

MAD

NOVEMBER 2018

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 Plan~~
~~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 = 174

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MADISON - OCONOMOWOC

STH 73 TO CTH F

IH 94

DANE & JEFFERSON COUNTIES

STATE PROJECT

FEDERAL PROJECT

PROJECT

CONTRACT

1067-02-62

WISC 2018435

1

STATE PROJECT NUMBER

1067-02-62



BEGIN PROJECT
STA 109+25 'WB'
N: 597209.42
E: 797912.84

DESIGN DESIGNATION

A.A.D.T. (5 year) = S 1 & 2: 34600, S3: 33900, S4: 42900
A.A.D.T.
D.H.V.
D.D.
T.
DESIGN SPEED 70 MPH
ESALS

CONVENTIONAL SYMBOLS

PLAN
CORPORATE LIMITS

PROPERTY LINE

LOT LINE

LIMITED HIGHWAY EASEMENT

EXISTING RIGHT OF WAY

PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

PROPOSED CULVERT
(Box or Pipe)

COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA

PROFILE

GRADE LINE

ORIGINAL GROUND
MARSH OR ROCK PROFILE
(To be noted as such)
SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

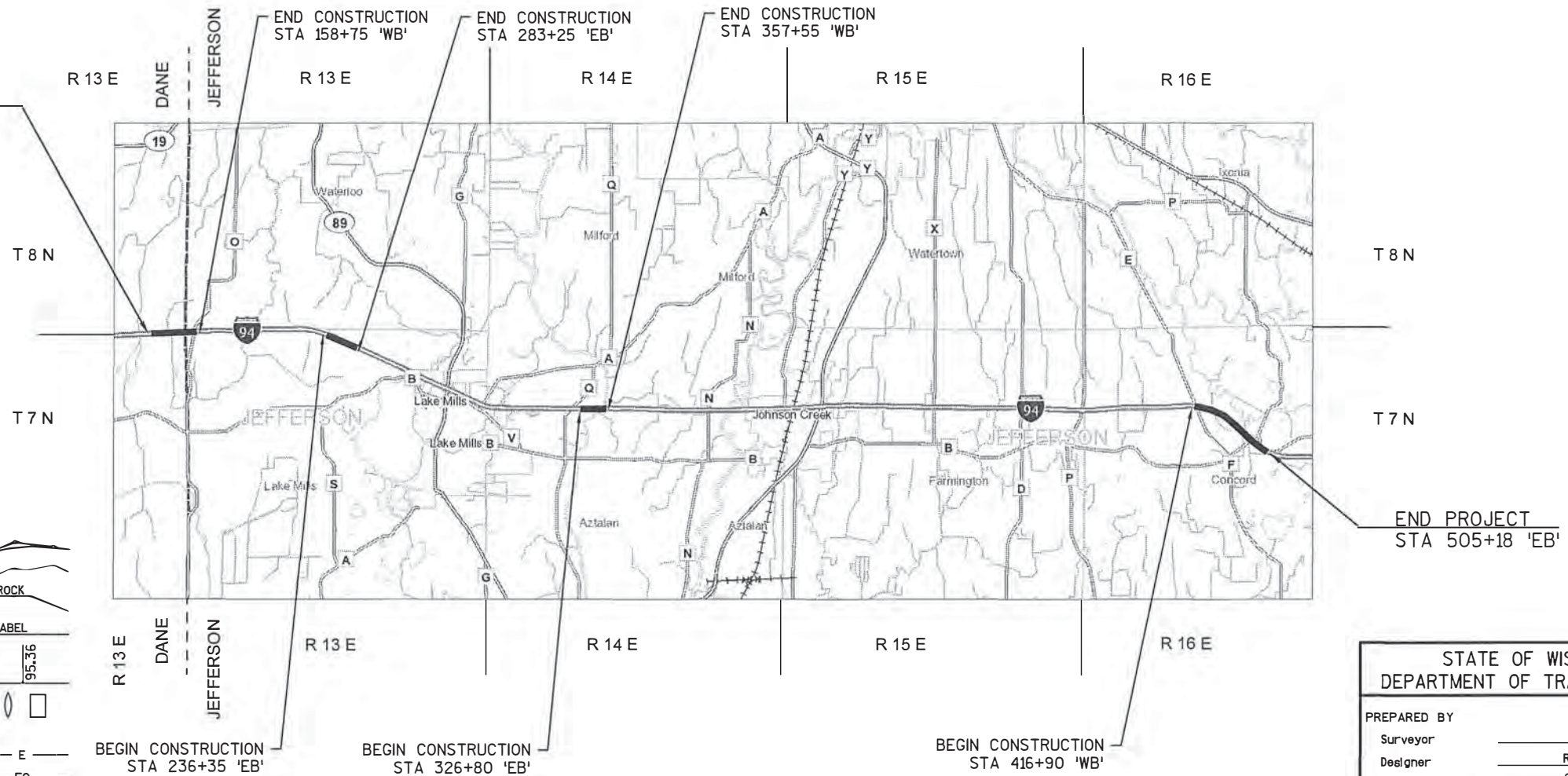
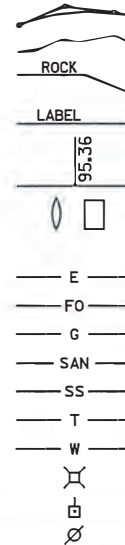
TELEPHONE

WATER

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE



LAYOUT
SCALE 0 3 MILES

TOTAL NET LENGTH OF CENTERLINE = 0.00

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, JEFFERSON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

VERTICAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD88 (2012).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor WISDOT
Designer RYAN BAILEY
Project Manager CRAIG HARDY
Regional Examiner SW REGION
Regional Supervisor JIM OETTINGER

APPROVED FOR THE DEPARTMENT

DATE: 6/15/18
(Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS THAT ARE NOT MARKED ON THE PLAN TO BE REMOVED SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATIONS OF EXISTING UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

THE EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL SHEETS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER. EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

PRIOR TO PLACEMENT OF CABLE BARRIER, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

UTILITY LINES IN CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

DRAINAGE PIPES/STRUCTURES IN CROSS SECTIONS ARE NOT TO SCALE AND ARE INTENDED FOR REFERENCE ONLY.

LAYOUT/STAKING FOR CABLE BARRIER TYPE 1 AND CABLE BARRIER END TERMINAL TYPE 1 IS INCIDENTAL TO BID ITEM.

ADDITIONAL SOIL BORING INFORMATION IS AVAILABLE UPON REQUEST TO PROJECT ENGINEER.

UTILITY CONTACTS

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL
TRAFFIC CONTROL

WILLIAM KOENIG
AT&T LEGACY
COMMUNICATION LINE
128 W. SUNSET AVE
APPLETON, WI 54911
(608) 628-0575
WEKOENIG@ATT.NET

CHRIS DAILEY
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PO BOX 47
WAUKESHA, WI 53187
(414) 651-3950
CDAILEY@ATCLLC.COM

JAMES WINTER
CENTURYLINK
COMMUNICATION LINE
224 INDUSTRIAL DR
NORTH PRAIRIE, WI 53189
(262) 392-5210
JAMES.WINTER@CENTURYLINK.COM

RON FRASE
CHARTER COMMUNICATIONS
COMMUNICATION LINE
N3760 CTH DJ
JUNEAU, WI 53039
(608) 438-9648
RON.FRASE@CHARTER.COM

DANA GILLET
FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
100 COMMUNICATIONS DRIVE
SUN PRAIRIE, WI 53590
(608) 837-1605
DANA.GILLET@FTR.COM

BRYAN STOEHR
WE ENERGIES
ELECTRICITY TRANSMISSION
500 S 116TH ST
WEST ALLIS, WI 53214
(414) 416-6059
BRYAN.STOEHR@WE-ENERGIES.COM

WI DNR LIASON
LAURA BUB
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3301
laura.bub@wisconsin.gov

(WISDOT) DESIGN PROJECT
MANAGER
JEREMY HALL, P.E.
2101 WRIGHT ST.
MADISON, WI 53704
(608) 245-2655
jeremy.hall@dot.wi.gov

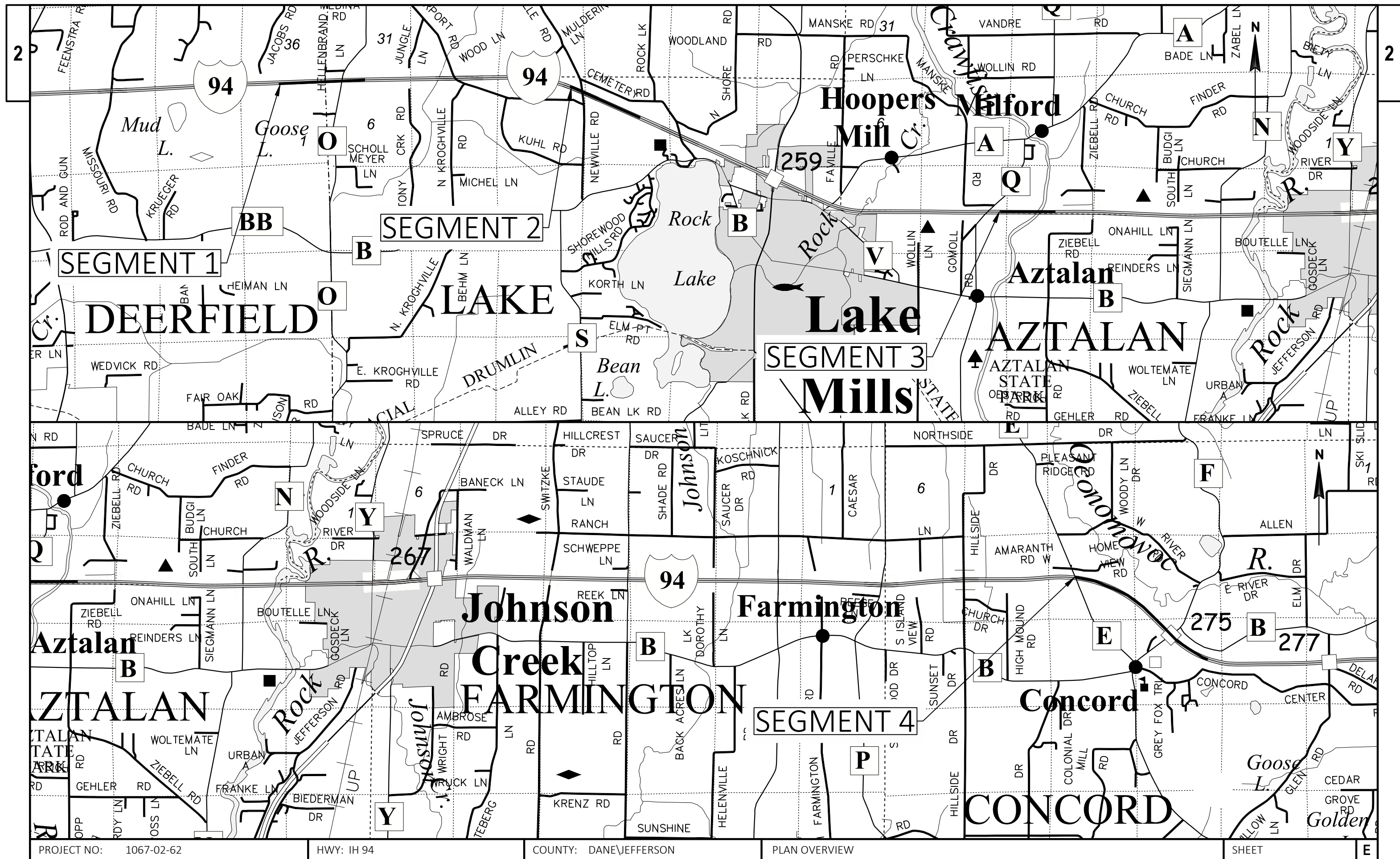
(WISDOT) DESIGN PROJECT
LEADER
RYAN BAILEY, P.E.
2101 WRIGHT ST.
MADISON, WI 53704
(608) 246-5625
ryan.bailey@dot.wi.gov

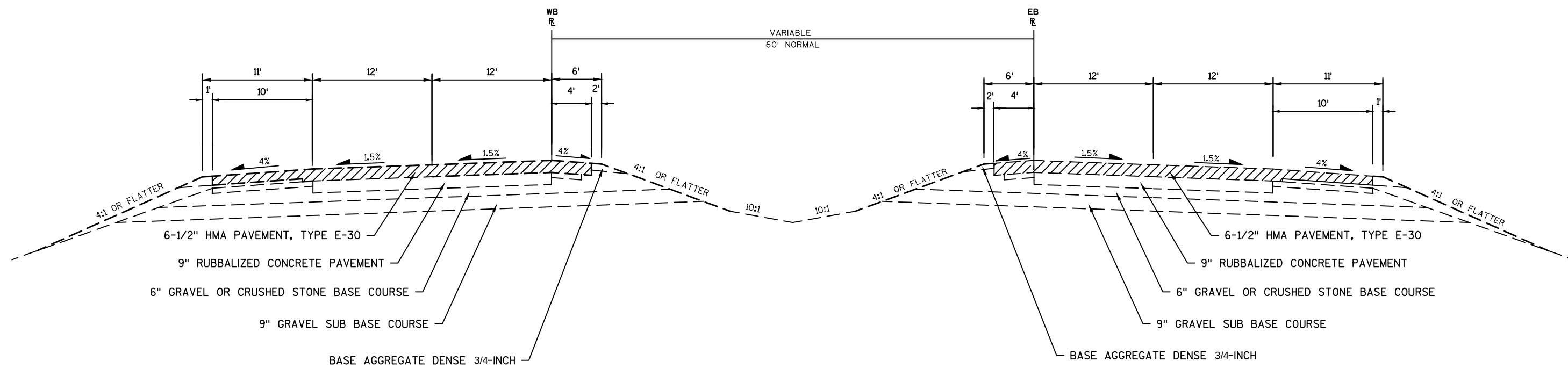


Dial 811 or (800) 242-8511
www.DiggersHotline.com

STANDARD ABBREVIATIONS

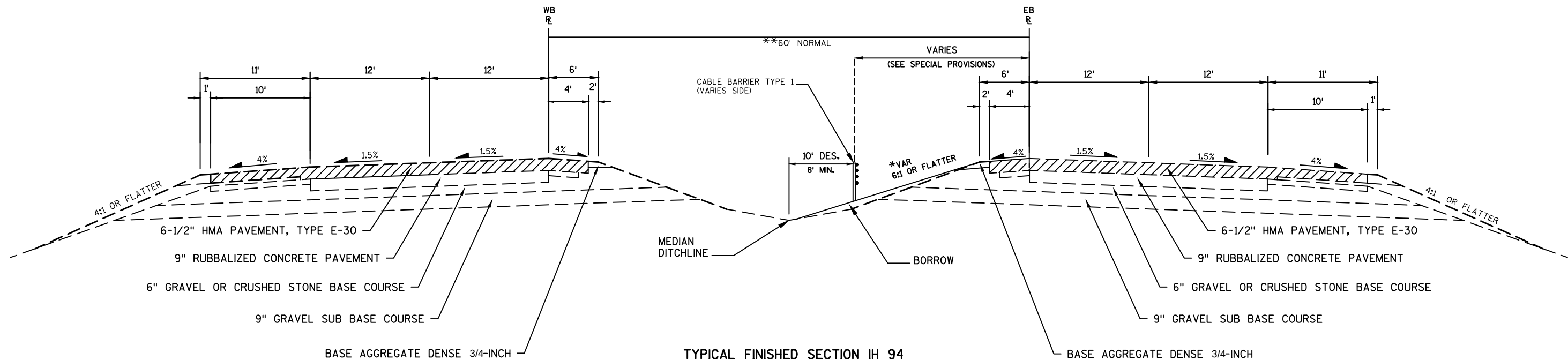
AC.	ACRE	MAX.	MAXIMUM
AGG.	AGGREGATE	MGAL	1000 GALLONS
AH	AHEAD	MIN.	MINIMUM
<	ANGLE	N.C.	NORMAL CROWN OR NO CHANGE
AE, AEW	APRON ENDWALL	N	NORTH
ASPH.	ASPHALTIC	NO.	NUMBER
A.D.T.	AVERAGE DAILY TRAFFIC	PAV'T	PAVEMENT
B.F.	BACK FACE	P.L.E.	PERMANENT LIMITED EASEMENT
BK.	BACK	P.C.	POINT OF CURVATURE
BEG.	BEGIN	P.I.	POINT OF INTERSECTION
B.M.	BENCH MARK	P.T.	POINT OF TANGENCY
C/L	CENTER LINE	V.P.C.	VERTICAL POINT OF CURVATURE
D	CENTRAL ANGLE OR DELTA CORRUGATED METAL CULVERT PIPE	V.P.I.	VERTICAL POINT OF INTERSECTION
C.M.C.P.	CORRUGATED METAL PIPE	V.P.T.	VERTICAL POINT OF TANGENCY
CO.	COUNTY	PCC	PORTLAND CEMENT CONCRETE
CTH	COUNTY TRUNK HIGHWAY	P.E.	PRIVATE ENTRANCE
CR.	CREEK	P.L.	PROPERTY LINE
C.A.B.C.	CRUSHED AGGREGATE BASE COURSE	R	RADIUS OR RANGE
C.Y.	CUBIC YARD	R/L	REFERENCE LINE
C.P.	CULVERT PIPE		REINFORCED CONCRETE CULVERT PIPE
C. & G.	CURB AND GUTTER	R.C.C.P.	
D	DEGREE OF CURVE	RT	RIGHT
D.H.V.	DESIGN HOUR VOLUME	REQ'D	REQUIRED
DIA.	DIAMETER	R.H.F.	RIGHT HAND FORWARD
DISCH.	DISCHARGE	R/W	RIGHT OF WAY
EA	EACH	R.	RIVER
E	EAST	RD.	ROAD
ELEC.	ELECTRIC(AL), ELEC. CABLE	SHLD.	SHOULDER(S)
EL., ELEV.	ELEVATION	SHR.	SHRINKAGE
EXC.	EXCAVATION	S	SOUTH
F.F.	FACE TO FACE	S.F.	SQUARE FOOT (FEET)
FERT.	FERTILIZER	SDD	STANDARD DETAIL DRAWING(S)
F.E.	FIELD ENTRANCE	STH	STATE TRUNK HIGHWAY
F/L, F.L.	FLOW LINE	STA.	STATION
CWT.	HUNDRED WEIGHT	S.E.	SUPERELEVATION
INL	INLET	S/L	SURVEY LINE
INTER.	INTERSECTION	T	TANGENT
JT.	JOINT	TEL.	TELEPHONE
LT	LEFT	TEMP.	TEMPORARY
L.H.F.	LEFT HAND FORWARD	T.L.E.	TEMPORARY LIMITED EASEMENT
L.	LENGTH OF CURVE	T.O.C.	TOP OF CURB
L.F.	LINEAR FOOT(FEET)	T.	(TRUCKS) PERCENT OF
LC.	LONG CHORD	TYP.	TYPICAL
LS	LUMP SUM	UNCL.	UNCLASSIFIED
M.P.	MARKER POST	U.G.	UNDERGROUND (CABLE)
		V.C.	VERTICAL CURVE
		W	WEST





TYPICAL EXISTING SECTION IH 94

SEGMENT 1, 2, 3, 4



TYPICAL FINISHED SECTION IH 94

SEGMENT 1, 2, 3, 4

* 10:1 OR FLATTER AHEAD OF AND ALONG BEAM GUARD

** SEGMENT 2 MEDIAN WIDTH IS 75' - 100'

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/19/2017	597179	797913
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

BOR-1

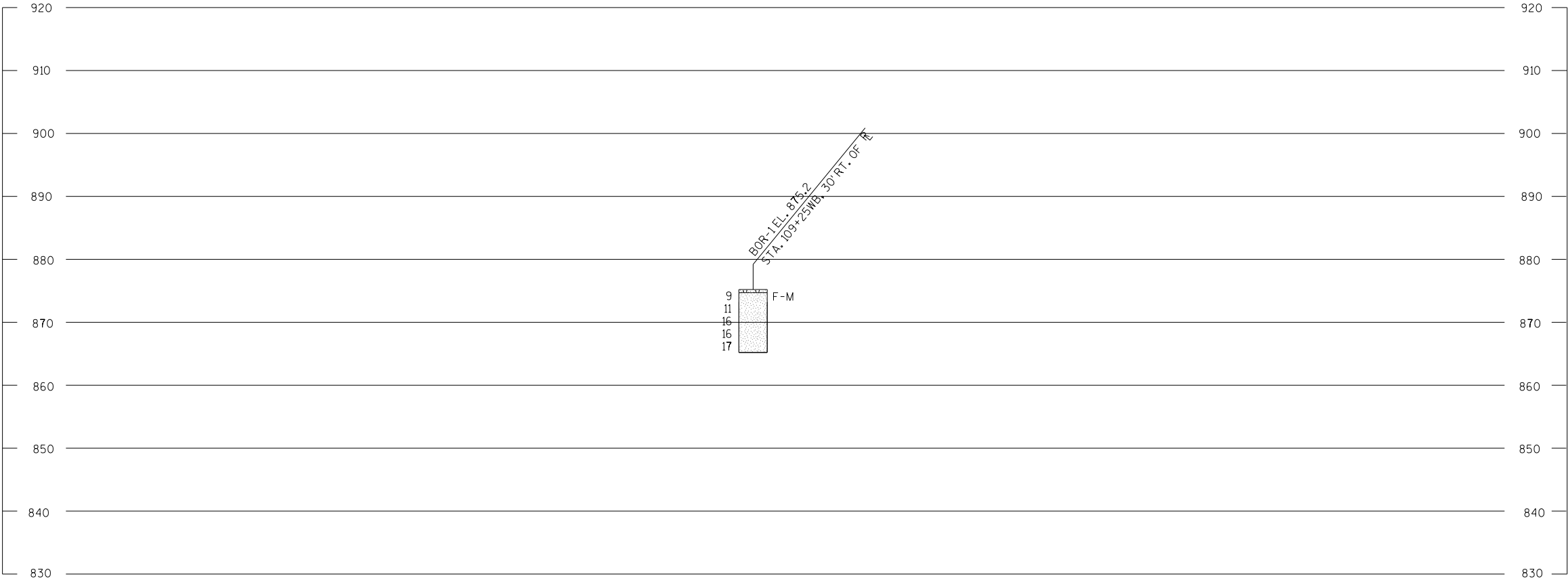


109+00'WB'

110+00'WB'

109+00'EB'

110+00'EB'



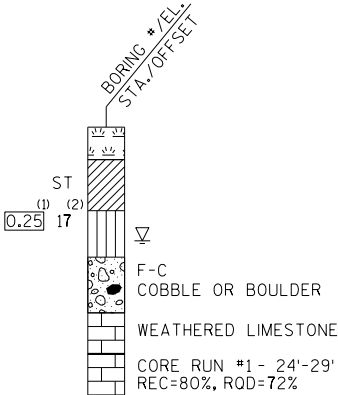
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

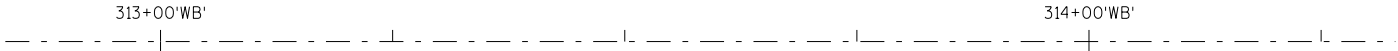
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

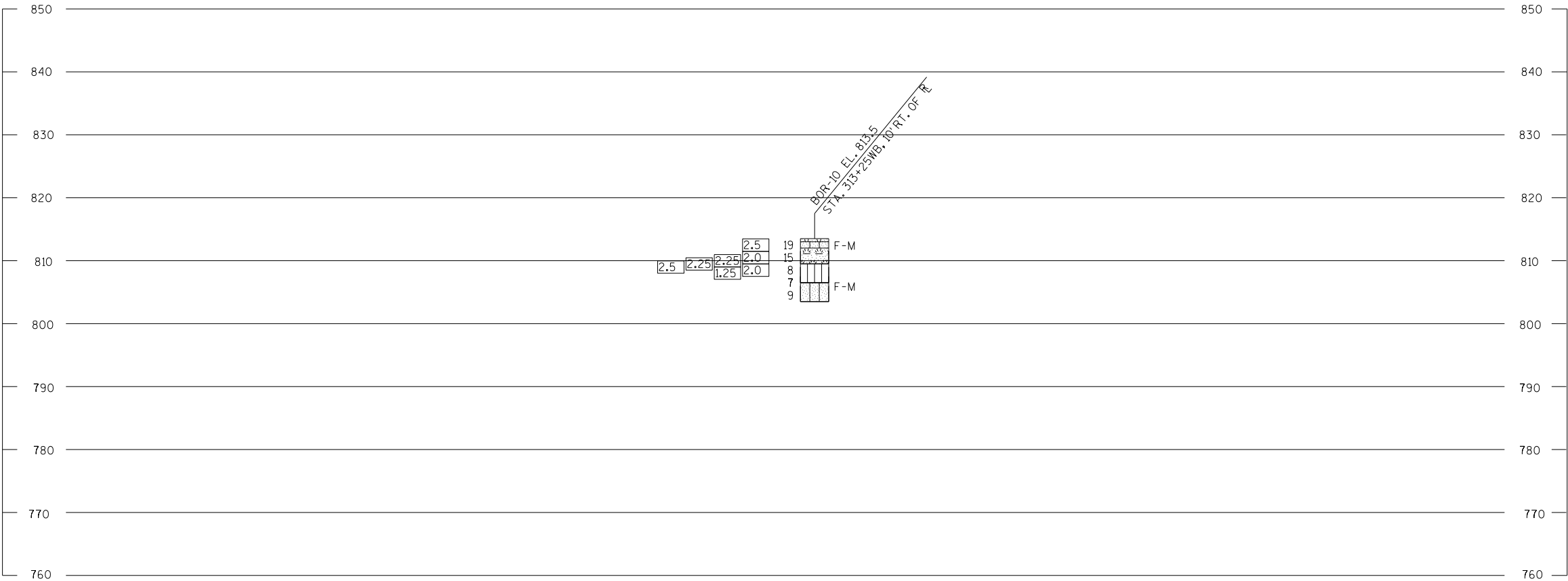
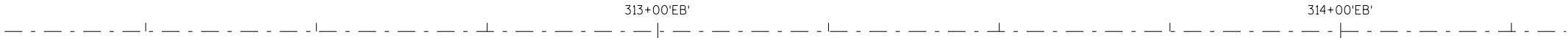
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
10	7/18/2017	588565	841418
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-10



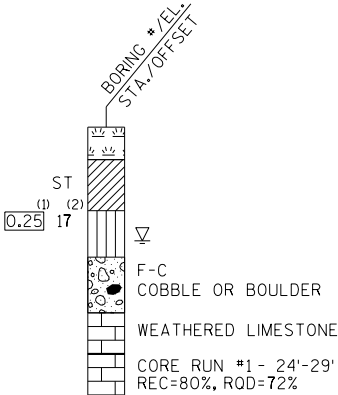
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

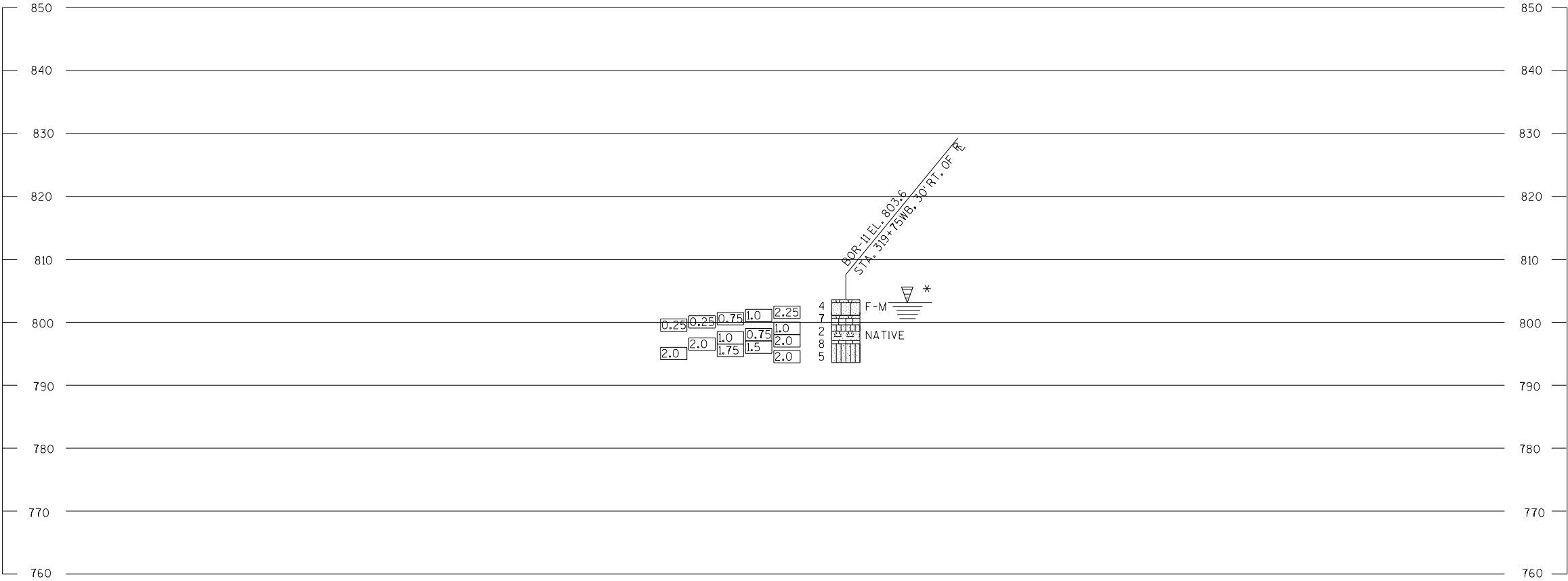
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
11	7/18/2017	588536	842068
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-11



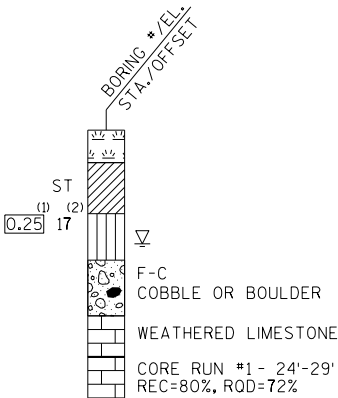
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

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CONCRETE	FILL	GRAVEL
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GROUND WATER ELEVATION

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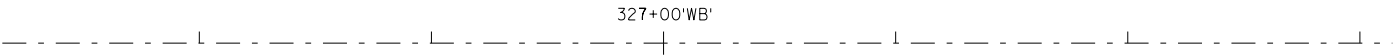
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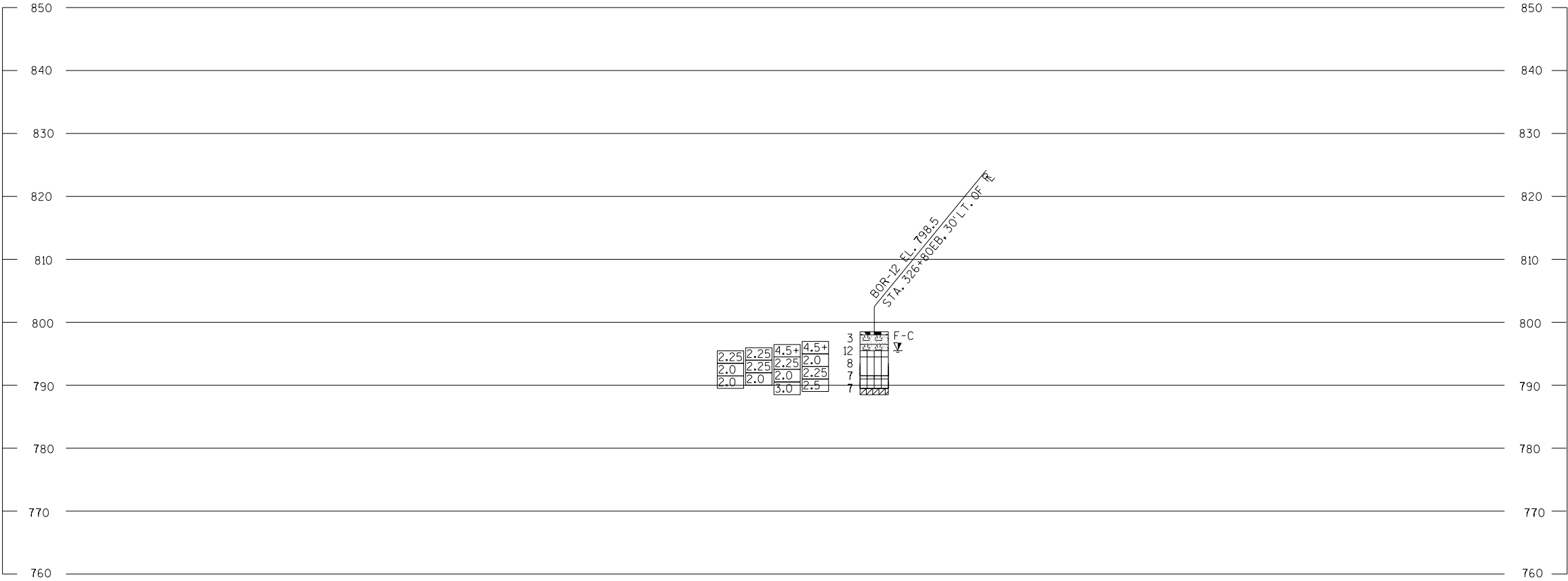
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* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
12	7/18/2017	588525	842772
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-12



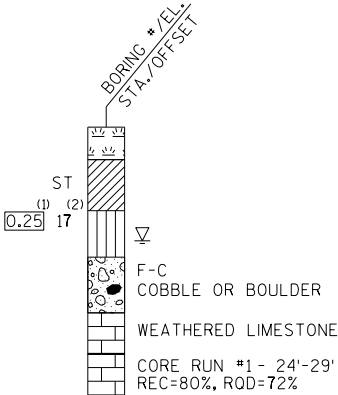
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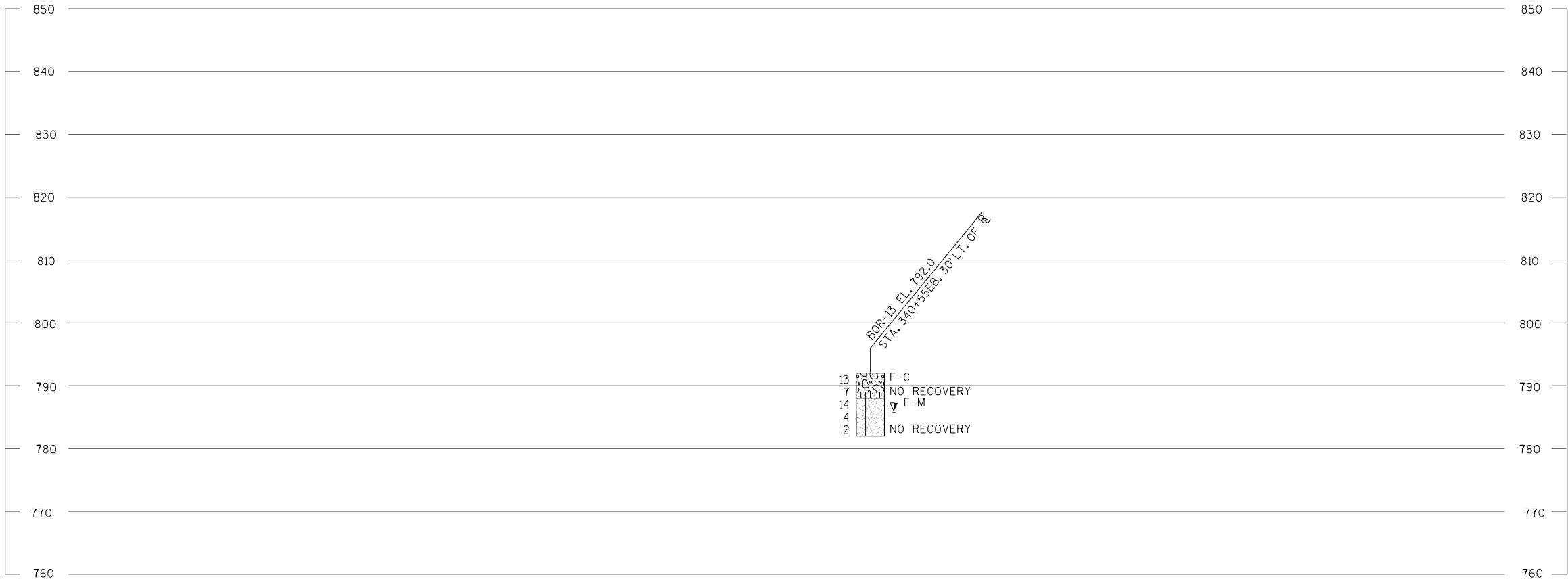
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
13	7/18/2017	588505	844147
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

BOR-13



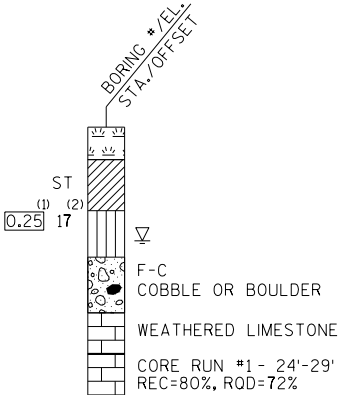
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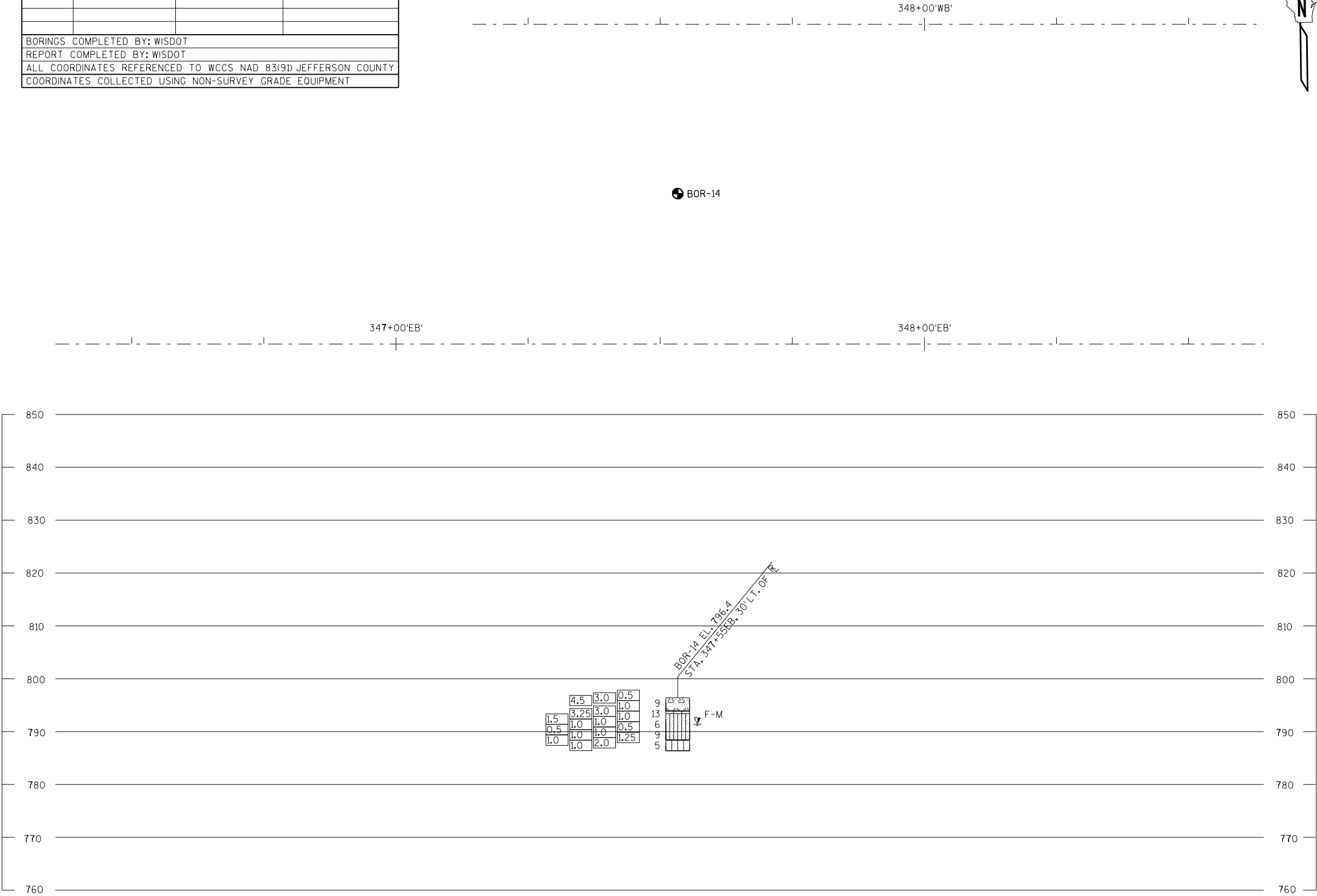
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
14	7/18/2017	588495	844847
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



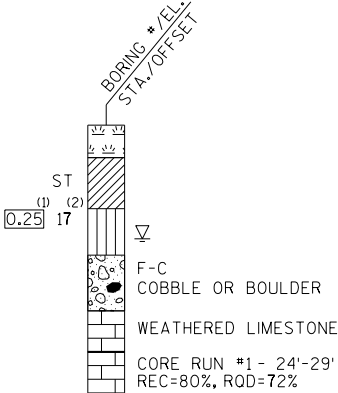
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LEGEND OF BORING



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(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

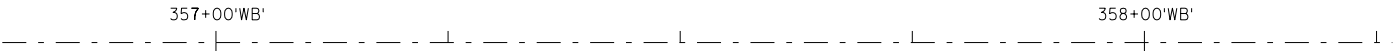
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

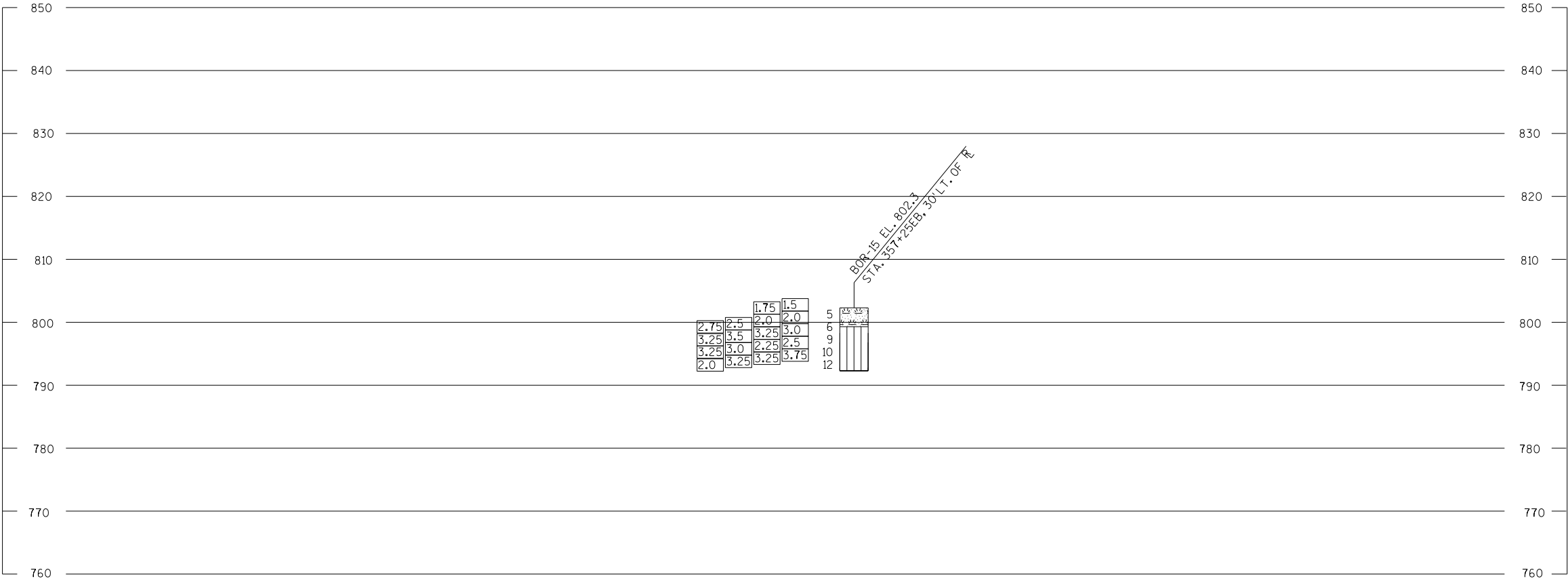
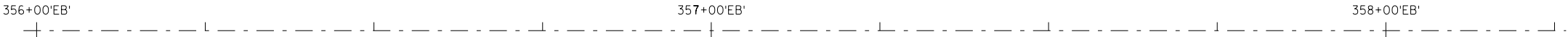
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
15	7/18/2017	588481	845817
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-15



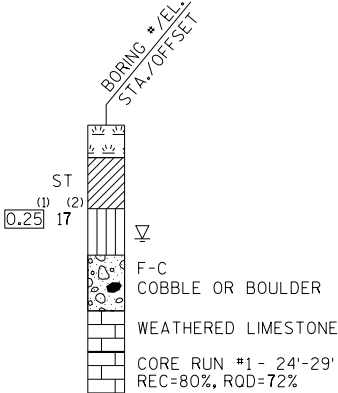
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

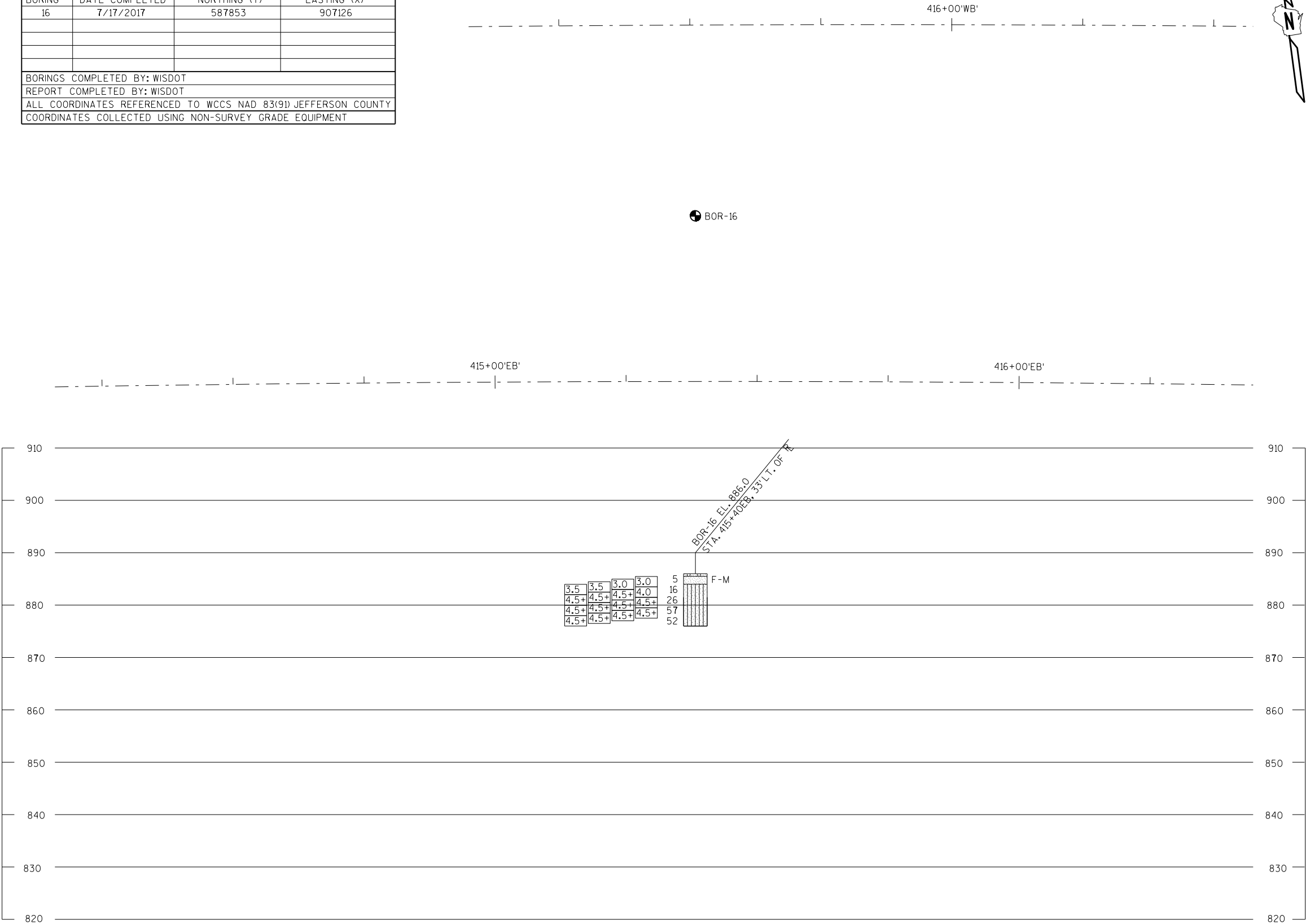
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
16	7/17/2017	587853	907126
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



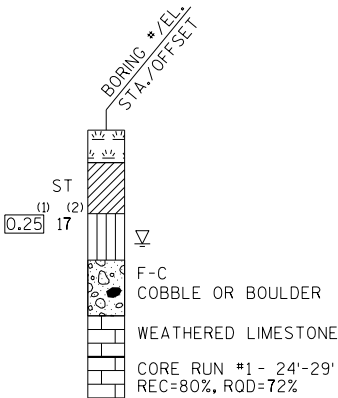
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

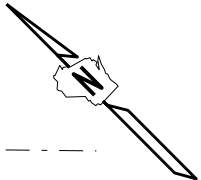
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
17	7/17/2017	585662	911577
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

466+00'WB'

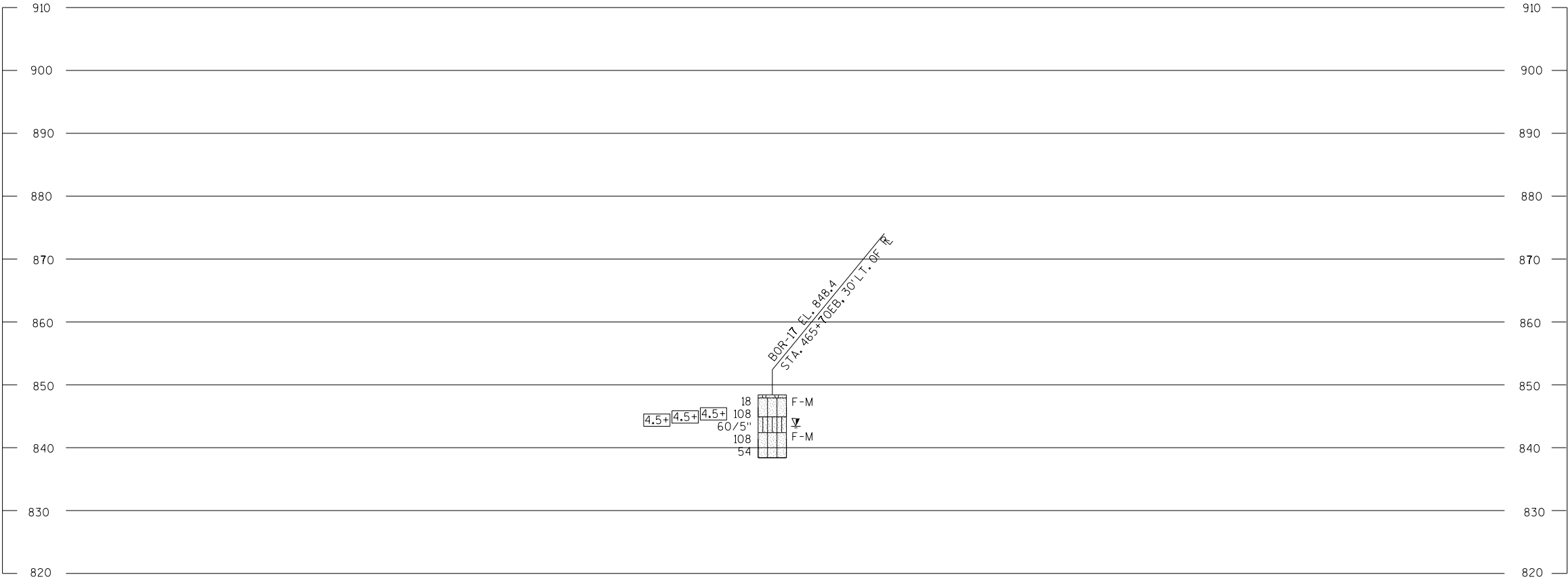
467+00'WB'



BOR-17

465+00'EB'

466+00'EB'



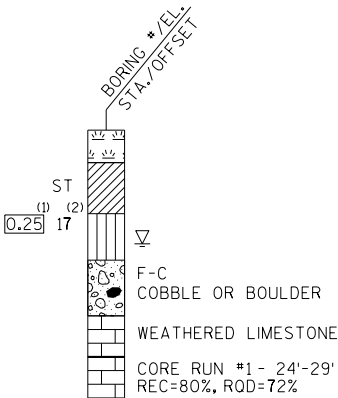
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

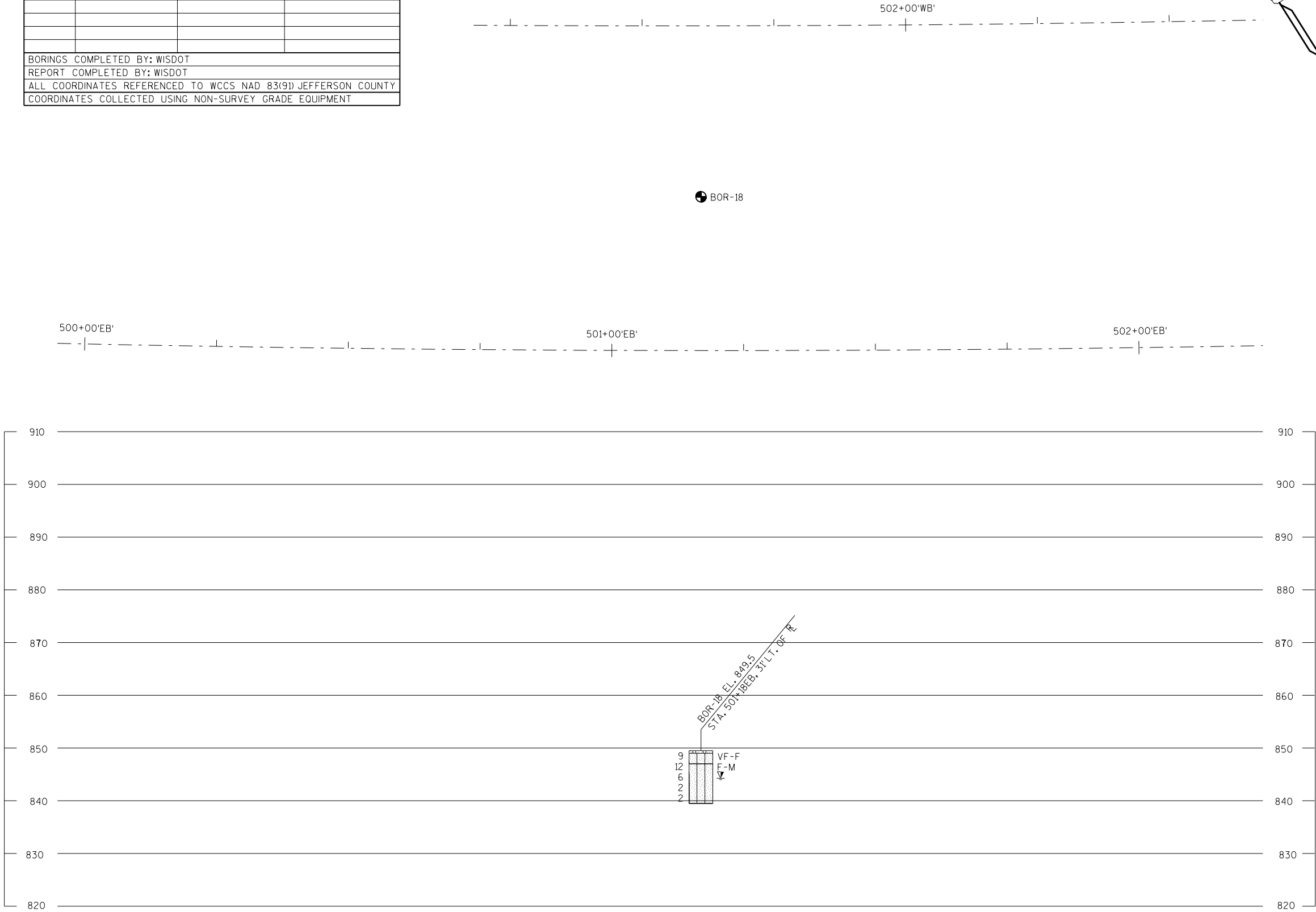
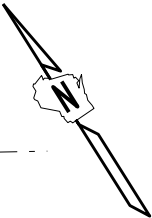
ABBREVIATIONS

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
18	7/17/2017	583253	914161
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



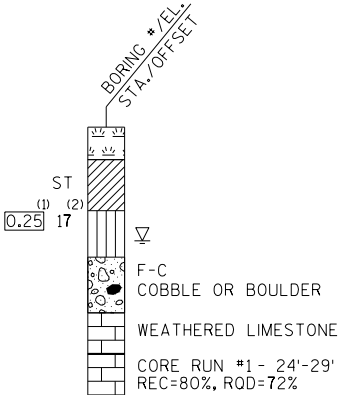
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

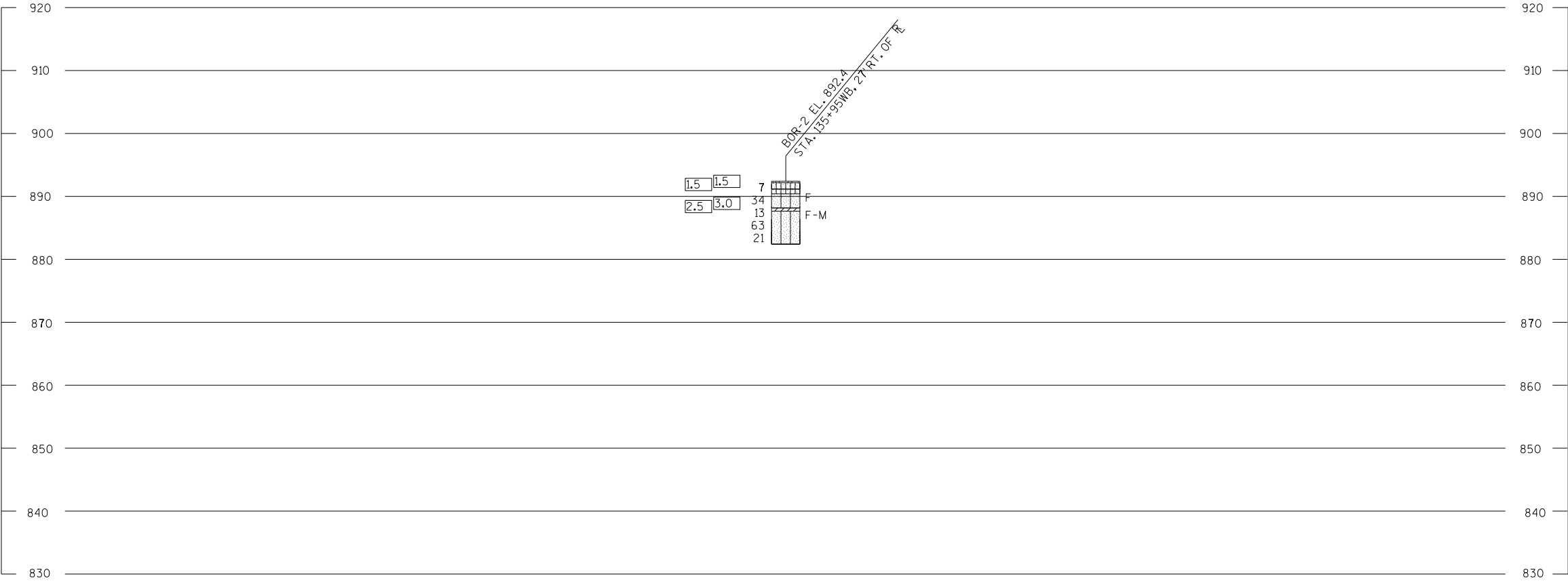
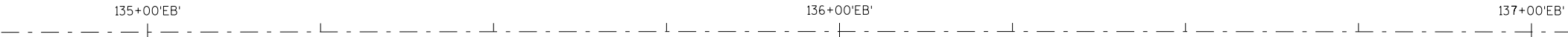
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	7/19/2017	597251	800583
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-2



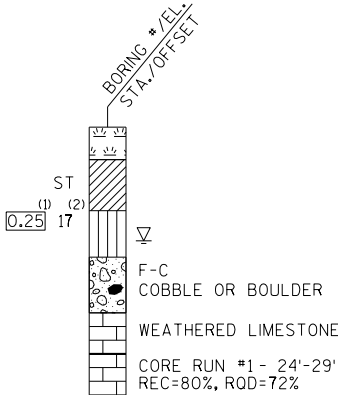
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

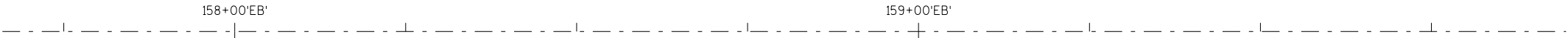
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	7/19/2017	597268	802862
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



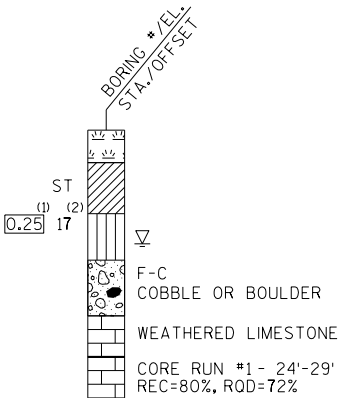
BOR-3



MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

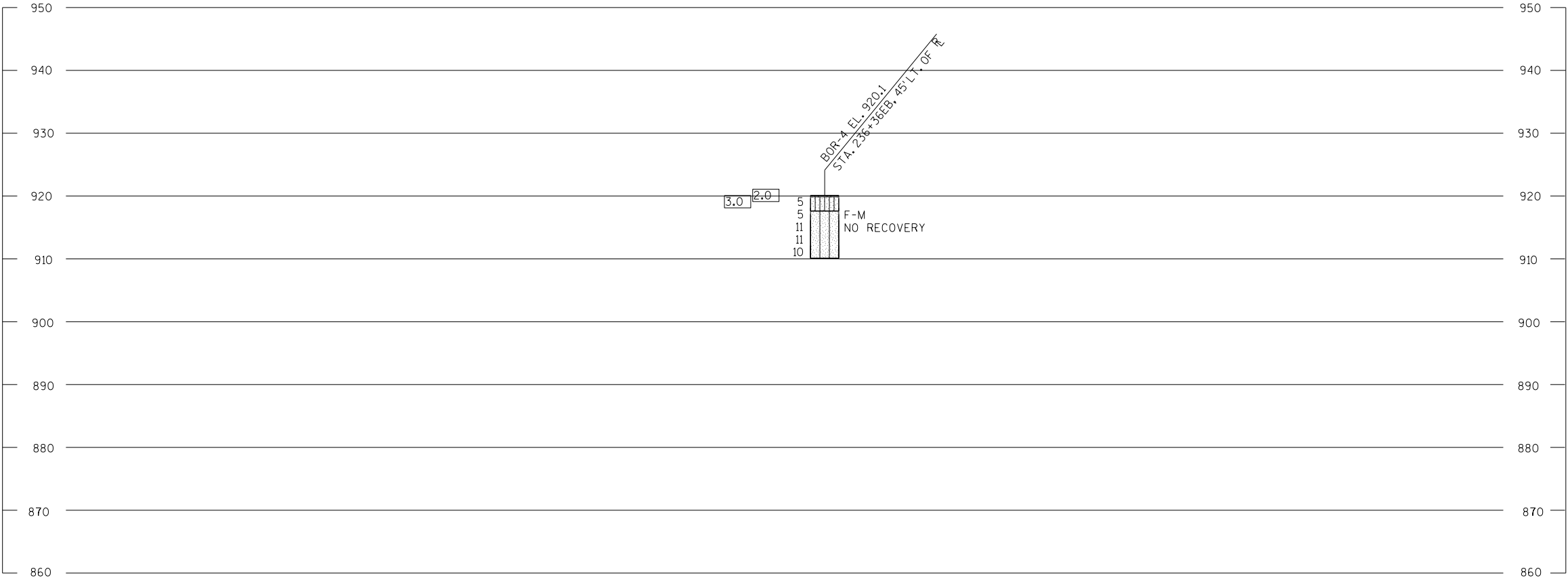
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
4	7/19/2017	596617	815843
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(9D) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

BOR-4



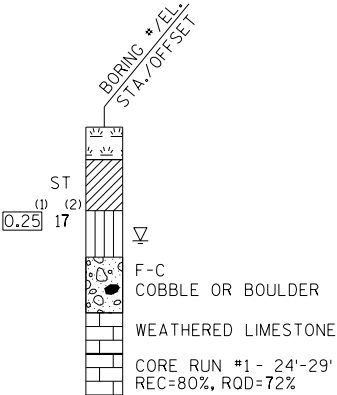
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

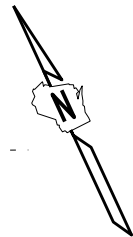
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
5	7/19/2017	596386	816382
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

BOR-5

STA BACK = 243+20.57'WB'
STA AHEAD = 242+72.10'WB'



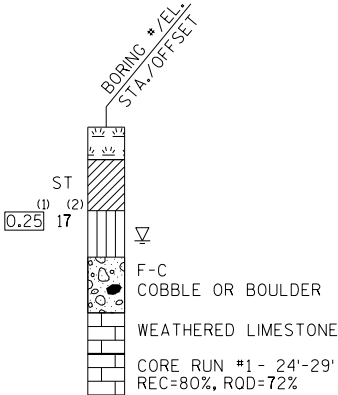
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

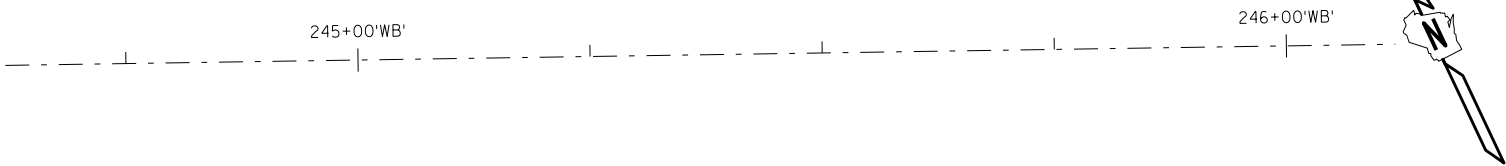
ABBREVIATIONS

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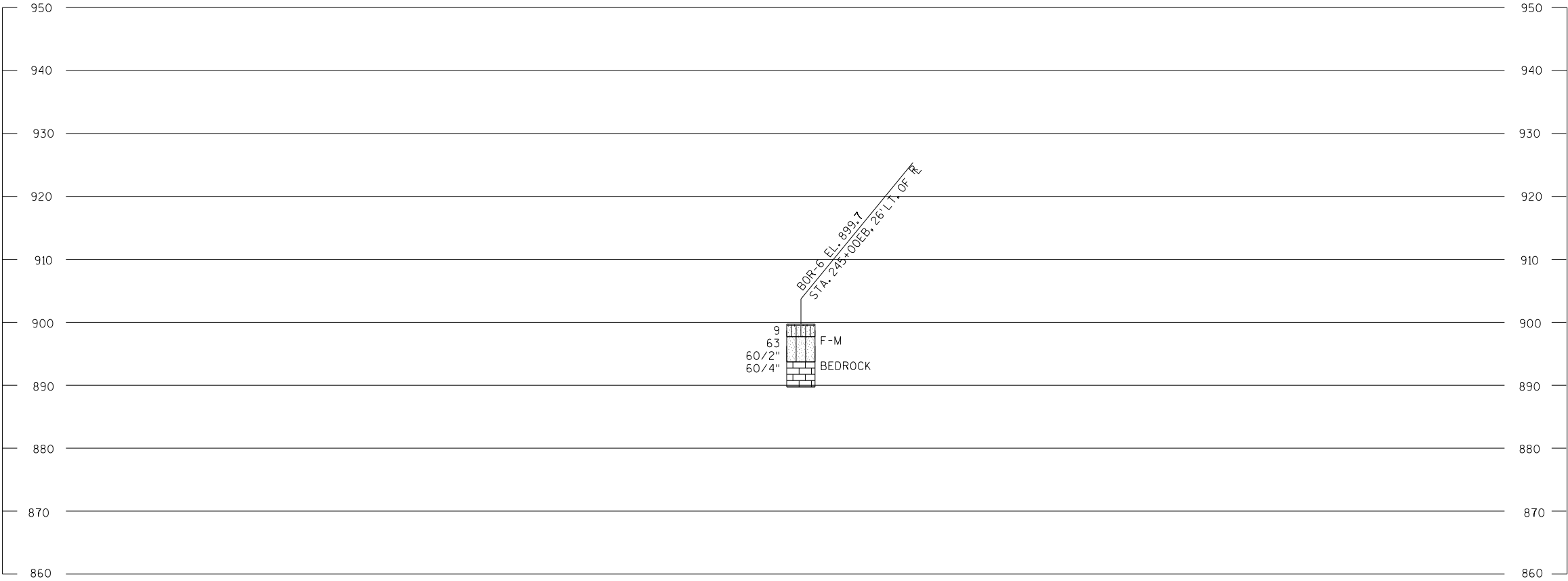
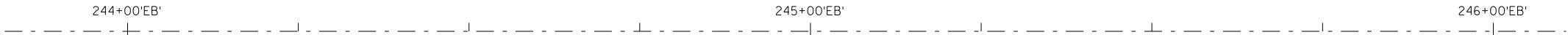
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
6	7/19/2017	596250	816628
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



BOR-6



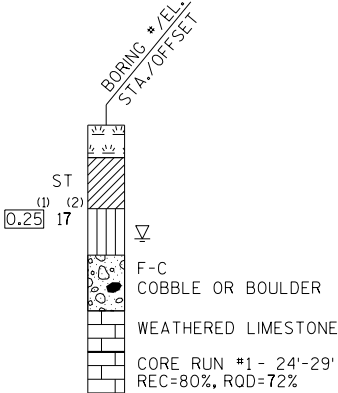
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

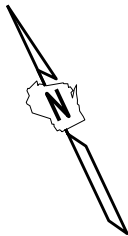
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
7	7/19/2017	595567	818078
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

BOR-7



260+00'EB'

261+00'EB'

262+00'EB'



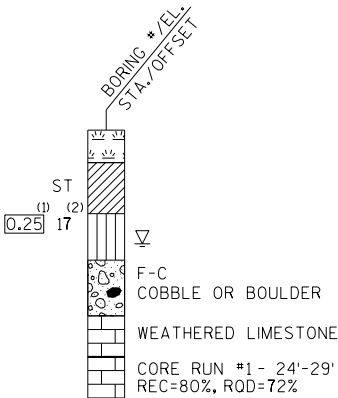
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



⁽¹⁾ UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
⁽²⁾ UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

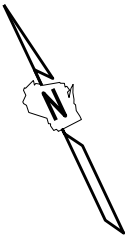
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
8	7/19/2017	595106	819074
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

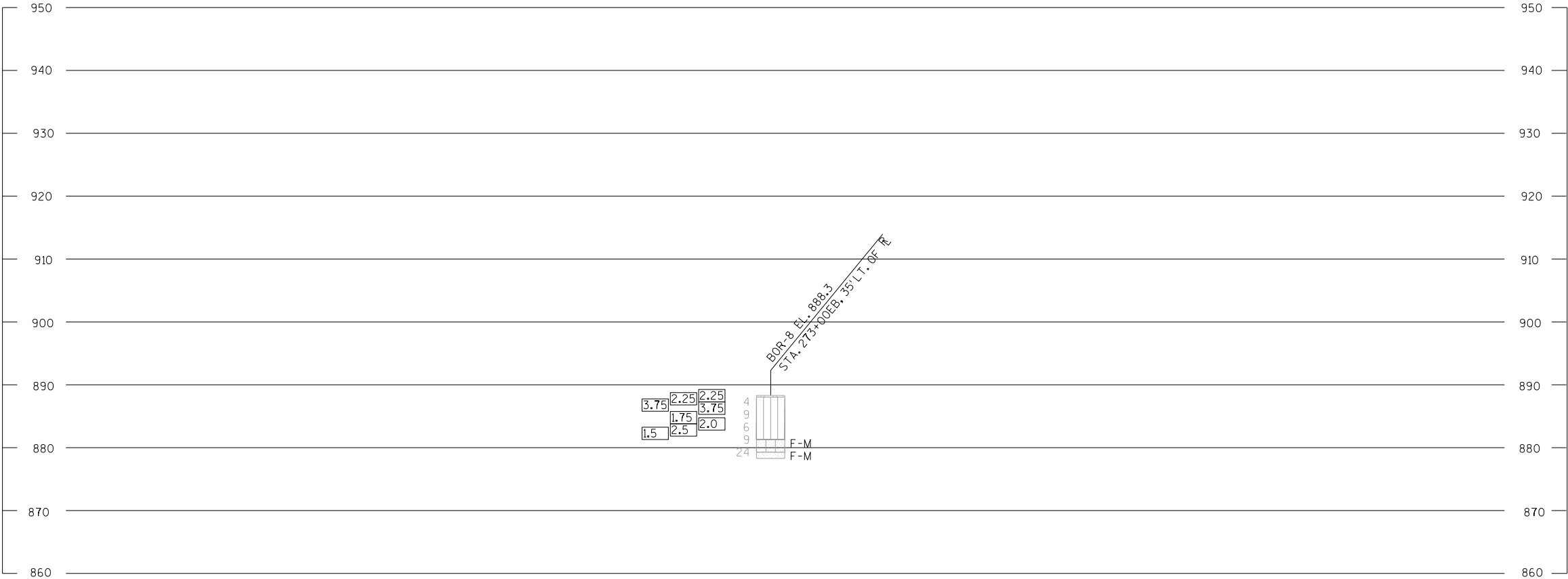
BOR-8



271+00'EB'

272+00'EB'

273+00'EB'



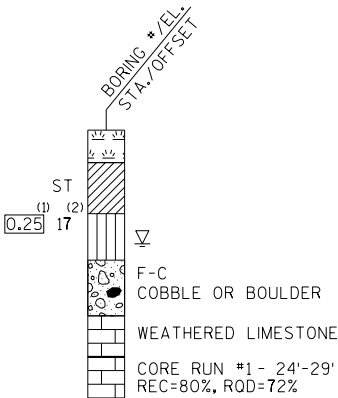
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

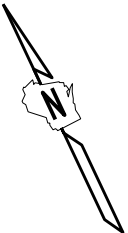
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
9	7/19/2017	594622	820090
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JEFFERSON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

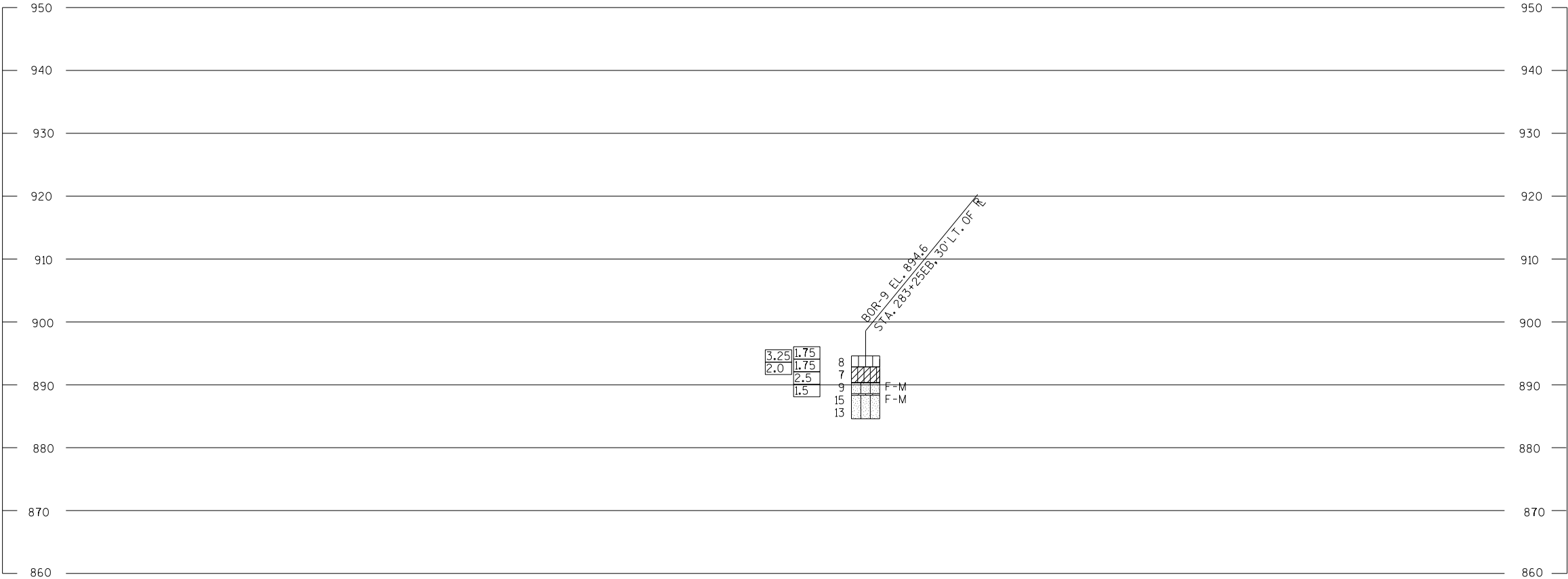
BOR-9



282+00'EB'

283+00'EB'

284+00'EB'



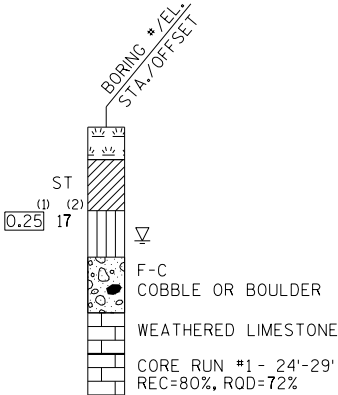
STATE PROJECT NUMBER

1067-02-62

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

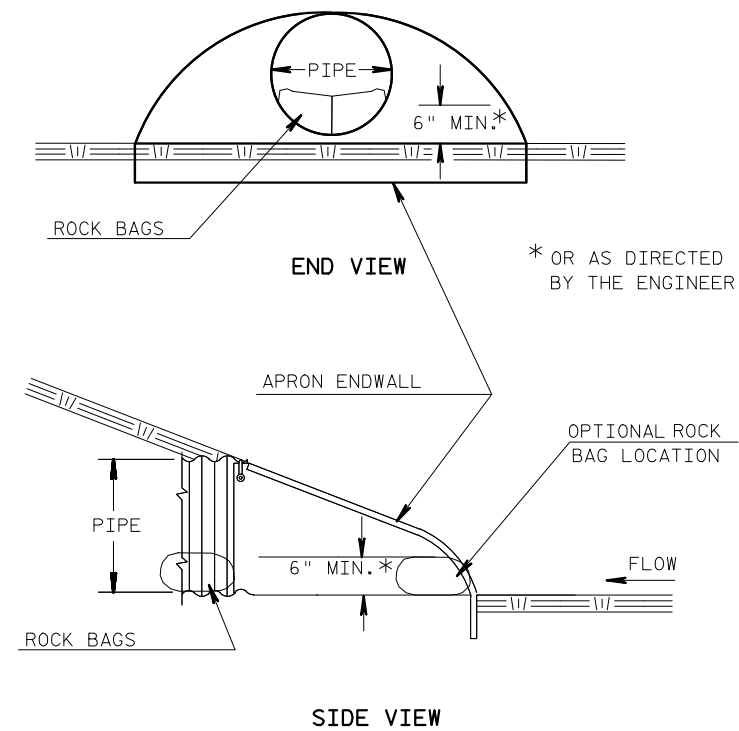
- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

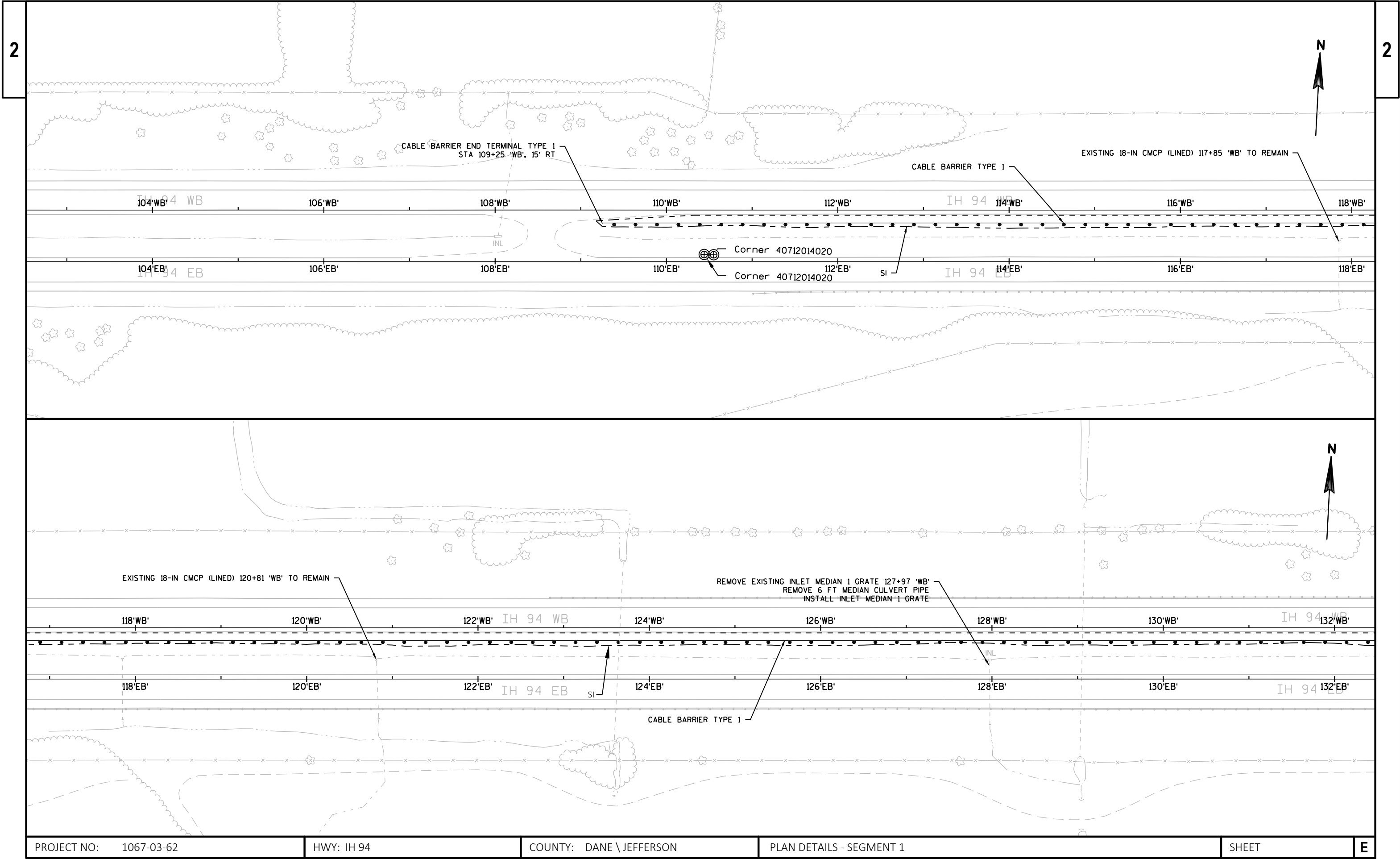
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

