

BM #11 Chiseled "L" on top Northeast corner
of concrete guardrail at Northeast corner of
I-470 Bridge spanning View High Drive.
Elev. = 833.80

Notice and Disclaimer Regarding Boring Log Data

"" Indicates location of borings.

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the Engineer for the design of the bridge, are shown on Sheet(s) No. (---) No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the Engineer or elsewhere.

The Engineer does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this bridge. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here, or on any other documentation not expressly warranted, which the contractor may obtain from the Engineer.

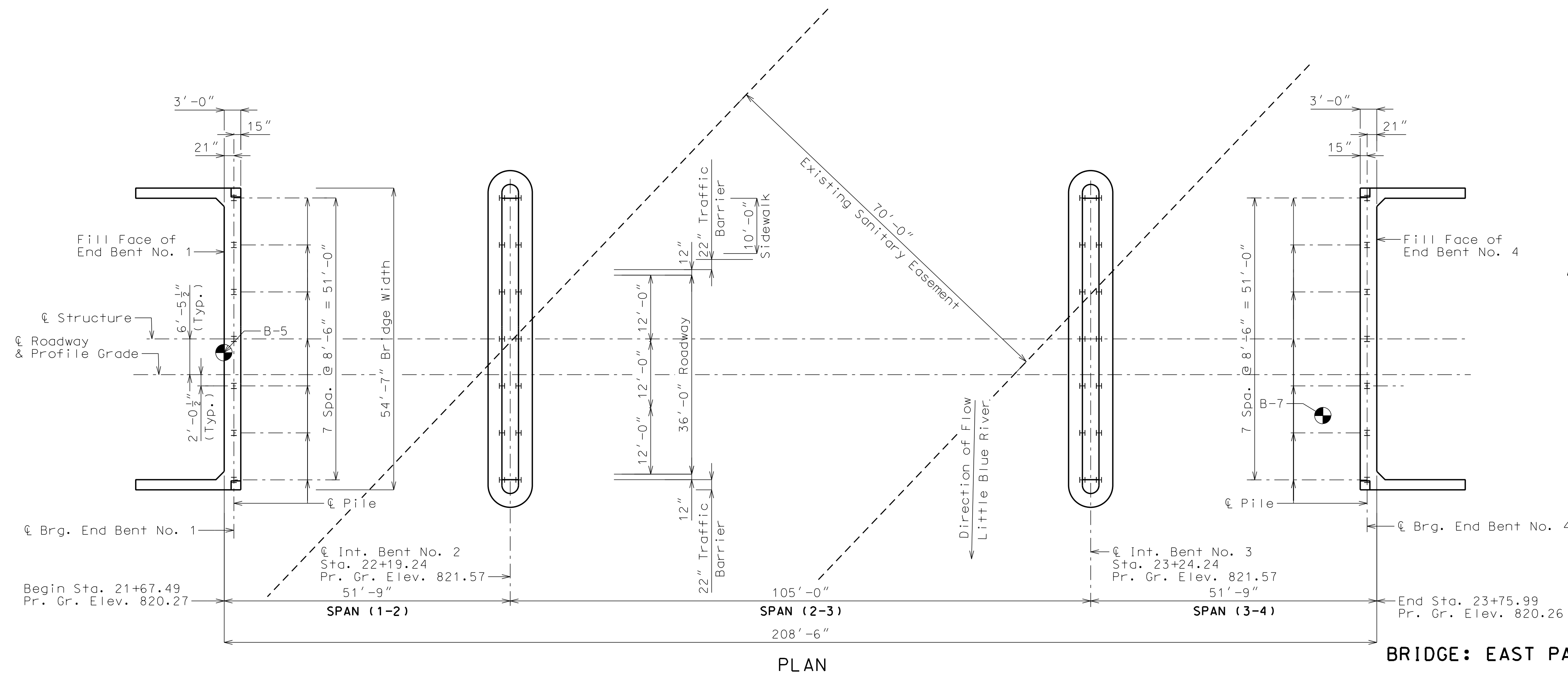
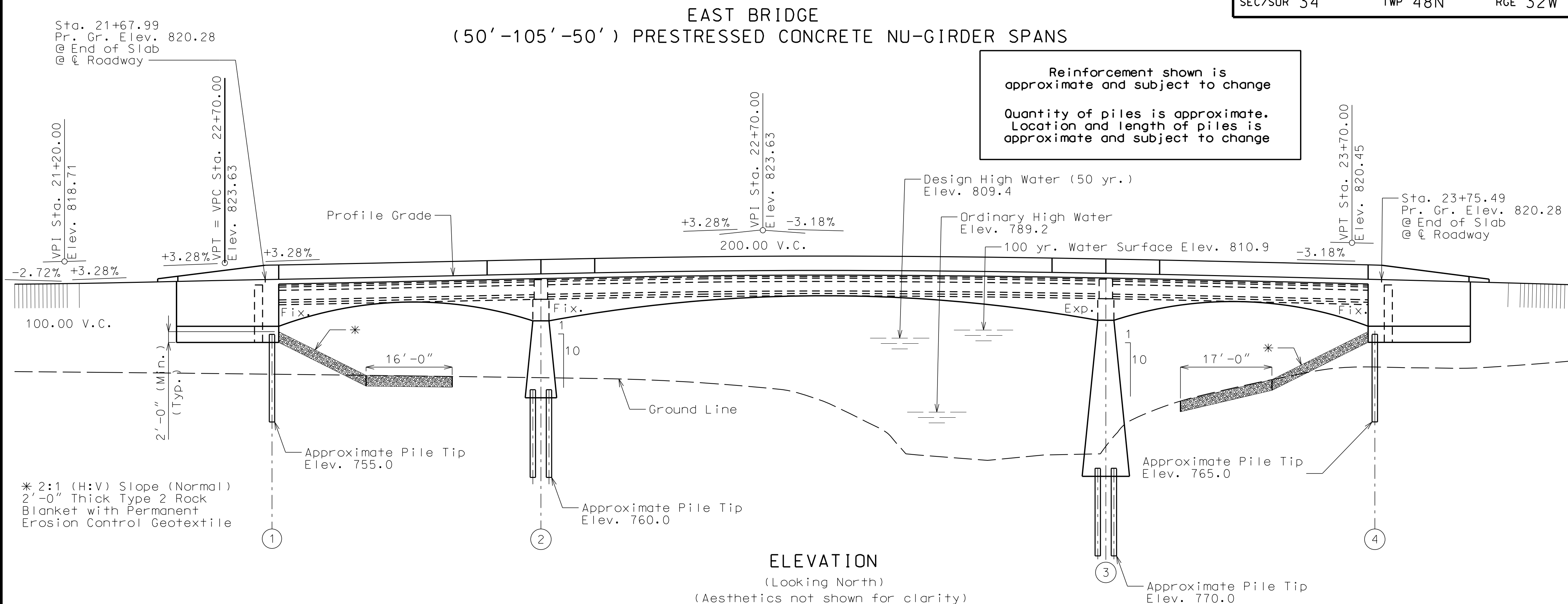
Hydrologic Data
Drainage Area = 56.8 (sq. mi.) Design Flood Frequency = 50 years Design Flood Discharge = 4,794 cfs Design Flood (D.F.) Elevation = 809.4
Base Flood (100-year)
Base Flood Elevation = 810.9 Base Flood Discharge = 5,636 cfs Estimated Backwater = 0.1 ft Average Velocity thru Opening = 2.4 ft/s
Freeboard (50-year)
Design Hg Water = 809.4 Freeboard = 2.6 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A Overtopping Flood Frequency N/A years Flood Elevation = N/A

Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

All bents are parallel.

All longitudinal dimensions shown are horizontal.



Note: This drawing is not to scale. Follow dimensions.

"PRELIMINARY PLANS NOT APPROVED FOR CONSTRUCTION."	<div><div>GBA</div><div>architects engineers</div><div>9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com</div></div>	DATE: 10-11-19	
		DESIGN BY: JJM	
		DRAWN BY: DWM	
		PROJECT NO.: 12720	
		SHEET NO.	TOTAL SHEETS
		2	33
JOSHUA J. MILLER PROFESSIONAL ENGINEER PE-2009010386	Bridge Plans Paragon Star Development Kansas City, Missouri		
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General Notes:

Design Specifications:
2012 AASHTO LRFD Bridge Design Specifications (6th Ed.) and 2013 Interim Revisions.
Seismic Design Category = A
All referenced specifications shall refer to Missouri Standard Specifications for Highway Construction

Design Loading:
Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf

Design Unit Stresses:
Class B Concrete (Substructure) f'c = 3,000 psi
Class B-1 Concrete (Barrier Curb) f'c = 4,000 psi
Class B-2 Concrete (Superstructure except Barrier Curb) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S) fy = 50,000 psi
For Precast Prestressed Panel Stresses, see Sheet No. ___.
For Prestressed Girder Stresses, See Sheets No. __ & __.

Neoprene Pads:
Plain and Laminated Neoprene Bearing Pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:
All joint filler shall be in accordance with Section 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Minimum clearance between galvanized piles and uncoated (plain) reinforcing steel including bar supports shall be 1 1/2". Nylon, PVC, or other polyethylene spacers shall be used to maintain clearance. Nylon cable ties shall be used to bind the spacers to the reinforcement.

Traffic Handling:
Structure to be closed during construction. See roadway plans for traffic control.

Miscellaneous:
City Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

- ☐ Constant Joint Filler
- ☐ Variable Joint Filler

FOUNDATION DATA					
TYPE	DESIGN DATA	BENT NUMBER			
		1	2	3	4
Load Bearing Pile	Pile Type and Size	HP12x53	HP12x53	HP12x53	HP12x53
	Number ea	8	--	--	8
	Approximate Length per Each ft	--	--	--	--
	Pile Point Reinforcement ea	--	--	--	--
	Min. Galvanized Penetration (Elev.) ft	--	--	--	--
	Minimum Nominal Axial Compressive Resistance kip	--	--	--	--

DT = Dynamic Testing

Minimum Nominal Axial Compressive Resistance = Maximum Factored Loads/Resistance Factor

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702.

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviations in penetration less than 5 feet of the minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.

GENERAL NOTES AND QUANTITIES

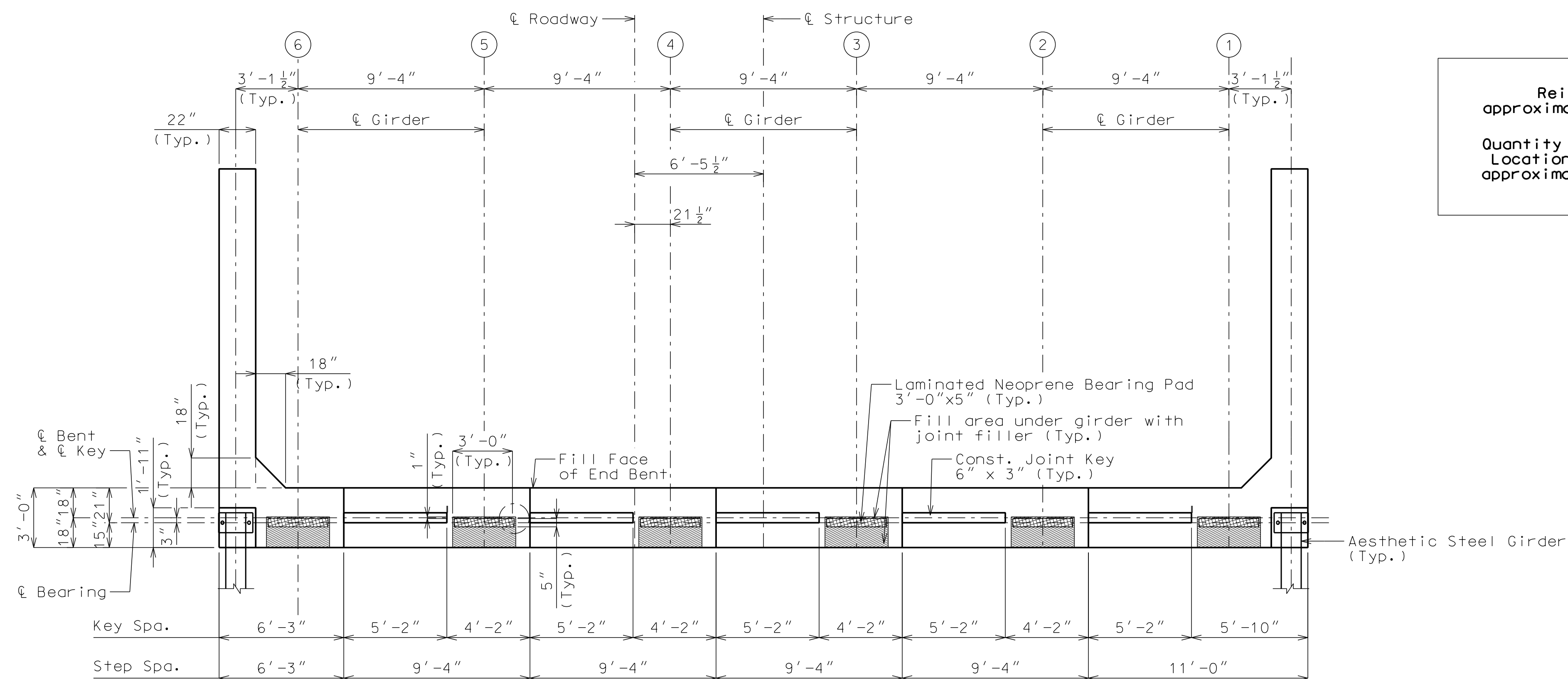
Note: This drawing is not to scale. Follow dimensions.

Reinforcement quantity provided is based on ----lbs/cy of concrete.

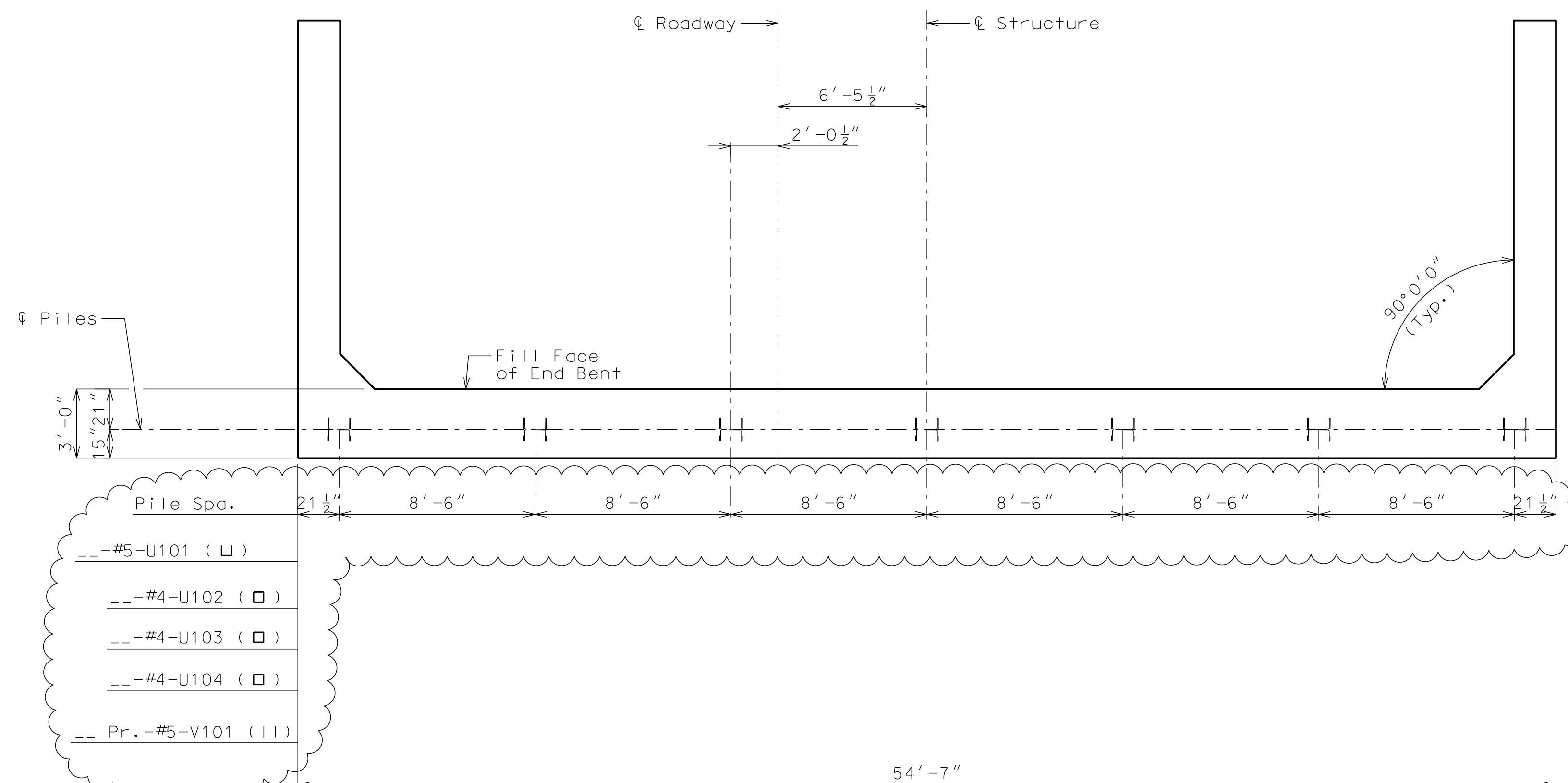
Estimated Quantities		
Item		Total
Class B-2 Concrete (Superstructure Concrete on NU-Girder)	cu. yard	--
Reinforcing Steel (Epoxy Coated)	pound	--

The table of Estimated Quantities represents the quantities used by the Engineer in preparing the cost estimate. Payment for the Bridge will be considered completely covered by the contract Lump sum price. Variations may be encountered in the estimated quantities but the variations cannot be used for adjustment in the contract Lump sum price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II, or III.



PLAN OF BEAM



PLAN OF BEAM SHOWING REINFORCEMENT
(Note: Steps and keys not shown for clarity)

DETAILS OF END BENT NO. 1

Note: This drawing is not to scale. Follow dimensions.

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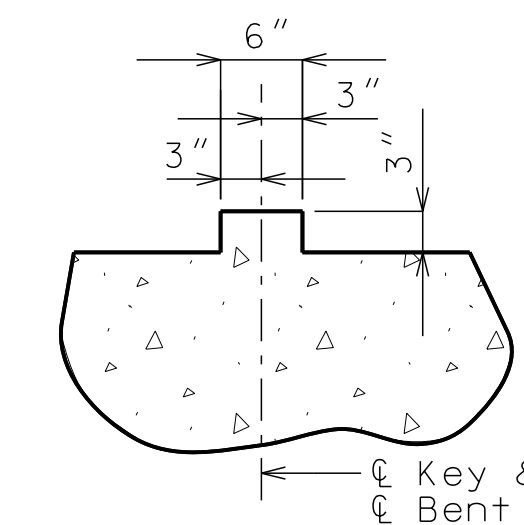
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PROJECT NO.: 12720	
SHEET NO.	TOTAL SHEETS

3 | 33

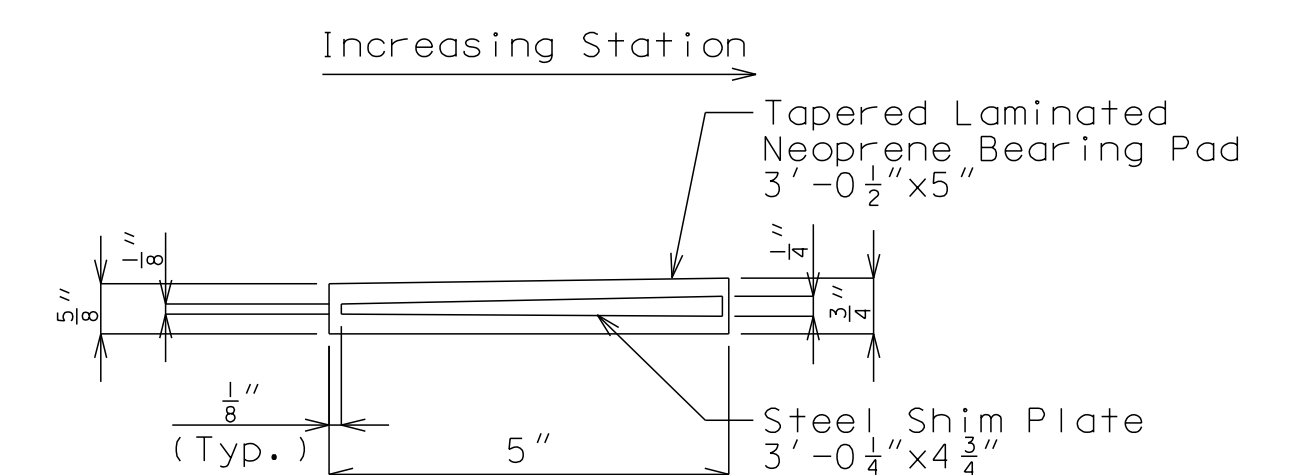
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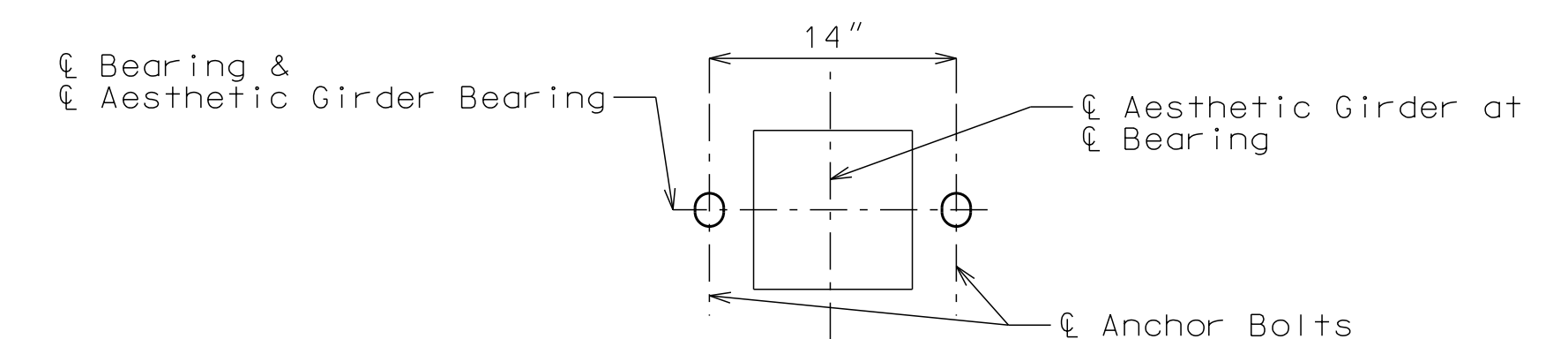
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SECTION THRU KEY



BEARING PAD DETAIL



ANCHOR BOLT DETAIL

Notes:

For details of End Bent No. 1 not shown, see Sheets No. _ & _.

For details of Vertical Drain at End Bents, see Sheet No. __.

Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least $1\frac{1}{2}"$.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For reinforcement of Barrier Curb (Type D), see Sheets No. __ & __.

The U-bars and Pairs-V bars shall be placed parallel to C Roadway.

For Substructure Quantity Table, see Sheet No. _.

East Bridge : 60% Plans

Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059

Reinforcement shown is approximate and subject to change

Quantity of piles is approximate. Location and length of piles is approximate and subject to change

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DETAIL A

DETAIL B

PART PLAN

(Note: Steps and keys not shown for clarity)

DETAILS OF END BENT NO. 1

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Notes:

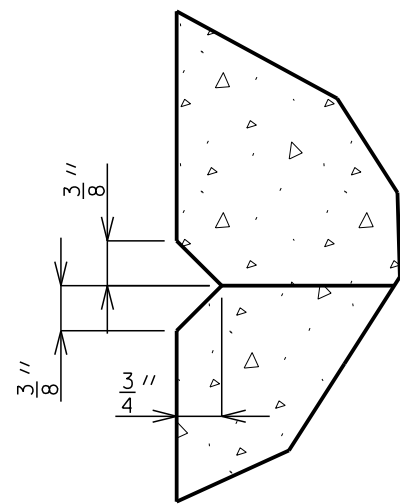
- For details of End Bent No. 1 not shown, see Sheets No. _ & _.
- For details of Vertical Drain at End Bents, see Sheet No. _.
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- All concrete in the end bent above top of beam and below top of slab shall be Class B-2.
- For reinforcement of Barrier Curb, see Sheets No. __ & __.
- The U-bars and Pairs-V bars shall be placed parallel to ℓ Structure.

