



# GENERAL NOTES

**SPECIFICATIONS:** All references to the Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction with current Supplemental Specifications. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specifications, with interims.

**DESIGN LOAD:** This bridge is designed for 1.25\*HL93 (KYHL93) live load.

**FUTURE WEARING SURFACE:** This bridge is designed for a 15 PSF future wearing surface load.

**Materials Design Specifications:**

For Class "A" Reinforced Concrete       $f'_c = 3500$  psi  
 For Class "AA" Reinforced Concrete       $f'_c = 4000$  psi  
 For Steel Reinforcement                   $f_y = 60000$  psi

**Preformed Cork Expansion Joint Material:** Preformed Cork Expansion Joint Material shall conform to subsection 807.04.02 (Type II) of the Kentucky Department of Highways Standard Specifications.

**CONCRETE:** Class "AA" Concrete is to be used throughout the superstructure. Class "A" concrete is to be used in the substructures. Prestressed beam concrete shall be in accordance with the plans and specifications.

**REINFORCEMENT:** Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to face of concrete is 2", unless otherwise noted. Epoxy coat bars designated by suffix (e) in accordance with Section 811.10 of the Standard Specifications. Use stirrup bend diameters for bars designated by suffix (s) in a Bill of Reinforcement.

**SHOP DRAWINGS:** Submit shop drawings that are required by the plans and specifications directly to the Division of Structural Design. If any changes in the design plans are proposed by a fabricator or supplier, submit those changes to the Department through the Contractor.

**DIMENSIONS:** Dimensions are for a normal temperature of 60 degrees Fahrenheit. Layout dimensions are horizontal dimensions.

**FOOTING EXCAVATION:** Ensure excavation for footings is in accordance with Subsection 603.03.03 of the specifications.

**COMPLETION OF THE STRUCTURE:** The Contractor is required to complete the structure in accordance with the plans and specifications. Material, labor or construction operations, not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, back filling, removal of all or parts of existing structures, phase construction, incidental materials, labor, or anything else required to complete the structure.

**COFFERDAMS:** Cofferdams may be necessary for construction of substructure. Include the cost of this work in the bid for Foundation Preparation.

**Foundation Preparation:** Foundation Preparation shall be in accordance with Section 603 of the Specifications.

**BEVELED EDGES:** Bevel all exposed edges  $\frac{3}{4}$ ", unless otherwise noted.

**CONSTRUCTION NOTE:** Sheeting, shoring, cofferdams, and dewatering methods may be required. Include all costs in the price bid for Foundation Preparation.

**MASONRY COATING:** Contrary to the Specifications, do not apply Masonry Coating. Apply Concrete Sealing in place of Masonry Coating as noted in Concrete Sealer note.

**CONCRETE SEALER:** All areas detailed in the specifications as requiring masonry coating shall be sealed in accordance with the special note for concrete sealing. The substructures to 6 inches below ground, superstructure deck, barriers, overhangs and approach slabs shall also be sealed as shown herein these plans. Concrete surfaces (except the deck) shall receive the ordinary surface finish as described in section 601.03.18(A) prior to being sealed.

The following abbreviations may have been used in the preparation of these plans:

bet.            Between  
 b.f.            Back Face  
 BOF            Bottom of Footing  
 bot.            Bottom  
 Brg.            Bearing  
 C to C        Center to Center  
 c.e.            Current Edition  
 C.Y.            Cubic Yard  
 Chd.            Chord  
 CL            Center Line  
 Cl.            Clear  
 Conc.        Concrete  
 Cu.            Cubic  
 Dwg.        Drawing  
 e.f.            Each Face  
 El.            Elevation  
 eq.            Equal  
 Est.            Estimate  
 Ext.            Exterior  
 F to F        Face to Face  
 f.f.            Front Face  
 f.s.            Far Side  
 fr.            Front  
 ft.            Feet  
 I.D.            Inside Diameter  
 in.            Inch  
 Int.            Interior  
 L            Left  
 LBS            Low Bridge Seat  
 LBS.        Pounds  
 M            Meter  
 MPH        Miles per Hour  
 n.s.            Near Side  
 O.D.            Outside Diameter  
 Opp.        Opposite  
 PC            Point of Curve  
 Perp.        Perpendicular  
 PI            Point of Intersection  
 PPC        Precast Prestressed Concrete  
 PPCDU      Precast Prestressed Concrete Deck Unit  
 PSI        Pounds per Square Inch  
 PT            Point of Tangent  
 R            Radius  
 R            Right  
 RCBC        Reinforced Concrete Box Culvert  
 RCDG        Reinforced Concrete Deck Girder  
 Req'd.      Required  
 RR            Railroad  
 Shld        Shoulder  
 spa.        Spaces  
 Sta.        Station  
 Std.        Standard  
 Str.        Straight  
 Tan        Tangent  
 Thru        Through  
 TOF        Top of Footing  
 Tot.        Total  
 Typ.        Typical  
 Vert.        Vertical  
 W.P.        Working Point  
 Yd.        Yard



REVISION	DATE

PREPARED BY  
**Division of  
 Structural Design**

DATE: October 2023	CHECKED BY:
DESIGNED BY: K. Ee	K. Ee
DETAILED BY: M. BawiThawng	K. Ee

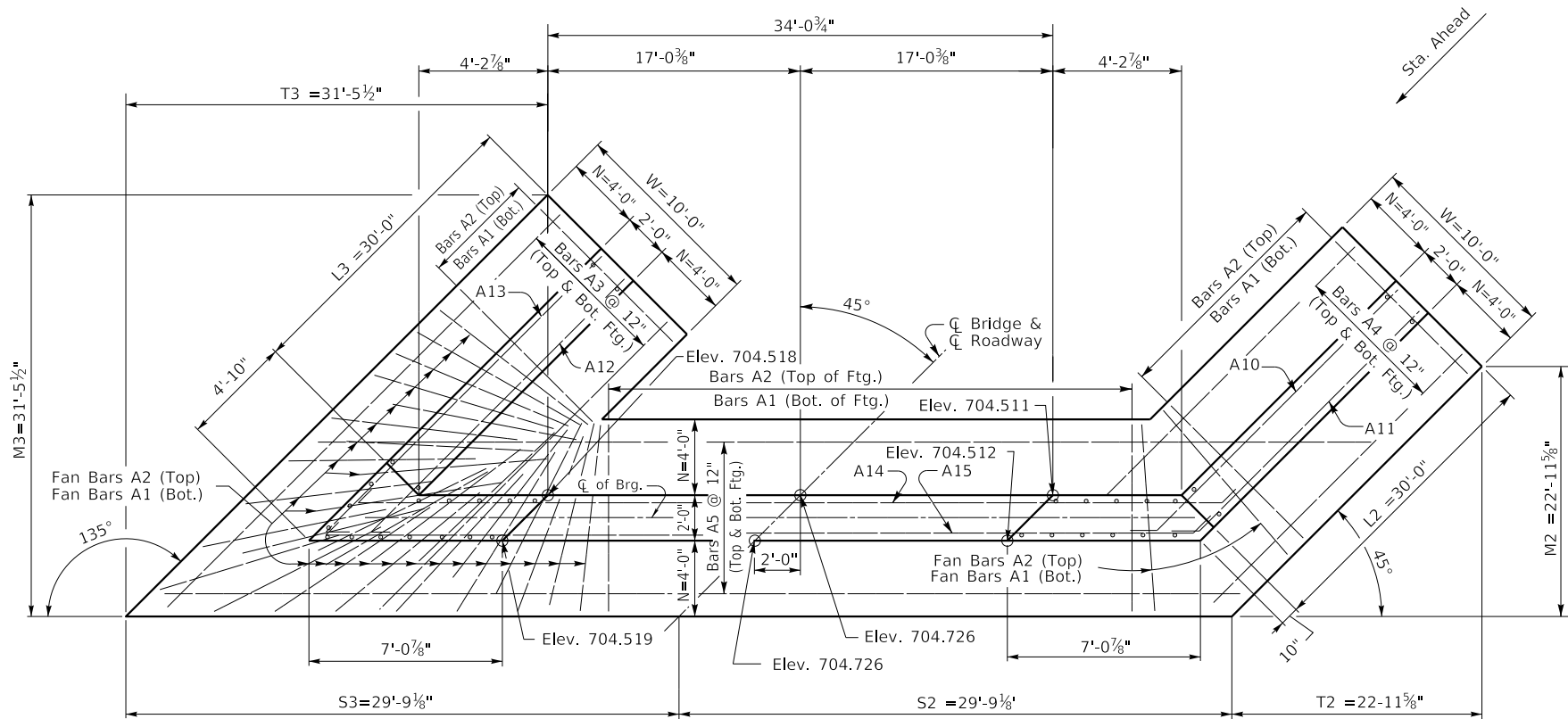
**GENERAL NOTES**  
 CROSSING  
**BRANCH OF INDIAN CREEK**

