GENERAL NOTES

EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH M-206-2.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M213.

GRADE 60 REINFORCING STEEL IS REQUIRED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS OTHERWISE NOTED.

Ⓝ DENOTES NON COATED REINFORCING STEEL.

CONCRETE SULFATE EXPOSURE IS CLASS 0

THE FINAL FINISH FOR THE SURFACES OF THE TYPE 10 MASH BRIDGE RAIL AND CURBS SHALL BE CLASS 2. ALL OTHER EXPOSED CONCRETE SURFACES SHALL RECEIVE A CLASS 1 FINAL FINISH TO ONE FOOT BELOW THE GROUND LINE.

LEVELING PADS ARE UNLAMINATED BEARINGS. THEY SHALL BE CUT OR MOLDED FROM AASHTO ELASTOMER GRADE 3, 4, OR 5 AS DESCRIBED IN TABLES 705-1 AND 705-2 WITH A DUROMETER (SHORE "A") HARDNESS OF 60.

MATERIALS AND ITEMS THAT ARE NOT ITEMIZED IN THE SUMMARY OF QUANTITIES WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE WORK.

THE FOLLOWING TABLE GIVES THE MINIMUM STAGGERED LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. SPLICE LENGTHS SHOWN ARE FOR NON-TOP BARS (LESS THAN 12" CONCRETE CAST BELOW BAR).

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS B&D CONCRETE	1'-10"	2'-3"	3'-4"	3'-11"	4'-5"	5'-6"	6'-9"	8'-2"

THE ABOVE SPLICE LENGTHS SHALL BE INCREASED BY 20 PERCENT FOR 3 BAR BUNDLES AND 33 PERCENT FOR 4 BAR BUNDLES.

THE ABOVE SPLICE LENGTHS MAY BE REDUCED BY 20% WHEN 3" OF CLEAR COVER EXISTS AND BAR SPACING IS 6" OR GREATER ON CENTER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

E.F. = EACH FACE
F.F. = FAR FACE
N.F. = NEAR FACE
B.F. = BACK FACE
C.L. = CENTERLINE
P.G. = PROFILE GRADE

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

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B2	GENERAL LAYOUT
B3	CONSTRUCTION & FOUNDATION LAYOUT
B4	ENGINEERING GEOLOGY
B5	BRIDGE HYDRAULIC INFORMATION
B6	ABUTMENT 1 PLAN AND ELEVATION
B7	ABUTMENT 4 PLAN AND ELEVATION
B8	ABUTMENT AND WINGWALL DETAILS
B9	PIER 2 PLAN AND ELEVATION
B10	PIER 3 PLAN AND ELEVATION
B11	PIER DETAILS
B12	RIPRAP DETAILS
B13	GIRDER DETAILS
B14	SUPERSTRUCTURE DETAILS (1 OF 2)
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B16	BRIDGE RAIL TYPE 10MASH
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B20	BRIDGE DECK GEOMETRY (1 OF 3)
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B22	BRIDGE DECK GEOMETRY (3 OF 3)
B23	ROADWAY APPROACHES

811
FOR BURIED UTILITY INFORMATION
THREE (3) BUSINESS DAYS
BEFORE YOU DIG
CALL 811
(or 1-800-922-1987)
UTILITY NOTIFICATION
CENTER OF COLORADO (UNCC)
www.uncc.org

BRIDGE DESCRIPTION

THREE SPAN (70', 86', 70') BRIDGE

40'-0" ROADWAY CURB TO CURB

DESIGN DATA

AASHTO, 9TH EDITION LRFD WITH CURRENT INTERIMS

DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN

LIVE LOAD: HL-93 (DESIGN TRUCK OR TANDEM, AND DESIGN LANE LOAD)
DEAD LOAD: ASSUMES 36 LBS. PER SQ. FT FOR BRIDGE DECK OVERLAY
ASSUMES 5 LBS. PER SQ. FT FOR FUTURE UTILITIES

REINFORCED CONCRETE:

CLASS D CONCRETE: f'c = 4,500 psi
REINFORCING STEEL: fy = 60,000 psi

STRUCTURAL STEEL: AASHTO M270 (ASTM A709) GRADE 36 fy = 36,000 PSI.
AASHTO M270 (ASTM A709) GRADE 50 fy = 50,000 PSI.

PRECAST PRESTRESSED CONCRETE:
CLASS PS CONCRETE f'c = (SEE DETAILS)
f's = 270,000 PSI

BRIDGE SUMMARY OF QUANTITIES (FOR INFORMATION ONLY)

ITEM NUMBER	ITEM DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL
202-00400	Removal of Bridge	EACH	1.0		1.0
206-00000	Structure Excavation	CY	2235.0		2235.0
206-00100	Structure Backfill (Class 1)	CY	528.0		528.0
206-00360	Mechanical Reinforcement of Soil	CY	528.0		528.0
206-00510	Filter Material (Class A)	CY	502.0		502.0
403-34721	Hot Mix Asphalt (Grading SX) (75) (PG 58-28)	EACH		169.0	169.0
502-00460	Pile Tip	EACH	50.0		50.0
502-02010	Dynamic Pile Test	EACH	4.0		4.0
502-11253	Steel Piling (HP 12x53)	LF	1320.0		1320.0
502-11274	Steel Piling (HP 12x74)	LF	1820.0		1820.0
506-00418	Soil Riprap (18 Inch)	CY	1611.0		1611.0
515-00120	Waterproofing (Membrane)	SY	1020.0		1020.0
601-03040	Concrete Class D (Bridge)	CY	186.2	265.5	451.7
601-40300	Structural Concrete Coating	SY		688.0	688.0
602-00020	Reinforcing Steel (Epoxy Coated)	LB	16370.0	53912.0	70282.0
606-01400	Transition Type BR10M-GR3	EACH		4.0	4.0
606-11035	Bridge Rail Type 10 MASH	LF		459.0	459.0
618-01994	Prestressed Concrete Box (Depth 32" Through 48")	SF		9162.0	9162.0

SEISMIC DESIGN CRITERIA

EARTHQUAKE DESIGN METHOD: GENERAL PROCEDURE
LATITUDE: 38.8625
LONGITUDE: 104.3875
AASHTO SPECTRUM FOR 7% PE IN 75 YEARS (1000YR RETURN PERIOD)

PERIOD (Sec)	Sa (g)	
0.0	0.076	PGA - SITE CLASS B
0.2	0.155	Ss - SITE CLASS B
1.0	0.056	S1 - SITE CLASS B

SPECTRAL RESPONSE ACCELERATIONS:
As = Fpga*PGA, SDs = Fa*Ss, AND SD1 = Fv*S1
Fpga = 1.60, Fa = 1.60, Fv = 2.4

PERIOD (Sec)	Sa (g)	
0.0	0.122	As - SITE CLASS D
0.2	0.165	SDs - SITE CL
1.0	0.089	SD1 - SITE CL

OPERATIONAL CLASS:

SEISMIC DESIGN ZONE 1

COLORADO REGISTERED DANIEL J. BECHTOLD 29435 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	09/01/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	DJB
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Sheet Revisions		

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No Revisions:
Revised:
Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT
GENERAL INFORMATION

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B1 of B23

Project No./Code: 500331
–
Sheet Number 51

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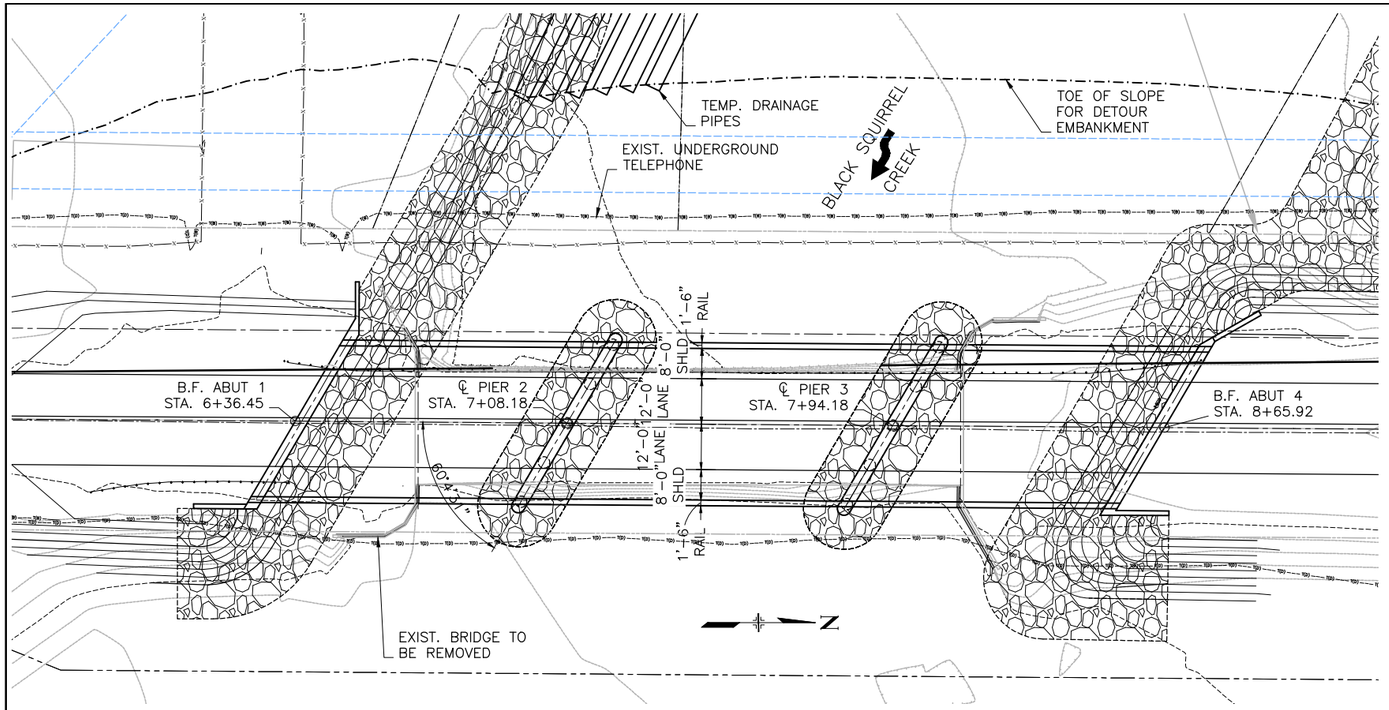

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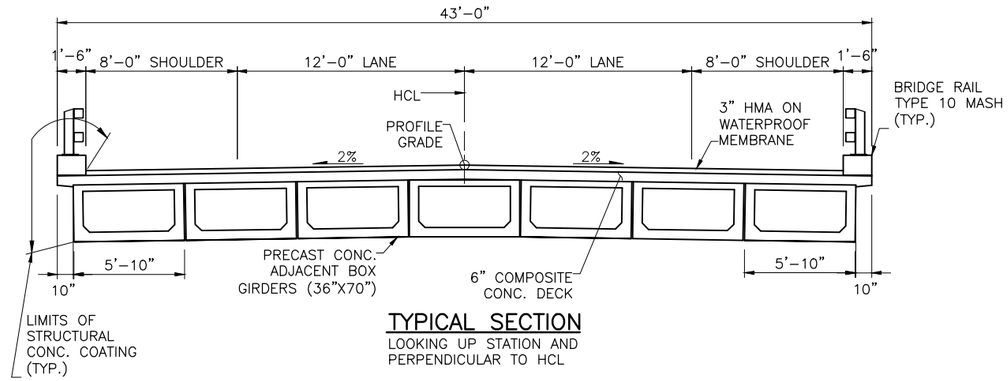
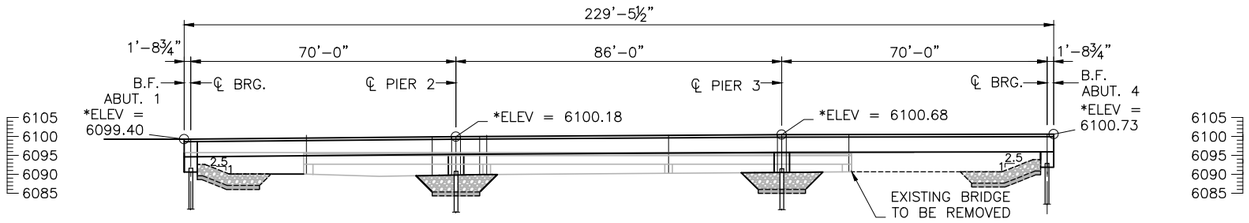


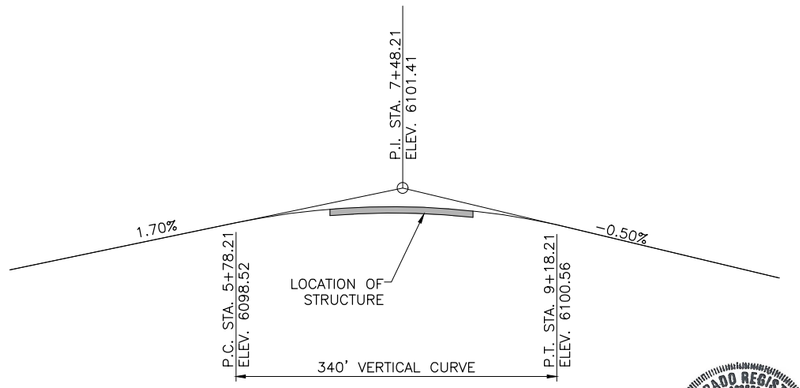
TYPICAL SECTION

LOOKING UP STATION AND PERPENDICULAR TO HCL



SECTION

SECTION TAKEN AT HCL/PGL
*FINISHED GRADE (TOP OF HMA)



PROFILE GRADE

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

GENERAL LAYOUT

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B2 of B23

Project No./Code	
500331	
–	
Sheet Number	52

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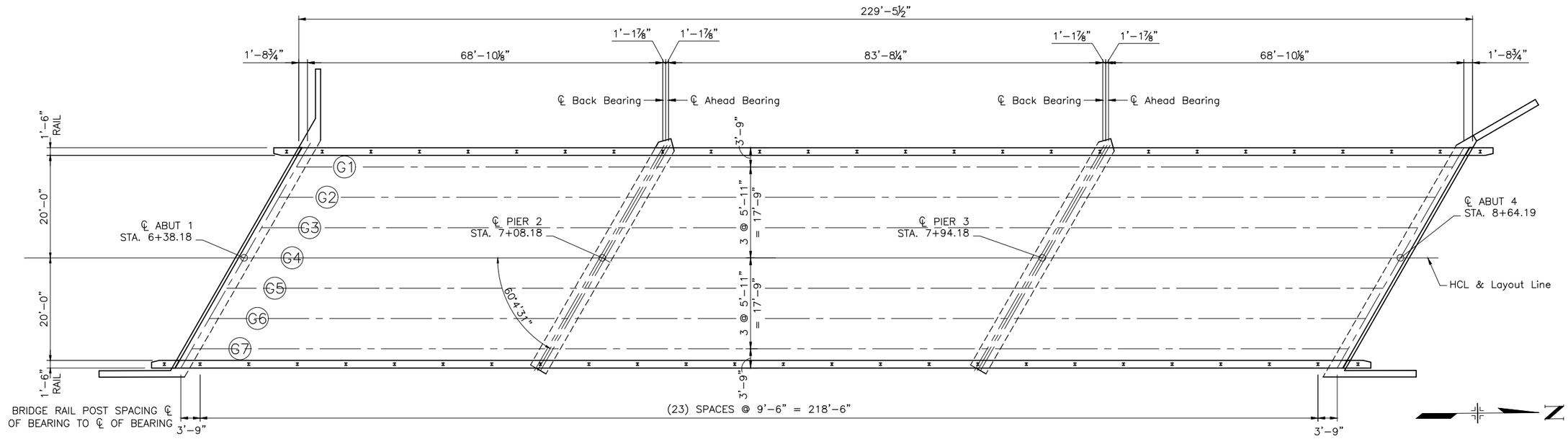
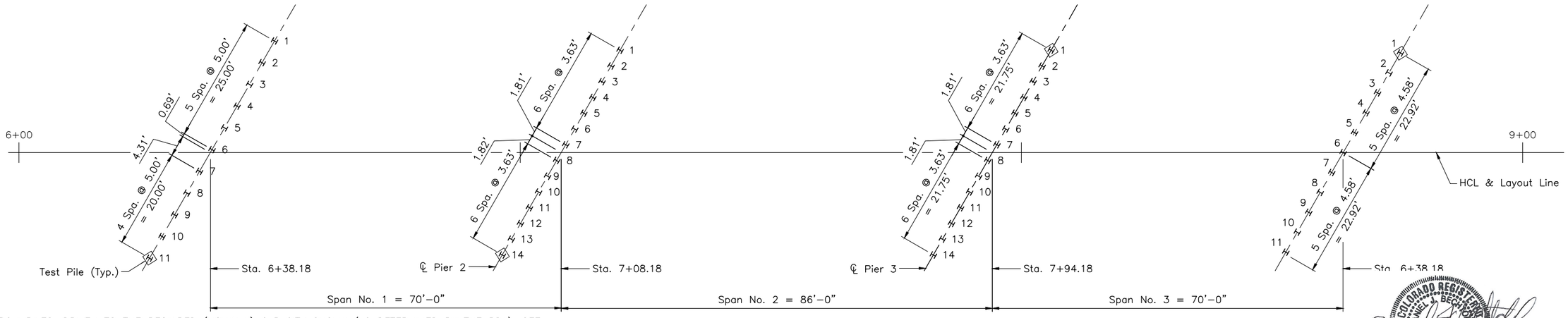


CONSTRUCTION LAYOUT



FOUNDATION LAYOUT

NOTES:
PILES SHALL BE FRICTION PILES, DRIVEN TO THE REQUIRED (NOMINAL) CAPACITY SHOWN (AS DETERMINED BY THE PDA). SEE SECTION 502.09 FOR PDA (DYNAMIC TESTING) REQUIREMENTS. ONE PILE SHALL BE TESTED PER SUBSTRUCTURE ELEMENT. ABUTMENT 1 MAXIMUM FACTORED PILE LOAD = 120 KIPS. ABUTMENT 4 MAXIMUM FACTORED PILE LOAD = 122 KIPS. MINIMUM ABUTMENT TIP ELEVATION = ESTIMATED TIP. PIER 2 & 3 MAXIMUM FACTORED PILE LOAD = 191 KIPS. MINIMUM PIER TIP ELEVATION = ESTIMATED TIP.

USE OF PILE TIPS IS REQUIRED. ALL PILES SHALL BE DRIVEN PLUMB UNLESS NOTED OTHERWISE.

PILES SHALL BE SPLICED IN STRICT ACCORDANCE WITH CDOT SECTION 502.12. WELDERS SHALL BE PREQUALIFIED IN ACCORDANCE WITH AWS D1.1 FOR THE REQUIRED WELD.

SEE THE GEOTECHNICAL ENGINEERING REPORT BY TERRACON (DATED OCT 14, 2021, PROJECT NO.: 23205146) FOR ADDITIONAL REQUIREMENTS.

THE CONTRACTOR SHALL HAVE QUALIFIED ENGINEERING PERSONNEL RUN THE PDA.

DYNAMIC TESTING SHALL BE PERFORMED ON THE TEST PILES INDICATED AND ACCORDING TO ASTM D4945.

PILE DATA					
Location	Pile Type	Quantity	Top of Pile Elevation	Estimated Tip Elevation	Required Nominal Capacity (kips)
Abut. 1	HP12x53	11	6091.63	6035.63	210
Pier 2	HP12x74	14	6089.83	6027.83	300
Pier 3	HP12x74	14	6090.50	6028.50	300
Abut. 4	HP12x53	11	6092.92	6036.92	210

TEST PILE DATA				
Location	Pile Number	Top of Pile Elevation	Estimated Tip Elevation	Required Nominal Capacity (kips)
Abut. 1	11	6091.63	6035.63	210
Pier 2	14	6089.83	6027.83	300
Pier 3	1	6090.50	6028.50	300
Abut. 4	1	6092.92	6036.92	210

FRICTION PILES, RESISTANCE FACTOR = 0.65

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER
10/13/2022

Computer File Information			
Creation Date:	08/31/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	CDF
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CONSTRUCTION / FOUNDATION LAYOUT

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B3 of B23

Project No./Code: 500331
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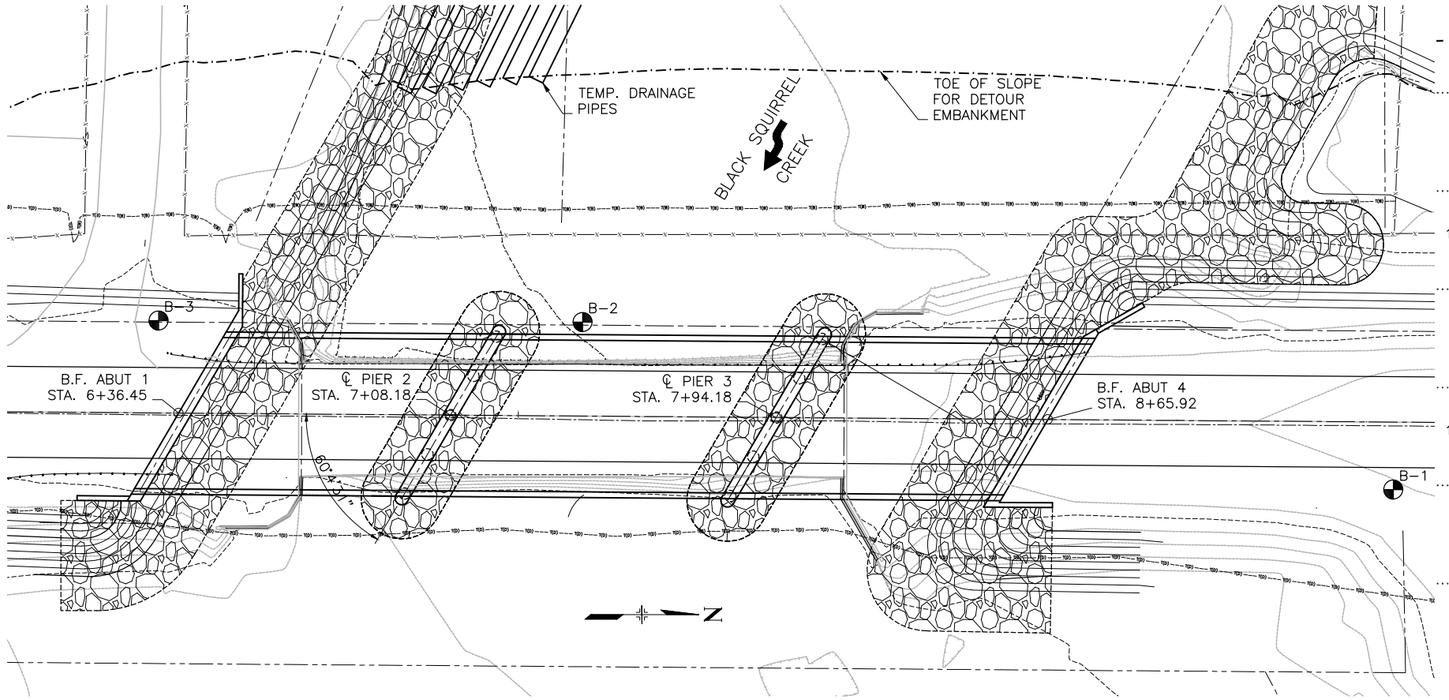
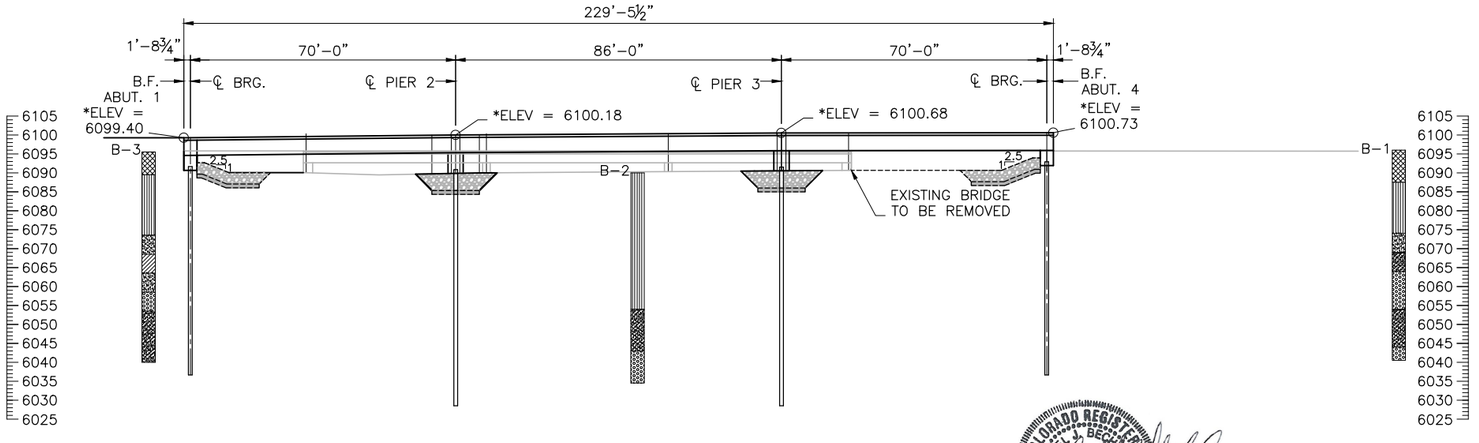
Sheet Number: 53

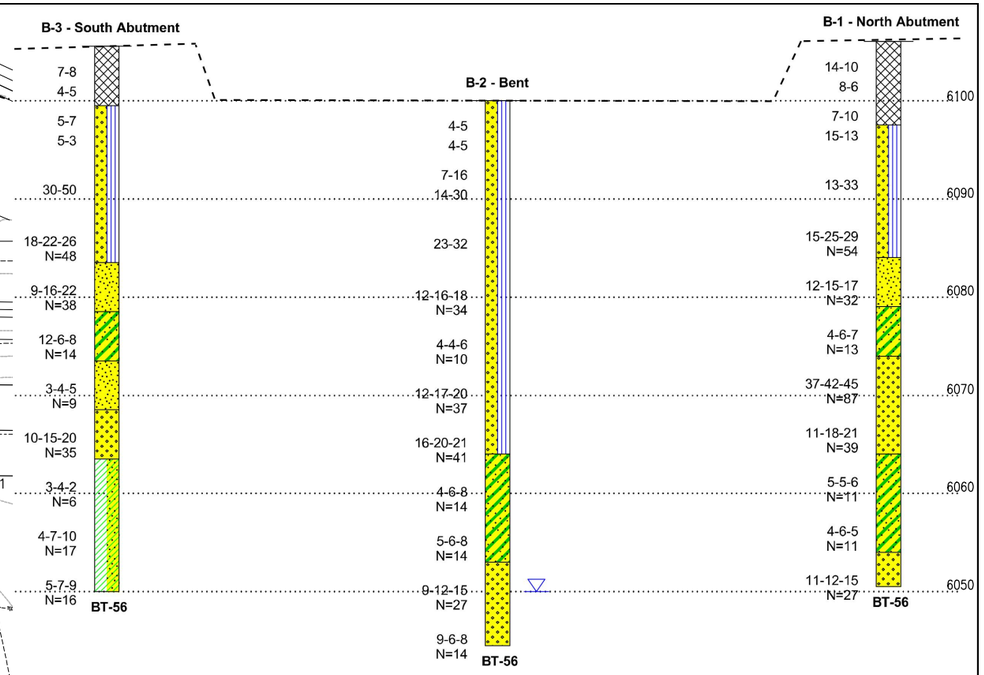


PLAN



SECTION

SECTION TAKEN AT HCL/PGL
*FINISHED GRADE (TOP OF HMA)



SUBSURFACE PROFILE

Explanation

B-3 — Borehole Number
Borehole Lithology
AR / BT — Borehole Termination Type
Water Level Reading at time of drilling.
Water Level Reading after drilling.

Lean Clay | Silty Sand | Fill
Well-graded Sand with Silt | Poorly-graded Sand | Clayey Sand

NOTES:
See Exhibit Number of Exhibit to which to refer client to view orientation of soil profile. for orientation of soil profile.
Soils profile provided for illustration purposes only.
Soils between borings may differ
AR - Auger Refusal
BT - Boring Termination

SUBSURFACE LEGEND

Project No.: 23205146 Scale: AS SHOWN File Name: SUB PROFILE	Terracon 4172 Center Park Dr Colorado Springs, CO PH. 719-597-2116 FAX. 719-597-2117	SUBSURFACE PROFILE ELLICOTT HIGHWAY BRIDGE REPLACEMENT PROJECT N. OF SH-94 OVER BLACK SQUIRREL CREEK EL PASO COUNTY, COLORADO

NOTES:

1. FOR ADDITIONAL INFORMATION AND CONSTRUCTION REQUIREMENTS SEE TERRACON GEOTECHNICAL ENGINEERING REPORT, DATED OCTOBER 14, 2021.
2. PE STAMP FOR STRUCTURAL DETAILS ONLY, SEE GEOTECHNICAL REPORT FOR GEOTECHNICAL STAMP.
3. SEE GEOTECHNICAL REPORT FOR BORINGS B-4 AND B-5.

10/13/2022

Stamp for structural details only. See geotechnical report for geotechnical stamp

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
ENGINEERING GEOLOGY

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B4 of B23

Project No./Code: 500331
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Sheet Number: 54

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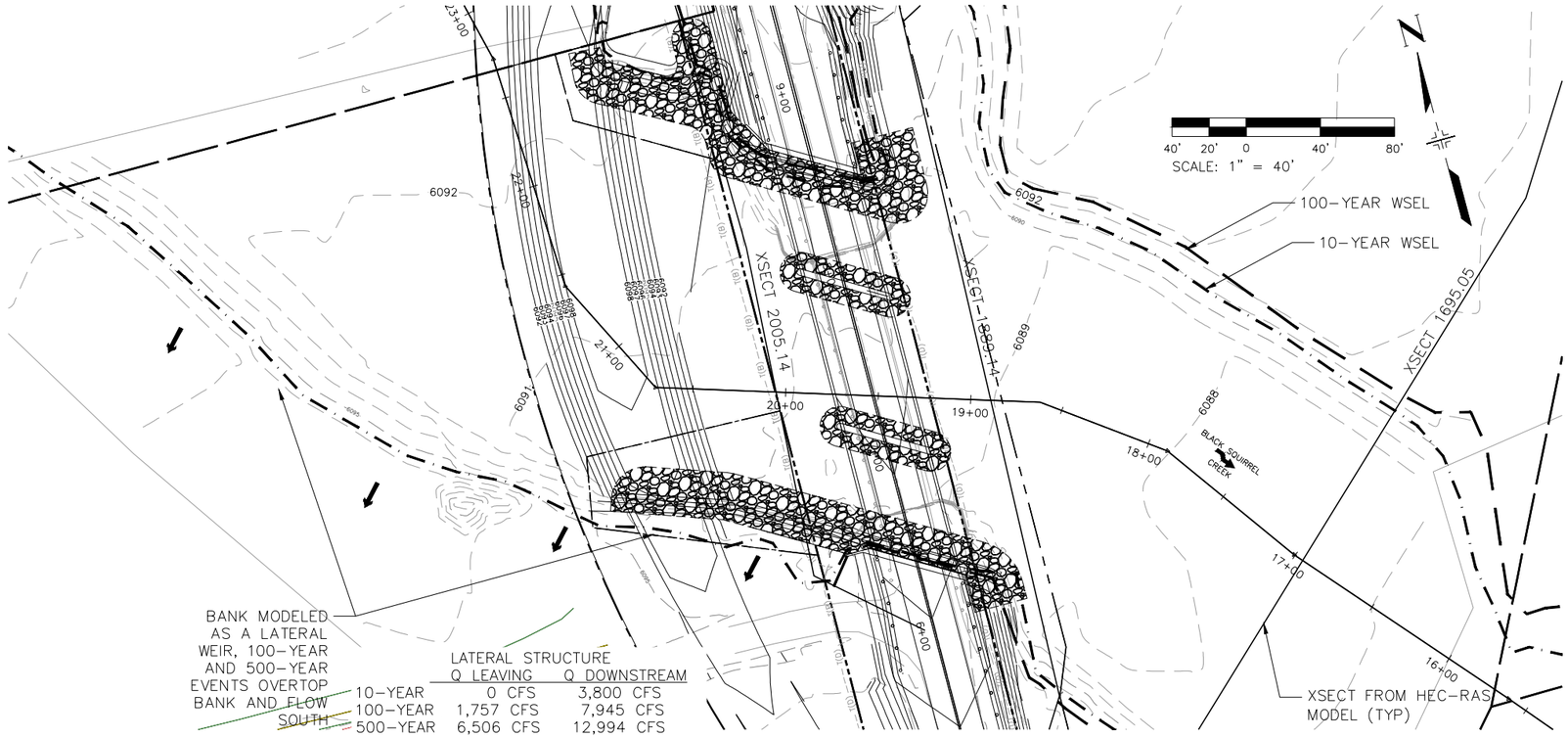
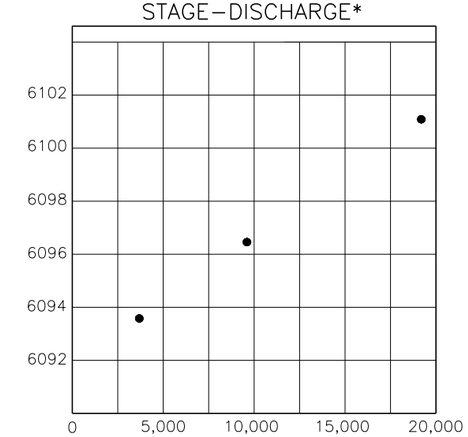


LATERAL STRUCTURE	Q LEAVING	Q DOWNSTREAM
10-YEAR	0 CFS	3,800 CFS
100-YEAR	1,757 CFS	7,945 CFS
500-YEAR	6,506 CFS	12,994 CFS

STAGE-DISCHARGE*



Q DISCHARGE IN CFS
Q10 = 3,800 CFS
Q100 = 9,702 CFS
Q500 = 19,000 CFS

CHANNEL DESCRIPTION

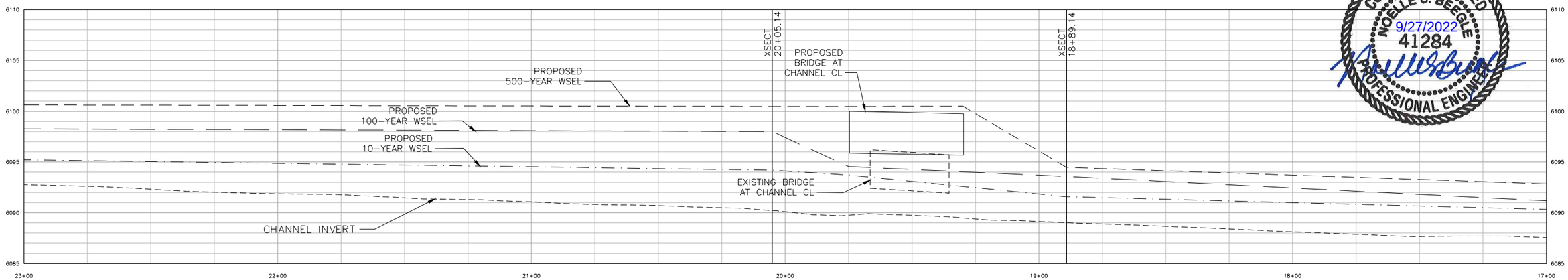
BOTTOM MATERIAL – NON-COHESIVE
BOTTOM MATERIAL SIZE – SAND, GRAVEL

STREAM FORM – DRY CREEK BED, INTERMITTENT FLOW
MANNINGS "N" FOR DESIGN – CHANNEL=0.035 OVERBANK=0.040

COMPARISON OF HYDRAULICS**

CHANNEL INVERT (ft)	LOW CHORD ELEV (ft)	WSEL (ft)	VELOCITY (fps)	FREEBOARD (ft)
6089.51	6095.23	6093.76	6.12	1.47

* TAKEN AT UPSTREAM SECTION OF BRIDGE
** FOR 10-YEAR EVENT



WATER SURFACE ELEVATION PROFILE

COLORADO LICENSED
NOELLE S. BEEGLE
9/27/2022
41284
PROFESSIONAL ENGINEER

Computer File Information	
Creation Date:	User:
Last Modification Date:	User:
Full Path: Y:\Denver\152000s\00152049.01\Eng Docs\Drawings\	
Drawing File Name:	B5 HYDRAULIC.dwg
Acad Ver. 2020 Scale: As Noted	Units: ENGLISH

Sheet Revisions		

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As Constructed	ELLICOTT HIGHWAY BRIDGE REPLACEMENT			Project No./Code
No Revisions:	BRIDGE HYDRAULIC INFORMATION			500331
Revised:	Designer: NSB	Structure Numbers	EPC0493-11.77	
Void:	Detailer: MDS			
	Sheet Subset: –	Subset Sheets: B5 of B23		Sheet Number 55

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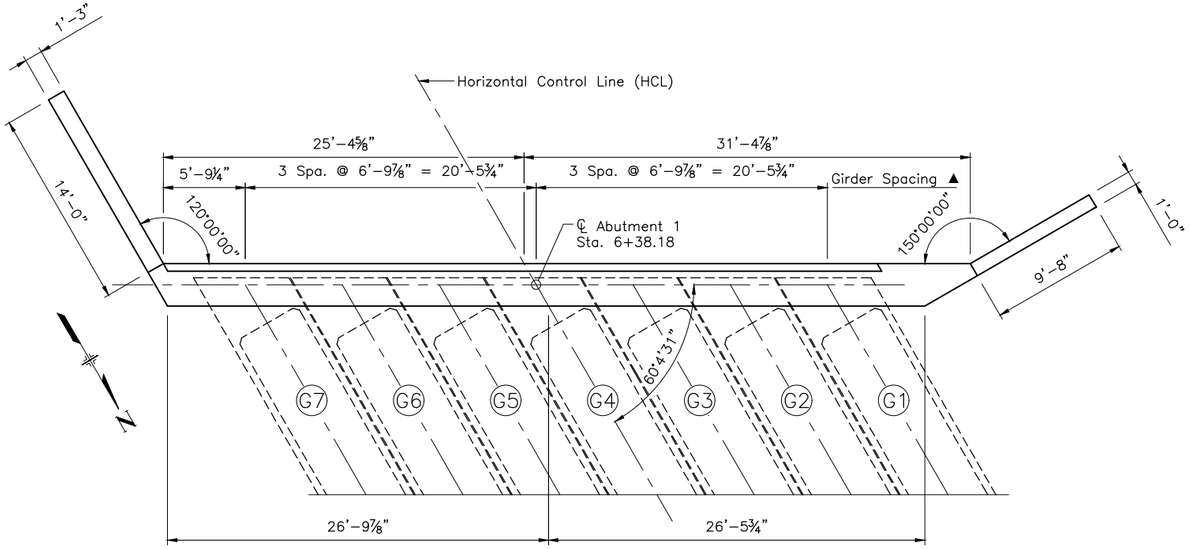
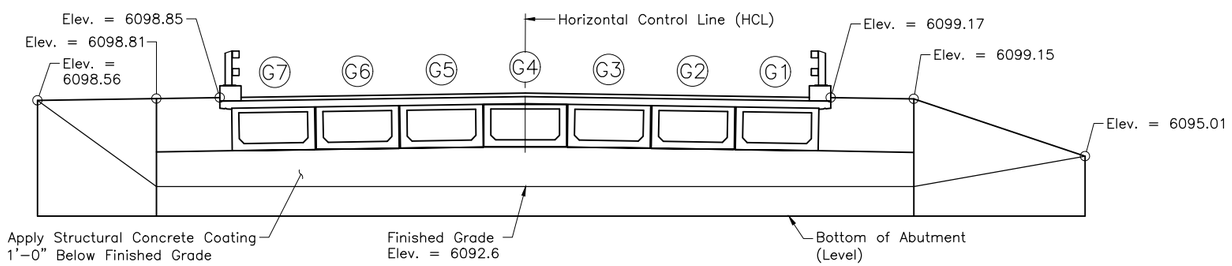