East Bridge : 60% Plans

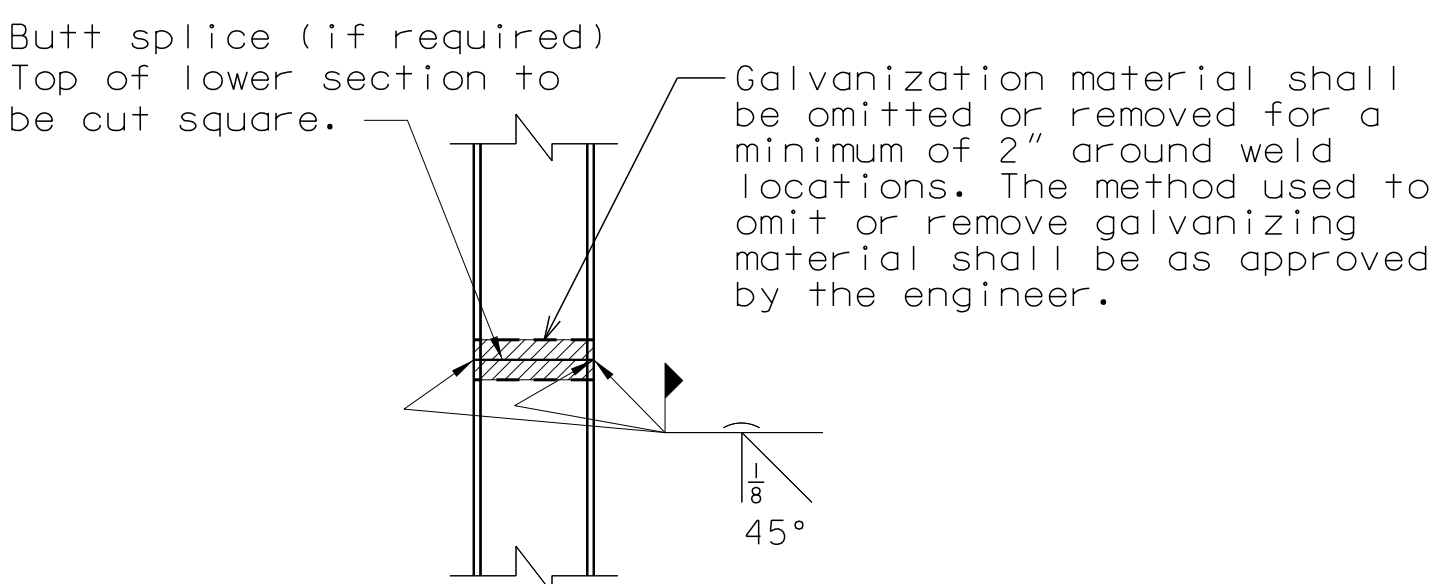
Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059

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Quantity of piles is approximate. Location and length of piles is approximate and subject to change

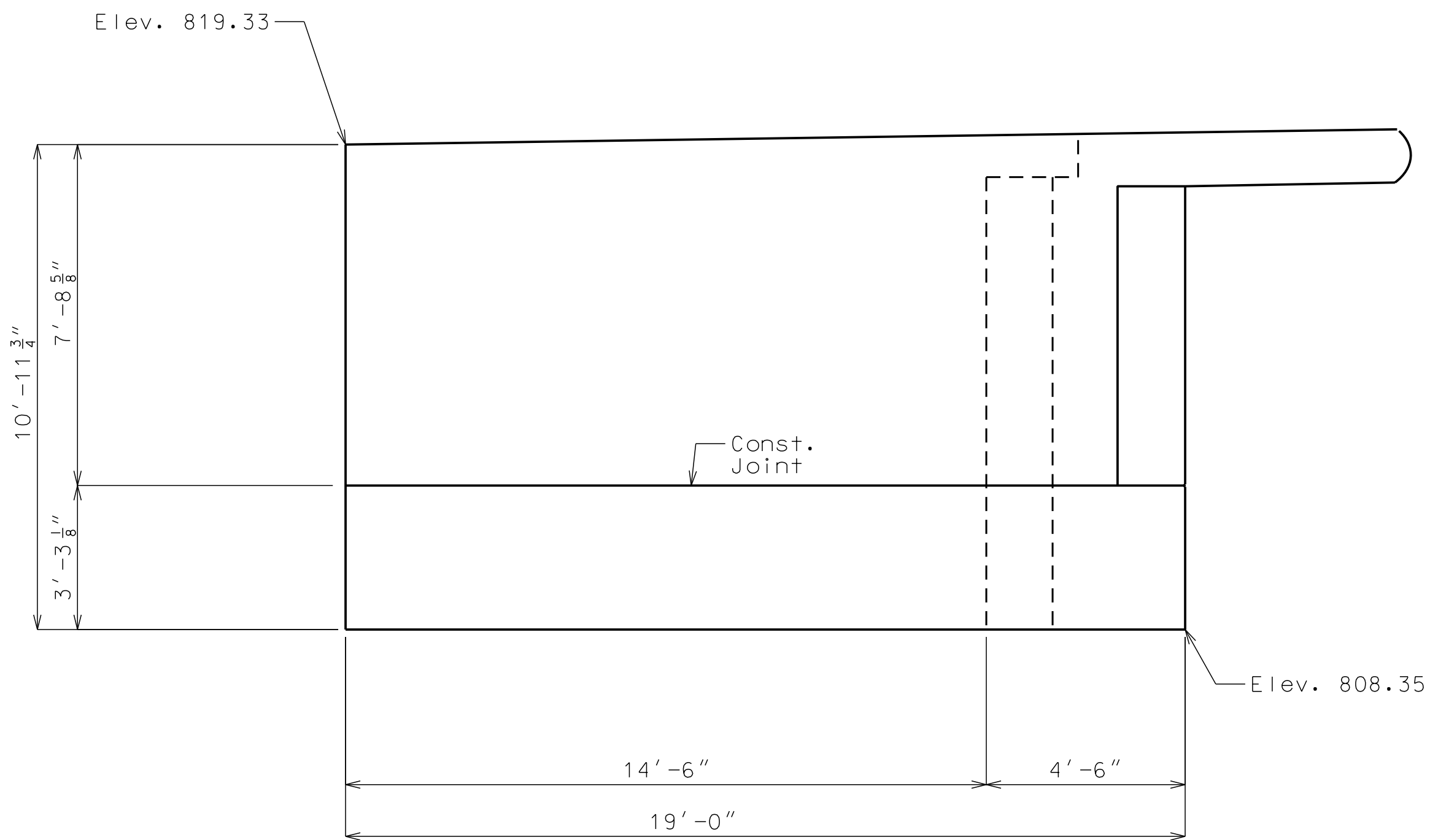


DETAIL G

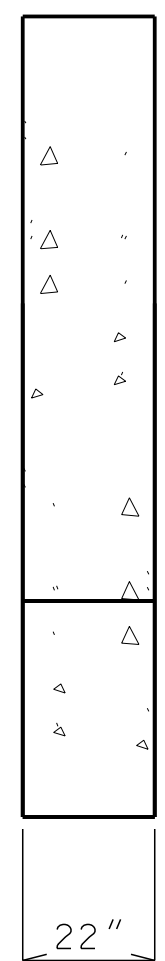


DETAIL OF STEEL PILE SPLICE

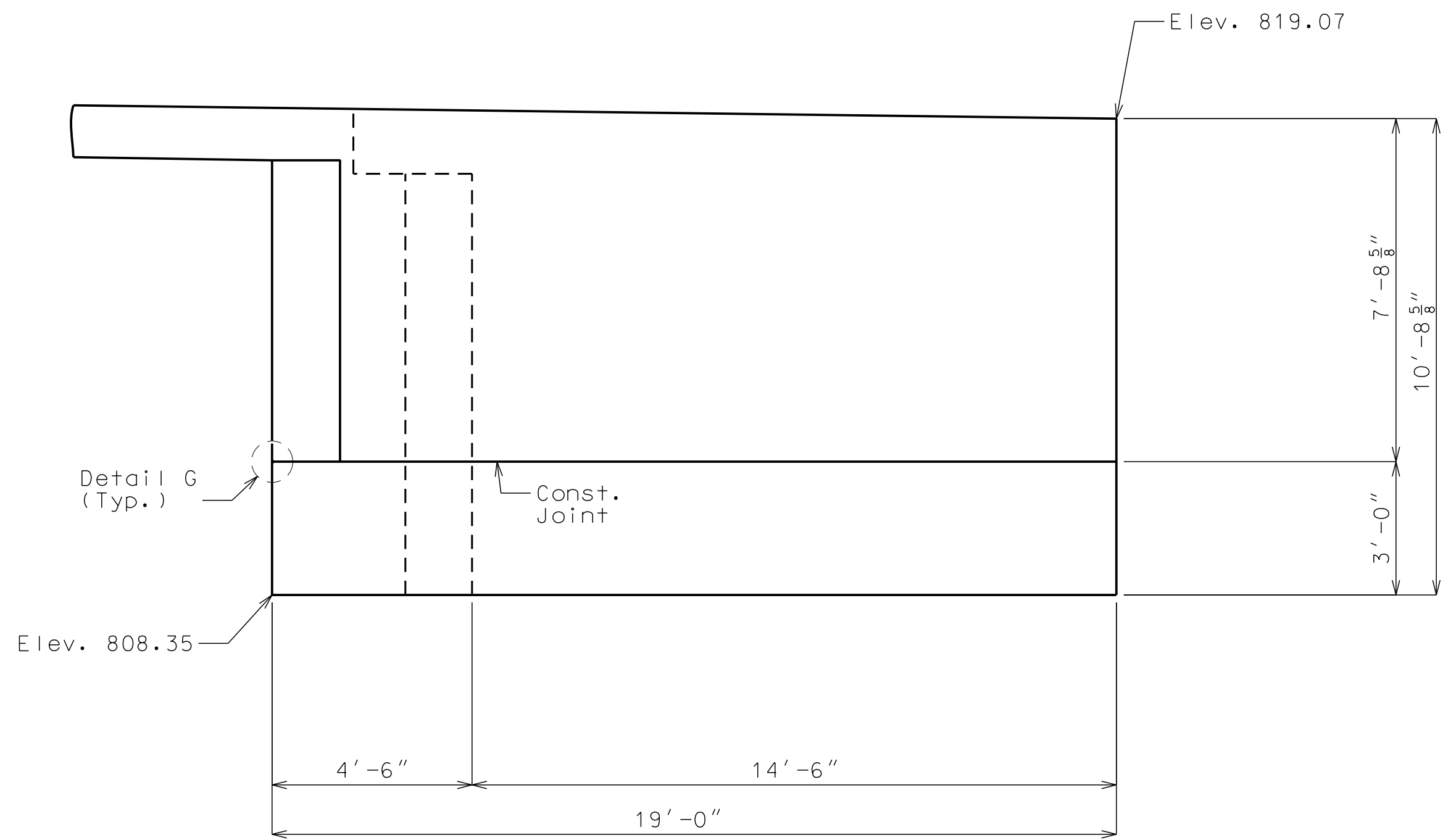
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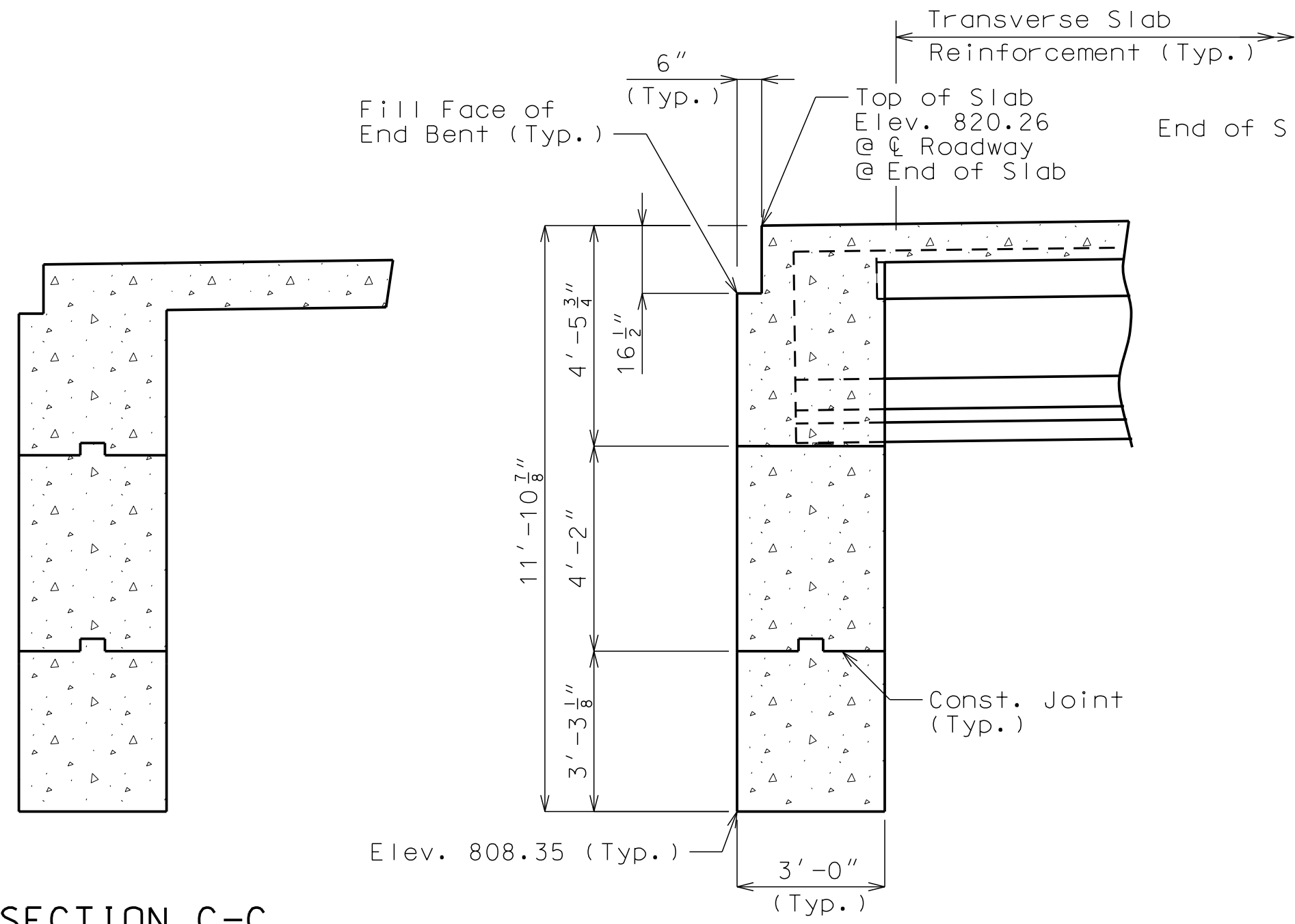
ELEVATION A-A



TYPICAL SECTION THRU WING

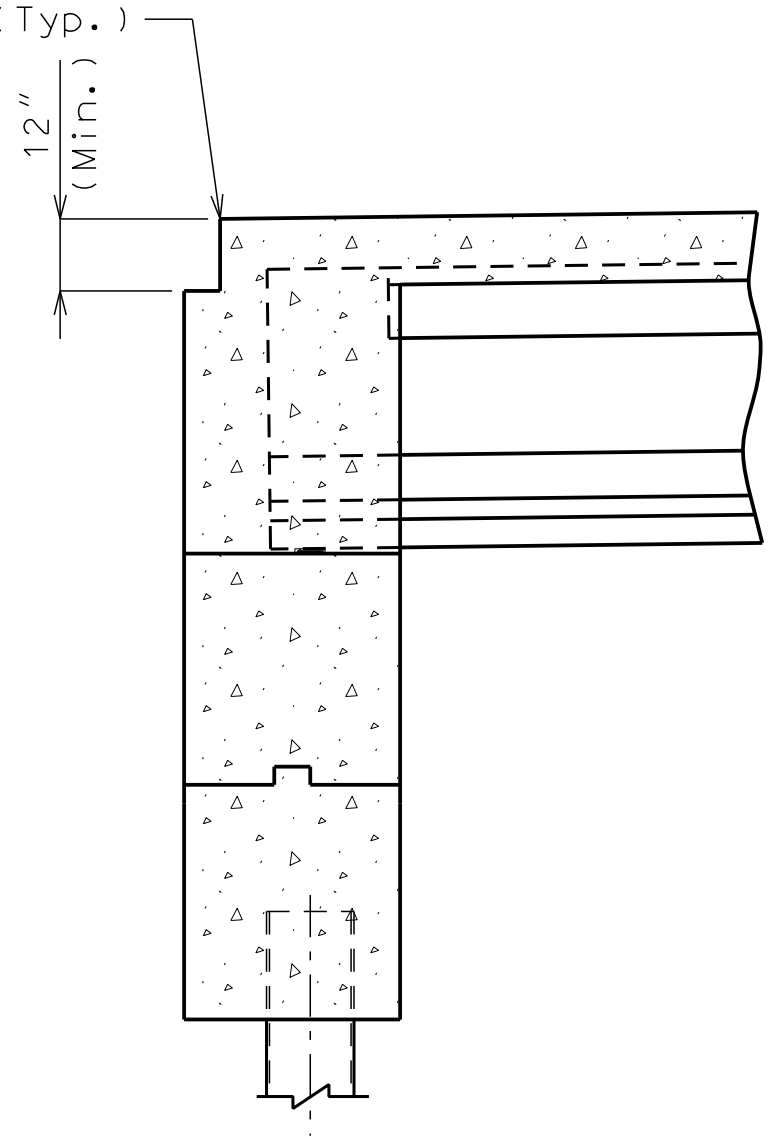


ELEVATION B-B

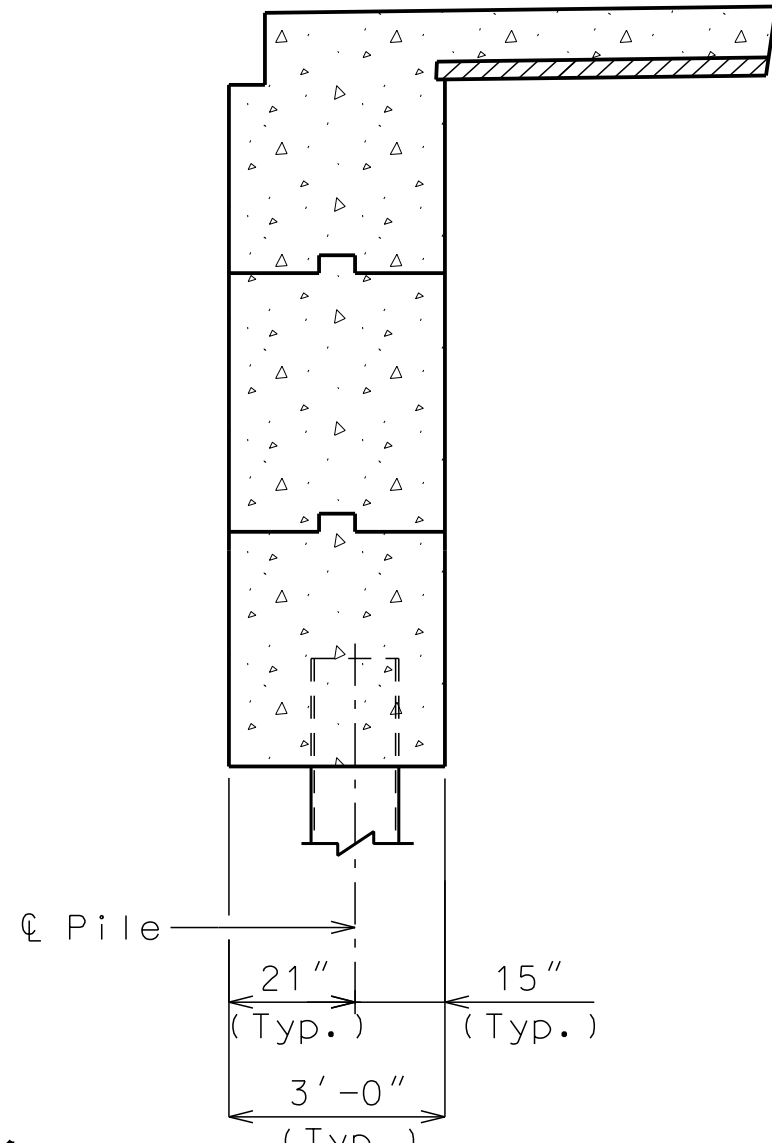


SECTION C-C

SECTION D-D



SECTION E-E



SECTION F-F

DETAILS OF END BENT NO. 1

Note: This drawing is not to scale. Follow dimensions.

Notes:

- For details of End Bent No. 1 not shown, See Sheets No. 4 & 5.
- For location of Elevations A-A & B-B, See Sheet No. 5.
- For location of Sections C-C, D-D, E-E & F-F See Sheet No. 5.
- Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inch.
- For reinforcement of Safety Barrier Curb, See Sheets No. __ & __.
- For reinforcement of Pedestrian Curb, see Sheet No. __.
- HP pile shall be galvanized to the minimum galvanized penetration (elevation) (See Foundation Data).

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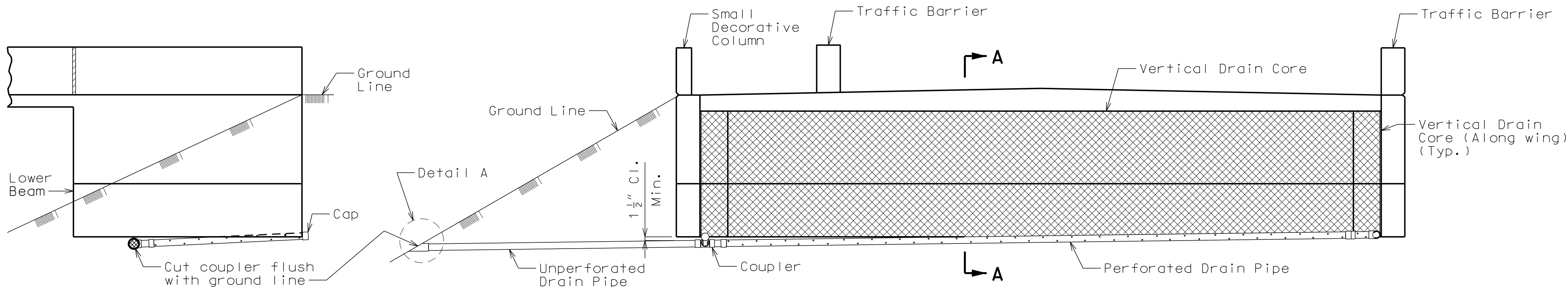
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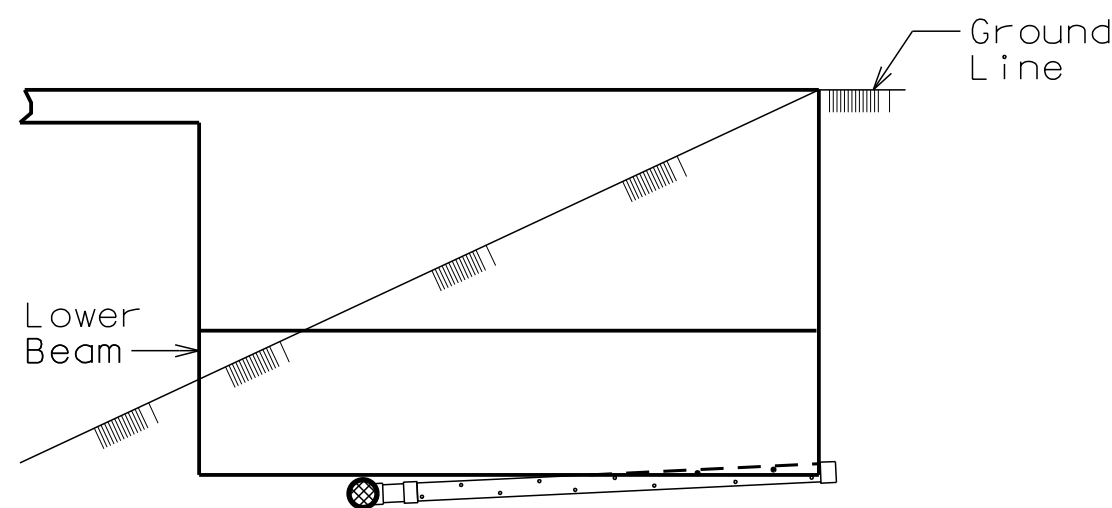
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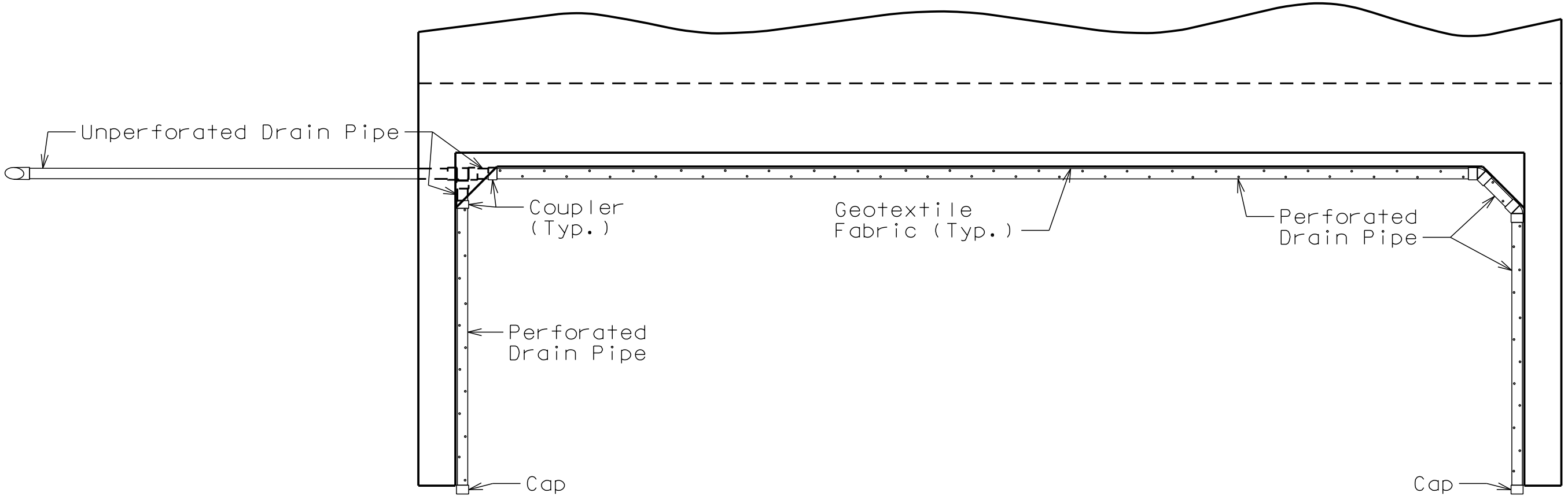