ROUTE  
**KY 395**

ITEM NO.  
**7-0000**  
 SHEET NO.  
**S2**

COUNTY OF  
**ANDERSON**  
 DRAWING NUMBER  
**28845**

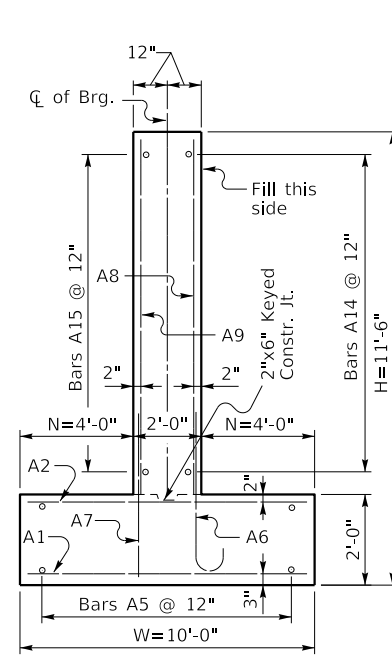




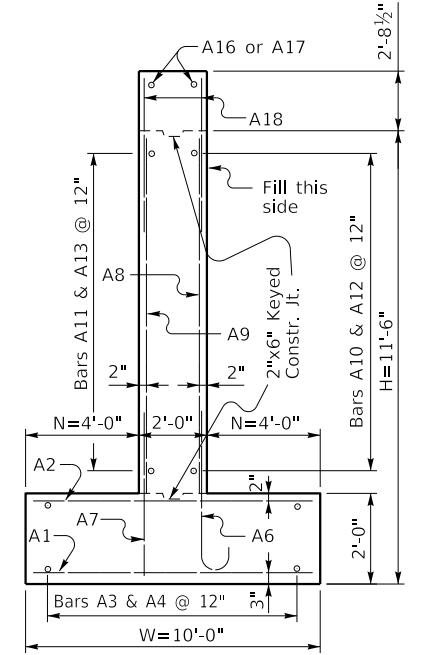
**PLAN**

NOTE: Trim A16 & A17 bars if necessary  
Trim A3 bars as necessary

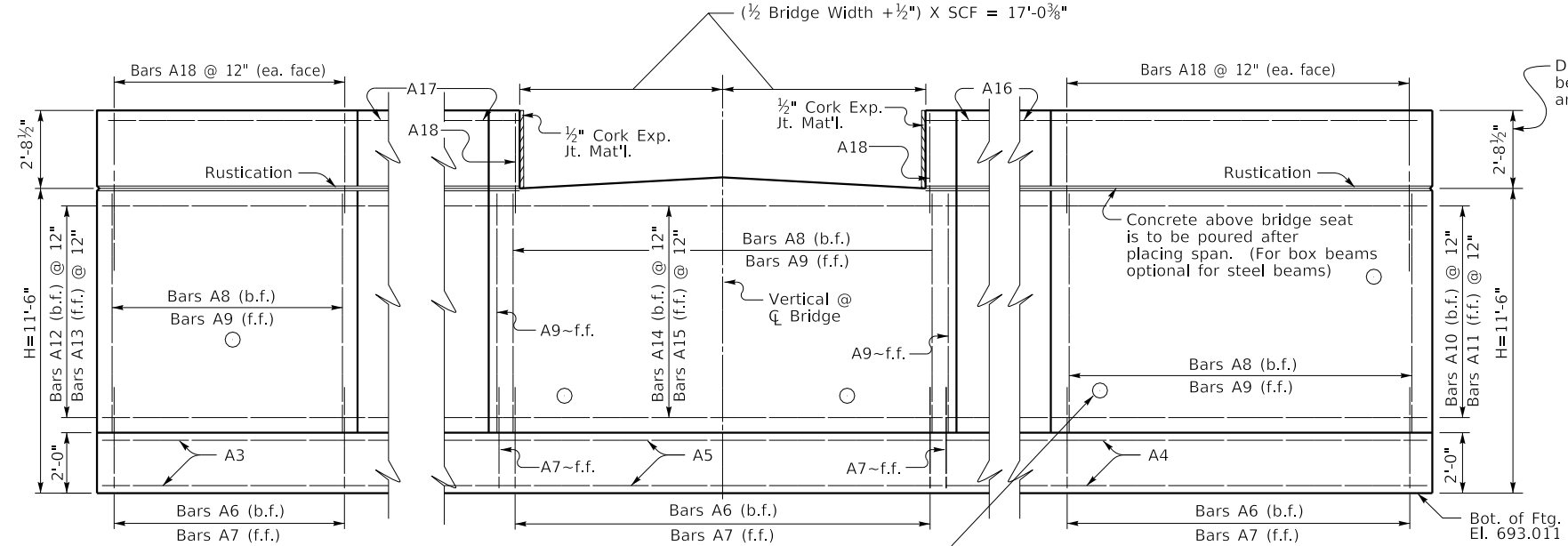
For fanning A1 & A2 bars with an acute angle, space @ 12" at face of toe, then as you get closer to the corner start pulling every other bar back toward the heel. (Similar to as shown)