PLAN

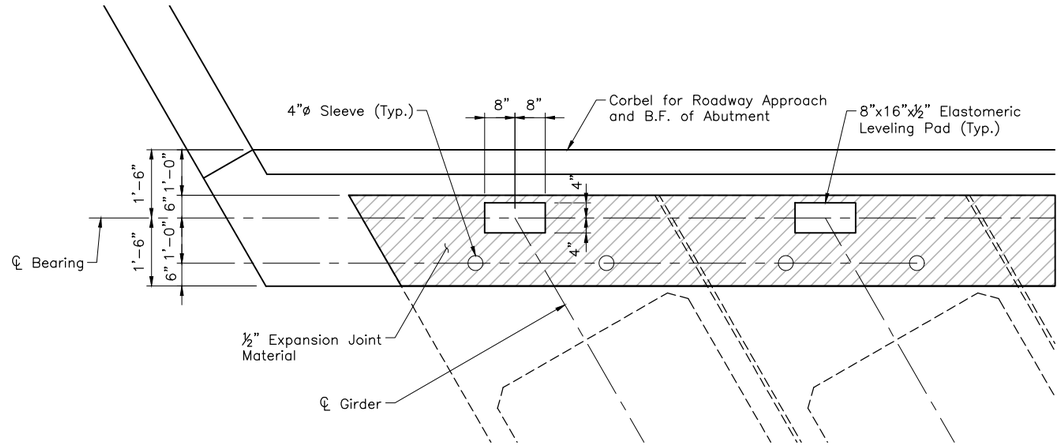


ELEVATION

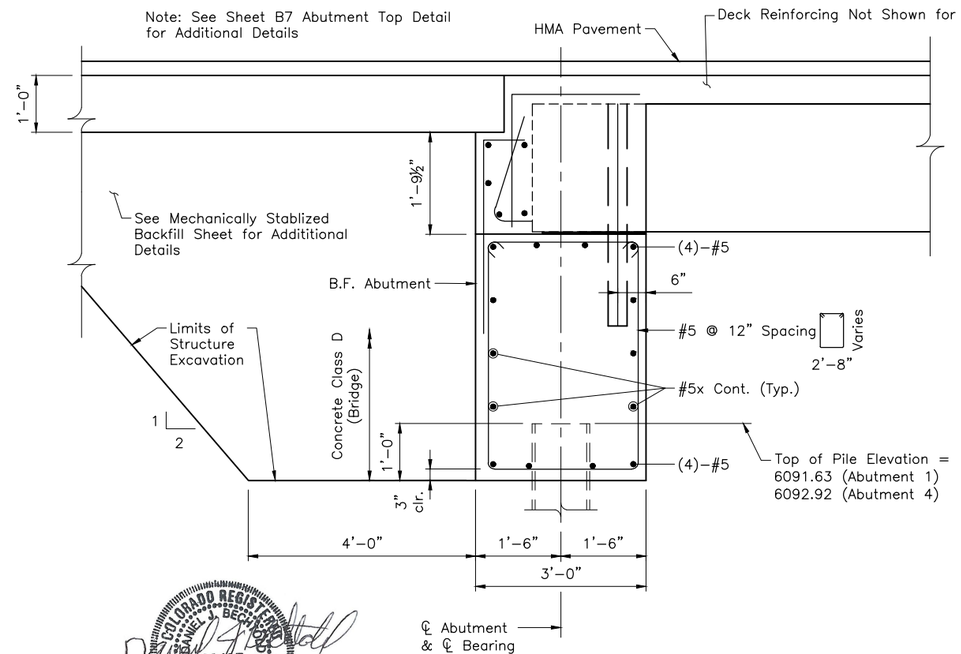
NOTES:

1. Piles not shown for clarity.
2. See Sheet B7 for Bearing Seat and Bottom of Abutment Elevations.
3. Elastomeric leveling pad shall not be paid for separately, but shall be included in item 618, Prestressed Concrete Box

▲ Measured Along ℄ Abutment



BEARING SEAT



COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

ABUTMENT SECTION

Computer File Information			
Creation Date:	09/20/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	CDF
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	B6-B7 ABUT.DWG		
Acad Ver. 2018	Scale:	Units:	English

Sheet Revisions		

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

ABUTMENT 1 PLAN AND ELEVATION

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B6 of B23

Project No./Code: 500331

–

Sheet Number: 56

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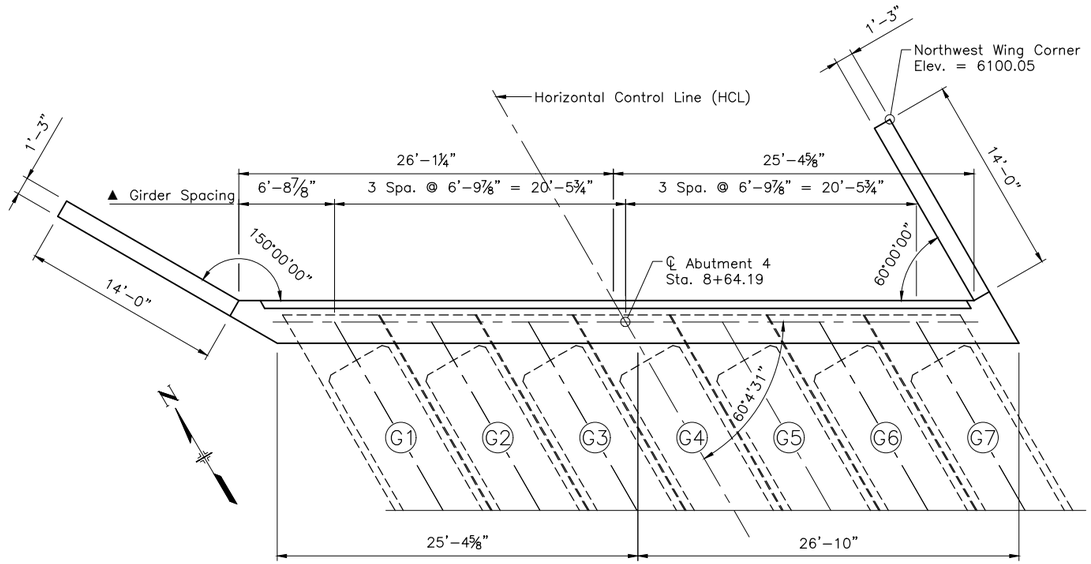
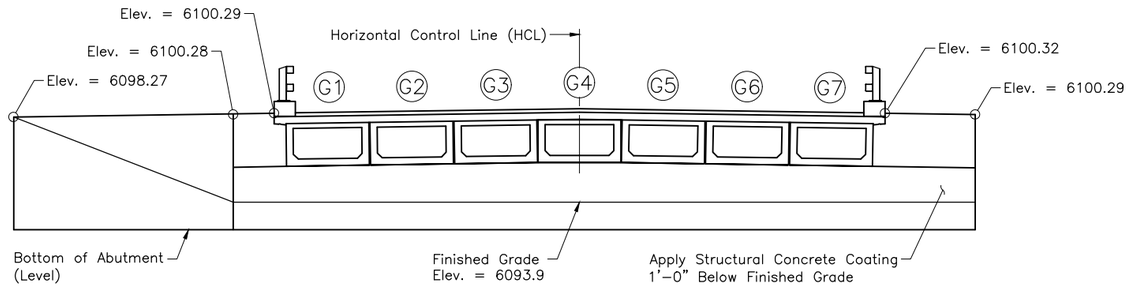


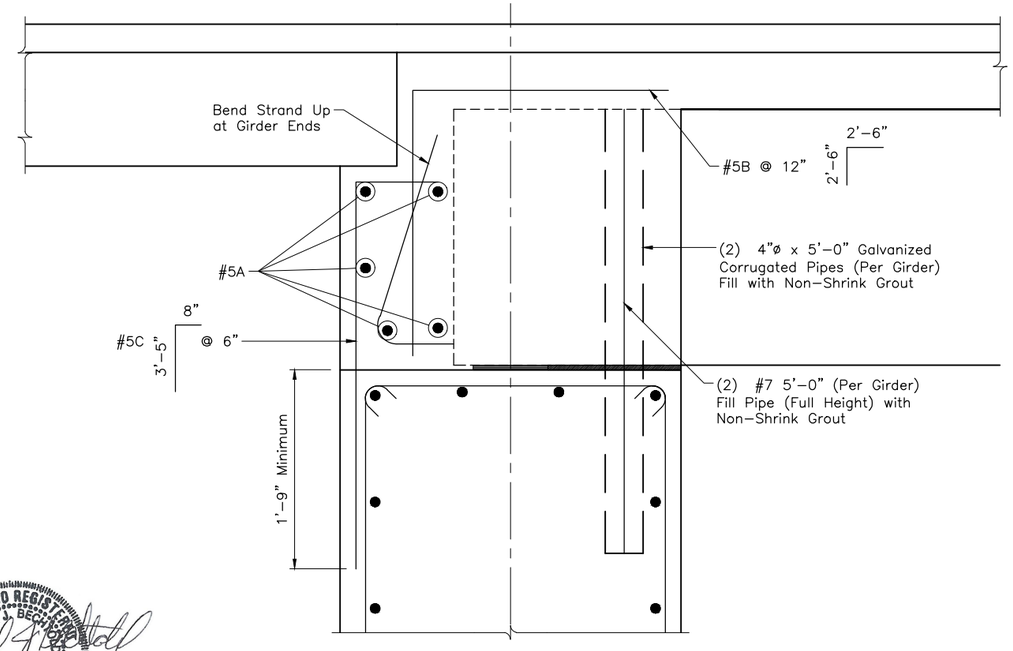
PLAN



ELEVATION

BEARING SEAT ELEVATIONS								Bottom of Abutment Elevation
ABUTMENT	G1	G2	G3	G4	G5	G6	G7	
1	6095.41	6095.48	6095.56	6095.52	6095.47	6095.30	6095.14	6090.6
4	6096.57	6096.70	6096.82	6096.83	6096.83	6096.72	6096.60	6091.9

BEARING SEAT ELEVATIONS



ABUTMENT TOP

Note: See Sheet B6 Abutment Section for Additional Details

NOTES:

Piles not shown for clarity.
▲ Measured Along ℄ Abutment

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER
10/13/2022

Computer File Information			
Creation Date:	09/20/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	CDF
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	B6-B7 ABUT.DWG		
Acad Ver. 2018	Scale:	Units:	English

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Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT
ABUTMENT 4 PLAN AND ELEVATION

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B7 of B23

Project No./Code: 500331
–
Sheet Number: 57

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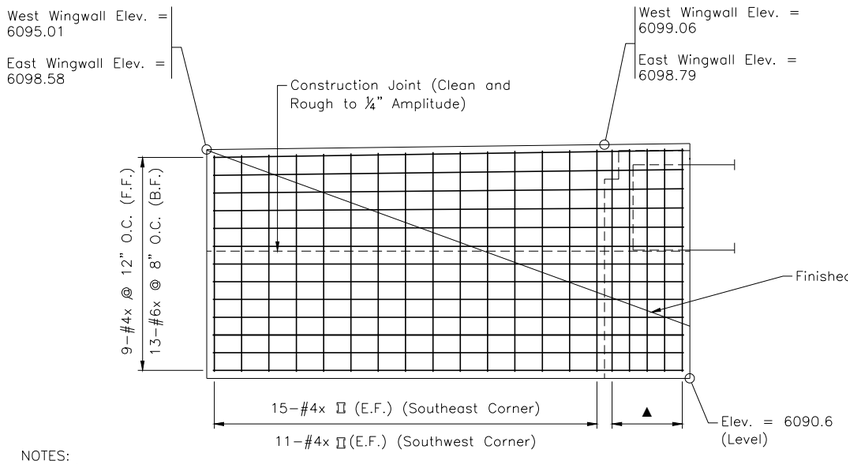
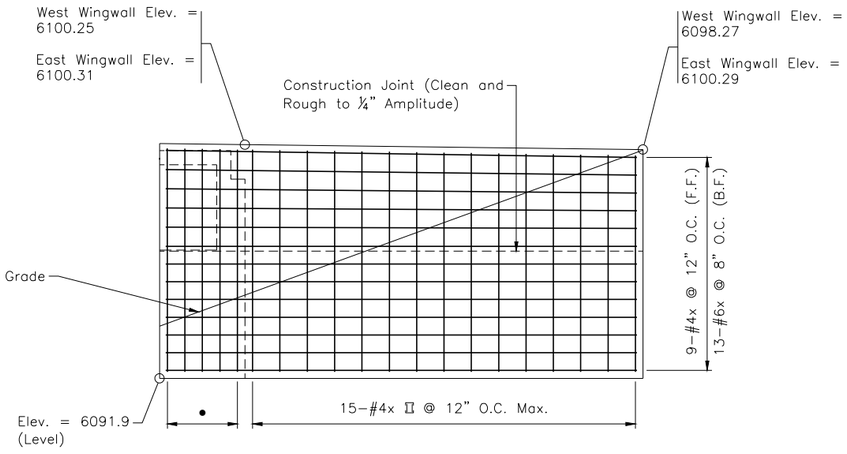
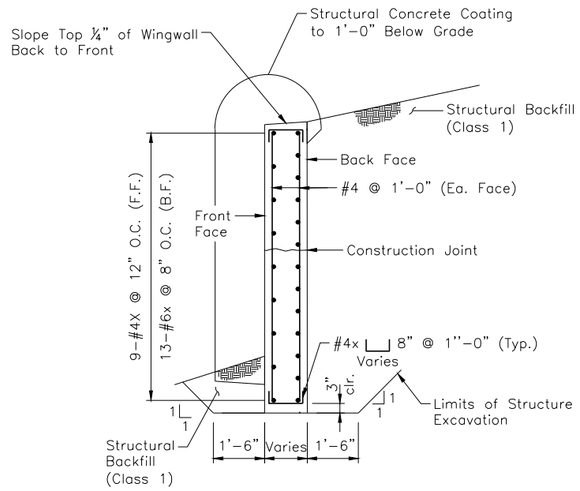






NOTES:
All reinforcement shown on this sheet are epoxy coated. (E)

All wing elevations are taken at BF of wall.

▲ 5–SW Corner, 4–SE Corner (F.F.)
▲ 1–SW Corner, 1–SE Corner (B.F.)

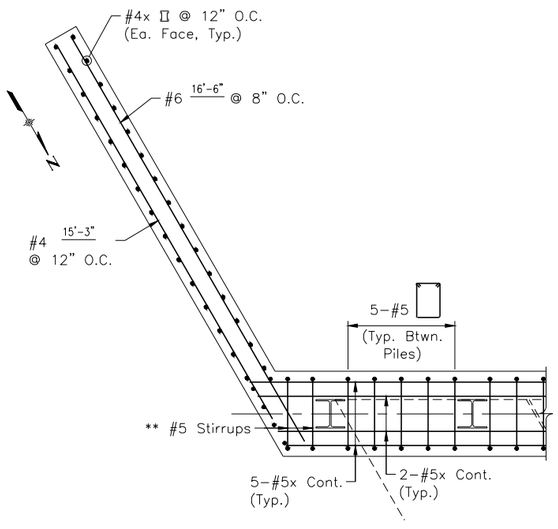
● 5–NW Corner, 5–NE Corner (F.F.)
● 1–NW Corner, 1–NE Corner (B.F.)
** Place as Shown

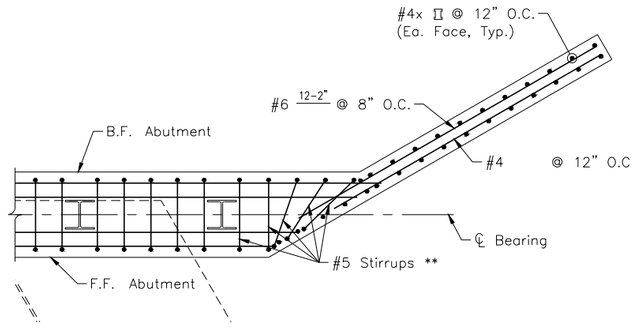
ABUTMENT 1 WINGWALLS

ABUTMENT 4 WINGWALLS

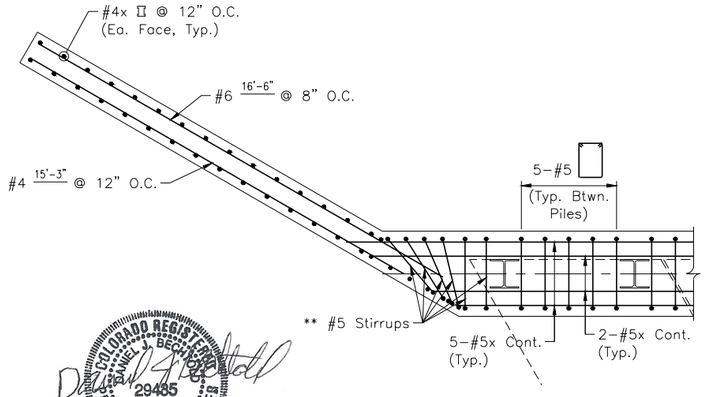
WINGWALL ELEVATION

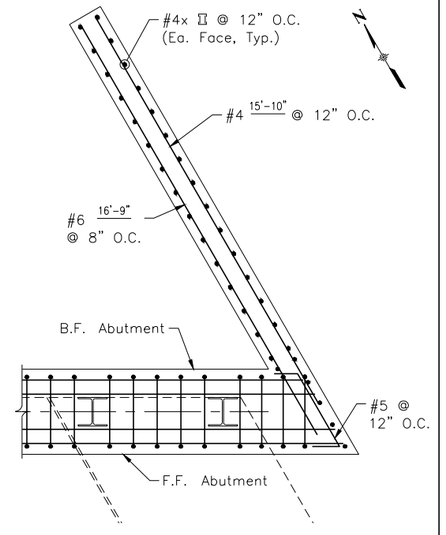
WINGWALL SECTION





ABUTMENT 1 WINGWALLS





ABUTMENT 4 WINGWALLS

WINGWALL CORNERS

COLORADO REGISTERED DANIEL J. BECHTOLD 29435 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	10/11/21	Initials:	CDF
Last Modification Date:	08/16/22	Initials:	CDF
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	B8 ABUTDETS.dwg		
Acad Ver. 2018	Scale:	Units:	English

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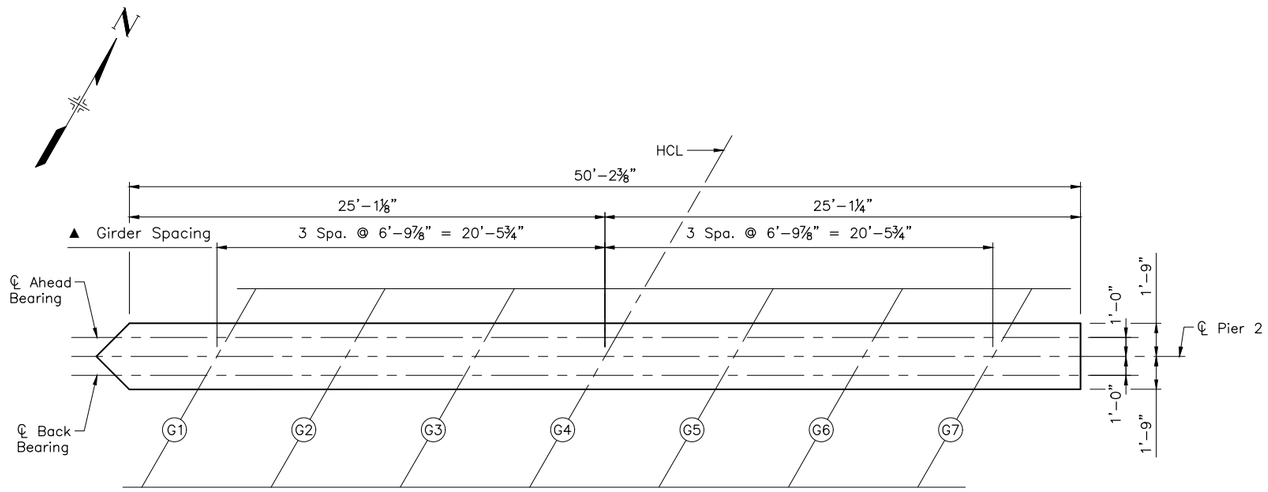
Revised:			
Void:			

ELLICOTT HIGHWAY BRIDGE REPLACEMENT

ABUTMENT & WINGWALL DETAILS

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B8 of B23

Project No./Code
500331
–
Sheet Number



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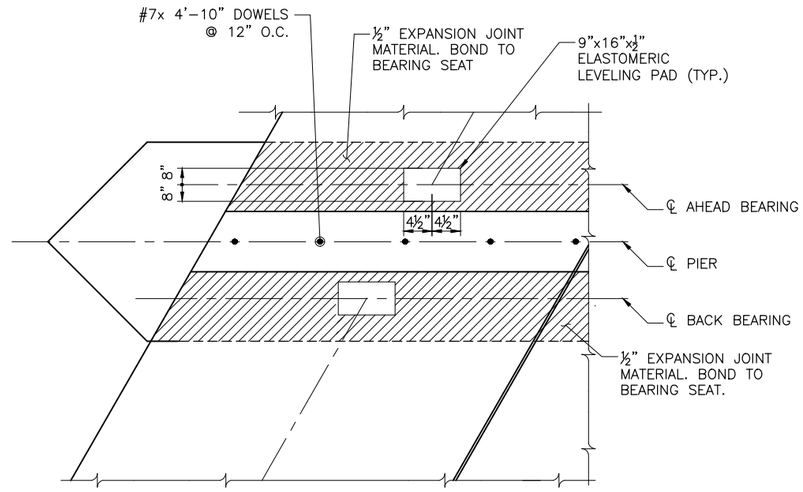
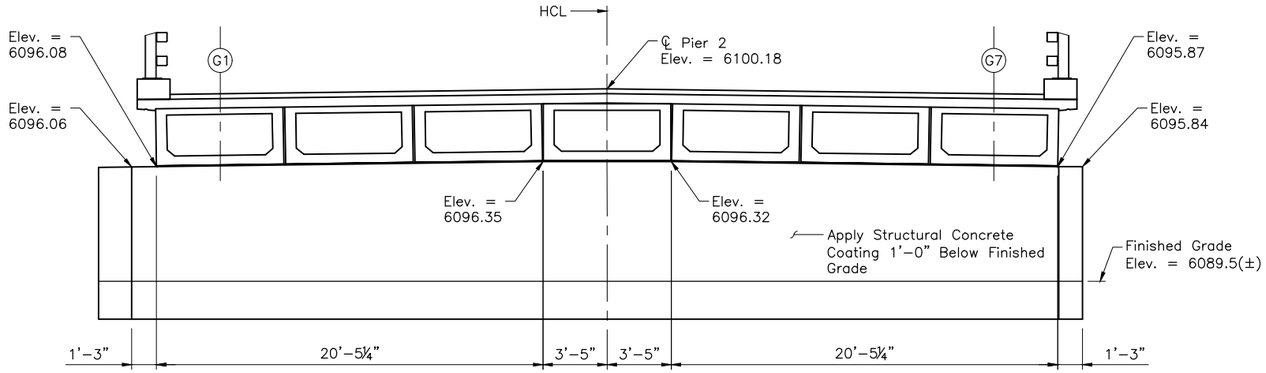
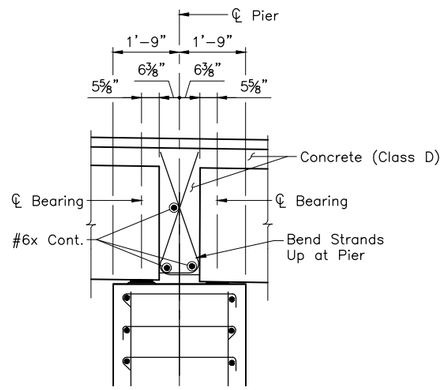


BEARING DETAIL



ELEVATION



PIER DIAPHRAGM DETAIL

NOTES:

1. Piles not shown for clarity. See Sheet B11 for Pier Details.
2. All dimensions and elevations shown are along the ℄ of the pier.
3. Elastomeric leveling pad shall not be paid for separately, but shall be included in item 618, Prestressed Concrete Box.

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	10/06/2021	Initials:	CDF
Last Modification Date:	08/16/2022	Initials:	DJB
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	B9-B11 PIER.DWG		
Acad Ver. 2018	Scale:	Units:	English

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No Revisions:	PIER 2 PLAN AND ELEVATION			500331
Revised:	Designer: DJB	Structure Numbers	EPC0493-11.77	–
Void:	Detailer: CDF			
	Sheet Subset: BRIDGE	Subset Sheets: B9 of B23		Sheet Number 59

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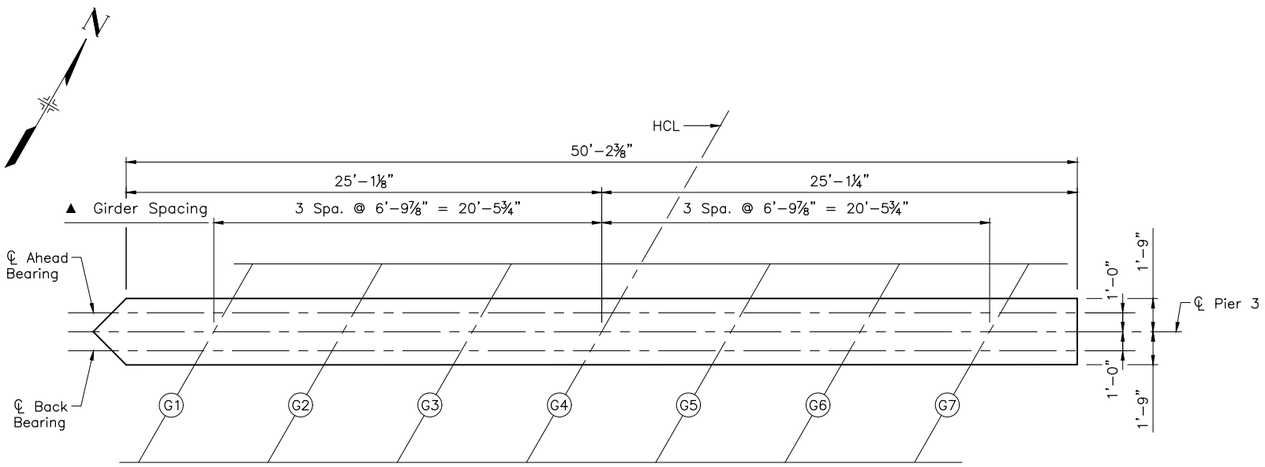
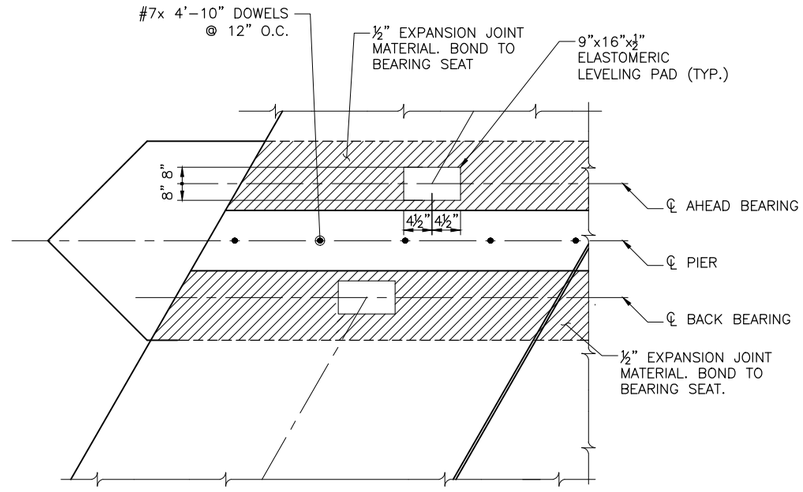


PLAN



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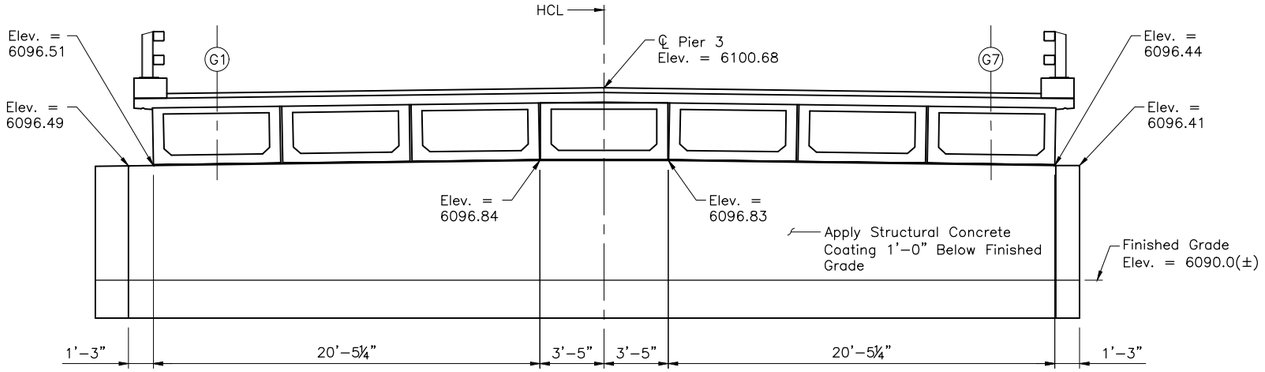

ELEVATION

NOTES:

1. Piles not shown for clarity. See Sheet B11 for Pier Details.
2. All dimensions and elevations shown are along the ℄ of the pier.
3. Elastomeric leveling pad shall not be paid for separately, but shall be included in item 618, Prestressed Concrete Box.

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	10/06/2021	Initials:	CDF
Last Modification Date:	08/16/2022	Initials:	DJB
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	B9–B11 PIER.DWG		
Acad Ver. 2018	Scale:	Units:	English

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

PIER 3 PLAN AND ELEVATION

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B10 of B23

Project No./Code	
500331	
–	
Sheet Number	60

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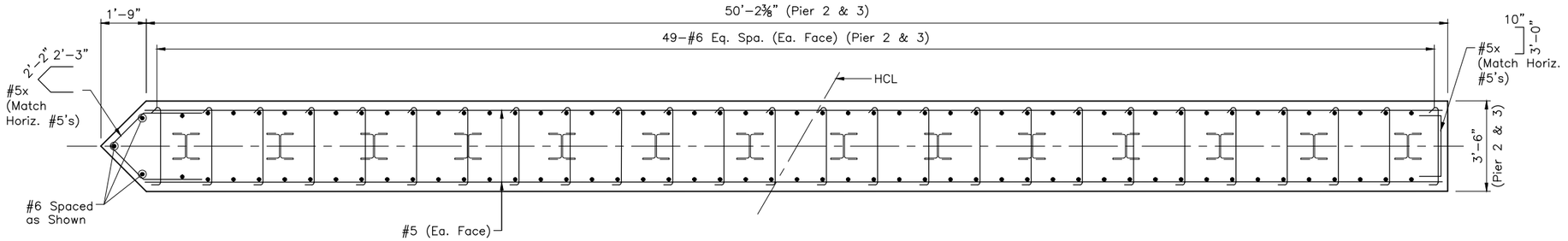
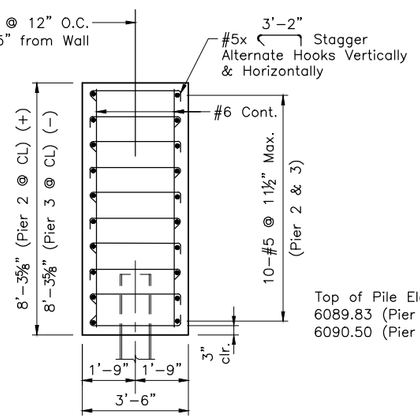
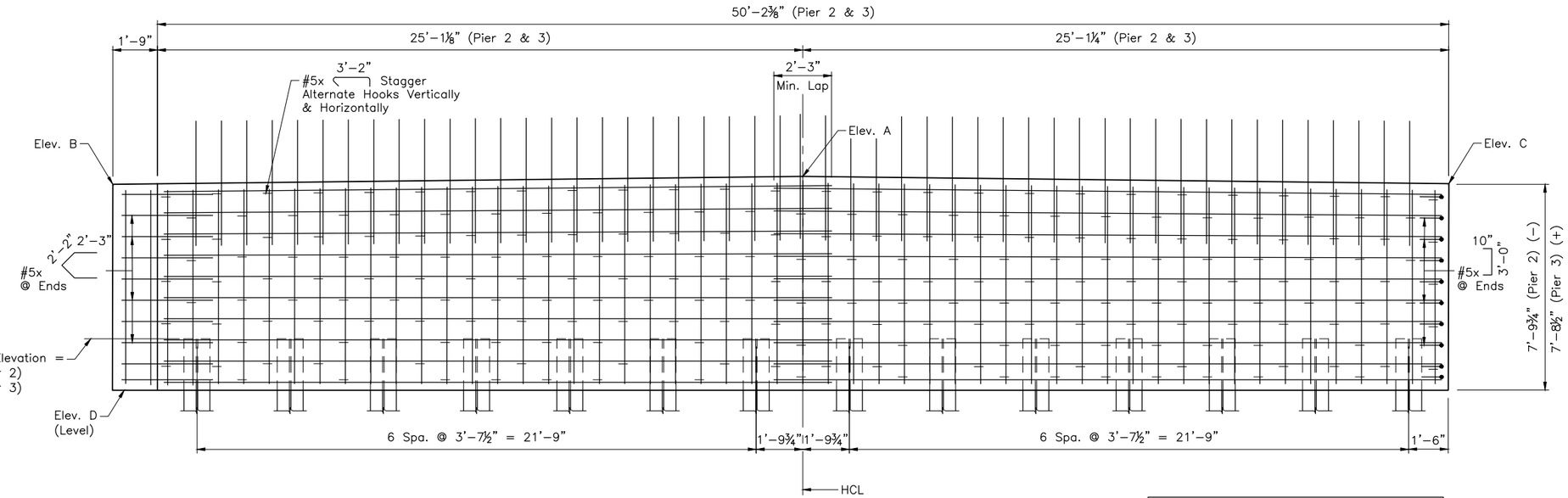


PLAN OF PIER



SECTION OF PIER



ELEVATION OF PIER

PIER ELEVATIONS				
Pier	A	B	C	D
2	6096.33	6096.04	6095.84	6087.8
3	6096.83	6096.46	6096.41	6088.5

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

NOTES:

1. All dimensions and elevations shown are along the ℄ of the pier.

Computer File Information			
Creation Date:	11/02/2021	Initials:	CDF
Last Modification Date:	08/16/2022	Initials:	DJB
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Drawing File Name:	B9–B11 PIER.DWG		
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT			
PIER DETAILS			
Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B11 of B23

Project No./Code	
500331	
–	
Sheet Number	61

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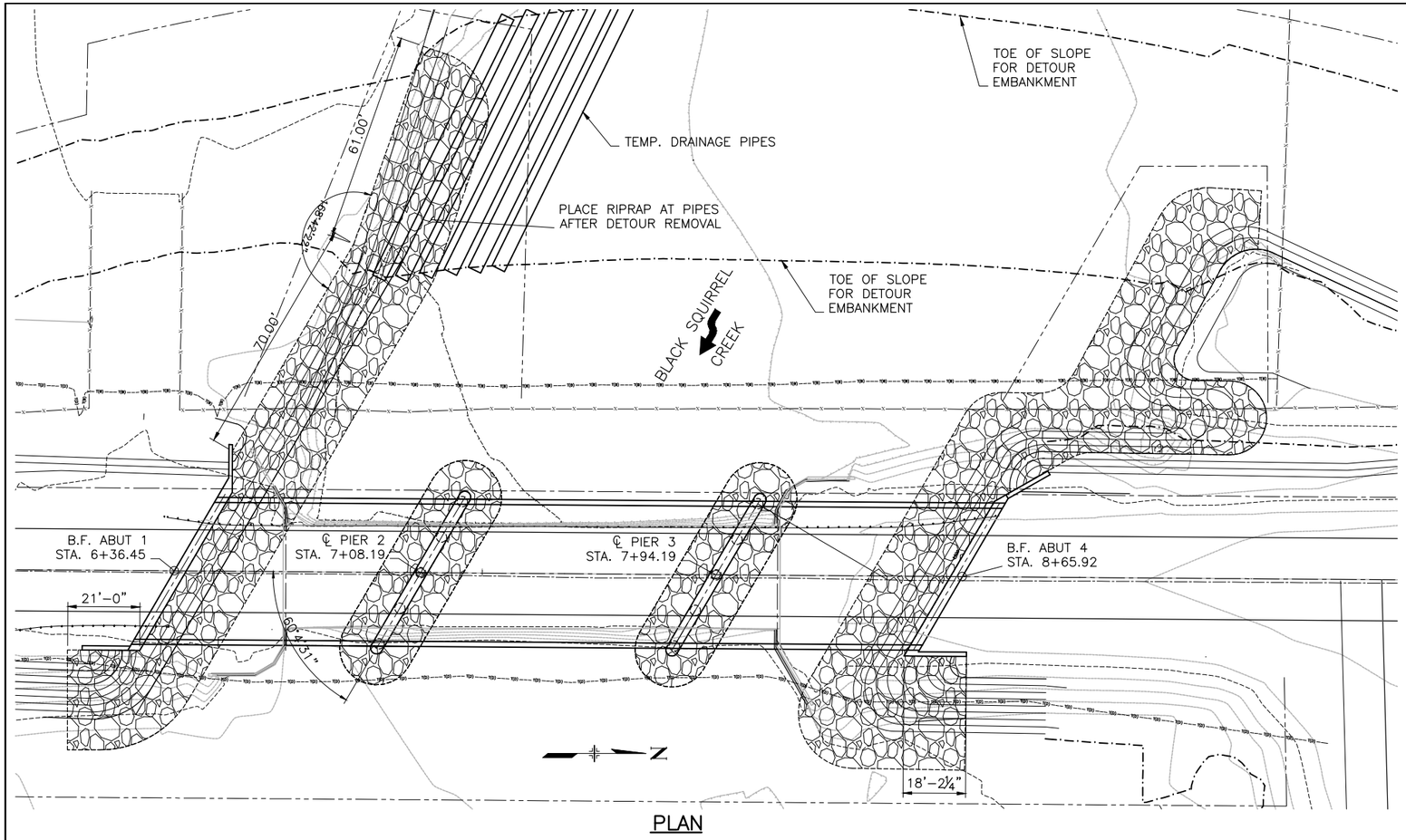
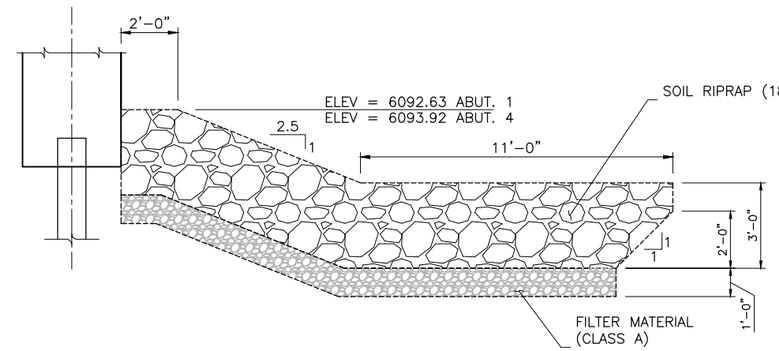
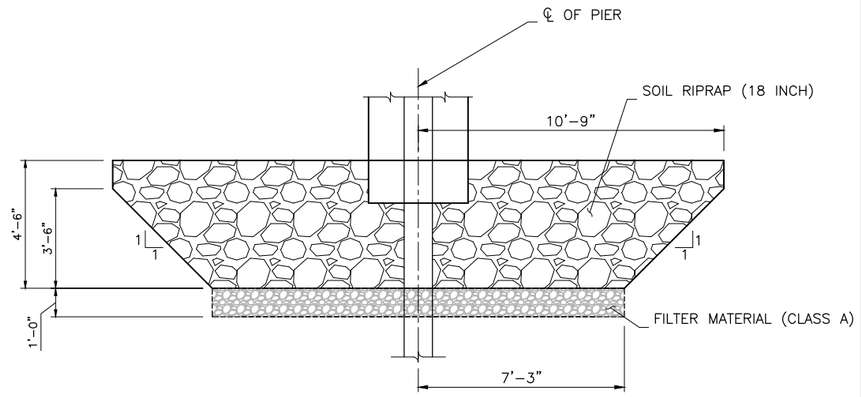