ELEVATION OF SOUTH WING

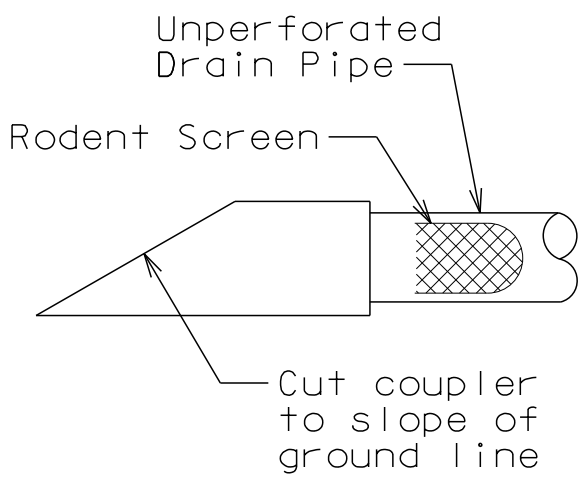
ELEVATION OF END BENT



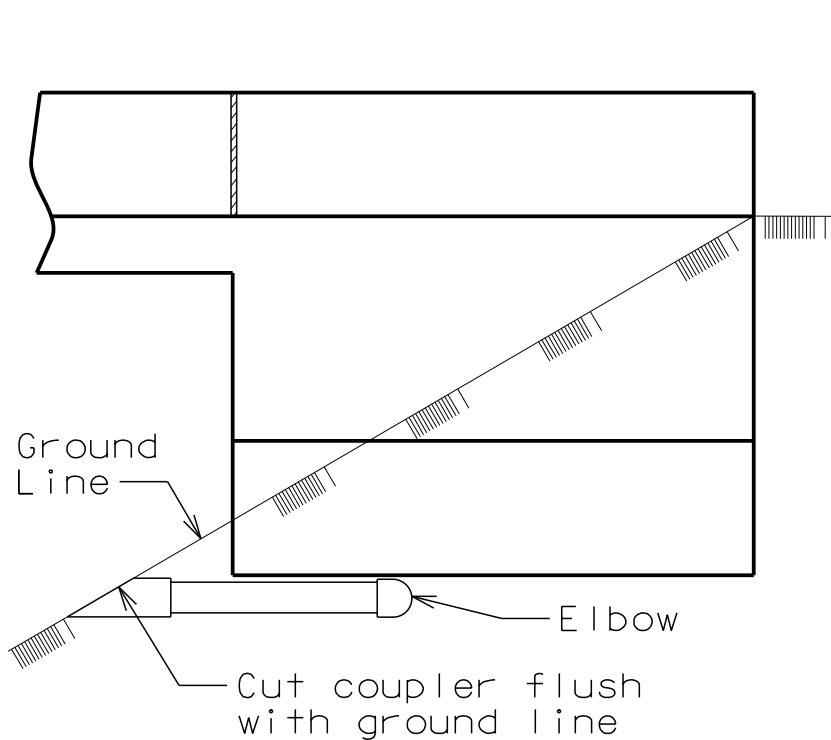
ELEVATION OF NORTH WING



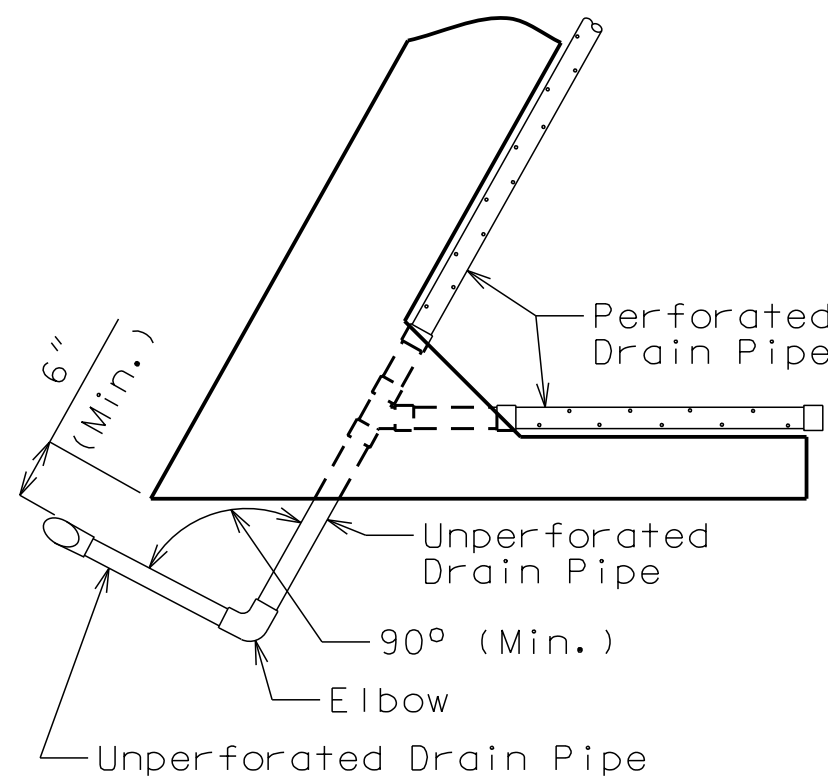
PLAN OF END BENT



DETAIL A



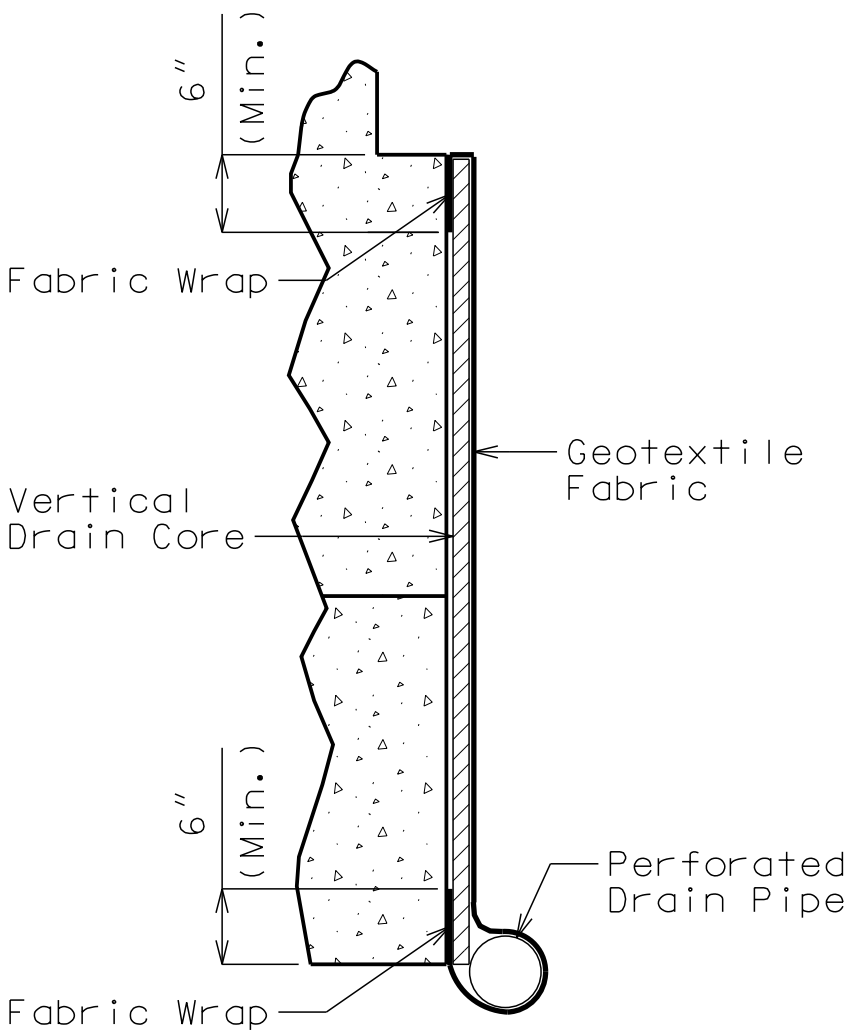
ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN

(Only if rock is encountered outside of wing)



PART SECTION A-A

(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

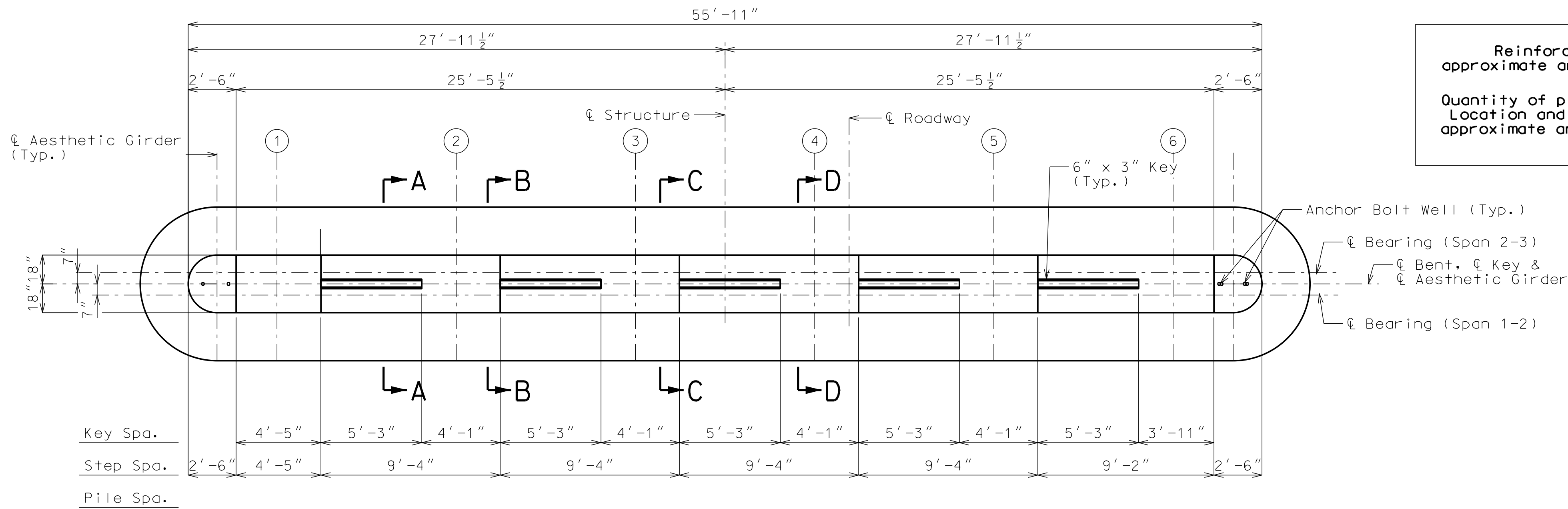
Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

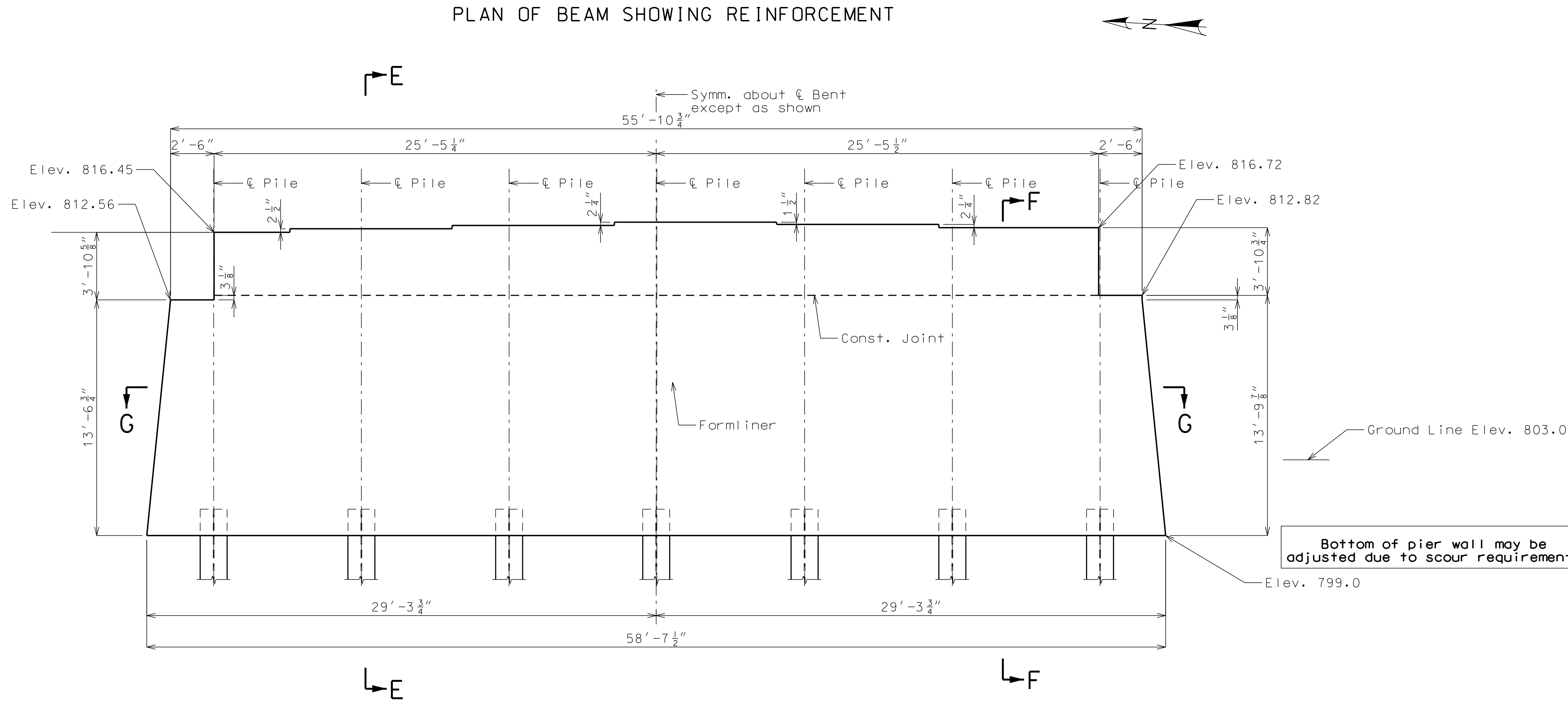
Note: This drawing is not to scale. Follow dimensions.

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Reinforcement shown is approximate and subject to change

Quantity of piles is approximate. Location and length of piles is approximate and subject to change



ELEVATION
DETAILS OF INTERMEDIATE BENT NO. 2

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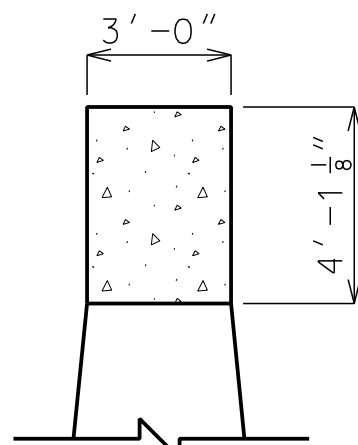
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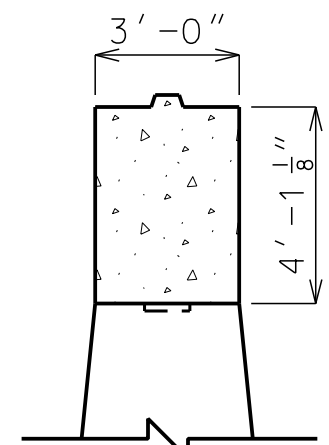
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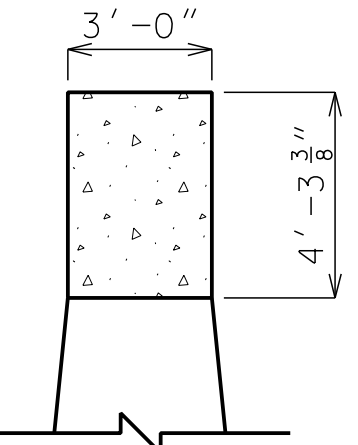
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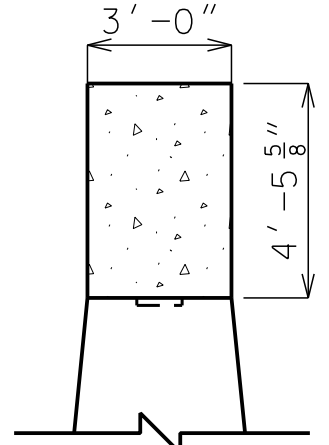
SECTION A-A
(Reinforcement w/o pile and not under a girder)



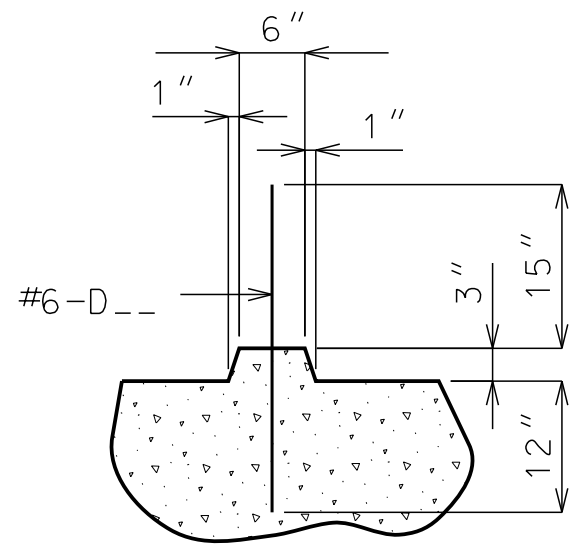
SECTION B-B
(Reinforcement w/o pile and under a girder)



SECTION C-C
(Reinforcement with pile and not under a girder)



SECTION D-D
(Reinforcement with pile and under a girder)



DETAIL OF KEY

Notes:

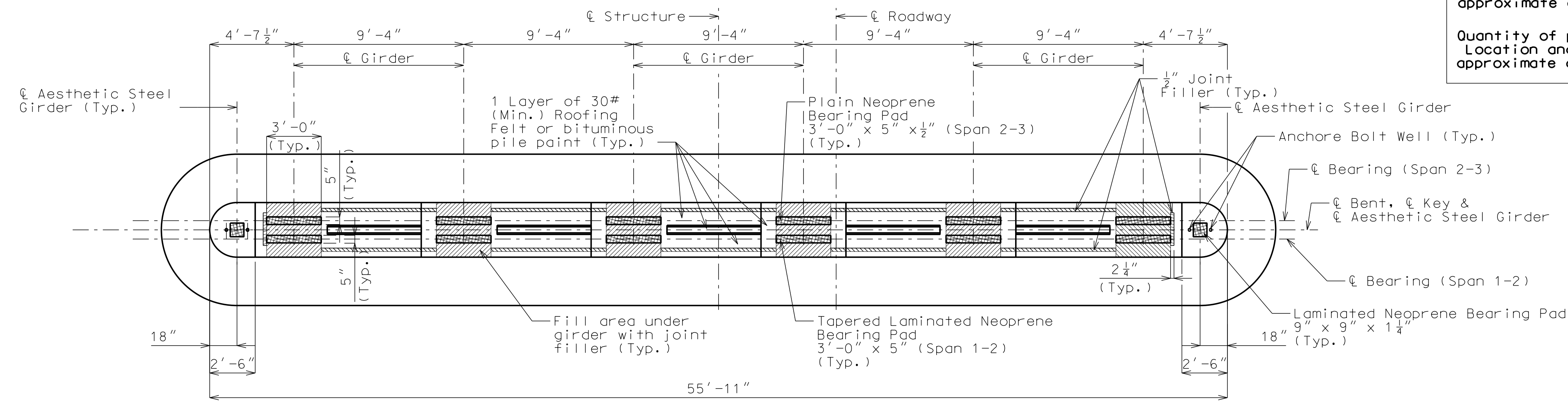
For Sections E-E, F-F & G-G, see Sheet No. ---.

For details of Int. Bent No. 2 not shown, see Sheet No. ---.

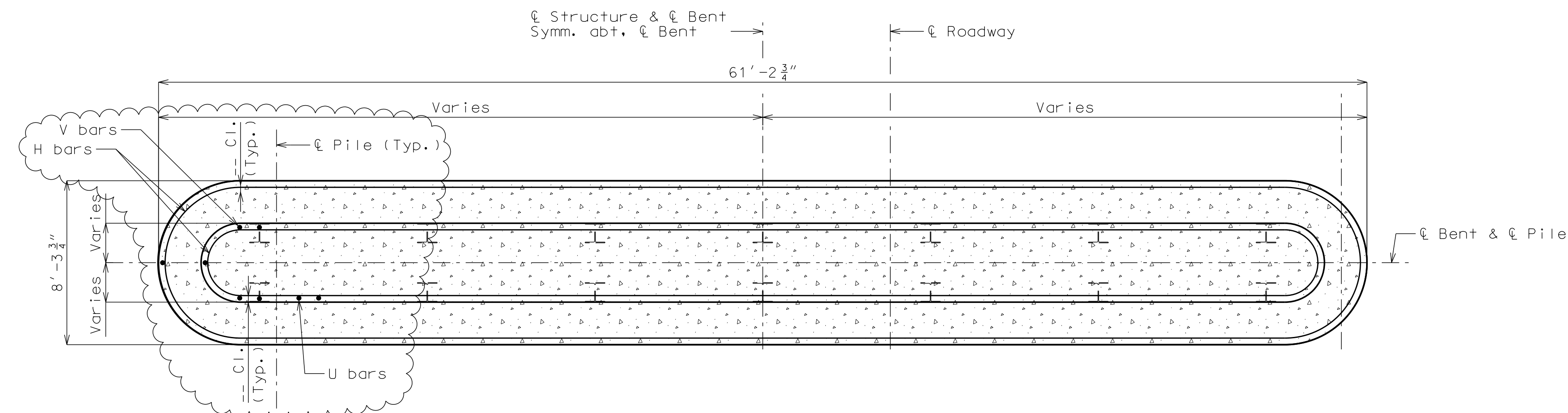
Reinforcing steel shall be shifted to clear piles. U-bars shall clear pile by at least 1 1/2".

For Substructure Quantity Table, see Sheet No. ---.

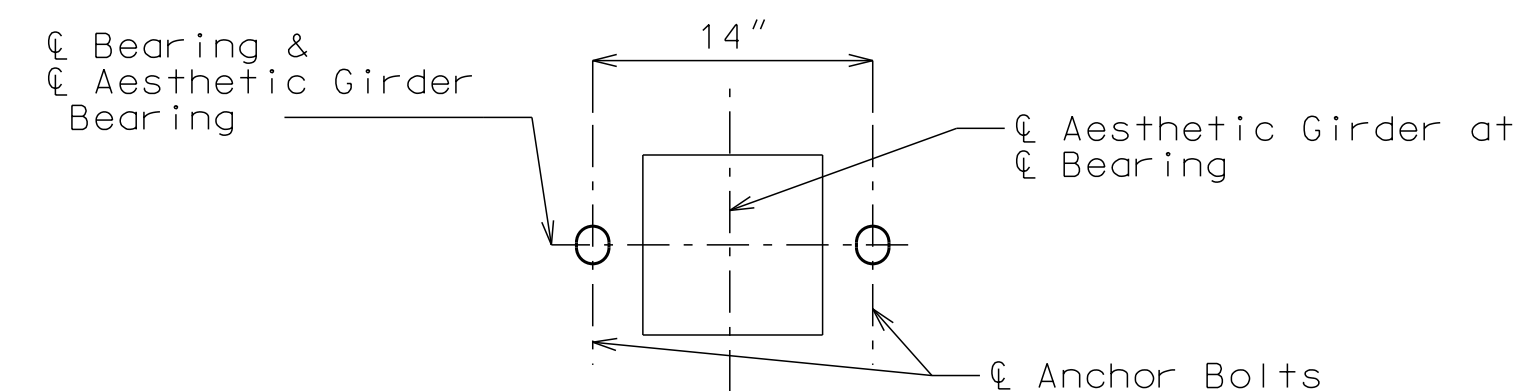
For steps 2" or more, use 2 1/4"x1/2" joint filler up vertical face.



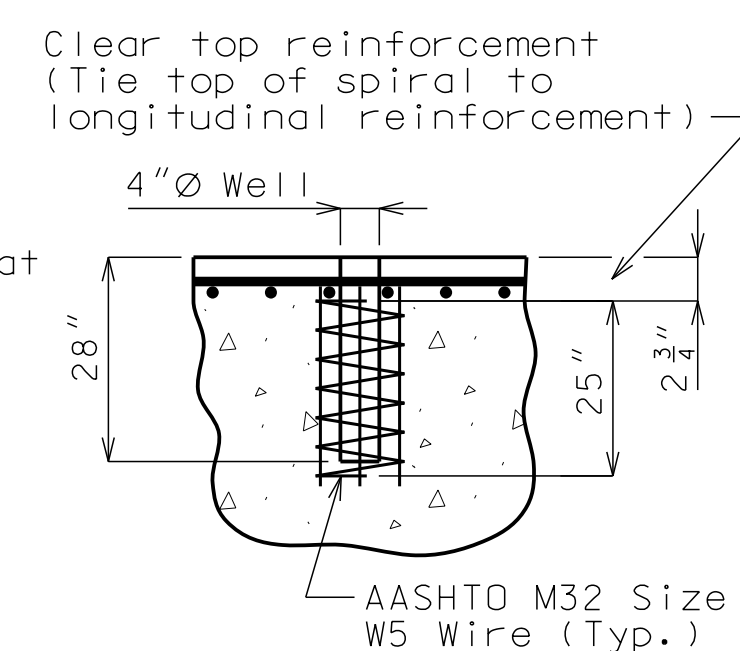
PLAN OF BEAM



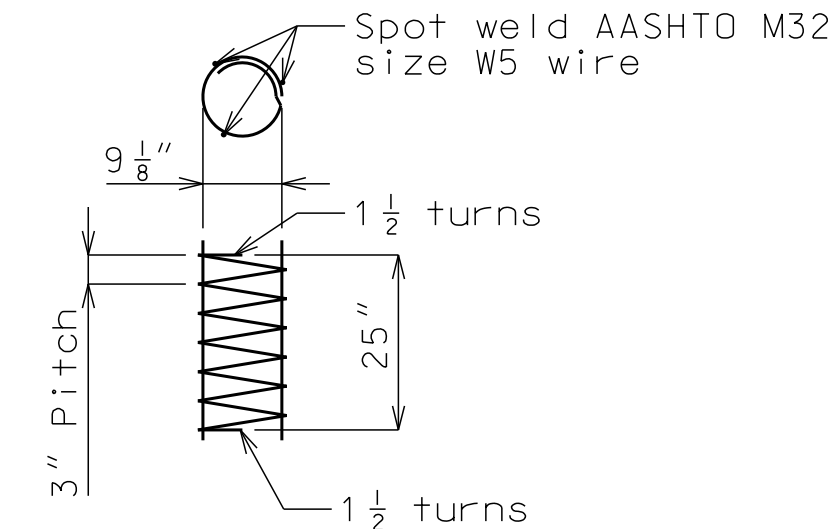
SECTION G-G



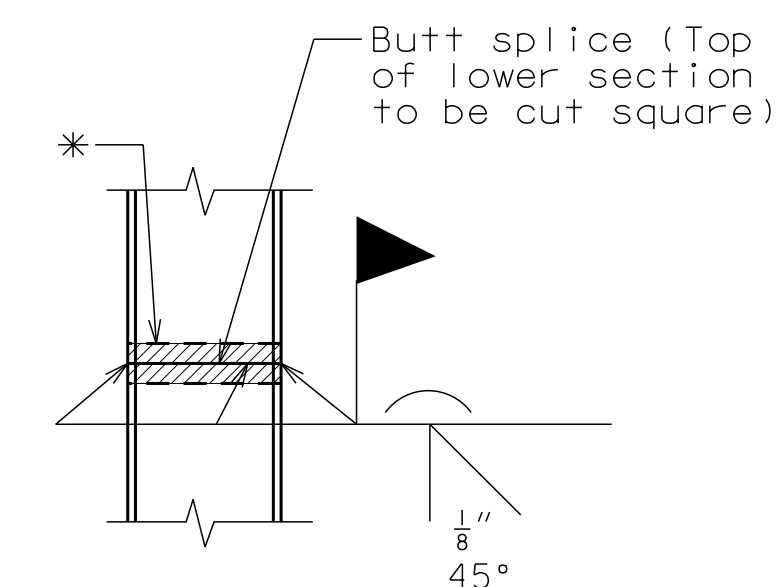
ANCHOR BOLT DETAIL



ANCHOR BOLT WELLS



DETAIL OF SPIRAL REINFORCEMENT



STEEL PILE SPLICE
(if required)

* Galvanizing material shall be omitted or removed 1 inch clear of weld locations. See special provisions.

Notes:

For details of Int. Bent No. 2 not shown, see Sheet No. __.

For location of Section A-A, B-B & C-C, see Sheet No. __.

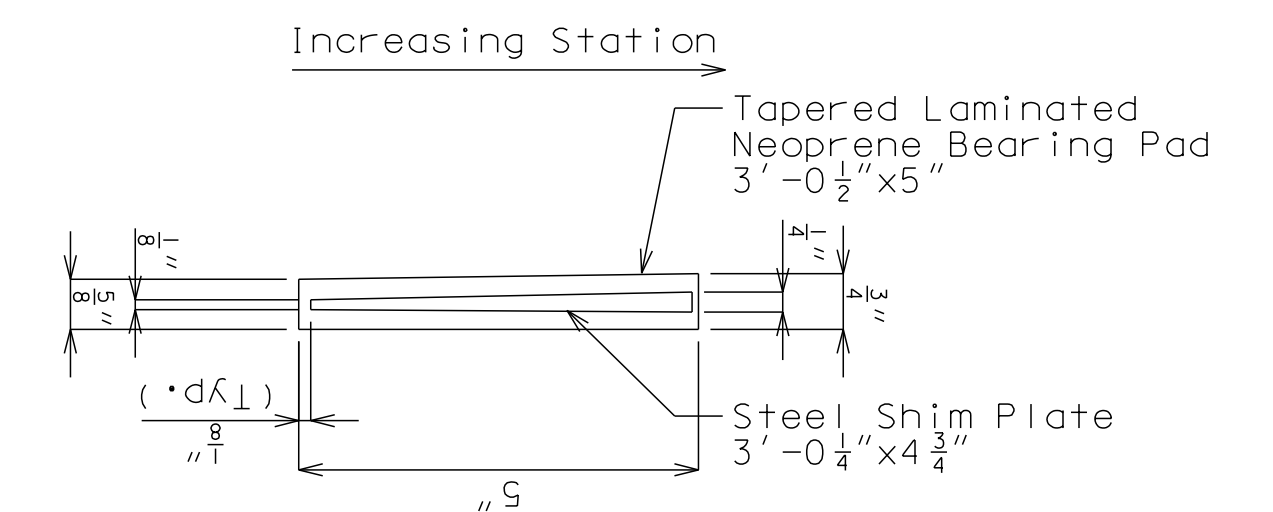
Reinforcing steel shall be shifted to clear piles. U bars shall clear pile by at least 1 1/2 inch.