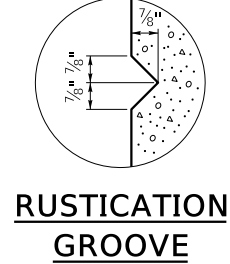
**WALL SECTION**



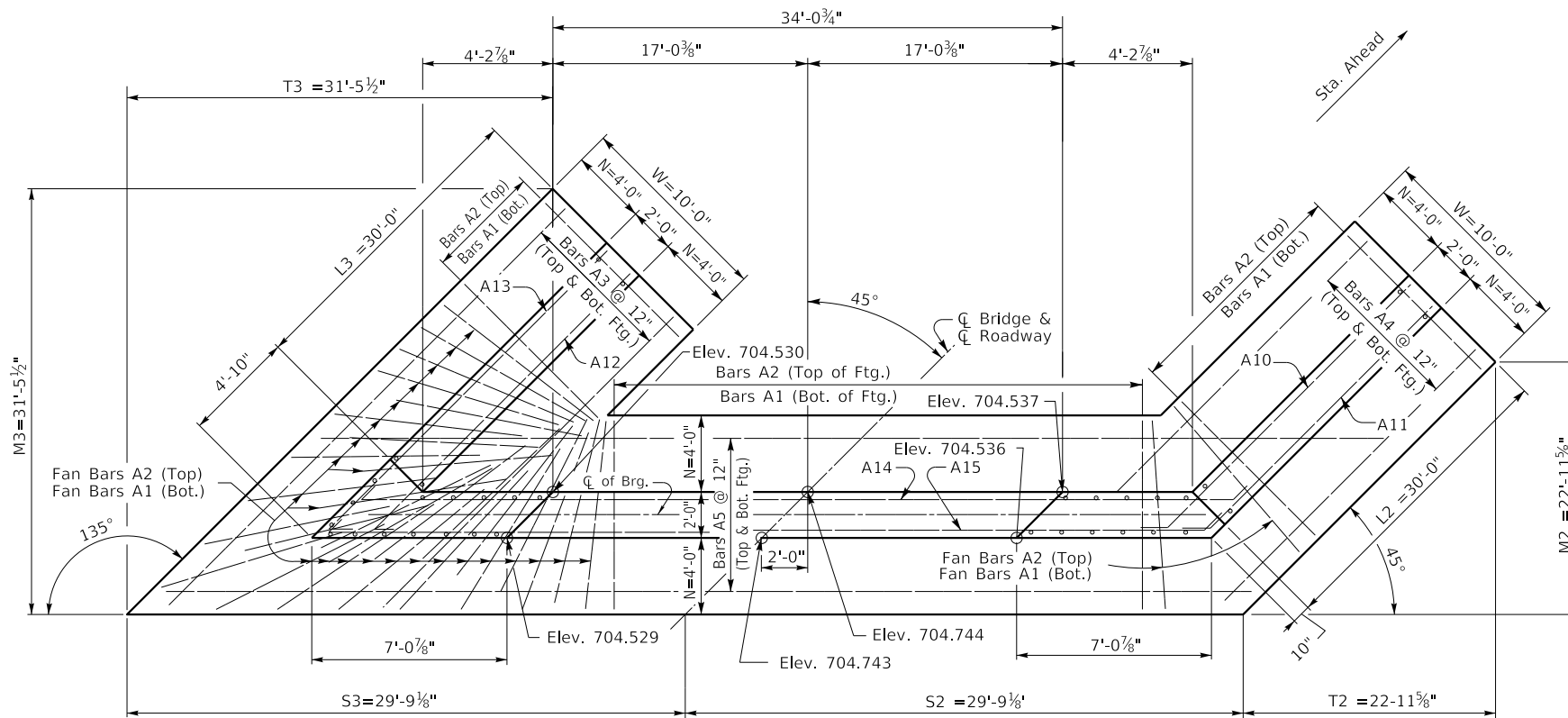
**WING SECTION**



**ELEVATION**



**RUSTICATION GROOVE**



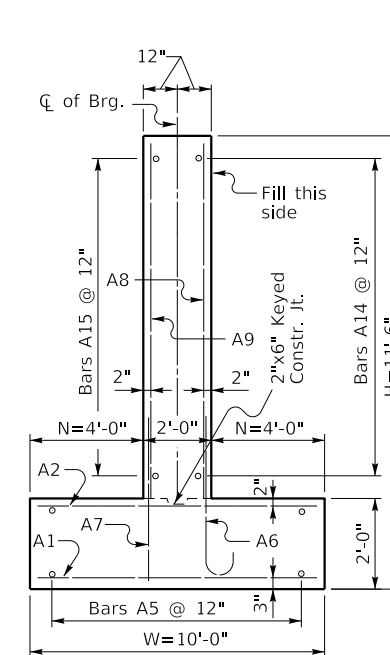
**PLAN**

(Left Skew as shown; right skew opp. hand)  
~Right Wing~

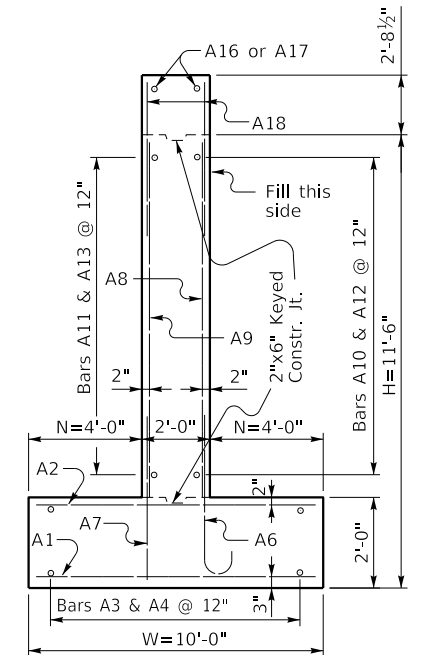
NOTE: Trim A16 & A17 bars if necessary  
Trim A3 bars as necessary

~Left Wing~

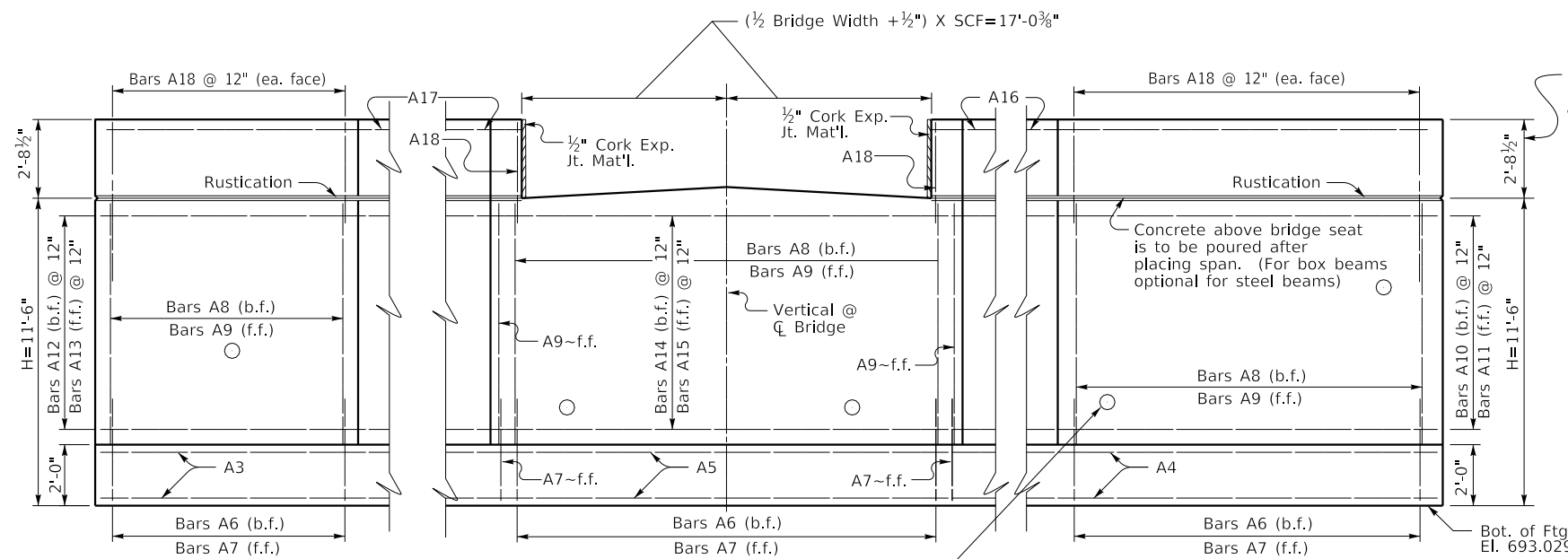
For fanning A1 & A2 bars with an acute angle, space @ 12" at face of toe, then as you get closer to the corner start pulling every other bar back toward the heel. (Similar to as shown)



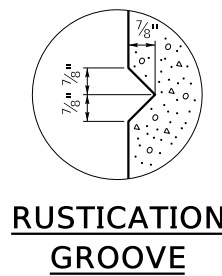
**WALL SECTION**



**WING SECTION**



**ELEVATION**



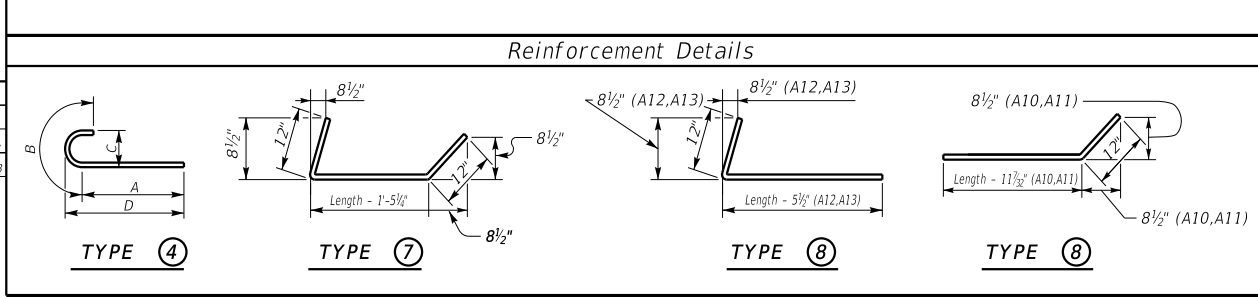
**RUSTICATION GROOVE**

Depth of int. beam, bearing pad, haunch, and slab when req.