PLAN



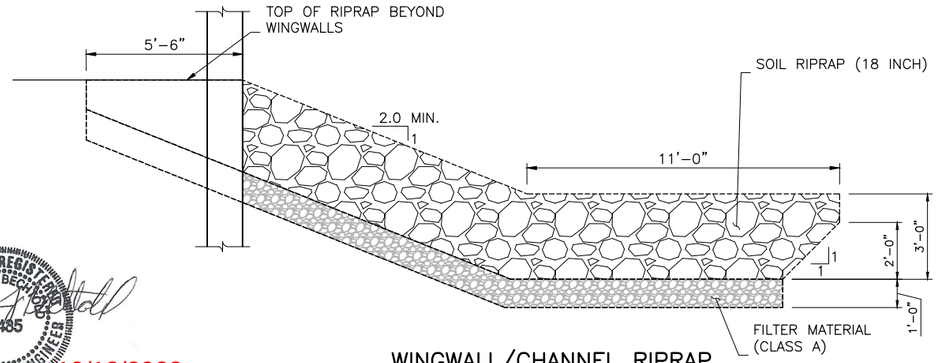
ABUTMENT RIPRAP

SECTION TAKEN PERPENDICULAR
TO FRONT FACE OF ABUTMENT



PIER RIPRAP

SECTION TAKEN PERPENDICULAR
TO ℄ OF PIER



WINGWALL/CHANNEL RIPRAP

SECTION TAKEN PERPENDICULAR
TO FRONT FACE OF WINGWALL

COLORADO REGISTERED PROFESSIONAL ENGINEER
DANIEL J. BECHTOLD
29485

10/13/2022

Computer File Information			
Creation Date:	11/01/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	DJB
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

RIPRAP DETAILS

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B12 of B23

Project No./Code	
500331	
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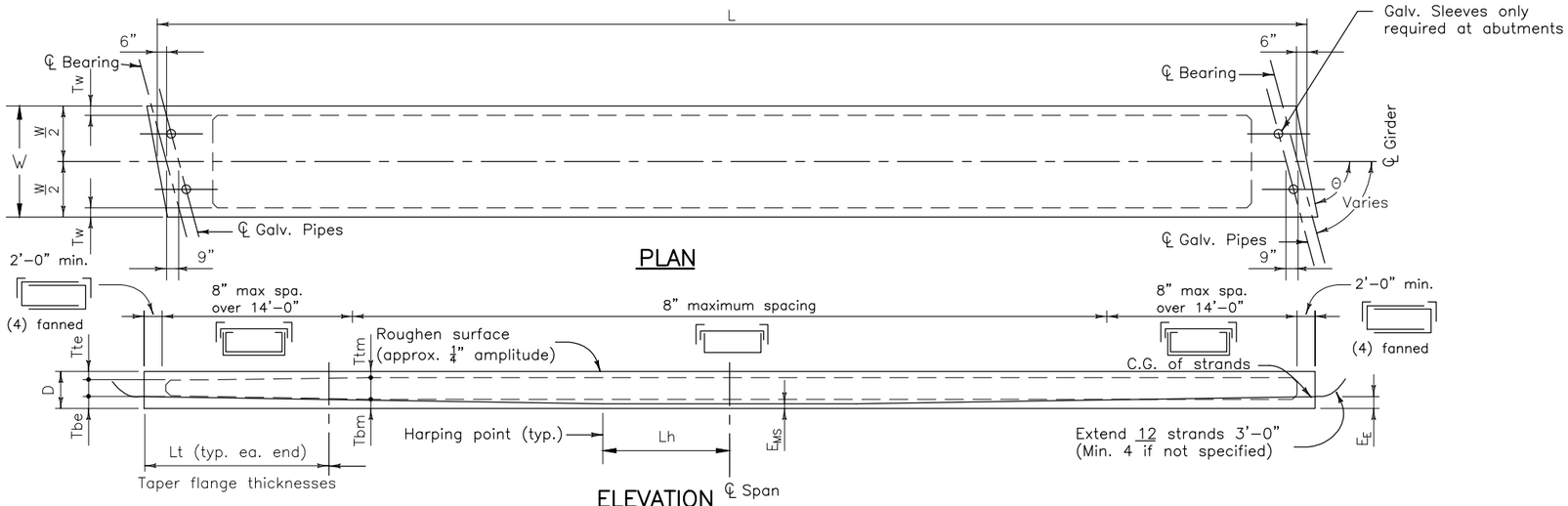
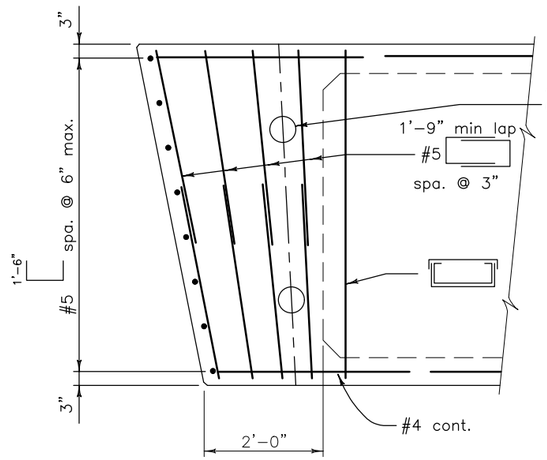
Sheet Number	62





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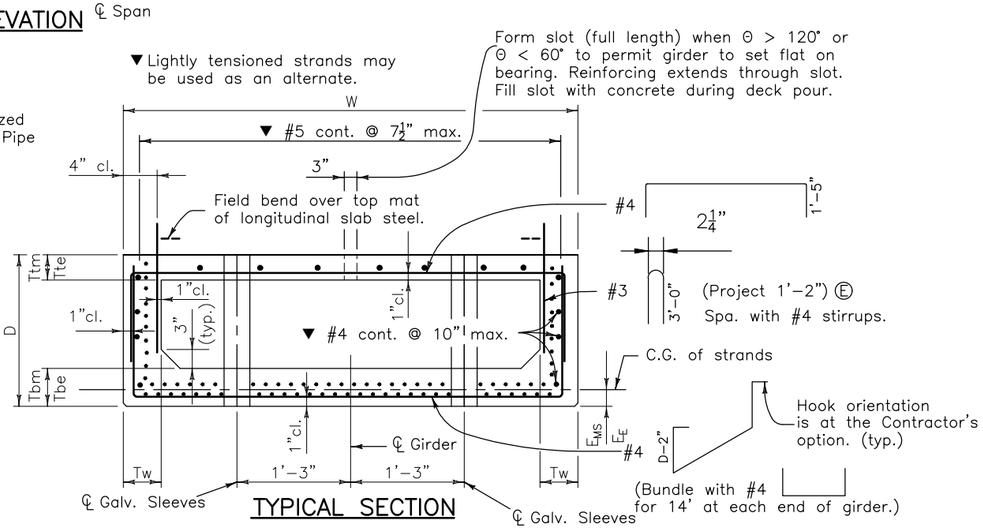

TYPICAL SECTION

NOTES

All work necessary to fabricate and install the integral parts of the girder (including the intermediate diaphragms, if any, and leveling pads), as shown on the plans, shall be included in the bid price for Item No. 618, Prestressed Concrete Box (Depth 32" Thru 48") with a pay unit of Sq. Ft. measured by L x W.

When approved by the Engineer, a minimum of tack welding will be permitted on ASTM A706 uncoated reinforcing steel.

Reinforcing projecting from the top of the girder and reinforcing within eight feet of an expansion device in the bridge deck shall be epoxy coated. Damaged coating on girder reinforcing need not be repaired. The minimum cover for reinforcing steel is 1".

Welded wire fabric may be used with D20 wires in lieu of the #4 bars shown.

At girder ends not embedded in concrete diaphragms, cut strands off 1" below the surface of the concrete and finish with an approved epoxy grout. At girder ends embedded in concrete diaphragms, cut strands to project 3", except as shown. Do not make cosmetic repairs (damage less than 1½" deep) to the parts of the girders embedded in concrete.

Use low relaxation strands meeting the requirements of ASTM A-416 Grade 270. The minimum clear distance between groups or individual strands shall be $2.3(d_s)$ but not less than 1¼". The minimum cover for prestressing steel is 1½".

- A_s = minimum area of the prestressing steel.
- d_s = nominal strand diameter.
- f'_s = ultimate strength of prestressing steel.
- F_j = jacking force per girder.
- F_f = final force per girder after all losses.
- f'_{ci} = required concrete strength at release of prestress force.
- f'_c = required concrete strength at 28 days of age.
- L = length of girder along the grade of the girder.
- Δ = deflection at centerline of span due to cast-in-place slab, diaphragms, asphalt, curbs, rails, and walks.
- Θ = bridge skew angle

Concrete shall be Class PS.

Entrained air is not required for girder concrete.

End blocks shall be used on all girders unless otherwise noted.

Use ½" chamfer on all corners, except as noted.

Predicted camber is the camber for the girder alone at 60 days. The Contractor shall limit the camber growth to a value not to exceed the predicted camber plus 1/2" prior to the deck pour by weighting, scheduling fabrication, post tensioning, or other means and must report to the Engineer values of camber which exceed the predicted camber plus 1/2". Remedial measures, as approved by the Engineer, shall be taken if the predicted camber plus 1/2" is exceeded. The approved remedial measures shall be free of any adverse impact. The costs associated with all remedial measures shall be borne by the Contractor.

Side by side boxes shall not have cambers of adjacent boxes differ by more than 1" before the deck pour. Prior to placing deck reinforcing, the Contractor shall adjust this differential to within this limit by sorting the boxes to minimize differentials, or by pulling the high boxes down and low boxes up.

Product dimensional tolerances specified in MNL-116, Section 6.4 shall apply as specification tolerance, except that the depth (D) tolerance shall be $+\frac{1}{2}$", $-\frac{1}{4}$".

The Contractor is responsible for determining necessary bracing requirements, and for providing adequate bracing for the specific wind and weather conditions to be encountered for each specific project.

When a girder is shown with both a harped design and a debonded designs for a girder, the choice of designs is the contractors option. If only a harped or a debonded design or a combination design is shown, that design shall be used with no contractor option or redesign. When used, debonding shall extend in uniformly varying lengths to 3 ft. before the harping point shown, but not closer than 17 ft. to the center of the span.

Precast supplier shall measure girder camber not more than one week prior to shipping and shall designate girders so that the camber of adjacent boxes differs by less than ¾".

GIRDER SCHEDULE

Span No.	Girder No.	L (Feet)	W (Inch)	D (Inch)	Θ (Deg.)	Tw (Inch)	Tbm (Inch)	Ttm (Inch)	Tbe (Inch)	Tte (Inch)	Lt (Feet)	Lh (Feet)	A_s* (Square inch)	Debond Strands (percent)	E_E (Inch)	E_{MS} (Inch)	F_j (KIPS)	F_f (KIPS)	Concrete Strength f'_{ci} (PSI)	Concrete Strength f'_c (PSI)	Δ (Inch)	Predicted Release Camber (Inch)	Predicted Camber (Inch)
1,3	1,7	69.84	70	36	60.08	6	6	4	6	4	0	0	4.34	0	2.25	2.25	778.1	702.06	6000	7500	0.77	0.41	0.71
1,3	2-6	69.84	70	36	60.08	6	6	4	6	4	0	0	4.34	0	2.25	2.25	778.1	702.06	6000	7500	0.71	0.41	0.71
2	1,7	84.69	70	36	60.08	6	6	4	6	4	0	0	6.29	0	2.25	2.25	1127.5	993.40	6000	7500	1.49	0.83	1.43
2	2-6	84.69	70	36	60.08	6	6	4	6	4	0	0	6.29	0	2.25	2.25	1127.5	993.40	6000	7500	1.36	0.83	1.43

10/13/2022

Computer File Information	
Creation Date:	09/01/21 Initials: DJB
Last Modification Date:	08/16/22 Initials: DJB
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS
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Acad Ver. 2018	Scale: Units: English

Sheet Revisions		

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AS CONSTRUCTED	ELLICOTT HIGHWAY BRIDGE REPLACEMENT			Project No./Code
No Revisions:	GIRDER DETAILS			500331
Revised:	Designer: DJB	Structure Numbers	EPC0493-11.77	–
Void:	Detailer: CDF			
	Sheet Subset: BRIDGE	Subset Sheets: B13 of B23		Sheet Number 63

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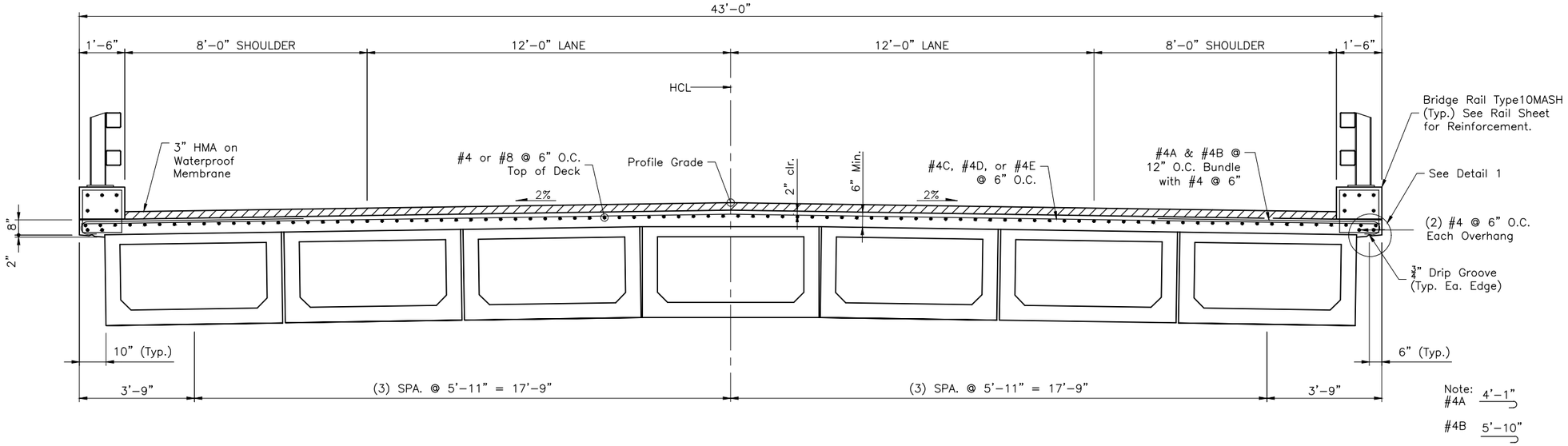

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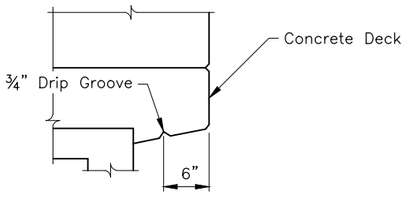

DETAIL 1

COLORADO REGISTERED DANIEL J. BECHTOLD 29435 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	09/20/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	DJB
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Acad Ver. 2018	Scale:	Units:	English

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No Revisions:

Revised:

Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT

SUPERSTRUCTURE DETAILS (1 OF 2)

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B14 of B23

Project No./Code	
500331	
–	
Sheet Number	64

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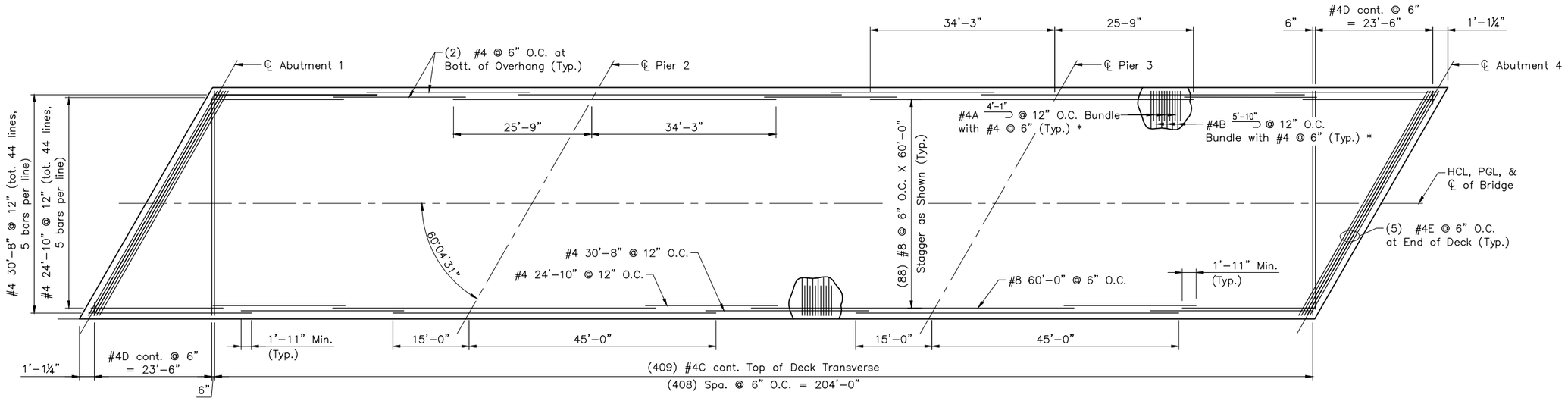

DECK PLAN

NOTES:

* Trim to fit at acute corners

COLORADO REGISTERED DANIEL J. BECHTOLD 29435 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	09/20/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	DJB
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

SUPERSTRUCTURE DETAILS (2 OF 2)

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B15 of B23

Project No./Code	
500331	
–	
Sheet Number	65

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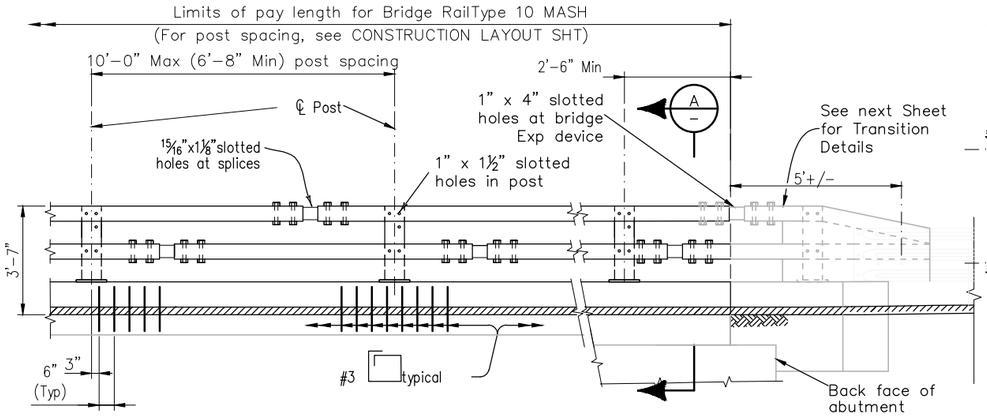
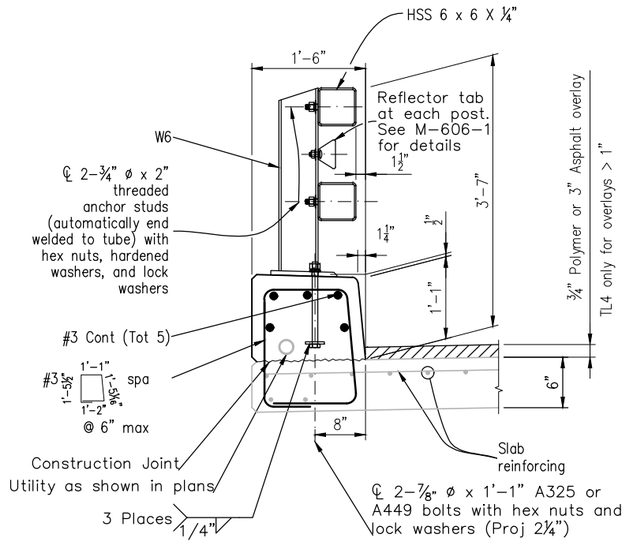
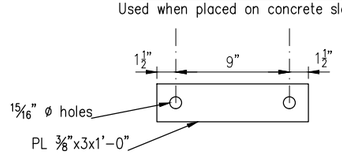


ELEVATION – BRIDGE RAIL



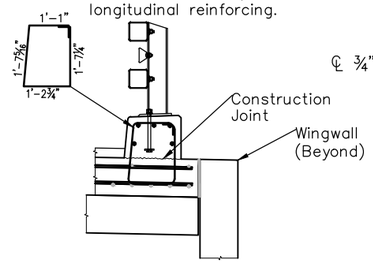
TYPICAL SECTION

Used when placed on concrete slab.

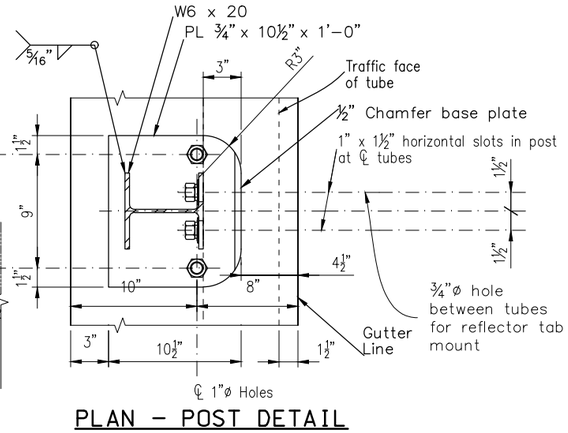


ANCHOR DETAIL

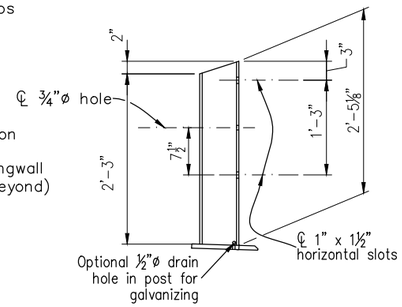
Note: Approach slab stirrups shall extend to top of longitudinal reinforcing.



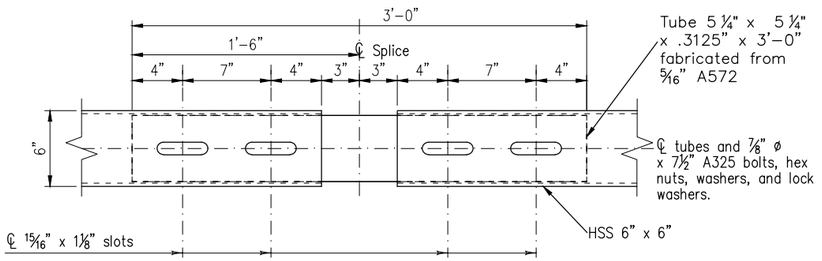
SECTION A–



PLAN – POST DETAIL



POST ELEVATION



at tube splice, and 1" x 4" slots at bridge Exp device. Slot both inner and outer tubes. Stagger top and bottom splices into different post spacings except at expansion joint, place at opposite ends of same post space except as shown in transitions. (Range of motion = 1'-0" at bridge expansion device.)

PLAN – TUBE SPLICE

INFORMATION ONLY

DESCRIPTION	UNIT	PER LF
Concrete Sealer	SY	0.28
Structural Steel (Galvanized)	LB	49.4
Concrete Class D	CY	0.059
Reinforcing Steel (ASTM A1035)	LB	6.4

NOTES:

1. All tubes shall be ASTM A-1085. All posts, base plates, and splice tubes fabricated by welding shall be ASTM A-572 Grade 50. Post anchor, encased in concrete, shall be Grade 36 steel and need not be galvanized. All other steel shall be Grade 36 unless otherwise noted.

2. The above material and all anchor bolts and miscellaneous bolts, nuts, and washers shall be galvanized after fabrication in accordance with Section 509. Concrete, reinforcing steel, and structural steel elements shall conform to the requirements of sections 601 & 606, 602, and 509, respectively unless otherwise noted. Concrete sealer shall conform to section 515.

3. The tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 1,800 feet.

4. Tubes shall be continuous over not less than two posts, preferably 4 posts except at approach slab end joint. No welded butt splices will be allowed in the tube sections.

5. The centerline of the tube splice shall be 1'-8" minimum and 2'-6" maximum from the centerline of the posts.

6. All bolts that have lock washers shall be tightened to snug only.

7. Posts shall be perpendicular to the longitudinal roadway grade.

8. One or more 10'-0" post spaces may be reduced (6'-8" Min) in order to maintain dimensions from the end of the rail and expansion joints or concrete buttresses.

9. The top and inside face of the rail shall receive a coating of Item 515, Concrete Sealer, either a silane/siloxane or a type compatible with the concrete coating or sealer/stain shown in the plans.

10. Payment will be made under item 606, Bridge Rail Type 10MASH, for all posts, post anchors, base plates, backing plates, anchor bolts, miscellaneous bolts, nuts, washers, tubes, tube expansion devices, tube splices, end plates, concrete (Class D), reinforcing steel, concrete sealer, and reflector tabs.

11. Prior to fabrication of this item, an electronic pdf which complies with the requirements of section 105, shall be submitted to the Engineer for information only.

DESIGN DATA

Design: AASHTO MASH 2016 TL-5 for overlay thickness up to 1" (by calculation), AASHTO MASH 2016 TL-4 for overlay thickness over 1" and resulting in a height of the top of rail over pavement of 36" Min (by Professional Evaluation)

Structural Steel:

AASHTO M270 Gr 36 (ASTM A709 Gr 36)	fy = 36 ksi
AASHTO M270 Gr 50 (ASTM A992/A572 Gr 50)	fy = 50 ksi
ASTM A1085	fy = 50 ksi

Concrete:

Class D	f'c = 4.5 ksi

Reinforcing Steel:
ASTM A1035CS (Grade 100), fy = 100 ksi Min
Reinforcing steel shall be low-carbon, chromium, conforming to ASTM A1035/A1035M Alloy Type 1035 CS Grade 100 with a minimum chromium content of 9.2%. Stainless steel per ASTM A955 may be substituted.
Stagger splices. Splice Length = 1'-10"

COLORADO REGISTERED DANIEL J. BECHTOLD 29435 PROFESSIONAL ENGINEER
Daniel J. Bechtold
10/13/2022

Computer File Information			
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Drawing File Name:	BRIDGE RAIL.DWG		
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No Revisions:	BRIDGE RAIL TYPE 10MASH			500331
Revised:	Designer: DJB	Structure Numbers	EPC0493-11.77	–
Void:	Detailer: CDF			
	Sheet Subset: BRIDGE	Subset Sheets:	B16 of B23	Sheet Number 66

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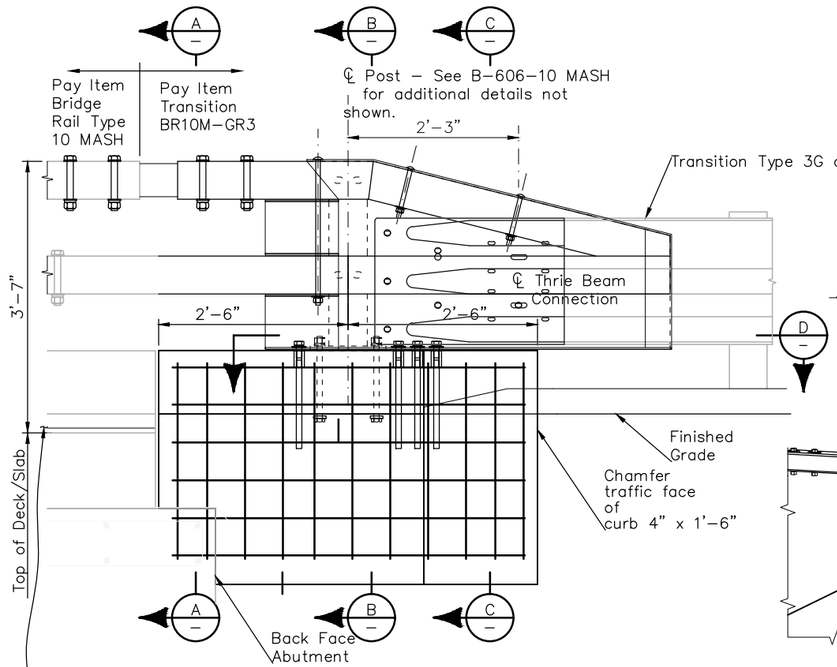
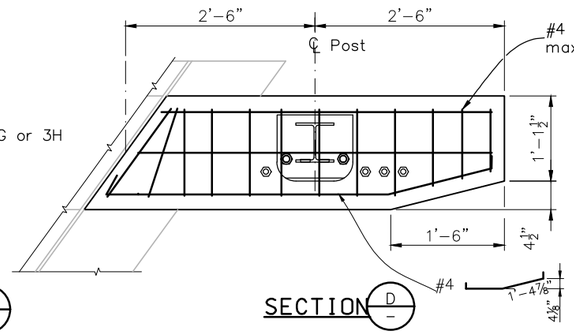


CONCRETE CURB DETAILS

Note: Shaded Linework is from other Pay Items



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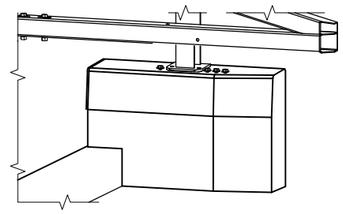

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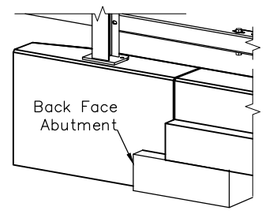
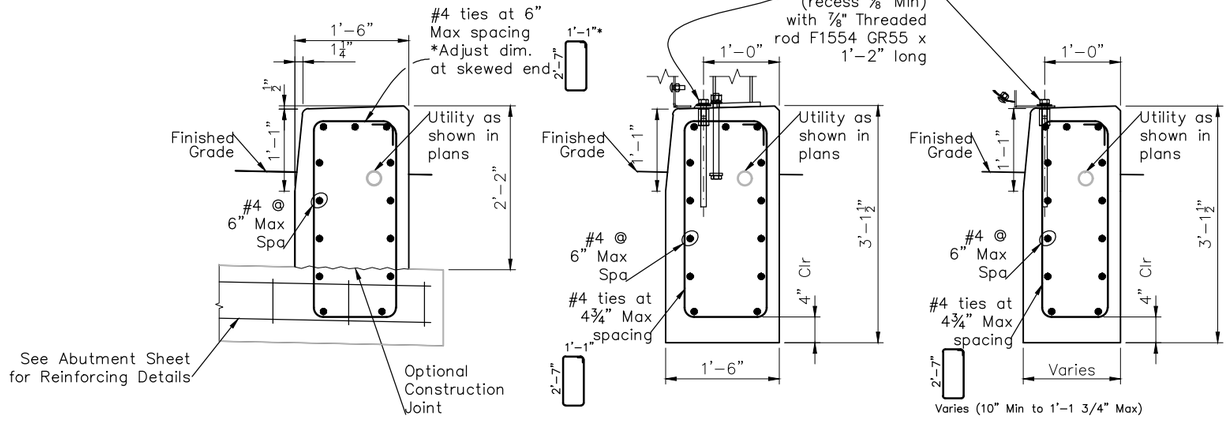


BACK ISOMETRIC

Note: Curb dimensions typical for all sections unless noted otherwise.



Note: Shaded Linework is from other Pay Items

SECTION A

SECTION B

SECTION C

NOTES:

B-606-10MASH A-S

(Use with B-606-10MASH & 10MASH B-S)

1. All tubes shall be ASTM A-1085. All posts, base plates, and splice tubes fabricated by welding shall be ASTM A-572 Grade 50. All other steel shall be Grade 36 unless otherwise noted.

2. The above material and all anchor bolts and miscellaneous bolts, nuts, and washers shall be galvanized after fabrication in accordance with Section 509. Concrete, reinforcing steel, and structural steel elements shall conform to the requirements of sections 601 & 606, 602, and 509, respectively unless otherwise noted. Concrete sealer shall conform to section 515.

3. All bolts that have lock washers shall be tightened to snug only. All anchors shall be cast in place unless approved by Engineer.

4. The top and inside face of the rail shall receive a coating of Item 515, Concrete Sealer, either a silane/siloxane or a type compatible with the concrete coating or sealer/stain shown in the plans.

5. Payment will be made under item 606, Transition Type BR10M-GR3, for all anchor bolts, miscellaneous bolts, nuts, washers, tubes, tube expansion device, concrete (Class D), reinforcing steel, and concrete sealer.

6. Prior to fabrication of this item, an electronic pdf which complies with the requirements of section 105, shall be submitted to the Engineer for information only.

DESIGN DATA

Structural Steel:	
AASHTO M270 Gr 36 (ASTM A709 Gr 36)	fy = 36 ksi
AASHTO M270 Gr 50 (ASTM A992/A572 Gr 50)	fy = 50 ksi
ASTM A1085	fy = 50 ksi
Concrete:	
Class D,	f'c = 4.5 ksi
Reinforcing Steel:	fy = 60 ksi min

INFORMATION ONLY

DESCRIPTION	UNIT	QUANTITY
Structural Steel (Galvanized)	LB	605
Concrete Sealer	SY	2.8
Concrete Class D	CY	.8
Reinforcing Steel (Epoxy Coated)	LB	60

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
TRANSITION TYPE BR10M-GR3 SHT. 1

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B17 of B23

Project No./Code	
500331	
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Sheet Number	67

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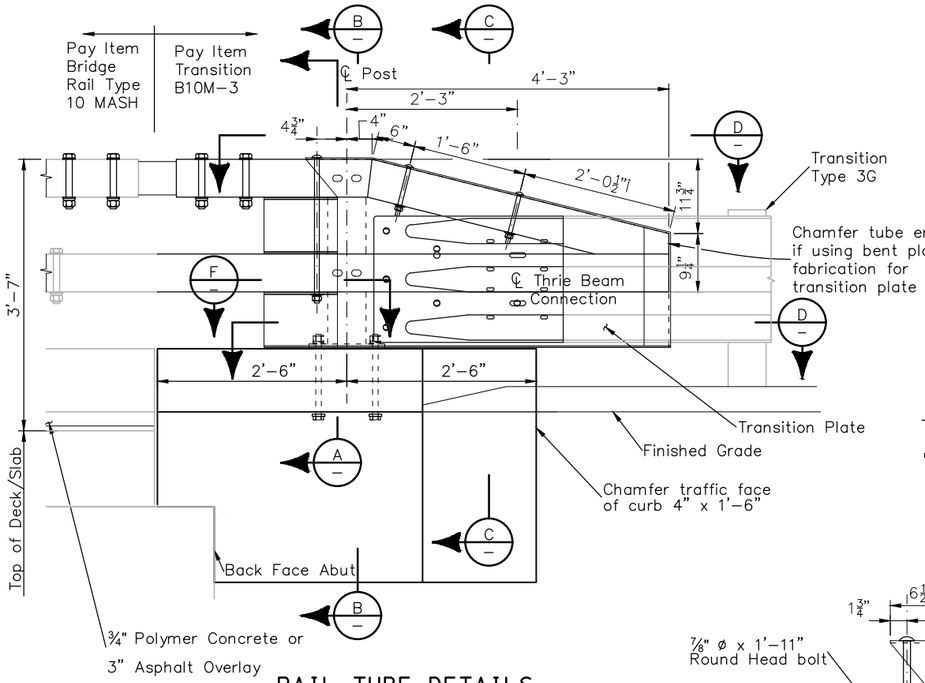
B-606-10MASH B-S

(Use with B-606-10MASH & 10MASHA-S)



RAIL TUBE DETAILS

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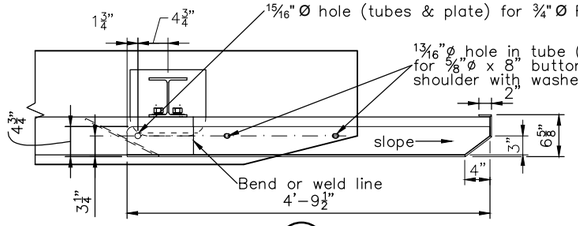

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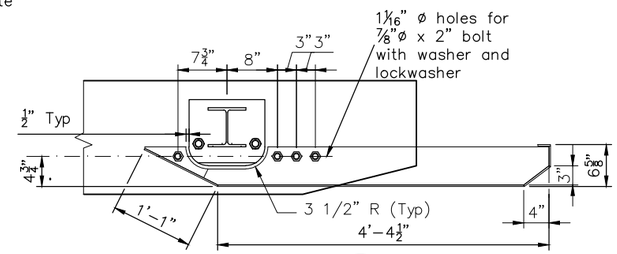

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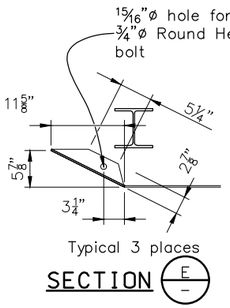

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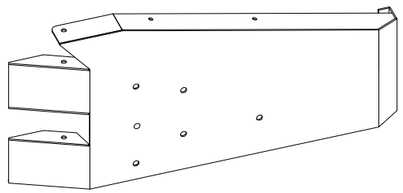

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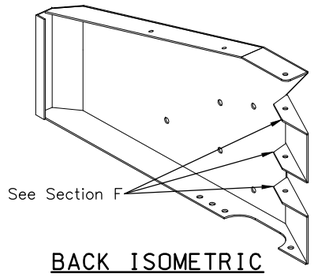

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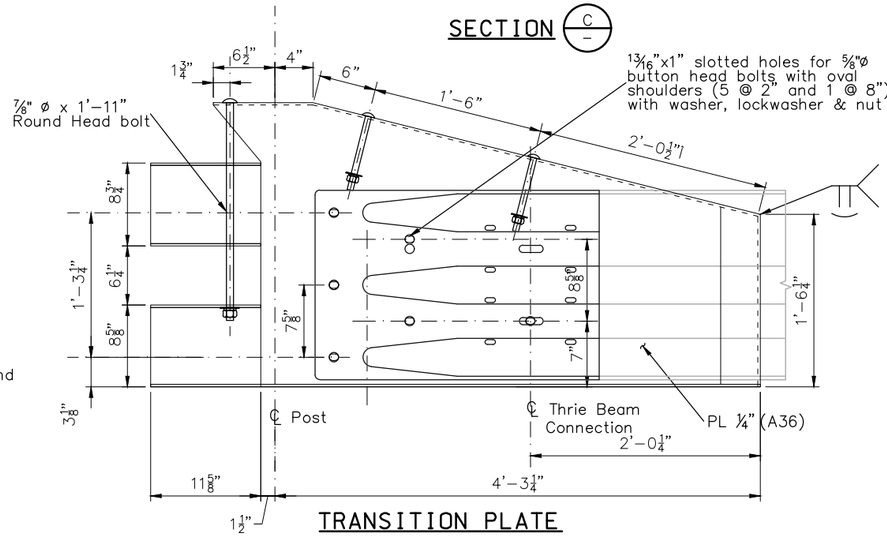
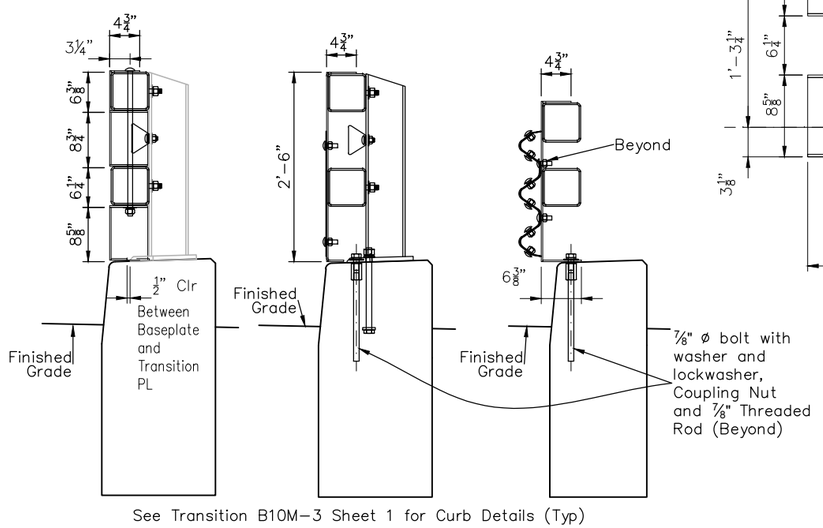


TRANSITION PLATE

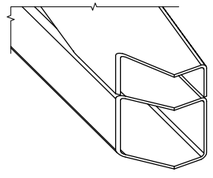


See Transition B10M-3 Sheet 1 for Curb Details (Typ)

SECTION A

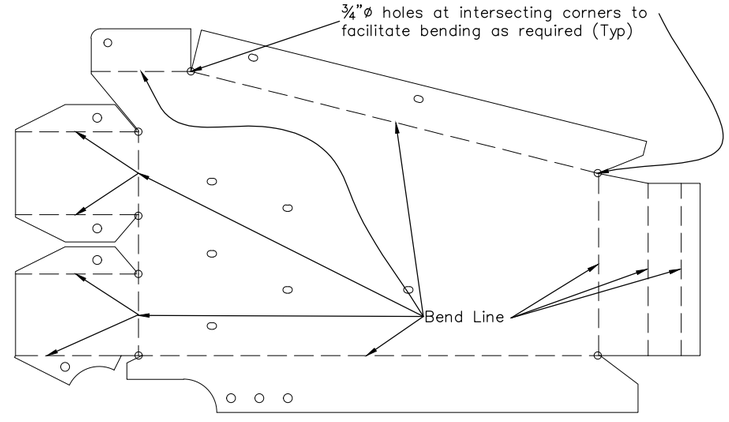
SECTION D

SECTION C



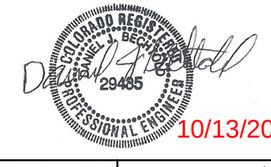
TUBE END ISOMETRIC

Note: Transition Plate may be fabricated with bent plates and/or welded construction. All welds shall be square root with convex contouring.