Reinforcing steel shall be shifted to clear anchor bolt well by at least 1/2 inch.

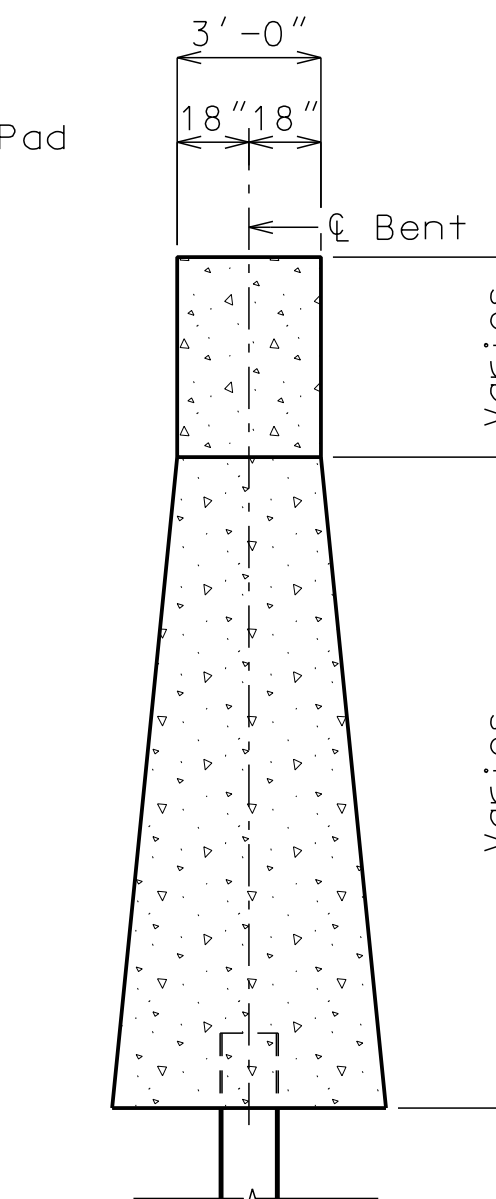
HP pile shall be galvanized to the minimum galvanized penetration (Elevation) (See Foundation Data).

* Embed #4-U38 and #4-V30 bars 18" into pile cap. (Min.)

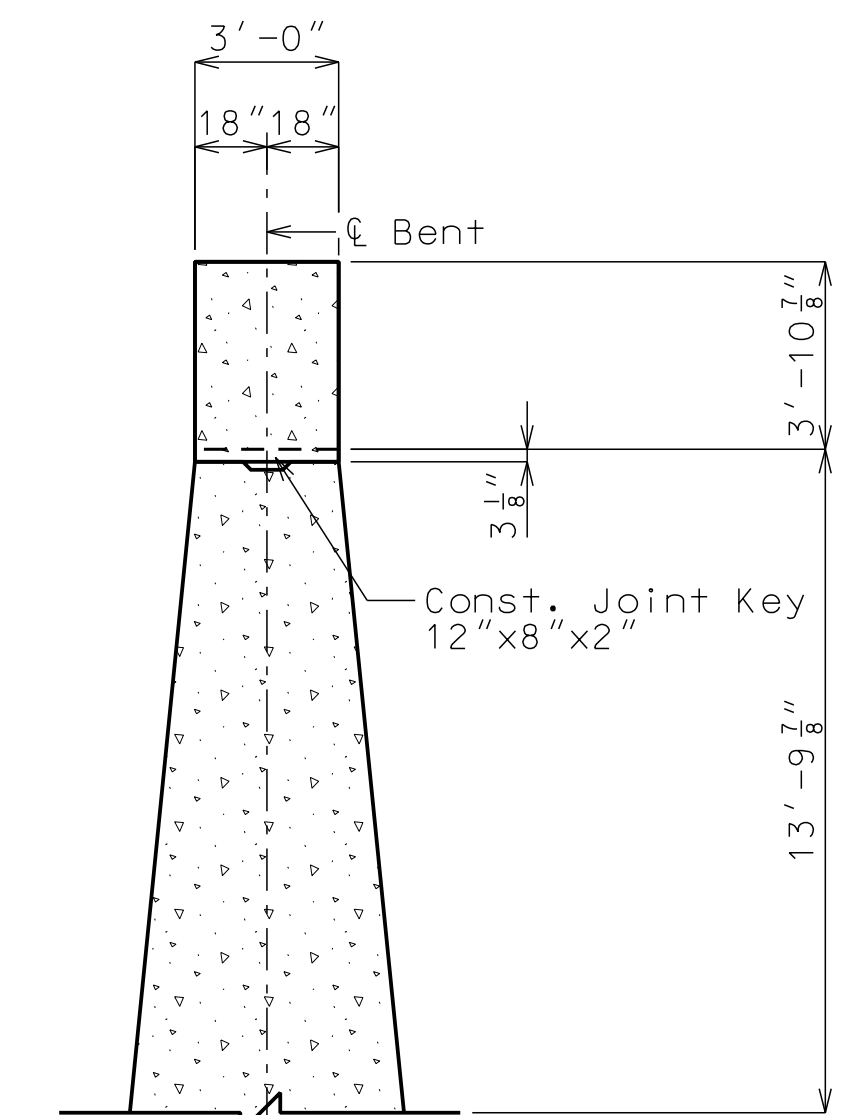
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	SHEET NO.	TOTAL SHEETS						
	8	33						
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BEARING PAD DETAIL

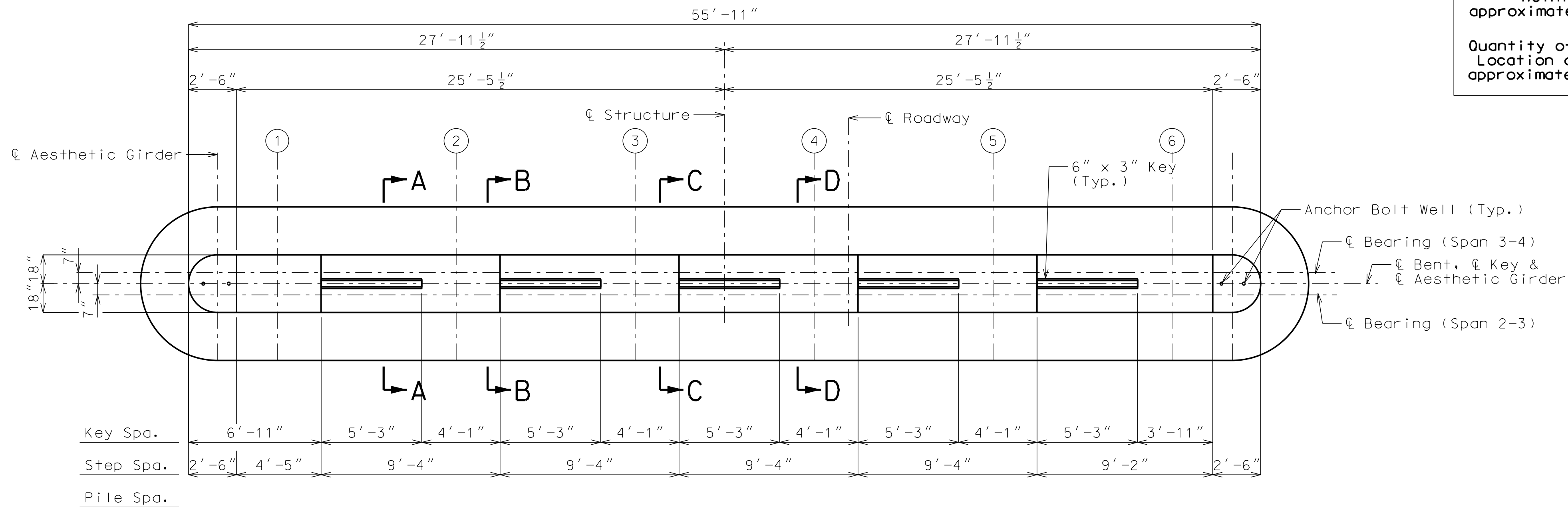


SECTION E-E

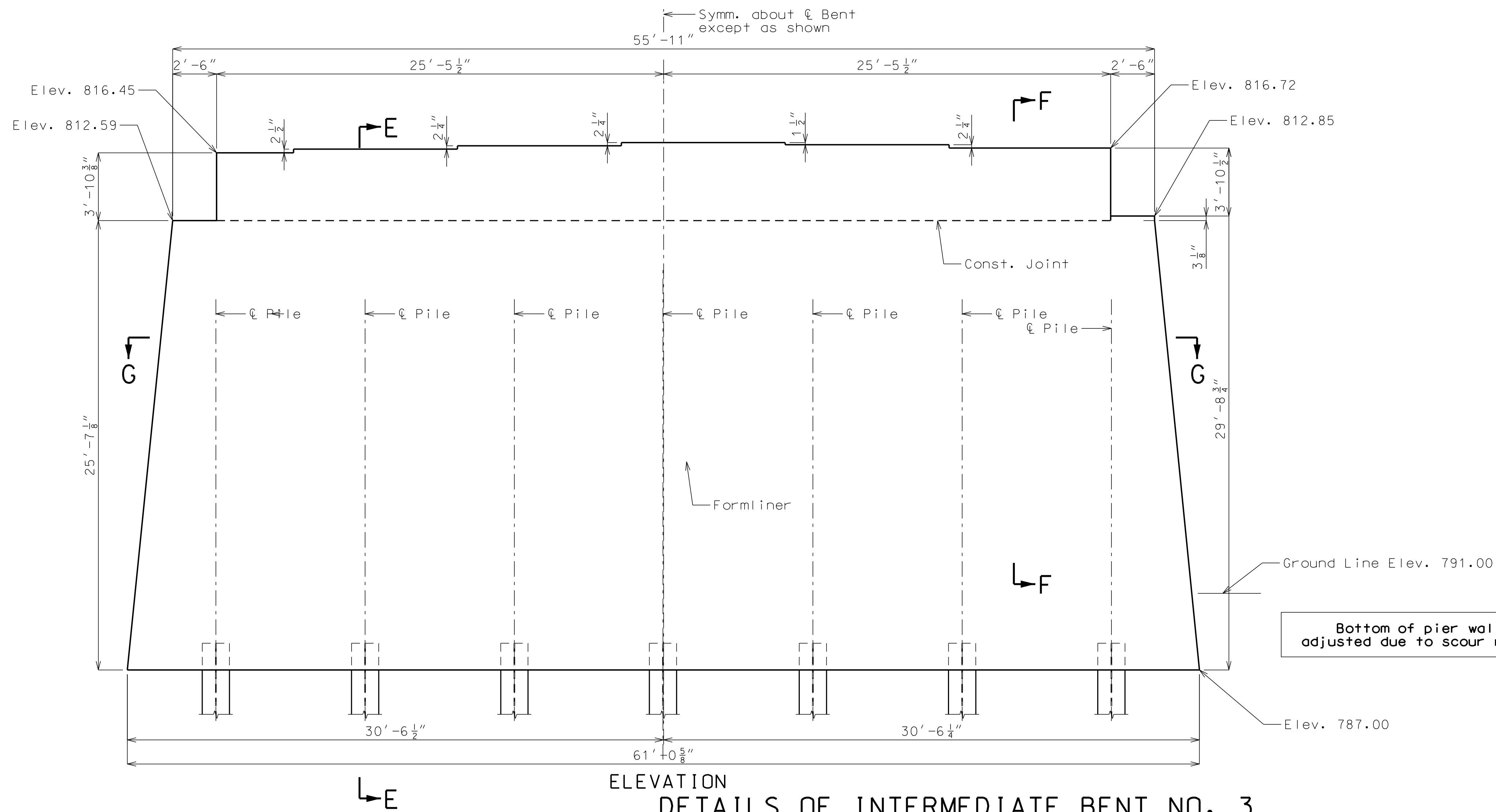


SECTION F-F

Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059



PLAN OF BEAM SHOWING REINFORCEMENT

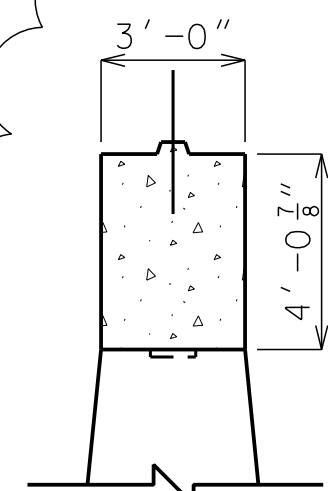


ELEVATION
DETAILS OF INTERMEDIATE BENT NO. 3

Note: This drawing is not to scale. Follow dimensions.

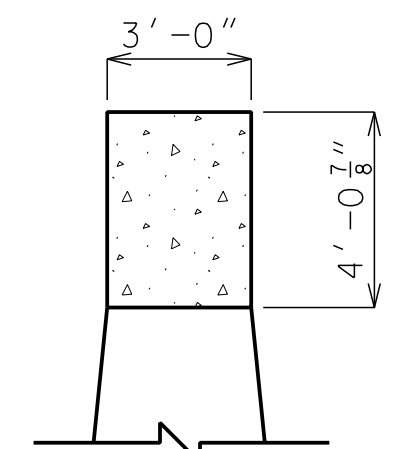
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Quantity of piles is approximate. Location and length of piles is approximate and subject to change

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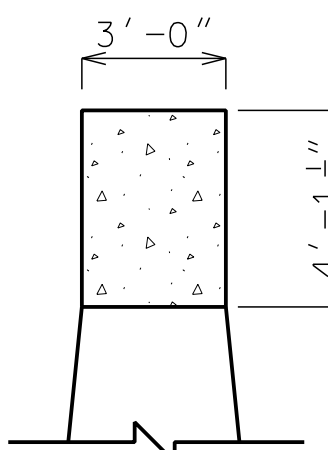
SECTION A-A

(Reinforcement w/o pile and not under a girder)



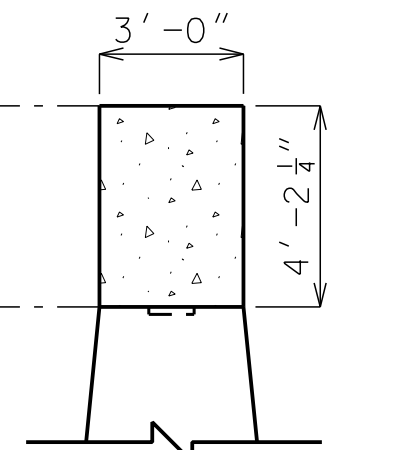
SECTION B-B

(Reinforcement w/o pile and under a girder)



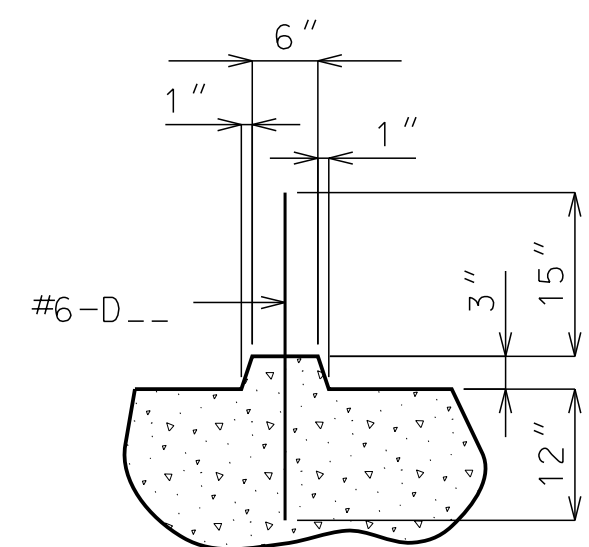
SECTION C-C

(Reinforcement with pile and not under a girder)



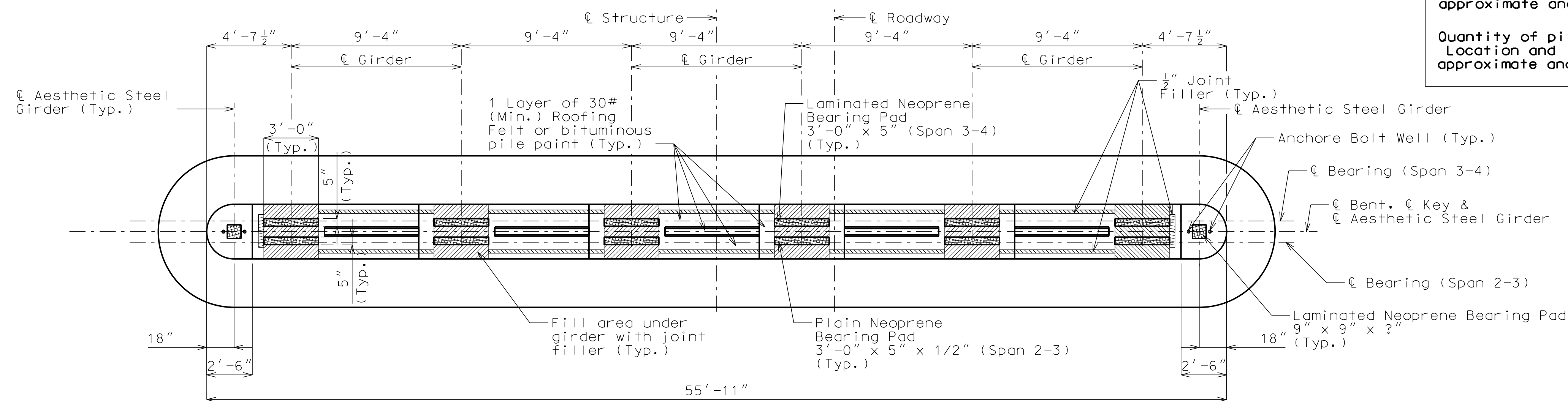
SECTION D-D

(Reinforcement with pile and under a girder)

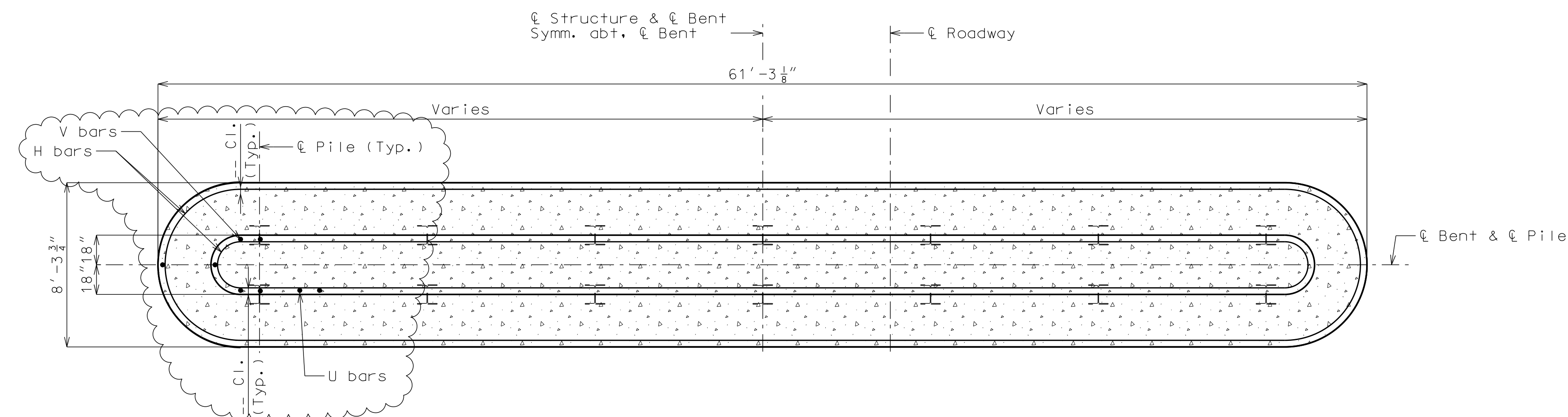


DETAIL OF KEY

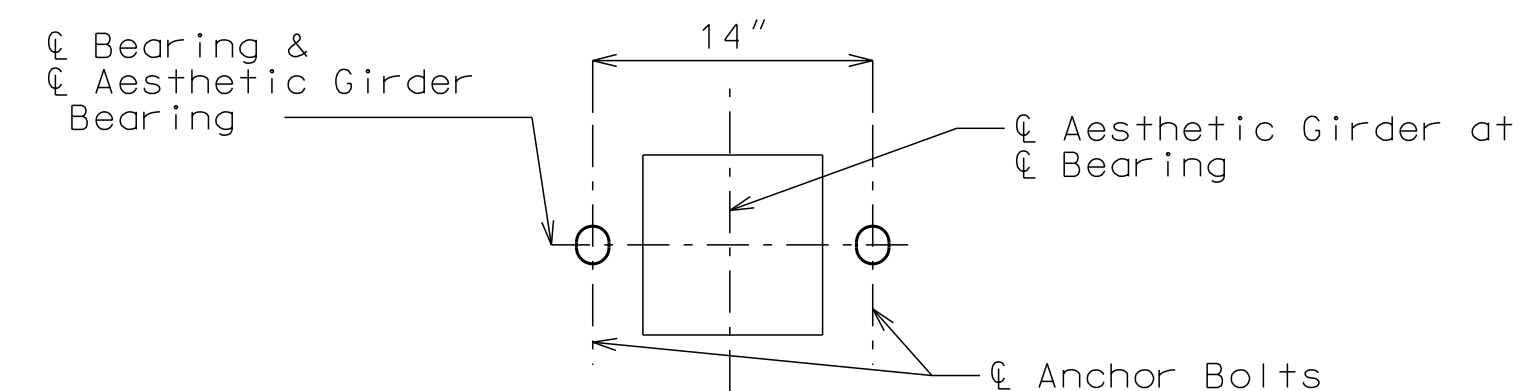
Notes:
For Sections E-E, F-F & G-G, see Sheet No. ---.
For details of Int. Bent No. 2 not shown, see Sheet No. ---.
Reinforcing steel shall be shifted to clear piles. U-bars shall clear pile by at least 1 1/2".
For Substructure Quantity Table, see Sheet No. ---.
For steps 2" or more, use 2 1/4"x1 1/2" joint filler up vertical face.



