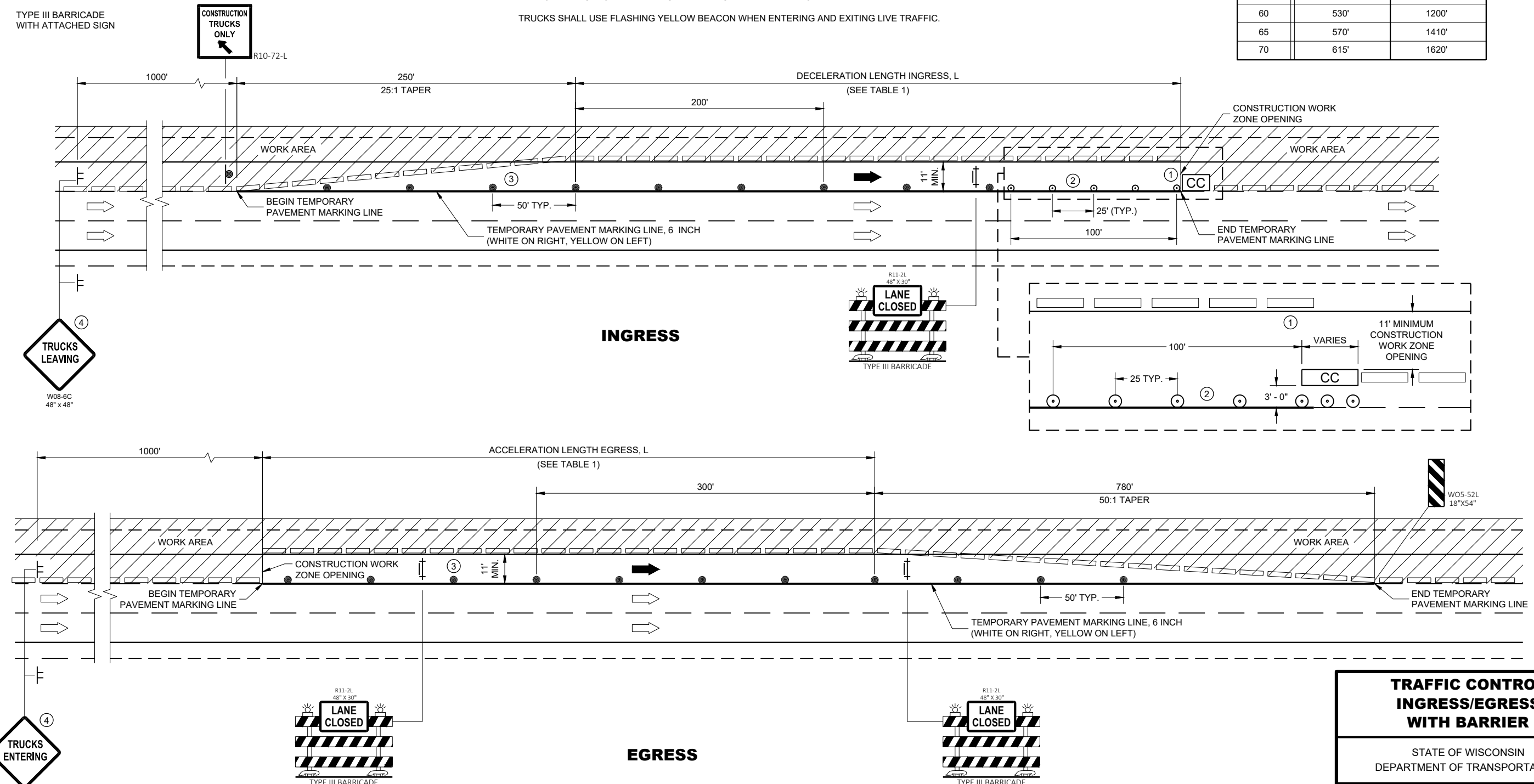
GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
 "WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.
 ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. 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.
 WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.
 THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL
 TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL
 TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

- ① WIDEN BARRIER AS NECESSARY TO ACCOMMODATE CRASH CUSHION WIDTH.
- ② USE TUBULAR MARKERS TO HELP DELINEATE TEMPORARY CRASH CUSHION.
- ③ REMOVE DRUMS / BARRICADES WHEN INGRESS / EGRESS ARE IN USE.
- ④ REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'



6

6

SDD 15D47-03a

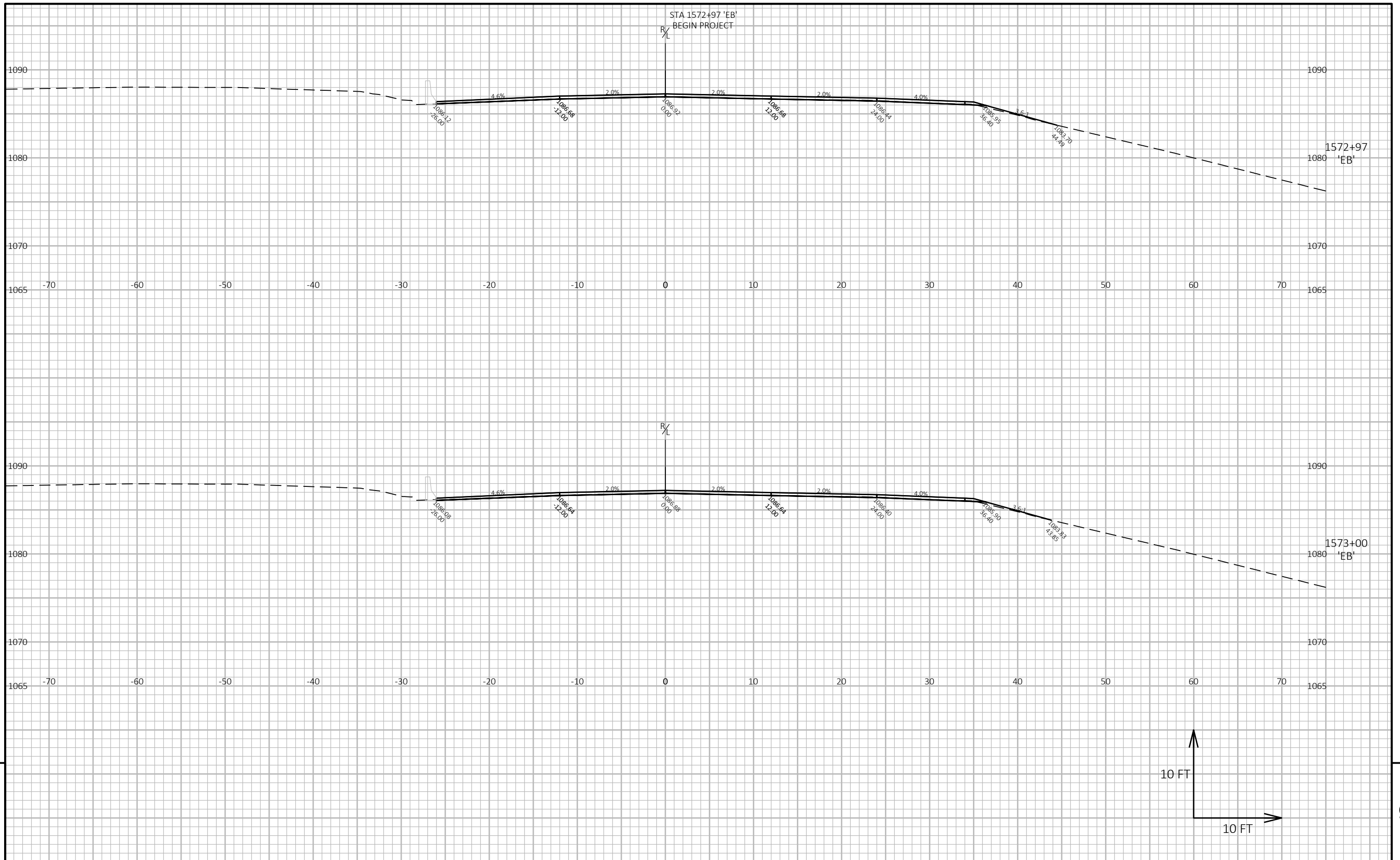
SDD 15D47-03a

**TRAFFIC CONTROL
INGRESS/EGRESS
WITH BARRIER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



9

9

PROJECT NO: 1011-00-82

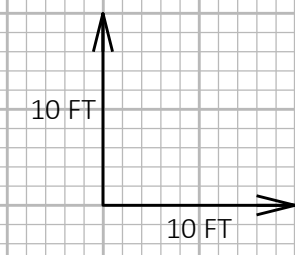
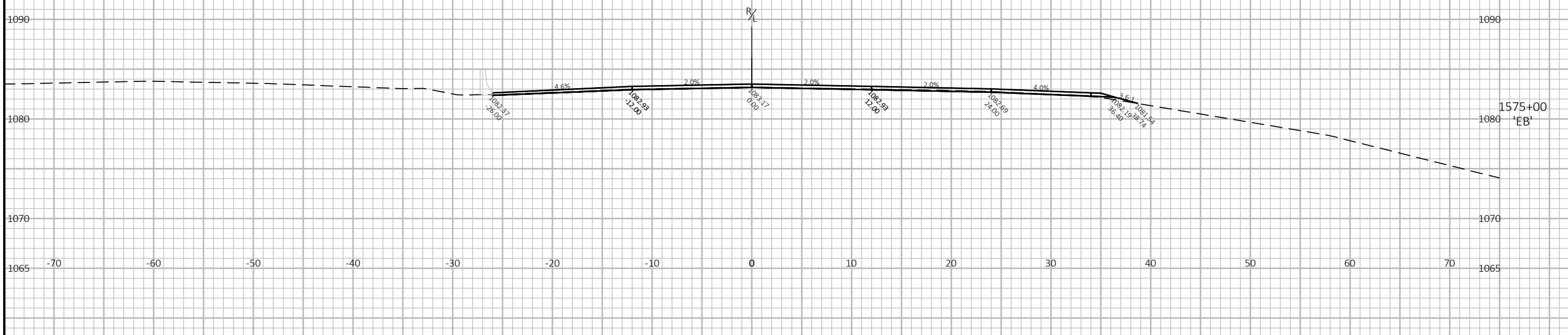
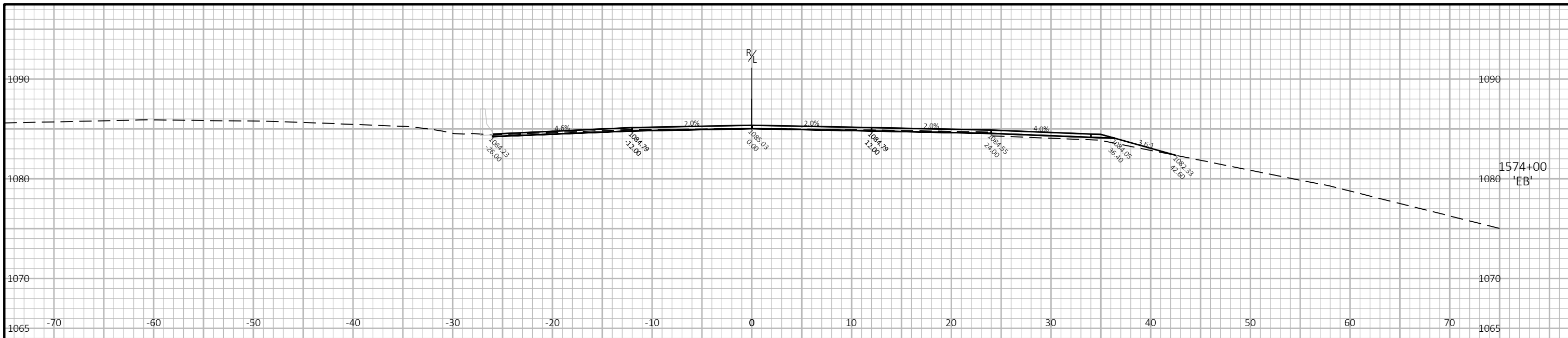
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

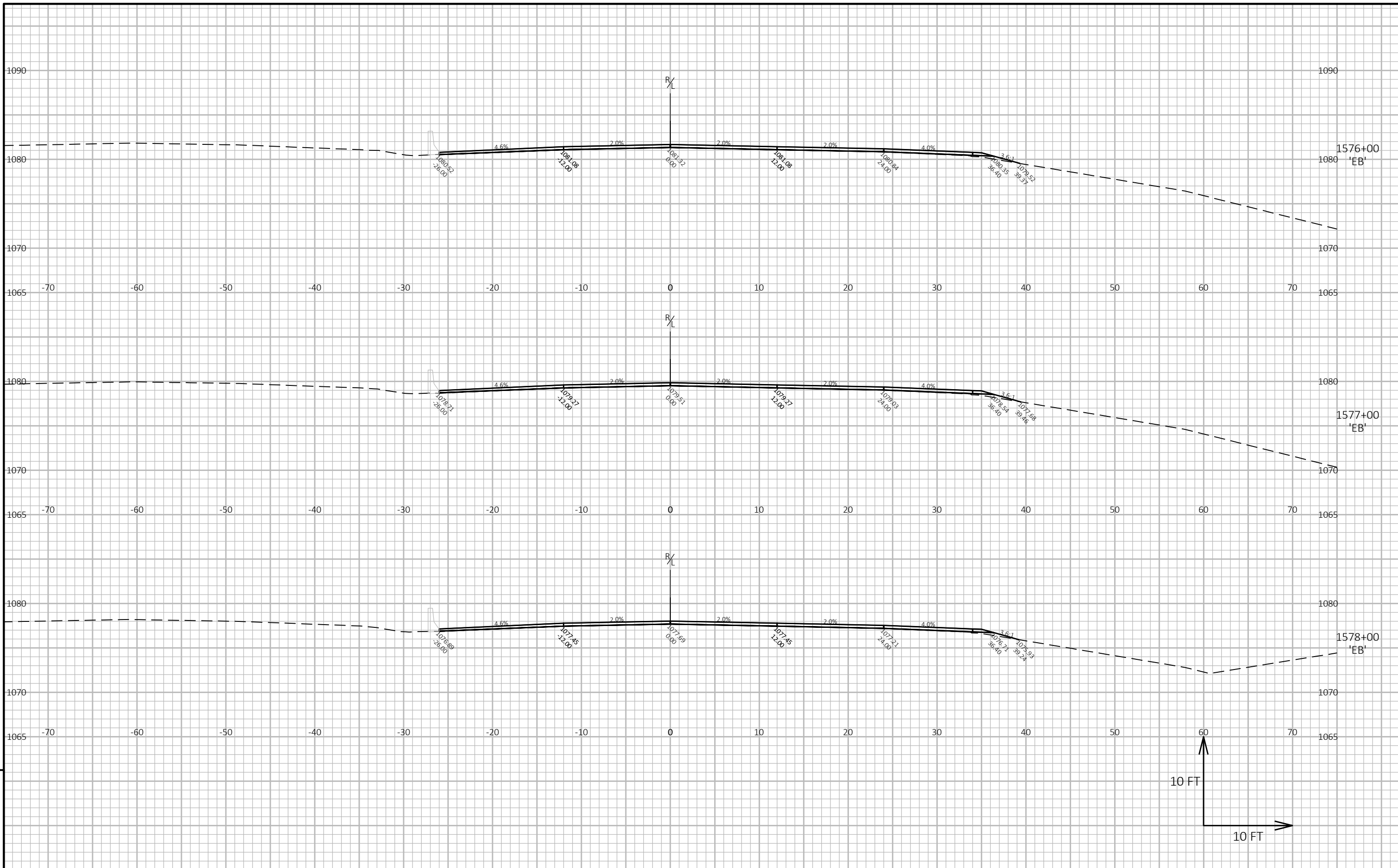
E



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

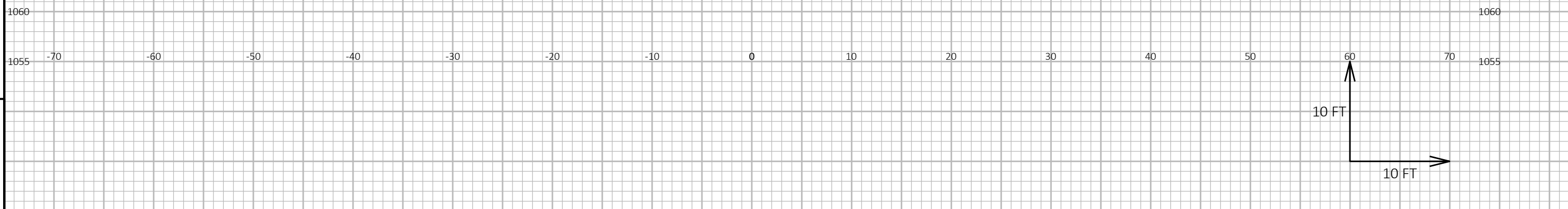
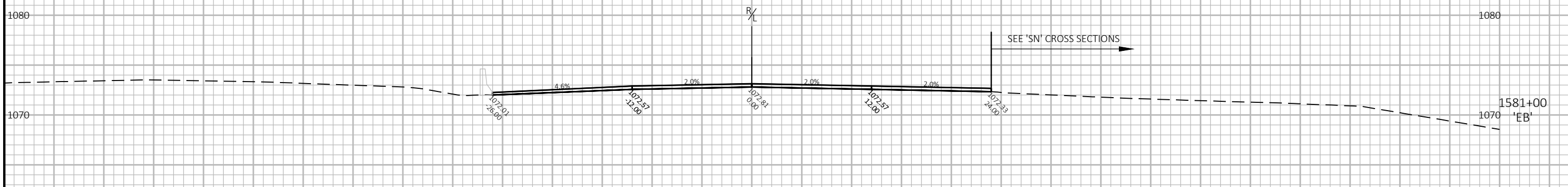
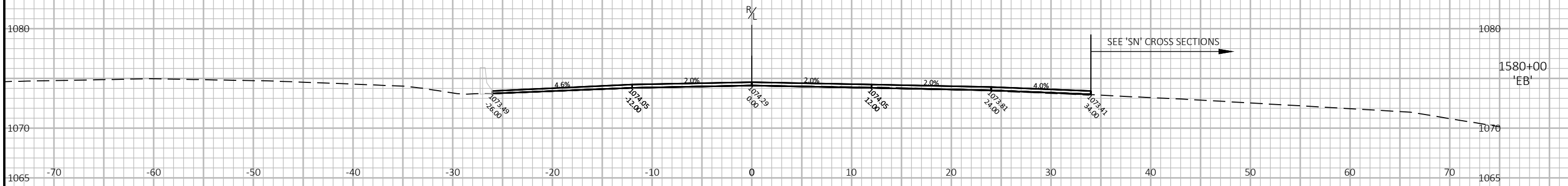
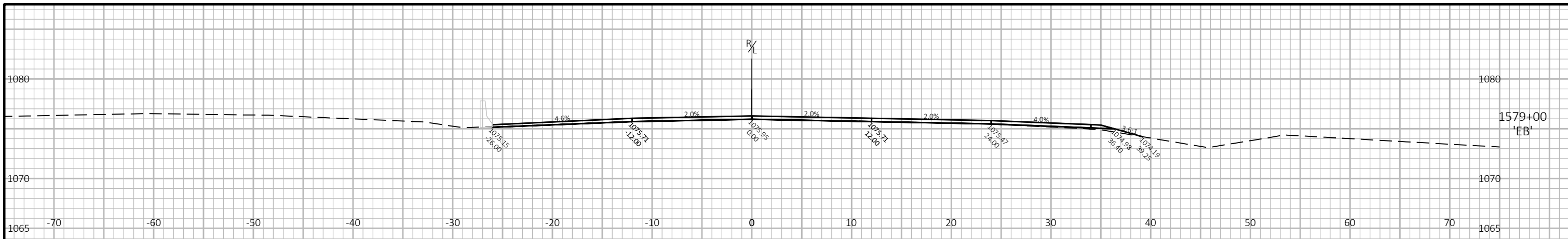


9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

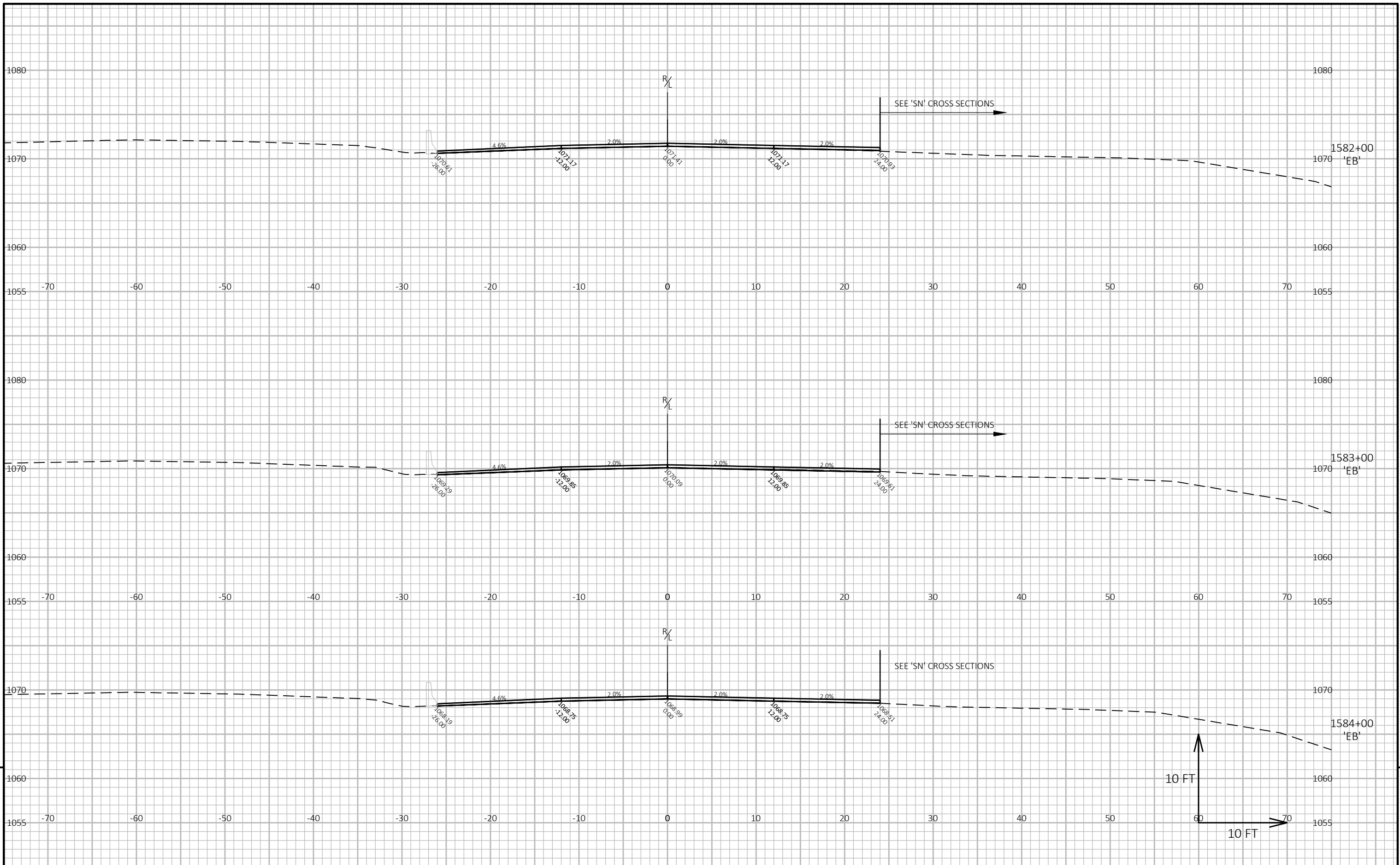
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2024 11:47 AM PLOT BY : DEGNER, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

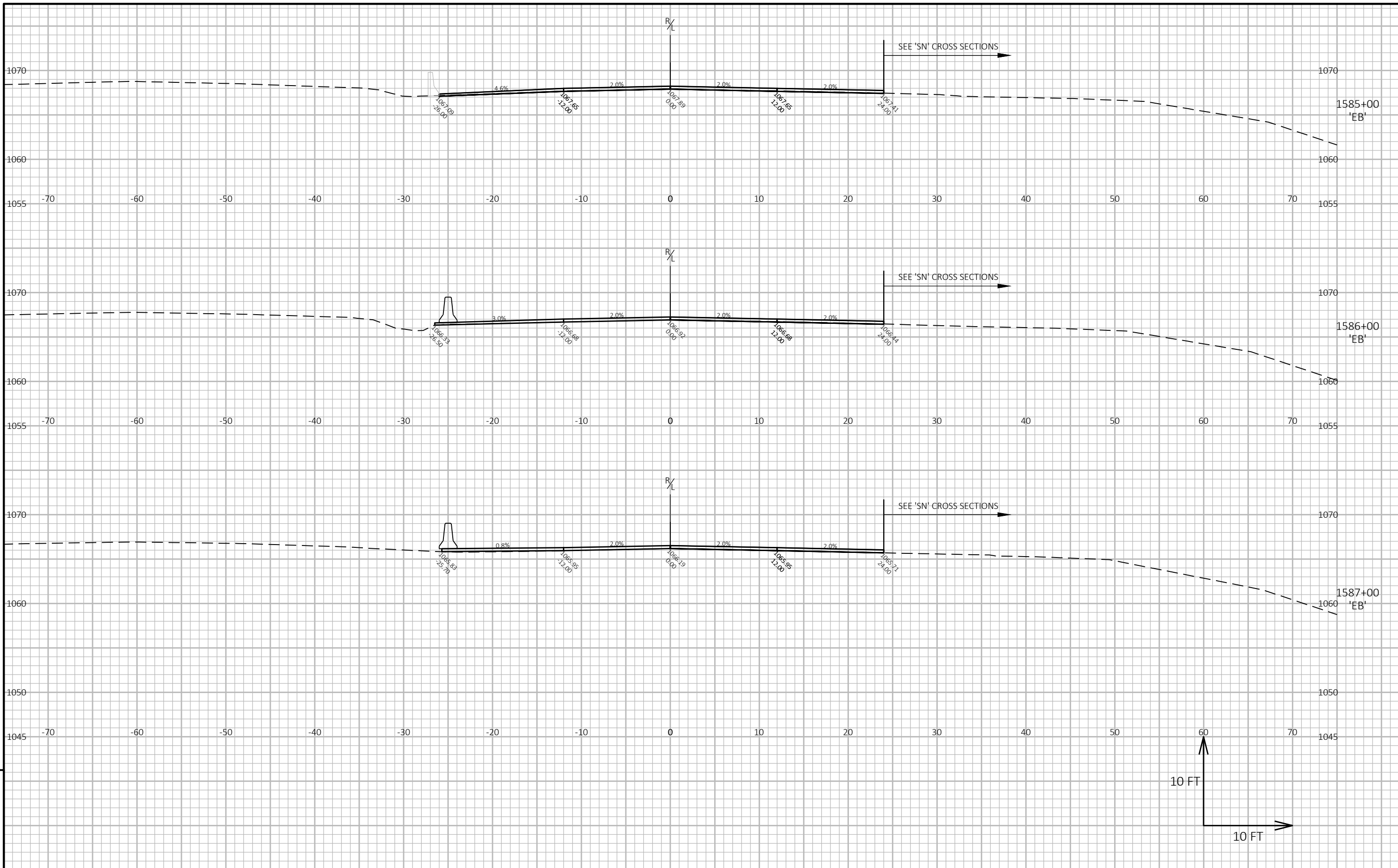
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

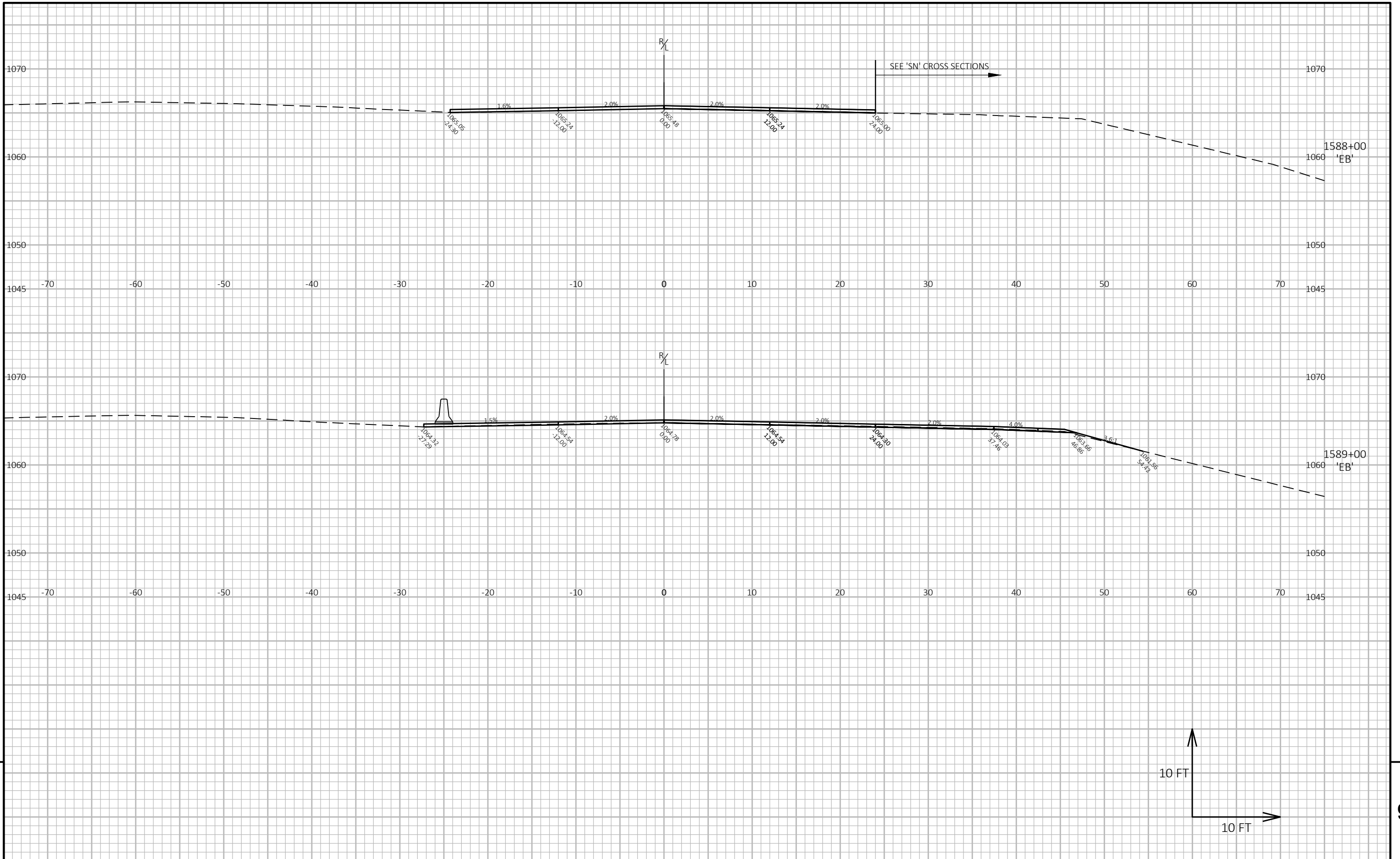
E



9

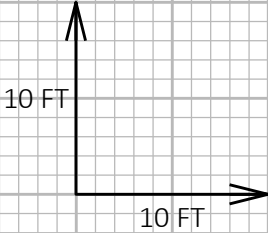
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

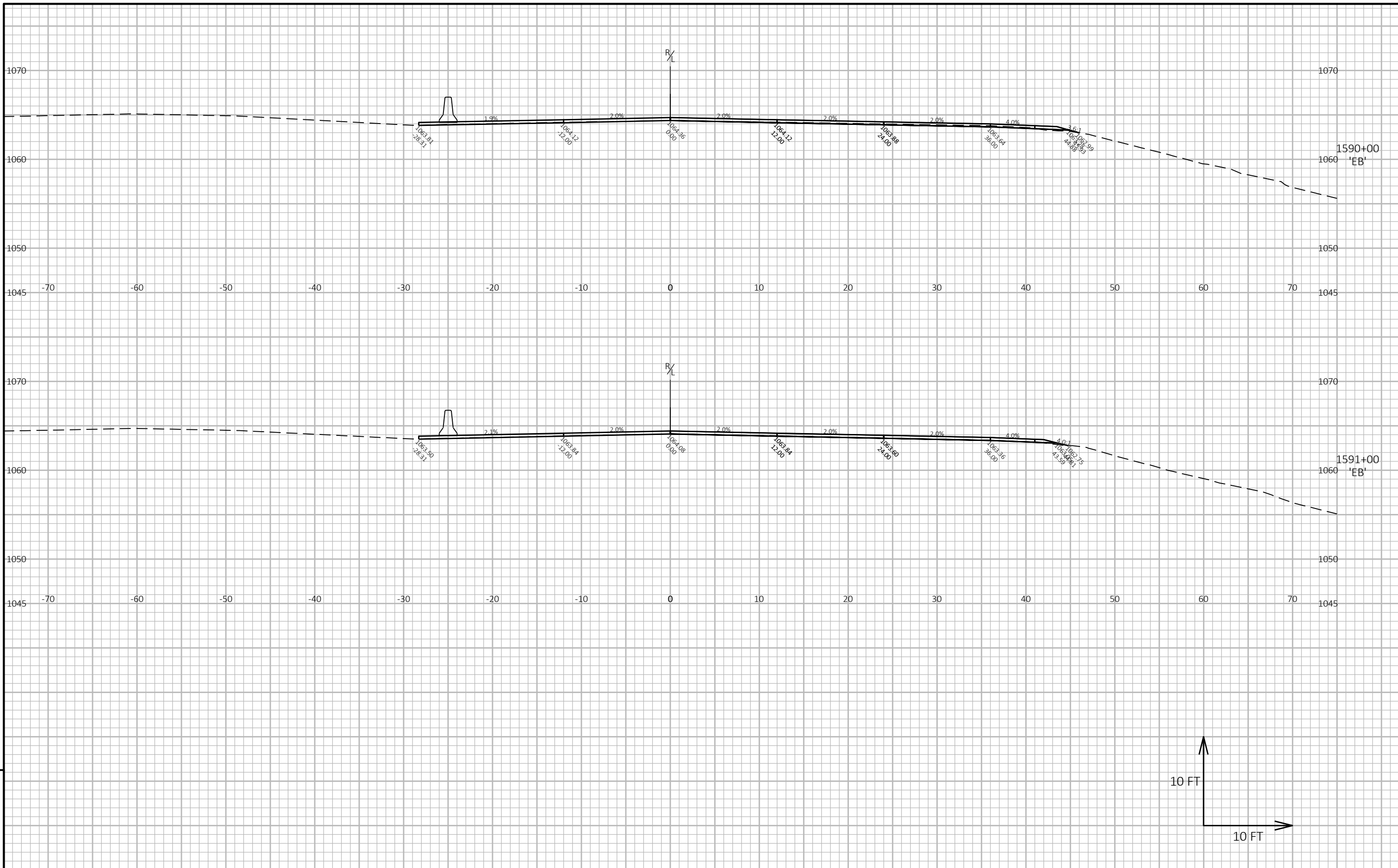


9

9

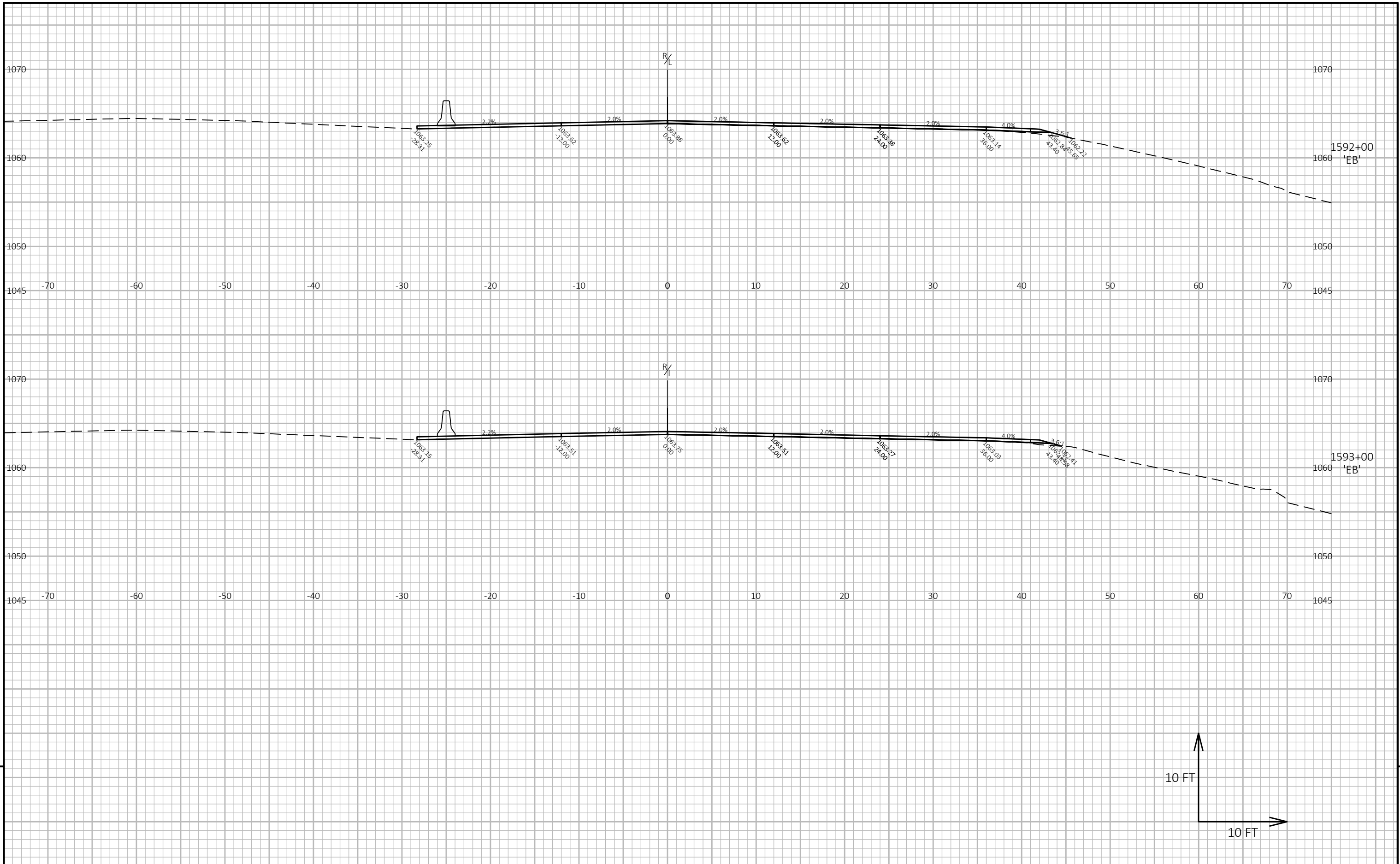


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

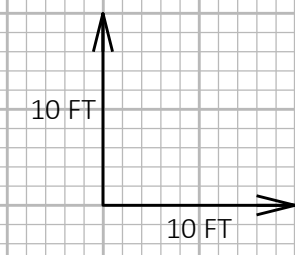
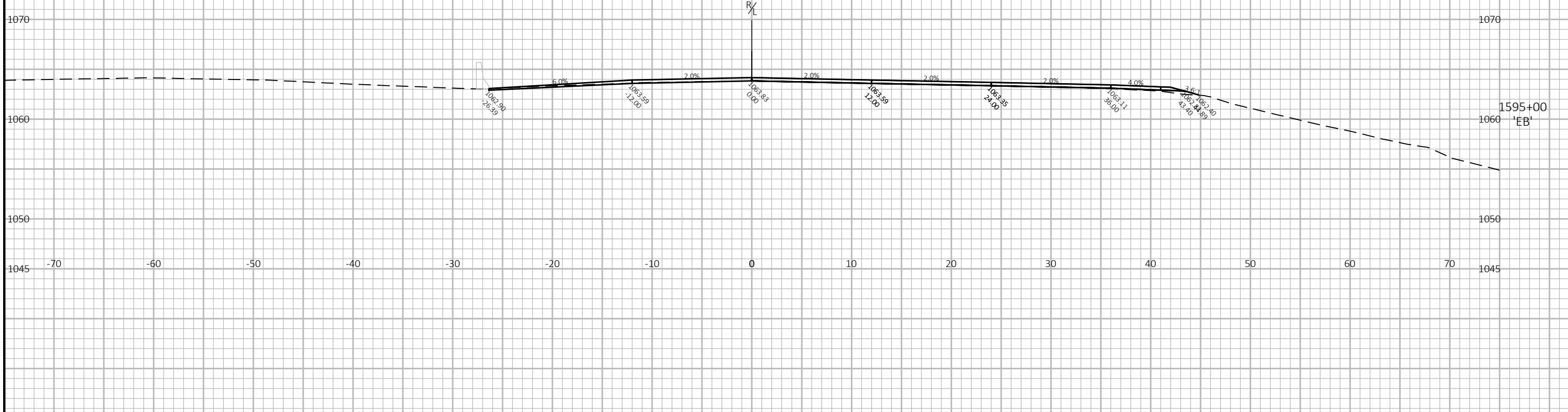
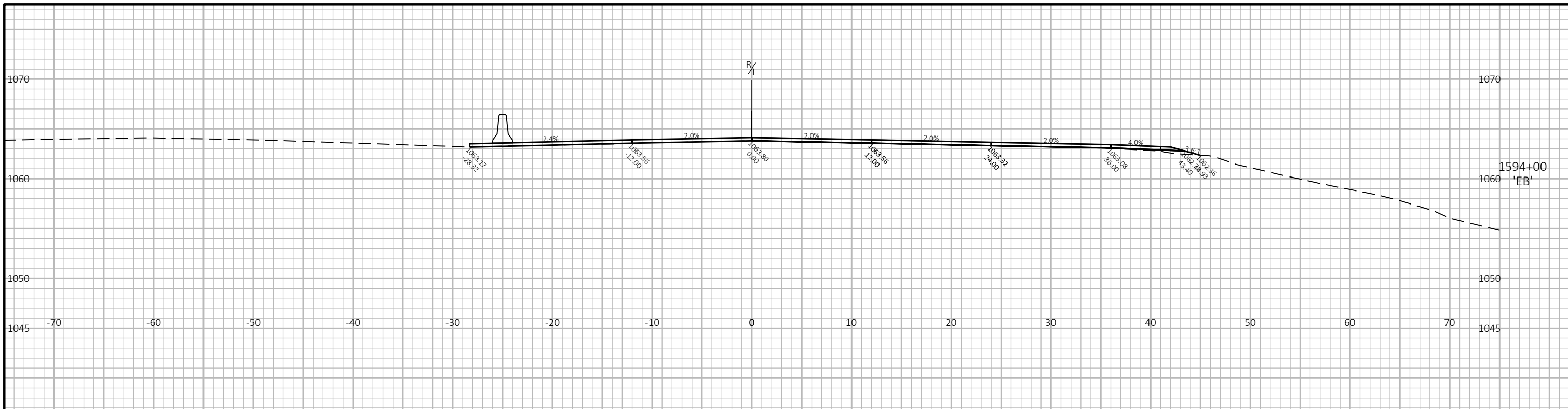


9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

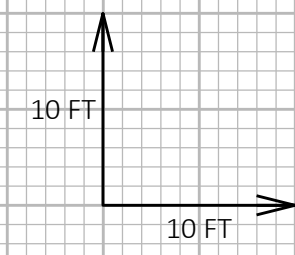
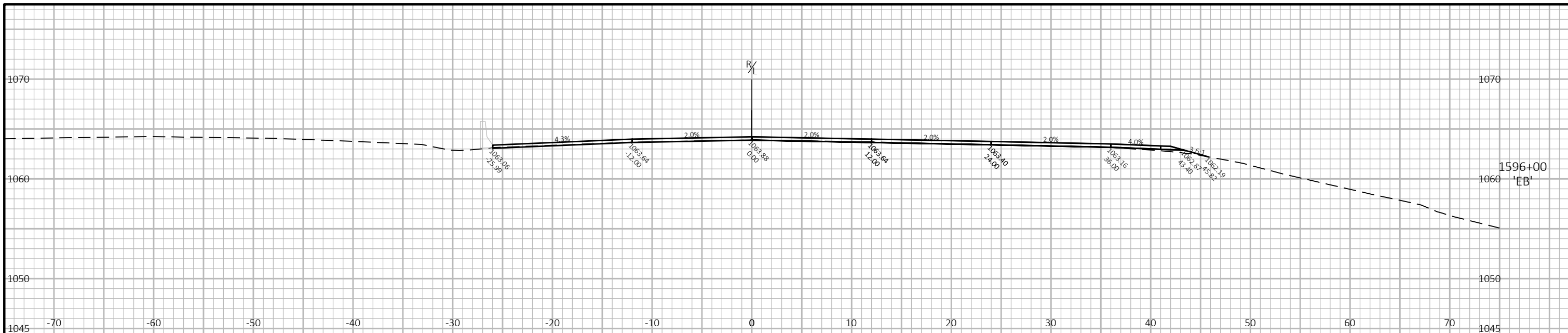
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2024 11:47 AM PLOT BY : DEGNER, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