CONCEPTUAL BEND DIAGRAM

Note: See B15 (B-606-10MASH A) for payment details and quantities.



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Last Modification Date:	08/16/22	Initials:	DJB
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Drawing File Name:	TRANBR10M-1.DWG		
Acad Ver. 2018	Scale:	Units:	English

Sheet Revisions		

El Paso County
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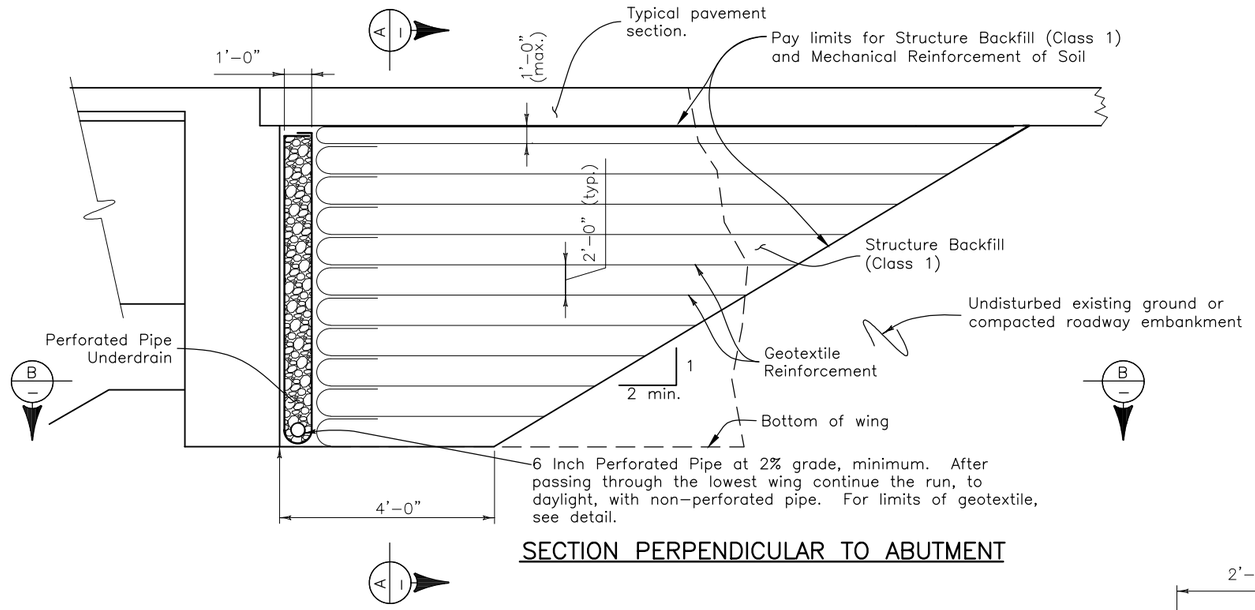
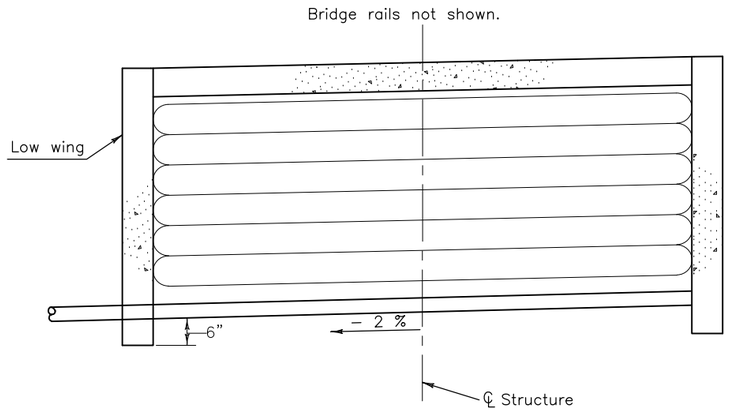
AS CONSTRUCTED	ELLICOTT HIGHWAY BRIDGE REPLACEMENT			Project No./Code
No Revisions:	TRANSITION TYPE BR10M-GR3 SHT. 2			500331
Revised:	Designer: DJB	Structure Numbers	EPC0493-11.77	–
Void:	Detailer: CDF			
	Sheet Subset: BRIDGE	Subset Sheets: B18 of B23		Sheet Number 68

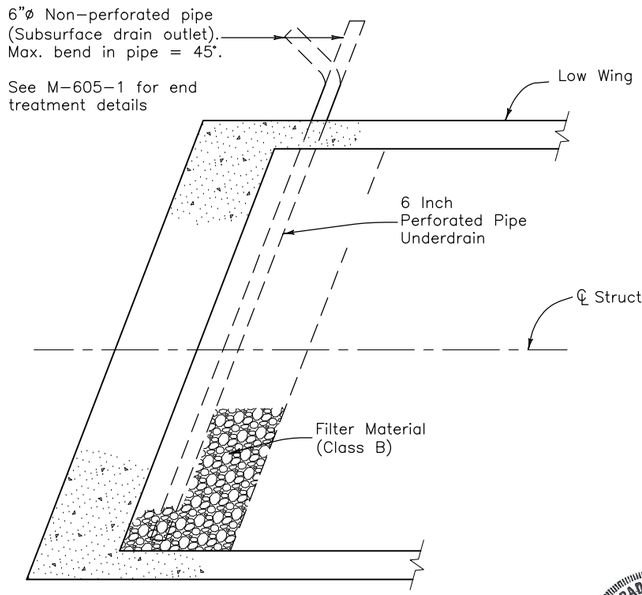
Y:\Denver\152000S\00152049.01_El_Paso_EPC0493111.77\Eng_Docs\Drawings\B18 TRANBR10M-2.dwg – Current tab: B18 TRAN 2 – Print Time: Tue, 16 Aug 2022 – 4:06pm By: dbechtold Last Save: Wed, 03 Aug 2022 – 11:55am



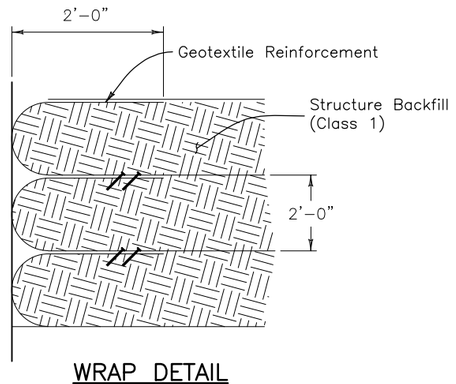
SECTION PERPENDICULAR TO ABUTMENT



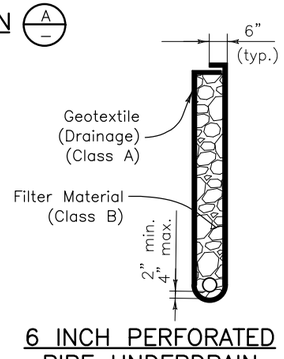
SECTION A



SECTION B

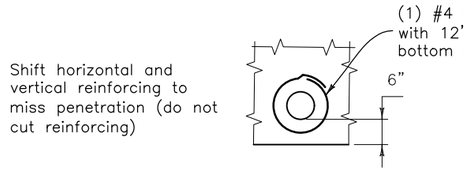


WRAP DETAIL



6 INCH PERFORATED PIPE UNDERDRAIN

6 Inch Perforated Pipe Underdrain includes all Filter Material (Class B) and Geotextile (Drainage) (Class A) surrounding the Filter Material (Class B).



PIPE PENETRATION DETAIL

NOTES:

Geotextile Reinforcement shall be woven fabric with a Minimum Average Roll Value of 2400 lb/ft based on ASTM D4595.

Geotextile Reinforcement shall be placed by alternating Machine Direction (MD) with Cross Machine Direction (XD) from layer to layer.

The Geotextile Reinforcement wrap at Back Face of Abutment shall be pulled back slack free with its end anchored to soil underneath with staples or pins.

Minimum splice of all Geofabric shall consist of 6" of overlap.

Payment will be made under Item 206 Mechanical Reinforcement of Soil (cu.yd.) and 206 Structure Backfill (Class 1) (cu.yd.) and shall include the cost for 6 Inch Perforated Pipe Underdrain (with filter material) and Subsurface Drain Outlet (6"ø Non–Perforated Pipe) and any geotextile shown on this sheet.

Installation of Pipe Underdrain and Subsurface Drain Outlet will conform to the Construction requirements of section 605.03 and 605.06, respectively.

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	06/10/21	Initials:	DJB
Last Modification Date:	08/16/22	Initials:	DJB
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	BACKFILL.DWG		
Acad Ver. 2018	Scale:	Units:	English

Sheet Revisions

El Paso County Department of Public Works
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AS CONSTRUCTED
No Revisions:
Revised:
Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT
MECHANICALLY STABILIZED BACKFILL

Designer:	DJB	Structure Numbers	EPC0493–11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B19 of B23

Project No./Code: 500331
–
Sheet Number: 69

Y:\Denver\152000S\00152049.01_El_Paso_EPC049311.77\Eng_Docs\Drawings\B19 BACKFILL.dwg – Current tab: Layout1 – Print Time: Tue, 16 Aug 2022 – 4:13pm By: dbechtold Last Save: Wed, 10 Aug 2022 – 9:30am

DESCRIPTION

Units: feet;
Project: 152049.01; Subaccount: ;
Designer: CDF; Detailer: ;
Location: El Paso County;
3 Span (70', 86', 70') Highway Bridge Replacement

HORIZONTAL ALIGNMENT DATA

HORIZONTAL TANGENT

VERTICAL ALIGNMENT DATA

ELEVATION AT PI	ELEVATION AT GRADE	STATION		ELEVATION AT GRADE	ELEVATION AT PI	PERCENT GRADE
						1.700000
		5+78.2100	PC	6098.5200		
		7+48.2100	PI	6100.4750	6101.4100	
		9+18.2100	PT	6100.5600		
						-0.500000

TABLE OF ROADWAY CROSS-SLOPES (SUPERELEVATION: E= -NC-)

STATION	SLOPE LEFT	SLOPE RIGHT	VC LENGTH
(ON TANGENT)	-0.0200	-0.0200	50.00 (MAX)

OFFSET PROFILE CONTROL TO PIVOT POINT = 0.0000 FEET

LIMITS OF VALID ELEVATION AND CROSS-SLOPE DATA	BEGIN	END
* UNLIMITED *	* UNLIMITED *	

LAYOUT LINE DATA

LAYOUT LINE DEFINED TO BE COINCIDENT WITH HORIZONTAL CONTROL

	HCL STA	OFFSET	X	Y
LAYOUT LINE INTERSECTS REF LINE AT	6+25.0000	0.00000000	0.0000	0.0000

DEAD LOAD DEFLECTION DATA

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
FOR BENT LINE: ABUT 1 BRG AND OTHERS						07 CARD(S): 1		GIRDER LINES REFERENCED BY: (BLANK)				
												A4= 0.00000
INCH	0.0000	0.2081	0.4146	0.5838	0.6908	0.7216	0.6730	0.5526	0.3790	0.1815	0.0000 INCH	A3= 0.00000
FOOT	0.0000	0.0173	0.0346	0.0486	0.0576	0.0601	0.0561	0.0461	0.0316	0.0151	0.0000 FOOT	A2= 4.51121
												A1=-4.14055
SLOPE	0.161980										-0.131091 SLOPE	A0=-1.94377
FOR BENT LINE: PIER 2 AH						07 CARD(S): 1		GIRDER LINES REFERENCED BY: (BLANK)				
												A4= 0.00000
INCH	0.0000	0.3529	0.7428	1.0831	1.3120	1.3924	1.3120	1.0831	0.7428	0.3529	0.0000 INCH	A3= 0.00000
FOOT	0.0000	0.0294	0.0619	0.0903	0.1093	0.1160	0.1093	0.0903	0.0619	0.0294	0.0000 FOOT	A2= 10.3002
												A1=-10.3002
SLOPE	0.249542										-0.249542 SLOPE	A0=-2.99451
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	

BENT LINE DESCRIPTION	INTERSECTION POINT STATION	OFFSET	ELEVATION	FROM LAYOUT LINE OFFSET X	ORDINATE Y	BENT LINE LENGTH FROM Y-AXIS	SKEW D M S	GIRDER LINE LENGTH FROM REF LINE	ROADWAY CROSS-SLOPE
* HORIZONTAL CONTROL LINE *			AT FINISHED GRADE						
REF LINE	6+25.0000	0.0000	6099.2446	0.0000	0.0000	0.0000	60 04 31.00	0.0000	
BF Abut 1	6+36.4500	0.0000	6099.4003	0.0000	11.4500	0.0000	29 55 00.29	11.4500	
ABUT 1 BRG	6+38.1800	0.0000	6099.4231 10	0.0000	13.1800	0.0000	29 55 00.29	13.1800	
PIER 2 BK	7+07.0300	0.0000	6100.1731 1	0.0000	82.0300	0.0000	29 55 00.29	82.0300	
PIER 2 CL	7+08.1900	0.0000	6100.1831 1	0.0000	83.1900	0.0000	29 55 00.29	83.1900	
PIER 2 AH	7+09.3500	0.0000	6100.1930 10	0.0000	84.3500	0.0000	29 55 00.29	84.3500	
PIER 3 BK	7+93.0300	0.0000	6100.6789 1	0.0000	168.0300	0.0000	29 55 00.29	168.0300	
PIER 3 CL	7+94.1900	0.0000	6100.6825 1	0.0000	169.1900	0.0000	29 55 00.29	169.1900	
PIER 3 AH	7+95.3500	0.0000	6100.6859 10	0.0000	170.3500	0.0000	29 55 00.29	170.3500	
ABUT 4 BRG	8+64.1900	0.0000	6100.7357 1	0.0000	239.1900	0.0000	29 55 00.29	239.1900	
BF ABUT 4	8+65.9200	0.0000	6100.7330 0.0	0.0000	240.9200	0.0000	29 55 00.29	240.9200	

Left Edge of Deck — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF Abut 1	6+48.8214	-21.5000	6098.8791		-21.5000	23.8214	-24.8053	29 55 00.29	-13.5309	-0.020000
ABUT 1 BRG	6+50.5514	-21.5000	6098.9005	098.9005	-21.5000	25.5514	-24.8053	29 55 00.29	-11.8009	-0.020000
F-1	6+57.4364	-21.5000	6098.9838	099.0011	-21.5000	32.4364			-4.9159	-0.020000
REF LINE	6+62.3523	-21.5000	6099.0414		-21.5000	37.3523	-43.0981	60 04 31.00	0.0000	-0.020000
F-2	6+64.3214	-21.5000	6099.0640	099.0985	-21.5000	39.3214			1.9691	-0.020000
F-3	6+71.2064	-21.5000	6099.1411	099.1898	-21.5000	46.2064			8.8541	-0.020000
F-4	6+78.0914	-21.5000	6099.2152	099.2728	-21.5000	53.0914			15.7391	-0.020000
F-5	6+84.9764	-21.5000	6099.2862	099.3464	-21.5000	59.9764			22.6241	-0.020000
F-6	6+91.8614	-21.5000	6099.3542	099.4103	-21.5000	66.8614			29.5091	-0.020000
F-7	6+98.7464	-21.5000	6099.4191	099.4651	-21.5000	73.7464			36.3941	-0.020000
F-8	7+05.6314	-21.5000	6099.4809	099.5125	-21.5000	80.6314			43.2791	-0.020000
F-9	7+12.5164	-21.5000	6099.5396	099.5547	-21.5000	87.5164			50.1641	-0.020000
PIER 2 BK	7+19.4014	-21.5000	6099.5953	099.5953	-21.5000	94.4014	-24.8053	29 55 00.29	57.0491	-0.020000
PIER 2 CL	7+20.5614	-21.5000	6099.6044		-21.5000	95.5614	-24.8053	29 55 00.29	58.2091	-0.020000
PIER 2 AH	7+21.7214	-21.5000	6099.6134	099.6134	-21.5000	96.7214	-24.8053	29 55 00.29	59.3691	-0.020000
F-1	7+30.0894	-21.5000	6099.6757	099.7051	-21.5000	105.0894			67.7371	-0.020000
F-2	7+38.4574	-21.5000	6099.7334	099.7953	-21.5000	113.4574			76.1051	-0.020000
F-3	7+46.8254	-21.5000	6099.7866	099.8769	-21.5000	121.8254			84.4731	-0.020000
F-4	7+55.1934	-21.5000	6099.8353	099.9447	-21.5000	130.1934			92.8411	-0.020000
F-5	7+63.5614	-21.5000	6099.8795	099.9955	-21.5000	138.5614			101.2091	-0.020000
F-6	7+71.9294	-21.5000	6099.9191	100.0284	-21.5000	146.9294			109.5771	-0.020000
F-7	7+80.2974	-21.5000	6099.9542	100.0445	-21.5000	155.2974			117.9451	-0.020000
F-8	7+88.6654	-21.5000	6099.9848	100.0467	-21.5000	163.6654			126.3131	-0.020000
F-9	7+97.0334	-21.5000	6100.0108	100.0402	-21.5000	172.0334			134.6811	-0.020000
PIER 3 BK	8+05.4014	-21.5000	6100.0323	100.0323	-21.5000	180.4014	-24.8053	29 55 00.29	143.0491	-0.020000
PIER 3 CL	8+06.5614	-21.5000	6100.0350		-21.5000	181.5614	-24.8053	29 55 00.29	144.2091	-0.020000
PIER 3 AH	8+07.7214	-21.5000	6100.0375	100.0375	-21.5000	182.7214	-24.8053	29 55 00.29	145.3691	-0.020000
F-1	8+14.6054	-21.5000	6100.0507	100.0681	-21.5000	189.6054			152.2531	-0.020000
F-2	8+21.4894	-21.5000	6100.0609	100.0955	-21.5000	196.4894			159.1371	-0.020000
F-3	8+28.3734	-21.5000	6100.0681	100.1167	-21.5000	203.3734			166.0211	-0.020000
F-4	8+35.2574	-21.5000	6100.0721	100.1297	-21.5000	210.2574			172.9051	-0.020000
F-5	8+42.1414	-21.5000	6100.0731	100.1333	-21.5000	217.1414			179.7891	-0.020000
F-6	8+49.0254	-21.5000	6100.0711	100.1271	-21.5000	224.0254			186.6731	-0.020000
F-7	8+55.9094	-21.5000	6100.0659	100.1120	-21.5000	230.9094			193.5571	-0.020000
F-8	8+62.7934	-21.5000	6100.0577	100.0893	-21.5000	237.7934			200.4411	-0.020000
F-9	8+69.6774	-21.5000	6100.0465	100.0616	-21.5000	244.6774			207.3251	-0.020000
ABUT 4 BRG	8+76.5614	-21.5000	6100.0321	100.0321	-21.5000	251.5614	-24.8053	29 55 00.29	214.2091	-0.020000
BF ABUT 4	8+78.2914	-21.5000	6100.0280		-21.5000	253.2914	-24.8053	29 55 00.29	215.9391	-0.020000

CL 1 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF Abut 1	6+46.6636	-17.7500	6098.9271		-17.7500	21.6636	-20.4788	29 55 00.29	-9.1738	-0.020000
ABUT 1 BRG	6+48.3936	-17.7500	6098.9488	098.9488	-17.7500	23.3936	-20.4788	29 55 00.29	-7.4438	-0.020000
F-1	6+55.2786	-17.7500	6099.0330	099.0503	-17.7500	30.2786			-0.5588	-0.020000
REF LINE	6+55.8374	-17.7500	6099.0397		-17.7500	30.8374	-35.5810	60 04 31.00	0.0000	-0.020000
F-2	6+62.1636	-17.7500	6099.1142	099.1487	-17.7500	37.1636			6.3262	-0.020000
F-3	6+69.0486	-17.7500	6099.1923	099.2409	-17.7500	44.0486			13.2112	-0.020000
F-4	6+75.9336	-17.7500	6099.2673	099.3249	-17.7500	50.9336			20.0962	-0.020000
F-5	6+82.8186	-17.7500	6099.3393	099.3994	-17.7500	57.8186			26.9812	-0.020000
F-6	6+89.7036	-17.7500	6099.4082	099.4643	-17.7500	64.7036			33.8662	-0.020000
F-7	6+96.5886	-17.7500	6099.4741	099.5201	-17.7500	71.5886			40.7512	-0.020000
F-8	7+03.4736	-17.7500	6099.5368	099.5684	-17.7500	78.4736			47.6362	-0.020000
F-9	7+10.3586	-17.7500	6099.5965	099.6117	-17.7500	85.3586			54.5212	-0.020000
PIER 2 BK	7+17.2436	-17.7500	6099.6532	099.6532	-17.7500	92.2436	-20.4788	29 55 00.29	61.4062	-0.020000
PIER 2 CL	7+18.4036	-17.7500	6099.6624		-17.7500	93.4036	-20.4788	29 55 00.29	62.5662	-0.020000
PIER 2 AH	7+19.5636	-17.7500	6099.6716	099.6716	-17.7500	94.5636	-20.4788	29 55 00.29	63.7262	-0.020000
F-1	7+27.9316	-17.7500	6099.7350	099.7644	-17.7500	102.9316			72.0942	-0.020000
F-2	7+36.2996	-17.7500	6099.7939	099.8558	-17.7500	111.2996			80.4622	-0.020000
F-3	7+44.6676	-17.7500	6099.8483	099.9386	-17.7500	119.6676			88.8302	-0.020000
F-4	7+53.0356	-17.7500	6099.8982	100.0075	-17.7500	128.0356			97.1982	-0.020000
F-5	7+61.4036	-17.7500	6099.9435	100.0596	-17.7500	136.4036			105.5662	-0.020000
F-6	7+69.7716	-17.7500	6099.9843	100.0937	-17.7500	144.7716			113.9342	-0.020000
F-7	7+78.1396	-17.7500	6100.0206	100.1109	-17.7500	153.1396			122.3022	-0.020000
F-8	7+86.5076	-17.7500	6100.0523	100.1142	-17.7500	161.5076			130.6702	-0.020000
F-9	7+94.8756	-17.7500	6100.0795	100.1090	-17.7500	169.8756			139.0382	-0.020000
PIER 3 BK	8+03.2436	-17.7500	6100.1022	100.1022	-17.7500	178.2436	-20.4788	29 55 00.29	147.4062	-0.020000
PIER 3 CL	8+04.4036	-17.7500	6100.1050		-17.7500	179.4036	-20.4788	29 55 00.29	148.5662	-0.020000
PIER 3 AH	8+05.5636	-17.7500	6100.1077	100.1077	-17.7500	180.5636	-20.4788	29 55 00.29	149.7262	-0.020000
F-1	8+12.4476	-17.7500	6100.1219	100.1393	-17.7500	187.4476			156.6102	-0.020000
F-2	8+19.3316	-17.7500	6100.1331	100.1676	-17.7500	194.3316			163.4942	-0.020000
F-3	8+26.2156	-17.7500	6100.1412	100.1898	-17.7500	201.2156			170.3782	-0.020000
F-4	8+33.0996	-17.7500	6100.1462	100.2038	-17.7500	208.0996			177.2622	-0.020000
F-5	8+39.9836	-17.7500	6100.1482	100.2083	-17.7500	214.9836			184.1462	-0.020000
F-6	8+46.8676	-17.7500	6100.1470	100.2031	-17.7500	221.8676			191.0302	-0.020000
F-7	8+53.7516	-17.7500	6100.1429	100.1889	-17.7500	228.7516			197.9142	-0.020000
F-8	8+60.6356	-17.7500	6100.1356	100.1672	-17.7500	235.6356			204.7982	-0.020000
F-9	8+67.5196	-17.7500	6100.1253	100.1404	-17.7500	242.5196			211.6822	-0.020000
ABUT 4 BRG	8+74.4036	-17.7500	6100.1119	100.1119	-17.7500	249.4036	-20.4788	29 55 00.29	218.5662	-0.020000
BF ABUT 4	8+76.1336	-17.7500	6100.1081		-17.7500	251.1336	-20.4788	29 55 00.29	220.2962	-0.020000

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

Computer File Information			
Creation Date:	10/05/21	Initials:	CDF
Last Modification Date:	08/16/22	Initials:	CDF
Full Path:	Y:\Denver\152000S\00152049.01\Eng_Docs\DWGS		
Drawing File Name:	GEOMETRY.dwg		
Acad Ver. 2018	Scale:	Units:	English

Sheet Revisions		

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No Revisions:

Revised:

Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT

BRIDGE DECK GEOMETRY (1 OF 3)

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B20 of B23

Project No./Code: 500331

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Sheet Number: 70

Y:\Denver\152000S\00152049.01_El_Paso_EPC049311.77\Eng_Docs\Drawings\B20-B22 GEOMETRY.dwg - Current tab: B20 - Print Time: Tue, 16 Aug 2022 - 4:14pm By: dbechtold Last Save: Tue, 16 Aug 2022 - 3:03pm

CL 2 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
BF Abut 1	6+43.2591	-11.8333	6099.0023		-11.8333	18.2591	-13.6525	29 55 00.29	-2.2992	-0.020000
ABUT 1 BRG	6+44.9891	-11.8333	6099.0243	099.0243	-11.8333	19.9891	-13.6525	29 55 00.29	-0.5692	-0.020000
REF LINE	6+45.5582	-11.8333	6099.0315		-11.8333	20.5582	-23.7206	60 04 31.00	0.0000	-0.020000
F-1	6+51.8741	-11.8333	6099.1101	099.1274	-11.8333	26.8741			6.3158	-0.020000
F-2	6+58.7591	-11.8333	6099.1928	099.2273	-11.8333	33.7591			13.2008	-0.020000
F-3	6+65.6441	-11.8333	6099.2724	099.3210	-11.8333	40.6441			20.0858	-0.020000
F-4	6+72.5291	-11.8333	6099.3489	099.4065	-11.8333	47.5291			26.9708	-0.020000
F-5	6+79.4141	-11.8333	6099.4224	099.4826	-11.8333	54.4141			33.8558	-0.020000
F-6	6+86.2991	-11.8333	6099.4929	099.5489	-11.8333	61.2991			40.7408	-0.020000
F-7	6+93.1841	-11.8333	6099.5602	099.6063	-11.8333	68.1841			47.6258	-0.020000
F-8	7+00.0691	-11.8333	6099.6245	099.6561	-11.8333	75.0691			54.5108	-0.020000
F-9	7+06.9541	-11.8333	6099.6857	099.7009	-11.8333	81.9541			61.3958	-0.020000
PIER 2 BK	7+13.8391	-11.8333	6099.7439	099.7439	-11.8333	88.8391	-13.6525	29 55 00.29	68.2808	-0.020000
PIER 2 CL	7+14.9991	-11.8333	6099.7534		-11.8333	89.9991	-13.6525	29 55 00.29	69.4408	-0.020000
PIER 2 AH	7+16.1591	-11.8333	6099.7628	099.7628	-11.8333	91.1591	-13.6525	29 55 00.29	70.6008	-0.020000
F-1	7+24.5271	-11.8333	6099.8281	099.8575	-11.8333	99.5271			78.9688	-0.020000
F-2	7+32.8951	-11.8333	6099.8889	099.9508	-11.8333	107.8951			87.3368	-0.020000
F-3	7+41.2631	-11.8333	6099.9451	100.0353	-11.8333	116.2631			95.7048	-0.020000
F-4	7+49.6311	-11.8333	6099.9968	100.1061	-11.8333	124.6311			104.0728	-0.020000
F-5	7+57.9991	-11.8333	6100.0440	100.1600	-11.8333	132.9991			112.4408	-0.020000
F-6	7+66.3671	-11.8333	6100.0866	100.1959	-11.8333	141.3671			120.8088	-0.020000
F-7	7+74.7351	-11.8333	6100.1247	100.2150	-11.8333	149.7351			129.1768	-0.020000
F-8	7+83.1031	-11.8333	6100.1583	100.2202	-11.8333	158.1031			137.5448	-0.020000
F-9	7+91.4711	-11.8333	6100.1874	100.2168	-11.8333	166.4711			145.9128	-0.020000
PIER 3 BK	7+99.8391	-11.8333	6100.2119	100.2119	-11.8333	174.8391	-13.6525	29 55 00.29	154.2808	-0.020000
PIER 3 CL	8+00.9991	-11.8333	6100.2149		-11.8333	175.9991	-13.6525	29 55 00.29	155.4408	-0.020000
PIER 3 AH	8+02.1591	-11.8333	6100.2179	100.2179	-11.8333	177.1591	-13.6525	29 55 00.29	156.6008	-0.020000
F-1	8+09.0431	-11.8333	6100.2336	100.2510	-11.8333	184.0431			163.4848	-0.020000
F-2	8+15.9271	-11.8333	6100.2463	100.2808	-11.8333	190.9271			170.3688	-0.020000
F-3	8+22.8111	-11.8333	6100.2559	100.3045	-11.8333	197.8111			177.2528	-0.020000
F-4	8+29.6951	-11.8333	6100.2624	100.3200	-11.8333	204.6951			184.1368	-0.020000
F-5	8+36.5791	-11.8333	6100.2659	100.3260	-11.8333	211.5791			191.0208	-0.020000
F-6	8+43.4631	-11.8333	6100.2663	100.3224	-11.8333	218.4631			197.9048	-0.020000
F-7	8+50.3471	-11.8333	6100.2637	100.3097	-11.8333	225.3471			204.7888	-0.020000
F-8	8+57.2311	-11.8333	6100.2579	100.2895	-11.8333	232.2311			211.6728	-0.020000
F-9	8+64.1151	-11.8333	6100.2491	100.2643	-11.8333	239.1151			218.5568	-0.020000
ABUT 4 BRG	8+70.9991	-11.8333	6100.2373	100.2373	-11.8333	245.9991	-13.6525	29 55 00.29	225.4408	-0.020000
BF ABUT 4	8+72.7291	-11.8333	6100.2338		-11.8333	247.7291	-13.6525	29 55 00.29	227.1708	-0.020000

CL 3 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	6+35.2740	-5.9137	6099.0165		-5.9137	10.2740	-11.8544	60 04 31.00	0.0000	-0.020000
BF Abut 1	6+39.8528	-5.9137	6099.0767		-5.9137	14.8528	-6.8228	29 55 00.29	4.5789	-0.020000
ABUT 1 BRG	6+41.5828	-5.9137	6099.0991	099.0991	-5.9137	16.5828	-6.8228	29 55 00.29	6.3089	-0.020000
F-1	6+48.4678	-5.9137	6099.1864	099.2038	-5.9137	23.4678			13.1939	-0.020000
F-2	6+55.3528	-5.9137	6099.2706	099.3052	-5.9137	30.3528			20.0789	-0.020000
F-3	6+62.2378	-5.9137	6099.3518	099.4004	-5.9137	37.2378			26.9639	-0.020000
F-4	6+69.1228	-5.9137	6099.4298	099.4874	-5.9137	44.1228			33.8489	-0.020000
F-5	6+76.0078	-5.9137	6099.5049	099.5650	-5.9137	51.0078			40.7339	-0.020000
F-6	6+82.8928	-5.9137	6099.5768	099.6329	-5.9137	57.8928			47.6189	-0.020000
F-7	6+89.7778	-5.9137	6099.6457	099.6917	-5.9137	64.7778			54.5039	-0.020000
F-8	6+96.6628	-5.9137	6099.7115	099.7431	-5.9137	71.6628			61.3889	-0.020000
F-9	7+03.5478	-5.9137	6099.7742	099.7893	-5.9137	78.5478			68.2739	-0.020000
PIER 2 BK	7+10.4328	-5.9137	6099.8339	099.8339	-5.9137	85.4328	-6.8228	29 55 00.29	75.1589	-0.020000
PIER 2 CL	7+11.5928	-5.9137	6099.8436		-5.9137	86.5928	-6.8228	29 55 00.29	76.3189	-0.020000
PIER 2 AH	7+12.7528	-5.9137	6099.8533	099.8533	-5.9137	87.7528	-6.8228	29 55 00.29	77.4789	-0.020000
F-1	7+21.1208	-5.9137	6099.9204	099.9499	-5.9137	96.1208			85.8469	-0.020000
F-2	7+29.4888	-5.9137	6099.9831	100.0450	-5.9137	104.4888			94.2149	-0.020000
F-3	7+37.8568	-5.9137	6100.0411	100.1314	-5.9137	112.8568			102.5829	-0.020000
F-4	7+46.2248	-5.9137	6100.0947	100.2040	-5.9137	121.2248			110.9509	-0.020000
F-5	7+54.5928	-5.9137	6100.1437	100.2597	-5.9137	129.5928			119.3189	-0.020000
F-6	7+62.9608	-5.9137	6100.1882	100.2975	-5.9137	137.9608			127.6869	-0.020000
F-7	7+71.3288	-5.9137	6100.2281	100.3184	-5.9137	146.3288			136.0549	-0.020000
F-8	7+79.6968	-5.9137	6100.2636	100.3255	-5.9137	154.6968			144.4229	-0.020000
F-9	7+88.0648	-5.9137	6100.2945	100.3239	-5.9137	163.0648			152.7909	-0.020000
PIER 3 BK	7+96.4328	-5.9137	6100.3208	100.3208	-5.9137	171.4328	-6.8228	29 55 00.29	161.1589	-0.020000
PIER 3 CL	7+97.5928	-5.9137	6100.3241		-5.9137	172.5928	-6.8228	29 55 00.29	162.3189	-0.020000
PIER 3 AH	7+98.7528	-5.9137	6100.3273	100.3273	-5.9137	173.7528	-6.8228	29 55 00.29	163.4789	-0.020000
F-1	8+05.6368	-5.9137	6100.3446	100.3619	-5.9137	180.6368			170.3629	-0.020000
F-2	8+12.5208	-5.9137	6100.3588	100.3933	-5.9137	187.5208			177.2469	-0.020000
F-3	8+19.4048	-5.9137	6100.3699	100.4186	-5.9137	194.4048			184.1309	-0.020000
F-4	8+26.2888	-5.9137	6100.3780	100.4355	-5.9137	201.2888			191.0149	-0.020000
F-5	8+33.1728	-5.9137	6100.3830	100.4431	-5.9137	208.1728			197.8989	-0.020000
F-6	8+40.0568	-5.9137	6100.3849	100.4410	-5.9137	215.0568			204.7829	-0.020000
F-7	8+46.9408	-5.9137	6100.3837	100.4298	-5.9137	221.9408			211.6669	-0.020000
F-8	8+53.8248	-5.9137	6100.3795	100.4111	-5.9137	228.8248			218.5509	-0.020000
F-9	8+60.7088	-5.9137	6100.3723	100.3874	-5.9137	235.7088			225.4349	-0.020000
ABUT 4 BRG	8+67.5928	-5.9137	6100.3619	100.3619	-5.9137	242.5928	-6.8228	29 55 00.29	232.3189	-0.020000
BF ABUT 4	8+69.3228	-5.9137	6100.3588		-5.9137	244.3228	-6.8228	29 55 00.29	234.0489	-0.020000

CL 4 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	6+25.0000	0.0000	6098.9946		0.0000	0.0000	0.0000	60 04 31.00	0.0000	
BF Abut 1	6+36.4500	0.0000	6099.1503		0.0000	11.4500	0.0000	29 55 00.29	11.4500	
ABUT 1 BRG	6+38.1800	0.0000	6099.1731	099.1731	0.0000	13.1800	0.0000	29 55 00.29	13.1800	
F-1	6+45.0650	0.0000	6099.2619	099.2793	0.0000	20.0650			20.0650	
F-2	6+51.9500	0.0000	6099.3477	099.3822	0.0000	26.9500			26.9500	
F-3	6+58.8350	0.0000	6099.4303	099.4790	0.0000	33.8350			33.8350	
F-4	6+65.7200	0.0000	6099.5099	099.5675	0.0000	40.7200			40.7200	
F-5	6+72.6050	0.0000	6099.5864	099.6466	0.0000	47.6050			47.6050	
F-6	6+79.4900	0.0000	6099.6599	099.7160	0.0000	54.4900			54.4900	
F-7	6+86.3750	0.0000	6099.7303	099.7763	0.0000	61.3750			61.3750	
F-8	6+93.2600	0.0000	6099.7976	099.8292	0.0000	68.2600			68.2600	
F-9	7+00.1450	0.0000	6099.8619	099.8770	0.0000	75.1450			75.1450	
PIER 2 BK	7+07.0300	0.0000	6099.9231	099.9231	0.0000	82.0300	0.0000	29 55 00.29	82.0300	
PIER 2 CL	7+08.1900	0.0000	6099.9331		0.0000	83.1900	0.0000	29 55 00.29	83.1900	
PIER 2 AH	7+09.3500	0.0000	6099.9430	099.9430	0.0000	84.3500	0.0000	29 55 00.29	84.3500	
F-1	7+17.7180	0.0000	6100.0120	100.0414	0.0000	92.7180			92.7180	
F-2	7+26.0860	0.0000	6100.0764	100.1383	0.0000	101.0860			101.0860	
F-3	7+34.4540	0.0000	6100.1363	100.2266	0.0000	109.4540			109.4540	
F-4	7+42.8220	0.0000	6100.1917	100.3011	0.0000	117.8220			117.8220	
F-5	7+51.1900	0.0000	6100.2426	100.3586	0.0000	126.1900			126.1900	
F-6	7+59.5580	0.0000	6100.2889	100.3983	0.0000	134.5580			134.5580	
F-7	7+67.9260	0.0000	6100.3307	100.4210	0.0000	142.9260			142.9260	
F-8	7+76.2940	0.0000	6100.3680	100.4299	0.0000	151.2940			151.2940	
F-9	7+84.6620	0.0000	6100.4007	100.4301	0.0000	159.6620			159.6620	
PIER 3 BK	7+93.0300	0.0000	6100.4289	100.4289	0.0000	168.0300	0.0000	29 55 00.29	168.0300	
PIER 3 CL	7+94.1900	0.0000	6100.4325		0.0000	169.1900	0.0000	29 55 00.29	169.1900	
PIER 3 AH	7+95.3500	0.0000	6100.4359	100.4359	0.0000	170.3500	0.0000	29 55 00.29	170.3500	
F-1	8+02.2340	0.0000	6100.4547	100.4721	0.0000	177.2340			177.2340	
F-2	8+09.1180	0.0000	6100.4704	100.5050	0.0000	184.1180			184.1180	
F-3	8+16.0020	0.0000	6100.4831	100.5317	0.0000	191.0020			191.0020	
F-4	8+22.8860	0.0000	6100.4926	100.5502	0.0000	197.8860			197.8860	
F-5	8+29.7700	0.0000	6100.4991	100.5593	0.0000	204.7700			204.7700	
F-6	8+36.6540	0.0000	6100.5026	100.5587	0.0000	211.6540			211.6540	
F-7	8+43.5380	0.0000	6100.5030	100.5490	0.0000	218.5380			218.5380	
F-8	8+50.4220	0.0000	6100.5003	100.5319	0.0000	225.4220			225.4220	
F-9	8+57.3060	0.0000	6100.4945	100.5096	0.0000	232.3060			232.3060	
ABUT 4 BRG	8+64.1900	0.0000	6100.4857	100.4857	0.0000	239.1900	0.0000	29 55 00.29	239.1900	
BF ABUT 4	8+65.9200	0.0000	6100.4830		0.0000	240.9200	0.0000	29 55 00.29	240.9200	