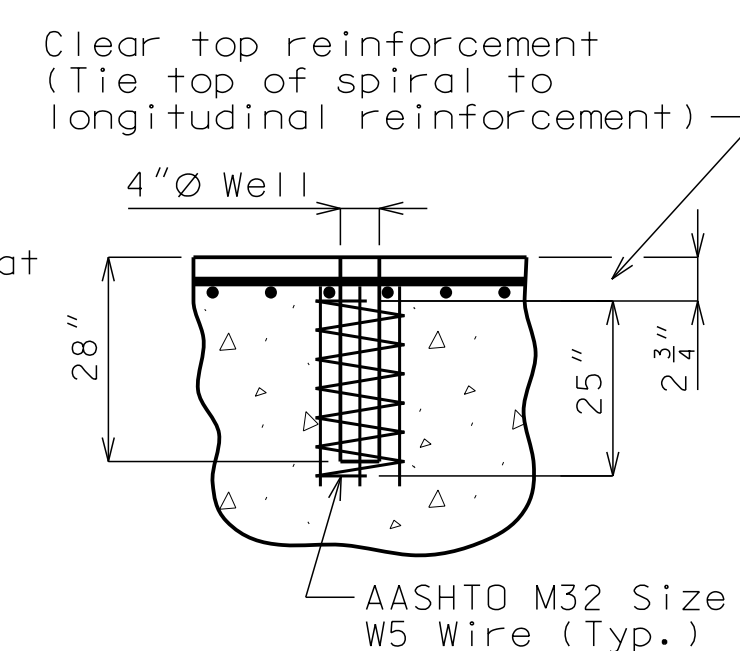
PLAN OF BEAM



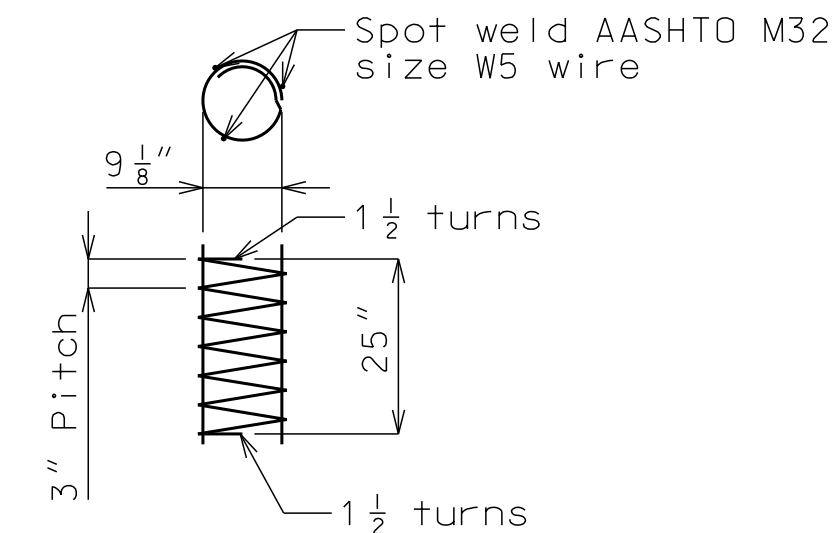
SECTION G-G



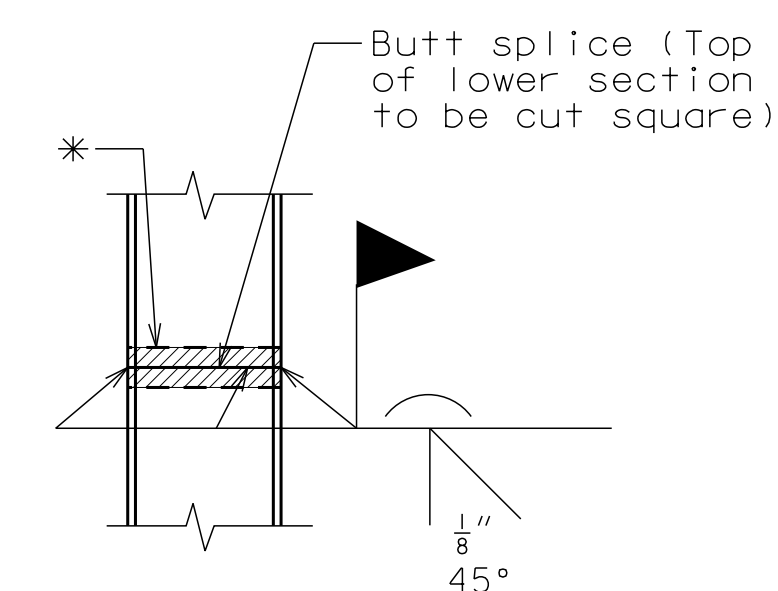
ANCHOR BOLT DETAIL



ANCHOR BOLT WELLS

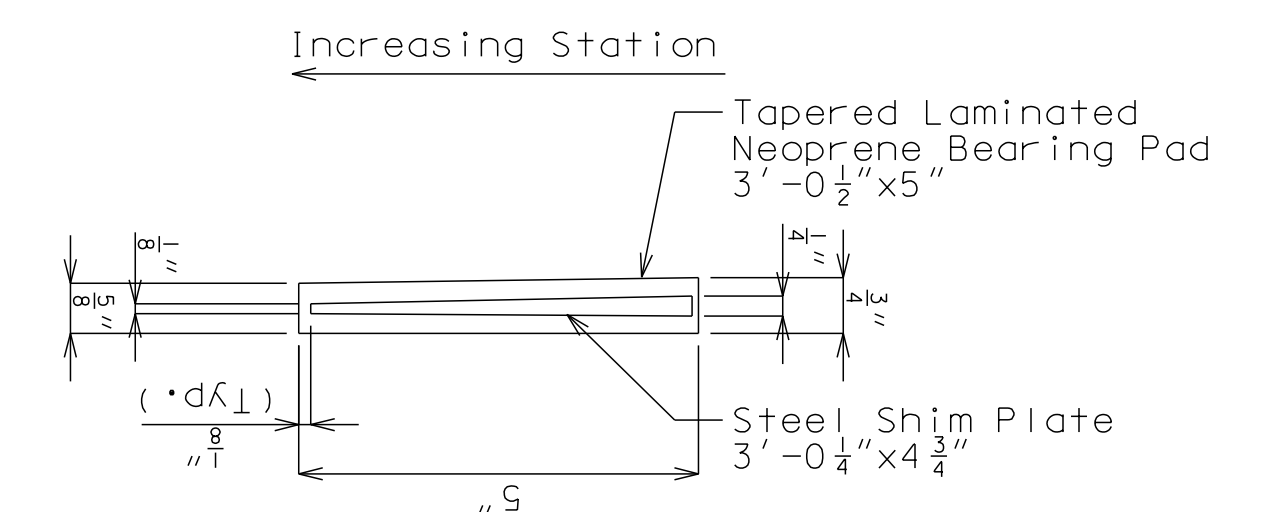


DETAIL OF SPIRAL REINFORCEMENT

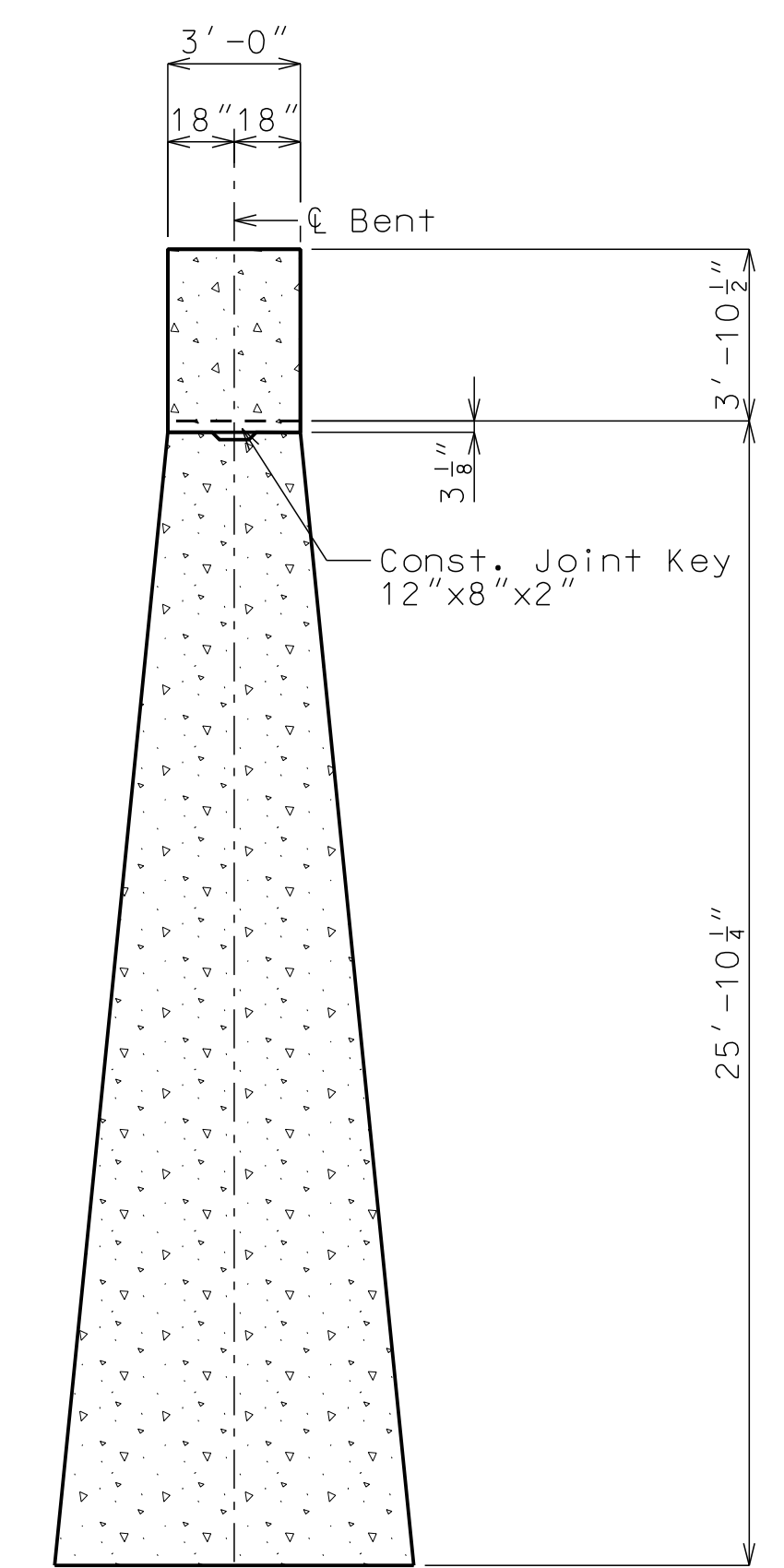


STEEL PILE SPLICE
(if required)

* Galvanizing material shall be omitted or removed 1 inch clear of weld locations. See special provisions.



BEARING PAD DETAIL



SECTION F-F

Notes:

For details of Int. Bent No. 2 not shown, see Sheet No. __.

Reinforcing steel shall be shifted to clear piles. U bars shall clear pile by at least 1 1/2 inch.

Reinforcing steel shall be shifted to clear anchor bolt well by at least 1/2 inch.

HP pile shall be galvanized to the minimum galvanized penetration (Elevation) (See Foundation Data).

* Embed #4-U38 and #4-V30 bars 18" into pile cap. (Min.)

Reinforcement shown is
approximate and subject to change

Quantity of piles is approximate.
Location and length of piles is
approximate and subject to change

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PE-2009010386

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Note: This drawing is not to scale. Follow dimensions.

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Reinforcement shown is approximate and subject to change

Quantity of piles is approximate. Location and length of piles is approximate and subject to change

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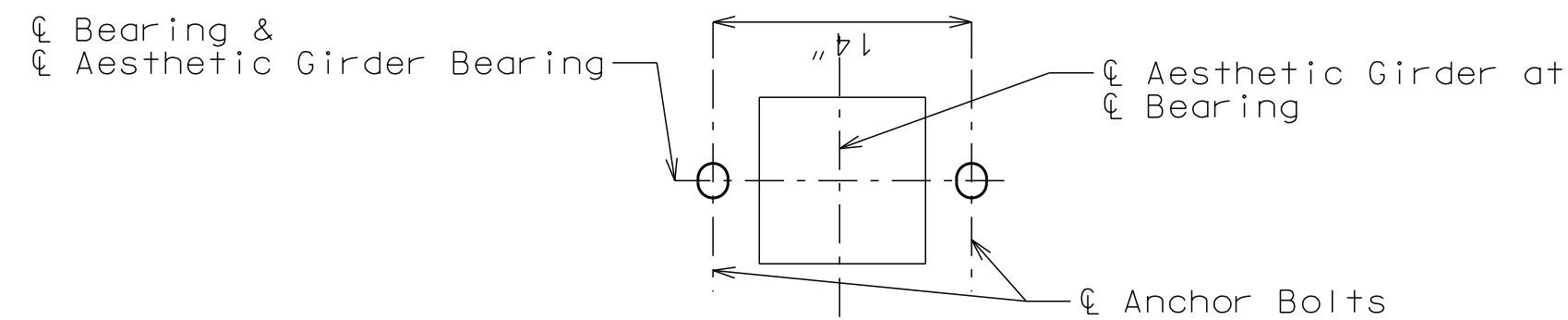
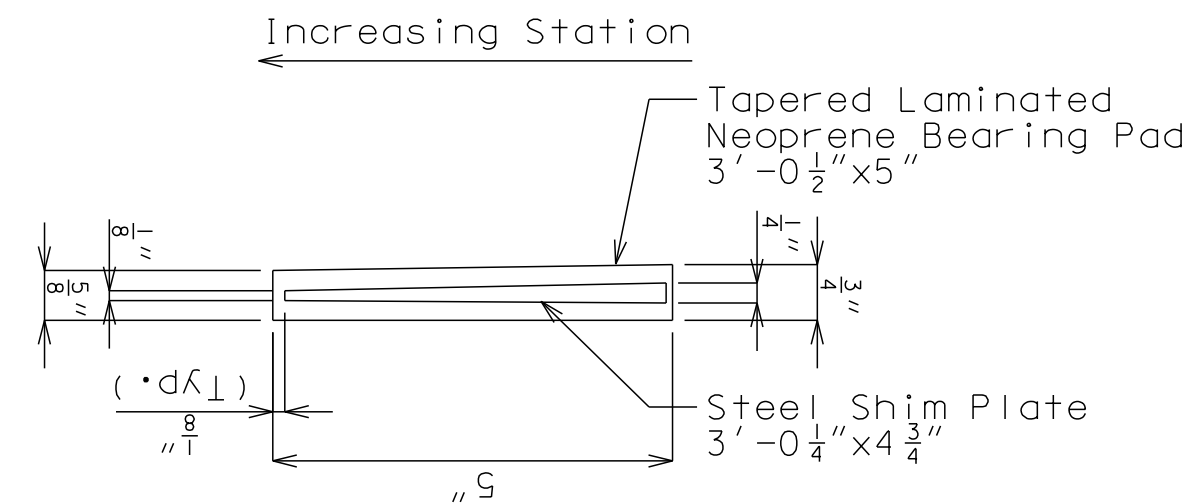
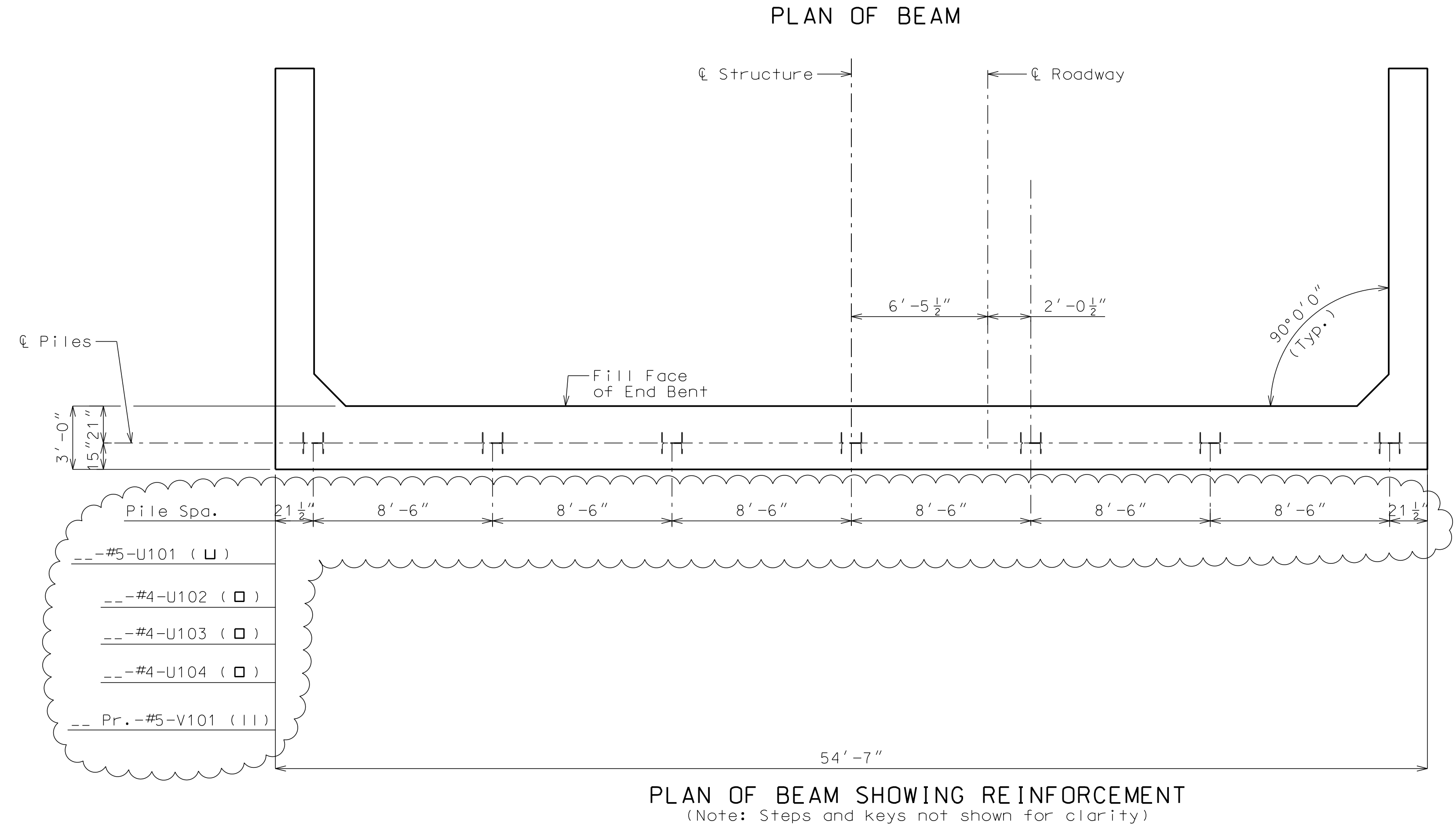
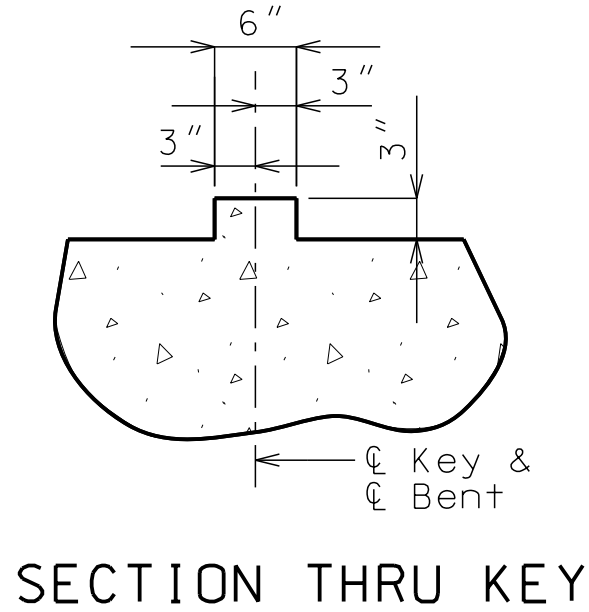
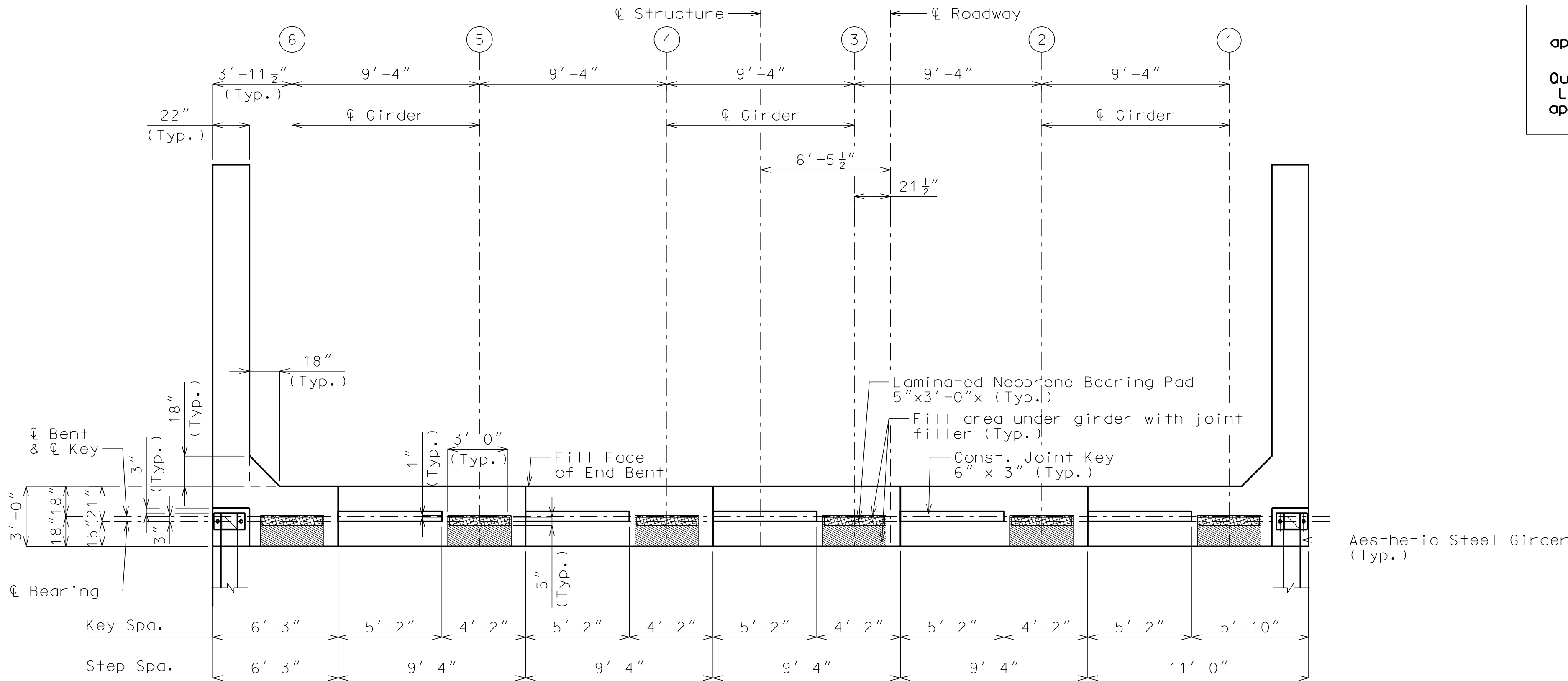
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SHEET NO.	TOTAL SHEETS
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Notes:

For details of End Bent No. 4 not shown, see Sheets No. _ & _.

For details of Vertical Drain at End Bents, see Sheet No. _.

Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For reinforcement of Barrier Curb (Type D), see Sheets No. _ & _.

The U-bars and Pairs-V bars shall be placed parallel to ℓ Roadway.

For Substructure Quantity Table, see Sheet No. 5.

DETAILS OF END BENT NO. 4

Note: This drawing is not to scale. Follow dimensions.

Reinforcement shown is
approximate and subject to change

Quantity of piles is approximate.
Location and length of piles is
approximate and subject to change

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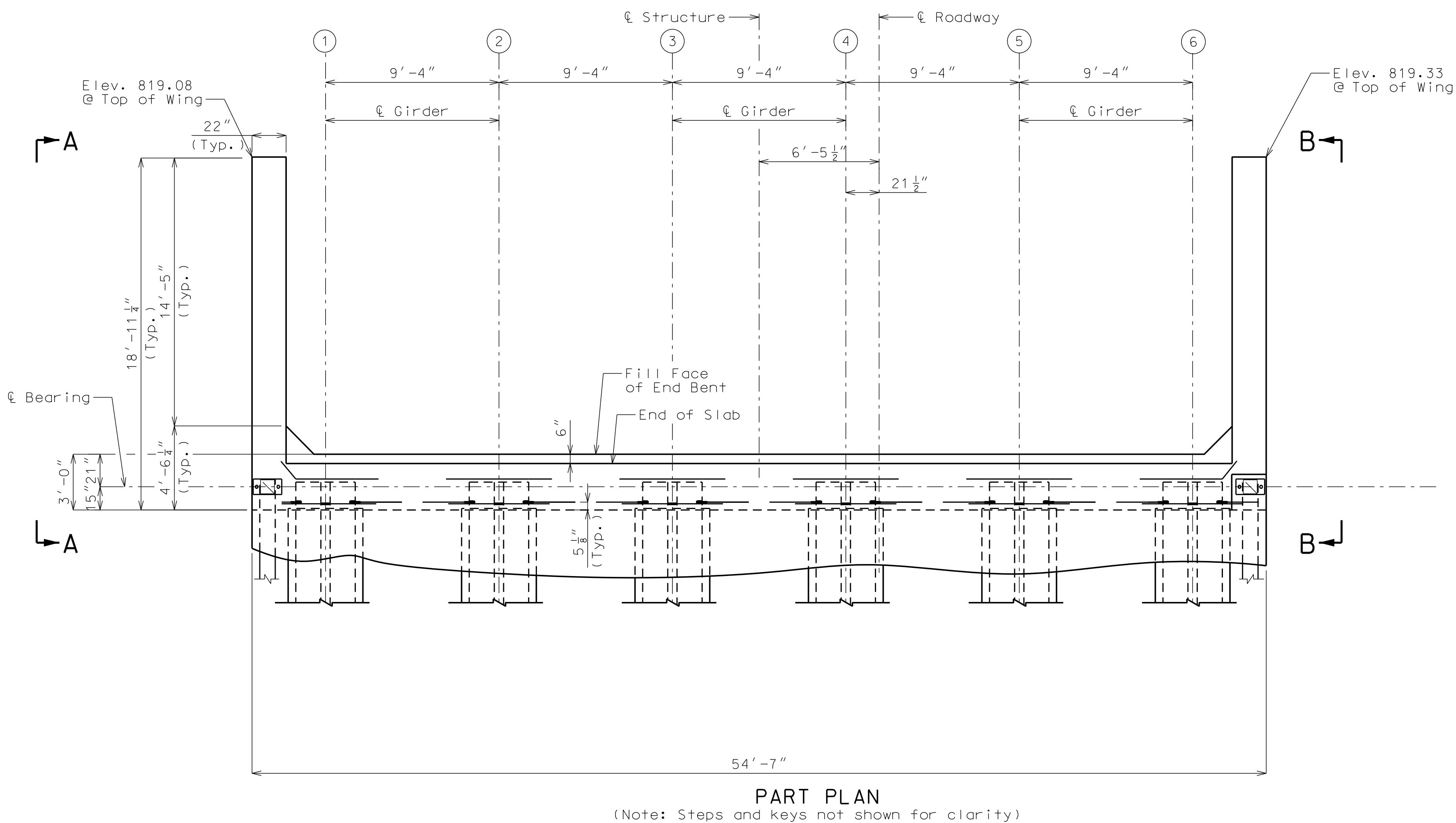
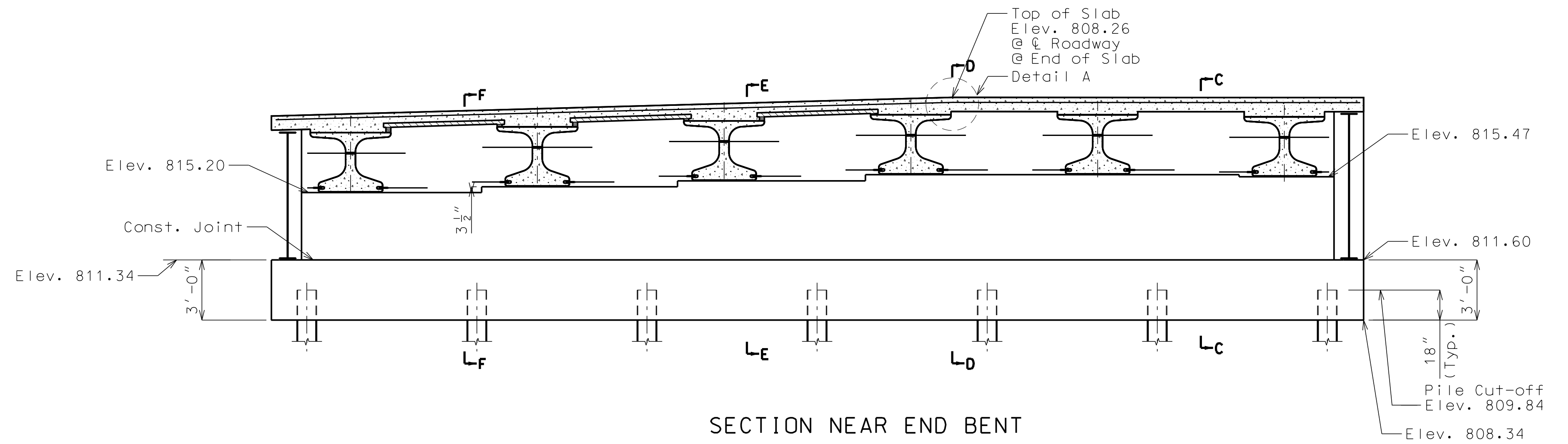
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SHEET NO.	TOTAL SHEETS

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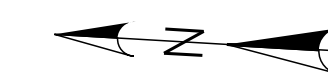
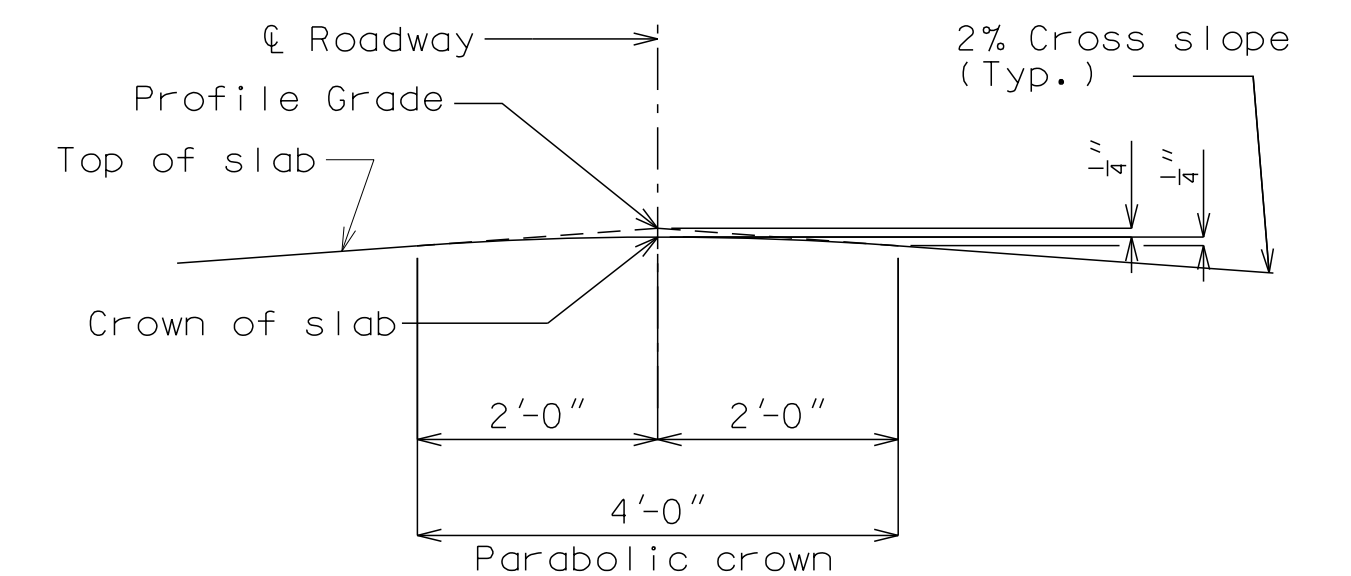
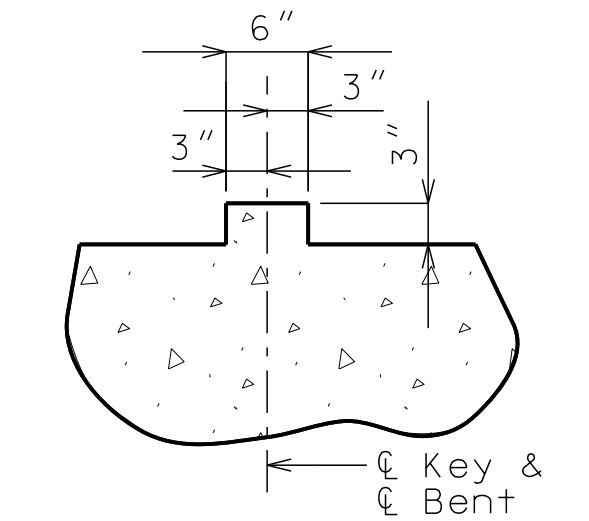
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(Note: Steps and keys not shown for clarity)

DETAILS OF END BENT NO. 4

Note: This drawing is not to scale. Follow dimensions.