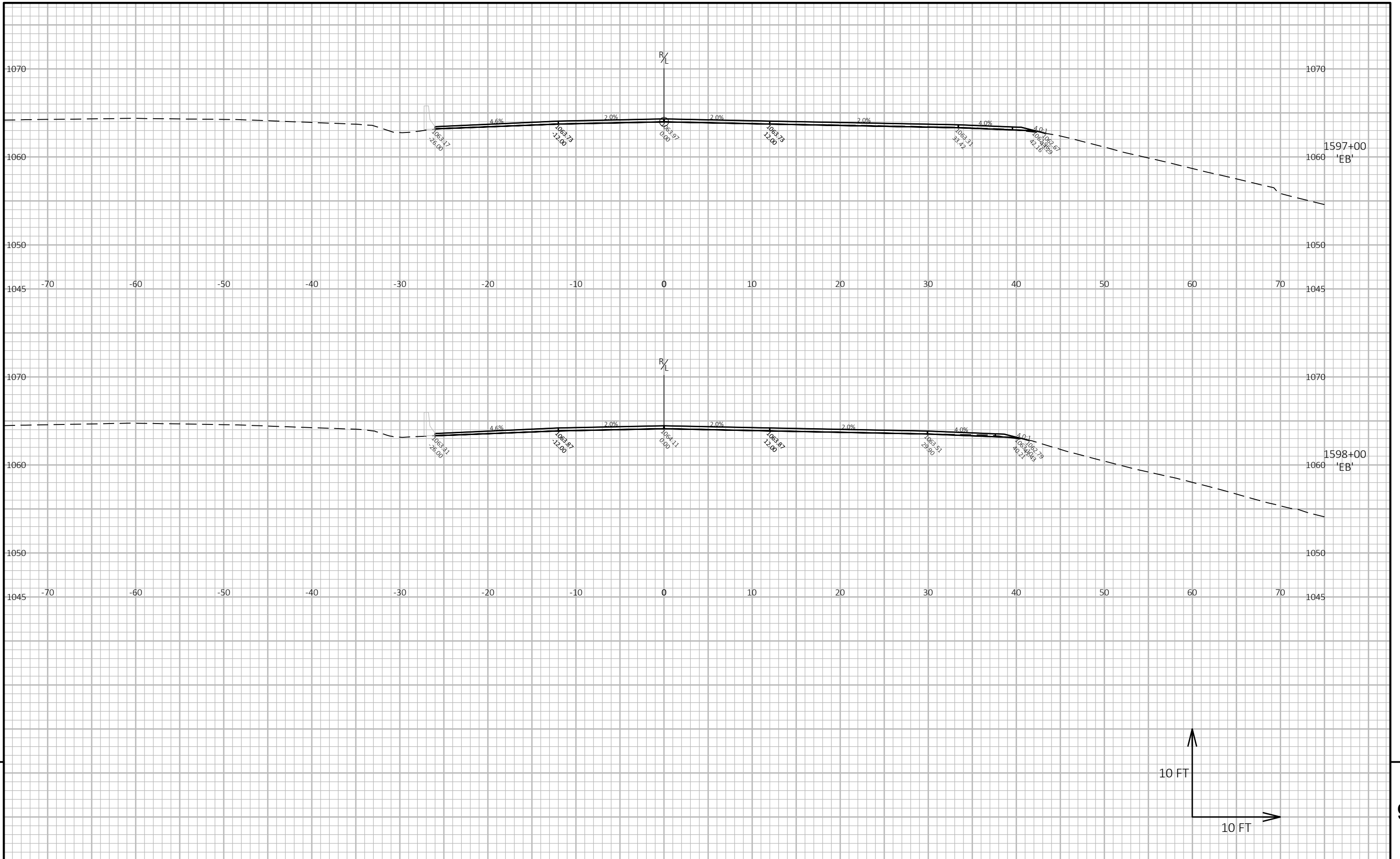
9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090201-XS.DWG PLOT DATE : 1/24/2024 11:47 AM PLOT BY : DEGNER, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

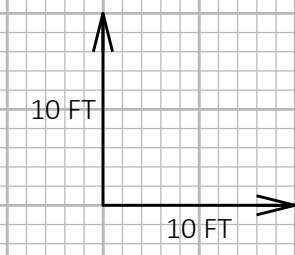
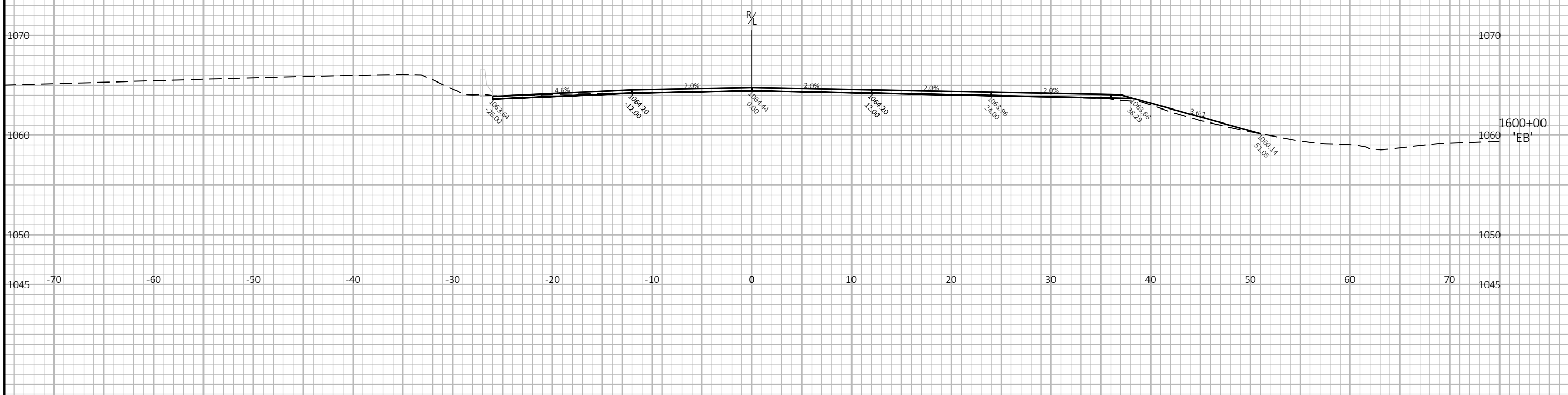
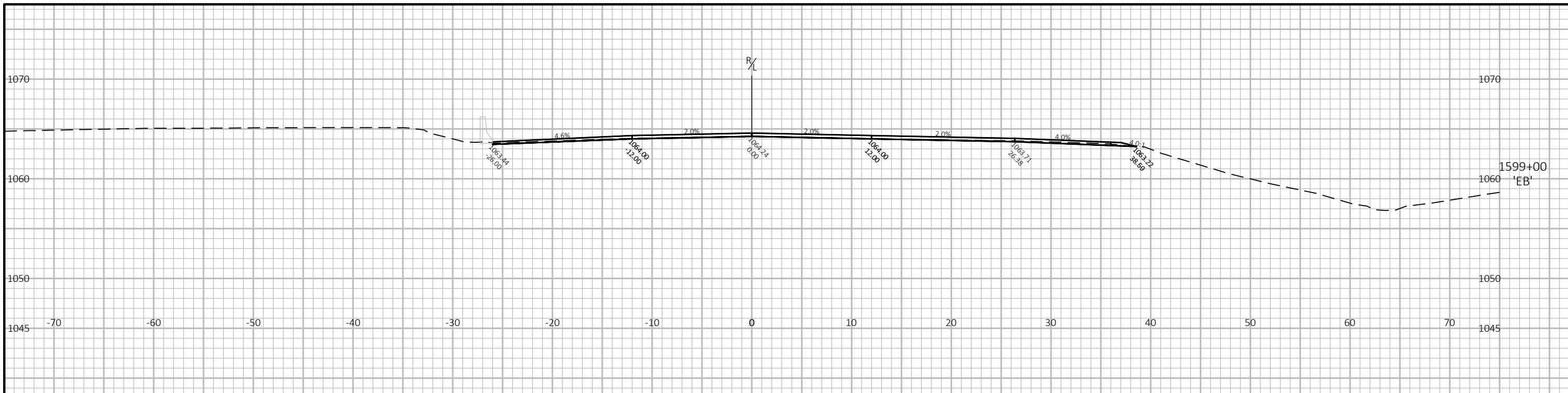
LAYOUT NAME - 090201-xs(11)



9

9

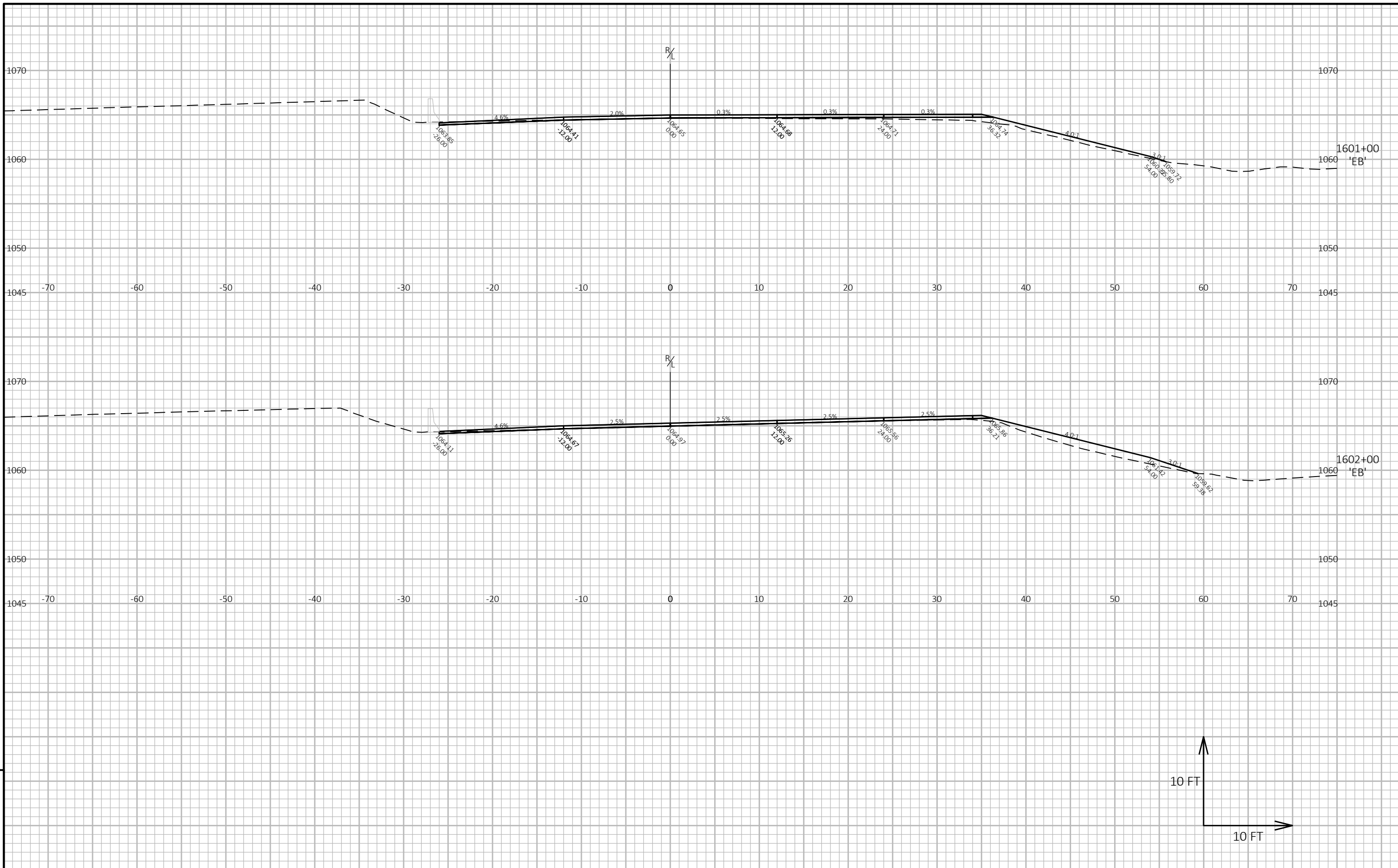
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

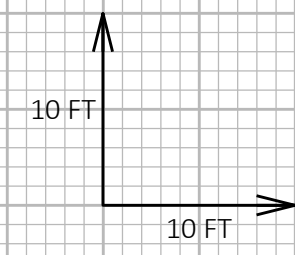
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

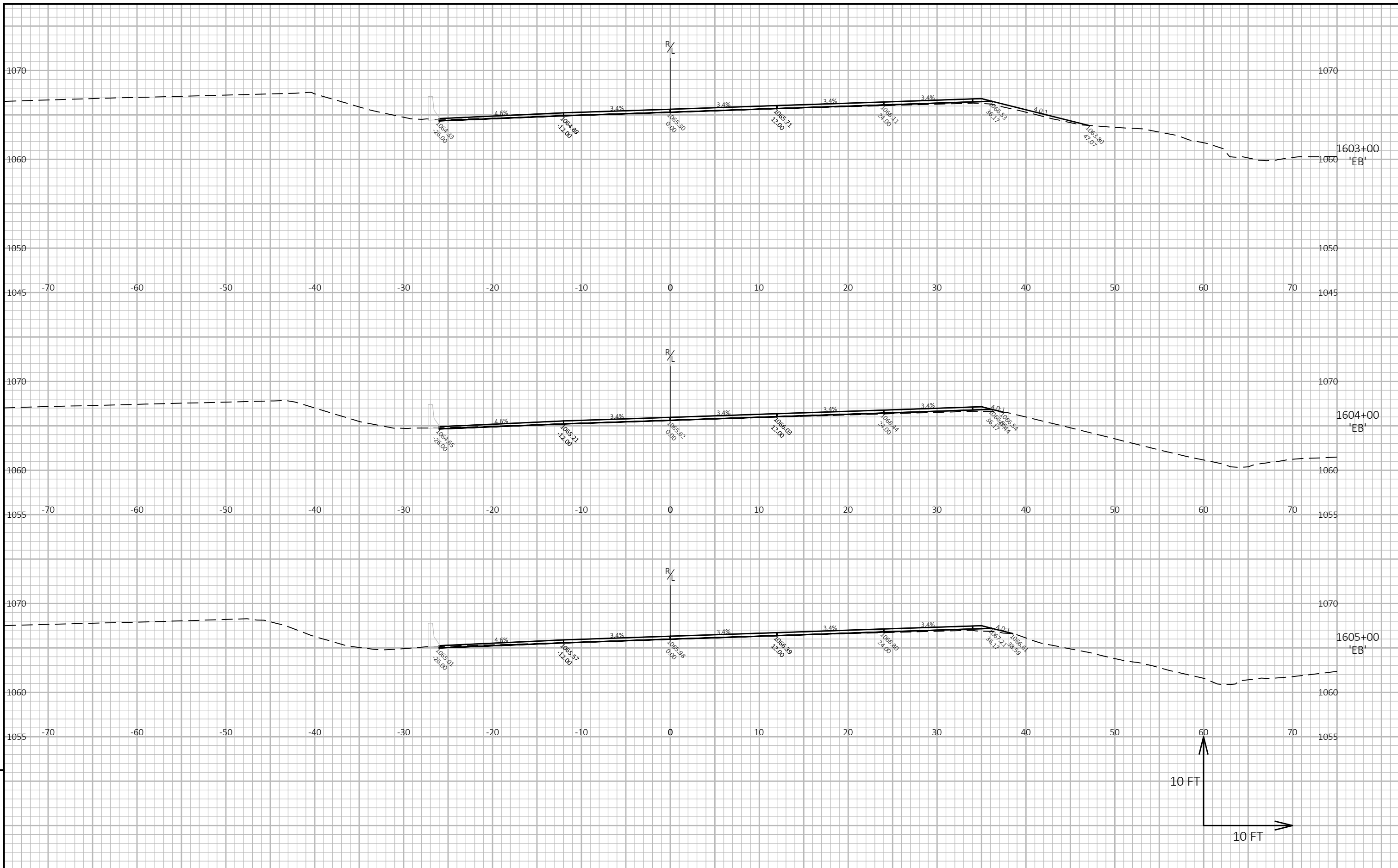


9

9



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

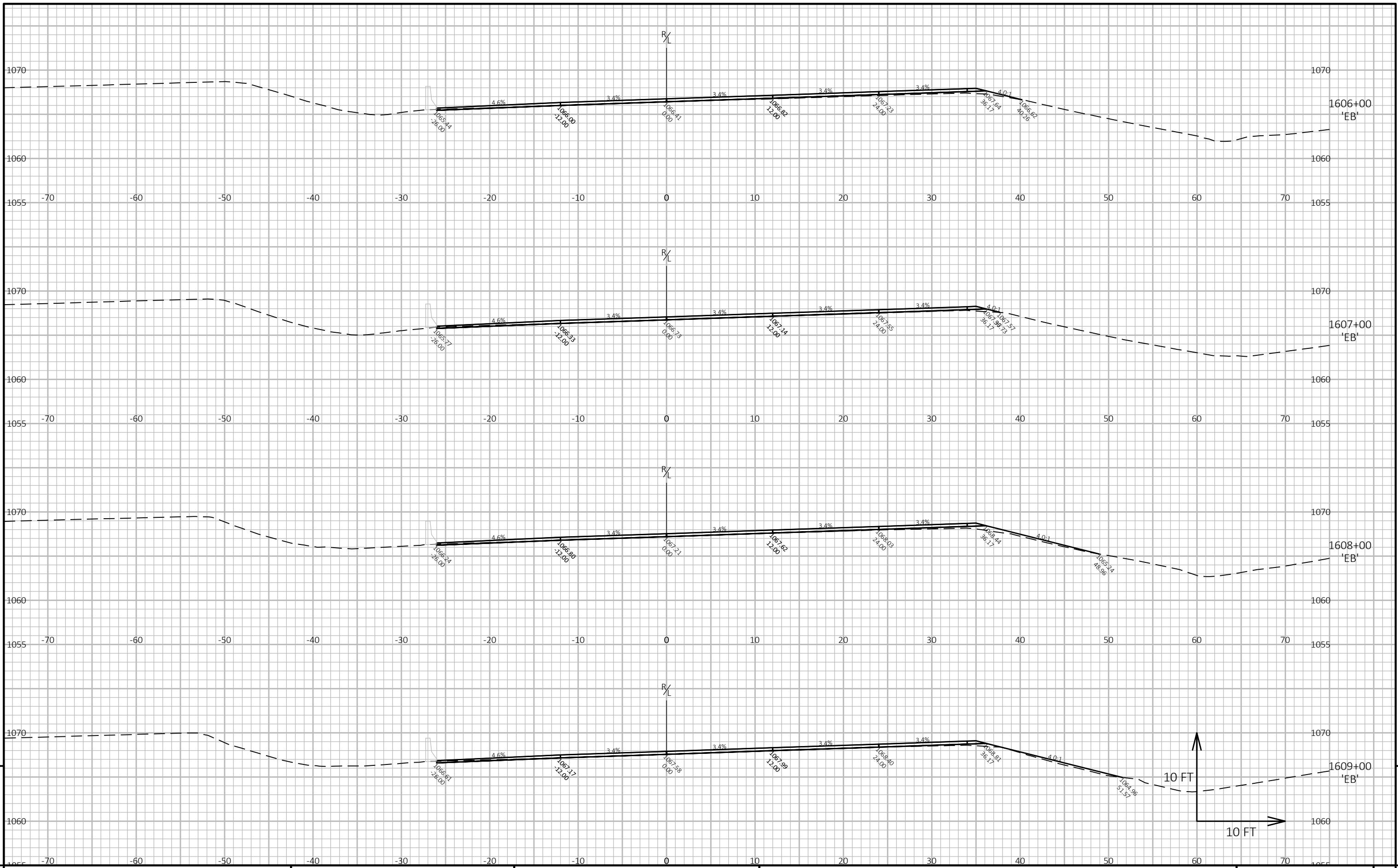


9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHETSPLAN\090202-XS.DWG PLOT DATE : 8/21/2023 12:51 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

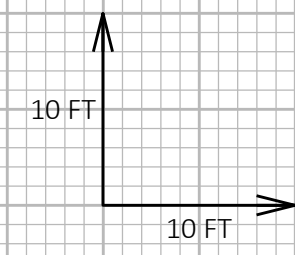
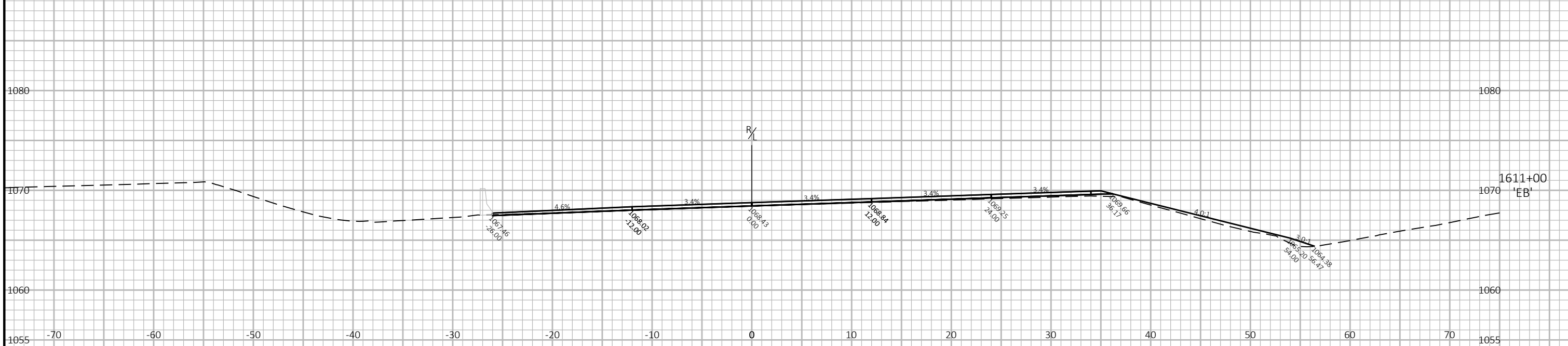
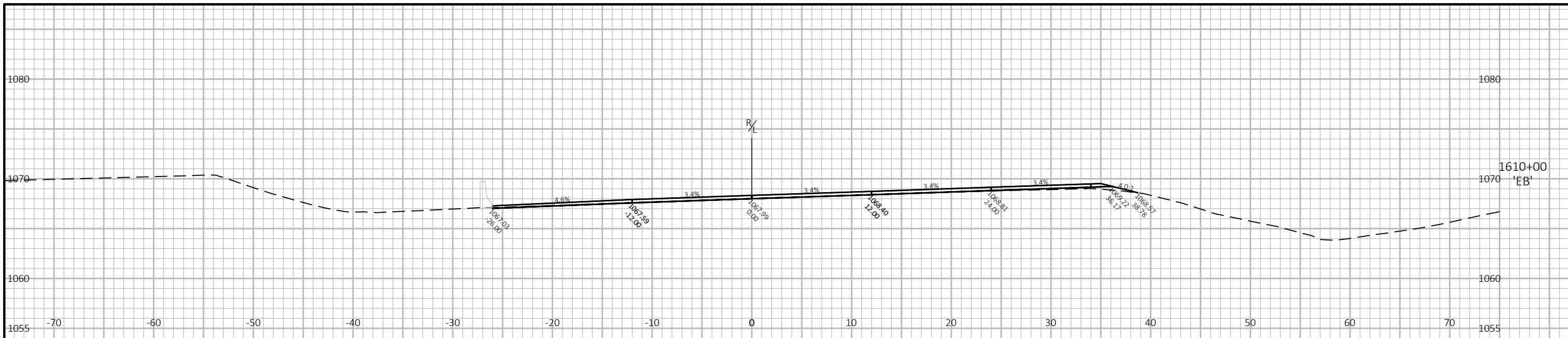


9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

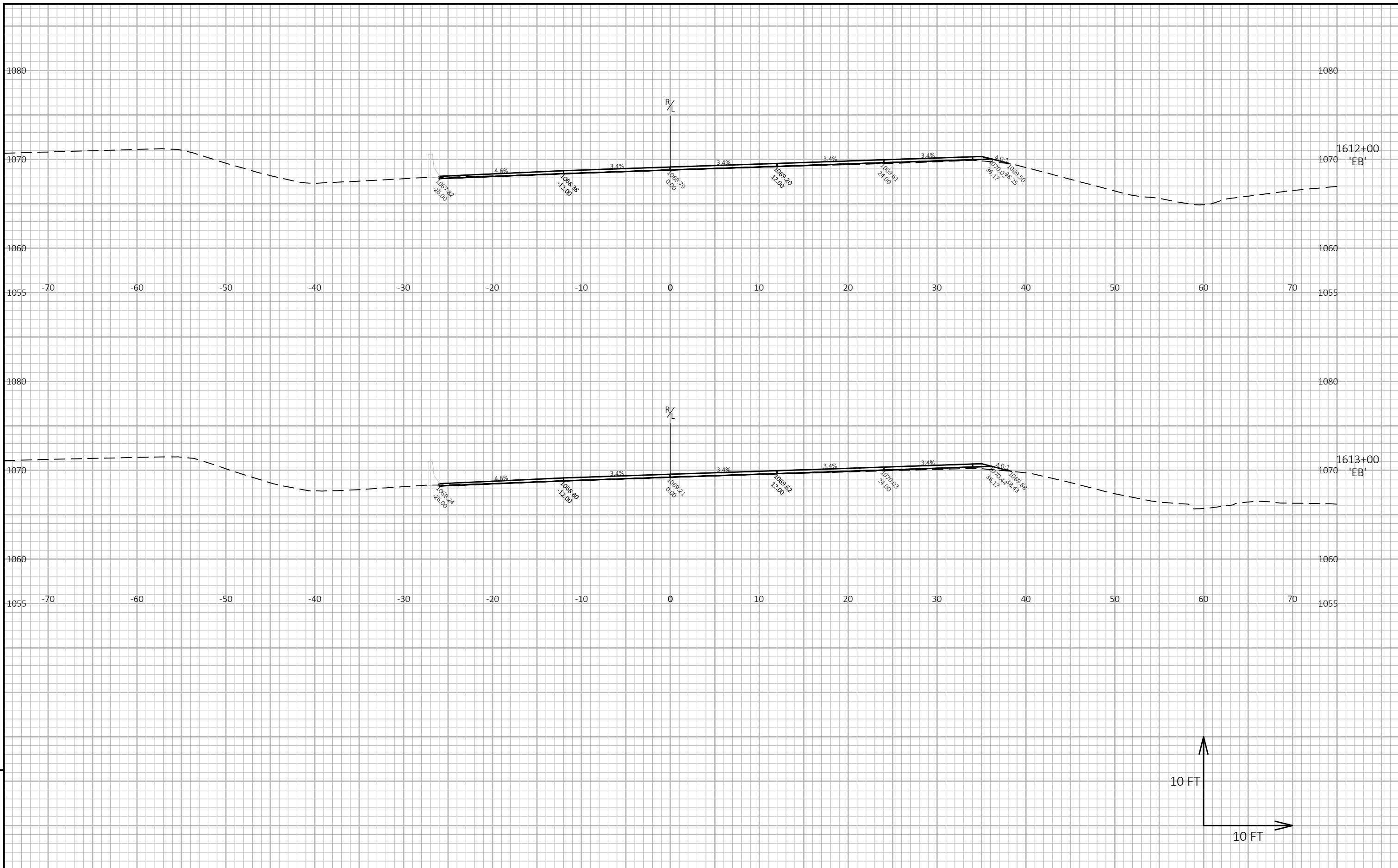
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHETSPLAN\090202-XS.DWG PLOT DATE : 8/21/2023 12:51 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



9

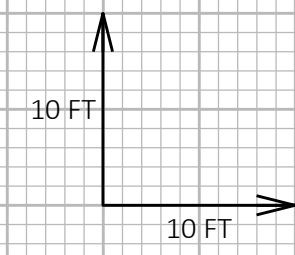
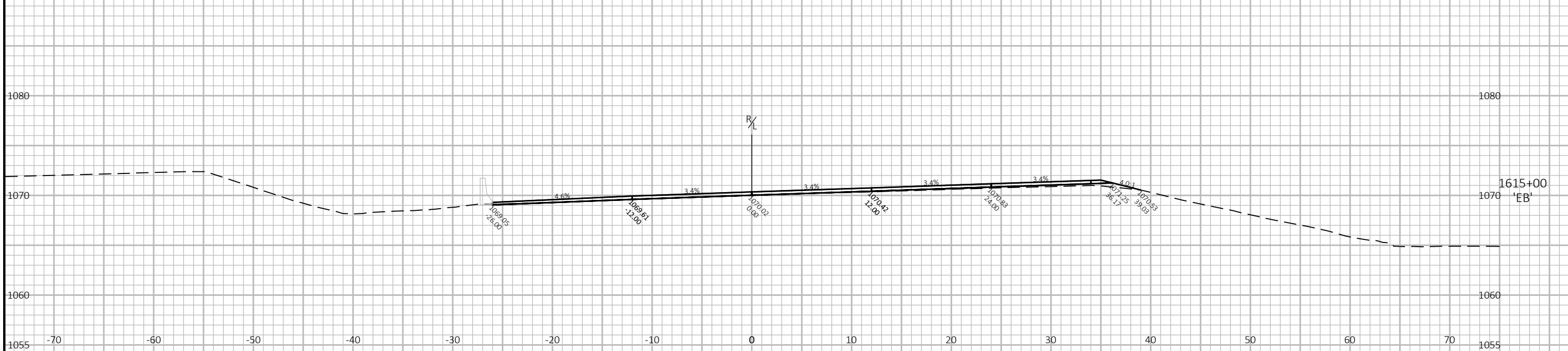
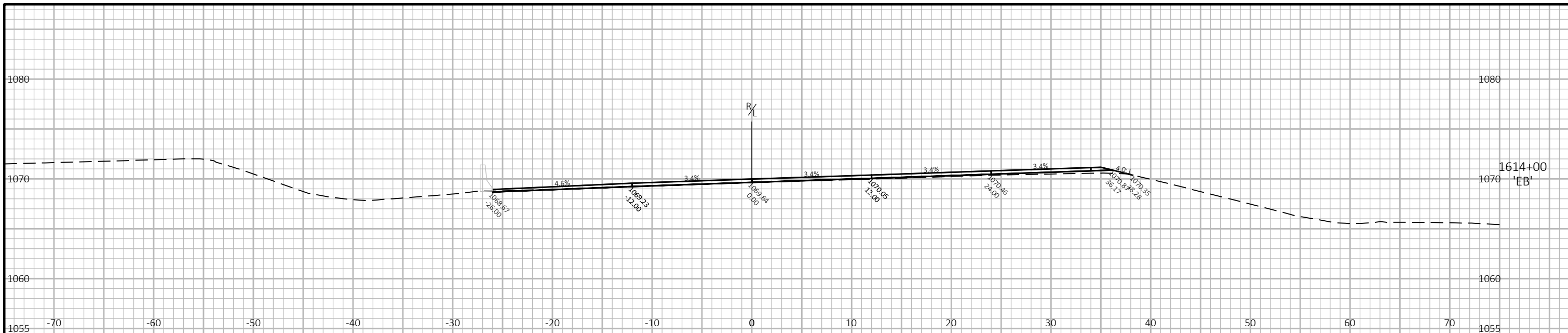
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

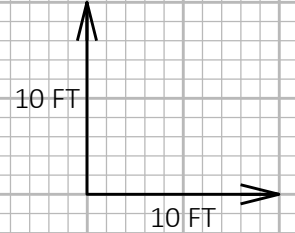
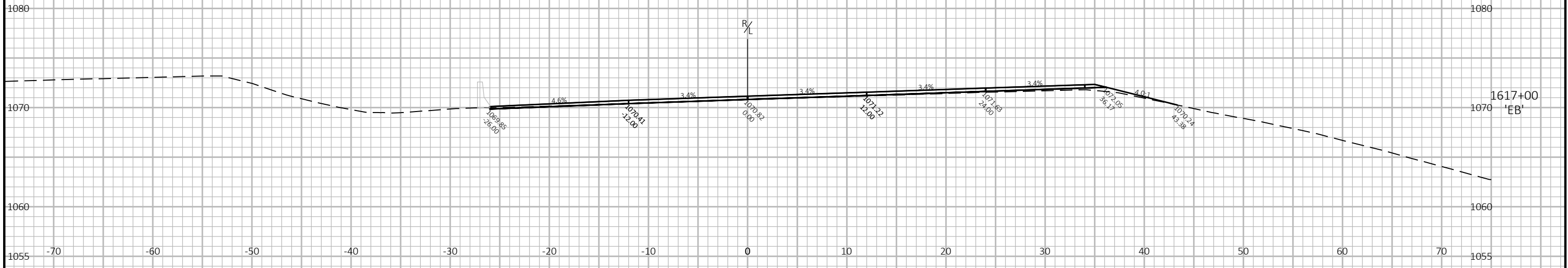
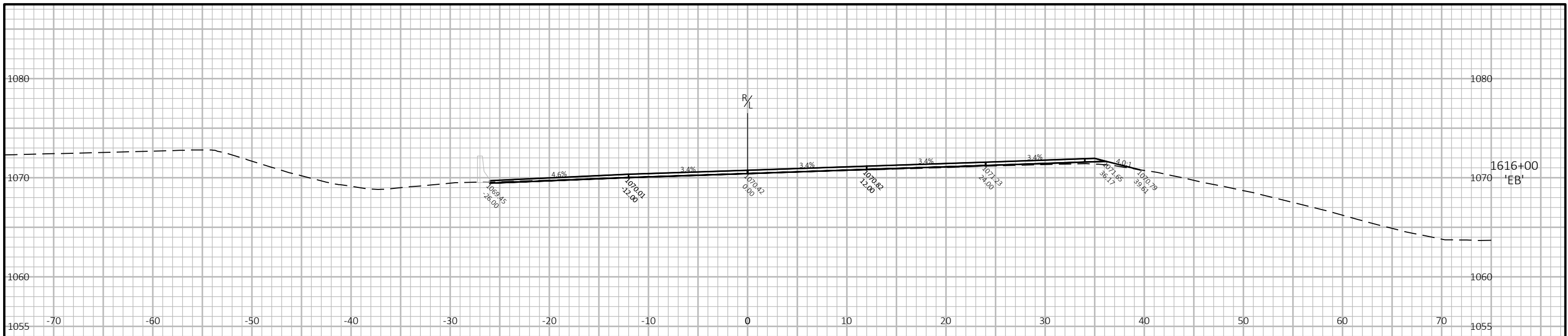
9



9

9

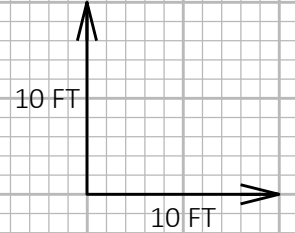
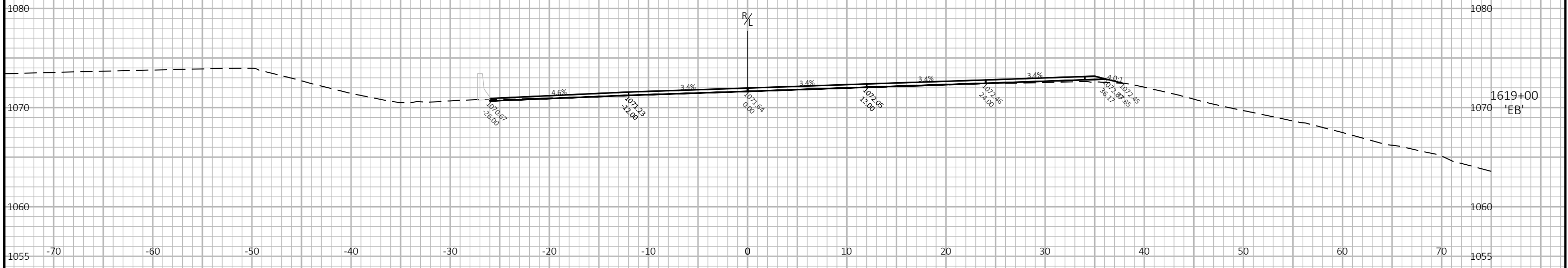
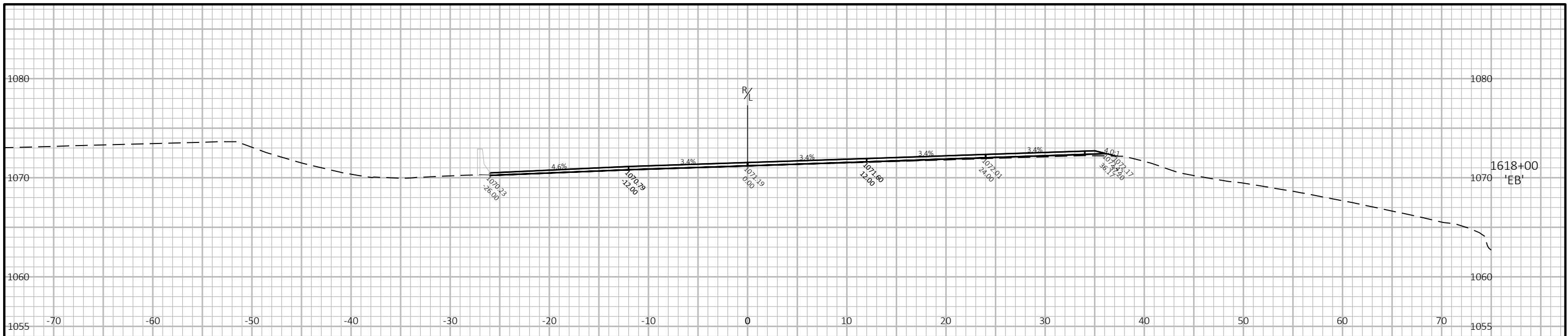
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

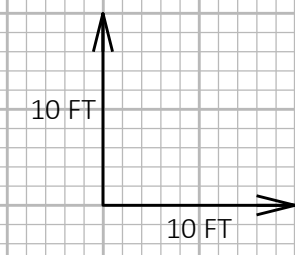
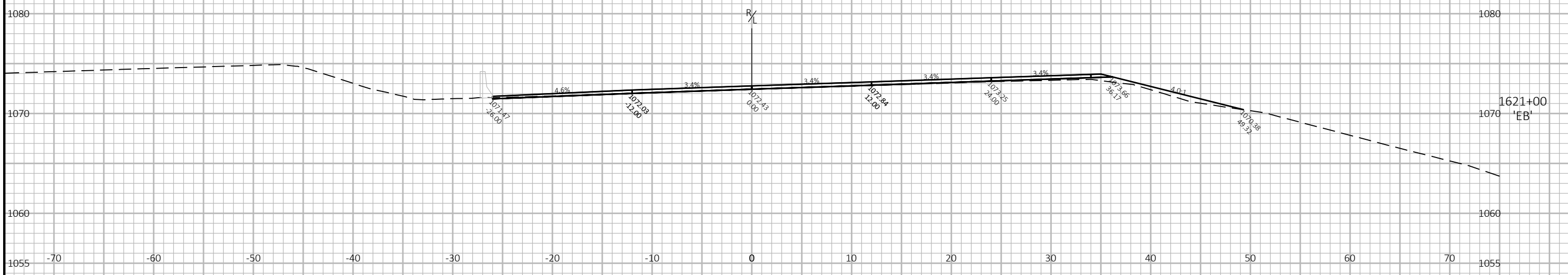
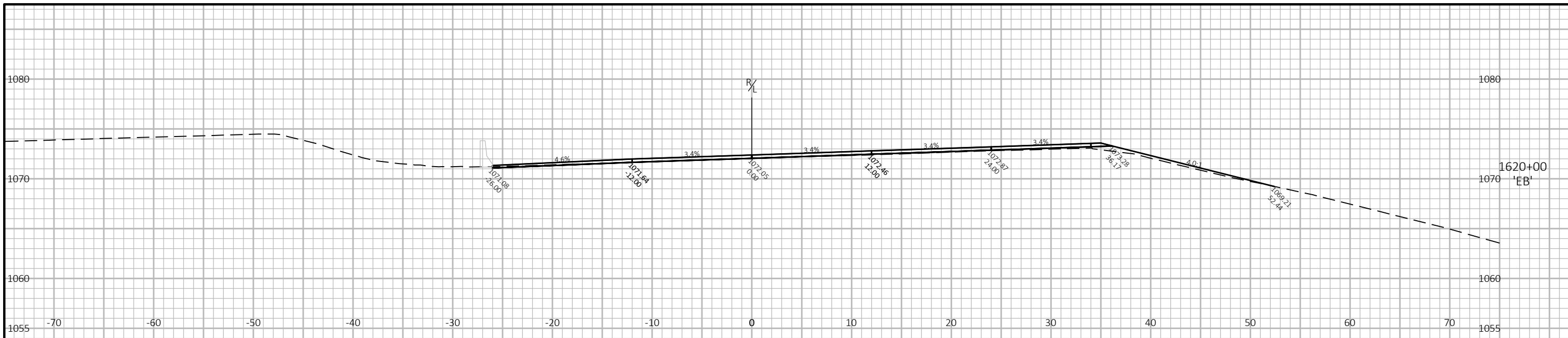
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

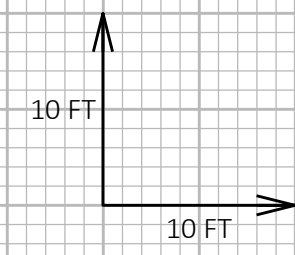
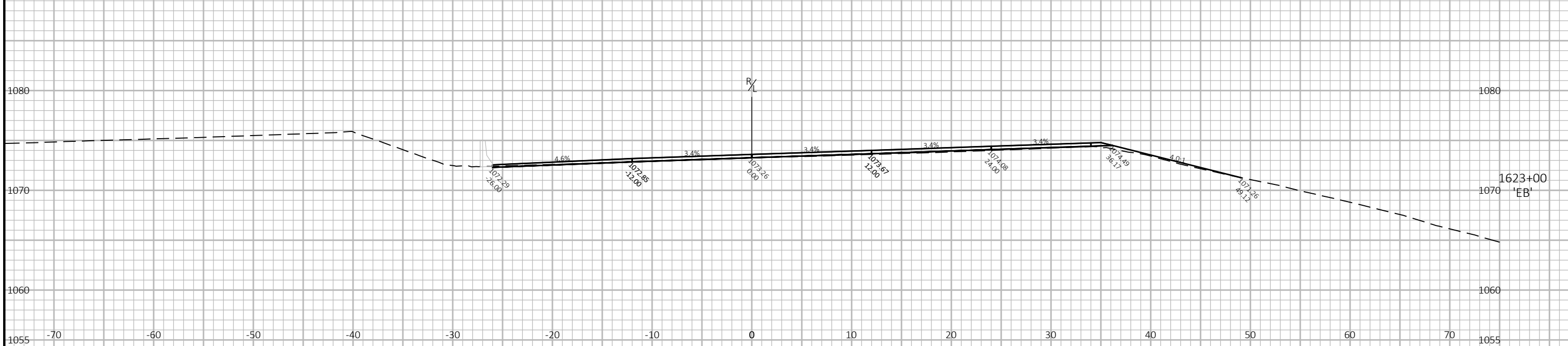
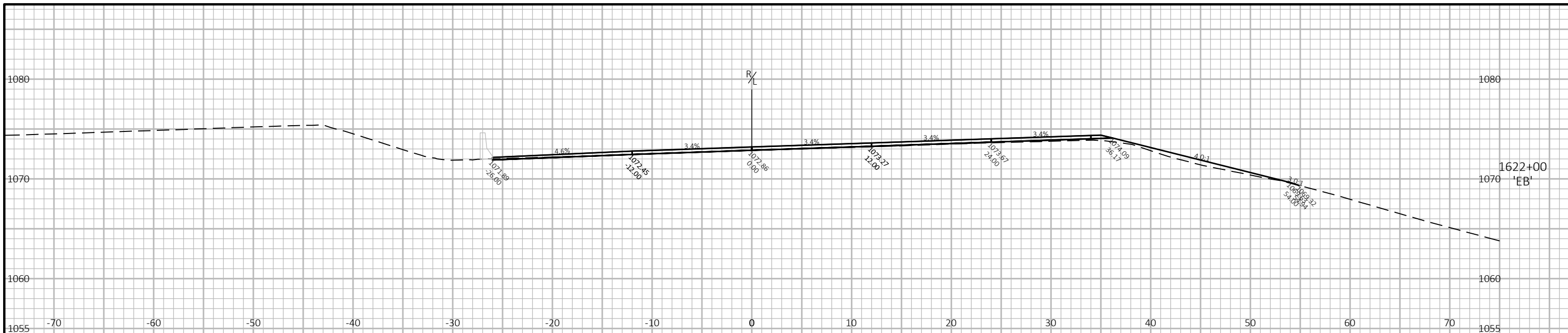
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