CL 5 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	6+14.7260	5.9137	6098.7294		5.9137	-10.2740	11.8544	60 04 31.00	0.0000	-0.020000
BF Abut 1	6+33.0472	5.9137	6098.9867		5.9137	8.0472	6.8228	29 55 00.29	18.3211	-0.020000
ABUT 1 BRG	6+34.7772	5.9137	6099.0098	099.0098	5.9137	9.7772	6.8228	29 55 00.29	20.0511	-0.020000
F-1	6+41.6622	5.9137	6099.1002	099.1175	5.9137	16.6622			26.9361	-0.020000
F-2	6+48.5472	5.9137	6099.1874	099.2219	5.9137	23.5472			33.8211	-0.020000
F-3	6+55.4322	5.9137	6099.2716	099.3202	5.9137	30.4322			40.7061	-0.020000
F-4	6+62.3172	5.9137	6099.3527	099.4102	5.9137	37.3172			47.5911	-0.020000
F-5	6+69.2022	5.9137	6099.4307	099.4909	5.9137	44.2022			54.4761	-0.020000
F-6	6+76.0872	5.9137	6099.5057	099.5618	5.9137	51.0872			61.3611	-0.020000
F-7	6+82.9722	5.9137	6099.5776	099.6237	5.9137	57.9722			68.2461	-0.020000
F-8	6+89.8572	5.9137	6099.6464	099.6780	5.9137	64.8572			75.1311	-0.020000
F-9	6+96.7422	5.9137	6099.7122	099.7273	5.9137	71.7422			82.0161	-0.020000
PIER 2 BK	7+03.6272	5.9137	6099.7749	099.7749	5.9137	78.6272	6.8228	29 55 00.29	88.9011	-0.020000
PIER 2 CL	7+04.7872	5.9137	6099.7852		5.9137	79.7872	6.8228	29 55 00.29	90.0611	-0.020000
PIER 2 AH	7+05.9472	5.9137	6099.7954	099.7954	5.9137	80.9472	6.8228	29 55 00.29	91.2211	-0.020000
F-1	7+14.3152	5.9137	6099.8662	099.8956	5.9137	89.3152			99.5891	-0.020000
F-2	7+22.6832	5.9137	6099.9325	099.9944	5.9137	97.6832			107.9571	-0.020000
F-3	7+31.0512	5.9137	6099.9942	100.0845	5.9137	106.0512			116.3251	-0.020000
F-4	7+39.4192	5.9137	6100.0515	100.1608	5.9137	114.4192			124.6931	-0.020000
F-5	7+47.7872	5.9137	6100.1042	100.2202	5.9137	122.7872			133.0611	-0.020000
F-6	7+56.1552	5.9137	6100.1524	100.2617	5.9137	131.1552			141.4291	-0.020000
F-7	7+64.5232	5.9137	6100.1960	100.2863	5.9137	139.5232			149.7971	-0.020000
F-8	7+72.8912	5.9137	6100.2351	100.2970	5.9137	147.8912			158.1651	-0.020000
F-9	7+81.2592	5.9137	6100.2697	100.2991	5.9137	156.2592			166.5331	-0.020000
PIER 3 BK	7+89.6272	5.9137	6100.2997	100.2997	5.9137	164.6272	6.8228	29 55 00.29	174.9011	-0.020000
PIER 3 CL	7+90.7872	5.9137	6100.3035		5.9137	165.7872	6.8228	29 55 00.29	176.0611	-0.020000
PIER 3 AH	7+91.9472	5.9137	6100.3073	100.3073	5.9137	166.9472	6.8228	29 55 00.29	177.2211	-0.020000
F-1	7+98.8312	5.9137	6100.3275	100.3449	5.9137	173.8312			184.1051	-0.020000
F-2	8+05.7152	5.9137	6100.3448	100.3793	5.9137	180.7152			190.9891	-0.020000
F-3	8+12.5992	5.9137	6100.3589	100.4076	5.9137	187.5992			197.8731	-0.020000
F-4	8+19.4832	5.9137	6100.3700	100.4276	5.9137	194.4832			204.7571	-0.020000
F-5	8+26.3672	5.9137	6100.3780	100.4382	5.9137	201.3672			211.6411	-0.020000
F-6	8+33.2512	5.9137	6100.3830	100.4391	5.9137	208.2512			218.5251	-0.020000
F-7	8+40.1352	5.9137	6100.3849	100.4309	5.9137	215.1352			225.4091	-0.020000
F-8	8+47.0192	5.9137	6100.3837	100.4153	5.9137	222.0192			232.2931	-0.020000
F-9	8+53.9032	5.9137	6100.3795	100.3946	5.9137	228.9032			239.1771	-0.020000
ABUT 4 BRG	8+60.7872	5.9137	6100.3722	100.3722	5.9137	235.7872	6.8228	29 55 00.29	246.0611	-0.020000
BF ABUT 4	8+62.5172	5.9137	6100.3698		5.9137	237.5172	6.8228	29 55 00.29	247.7911	-0.020000

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

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Last Modification Date:	08/16/22	Initials:	CDF
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Drawing File Name:	GEOMETRY.dwg		
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT

BRIDGE DECK GEOMETRY (2 OF 3)

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B21 of B23

Project No./Code: 500331

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Sheet Number: 71

Y:\Denver\152000S\00152049.01_El_Paso_EPC049311.77\Eng_Docs\Drawings\B20-B22 GEOMETRY.dwg - Current tab: B21 - Print Time: Tue, 16 Aug 2022 - 4:14pm By: dbechtold Last Save: Tue, 16 Aug 2022 - 3:03pm

CL 6 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	6+04.4418	11.8333	6098.4570		11.8333	-20.5582	23.7206	60 04 31.00	0.0000	-0.020000
BF Abut 1	6+29.6409	11.8333	6098.8221		11.8333	4.6409	13.6525	29 55 00.29	25.1992	-0.020000
ABUT 1 BRG	6+31.3709	11.8333	6098.8456	098.8456	11.8333	6.3709	13.6525	29 55 00.29	26.9292	-0.020000
F-1	6+38.2559	11.8333	6098.9375	098.9548	11.8333	13.2559			33.8142	-0.020000
F-2	6+45.1409	11.8333	6099.0262	099.0608	11.8333	20.1409			40.6992	-0.020000
F-3	6+52.0259	11.8333	6099.1119	099.1606	11.8333	27.0259			47.5842	-0.020000
F-4	6+58.9109	11.8333	6099.1945	099.2521	11.8333	33.9109			54.4692	-0.020000
F-5	6+65.7959	11.8333	6099.2741	099.3342	11.8333	40.7959			61.3542	-0.020000
F-6	6+72.6809	11.8333	6099.3506	099.4067	11.8333	47.6809			68.2392	-0.020000
F-7	6+79.5659	11.8333	6099.4240	099.4701	11.8333	54.5659			75.1242	-0.020000
F-8	6+86.4509	11.8333	6099.4944	099.5260	11.8333	61.4509			82.0092	-0.020000
F-9	6+93.3359	11.8333	6099.5617	099.5768	11.8333	68.3359			88.8942	-0.020000
PIER 2 BK	7+00.2209	11.8333	6099.6259	099.6259	11.8333	75.2209	13.6525	29 55 00.29	95.7792	-0.020000
PIER 2 CL	7+01.3809	11.8333	6099.6364		11.8333	76.3809	13.6525	29 55 00.29	96.9392	-0.020000
PIER 2 AH	7+02.5409	11.8333	6099.6468	099.6468	11.8333	77.5409	13.6525	29 55 00.29	98.0992	-0.020000
F-1	7+10.9089	11.8333	6099.7195	099.7489	11.8333	85.9089			106.4672	-0.020000
F-2	7+19.2769	11.8333	6099.7877	099.8496	11.8333	94.2769			114.8352	-0.020000
F-3	7+27.6449	11.8333	6099.8513	099.9415	11.8333	102.6449			123.2032	-0.020000
F-4	7+36.0129	11.8333	6099.9103	100.0197	11.8333	111.0129			131.5712	-0.020000
F-5	7+44.3809	11.8333	6099.9649	100.0809	11.8333	119.3809			139.9392	-0.020000
F-6	7+52.7489	11.8333	6100.0149	100.1242	11.8333	127.7489			148.3072	-0.020000
F-7	7+61.1169	11.8333	6100.0604	100.1506	11.8333	136.1169			156.6752	-0.020000
F-8	7+69.4849	11.8333	6100.1013	100.1632	11.8333	144.4849			165.0432	-0.020000
F-9	7+77.8529	11.8333	6100.1378	100.1672	11.8333	152.8529			173.4112	-0.020000
PIER 3 BK	7+86.2209	11.8333	6100.1697	100.1697	11.8333	161.2209	13.6525	29 55 00.29	181.7792	-0.020000
PIER 3 CL	7+87.3809	11.8333	6100.1737		11.8333	162.3809	13.6525	29 55 00.29	182.9392	-0.020000
PIER 3 AH	7+88.5409	11.8333	6100.1777	100.1777	11.8333	163.5409	13.6525	29 55 00.29	184.0992	-0.020000
F-1	7+95.4249	11.8333	6100.1995	100.2168	11.8333	170.4249			190.9832	-0.020000
F-2	8+02.3089	11.8333	6100.2182	100.2528	11.8333	177.3089			197.8672	-0.020000
F-3	8+09.1929	11.8333	6100.2339	100.2826	11.8333	184.1929			204.7512	-0.020000
F-4	8+16.0769	11.8333	6100.2465	100.3041	11.8333	191.0769			211.6352	-0.020000
F-5	8+22.9609	11.8333	6100.2561	100.3162	11.8333	197.9609			218.5192	-0.020000
F-6	8+29.8449	11.8333	6100.2625	100.3186	11.8333	204.8449			225.4032	-0.020000
F-7	8+36.7289	11.8333	6100.2659	100.3120	11.8333	211.7289			232.2872	-0.020000
F-8	8+43.6129	11.8333	6100.2663	100.2979	11.8333	218.6129			239.1712	-0.020000
F-9	8+50.4969	11.8333	6100.2636	100.2787	11.8333	225.4969			246.0552	-0.020000
ABUT 4 BRG	8+57.3809	11.8333	6100.2578	100.2578	11.8333	232.3809	13.6525	29 55 00.29	252.9392	-0.020000
BF ABUT 4	8+59.1109	11.8333	6100.2558		11.8333	234.1109	13.6525	29 55 00.29	254.6692	-0.020000

CL 7 — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	5+94.1626	17.7500	6098.1780		17.7500	-30.8374	35.5810	60 04 31.00	0.0000	-0.020000
BF Abut 1	6+26.2364	17.7500	6098.6568		17.7500	1.2364	20.4788	29 55 00.29	32.0738	-0.020000
ABUT 1 BRG	6+27.9664	17.7500	6098.6808	098.6808	17.7500	2.9664	20.4788	29 55 00.29	33.8038	-0.020000
F-1	6+34.8514	17.7500	6098.7741	098.7915	17.7500	9.8514			40.6888	-0.020000
F-2	6+41.7364	17.7500	6098.8644	098.8989	17.7500	16.7364			47.5738	-0.020000
F-3	6+48.6214	17.7500	6098.9516	099.0002	17.7500	23.6214			54.4588	-0.020000
F-4	6+55.5064	17.7500	6099.0357	099.0933	17.7500	30.5064			61.3438	-0.020000
F-5	6+62.3914	17.7500	6099.1168	099.1769	17.7500	37.3914			68.2288	-0.020000
F-6	6+69.2764	17.7500	6099.1948	099.2509	17.7500	44.2764			75.1138	-0.020000
F-7	6+76.1614	17.7500	6099.2698	099.3158	17.7500	51.1614			81.9988	-0.020000
F-8	6+83.0464	17.7500	6099.3416	099.3732	17.7500	58.0464			88.8838	-0.020000
F-9	6+89.9314	17.7500	6099.4104	099.4256	17.7500	64.9314			95.7688	-0.020000
PIER 2 BK	6+96.8164	17.7500	6099.4762	099.4762	17.7500	71.8164	20.4788	29 55 00.29	102.6538	-0.020000
PIER 2 CL	6+97.9764	17.7500	6099.4870		17.7500	72.9764	20.4788	29 55 00.29	103.8138	-0.020000
PIER 2 AH	6+99.1364	17.7500	6099.4976	099.4976	17.7500	74.1364	20.4788	29 55 00.29	104.9738	-0.020000
F-1	7+07.5044	17.7500	6099.5722	099.6016	17.7500	82.5044			113.3418	-0.020000
F-2	7+15.8724	17.7500	6099.6421	099.7040	17.7500	90.8724			121.7098	-0.020000
F-3	7+24.2404	17.7500	6099.7076	099.7979	17.7500	99.2404			130.0778	-0.020000
F-4	7+32.6084	17.7500	6099.7685	099.8778	17.7500	107.6084			138.4458	-0.020000
F-5	7+40.9764	17.7500	6099.8249	099.9409	17.7500	115.9764			146.8138	-0.020000
F-6	7+49.3444	17.7500	6099.8768	099.9861	17.7500	124.3444			155.1818	-0.020000
F-7	7+57.7124	17.7500	6099.9241	100.0144	17.7500	132.7124			163.5498	-0.020000
F-8	7+66.0804	17.7500	6099.9669	100.0288	17.7500	141.0804			171.9178	-0.020000
F-9	7+74.4484	17.7500	6100.0052	100.0346	17.7500	149.4484			180.2858	-0.020000
PIER 3 BK	7+82.8164	17.7500	6100.0389	100.0389	17.7500	157.8164	20.4788	29 55 00.29	188.6538	-0.020000
PIER 3 CL	7+83.9764	17.7500	6100.0432		17.7500	158.9764	20.4788	29 55 00.29	189.8138	-0.020000
PIER 3 AH	7+85.1364	17.7500	6100.0474	100.0474	17.7500	160.1364	20.4788	29 55 00.29	190.9738	-0.020000
F-1	7+92.0204	17.7500	6100.0708	100.0881	17.7500	167.0204			197.8578	-0.020000
F-2	7+98.9044	17.7500	6100.0910	100.1256	17.7500	173.9044			204.7418	-0.020000
F-3	8+05.7884	17.7500	6100.1082	100.1569	17.7500	180.7884			211.6258	-0.020000
F-4	8+12.6724	17.7500	6100.1223	100.1799	17.7500	187.6724			218.5098	-0.020000
F-5	8+19.5564	17.7500	6100.1334	100.1935	17.7500	194.5564			225.3938	-0.020000
F-6	8+26.4404	17.7500	6100.1414	100.1975	17.7500	201.4404			232.2778	-0.020000
F-7	8+33.3244	17.7500	6100.1463	100.1924	17.7500	208.3244			239.1618	-0.020000
F-8	8+40.2084	17.7500	6100.1482	100.1798	17.7500	215.2084			246.0458	-0.020000
F-9	8+47.0924	17.7500	6100.1470	100.1621	17.7500	222.0924			252.9298	-0.020000
ABUT 4 BRG	8+53.9764	17.7500	6100.1427	100.1427	17.7500	228.9764	20.4788	29 55 00.29	259.8138	-0.020000
BF ABUT 4	8+55.7064	17.7500	6100.1411		17.7500	230.7064	20.4788	29 55 00.29	261.5438	-0.020000

Right Edge of Deck — PARALLEL TO HORIZONTAL CONTROL — 0.250000 FEET BELOW FINISHED GRADE

BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
REF LINE	5+87.6477	21.5000	6097.9976		21.5000	-37.3523	43.0981	60 04 31.00	0.0000	-0.020000
BF Abut 1	6+24.0786	21.5000	6098.5517		21.5000	-0.9214	24.8053	29 55 00.29	36.4309	-0.020000
ABUT 1 BRG	6+25.8086	21.5000	6098.5759	098.5759	21.5000	0.8086	24.8053	29 55 00.29	38.1609	-0.020000
F-1	6+32.6936	21.5000	6098.6702	098.6875	21.5000	7.6936			45.0459	-0.020000
F-2	6+39.5786	21.5000	6098.7614	098.7960	21.5000	14.5786			51.9309	-0.020000
F-3	6+46.4636	21.5000	6098.8496	098.8982	21.5000	21.4636			58.8159	-0.020000
F-4	6+53.3486	21.5000	6098.9347	098.9923	21.5000	28.3486			65.7009	-0.020000
F-5	6+60.2336	21.5000	6099.0167	099.0769	21.5000	35.2336			72.5859	-0.020000
F-6	6+67.1186	21.5000	6099.0957	099.1518	21.5000	42.1186			79.4709	-0.020000
F-7	6+74.0036	21.5000	6099.1716	099.2177	21.5000	49.0036			86.3559	-0.020000
F-8	6+80.8886	21.5000	6099.2444	099.2760	21.5000	55.8886			93.2409	-0.020000
F-9	6+87.7736	21.5000	6099.3142	099.3293	21.5000	62.7736			100.1259	-0.020000
PIER 2 BK	6+94.6586	21.5000	6099.3809	099.3809	21.5000	69.6586	24.8053	29 55 00.29	107.0109	-0.020000
PIER 2 CL	6+95.8186	21.5000	6099.3918		21.5000	70.8186	24.8053	29 55 00.29	108.1709	-0.020000
PIER 2 AH	6+96.9786	21.5000	6099.4027	099.4027	21.5000	71.9786	24.8053	29 55 00.29	109.3309	-0.020000
F-1	7+05.3466	21.5000	6099.4784	099.5078	21.5000	80.3466			117.6989	-0.020000
F-2	7+13.7146	21.5000	6099.5495	099.6114	21.5000	88.7146			126.0669	-0.020000
F-3	7+22.0826	21.5000	6099.6162	099.7064	21.5000	97.0826			134.4349	-0.020000
F-4	7+30.4506	21.5000	6099.6782	099.7876	21.5000	105.4506			142.8029	-0.020000
F-5	7+38.8186	21.5000	6099.7358	099.8518	21.5000	113.8186			151.1709	-0.020000
F-6	7+47.1866	21.5000	6099.7888	099.8982	21.5000	122.1866			159.5389	-0.020000
F-7	7+55.5546	21.5000	6099.8373	099.9276	21.5000	130.5546			167.9069	-0.020000
F-8	7+63.9226	21.5000	6099.8813	099.9432	21.5000	138.9226			176.2749	-0.020000
F-9	7+72.2906	21.5000	6099.9207	099.9501	21.5000	147.2906			184.6429	-0.020000
PIER 3 BK	7+80.6586	21.5000	6099.9556	099.9556	21.5000	155.6586	24.8053	29 55 00.29	193.0109	-0.020000
PIER 3 CL	7+81.8186	21.5000	6099.9601		21.5000	156.8186	24.8053	29 55 00.29	194.1709	-0.020000
PIER 3 AH	7+82.9786	21.5000	6099.9645	099.9645	21.5000	157.9786	24.8053	29 55 00.29	195.3309	-0.020000
F-1	7+89.8626	21.5000	6099.9888	100.0061	21.5000	164.8626			202.2149	-0.020000
F-2	7+96.7466	21.5000	6100.0100	100.0446	21.5000	171.7466			209.0989	-0.020000
F-3	8+03.6306	21.5000	6100.0282	100.0768	21.5000	178.6306			215.9829	-0.020000
F-4	8+10.5146	21.5000	6100.0432	100.1008	21.5000	185.5146			222.8669	-0.020000
F-5	8+17.3986	21.5000	6100.0553	100.1154	21.5000	192.3986			229.7509	-0.020000
F-6	8+24.2826	21.5000	6100.0642	100.1203	21.5000	199.2826			236.6349	-0.020000
F-7	8+31.1666	21.5000	6100.0701	100.1161	21.5000	206.1666			243.5189	-0.020000
F-8	8+38.0506	21.5000	6100.0729	100.1045	21.5000	213.0506			250.4029	-0.020000
F-9	8+44.9346	21.5000	6100.0727	100.0878	21.5000	219.9346			257.2869	-0.020000
ABUT 4 BRG	8+51.8186	21.5000	6100.0694	100.0694	21.5000	226.8186	24.8053	29 55 00.29	264.1709	-0.020000
BF ABUT 4	8+53.5486	21.5000	6100.0680		21.5000	228.5486	24.8053	29 55 00.29	265.9009	-0.020000

COLORADO REGISTERED PROFESSIONAL ENGINEER — DANIEL J. BECHTOLD — 29485

10/13/2022

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Drawing File Name:	GEOMETRY.dwg		
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Sheet Revisions		

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
BRIDGE DECK GEOMETRY (3 OF 3)

Designer:	DJB	Structure Numbers	EPC0493-11.77
Detailer:	CDF		
Sheet Subset:	BRIDGE	Subset Sheets:	B22 of B23

Project No./Code: 500331
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Sheet Number: 72

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* ROADWAY APPROACHES *

STATION	OFFSET	ELEVATION	CROSS-SLOPE	STATION	OFFSET	ELEVATION	CROSS-SLOPE
4+90	-20.0000	6096.6204	-0.020000	8+60	-20.0000	6100.3414	-0.020000
5+00	-20.0000	6096.7904	-0.020000	8+70	-20.0000	6100.3259	-0.020000
5+10	-20.0000	6096.9604	-0.020000	8+80	-20.0000	6100.3038	-0.020000
5+20	-20.0000	6097.1304	-0.020000	8+90	-20.0000	6100.2753	-0.020000
5+30	-20.0000	6097.3004	-0.020000	9+00	-20.0000	6100.2403	-0.020000
5+40	-20.0000	6097.4704	-0.020000	9+10	-20.0000	6100.1989	-0.020000
5+50	-20.0000	6097.6404	-0.020000	9+20	-20.0000	6100.1510	-0.020000
5+60	-20.0000	6097.8104	-0.020000	9+30	-20.0000	6100.1011	-0.020000
5+70	-20.0000	6097.9804	-0.020000	9+40	-20.0000	6100.0511	-0.020000
5+80	-20.0000	6098.1503	-0.020000	9+50	-20.0000	6100.0010	-0.020000
5+90	-20.0000	6098.3159	-0.020000	9+60	-20.0000	6099.9510	-0.020000
6+00	-20.0000	6098.4751	-0.020000	9+70	-20.0000	6099.9010	-0.020000
6+10	-20.0000	6098.6277	-0.020000	9+80	-20.0000	6099.8511	-0.020000
6+20	-20.0000	6098.7739	-0.020000	9+90	-20.0000	6099.8011	-0.020000
6+30	-20.0000	6098.9137	-0.020000	10+00	-20.0000	6099.7510	-0.020000
6+40	-20.0000	6099.0469	-0.020000	10+10	-20.0000	6099.7010	-0.020000
4+90	-12.0000	6096.7804	-0.020000	8+60	-12.0000	6100.5014	-0.020000
5+00	-12.0000	6096.9504	-0.020000	8+70	-12.0000	6100.4859	-0.020000
5+10	-12.0000	6097.1204	-0.020000	8+80	-12.0000	6100.4638	-0.020000
5+20	-12.0000	6097.2904	-0.020000	8+90	-12.0000	6100.4353	-0.020000
5+30	-12.0000	6097.4604	-0.020000	9+00	-12.0000	6100.4003	-0.020000
5+40	-12.0000	6097.6304	-0.020000	9+10	-12.0000	6100.3589	-0.020000
5+50	-12.0000	6097.8004	-0.020000	9+20	-12.0000	6100.3111	-0.020000
5+60	-12.0000	6097.9704	-0.020000	9+30	-12.0000	6100.2611	-0.020000
5+70	-12.0000	6098.1404	-0.020000	9+40	-12.0000	6100.2110	-0.020000
5+80	-12.0000	6098.3103	-0.020000	9+50	-12.0000	6100.1610	-0.020000
5+90	-12.0000	6098.4759	-0.020000	9+60	-12.0000	6100.1110	-0.020000
6+00	-12.0000	6098.6351	-0.020000	9+70	-12.0000	6100.0611	-0.020000
6+10	-12.0000	6098.7877	-0.020000	9+80	-12.0000	6100.0111	-0.020000
6+20	-12.0000	6098.9339	-0.020000	9+90	-12.0000	6099.9610	-0.020000
6+30	-12.0000	6099.0737	-0.020000	10+00	-12.0000	6099.9110	-0.020000
6+40	-12.0000	6099.2069	-0.020000	10+10	-12.0000	6099.8610	-0.020000
4+90	0.0000	6097.0204		8+60	0.0000	6100.7414	
5+00	0.0000	6097.1904		8+70	0.0000	6100.7259	
5+10	0.0000	6097.3604		8+80	0.0000	6100.7038	
5+20	0.0000	6097.5304		8+90	0.0000	6100.6753	
5+30	0.0000	6097.7004		9+00	0.0000	6100.6403	
5+40	0.0000	6097.8704		9+10	0.0000	6100.5989	
5+50	0.0000	6098.0404		9+20	0.0000	6100.5511	
5+60	0.0000	6098.2104		9+30	0.0000	6100.5010	
5+70	0.0000	6098.3804		9+40	0.0000	6100.4510	
5+80	0.0000	6098.5503		9+50	0.0000	6100.4010	
5+90	0.0000	6098.7159		9+60	0.0000	6100.3511	
6+00	0.0000	6098.8751		9+70	0.0000	6100.3011	

* ROADWAY APPROACHES *

STATION	OFFSET	ELEVATION	CROSS-SLOPE	STATION	OFFSET	ELEVATION	CROSS-SLOPE
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6+20	0.0000	6099.1739		9+90	0.0000	6100.2010	
6+30	0.0000	6099.3137		10+00	0.0000	6100.1510	
6+40	0.0000	6099.4469		10+10	0.0000	6100.1011	
4+90	12.0000	6096.7804	-0.020000	8+60	12.0000	6100.5014	-0.020000
5+00	12.0000	6096.9504	-0.020000	8+70	12.0000	6100.4859	-0.020000
5+10	12.0000	6097.1204	-0.020000	8+80	12.0000	6100.4638	-0.020000
5+20	12.0000	6097.2904	-0.020000	8+90	12.0000	6100.4353	-0.020000
5+30	12.0000	6097.4604	-0.020000	9+00	12.0000	6100.4003	-0.020000
5+40	12.0000	6097.6304	-0.020000	9+10	12.0000	6100.3589	-0.020000
5+50	12.0000	6097.8004	-0.020000	9+20	12.0000	6100.3111	-0.020000
5+60	12.0000	6097.9704	-0.020000	9+30	12.0000	6100.2611	-0.020000
5+70	12.0000	6098.1404	-0.020000	9+40	12.0000	6100.2110	-0.020000
5+80	12.0000	6098.3103	-0.020000	9+50	12.0000	6100.1610	-0.020000
5+90	12.0000	6098.4759	-0.020000	9+60	12.0000	6100.1110	-0.020000
6+00	12.0000	6098.6351	-0.020000	9+70	12.0000	6100.0611	-0.020000
6+10	12.0000	6098.7877	-0.020000	9+80	12.0000	6100.0111	-0.020000
6+20	12.0000	6098.9339	-0.020000	9+90	12.0000	6099.9610	-0.020000
6+30	12.0000	6099.0737	-0.020000	10+00	12.0000	6099.9110	-0.020000
6+40	12.0000	6099.2069	-0.020000	10+10	12.0000	6099.8610	-0.020000
4+90	20.0000	6096.6204	-0.020000	8+60	20.0000	6100.3414	-0.020000
5+00	20.0000	6096.7904	-0.020000	8+70	20.0000	6100.3259	-0.020000
5+10	20.0000	6096.9604	-0.020000	8+80	20.0000	6100.3038	-0.020000
5+20	20.0000	6097.1304	-0.020000	8+90	20.0000	6100.2753	-0.020000
5+30	20.0000	6097.3004	-0.020000	9+00	20.0000	6100.2403	-0.020000
5+40	20.0000	6097.4704	-0.020000	9+10	20.0000	6100.1989	-0.020000
5+50	20.0000	6097.6404	-0.020000	9+20	20.0000	6100.1510	-0.020000
5+60	20.0000	6097.8104	-0.020000	9+30	20.0000	6100.1011	-0.020000
5+70	20.0000	6097.9804	-0.020000	9+40	20.0000	6100.0511	-0.020000
5+80	20.0000	6098.1503	-0.020000	9+50	20.0000	6100.0010	-0.020000
5+90	20.0000	6098.3159	-0.020000	9+60	20.0000	6099.9510	-0.020000
6+00	20.0000	6098.4751	-0.020000	9+70	20.0000	6099.9010	-0.020000
6+10	20.0000	6098.6277	-0.020000	9+80	20.0000	6099.8511	-0.020000
6+20	20.0000	6098.7739	-0.020000	9+90	20.0000	6099.8011	-0.020000
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COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

10/13/2022

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Acad Ver. 2018	Scale: Units: English

Sheet Revisions		

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Denver, CO 80237
(303) 771-6868

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Revised:

Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT

ROADWAY APPROACHES

Designer: DJB
Detailer: CDF
Sheet Subset: BRIDGE
Structure Numbers: EPC0493-11.77
Subset Sheets: B23 of B23

Project No./Code: 500331

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Sheet Number 73

10/13/2022

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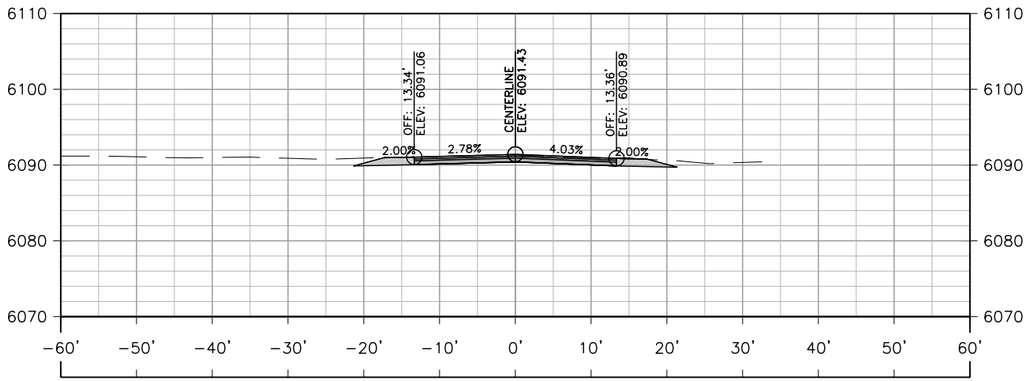

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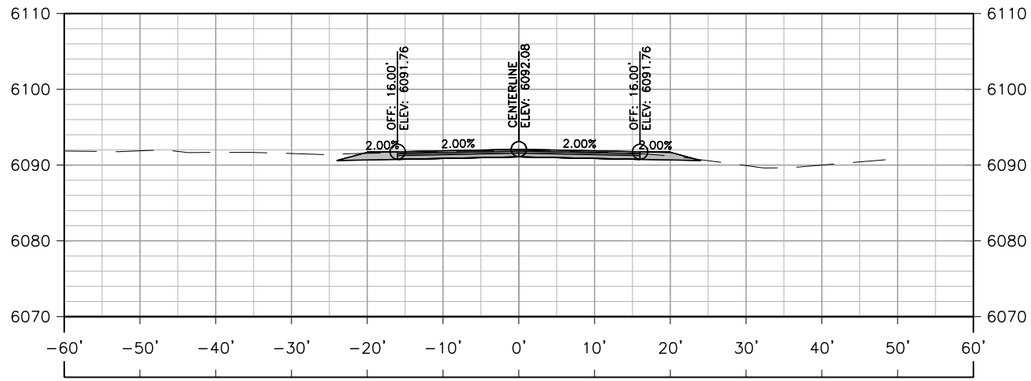

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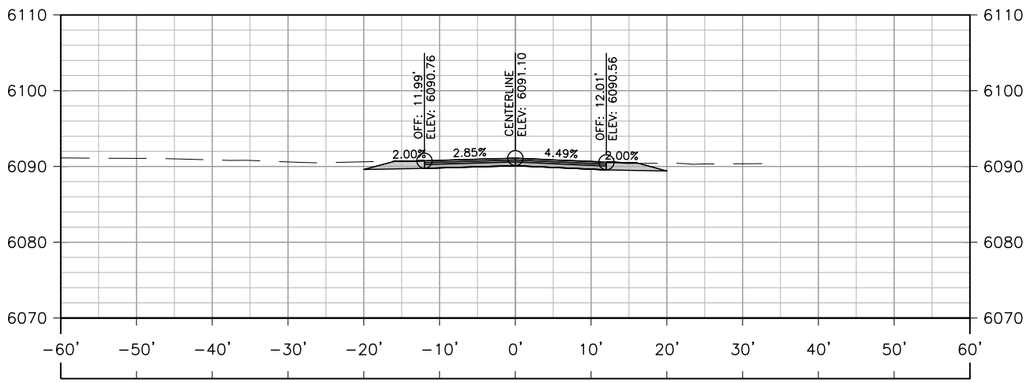

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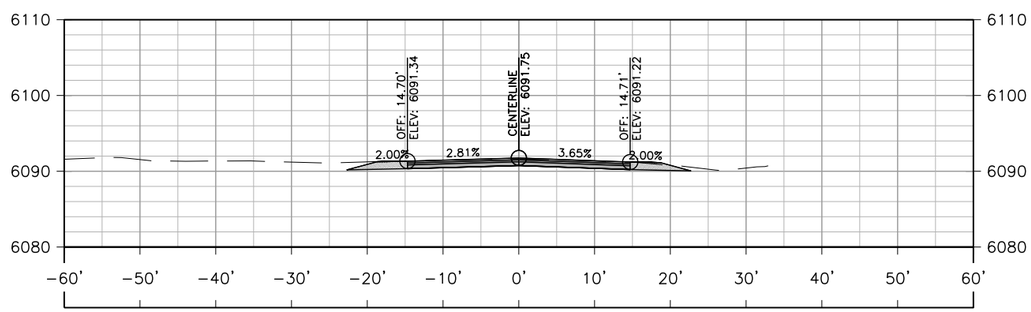

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Drawing File Name:	09 XSEC.dwg	
Acad Ver. 2020	Scale: As Noted	Units: ENGLISH

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Revised:
Void:

ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	01 of 12

Project No./Code
500331
Sheet Number 74

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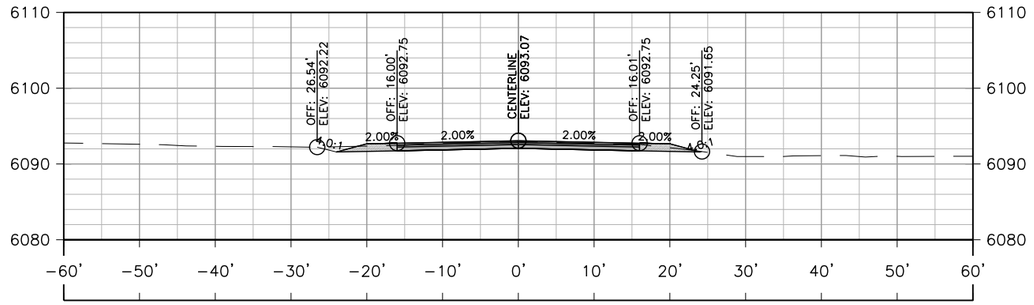

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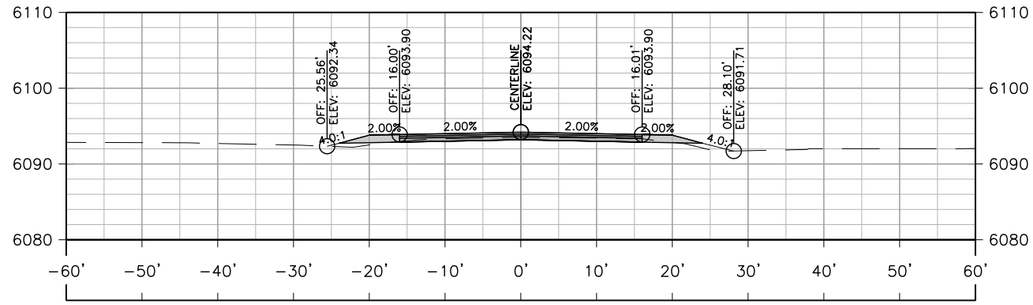

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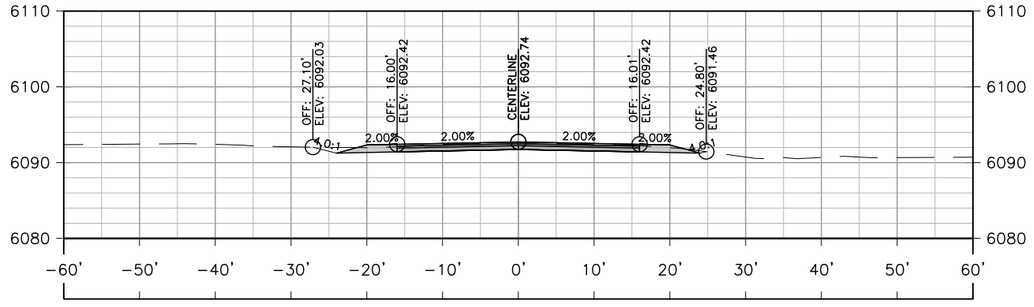

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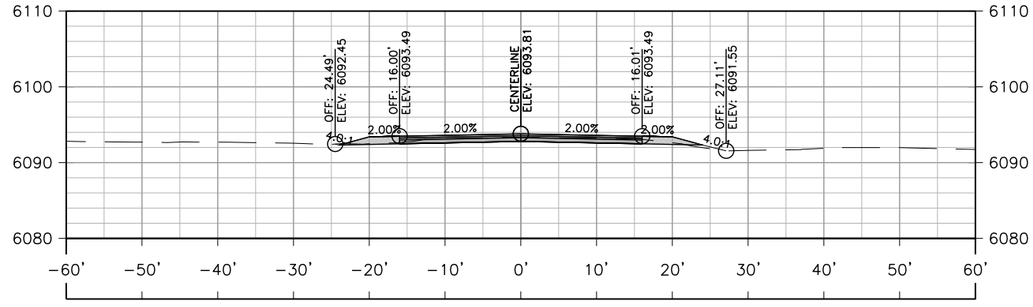

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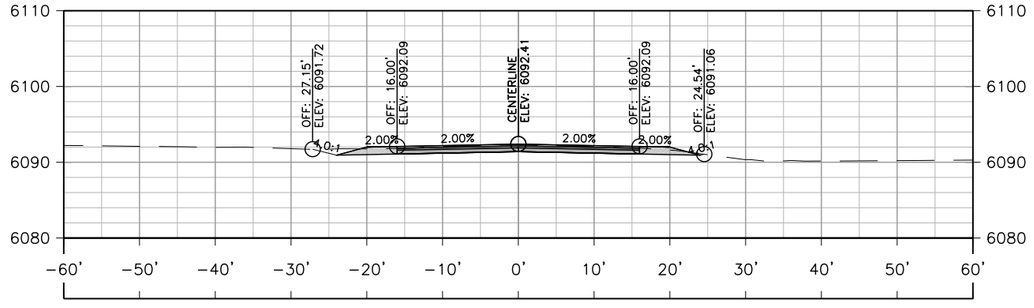

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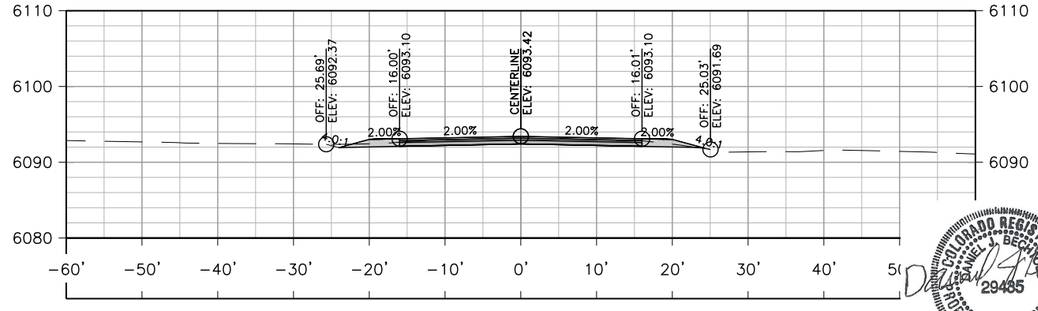

COLORADO REGISTERED DANIEL J. BECHTEL 29435 PROFESSIONAL ENGINEER

10/13/2022

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Acad Ver. 2020	Scale: As Noted		Units: ENGLISH

Sheet Revisions		

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Revised:	
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	02 of 12

Project No./Code	
500331	
Sheet Number	75

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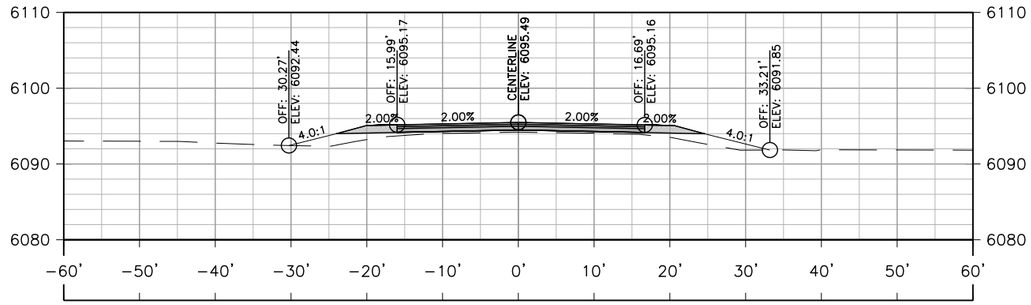