Notes:

For details of End Bent No. 4 not shown, see Sheets No. _ & _.

For details of Vertical Drain at End Bents, see Sheet No. .

Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least $1\frac{1}{2}"$.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For reinforcement of Barrier Curb , see Sheets No. __ & __.

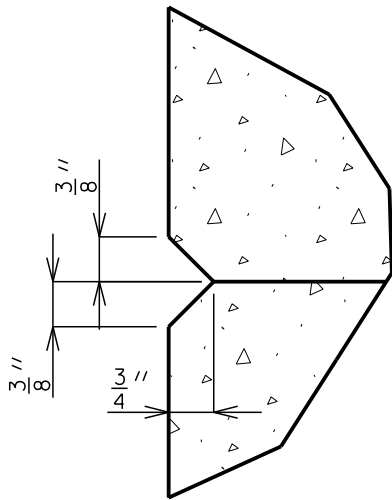
The U-bars and Pairs-V bars shall be placed parallel to C Structure.)

East Bridge : 60% Plans

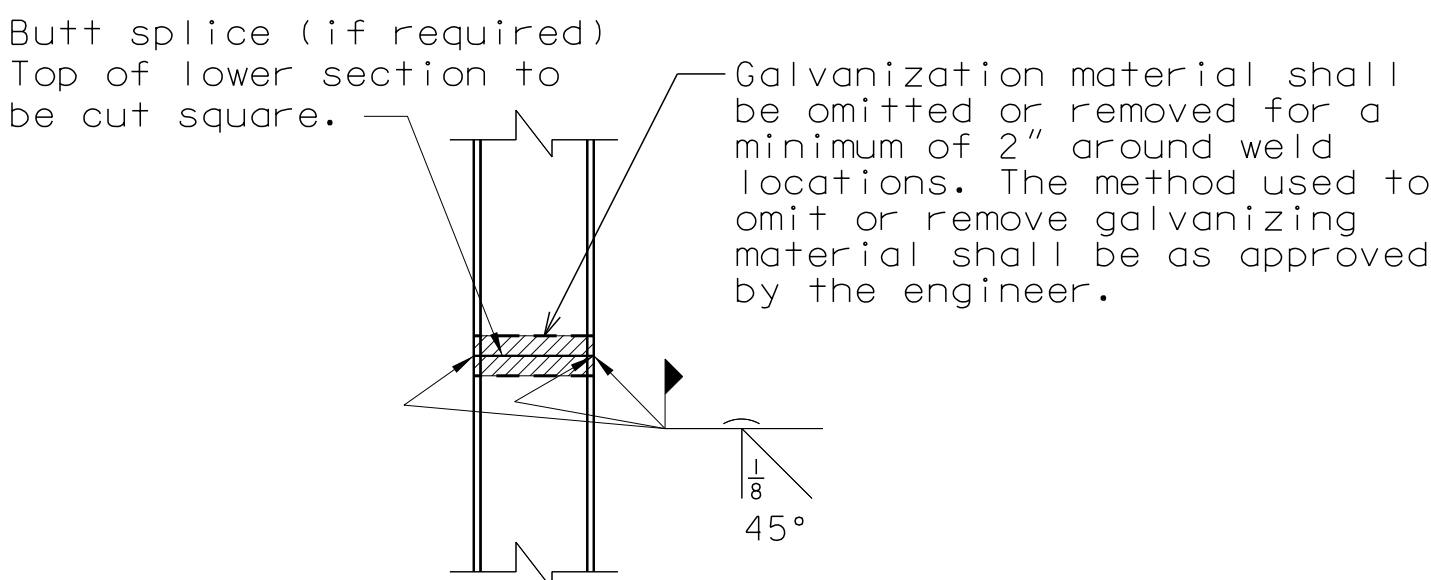
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Reinforcement shown is approximate and subject to change

Quantity of piles is approximate. Location and length of piles is approximate and subject to change

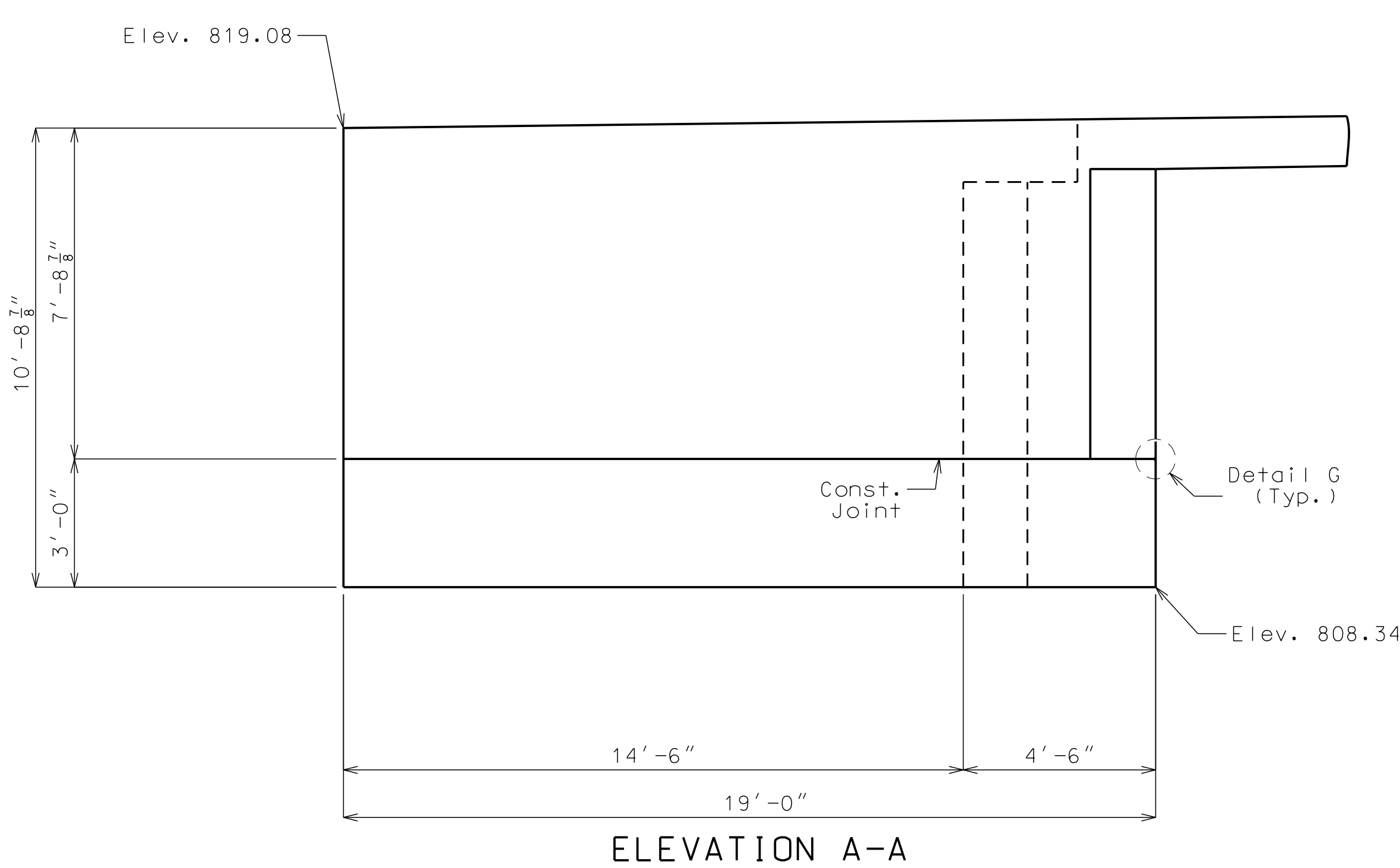


DETAIL G

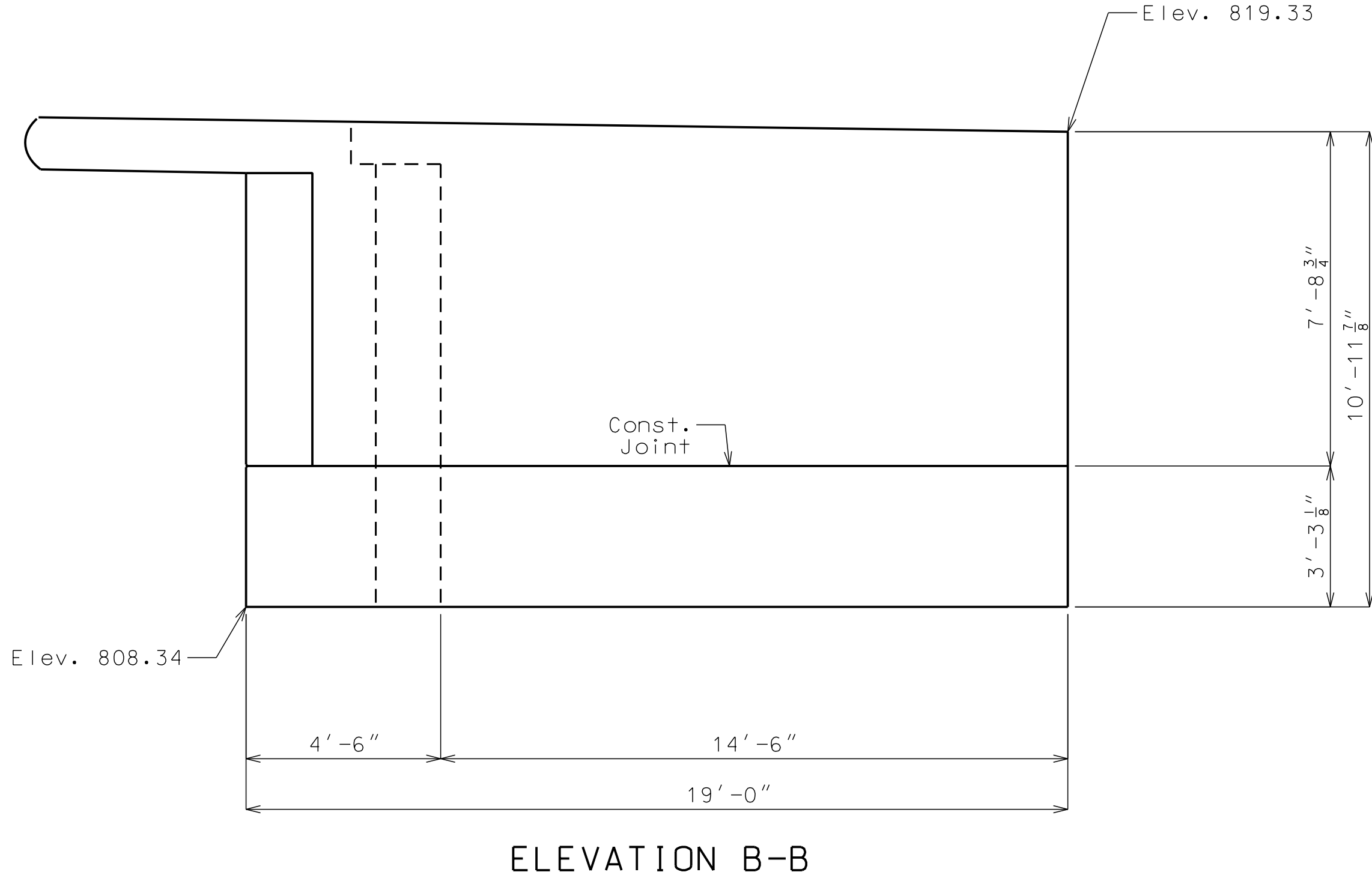


DETAIL OF STEEL PILE SPLICE

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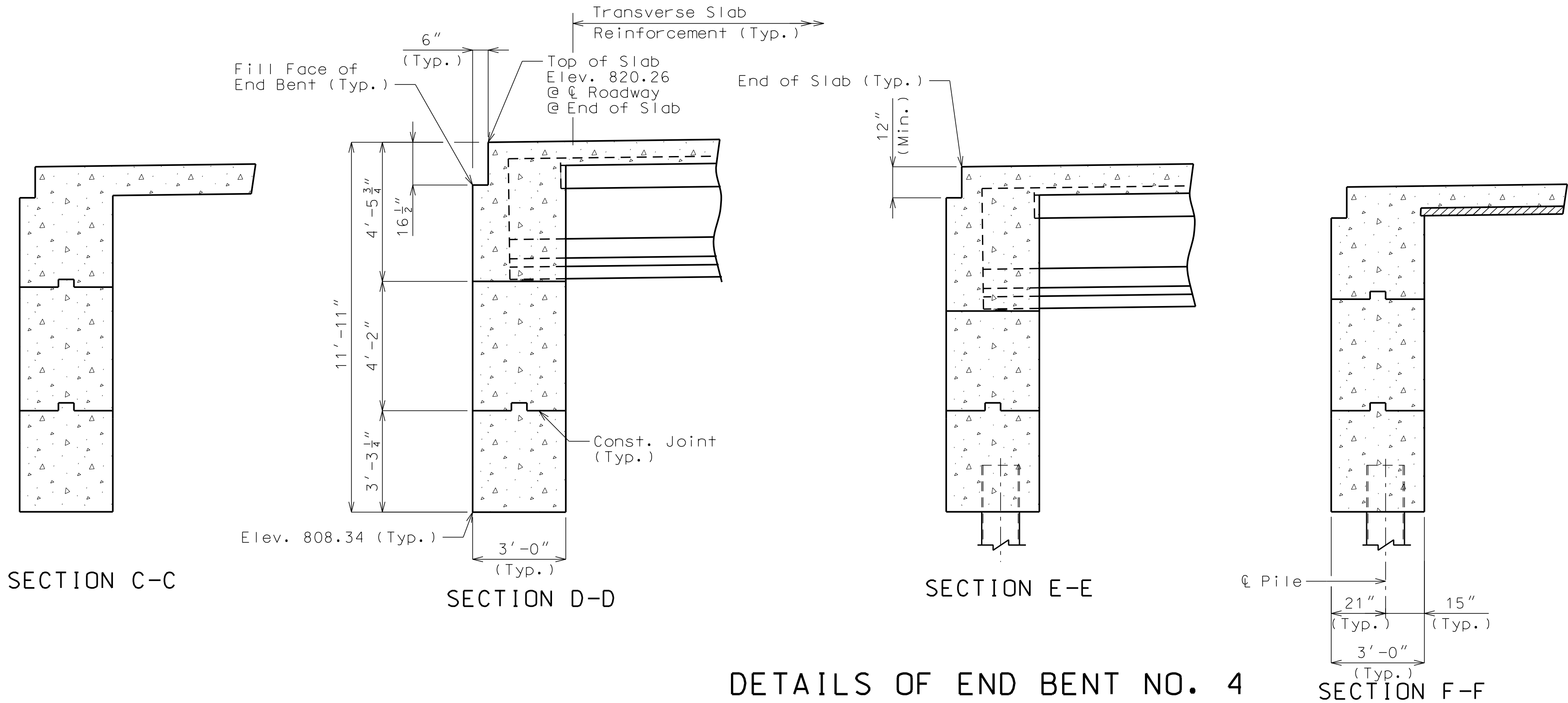


ELEVATION A-A



ELEVATION B-B

TYPICAL SECTION THRU WING



DETAILS OF END BENT NO. 4

Notes:

For details of End Bent No. 4 not shown, See Sheets No. _ & _.

For location of Elevations A-A & B-B, See Sheet No. _.

For location of Sections C-C, D-D, E-E & F-F See Sheet No. _.

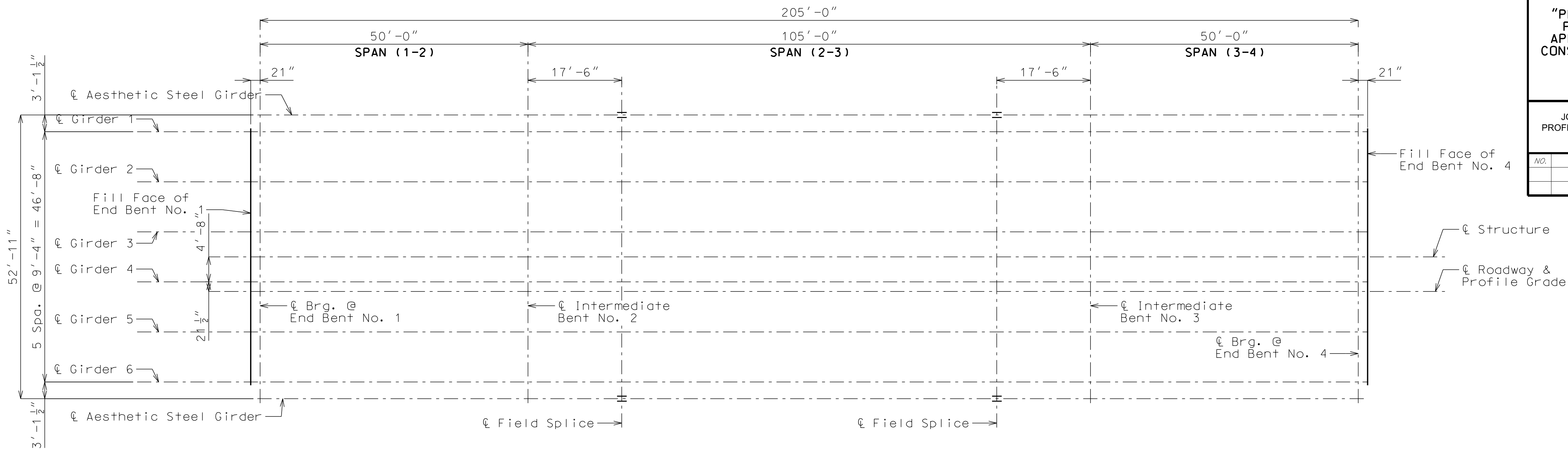
Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inch.

For reinforcement of Safety Barrier Curb, See Sheets No. _ & _.

For reinforcement of Pedestrian Curb, see Sheet No. _.

HP pile shall be galvanized to the minimum galvanized penetration (elevation) (See Foundation Data).

Note: This drawing is not to scale. Follow dimensions.



PLAN OF STRUCTURAL STEEL

FRAMING PLAN

Note: This drawing is not to scale. Follow dimensions.

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Structure
Roadway & Profile Grade

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SHEET NO.

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PART ELEVATION GIRDER NO. 1
(South Elevation Shown)
(South Girder shown North Girder Similar)
(Work this sheet with Plan of Structural Steel Sheet)

PART ELEVATION GIRDER NO. 1
(South Elevation Shown)
(South Girder shown North Girder Similar)
(Work this sheet with Plan of Structural Steel Sheet)

AESTHETIC STEEL GIRDER ELEVATION

Note: This drawing is not to scale. Follow dimensions.

Diaphragm connection plates on north side of south girder and south side of north girder only.

Diaphragms on north side of south girder and south side of north girder only.

Notes:

Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. XX.

*** Indicates flange plates subject to notch toughness requirements.

All web plates shall be subject to notch toughness requirements.

The flange and web splice plates shall be subject to notch toughness requirements, when notch toughness is required for flanges on both sides of splice.

Intermediate web stiffener plate and diaphragm spacing may vary from plan dimensions by a maximum of 3" for diaphragm to connect to the intermediate web stiffener plate.

Fabricated structural, low alloy steel shall be ASTM A709 Grade 50W, except as noted.

Longitudinal dimensions are horizontal. See Part Longitudinal Sections on Sheet No. XX.

For Details of Bolted Field Splice see Sheet No. XX.

For Details of Intermediate Diaphragms & Bearing Stiffeners see Sheet No. XX.

For Plan of Aesthetic Girder Steel, see Sheet No. XX.

East Bridge : 60% Plans

Concrete for prestressed girders shall be Class A-1 with $f'c = 8000$ psi and $f'ci = 6500$ psi.

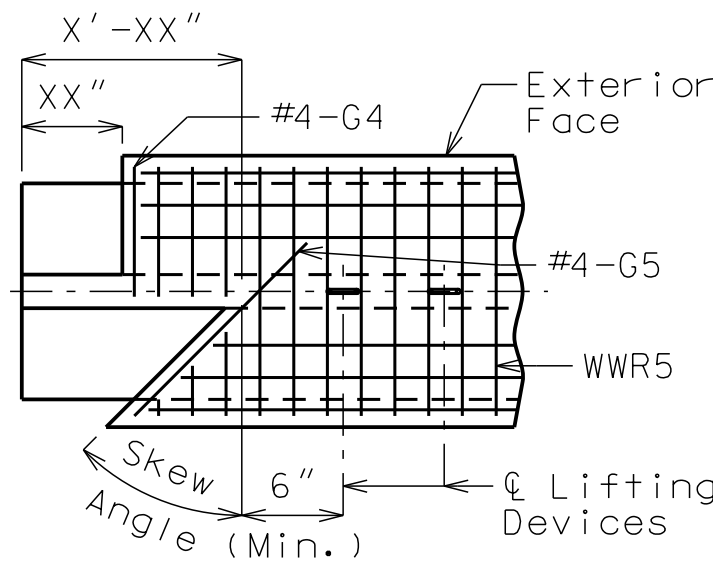
(+) indicates prestressing strand.

Use ___ strands with an initial prestress force of ____ kips.

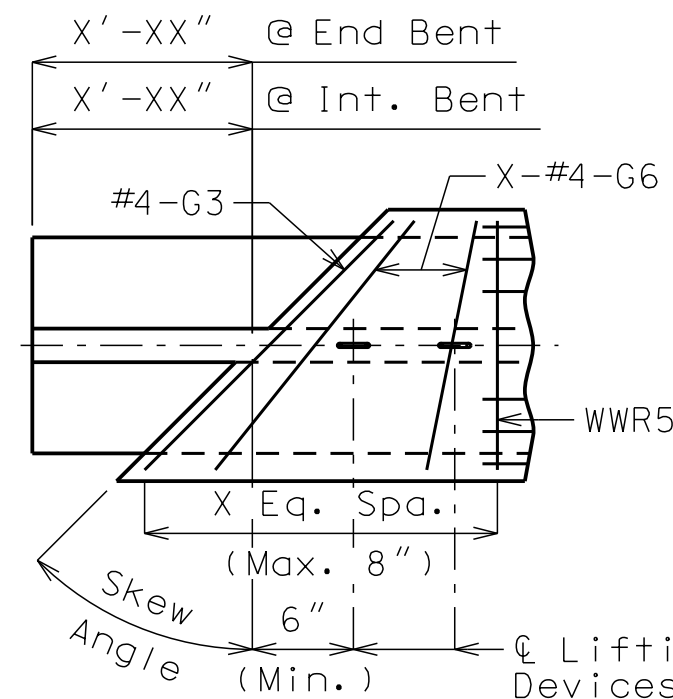
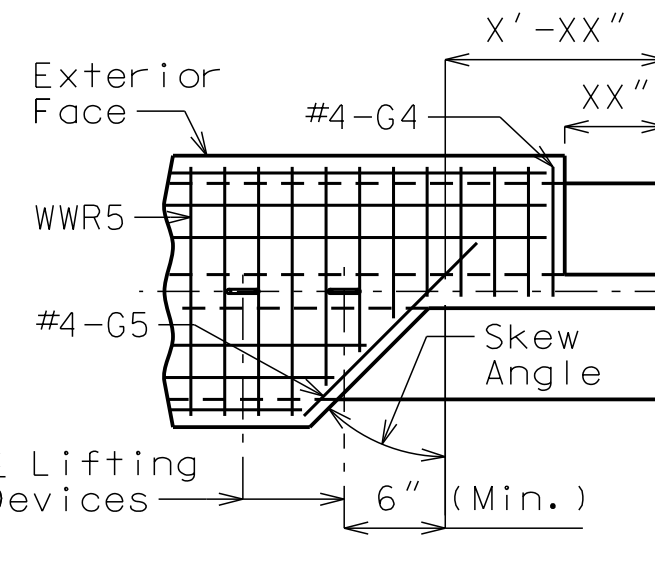
Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands, 0.6 inch diameter in accordance with AASHTO M 203, Grade 270. Pretensioned members shall be in accordance with Sec 1029. Fabricator shall be responsible for location and design of lifting devices.

* Girder top flange shall be steel troweled to a smooth finish for 8" at the edges, as shown. Apply two layers of 30-lb roofing felt as a bond breaker to this region only excluding where joint filler is applied. The center portion shall be rough finished by scarifying the surface transversely with a wire brush, and no laitance shall remain on the surface.

** At the contractor's option the location for bent-up strands may be varied from that shown for fully bonded strands only. The total number of bent-up strands shall not be changed. One strand tie bar is required for each layer of bent-up strands except at end bents which require one bar on the bottom layer of strands only. No additional payment will be made if additional strand tie bars are required.



LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT
(ROTATE 180° FOR RIGHT EXTERIOR)



INTERIOR GIRDER AT ALL BENTS
& EXTERIOR GIRDER AT END BENT

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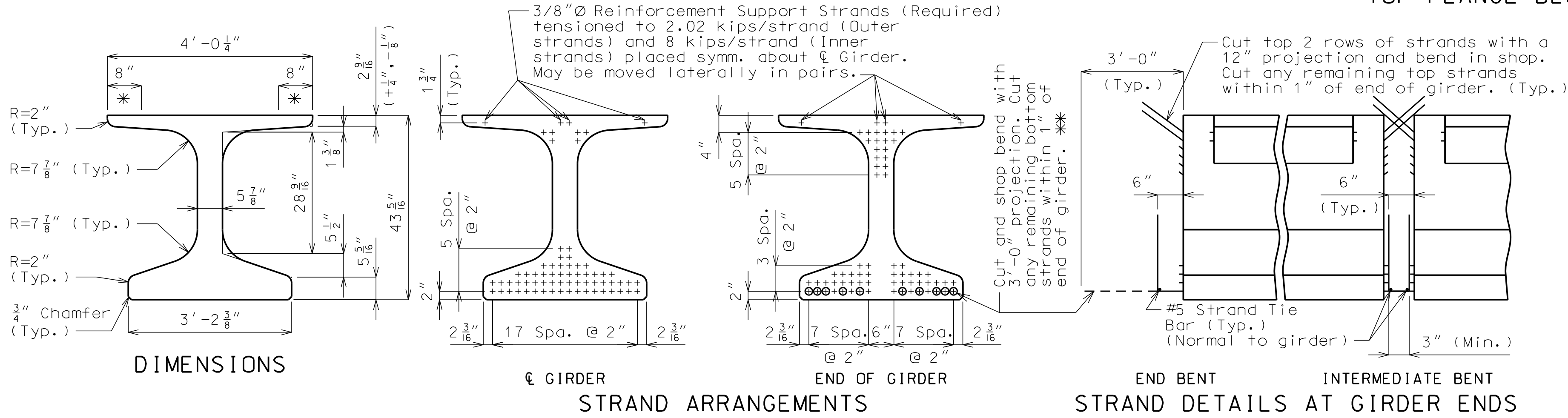
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TOTAL SHEETS 33

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TOP FLANGE BLOCKOUT

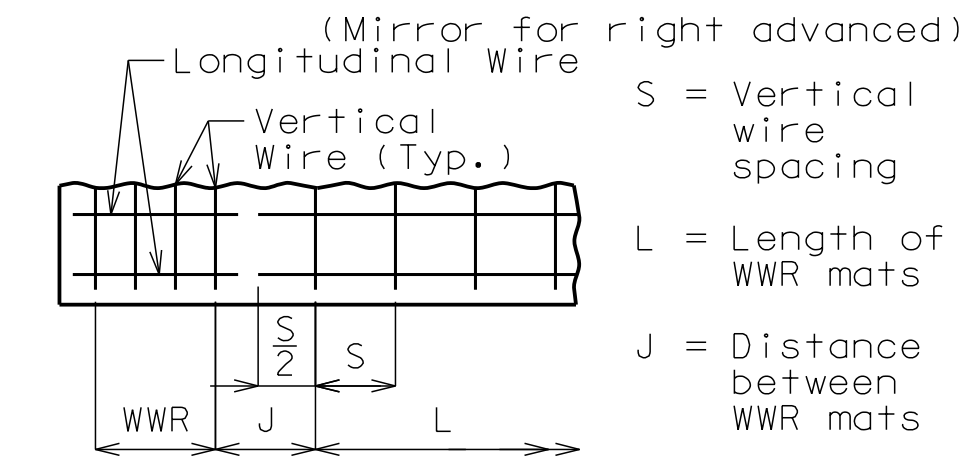


BILL OF REINFORCING STEEL - EACH GIRDER				
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAMS
XXX	3 G1	2'-10"	8	SHAPE 8
XXX	X G2	X'-X"	11	
2	4 G3	X'-X"	20	SHAPE 20
2	4 G4	2'-1"	20	
2	4 G5	X'-X"	20	SHAPE 11
XXX	4 G6	Varies	20	

G4 and G5 not required for interior girders. G3 and G6 not required for exterior girders of intermediate spans. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

WELDED WIRE REINFORCEMENT - EACH GIRDER				
MARK	WIRE SIZE	S	L	J
WWR1	X	X"	X'-X"	X"
WWR2	X	X"	X'-X"	X"
WWR3	X	X"	X'-X"	X"

BENDING DIAGRAMS



WELDED WIRE PLACEMENT

General Notes:

Reinforcing Steel:

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

Welded Wire Reinforcement (WWR) shall be in accordance with AASHTO M 221. WWR shall not be epoxy coated.

Miscellaneous:

Cost of 3/4" coil tie rods placed in diaphragms will be considered completely covered by the contract unit price for Prestressed Concrete NU-Girder.

Coil ties shall be held in place in the forms by slotted wire-setting-studs projecting thru forms. Studs are to be left in place or replaced with temporary plugs until girders are erected, then replaced by coil tie rods.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Prestressed Concrete NU-Girder.

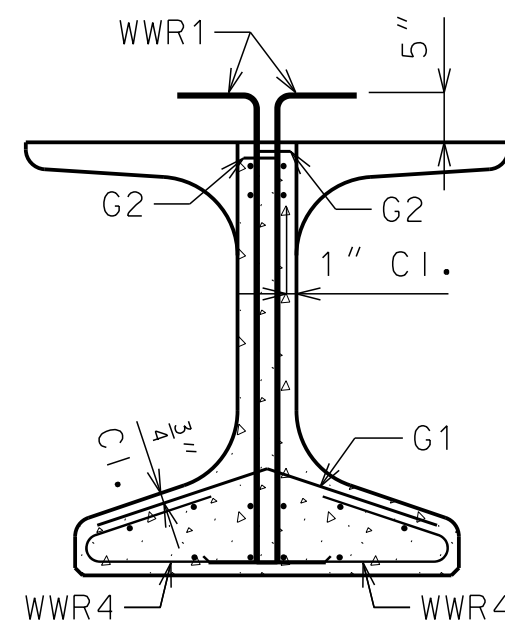
For location of coil inserts at slab drains, see Sheet No. __.

For location of coil ties and #6 bars at concrete bent diaphragms, see Sheets No. __ and __.

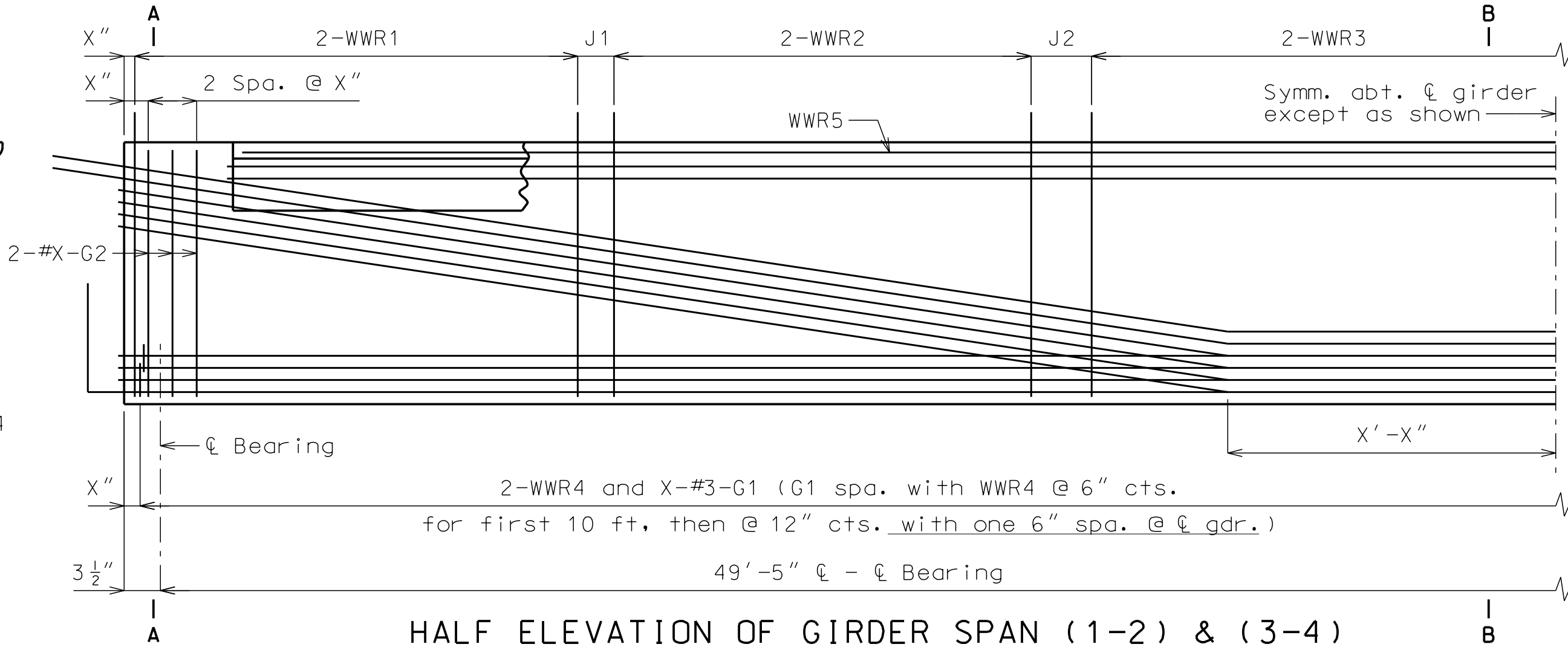
The 1 1/2" holes shall be cast in the web for steel intermediate diaphragms. Drilling is not allowed. For location of holes and details of steel intermediate diaphragms, see Sheet No. __.

For Girder Camber Diagram, see Sheet No. __.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

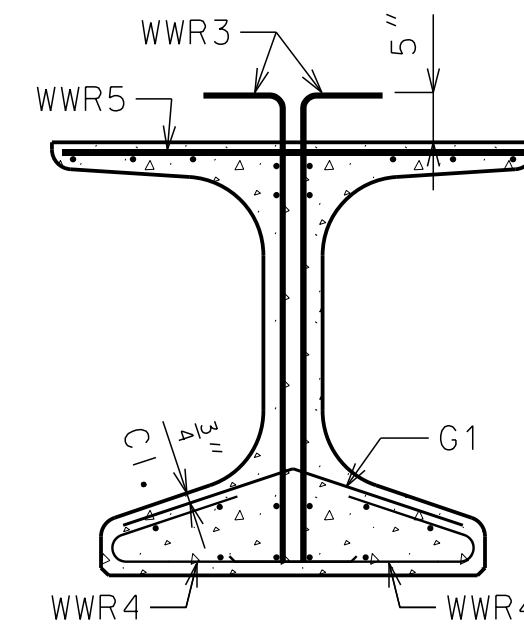


SECTION A-A
Strands not shown for clarity.

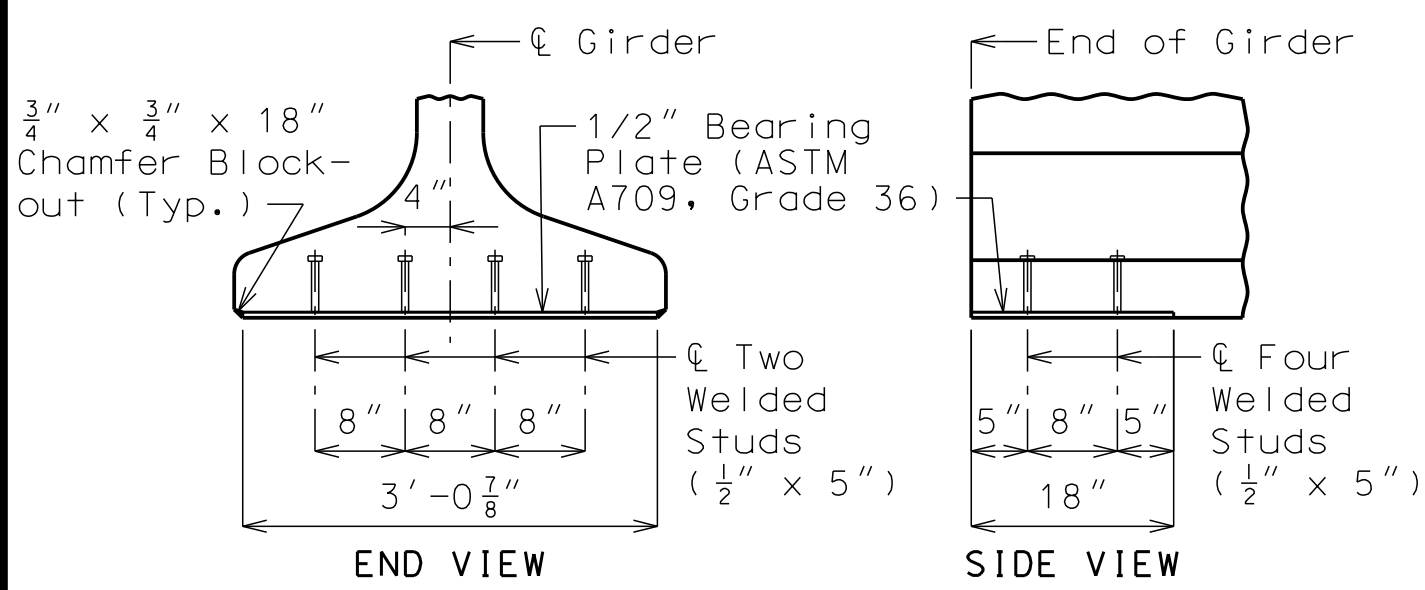


HALF ELEVATION OF GIRDER SPAN (1-2) & (3-4)

Exterior and interior girders are the same, except for coil ties, and top flange blockout and coil inserts for slab drains. Reinforcement support strands not shown for clarity.



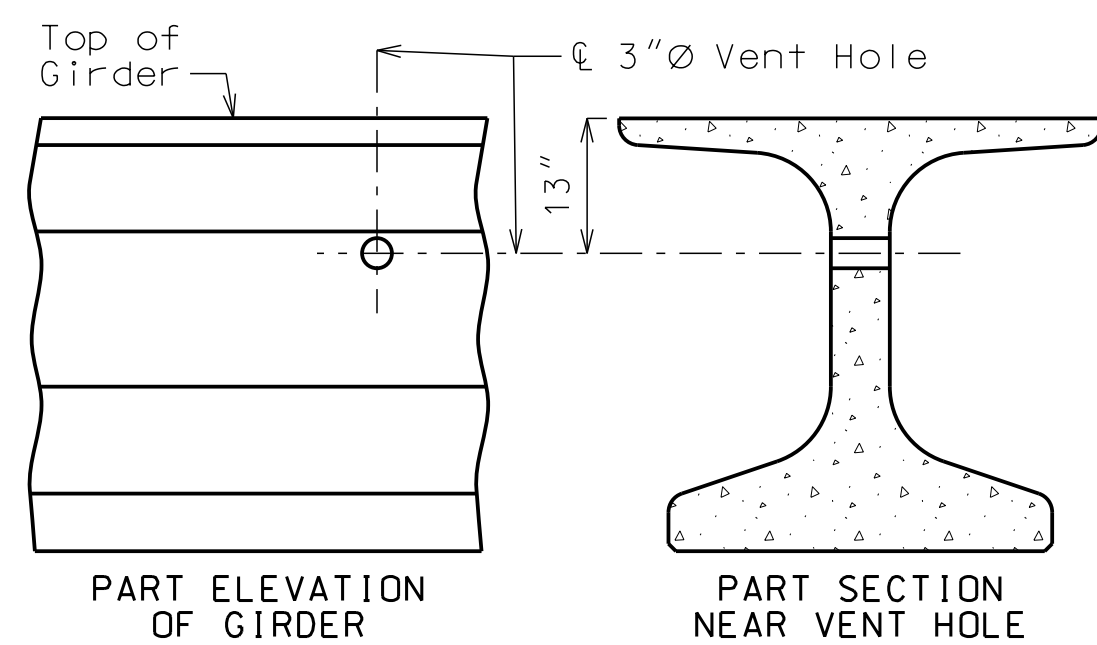
SECTION B-B
Strands not shown for clarity.



BEARING PLATE DETAILS

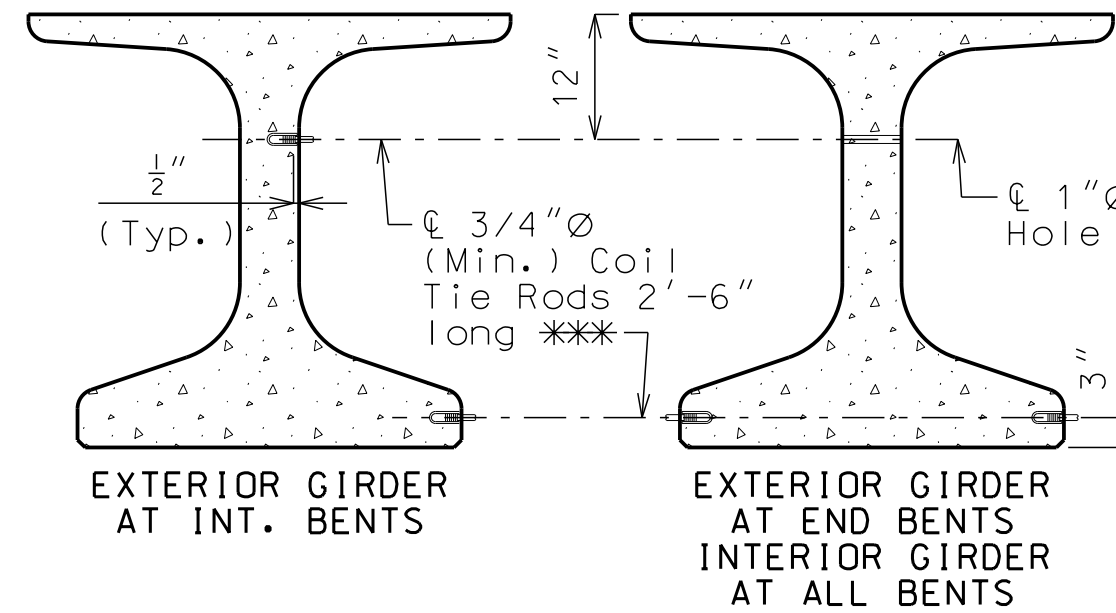
Galvanize the 1/2" bearing plate (ASTM A709 Grade 36) in accordance with ASTM A123.

Cost of furnishing, galvanizing, and installing the 1/2" bearing plate (ASTM A709 Grade 36) and welded studs in the prestressed girder will be considered completely covered by the contract unit price for Prestressed Concrete NU-Girder.



DETAILS OF VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum and steel interm. diaphragm bolt connections by 6" minimum.



DETAILS OF COIL TIES

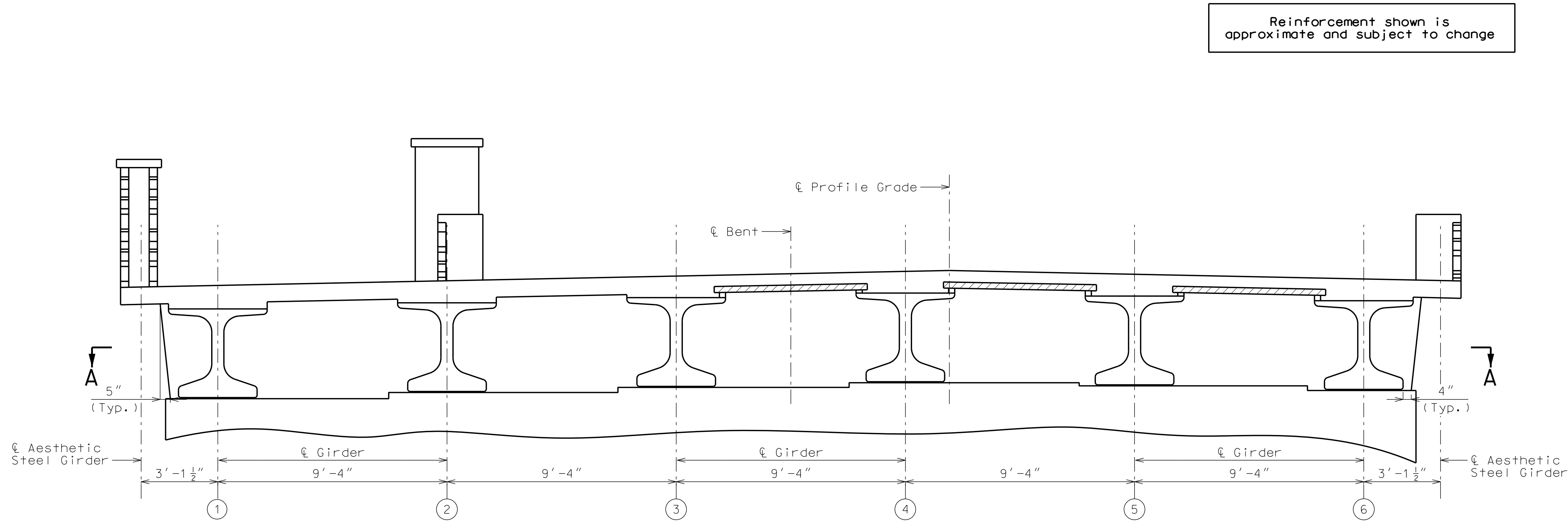
Cast 1" hole horizontally in girder for #6 bar 5'-6" long and clear reinforcing steel or strands by 1 1/2" minimum.

*** Length of coil tie rods at exterior face of exterior girders at end bents = __-__.

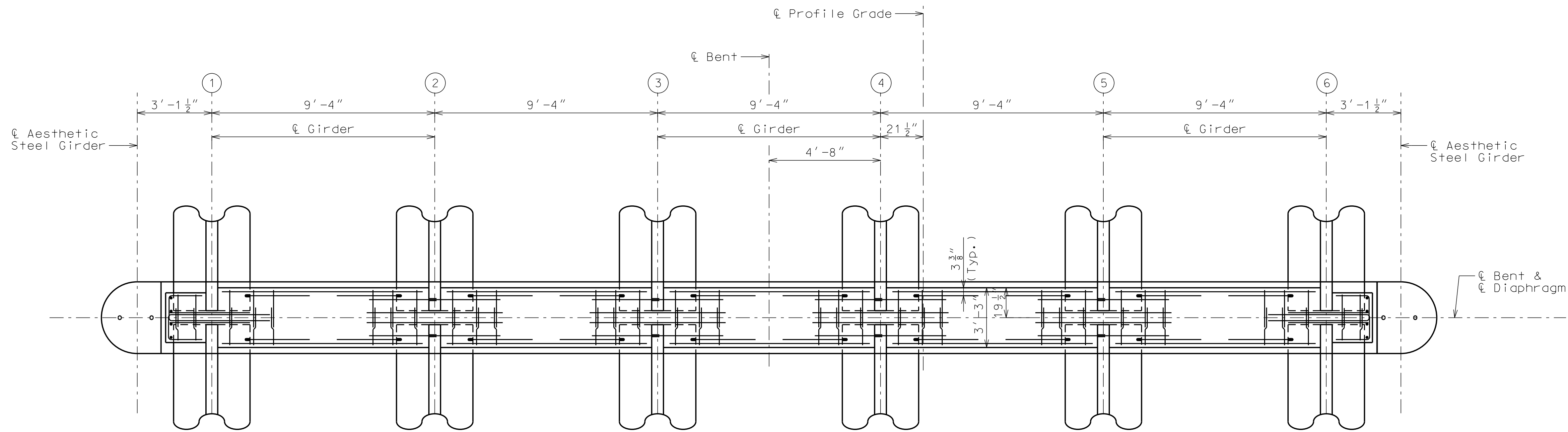
Note: This drawing is not to scale. Follow dimensions.

East Bridge : 60% Plans

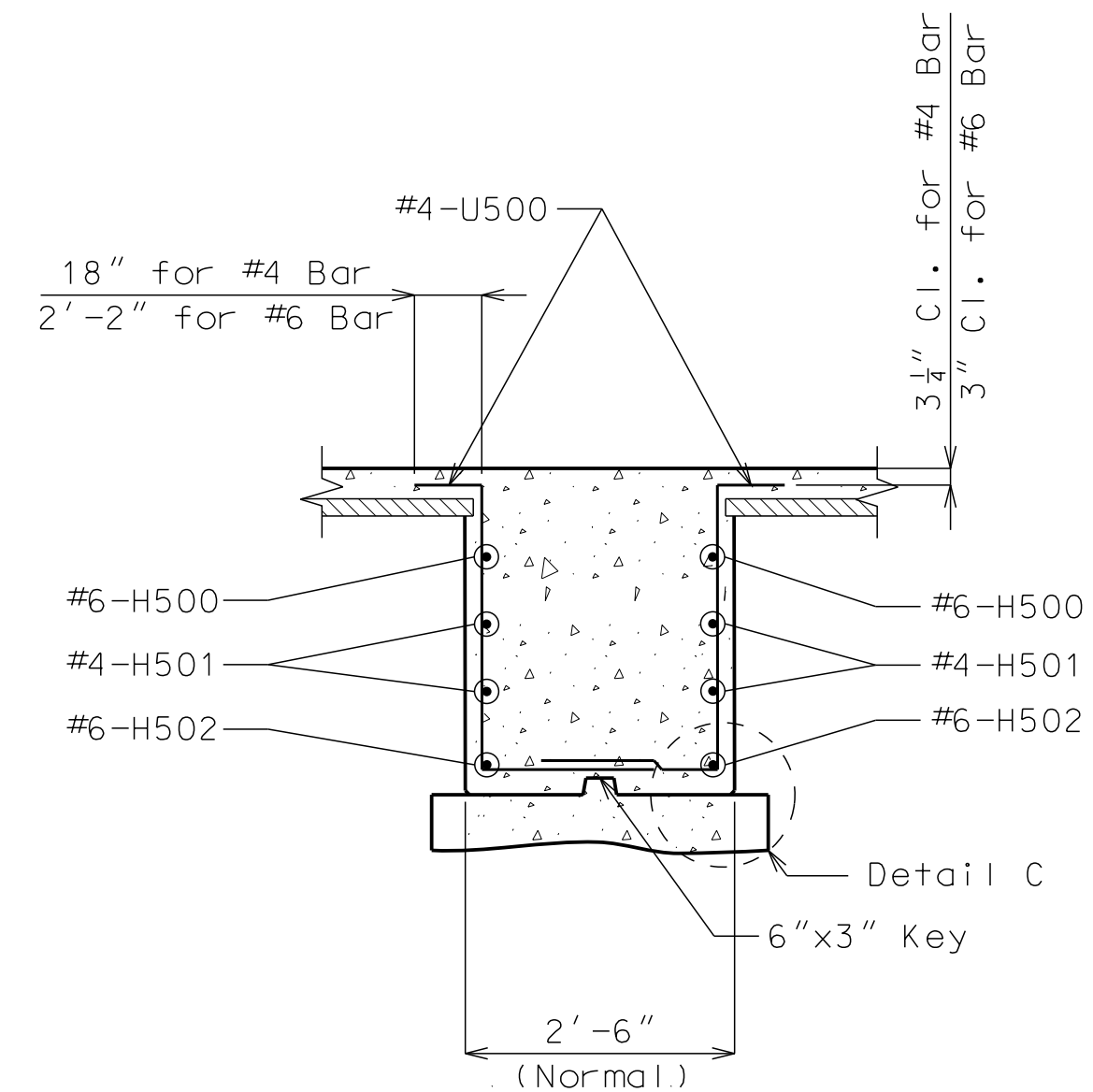
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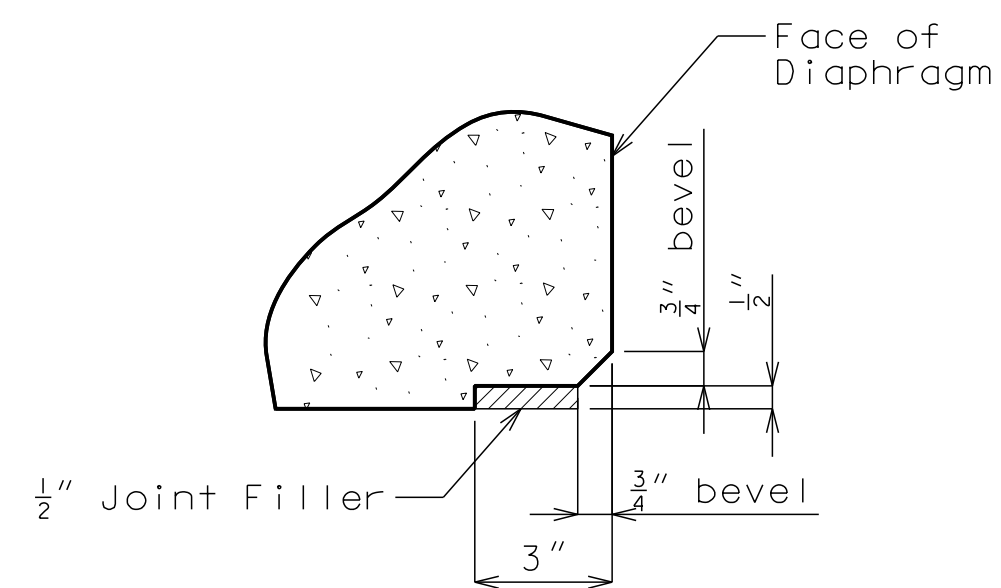
SECTION NEAR INTERMEDIATE BENT



SECTION A-A



SECTION B-B



DETAIL C

Notes:

- Diaphragms at Intermediate Bents shall be built vertically.
- All U-bars in the diaphragm are to be placed parallel to ℓ Roadway.
- For locations of Strand Tie Bars, see Sheets No. 14 - 19.
- For locations and details of Coil Tie Rods, see Sheets No. 14 - 19.