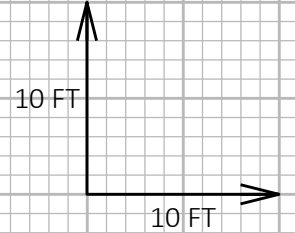
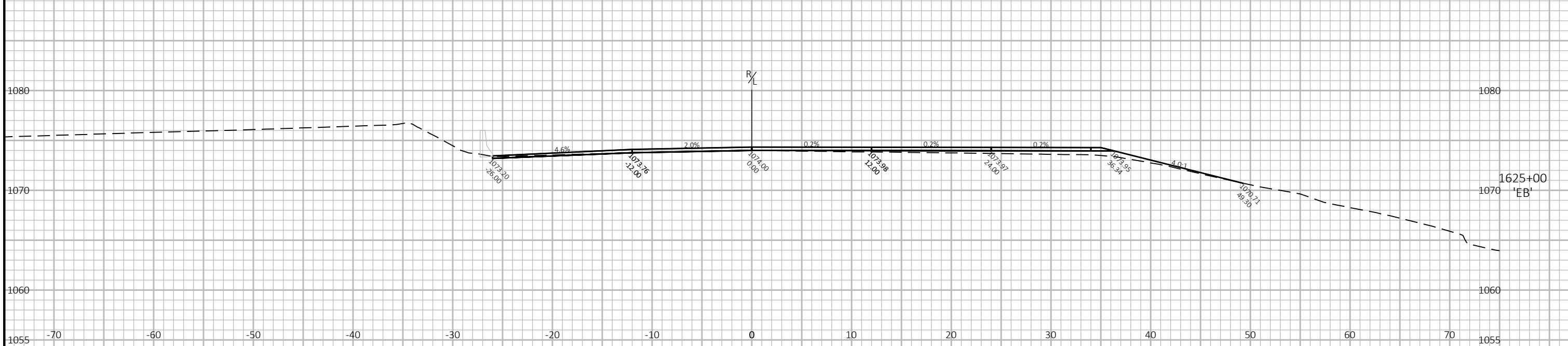
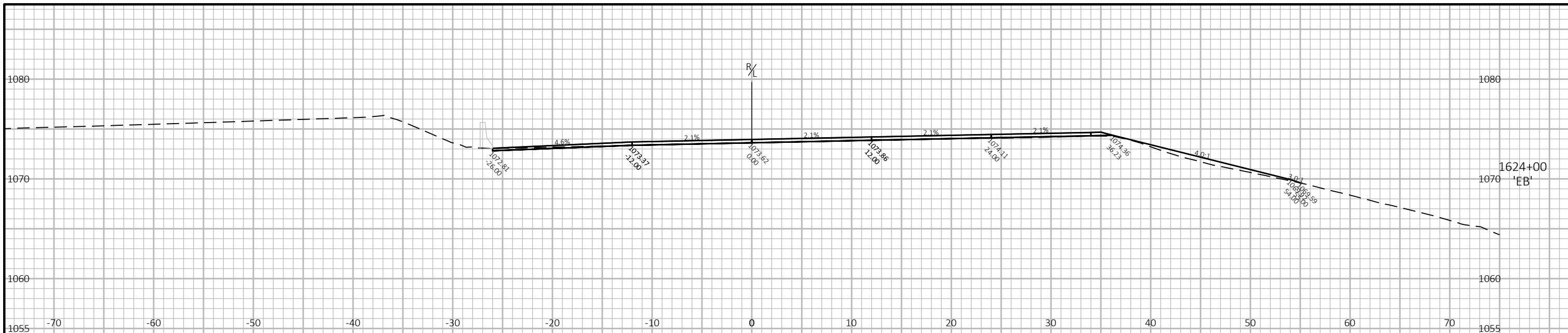
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

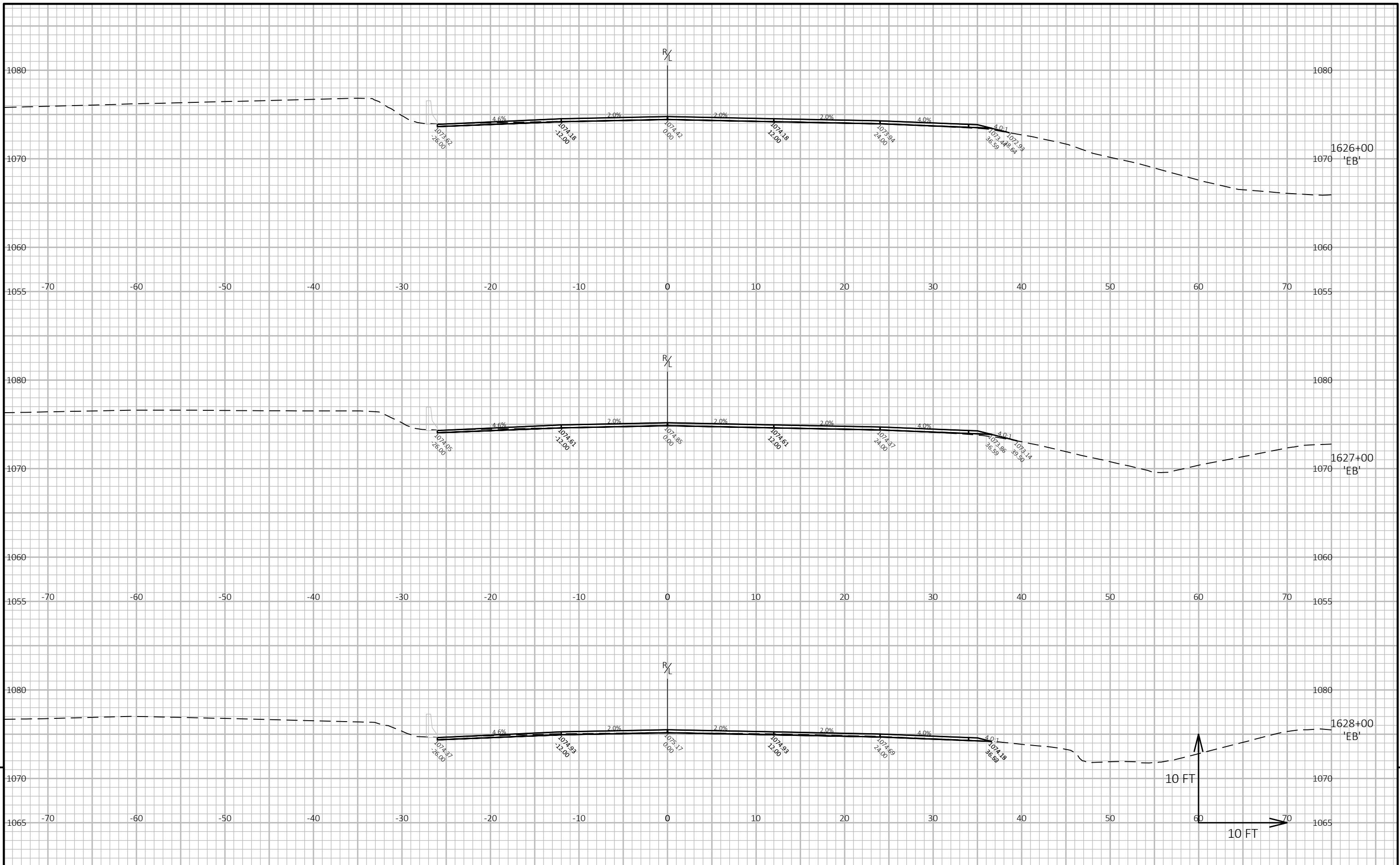
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

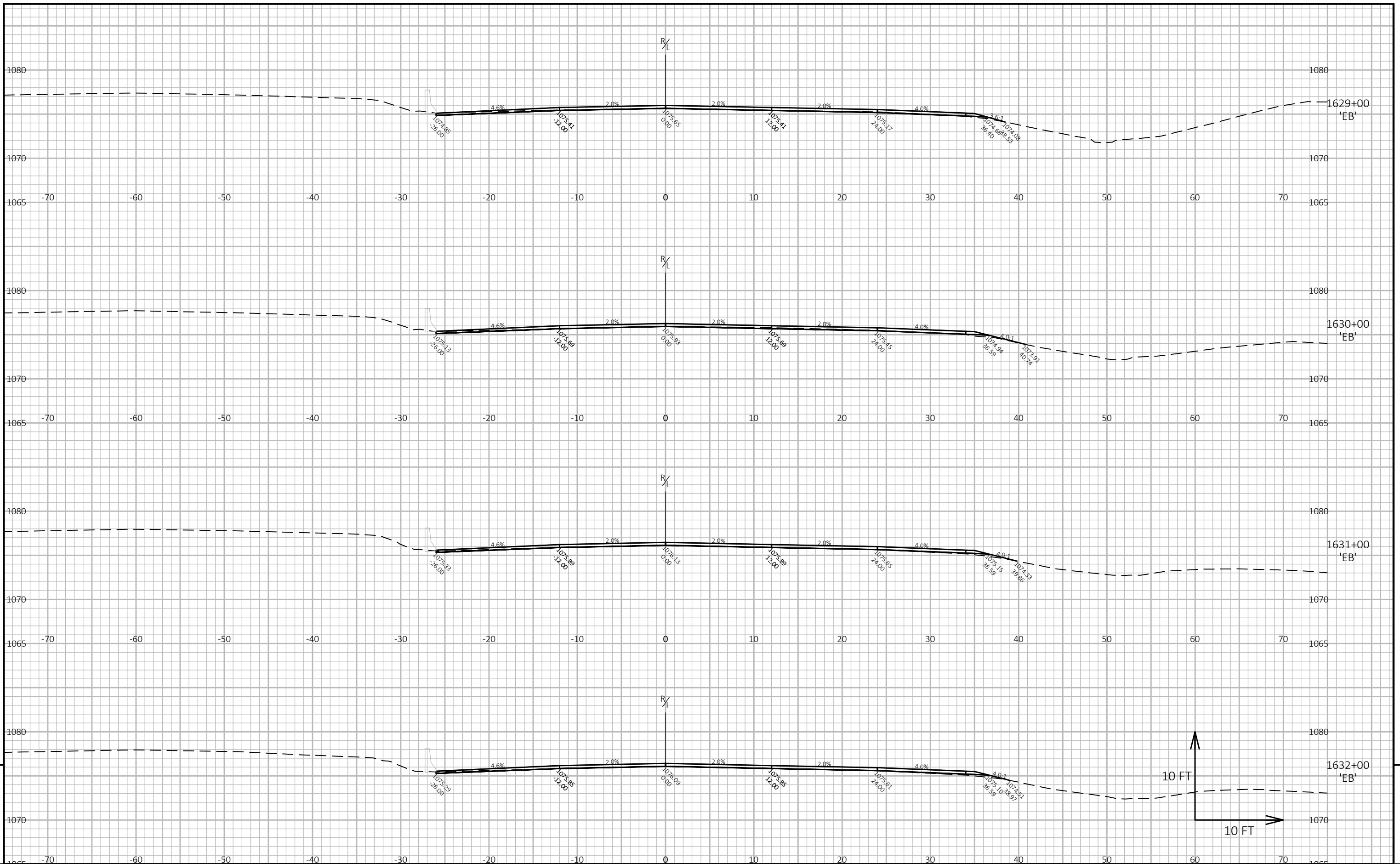
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

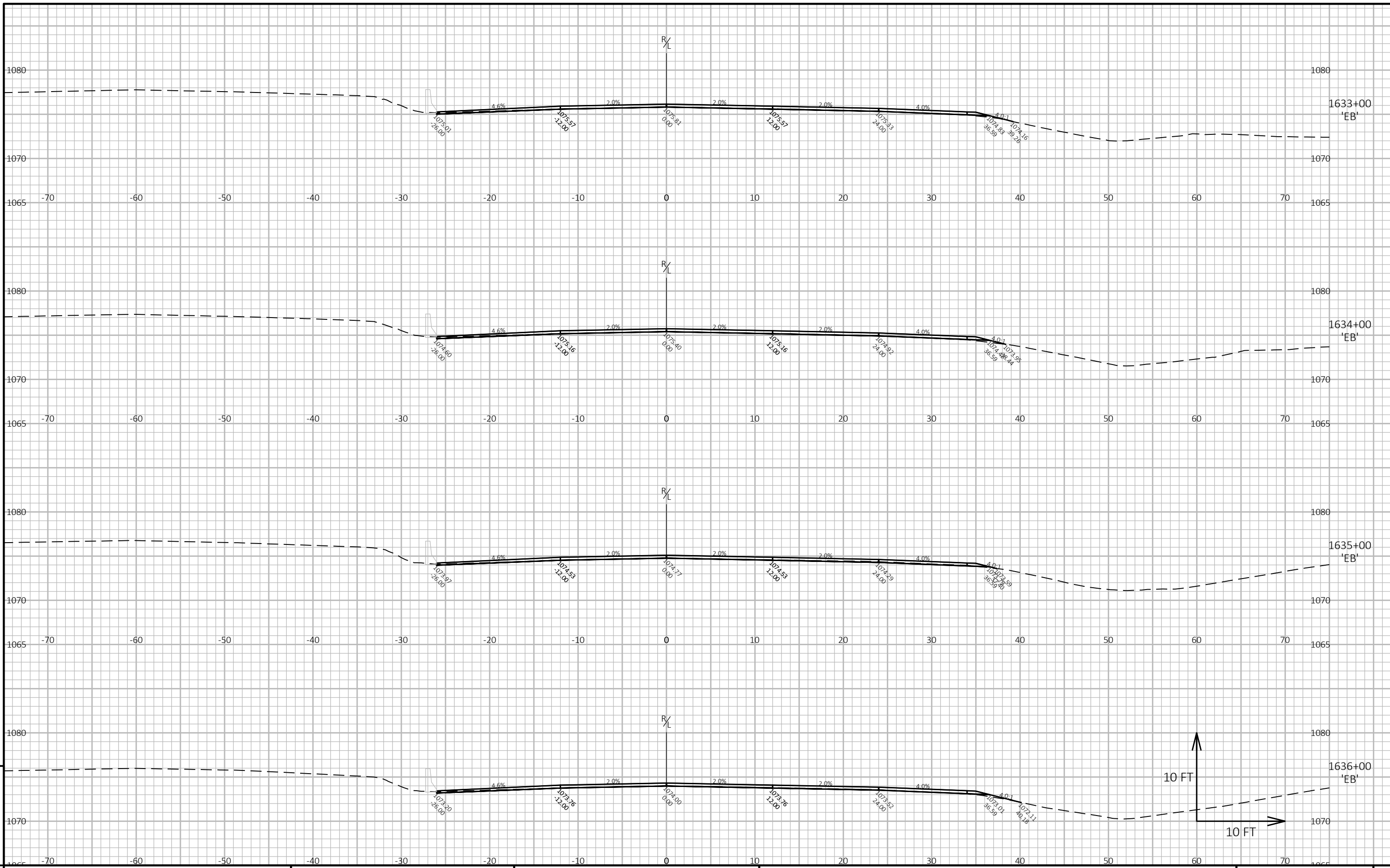
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

E



PROJECT NO: 1011-00-82

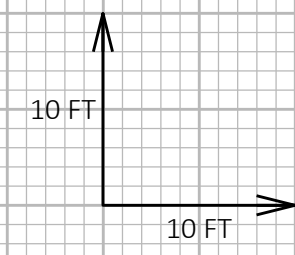
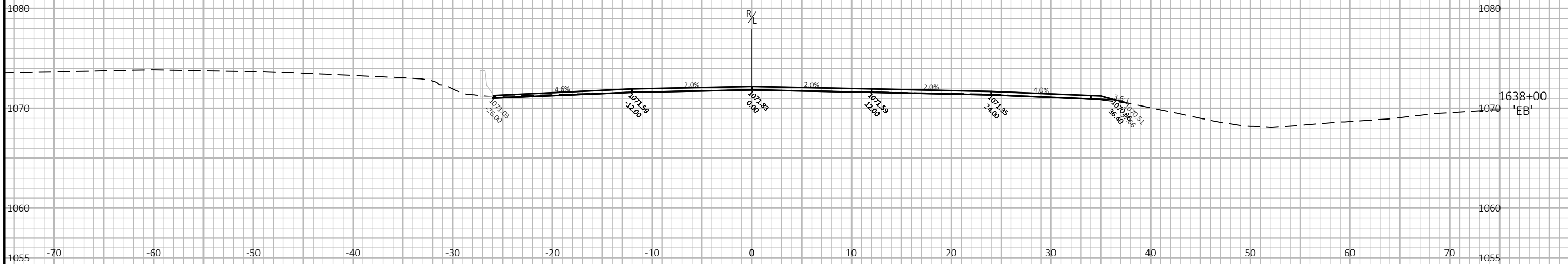
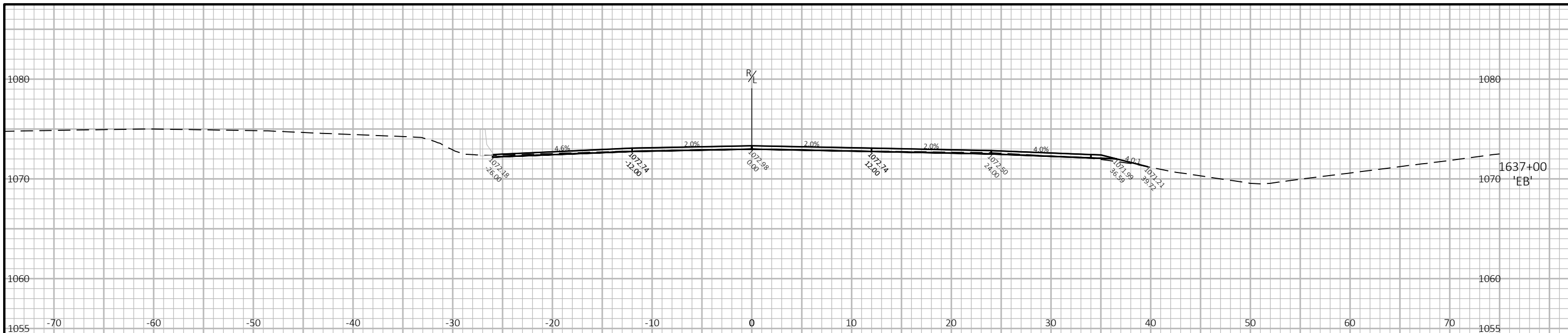
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

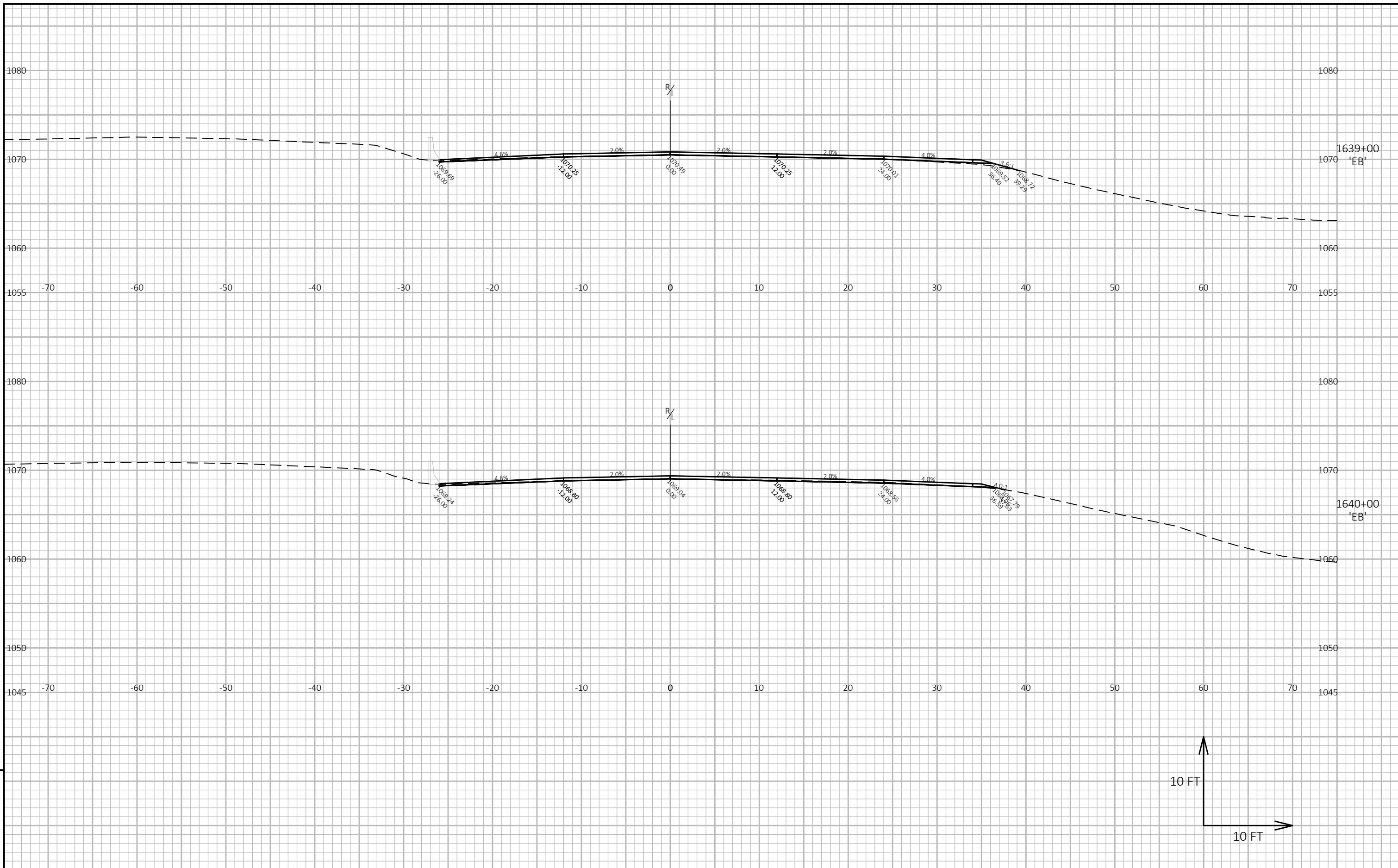
E



9

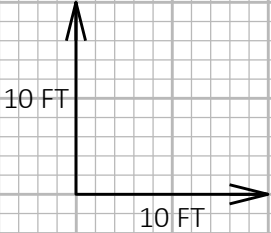
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



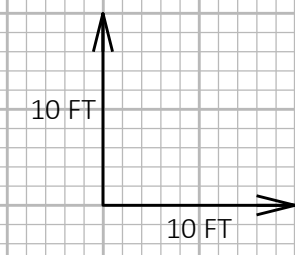
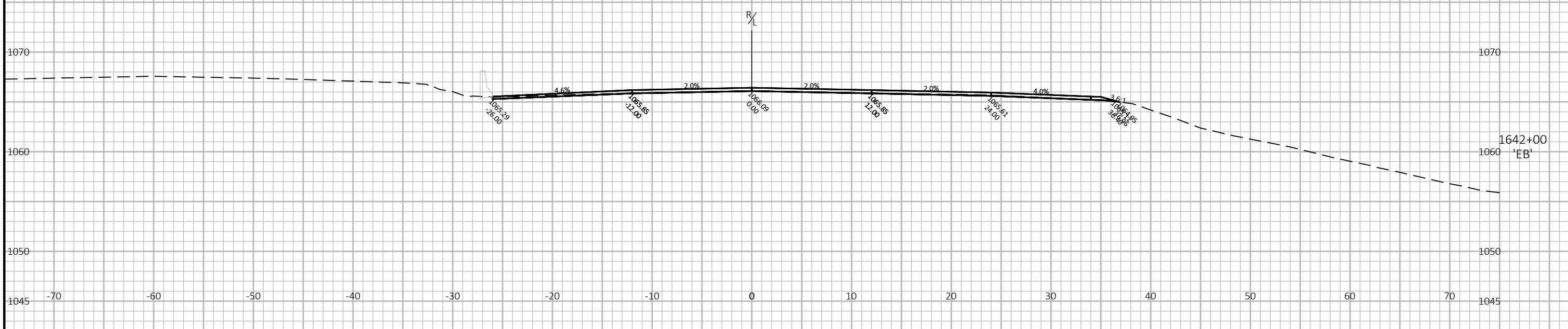
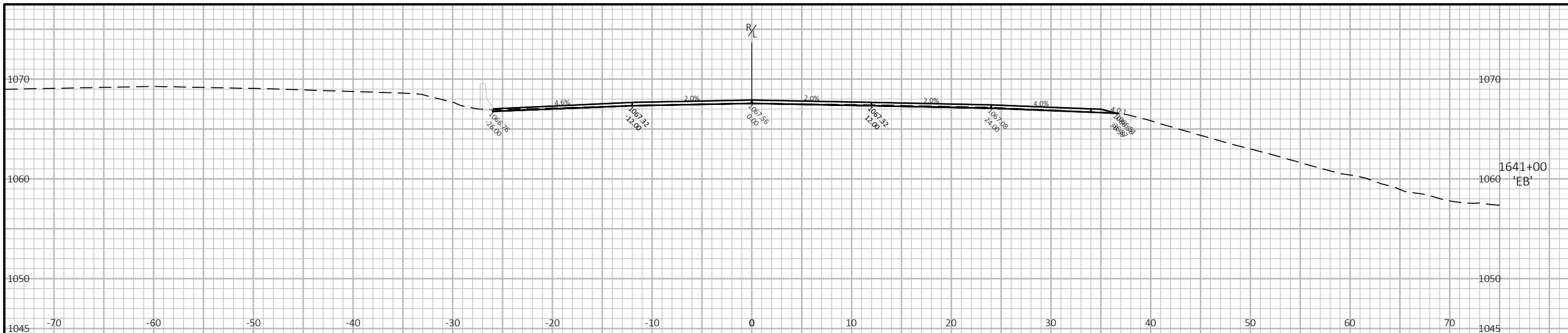
9

9



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

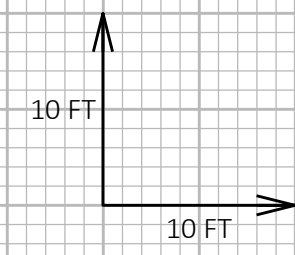
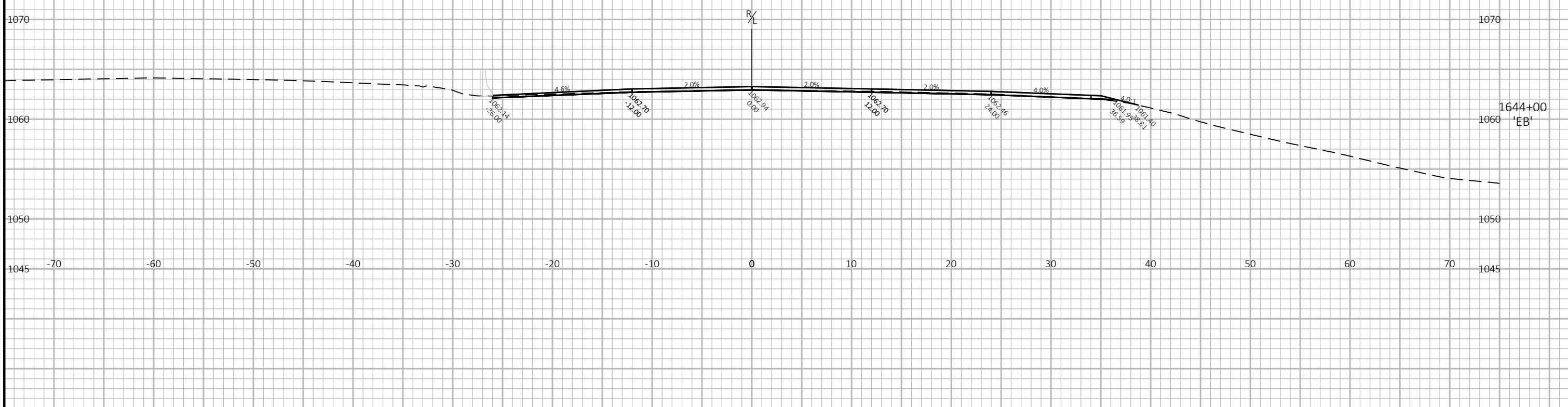
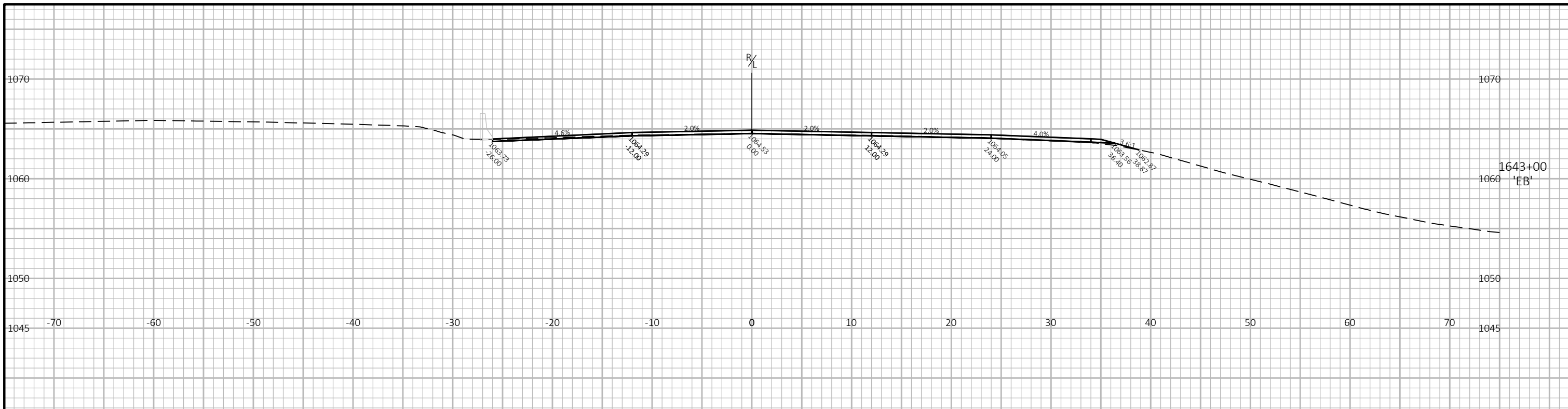
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090203-XS.DWG
 PLOT DATE : 8/21/2023 12:58 PM
 PLOT BY : DAY, JOHN
 PLOT NAME :
 PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
 WISDOT/CADD SHEET 49



9

9

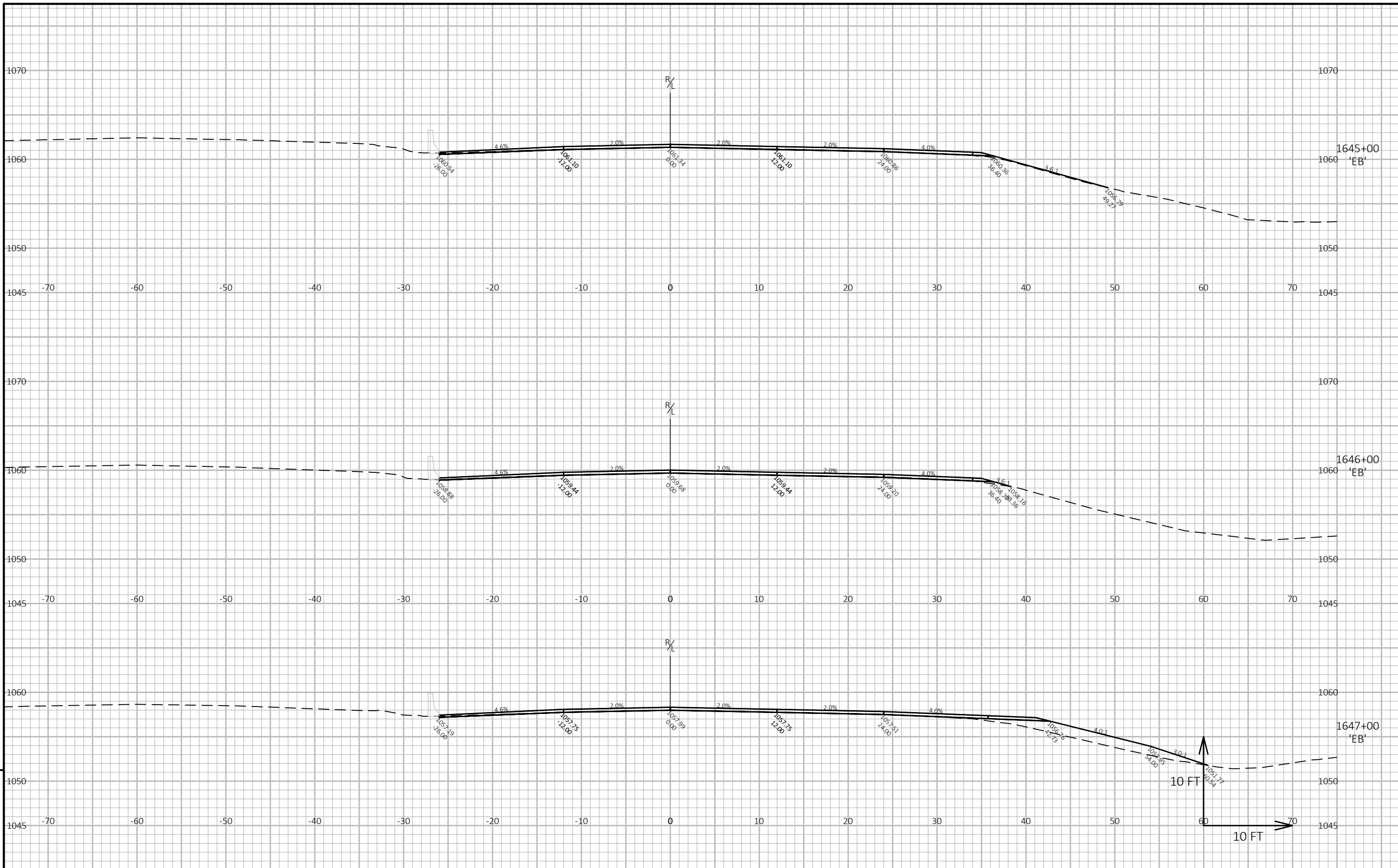
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

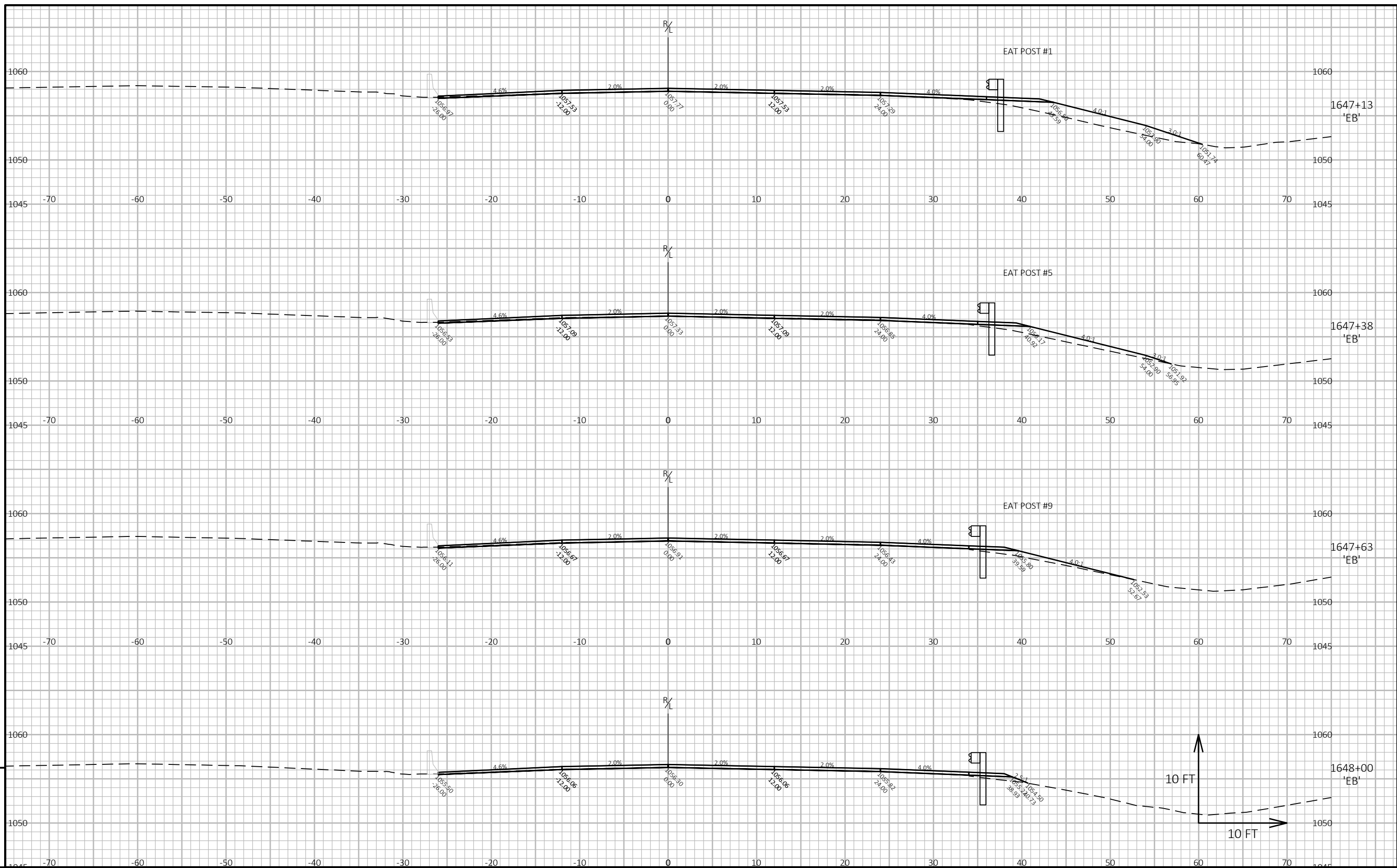
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

E



PROJECT NO: 1011-00-82

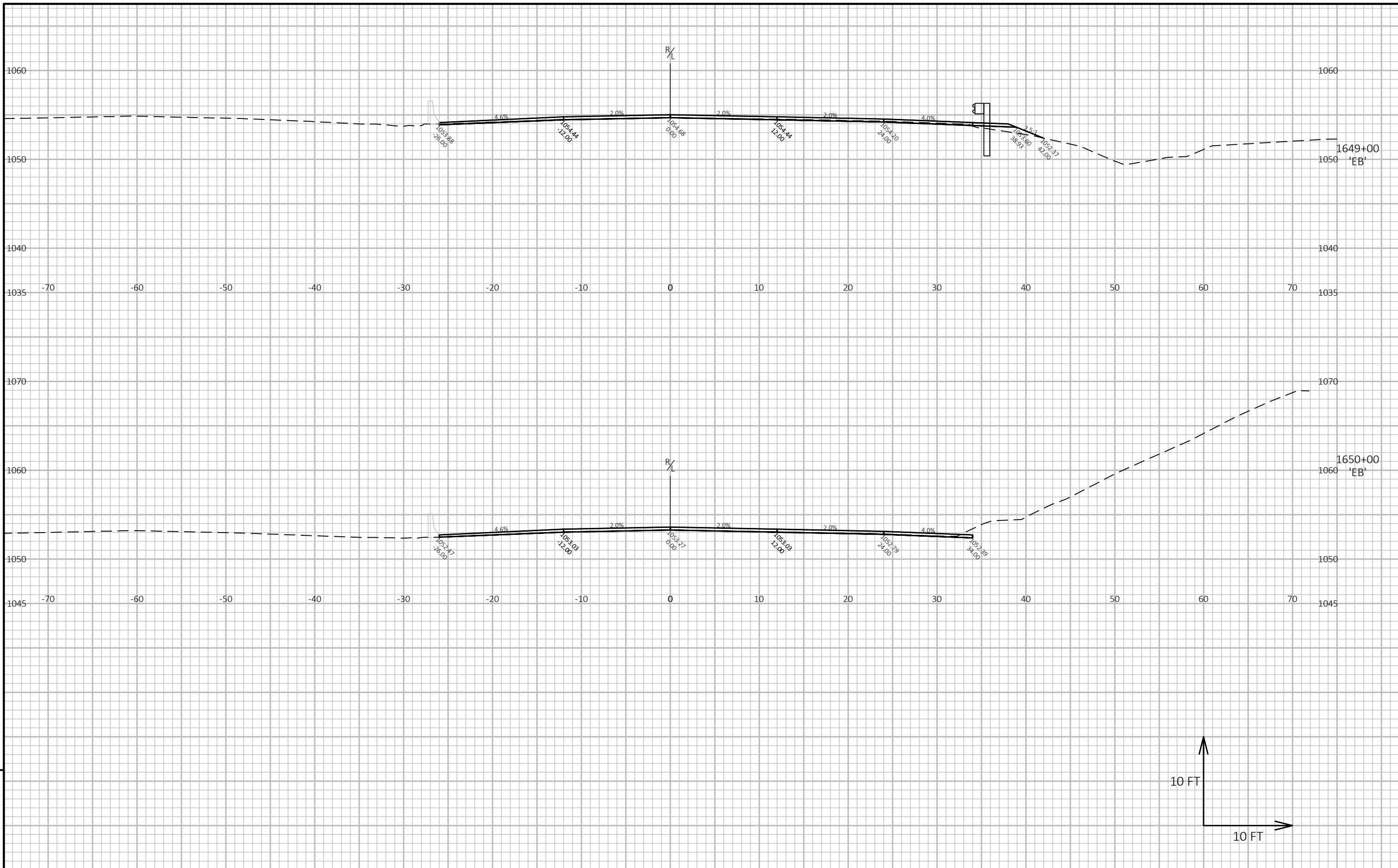
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

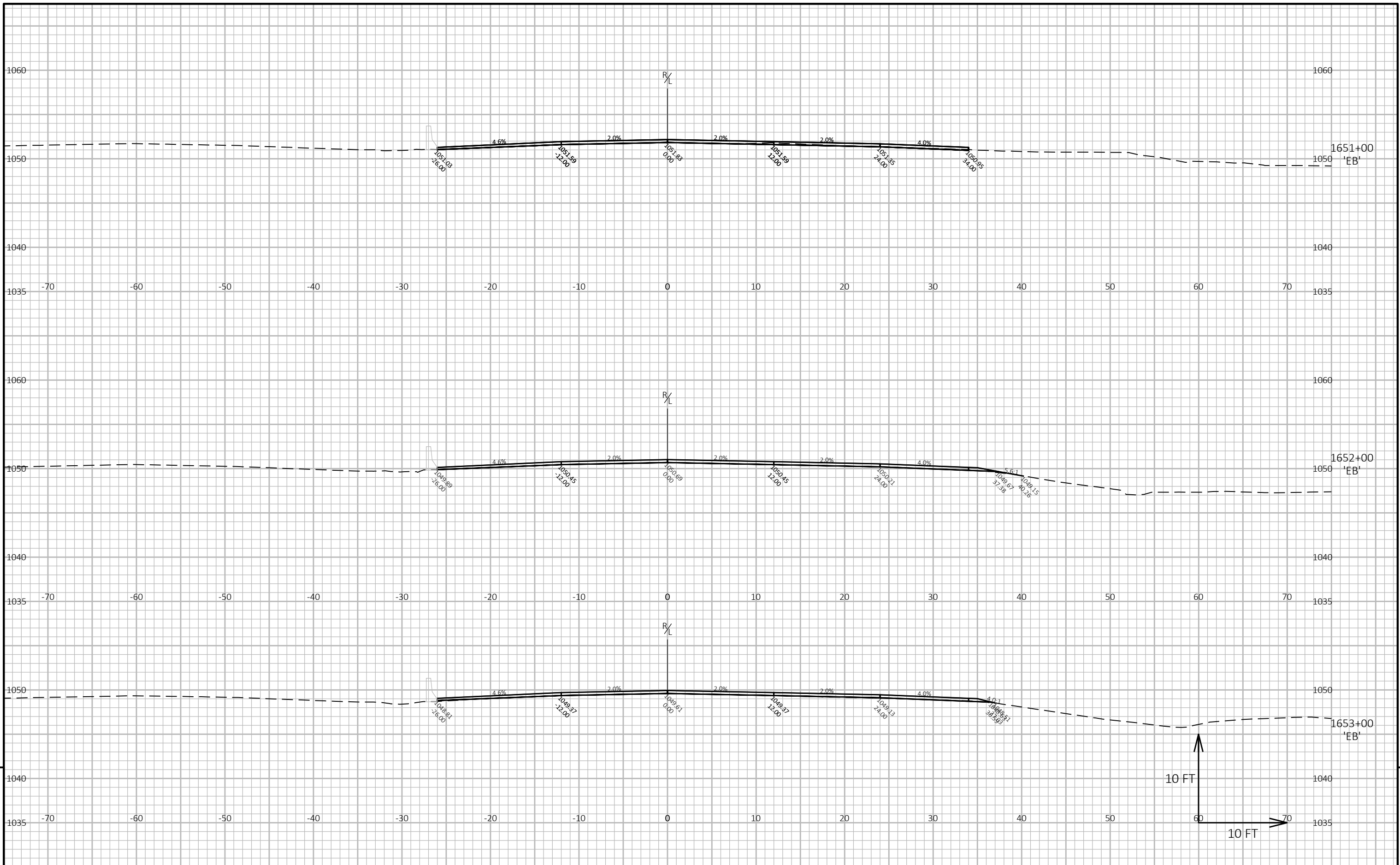
E



9

9

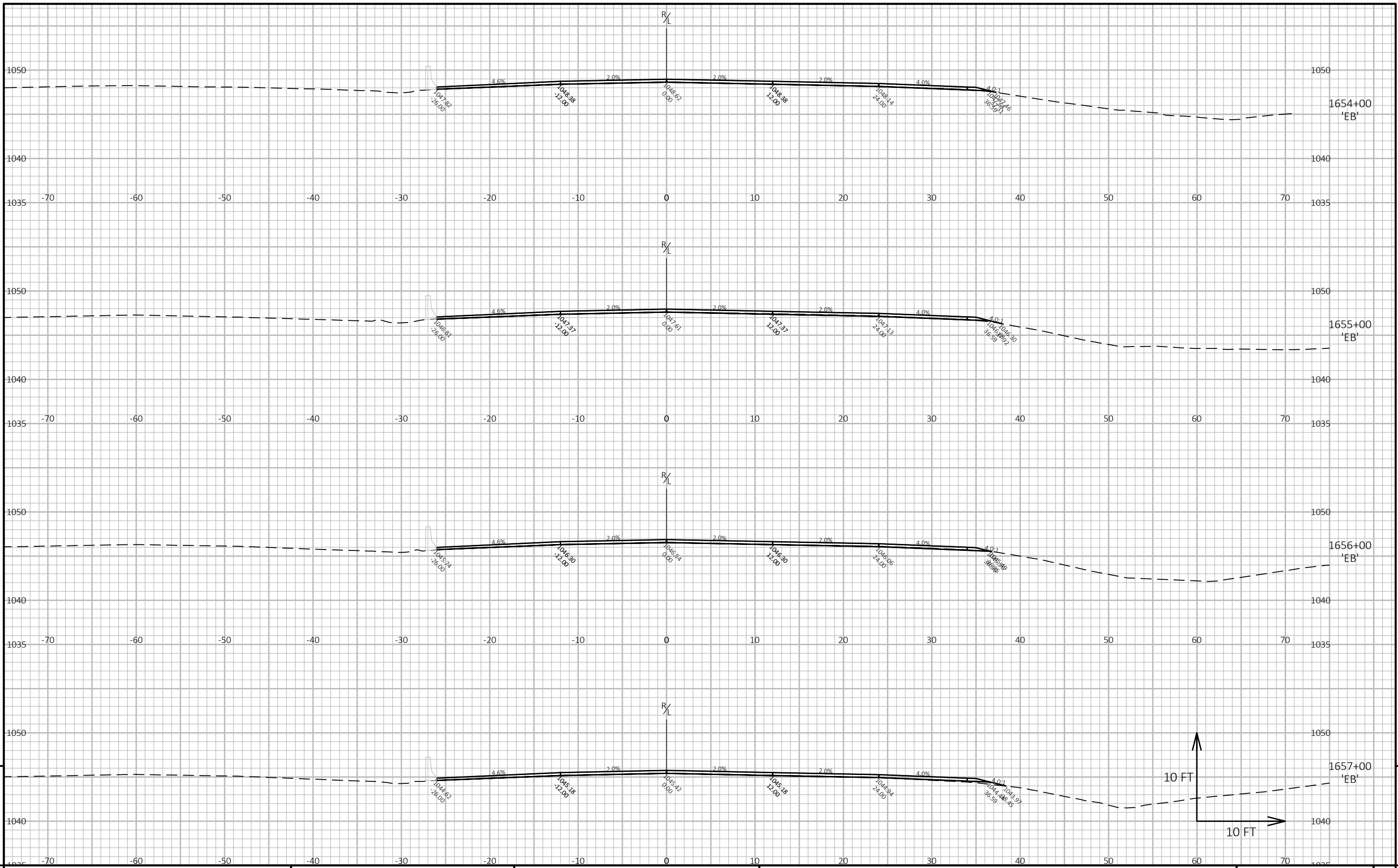
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