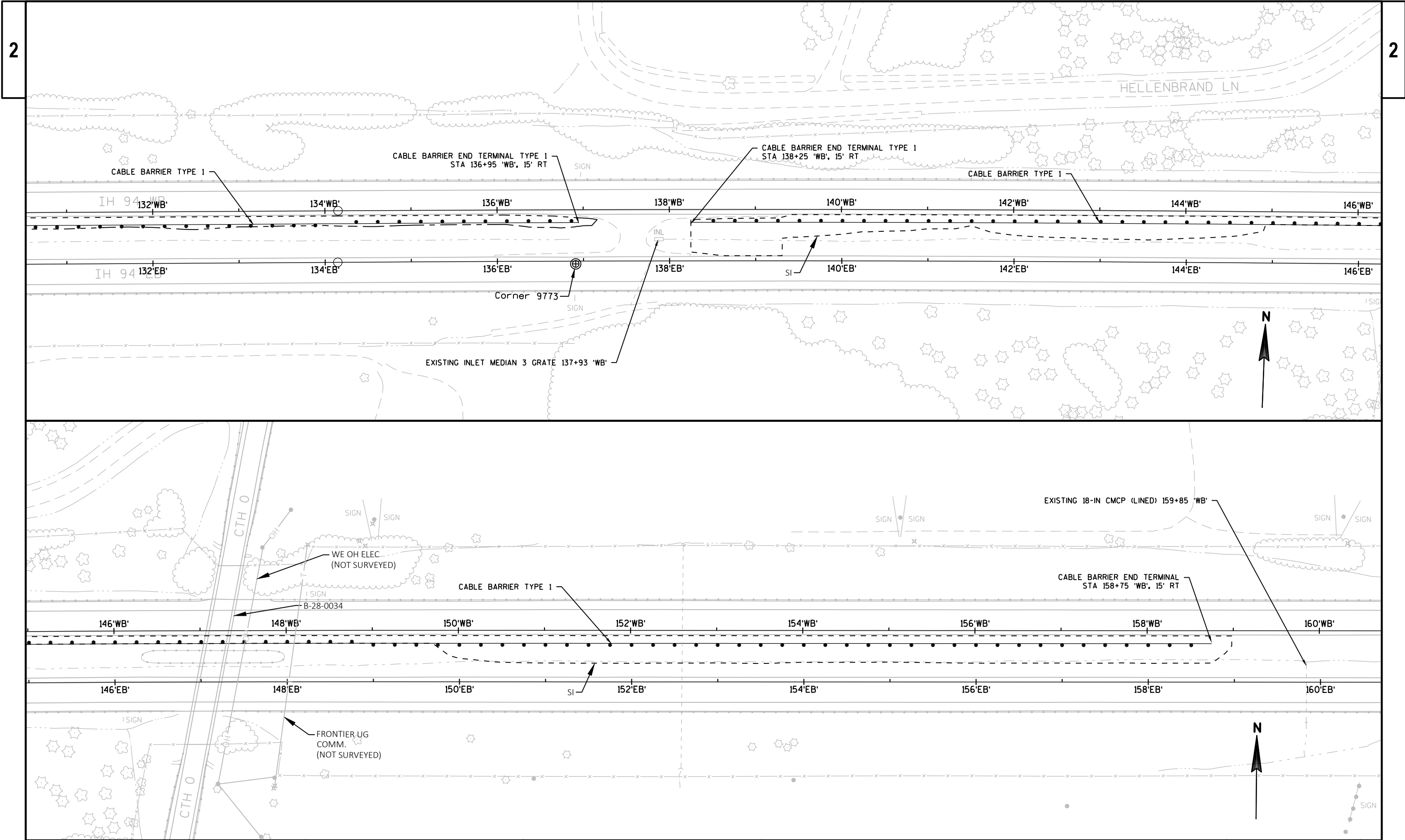
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



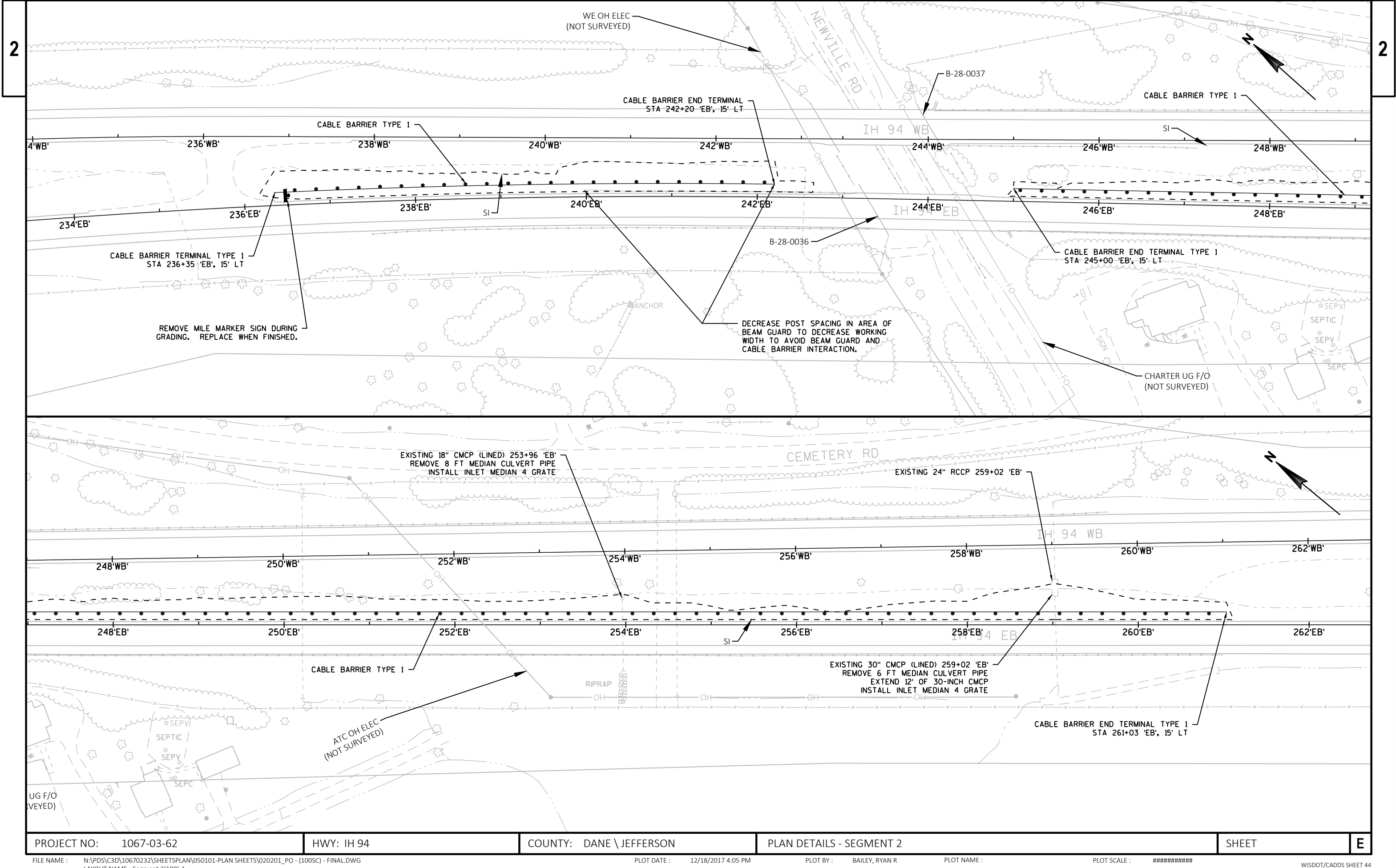
ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19

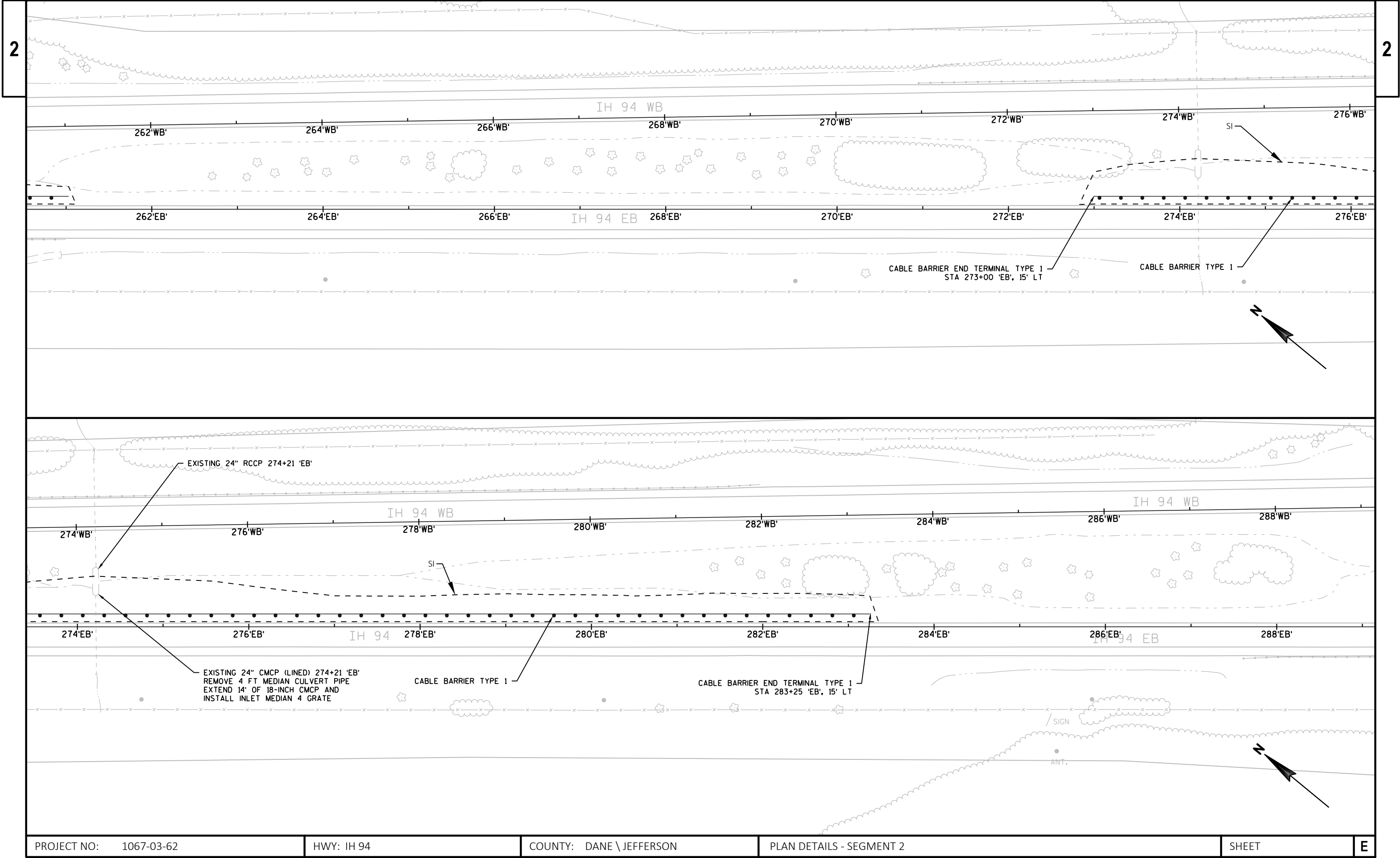
DETAIL FOR CULVERT PIPE CHECKS
(INSTALL ON INLET END ONLY)

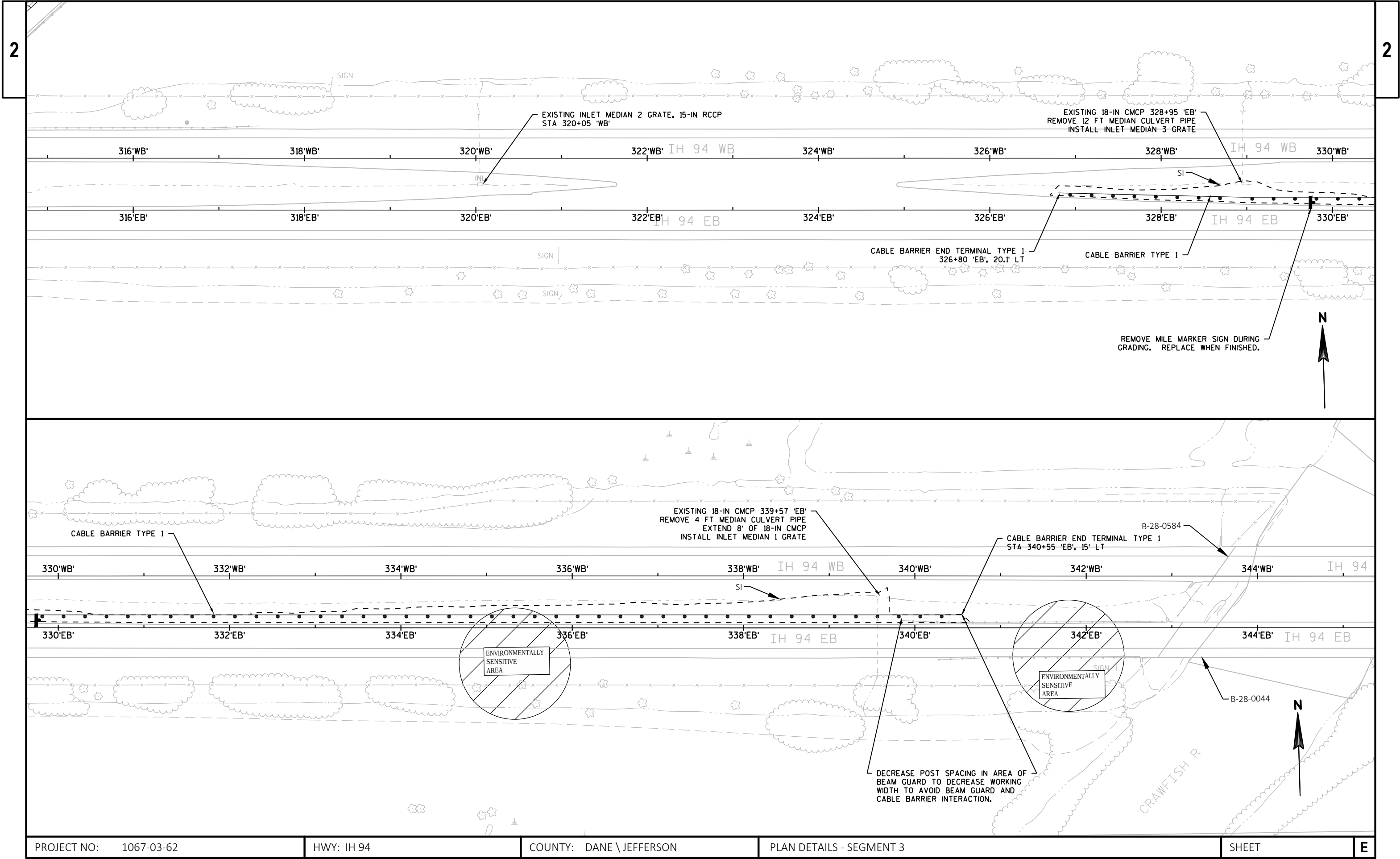


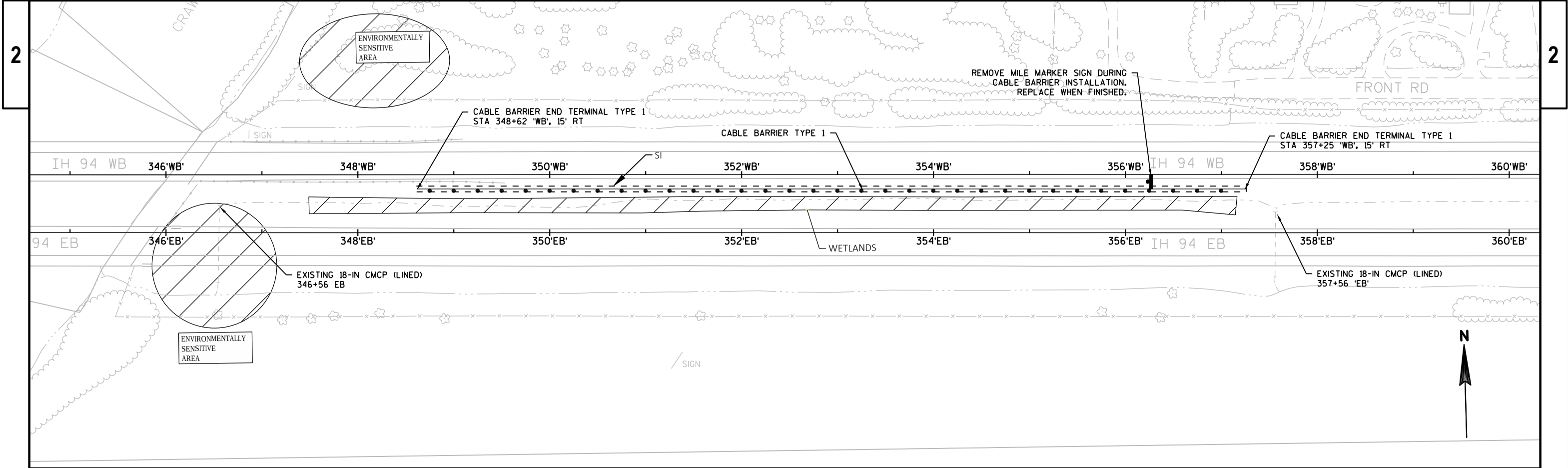


PROJECT NO: 1067-03-62	HWY: IH 94	COUNTY: DANE \ JEFFERSON	PLAN DETAILS - SEGMENT 1	SHEET	E
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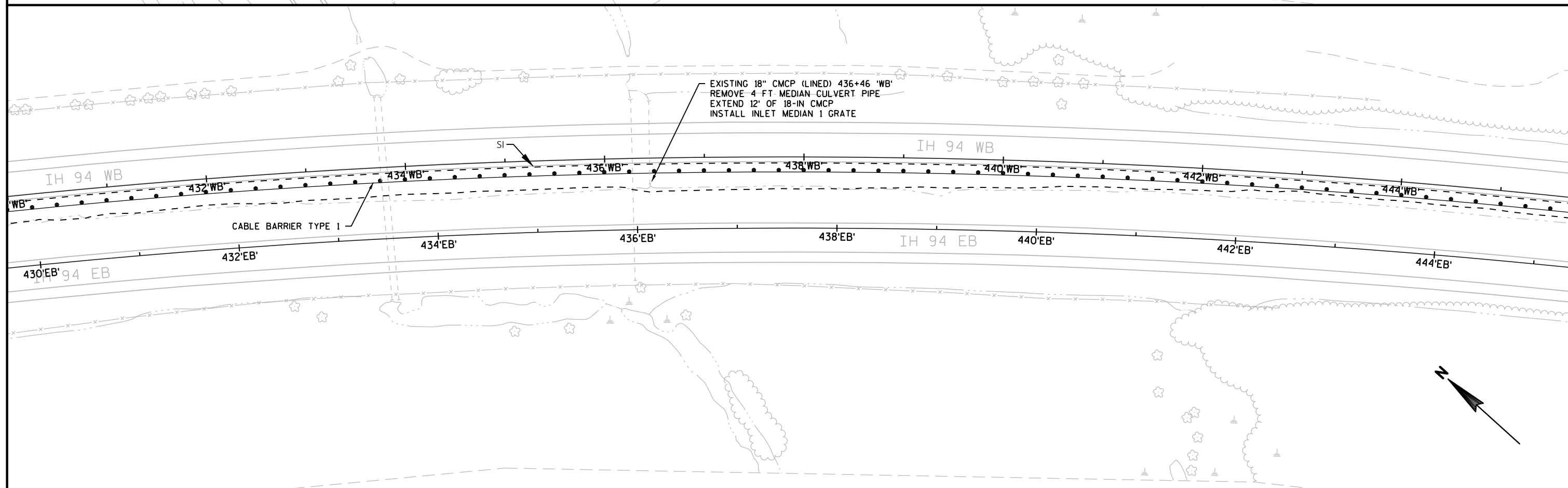


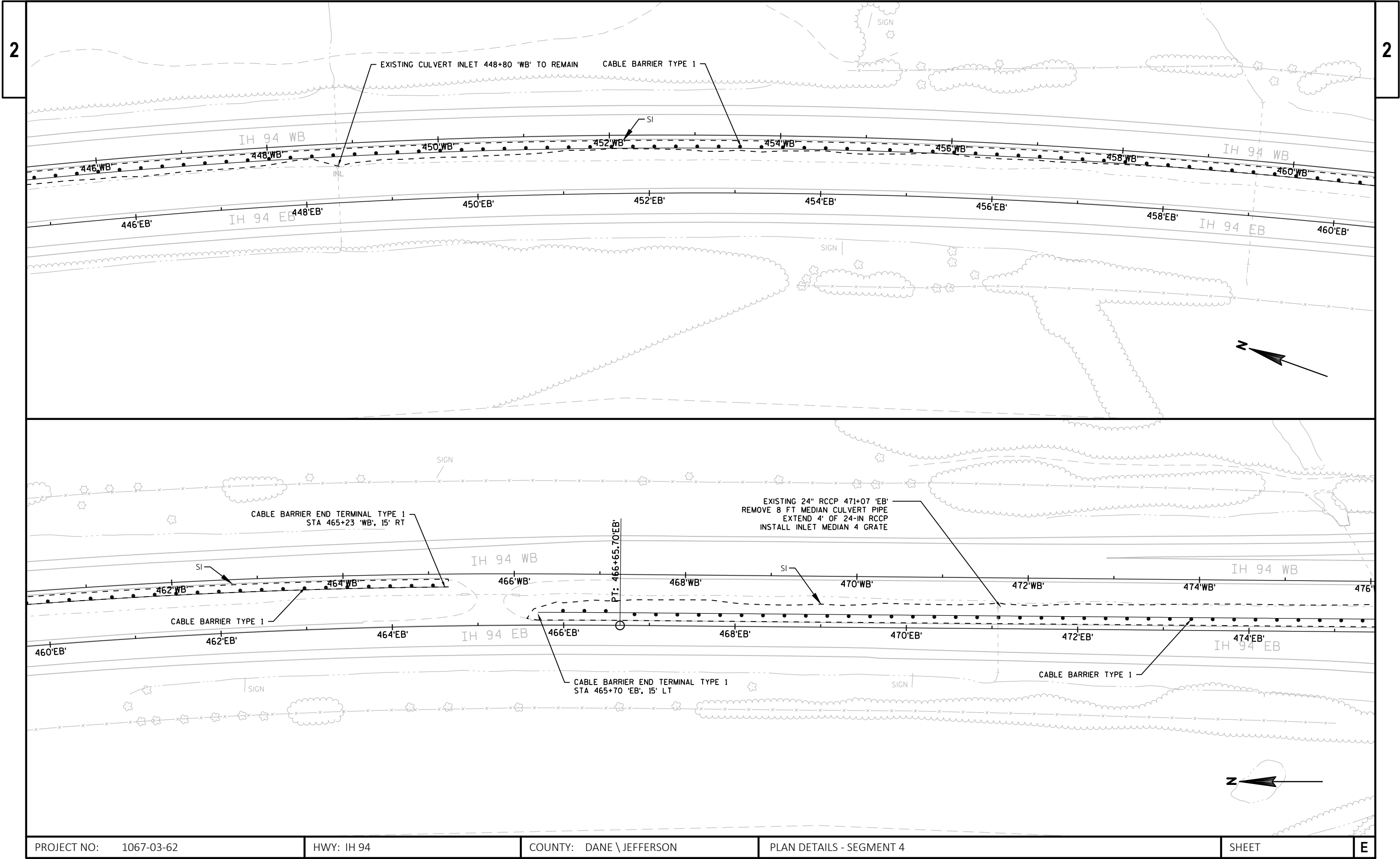


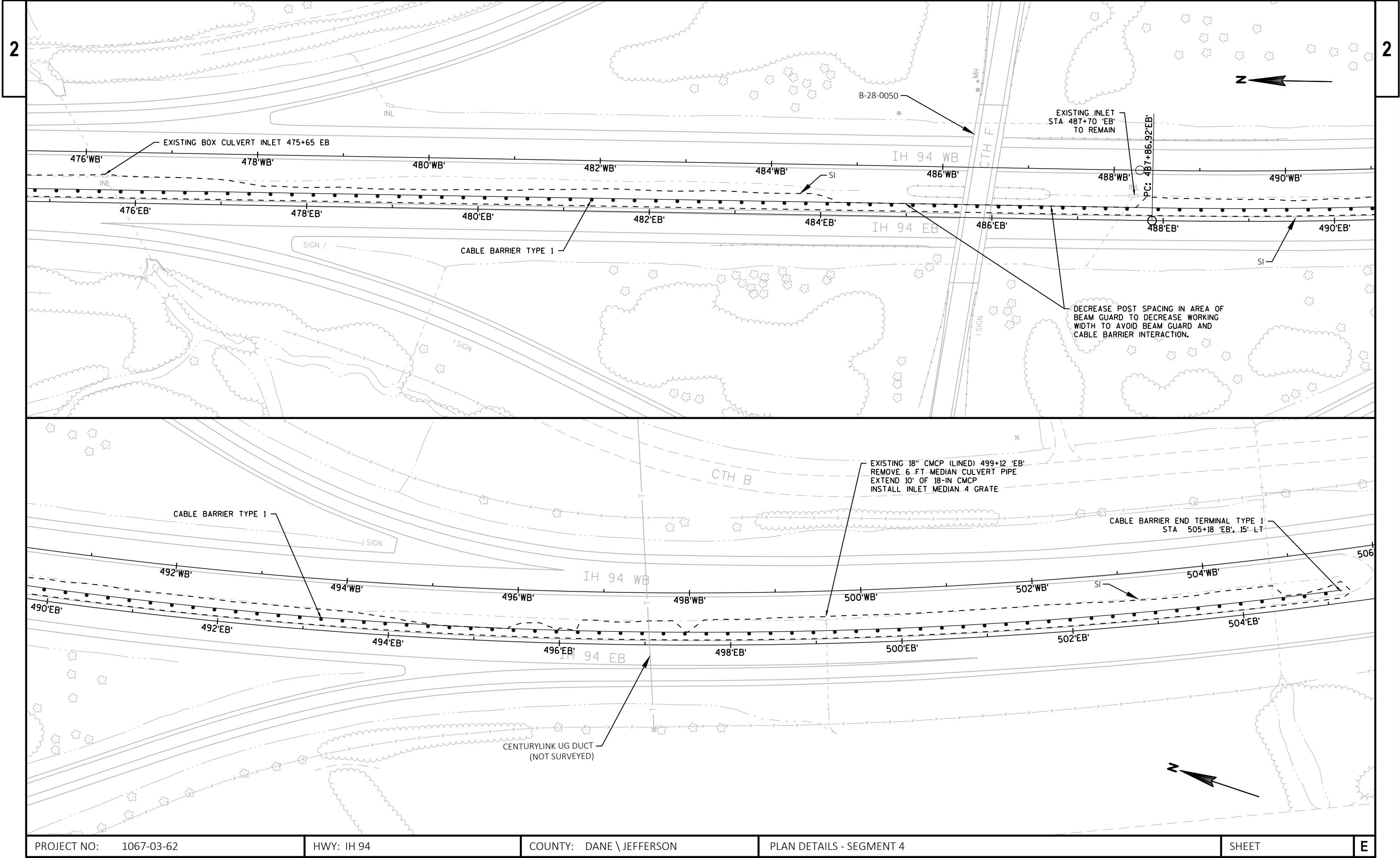




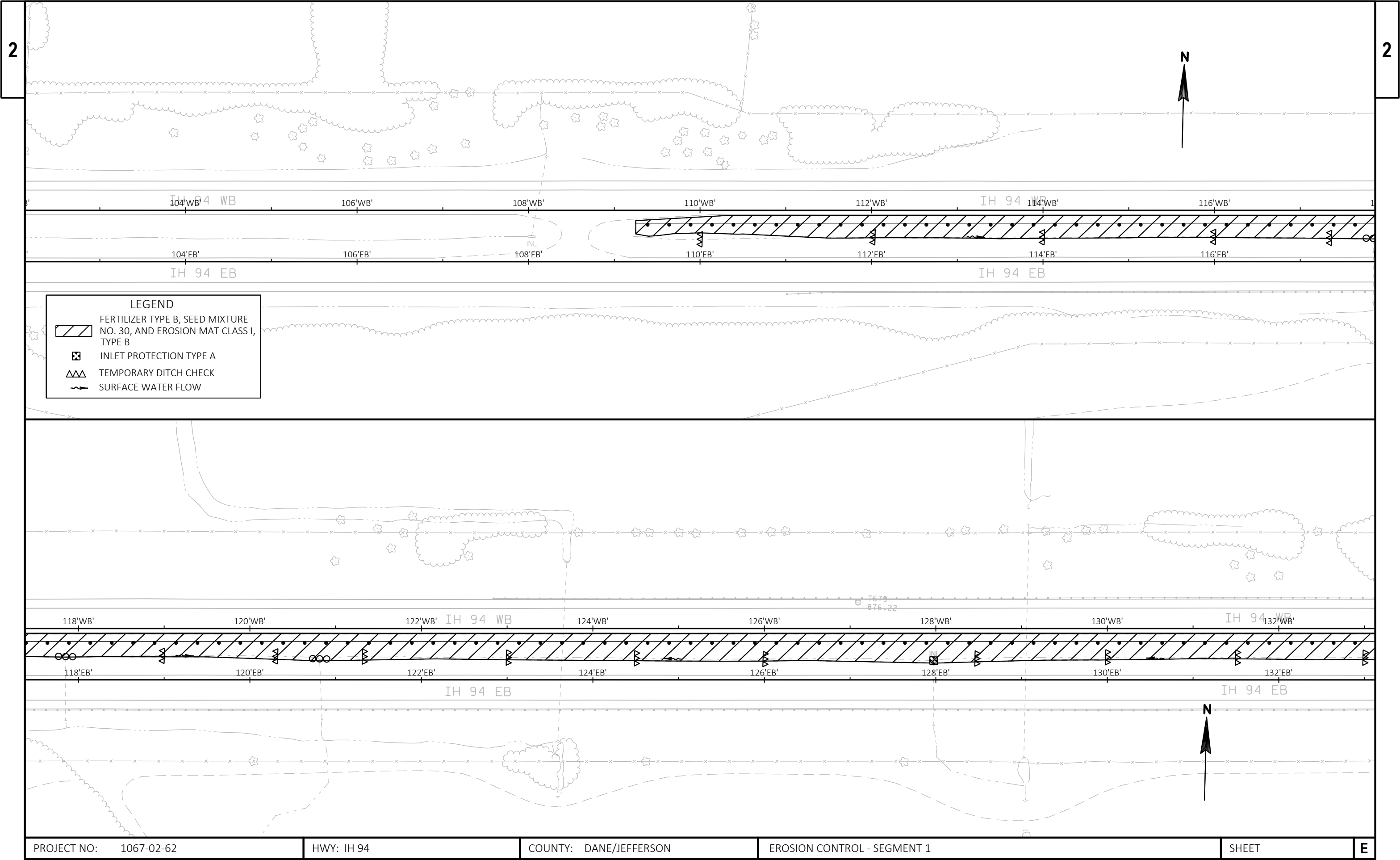
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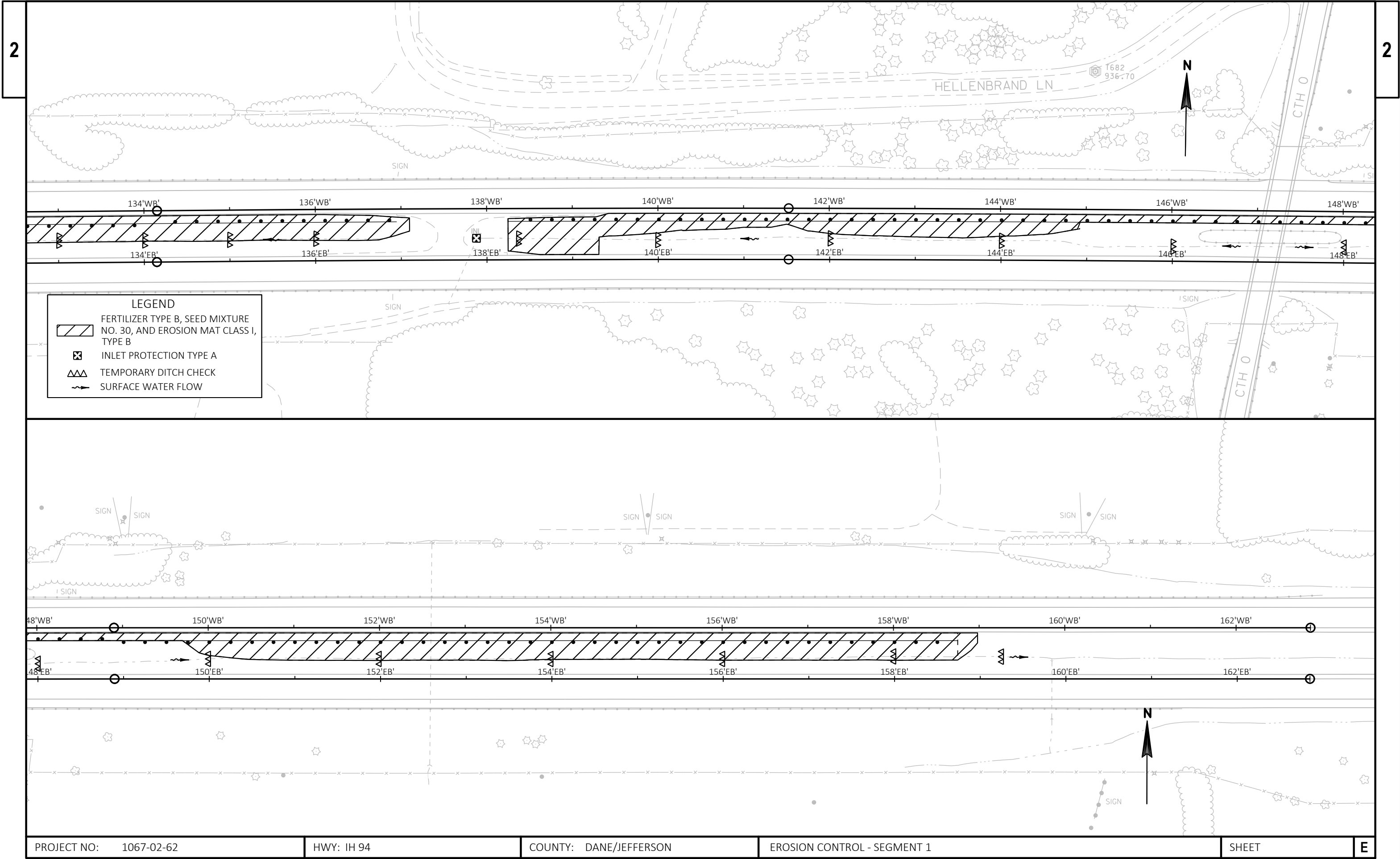


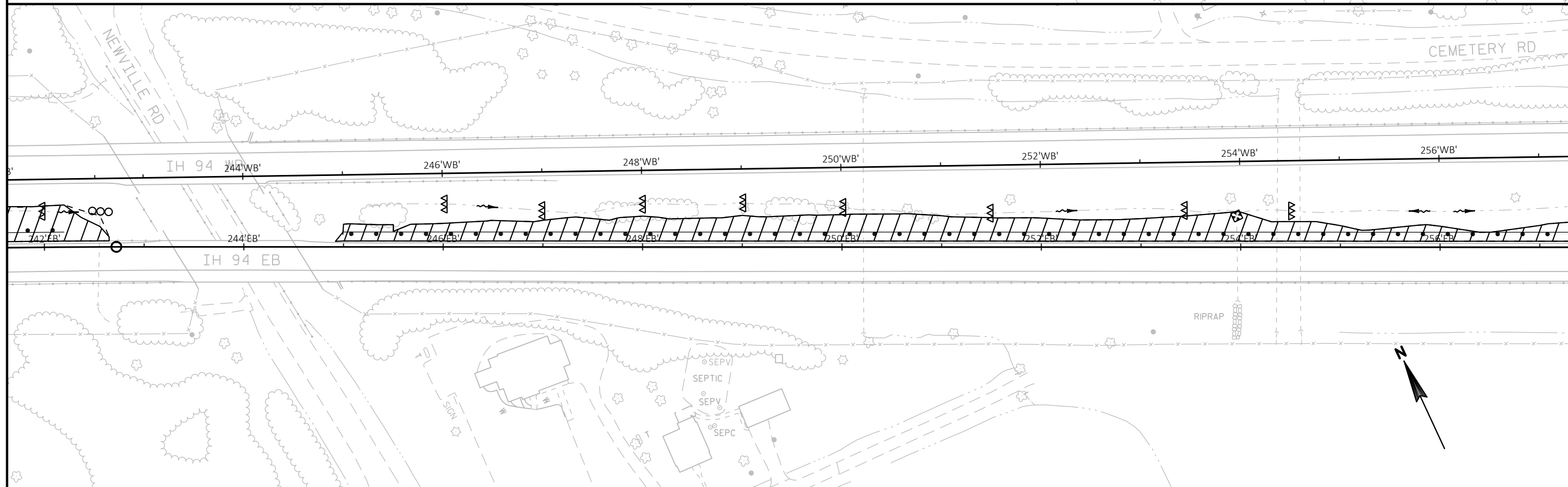


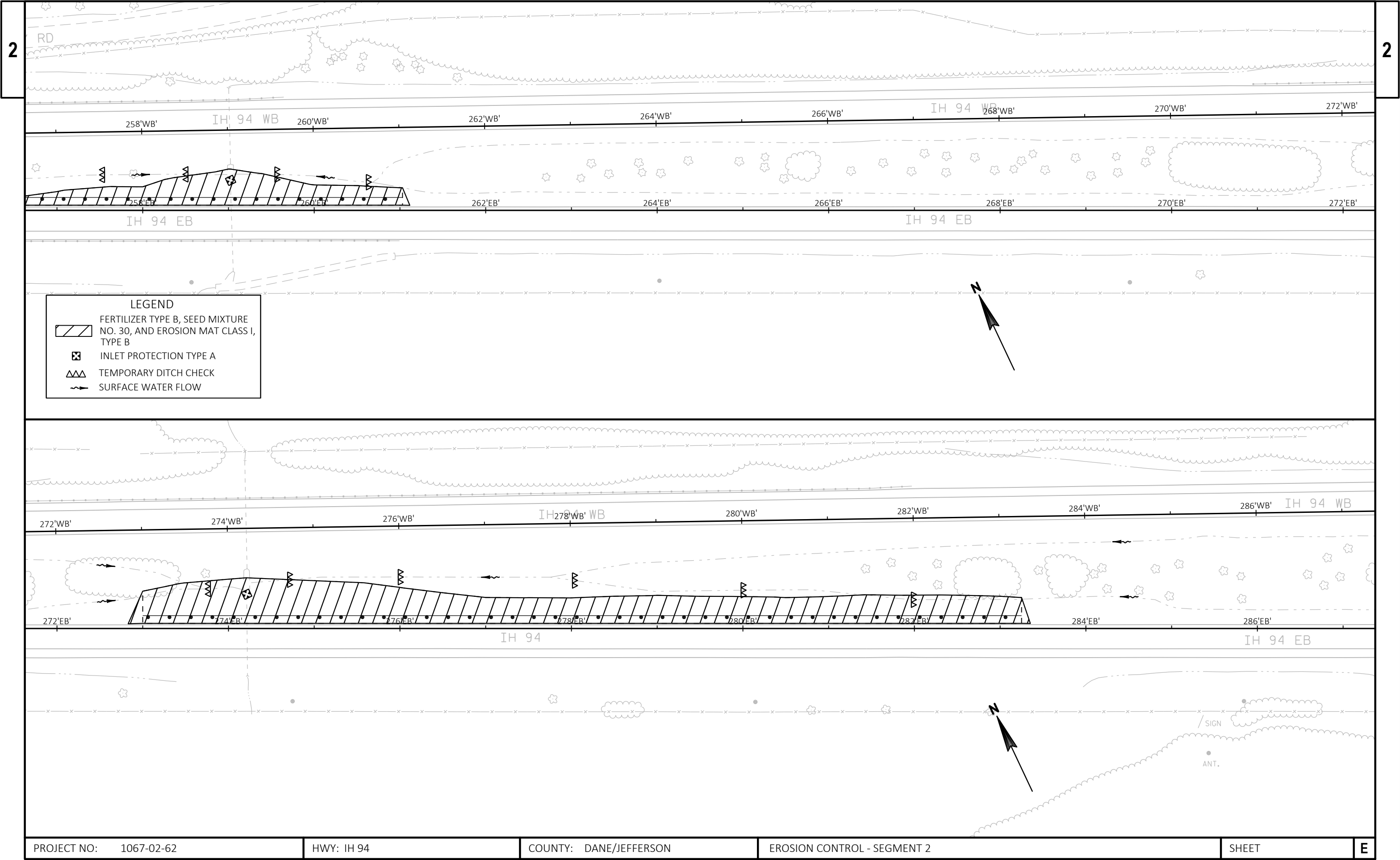


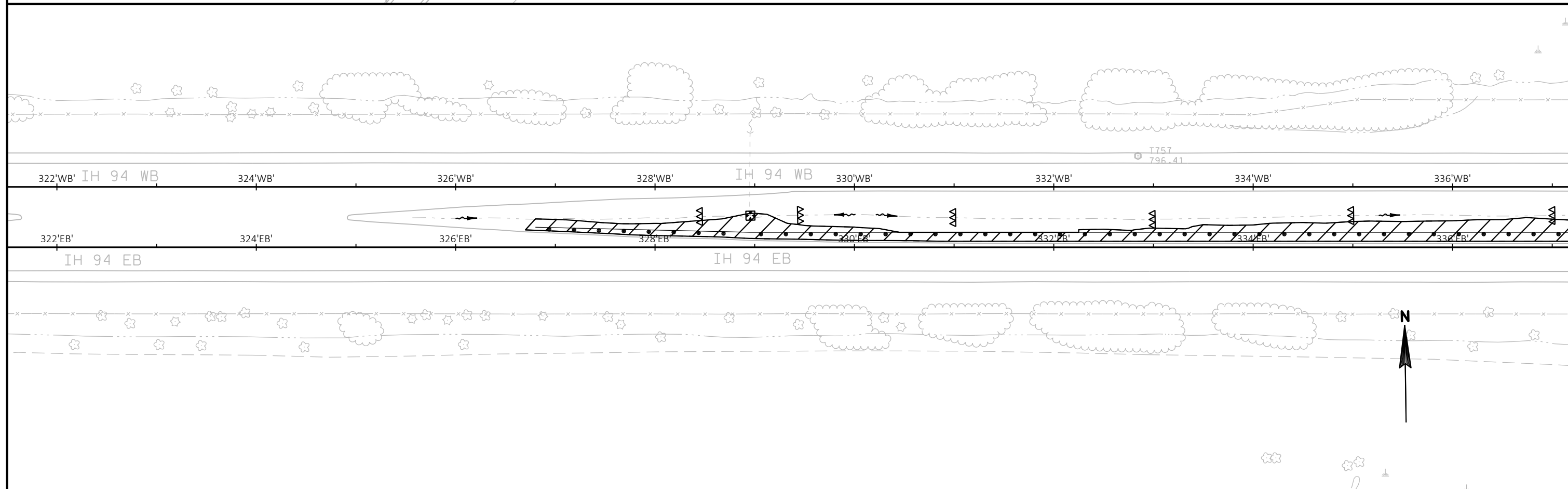
PROJECT NO: 1067-03-62	HWY: IH 94	COUNTY: DANE \ JEFFERSON	PLAN DETAILS - SEGMENT 4	SHEET	E
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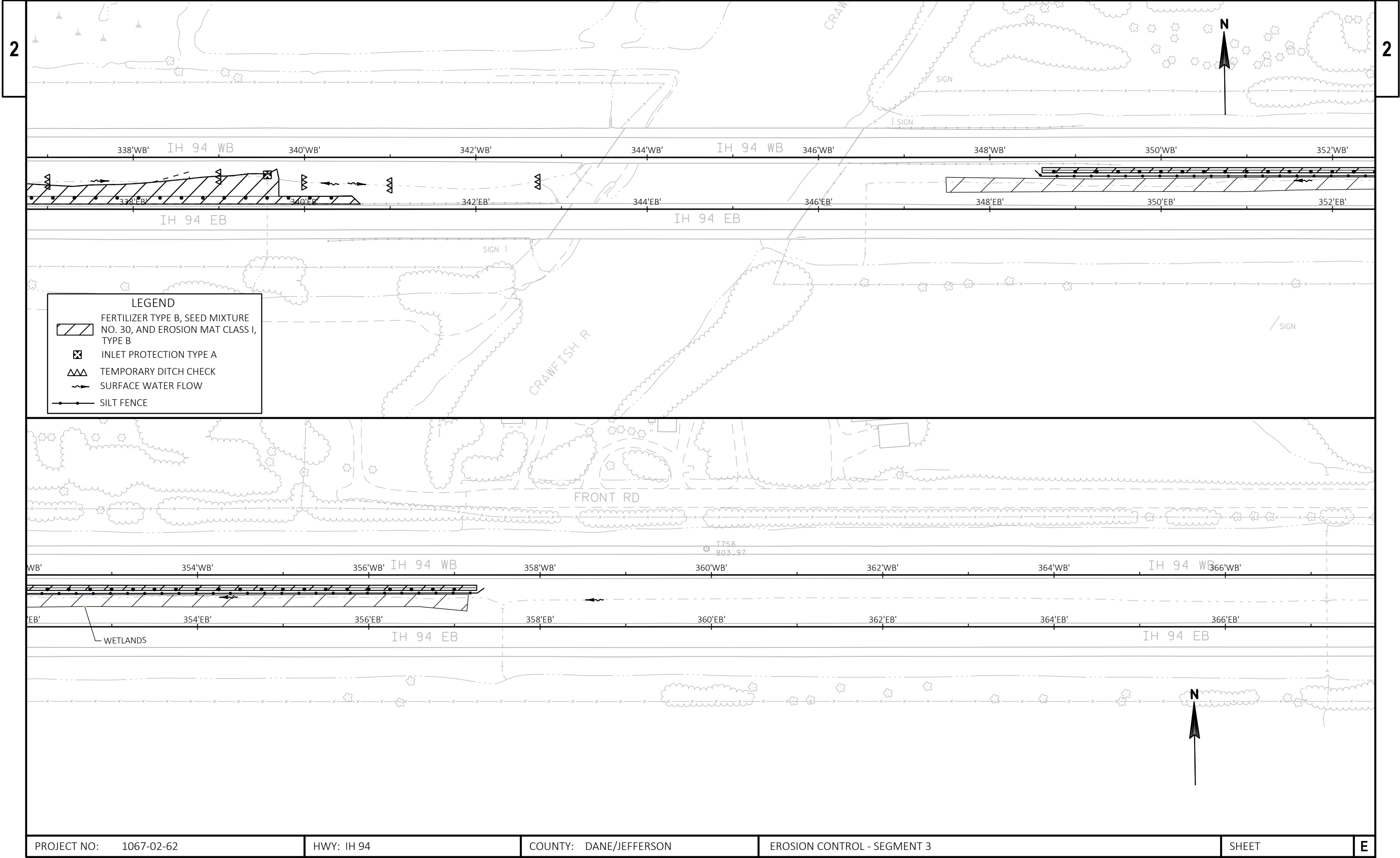




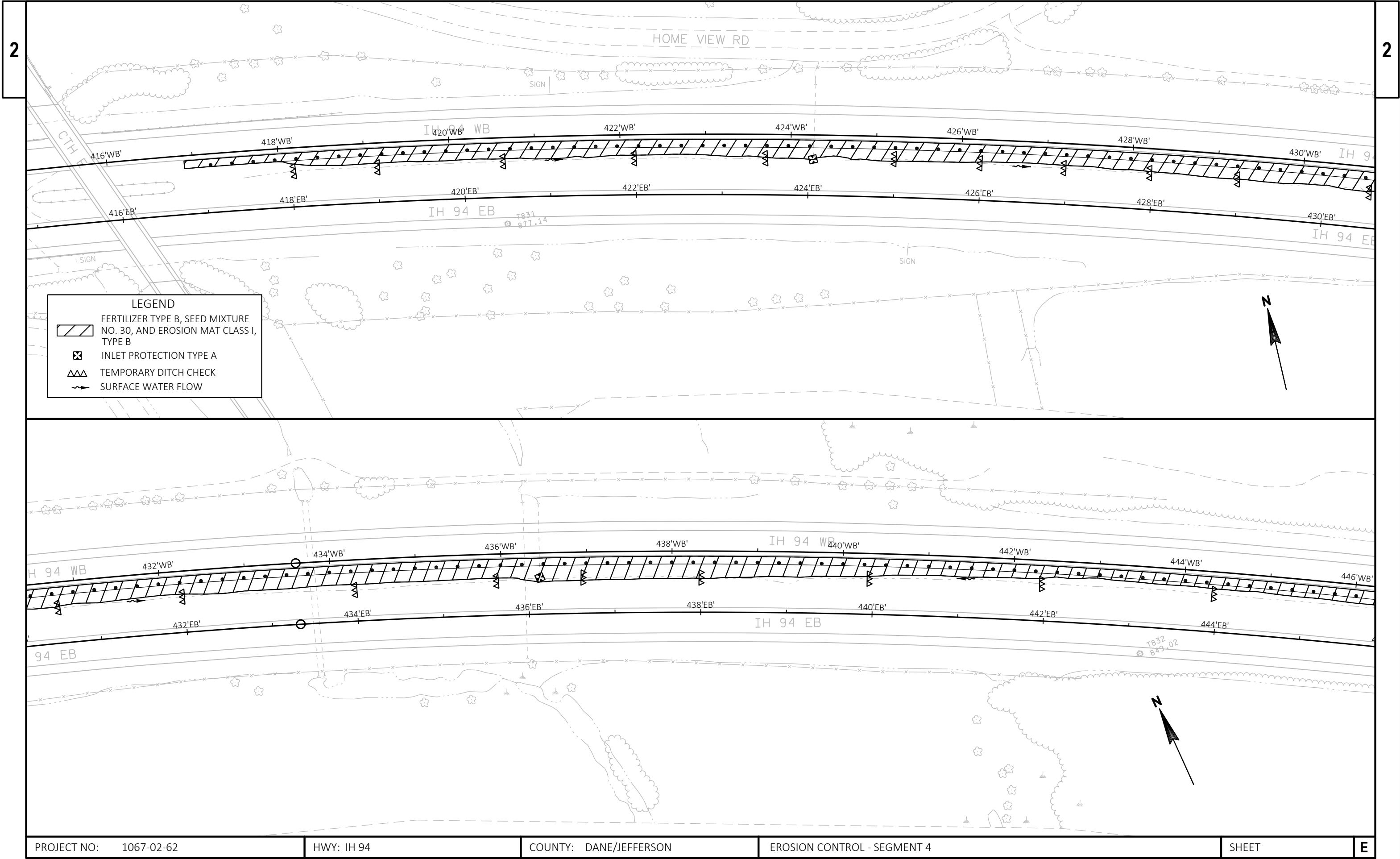


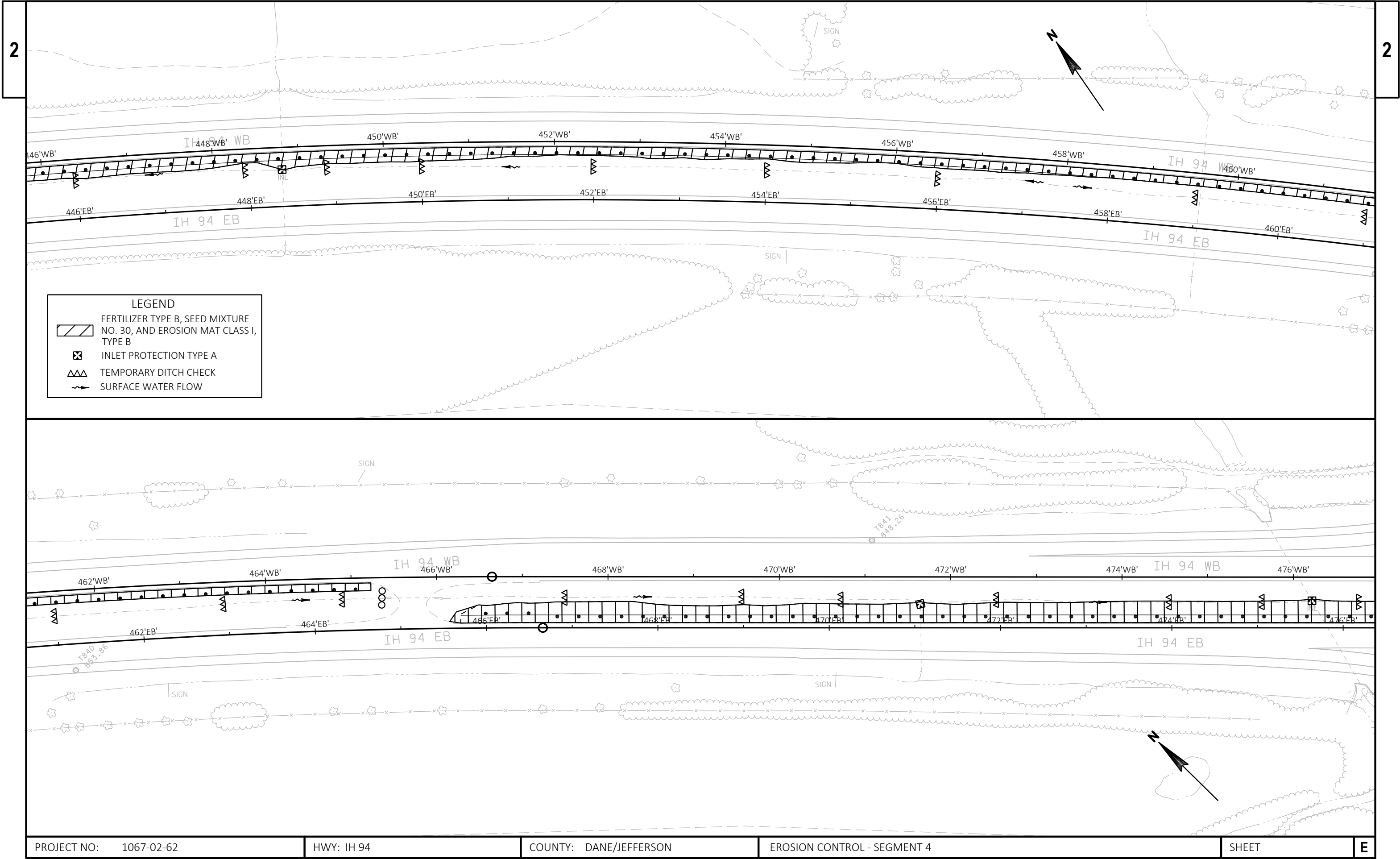


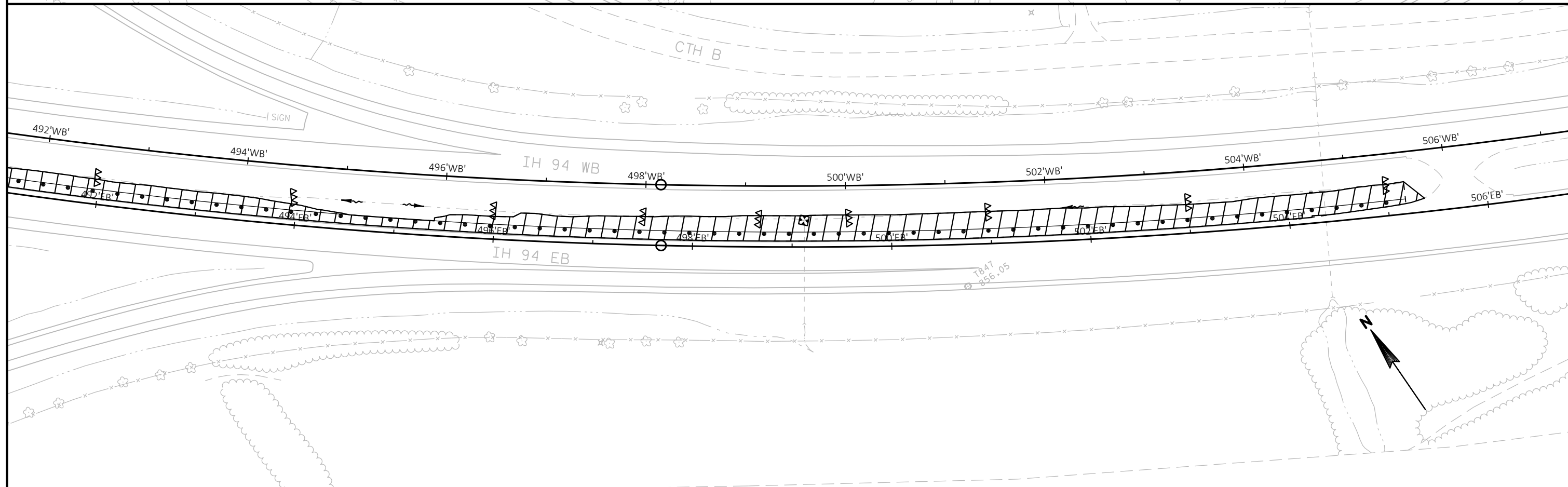


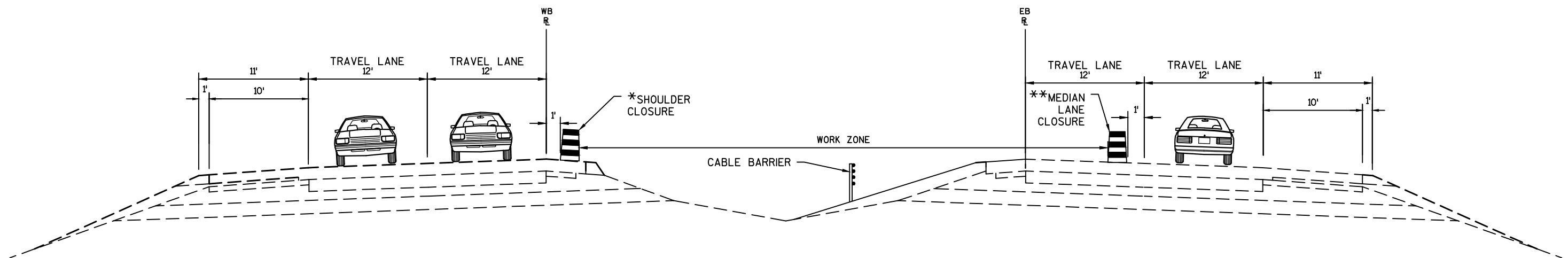


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE/JEFFERSON	EROSION CONTROL - SEGMENT 3	SHEET	E
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TRAFFIC CONTROL TYPICAL SECTION

EB MEDIAN LANE CLOSURE AND WB SHOULDER CLOSURE

* SEE S.D.D. 15D27-03 "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR ADDITIONAL LAYOUT DETAILS.

** SEE S.D.D. 15D12-06A "TRAFFIC CONTROL, LANE CLOSURE" FOR ADDITIONAL LAYOUT DETAILS

NOTE: DRUM POSITIONS WILL MIRROR FOR CABLE BARRIER INSTALLATION ON WB SIDE

PCMS MESSAGES

ROADWORK
BEGINS
XX/XX/XX

SEQUENCE 1

NIGHT
LANE
CLOSURES

SEQUENCE 2

Estimate Of Quantities

1067-02-62

Line	Item	Item Description	Unit	Total	Qty
0002	204.0220	Removing Inlets	EACH	1.000	1.000
0004	204.9090.S	Removing (item description) 01. Median Culvert Pipe	LF	70.000	70.000
0006	205.0100	Excavation Common	CY	519.000	519.000
0008	208.0100	Borrow	CY	5,932.000	5,932.000
0010	213.0100	Finishing Roadway (project) 01. 1067-02-62	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	514.000	514.000
0014	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0016	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	4.000	4.000
0018	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	34.000	34.000
0020	521.3130	Culvert Pipe Corrugated Steel 30-Inch	LF	12.000	12.000
0022	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	4.000	4.000
0024	611.3901	Inlets Median 1 Grate	EACH	3.000	3.000
0026	611.3903	Inlets Median 3 Grate	EACH	1.000	1.000
0028	611.3904	Inlets Median 4 Grate	EACH	6.000	6.000
0030	613.1100.S	Cable Barrier Type 1	LF	19,052.000	19,052.000
0032	613.1200.S	Cable Barrier End Terminal Type 1	EACH	18.000	18.000
0034	619.1000	Mobilization	EACH	1.000	1.000
0036	624.0100	Water	MGAL	287.000	287.000
0038	625.0500	Salvaged Topsoil	SY	45,954.000	45,954.000
0040	628.1504	Silt Fence	LF	885.000	885.000
0042	628.1520	Silt Fence Maintenance	LF	885.000	885.000
0044	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0046	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0048	628.2004	Erosion Mat Class I Type B	SY	45,954.000	45,954.000
0050	628.7005	Inlet Protection Type A	EACH	14.000	14.000
0052	628.7504	Temporary Ditch Checks	LF	923.000	923.000
0054	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0056	629.0210	Fertilizer Type B	CWT	25.900	25.900
0058	630.0130	Seeding Mixture No. 30	LB	831.000	831.000
0060	633.5200	Markers Culvert End	EACH	15.000	15.000
0062	638.2101	Moving Signs Type I	EACH	3.000	3.000
0064	642.5001	Field Office Type B	EACH	1.000	1.000
0066	643.0300	Traffic Control Drums	DAY	5,673.000	5,673.000
0068	643.0420	Traffic Control Barricades Type III	DAY	210.000	210.000
0070	643.0705	Traffic Control Warning Lights Type A	DAY	420.000	420.000
0072	643.0715	Traffic Control Warning Lights Type C	DAY	849.000	849.000
0074	643.0800	Traffic Control Arrow Boards	DAY	135.000	135.000
0076	643.0900	Traffic Control Signs	DAY	1,041.000	1,041.000
0078	643.1050	Traffic Control Signs PCMS	DAY	40.000	40.000
0080	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

1067-02-62					
Line	Item	Item Description	Unit	Total	Qty
0082	650.6000	Construction Staking Pipe Culverts	EACH	12.000	12.000
0084	650.9910	Construction Staking Supplemental Control (project) 01. 1067-02-62	LS	1.000	1.000
0086	650.9920	Construction Staking Slope Stakes	LF	19,052.000	19,052.000
0088	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	225.000	225.000
0090	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	175.000	175.000
0092	SPV.0060	Special 01. Verify Landmark Reference Monuments	EACH	2.000	2.000

204.0220 REMOVING INLETS			
CATEGORY	STATION	LOCATION	EACH
0010	127+97 'WB'	RT	1
TOTAL 0010			1

EARTHWORK

205.0100 208.0100
EXCAVATION BORROW
COMMON

CATEGORY	STATION TO	STATION	LOCATION	CY	CY	REMARKS
0010	109+25	- 136+95	IH 94 WB - RT	54	1480	SEGMENT 1, RUN 1
0010	138+25	- 158+75	IH 94 WB - RT	21	1030	SEGMENT 1, RUN 2
0010	236+35	- 242+20	IH 94 EB - LT	181	0	SEGMENT 2, RUN 1
0010	245+00	- 261+03	IH 94 EB - LT	28	502	SEGMENT 2, RUN 2
0010	273+00	- 283+25	IH 94 EB - LT	60	972	SEGMENT 2, RUN 3
0010	326+80	- 340+55	IH 94 EB - LT	81	96	SEGMENT 3, RUN 1
0010	348+62	- 357+25	IH 94 WB - RT	-	-	SEGMENT 3, RUN 2
0010	416+90	- 465+23	IH 94 WB - RT	59	910	SEGMENT 4, RUN 1
0010	465+70	- 505+18	IH 94 EB - LT	35	923	SEGMENT 4, RUN 2

TOTAL 0010 519 5913

305.0110
BASE
AGGREGATE
DENSE
3/4-INCH

CATEGORY	LOCATION	TON	REMARKS
0010	UNDISTRIBUTED	541	SHOULDERS

TOTAL 0010 541

DRAINAGE ITEMS

204.9090.S 520.8000 521.3112 521.3118 521.3130 522.0124
REMOVING CONCRETE CULVERT PIPE CULVERT PIPE CULVERT PIPE CULVERT PIPE
MEDIAN COLLARS CORRUGATED CORRUGATED CORRUGATED REINFORCED
CULVERT FOR PIPE STEEL 12-INCH STEEL 18-INCH STEEL 30-INCH CONCRETE
PIPE 24-INCH
611.3901 611.3903 611.3904 633.5200
INLETS INLETS INLETS MARKERS
MEDIAN MEDIAN MEDIAN CULVERT
1 GRATE 3 GRATE 4 GRATE END

SEGMENT	RUN	STA	SIDE	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	REMARKS
1	1	117+85 'WB'	RT	---	---	---	---	---	---	---	---	---	1	NO MOD
1	1	120+81 'WB'	RT	---	---	---	---	---	---	---	---	---	1	NO MOD
1	1	127+97 'WB'	RT	6	---	---	---	---	---	1	---	---	1	
2	2	253+96 'EB'	LT	8	---	---	---	---	---	---	---	1	1	
2	2	259+02 'EB'	LT	6	1	---	---	12	---	---	---	1	1	
2	3	274+21 'EB'	LT	4	1	---	14	---	---	---	---	1	1	
3	2	328+95 'EB'	LT	12	---	---	---	---	---	---	1	---	1	
3	2	339+57 'EB'	LT	4	1	---	8	---	---	1	---	---	1	
4	1	424+26 'WB'	RT	12	---	---	---	---	---	---	---	1	1	
4	1	436+46 'WB'	RT	4	---	---	12	---	---	1	---	---	1	
4	1	448+80 'WB'	RT	---	---	---	---	---	---	---	---	---	1	NO MOD
4	2	471+07 'EB'	LT	8	1	---	---	---	4	---	---	1	1	
4	2	475+65 'EB'	LT	---	---	---	---	---	---	---	---	---	1	ADD RISER
4	2	487+70 'EB'	LT	---	---	---	---	---	---	---	---	---	1	NO MOD
4	2	499+12 'EB'	LT	6	---	4	---	---	---	---	---	1	1	
TOTAL 0010				70	4	4	34	12	4	3	1	6	15	

CABLE BARRIER

					613.1100.S	613.1200.S	
					CABLE	CABLE BARRIER	
					BARRIER	END TERMINAL	
					TYPE 1	TYPE 1	
CATEGORY	STATION	TO	STATION	LOCATION	LF	EACH	REMARKS
0010	109+25	-	136+95	IH 94 WB - RT	2770	2	SEGMENT 1, RUN 1
0010	138+25	-	158+75	IH 94 WB - RT	2050	2	SEGMENT 1, RUN 2
0010	236+35	-	242+20	IH 94 EB - LT	585	2	SEGMENT 2, RUN 1
0010	245+00	-	261+03	IH 94 EB - LT	1603	2	SEGMENT 2, RUN 2
0010	273+00	-	283+25	IH 94 EB - LT	1025	2	SEGMENT 2, RUN 3
0010	326+80	-	340+55	IH 94 EB - LT	1375	2	SEGMENT 3, RUN 1
0010	348+62	-	357+25	IH 94 WB - RT	863	2	SEGMENT 3, RUN 2
0010	416+90	-	465+23	IH 94 WB - RT	4833	2	SEGMENT 4, RUN 1
0010	465+70	-	505+18	IH 94 EB - LT	3948	2	SEGMENT 4, RUN 2
TOTAL 0010					19052	18	

MOBILIZATIONS

					619.1000	628.1905	628.1910
					MOBILIZATION	MOBILIZATIONS	MOBILIZATIONS
						EROSION	EMERGENCY
						CONTROL	EROSION
							CONTROL
CATEGORY	STATION	TO	STATION	LOCATION	EACH	EACH	EACH
0010	109+25	-	158+75	SEGMENT 1	0.25	1	1
0010	136+35	-	283+25	SEGMENT 2	0.25	2	1
0010	326+80	-	357+25	SEGMENT 3	0.25	1	1
0010	415+40	-	505+18	SEGMENT 4	0.25	2	1
TOTAL 0010					1	6	4

WATER

		624.0100	
		WATER	
CATEGORY	LOCATION	MGAL	REMARKS
0010	UNDISTRIBUTED	256	
0010	UNDISTRIBUTED	31	DUST CONTROL
TOTAL 0010		287	

RESTORATION

					625.0500	628.2004	629.0210	630.0130	
					SALVAGED	EROSION MAT	FERTILIZER	SEEDING	
					TOPSOIL	CLASS I	TYPE B	MIXTURE	
						TYPE B		NO. 30	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	CWT	LB	REMARKS
0010	109+25	-	136+95	IH 94 WB - RT	8845	8845	4.98	160	SEGMENT 1, RUN 1
0010	138+25	-	158+75	IH 94 WB - RT	5578	5578	3.14	101	SEGMENT 1, RUN 2
0010	236+35	-	242+20	IH 94 EB - LT	2101	2101	1.19	38	SEGMENT 2, RUN 1
0010	245+00	-	261+03	IH 94 EB - LT	4038	4038	2.28	73	SEGMENT 2, RUN 2
0010	273+00	-	283+25	IH 94 EB - LT	4242	4242	2.39	77	SEGMENT 2, RUN 3
0010	326+80	-	340+55	IH 94 EB - LT	2626	2626	1.48	48	SEGMENT 3, RUN 1
0010	348+62	-	357+25	IH 94 WB - RT	-	-	-	-	SEGMENT 3, RUN 2
0010	416+90	-	465+23	IH 94 WB - RT	8759	8759	4.93	158	SEGMENT 4, RUN 1
0010	465+70	-	505+18	IH 94 EB - LT	8765	8765	4.94	158	SEGMENT 4, RUN 2
UNDISTRIBUTED					1000	1000	0.57	18	
TOTAL 0010					45954	45954	25.90	831	

EROSION CONTROL										
CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	628.7005	628.7504	628.7555	REMARKS
					SILT FENCE FENCE	SILT FENCE MAINTENANCE	INLET PROPTECTION TYPE A	TEMPORARY DITCH CHECKS	CULVERT PIPE CHECKS	
					LF	LF	EA	LF	EA	
0010	109+25	-	136+95	IH 94 WB - RT	-	-	1	135	2	SEGMENT 1, RUN 1
0010	137+85	-	158+75	IH 94 WB - RT	-	-	1	90	-	SEGMENT 1, RUN 2
0010	236+35	-	242+20	IH 94 EB - LT	-	-	-	45	1	SEGMENT 2, RUN 1
0010	245+00	-	261+03	IH 94 EB - LT	-	-	2	90	-	SEGMENT 2, RUN 2
0010	273+00	-	283+25	IH 94 EB - LT	-	-	1	45	-	SEGMENT 2, RUN 3
0010	326+80	-	340+55	IH 94 EB - LT	-	-	2	75	-	SEGMENT 3, RUN 1
0010	348+62	-	357+25	IH 94 WB - RT	885	885	-	45	-	SEGMENT 3, RUN 2
0010	416+90	-	465+23	IH 94 WB - RT	-	-	3	225	1	SEGMENT 4, RUN 1
0010	465+70	-	505+18	IH 94 EB - LT	-	-	4	173	-	SEGMENT 4, RUN 2
TOTAL 0010					885	885	14	923	4	

TRAFFIC CONTROL												
CATEGORY	STATION	TO	STATION	LOCATION	DAYS	643.0300	643.0420	643.0705	643.0715	643.0800	643.0900	REMARKS
						TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	
						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
						DRUMS	BARRICADES	WARNING	WARNING	ARROW	SIGNS	
							TYPE III	LIGHTS	LIGHTS	BOARDS		
								TYPE A	TYPE C			
<u>LANE CLOSURE</u>												
0010	109+25	-	158+75	IH 94 WB - RT	11	825	55	110	187	22	165	
0010	236+35	-	283+25	IH 94 EB - LT	11	792	55	110	187	22	165	
0010	326+80	-	340+55	IH 94 EB - LT	4	240	20	40	68	8	60	
0010	348+62	-	357+25	IH 94 WB - RT	4	200	12	24	68	8	52	
0010	416+90	-	465+23	IH 94 WB - RT	8	592	40	80	136	16	120	
0010	465+70	-	505+18	IH 94 EB - LT	7	658	28	56	203	14	119	INCLUDES ENTRANCE RAMP
<u>SHOULDER CLOSURE</u>												
0010	109+25	-	158+75	IH 94 WB - RT	11	671	-	-	-	11	88	
0010	236+35	-	283+25	IH 94 EB - LT	11	638	-	-	-	11	88	
0010	326+80	-	340+55	IH 94 EB - LT	4	120	-	-	-	4	32	
0010	348+62	-	357+25	IH 94 WB - RT	4	92	-	-	-	4	32	
0010	416+90	-	465+23	IH 94 WB - RT	8	488	-	-	-	8	64	
0010	465+70	-	505+18	IH 94 EB - LT	7	357	-	-	-	7	56	
TOTAL 0010						5673	210	420	849	135	1041	

638.2101 MOVING SIGNS TYPE I				
SEGMENT	RUN	STA	SIDE	EA
2	1	236+48 'EB'	LT	1
3	2	329+78 'EB'	LT	1
3	3	356+23 'WB'	RT	1
TOTAL 0010				3

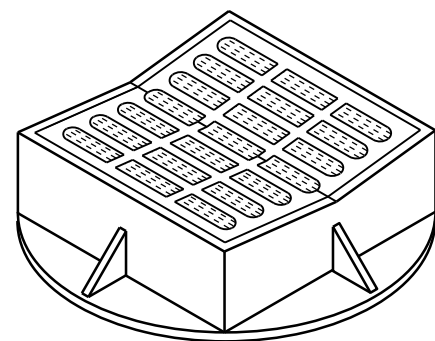
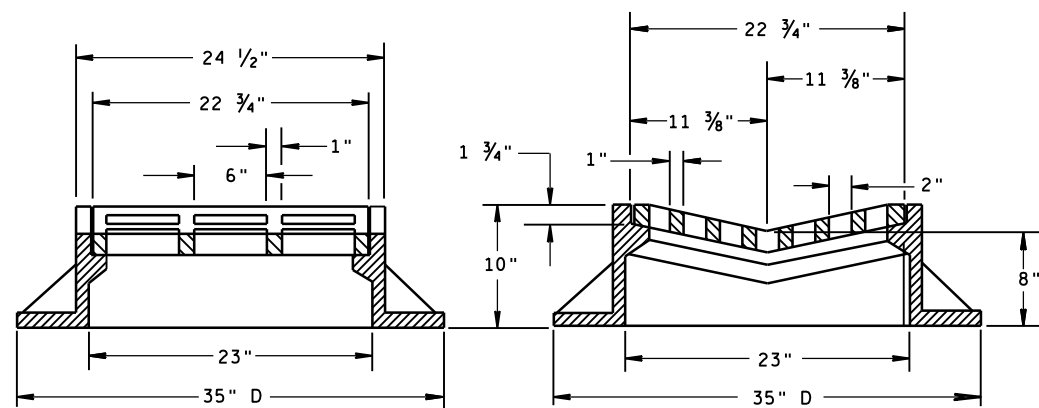
TRAFFIC CONTROL SIGNS PCMS		
643.1050		
CATEGORY	LOCATION	DAY
0010	SEGMENT 1	10
0010	SEGMENT 2	10
0010	SEGMENT 3	10
0010	SEGMENT 4	10
0010	TOTAL	40

520.8000 CONSTRUCTION STAKING PIPE CULVERTS					
SEGMENT	RUN	STA	SIDE	EA	REMARKS
1	1	117+85 'WB'	RT	-	
1	1	120+81 'WB'	RT	-	
1	1	127+97 'WB'	RT	1	
2	2	253+96 'EB'	LT	1	
2	2	259+02 'EB'	LT	1	
2	3	274+21 'EB'	LT	1	
3	2	328+95 'EB'	LT	1	
3	2	339+57 'EB'	LT	1	
4	1	424+26 'WB'	RT	1	
4	1	436+46 'WB'	RT	1	
4	1	448+80 'WB'	RT	-	
4	2	471+07 'EB'	LT	1	
4	2	475+65 'EB'	LT	1	
4	2	487+70 'EB'	LT	1	
4	2	499+12 'EB'	LT	1	
TOTAL 0010				12	

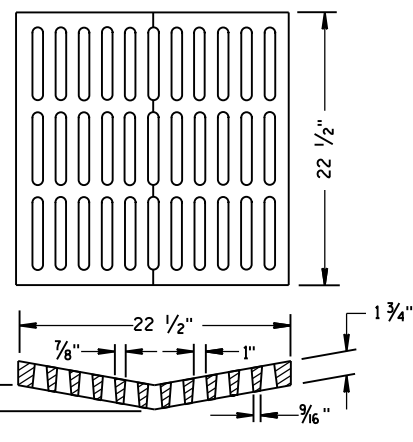
650.9920 CONSTRUCTION STAKING SLOPE STAKES						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	109+25	-	136+95	IH 94 WB - RT	2770	
0010	138+25	-	158+75	IH 94 WB - RT	2050	
0010	236+35	-	242+20	IH 94 EB - LT	585	
0010	245+00	-	261+03	IH 94 EB - LT	1603	
0010	273+00	-	283+25	IH 94 EB - LT	1025	
0010	326+80	-	340+55	IH 94 EB - LT	1375	
0010	348+62	-	357+25	IH 94 WB - RT	863	
0010	416+90	-	465+23	IH 94 WB - RT	4833	
0010	465+70	-	505+18	IH 94 EB - LT	3948	
TOTAL 0010					19052	

Standard Detail Drawing List

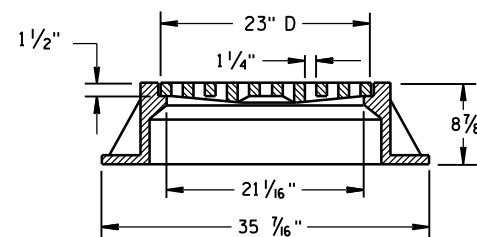
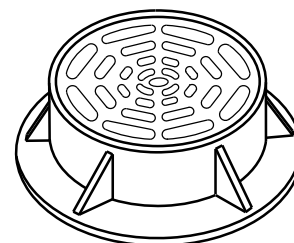
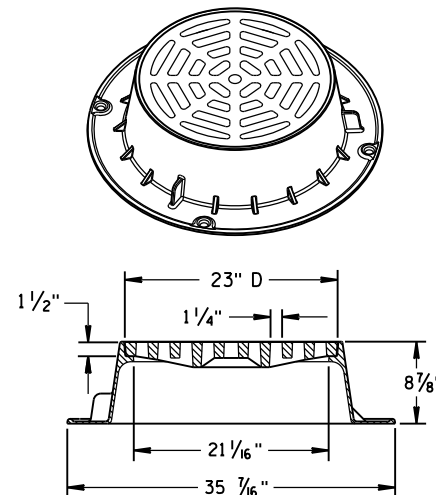
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08C09-02	INLETS MEDIAN 3 AND 4 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D15-04B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



TYPE "B"

ALTERNATIVE GRATE FOR
TYPE "B" COVER

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



TYPE "C"

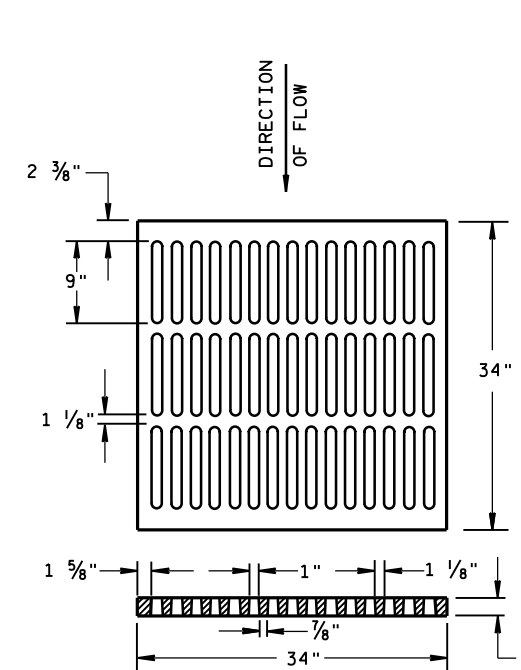
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

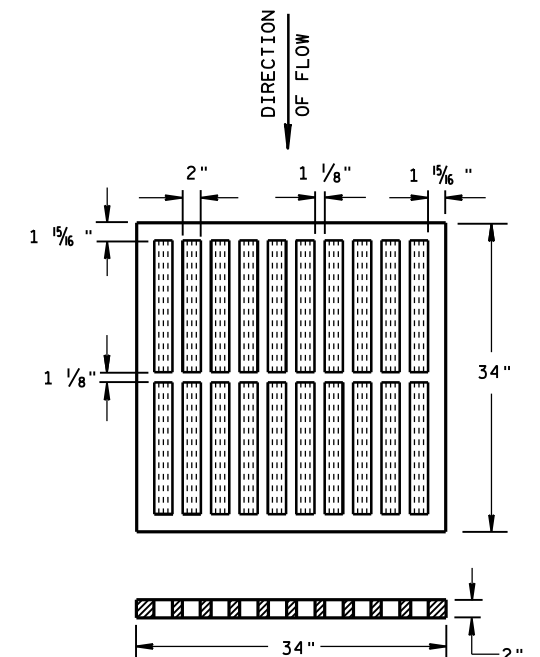
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



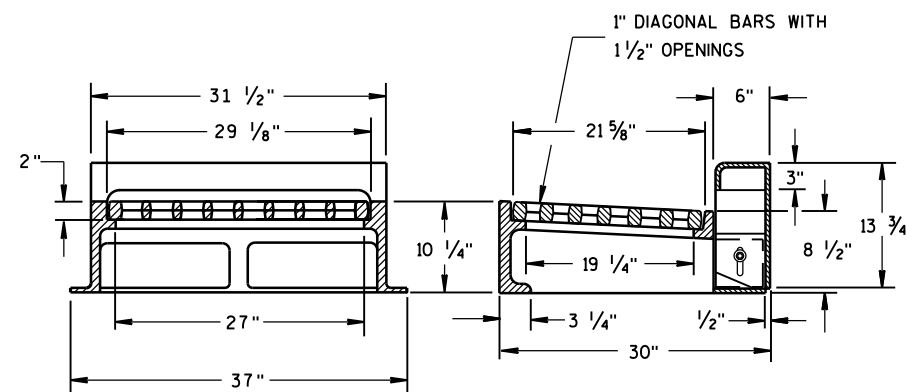
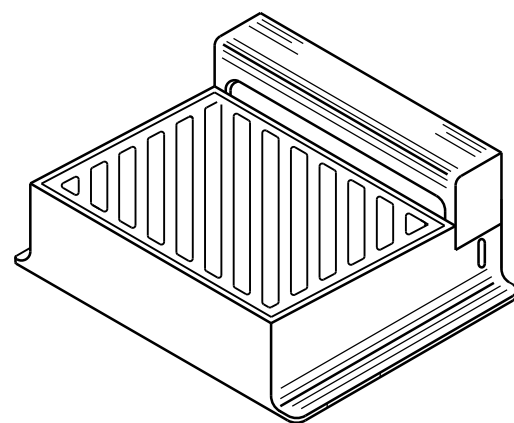
ALTERNATIVE TYPE "MS"

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



TYPE "MS"

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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

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

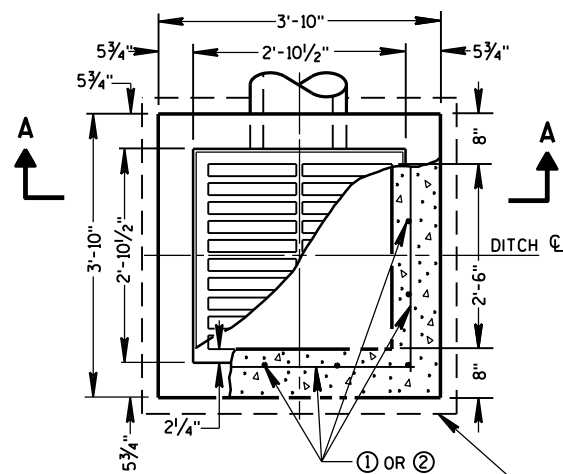
DIRECTION
OF FLOW

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

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

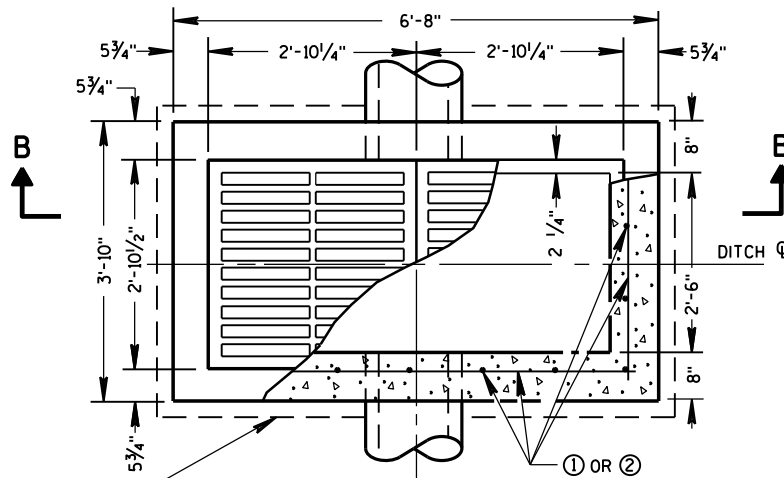
APPROVED
 11/27/2013
 DATE
 FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