Place 4" weep hole drains at 8'-0" centers at such elevation as to afford best drainage of backfill, in accordance with the Standard Specifications.

Bill of Reinforcement																																																																										
MARK	A1		A2		A3	A4	A5		A6				A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18																																																		
TYPE	Str.		Str.		Str.	Str.	Str.		4				Str.	Str.	Str.	8	8	8	8	7	7	Str.	Str.	Str.																																																		
SIZE	#5		#5		#5	#5	#5		#5				#5	#5	#5	#5	#5	#5	#5	#5	#5	#5	#5	#5																																																		
H	No.	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length																																																		
11-12	104+Nb=138	8	9	8	12	104+Nb=138	6	9	8	12	20	43	7	20	32	7	20	24	2	+Lb=58	2	69+Nb=103	7	7	1	12	5	10	1/2	1	2	0	7	6	2	80+Nb=114	5	4	11	12	69+Nb=103	5	8	10	12	80+Nb=114	8	10	12	10	33	0	10	35	0	10	15	0	+Lb=49	0	10	15	0	+Lb=49	0	2	37	10	2	41	10	156	5	9

Table of Dimensions																																
H	W	N	M2	M3	T2	T3	L2	L3	S2		S3		Length																			
ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.																	
11-12	10	0	4	0	22	11	3/8	31	5	1/2	22	11	3/8	31	5	1/2	30	30	12	9	1/2	+0.5Lb=	29	9	1/8	12	9	1/2	+0.5Lb=	29	9	1/8



Quantities			
H	Concrete*	Reinforcement	
	C.Y.	LBS.	
12	122.51+(1.49xLb) = 173.1	11902+(120.4xLb) = 15988	

\*Concrete quantities computed using 21" beam depth on 1/2" pad & Variable Bridge Width

ABUTMENT SKEW CORRECTION FACTOR (SCF) = 1.414

NUMBER OF BARS TO ADD (Nb) = Bridge Width (feet) x SCF = 33.936 (round up to nearest whole number)

LENGTH OF ABUTMENT TO ADD (Lb) = Bridge Width (feet) x SCF = 33.936 (convert decimal to architectural)

## GENERAL NOTES

**SPECIFICATIONS:** Construct abutments according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Abutments are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. Dimensions may be adjusted to allow for any out to out bridge width. Abutments are also adequate for Std. Dwg. slabs or steel beam superstructures.

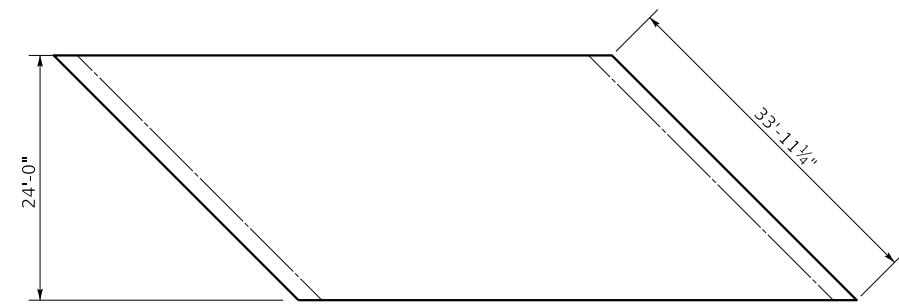
**FOUNDATION PRESSURE:** Construct abutment footings on solid rock bearing material that can support a pressure of 8000 psf service or 10,800 psf strength factored as recommended by a geotechnical engineer.

**WING LENGTHS:** Calculated assuming 21" superstructure depth and stream bank elevation at top of footing.

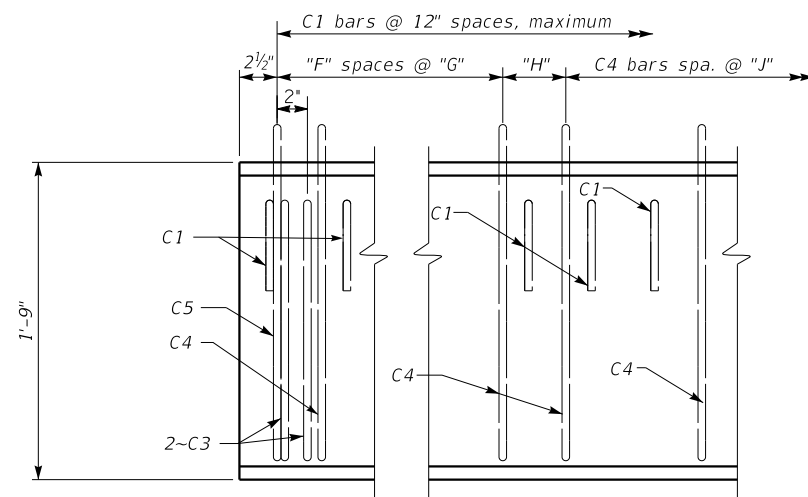
**FOOTING ELEVATION:** Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces, as recommended by geotechnical engineer.)

**NOTE:** Distances to bars shown are clear dimensions unless otherwise noted.

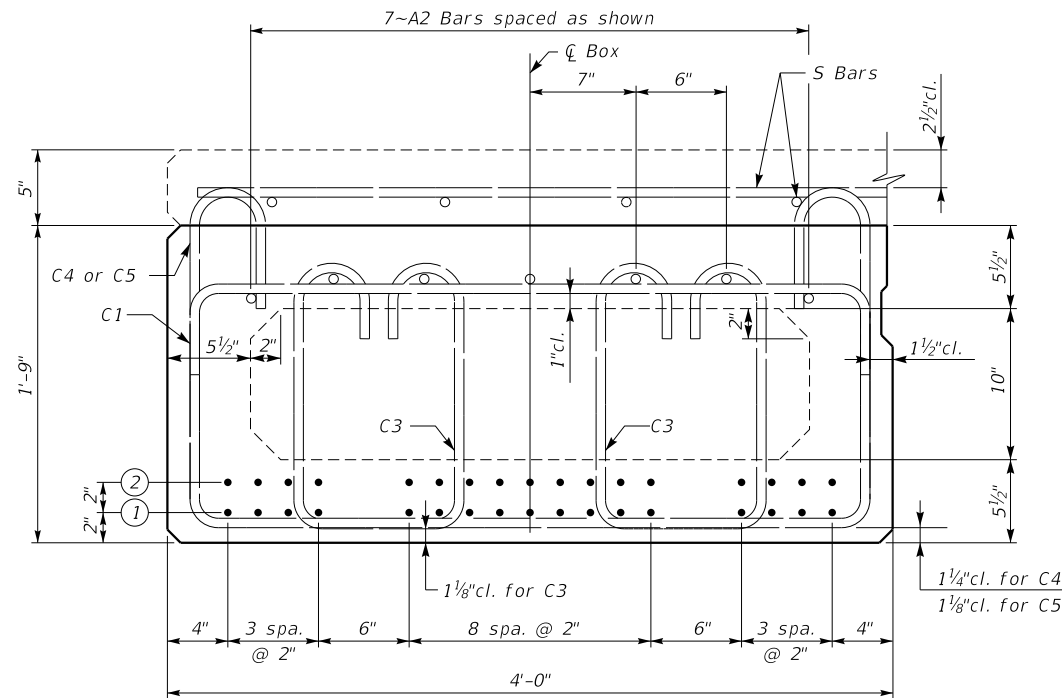
**MATERIAL SPECIFICATIONS:**  
 Concrete, Class "A" = 3500 psi  
 Steel Reinforcement = Grade 60