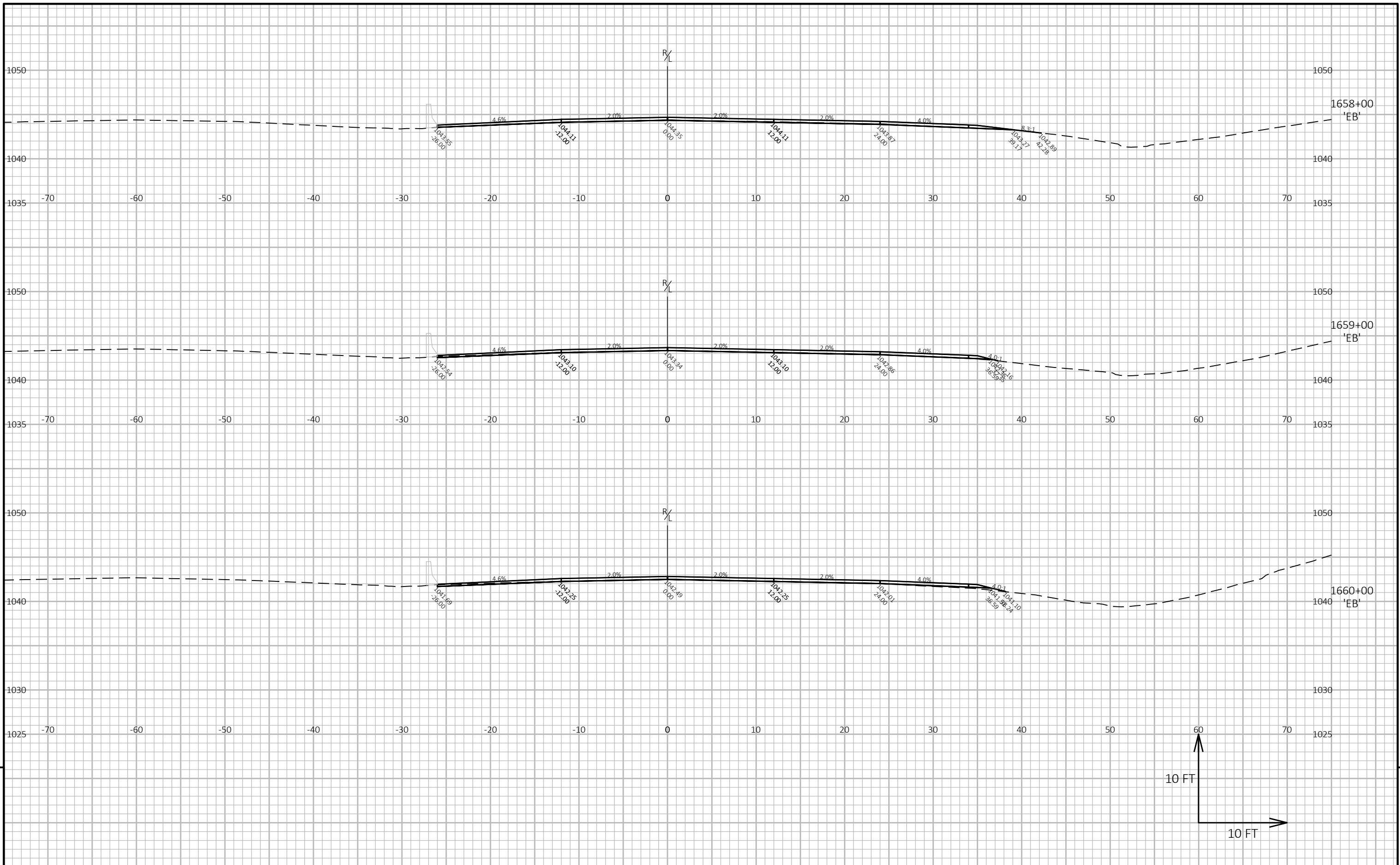
9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090203-XS.DWG PLOT DATE : 8/21/2023 12:58 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

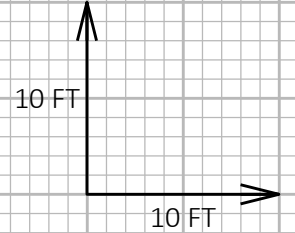
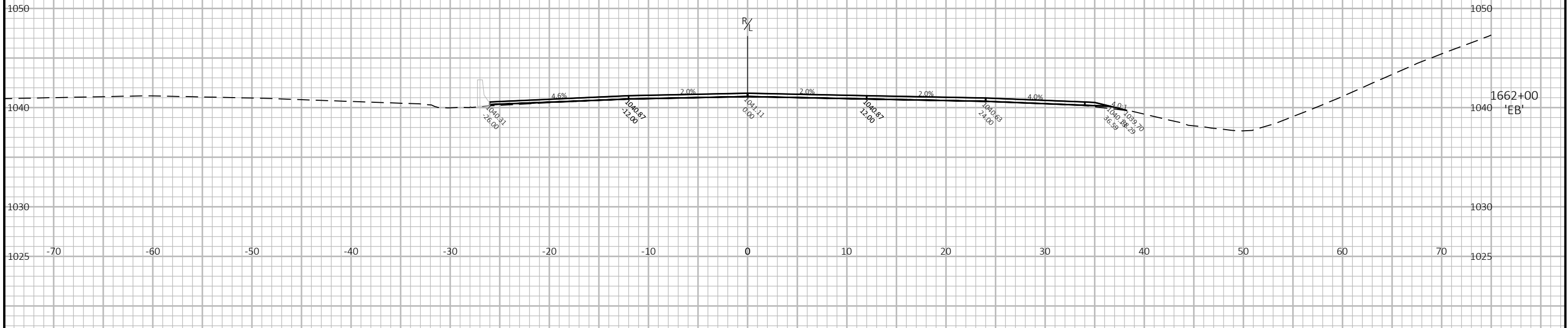
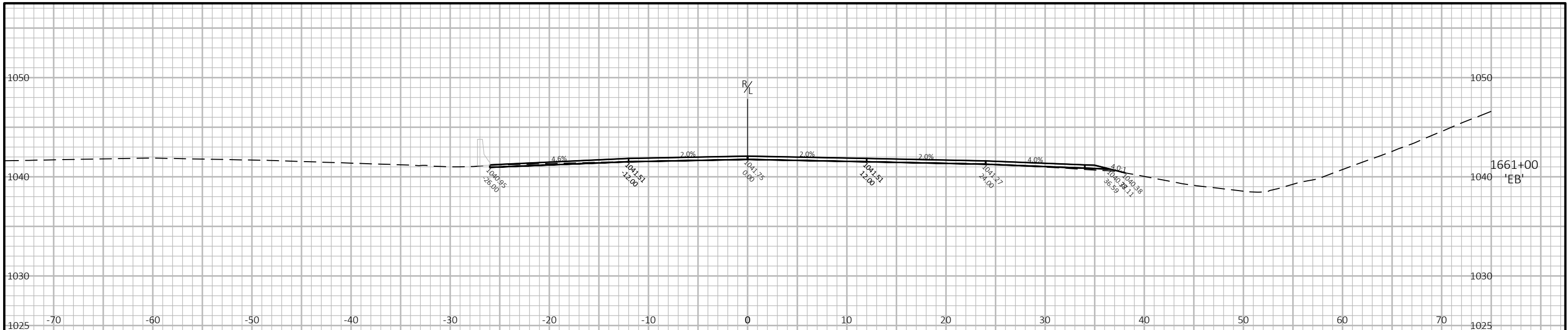
LAYOUT NAME - 090203-xs(09)



9

9

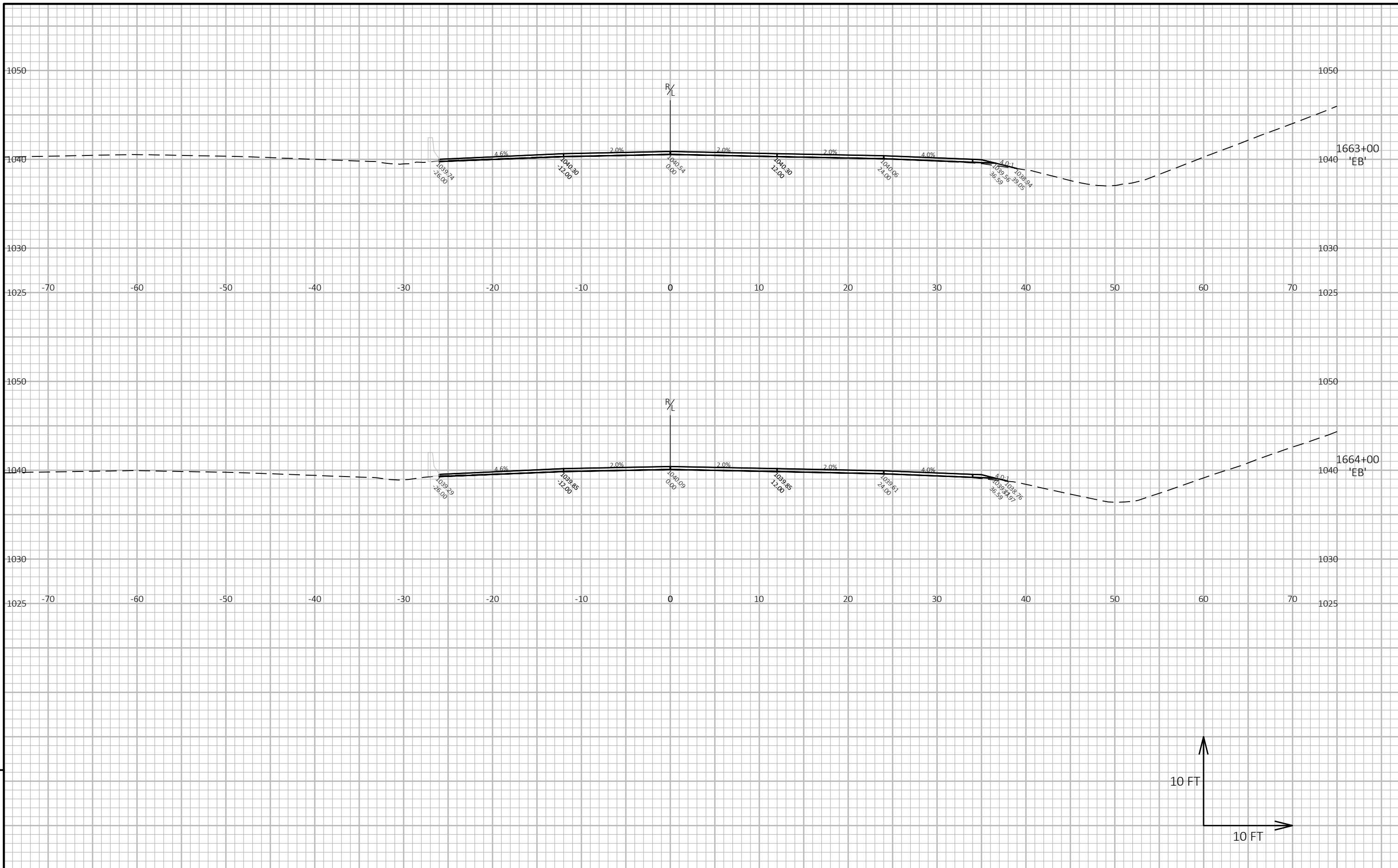
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

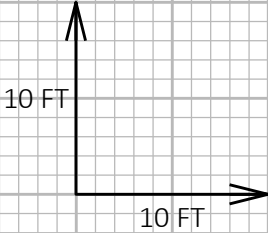
9

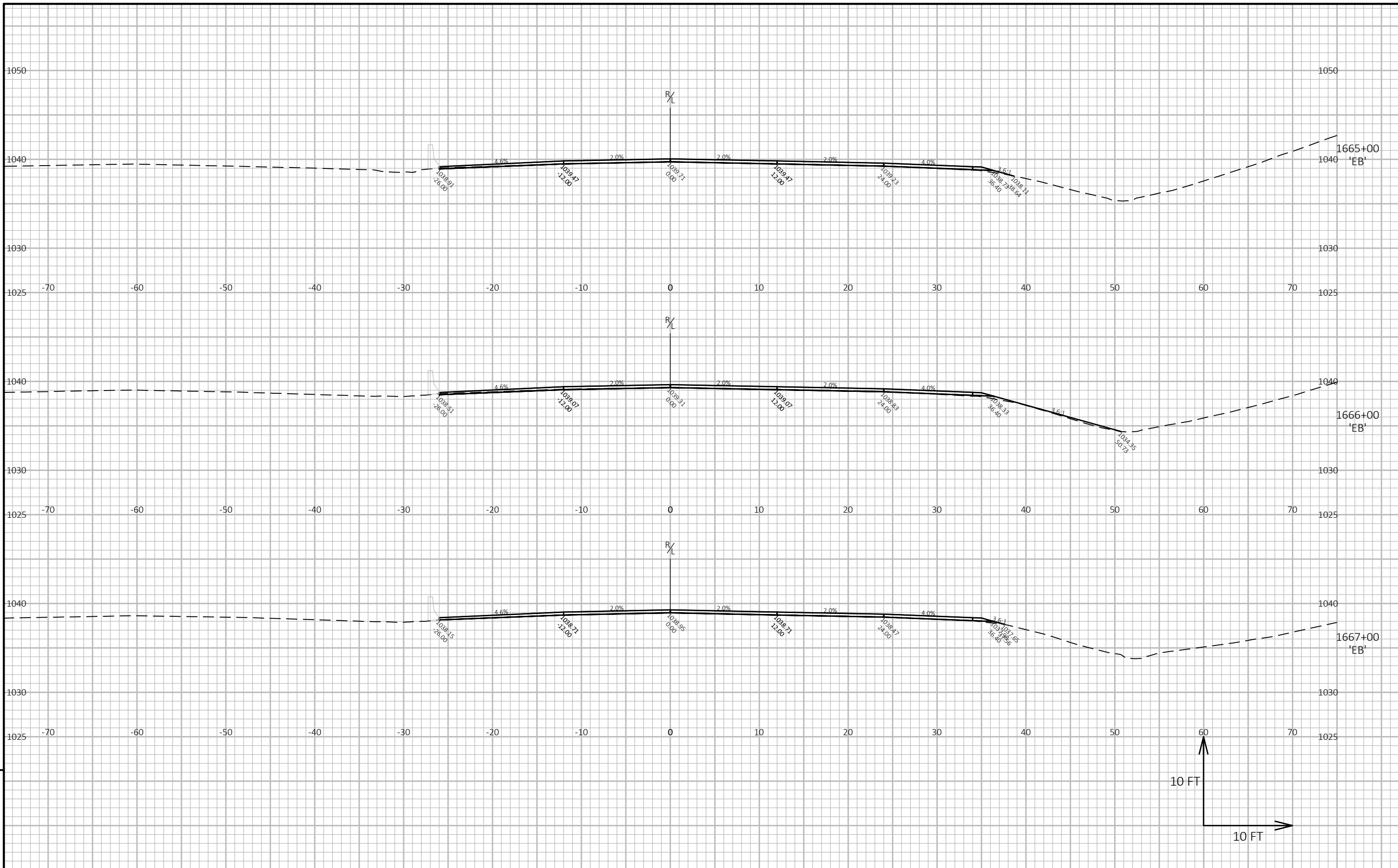
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9



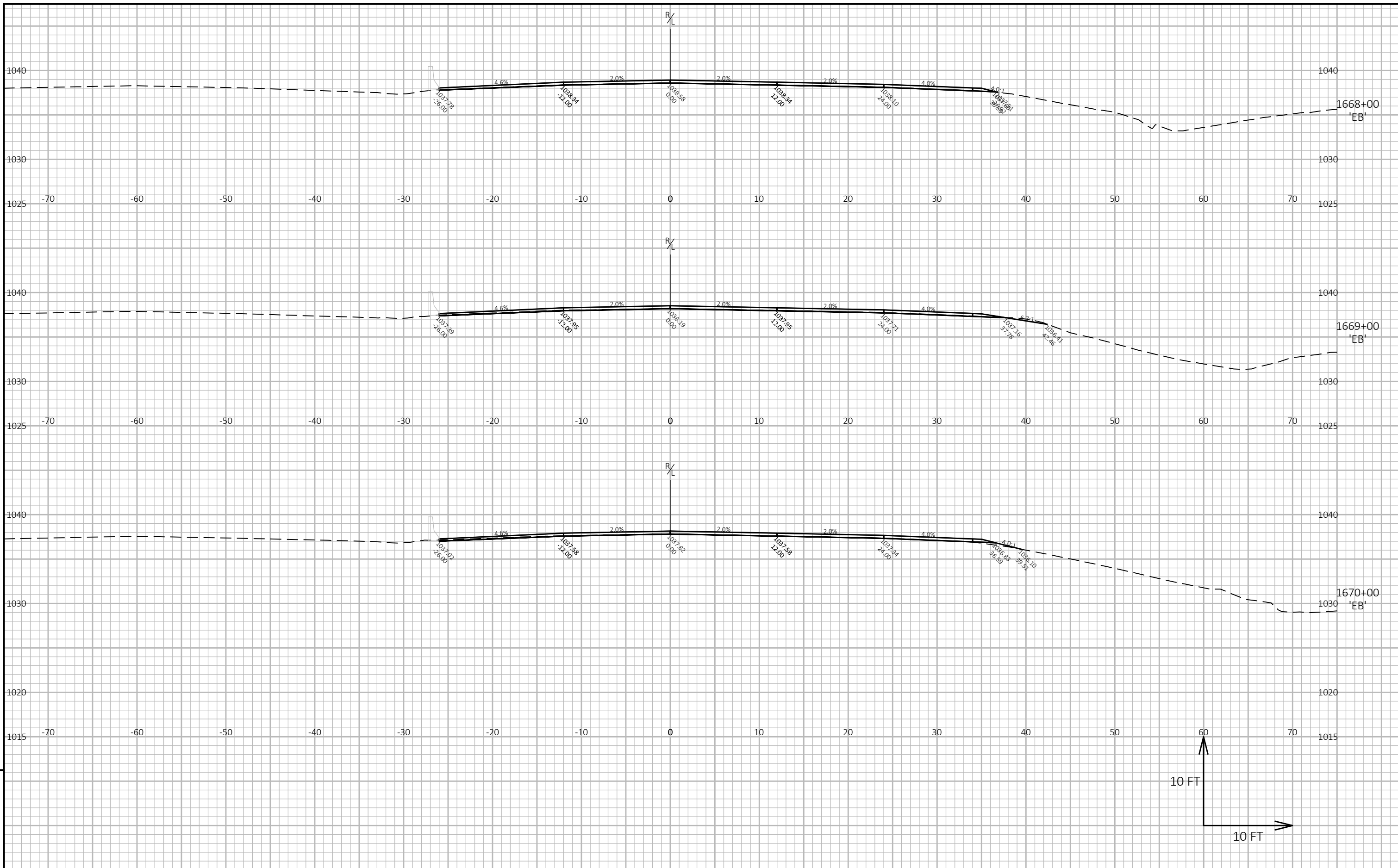


9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

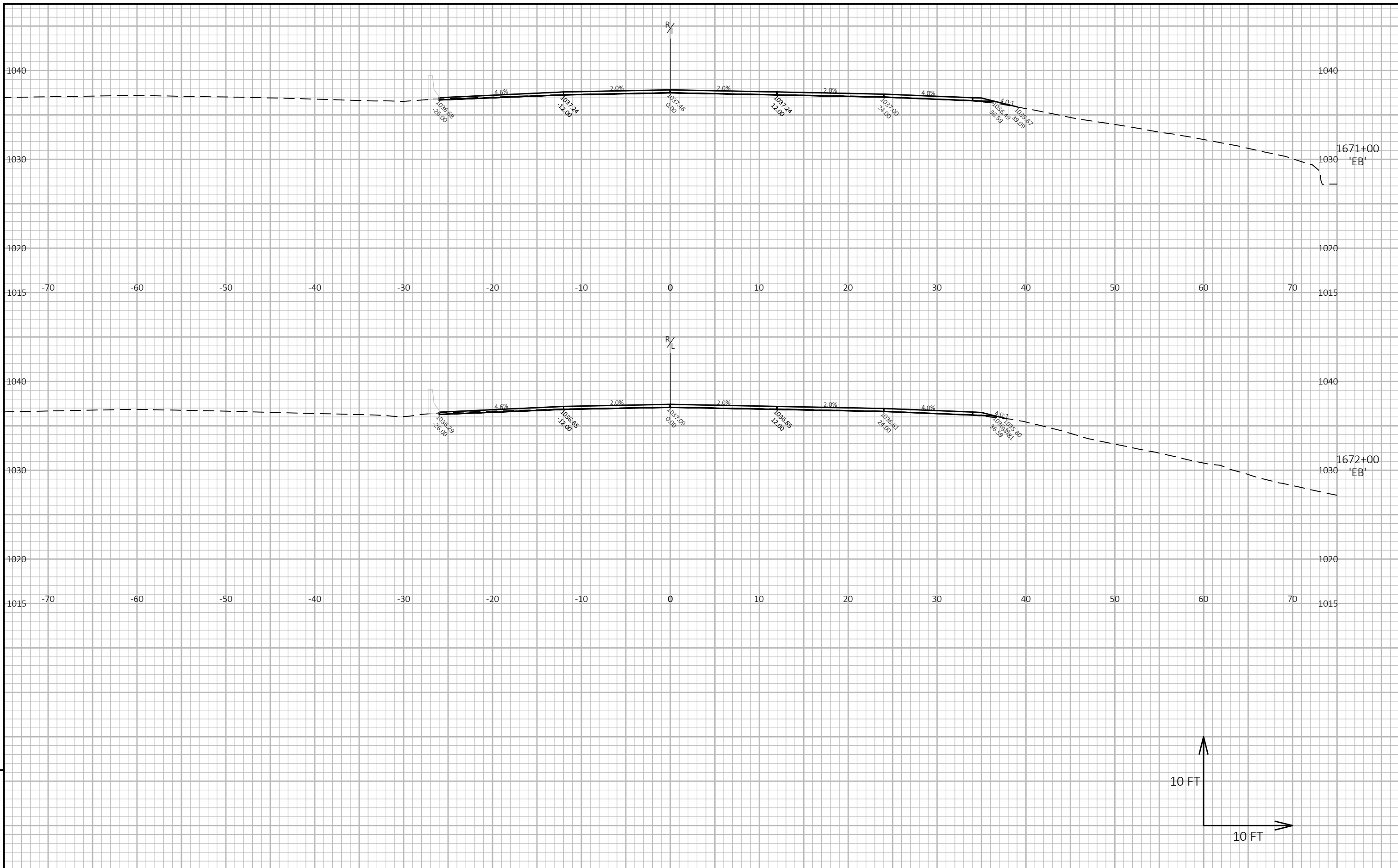
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090203-XS.DWG PLOT DATE : 8/21/2023 12:59 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



9

9

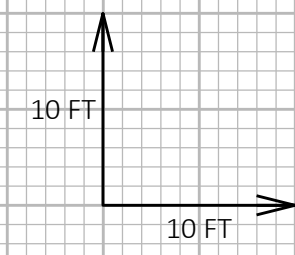
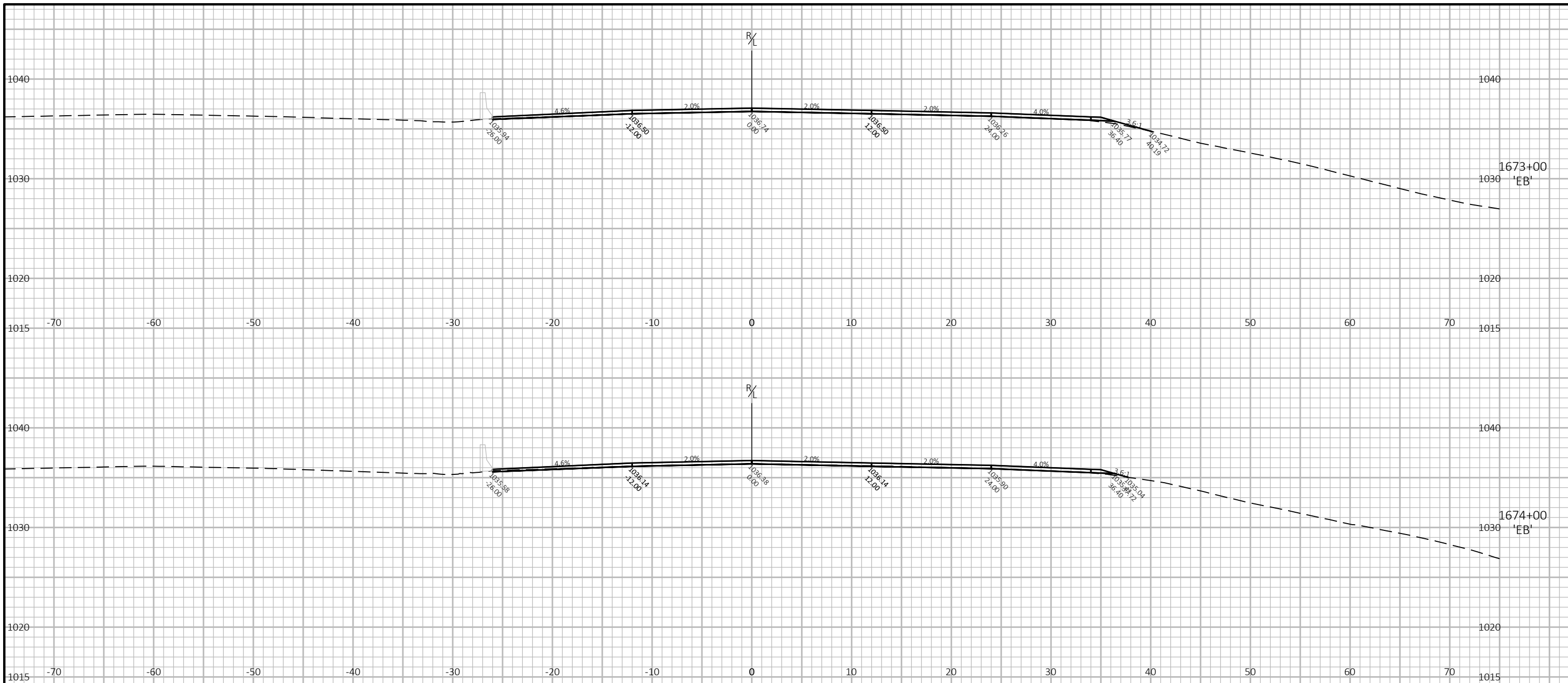
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

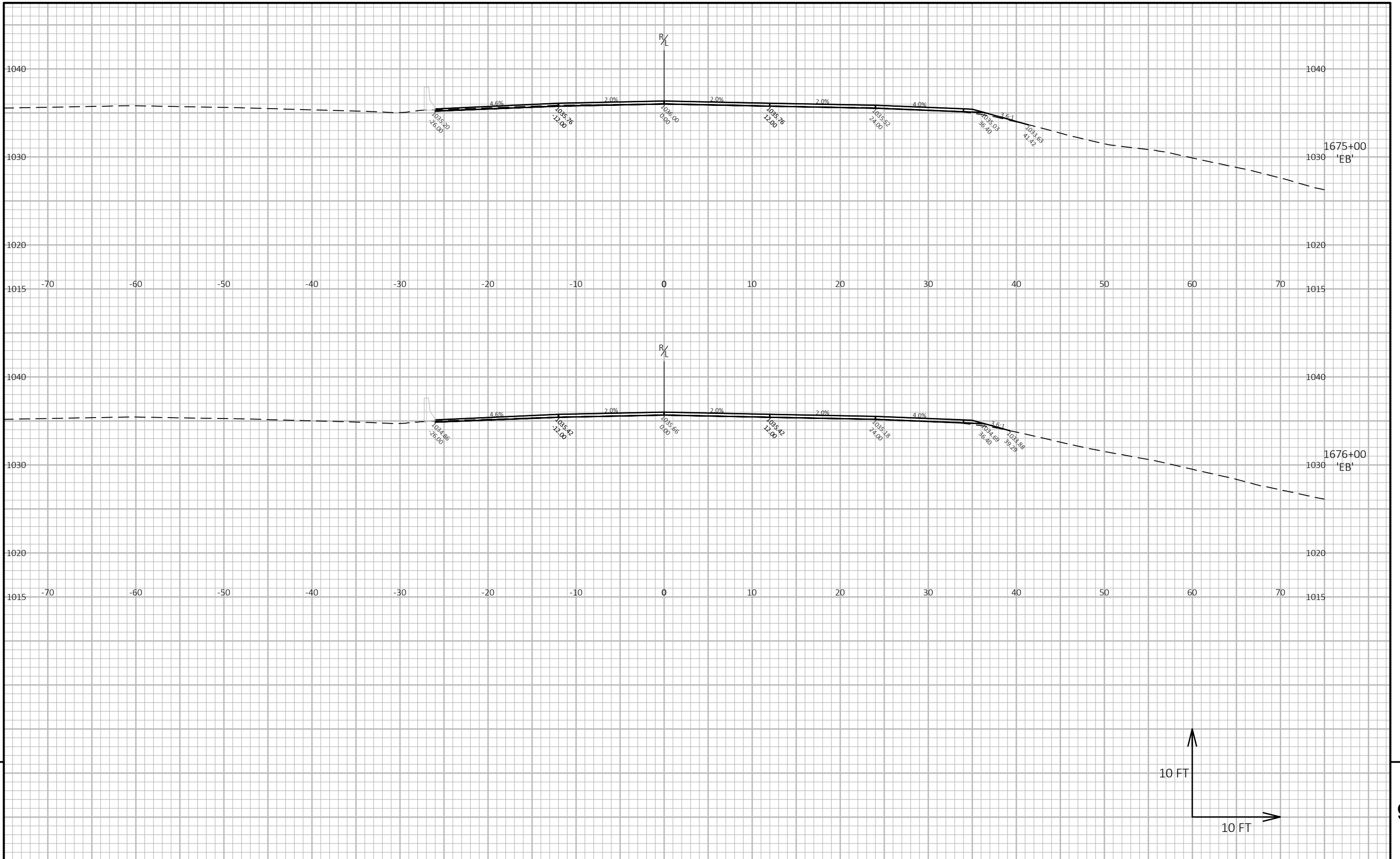
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

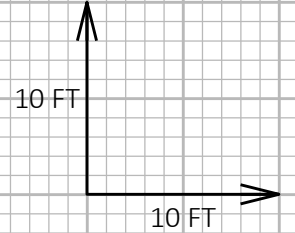
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

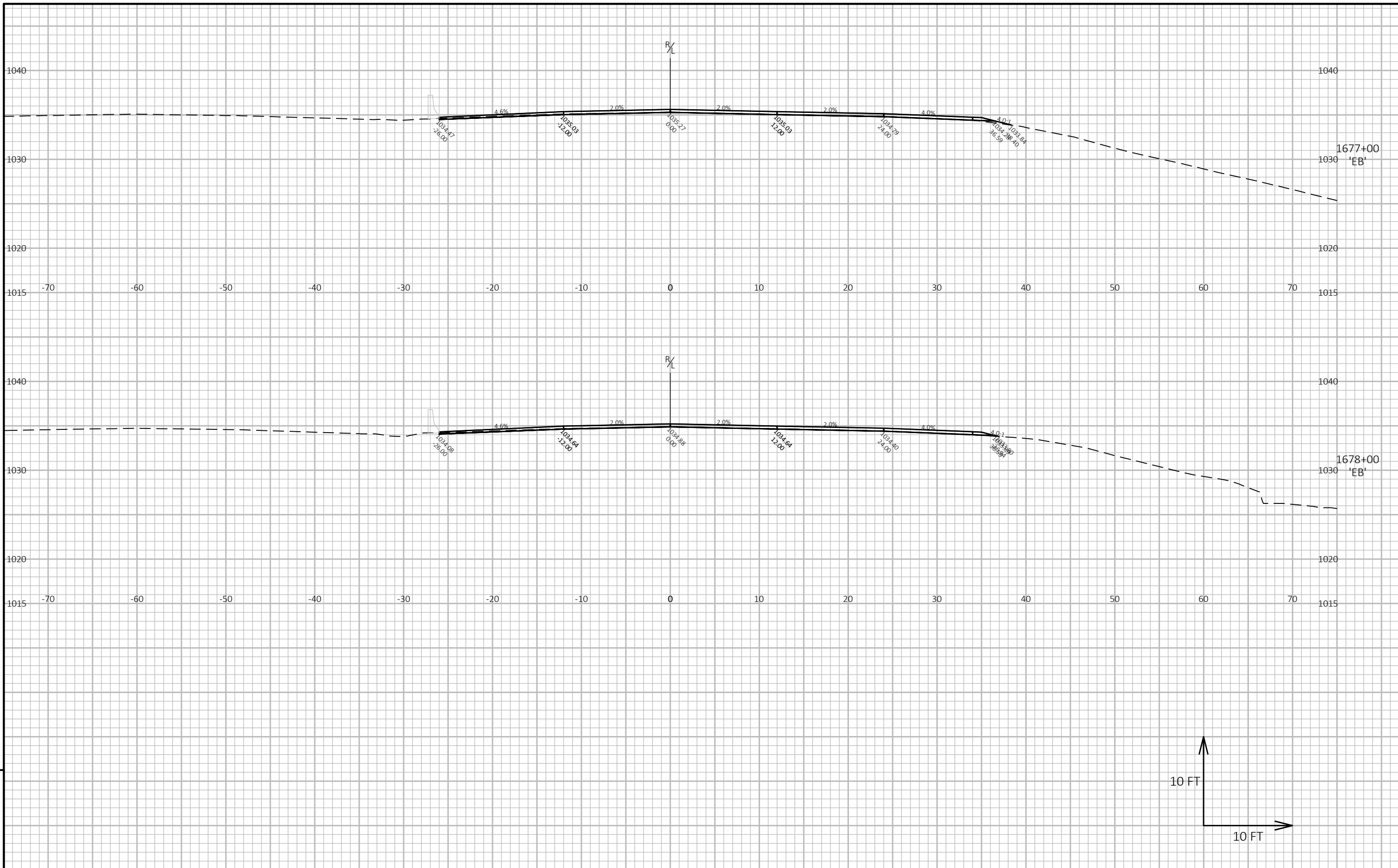


9

9



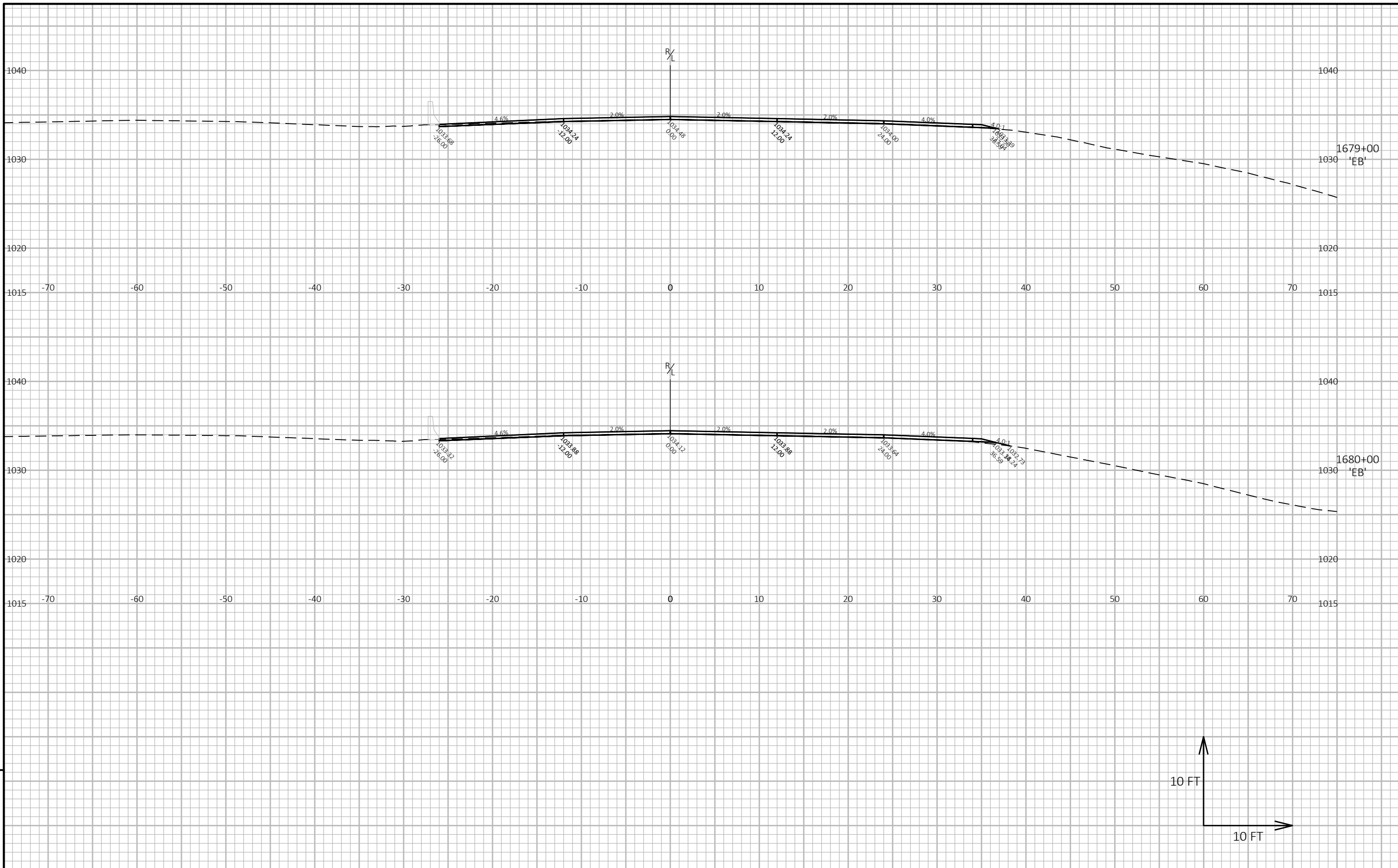
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

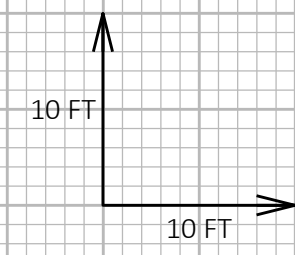
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

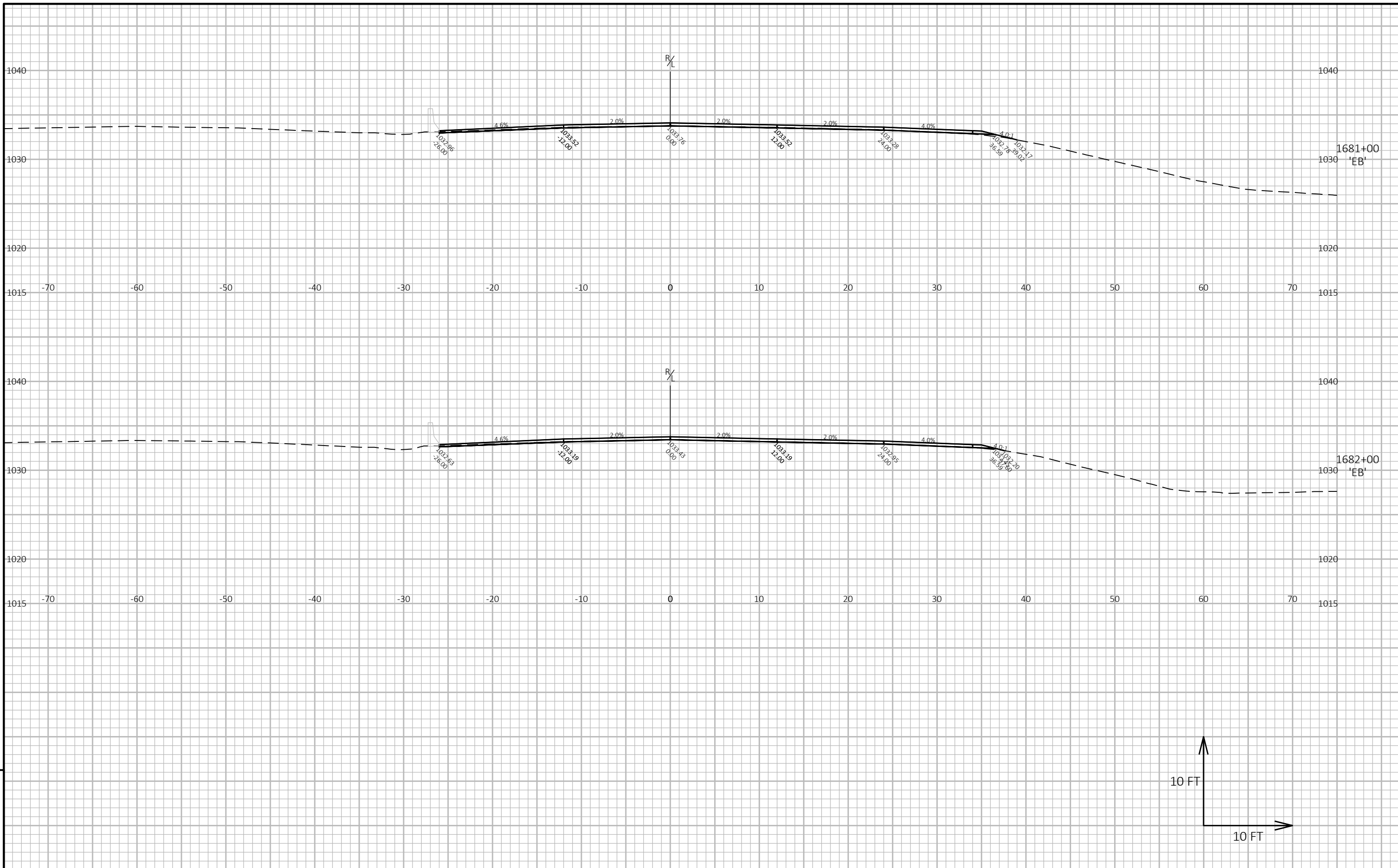


9

9

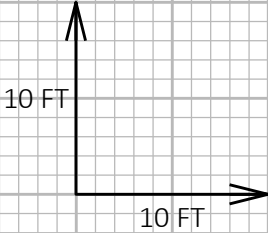


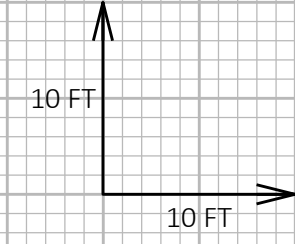
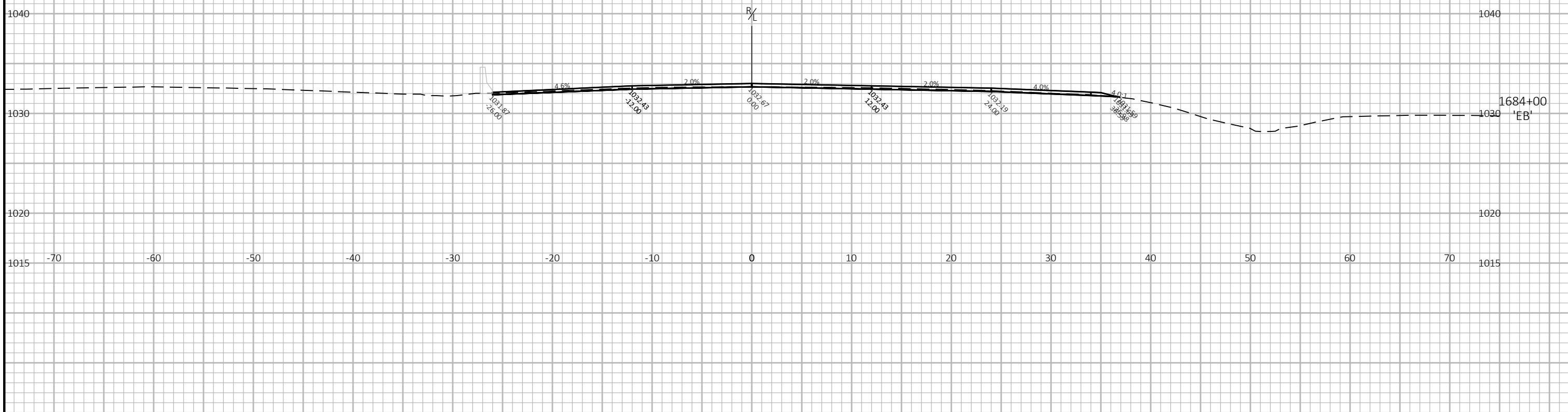
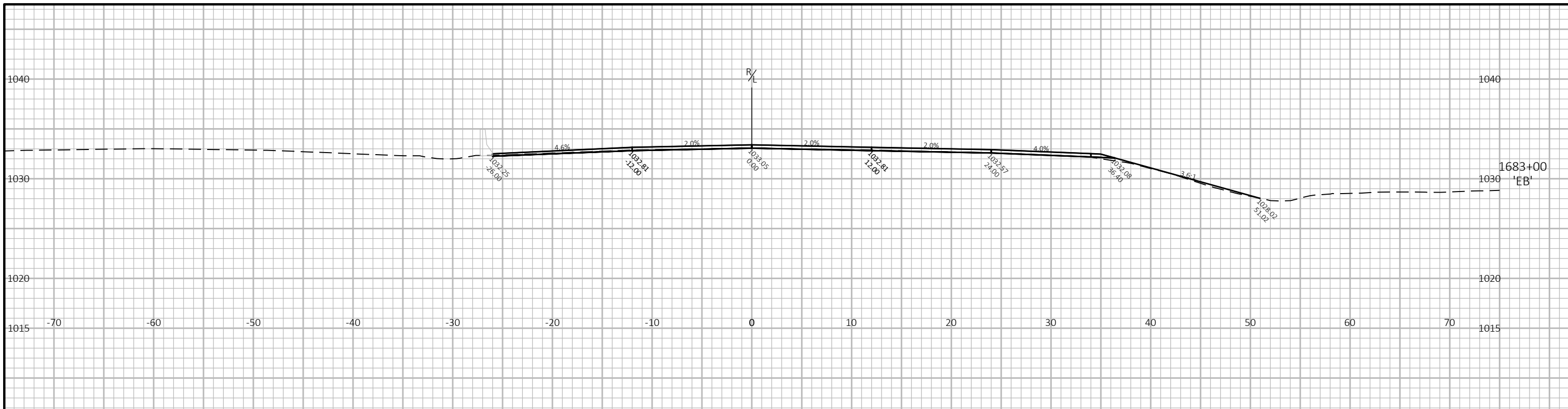
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