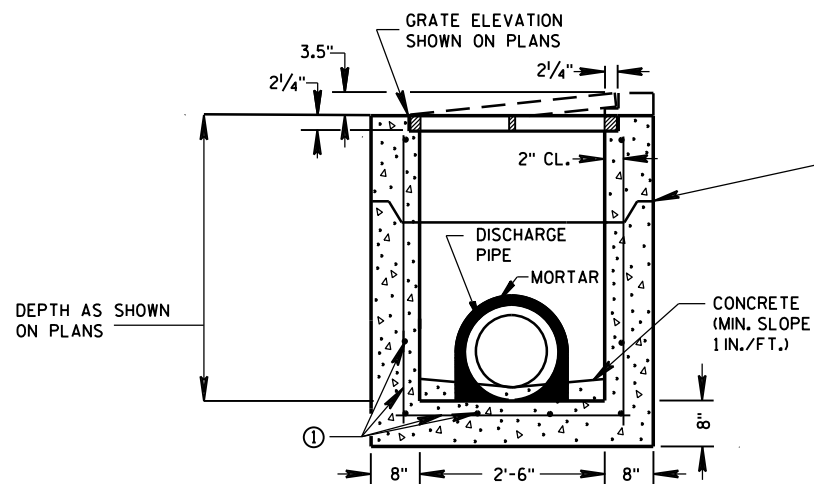


PLAN VIEW

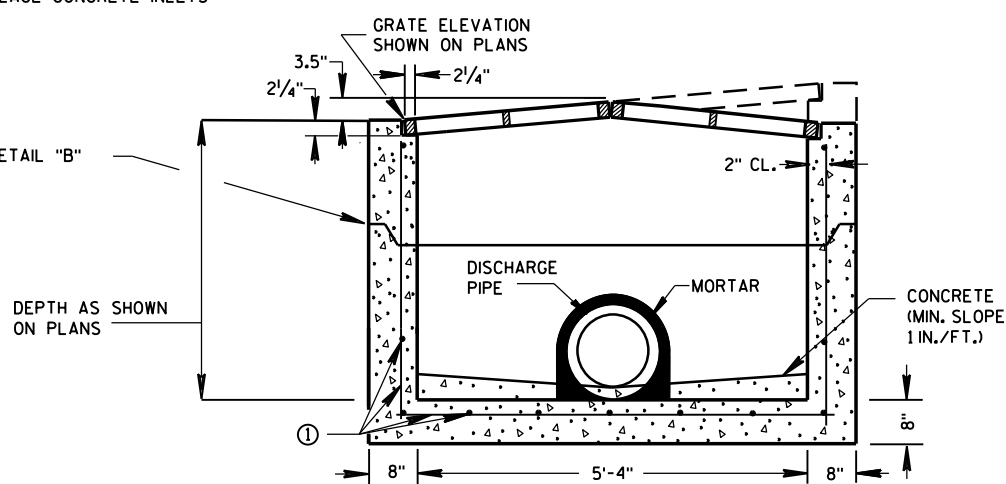
4" OVERHANGING BASE ON REINFORCED
CAST-IN-PLACE CONCRETE INLETS



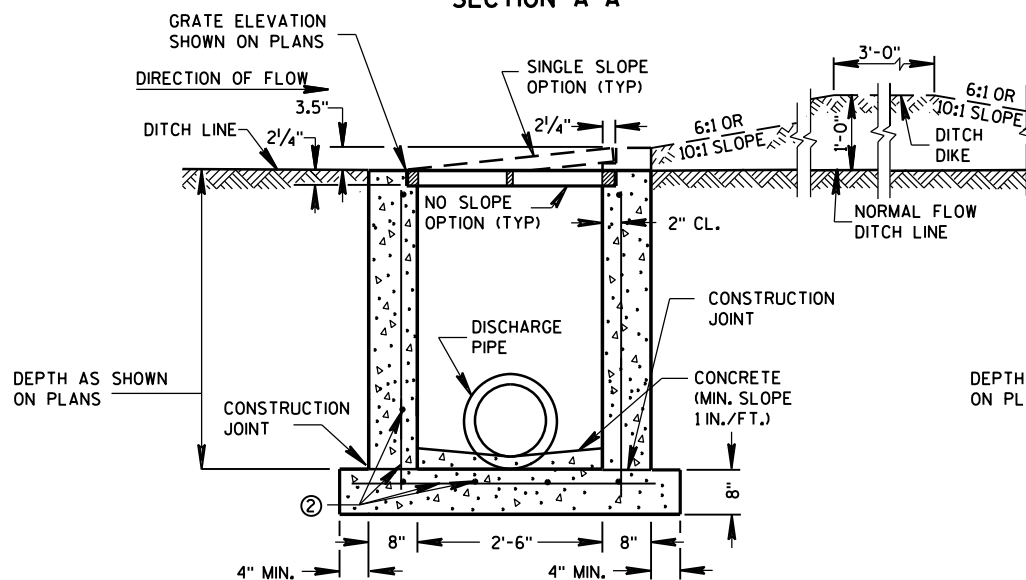
PLAN VIEW



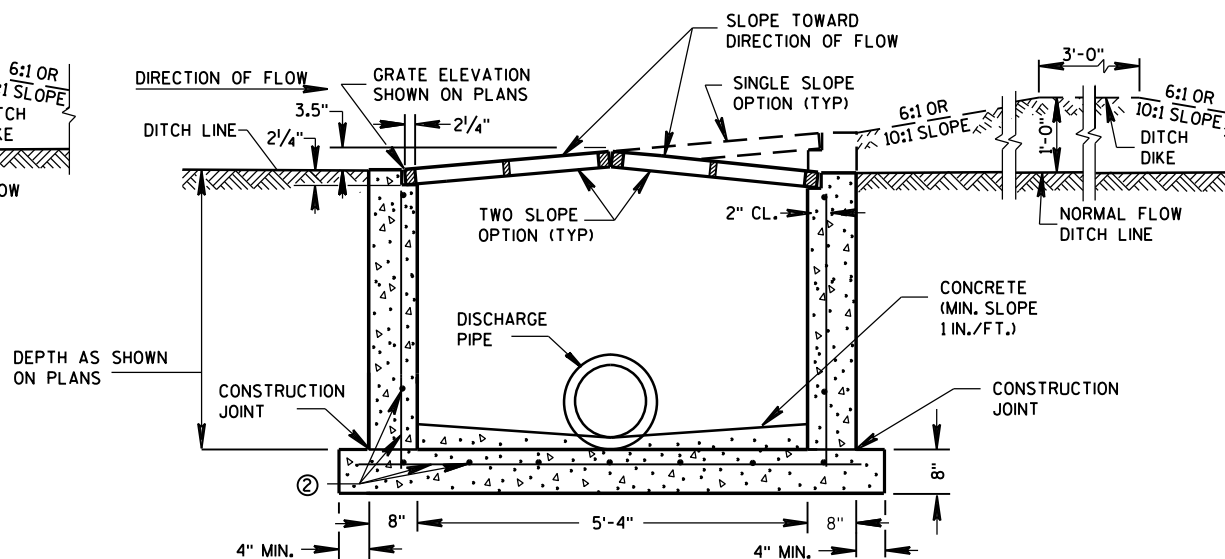
PRECAST REINFORCED CONCRETE
SECTION A-A



PRECAST REINFORCED CONCRETE
SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE
SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE
SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

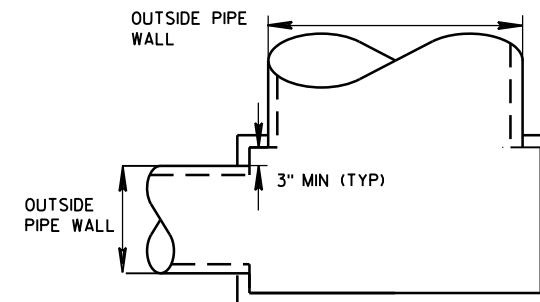
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

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

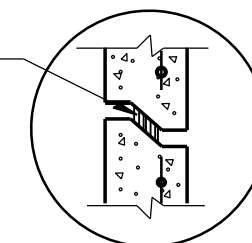
PIPE MATRIX

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



DETAIL "A"

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



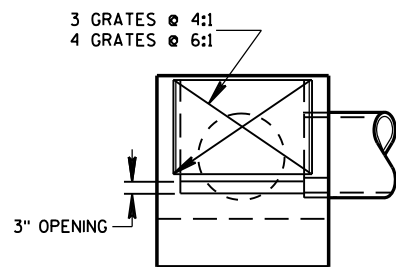
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

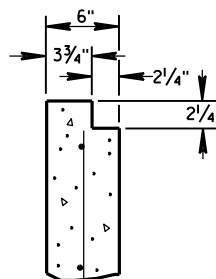
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

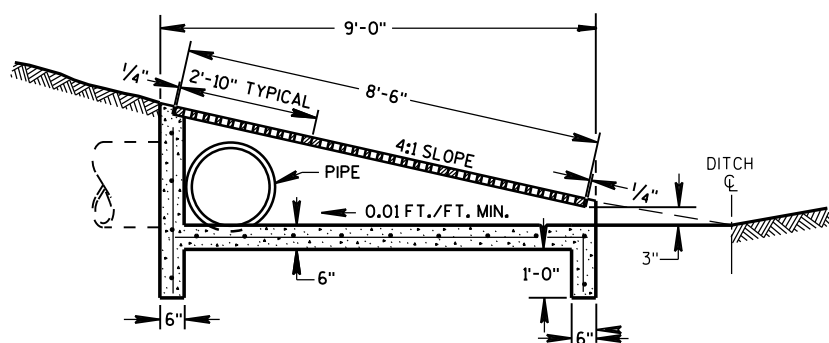
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



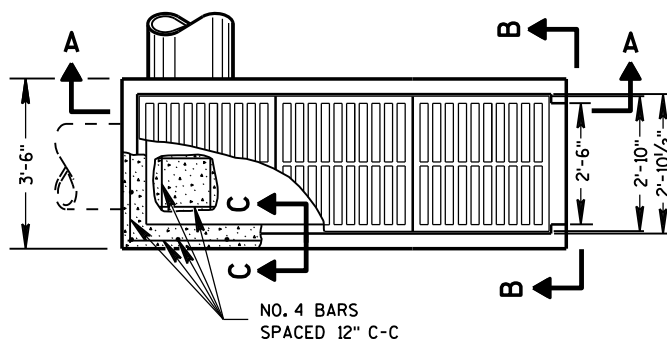
SECTION B-B



SECTION C-C

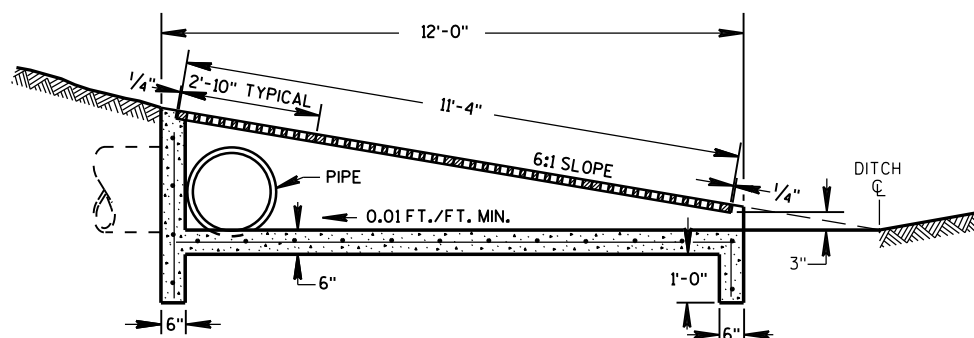


SECTION A-A

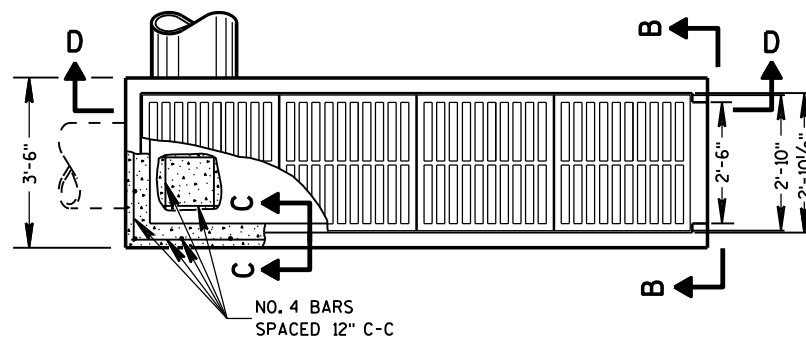


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



PLAN VIEW

INLETS MEDIAN 4 GRATE

GENERAL NOTES

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

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

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

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 3G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

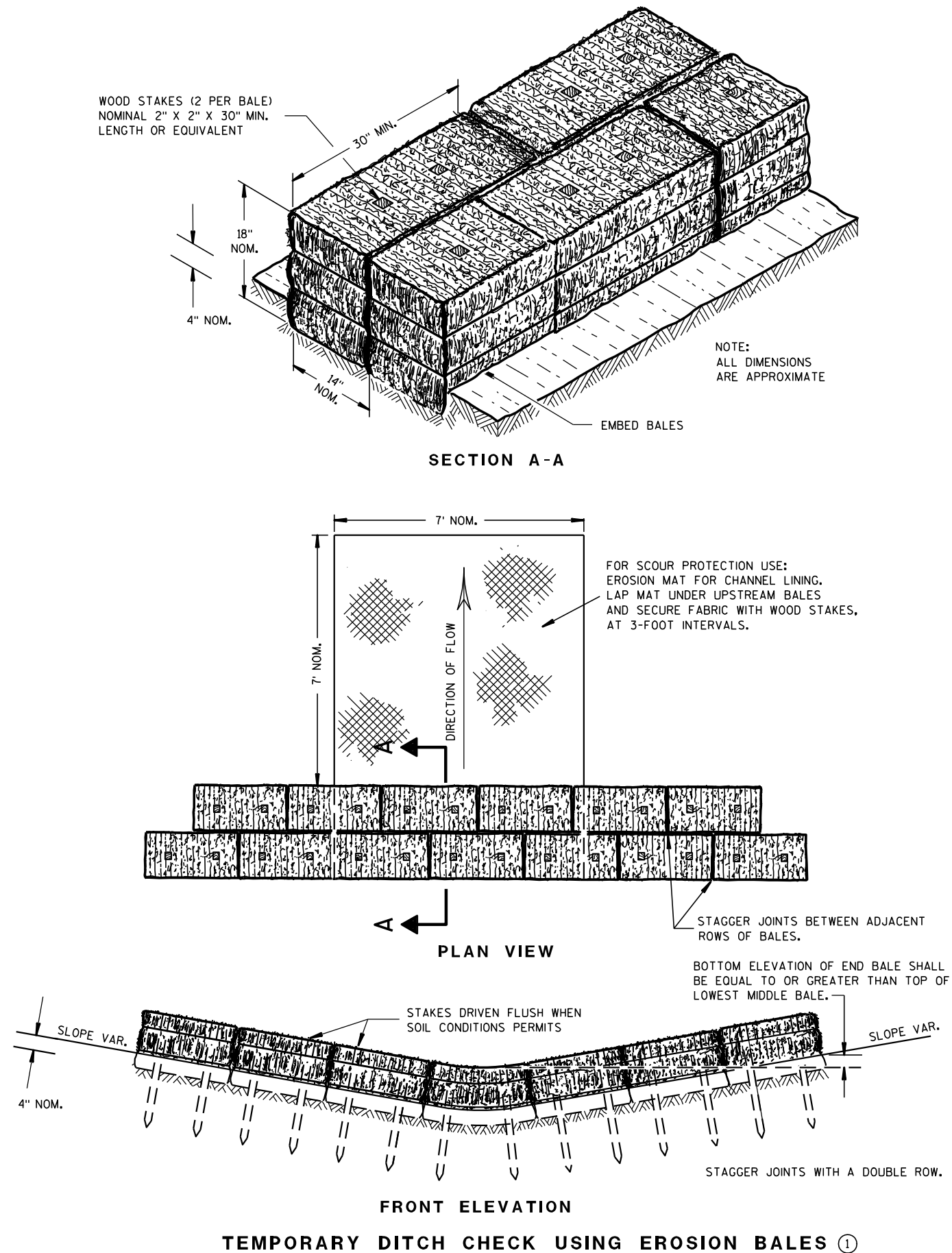
BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

INLETS MEDIAN 3 AND 4 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

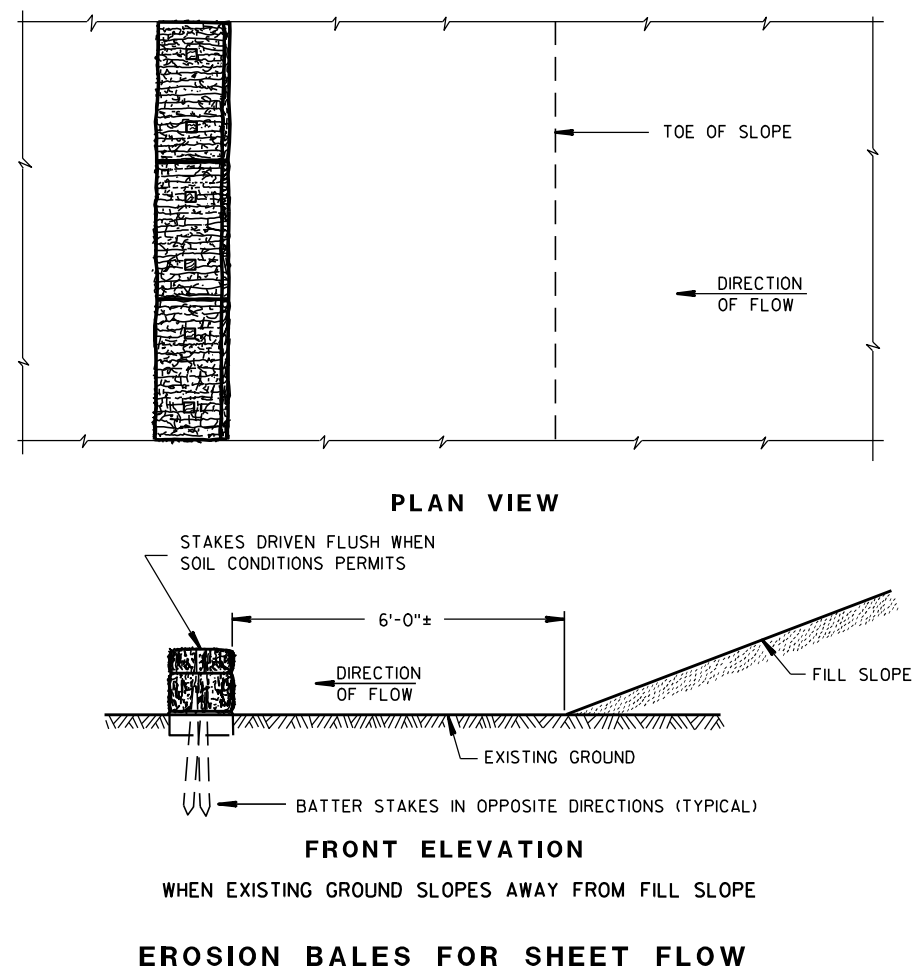
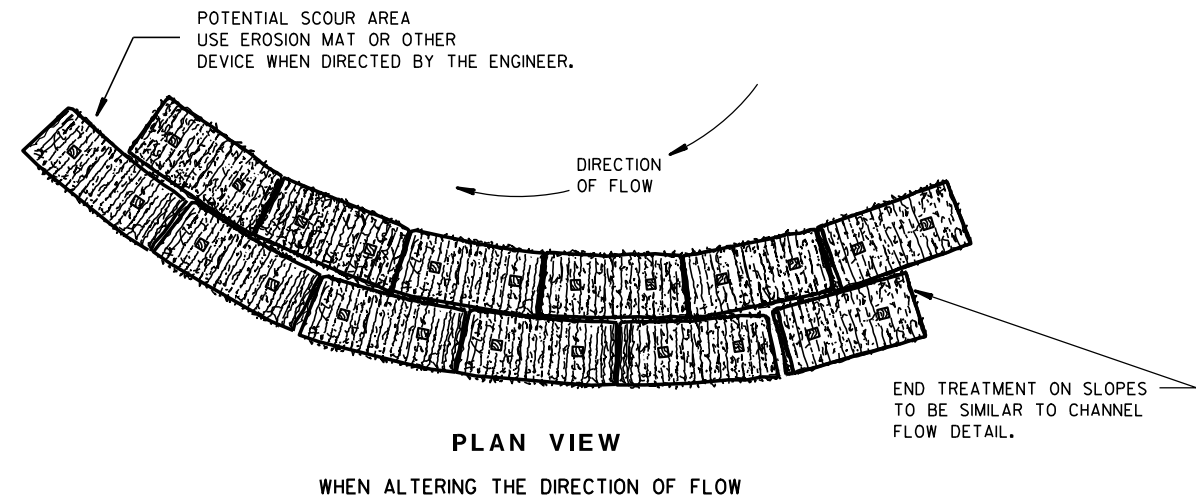
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



GENERAL NOTES

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

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

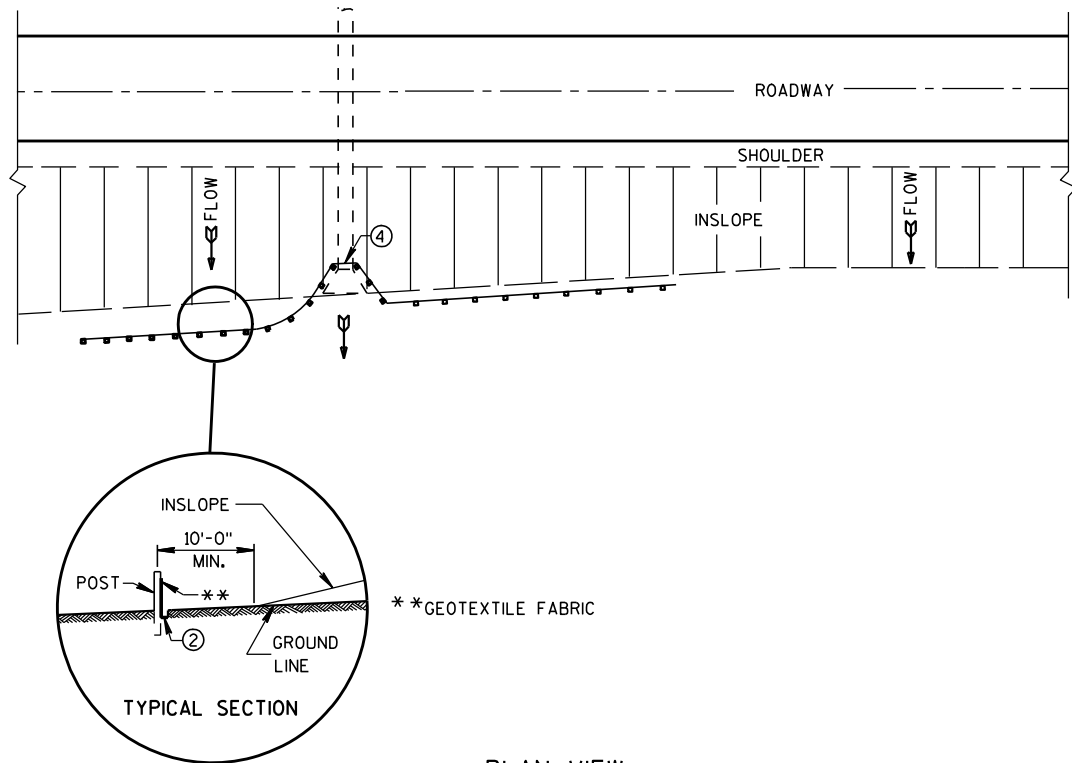
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

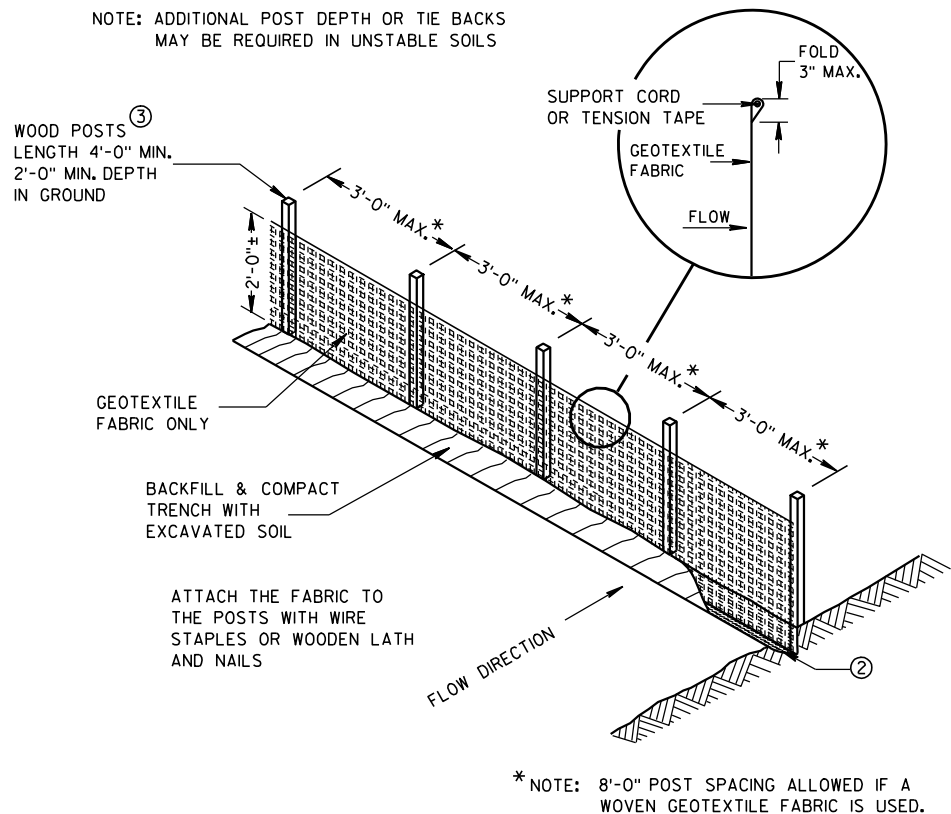
APPROVED

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

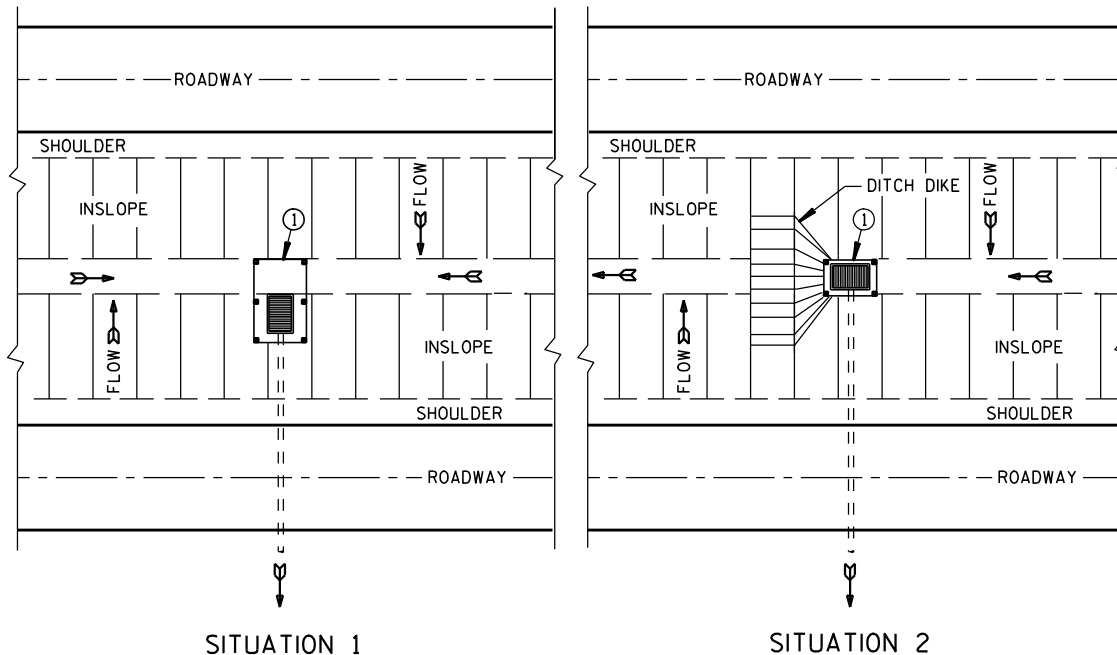
FHWA



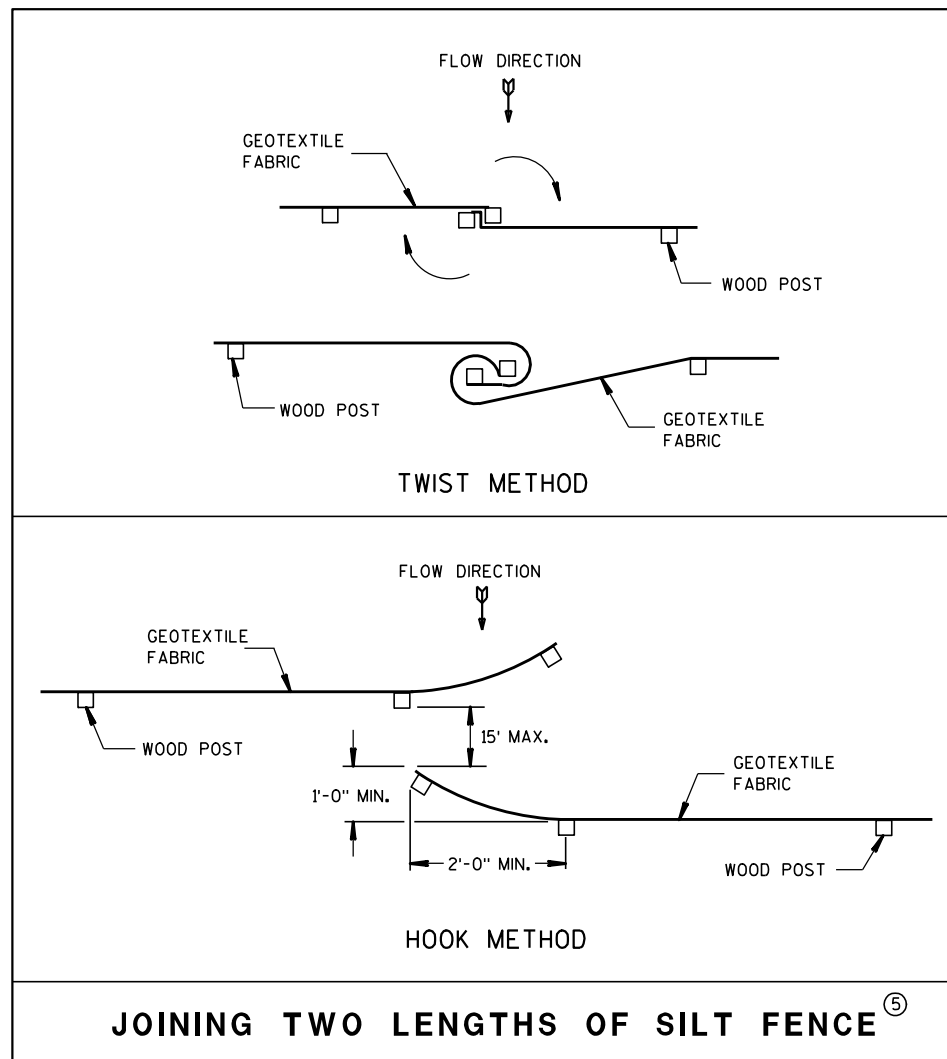
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

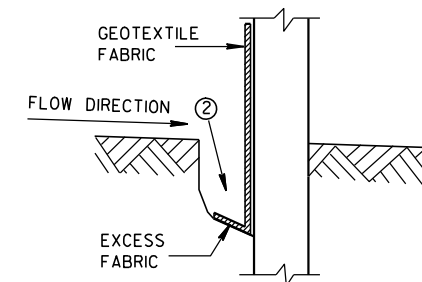


JOINING TWO LENGTHS OF SILT FENCE

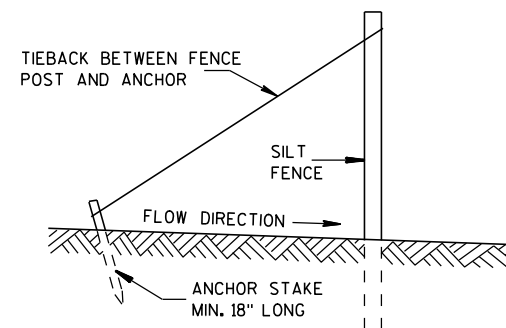
GENERAL NOTES

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

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

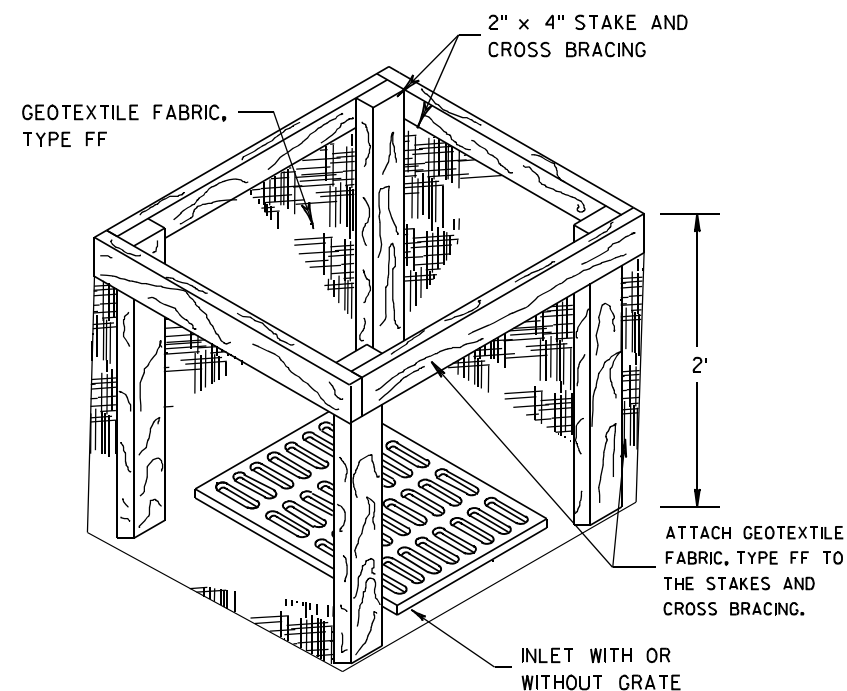
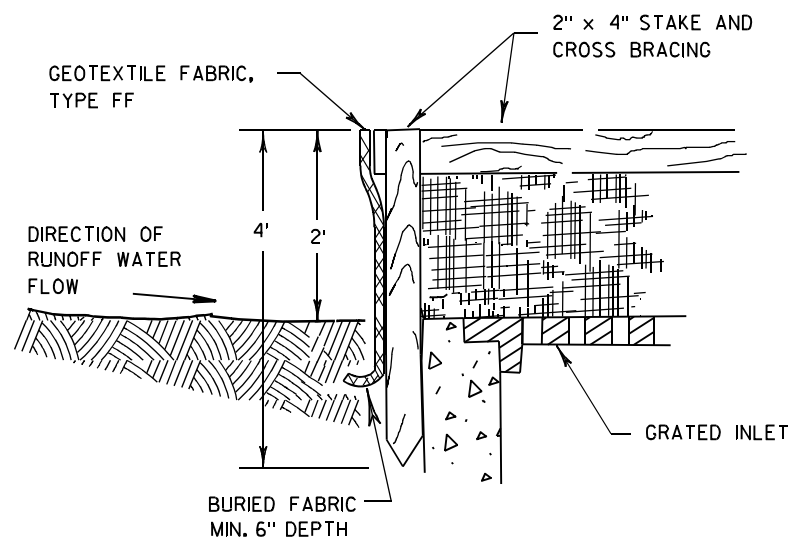


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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



INLET PROTECTION, TYPE A

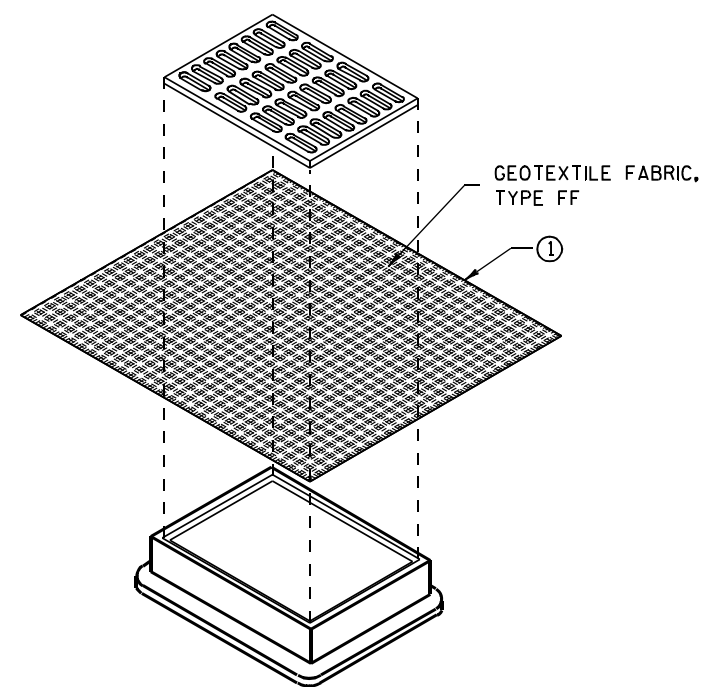
GENERAL NOTES

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

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

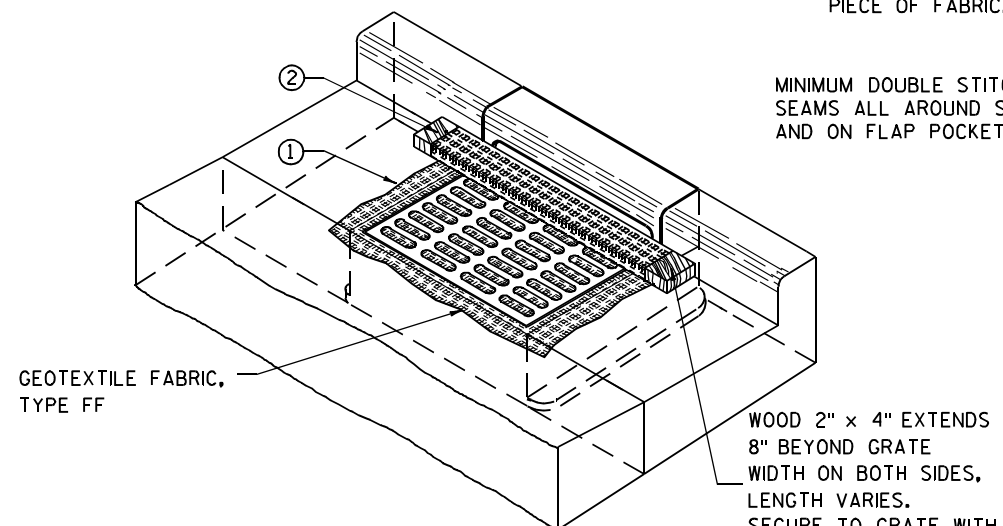
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

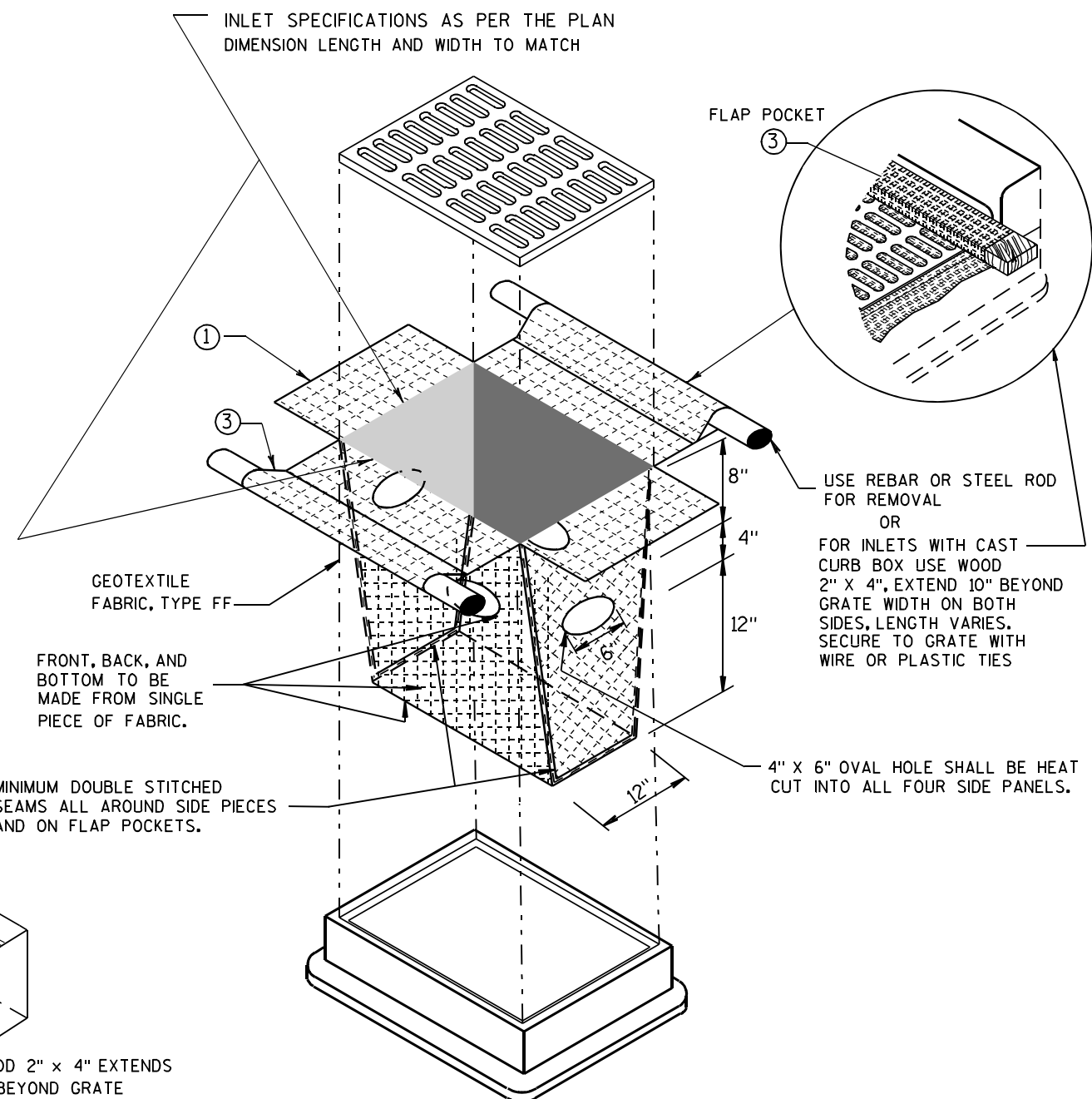
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



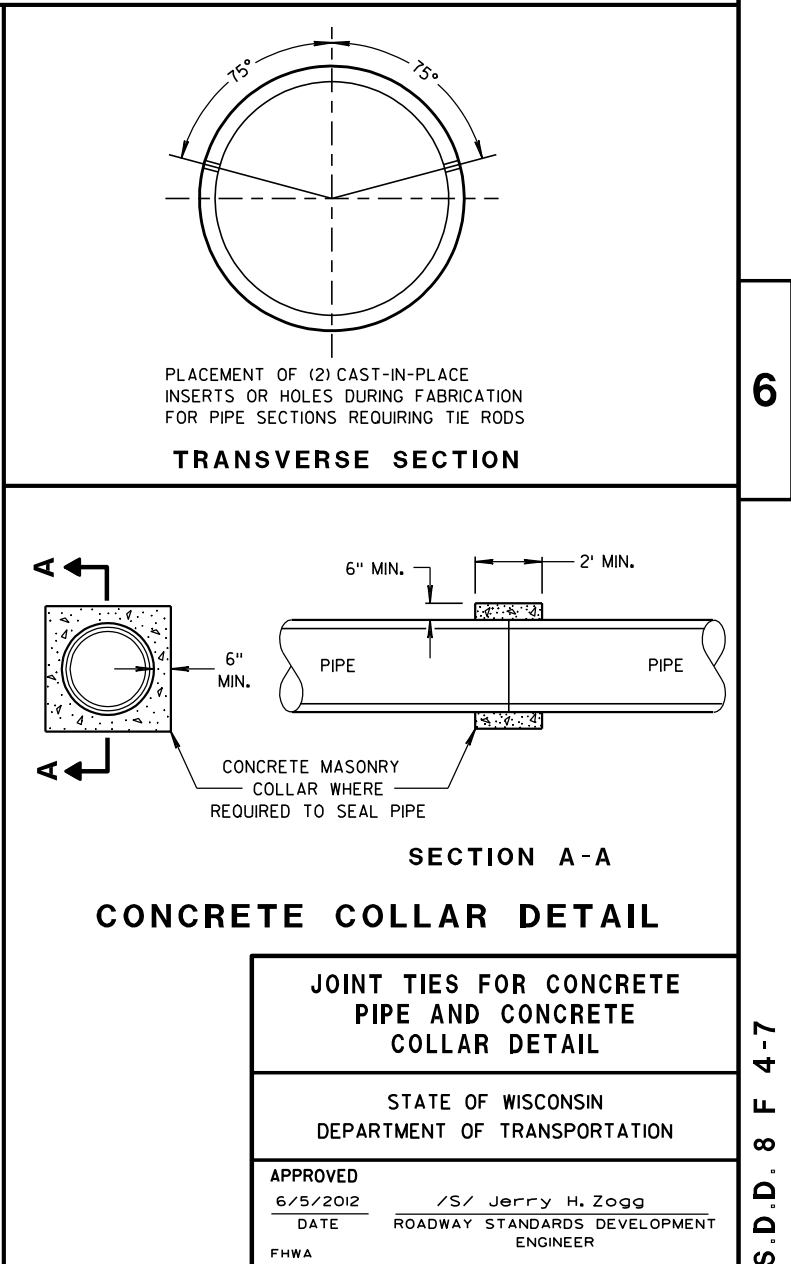
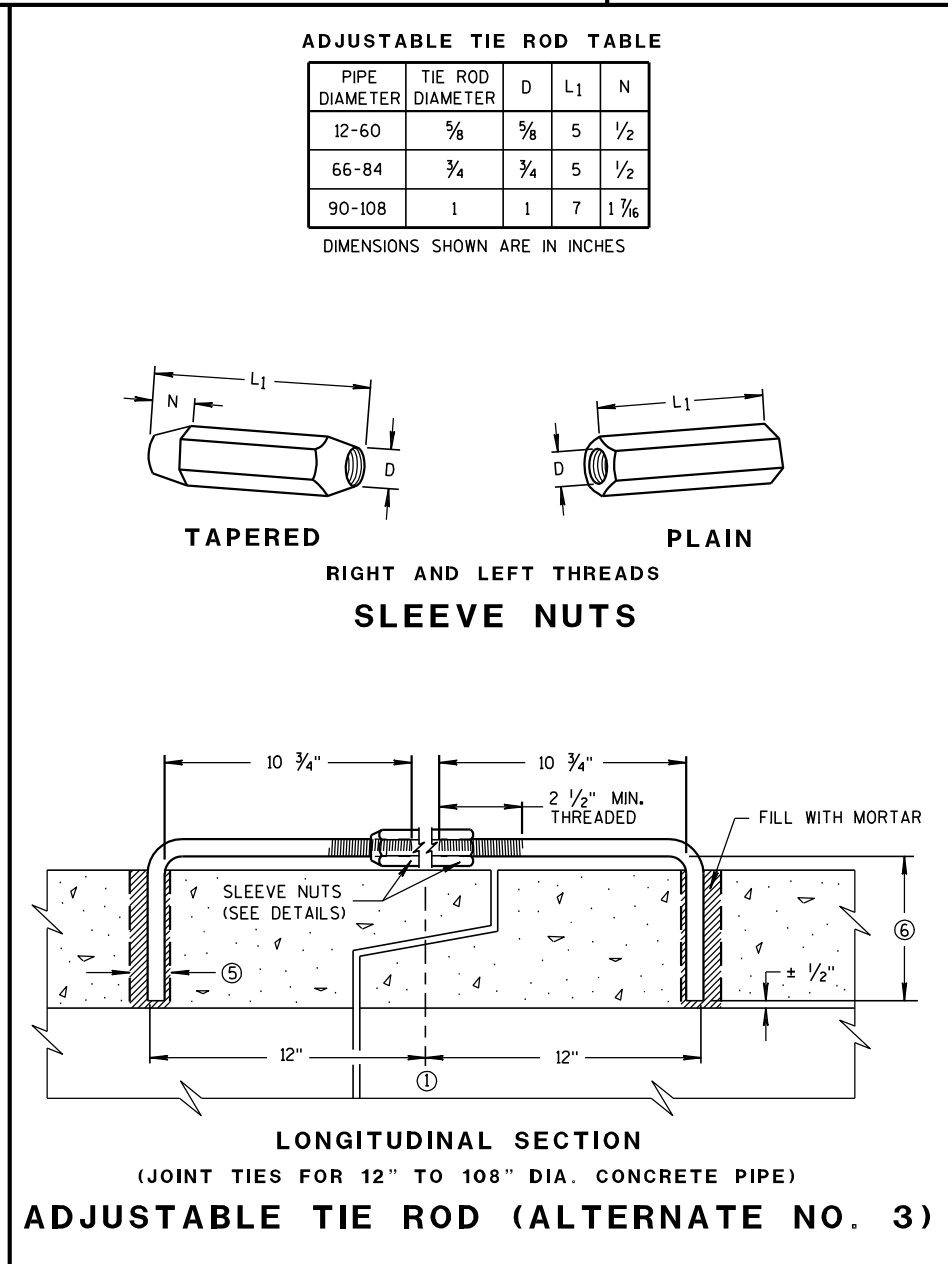
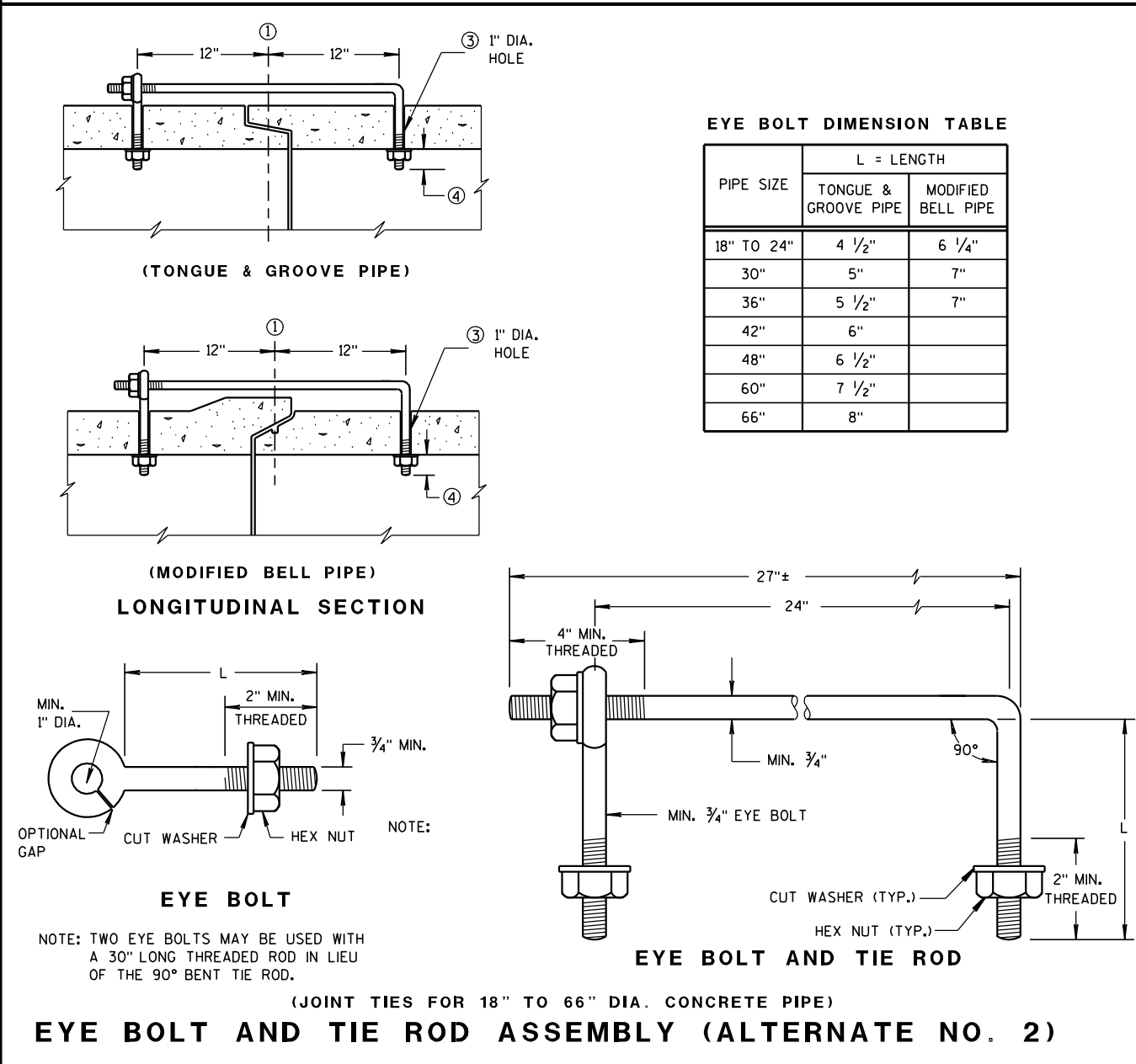
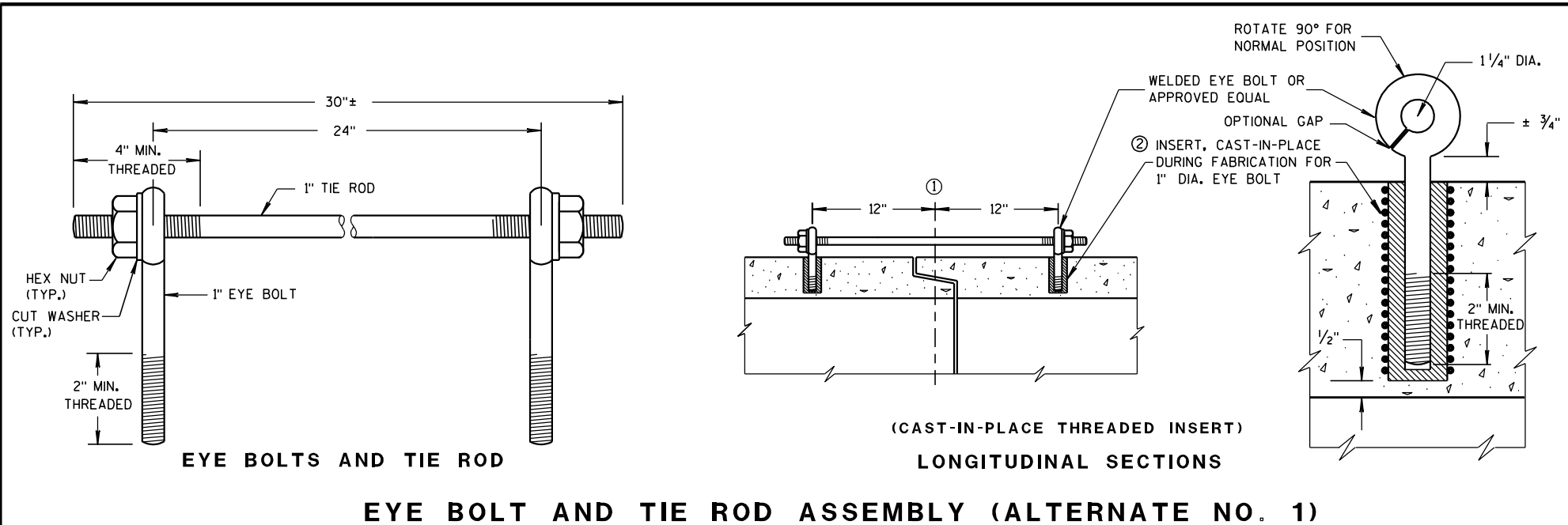
INLET PROTECTION, TYPE D

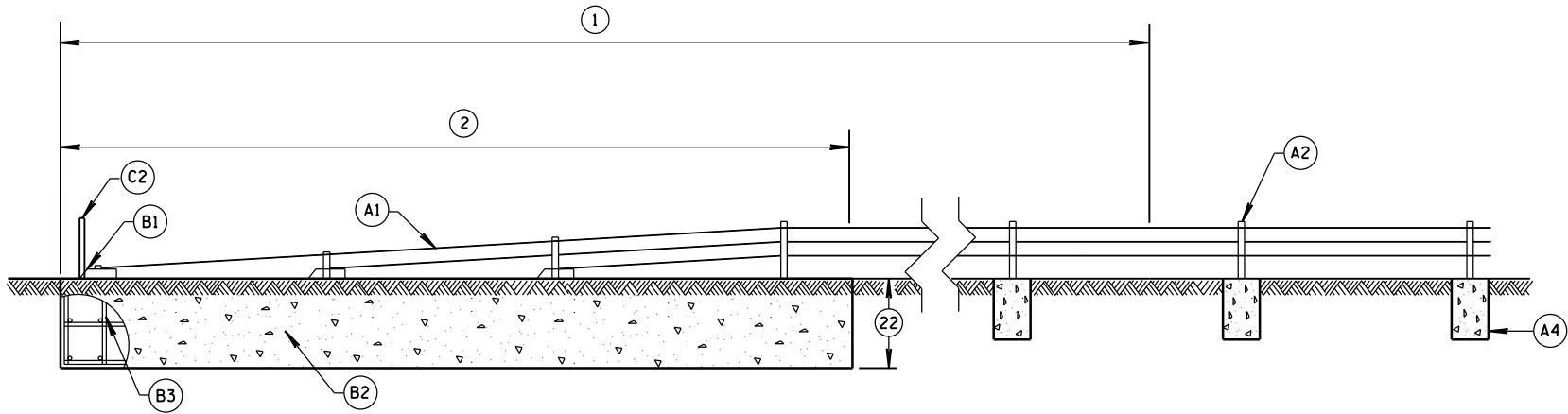
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

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

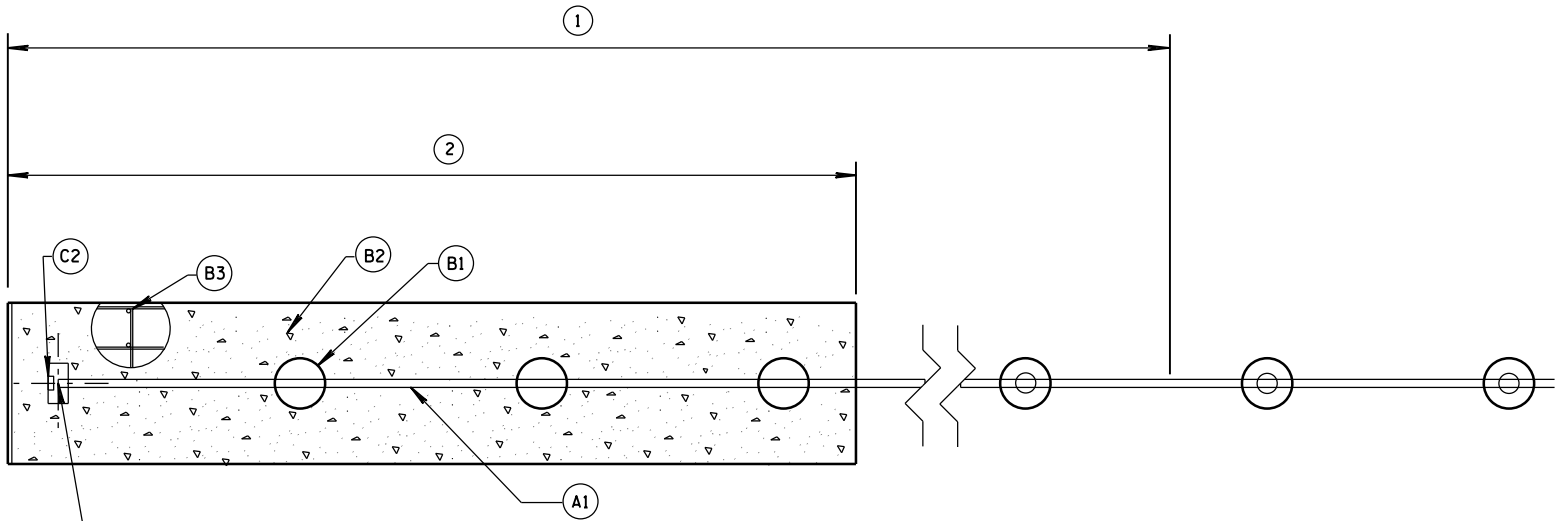
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



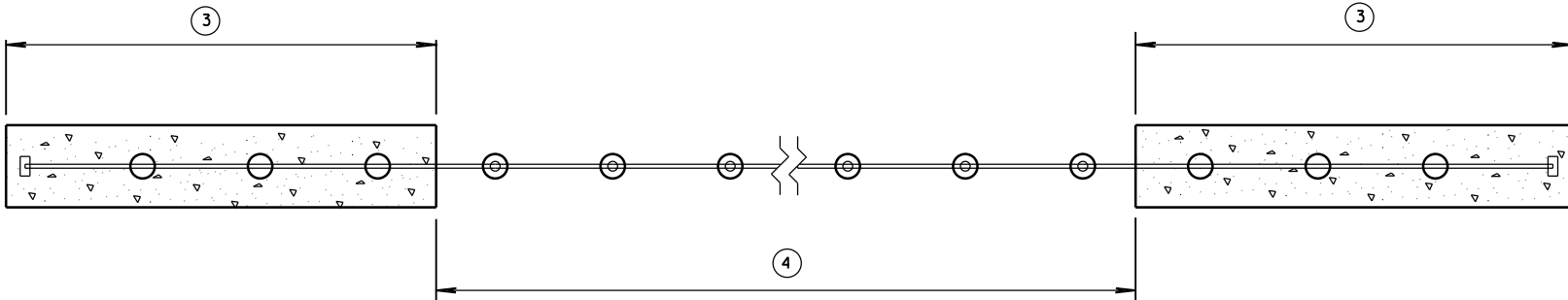


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER
TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

- DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.
- PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.
- INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.
- PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.
- PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.
- PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.
- PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.
- DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

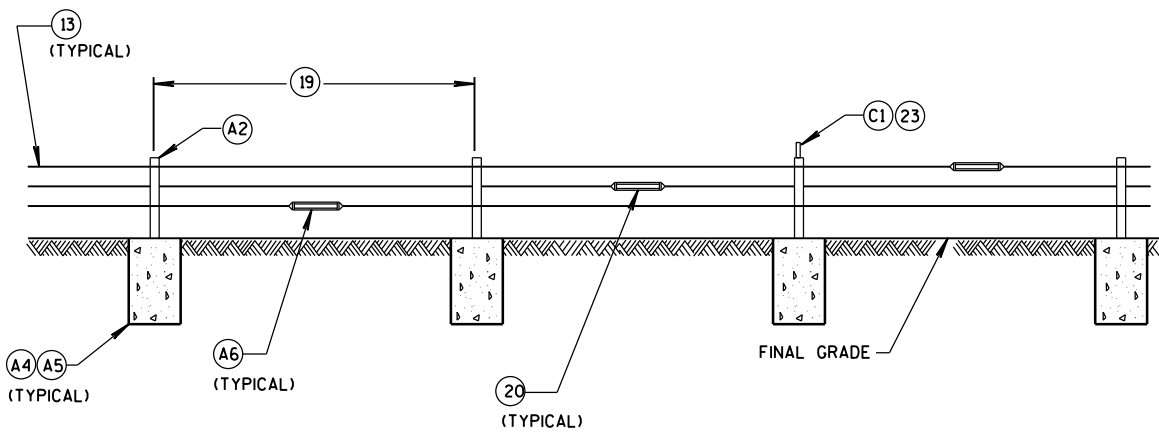
BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
A1	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741MIN. BREAKING STRENGTH 39,000 LBS. AASHTO M30 TYPE 1 CLASS A (GALVANATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
A2	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A3	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A4	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE. SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
A5	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
A6	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
B1	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
B2	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
B3	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
C1	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
C2	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

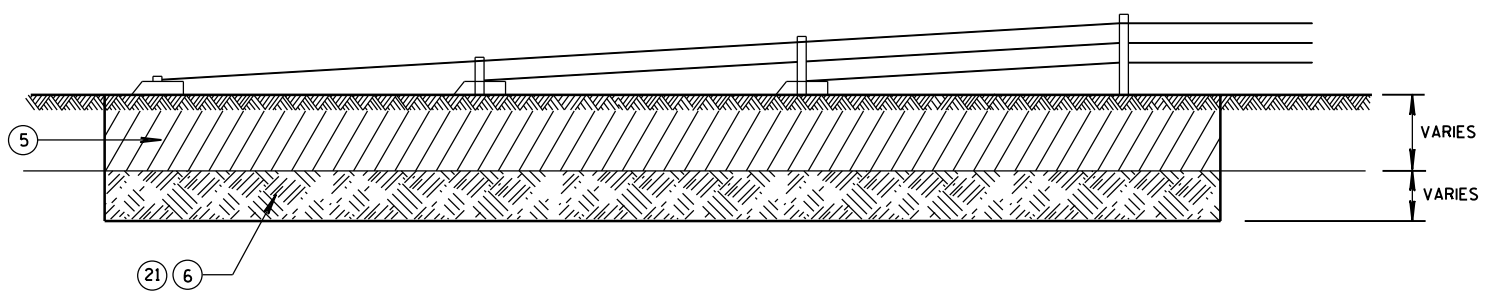
- 1 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 2 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 3 CABLE BARRIER END TERMINAL
- 4 CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1
LAYOUT

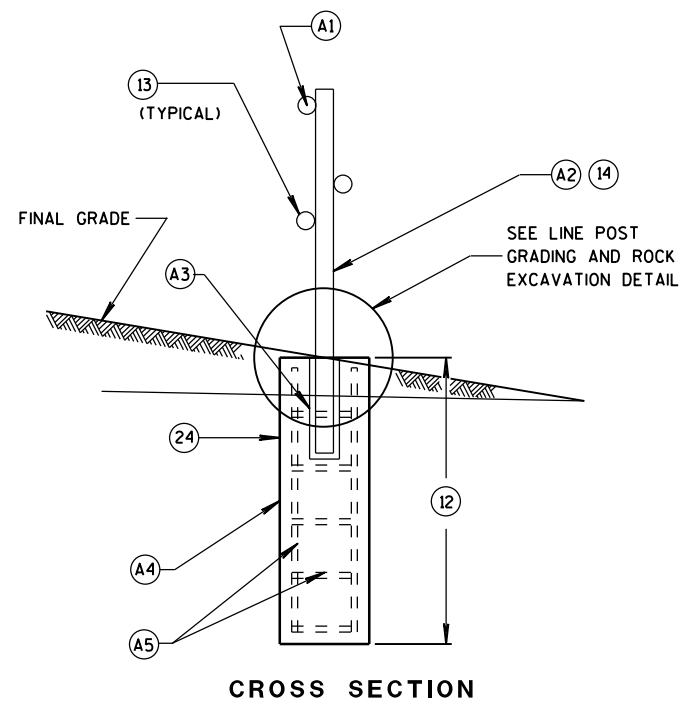
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



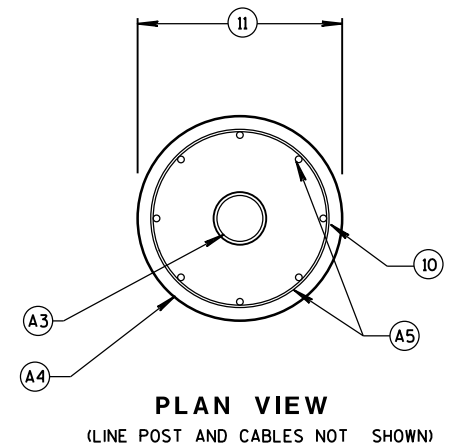
PROFILE VIEW
LINE POST INSTALLATION



CABLE BARRIER END
TERMINAL ROCK EXCAVATION DETAIL



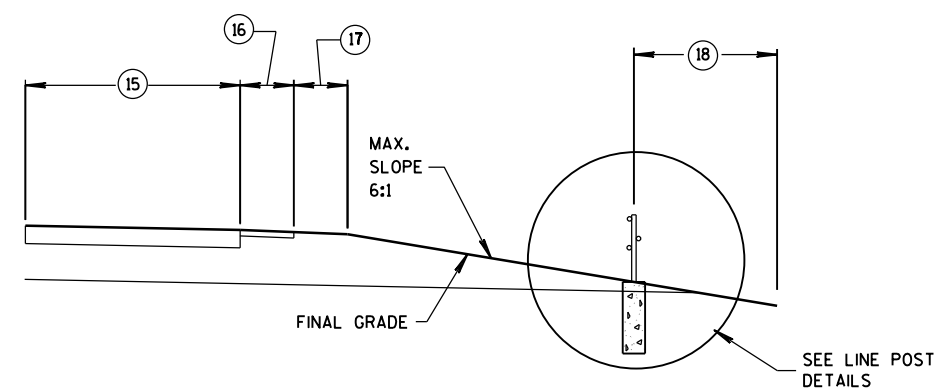
CROSS SECTION



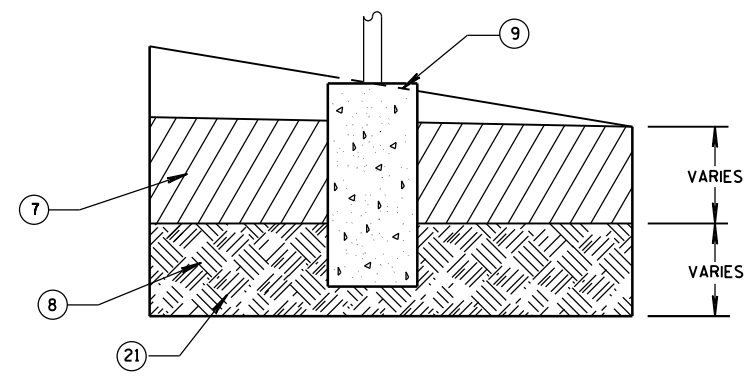
PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS

- (5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- (6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- (7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).
- (8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).
- (9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.
- (10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- (11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.
- (12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- (13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.
- (14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.
- (15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- (16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- (19) MAXIMUM POST SPACING IS 15 FEET.
- (20) STAGGER TURNBUCKLES (TYPICAL).
- (21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- (22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.
- (23) LINE POST DELINEATOR SPACING IS 100 FEET.
- (24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING
AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1 LAYOUT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

LEGEND

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

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 DESIREABLE) DISTANCE TO EXISTING SIGNS.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF 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.

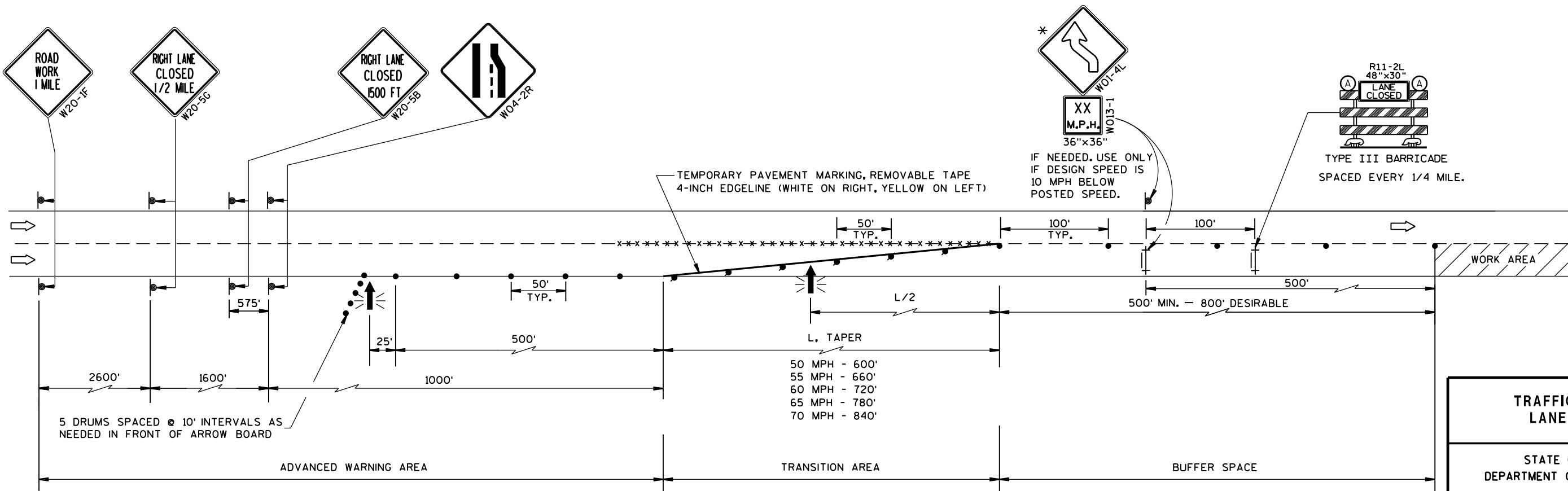
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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.

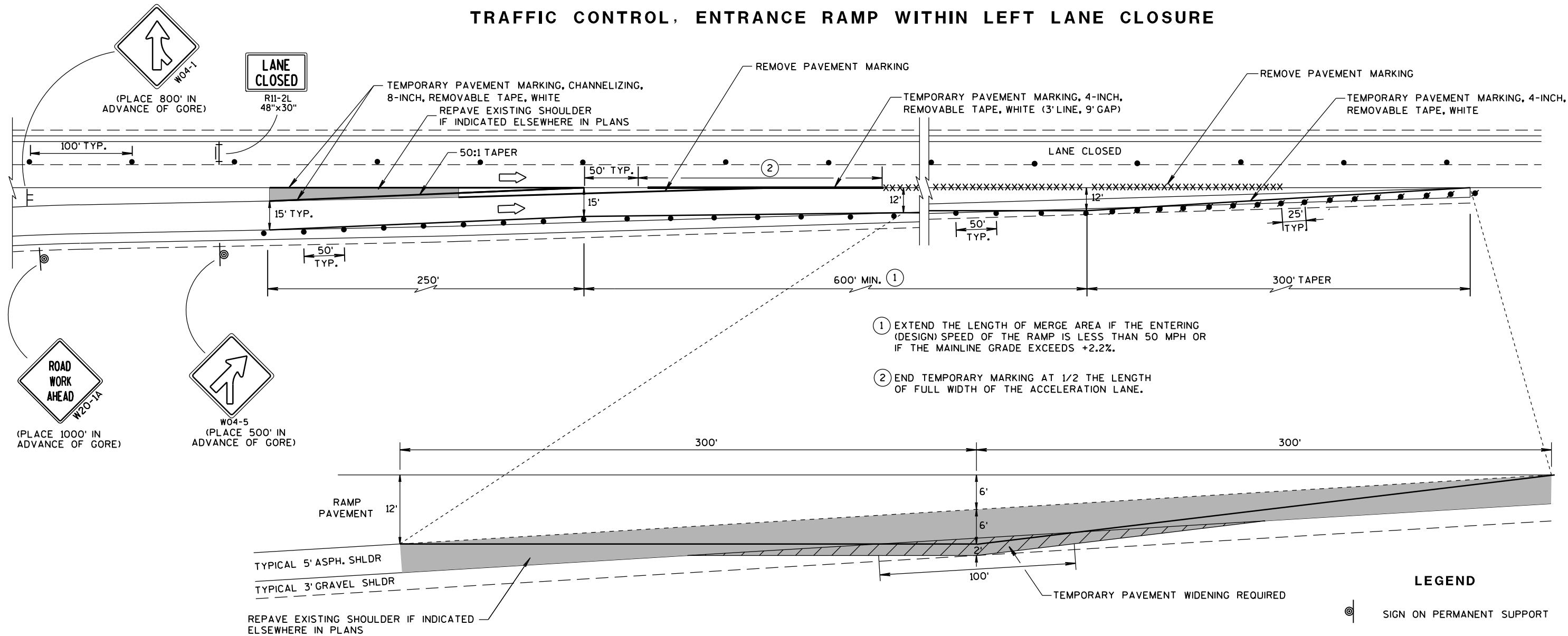
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 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.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY. ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

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"x48" UNLESS OTHERWISE NOTED.

"W0" 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 CONTINUOUS 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.

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

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

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

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED Sept., 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA

LEGEND

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

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.