**PLAN OF SUPERSTRUCTURE SLAB**



**CB21 ELEVATION OF 0° SKEW**  
(Refer to BDP-003,c.e. for skewed details)



**CB21 BEAM**

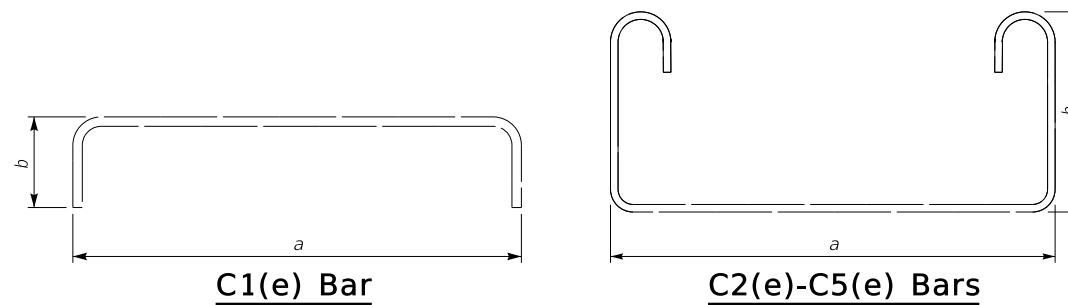


TABLE OF STRAND DATA			
Beam Type	Beam Length (feet)	Number of Strands Required	
		Row ①	Row ②
CB21	62.5	14	17

TABLE OF DIMENSION DATA					
Beam Type	Beam Length (feet)	"F"	"G"	"H"	"J"
CB21	62.5	9	8"	12 1/2"	16"

TABLE OF BAR QUANTITIES						
Beam Type	Beam Length (feet)	C1	C2	C3	C4	C5
CB21	62.5	63		8	55	2

DESIGN DATA							
Beam Type	Beam Length (feet)	DC kips	DW kips	LL kips	LL+I kips	Δd (in.)	Δc (in.)
CB21	62.5	28.3	1.8	50.3	61.7	0.5	1.7

Straight Reinforcement			
Mark	Size	Length	
A2(E)	#4	Beam Length Minus 3"	
D(E)	#8	2'-0"	
Bent Reinforcement			
Mark	Size	a	b
C1(e)	#5	3'-9"	6"
C3(e)	#5	11 3/8"	1'-5 3/8"
C4(e)	#4	3'-9"	1'-10 1/4"
C5(e)	#5	3'-9"	1'-10 3/8"





BILL OF REINFORCEMENT					
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION
s1e	Str.	63	5	33'- 7"	Slab
s2e	Str.	48	5	32'- 10"	Slab

### MASTIC TAPE APPLICATION

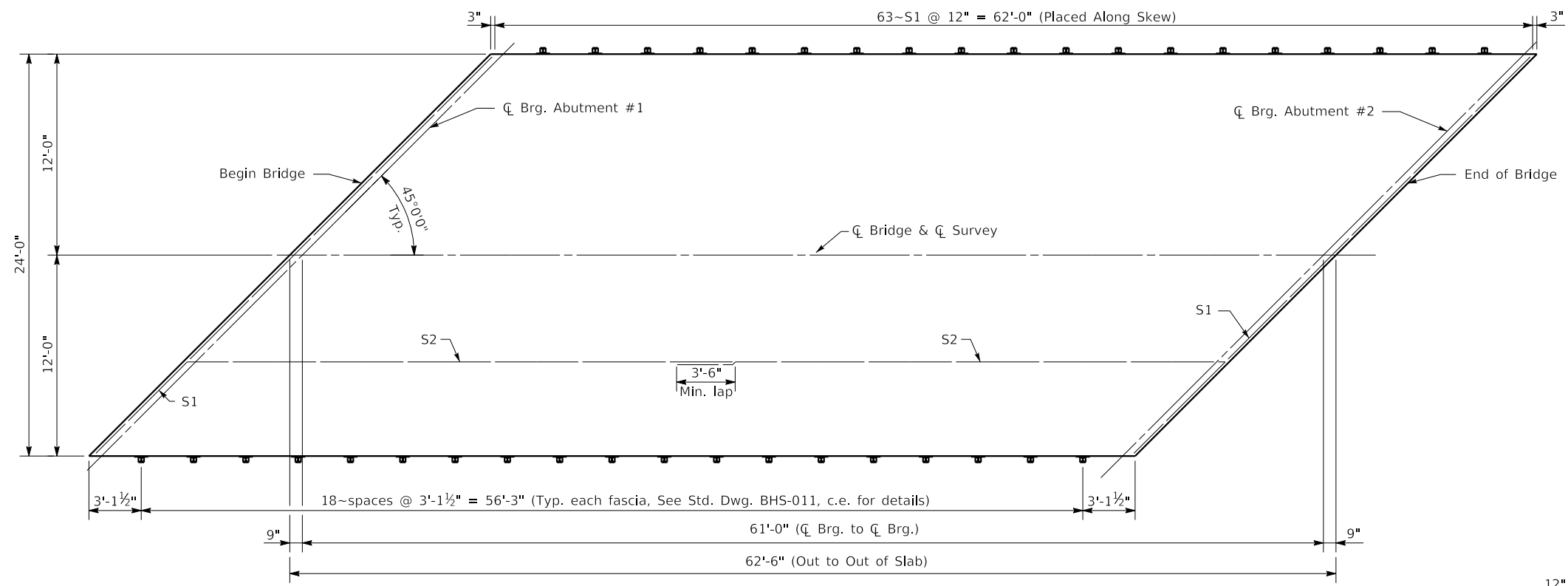
Note: The contractor shall provide 12" wide mastic tape to waterproof the joint between the breastwall and the diaphragm at each abutment.

At expansion abutments, the tape shall be applied with a kink to allow for movement without damage to the tape. All costs associated with the mastic tape (labor, materials, etc.) shall be incidental to the cost of class "AA" concrete.

Mastic Tape shall be either:  
 EZ-WRAP RUBBER by PRESS-SEAL GASKET CORPORATION,  
 SEAL WRAP by MAR MAC MANUFACTURING CO. INC.,  
 CADILLOC by the UP RUBBER CO. INC.  
 or approved equal.

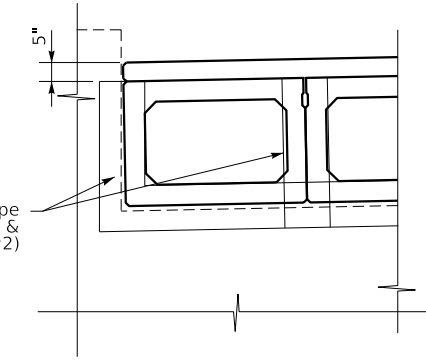
Mastic Tape shall cover the joint continuously unless otherwise shown in the plans. Mastic Tape shall be spliced by lapping a minimum of six inches and in accordance with the mfgs. recommendations with the overlap running downhill.

Approximately a total of 100 feet of 12" mastic tape will be required. (50ft at Abutment #1 and 50ft at Abutment #2)