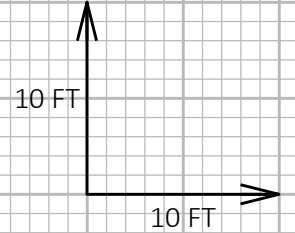
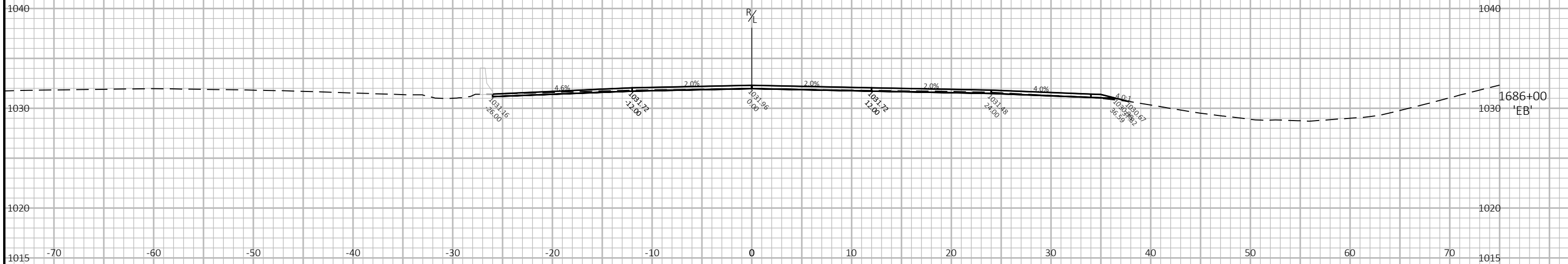
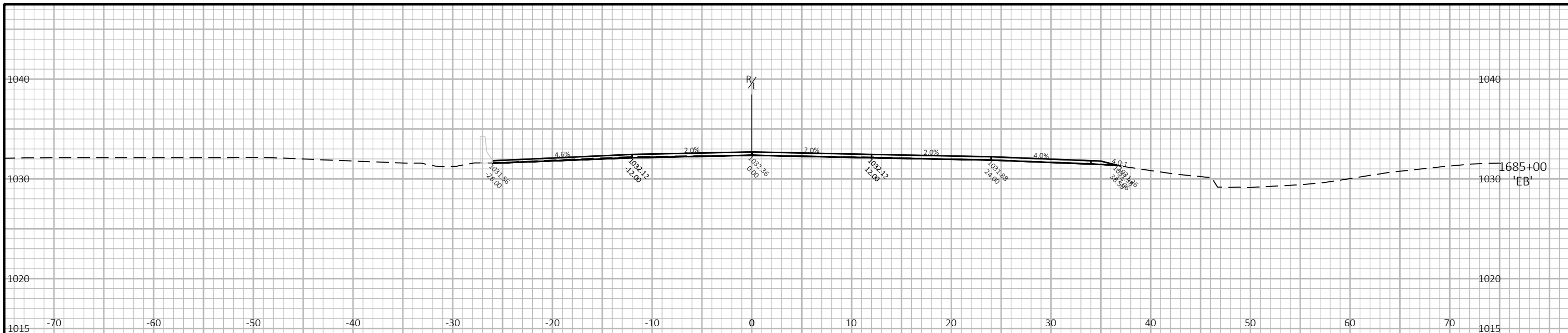
9





9

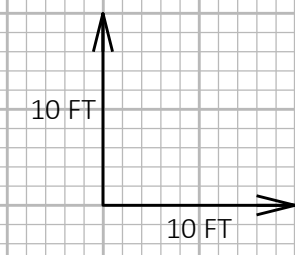
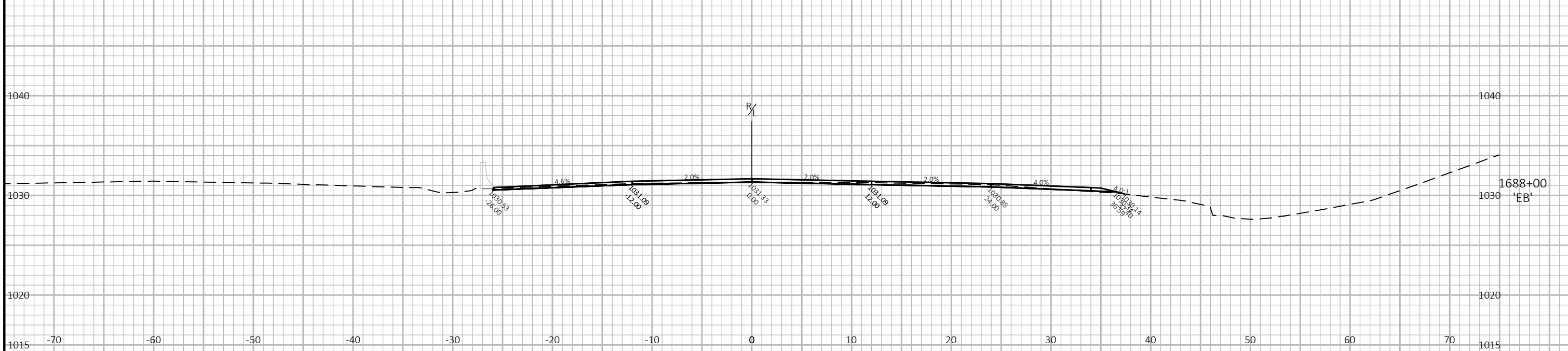
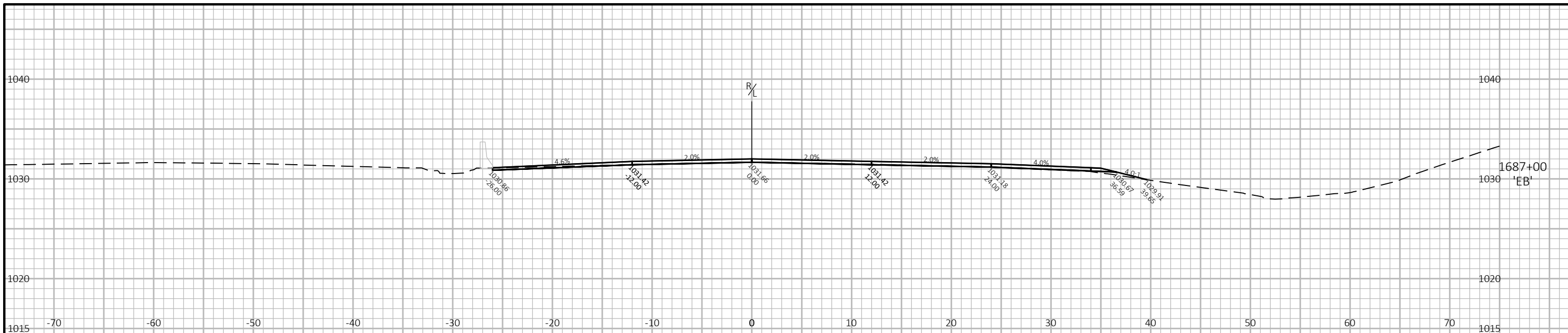
9



9

9

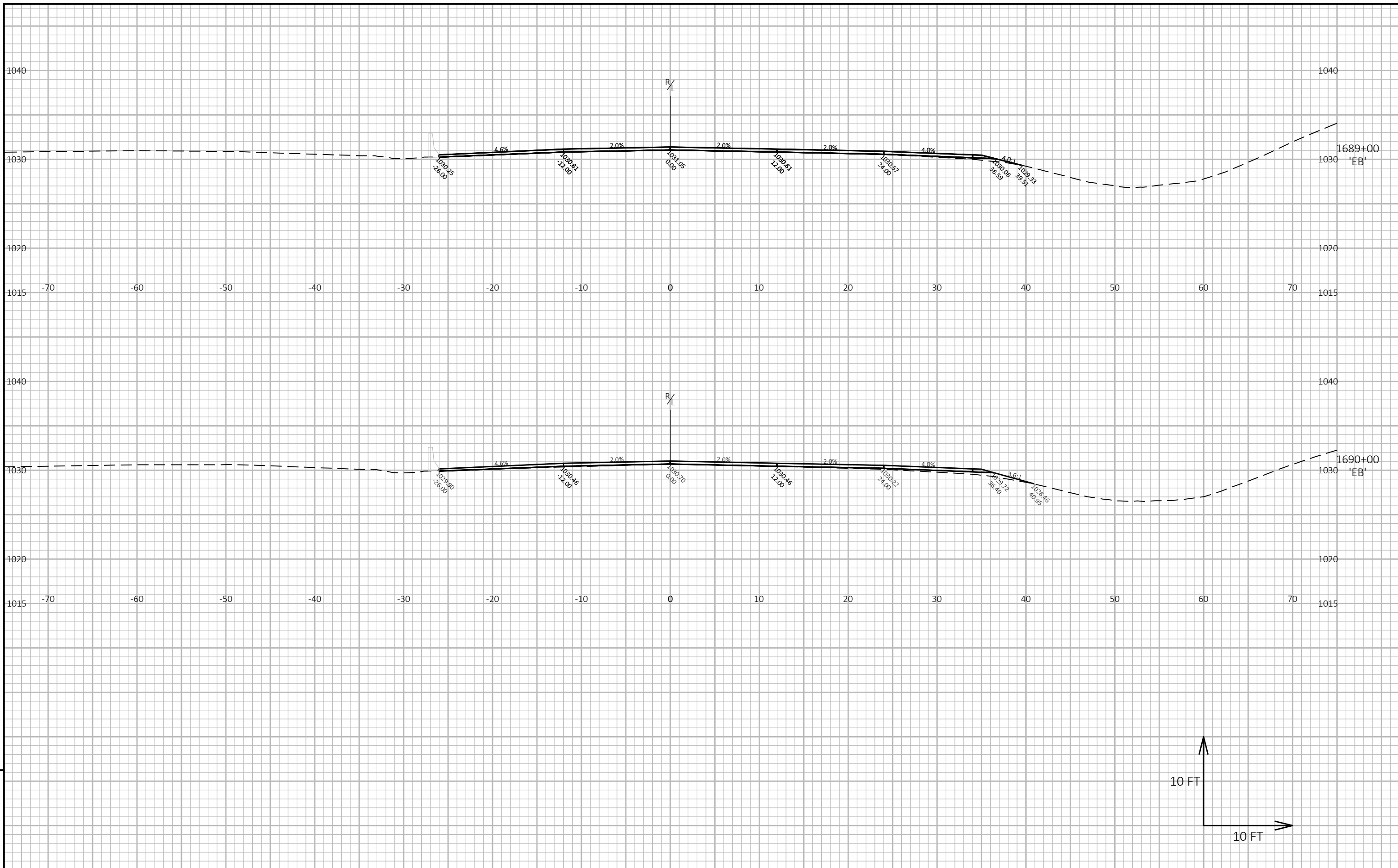
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

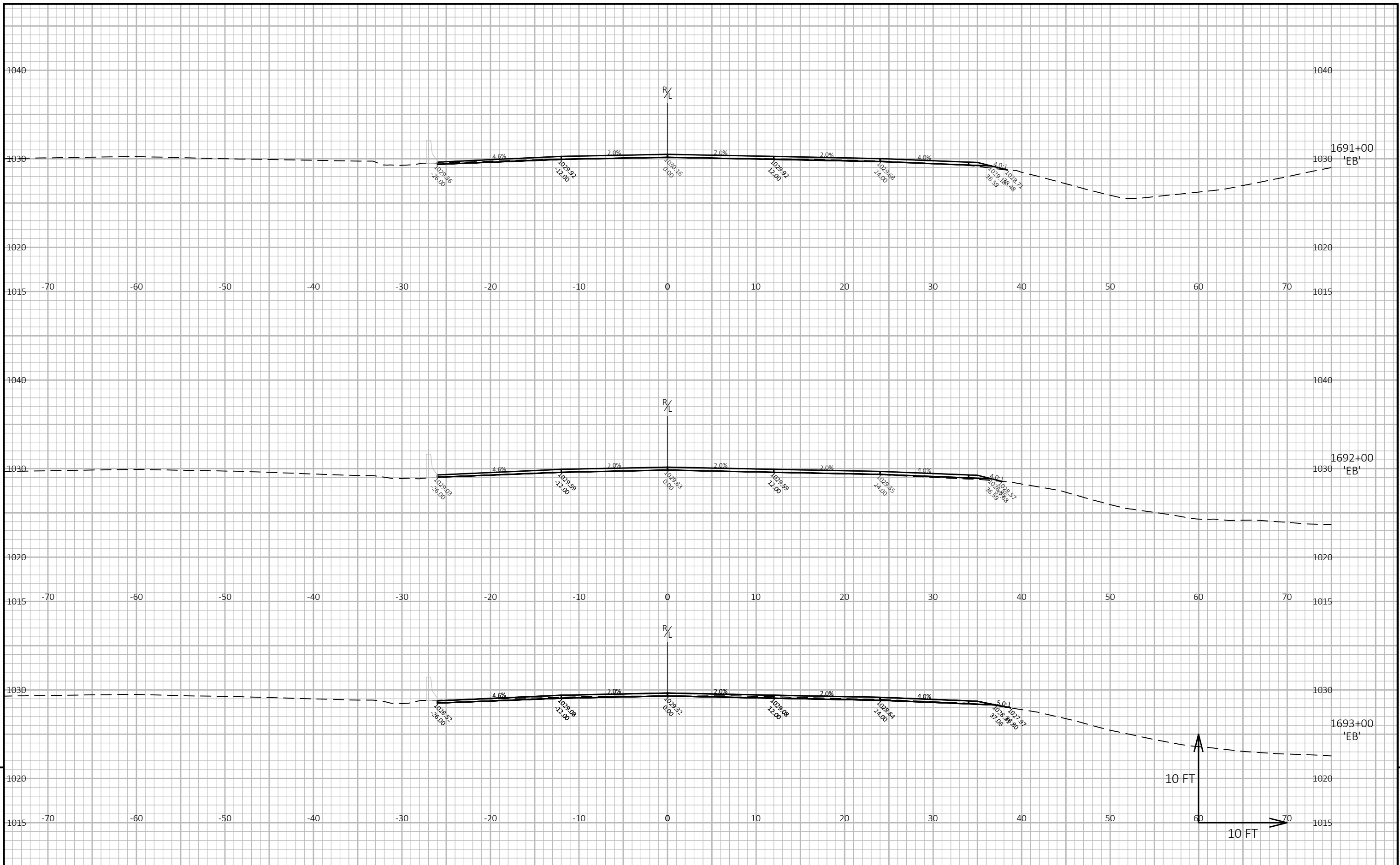
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

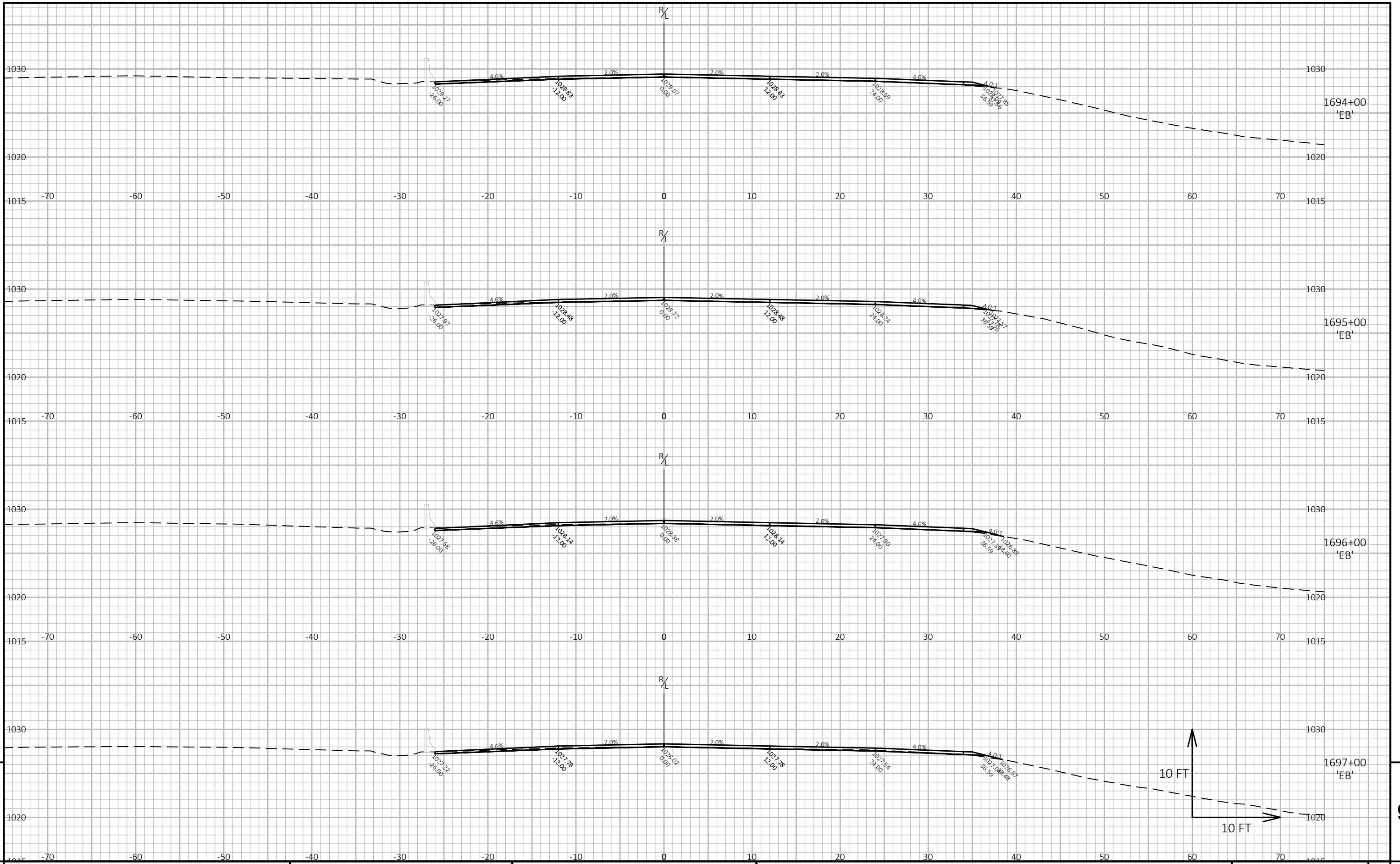
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



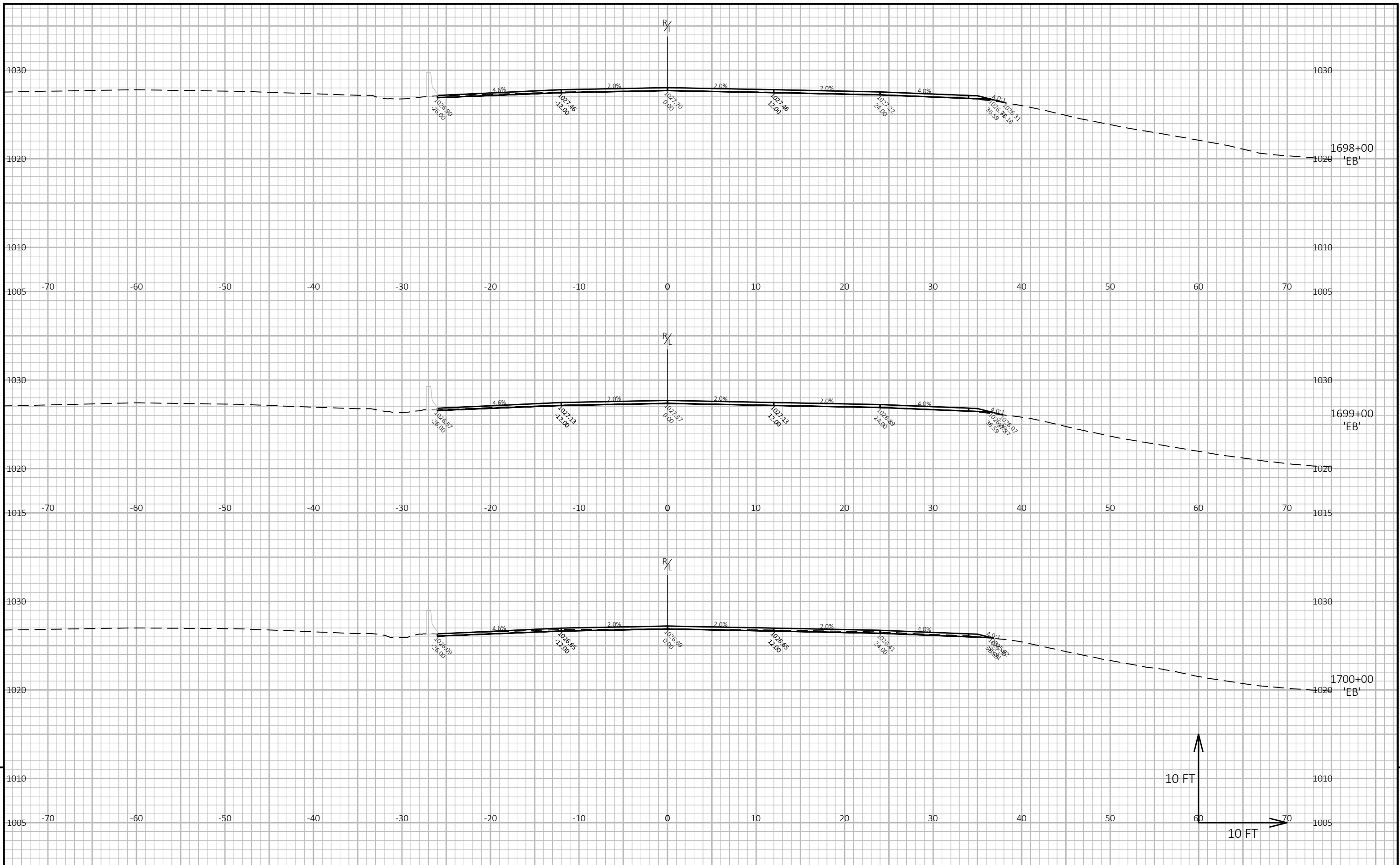
9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

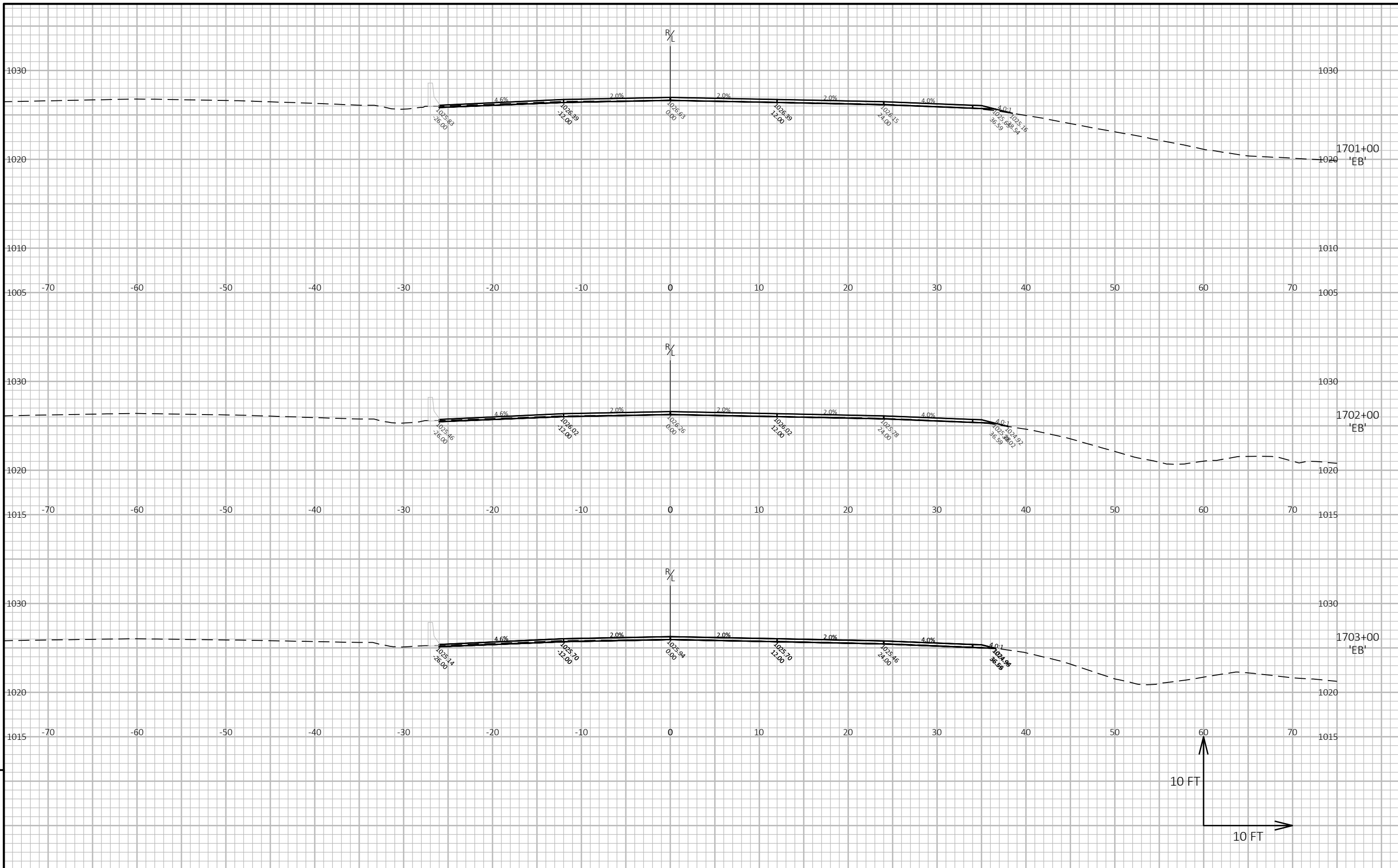


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



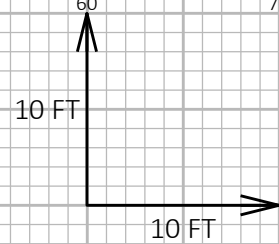
9
10 FT
10 FT
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET
------------------------	------------	------------------	-----------------------	-------

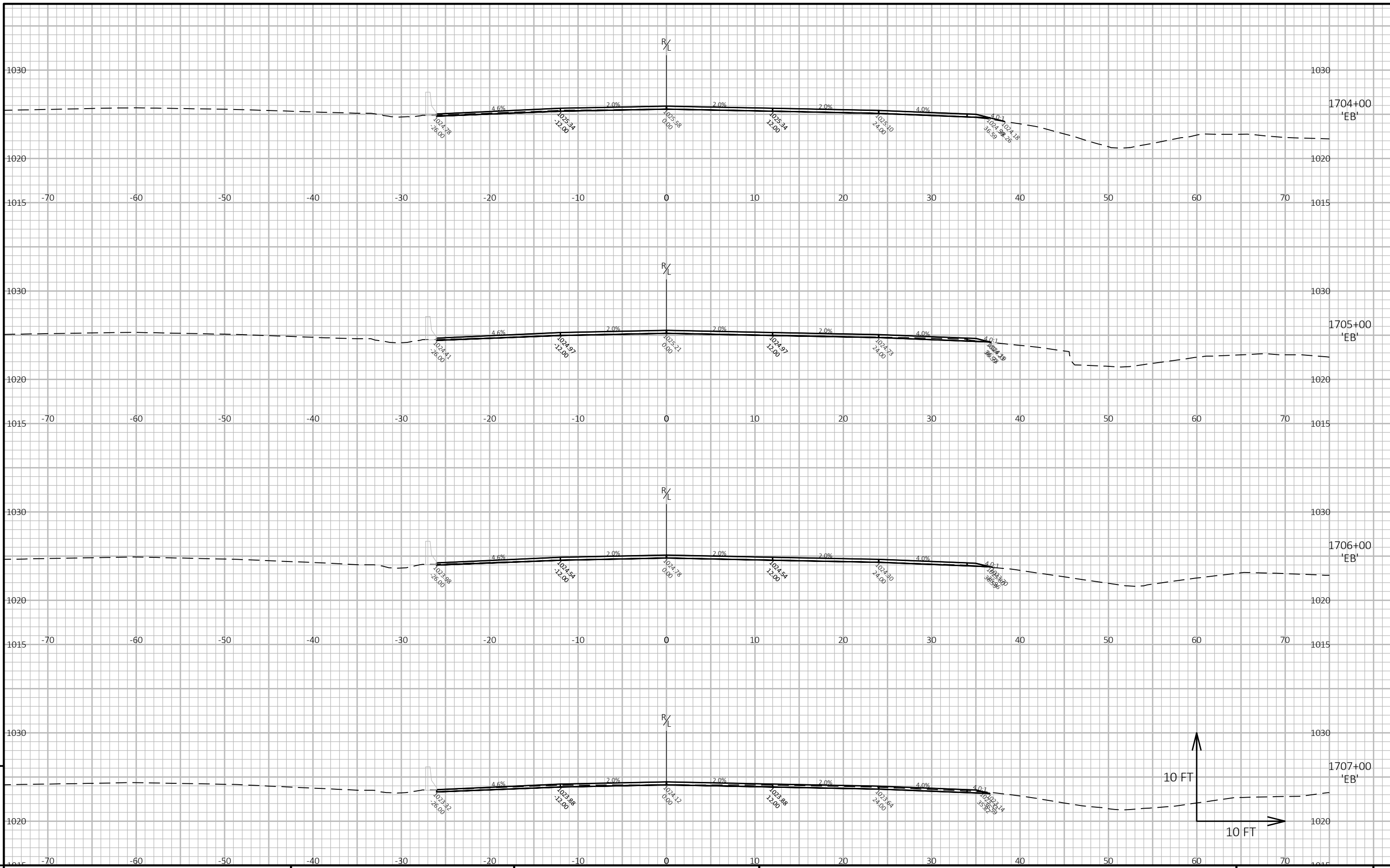


9

9



PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



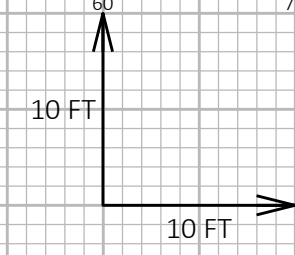
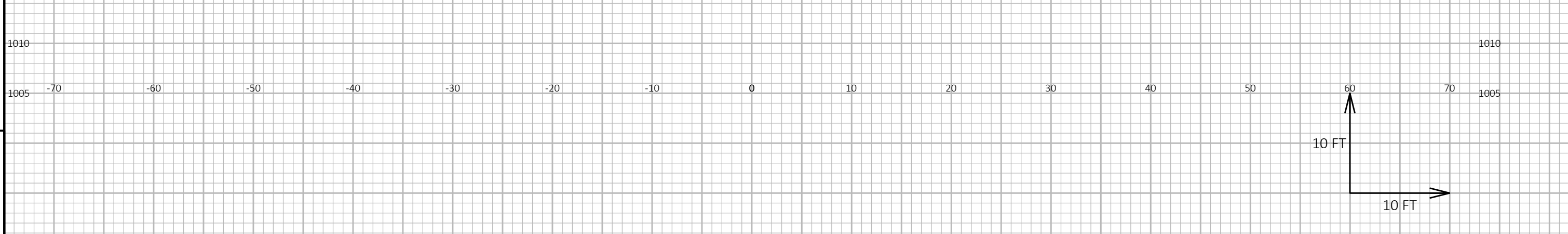
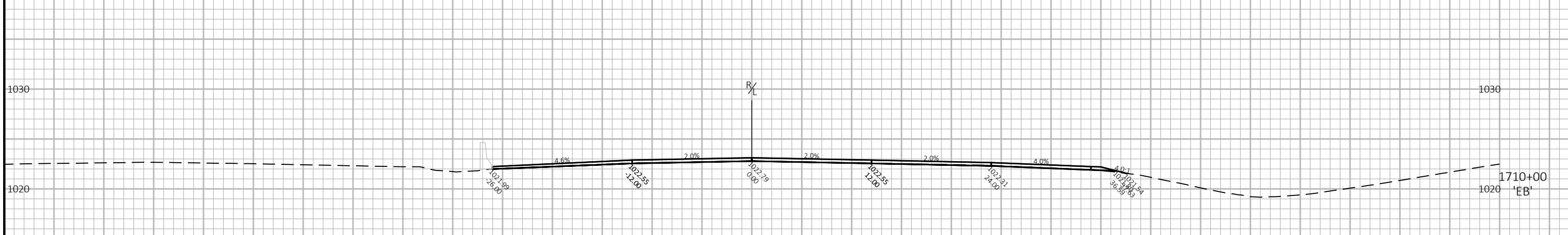
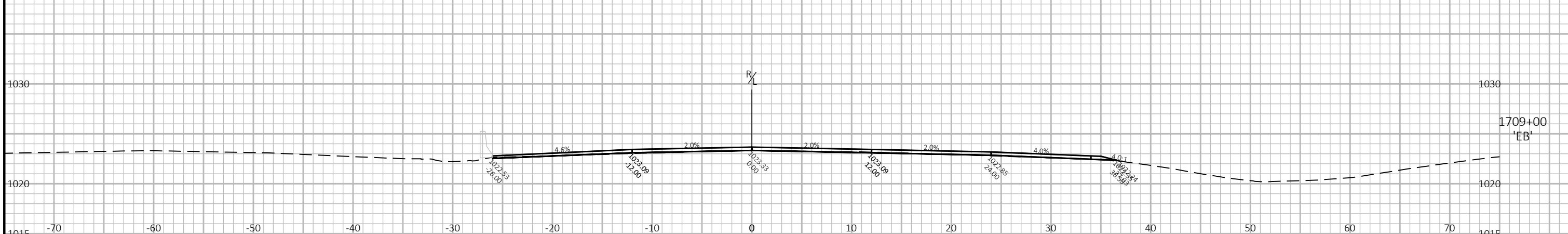
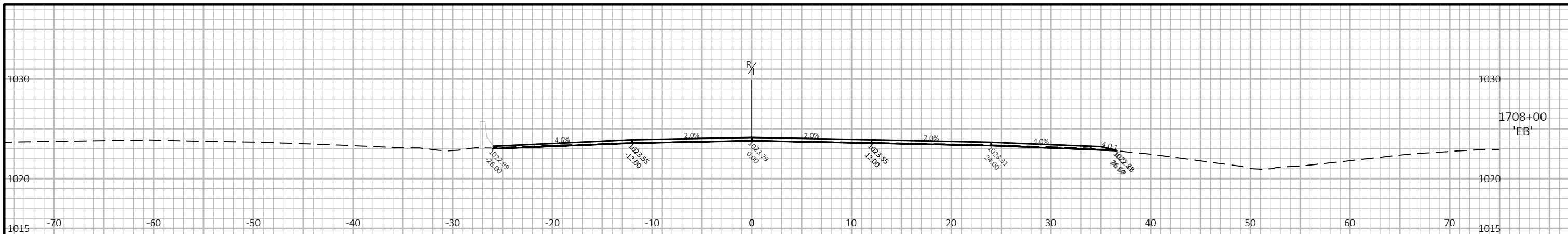
9

9

PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090204-XS.DWG PLOT DATE : 8/21/2023 1:02 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

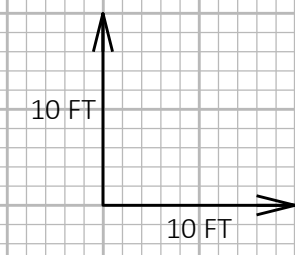
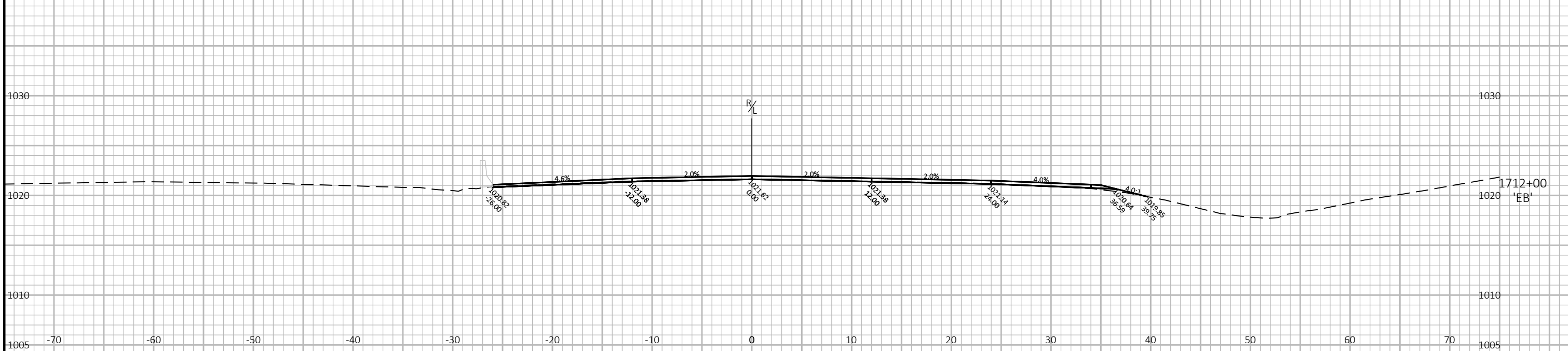
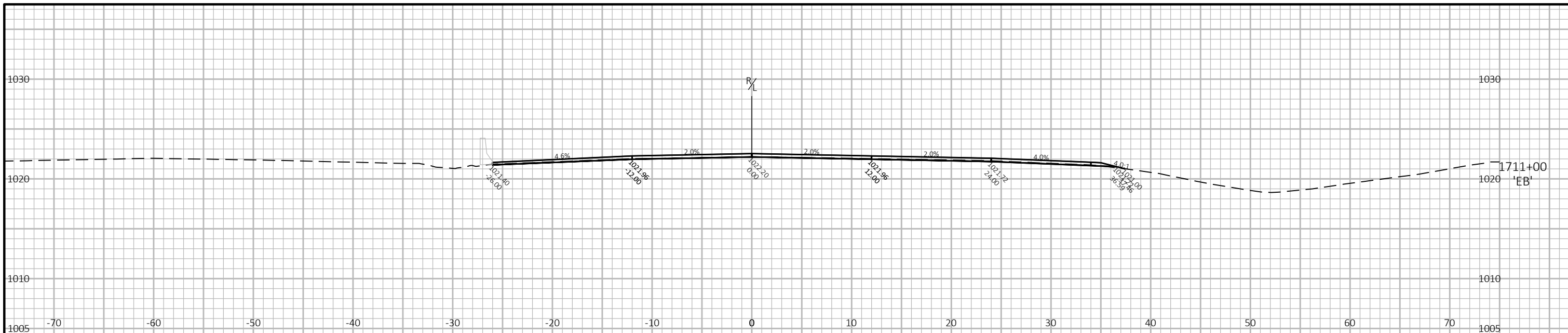
LAYOUT NAME - 090204-xs(12)



9

9

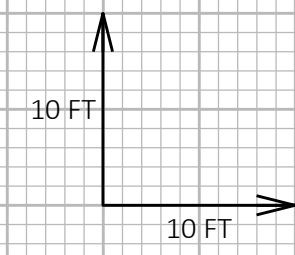
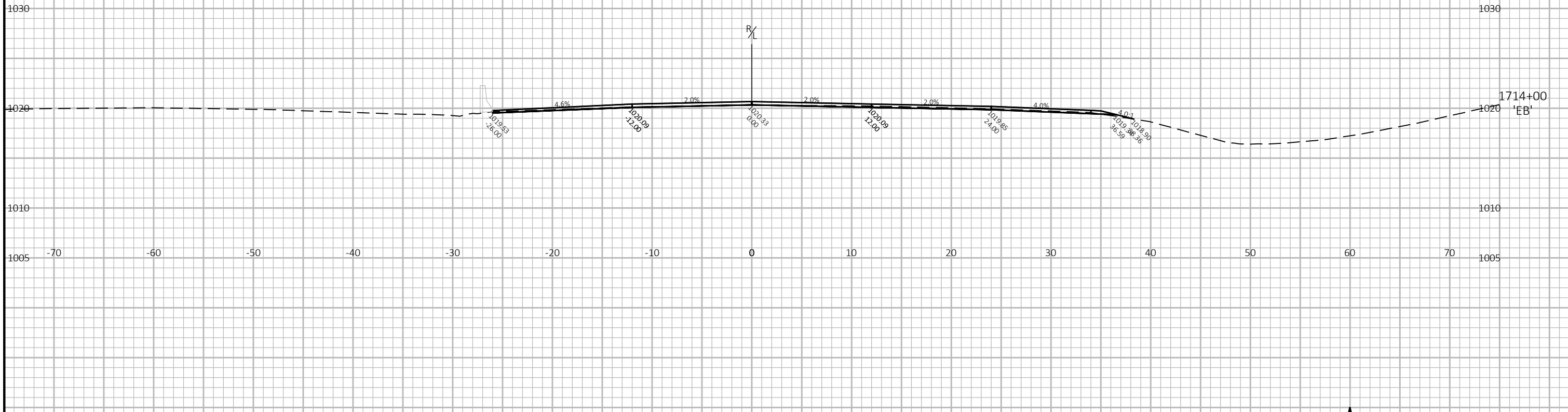
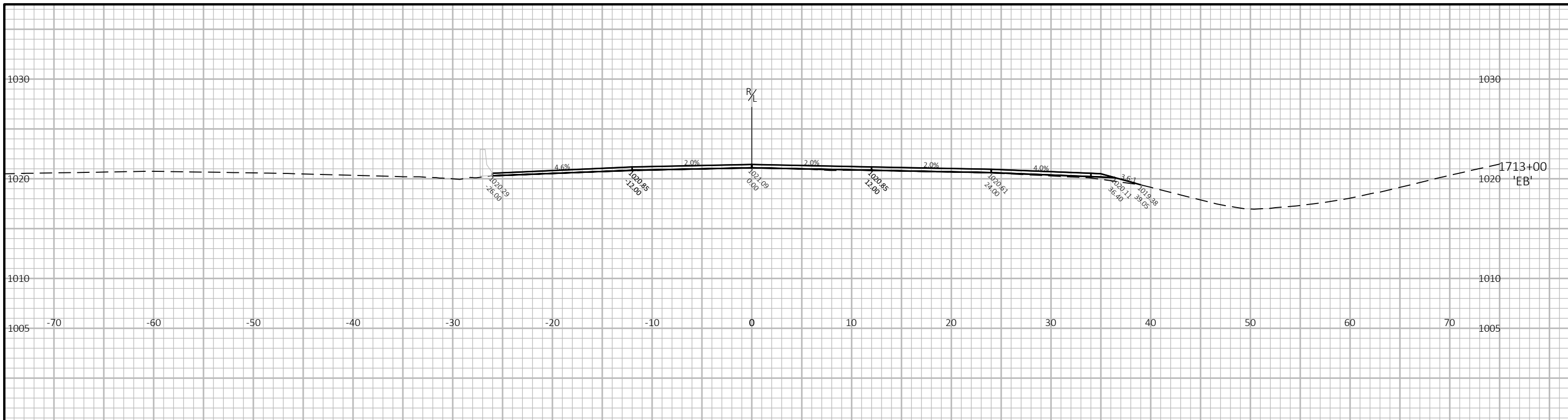
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