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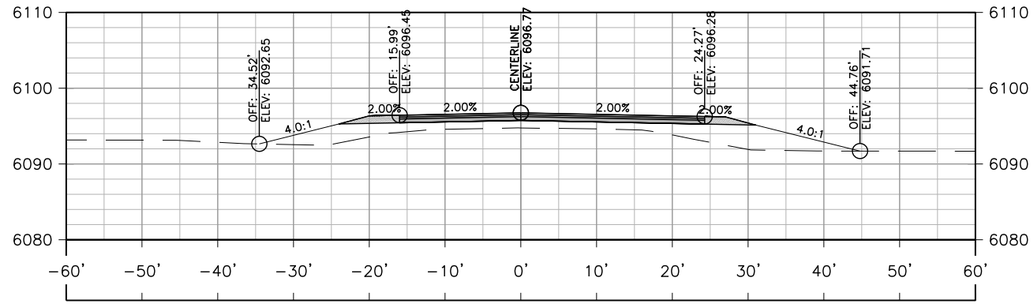

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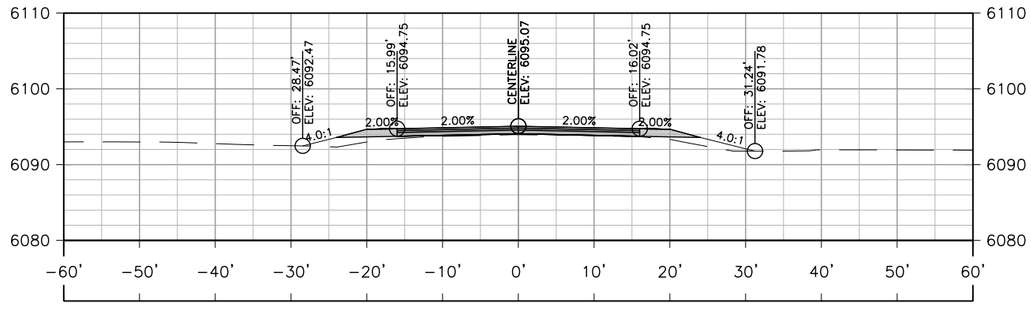

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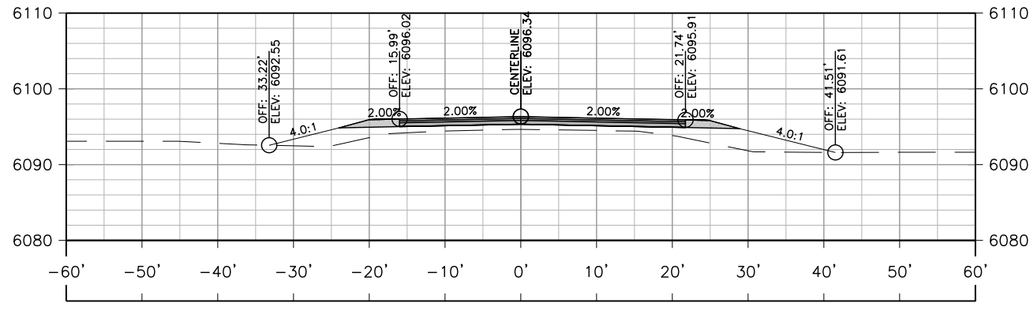

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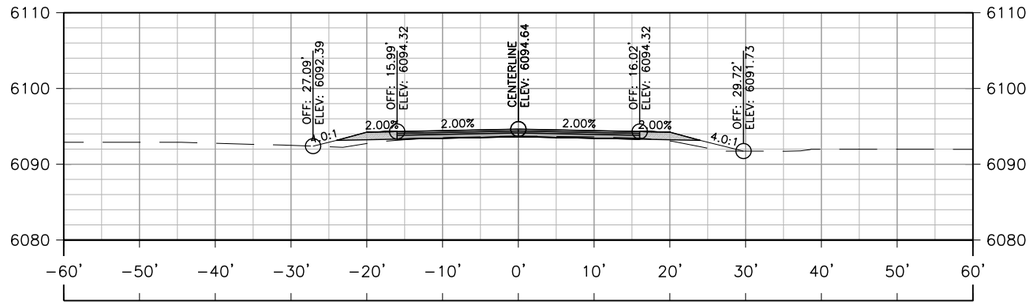

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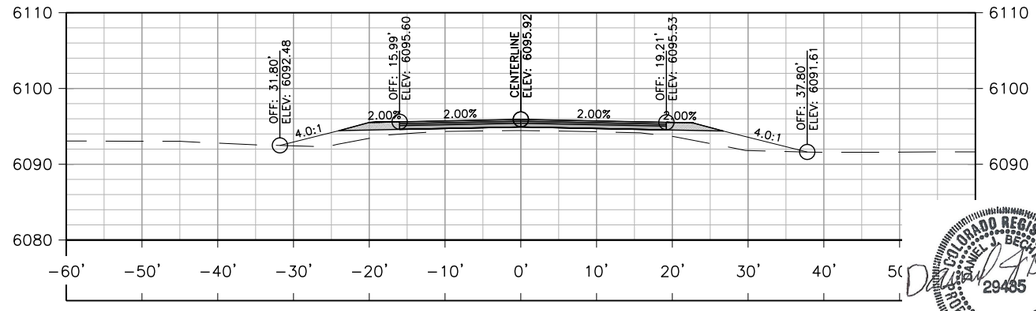

COLORADO REGISTERED PROFESSIONAL ENGINEER
DANIEL J. BECHTOLD
29485

10/13/2022

Computer File Information		
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Sheet Revisions

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	03 of 12

Project No./Code
500331
Sheet Number 76

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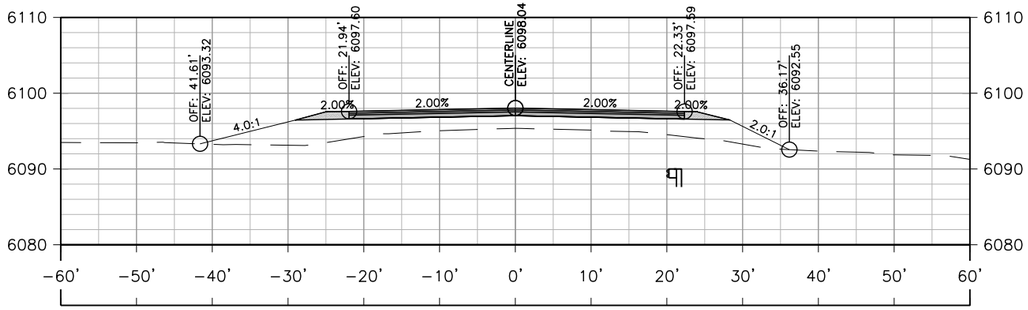

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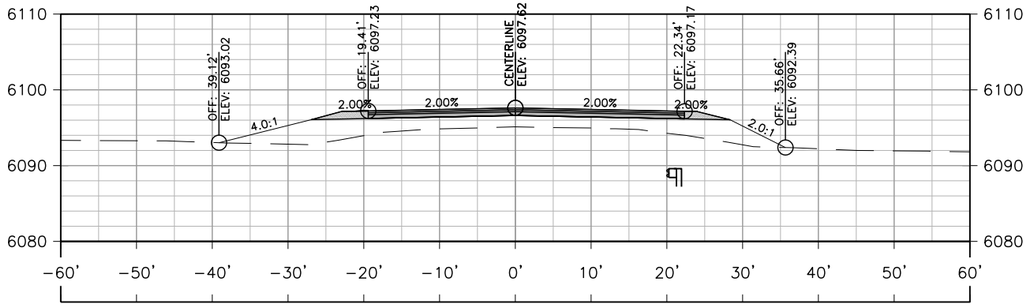

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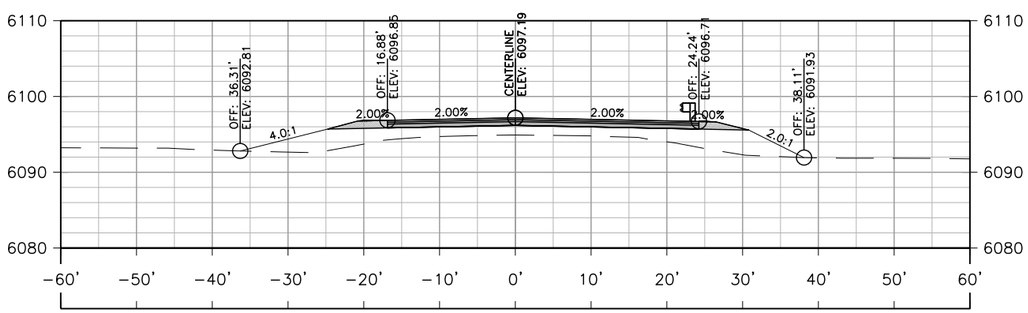

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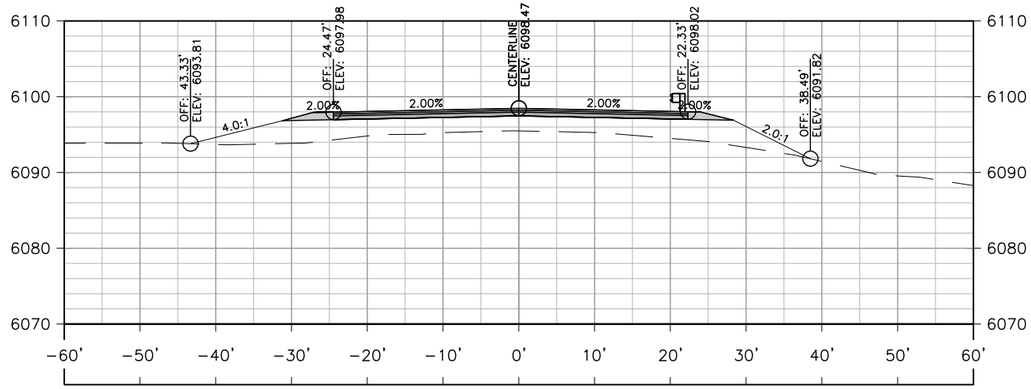

COLORADO REGISTERED DANIEL J. BECHTOLD 29485 PROFESSIONAL ENGINEER

Daniel J. Bechtold

10/13/2022

Computer File Information			
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Revised:	
Void:	

ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	04 of 12

Project No./Code	
500331	
Sheet Number	77

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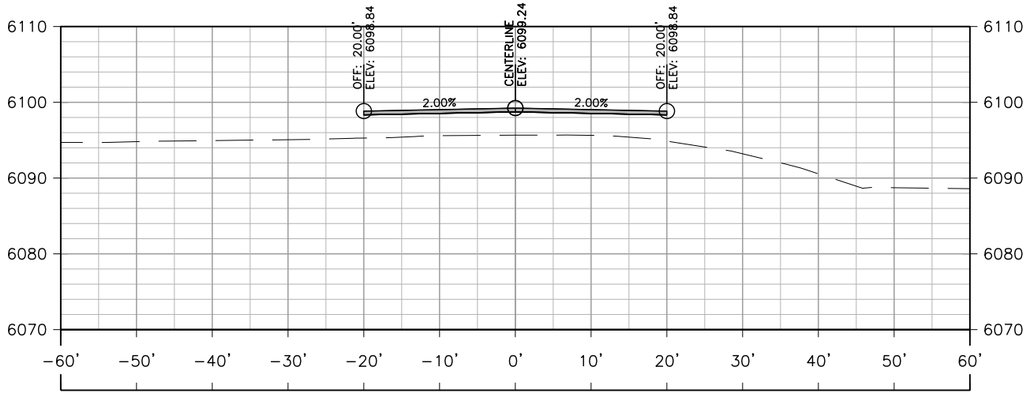
6+25.00



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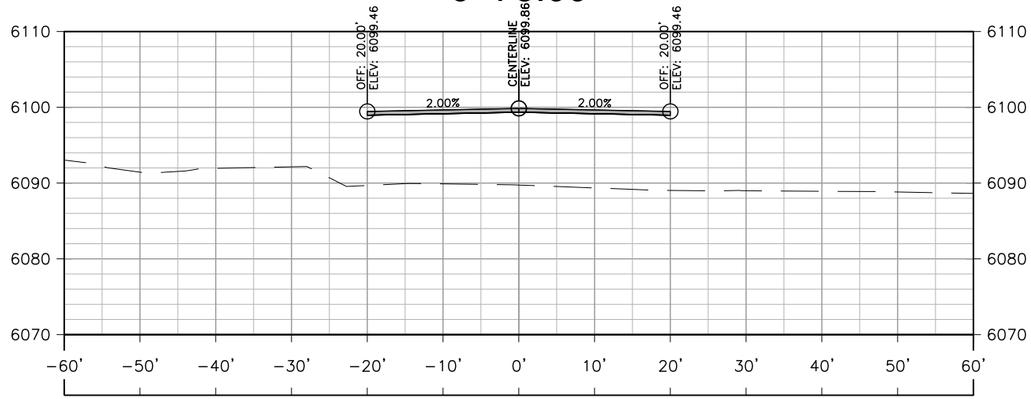

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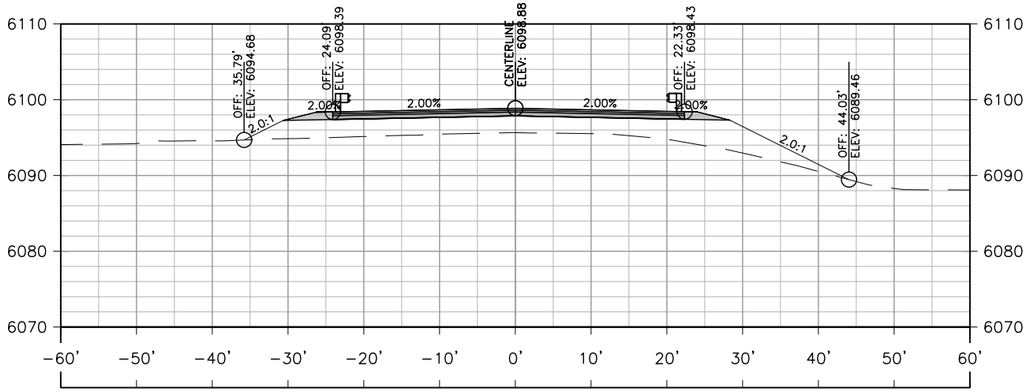

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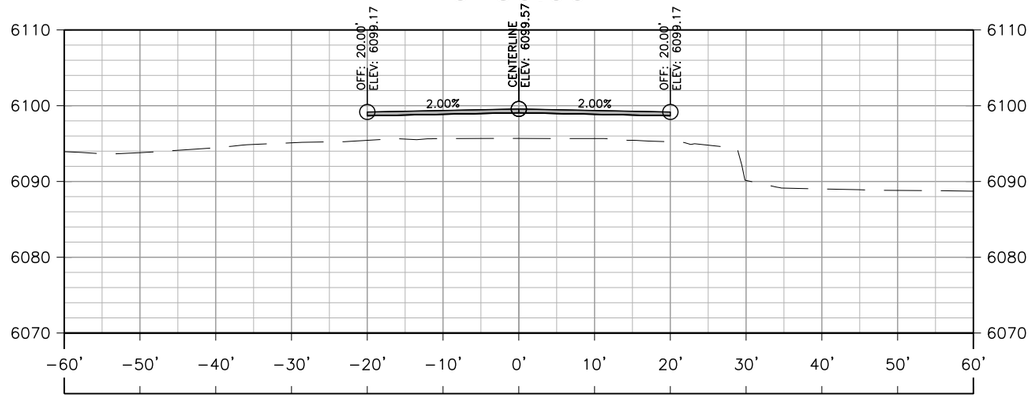

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Drawing File Name:			09 XSEC.dwg
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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	05 of 12

Project No./Code: 500331

Sheet Number: 78

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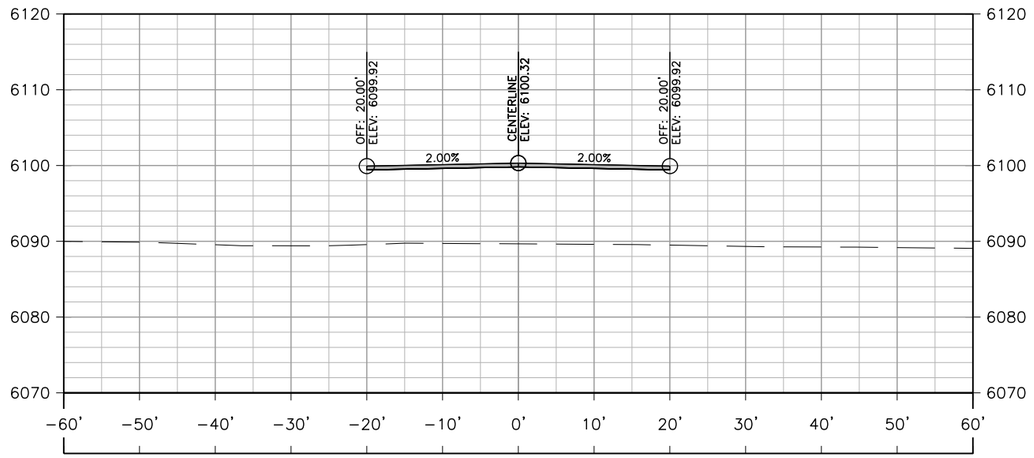
7+25.00



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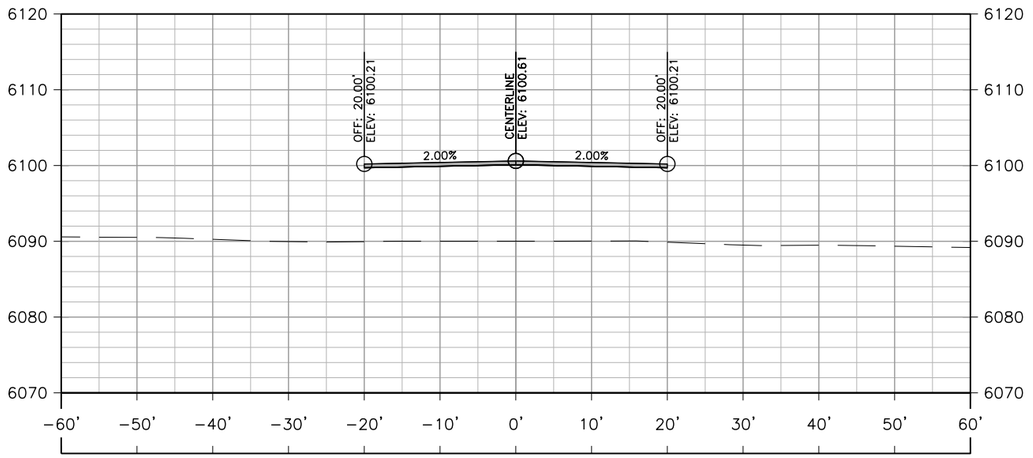

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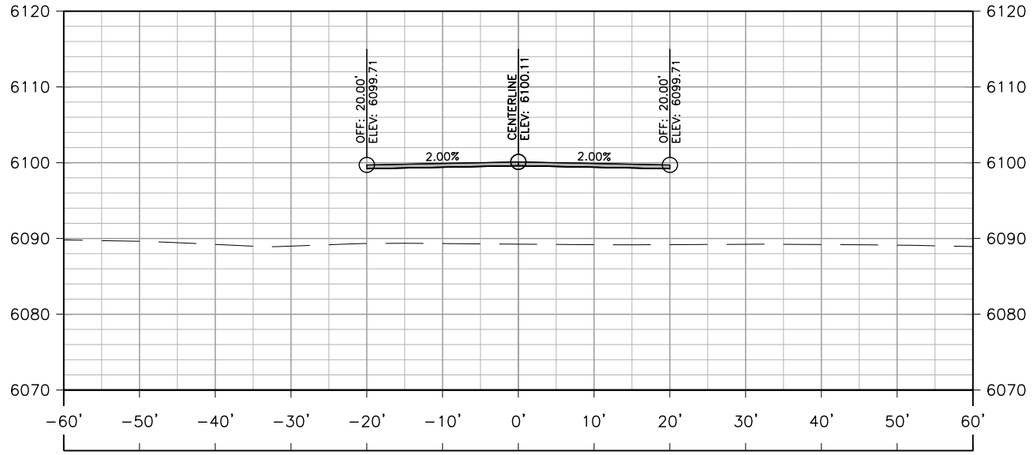

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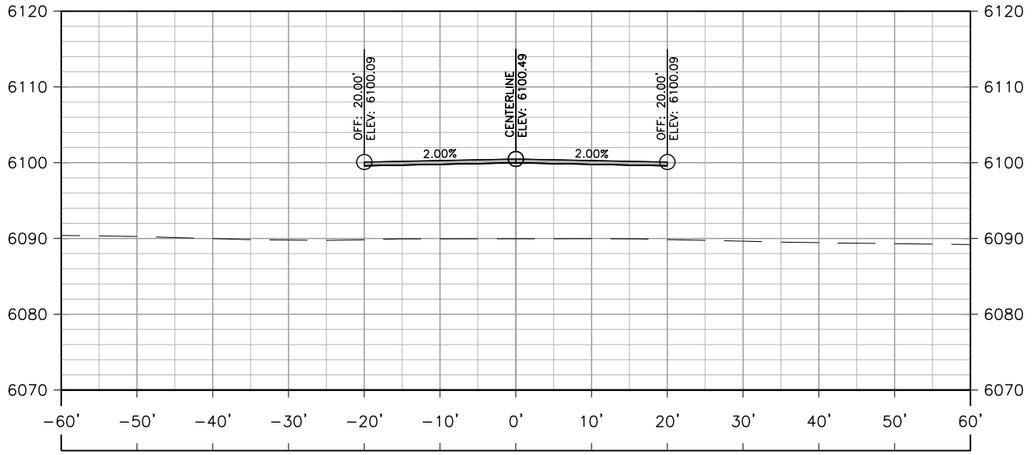

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Drawing File Name:	09 XSEC.dwg	
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ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	06 of 12

Project No./Code
500331
Sheet Number 79

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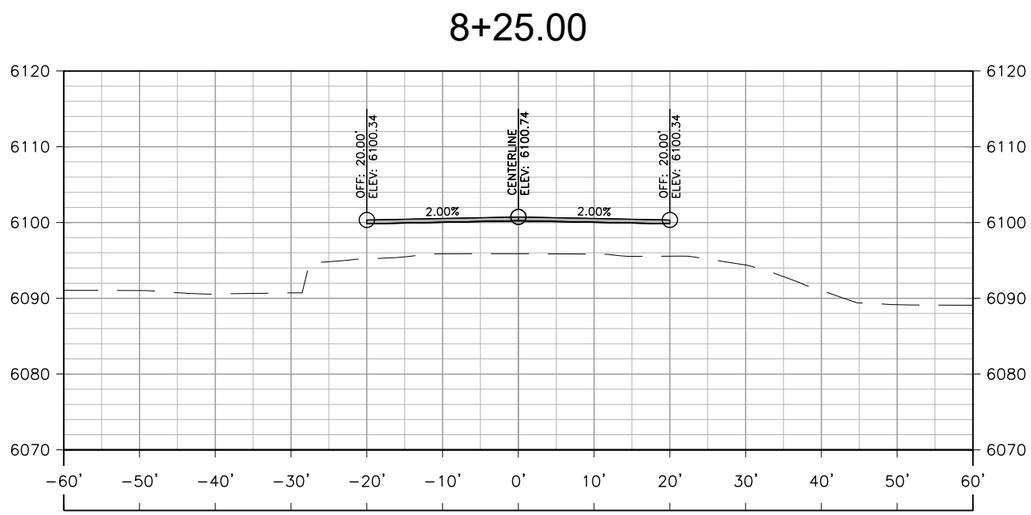

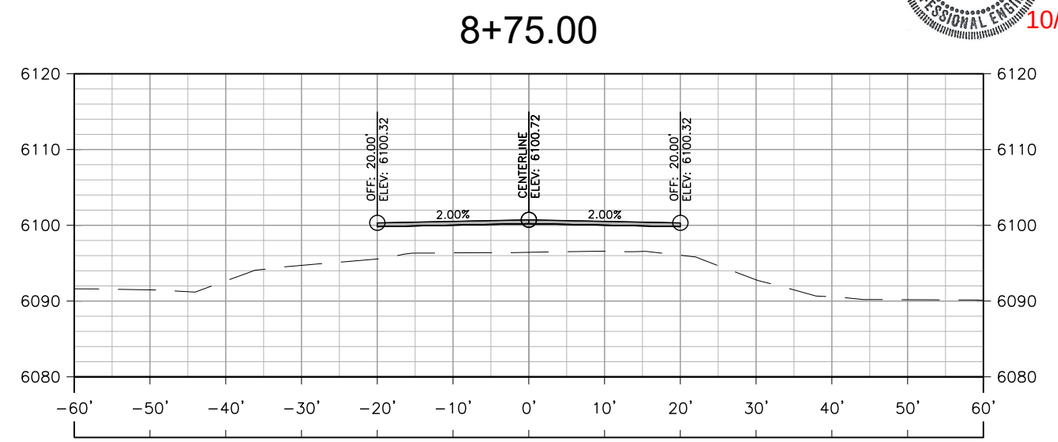

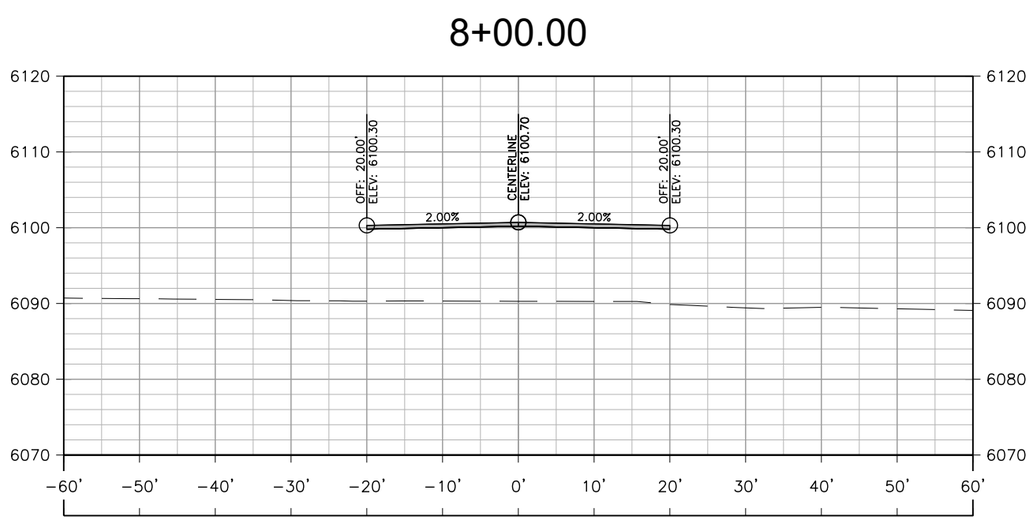

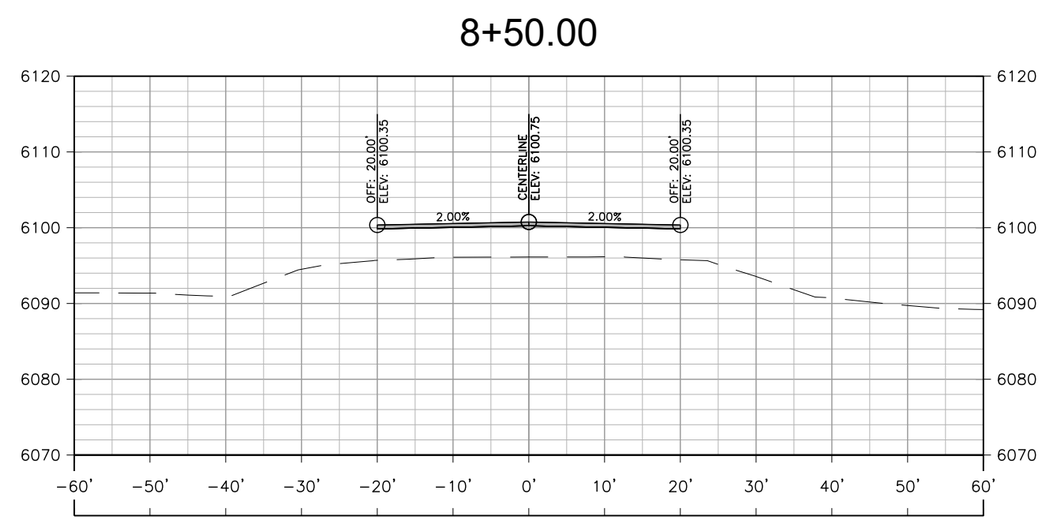

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Last Modification Date:	User:			
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Drawing File Name:	09 XSEC.dwg			
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No Revisions:				500331
Revised:	Designer: MDS	Structure Numbers	EPC0493-11.77	
	Detailer: MDS			
Void:	Sheet Subset: XSEC	Subset Sheets:	07 of 12	Sheet Number 80

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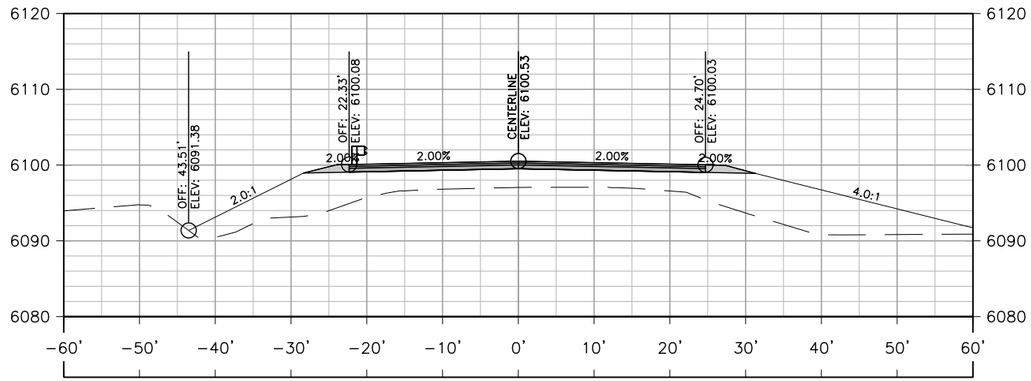
9+25.00



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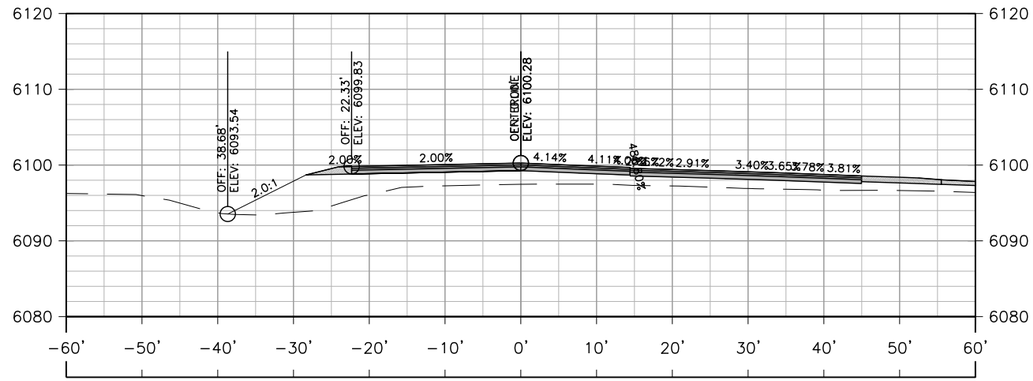

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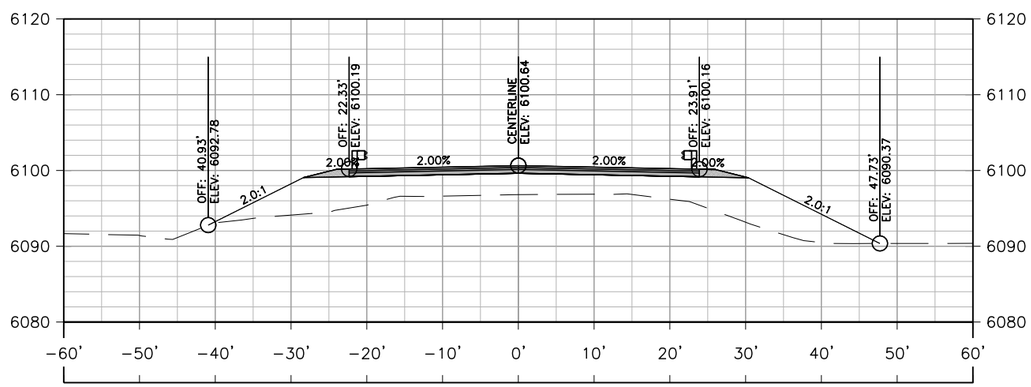

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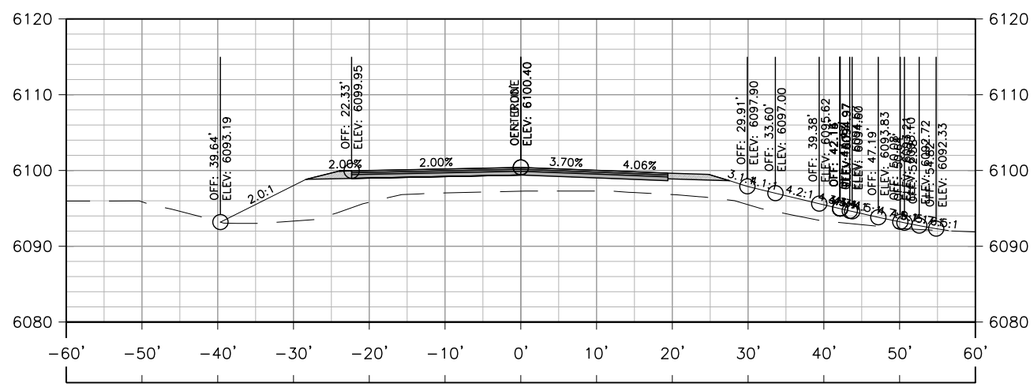

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CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	08 of 12

Project No./Code
500331
Sheet Number 81

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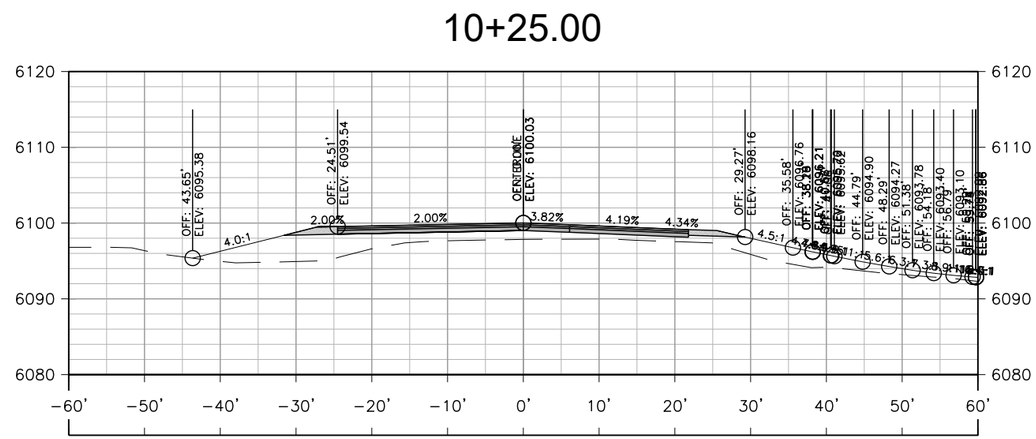

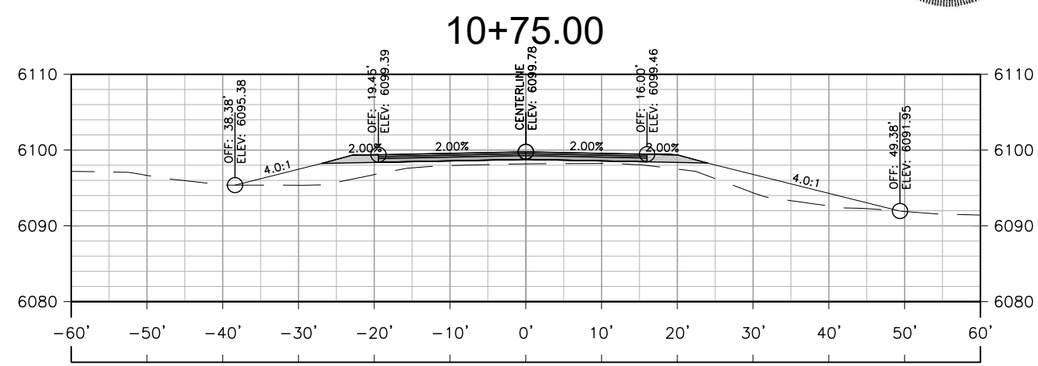

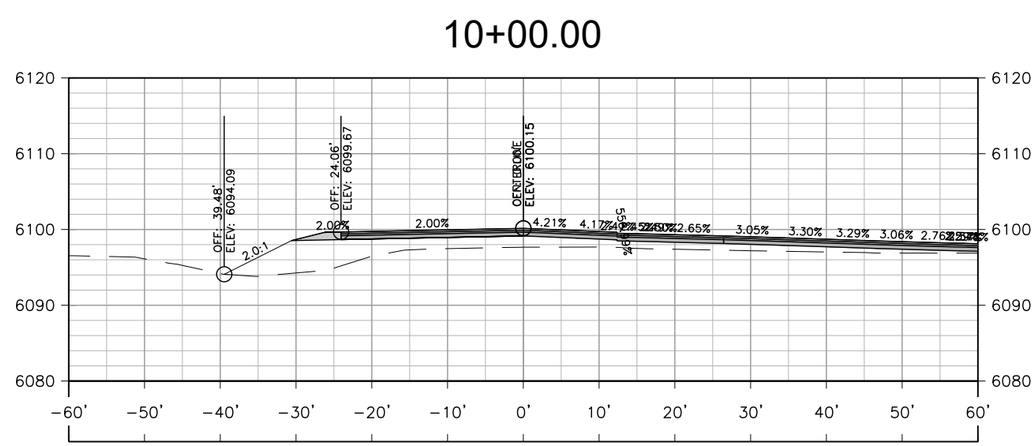

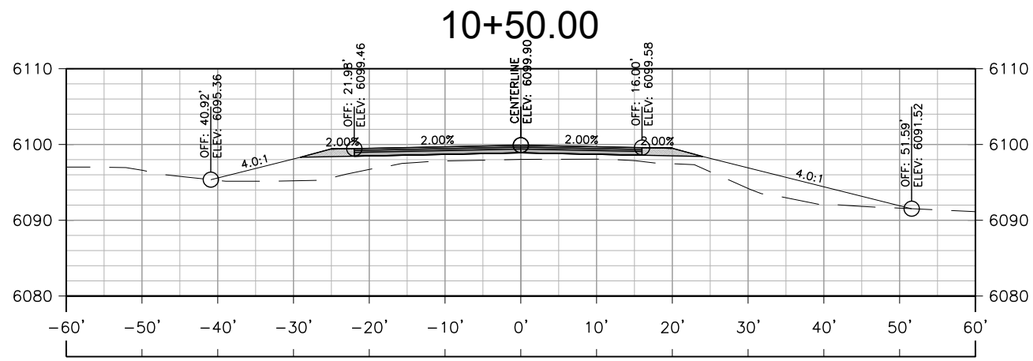

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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	09 of 12

Project No./Code
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Sheet Number 82

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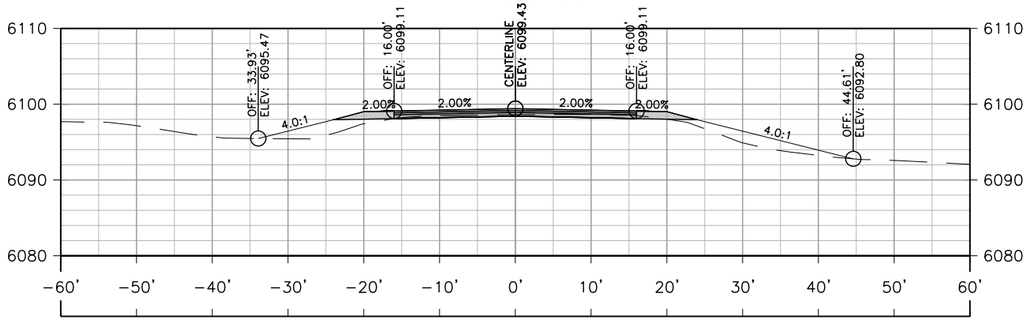
11+50.00