**PLAN OF SLAB**

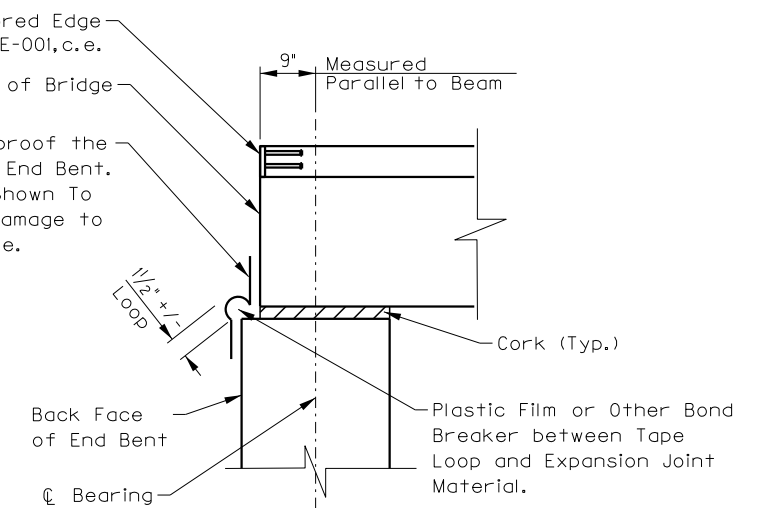
NOTE: S2 ~2 Lengths, 3'-6" Min. Lap



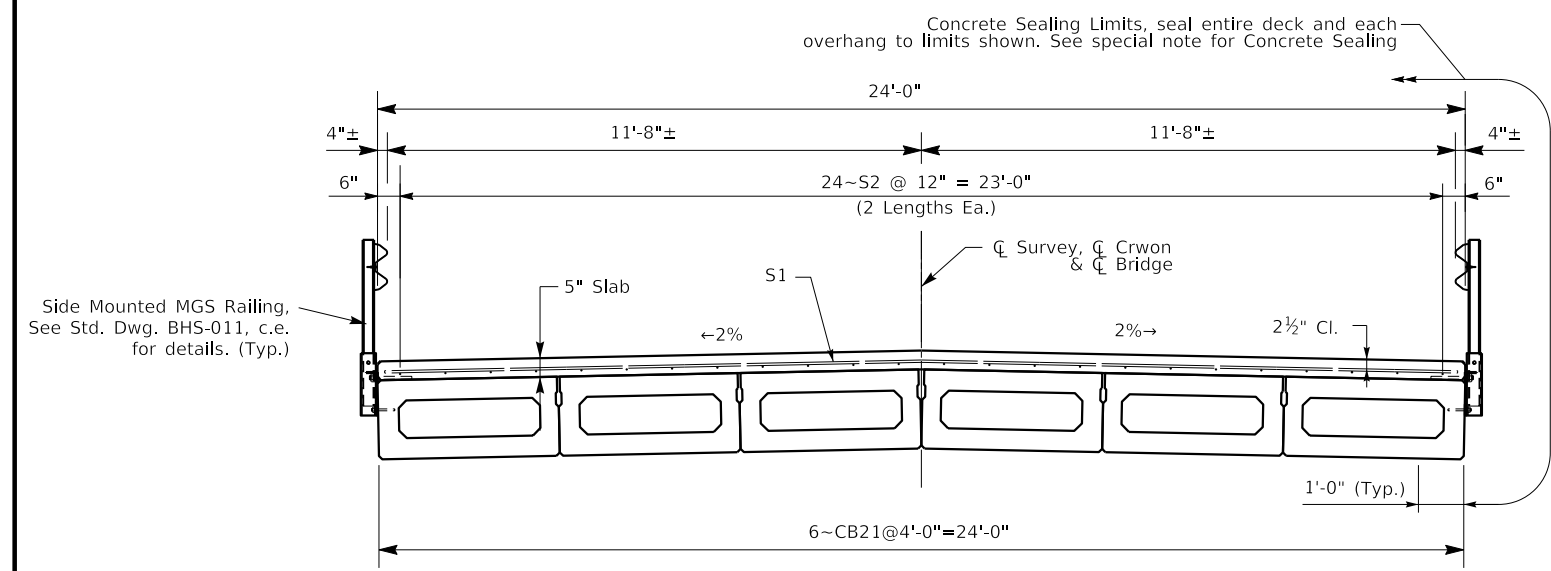
**END OF BEAM ELEVATION**

Armored Edge  
 See Std. Dwg. BJE-001, c.e.  
 Begin Bridge or End of Bridge

12" Wide Mastic Tape To Waterproof the Joint Between Beam Ends and End Bent. The Tape Shall Be Looped As Shown To Allow for Movement without Damage to the Tape. See the BGX-022, c.e.



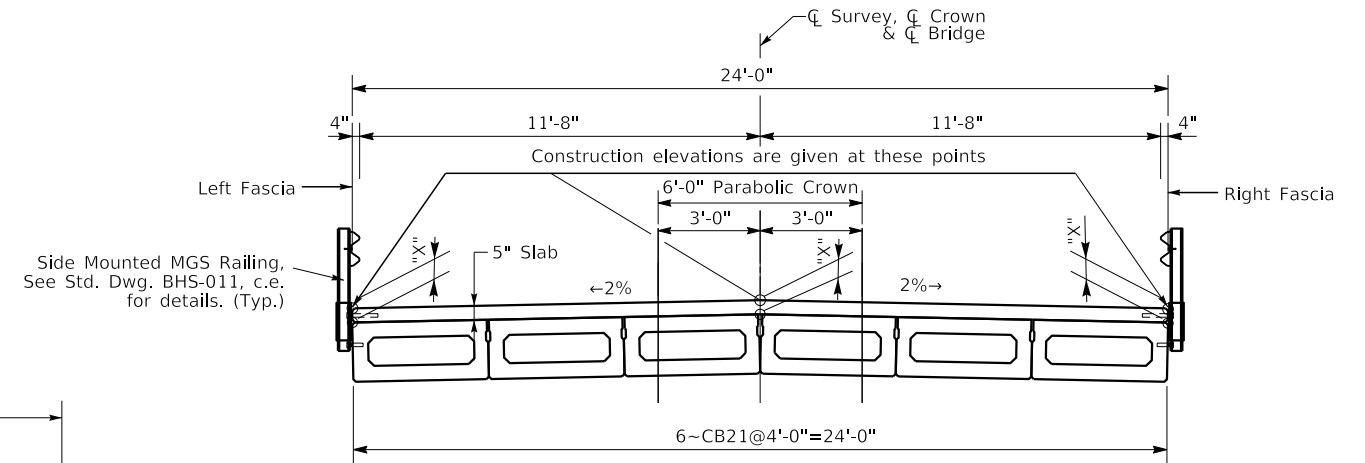
**JOINT WATERPROOFING DETAIL**



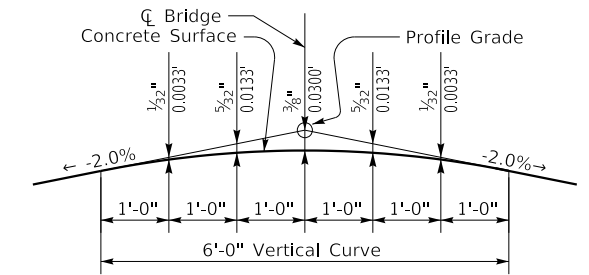
**TYPICAL SECTION**

# CONSTRUCTION ELEVATIONS

LOCATION	LEFT FASCIA			CL BRIDGE			RIGHT FASCIA		
	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"	CONSTR. ELEV.	TOP OF BEAM	DIM. "X"
SKEW LN AA	706.849			707.007			706.720		
SKEW LN BB	706.852			707.011			706.726		
SKEW LN CC	706.747			707.026			706.861		
SKEW LN DD	706.742			707.022			706.859		
GRID LN 01	-----			-----			706.783		
GRID LN 02	-----			707.029			706.842		
GRID LN 03	-----			707.078			706.885		
GRID LN 04	706.884			707.114			706.911		
GRID LN 05	706.911			707.133			706.921		
GRID LN 06	706.923			707.135			706.913		
GRID LN 07	706.917			707.120			706.890		
GRID LN 08	706.895			707.088			-----		
GRID LN 09	706.856			707.042			-----		
GRID LN 10	706.801			-----			-----		