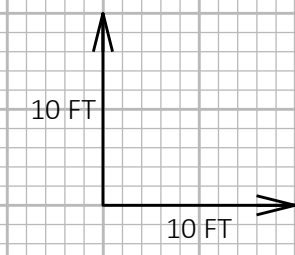
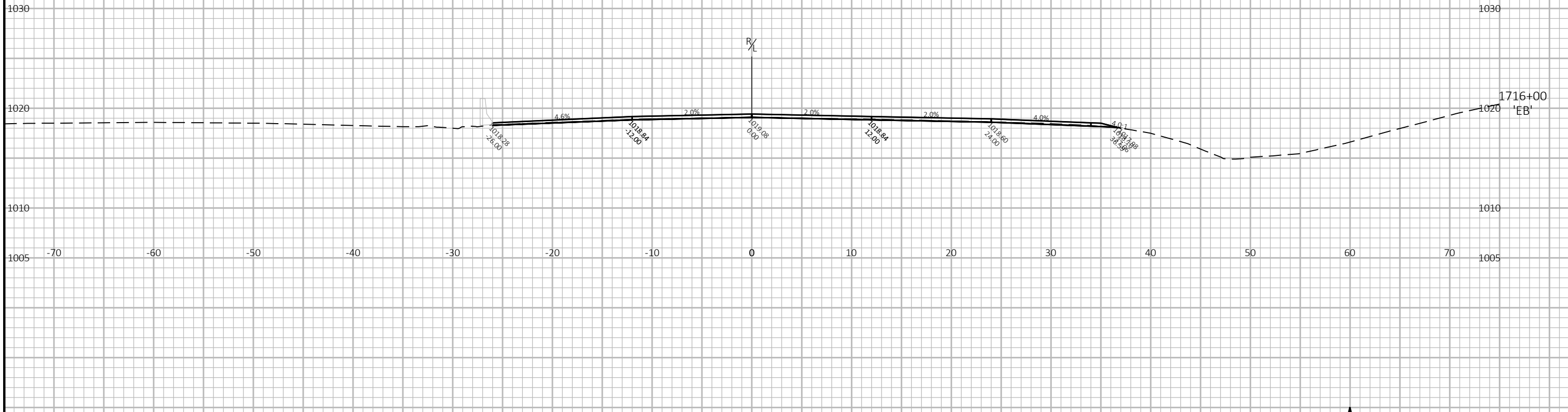
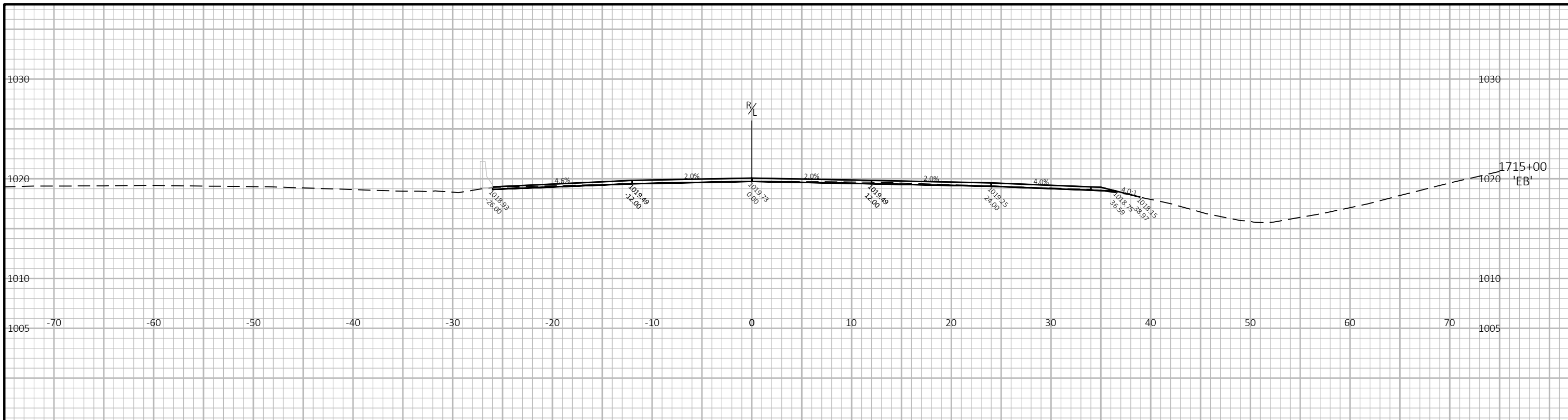
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

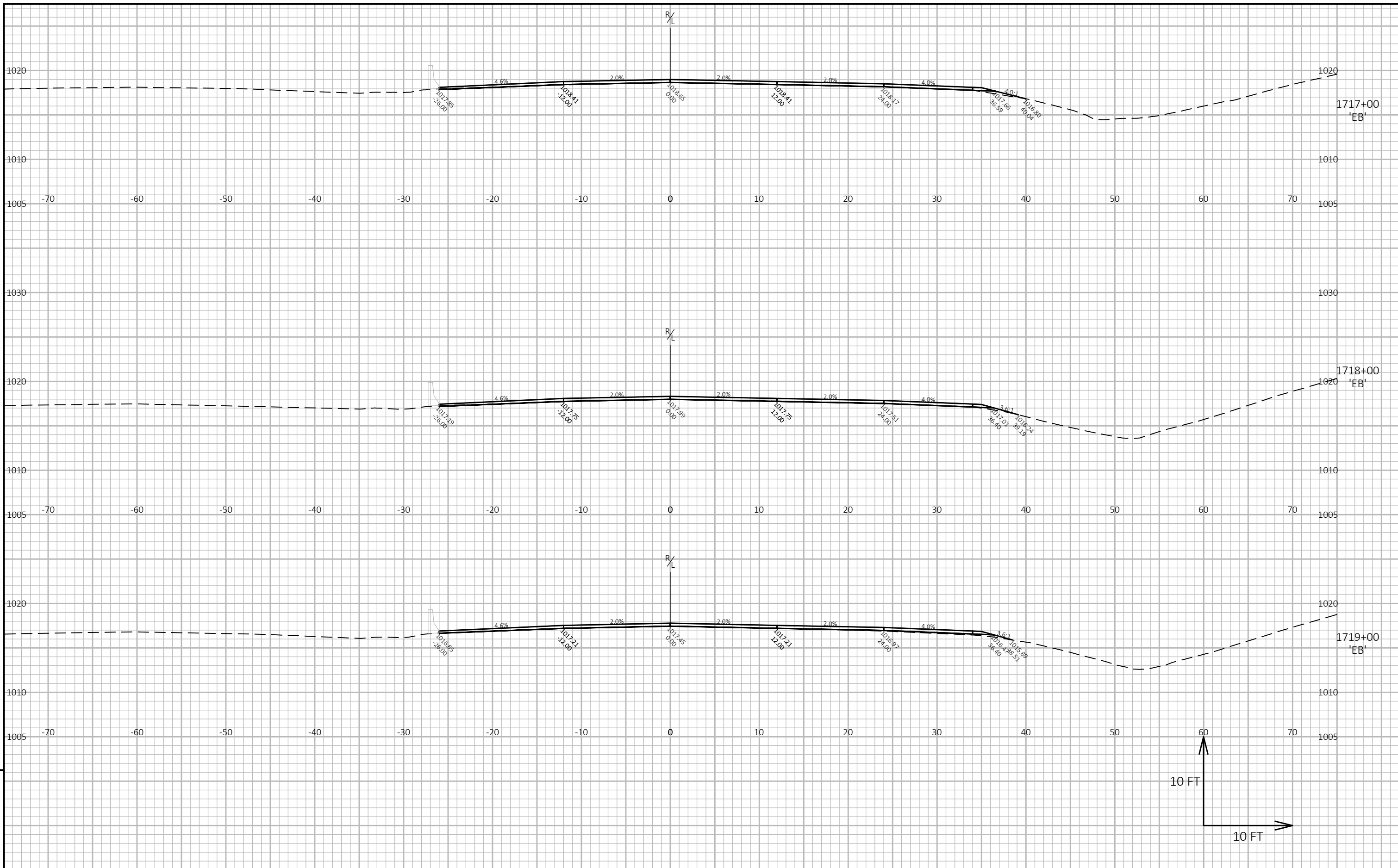
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



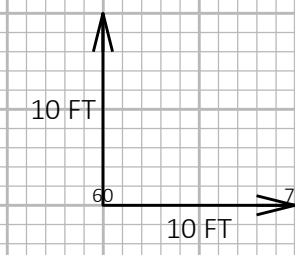
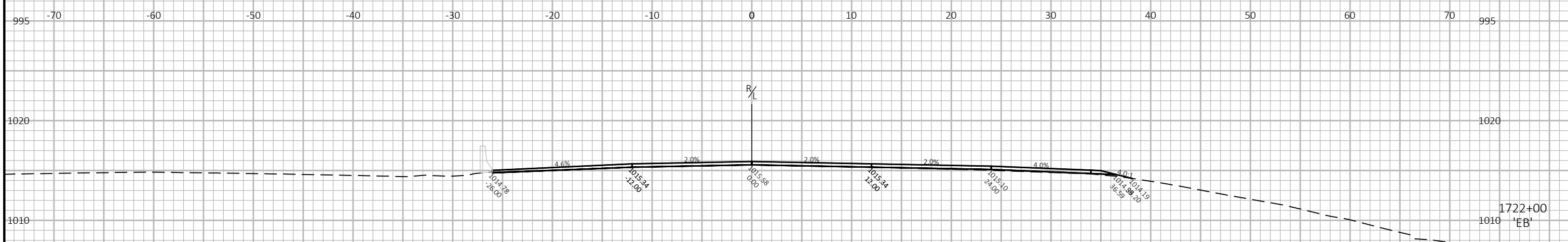
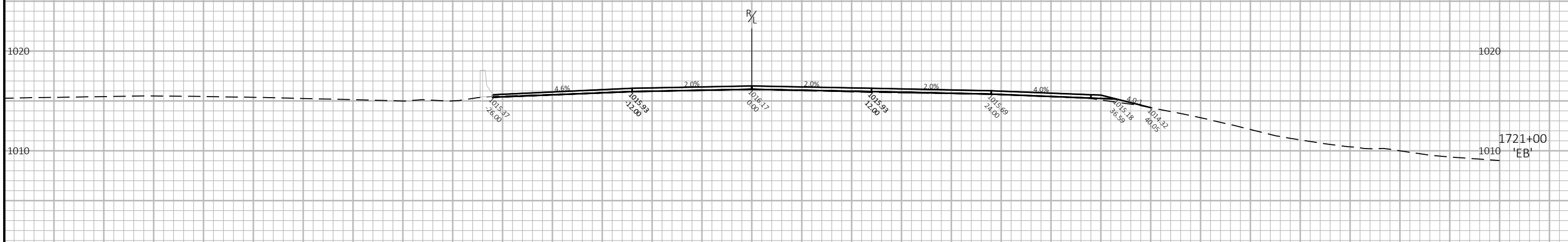
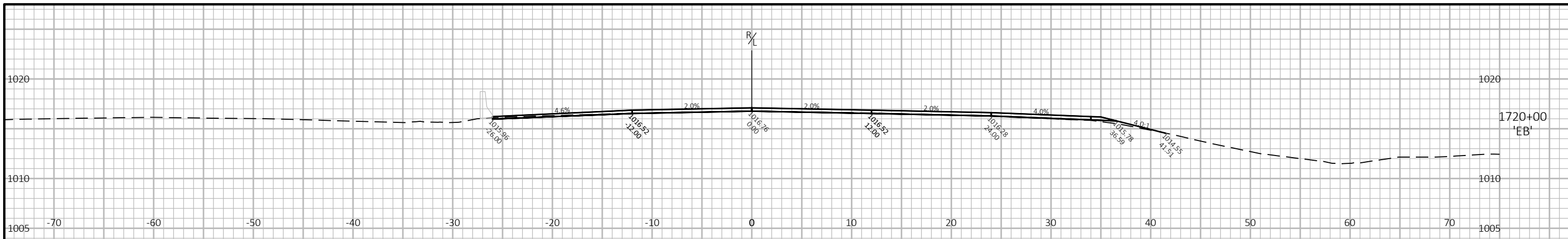
9

9

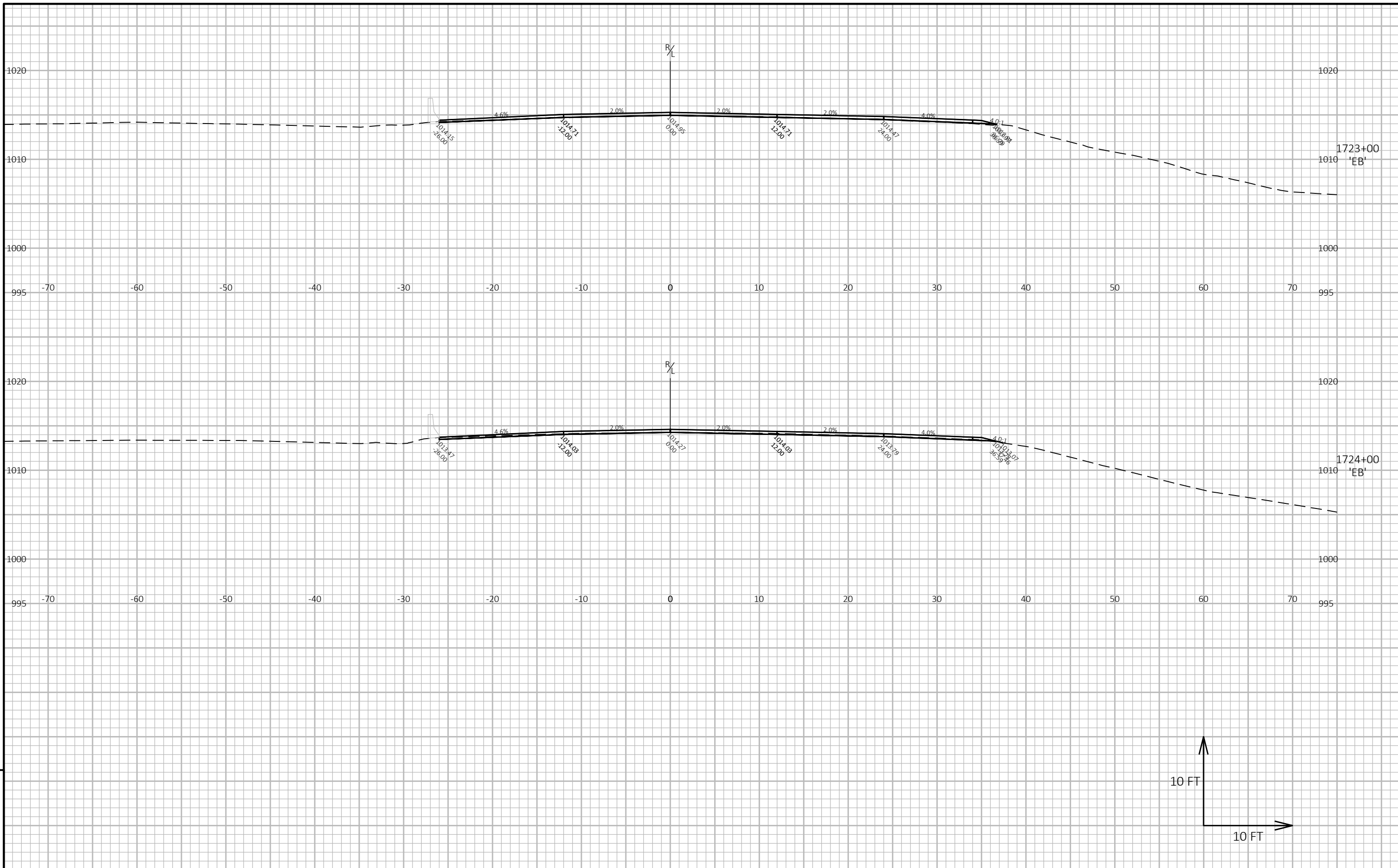
PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090205-XS.DWG PLOT DATE : 8/21/2023 1:14 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 090205-xs(01)

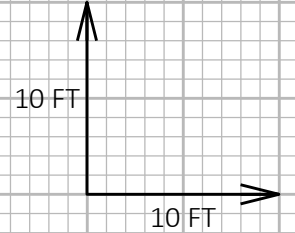


9
PROJECT NO: 1011-00-82
HWY: IH 39
COUNTY: COLUMBIA
CROSS SECTIONS: IH 39
SHEET
9

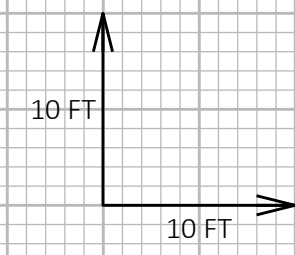
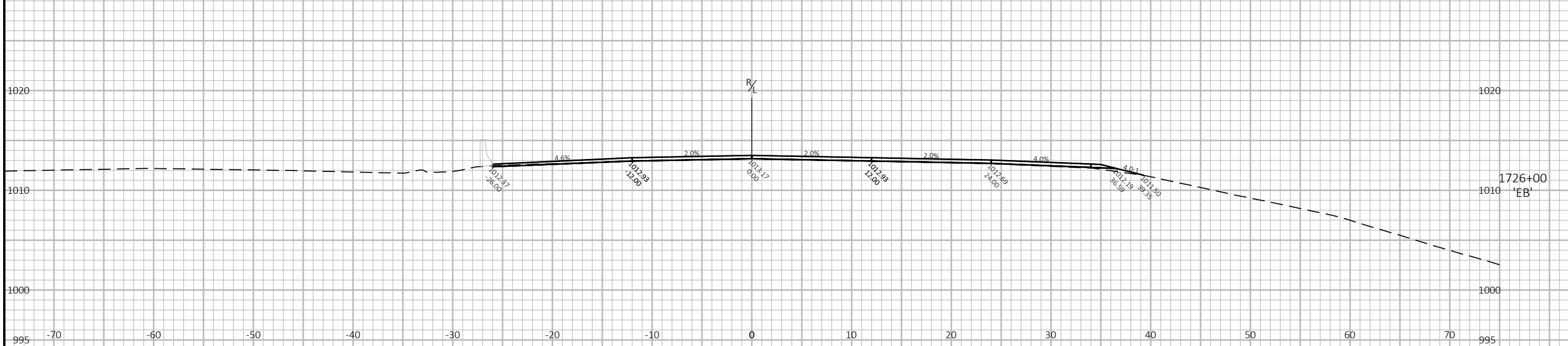
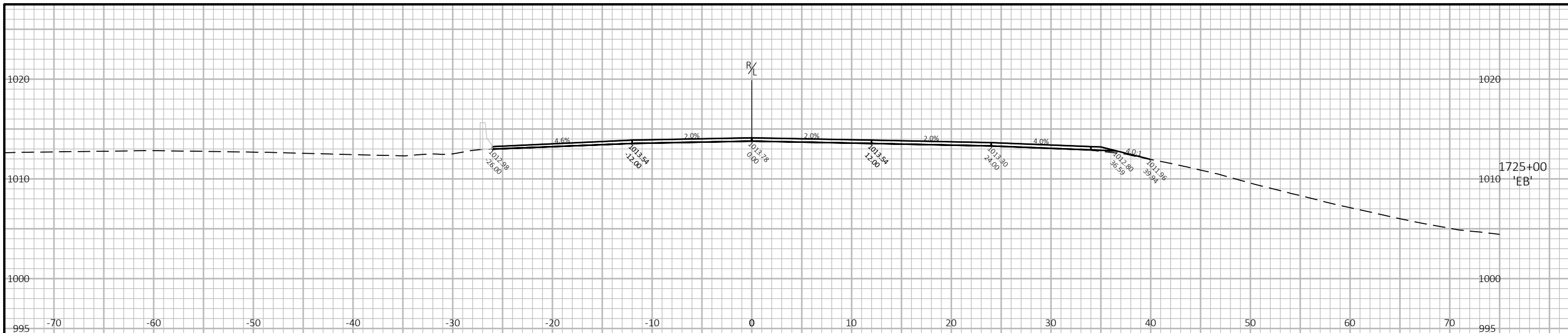


9

9



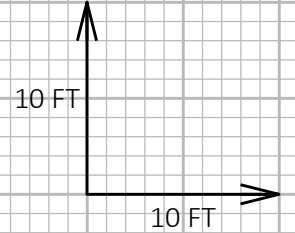
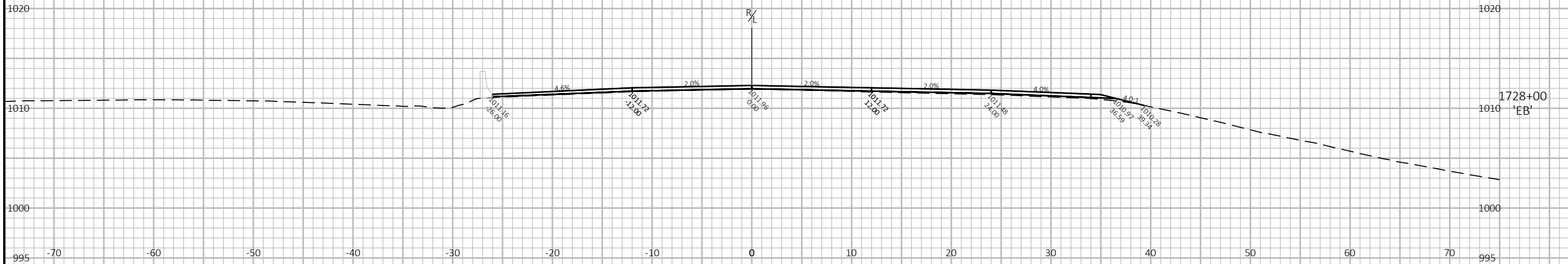
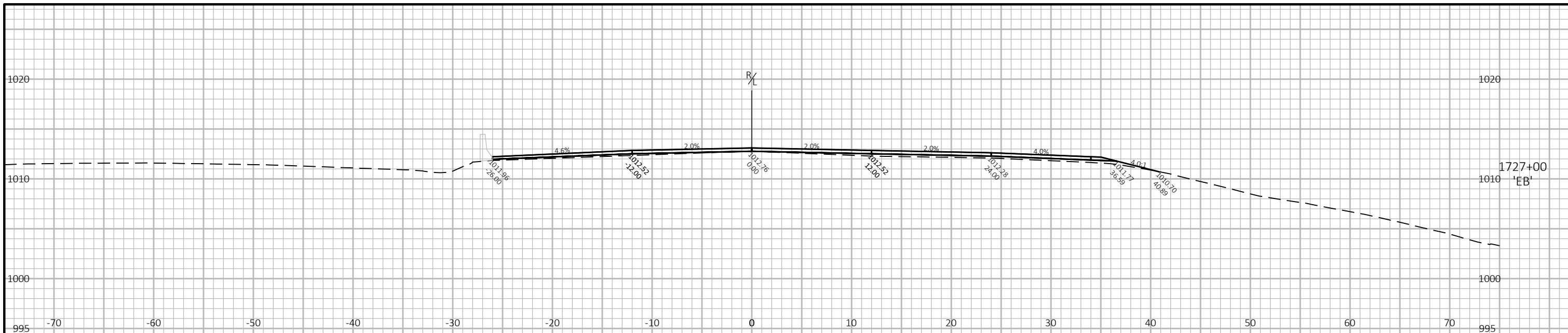
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

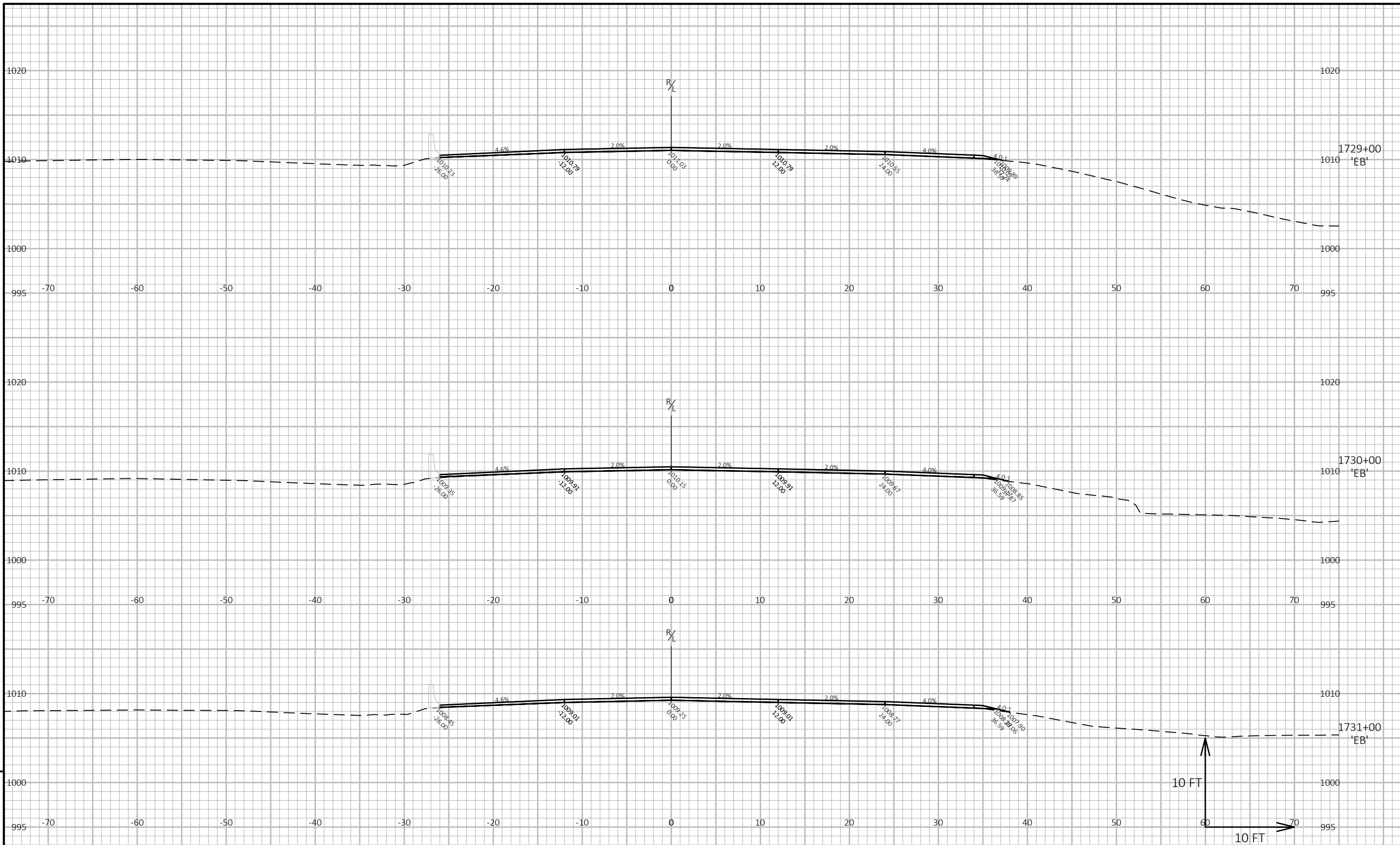
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

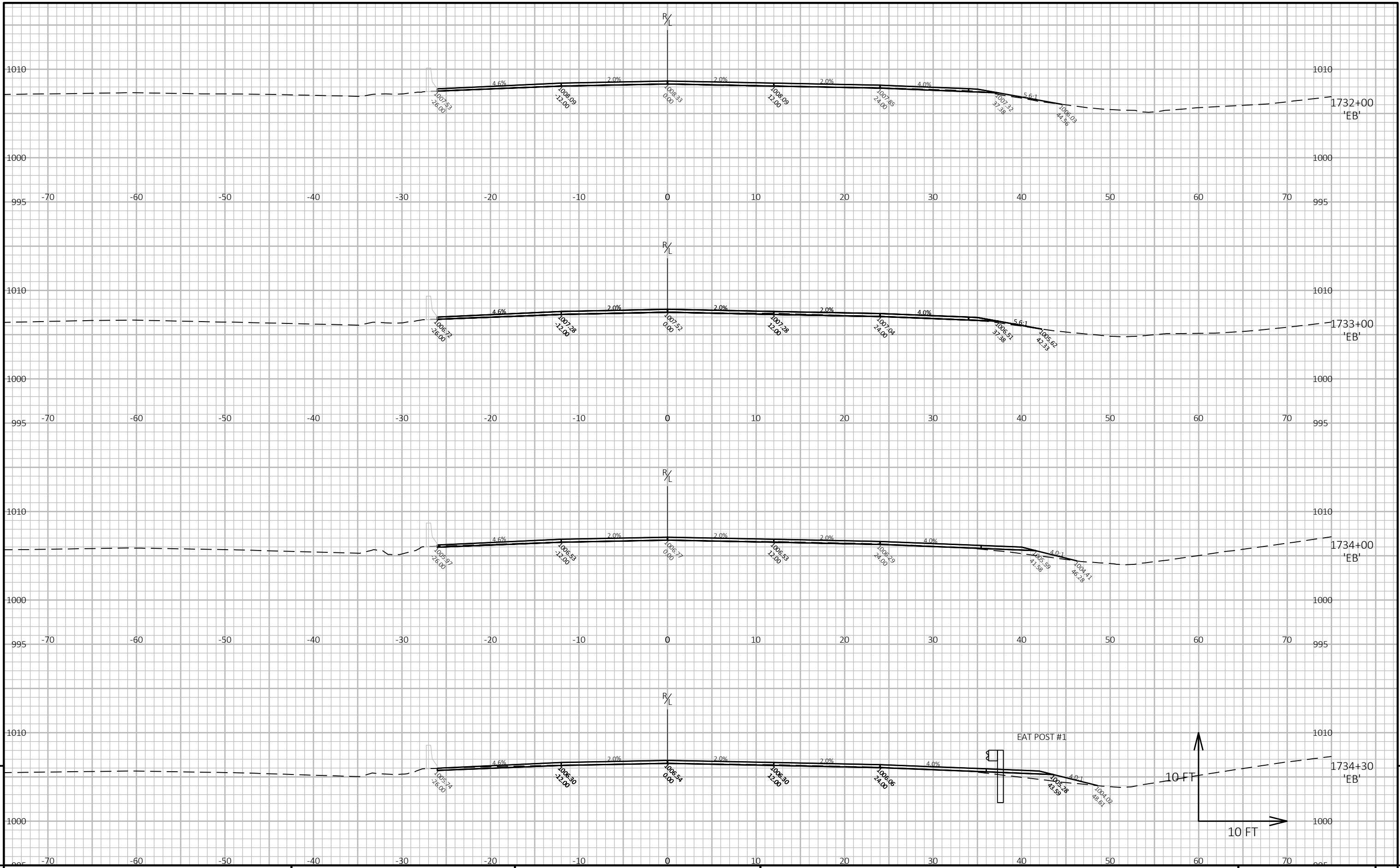
9

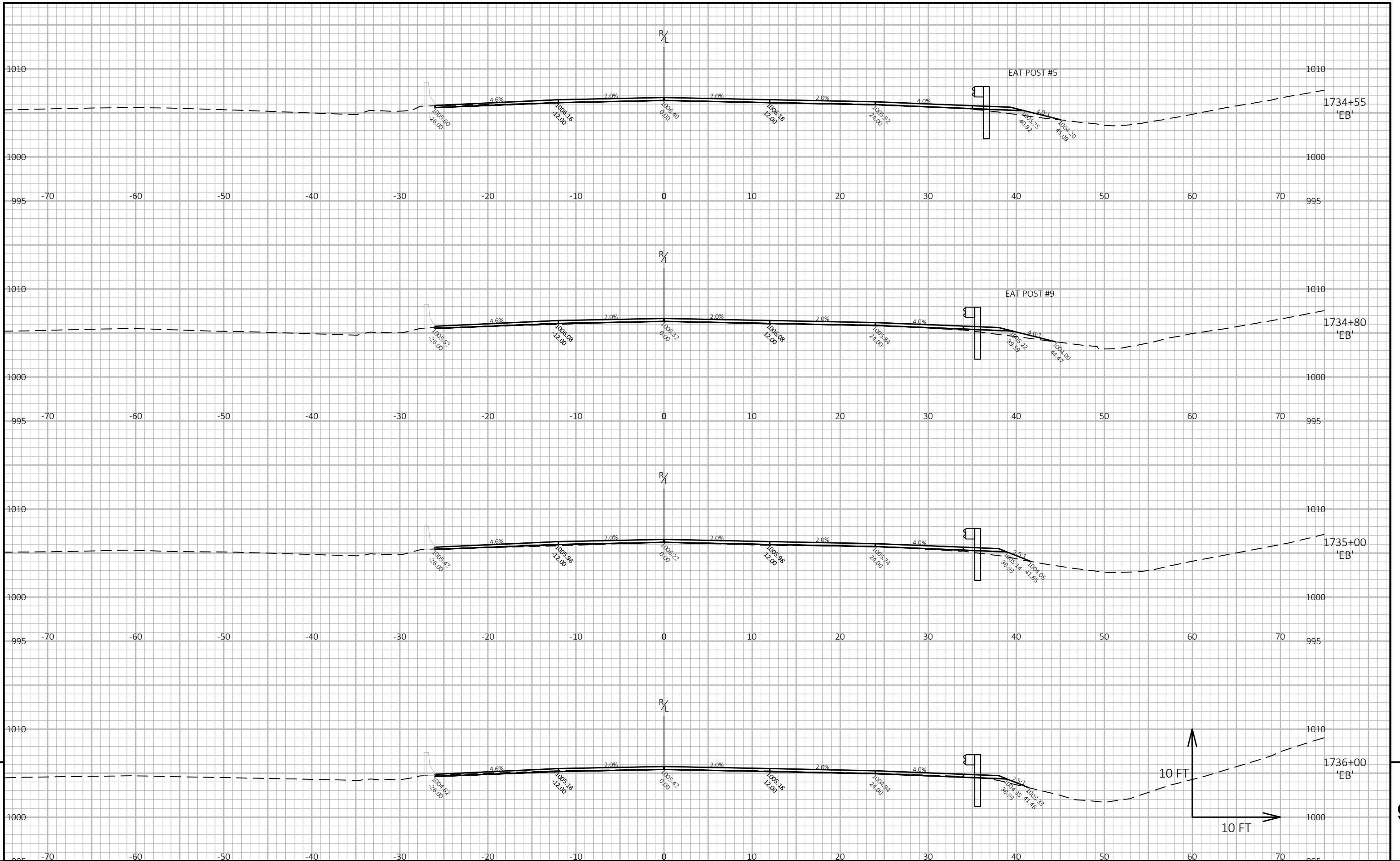
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9
10 FT
10 FT
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET
------------------------	------------	------------------	-----------------------	-------





PROJECT NO: 1011-00-82

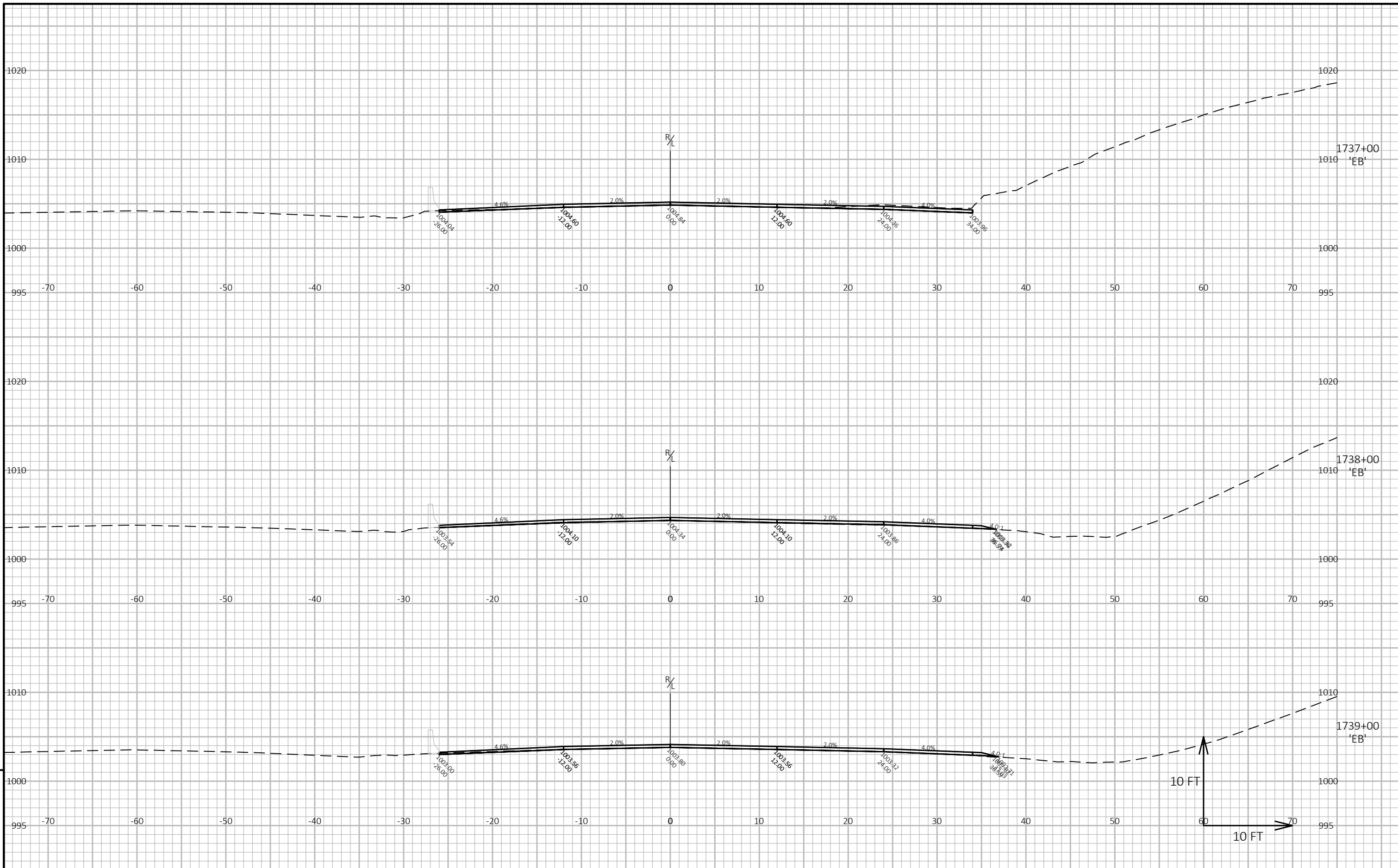
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

E



PROJECT NO: 1011-00-82

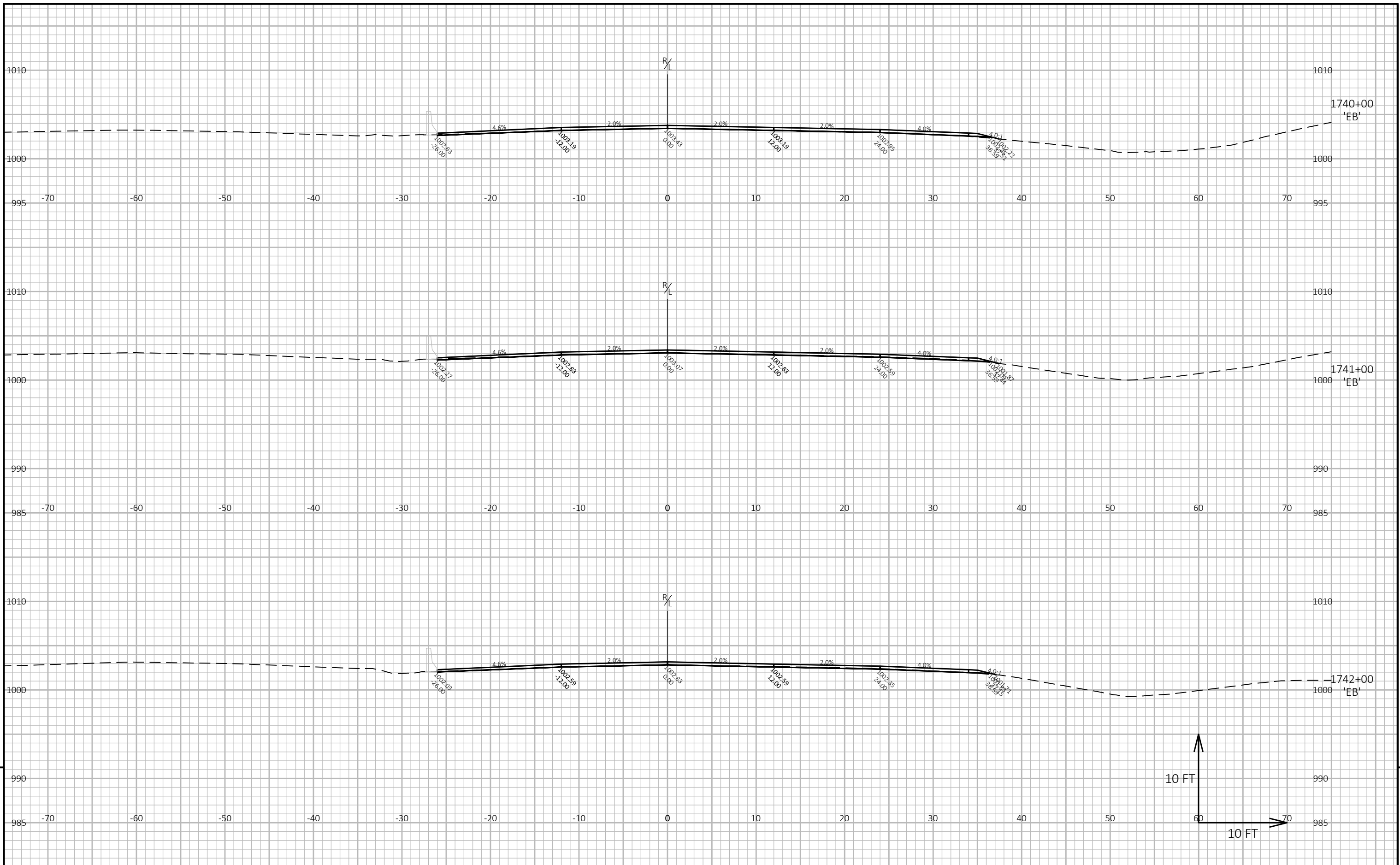
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

E



PROJECT NO: 1011-00-82

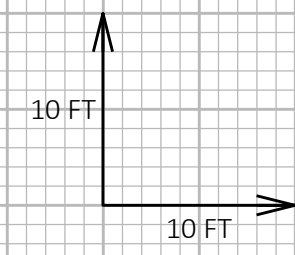
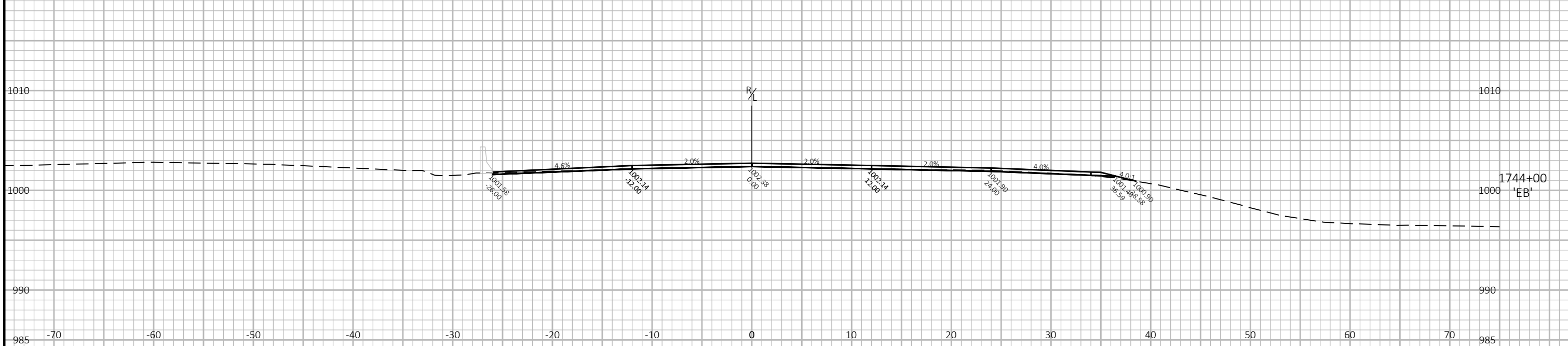
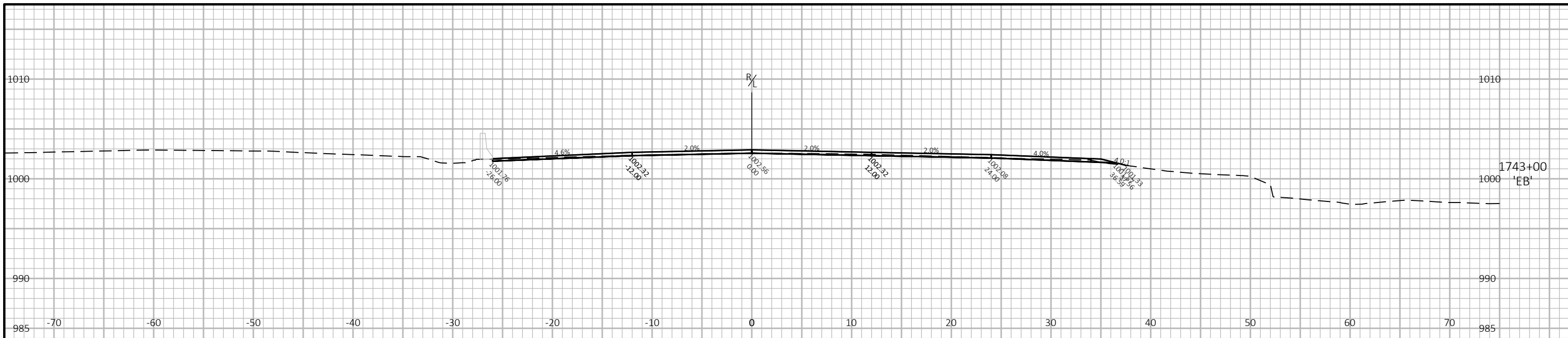
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