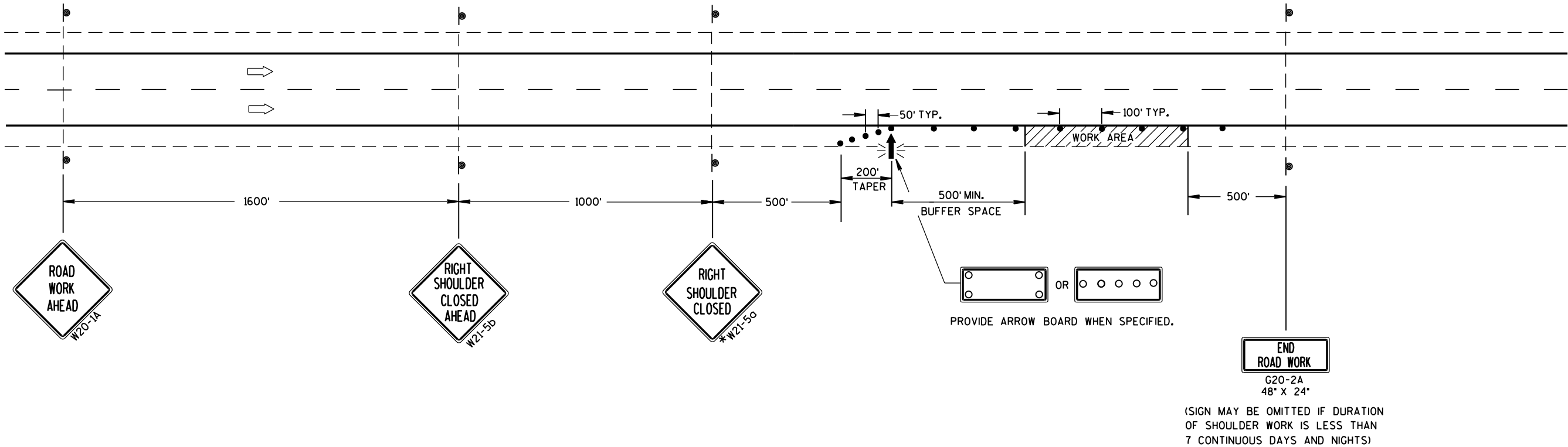
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

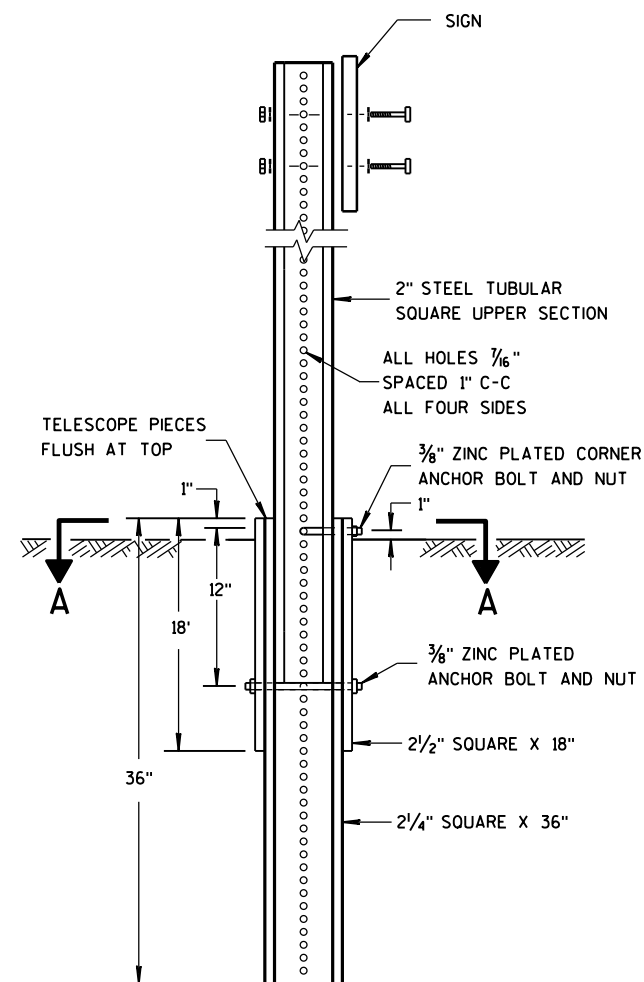
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

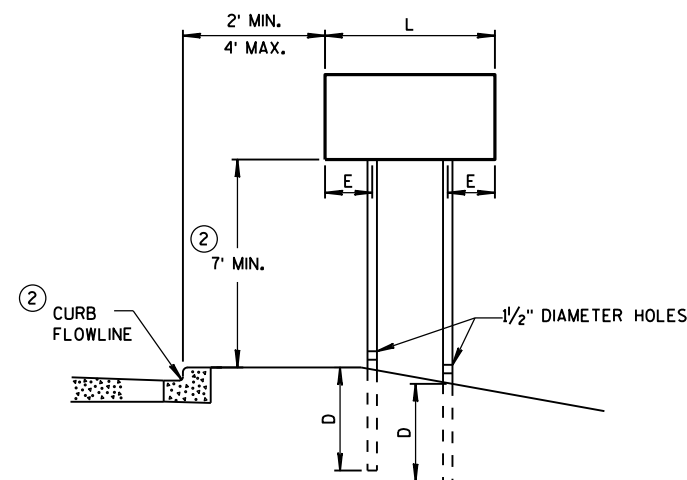
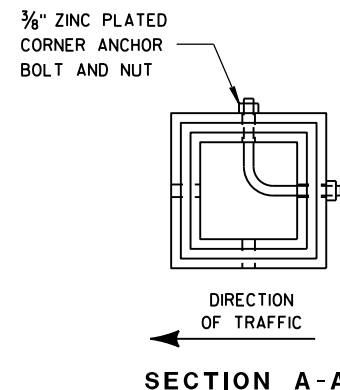


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

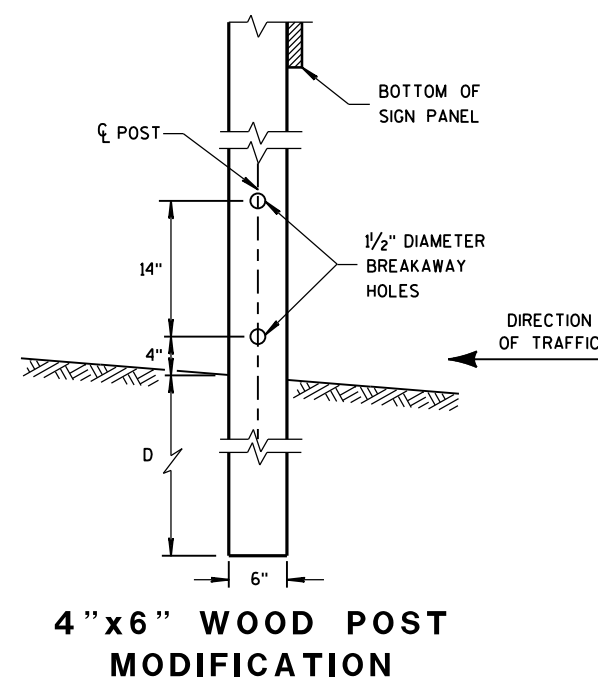
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



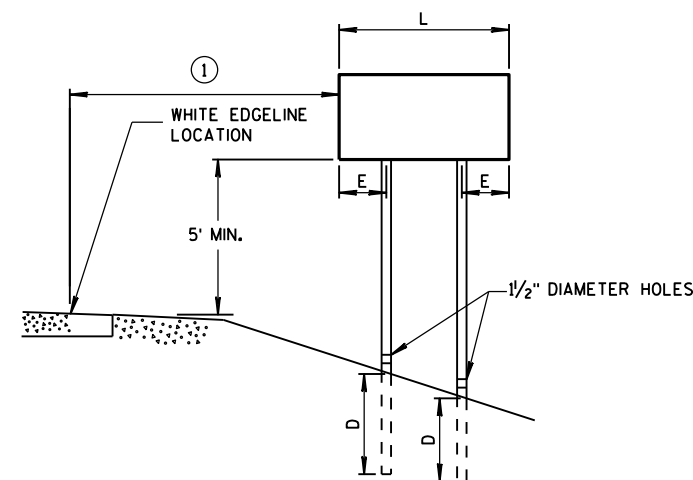
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

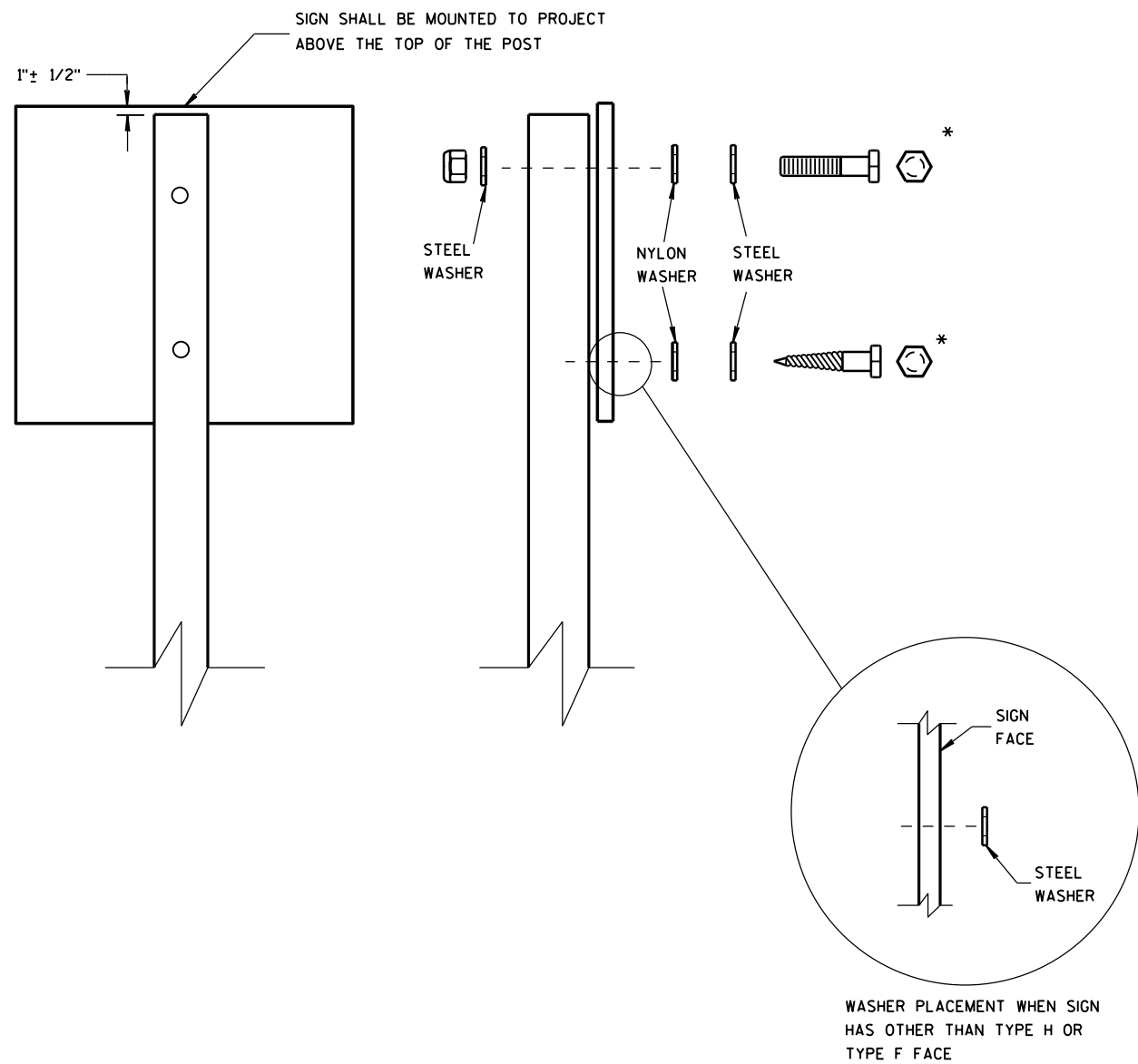
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

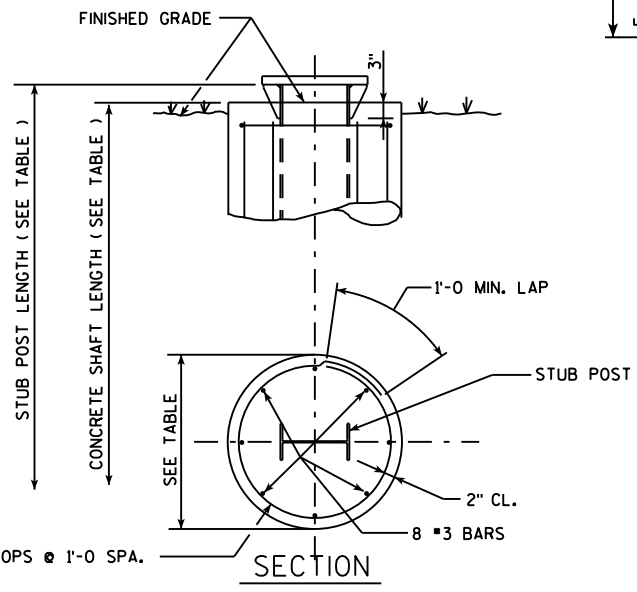
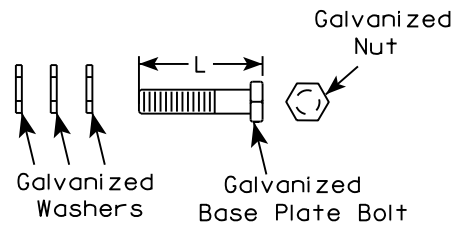
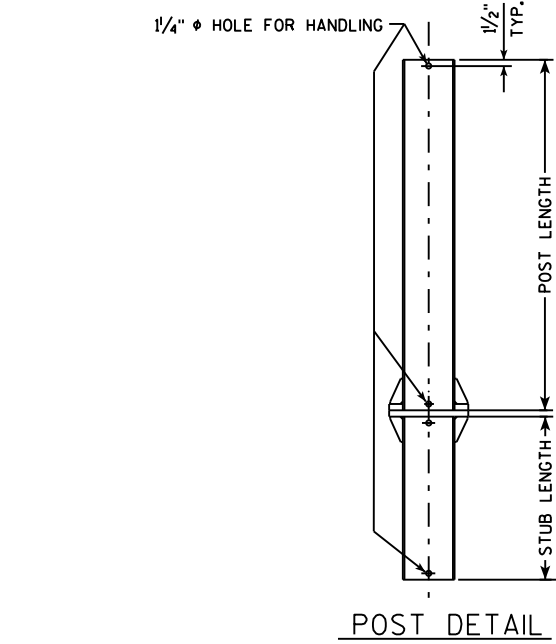
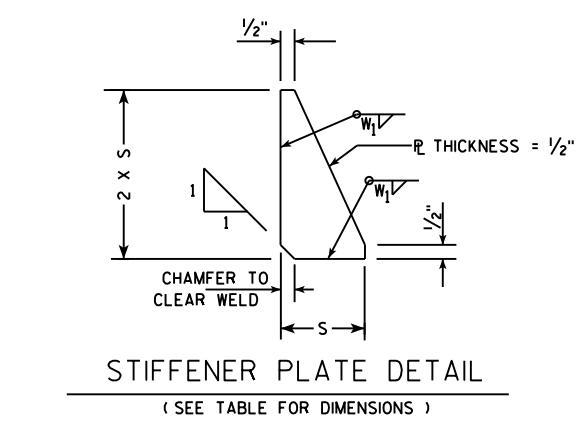
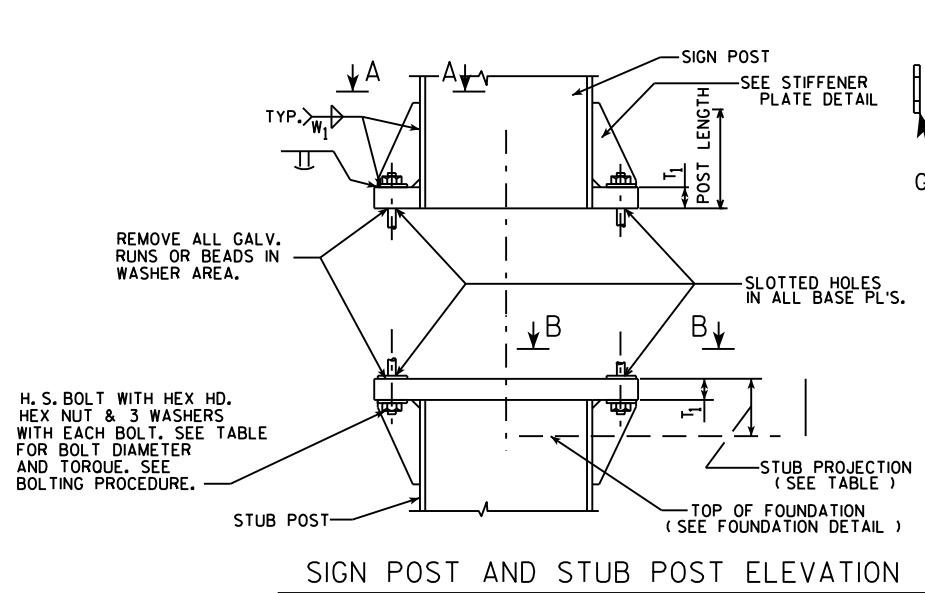
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T. M.- B36.

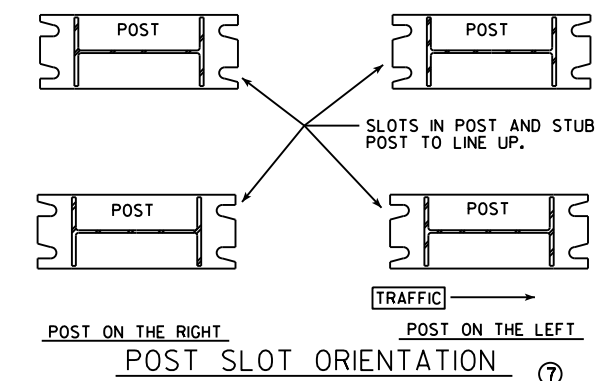
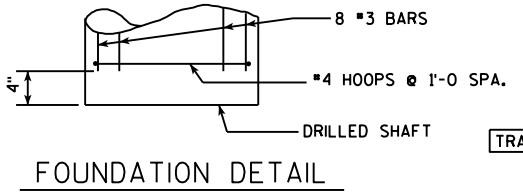
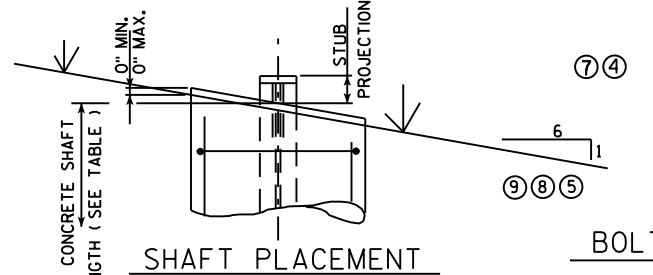
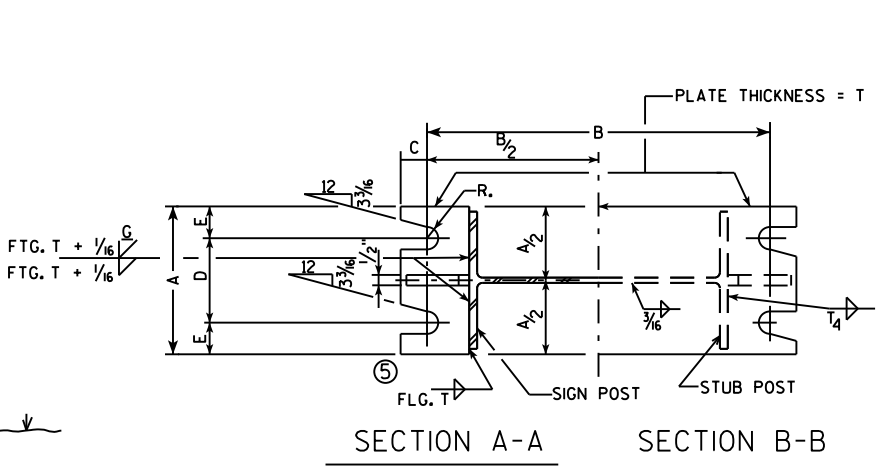
SHIM DETAIL

QUANTITIES FOR 1 FOOTING			
	CONC. MASONRY C.Y.	REINF. STEEL	LBS.
A	0.6	34	
B	0.8	49	
C	0.9	50	
D	0.9	56	
E	1.0	62	

REINF.	TYPE	#3		#4	
		8 @ 4'-5"	5 @ 6'-3"	8 @ 6'-3"	7 @ 6'-3"
A		8 @ 6'-5"	7 @ 6'-3"	8 @ 6'-3"	7 @ 6'-3"
B		8 @ 6'-11"	7 @ 6'-3"	8 @ 6'-3"	7 @ 6'-3"
C		8 @ 7'-5"	8 @ 6'-3"	8 @ 6'-3"	7 @ 6'-3"
D		8 @ 7'-11"	9 @ 6'-3"	8 @ 6'-3"	7 @ 6'-3"
E					

					BASE CONNECTION DATA TABLE											FOUNDATION DATA			
L	X	TYPE	POST SIZE	WEIGHT PER FT	BOLT SIZE & TORQUE	A	B	C	D	E	T ₁	T ₄	W ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH
3 ¾	④	A	W10"X12.0	12.0 LBS	¾" φ @ 75*-FT.	5¼"	1'-0 ⅜"	⅞"	3½"	⅞"	1"	⅜"	⅝"	⅜/32"	2⅞"	3'-6"	3"	2'-0 φ	5'-0"
4 ¾	④	B	W12"X16.0	16.0 LBS	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	⅝"	⅜/32"	3"	5'-6"	3"	2'-0 φ	7'-0"
5		C	W12"X19.0	19.0 LBS	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅝"	⅝"	⅜/32"	3"	6'-0"	3"	2'-0 φ	7'-6"
5		D	W12"X22.0	22.0 LBS	⅞" φ @ 85*-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	⅝"	⅜/32"	3"	6'-6"	3"	2'-0 φ	8'-0"
5	③	E	W12"X26.0	26.0 LBS	1" φ @ 90*-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	⅝"	⅜/32"	3"	7'-0"	3"	2'-0 φ	8'-6"

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.



DESIGN DATA		
WIND PRESSURE = 75 M.P.H.		
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0		
ICE LOAD = 3 P.S.F.		
GROUP LOADS		PERCENT OF ALLOWABLE STRESS
1. DEAD		100
2. DEAD & WIND		140
3. DEAD, ICE & 1/2 WIND		140
ALLOWABLE SOIL PRESSURE = 1 1/2 T / SQ. FT.		Δ25 P.S.F. MIN.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.		
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.		

GENERAL NOTES
DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
 2. SHIM AS REQ'D. TO PLUMB POST.
 3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
 4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
 5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.
- NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/22/17 PLATE NO. A3-1.17

⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE R WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T ₁ • T ₂ & W ₁

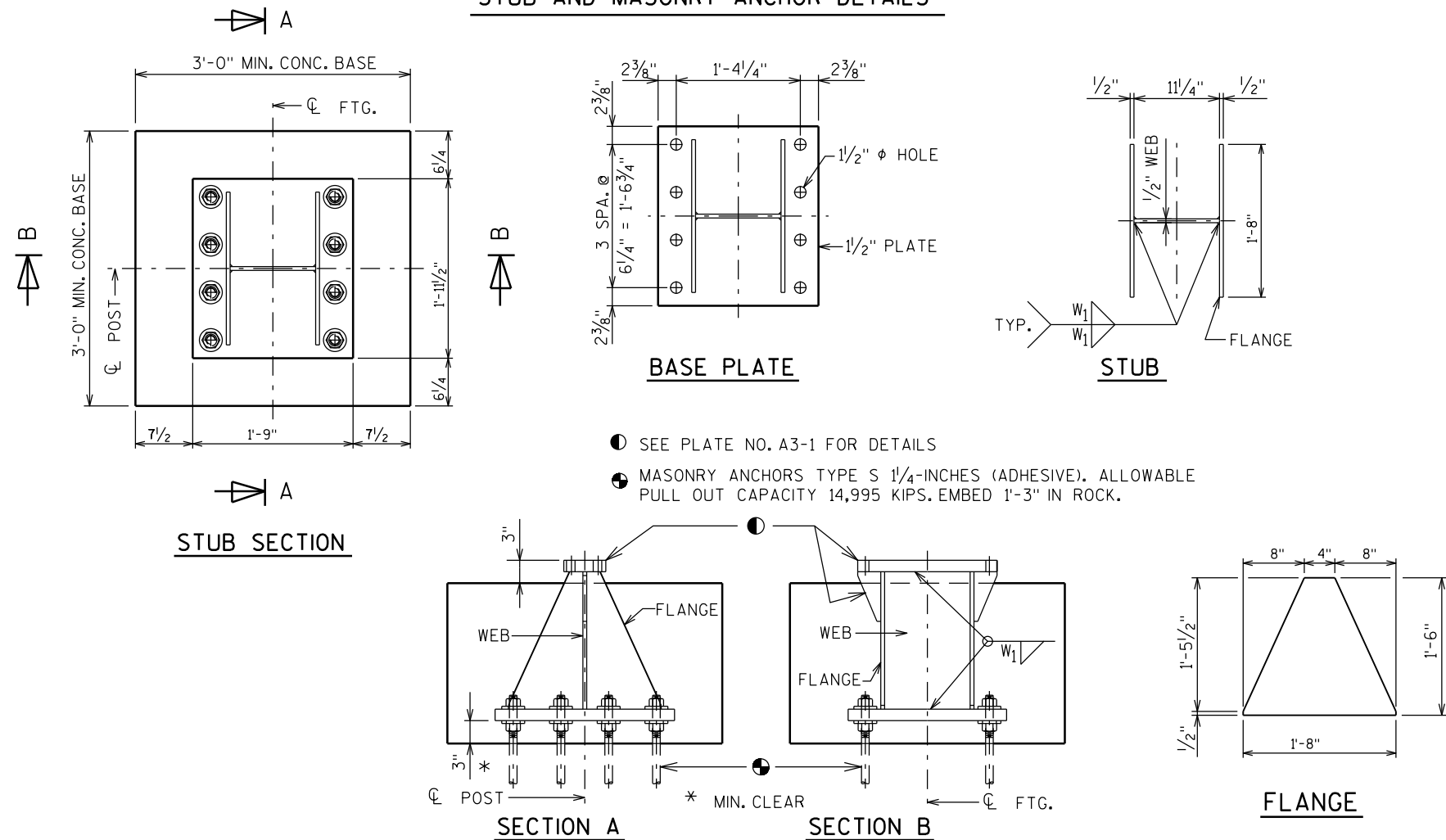
NO. DATE REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	2011	DRAWN BY	JPH	PLANS CK'D.	
FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS				SHEET	

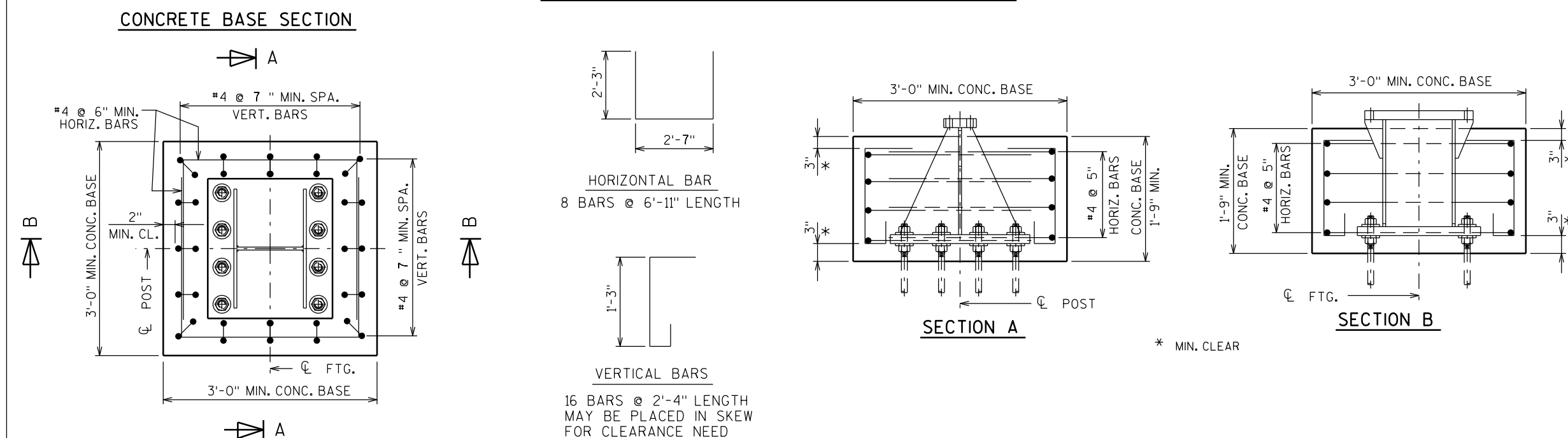
STUB AND MASONRY ANCHOR DETAILS



GENERAL NOTES

- Quantities per Base:
 - REINFORCING BAR STEEL = 62 LBS
 - CONCRETE = 0.6 C.Y.
 - STEEL WEIGHT = 335 LBS
- All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
- If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

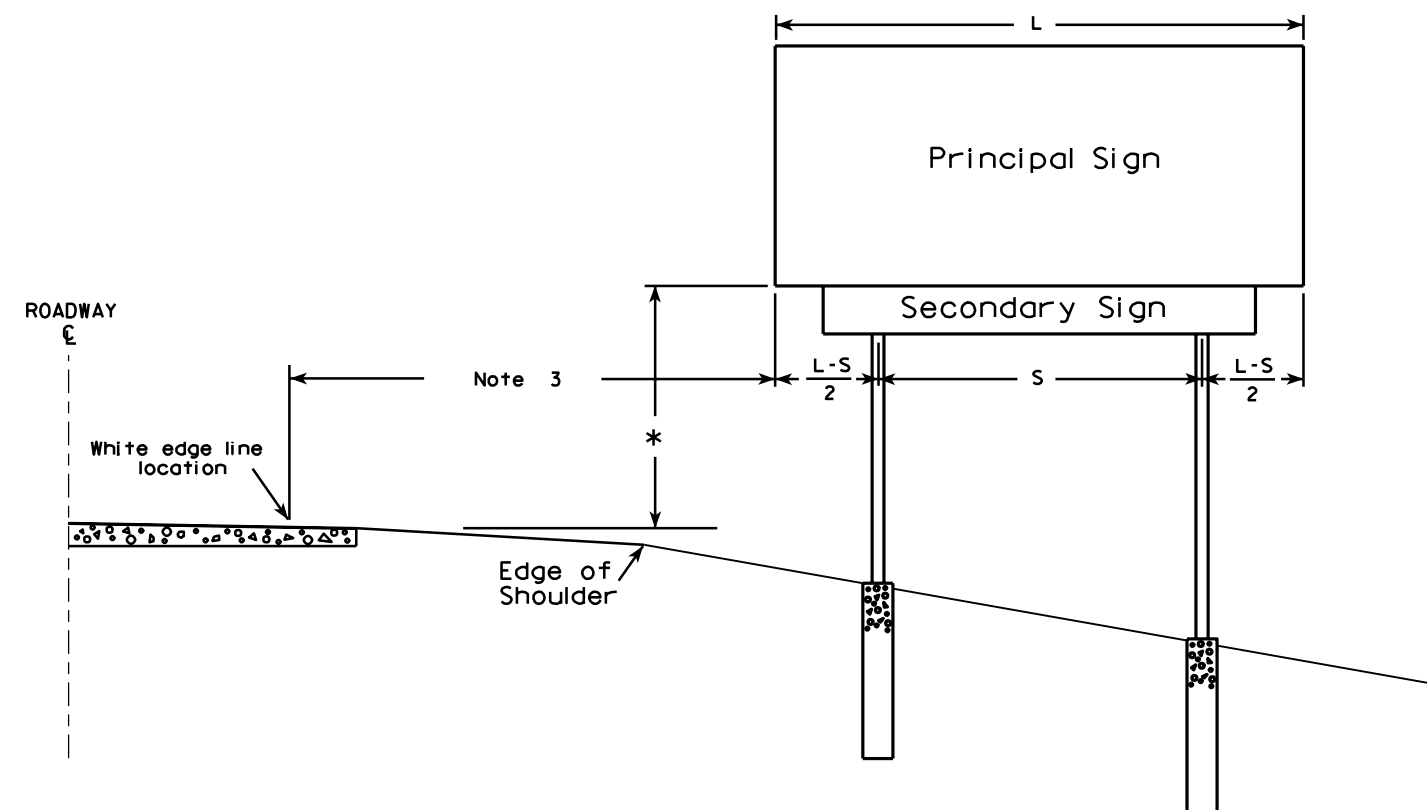
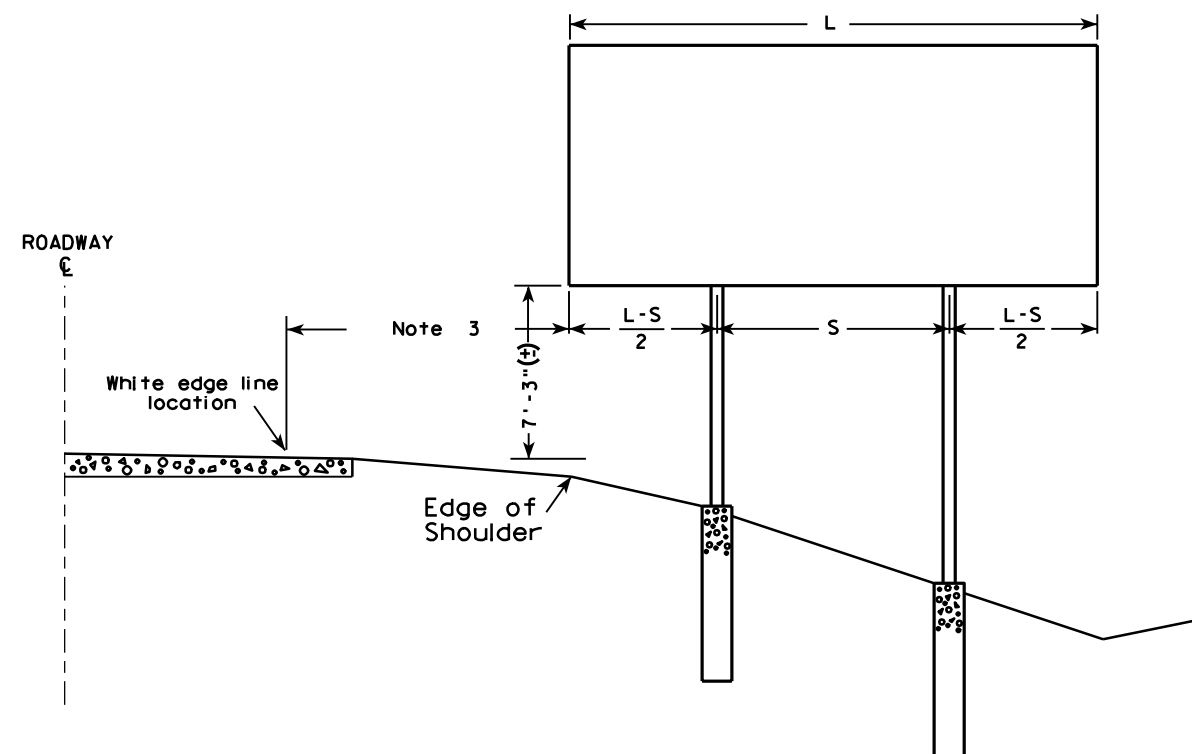


ALTERNATE BREAK-AWAY
BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/06/2014 PLATE NO. A3-1M.1



GENERAL NOTES

1. For a 2 post installation, S equals $3L/5$, but shall not be less than 9 ft.
2. For a 3 post installation, S equals $5L/7$, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3" (±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 4/02/08

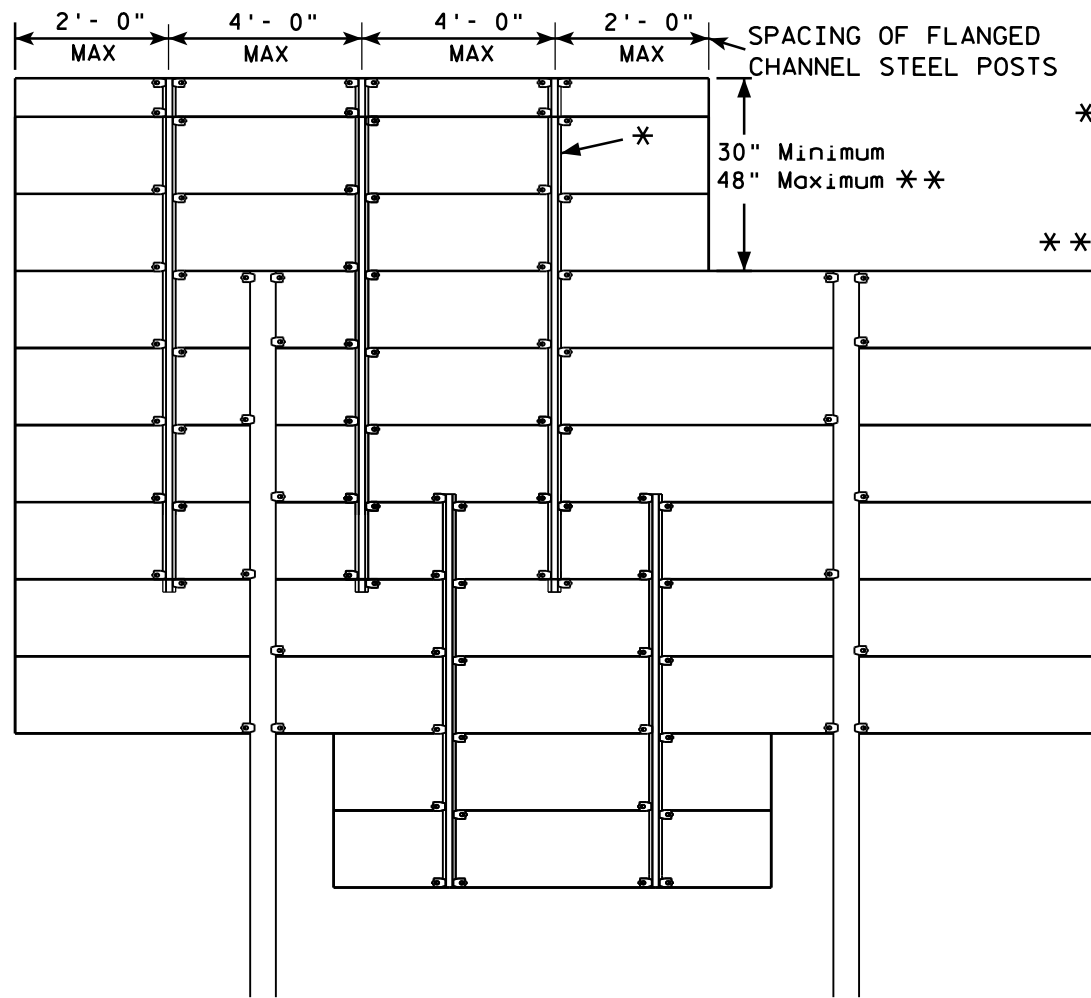
PLATE NO. A4-1.9

PROJECT NO:

SHEET NO:

E

GROUND MOUNTED SIGN

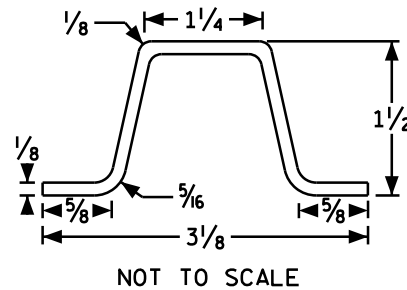


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

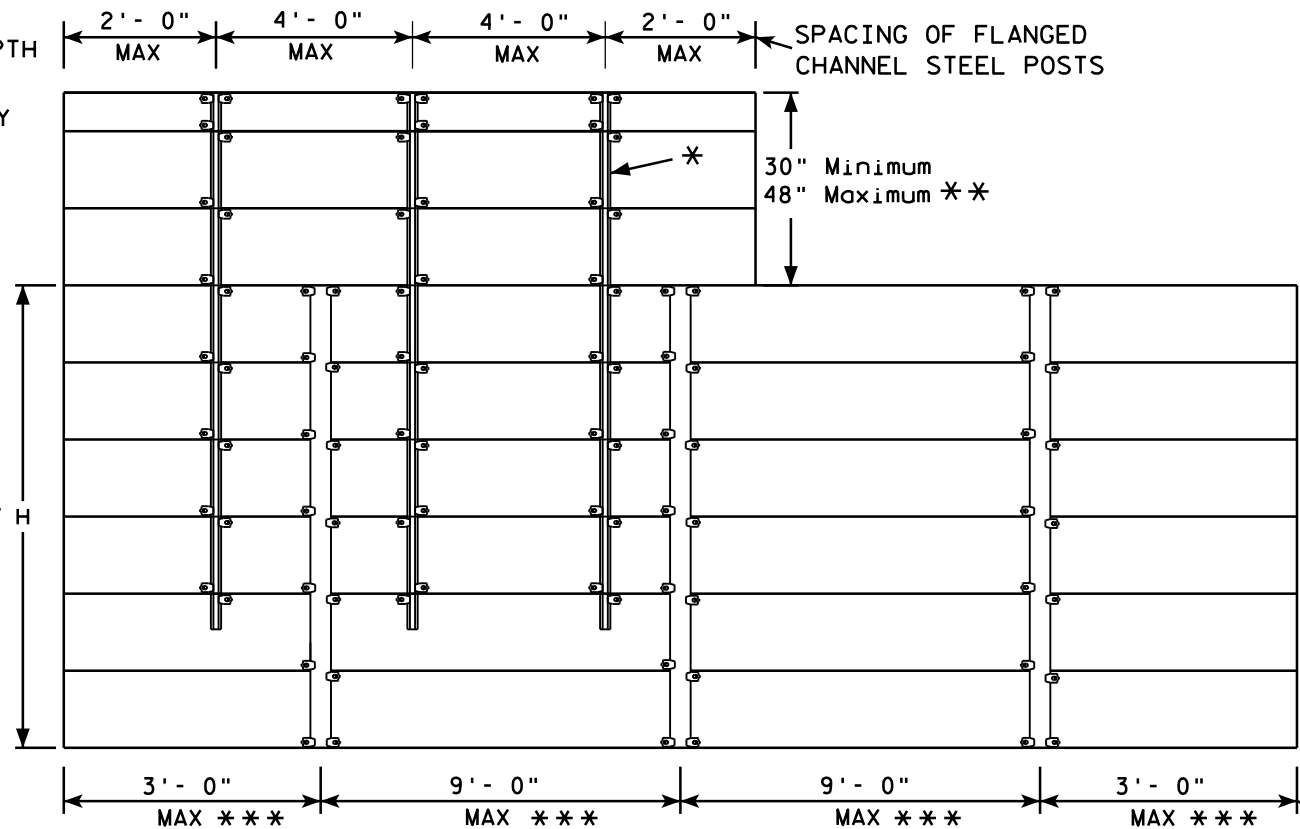
** = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS 5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:
PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS
PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS
If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

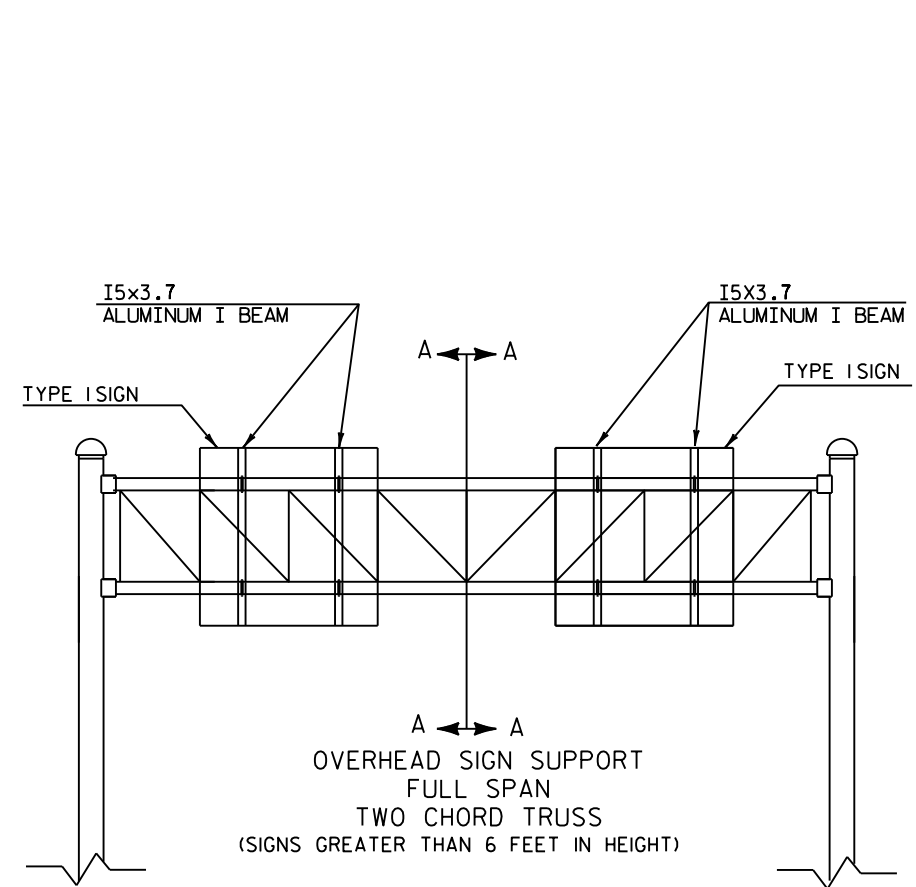
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

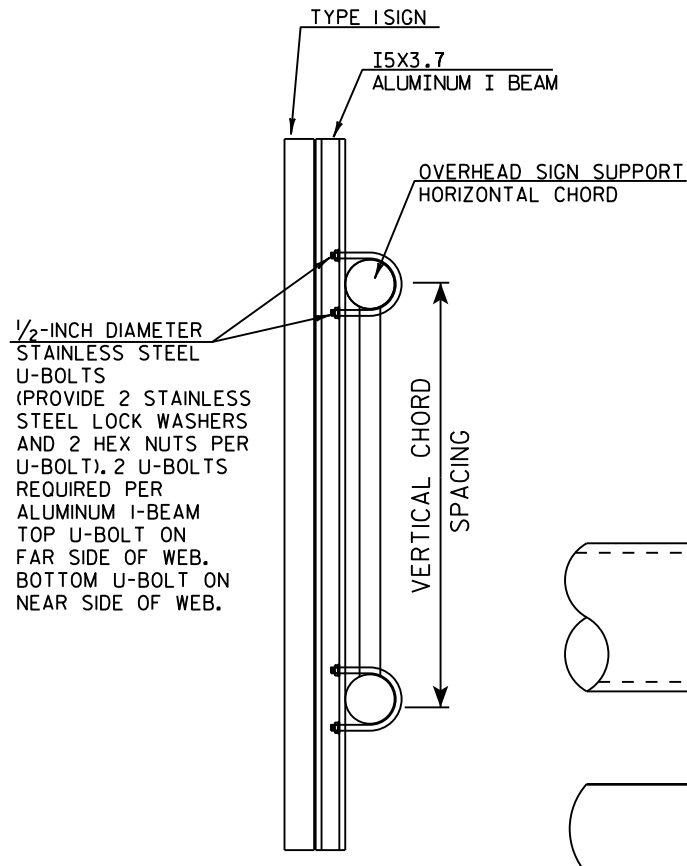
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

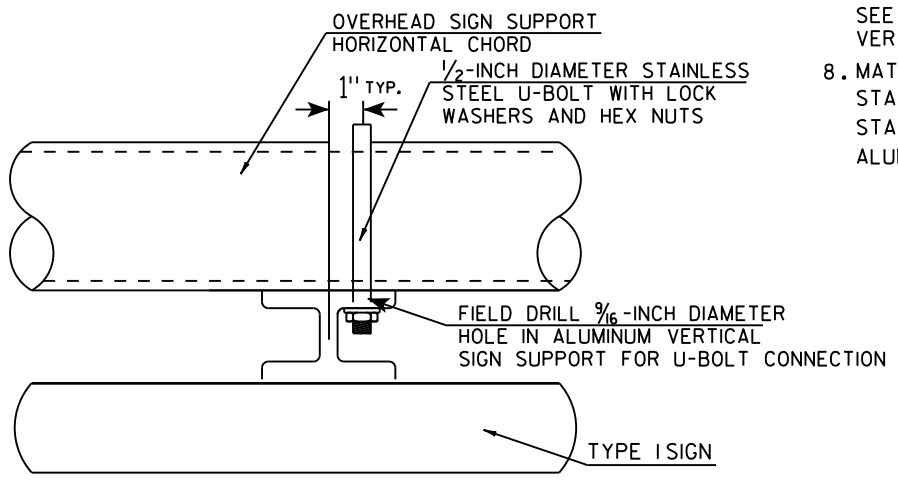
DATE 12/05/13 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)

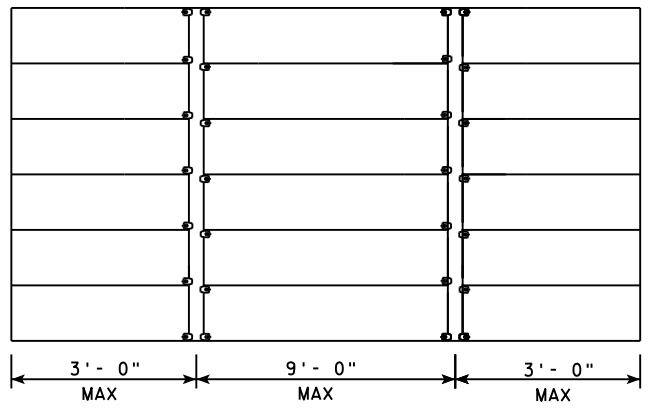


CUT SECTION A-A

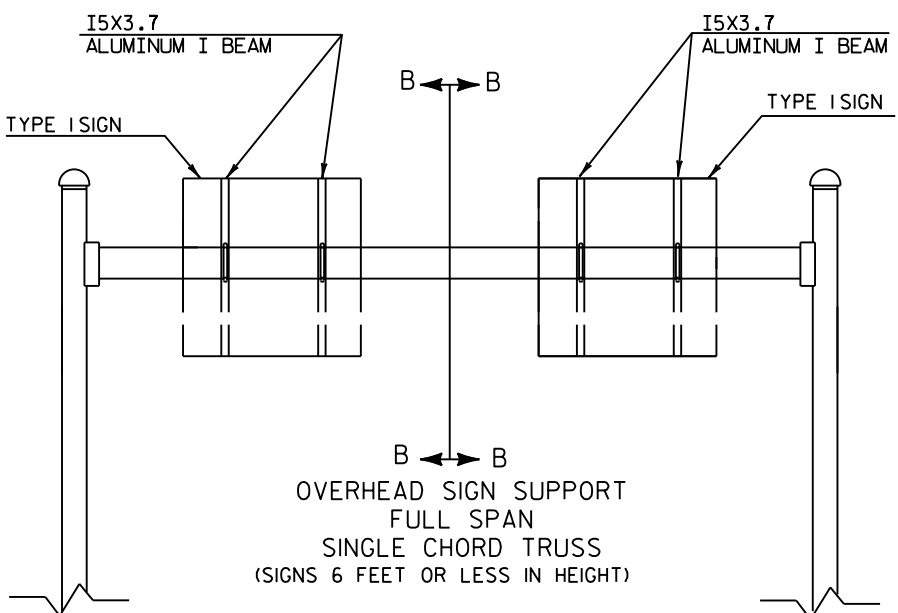


TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

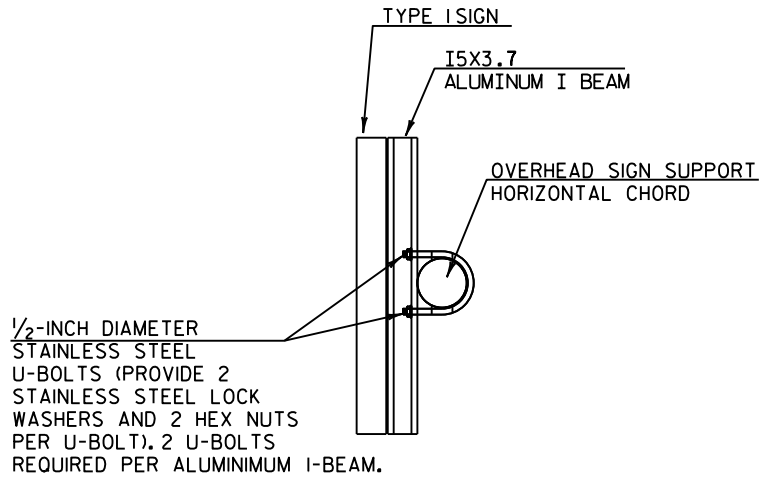
- GENERAL NOTES**
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
 2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
 3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
 4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
 5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
 6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
 7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
 8. MATERIAL NOTES:
STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
STAINLESS STEEL HEX NUTS ASTM A276.
ALUMINUM I-BEAMS ARE 6061-T6.



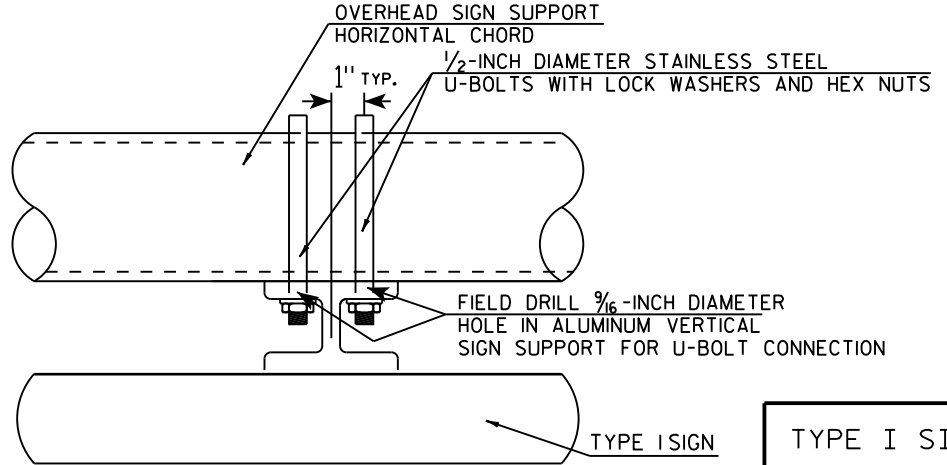
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> State Traffic Engineer
DATE 11/10/15	PLATE NO. A4-7.4

7



Punch 7/16" x 7/8" ovalholes beginning 6" in from end
of extrusion 12" CC on both edges of 6" and 12" panels.

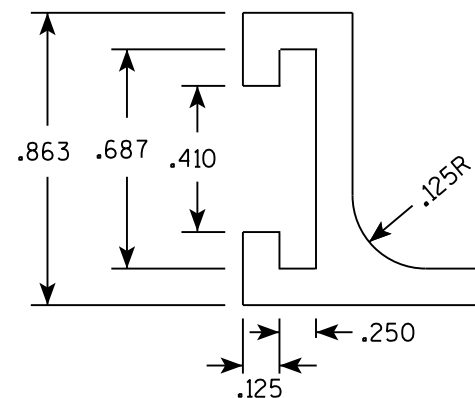
1/2" by 1/64"

1/8"

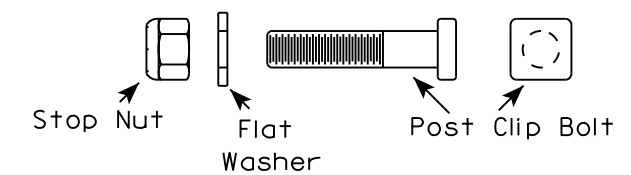
220R

DETAIL A (EDGE WRAP JOINT)

Panel
Stitch
Bolt



The diagrams illustrate two types of damage to a wire. The first diagram, labeled "Post Clip", shows a wire with a circular cross-section that has been flattened and elongated into a rectangular shape. The second diagram, labeled "Sharp Serrations", shows a wire with a cross-section that has been deformed into a series of sharp, pointed edges, resembling a saw blade. Arrows point to the sharp edges of the deformed wire.



1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R Rauch</u> for State Traffic Engineer
DATE <u>11/30/16</u>	PLATE NO. <u>A5-2.10</u>

Division	From/To Station	Location	205.0100 Common Excavation (1)		Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)			Factor 1.25				
Segment 1, Run 1	109+25/137+00	IH 94 WB - RT	54	0	54	1,228	1,535	-1,480	0	1,480	
Segment 1, Run 2	138+25/158+75	IH 94 WB - RT	21	0	21	841	1,051	-1,030	0	1,030	
Segment 2, Run 1	236+35/242+56	IH 94 EB - LT	181	0	181	106	133	48	48	0	
Segment 2, Run 2	245+00/261+03	IH 94 EB - LT	28	0	28	423	529	-502	0	502	
Segment 2, Run 3	273+00/283+25	IH 94 EB - LT	60	0	60	826	1,032	-972	0	972	
Segment 3, Run 1	326+80/340+55	IH 94 EB - LT	81	0	81	141	177	-96	0	96	
Segment 3, Run 2	348+62/357+25	IH 94 WB - RT	0	0	0	0	0	0	0	0	
Segment 4, Run 1	416+90/465+23	IH 94 WB - RT	59	0	59	776	970	-910	0	910	
Segment 4, Run 2	465+75/505+18	IH 94 EB - LT	35	0	35	767	958	-923	0	923	
Subtotal			519	0	520	5,108	6,385	-5,865	48	5,913	
Grand Total			519	0	520	5,108	6,385	-5,865	48	5,913	
Total Common Exc			519								

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.

5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.25

Depending on selections:

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor

(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

Division 1 - SEGMENT 1 RUN 1			AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate
STATION	Real Station	Distance							
					Note 1	Note 3	Note 1		Note 8
109+25	10925.00	0.00	0.00	4.50	0	0	0	0	0
110+00	11000.00	75.00	0.01	9.02	0	19	0	23	-23
111+00	11100.00	100.00	0.14	3.45	0	23	0	52	-52
112+00	11200.00	100.00	0.09	8.84	0	23	1	81	-80
113+00	11300.00	100.00	0.13	10.55	0	36	1	126	-124
114+00	11400.00	100.00	0.15	17.07	1	51	2	190	-188
115+00	11500.00	100.00	0.06	13.01	0	56	2	259	-257
116+00	11600.00	100.00	0.13	7.72	0	38	2	307	-305
117+00	11700.00	100.00	0.13	10.13	0	33	3	349	-346
117+85.25	11785.25	85.25	0.29	6.05	1	26	4	380	-377
118+00	11800.00	14.75	0.49	3.84	0	3	4	384	-380
119+00	11900.00	100.00	0.82	3.87	2	14	6	402	-395
120+00	12000.00	100.00	0.57	11.55	3	29	9	437	-429
120+81	12081.00	81.00	0.07	16.66	1	42	10	490	-481
121+00	12100.00	19.00	0.92	17.73	0	12	10	505	-495
122+00	12200.00	100.00	0.31	13.63	2	58	12	578	-566
123+00	12300.00	100.00	0.27	20.44	1	63	13	657	-643
124+00	12400.00	100.00	0.35	19.88	1	75	15	750	-736
125+00	12500.00	100.00	0.53	17.99	2	70	16	838	-822
126+00	12600.00	100.00	0.48	20.19	2	71	18	926	-908
127+00	12700.00	100.00	1.36	17.74	3	70	21	1,014	-993
127+97	12797.00	97.00	1.38	19.00	5	66	26	1,097	-1,070
128+00	12800.00	3.00	1.28	19.72	0	2	26	1,099	-1,073
129+00	12900.00	100.00	0.44	18.50	3	71	30	1,188	-1,158
130+00	13000.00	100.00	0.20	17.91	1	67	31	1,272	-1,241
131+00	13100.00	100.00	0.05	12.26	0	56	31	1,342	-1,310
132+00	13200.00	100.00	0.88	9.35	2	40	33	1,392	-1,359
133+00	13300.00	100.00	0.23	9.56	2	35	35	1,436	-1,400
134+00	13400.00	100.00	1.35	5.24	3	27	38	1,470	-1,432
135+00	13500.00	100.00	0.98	5.44	4	20	42	1,495	-1,452
136+00	13600.00	100.00	2.66	3.11	7	16	49	1,514	-1,465
137+00	13700.00	100.00	0.07	5.69	5	16	54	1,535	-1,480
					54	1,228			

Division -- SEGMENT 1 RUN 2										
			AREA (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate	
STATION	Real Station	Distance					1.00	1.25		
					Note 1	Note 3	Note 1		Note 8	
138+25	13825.00	0.00	0.06	31.96	0	0	0	0	0	
139+00	13900.00	75.00	0.59	21.48	1	74	1	93	-92	
140+00	14000.00	100.00	1.51	2.19	4	44	5	148	-143	
141+00	14100.00	100.00	0.32	0.60	3	5	8	154	-146	
142+00	14200.00	100.00	0.73	3.98	2	8	10	165	-155	
143+00	14300.00	100.00	0.04	11.84	1	29	12	201	-190	
144+00	14400.00	100.00	0.14	11.49	0	43	12	255	-243	
145+00	14500.00	100.00	0.00	0.18	0	22	12	282	-270	
146+00	14600.00	100.00	0.00	0.34	0	1	12	284	-271	
147+00	14700.00	100.00	0.00	0.17	0	1	12	285	-273	
148+00	14800.00	100.00	0.00	0.88	0	2	12	287	-275	
149+00	14900.00	100.00	0.00	0.78	0	3	12	291	-279	
150+00	15000.00	100.00	0.70	4.03	1	9	13	302	-289	
151+00	15100.00	100.00	0.24	24.17	2	52	15	367	-352	
152+00	15200.00	100.00	0.11	22.59	1	87	16	476	-460	
153+00	15300.00	100.00	0.03	18.91	0	77	16	572	-556	
154+00	15400.00	100.00	0.51	13.65	1	60	17	647	-630	
155+00	15500.00	100.00	0.40	13.84	2	51	19	711	-692	
156+00	15600.00	100.00	0.11	15.45	1	54	20	779	-759	
157+00	15700.00	100.00	0.31	15.03	1	56	20	849	-829	
158+00	15800.00	100.00	0.02	29.80	1	83	21	953	-932	
158+75	15875.00	75.00	0.00	27.02	0	79	21	1,051	-1,030	
					21	841				

Division -- SEGMENT 2 RUN 1										
			AREA (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
			Cut	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	Mass Ordinate
STATION	Real Station	Distance								
					Note 1	Note 2	Note 3	Note 1		Note 8
236+35	23635.00	0.00	0.00	14.17	0	0	0	0	0	0
237+00	23700.00	65.00	0.94	6.34	1	0	25	1	31	-30
238+00	23800.00	100.00	1.01	3.15	4	0	18	5	53	-48
239+00	23900.00	100.00	0.17	2.79	2	0	11	7	67	-60
240+00	24000.00	100.00	15.98	0.02	30	0	5	37	73	-36
241+00	24100.00	100.00	22.93	0.34	72	0	1	109	74	35
242+00	24200.00	100.00	6.28	16.13	54	0	30	163	112	51
242+56	24256.00	56.00	11.04	0.00	18	0	17	181	133	48
					181	0	106			

Division -- SEGMENT 2 RUN 2										
			AREA (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate	
STATION	Real Station	Distance								
					Note 1	Note 3	Note 1		Note 8	
245+00	24500.00	0.00	1.38	0.56	0	0	0	0	0	0
246+00	24600.00	100.00	0.65	1.90	4	5	4	6	-2	
247+00	24700.00	100.00	0.16	4.53	2	12	5	21	-15	
248+00	24800.00	100.00	0.18	6.49	1	20	6	46	-40	
249+00	24900.00	100.00	0.25	6.72	1	24	7	77	-70	
250+00	25000.00	100.00	0.21	8.08	1	27	8	111	-103	
251+00	25100.00	100.00	0.33	8.60	1	31	9	149	-141	
252+00	25200.00	100.00	0.10	6.94	1	29	9	185	-176	
253+00	25300.00	100.00	0.43	5.48	1	23	10	214	-204	
253+96	25396.00	96.00	0.83	8.79	2	25	13	246	-233	
254+00	25400.00	4.00	0.74	5.56	0	1	13	247	-235	
255+00	25500.00	100.00	0.68	0.56	3	11	15	261	-246	
256+00	25600.00	100.00	0.25	1.21	2	3	17	265	-248	
257+00	25700.00	100.00	0.65	0.60	2	3	19	270	-251	
258+00	25800.00	100.00	0.51	4.32	2	9	21	281	-260	
259+00	25900.00	100.00	0.91	42.80	3	87	23	390	-367	
259+02	25902.00	2.00	0.92	42.64	0	3	24	394	-371	
260+00	26000.00	98.00	0.36	6.04	2	88	26	504	-479	
261+00	26100.00	100.00	0.49	4.32	2	19	27	528	-501	
261+03	26103.00	3.00	0.54	4.11	0	0	28	529	-502	
					28	423				

Division -- SEGMENT 2 RUN 3									
STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Expanded		Mass Ordinate
							Cut	Fill	
							1.00	1.25	
					Note 1	Note 3	Note 1		Note 8
273+00	27300.00	0.00	1.29	21.87	0	0	0	0	0
274+00	27400.00	100.00	1.41	52.01	5	137	5	171	-166
274+21	27421.00	21.00	2.01	60.61	1	44	6	226	-219
275+00	27500.00	79.00	2.15	39.98	6	147	12	410	-397
276+00	27600.00	100.00	2.86	21.97	9	115	22	553	-531
277+00	27700.00	100.00	2.61	8.70	10	57	32	624	-592
278+00	27800.00	100.00	2.52	8.09	10	31	41	663	-622
279+00	27900.00	100.00	0.94	14.79	6	42	48	716	-668
280+00	28000.00	100.00	1.17	11.36	4	48	52	776	-725
281+00	28100.00	100.00	0.44	16.91	3	52	55	842	-787
282+00	28200.00	100.00	0.58	18.28	2	65	57	923	-867
283+00	28300.00	100.00	1.18	19.56	3	70	60	1,011	-951
283+25	28325.00	25.00	0.33	17.27	1	17	60	1,032	-972
					60	826			

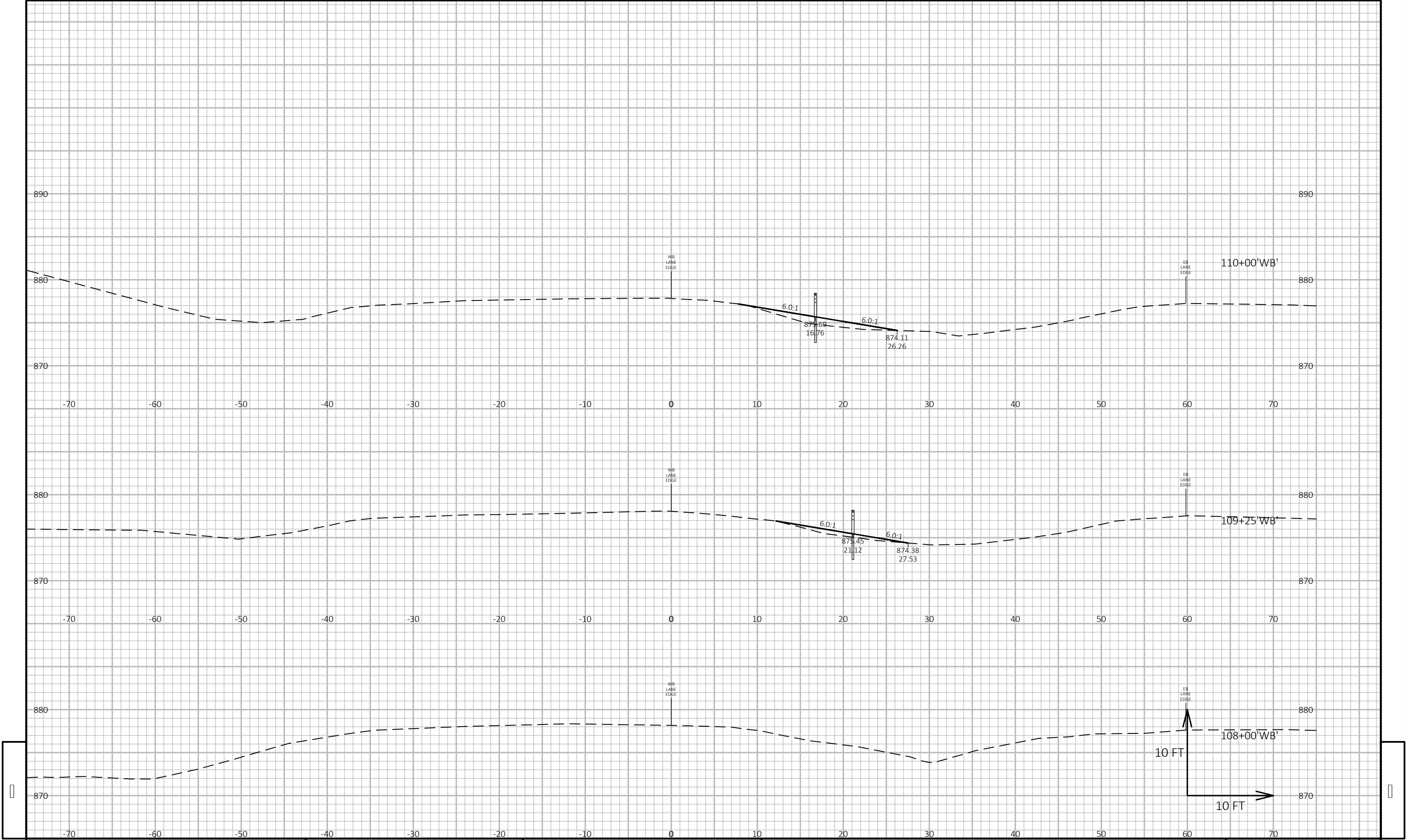
Division -- SEGMENT 3 RUN 1											
			AREA (SF)		Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
						Salvaged/Unusable Pavement Material			Expanded		
STATION	Real Station	Distance	Cut	Fill	Cut		Fill	Cut	Fill	Mass Ordinate	
								1.00	1.25		
					Note 1	Note 2	Note 3	Note 1		Note 8	
326+80	32680.05	0.00	0.13	1.23	0	0	0	0	0	0	
328+00	32800.00	119.95	0.46	0.33	1	0	3	1	4	-3	
328+95	32895.00	95.00	0.89	12.54	2	0	23	4	33	-29	
329+00	32900.00	5.00	0.94	9.05	0	0	2	4	35	-31	
330+00	33000.00	100.00	0.89	0.27	3	0	17	7	57	-49	
331+00	33100.00	100.00	0.00	0.04	2	0	1	9	57	-48	
332+00	33200.00	100.00	0.38	0.00	1	0	0	10	58	-48	
333+00	33300.00	100.00	0.29	0.66	1	0	1	11	59	-48	
334+00	33400.00	100.00	0.18	3.06	1	0	7	12	68	-56	
335+00	33500.00	100.00	0.46	2.64	1	0	11	13	81	-68	
336+00	33600.00	100.00	0.20	2.91	1	0	10	14	94	-80	
337+00	33700.00	100.00	0.39	4.97	1	0	15	15	112	-97	
338+00	33800.00	100.00	0.18	8.97	1	0	26	16	144	-128	
339+00	33900.00	100.00	17.93	0.01	34	0	17	50	165	-115	
339+57	33957.00	57.00	7.34	6.27	27	0	7	77	173	-97	
339+80	33980.00	23.00	0.63	0.00	3	0	3	80	177	-97	
340+00	34000.00	20.00	0.19	0.04	0	0	0	80	177	-96	
340+55	34055.00	55.00	0.53	0.00	1	0	0	81	177	-96	
					81	0	141				

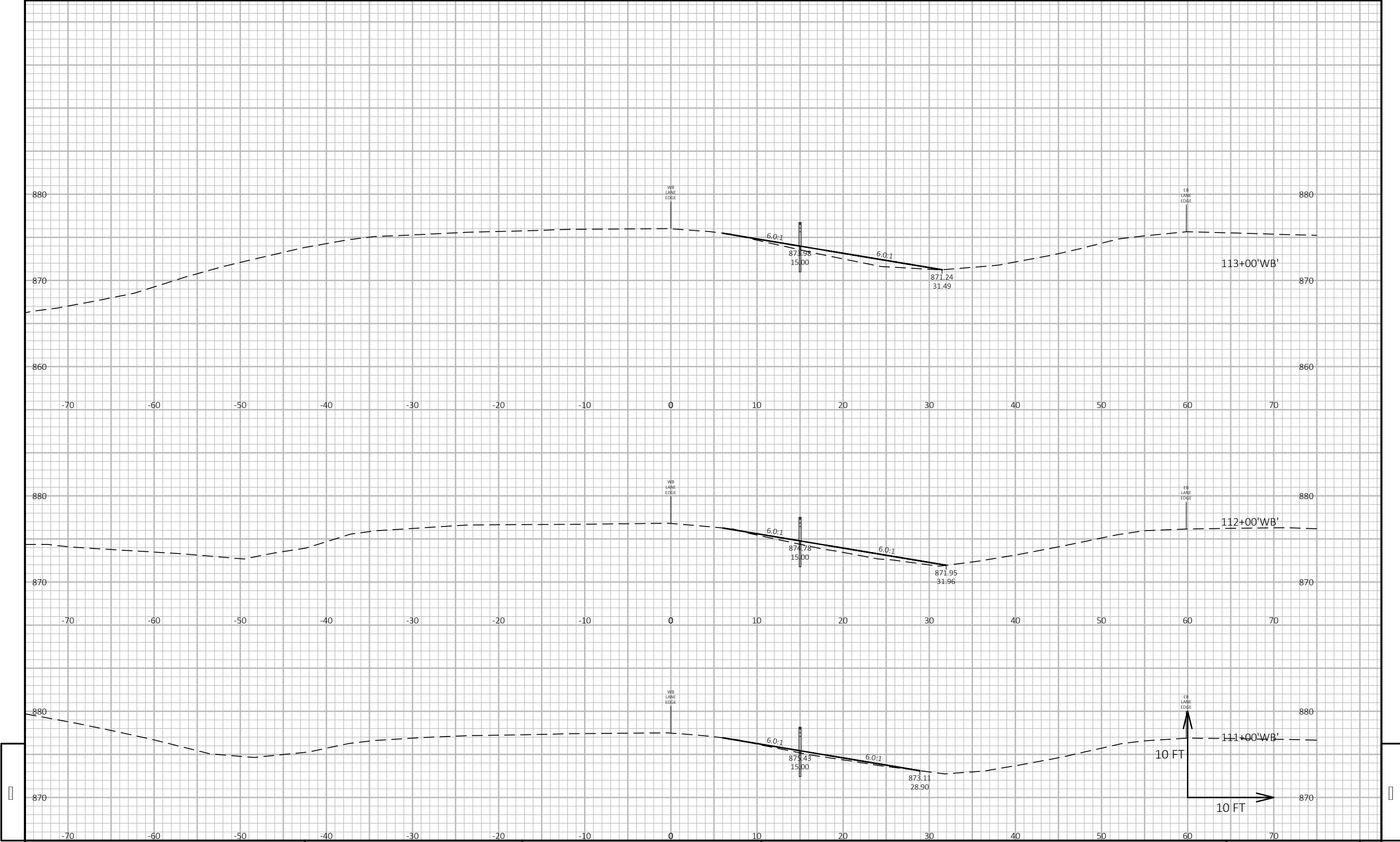
Division -- SEGMENT 4 RUN 1												
STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Expanded		Note 8	
			Cut	Fill	Cut	Fill	Cut	Fill				
									Note 1	Note 3		Note 1
416+90	41690.00	0.00	6.05	0.00	0	0	0	0	0	0	0	
417+00	41700.00	10.00	5.43	0.00	2	0	2	0	0	0	2	
418+00	41800.00	100.00	0.35	0.19	11	0	13	0	0	0	12	
419+00	41900.00	100.00	0.08	6.44	1	12	14	16	16	16	-2	
420+00	42000.00	100.00	0.15	4.82	0	21	14	42	42	42	-28	
421+00	42100.00	100.00	0.06	6.98	0	22	14	69	69	69	-55	
422+00	42200.00	100.00	0.41	5.95	1	24	15	99	99	99	-84	
423+00	42300.00	100.00	0.13	4.06	1	19	16	122	122	122	-106	
424+00	42400.00	100.00	0.07	3.95	0	15	17	141	141	141	-124	
424+26	42426.00	26.00	0.09	7.95	0	6	17	148	148	148	-131	
425+00	42500.00	74.00	0.66	7.06	1	21	18	174	174	174	-156	
426+00	42600.00	100.00	0.04	9.81	1	31	19	213	213	213	-194	
427+00	42700.00	100.00	0.22	5.63	0	29	20	249	249	249	-229	
428+00	42800.00	100.00	0.08	7.82	1	25	20	280	280	280	-260	
429+00	42900.00	100.00	0.02	8.34	0	30	20	317	317	317	-297	
430+00	43000.00	100.00	0.50	3.95	1	23	21	346	346	346	-324	
431+00	43100.00	100.00	0.42	4.65	2	16	23	365	365	365	-342	
432+00	43200.00	100.00	0.24	6.35	1	20	24	391	391	391	-367	
433+00	43300.00	100.00	0.49	7.93	1	26	26	424	424	424	-398	
434+00	43400.00	100.00	0.73	4.93	2	24	28	454	454	454	-426	
435+00	43500.00	100.00	0.63	6.52	3	21	30	480	480	480	-450	
436+00	43600.00	100.00	0.45	3.54	2	19	32	504	504	504	-471	
436+46	43646.00	46.00	0.15	24.99	1	24	33	534	534	534	-501	
437+00	43700.00	54.00	0.00	15.54	0	41	33	585	585	585	-552	
438+00	43800.00	100.00	0.02	18.11	0	62	33	663	663	663	-629	
439+00	43900.00	100.00	0.08	9.57	0	51	33	727	727	727	-693	
440+00	44000.00	100.00	0.02	8.32	0	33	33	768	768	768	-735	
441+00	44100.00	100.00	0.12	1.84	0	19	34	792	792	792	-758	
442+00	44200.00	100.00	0.04	3.52	0	10	34	804	804	804	-770	
443+00	44300.00	100.00	0.28	0.81	1	8	35	814	814	814	-779	
444+00	44400.00	100.00	0.05	2.40	1	6	35	821	821	821	-786	
445+00	44500.00	100.00	0.33	1.20	1	7	36	830	830	830	-794	
446+00	44600.00	100.00	0.12	4.14	1	10	37	842	842	842	-805	
447+00	44700.00	100.00	0.07	4.58	0	16	37	862	862	862	-825	
448+00	44800.00	100.00	0.20	2.64	0	13	38	879	879	879	-841	
448+80	44880.00	80.00	0.08	4.83	0	11	38	893	893	893	-855	
449+00	44900.00	20.00	0.09	3.89	0	3	38	897	897	897	-859	
450+00	45000.00	100.00	0.14	2.03	0	11	38	911	911	911	-872	
451+00	45100.00	100.00	0.12	3.22	0	10	39	923	923	923	-884	
452+00	45200.00	100.00	0.21	0.44	1	7	40	931	931	931	-892	
453+00	45300.00	100.00	0.14	1.07	1	3	40	935	935	935	-895	
454+00	45400.00	100.00	0.24	1.09	1	4	41	940	940	940	-899	
455+00	45500.00	100.00	0.14	2.16	1	6	42	947	947	947	-906	
456+00	45600.00	100.00	0.39	0.21	1	4	43	953	953	953	-910	
457+00	45700.00	100.00	0.13	1.27	1	3	44	956	956	956	-913	
458+00	45800.00	100.00	0.23	1.06	1	4	44	961	961	961	-917	
459+00	45900.00	100.00	0.38	0.36	1	3	45	965	965	965	-919	
460+00	46000.00	100.00	0.10	0.71	1	2	46	967	967	967	-921	
461+00	46100.00	100.00	0.41	0.00	1	1	47	969	969	969	-922	
462+00	46200.00	100.00	1.30	0.01	3	0	50	969	969	969	-919	
463+00	46300.00	100.00	1.04	0.00	4	0	55	969	969	969	-914	
464+00	46400.00	100.00	0.63	0.01	3	0	58	969	969	969	-911	
465+00	46500.00	100.00	0.07	0.22	1	0	59	969	969	969	-910	
465+23	46523.00	23.00	0.52	0.00	0	0	59	970	970	970	-910	
					59							
						776						

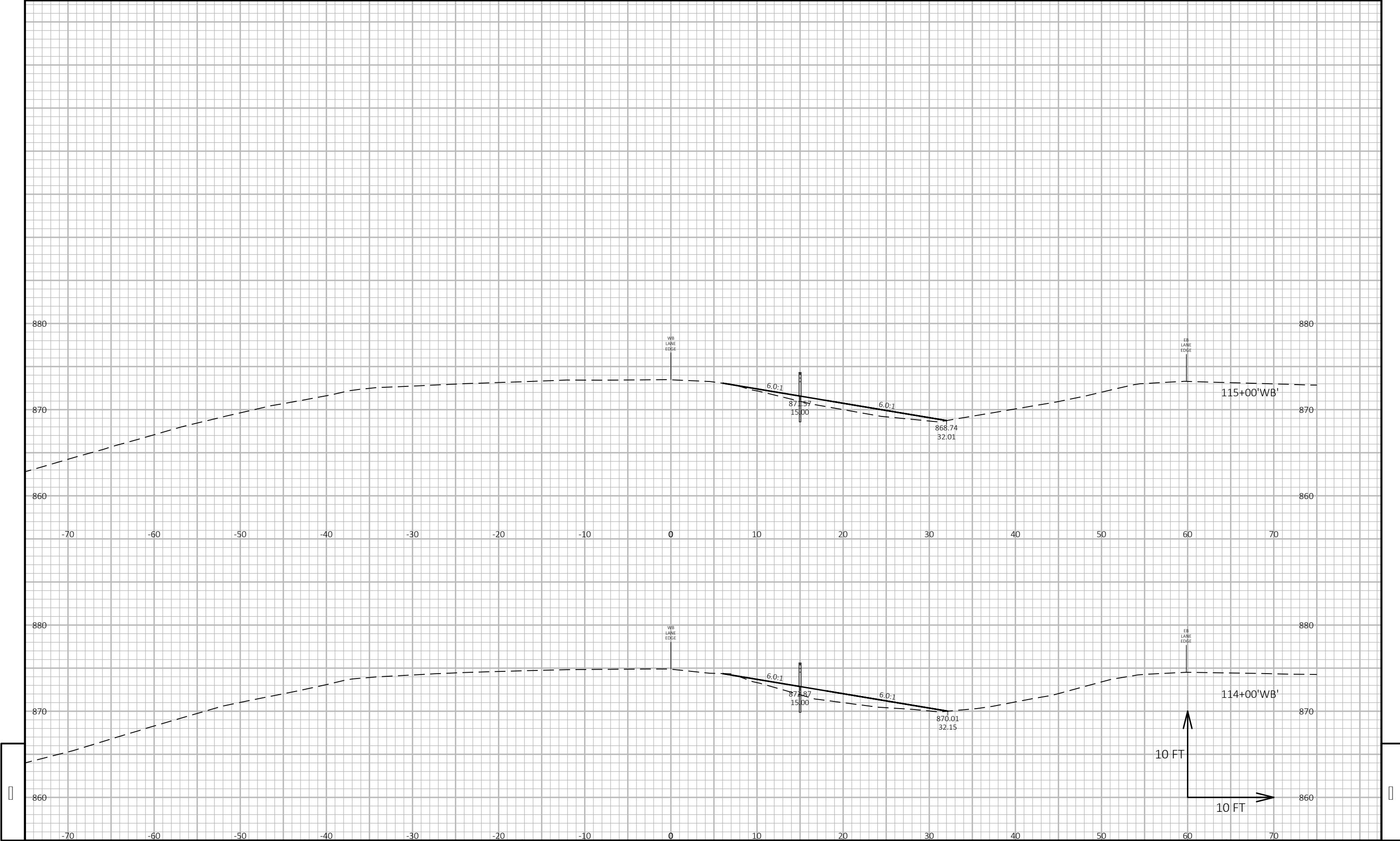
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE/JEFFERSON	EARTHWORK DATA SHEETS	SHEET:	E
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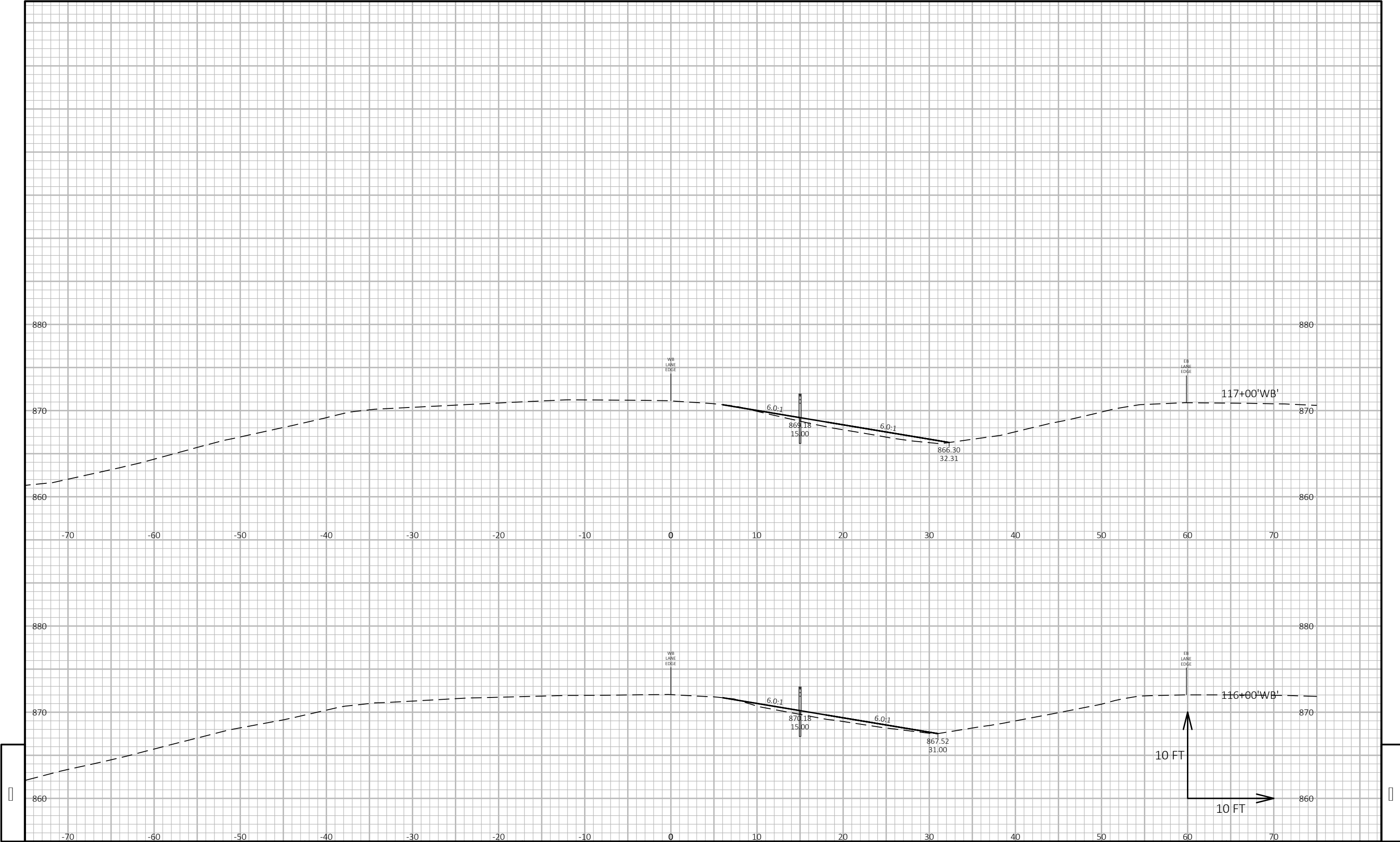
Division -- SEGMENT 4 RUN 2										
STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Expanded	
			Cut	Fill	Cut	Fill	Cut	Fill	Mass Ordinate	
					Note 1	Note 3	Note 1	Note 1	Note 8	
465+75	46575.00	0.00	0.54	0.25	0	0	0	0	0	0
466+00	46600.00	25.00	0.34	1.62	0	1	0	1	1	-1
467+00	46700.00	100.00	0.04	5.95	1	14	1	19	19	-17
468+00	46800.00	100.00	0.00	5.51	0	21	1	45	45	-44
469+00	46900.00	100.00	0.00	4.24	0	18	1	68	68	-67
470+00	47000.00	100.00	0.80	2.16	1	12	3	82	82	-80
471+00	47100.00	100.00	0.44	6.43	2	16	5	102	102	-97
471+07	47107.00	7.00	0.33	10.67	0	2	5	105	105	-100
472+00	47200.00	93.00	0.10	9.91	1	35	6	149	149	-144
473+00	47300.00	100.00	0.42	7.54	1	32	7	190	190	-183
474+00	47400.00	100.00	0.19	7.60	1	28	8	225	225	-217
475+00	47500.00	100.00	0.36	9.70	1	32	9	265	265	-256
475+65	47565.00	65.00	0.19	12.81	1	27	10	299	299	-289
476+00	47600.00	35.00	0.17	9.92	0	15	10	317	317	-307
477+00	47700.00	100.00	0.18	5.50	1	29	10	353	353	-342
478+00	47800.00	100.00	0.19	1.25	1	12	11	368	368	-357
479+00	47900.00	100.00	0.13	2.27	1	7	12	377	377	-365
480+00	48000.00	100.00	0.26	2.33	1	9	12	387	387	-375
481+00	48100.00	100.00	0.13	5.15	1	14	13	405	405	-391
482+00	48200.00	100.00	0.06	5.92	0	21	14	430	430	-417
483+00	48300.00	100.00	0.19	6.12	0	22	14	458	458	-444
484+00	48400.00	100.00	0.38	1.14	1	13	15	475	475	-460
485+00	48500.00	100.00	0.00	0.89	1	4	16	480	480	-464
486+00	48600.00	100.00	0.00	0.50	0	3	16	483	483	-467
487+00	48700.00	100.00	0.00	1.38	0	3	16	487	487	-471
487+70	48770.00	70.00	0.09	0.14	0	2	16	490	490	-474
488+00	48800.00	30.00	0.01	7.05	0	4	16	495	495	-479
489+00	48900.00	100.00	0.00	4.93	0	22	16	522	522	-506
490+00	49000.00	100.00	0.26	4.88	0	18	16	545	545	-529
491+00	49100.00	100.00	0.20	6.04	1	20	17	570	570	-553
492+00	49200.00	100.00	0.00	5.57	0	21	18	597	597	-580
493+00	49300.00	100.00	0.00	4.99	0	20	18	622	622	-604
494+00	49400.00	100.00	0.42	1.38	1	12	18	636	636	-618
495+00	49500.00	100.00	0.72	0.00	2	3	21	640	640	-619
496+00	49600.00	100.00	0.99	0.12	3	0	24	640	640	-616
497+00	49700.00	100.00	0.48	3.09	3	6	26	647	647	-621
498+00	49800.00	100.00	0.68	4.52	2	14	29	665	665	-636
499+00	49900.00	100.00	0.01	12.85	1	32	30	705	705	-675
499+12	49912.00	12.00	0.00	20.24	0	7	30	714	714	-684
500+00	50000.00	88.00	0.08	10.48	0	50	30	777	777	-747
501+00	50100.00	100.00	0.18	8.69	0	36	31	821	821	-791
502+00	50200.00	100.00	0.07	7.43	0	30	31	859	859	-828
503+00	50300.00	100.00	0.24	5.98	1	25	32	890	890	-858
504+00	50400.00	100.00	0.03	8.42	1	27	32	923	923	-891
505+00	50500.00	100.00	1.39	5.16	3	25	35	954	954	-920
505+18	50518.00	18.00	0.72	4.19	1	3	35	958	958	-923
					35	767				