**TYPICAL SECTION**



**PARABOLIC CROWN**

**NOTES FOR ELEVATIONS TAKEN ON PRESTRESSED CONCRETE BOX BEAMS**

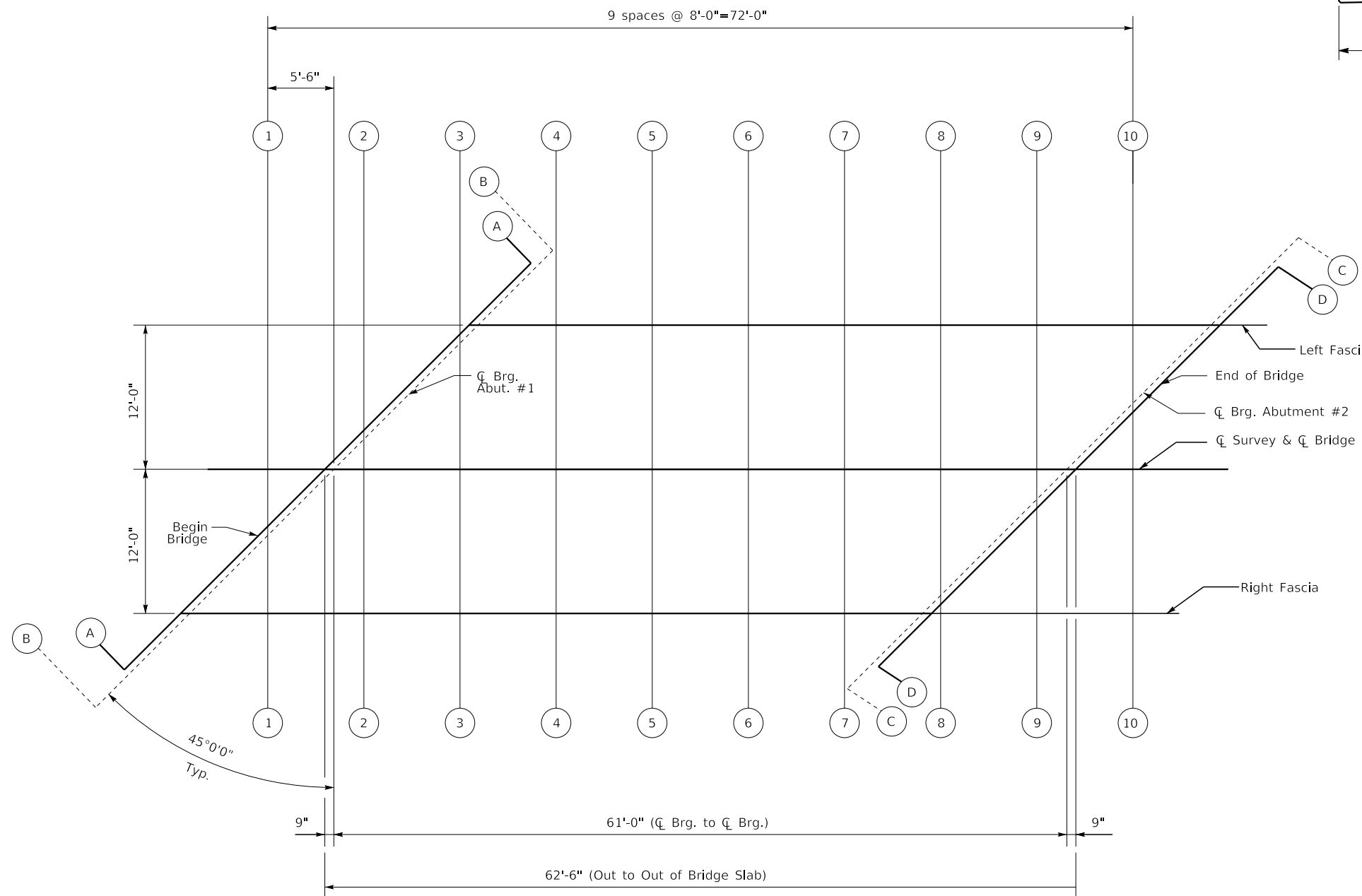
Take elevations on top of beam at points indicated after the beams have been laterally tensioned and grouted. The beam elevations are to be read to three decimal places and entered in tables under "Top of Beam" elevations.

Compute dimension "X" as follows: "Construction Elevation" minus "Top of Beam" elevation equals dimension "X". Construction Elevations include camber due to weight of the concrete slab and barrier. Measuring of dimension "X" gives the final check on beam tolerances for camber, beam damage, and errors in erection that produce reverse cambers, sags, and unsightly fascia beams.

The minimum allowable dimension "X" or slab thickness is 5" (0.417'). The maximum allowable dimension "X" or slab thickness is 5.60" (0.467'). If any computed dimension "X" is outside the limits, adjustments, need to be made to the dimensions "X" on one or more grid lines at the discretion of the Engineer.

For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevations.

Temporary supports or shoring will not be permitted under the girders when pouring the concrete floor slab or when taking "Top of Beam" elevations.



**GRID LAYOUT**

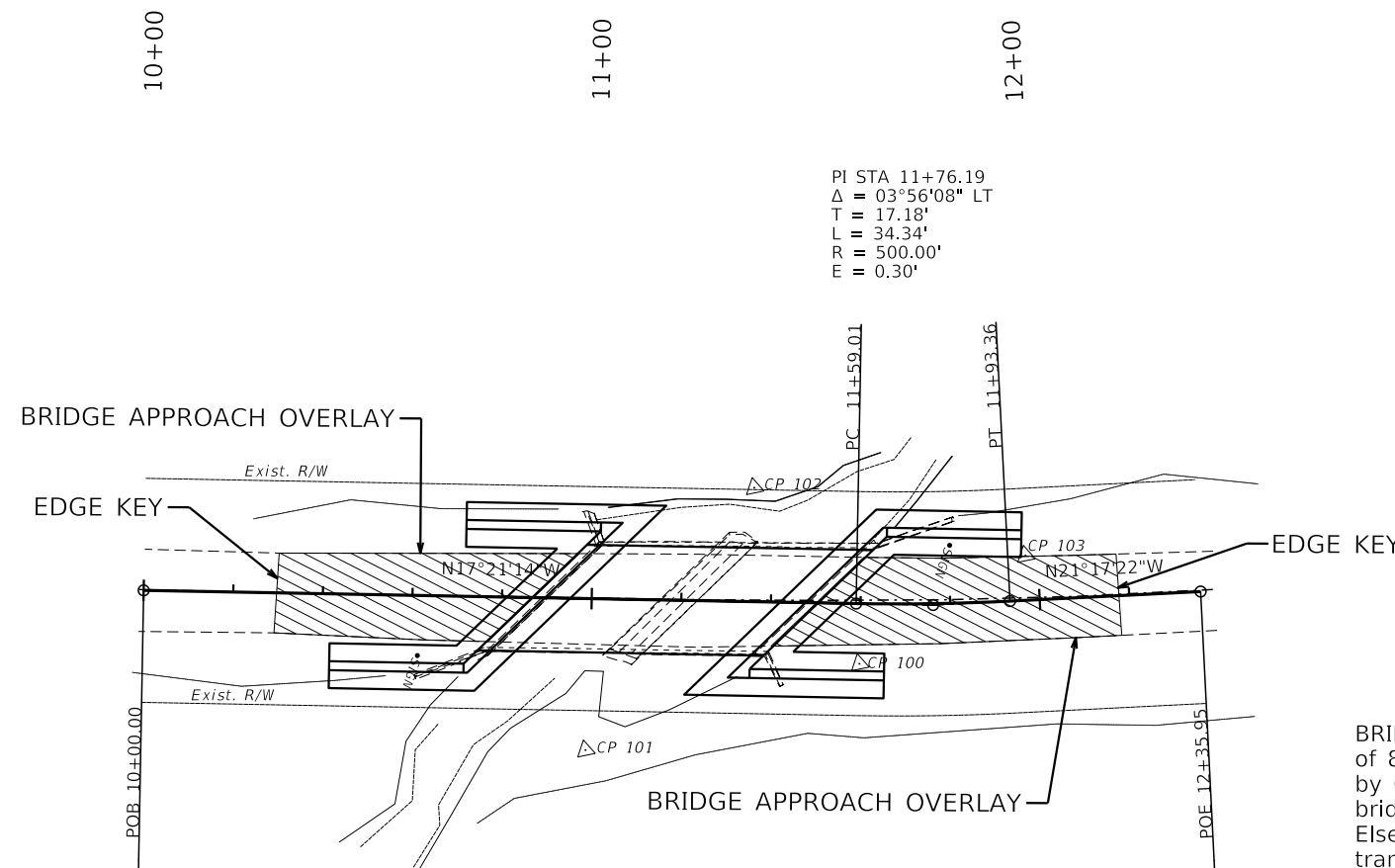
### GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
2014	BARRICADE-TYPE III	EACH	2
2159	TEMP DITCH ①	LF	118
2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	100
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	4
2399	EXTRA LENGTH GUARDRAIL POST	EACH	20
2569	DEMOBILIZATION	LS	1
2575	DITCHING AND SHOULDERING	LF	300
2585	EDGE KEY	LF	36
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2697	EDGELINE RUMBLE STRIPS	LF	243
2701	TEMPORARY SILT FENCE ①	LF	118
2703	SILT TRAP TYPE A ①	EACH	1
2704	SILT TRAP TYPE B ①	EACH	1
2705	SILT TRAP TYPE C ①	EACH	1
2706	CLEAN SILT TRAP TYPE A ①	EACH	1
2707	CLEAN SILT TRAP TYPE B ①	EACH	1
2707	CLEAN SILT TRAP TYPE C ①	EACH	1
2726	STAKING	LS	1
2731	REMOVE STRUCTURE	LS	1
3304	BRIDGE OVERLAY APPROACH PAVEMENT	SO YD	263
5952	TEMP MULCH ①	SO YD	480
5953	TEMP SEEDING AND PROTECTION ①	SO YD	360
5963	INITIAL FERTILIZER ①	TON	0.1
5964	MAINTENANCE FERTILIZER ①	TON	0.1
5985	SEEDING AND PROTECTION ①	SO YD	420
6514	PAVE STRIPING-PERM PAINT-4 IN (YELLOW)	LF	436