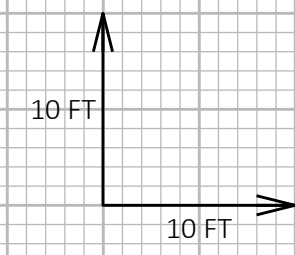
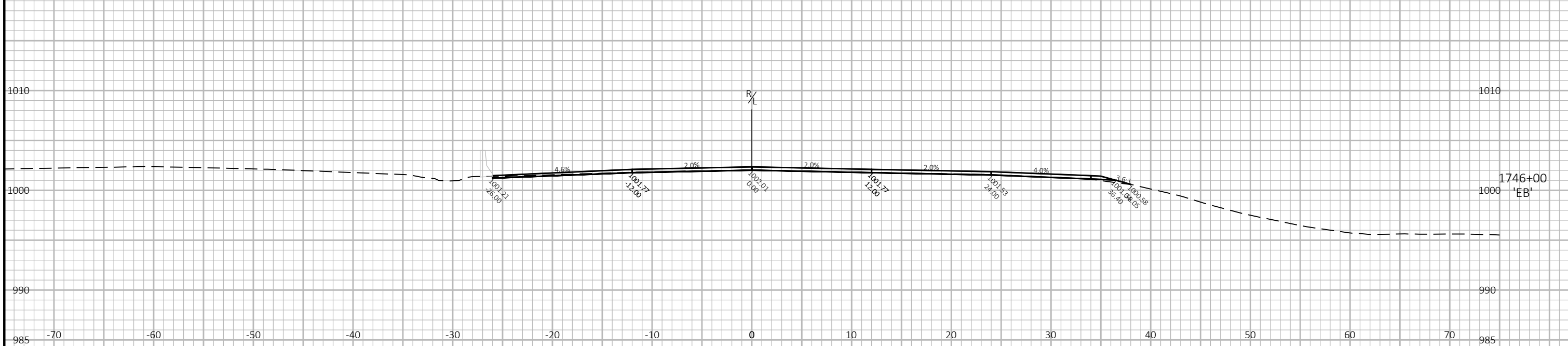
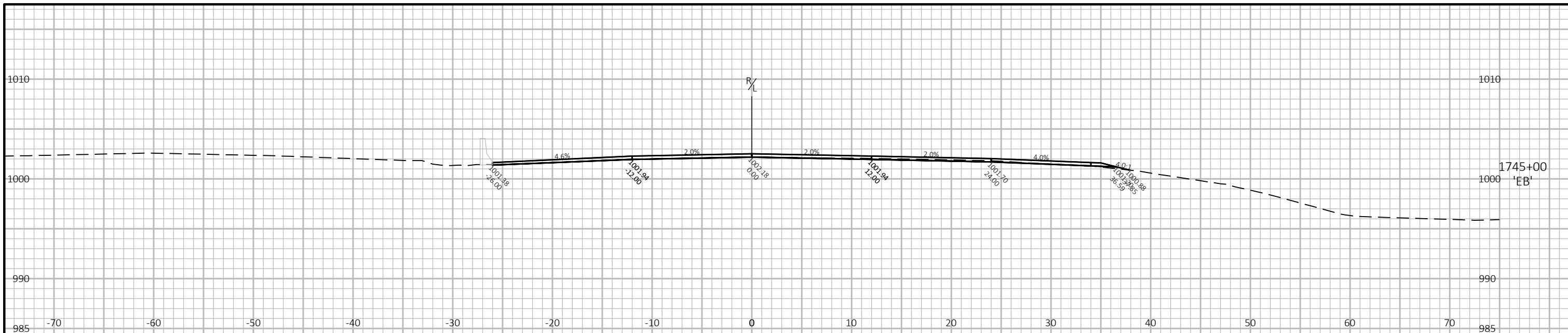
E



9

9

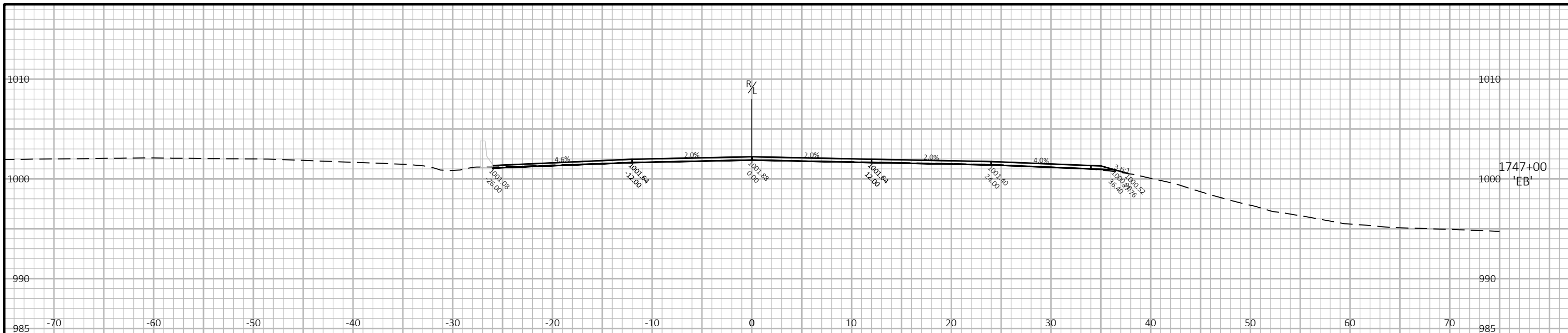
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET E
------------------------	------------	------------------	-----------------------	---------



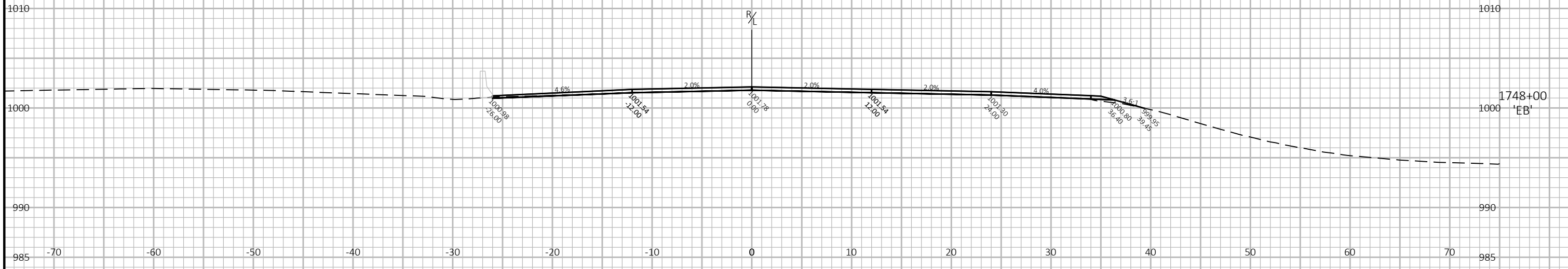
9

9

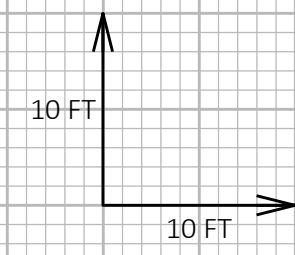
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



1747+00
'EB'



1748+00
'EB'



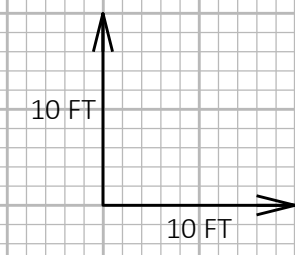
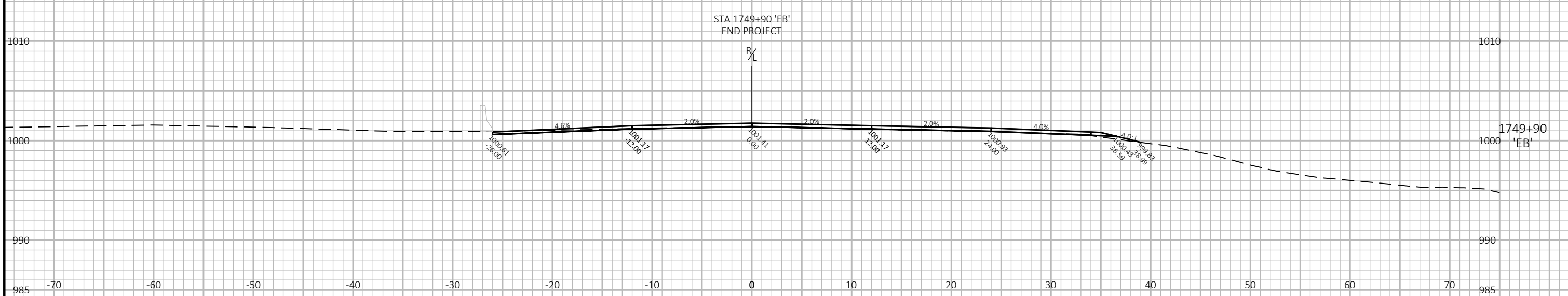
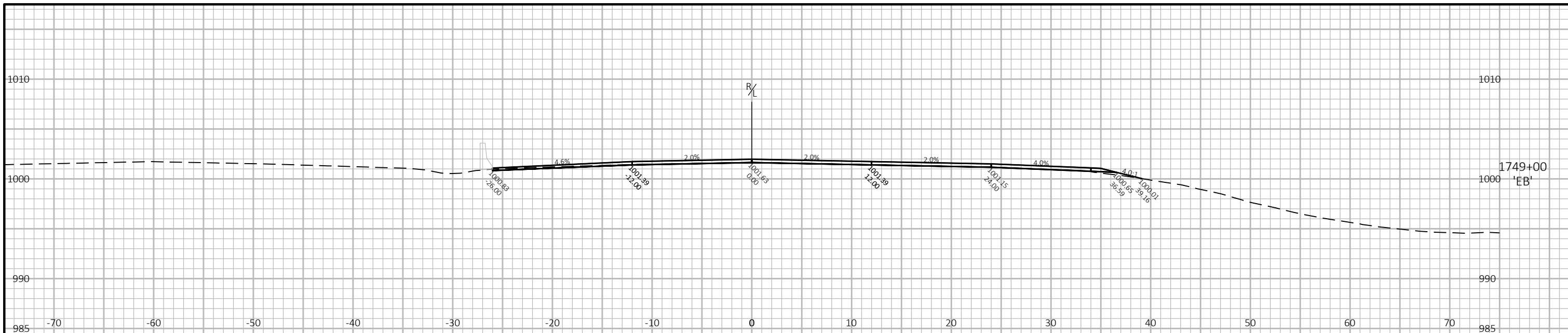
9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090205-XS.DWG PLOT DATE : 8/21/2023 1:14 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

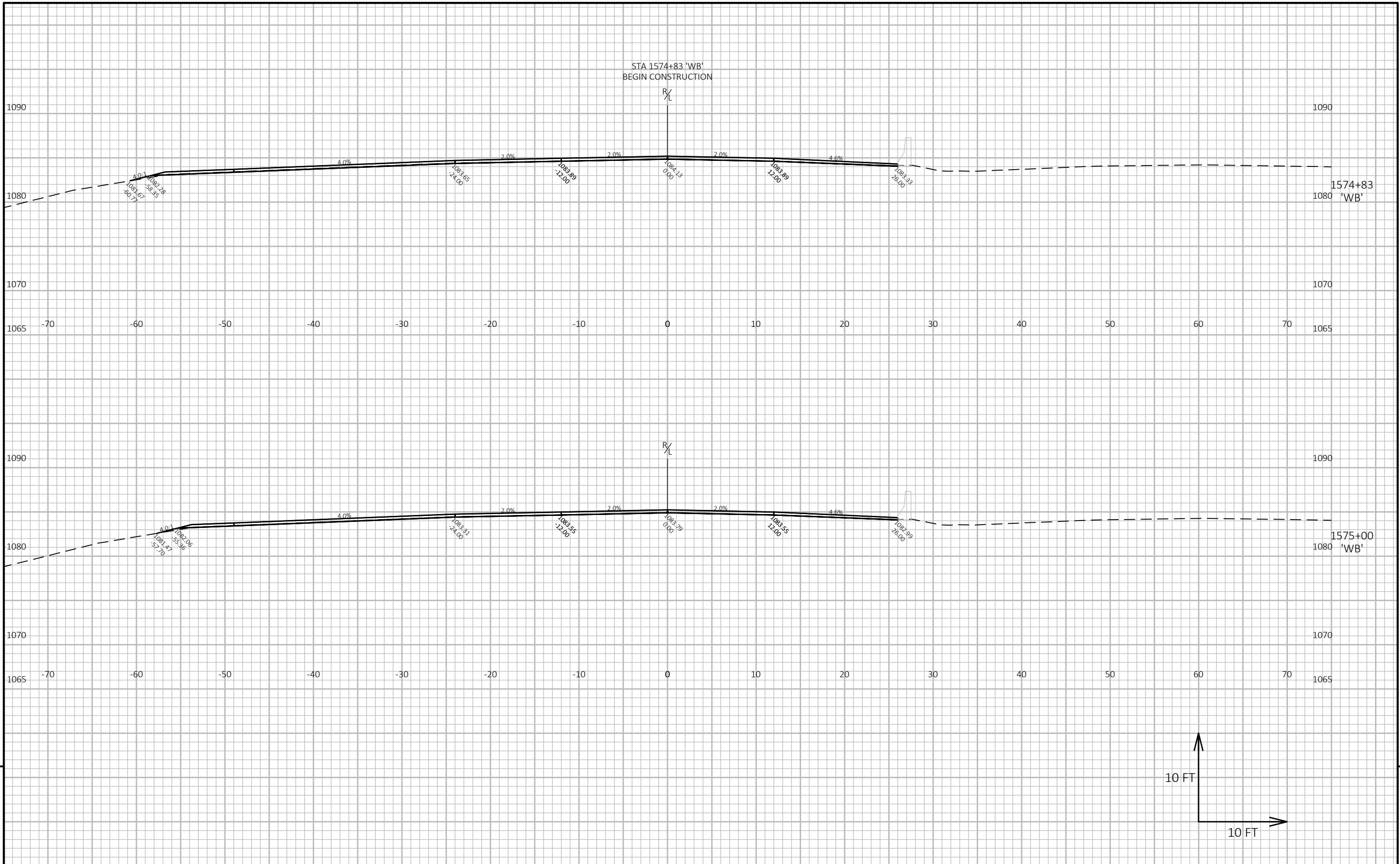
LAYOUT NAME - 090205-xs(13)



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

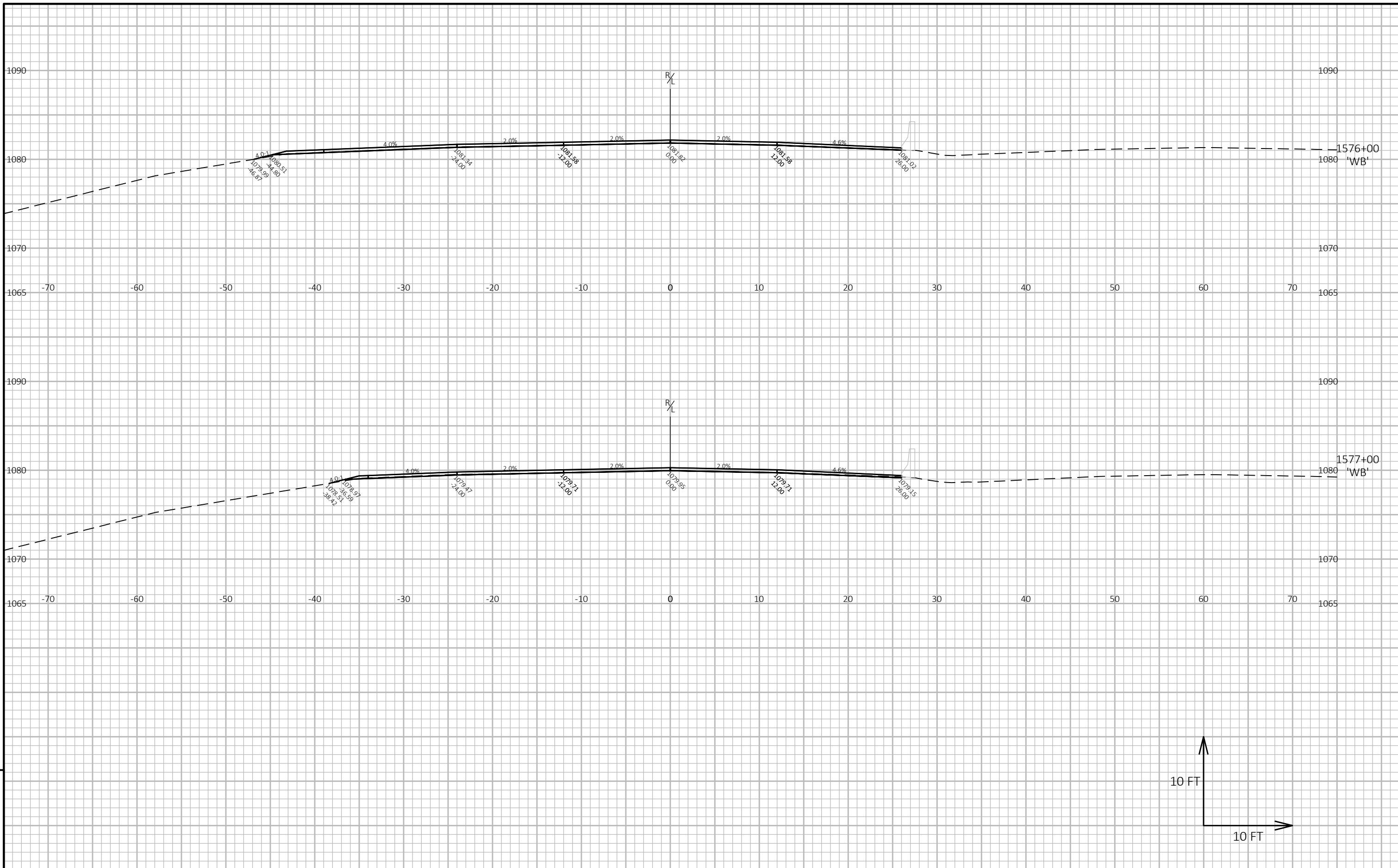
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

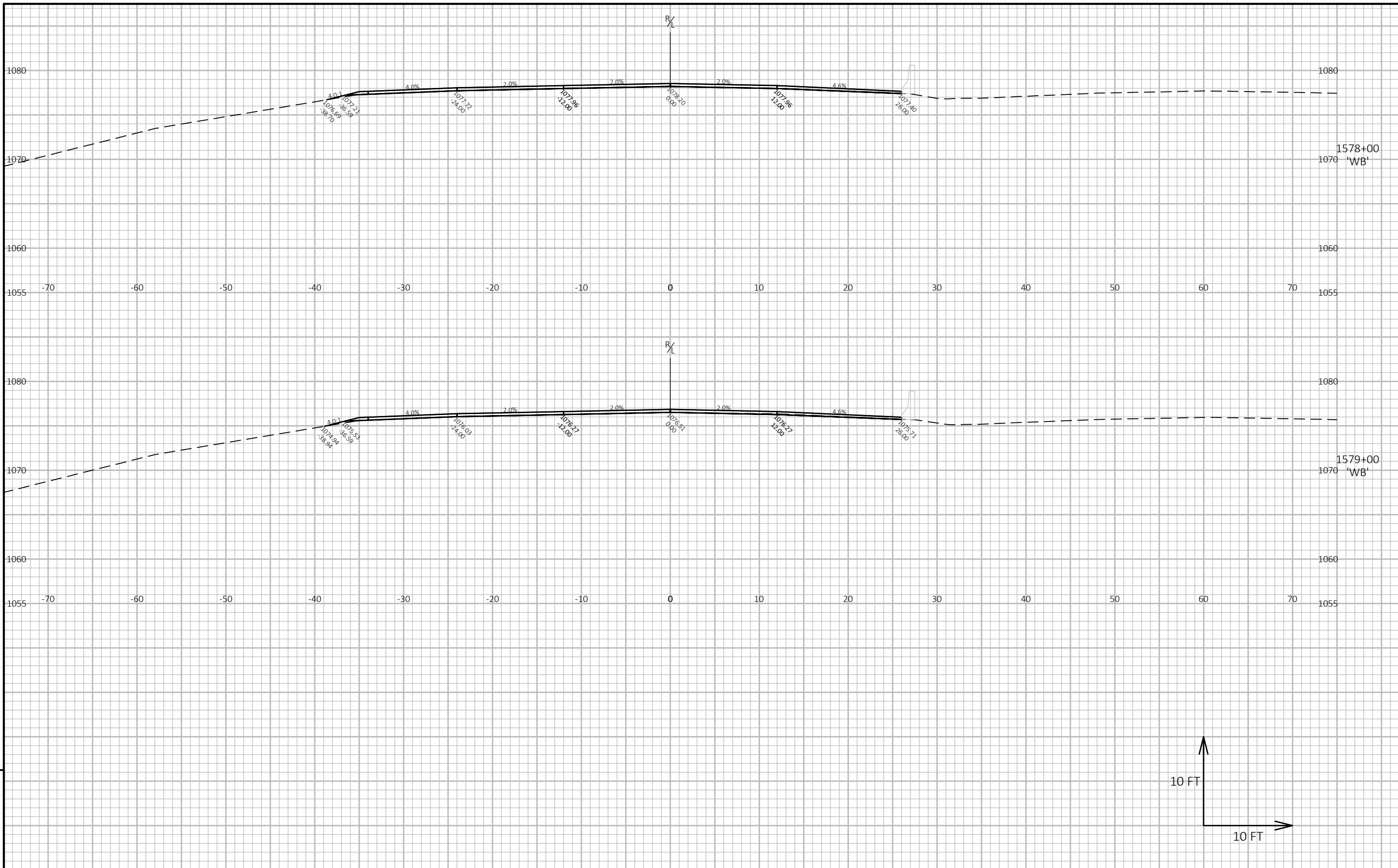
E



9

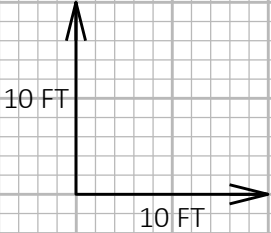
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



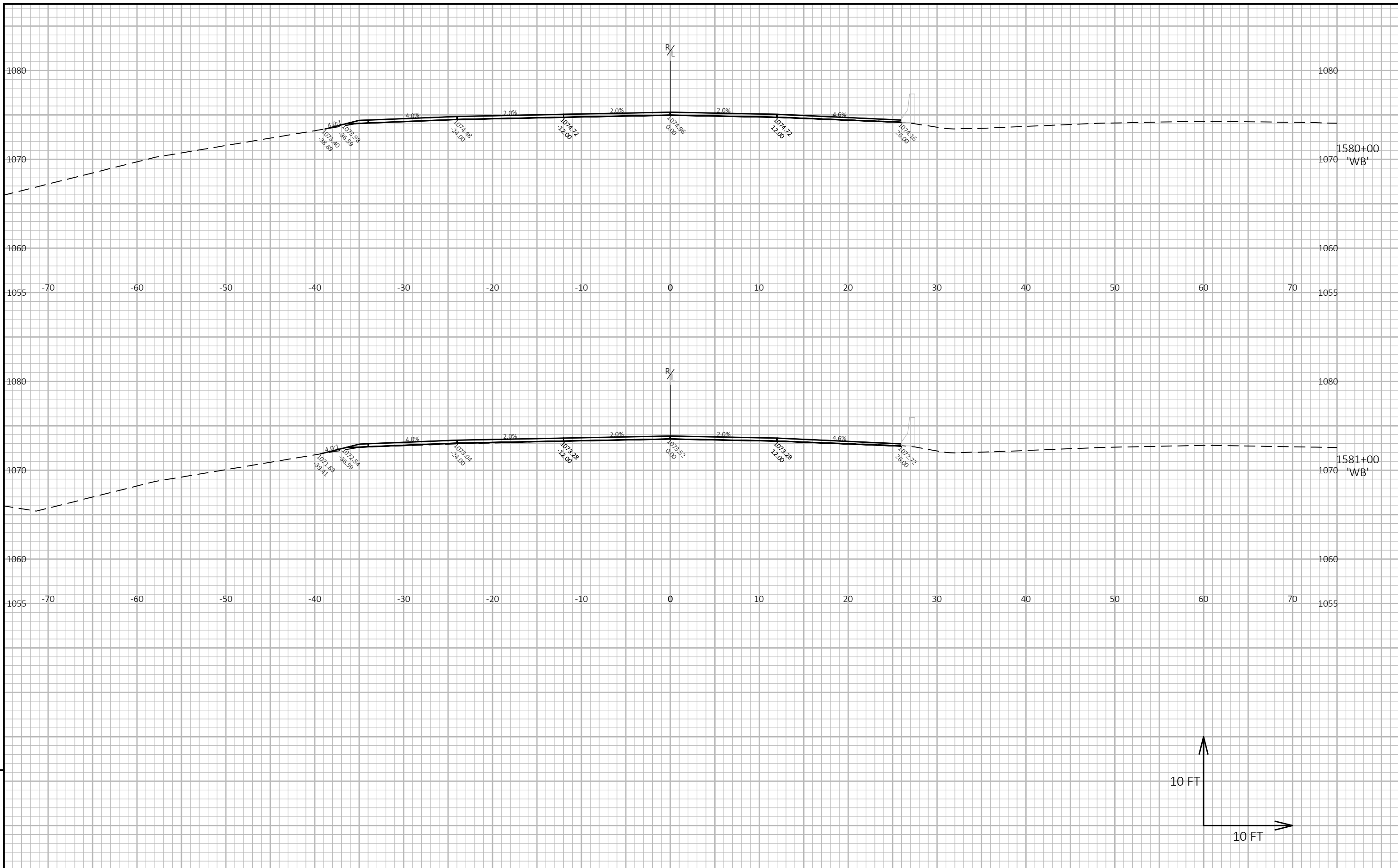
9

9



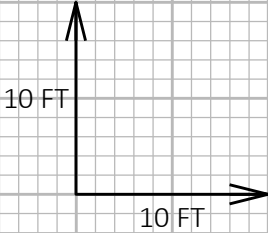
PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090206-XS-WB.DWG PLOT DATE : 1/24/2024 12:02 PM PLOT BY : DEGNER, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



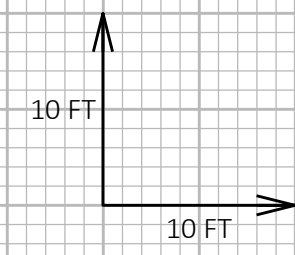
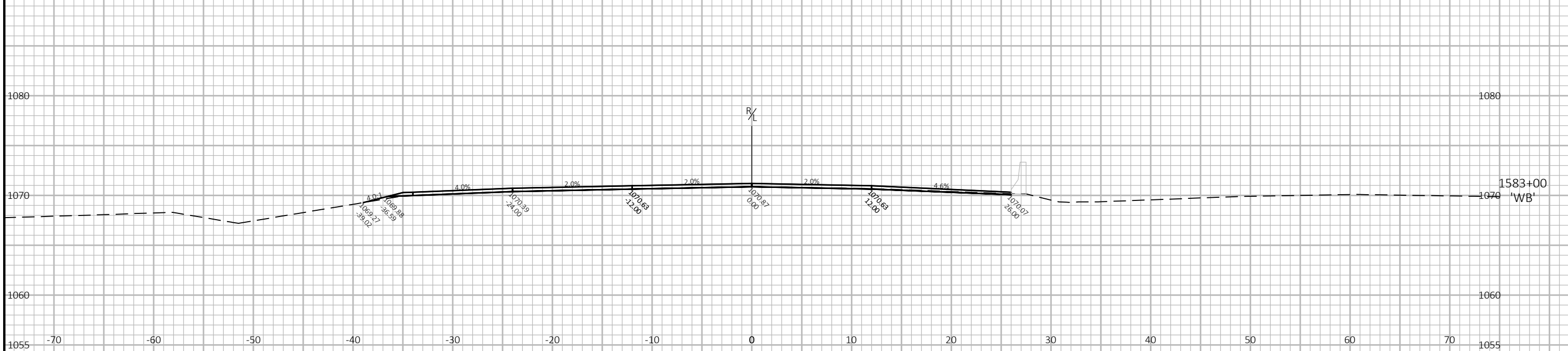
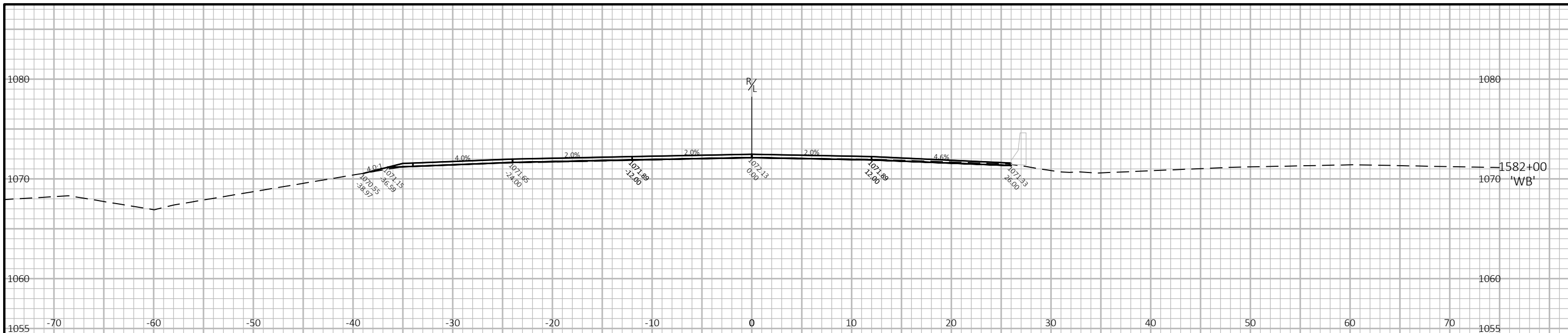
9

9



PROJECT NO: 1011-00-82 HWY: IH 39 COUNTY: COLUMBIA CROSS SECTIONS: IH 39 SHEET E

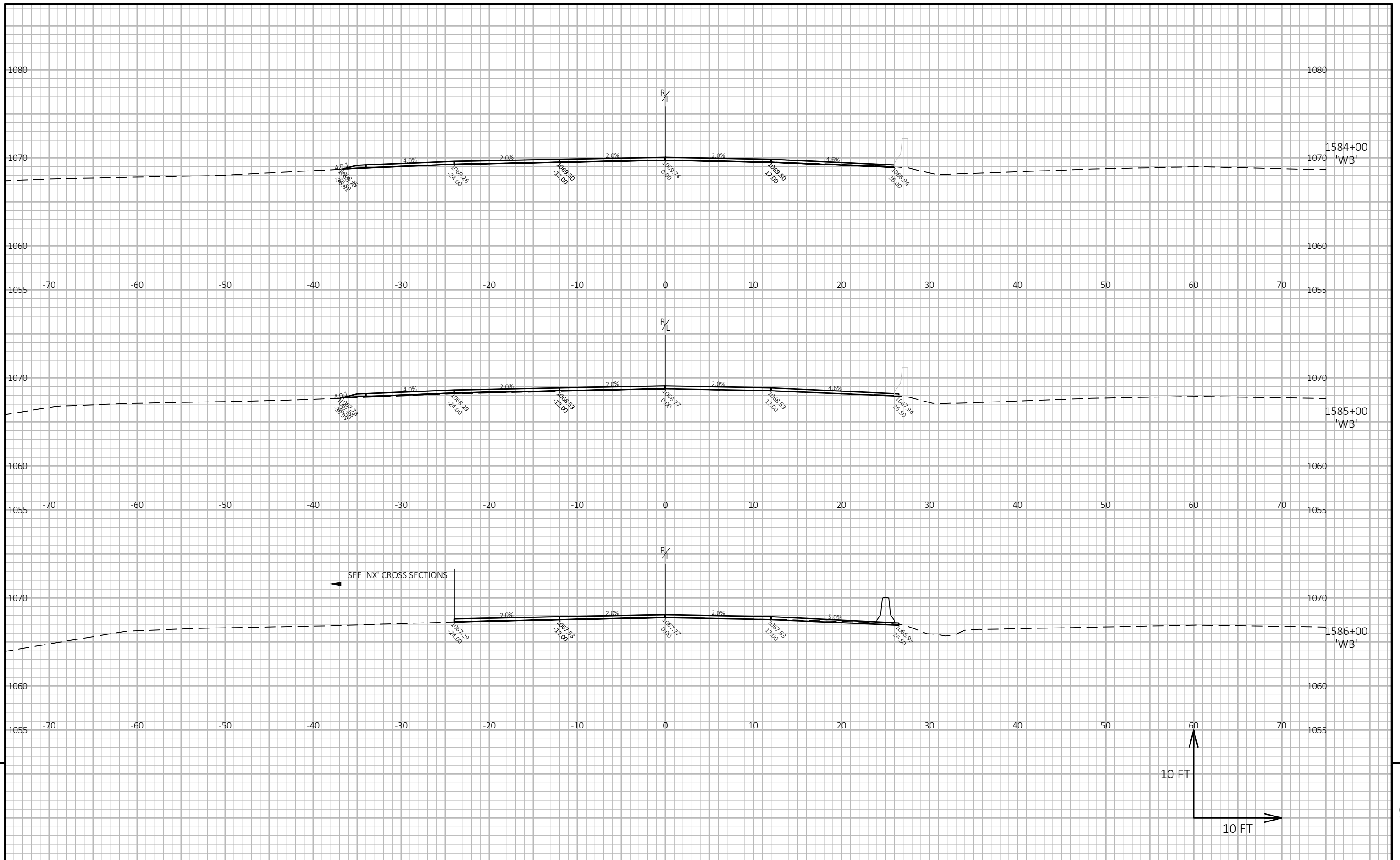
FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090206-XS-WB.DWG PLOT DATE : 1/24/2024 12:02 PM PLOT BY : DEGNER, MARK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

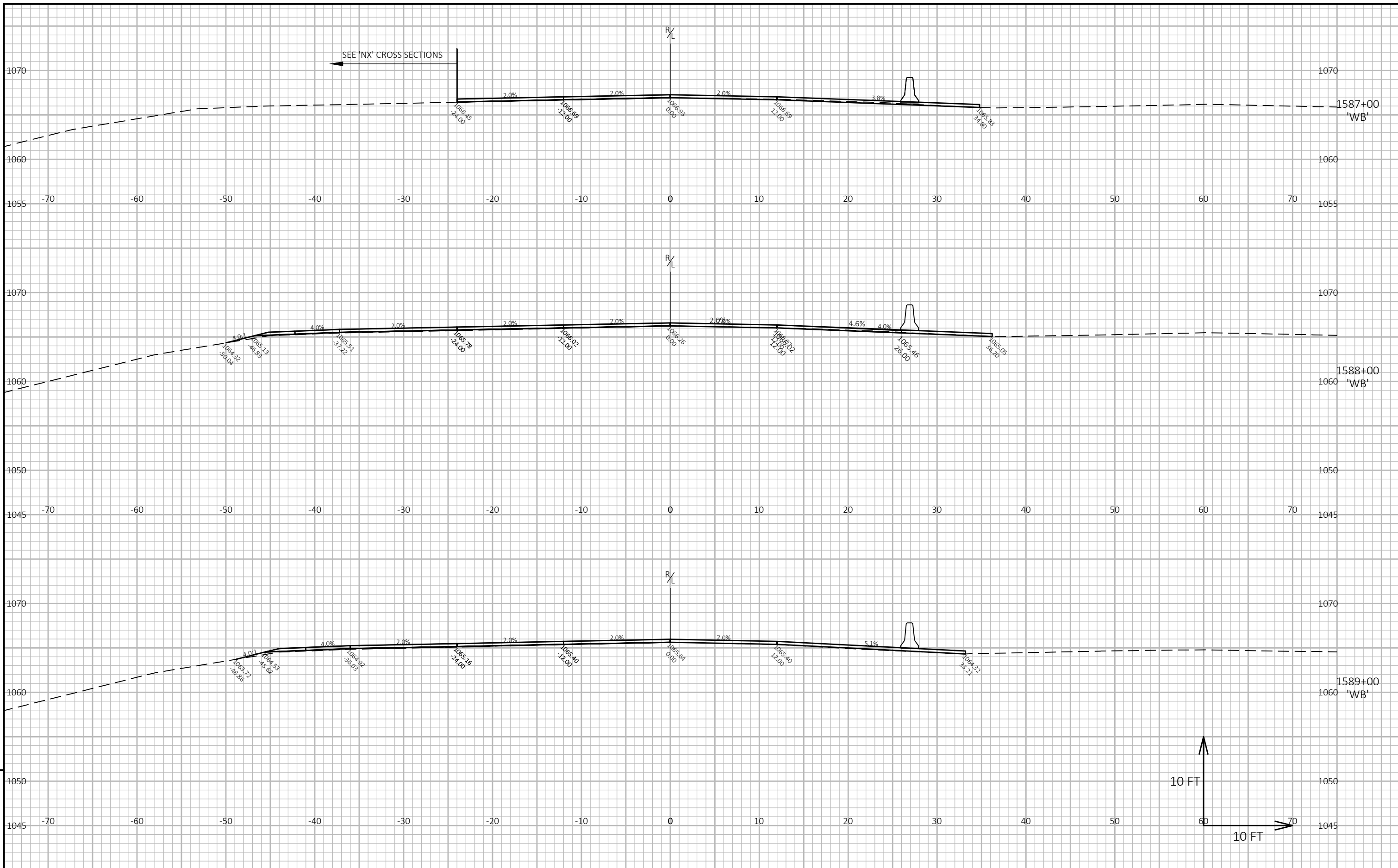
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

E



PROJECT NO: 1011-00-82

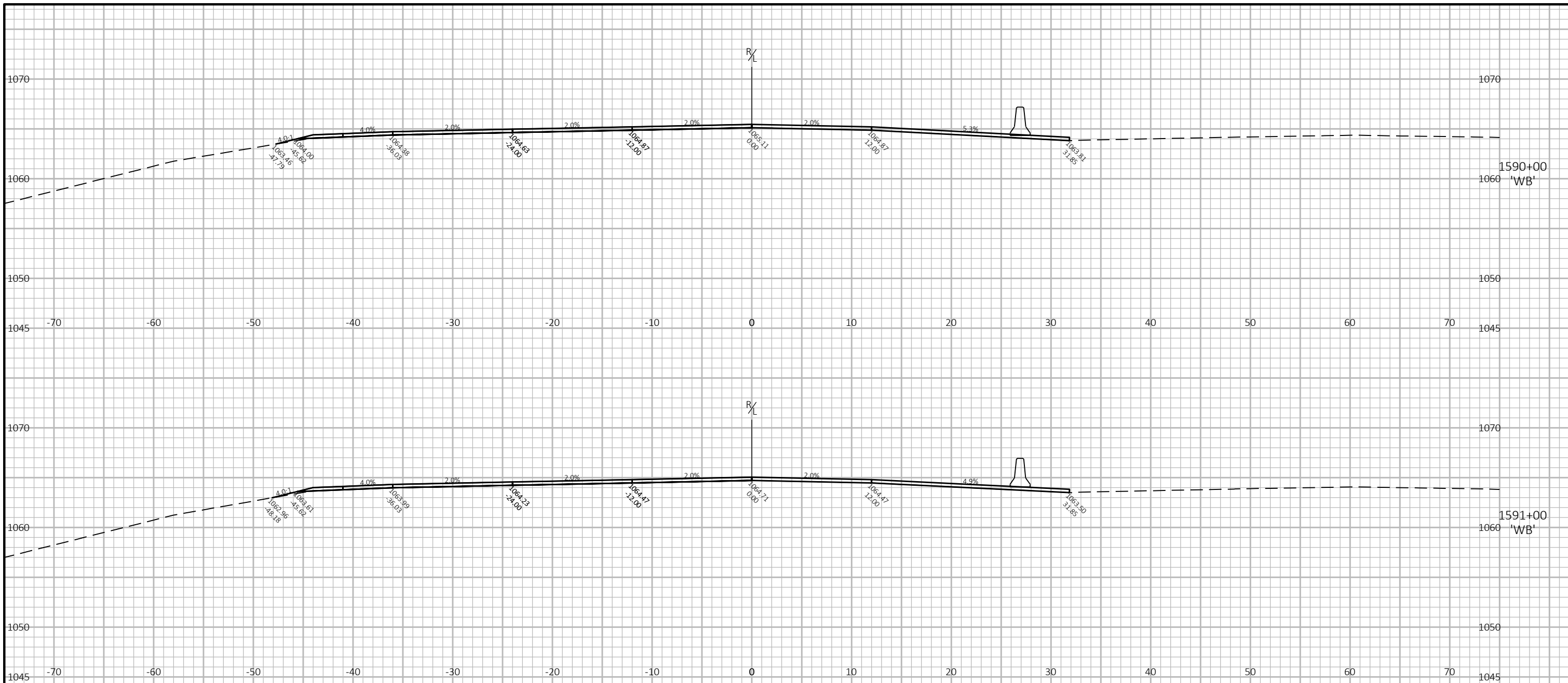
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