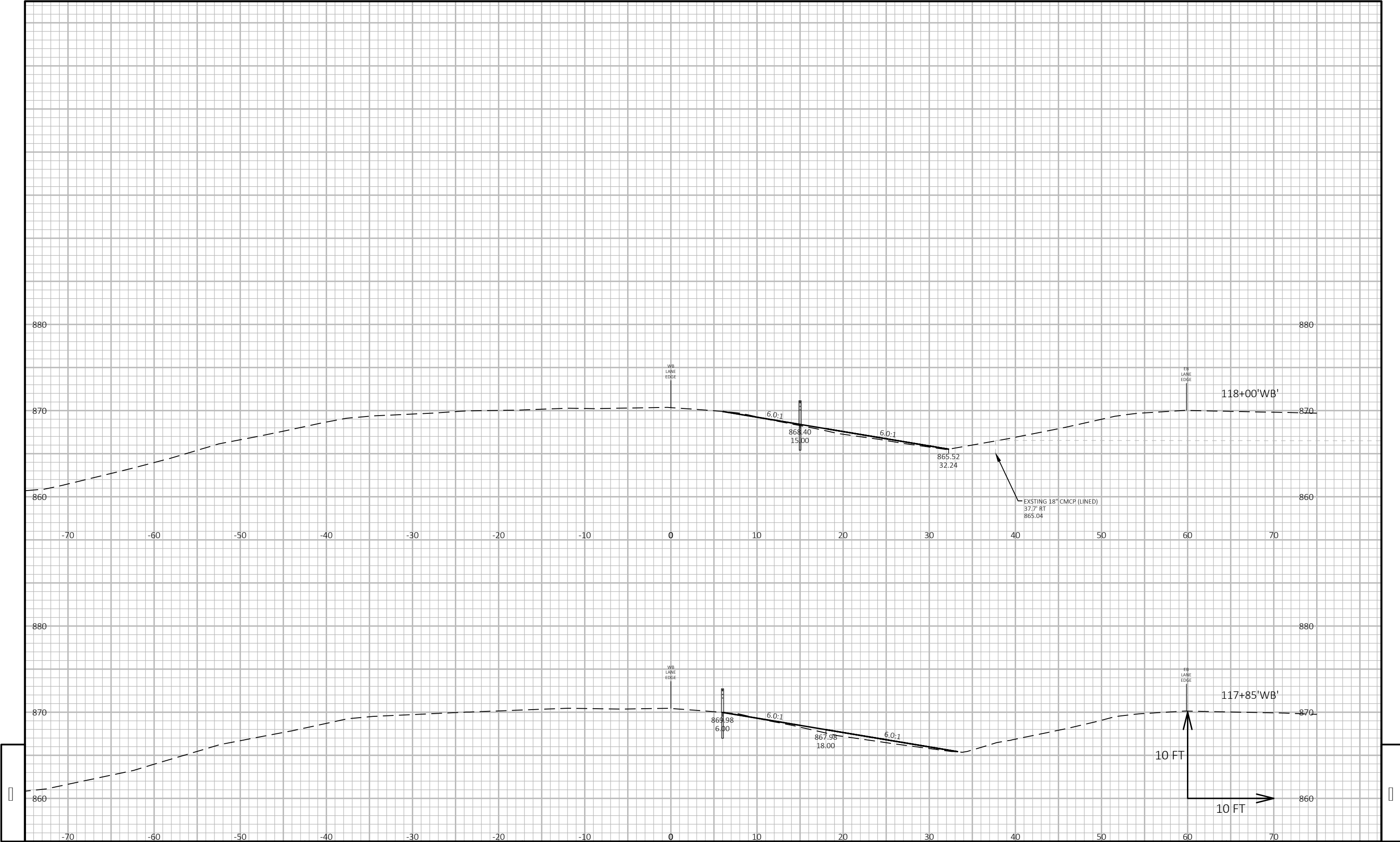
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE/JEFFERSON	EARTHWORK DATA SHEETS	SHEET:	E
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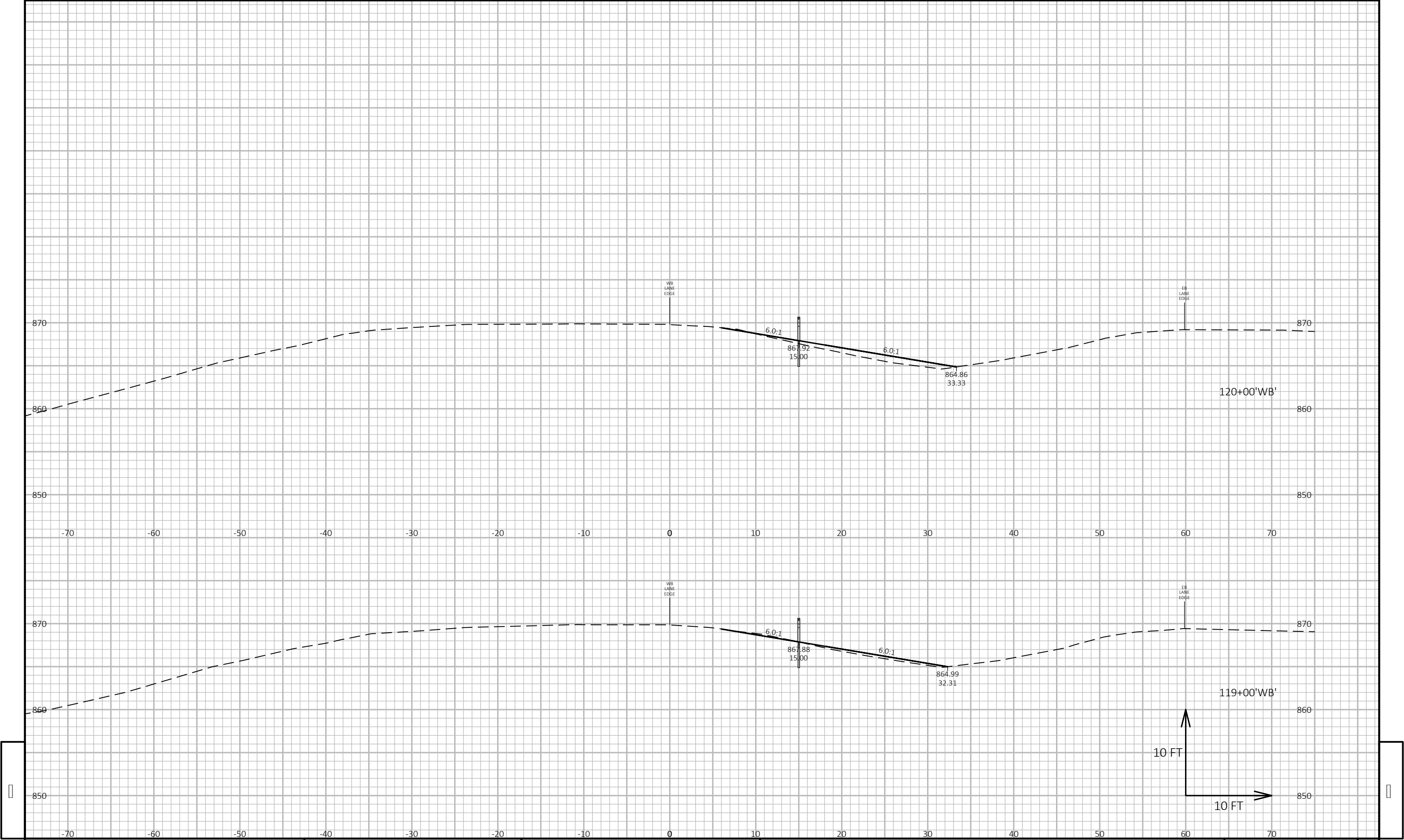




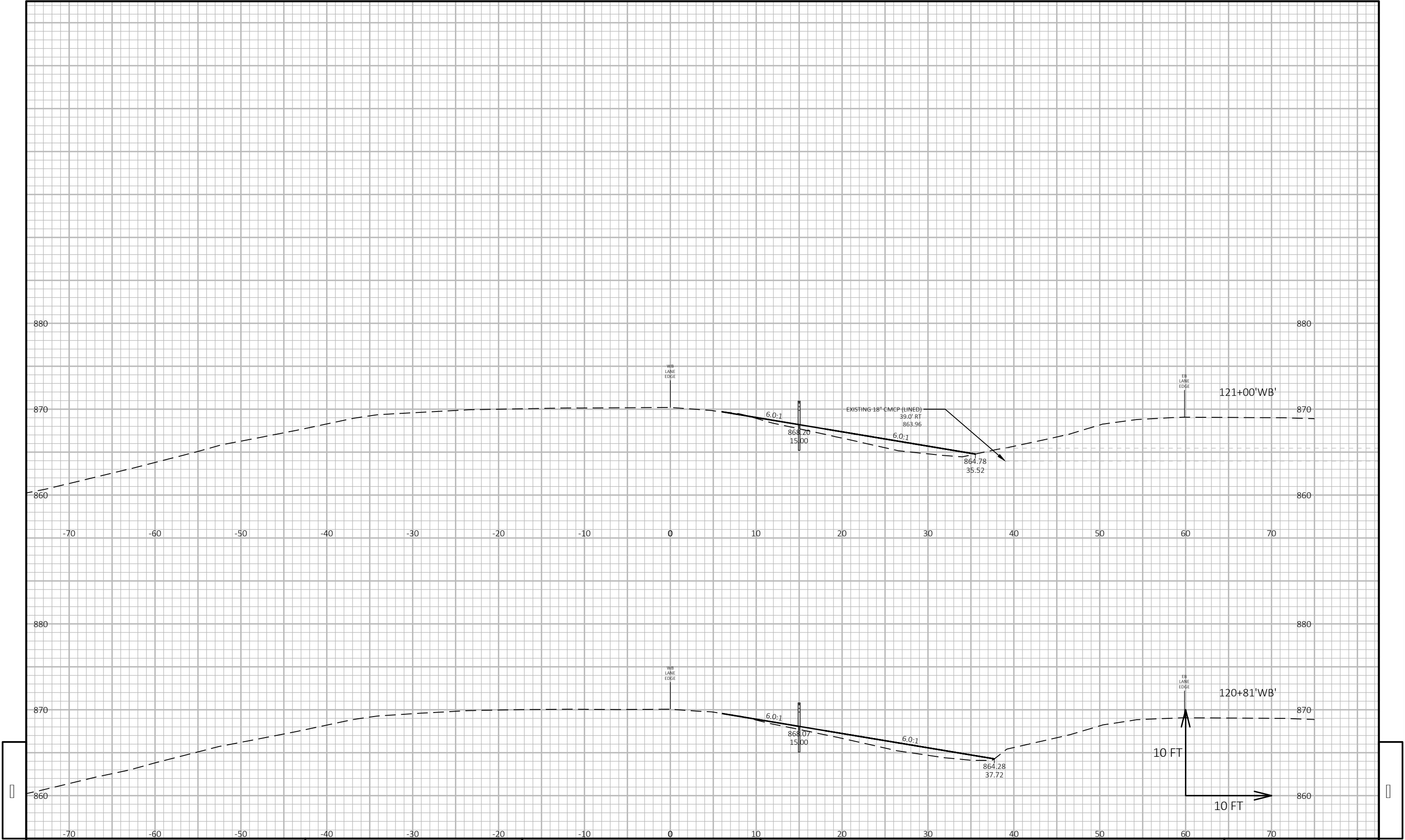


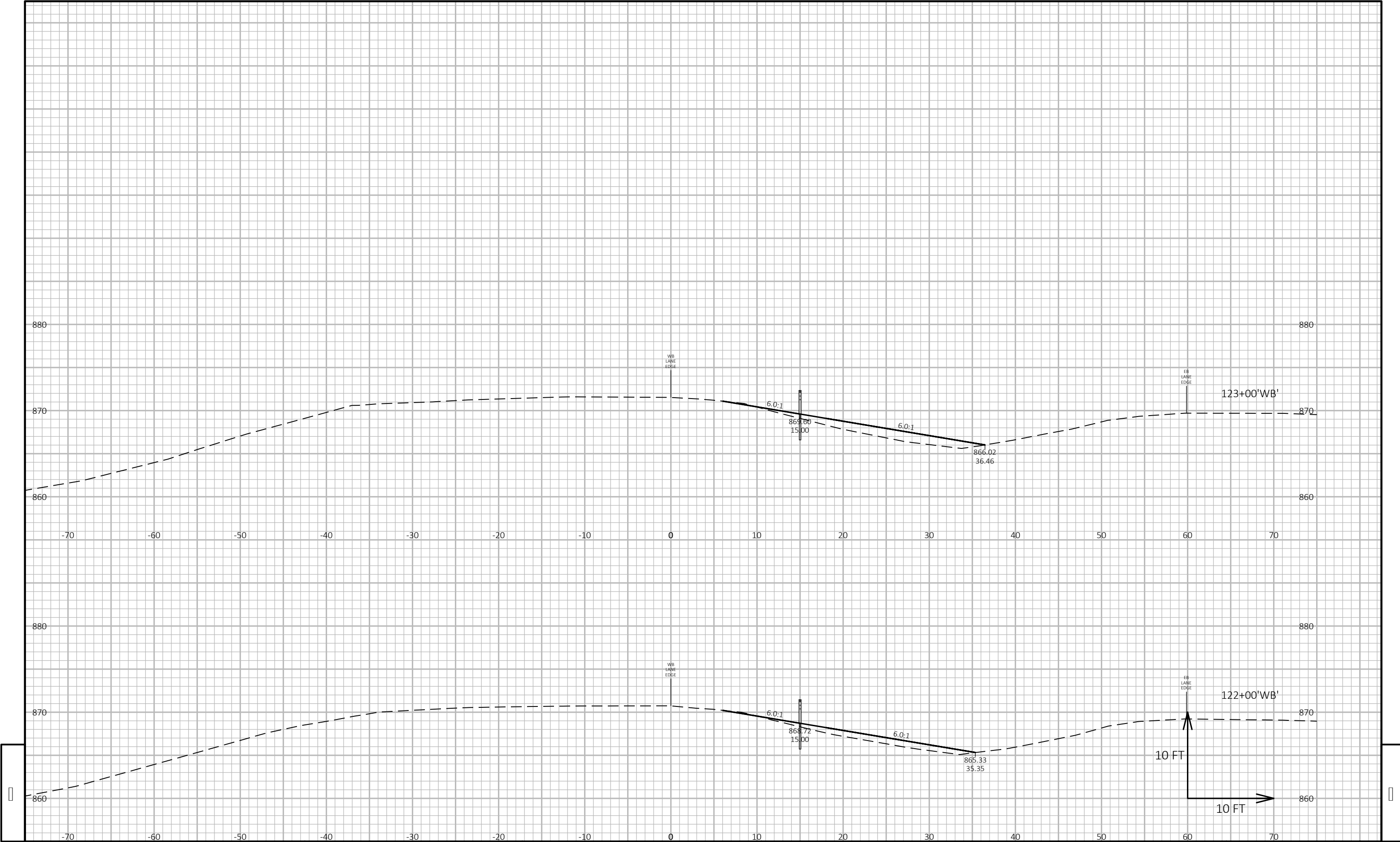


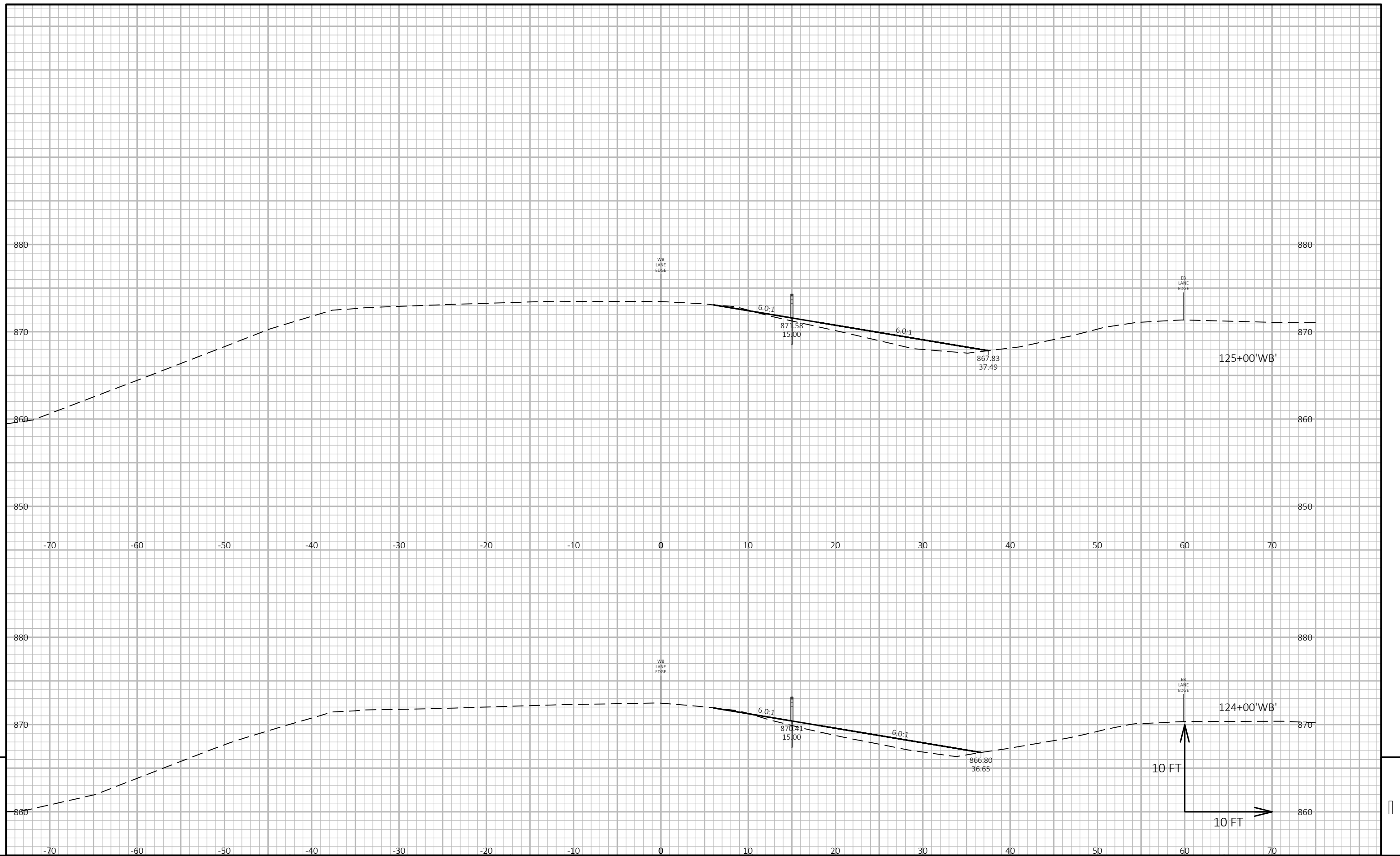
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 1	SHEET	E
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PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 1	SHEET	E
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PROJECT NO:	1067-02-62
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HWY: IH 94

COUNTY: DANE / JEFFERSON

CROSS SECTIONS:	SEGMENT 1
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SHEET

1

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LAYOUT NAME - S1R1WB_9

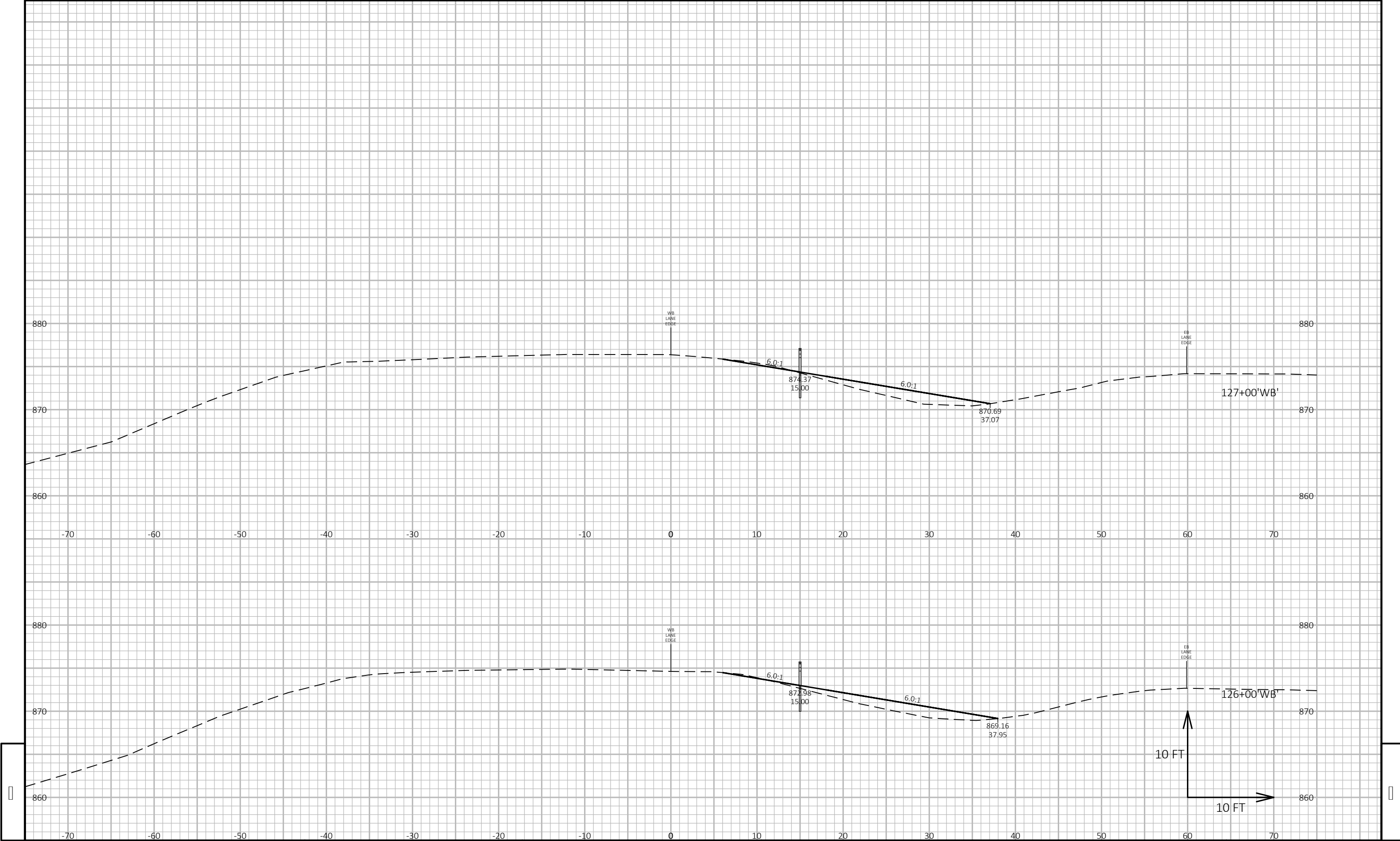
PLOT DATE : 12/19/2017 10:12 AM

PLOT BY : BAILEY, RYAN R

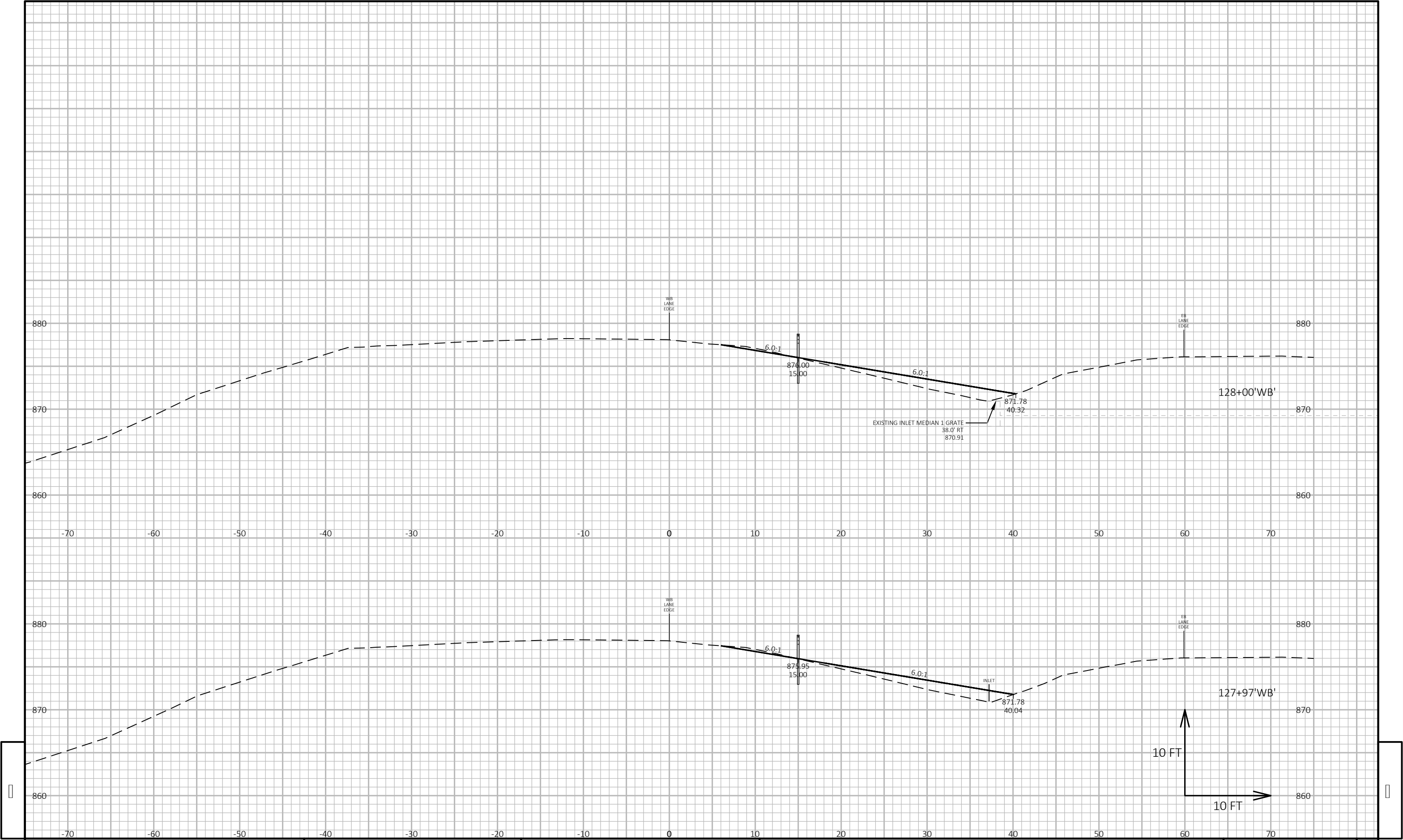
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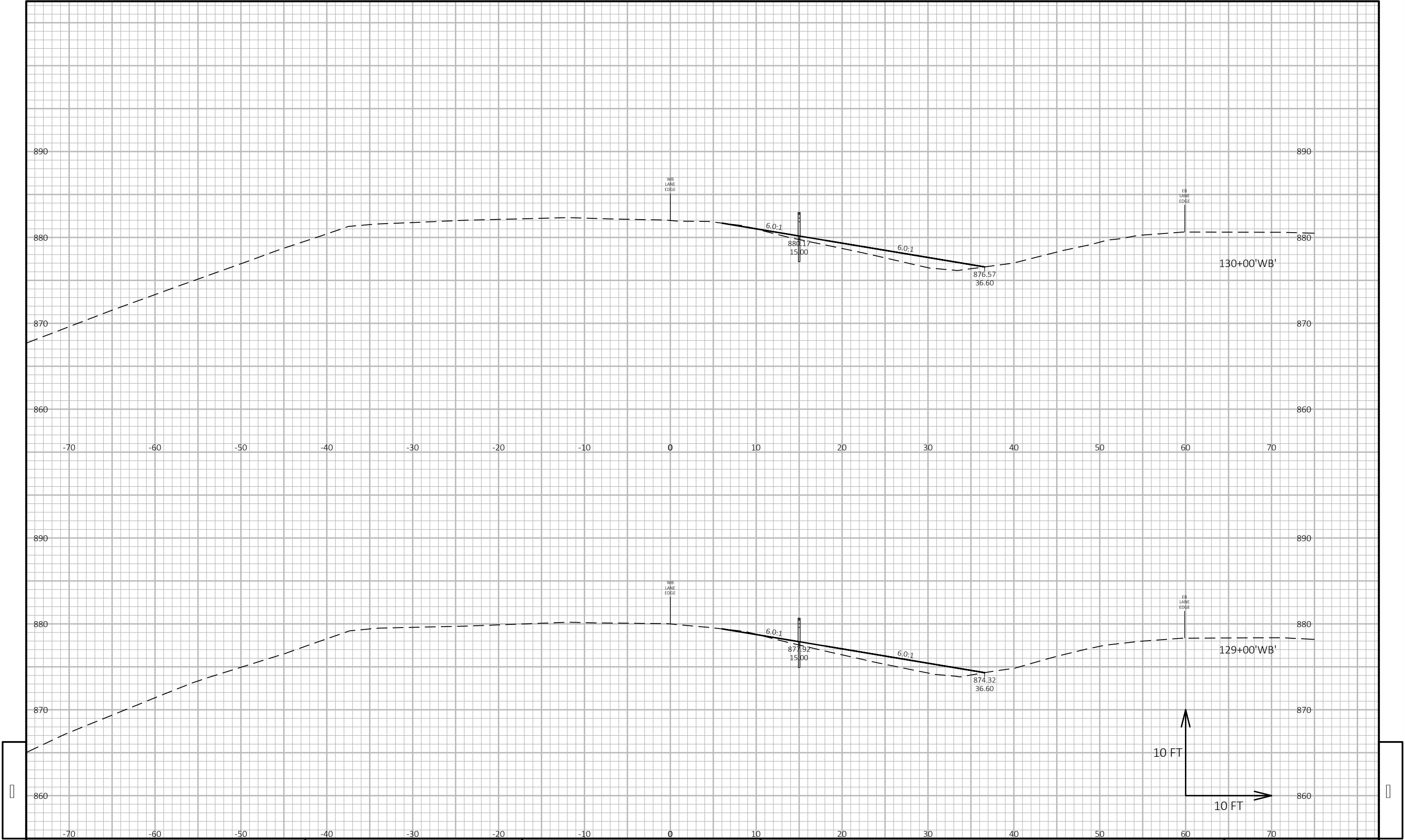
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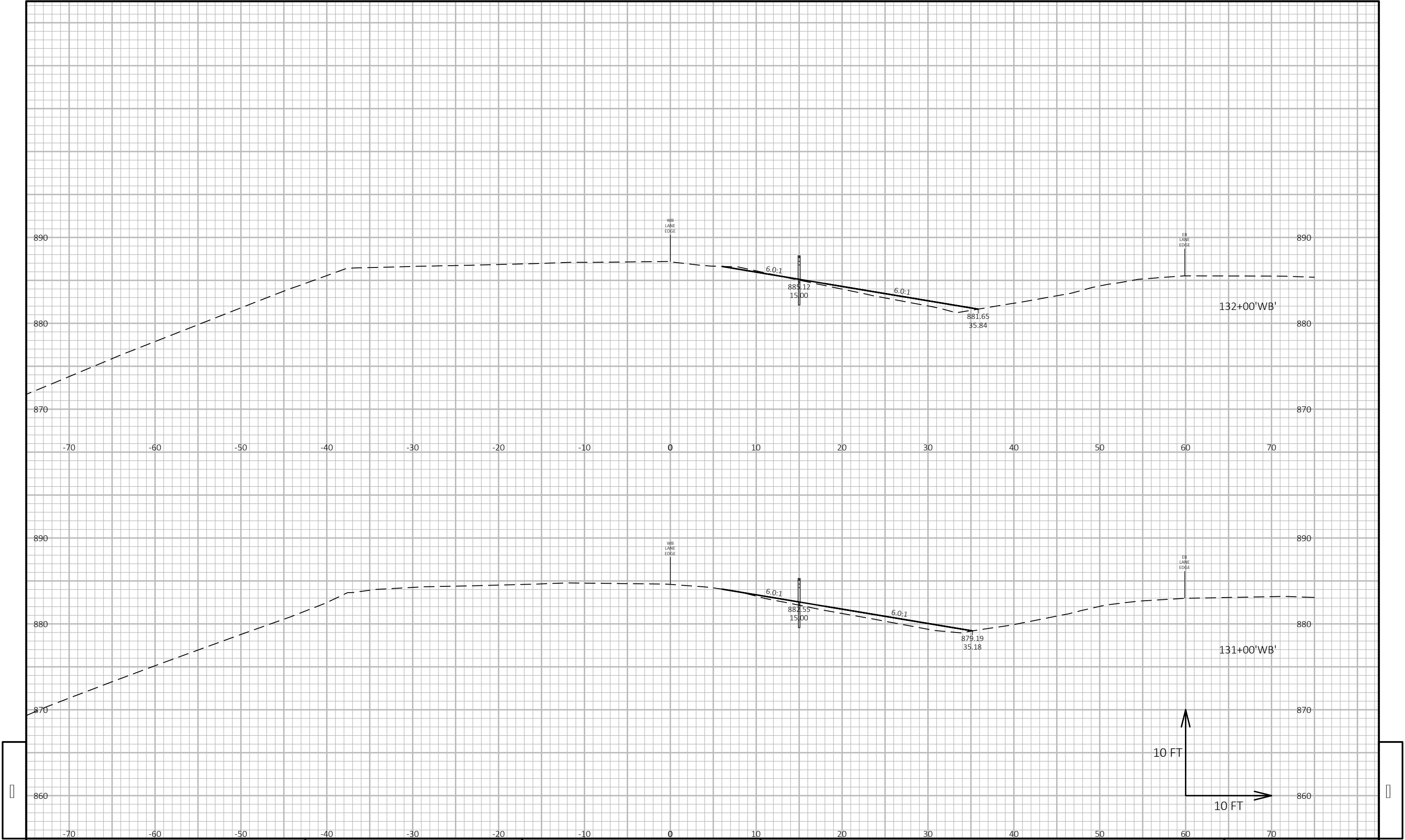
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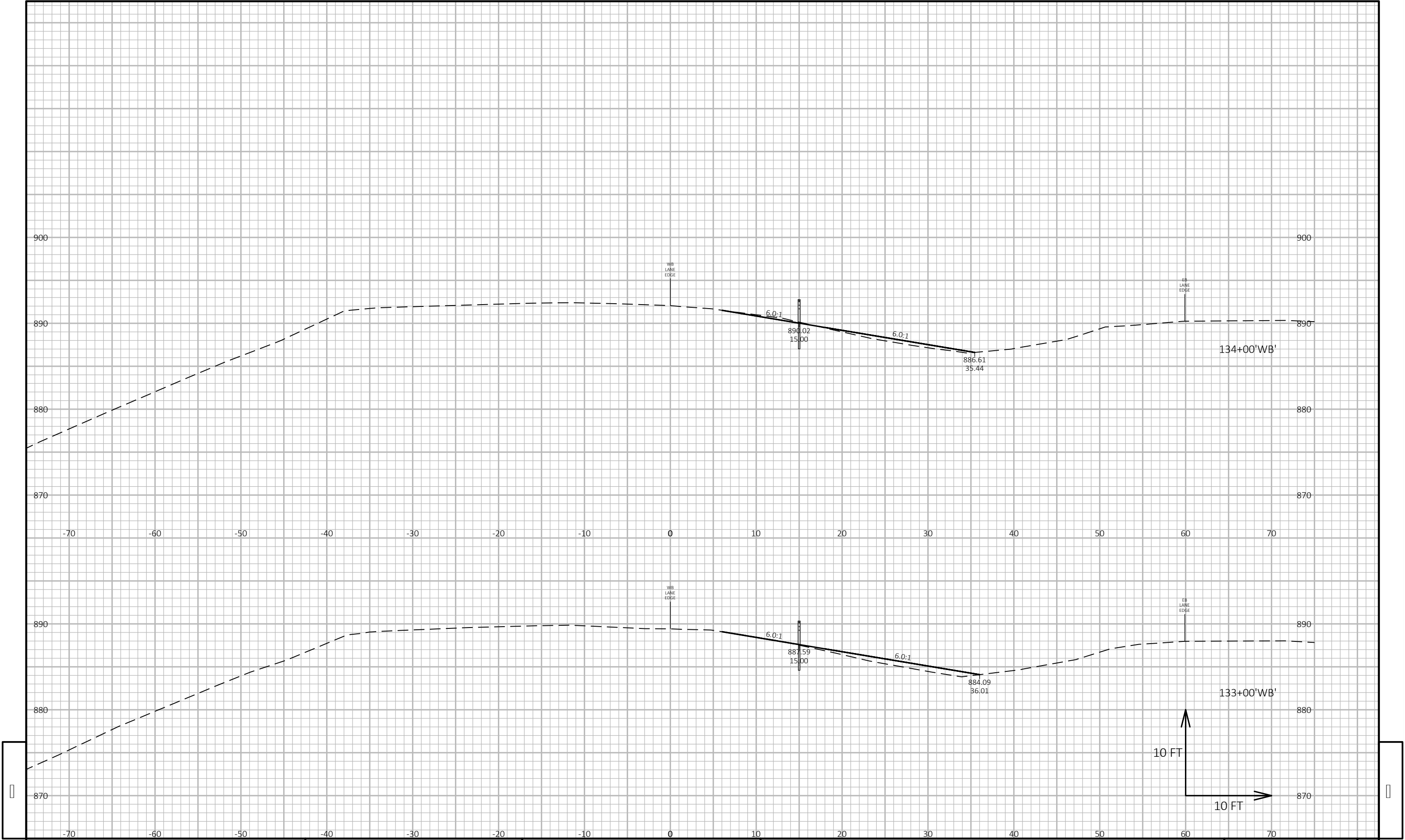
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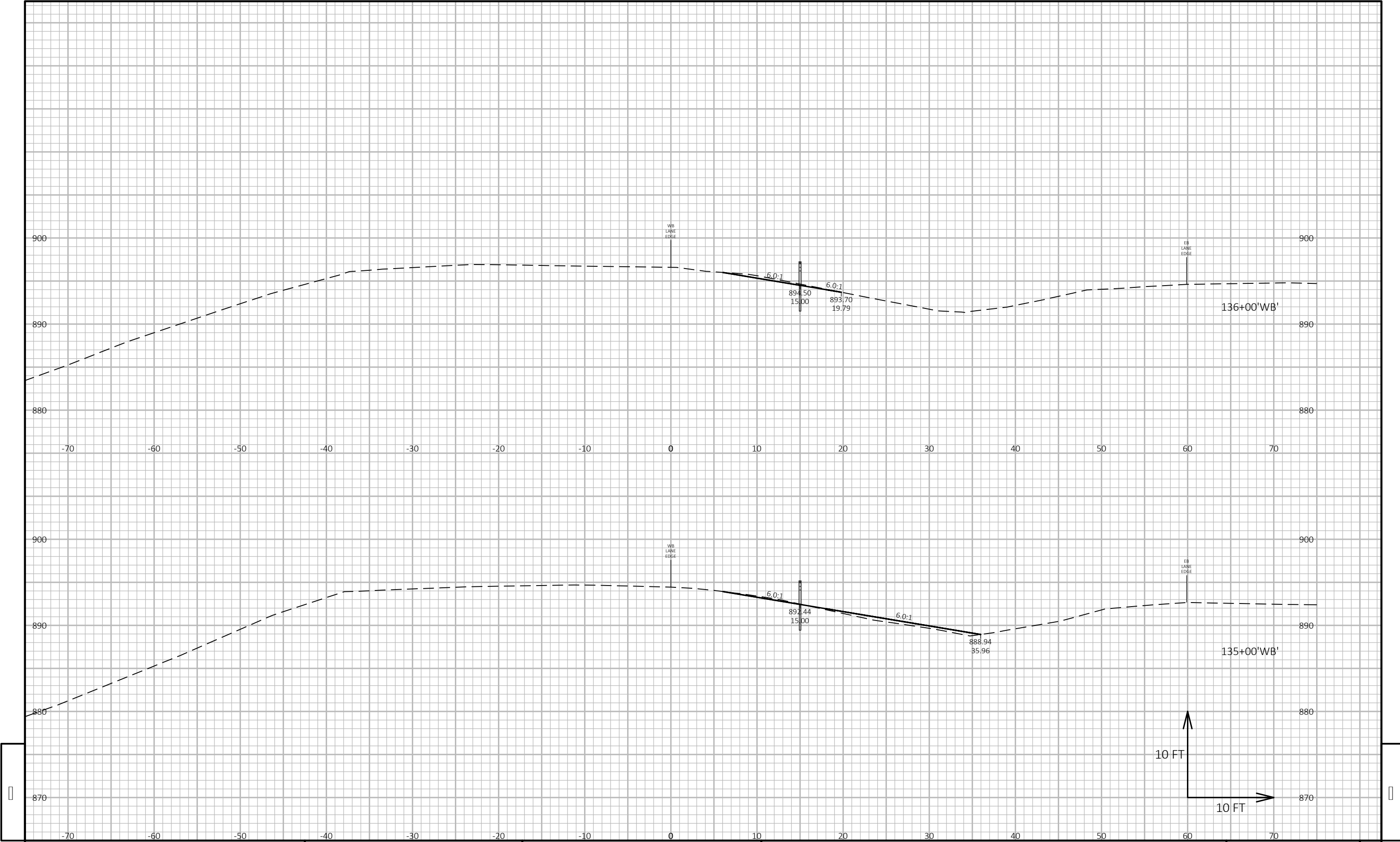


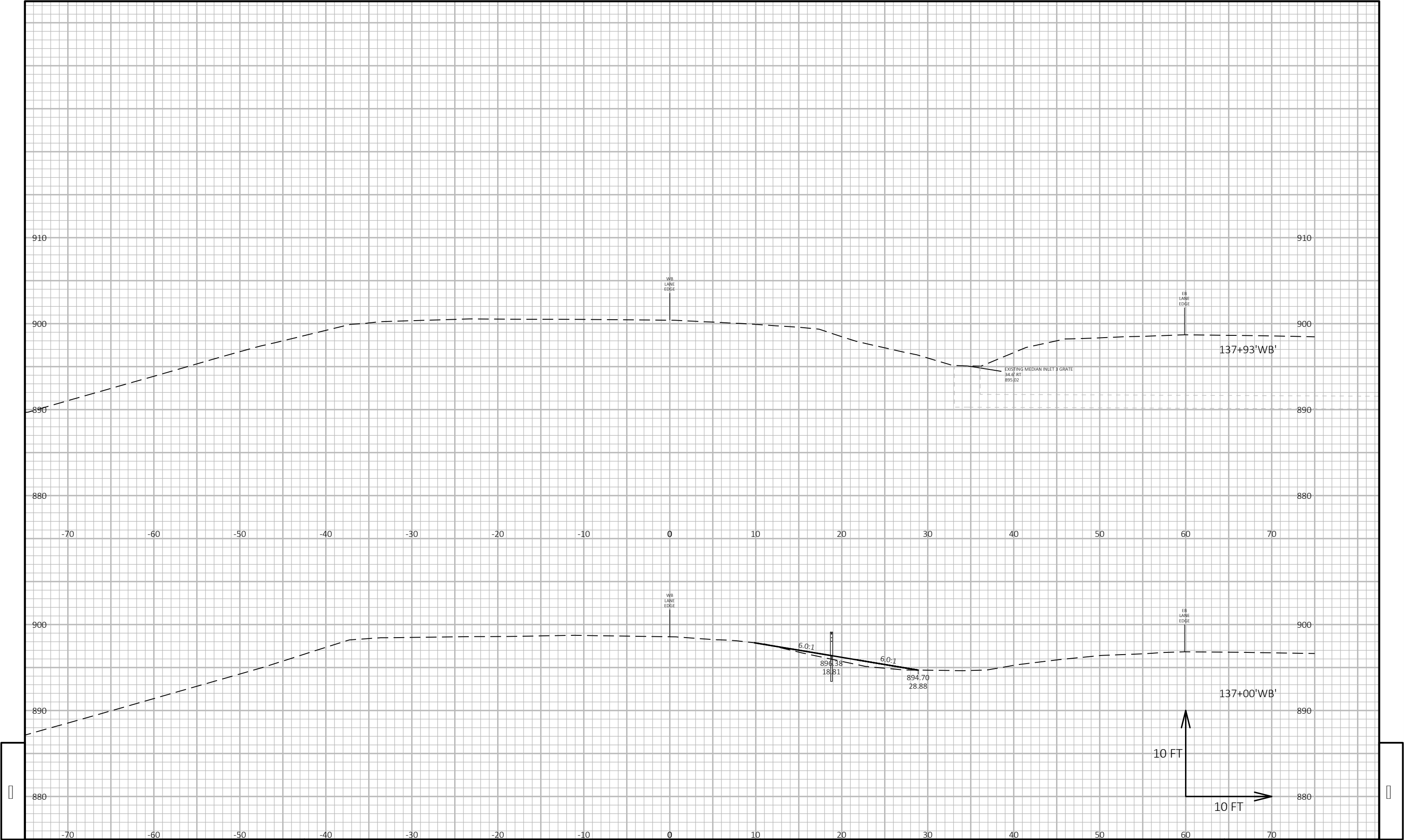


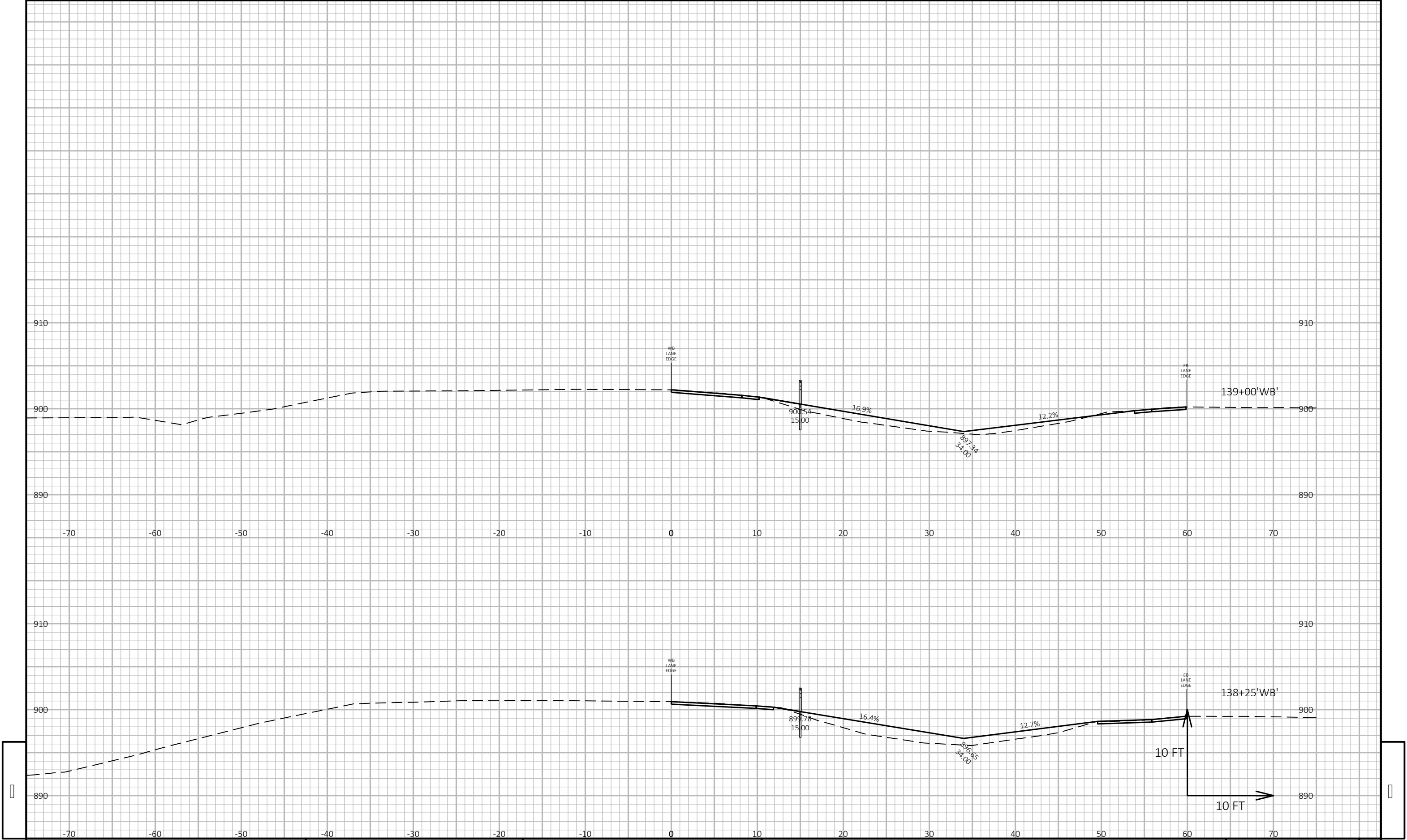


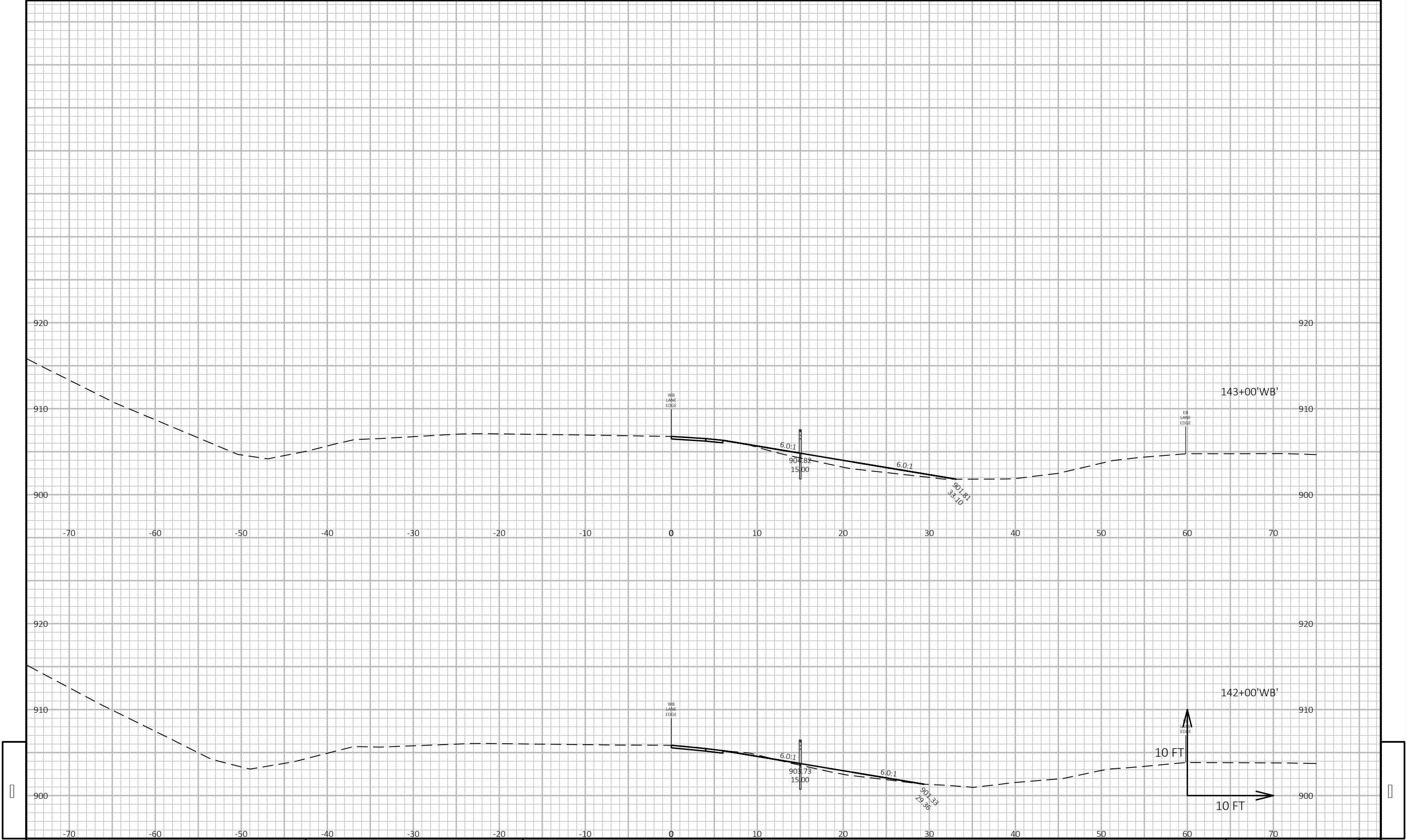
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 1	SHEET	E
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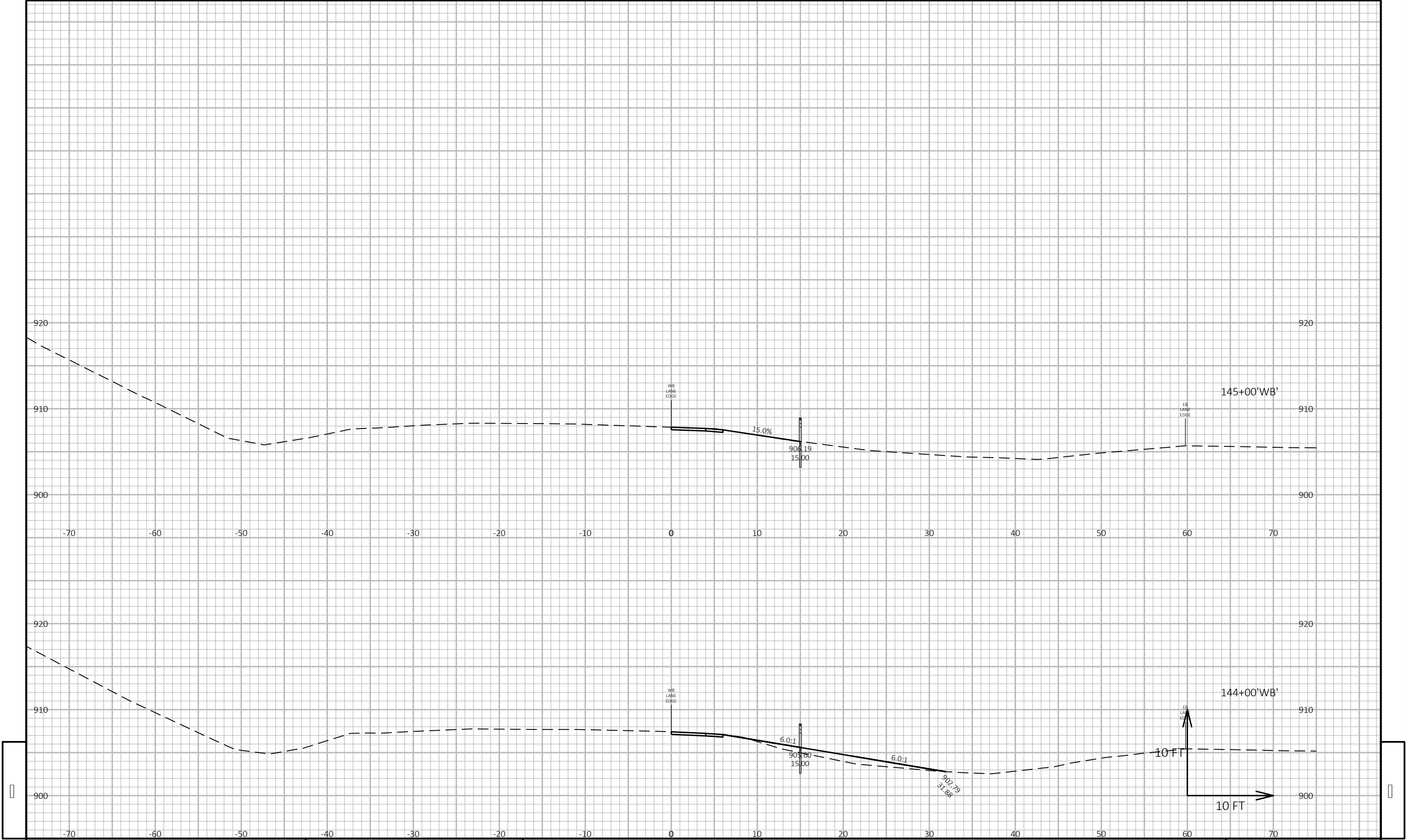


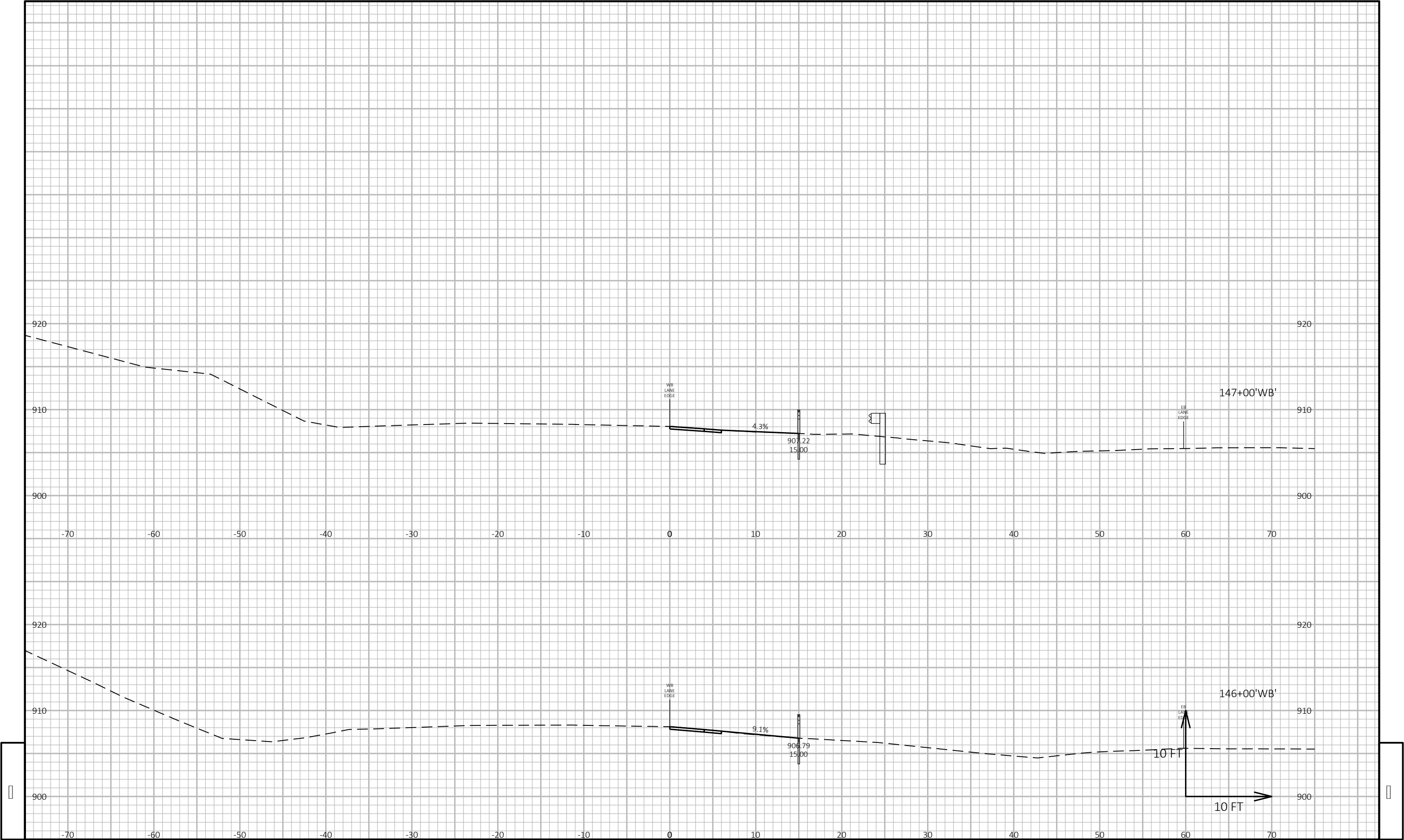


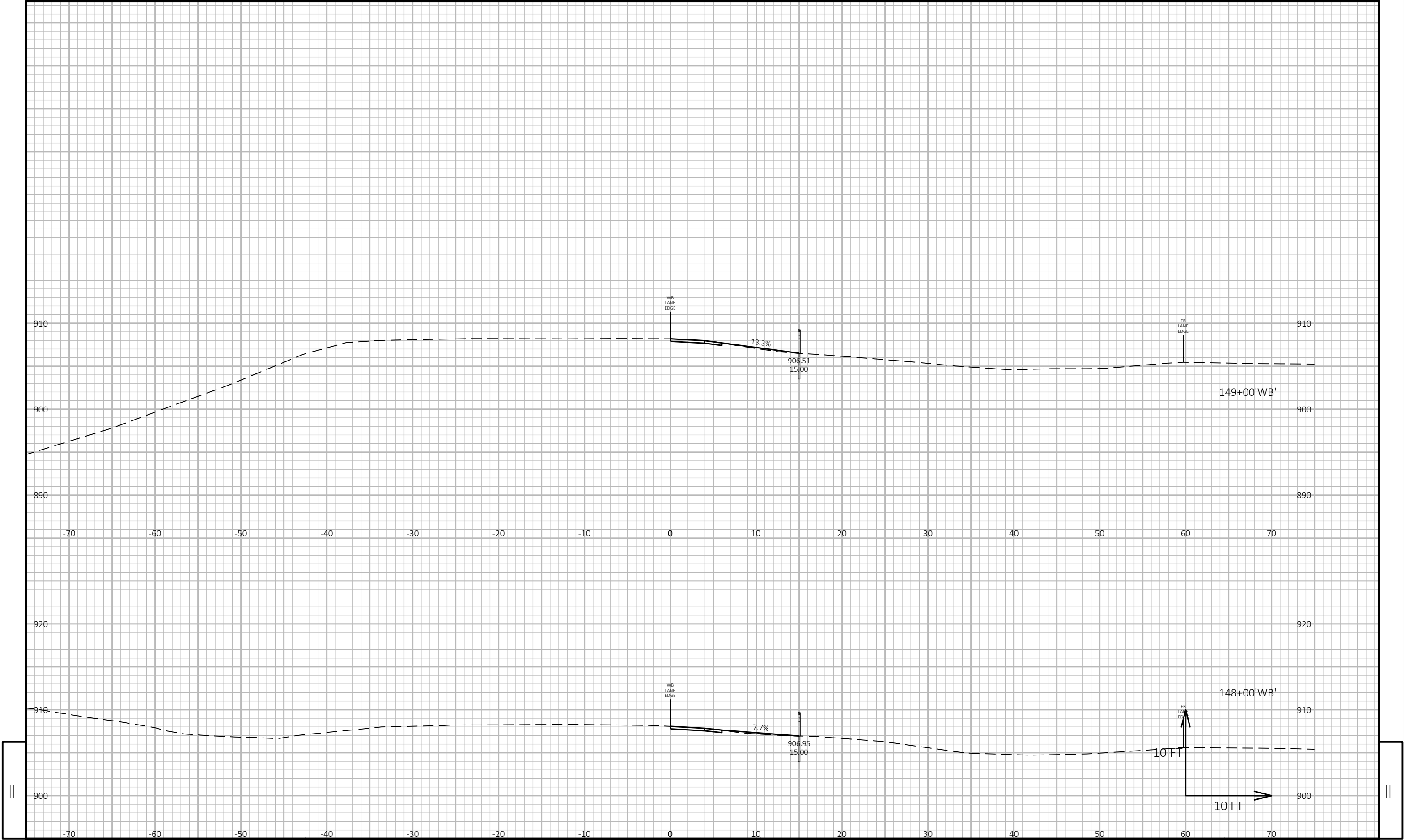


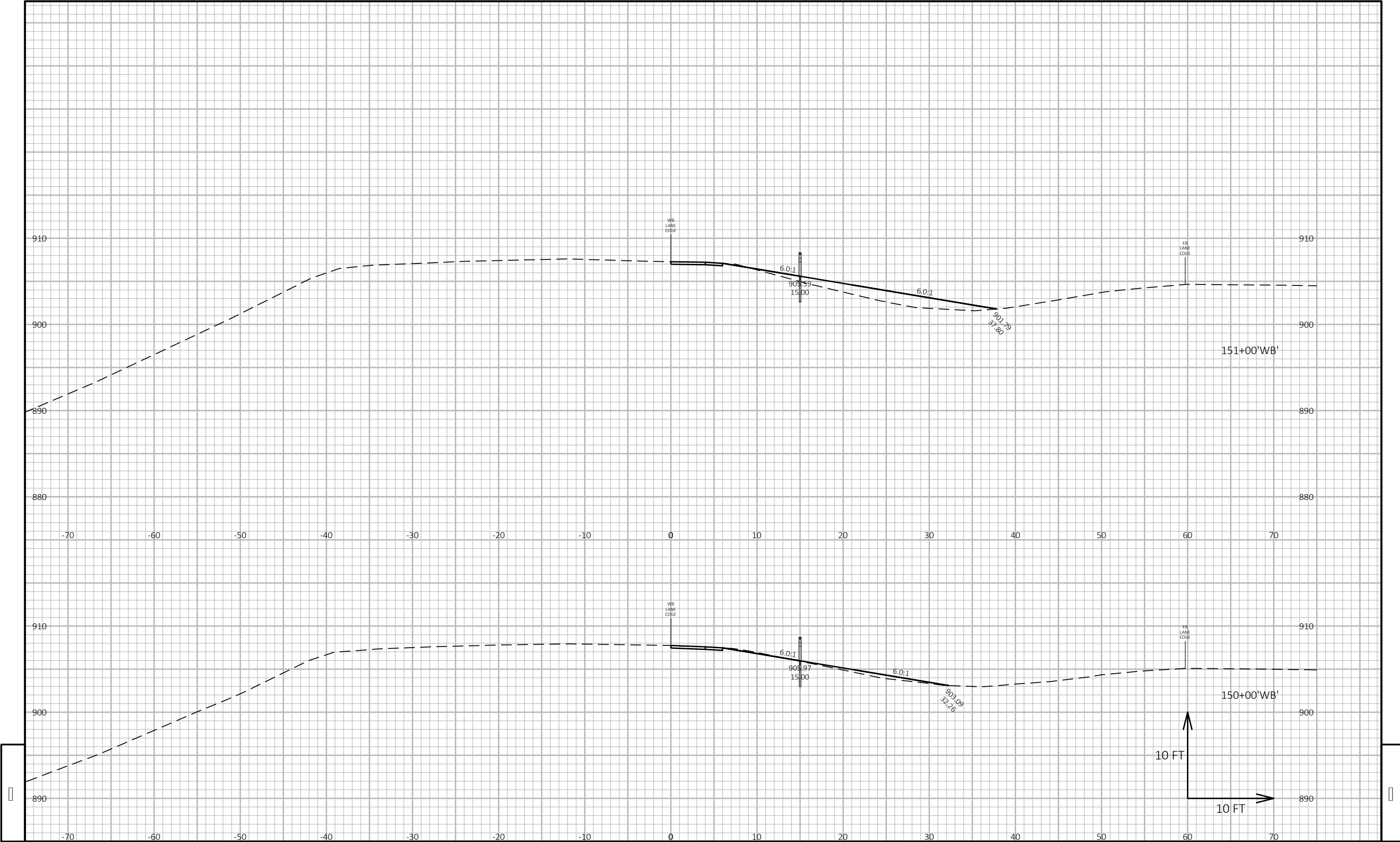


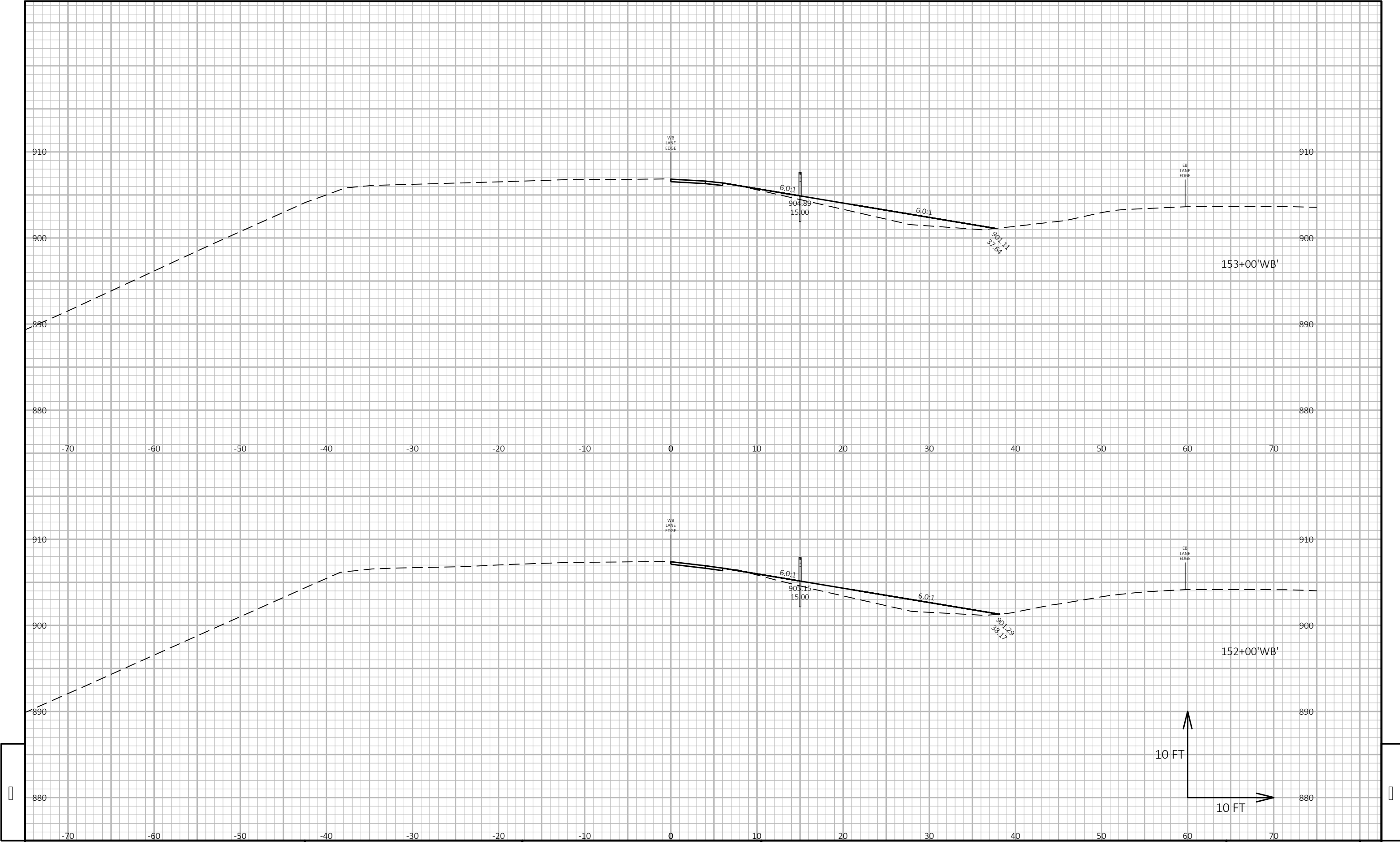
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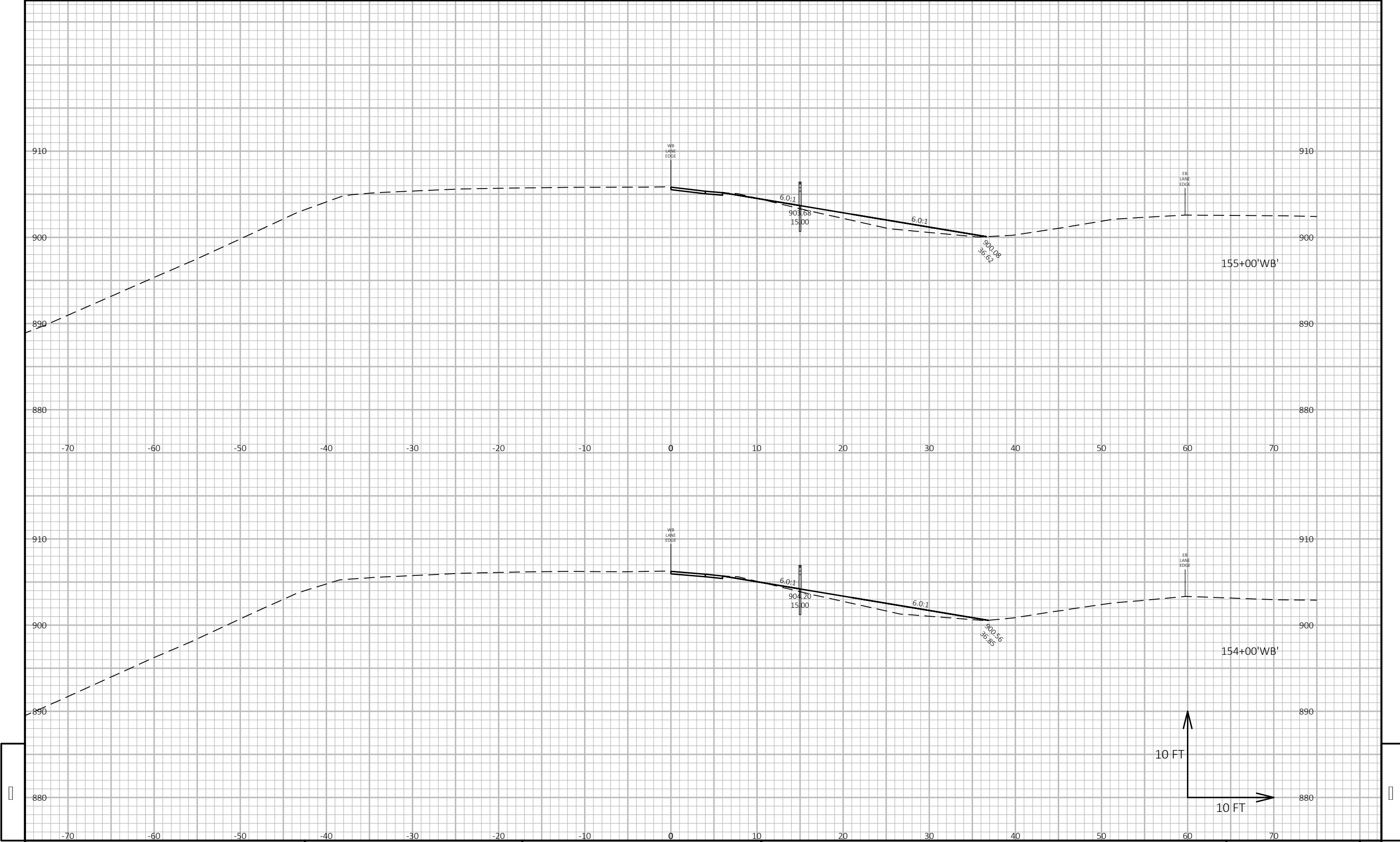