① ITEMS REQUIRED FOR EROSION CONTROL. WHILE ALL OF THE ITEMS MIGHT NOT BE USED ON EACH PROJECT, IT IS THE INTENT OF THE DESIGN ENGINEER TO PROVIDE THE RESIDENT ENGINEER AND THE CONTRACTOR FLEXIBILITY IN CHOOSING EROSION DEVICES AND/OR METHODS TO CREATE THE BMP.

CENTERLINE CONTROL POINTS			
POINT	State Plane Coordinates		
	NORTH (Y)	EAST (X)	STATION
POB	3893744.51	5138560.18	10+00.00
PC	3893896.29	5138512.75	11+59.01
PI	3893912.68	5138501.63	11+76.19
PT	3893928.69	5138501.39	11+93.36
POE	3893968.38	5138485.93	12+35.95

COORDINATE CONTROL POINTS				
POINT	Project Coordinates			STATION and OFFSET
	NORTH (Y)	EAST (X)	ELEV. (Z)	
CP 100	3893901.23	5138525.28	705.68	11+59.96, 13.44 Right
CP 101	3893849.32	5138562.86	698.62	10+99.23, 33.82 Right
CP 102	3893866.55	5138495.41	698.17	11+35.80, 25.42 Left
CP 103	3893928.75	5138490.64	706.17	11+97.32, 9.99 Left



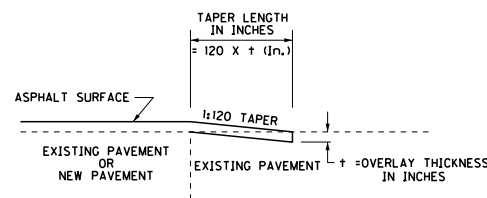
**BRIDGE OVERLAY APPROACH PAVEMENT:** The contractor shall provide a minimum of 8" DGA, 2-4" lifts of asphalt base, and 1.5" asphalt surface with tack as required by Current Specifications where full depth pavement is required near ends of bridge.

Elsewhere, the contractor shall provide surface as necessary to provide a smooth transition from end of bridge to existing pavement. Pavement limits are shown in the plans however, pavement work and limits are at the direction of the Engineer.

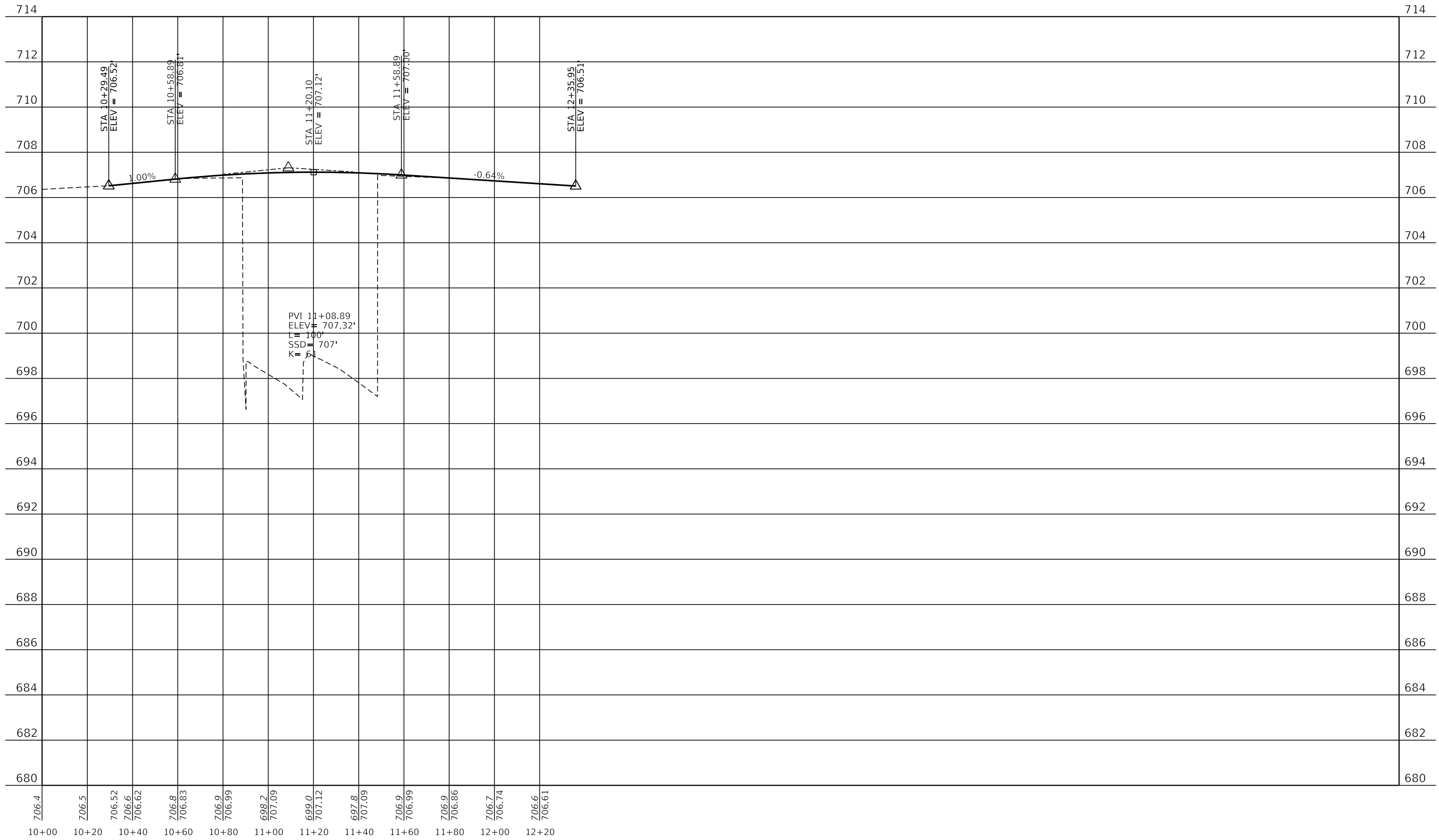
**ON-SITE INSPECTION:** Each contractor submitting a bid for this work shall make a thorough inspection of the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions so that work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department of Highways.

**UTILITIES:** The contractor shall be responsible for calling 811 (BUD) and/or all local utility companies as required for utility locating services prior to beginning work. The state shall not be liable for any utilities damaged during work.

**MAINTENANCE OF TRAFFIC:** The contractor shall be responsible for all maintenance and control of traffic in accordance with Section 112 of the Specifications.



EDGE KEY DETAIL



REVISION	DATE

DATE: January 2023	CHECKED BY:
DESIGNED BY:	
DETAILED BY:	

ROUTE KY 395	ITEM NO. 7-0000	COUNTY OF ANDERSON
	SHEET NO. S12	DRAWING NUMBER 28845