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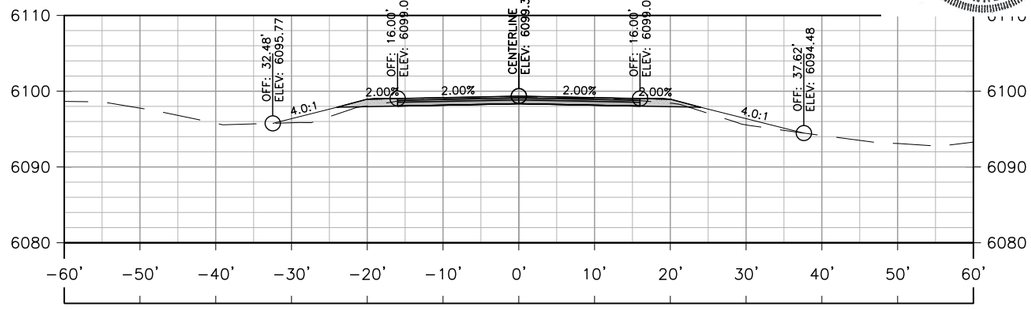

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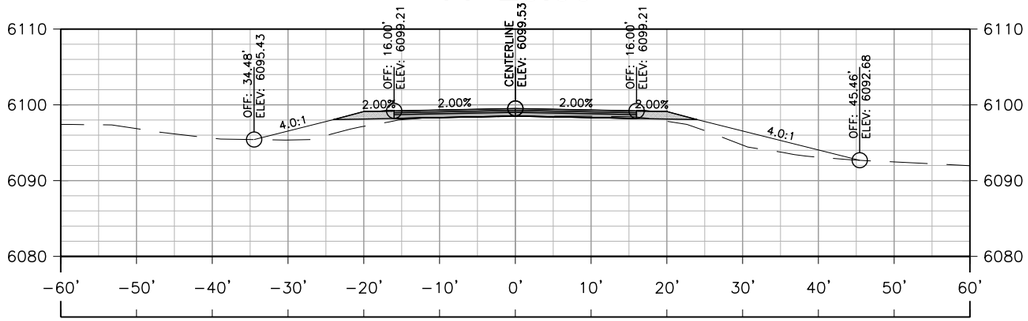

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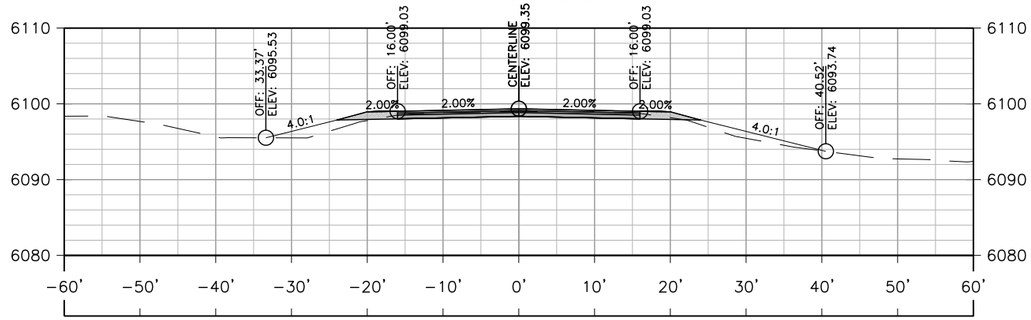

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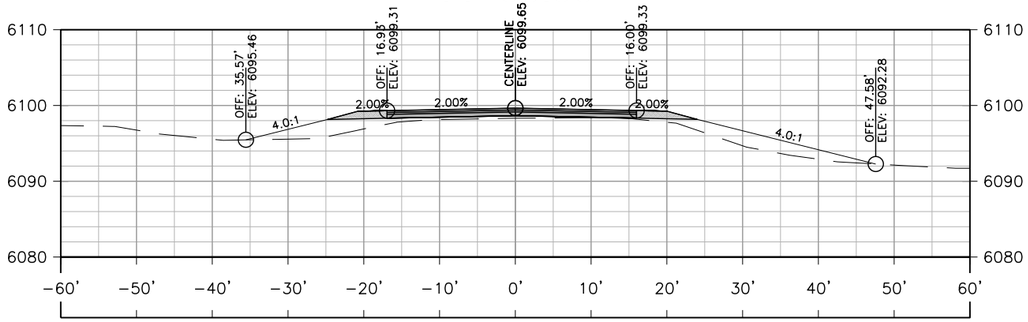

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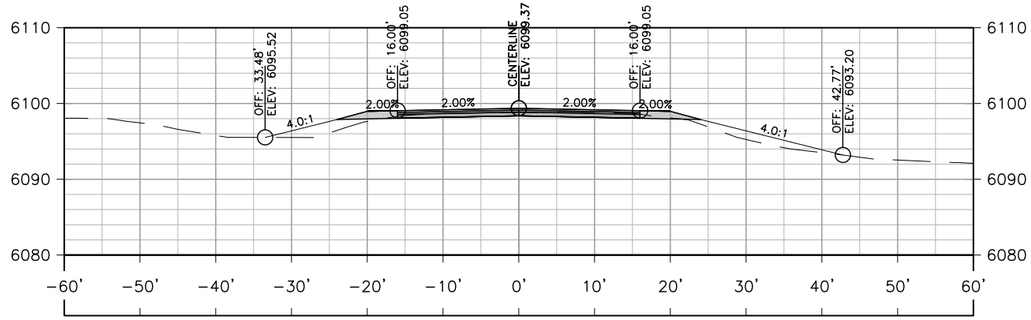

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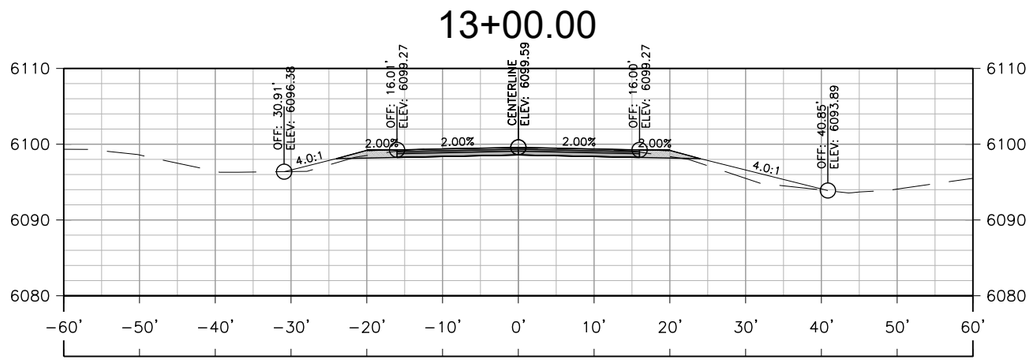
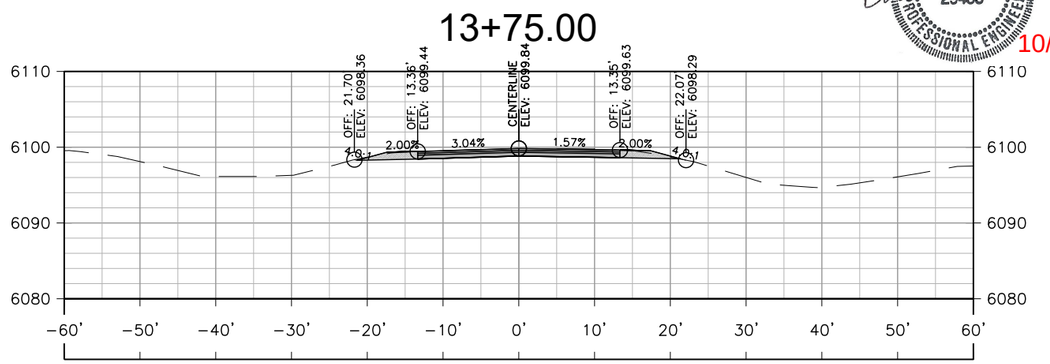
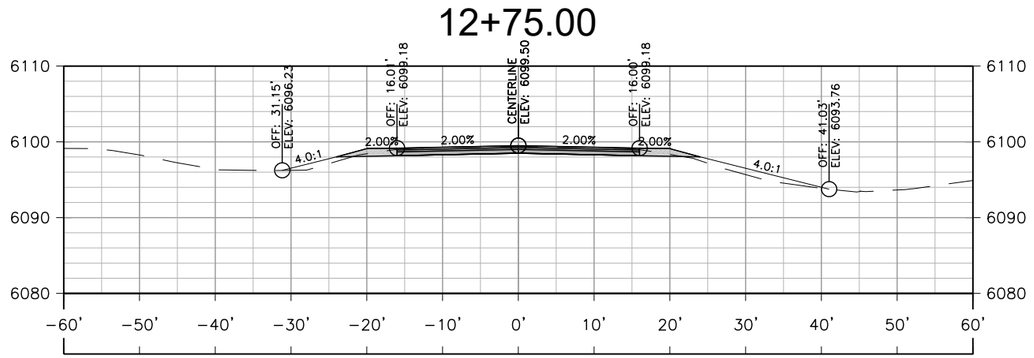
Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	010 of 12

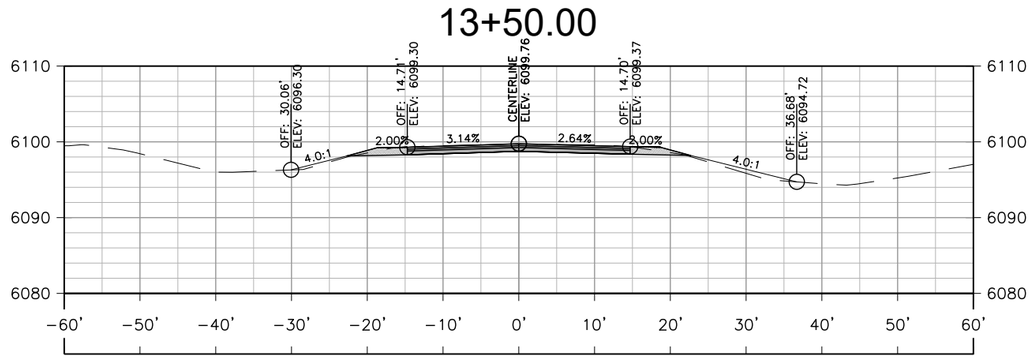
Project No./Code: 500331

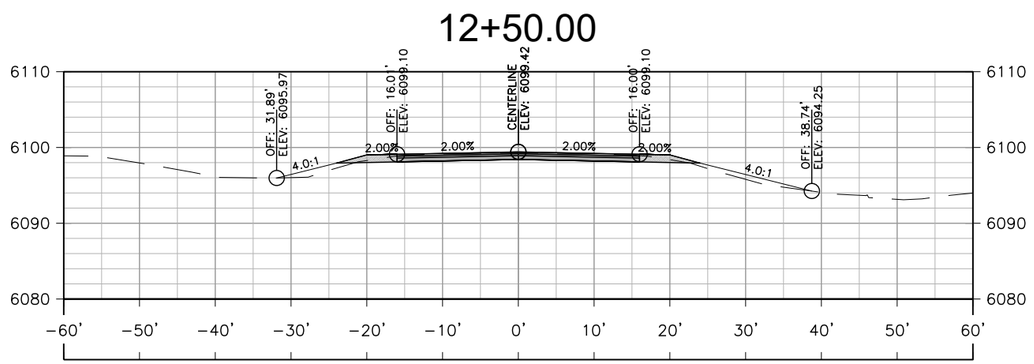
Sheet Number: 83

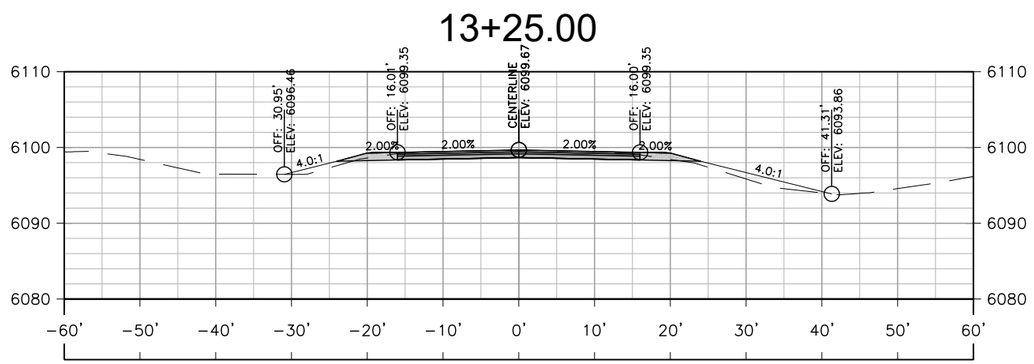












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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	11 of 12

Project No./Code	
500331	
Sheet Number	84

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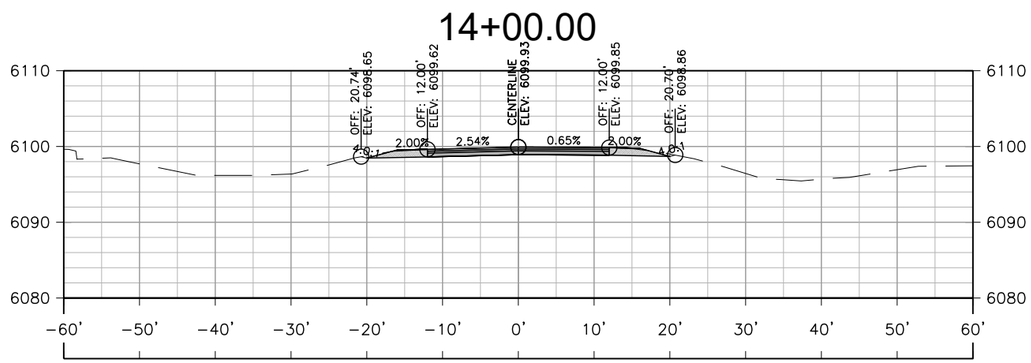

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CROSS SECTIONS
ELLICOTT HIGHWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	12 of 12

Project No./Code: 500331

Sheet Number: 85

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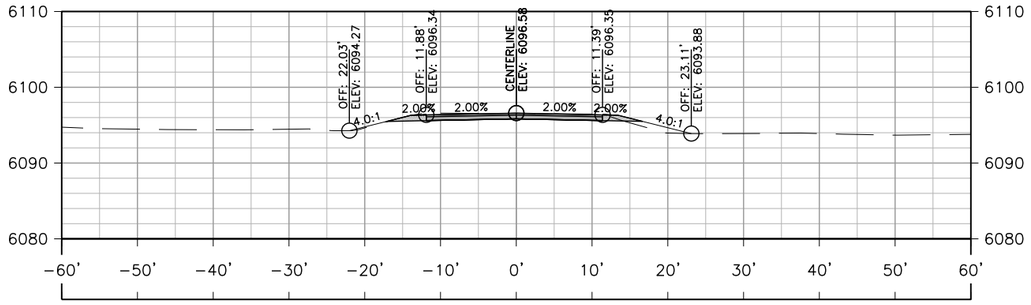

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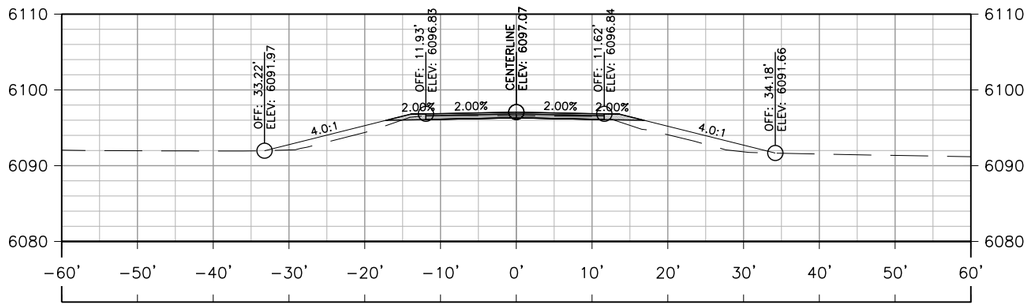

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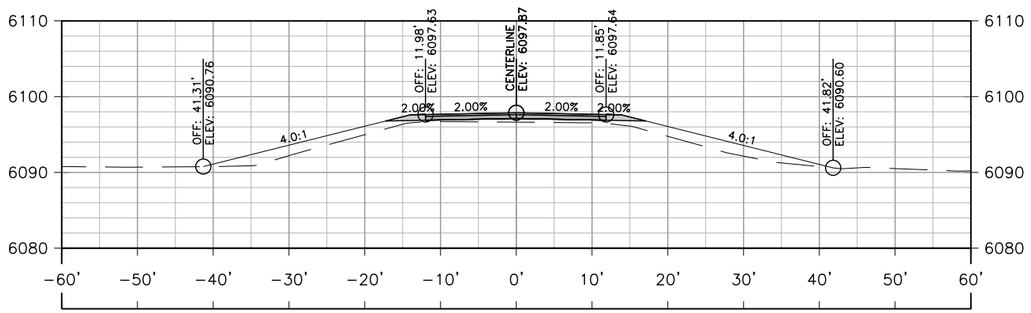

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
DRIVEWAY

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	01 of 01

Project No./Code: 500331

Sheet Number: 86

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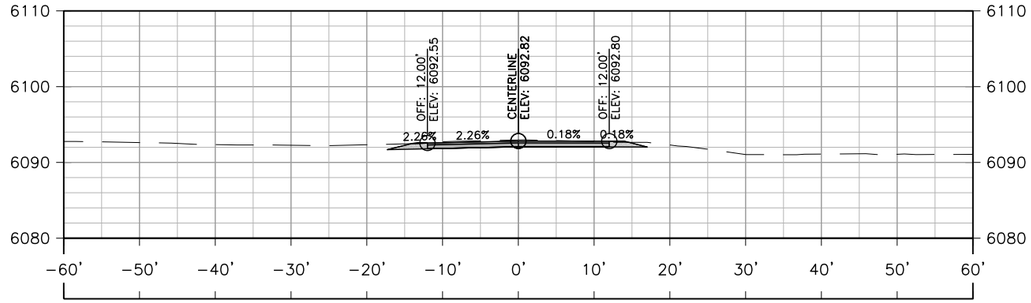

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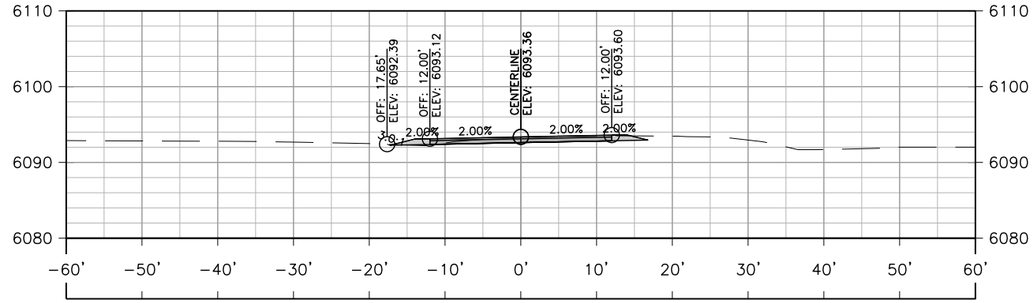

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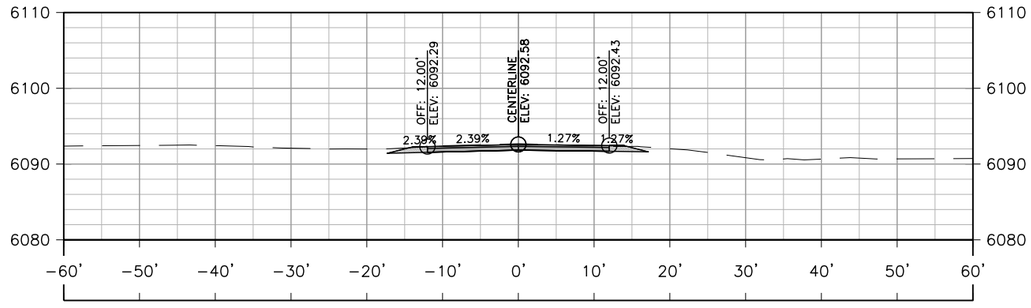

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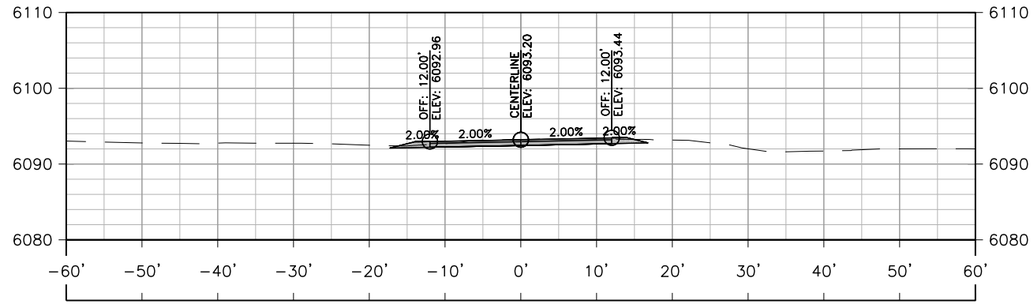

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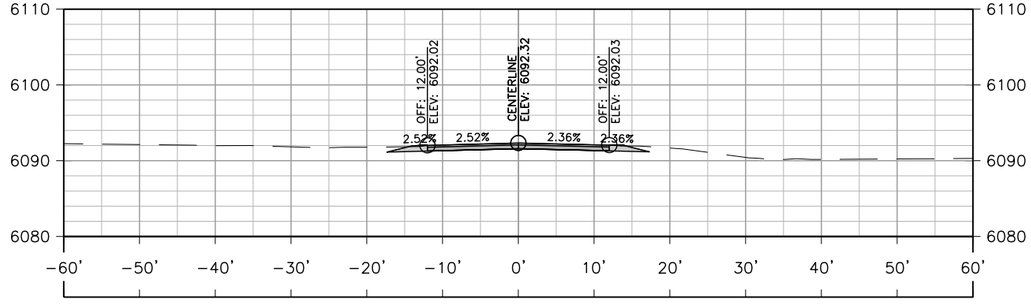

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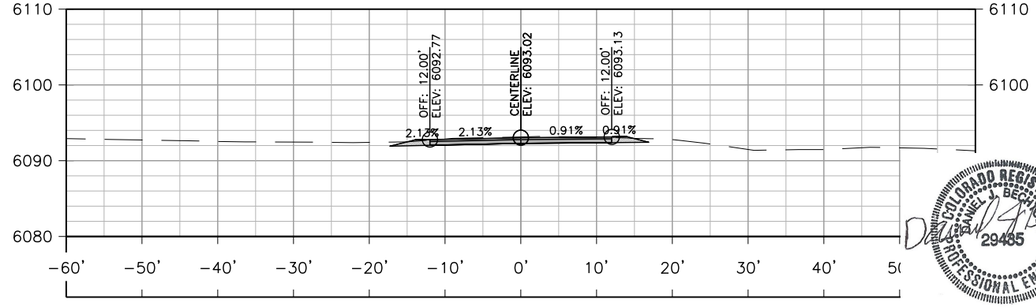

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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	01 of 09

Project No./Code: 500331

Sheet Number: 87

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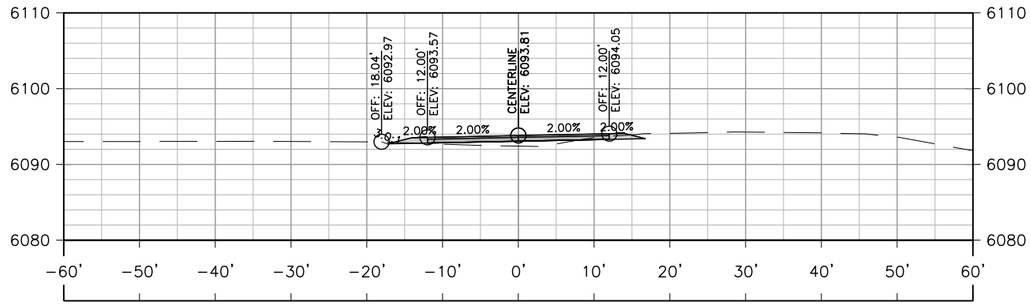

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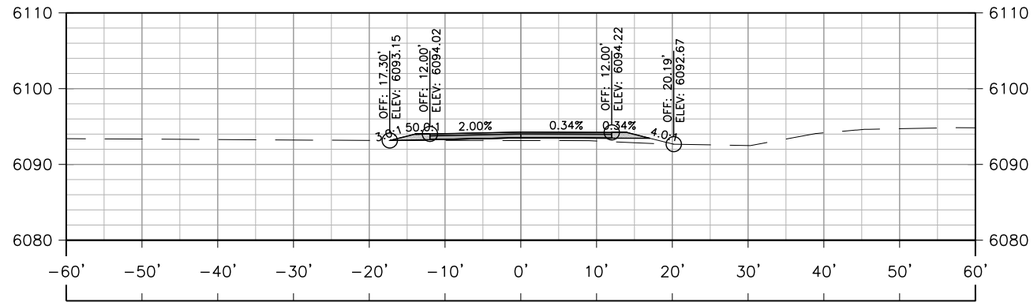

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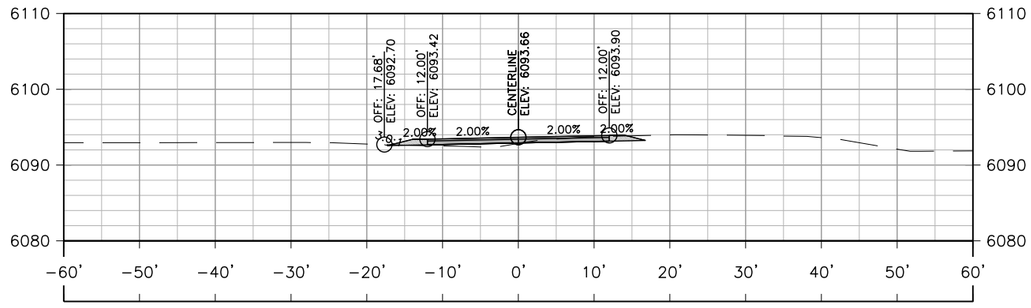

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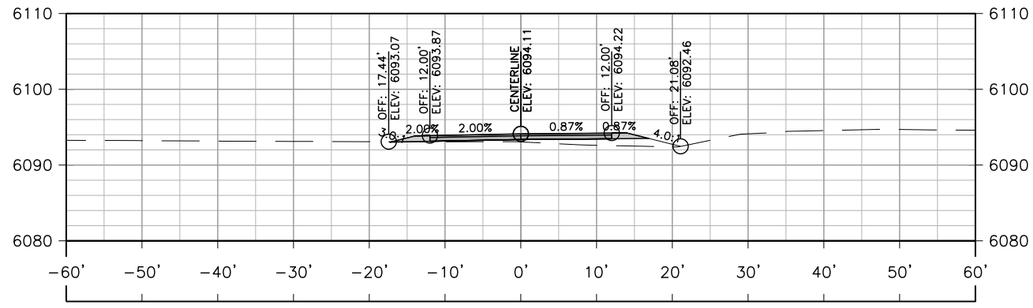

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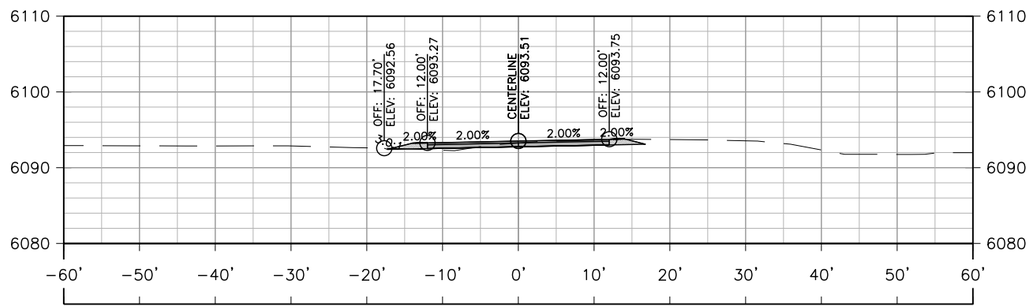

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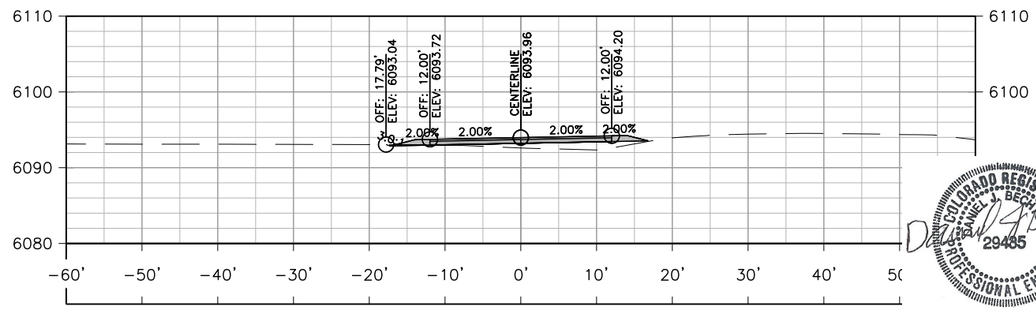

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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	02 of 09

Project No./Code
500331
Sheet Number 88

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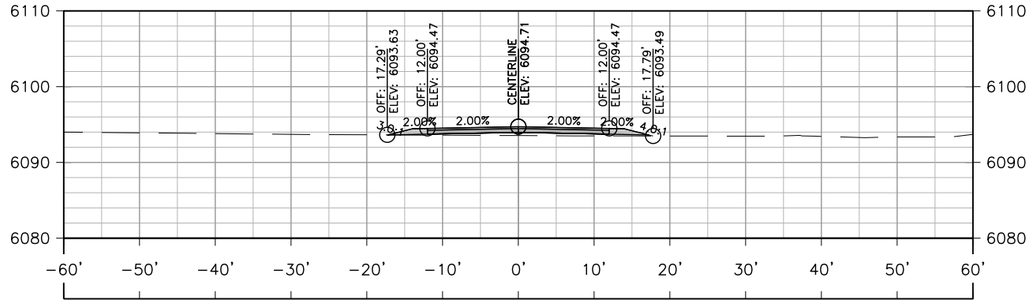

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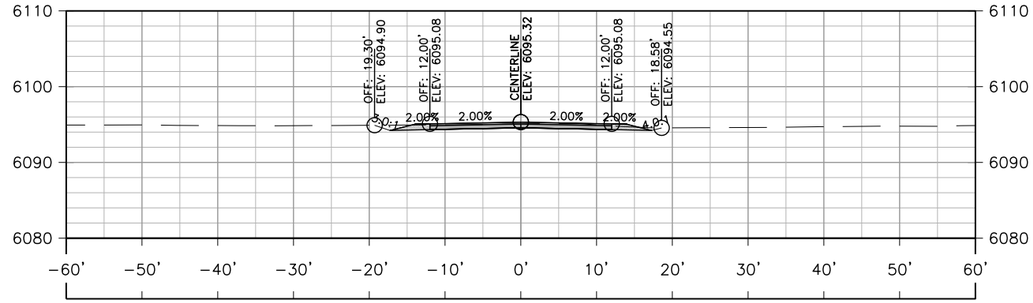

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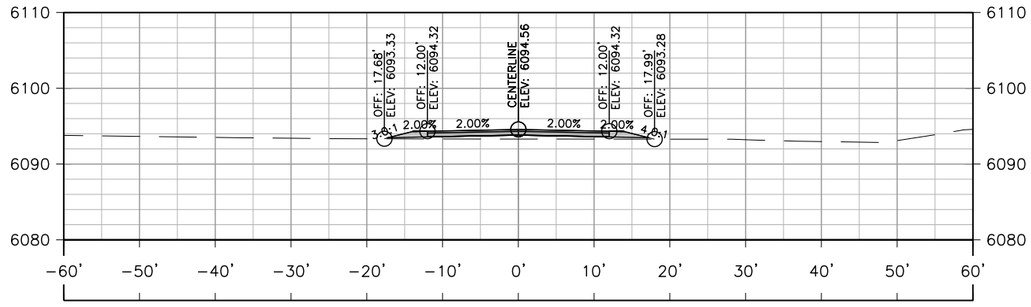

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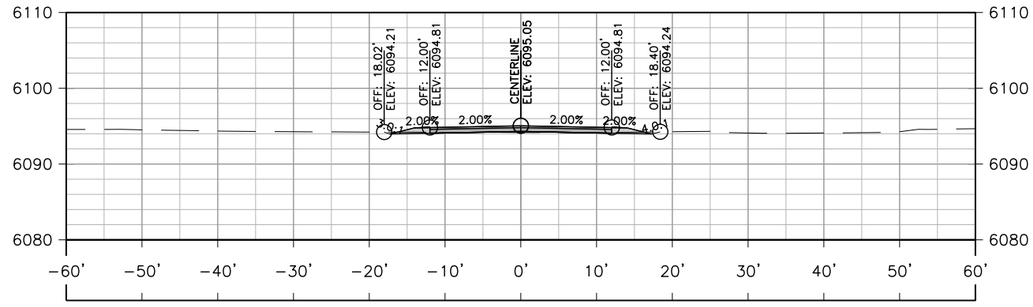

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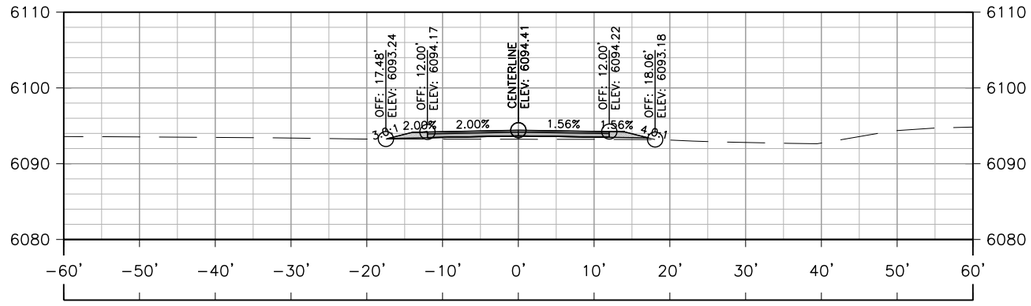

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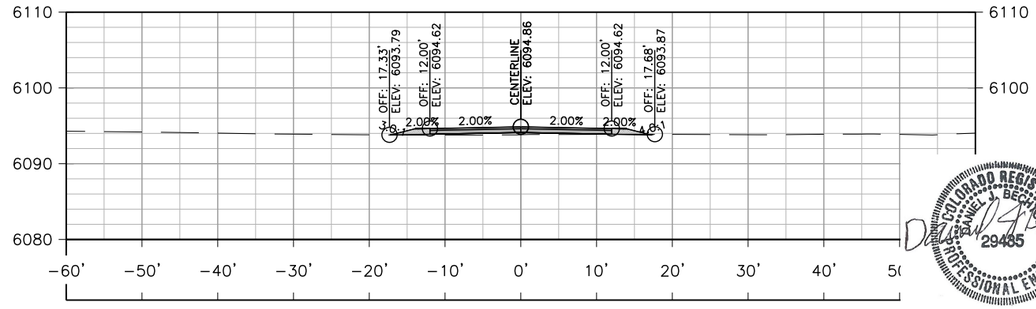

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ELLICOTT HIGHWAY DETOUR

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
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Project No./Code
500331

Sheet Number 89

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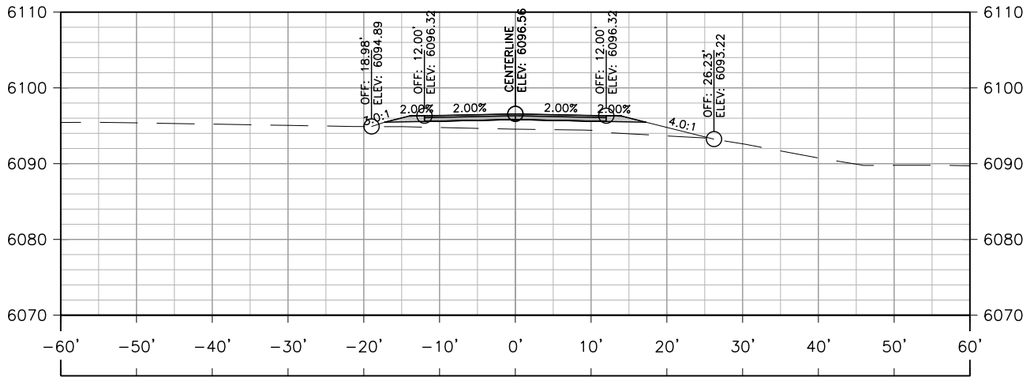

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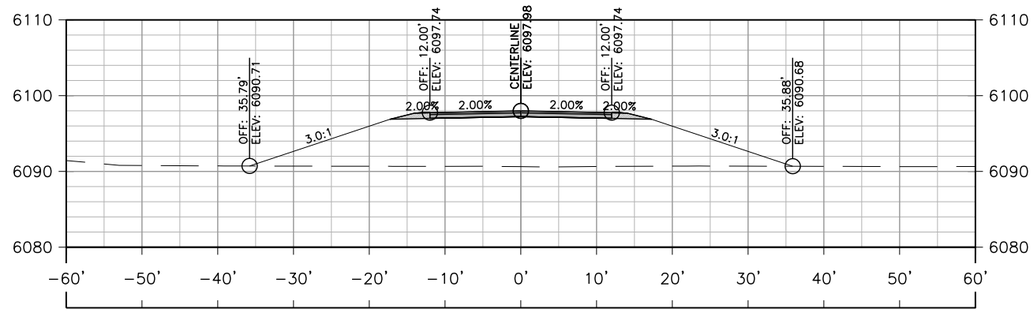

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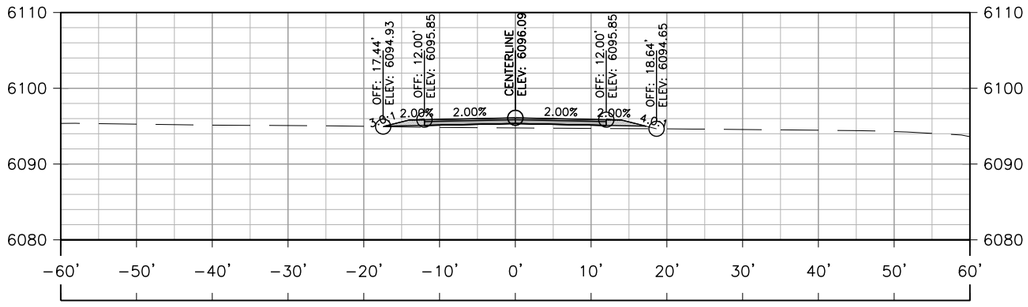

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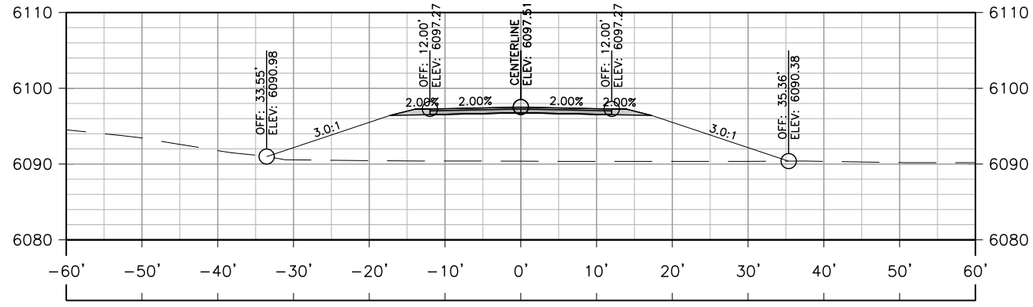

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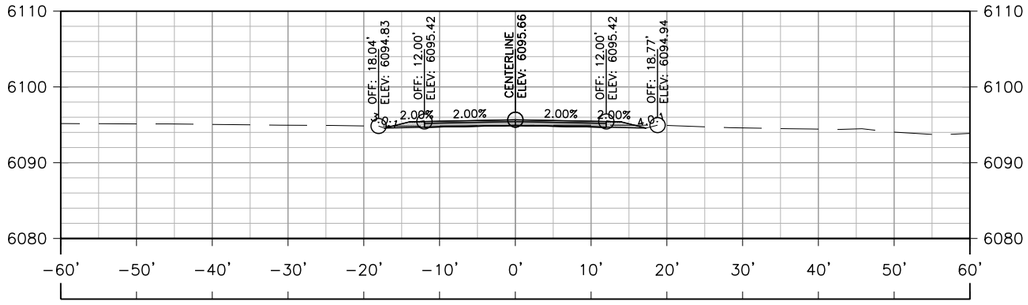