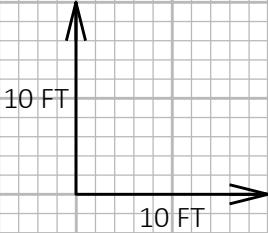
SHEET

E

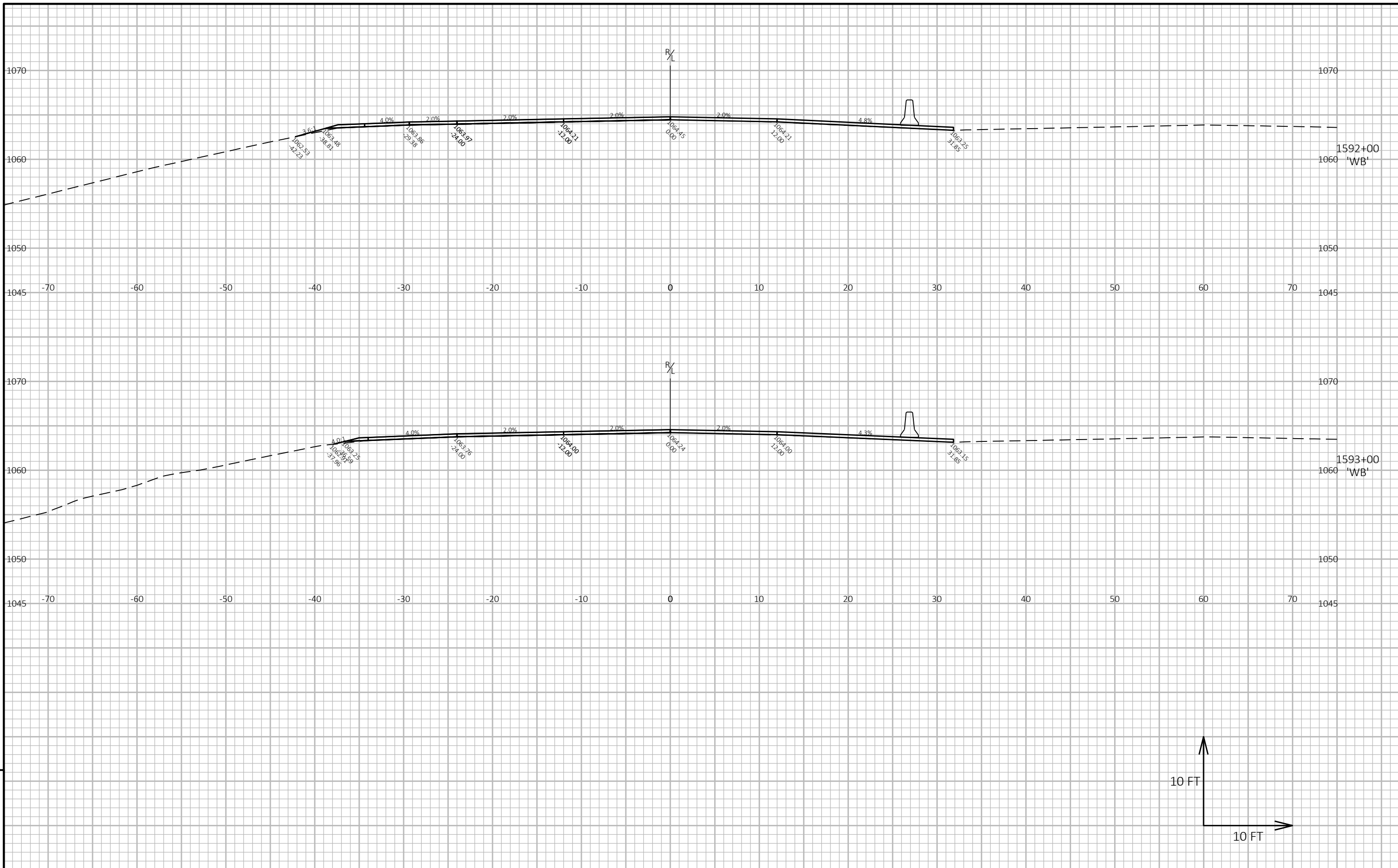


9

9

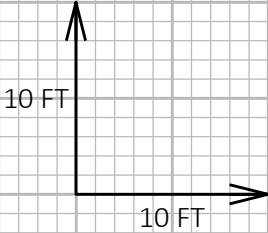


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---

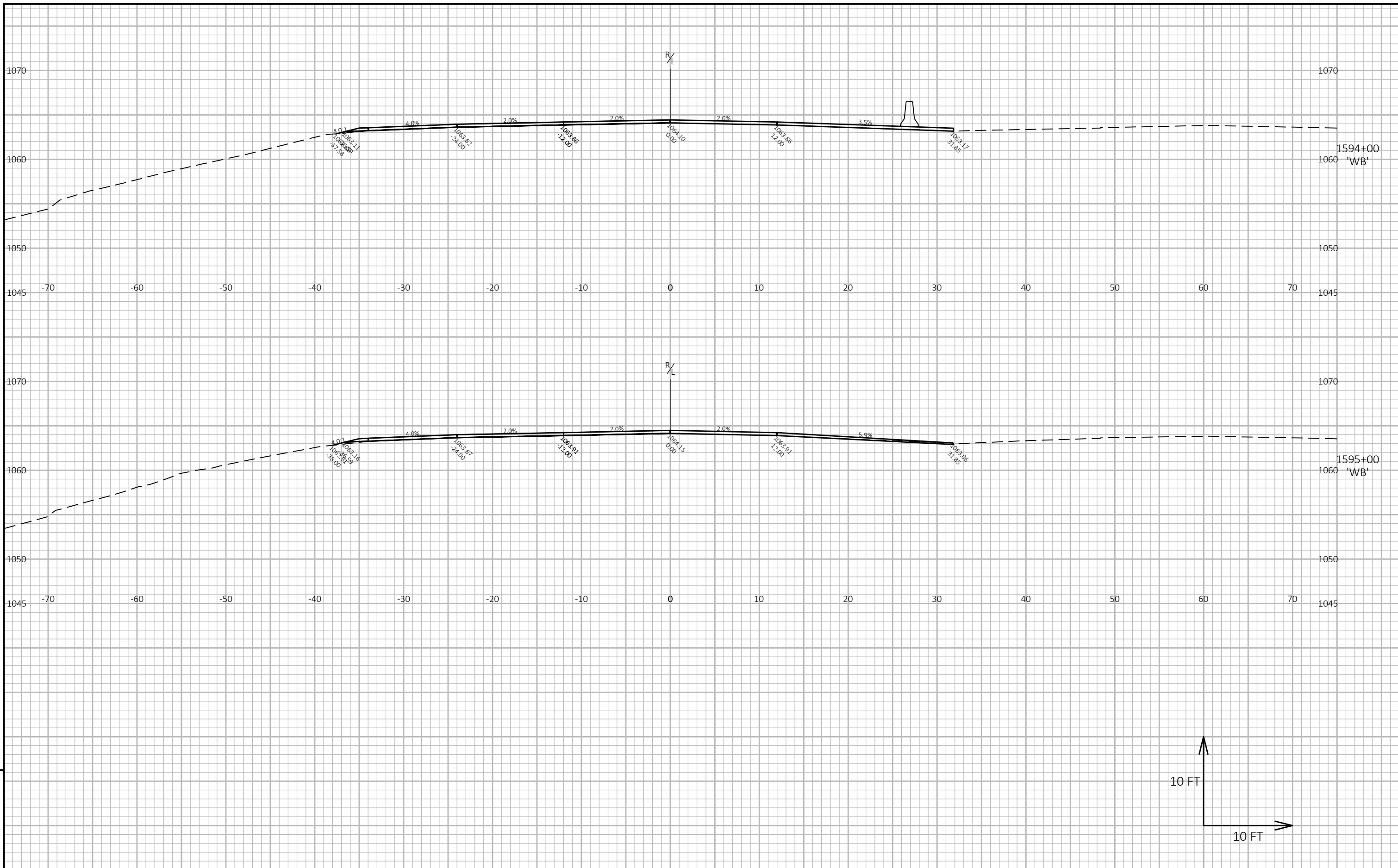


9

9



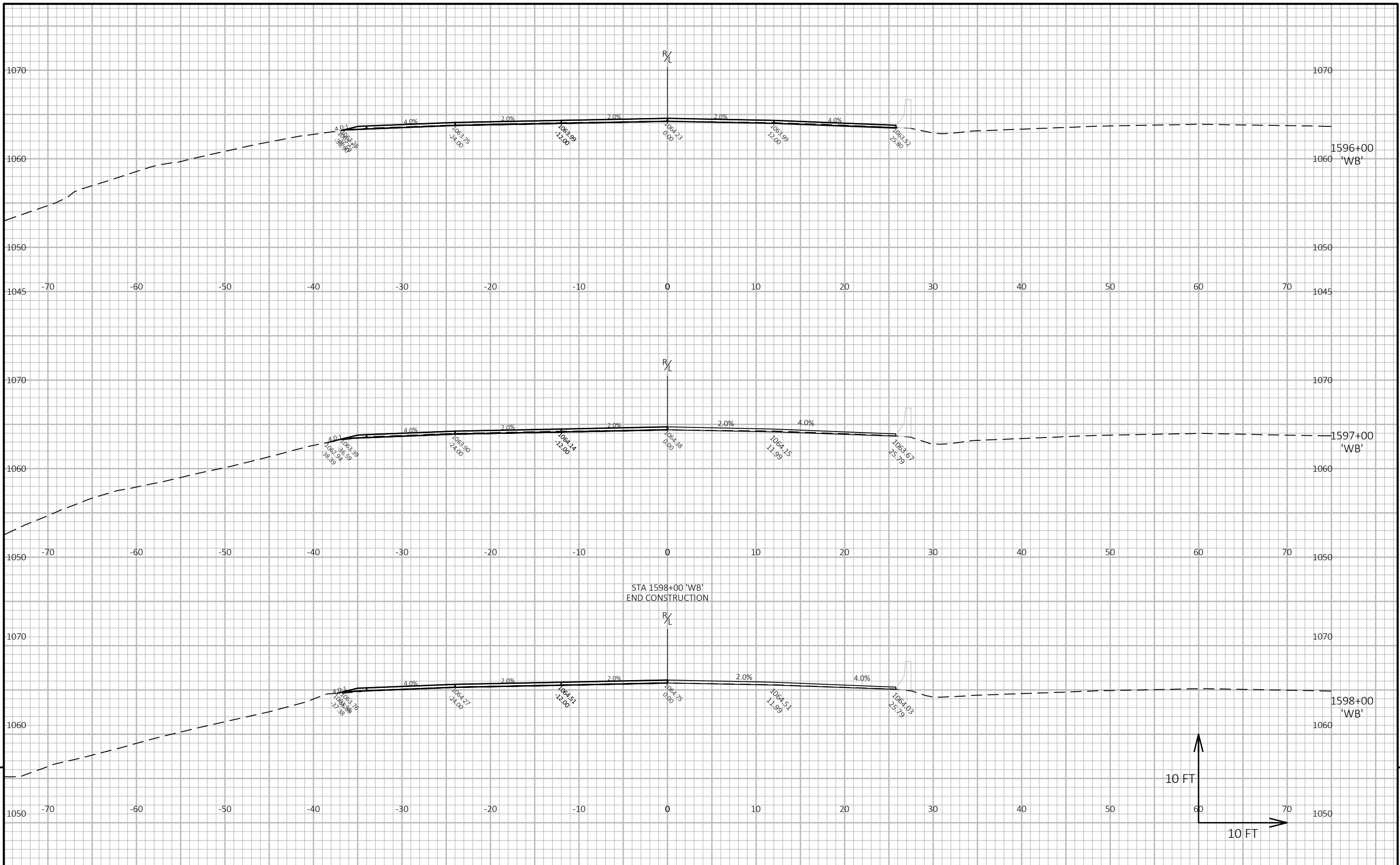
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: IH 39	SHEET	E
------------------------	------------	------------------	-----------------------	-------	---



PROJECT NO: 1011-00-82

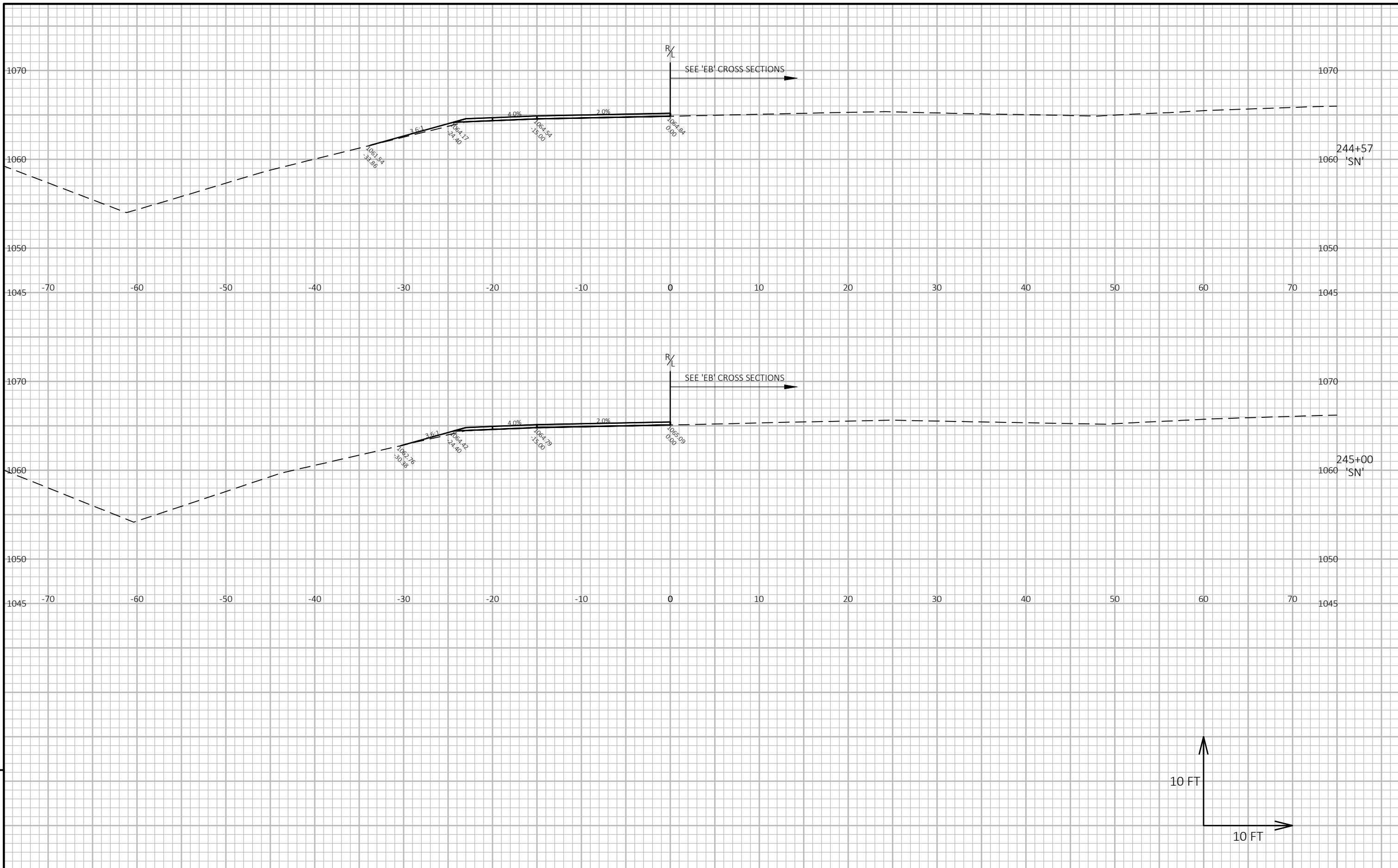
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: IH 39

SHEET

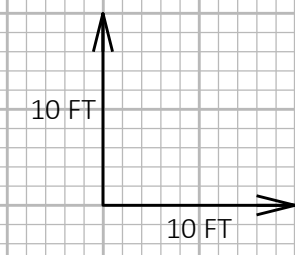
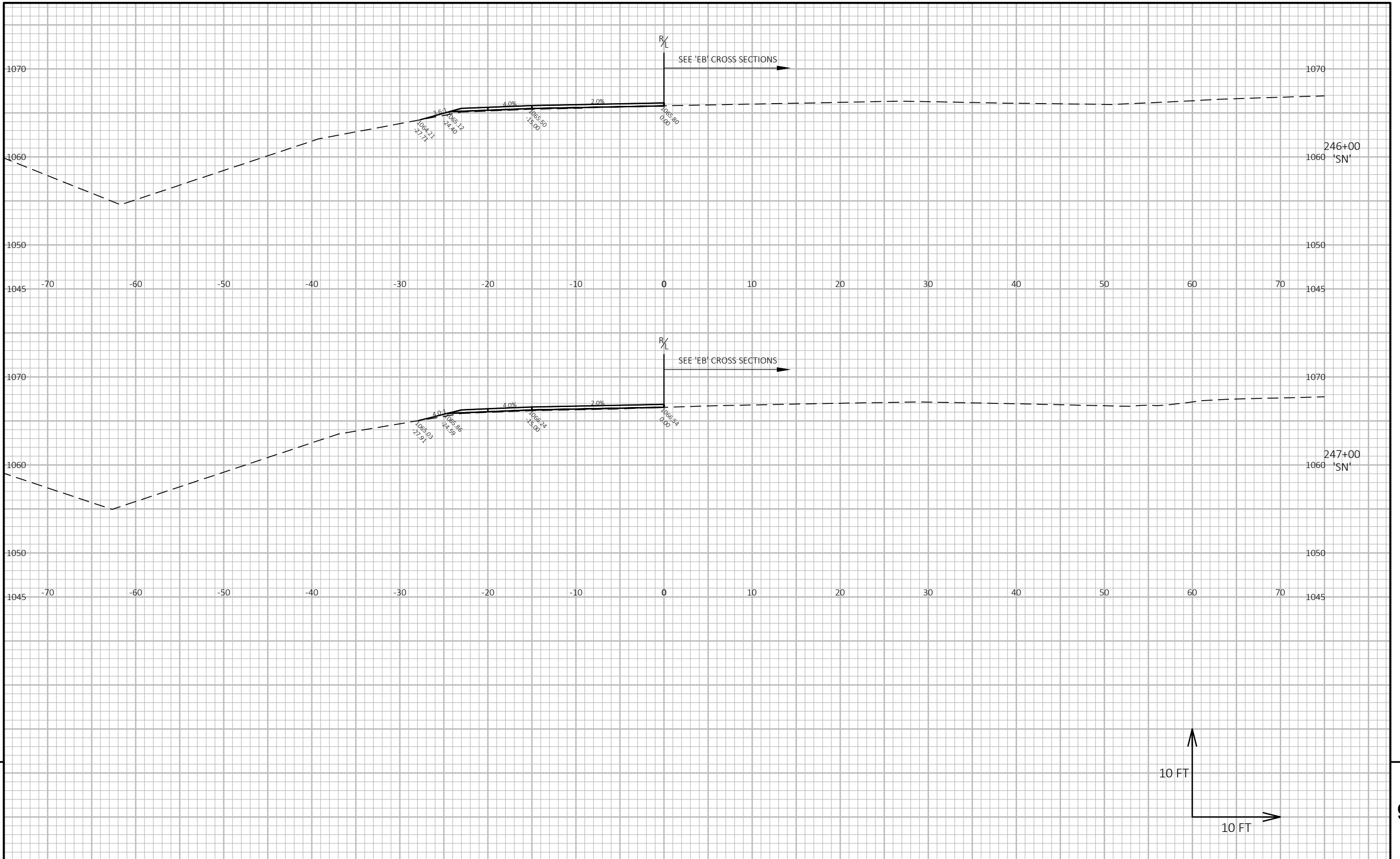
E



9

9

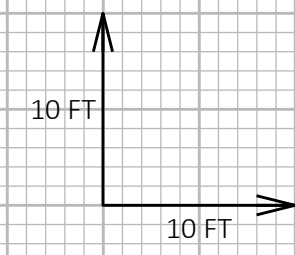
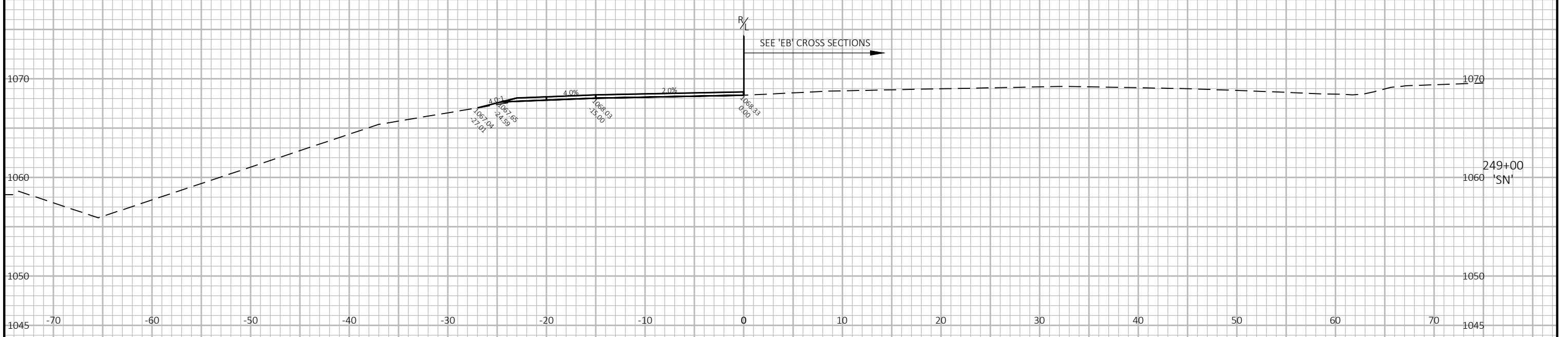
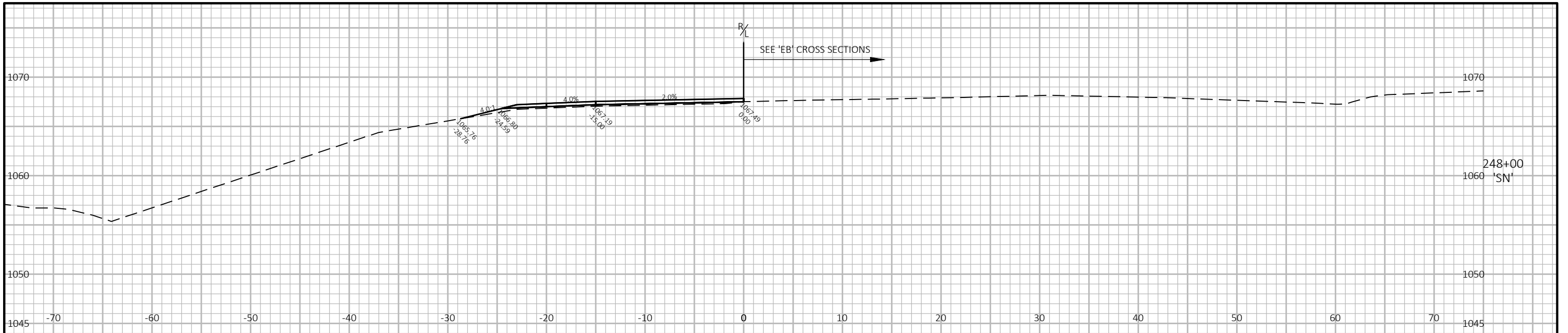
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: ENTRANCE RAMP	SHEET	E
------------------------	------------	------------------	-------------------------------	-------	---



9

9

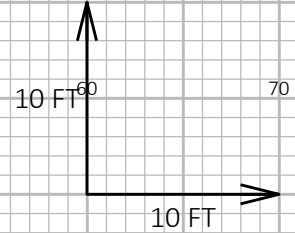
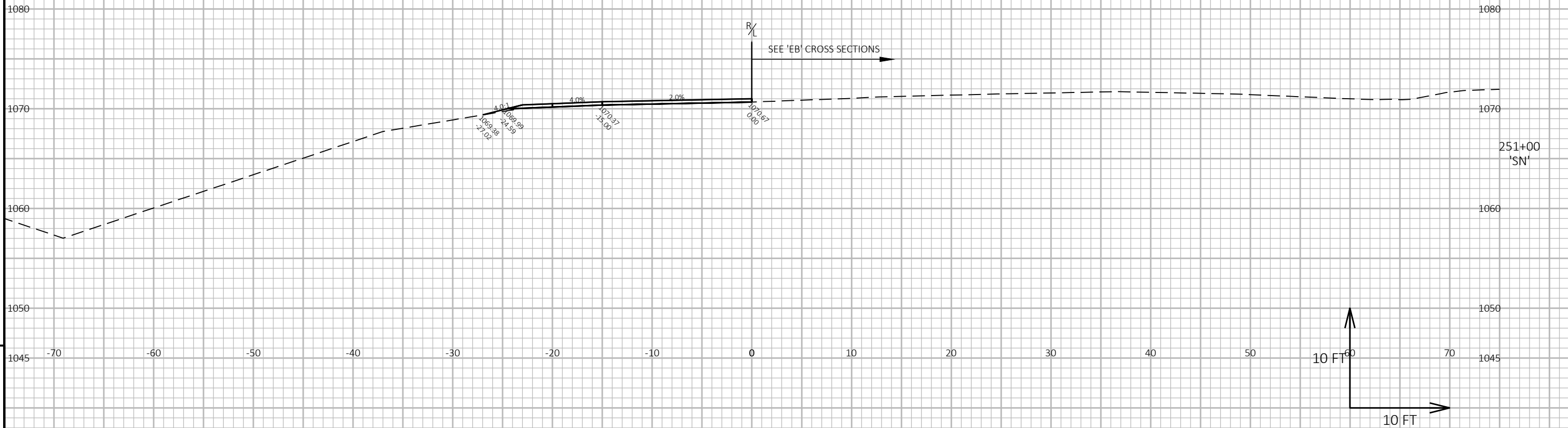
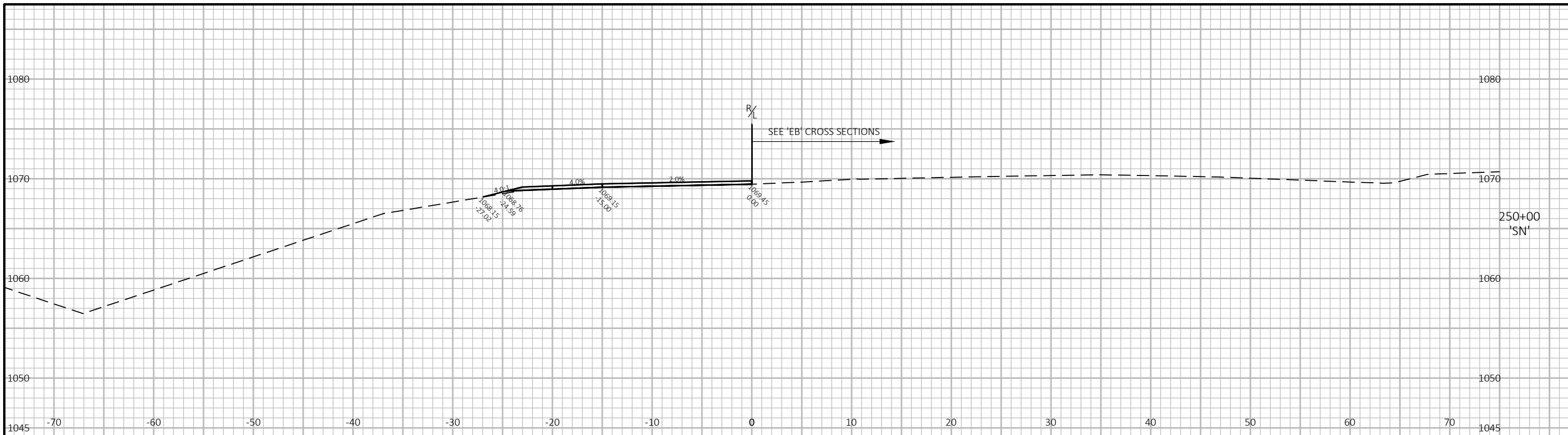
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: ENTRANCE RAMP	SHEET	E
------------------------	------------	------------------	-------------------------------	-------	---



9

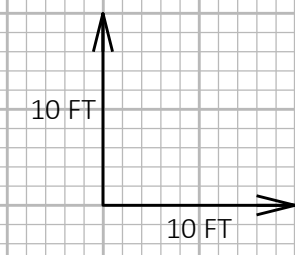
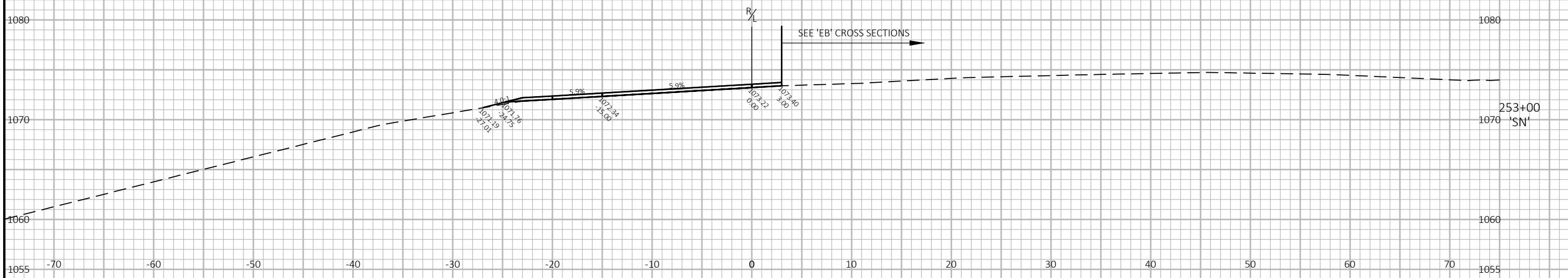
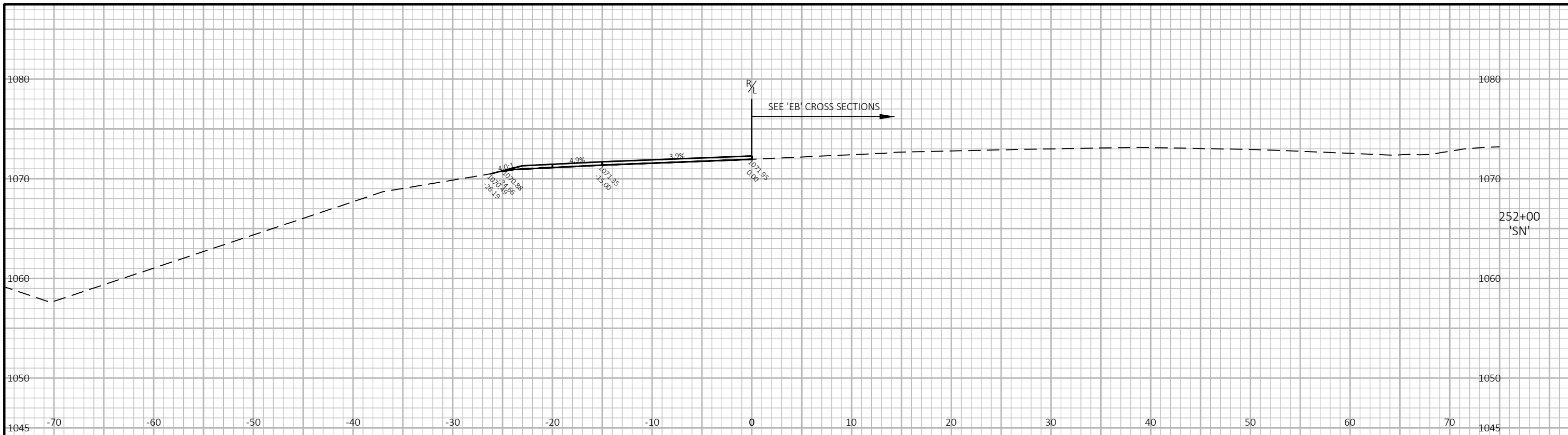
9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: ENTRANCE RAMP	SHEET	E
------------------------	------------	------------------	-------------------------------	-------	---



9 9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: ENTRANCE RAMP	SHEET E
------------------------	------------	------------------	-------------------------------	---------



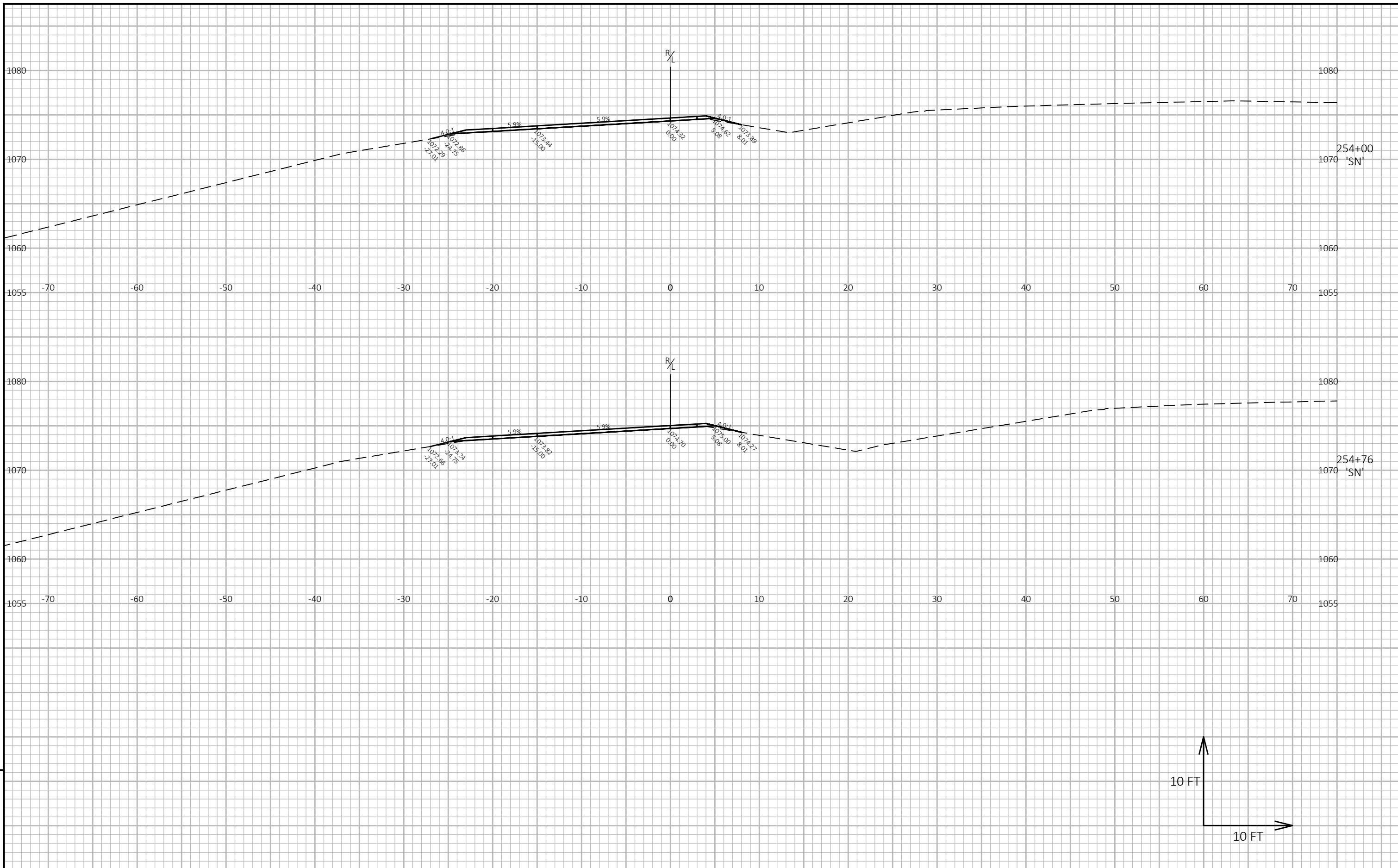
9

9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: ENTRANCE RAMP	SHEET	E
------------------------	------------	------------------	-------------------------------	-------	---

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090207-XS-ENTRANCE_RAMP.DWG PLOT DATE : 8/21/2023 1:40 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 090207-xs-EntranceRamp(05)



9

9

PROJECT NO: 1011-00-82

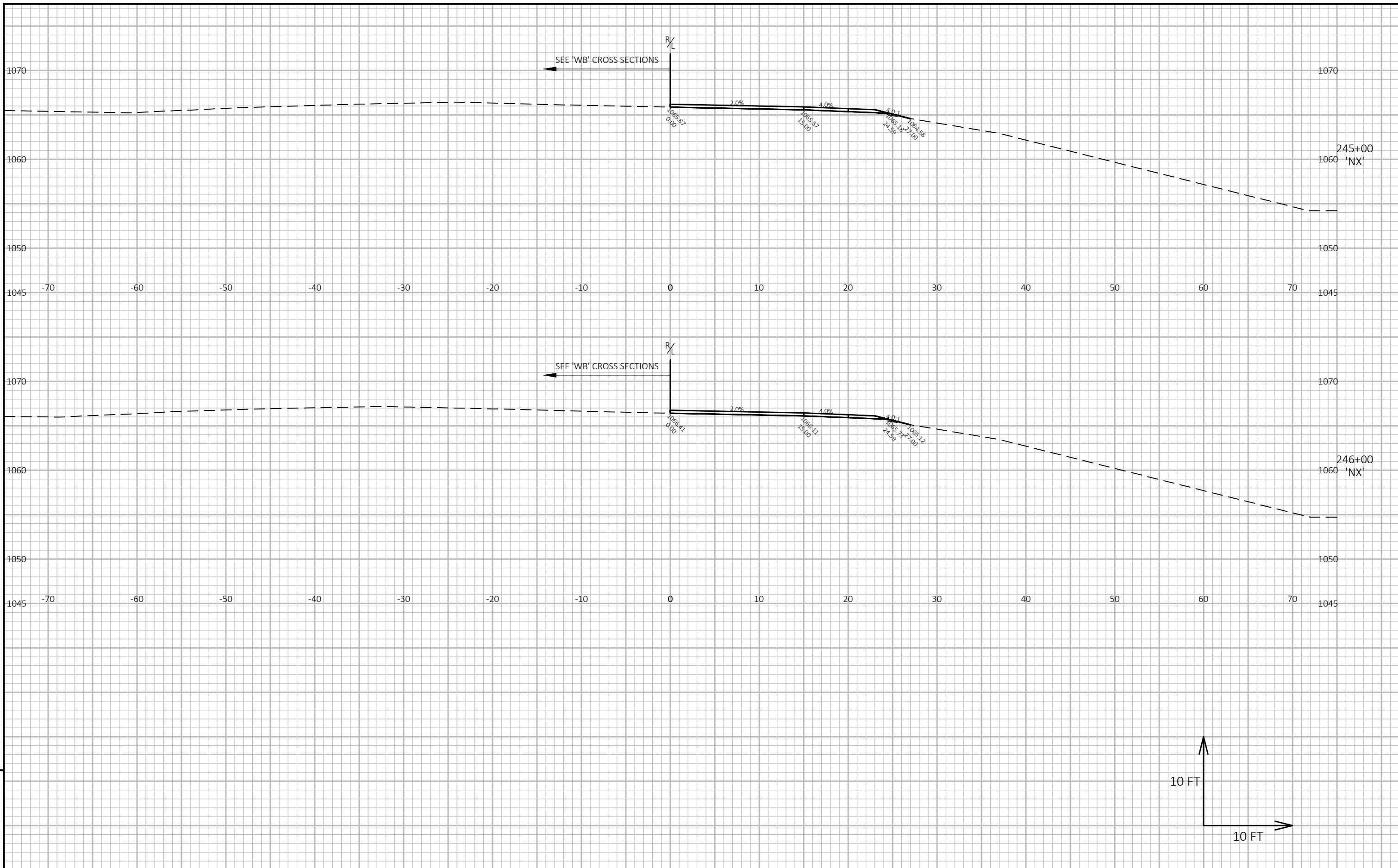
HWY: IH 39

COUNTY: COLUMBIA

CROSS SECTIONS: ENTRANCE RAMP

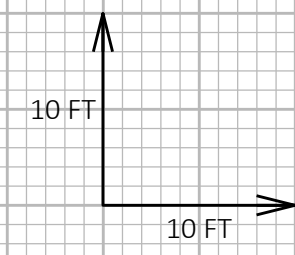
SHEET

E

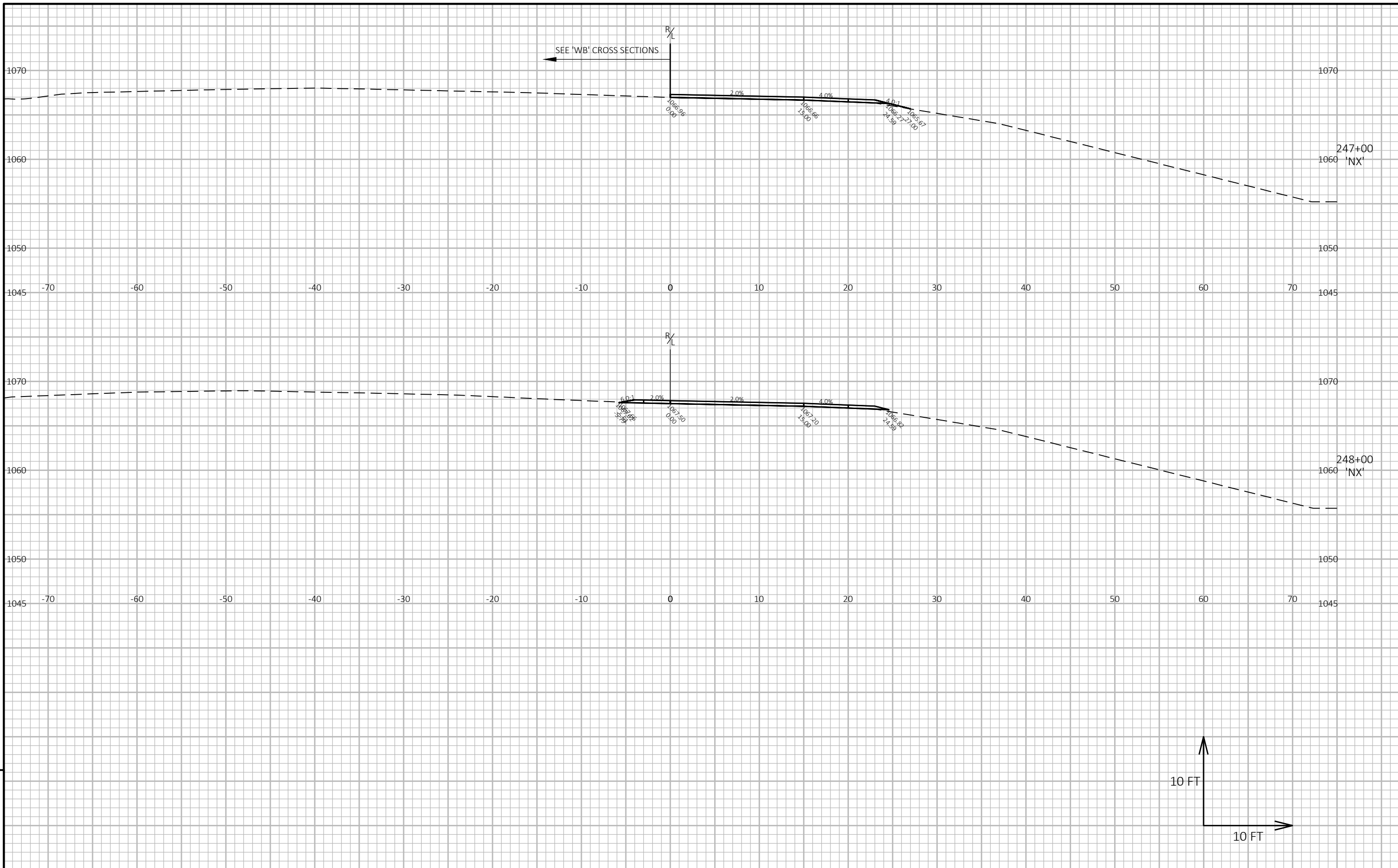


9

9

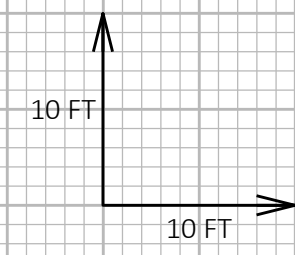


PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: EXIT RAMP	SHEET	E
------------------------	------------	------------------	---------------------------	-------	---



9

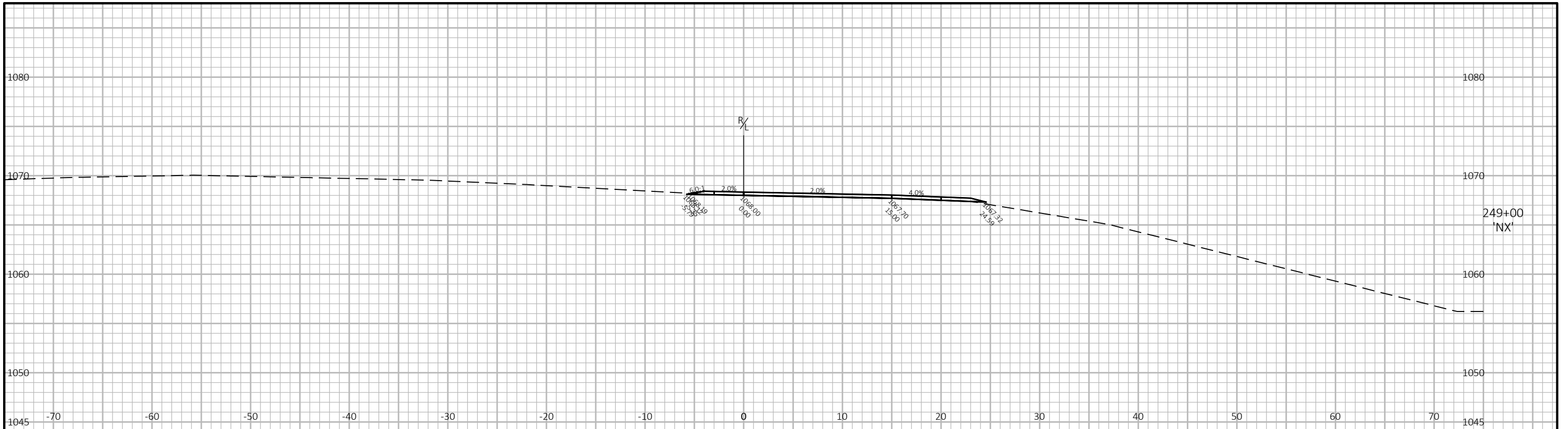
9



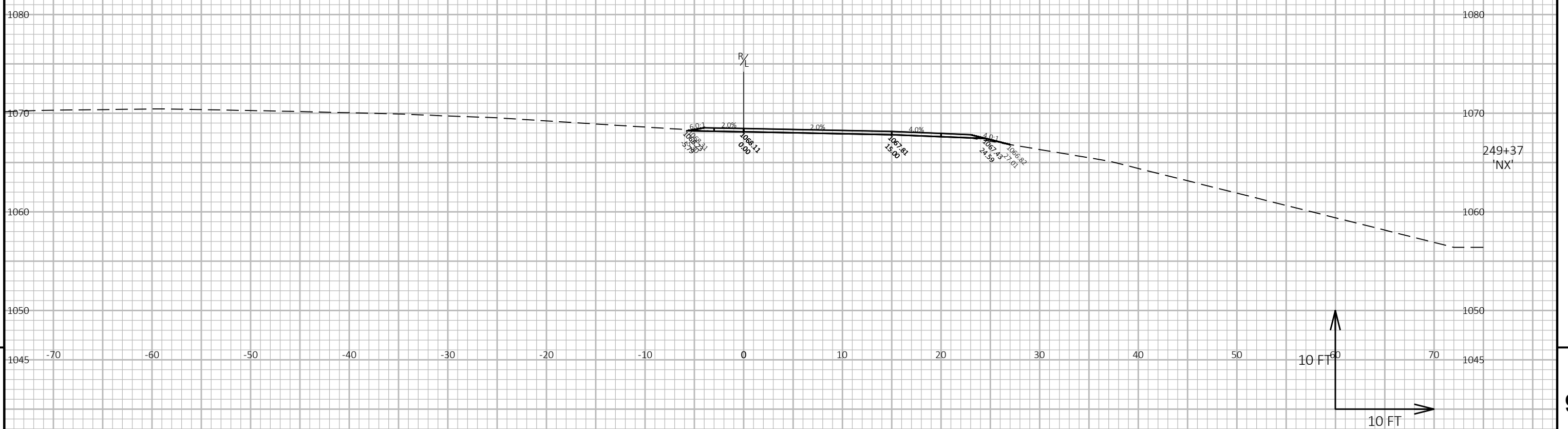
PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: EXIT RAMP	SHEET	E
------------------------	------------	------------------	---------------------------	-------	---

FILE NAME : C:\ONEDRIVE\AECOM\IH 39 OVERLAY_COLUMBIA COUNTY - GENERAL\900_CAD_GIS\910_CAD\1011-00-82_COLUMBIA\SHEETSPLAN\090208-XS-EXIT_RAMP.DWG PLOT DATE : 8/21/2023 1:42 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

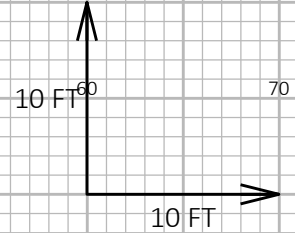
LAYOUT NAME - 090208-xs-ExitRamp(02)



249+00
'IN'



249+37
'IN'



9 9

PROJECT NO: 1011-00-82	HWY: IH 39	COUNTY: COLUMBIA	CROSS SECTIONS: EXIT RAMP	SHEET
------------------------	------------	------------------	---------------------------	-------

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>