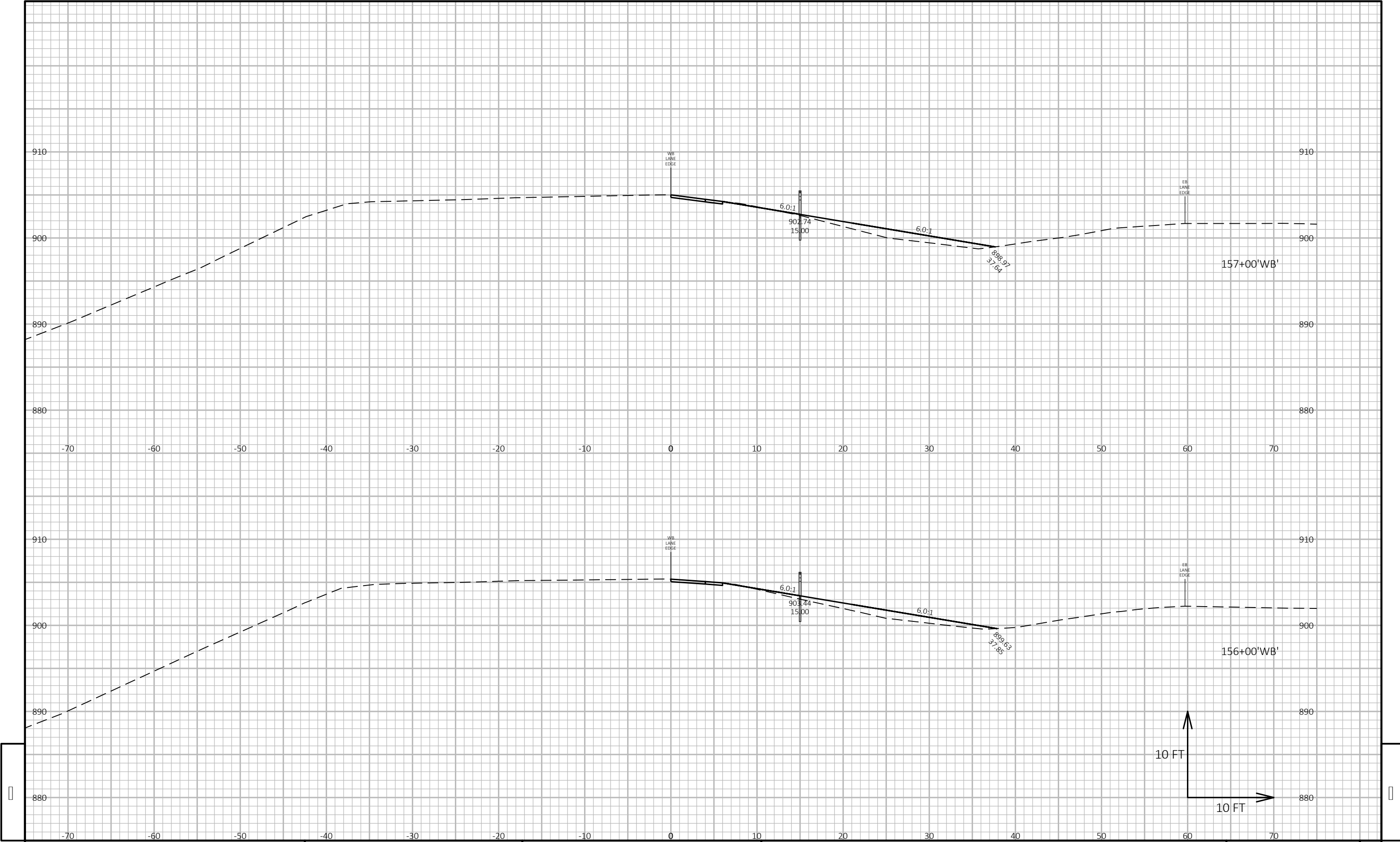


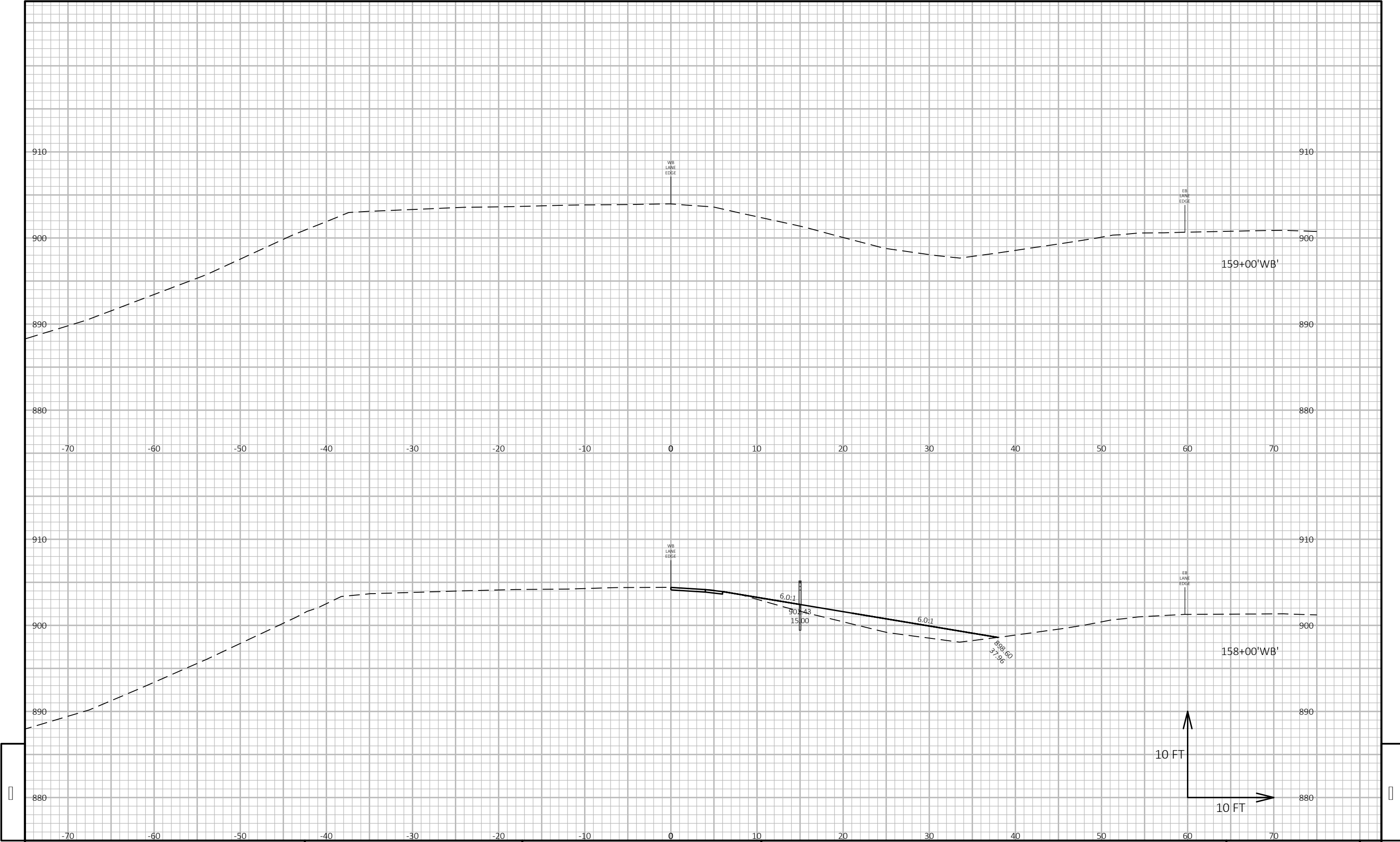


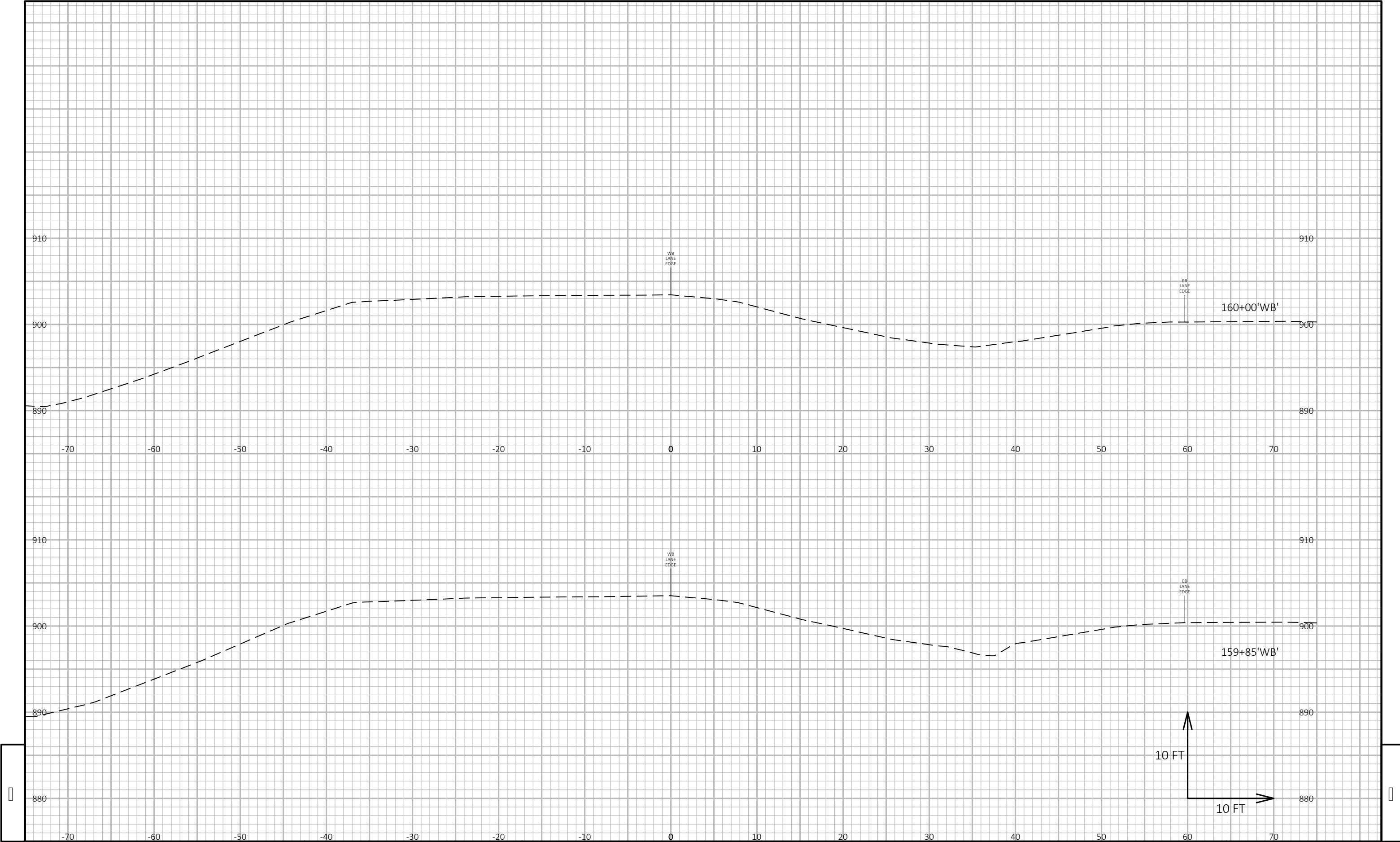


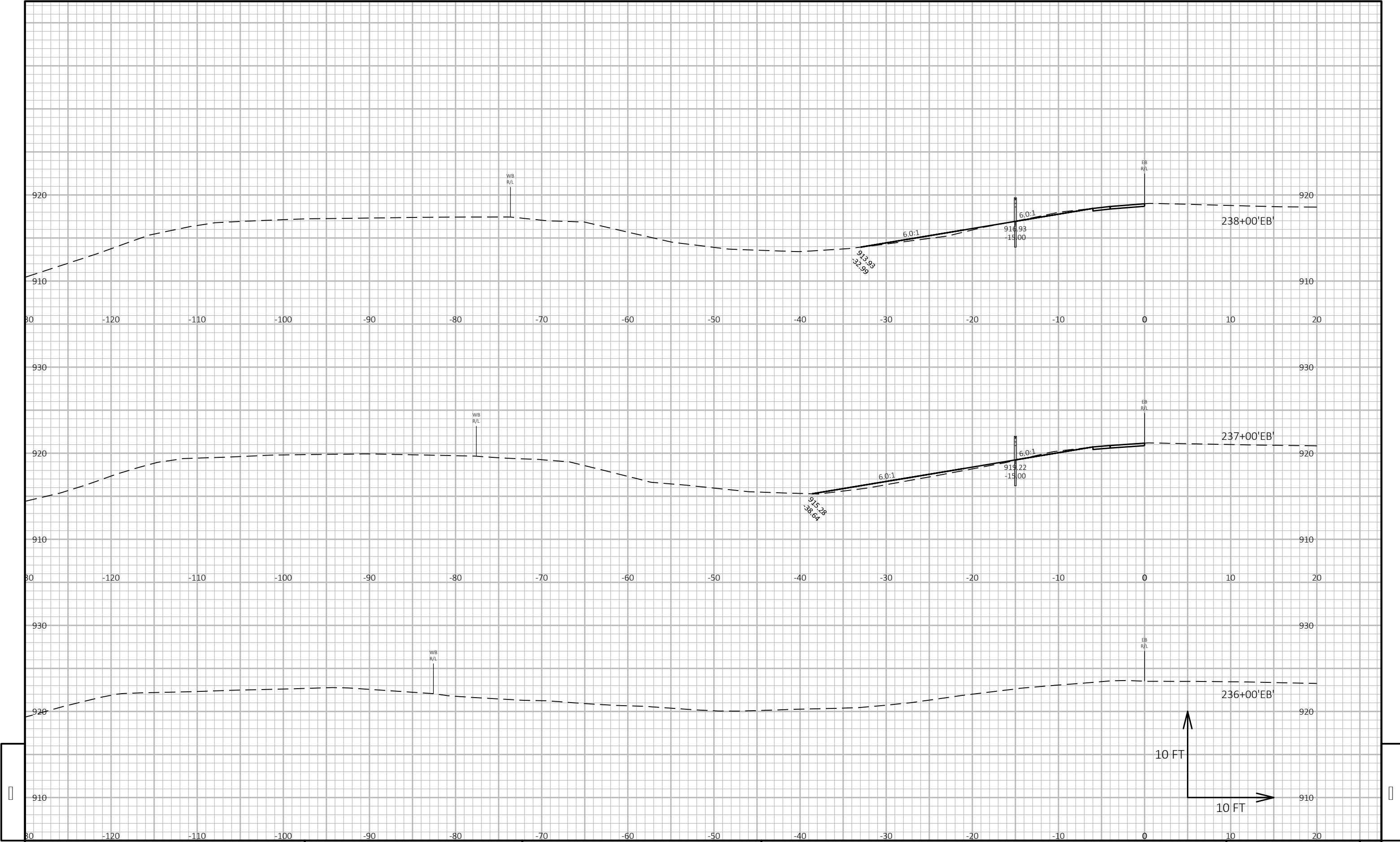


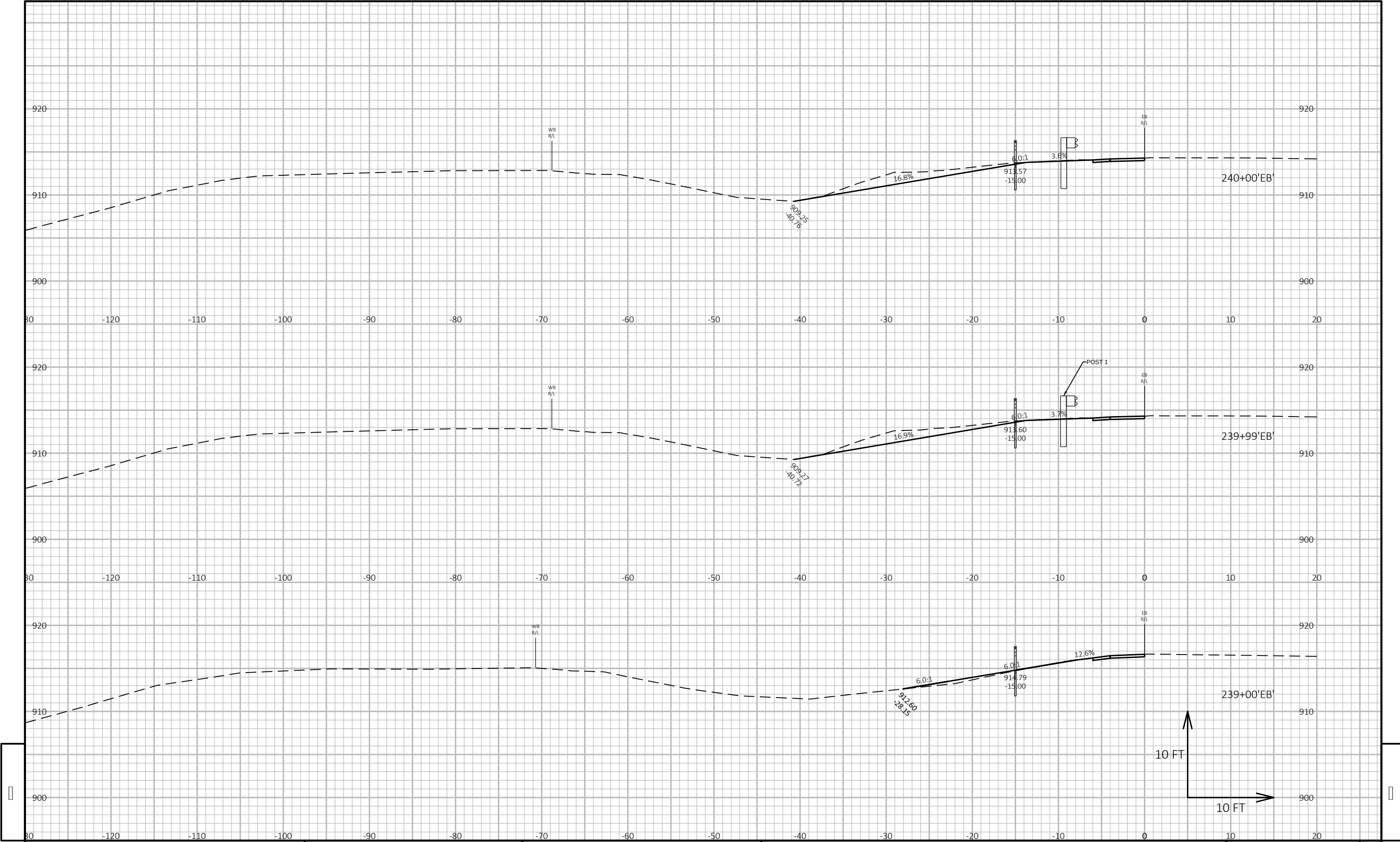


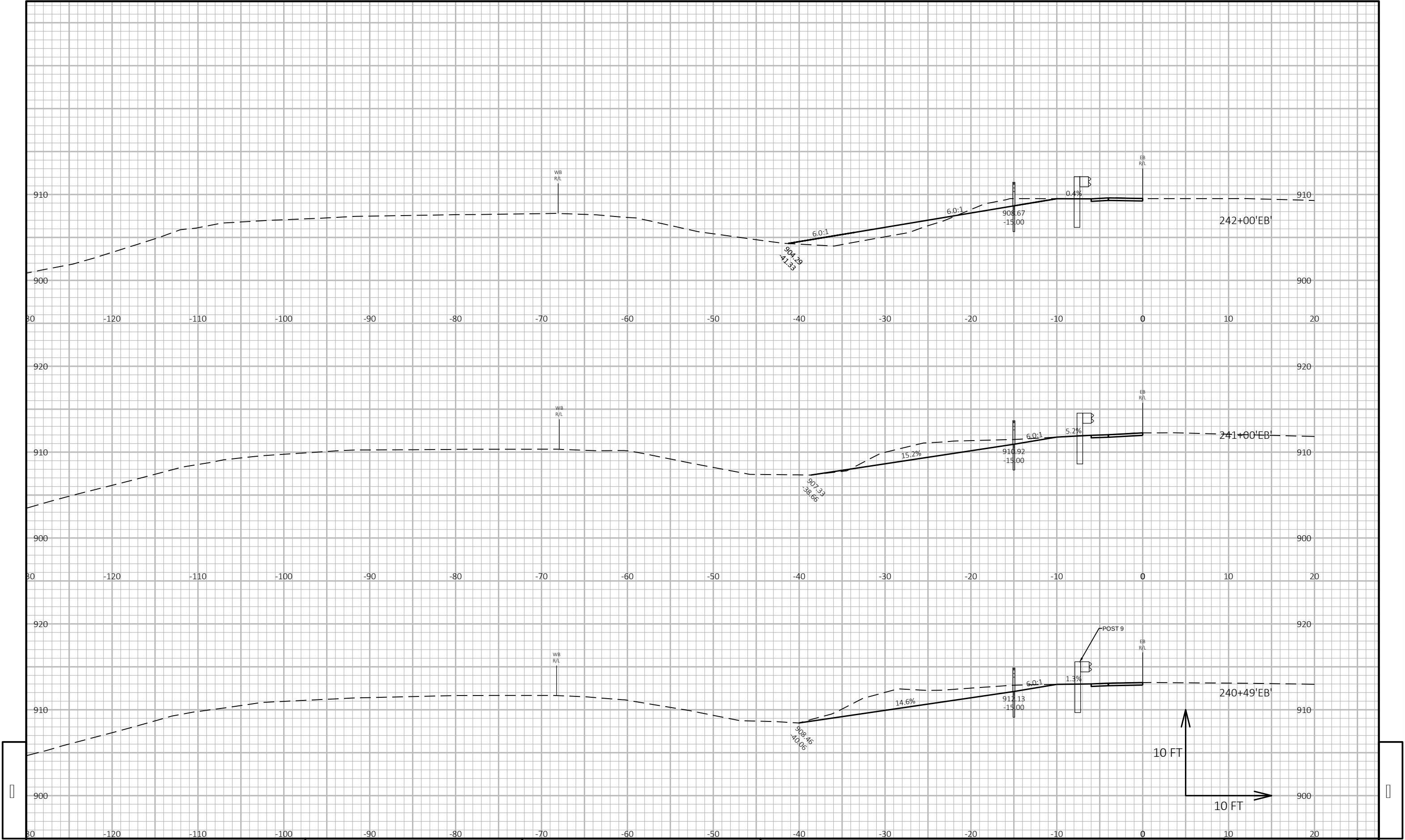


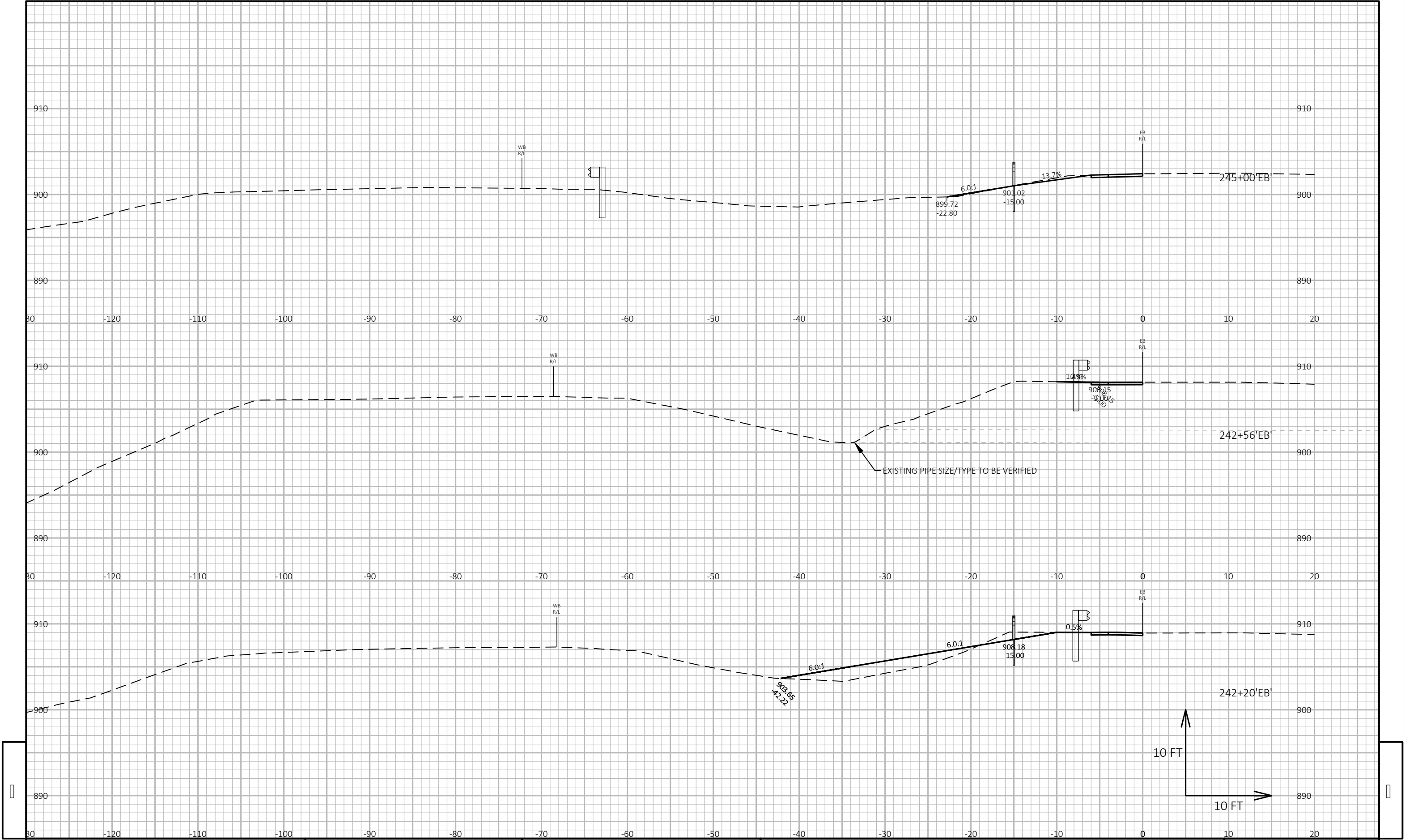




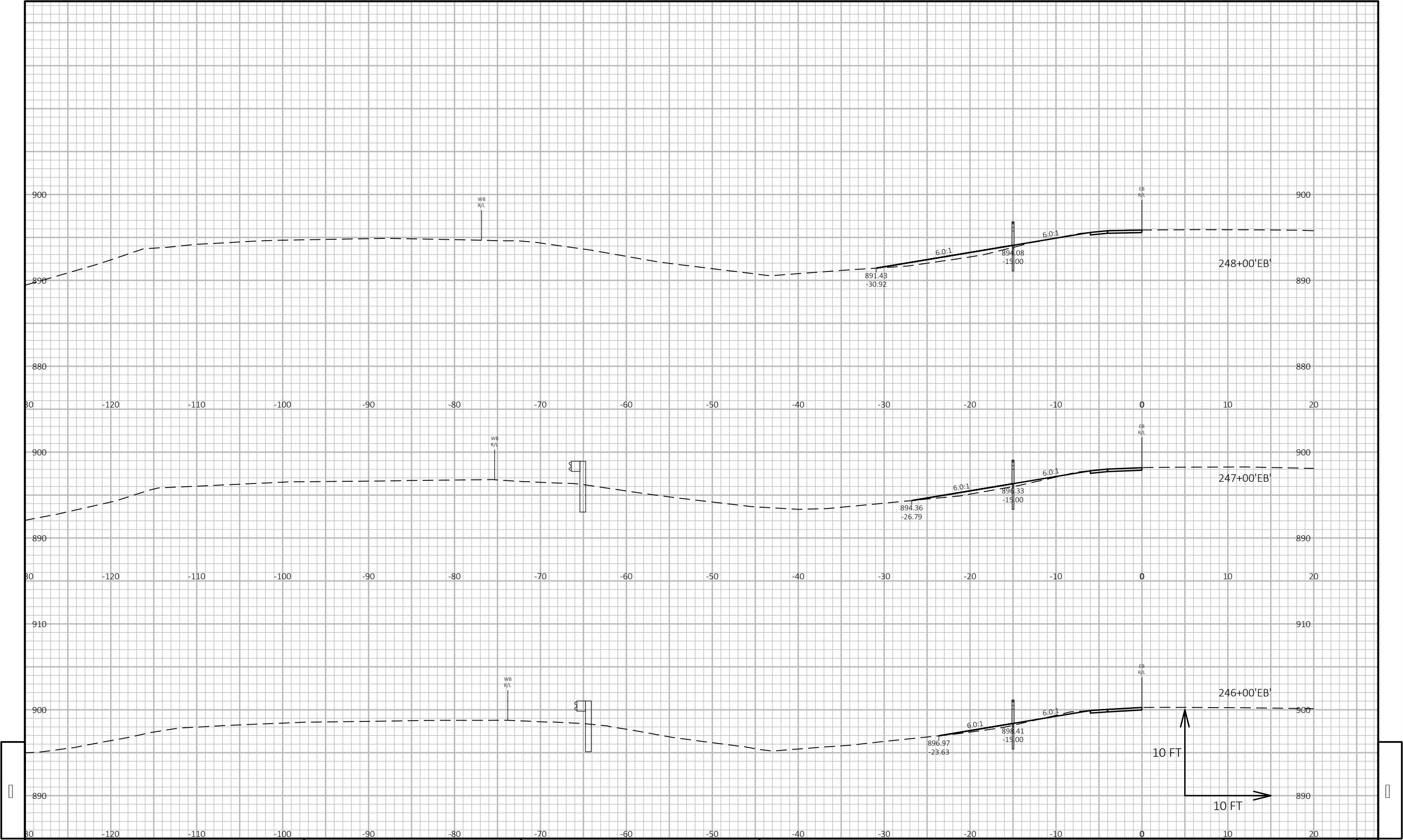


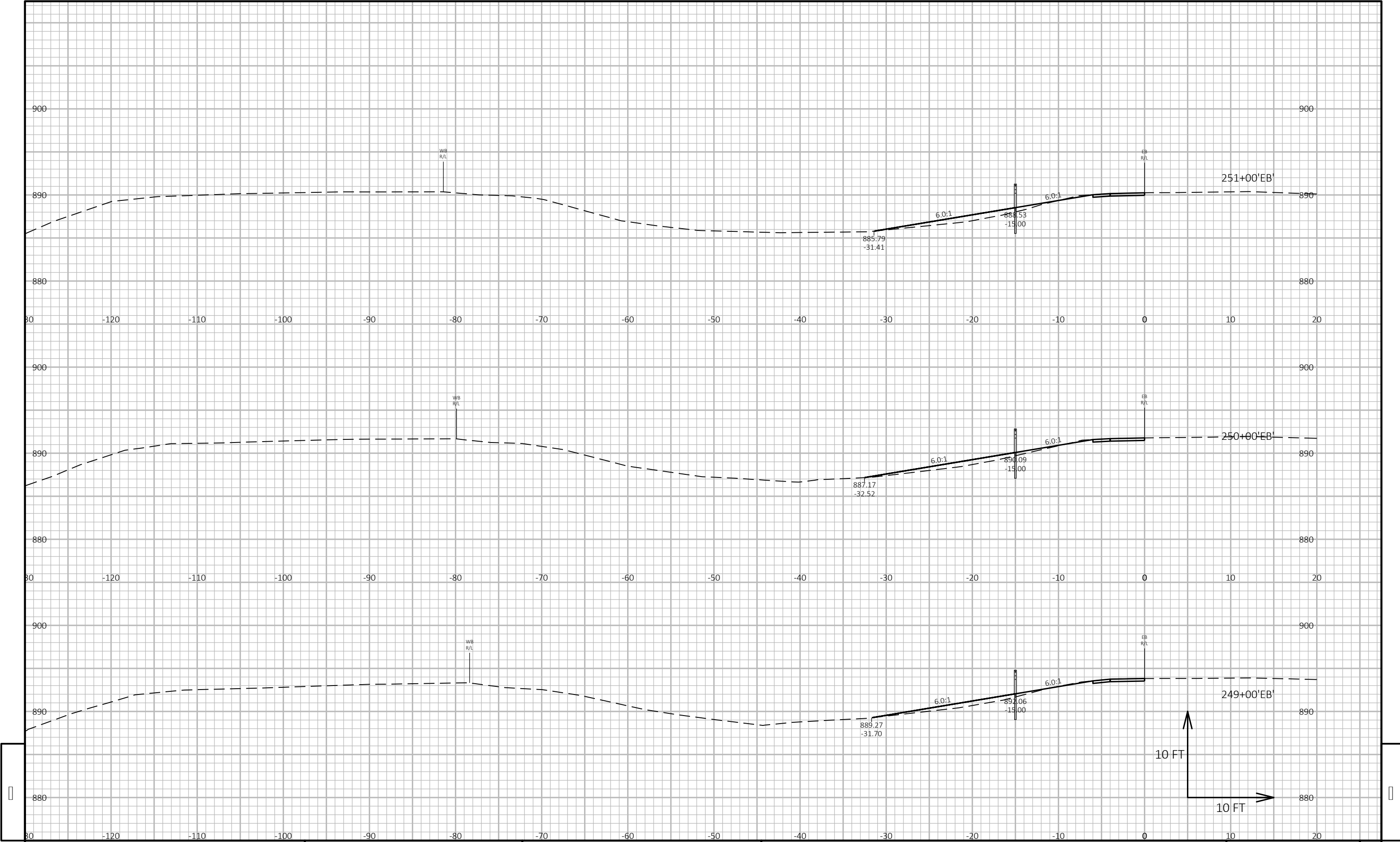


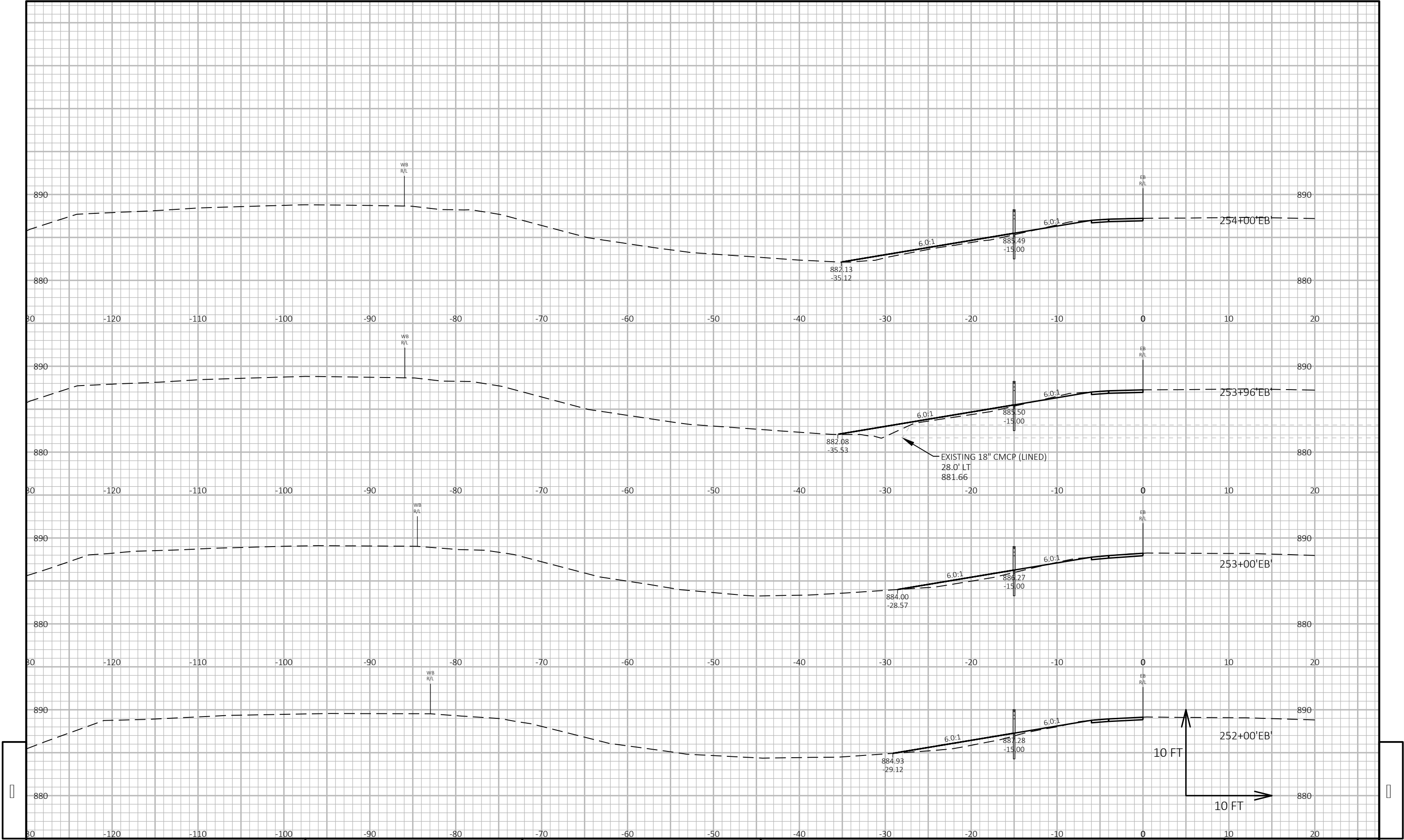


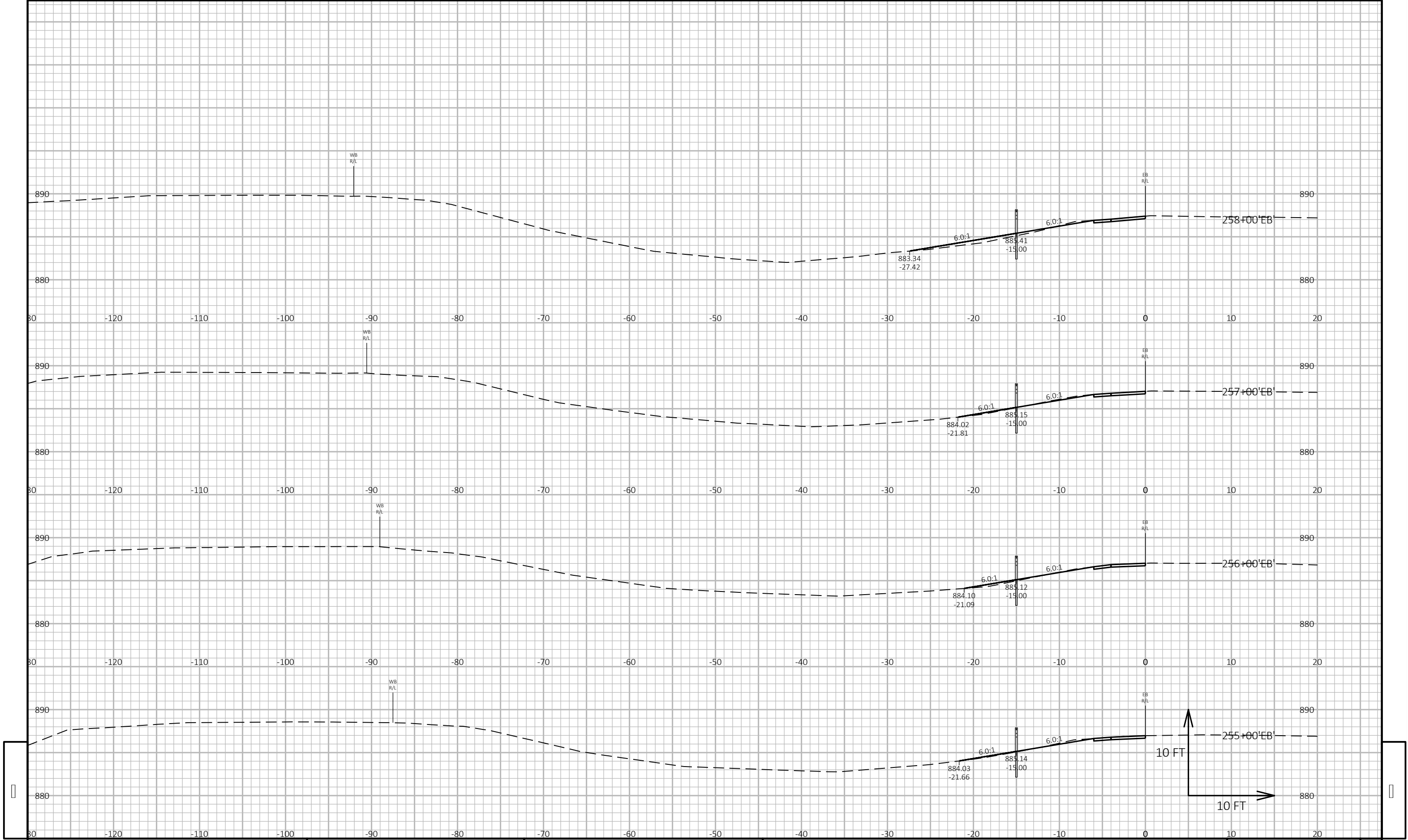


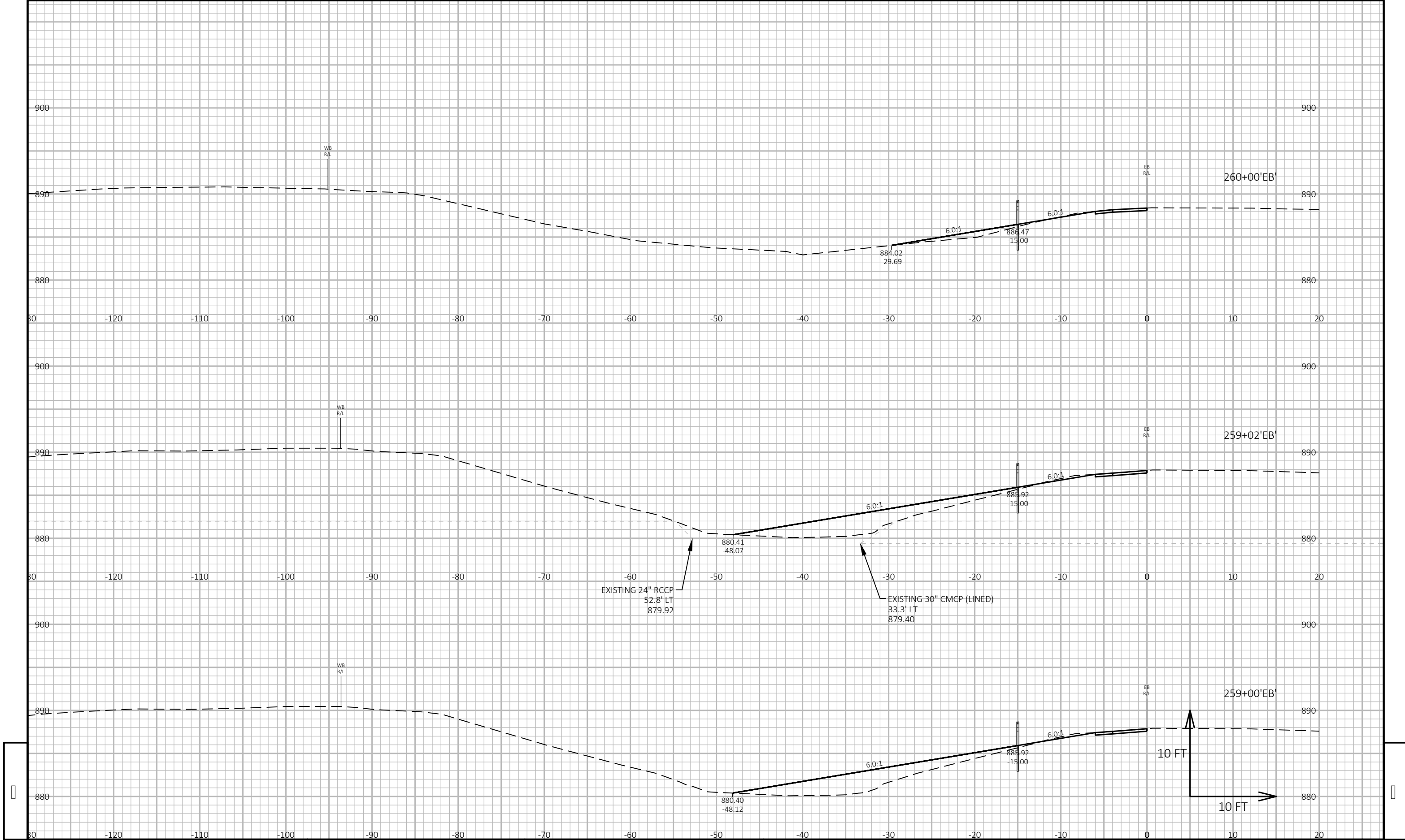
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 2	SHEET	E
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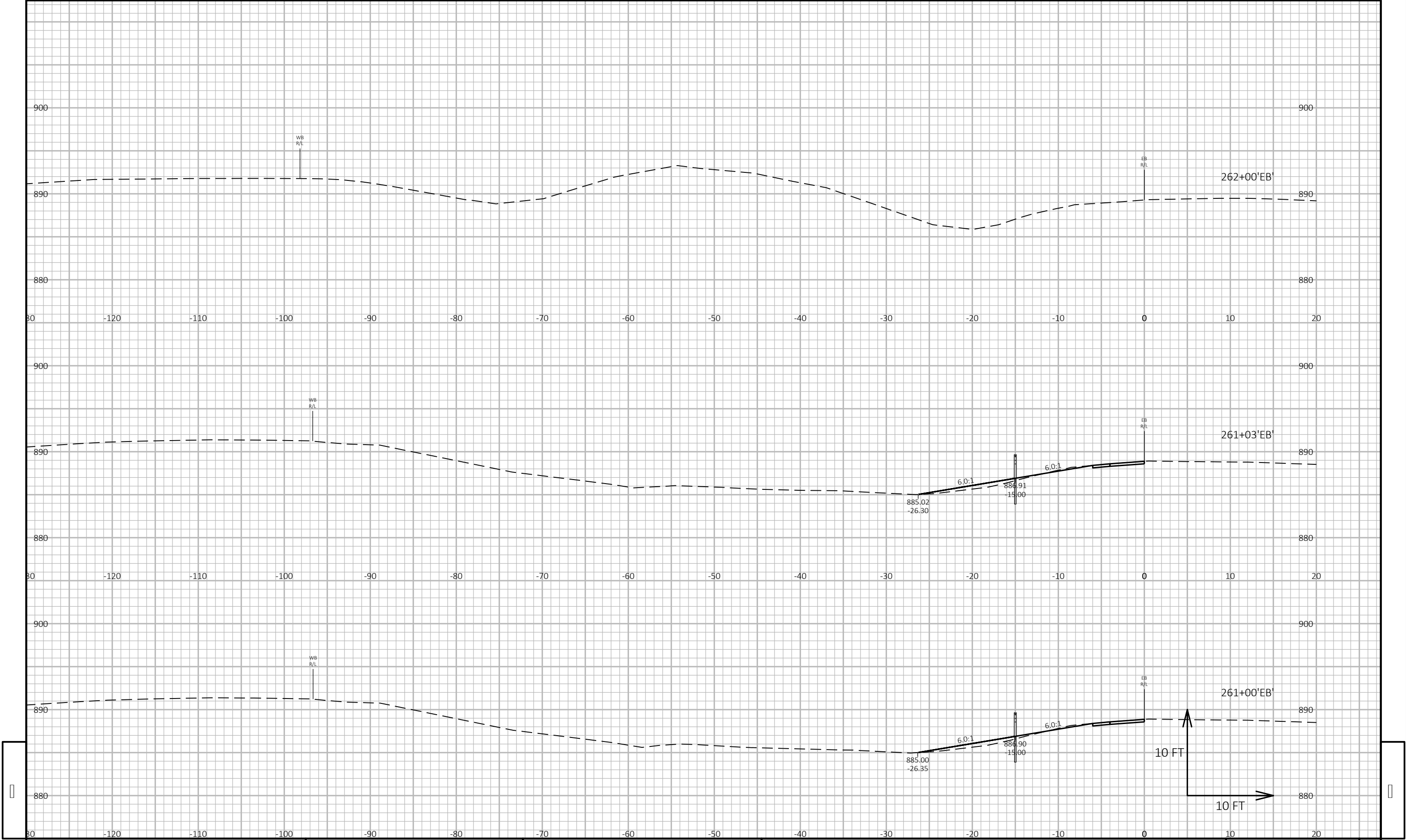


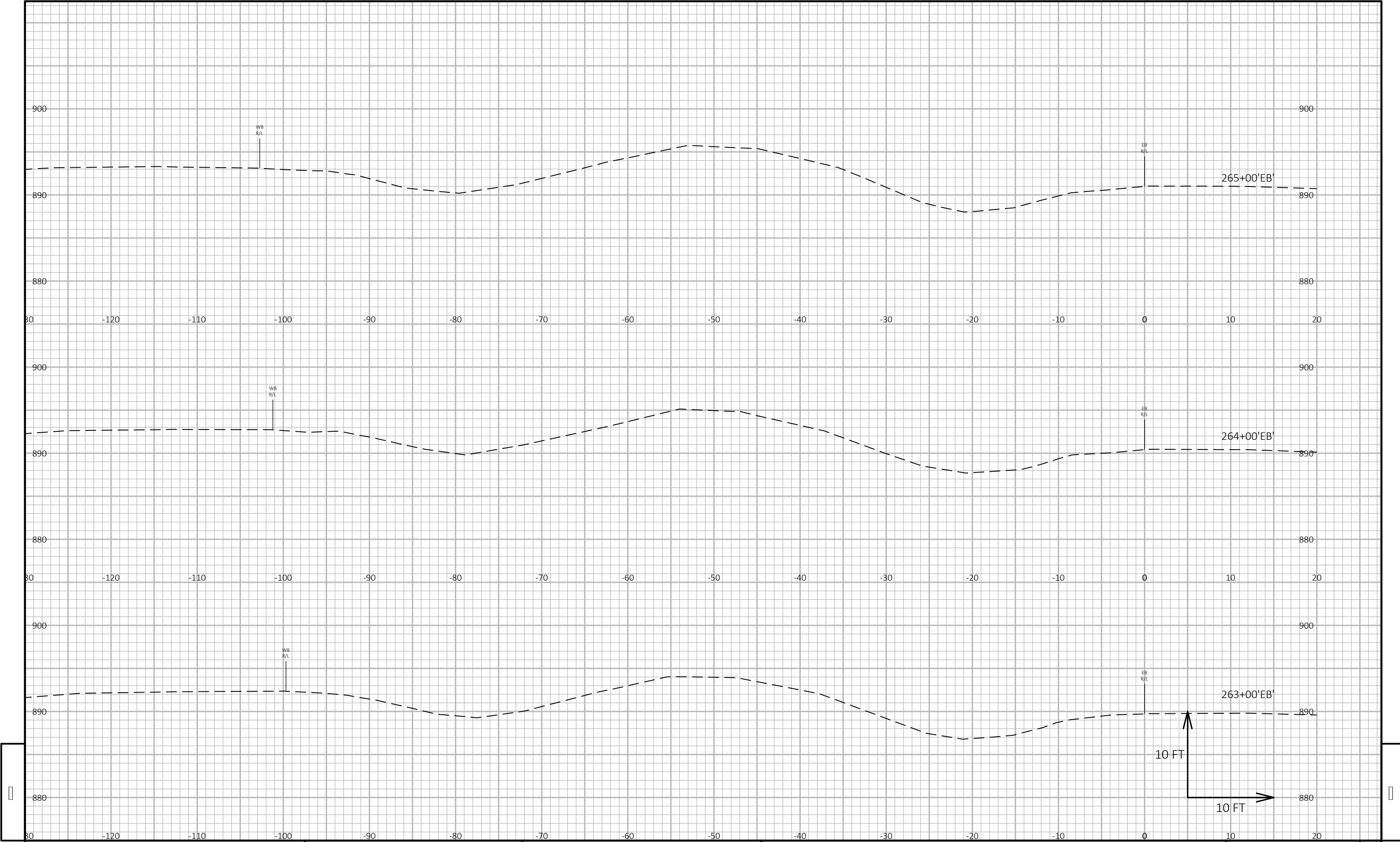




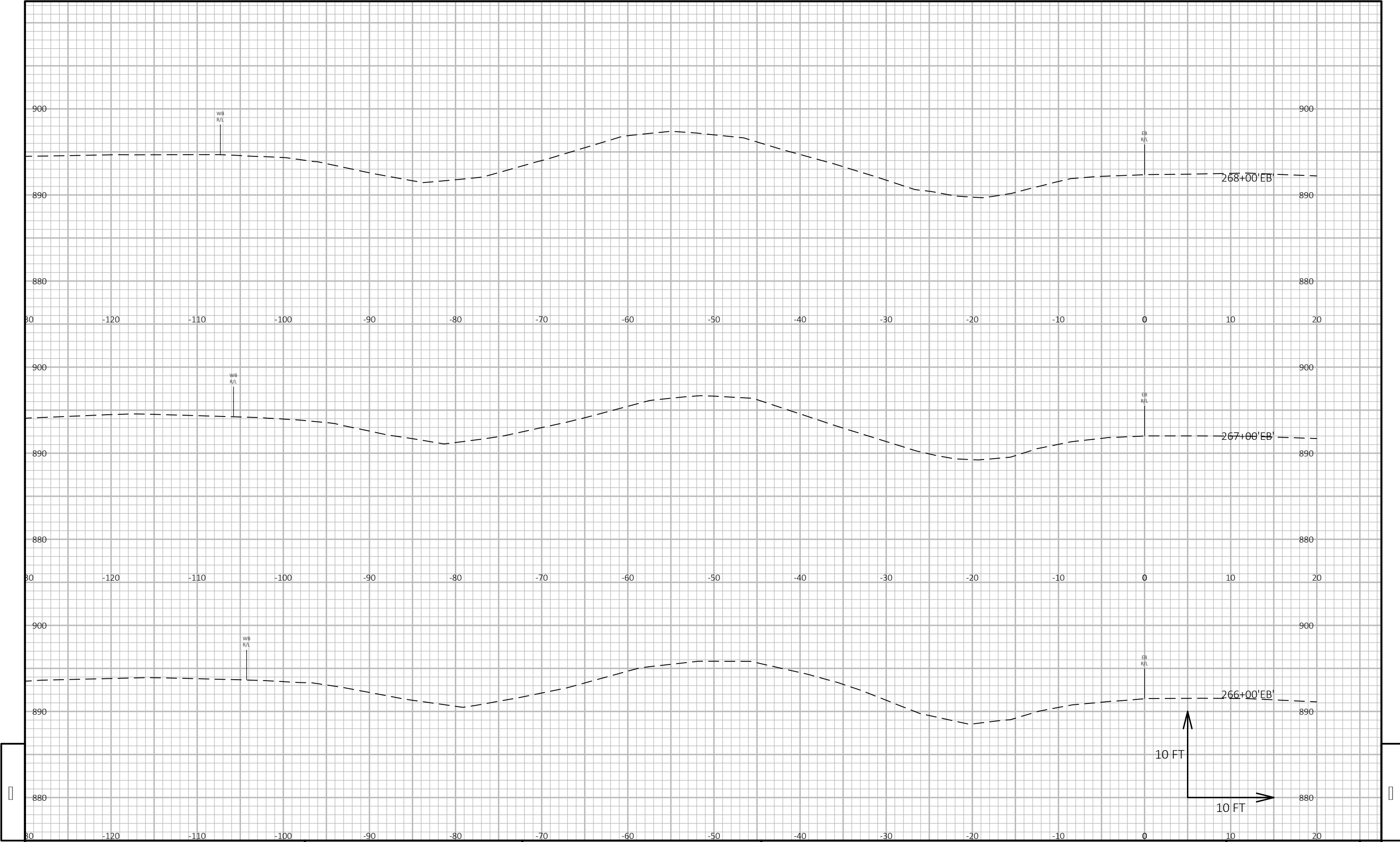


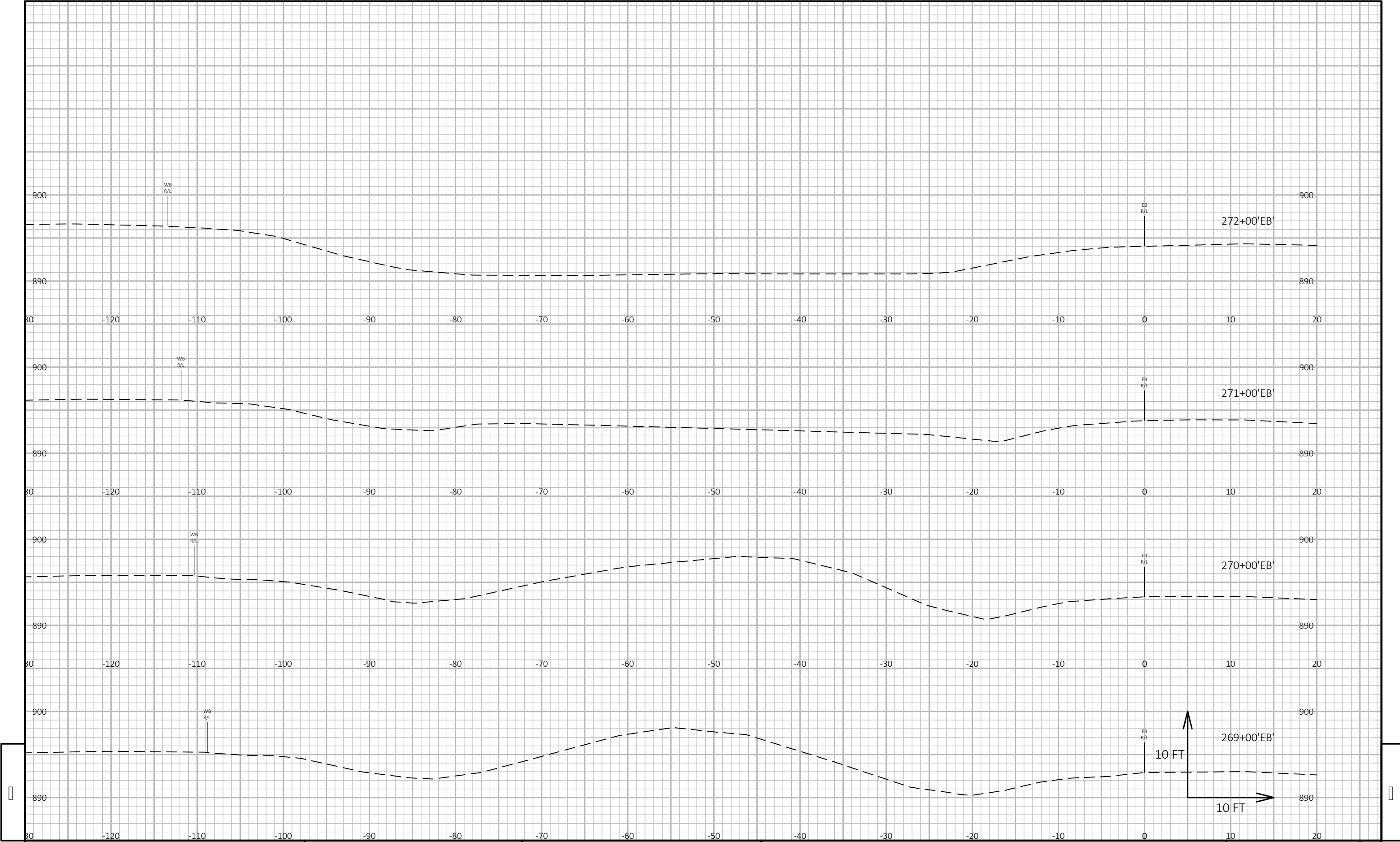
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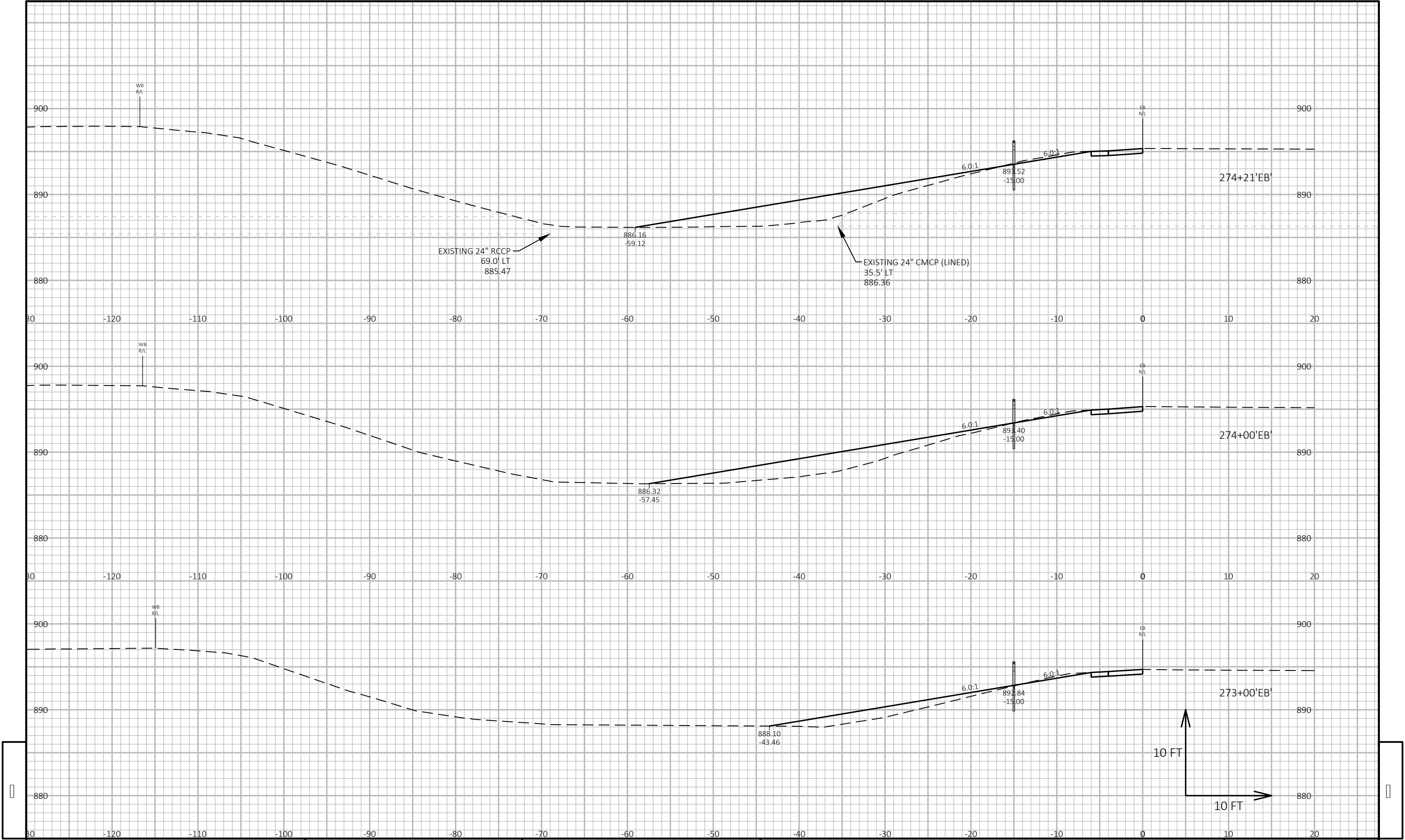


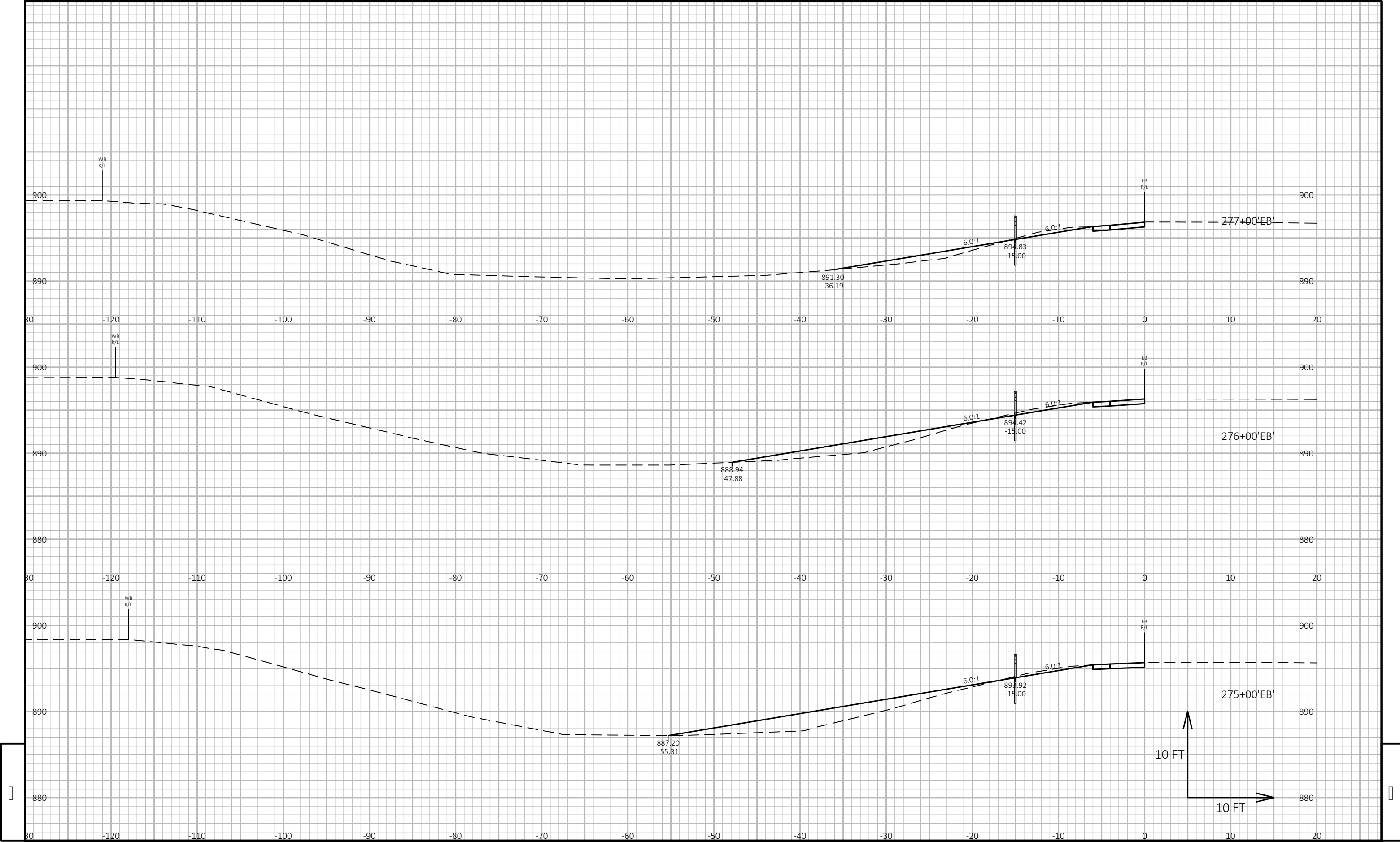
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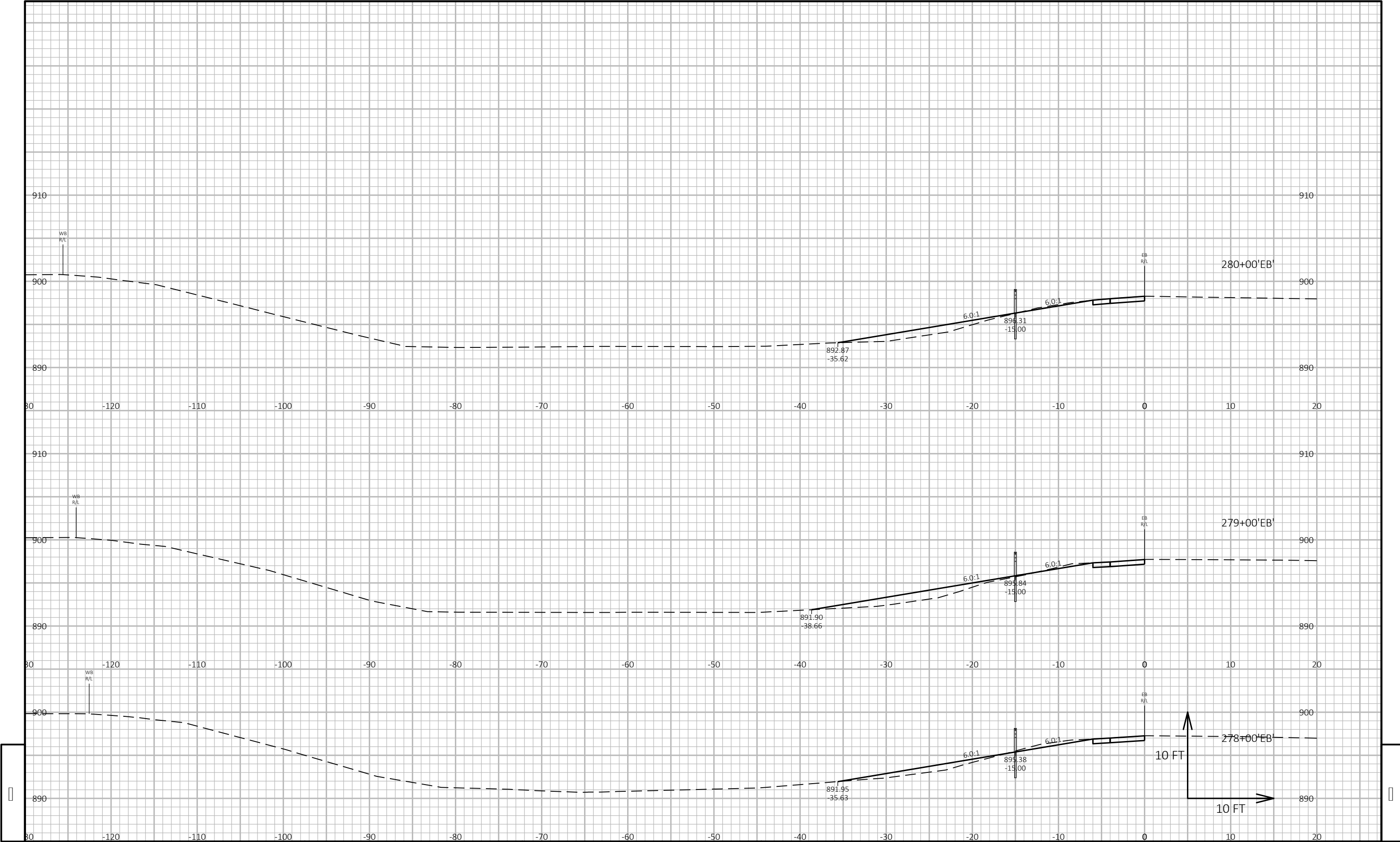


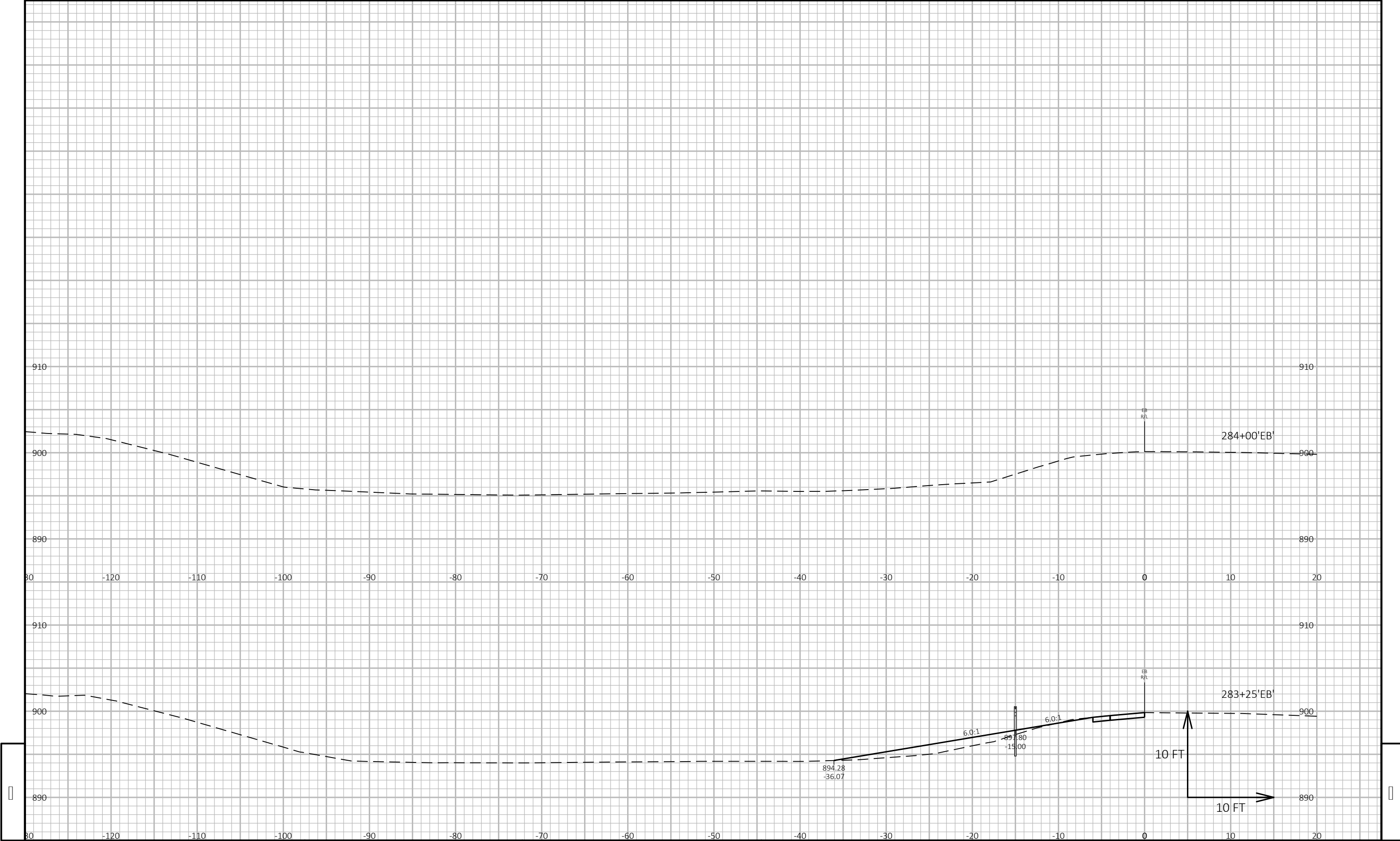


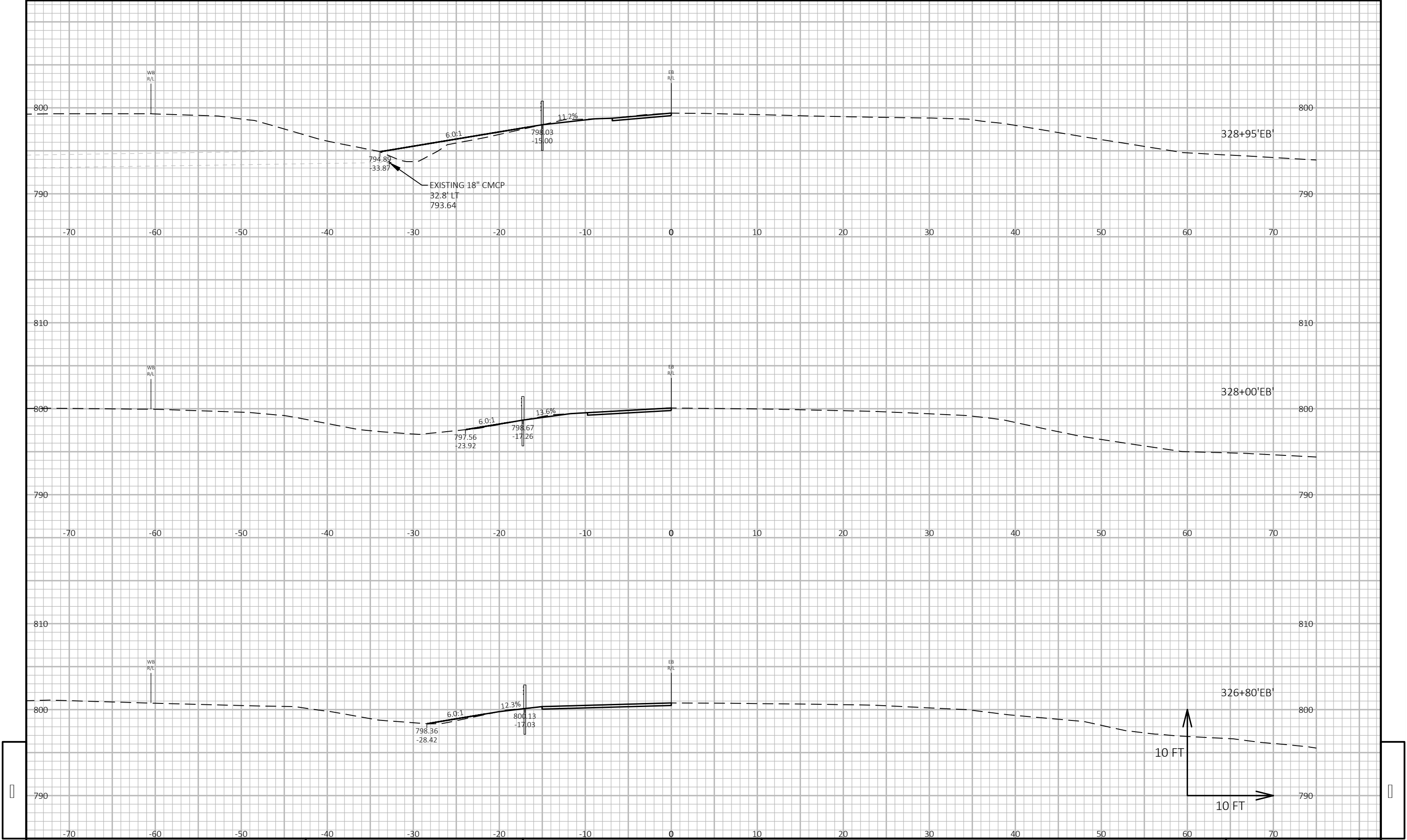
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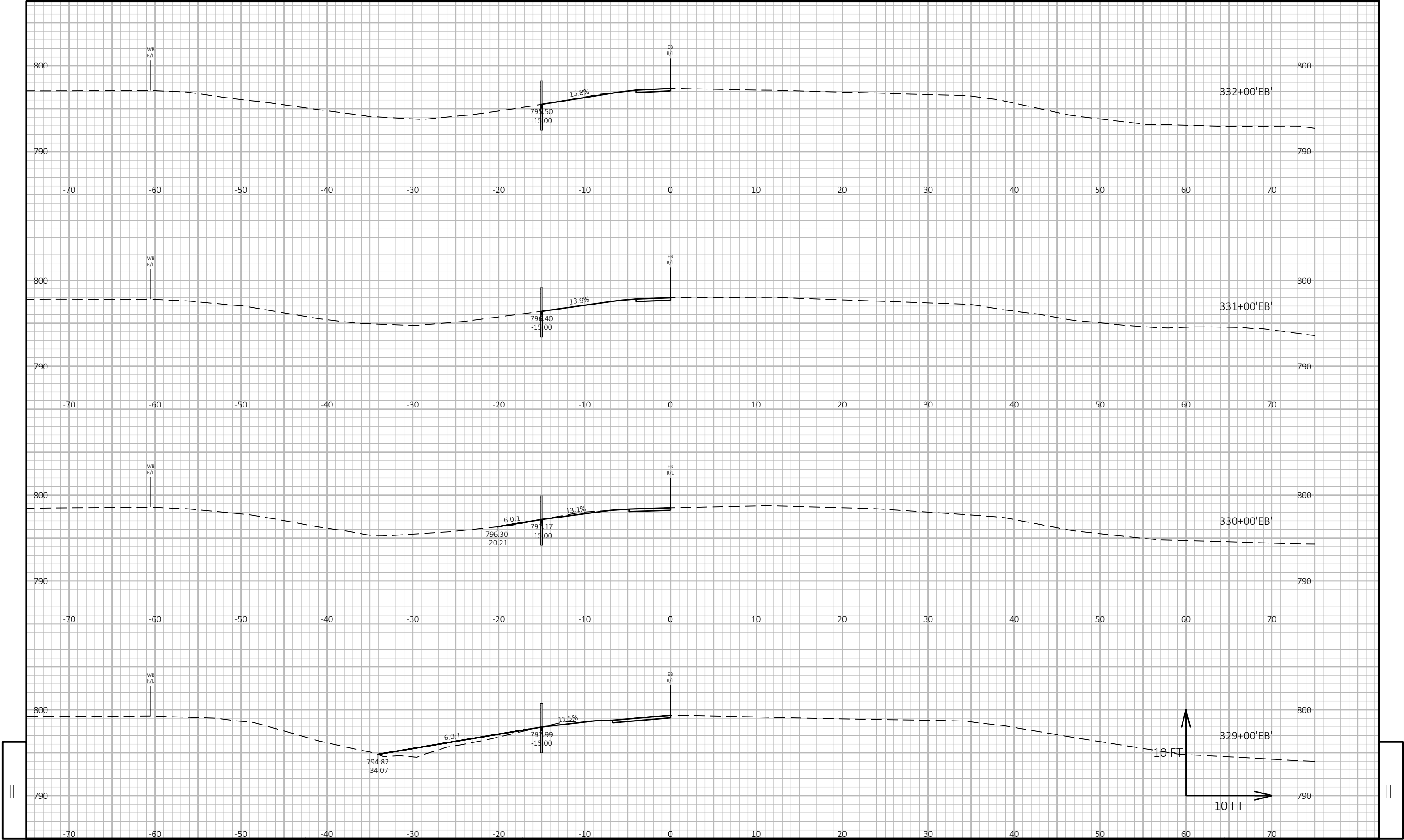




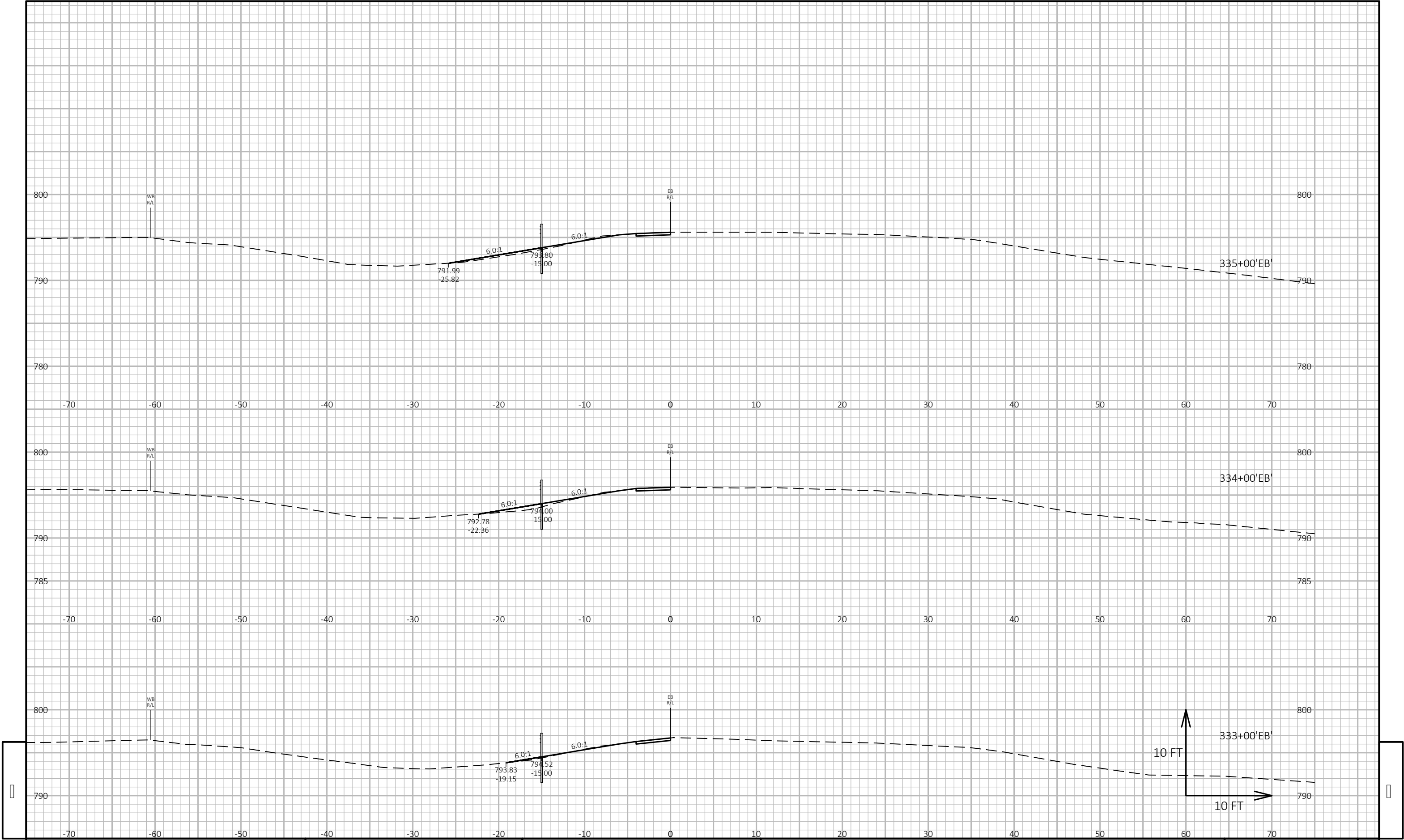


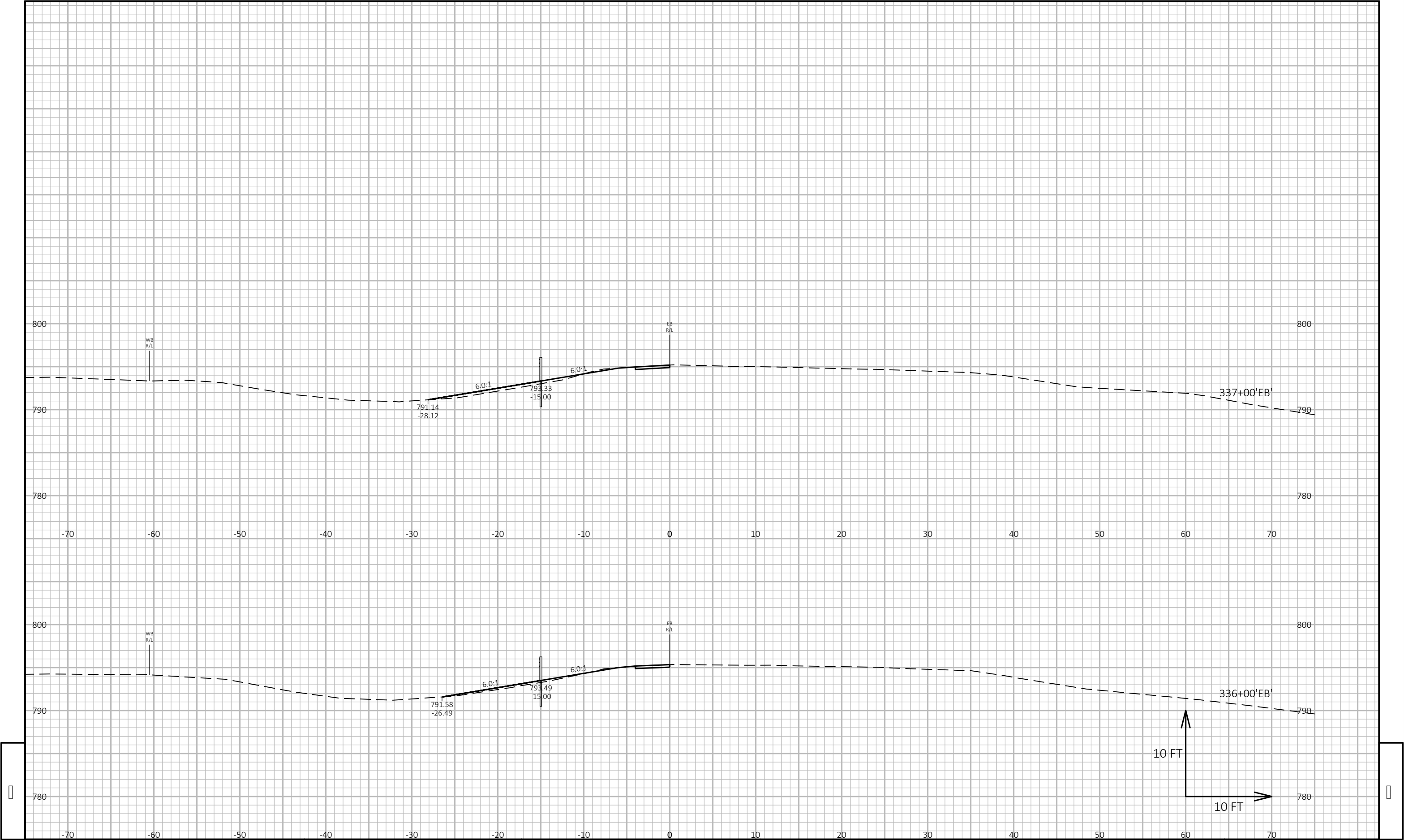


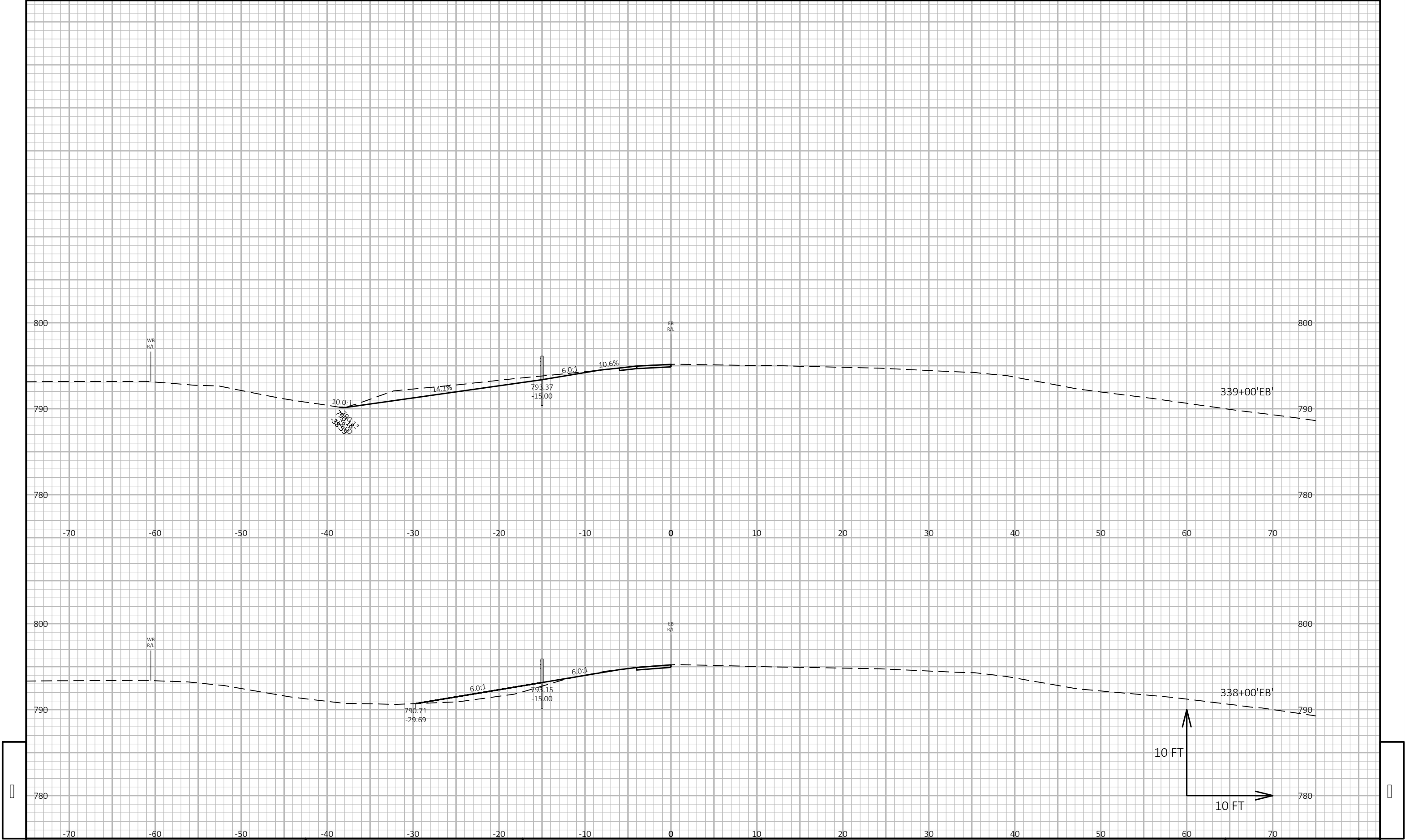


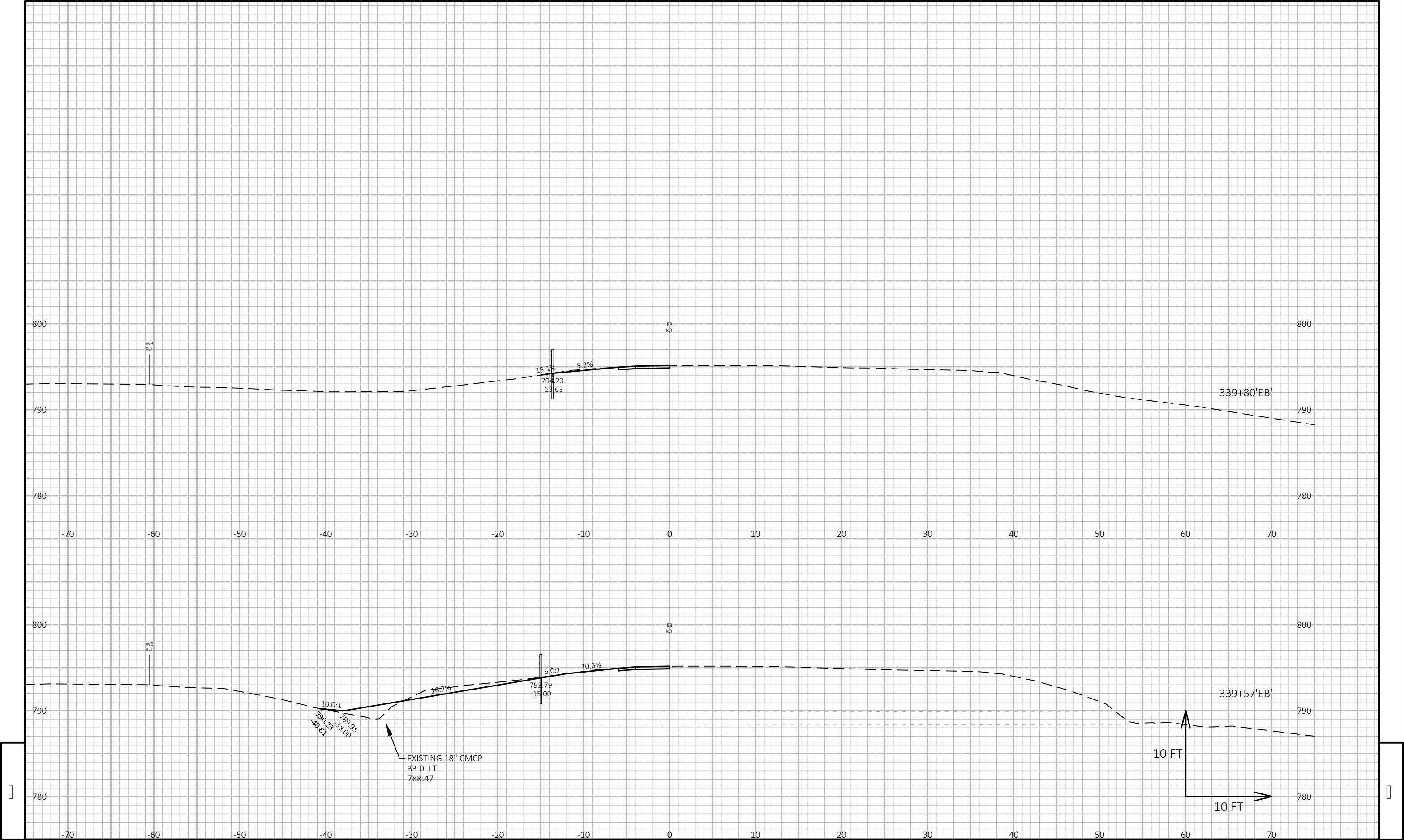


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 3	SHEET	E
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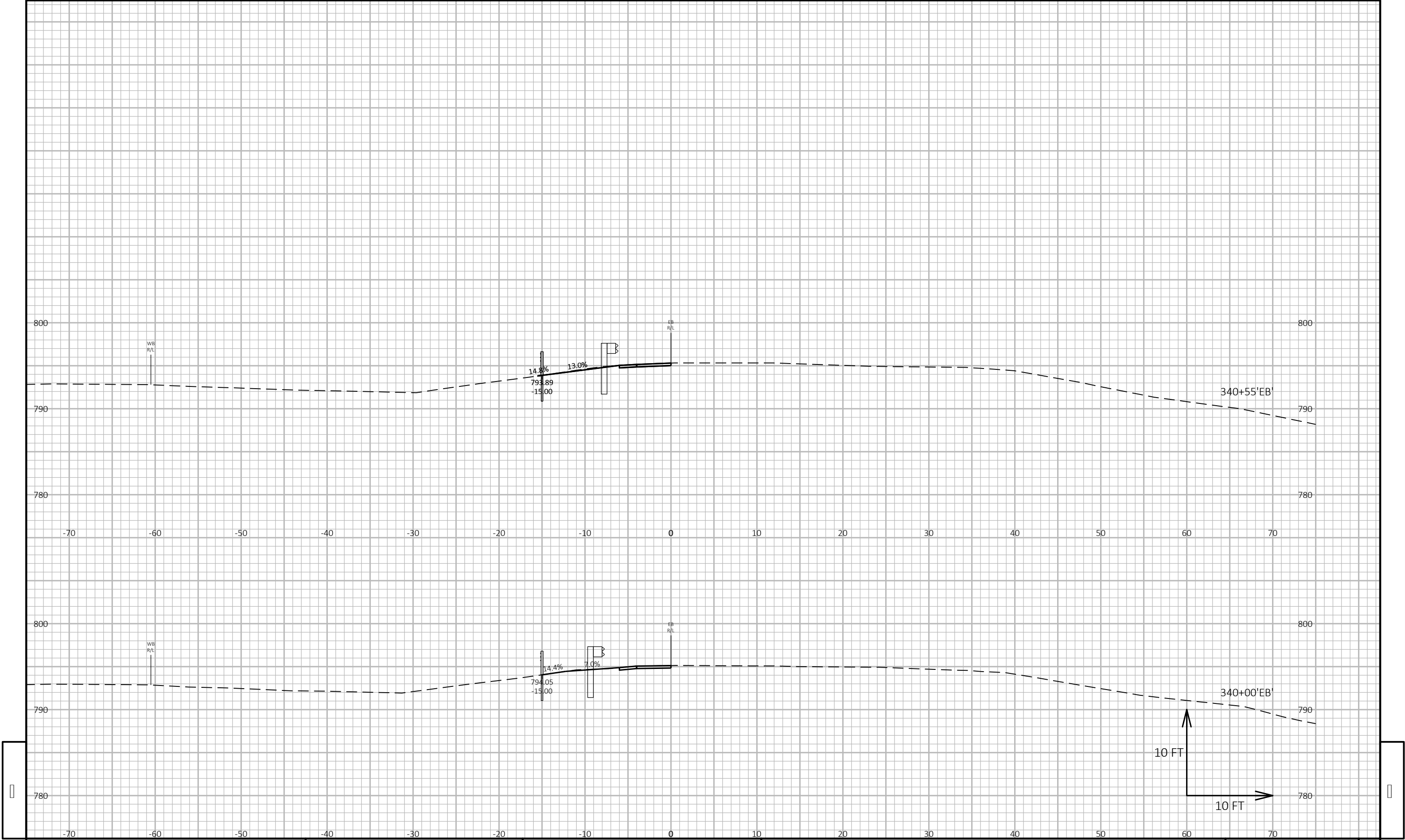