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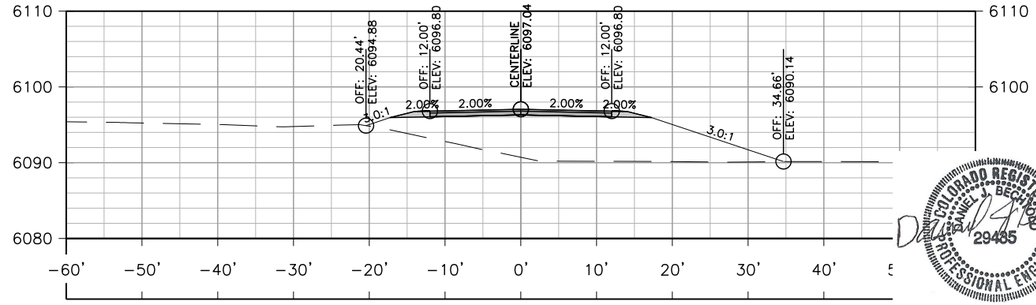

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
ELLICOTT HIGHWAY DETOUR

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	04 of 09

Project No./Code	
500331	
Sheet Number	90

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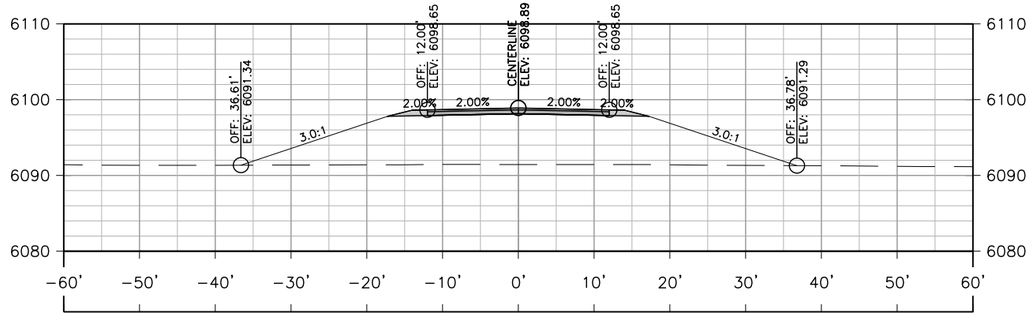

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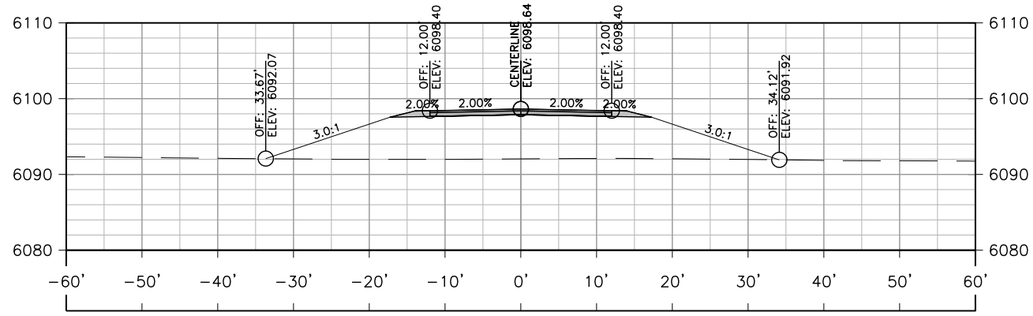

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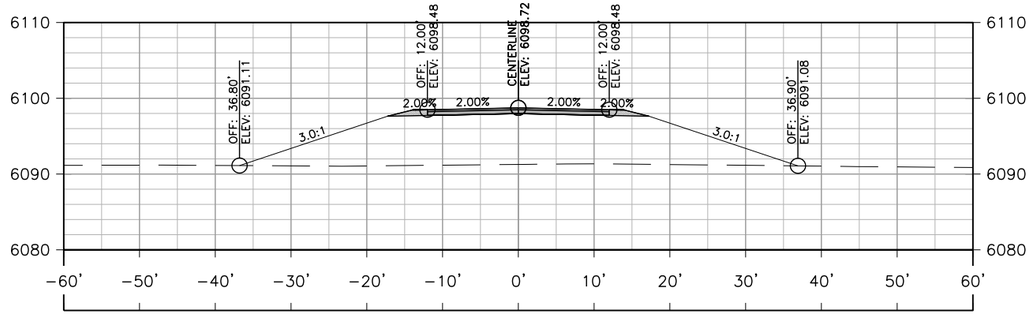

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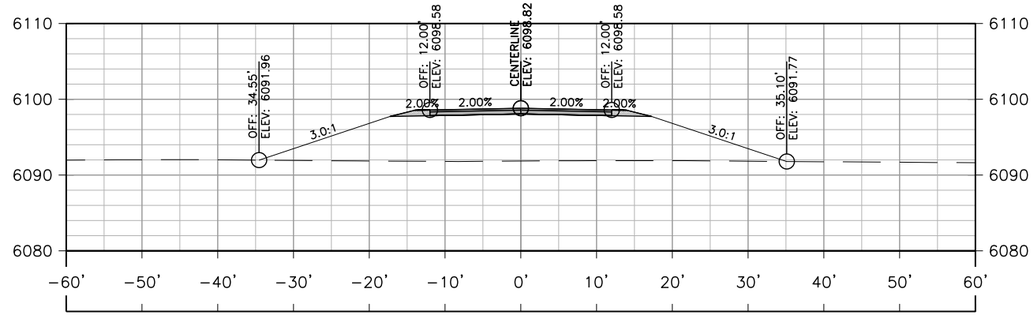

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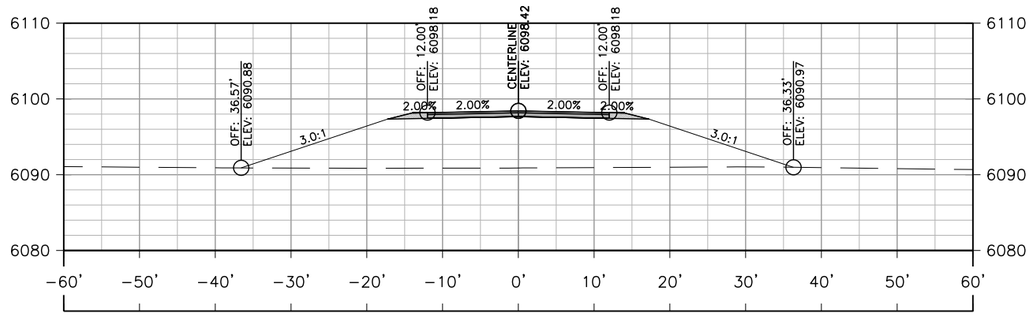

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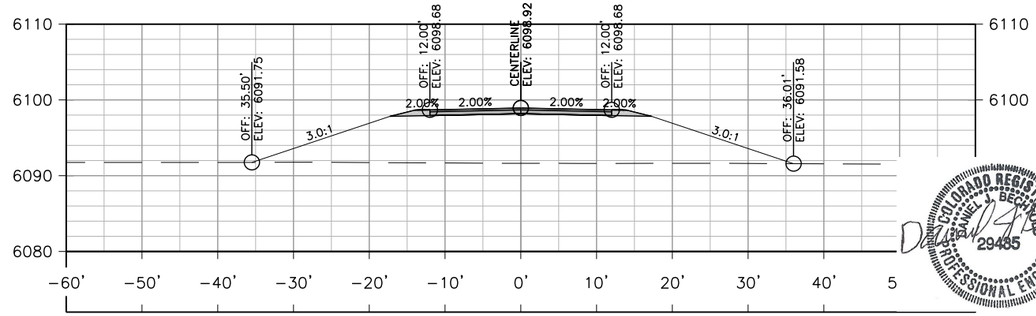

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	05 of 09

Project No./Code	
500331	
Sheet Number	91

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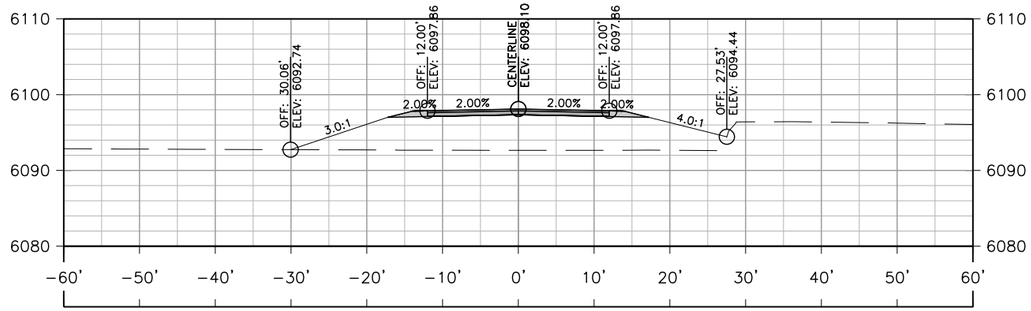

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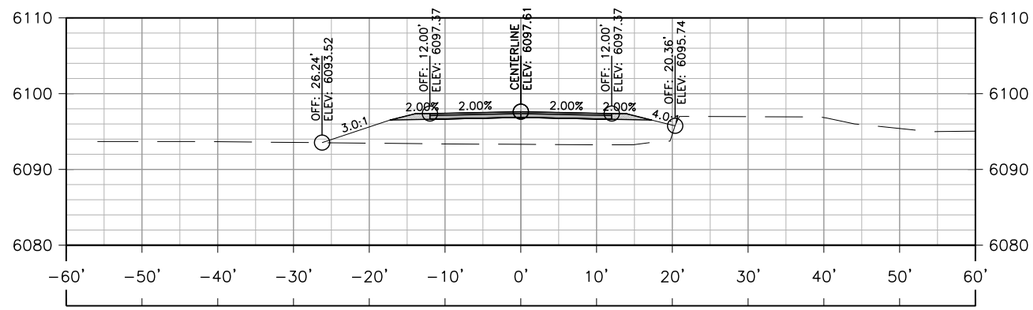

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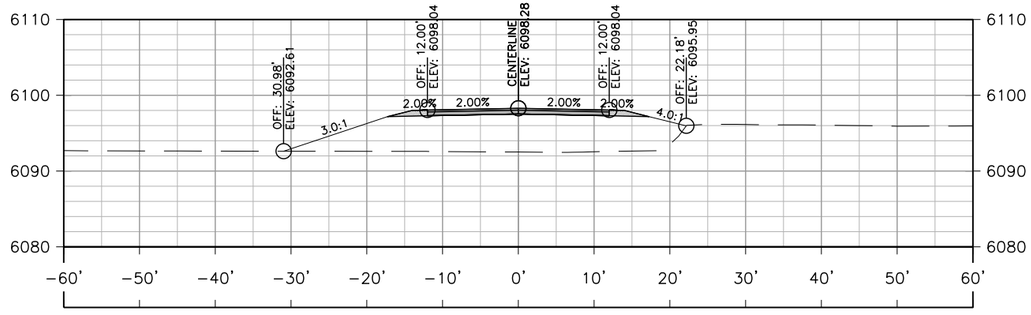

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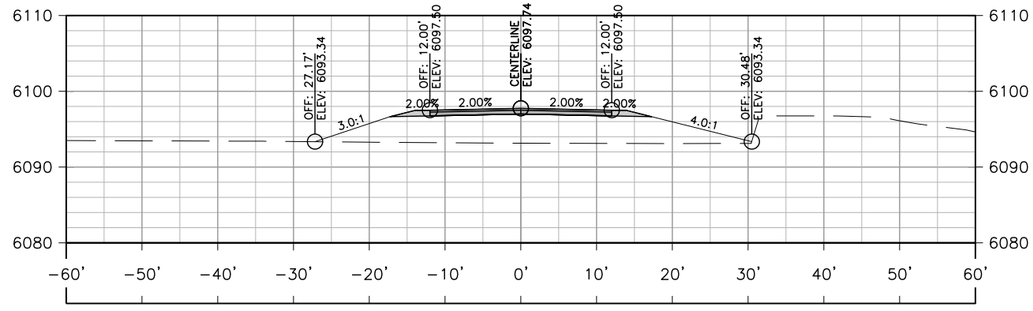

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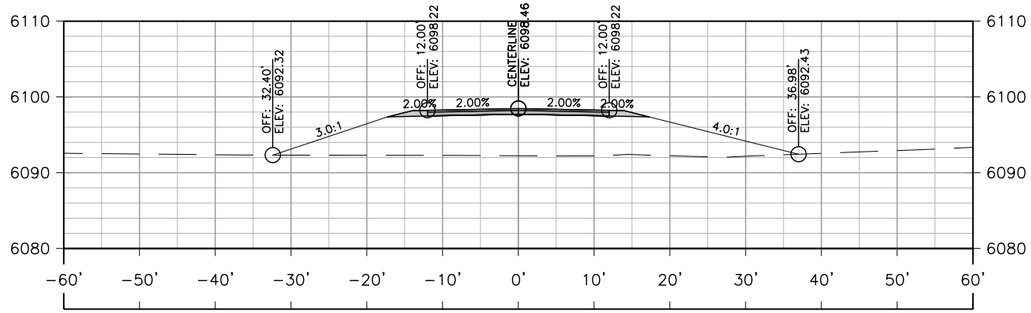

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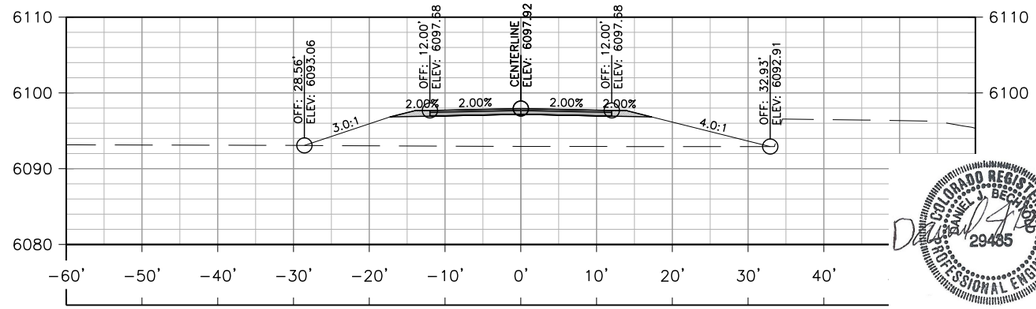

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No Revisions:	CROSS SECTIONS ELLICOTT HIGHWAY DETOUR			500331
Revised:	Designer: MDS	Structure Numbers	EPC0493-11.77	
Void:	Detailer: MDS			
	Sheet Subset: XSEC	Subset Sheets: 06 of 09		Sheet Number 92

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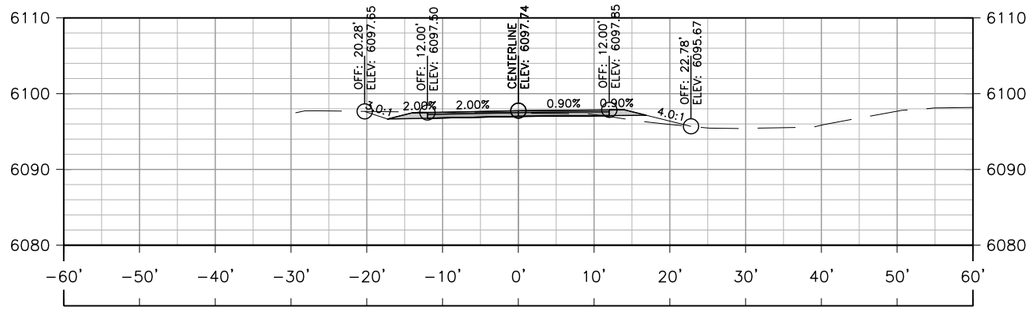

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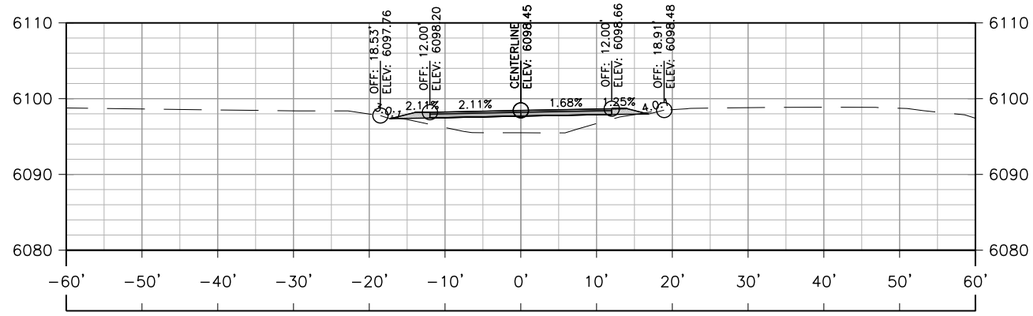

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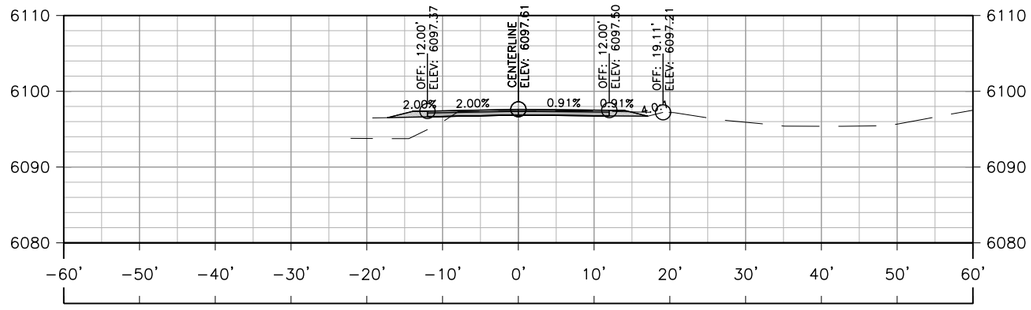

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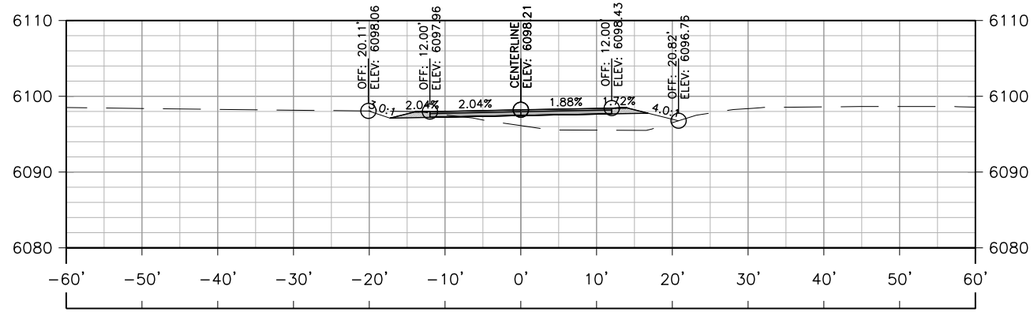

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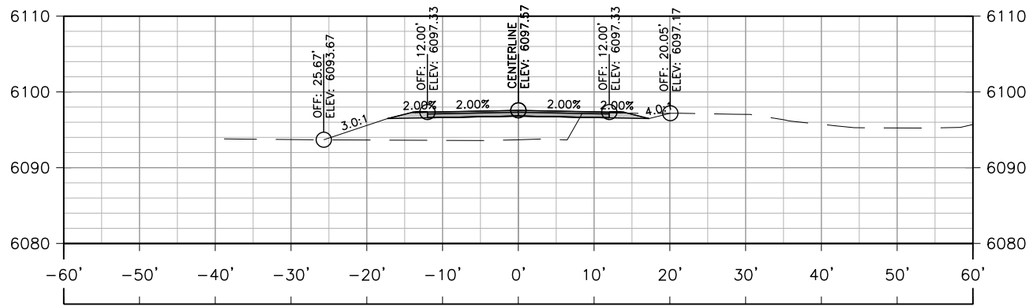

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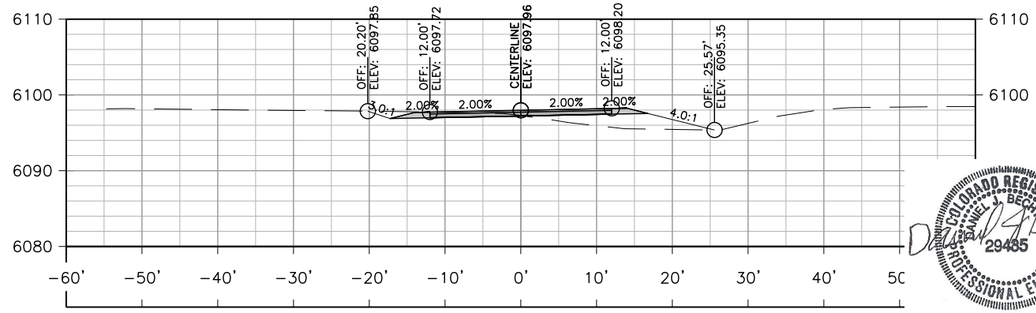

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
CROSS SECTIONS
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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	07 of 09

Project No./Code: 500331

Sheet Number: 93

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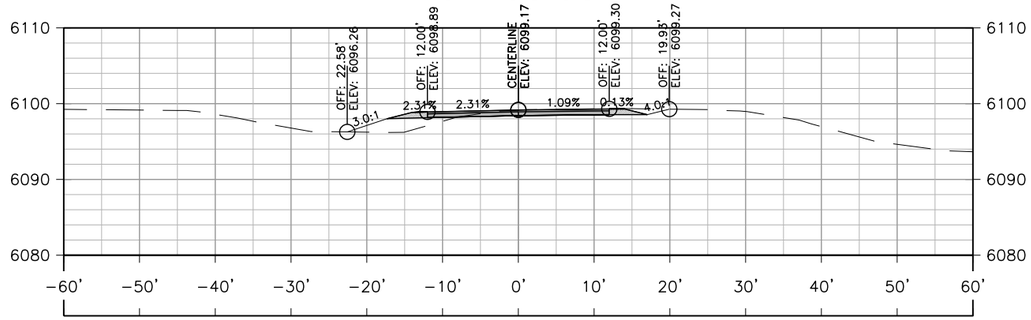

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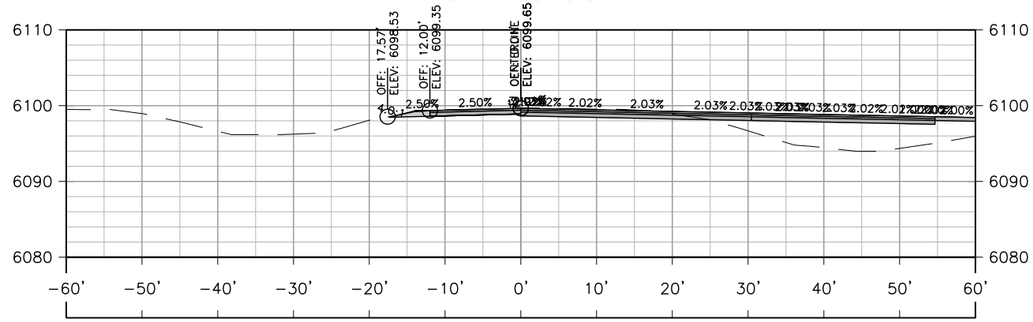

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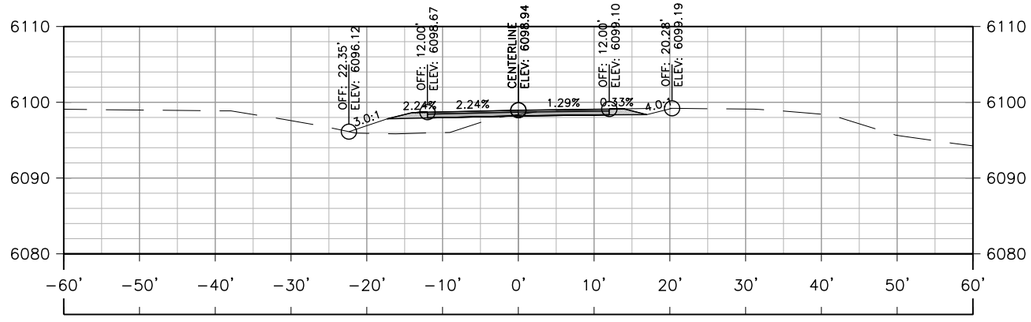

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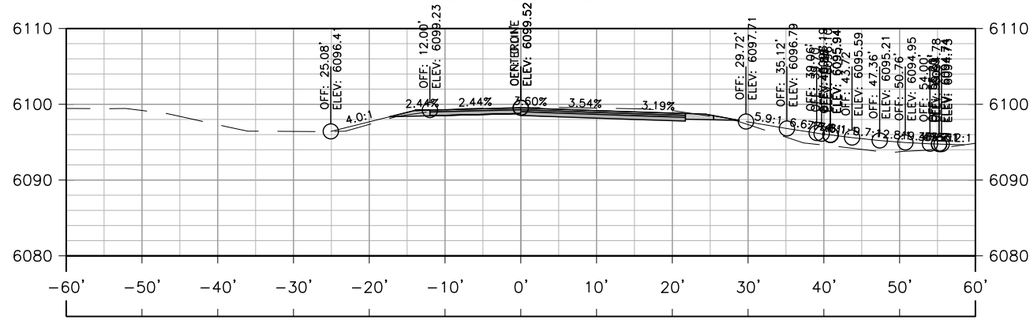

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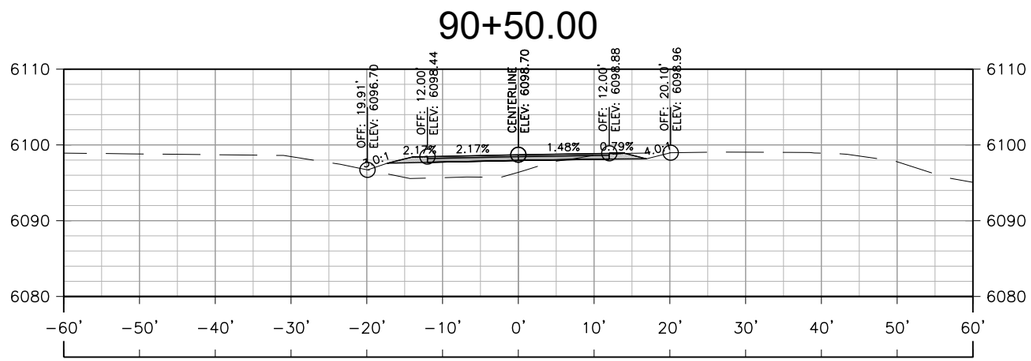

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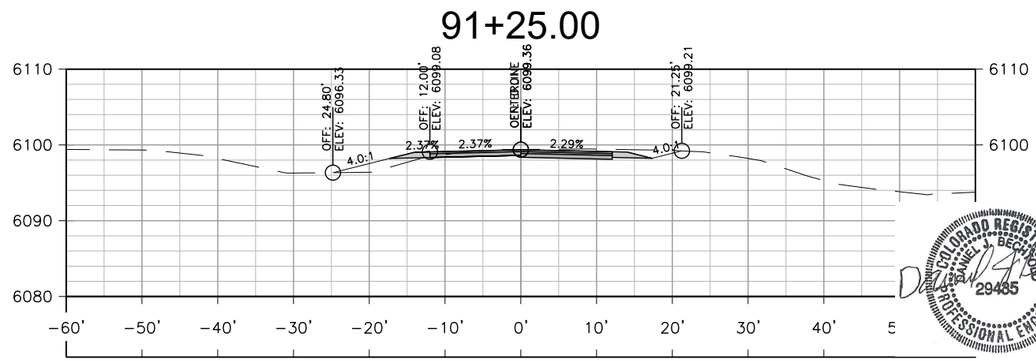

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29485
PROFESSIONAL ENGINEER

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ELLICOTT HIGHWAY BRIDGE REPLACEMENT
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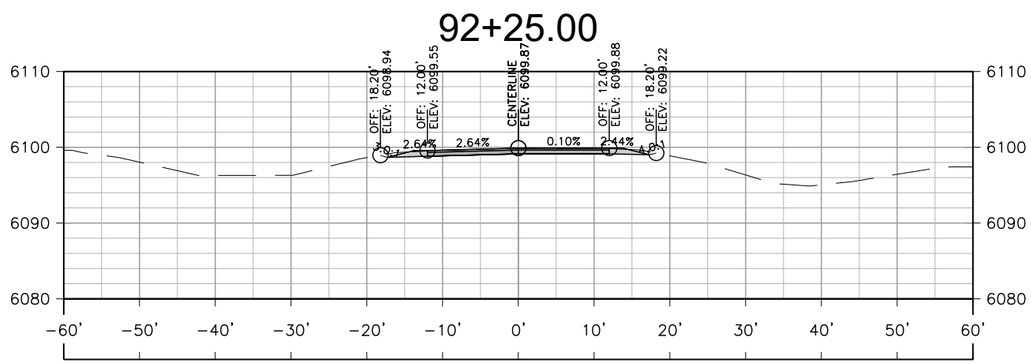
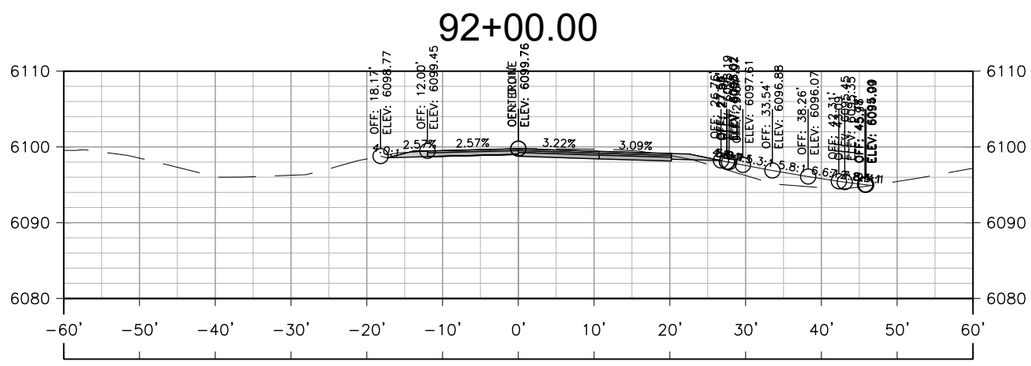
ELLICOTT HIGHWAY DETOUR

Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	08 of 09

Project No./Code	
500331	
Sheet Number	94





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29485

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Sheet Number 95

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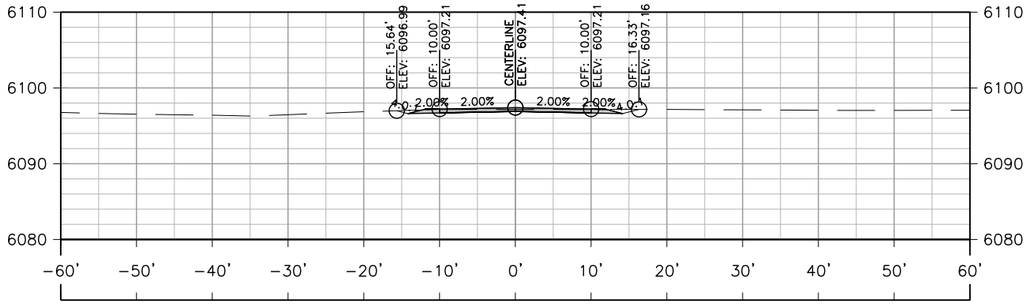

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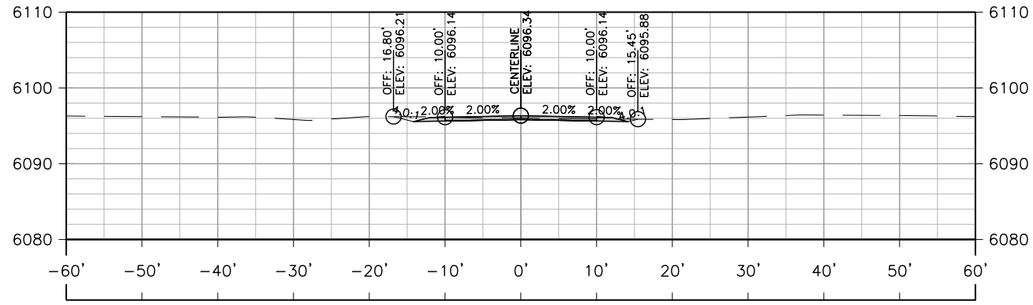

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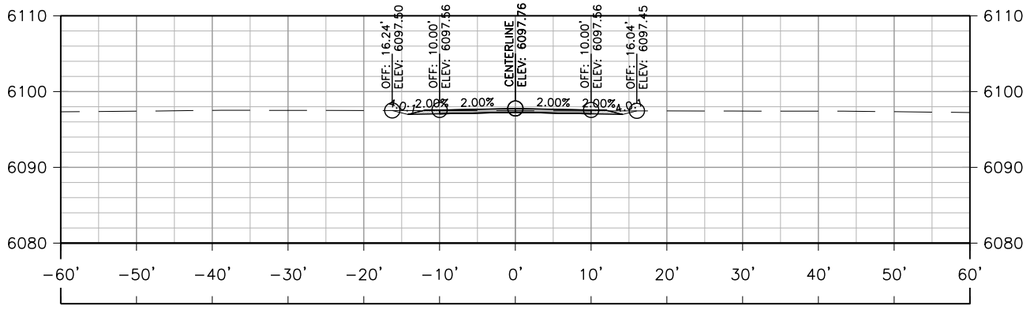

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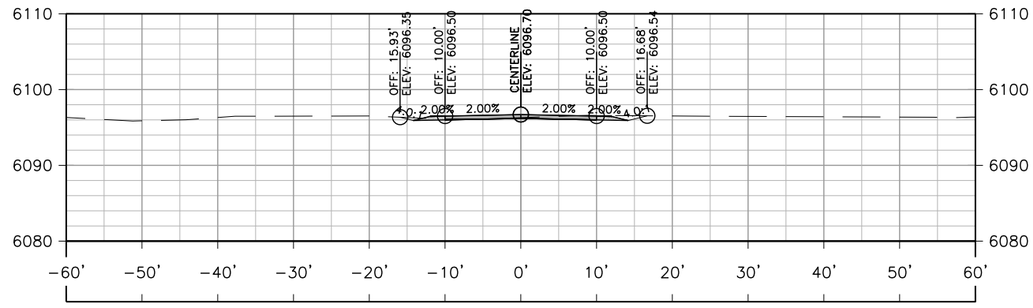

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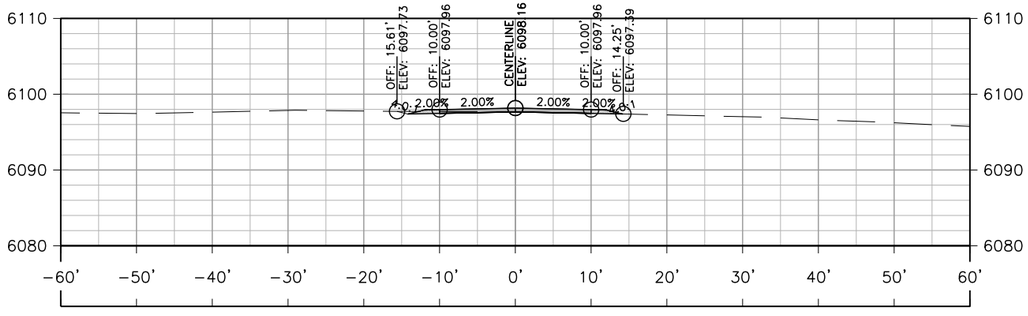

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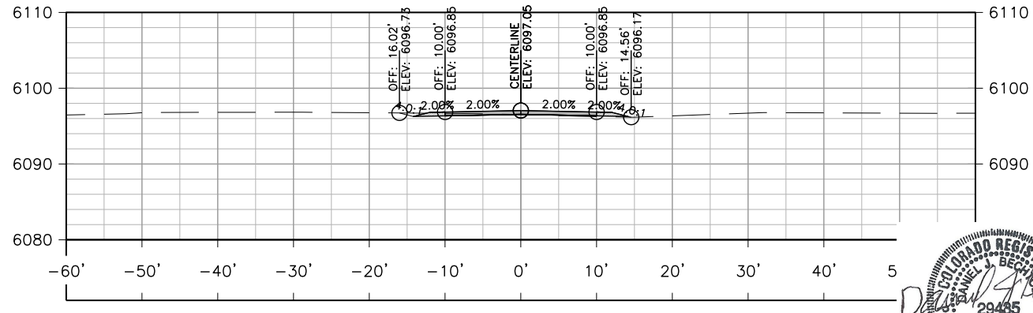

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Designer:	MDS	Structure Numbers	EPC0493-11.77
Detailer:	MDS		
Sheet Subset:	XSEC	Subset Sheets:	01 of 02

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500331	
Sheet Number	96

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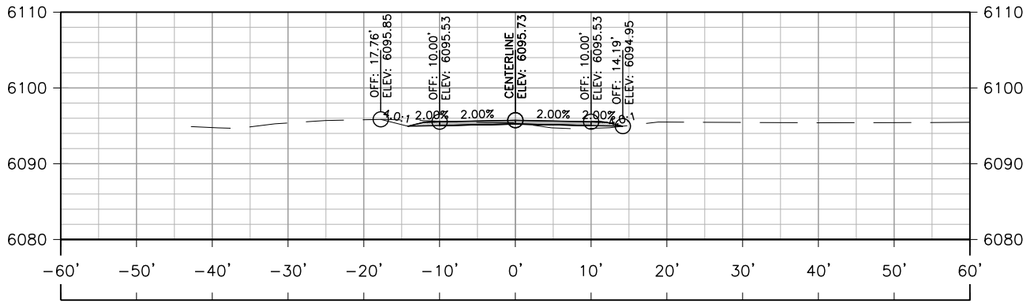

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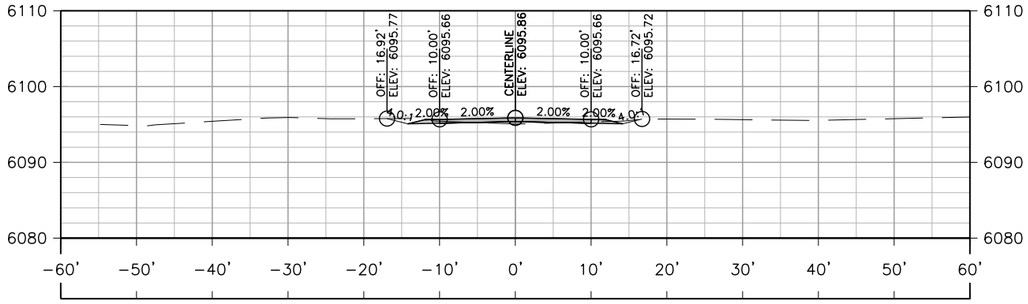

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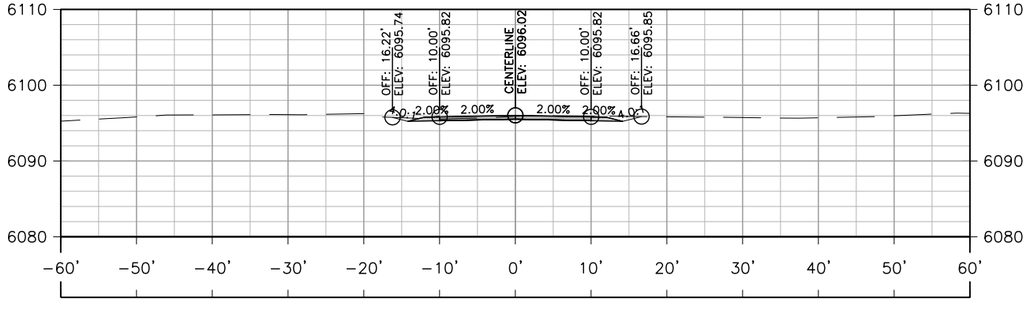

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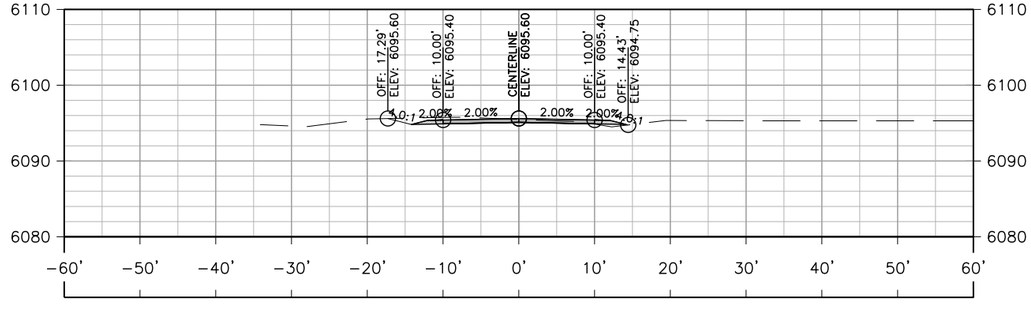

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Detailer:	MDS		
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Project No./Code
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Sheet Number 97