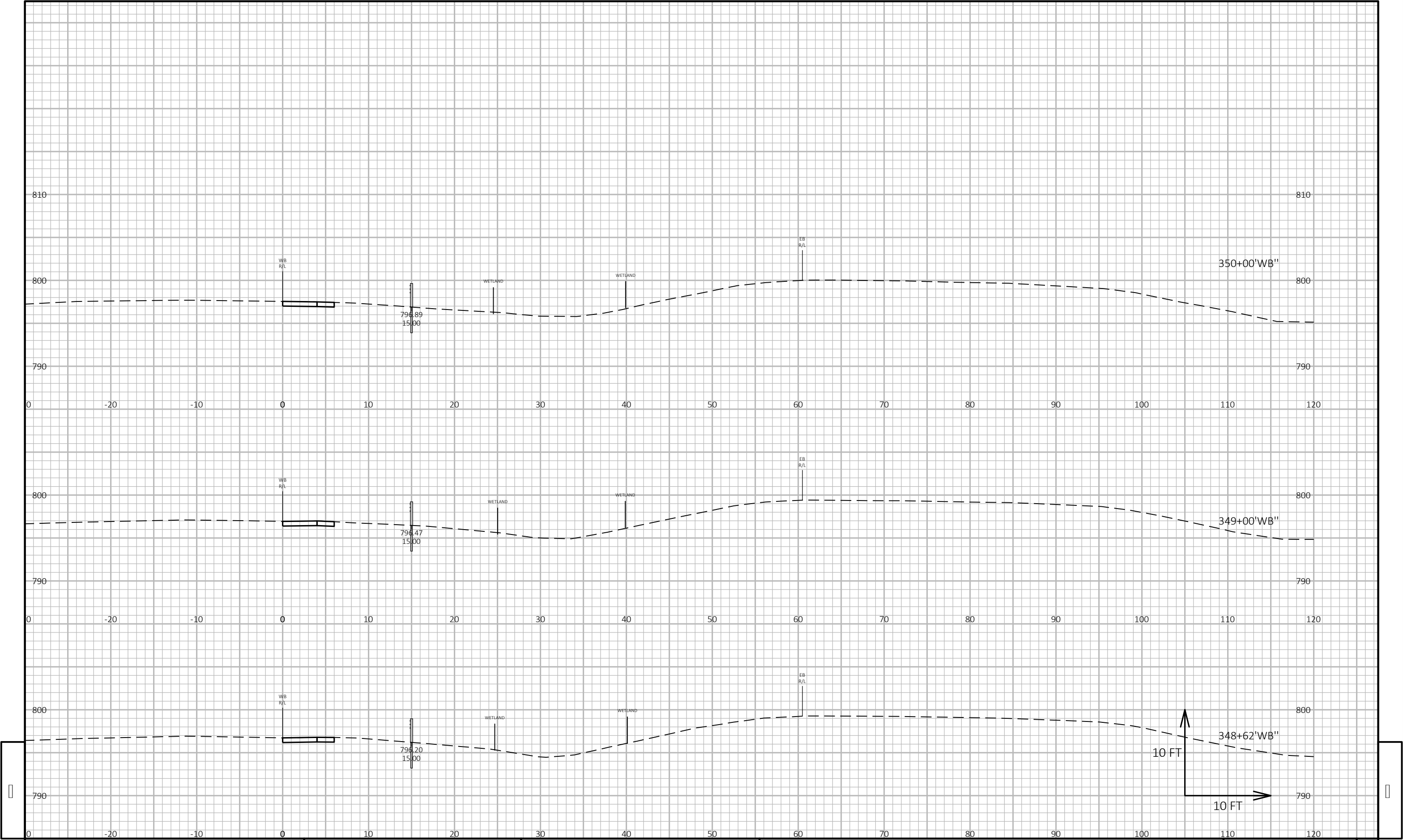




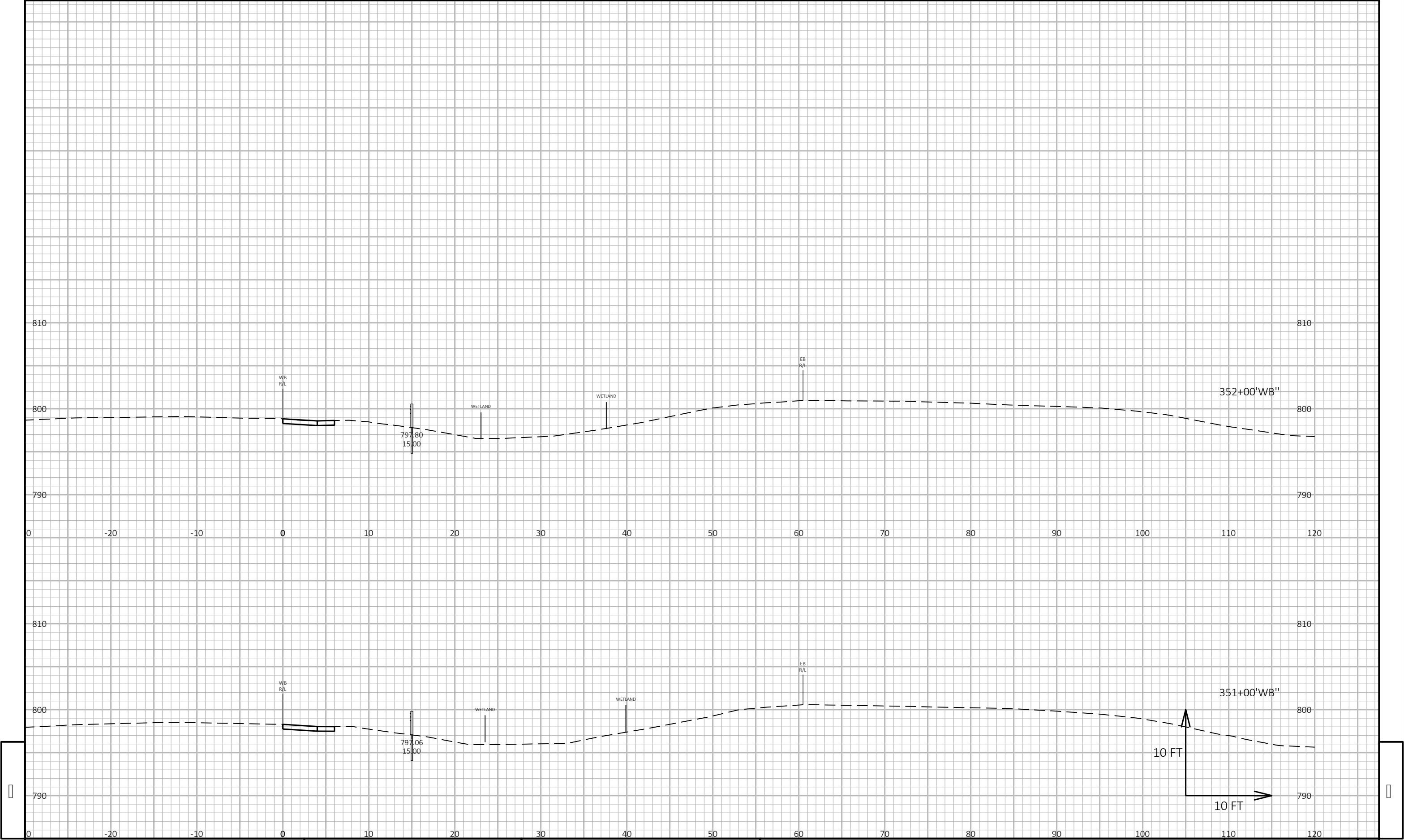


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 3	SHEET	E
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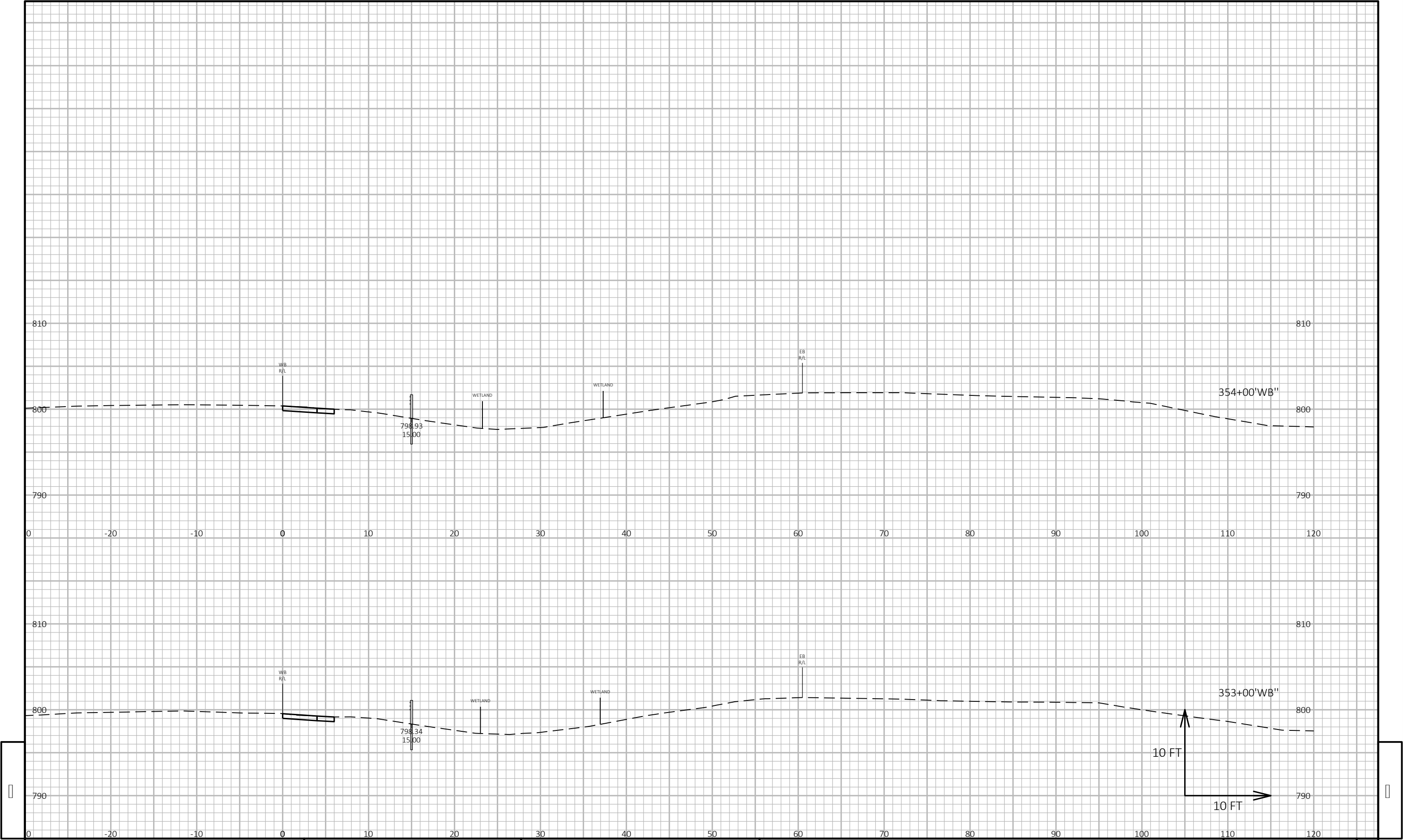


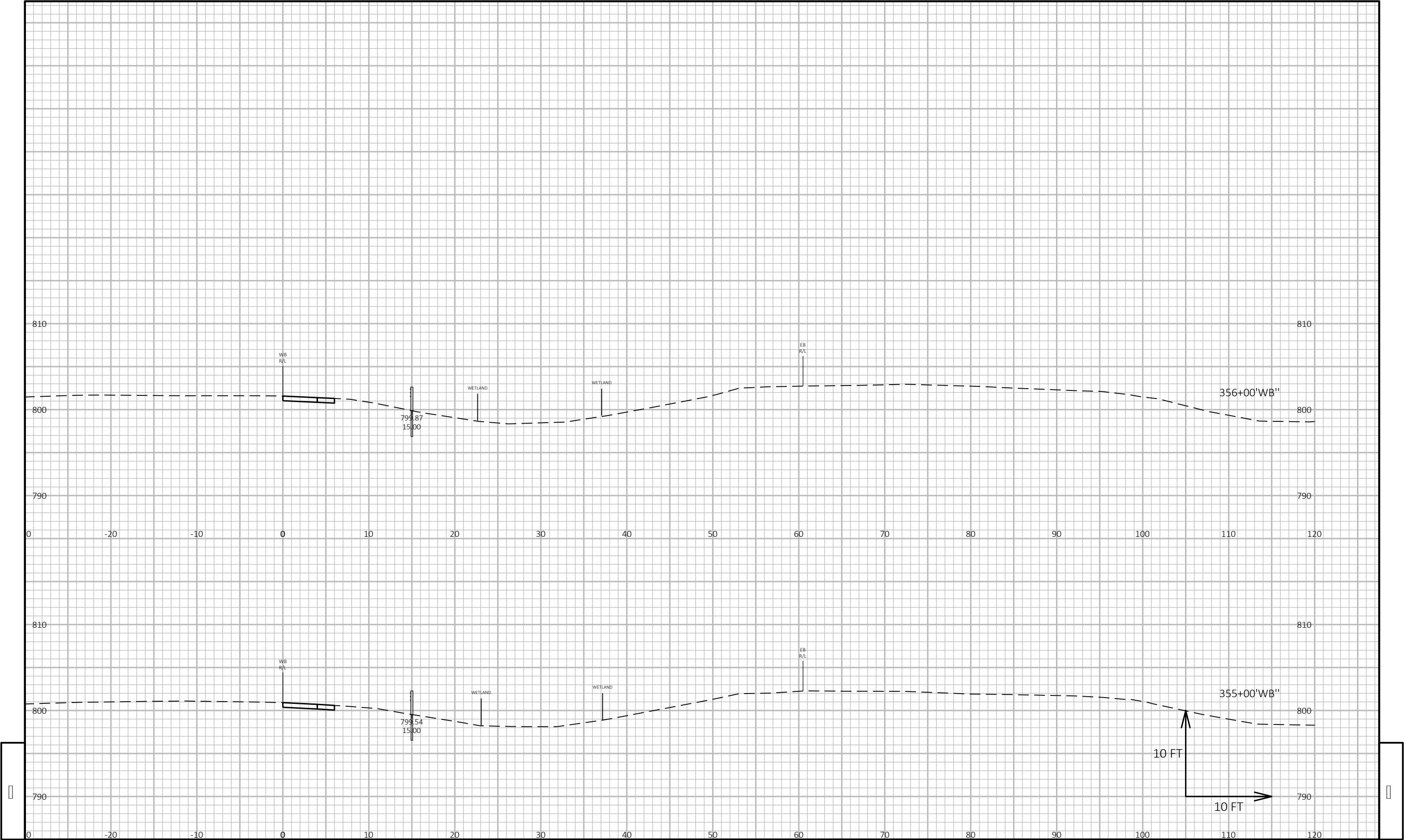


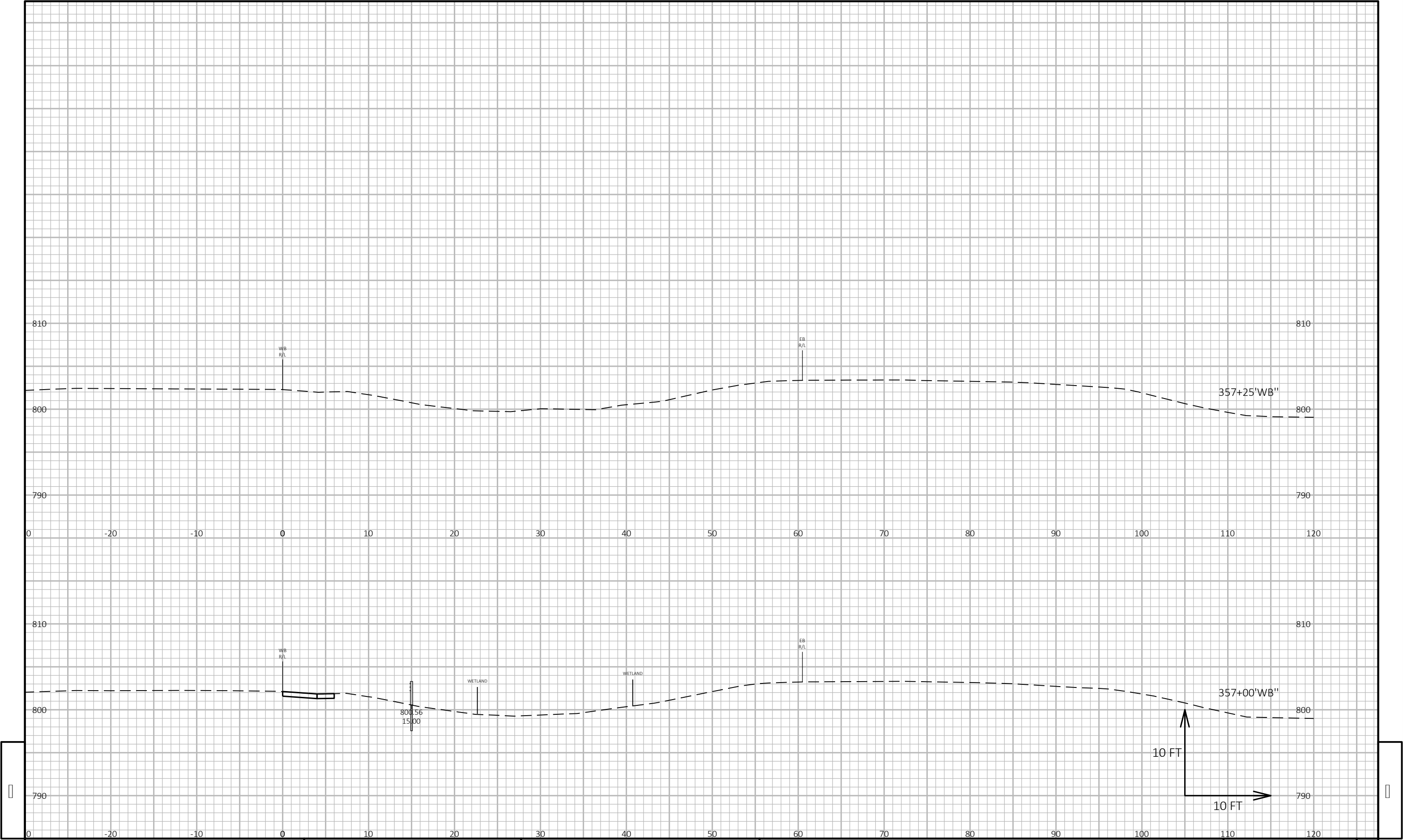
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 3	SHEET	E
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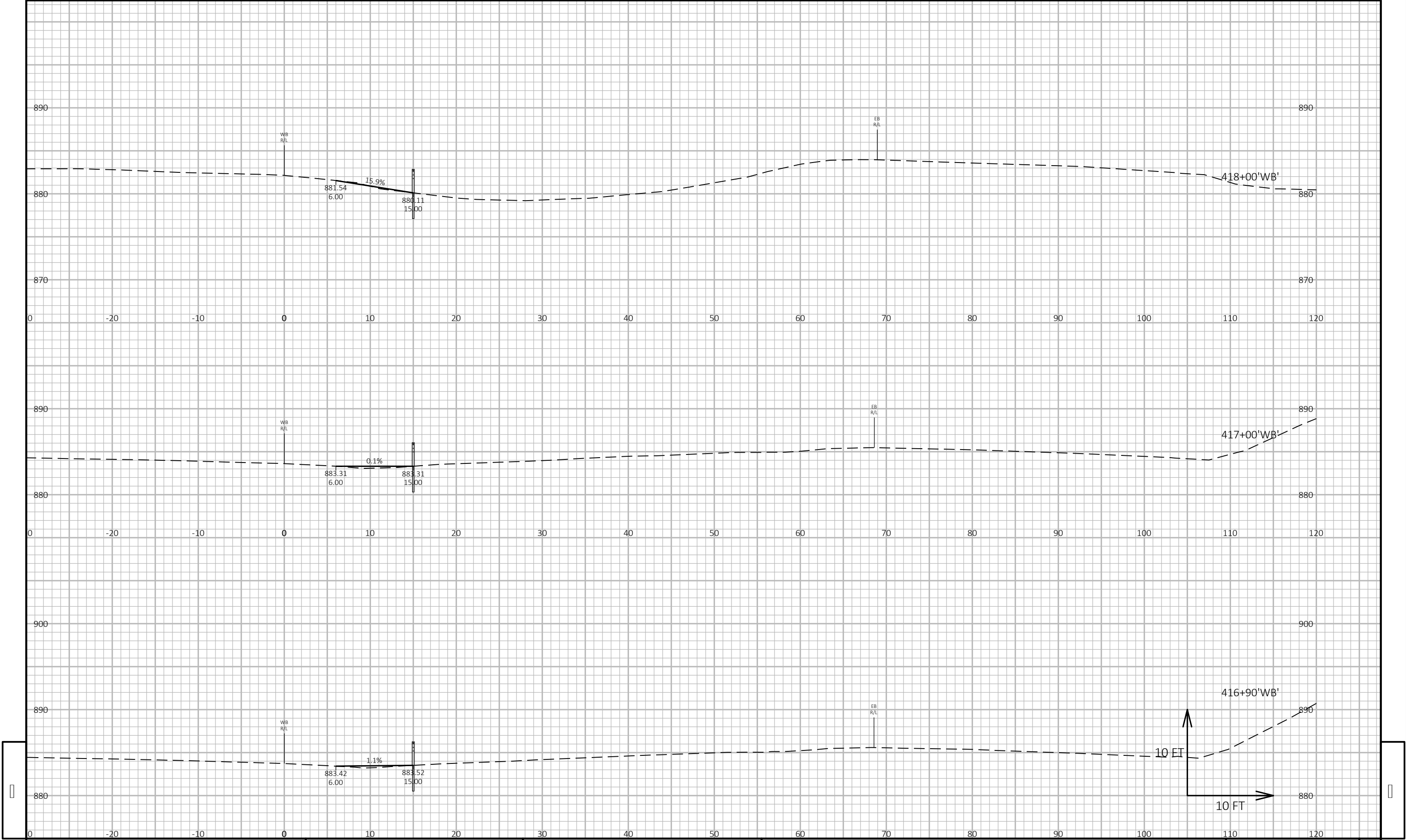
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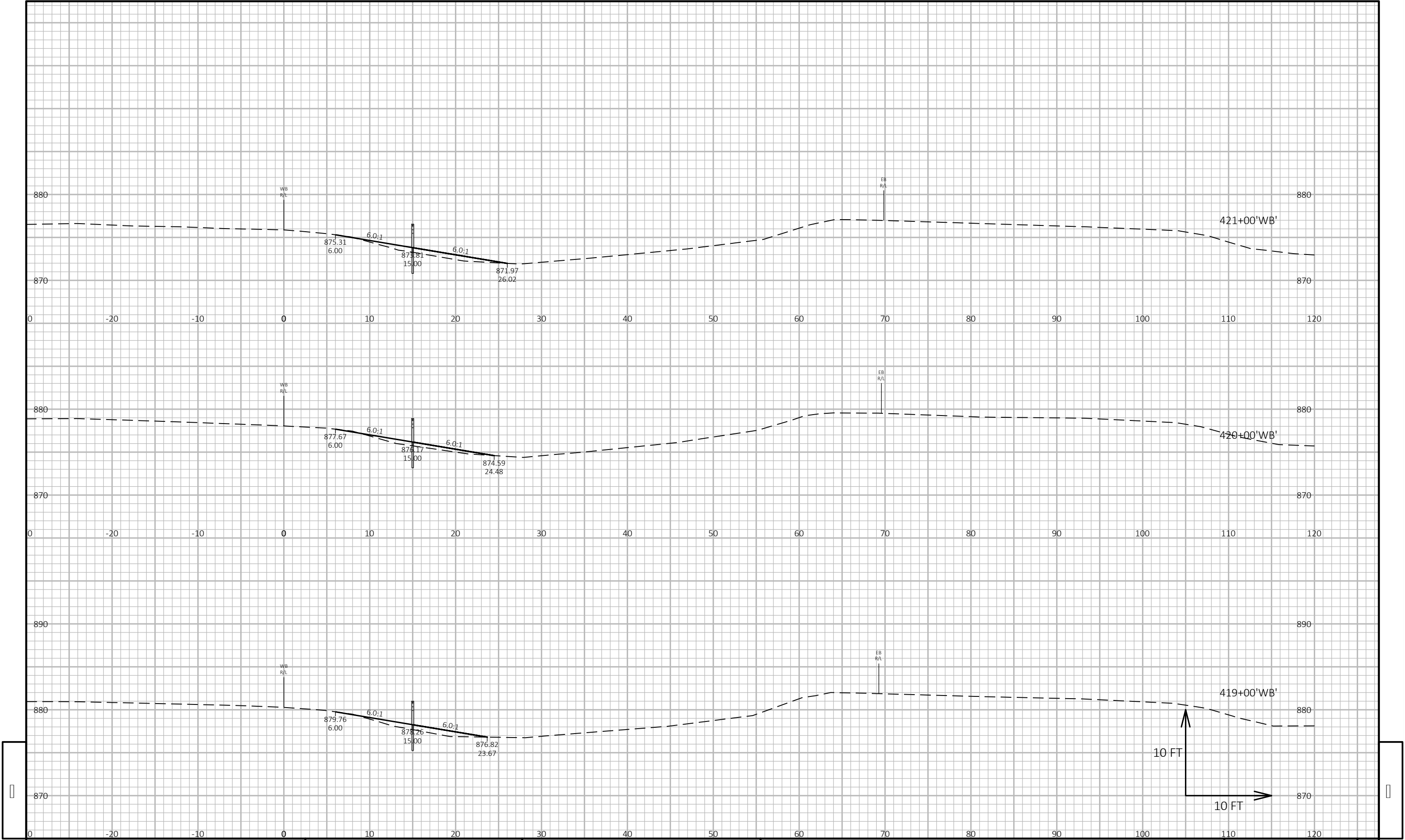


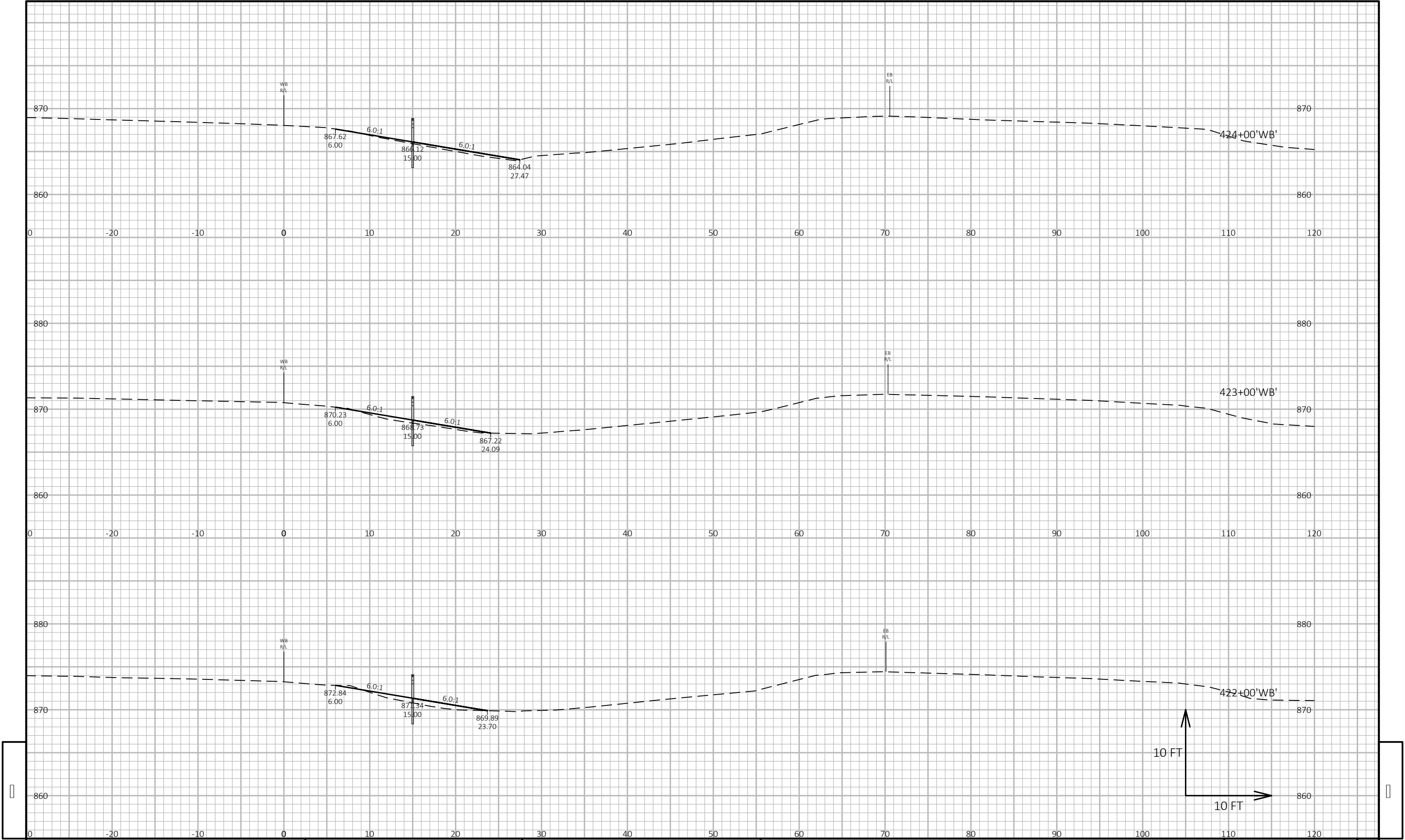


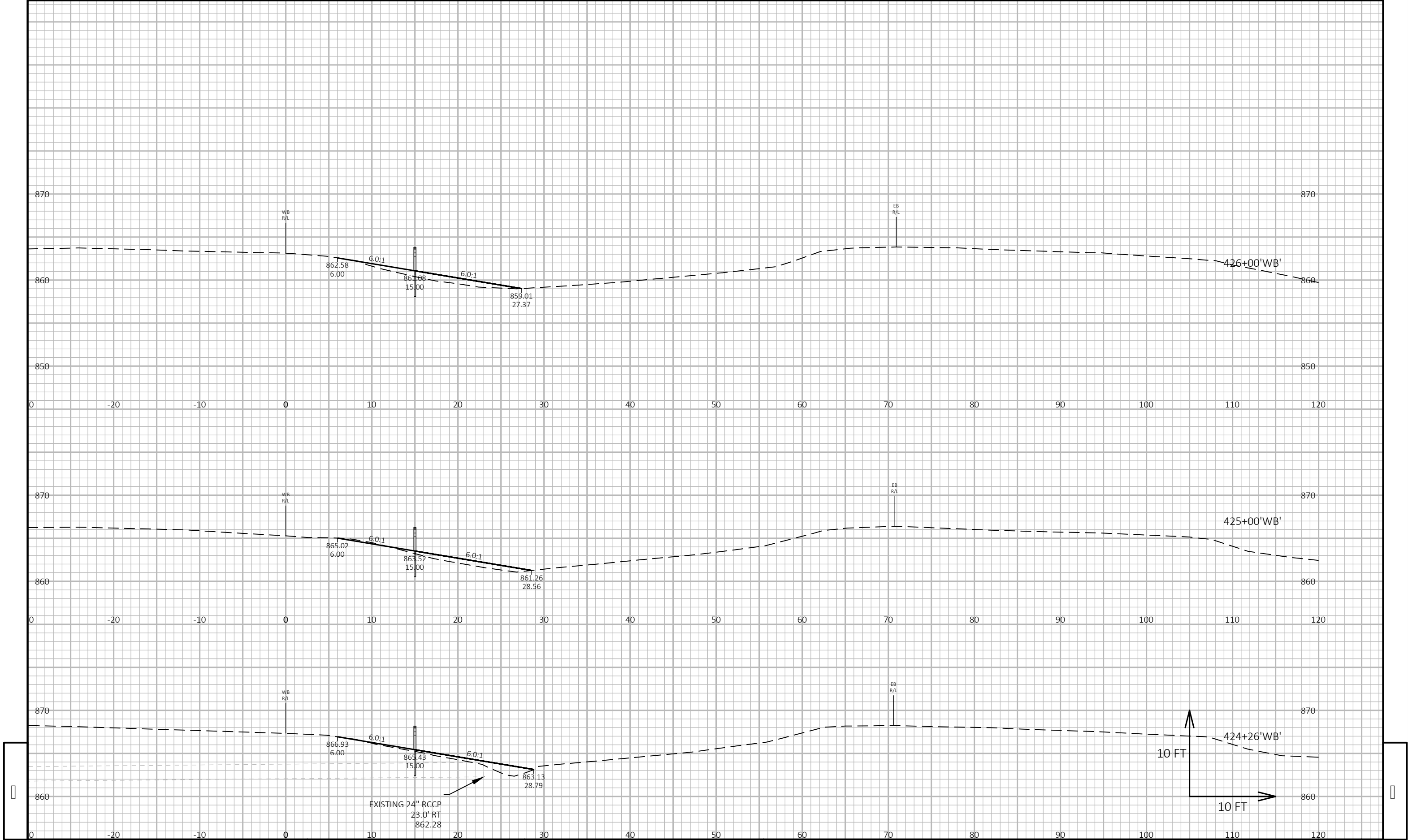
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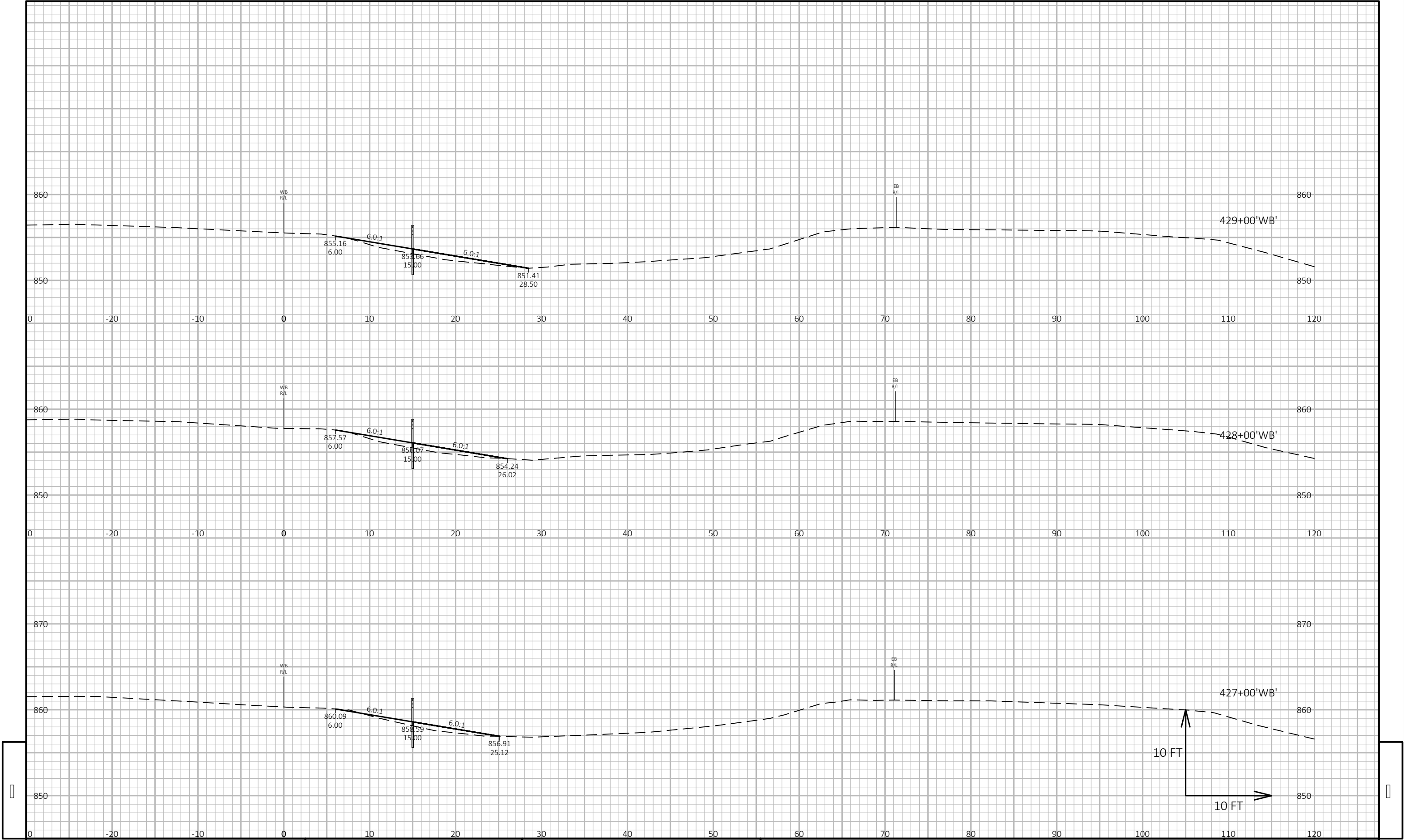


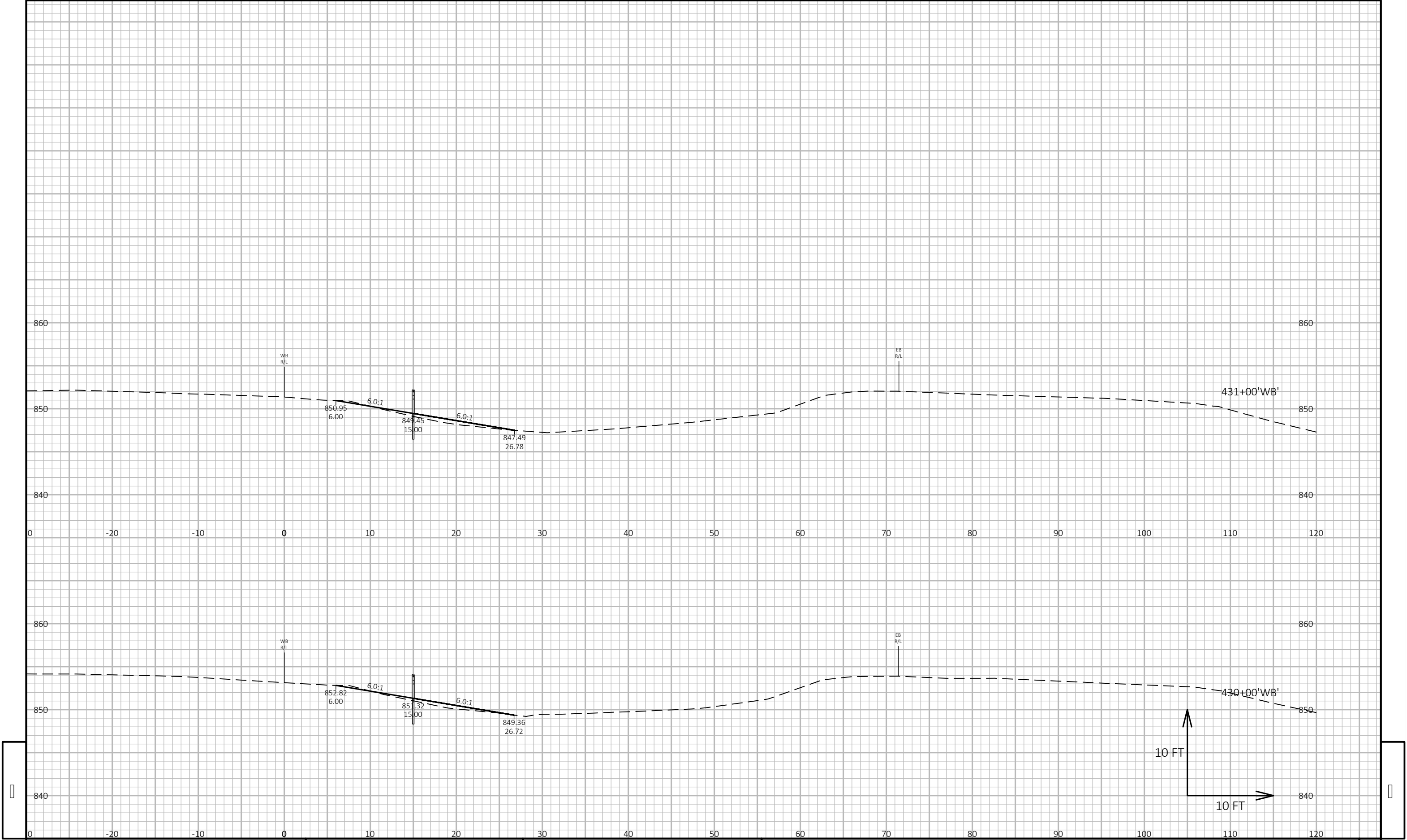
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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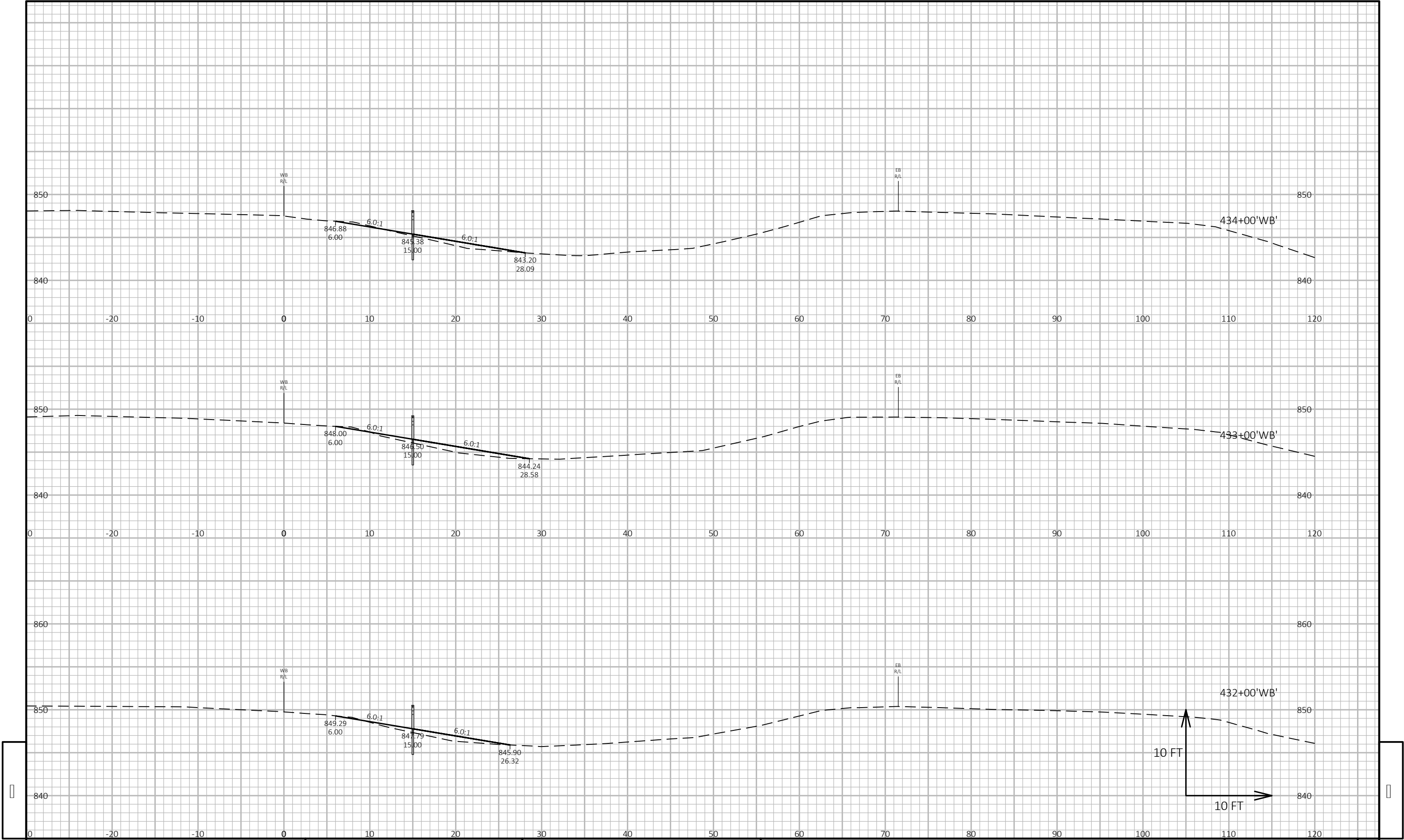


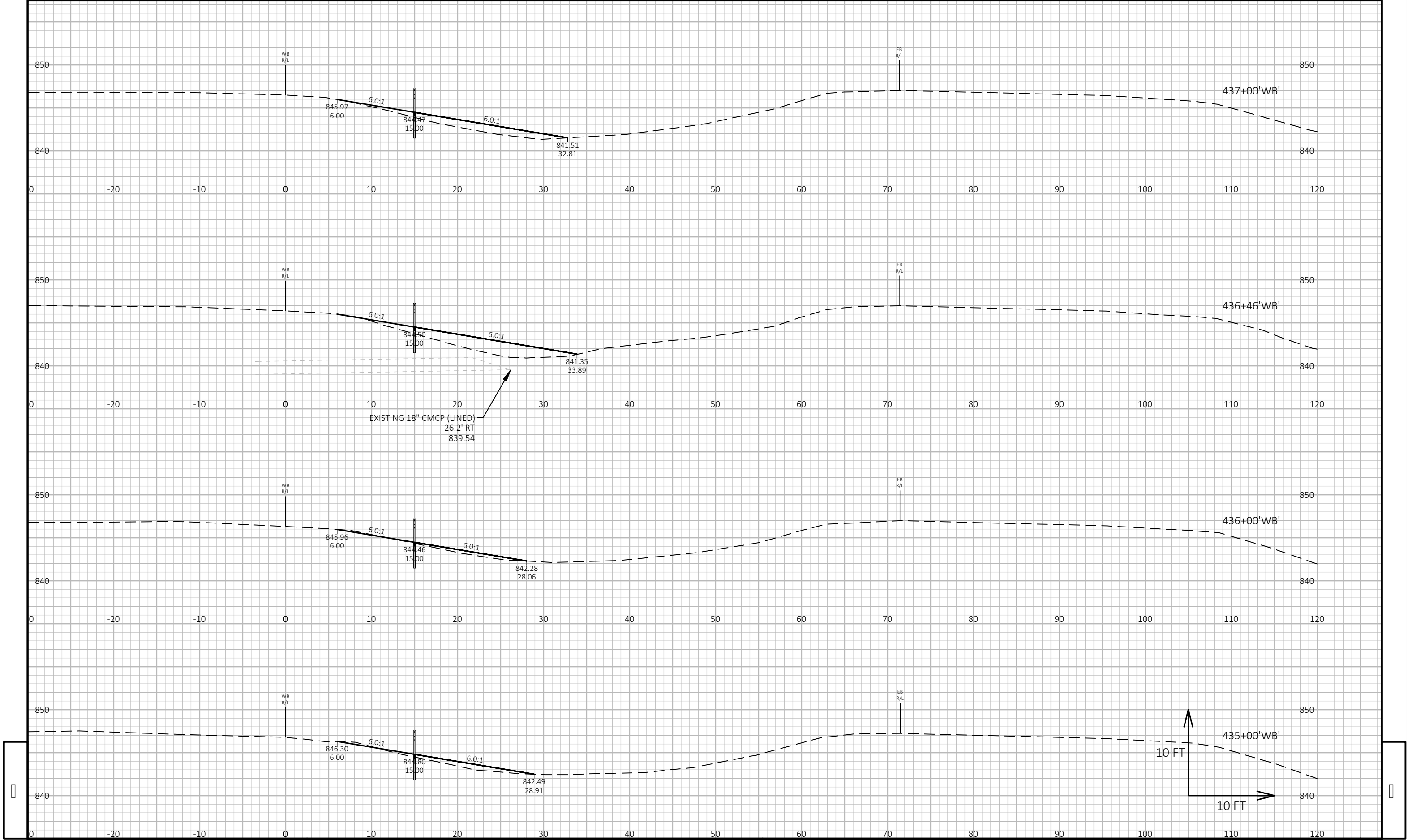


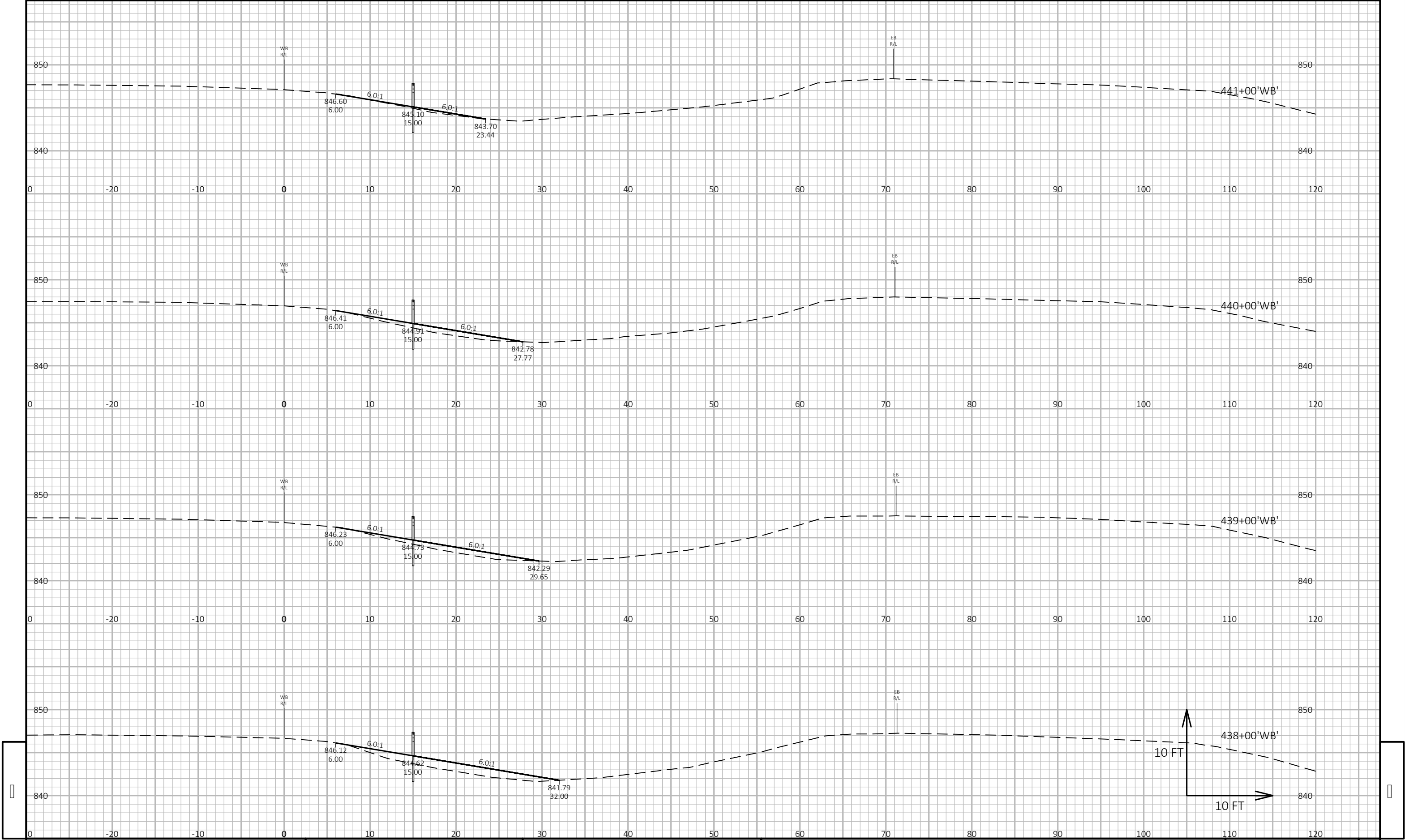




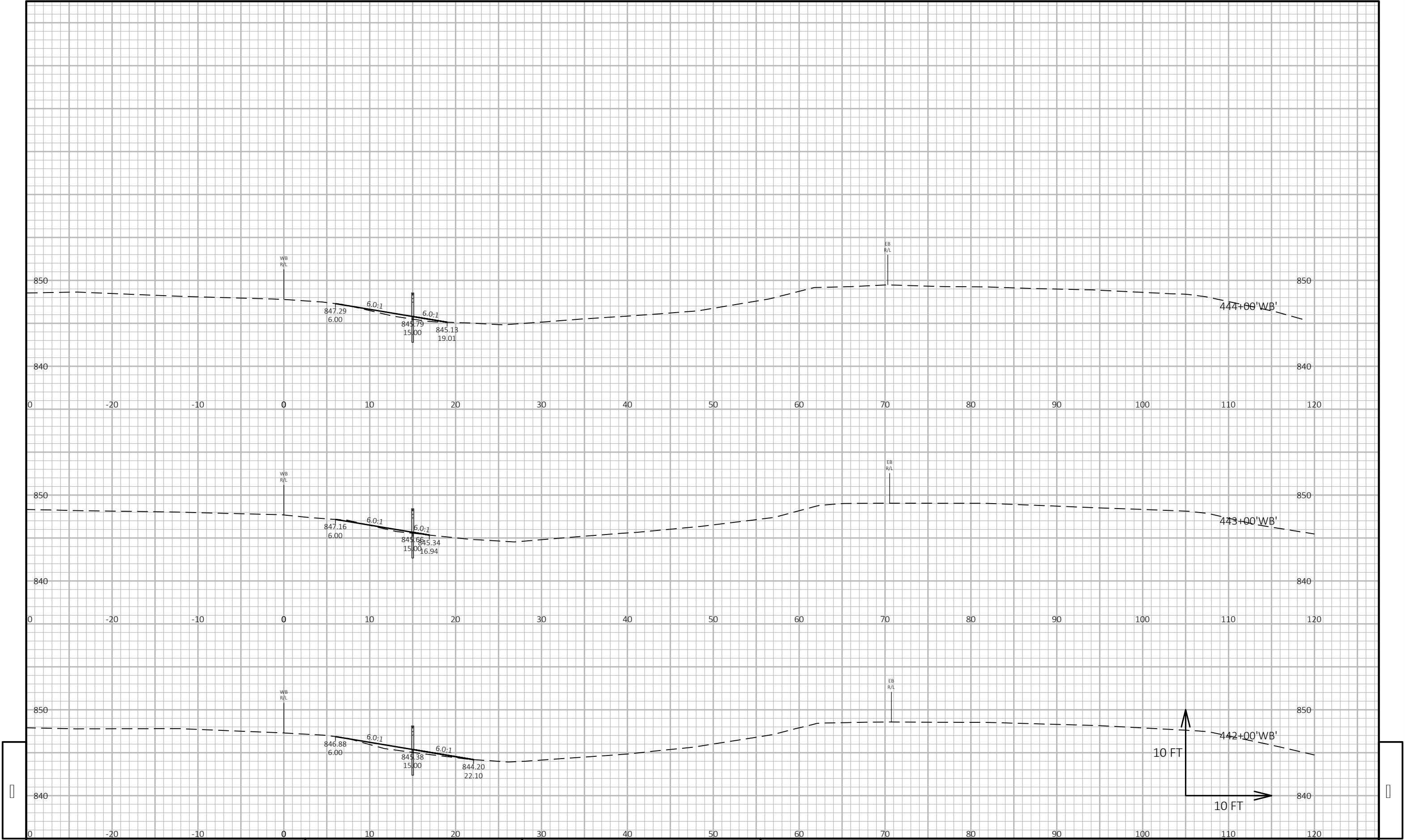
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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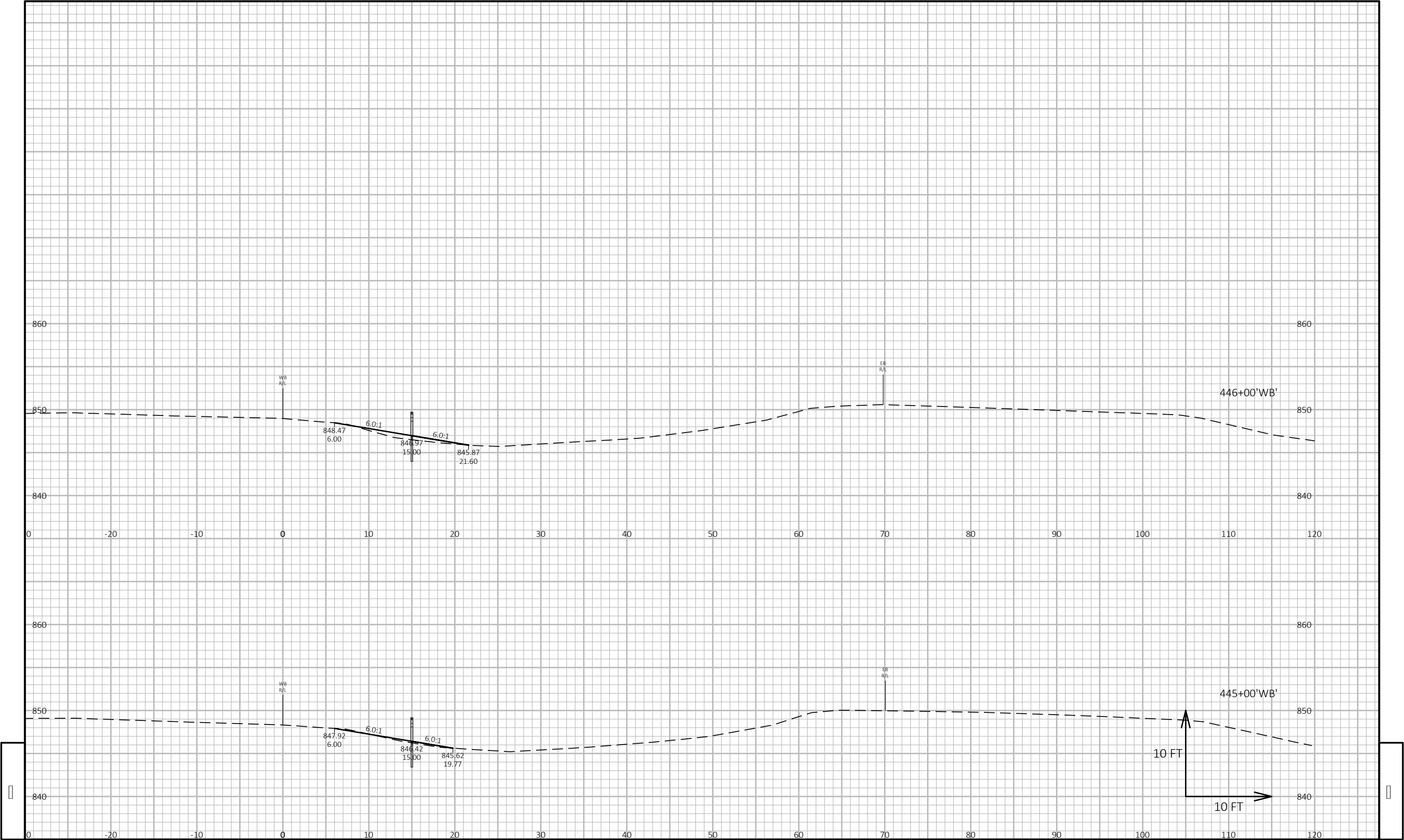


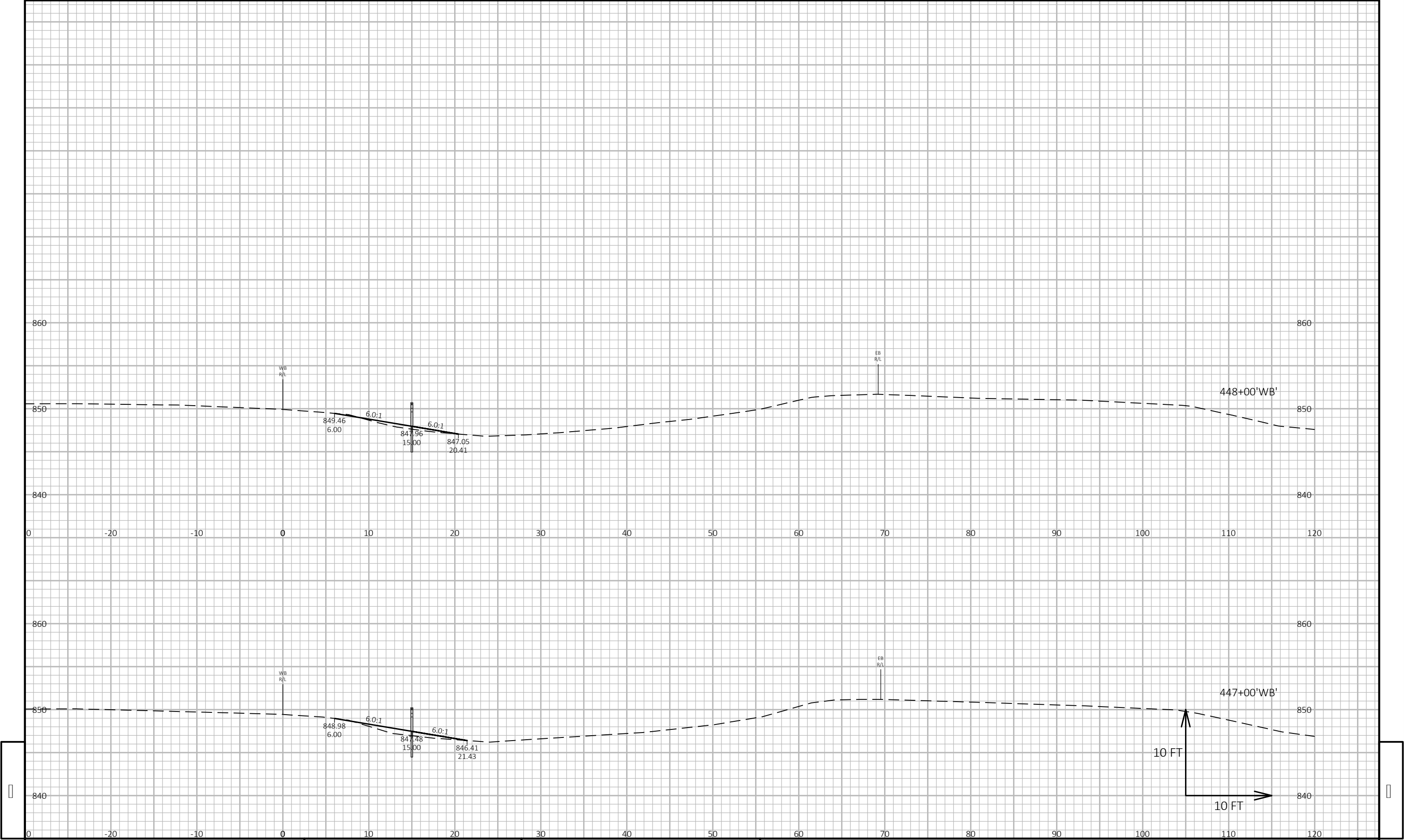


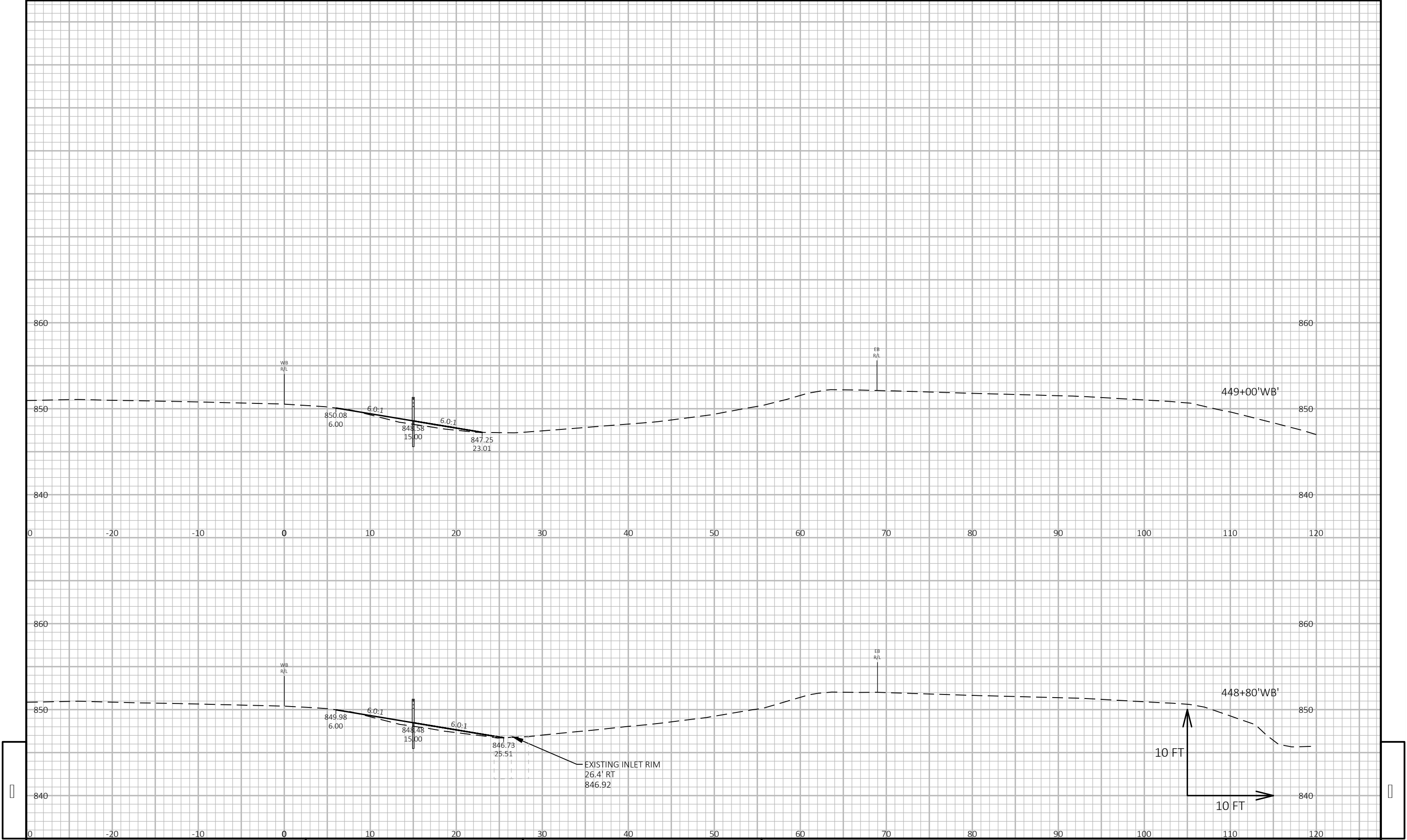


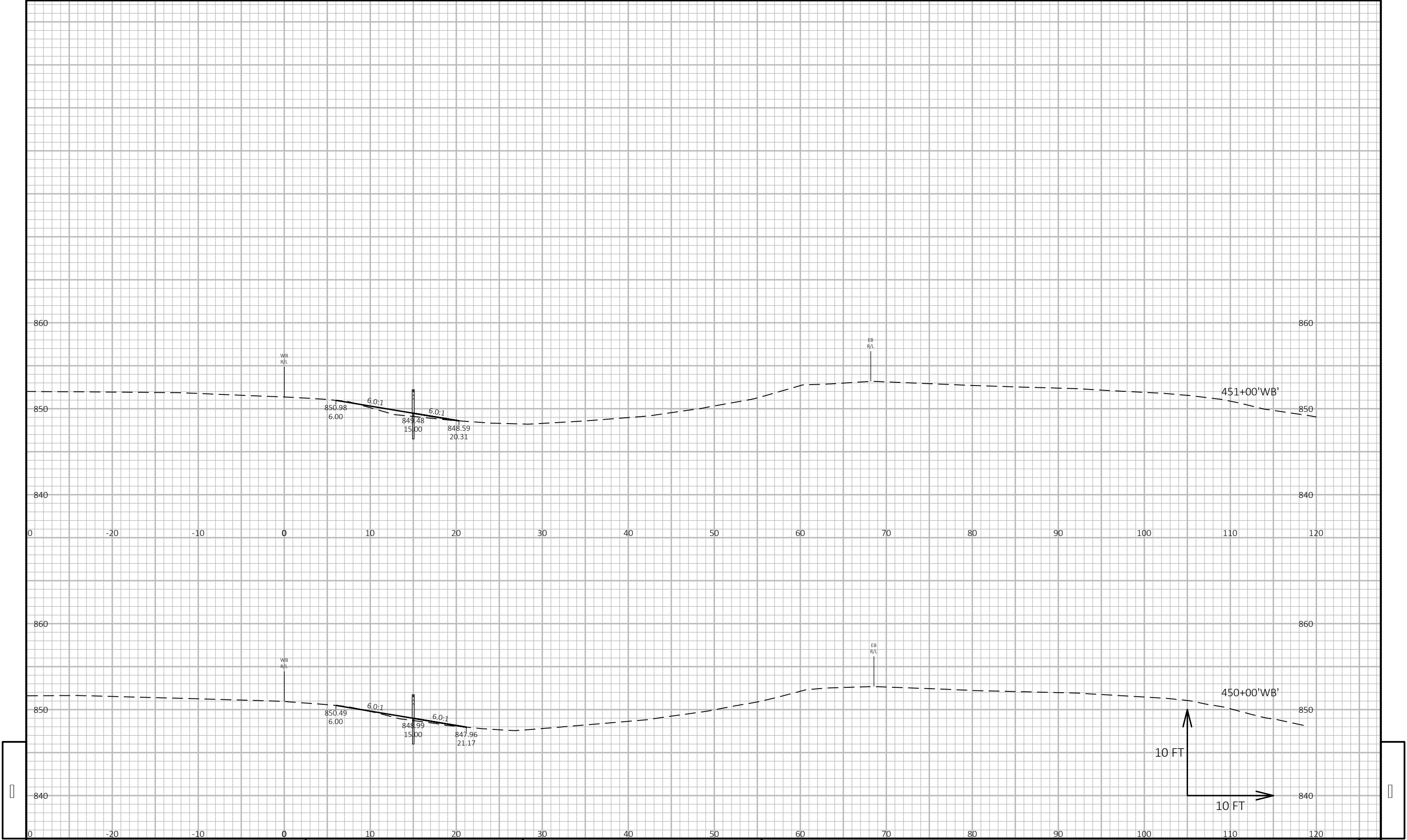
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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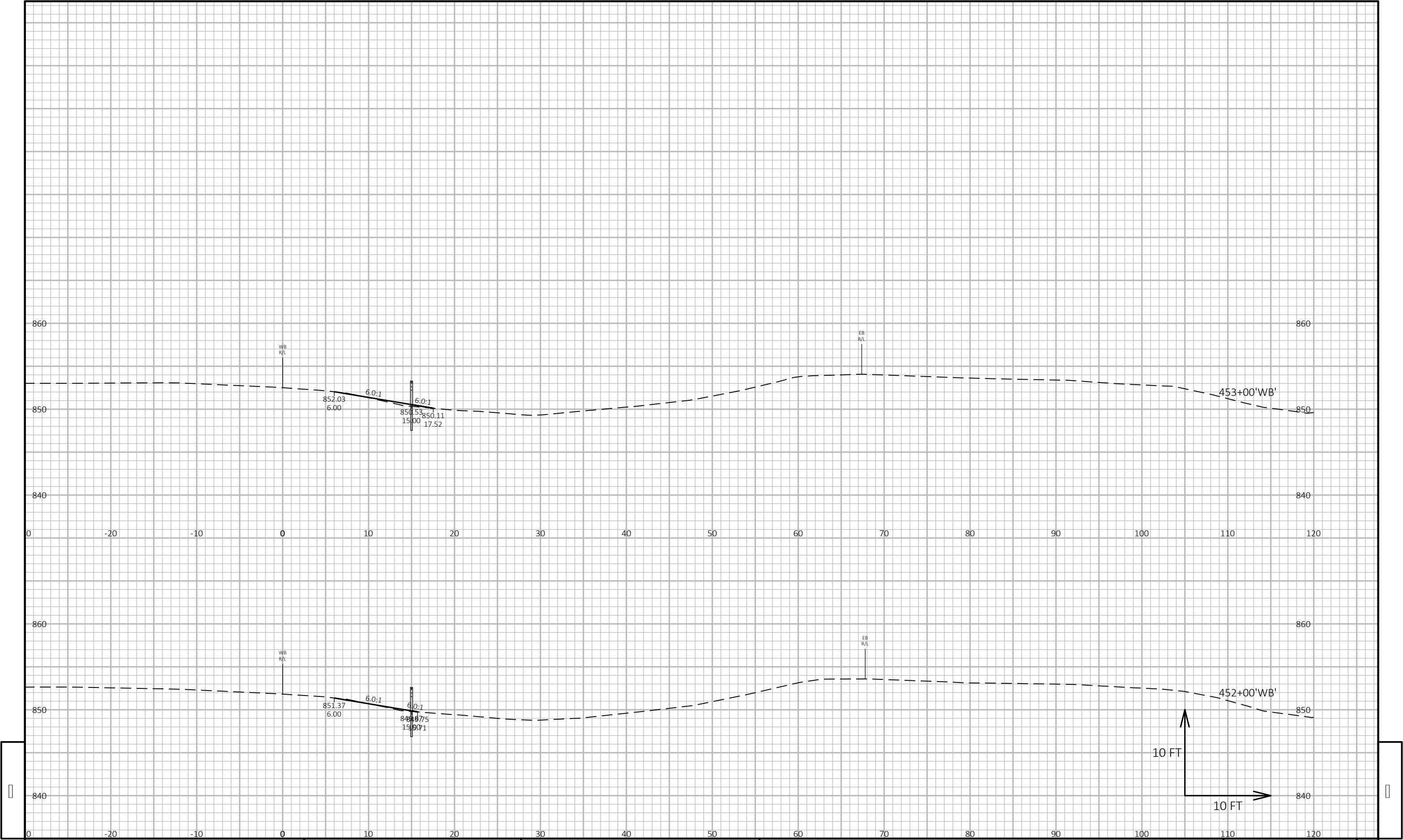




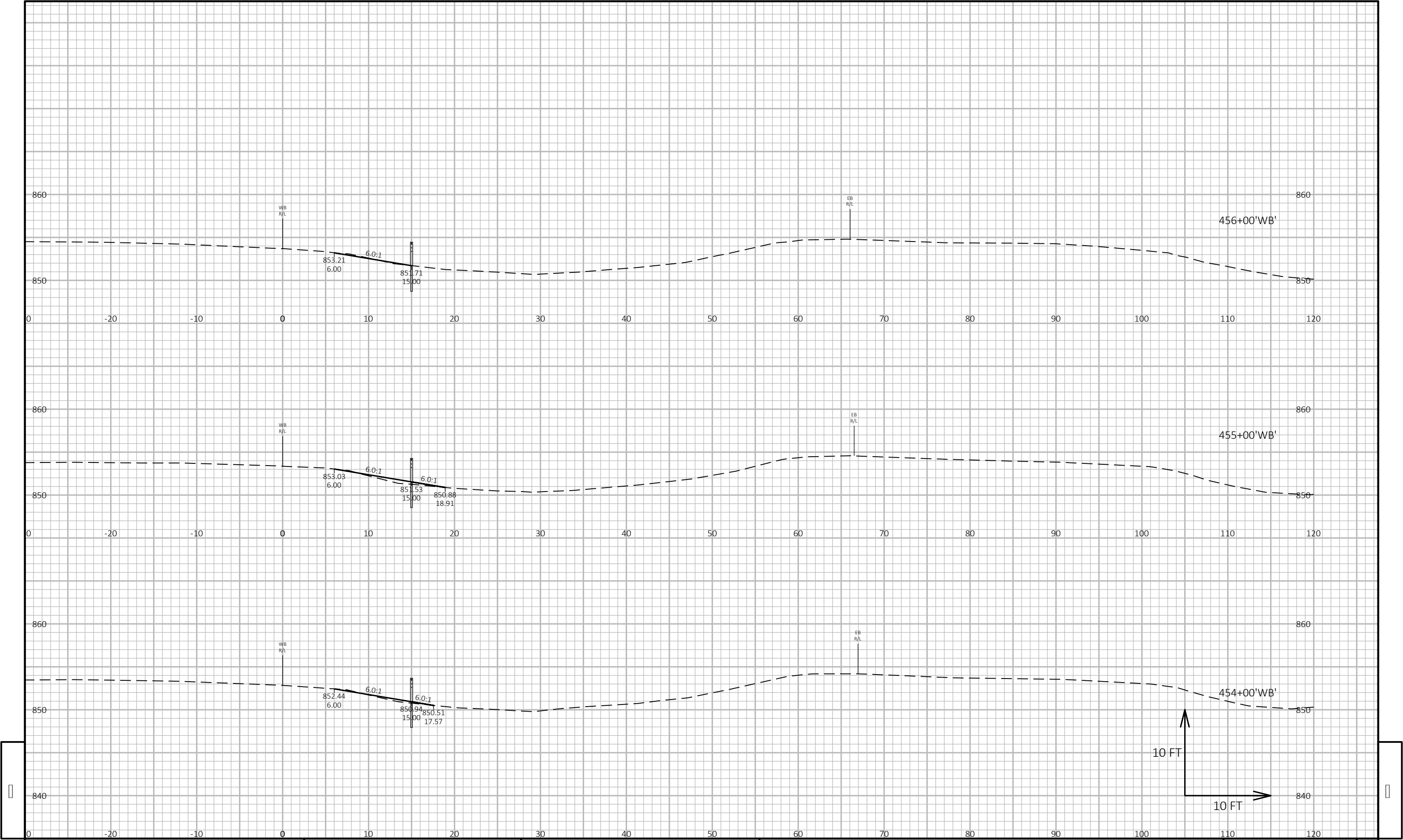




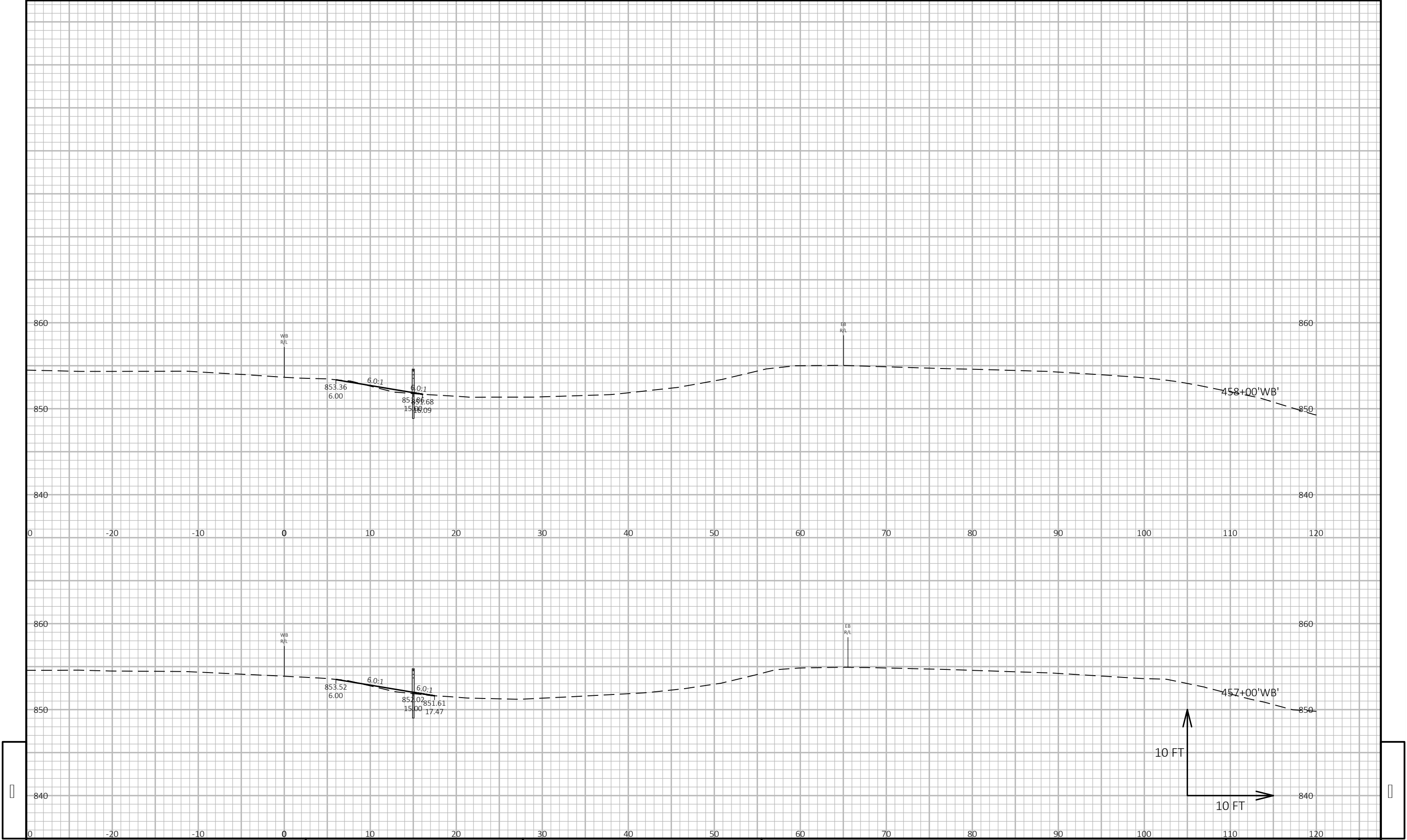




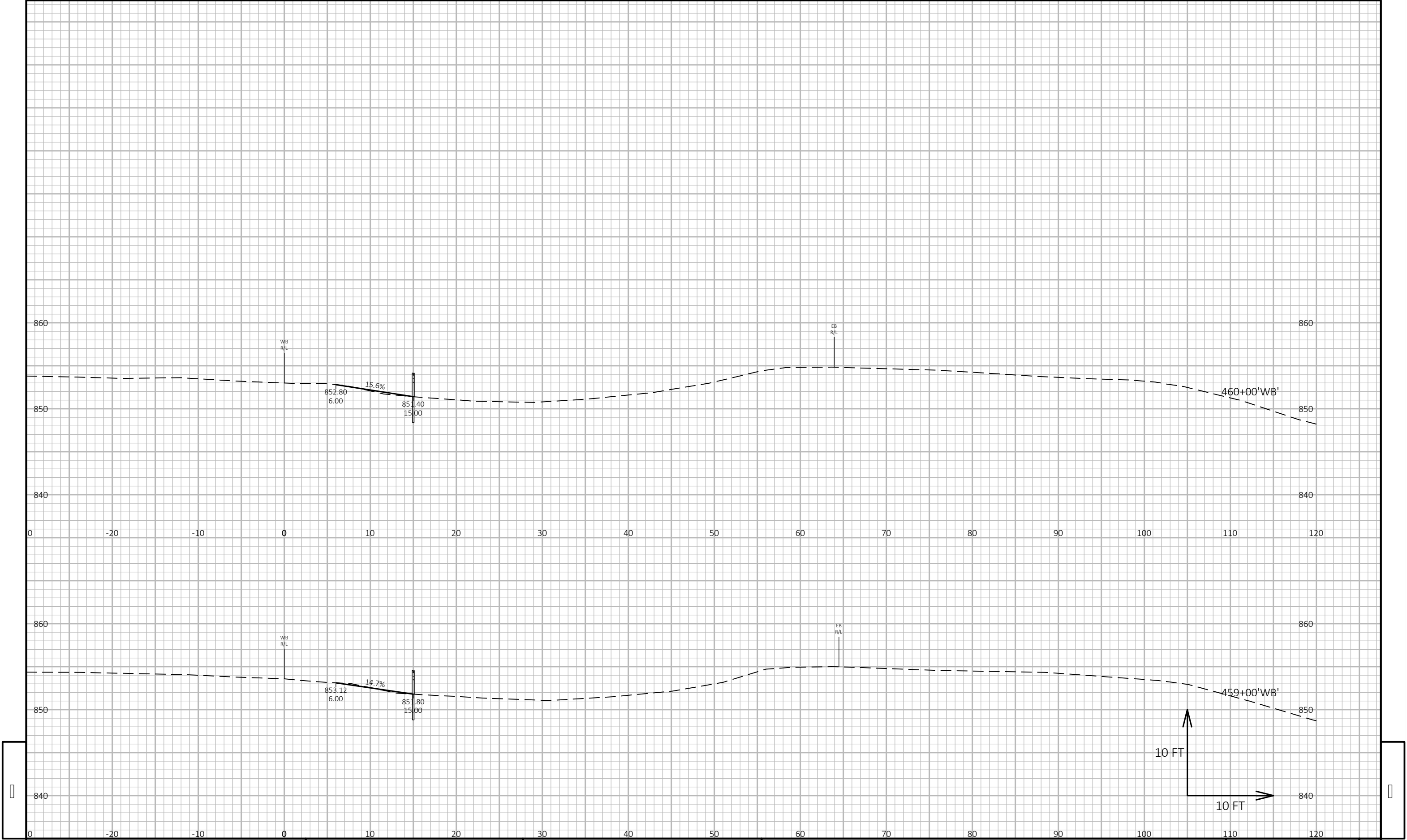
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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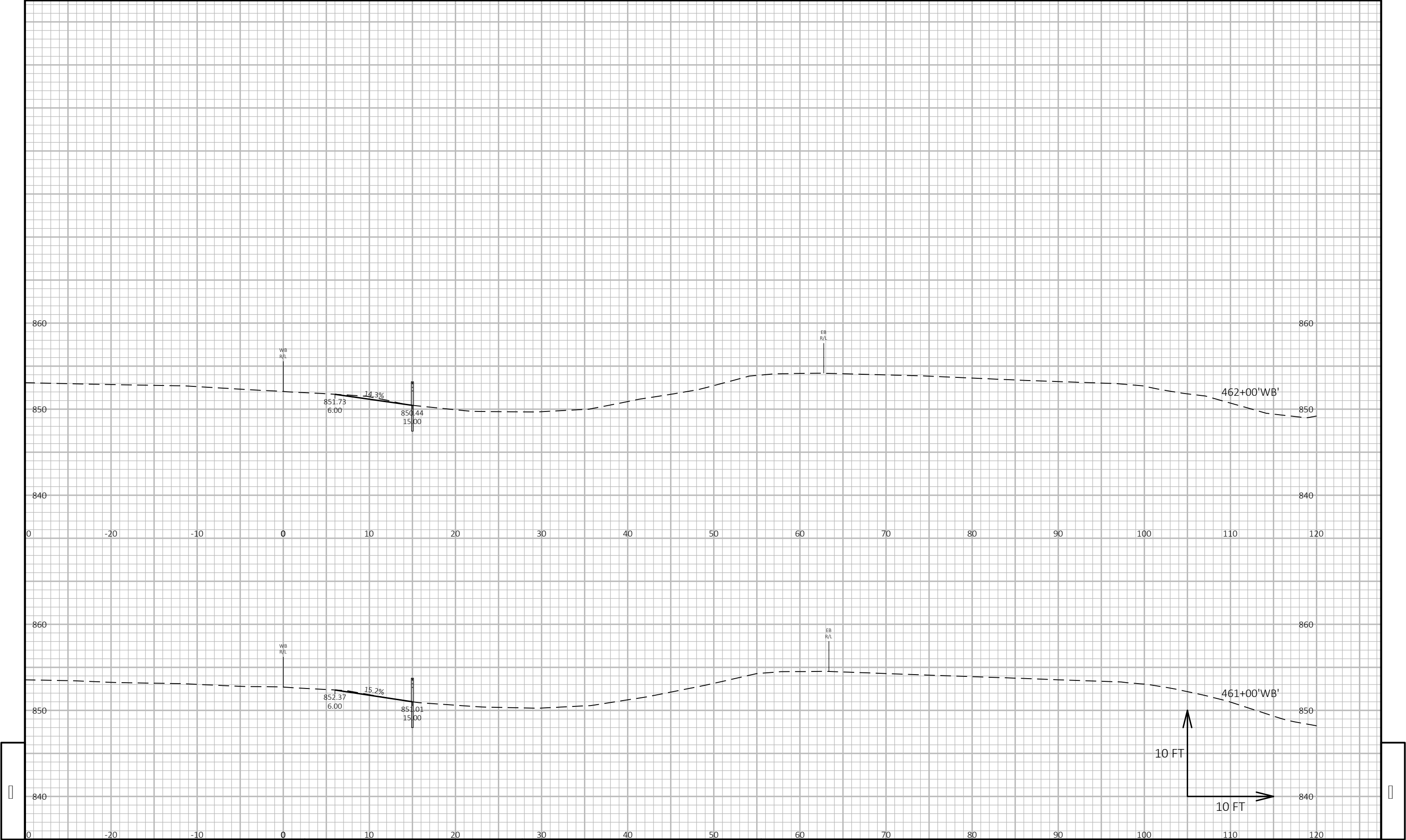


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET E
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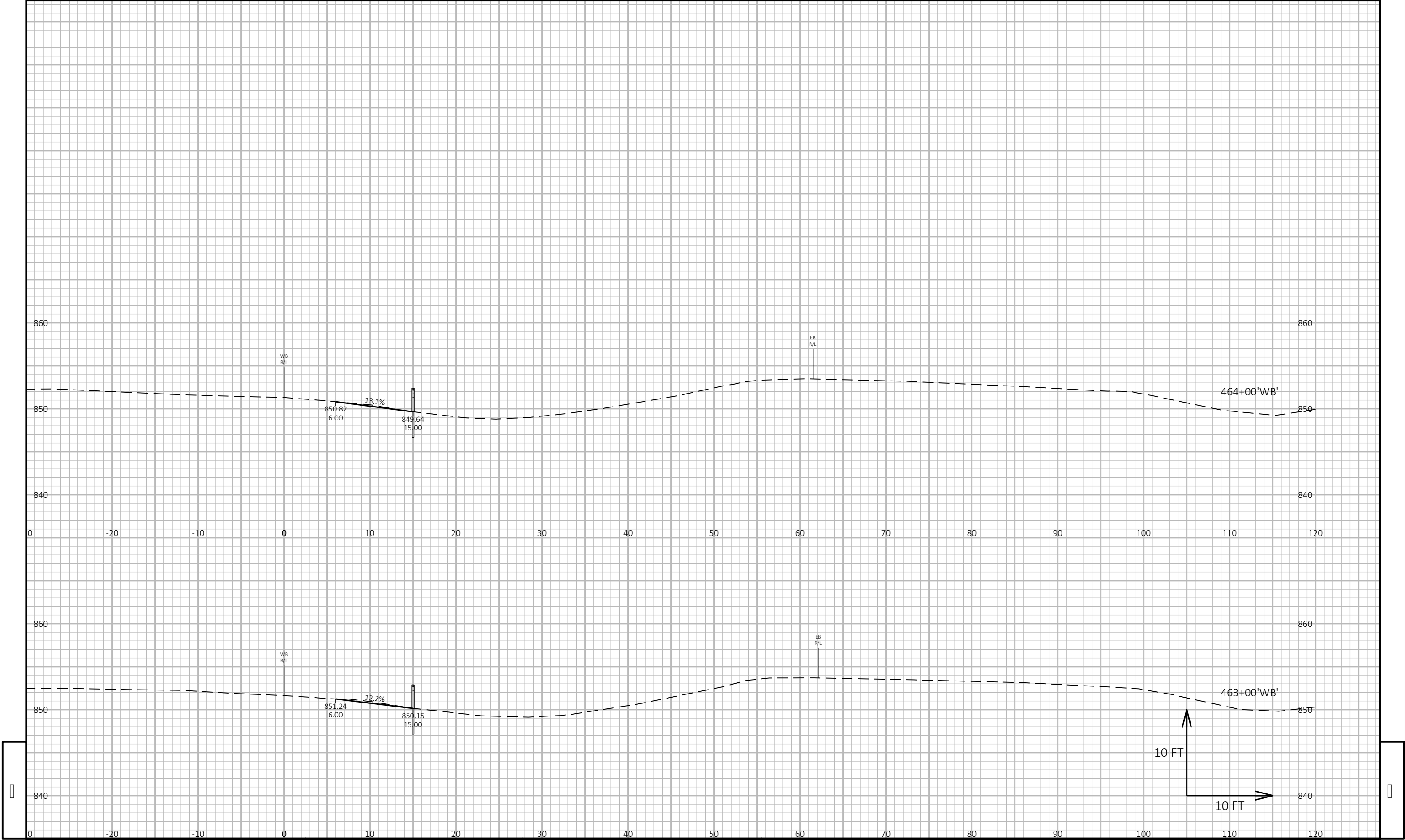


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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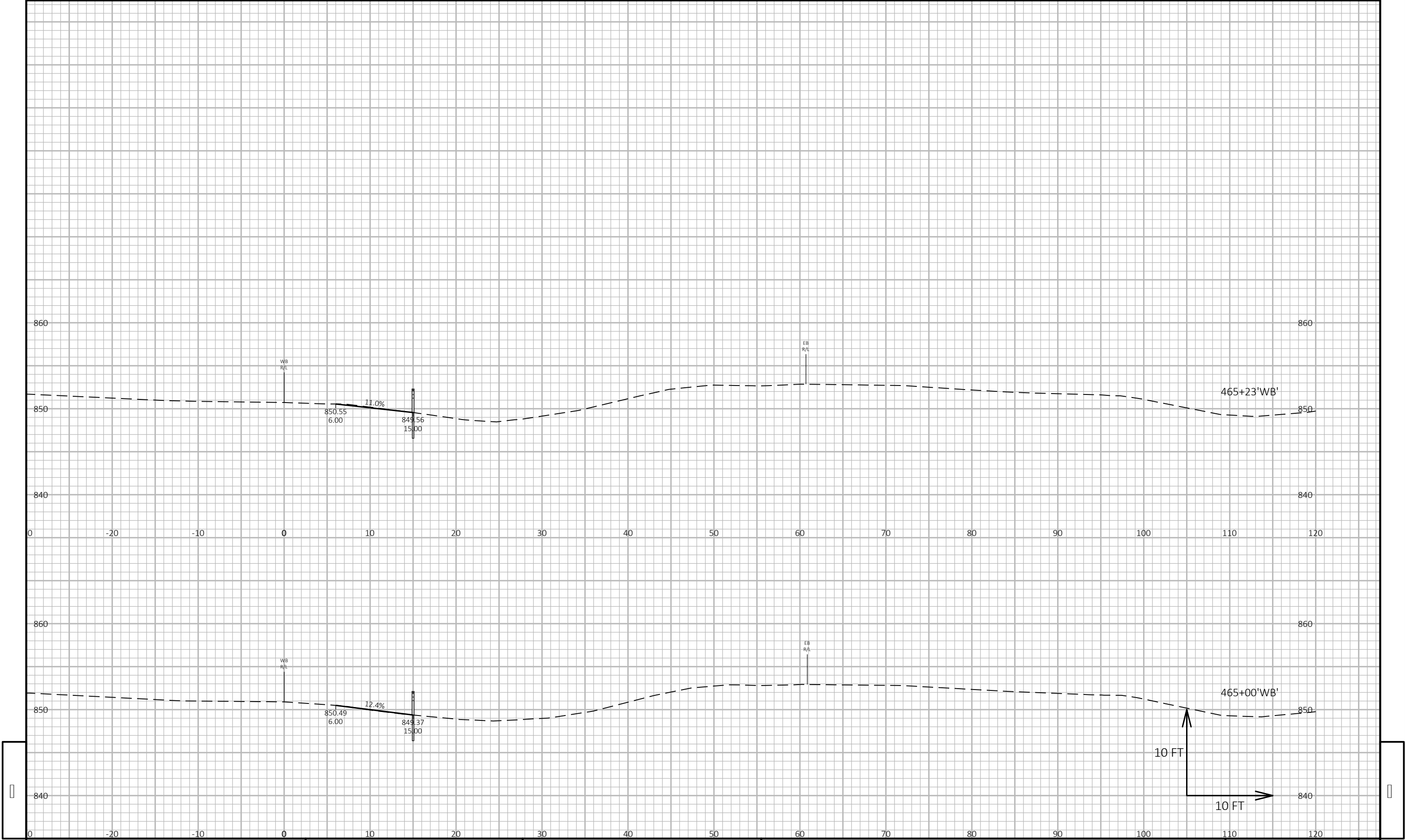




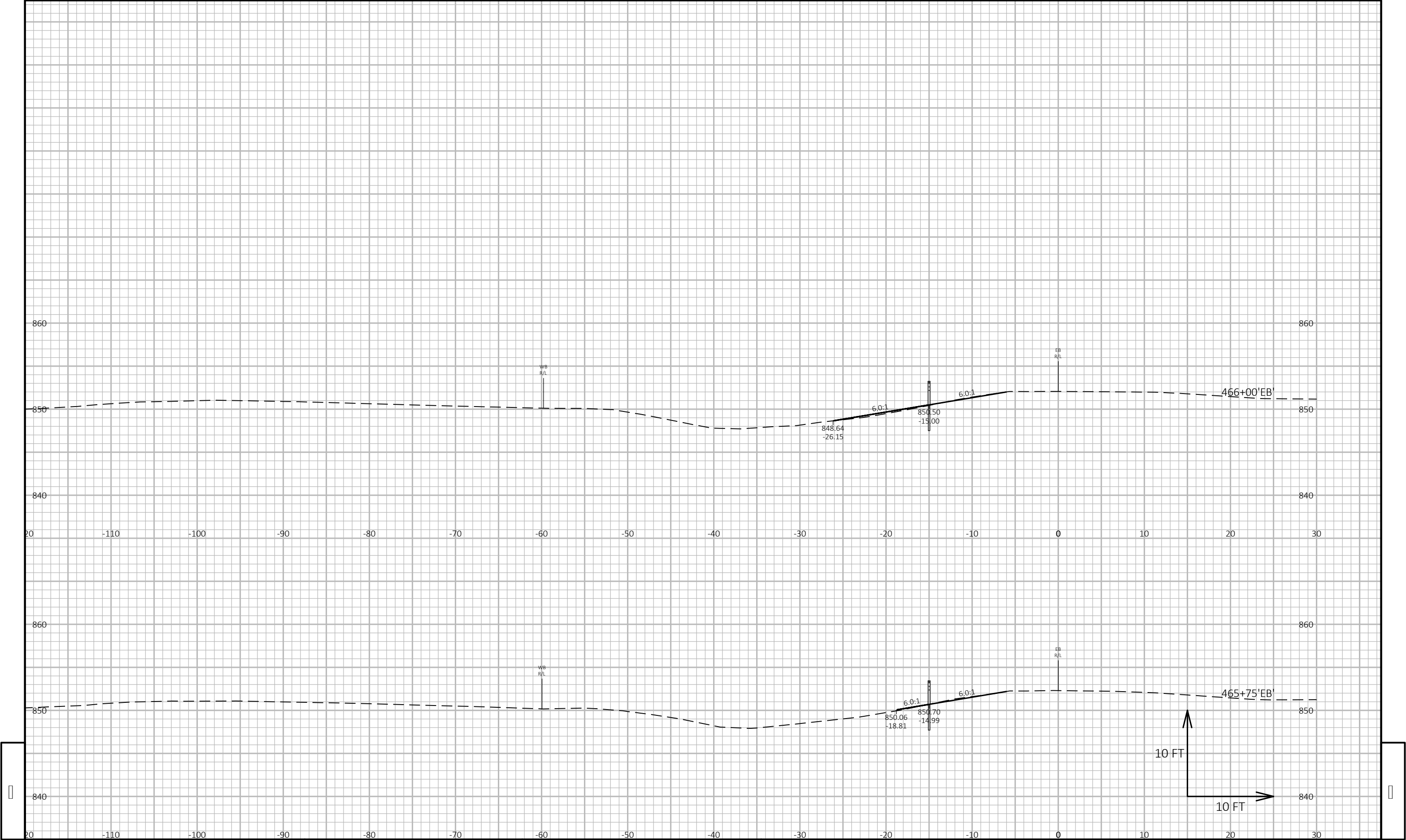
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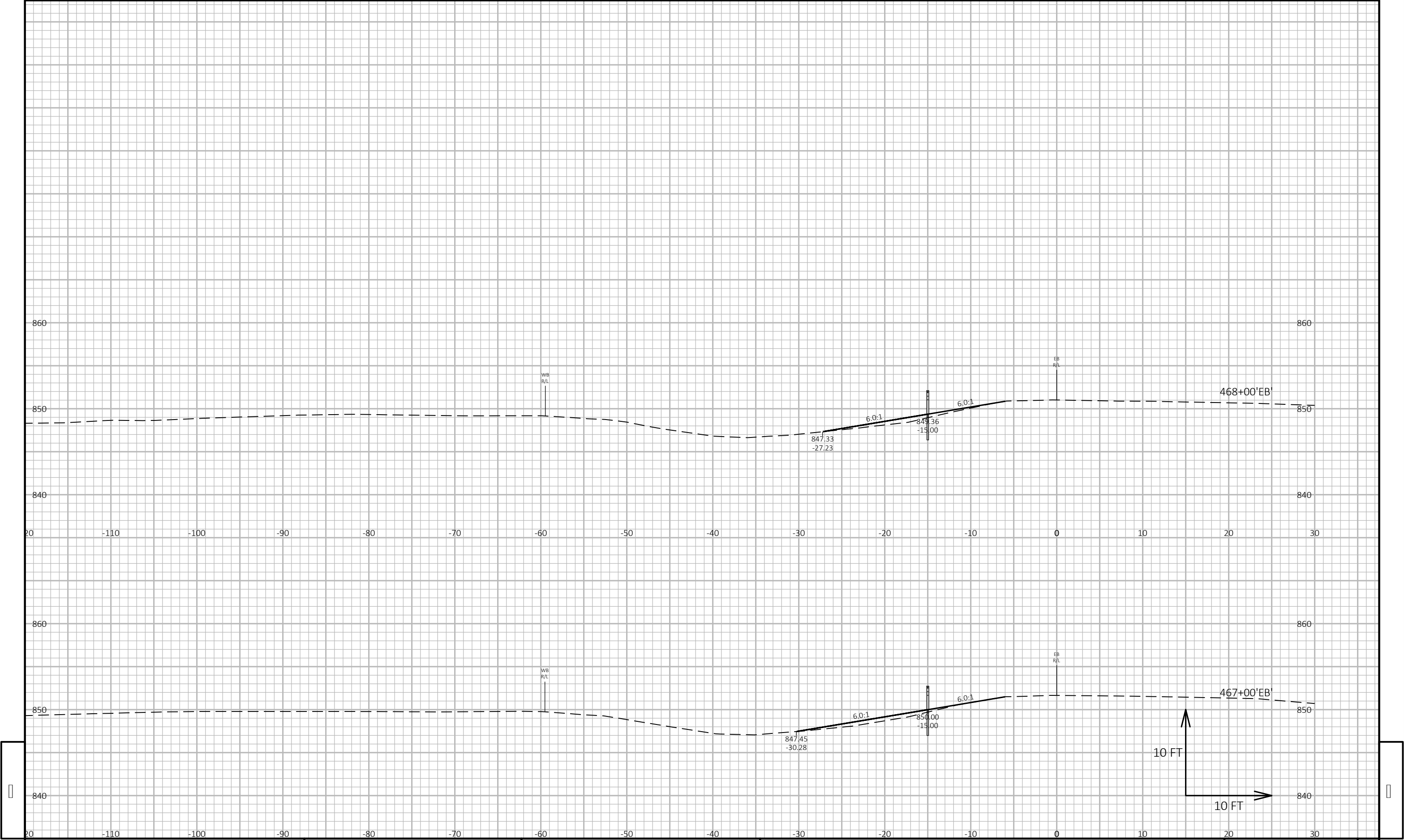


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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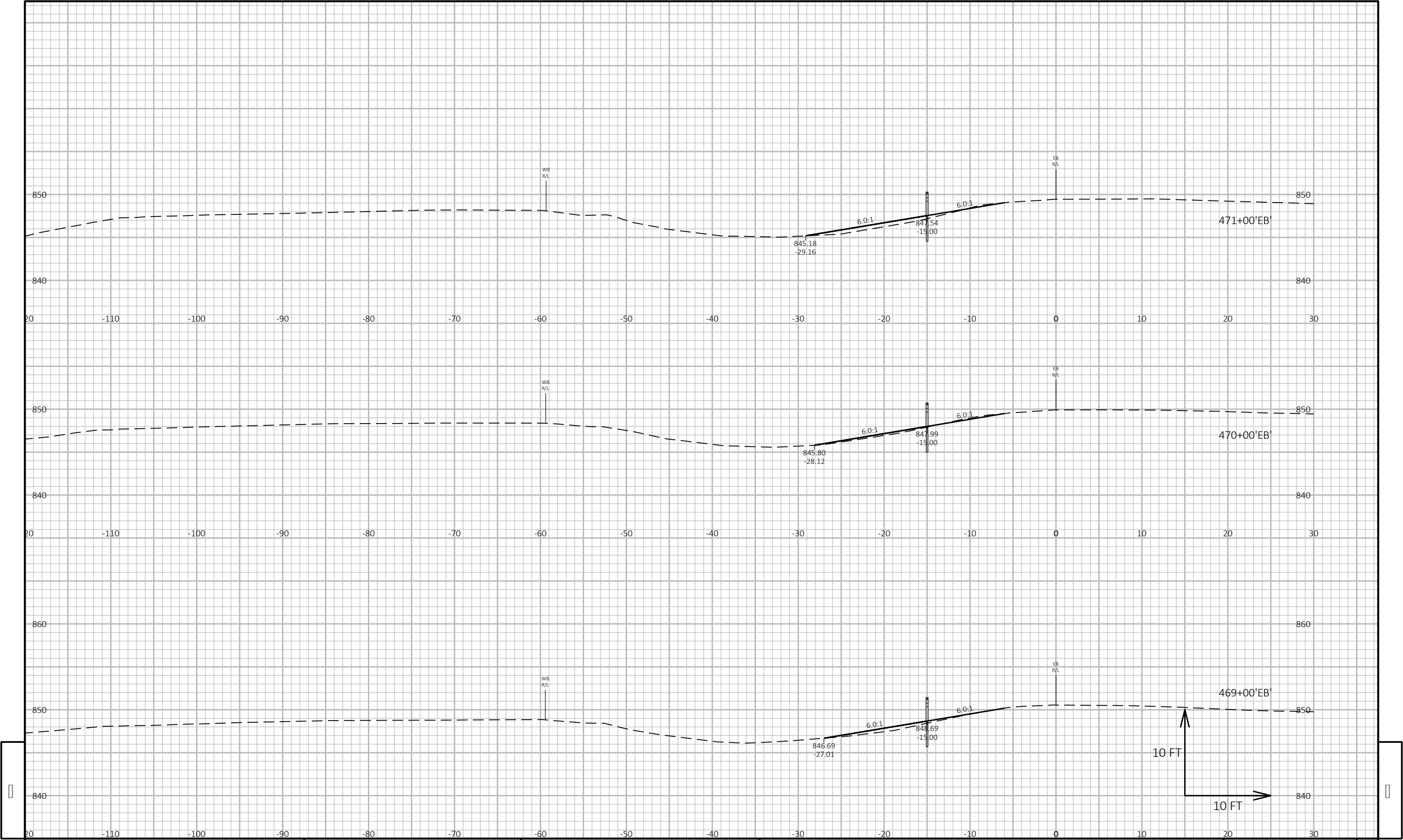


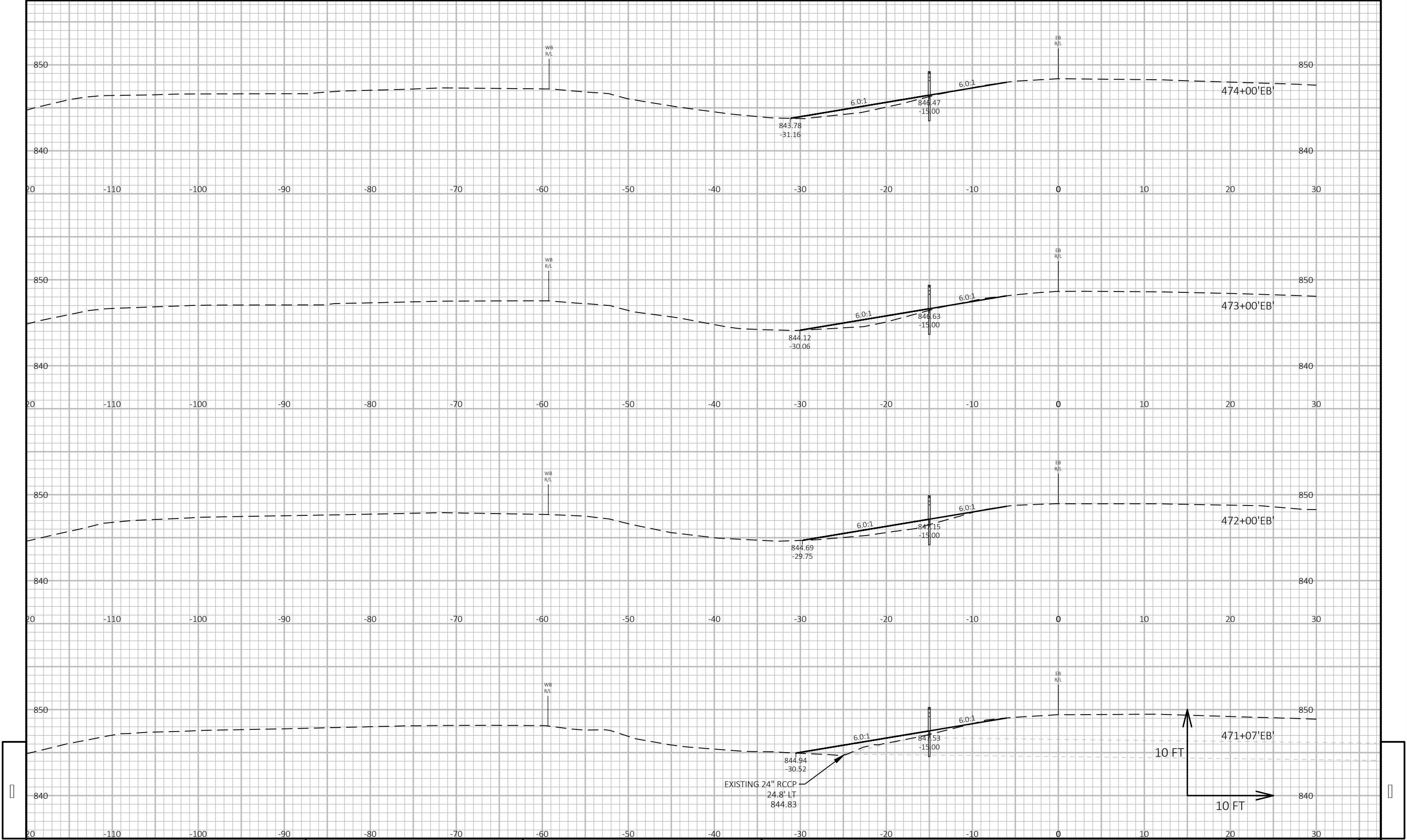
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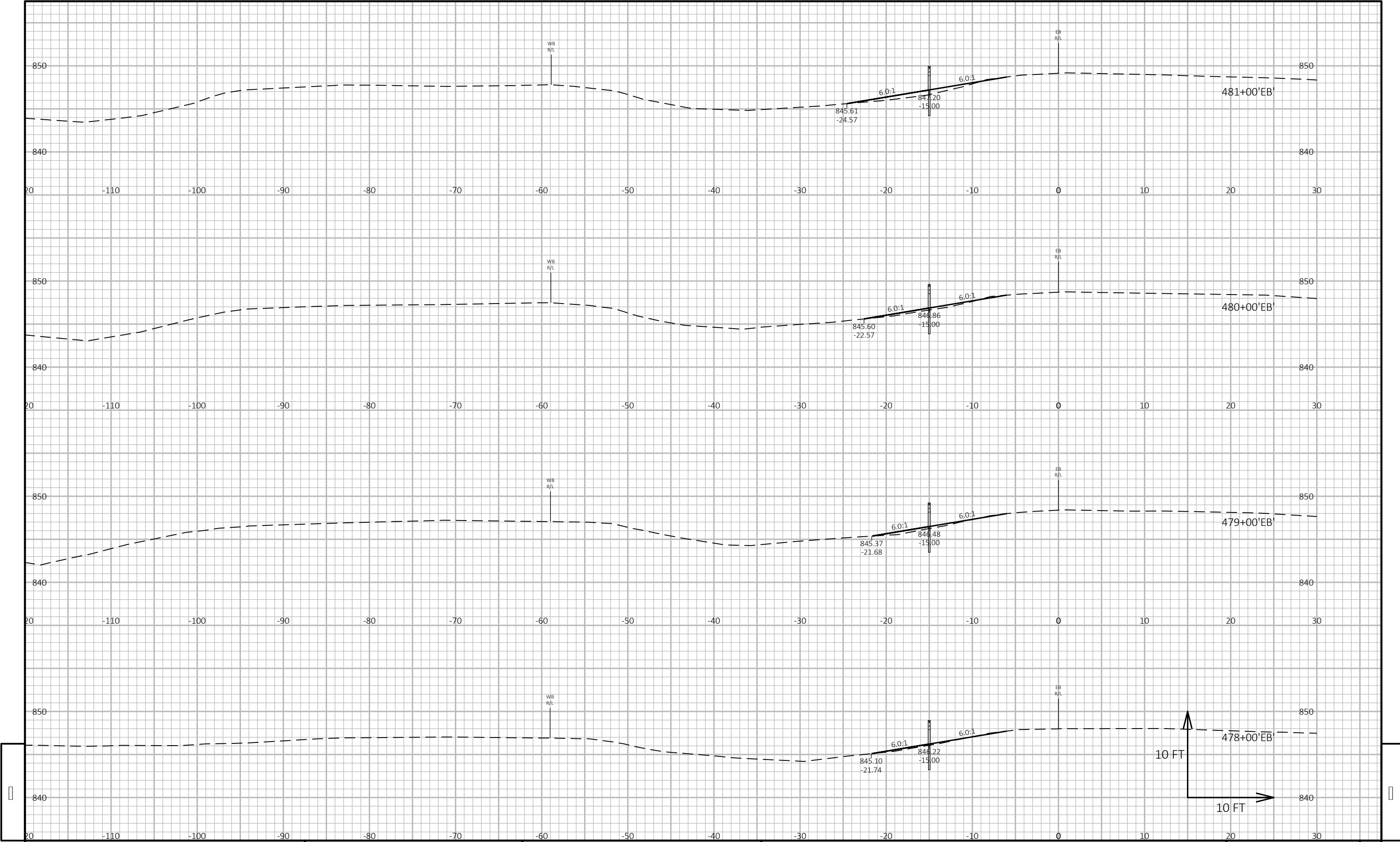




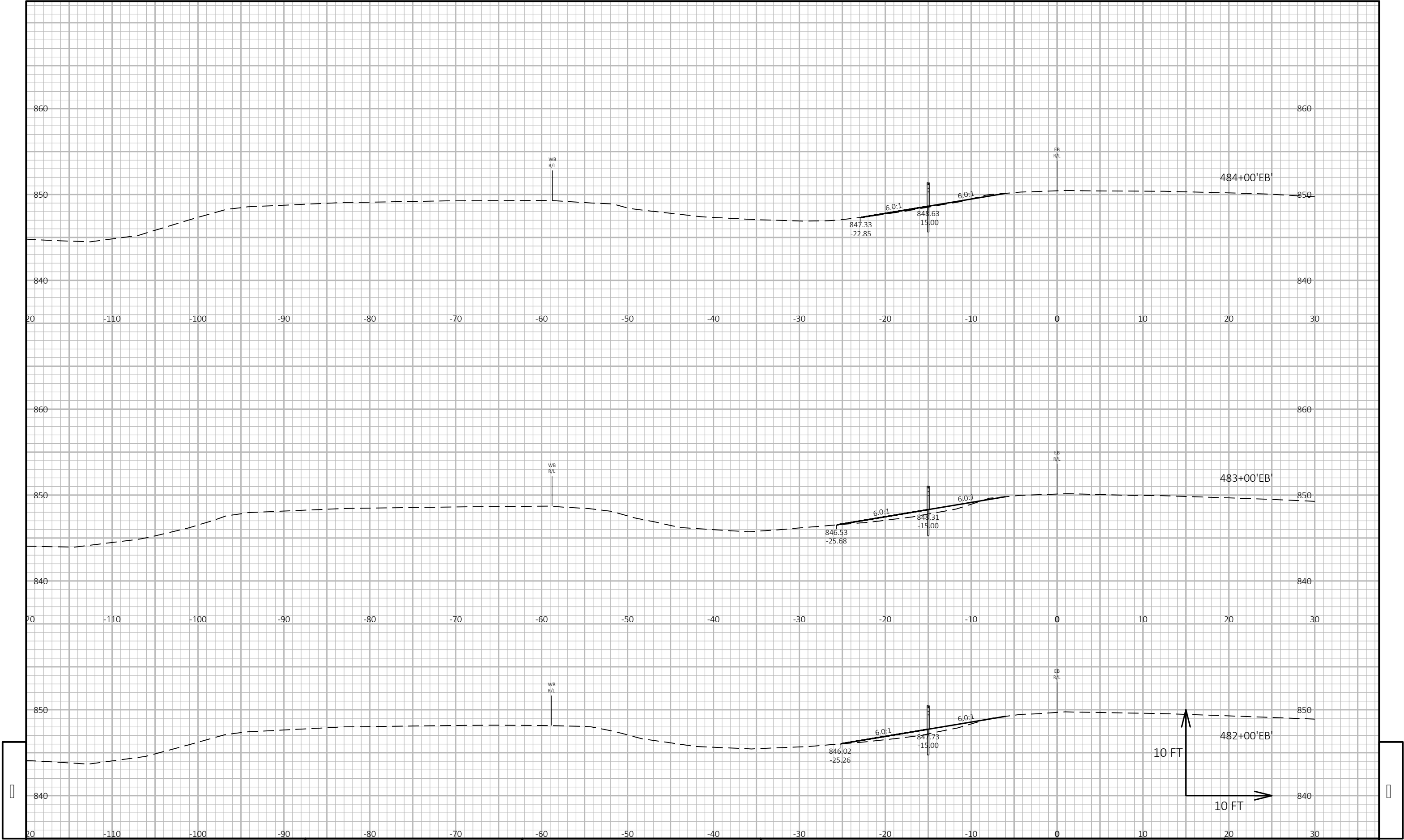
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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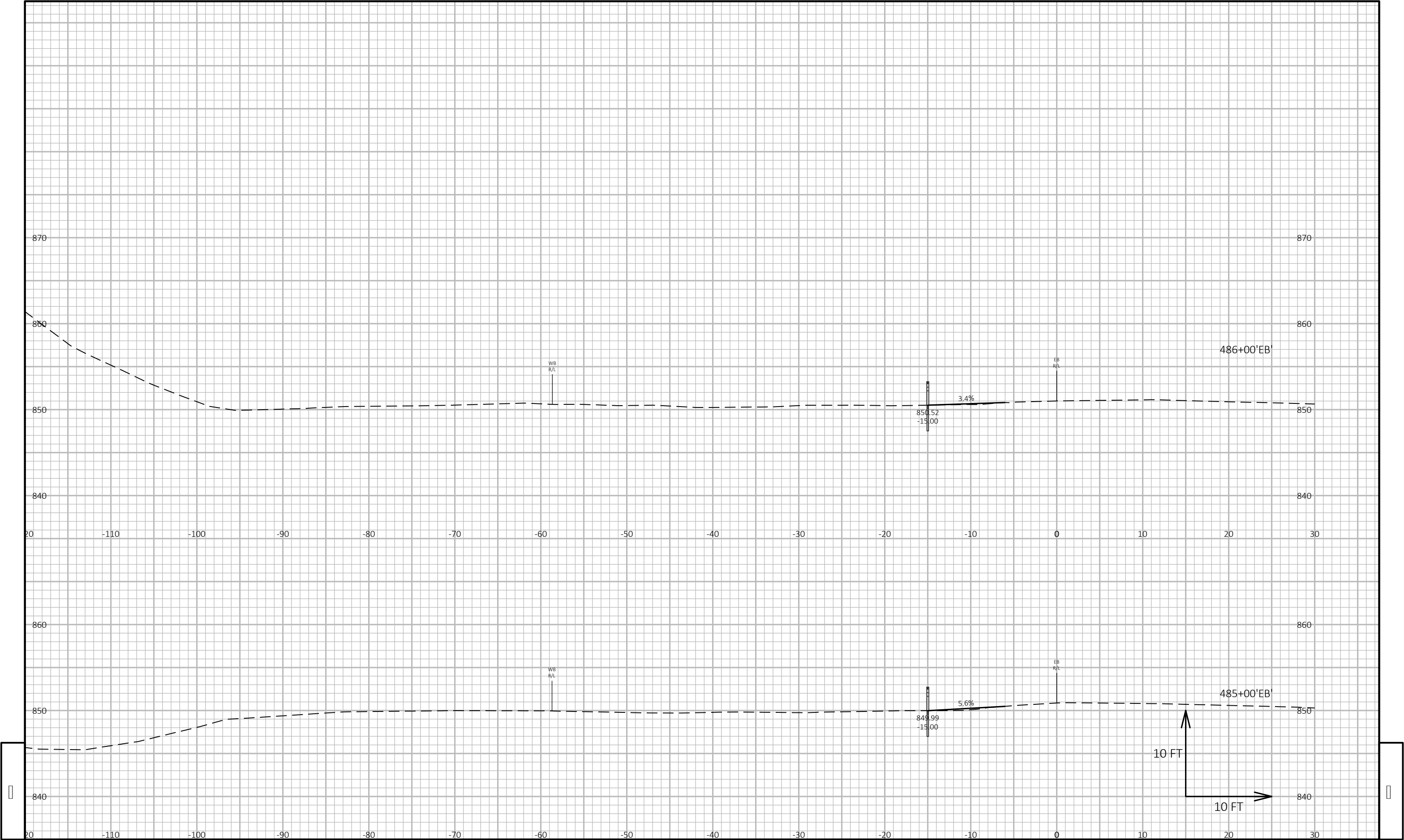


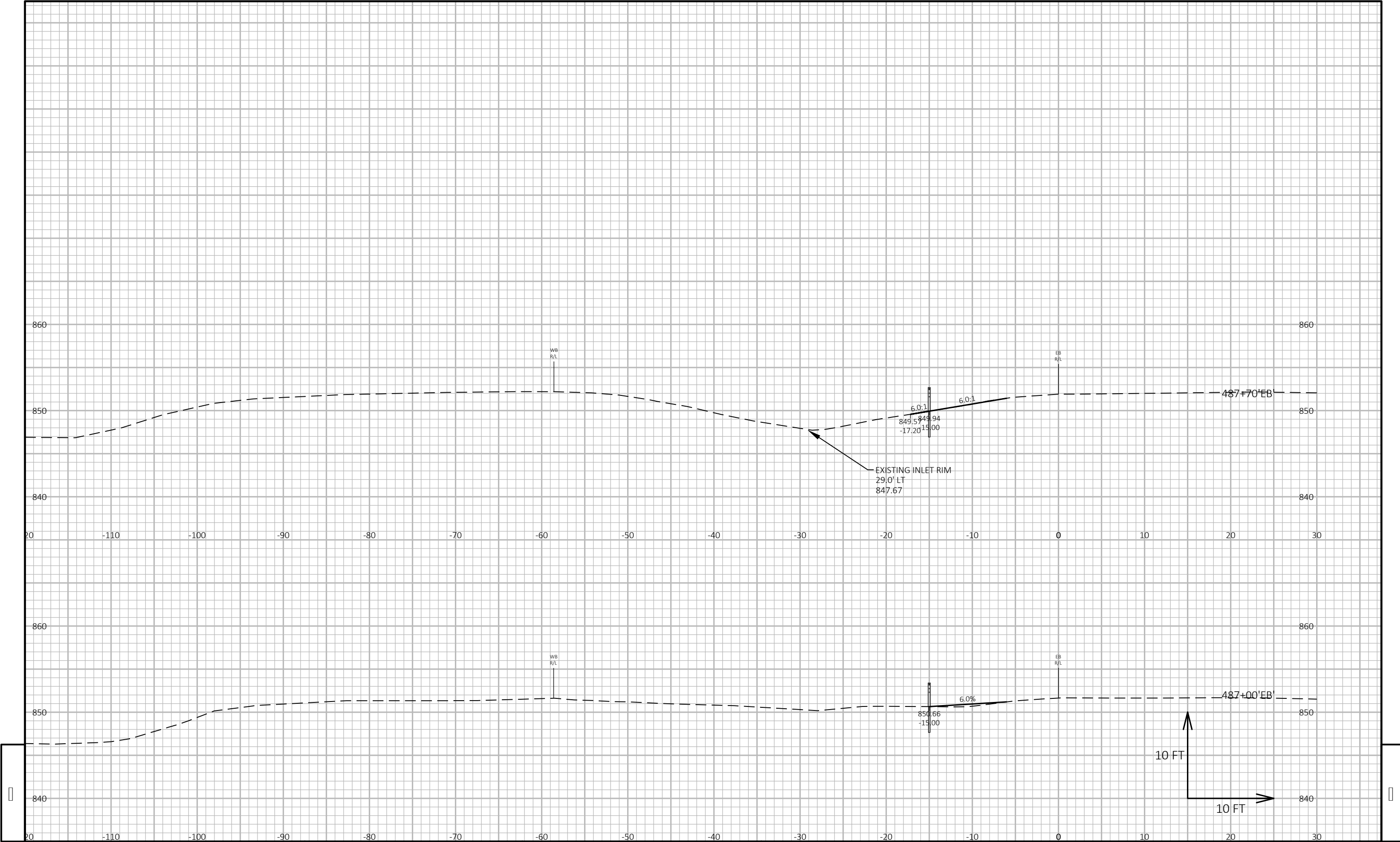


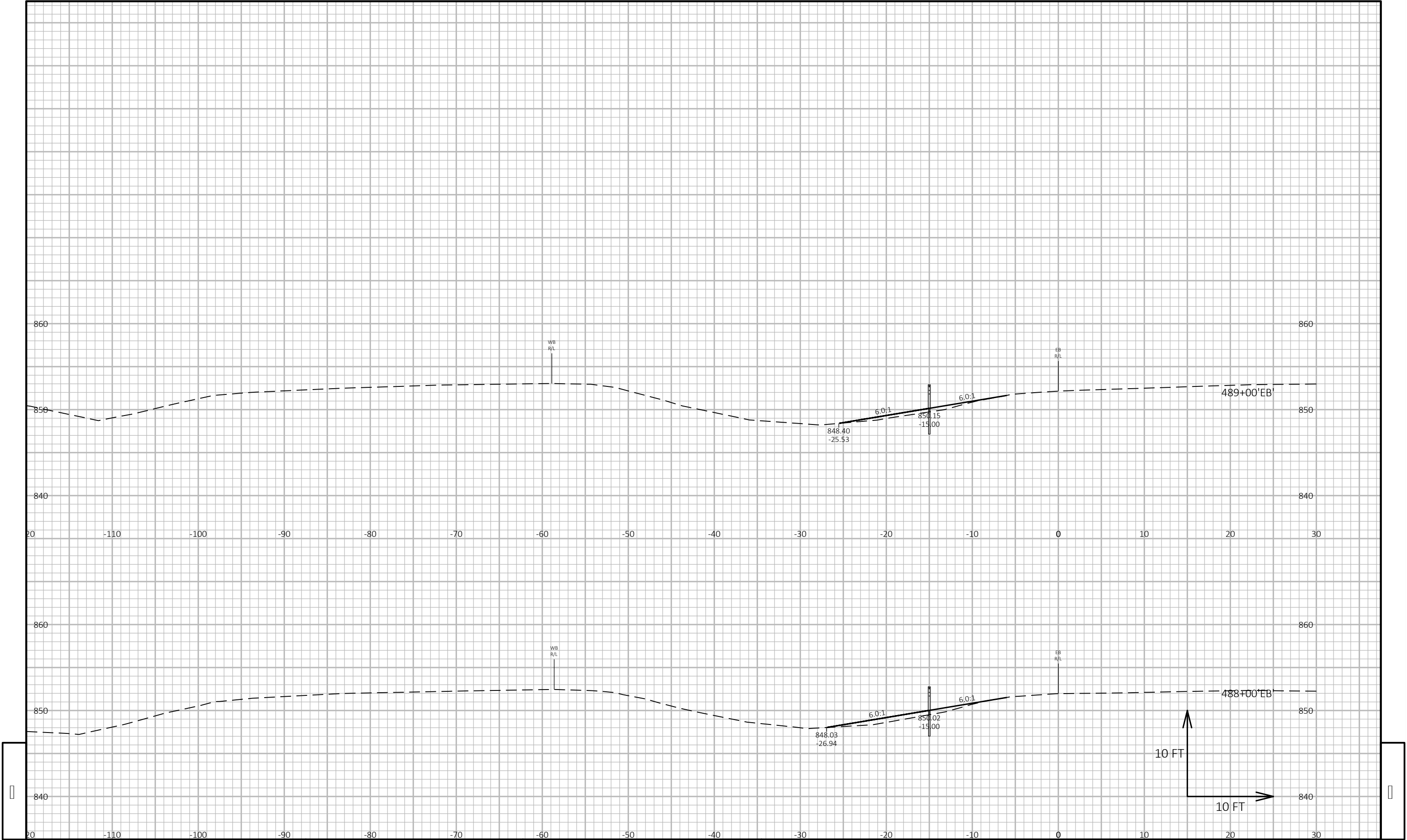
PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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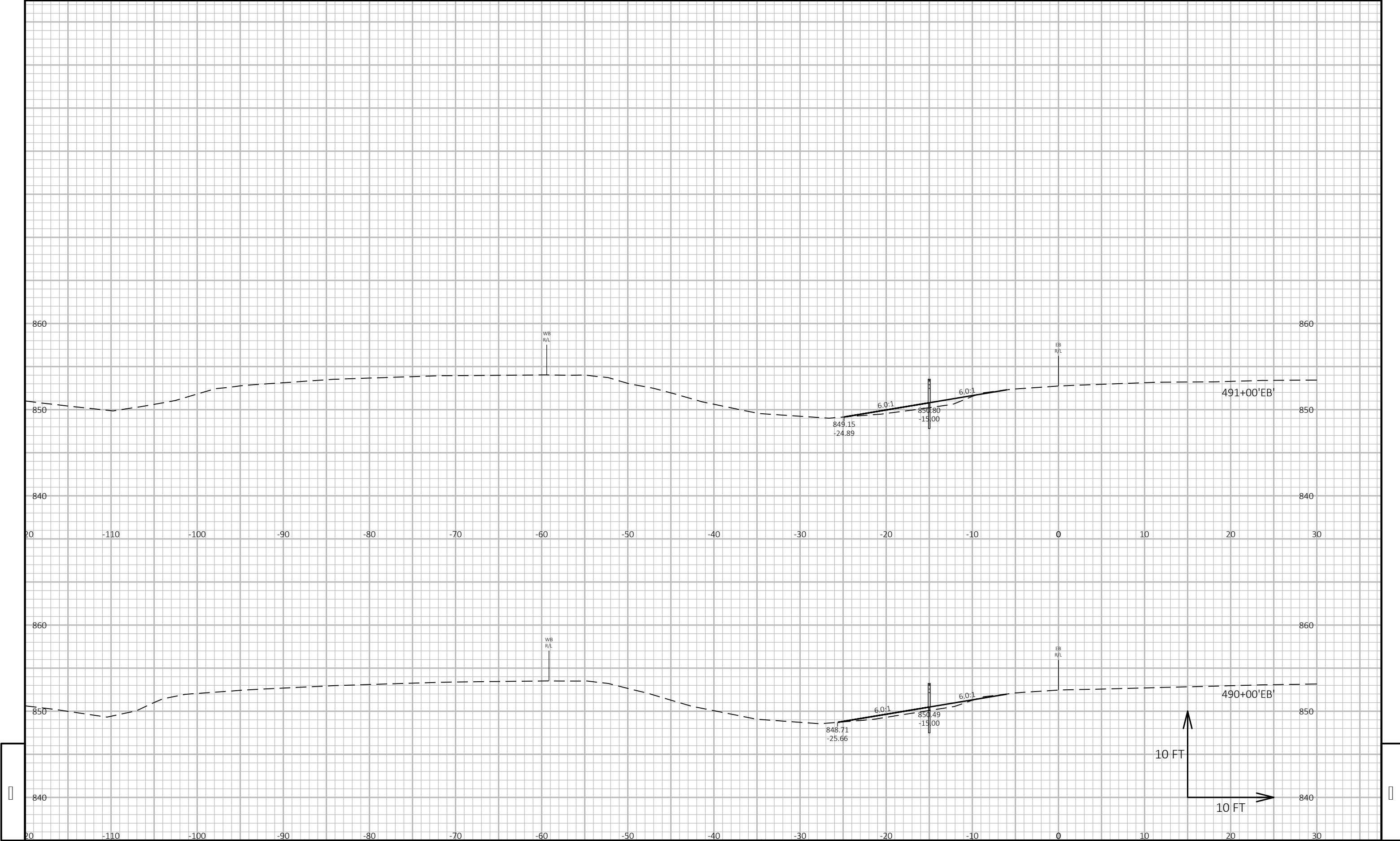


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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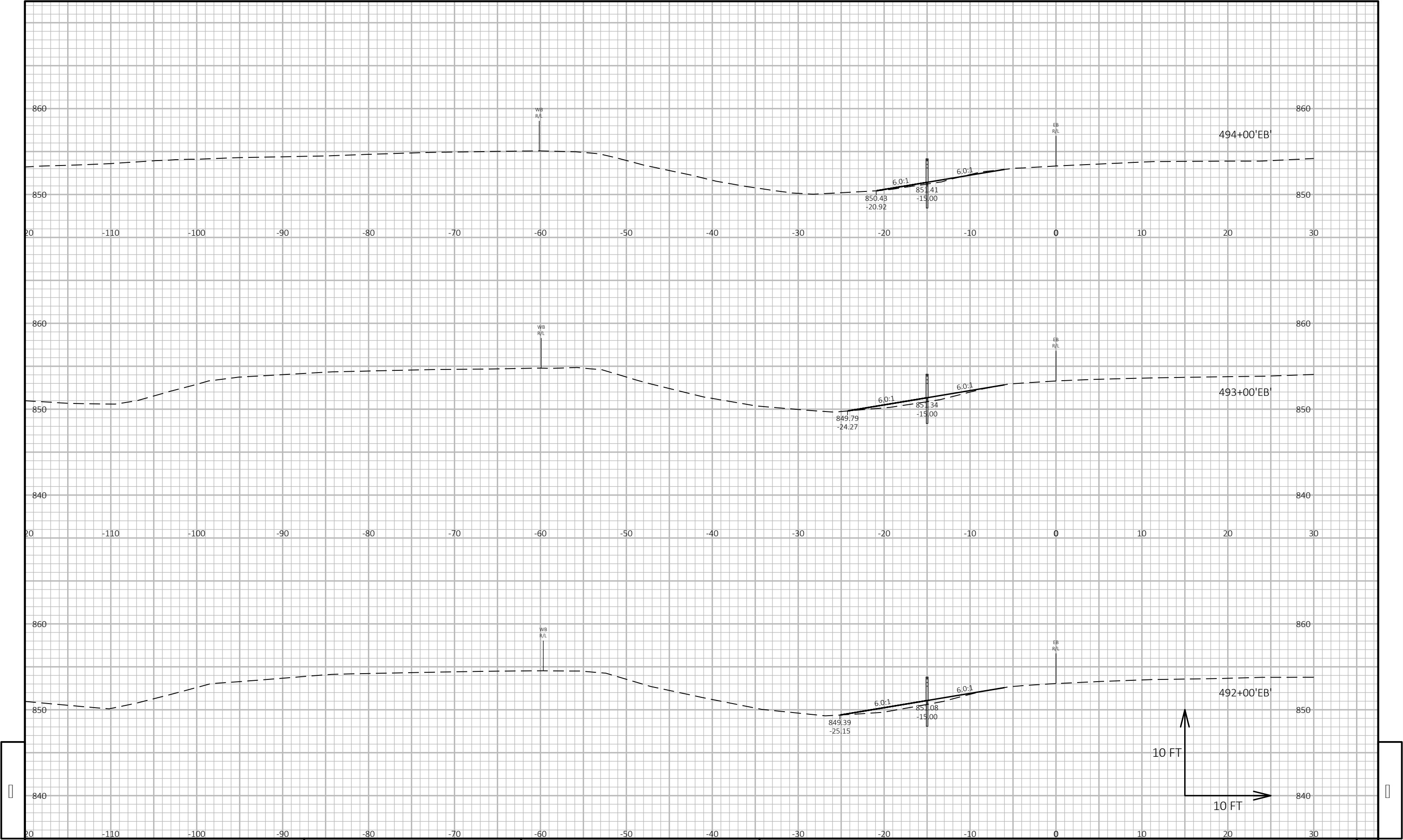


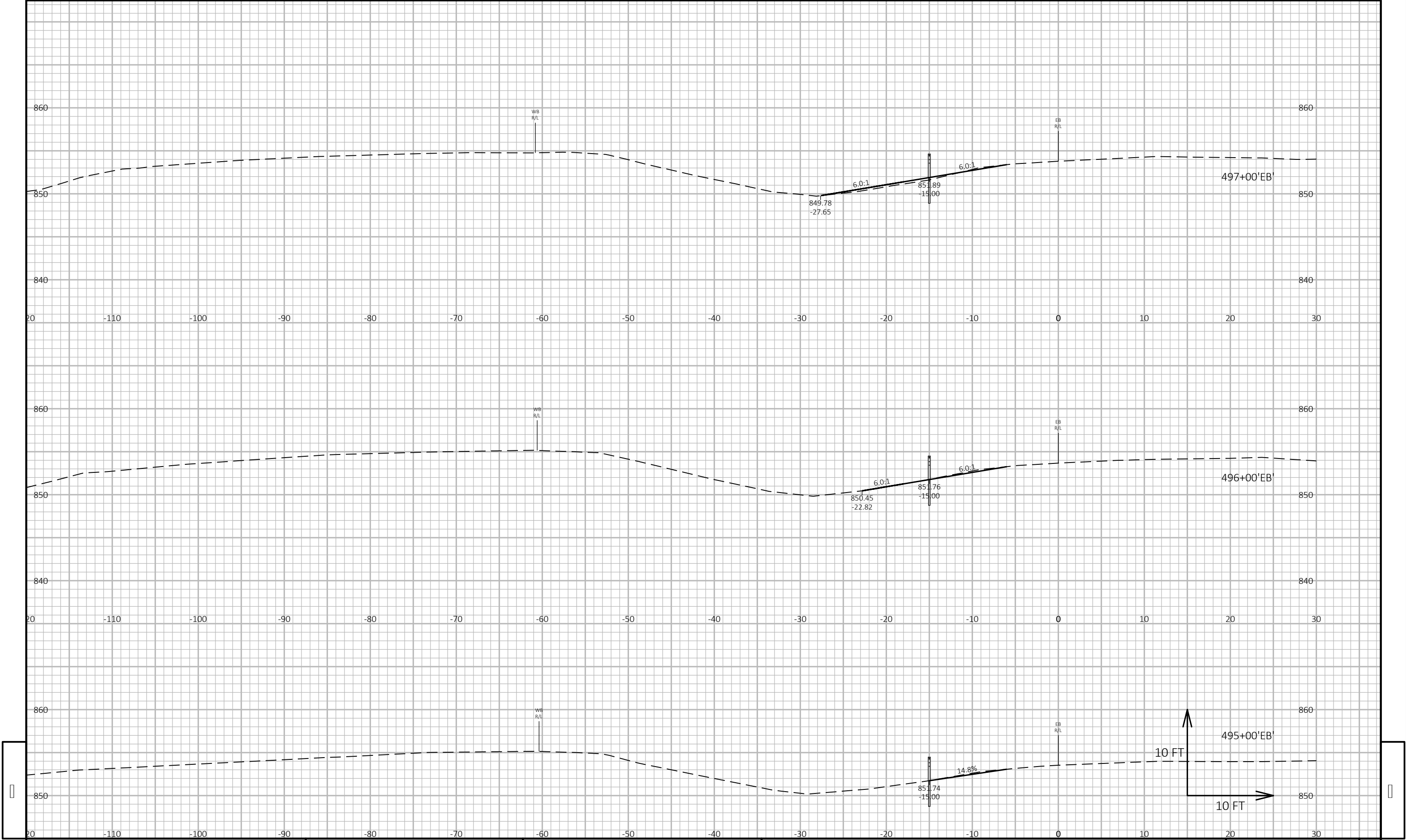






PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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PROJECT NO: 1067-02-62

HWY: IH 94

COUNTY: DANE / JEFFERSON

CROSS SECTIONS: SEGMENT 4

SHEET

E

FILE NAME : N:\PDS\C3D\10670232\SHEETS\PLAN\090201-CROSS SECTIONS\090201_XS - SEG4(FINAL - ONE SIDE).DWG
LAYOUT NAME - S4R2EB_13

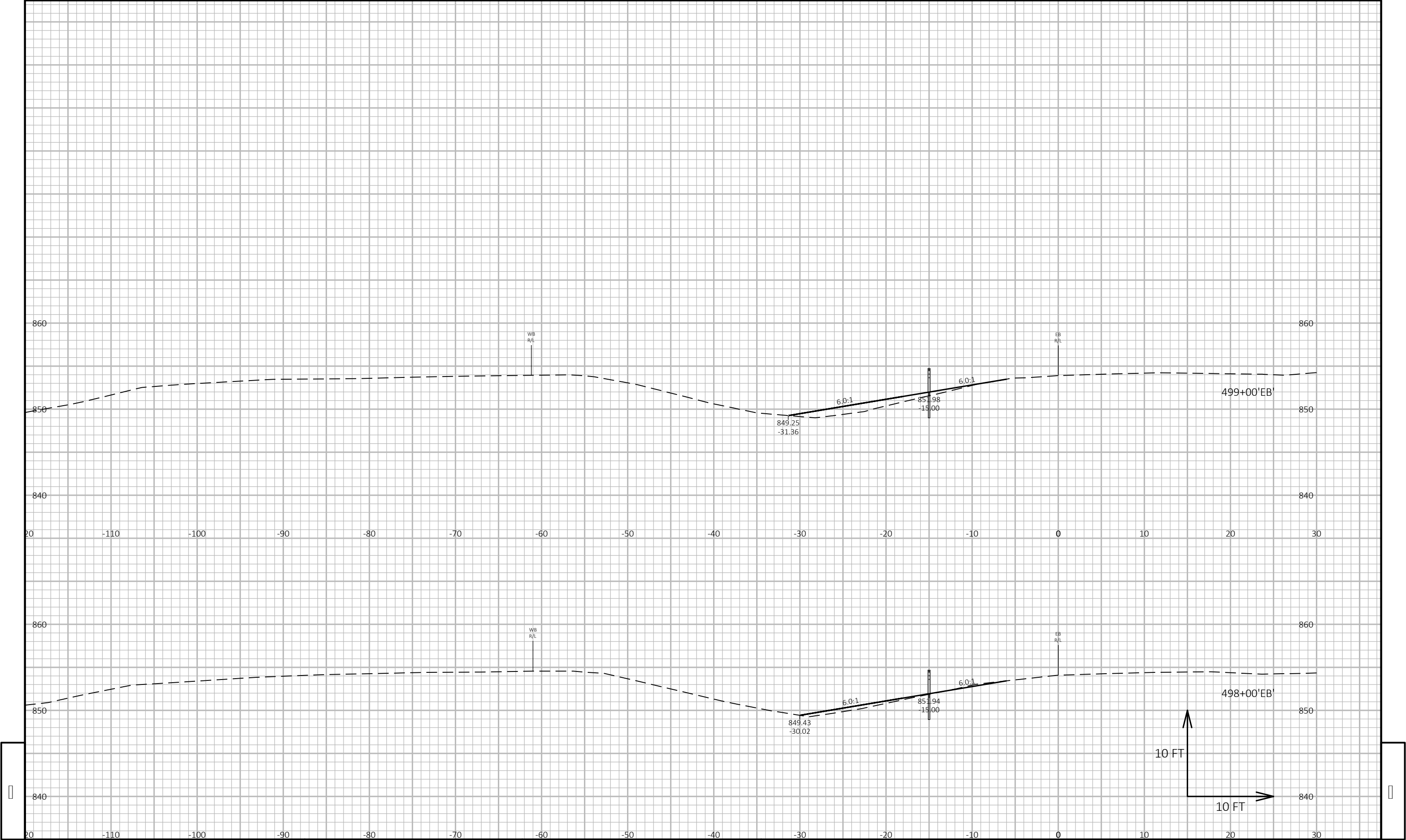
PLOT DATE : 12/19/2017 10:53 AM

PLOT BY : BAILEY, RYAN R

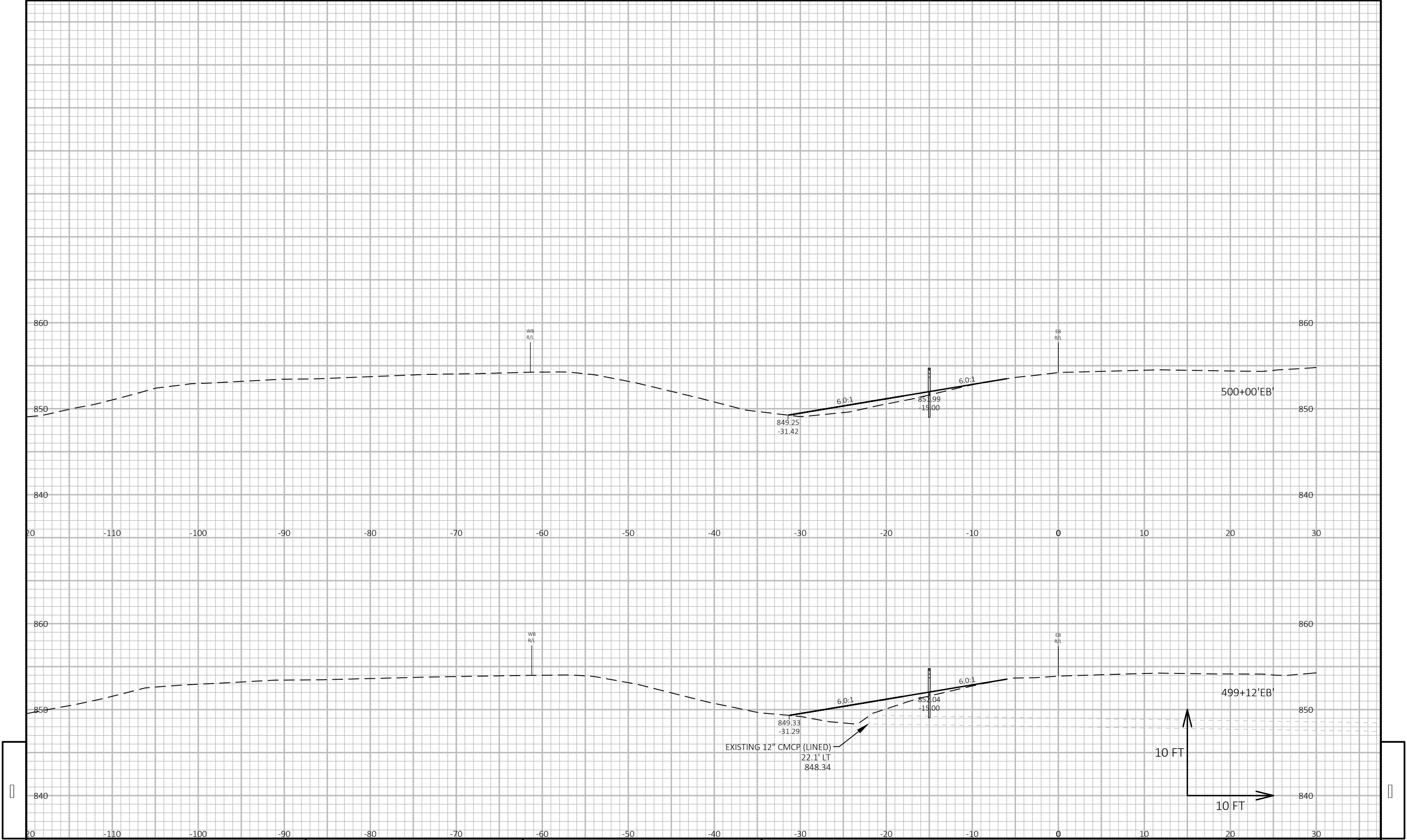
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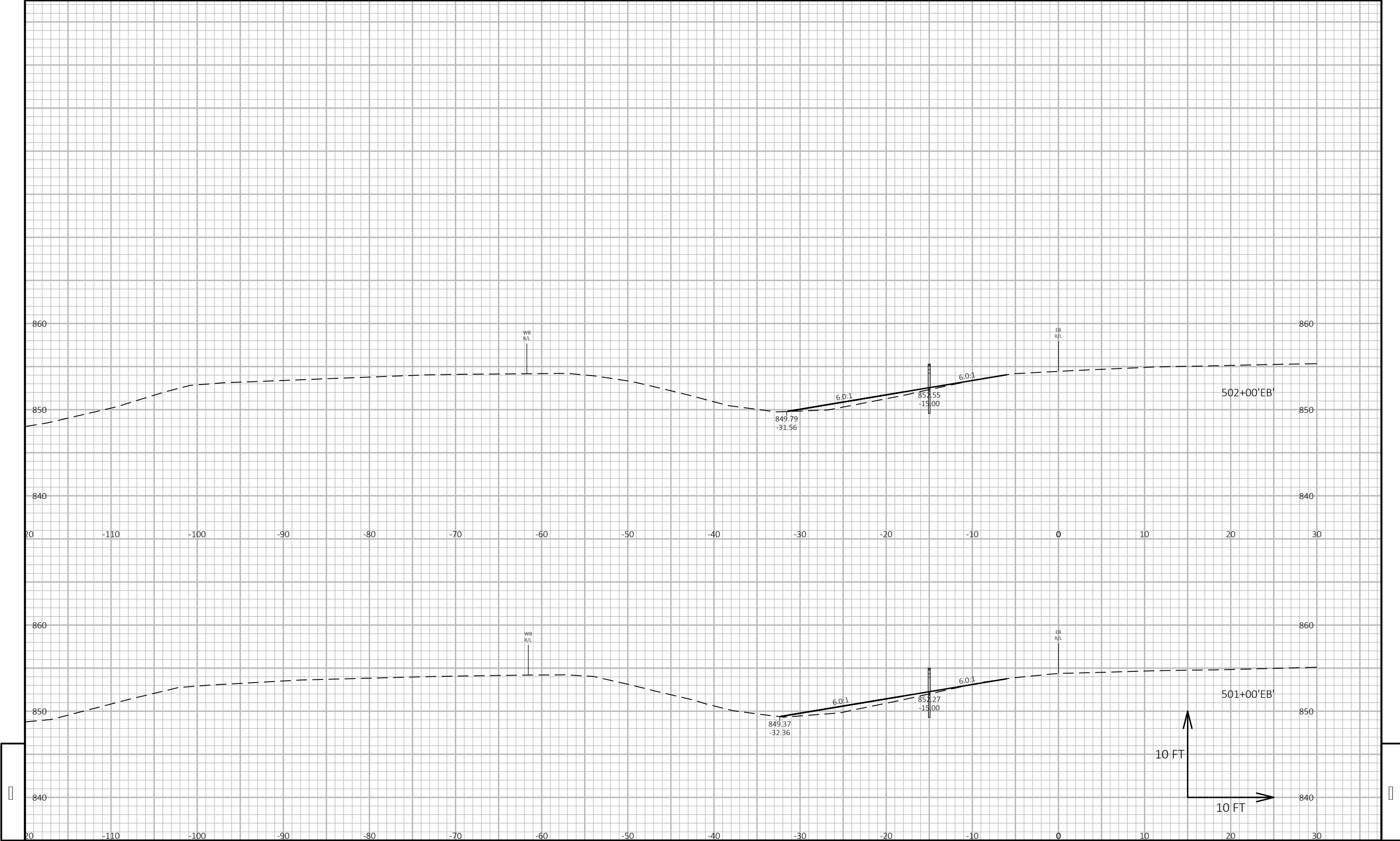
WISDOT/CADDs SHEET 49

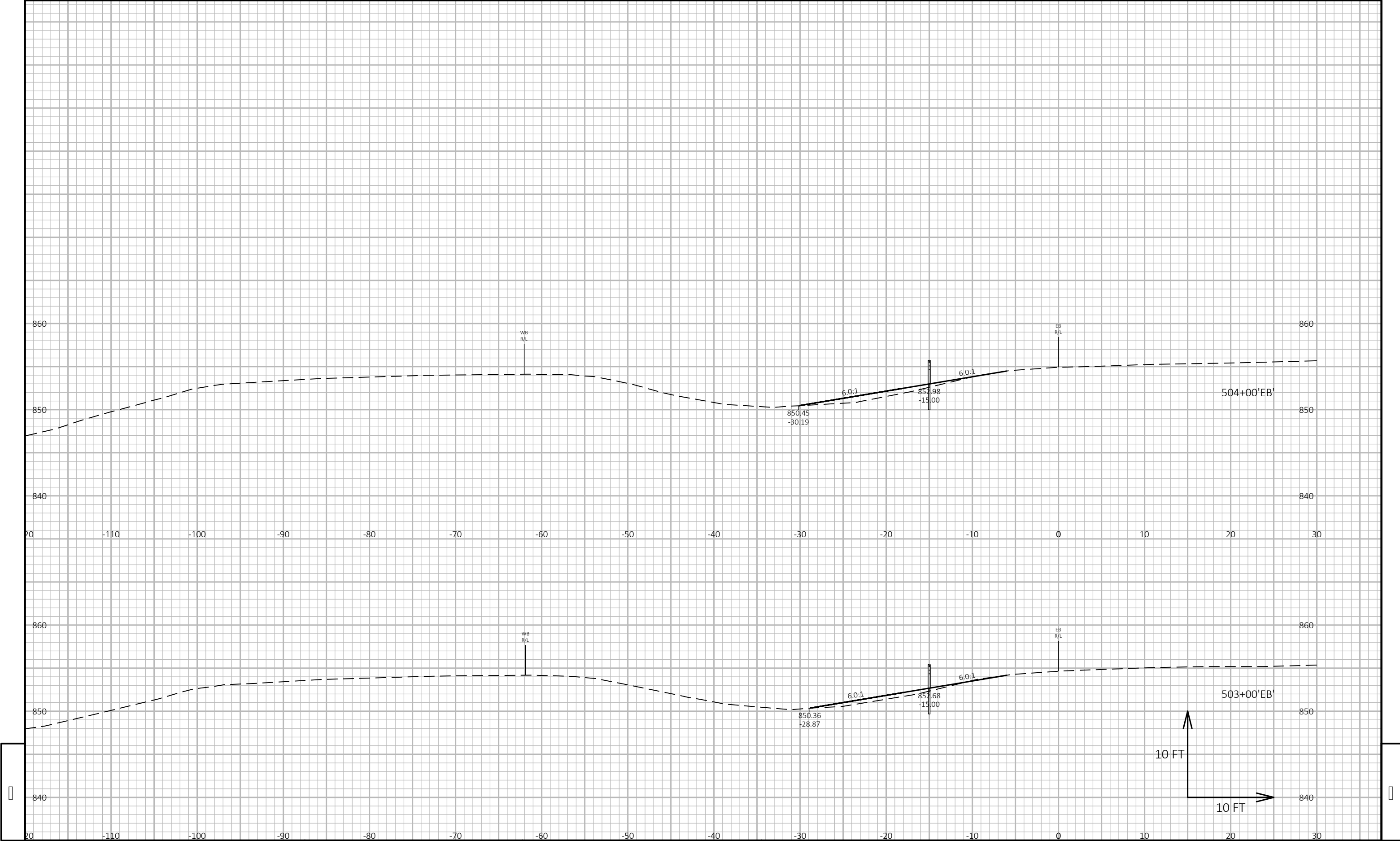


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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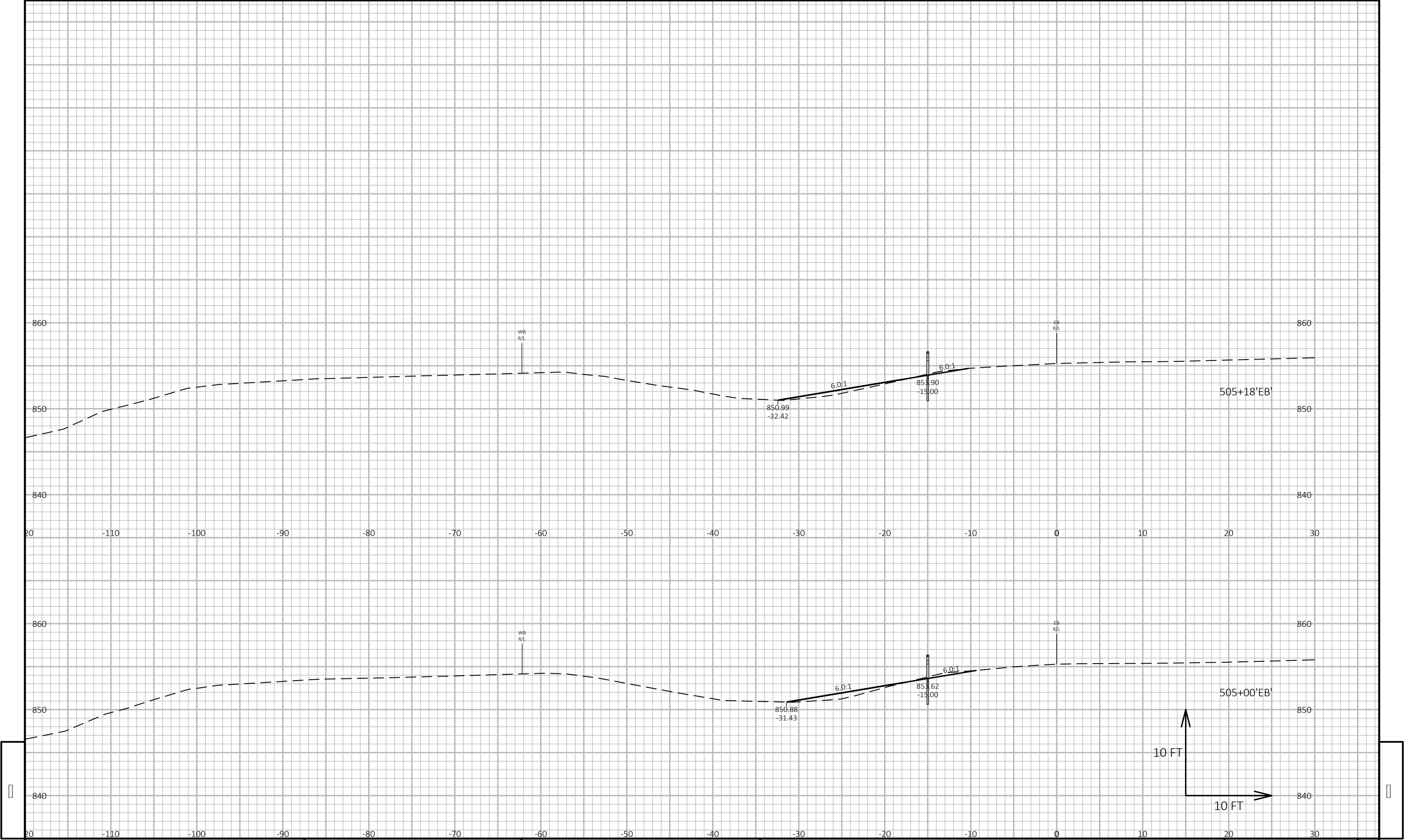


PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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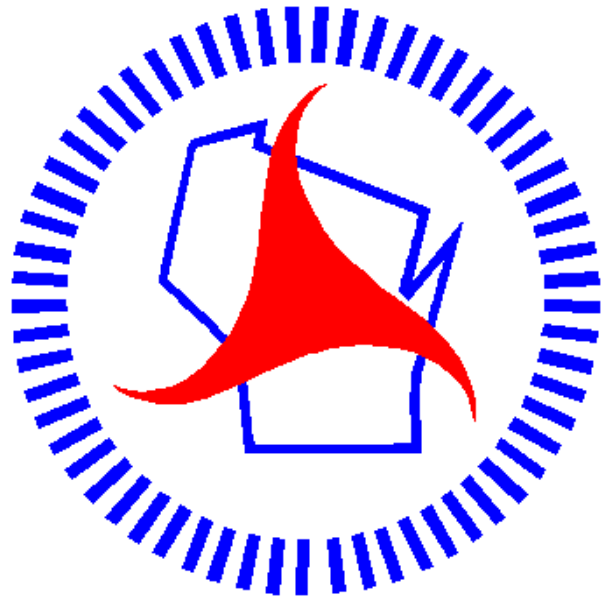




PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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PROJECT NO: 1067-02-62	HWY: IH 94	COUNTY: DANE / JEFFERSON	CROSS SECTIONS: SEGMENT 4	SHEET	E
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Wisconsin Department of Transportation

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