DETAILS OF CONCRETE DIAPHRAGMS AT INTERMEDIATE BENTS NO. 2 & 3

Note: This drawing is not to scale. Follow dimensions.

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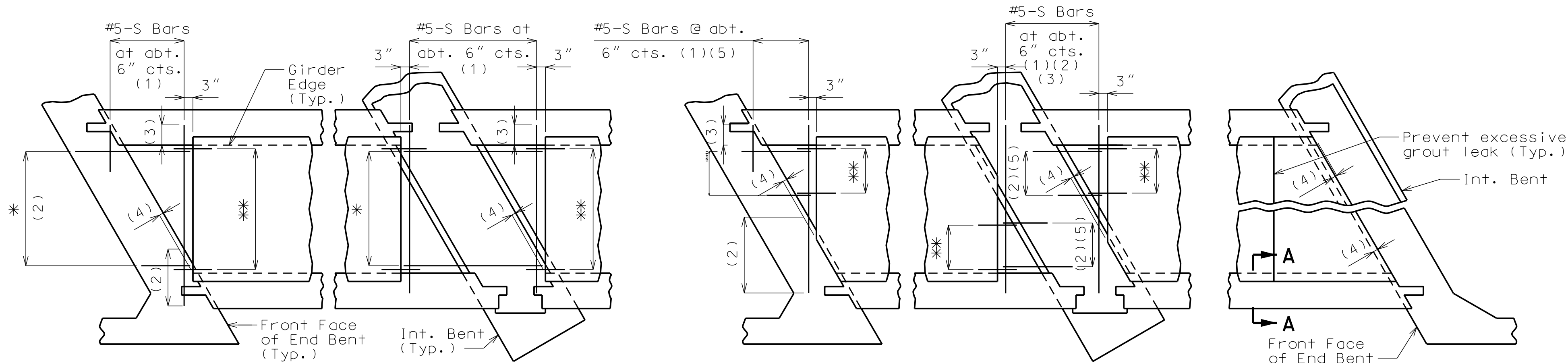
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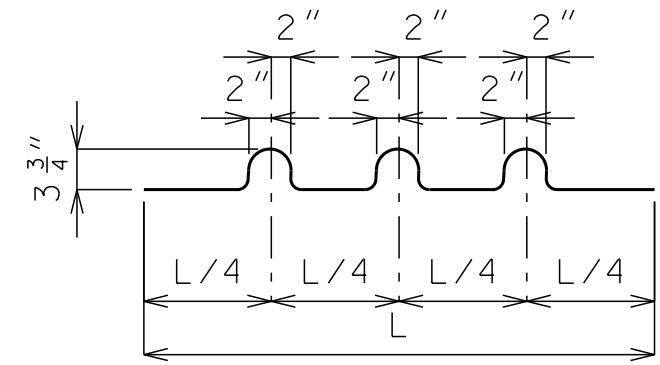
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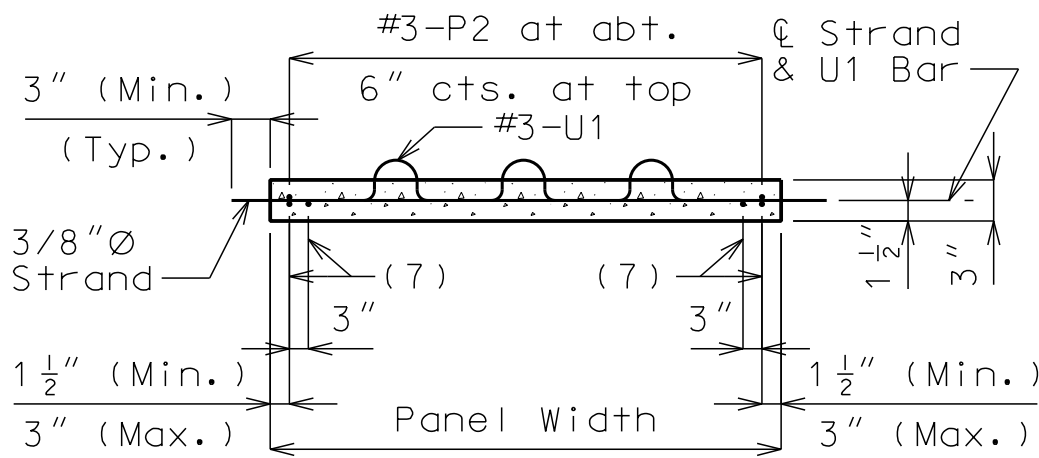
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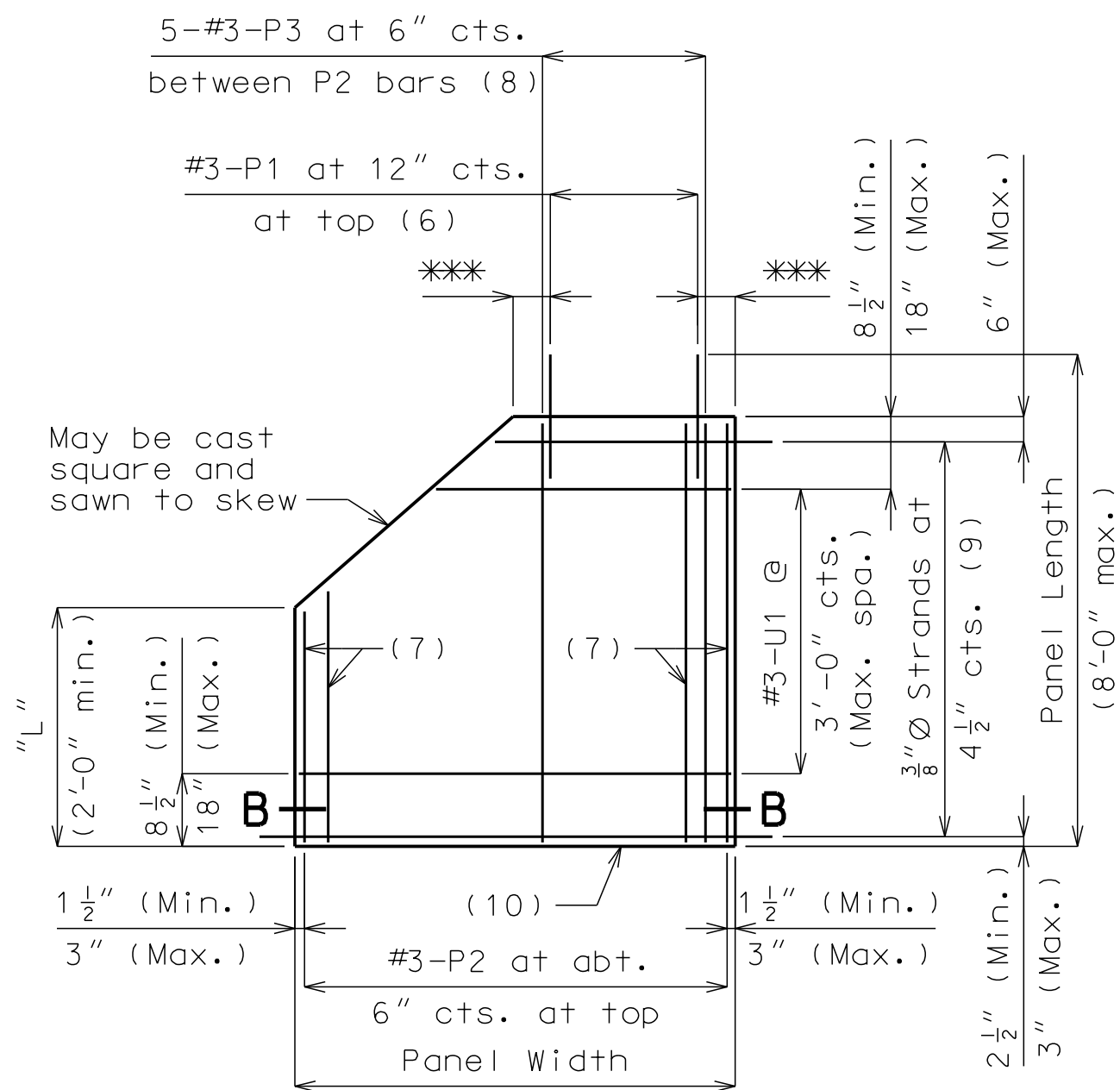
SQUARED END PANELS OR TRUNCATED END PANELS
PLAN SHOWING PANELS PLACEMENT



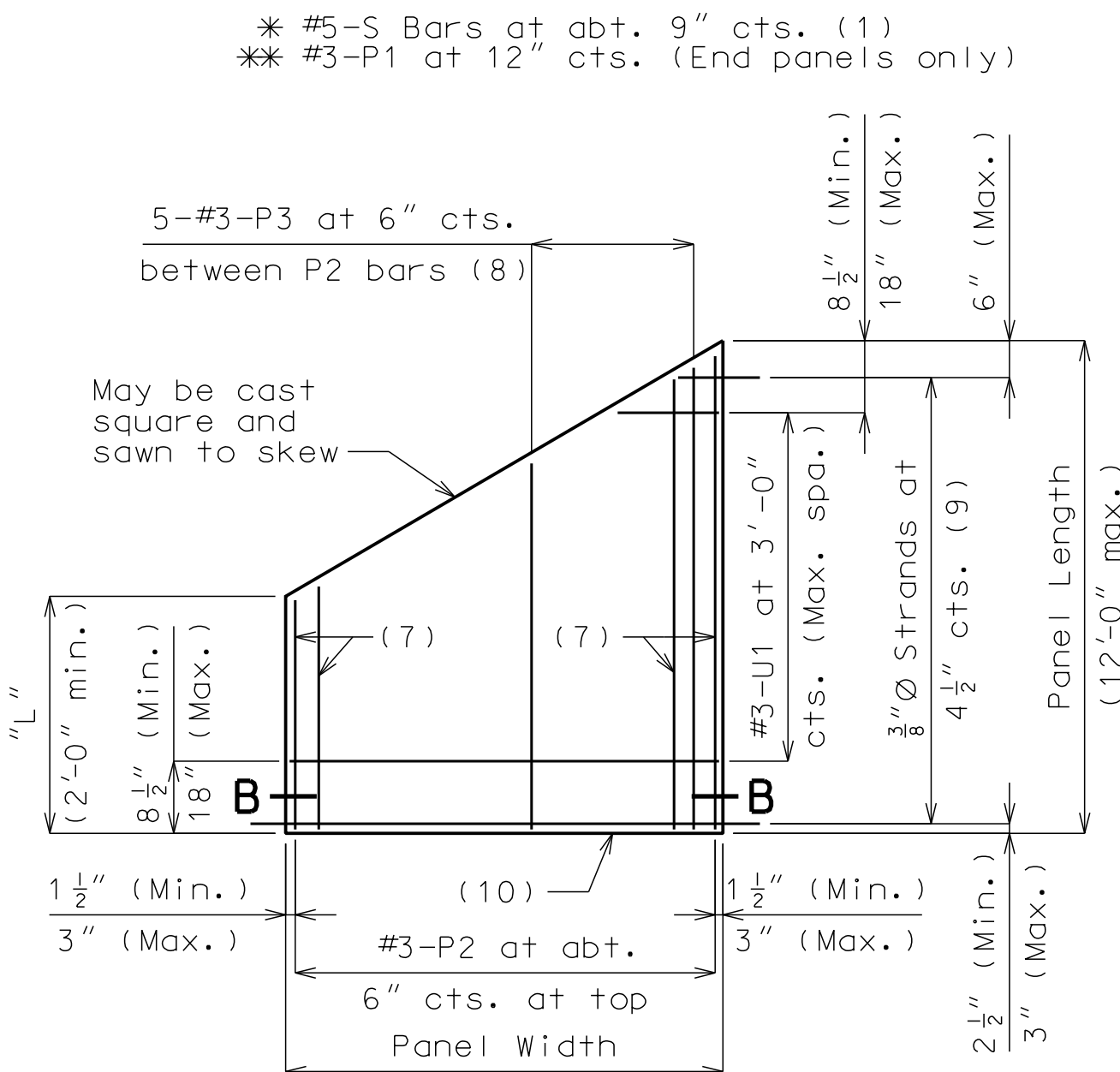
BENDING DIAGRAM FOR U1 BAR
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



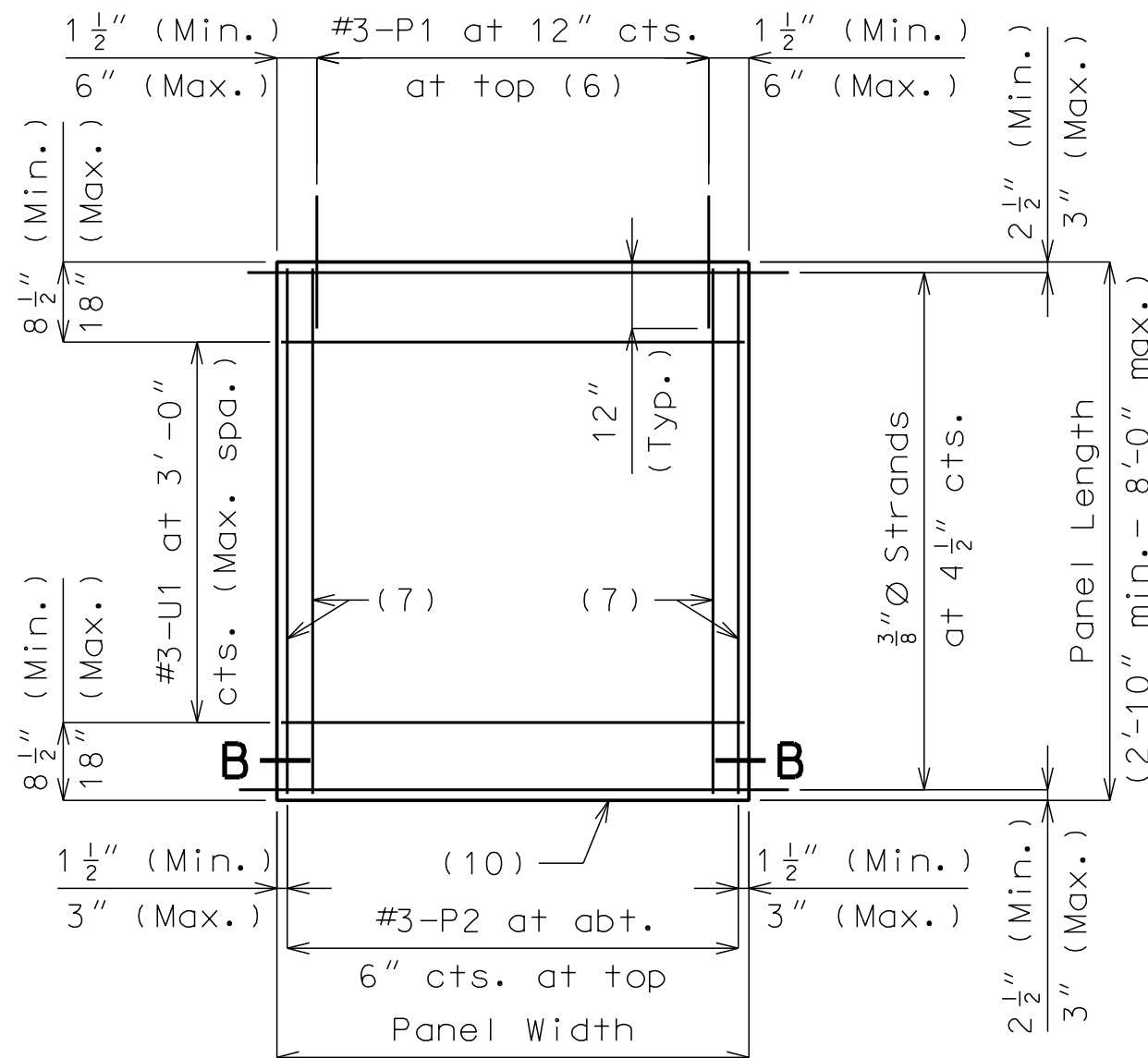
SECTION B-B



PLAN OF OPTIONAL TRUNCATED END PANEL
*** 3" (Min.), 6" (Max.)

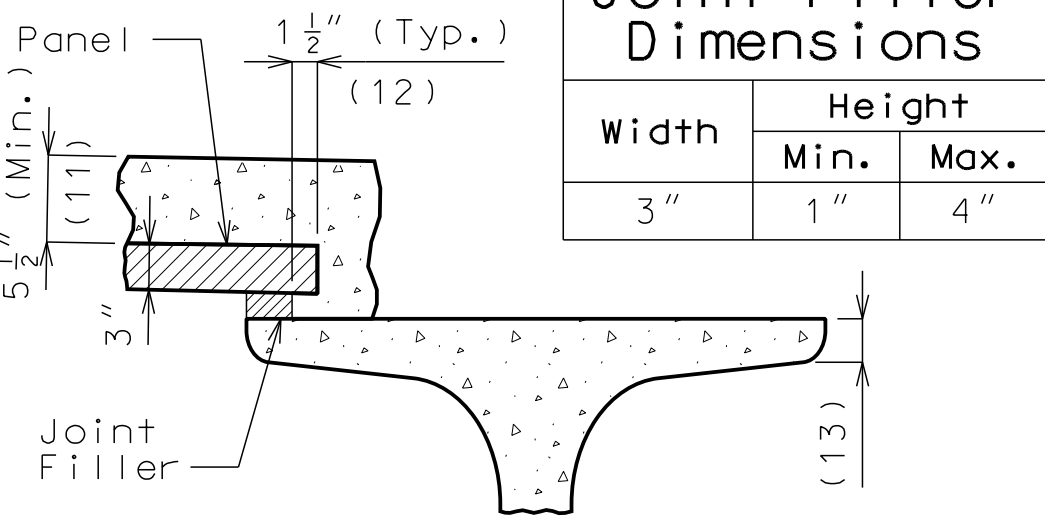


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF SQUARED PANEL

SKEWED END PANELS



SECTION A-A

Reference Notes:

Plan of Panels Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

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General Notes:

Prestressed Panels:

Concrete for prestressed panels shall be Class A-1 with $f'c = 6,000$ psi, $f'ci = 4,000$ psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft., with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:

#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:

Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. XX for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/4 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

Note: This drawing is not to scale. Follow dimensions.

DETAILS OF PRESTRESSED PANELS

Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059

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Diagram showing camber for spans 1-2, 2-3, and 3-4. Each span is divided into 4 equal spaces, 10 equal spaces, and 4 equal spaces. The diagram shows the centerline of the bridge stiffeners and the camber curve.

CAMBER DIAGRAM

Note:
Camber includes allowance for vertical curve and for dead load deflection due to concrete slab, barrier curbs, pedestrian curb and structural steel.
Longitudinal dimensions are measured horizontally.

Diagram showing dead load deflection for spans 1-2, 2-3, and 3-4. Each span is divided into 4 equal spaces, 10 equal spaces, and 4 equal spaces. The diagram shows the centerline of the bridge stiffeners and the deflection curve.

DEAD LOAD DEFLECTION

Note:
15% of dead load deflection is due to the weight of structural steel.
Dead Load deflection includes weight of structural steel, concrete slab, barrier curbs, and pedestrian curb & pedestrian fence.

GIRDER NO.	SPAN LENGTHS (℄ Brg.- ℄ Brg.)		
	Span (1-2)	Span (2-3)	Span (3-4)
1	--'-----	--'-----	--'-----
2	--'-----	--'-----	--'-----

Diagram showing typical slab elevations. It includes the theoretical bottom of slab elevations at the centerline of the girder, prior to forming for the slab. It also shows deflections due to the weight of the slab, barrier curbs, and pedestrian curb & pedestrian fence.

TYPICAL SLAB ELEVATIONS DIAGRAM

**Theoretical Bottom of Slab Elevations at ℄ of Girder (Prior to forming for slab)

Span 1 (℄ Brg.-℄ Brg.)											
Gdr. No.	℄ Brg Bent No. 1	.25	.50	.75	℄ Brg Bent No. 2						
1	----	----	----	----	----						
2	----	----	----	----	----						
Span 2 (℄ Brg.-℄ Brg.)											
Gdr. No.	℄ Brg Bent No. 2	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg Bent No. 3
1	----	----	----	----	----	----	----	----	----	----	----
2	----	----	----	----	----	----	----	----	----	----	----
Span 3 (℄ Brg.-℄ Brg.)											
Gdr. No.	℄ Brg Bent No. 3	.25	.50	.75	℄ Brg Bent No. 4						
1	----	----	----	----	----						
2	----	----	----	----	----						

** Elevations are based on a constant slab thickness of 8½" and include allowance for theoretical dead load deflections due to weight of Slab, Barrier Curbs, and Pedestrian Curb & Pedestrian Fence.

CAMBER, HAUNCHING, & ELEVATIONS (STEEL)

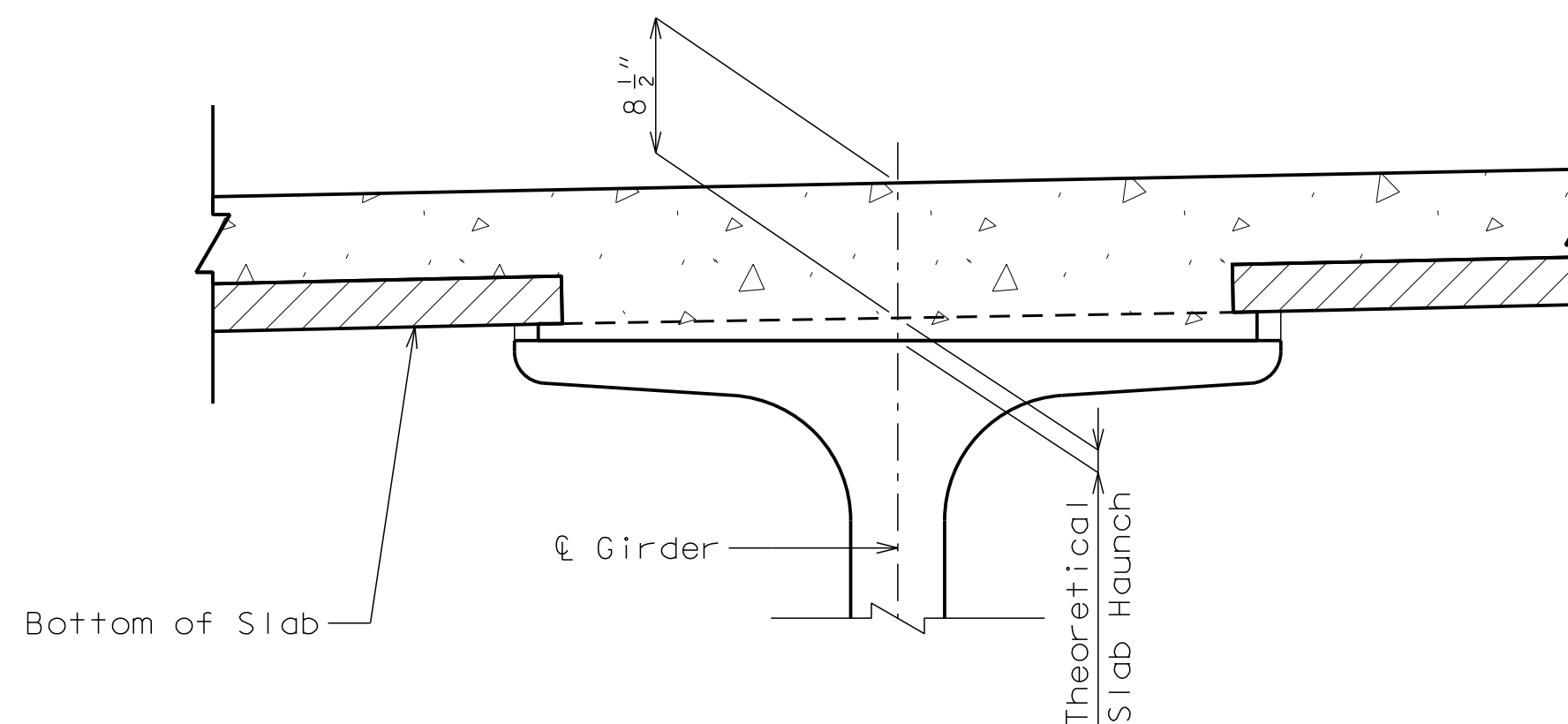
Note: This drawing is not to scale. Follow dimensions.

Diagram showing the theoretical slab haunch. It includes the bottom of the slab, the centerline of the girder, and the haunch dimension. The diagram is enclosed in a cloud-like border.

Notes:
* Dimension (bottom of slab to top of web) may vary if girder camber after erection differs from plan camber by more than or less than the % of D.L. deflection due to weight of structural steel. No payment will be made for any adjustment in forming or additional concrete required for variation in haunching.
Increase the haunch by 1/2 inch ± more than what is required to make one size shear connector work for both CIP and SIP options.

THEORETICAL SLAB HAUNCH

East Bridge : 60% Plans

[illegible]

THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Theoretical Bottom of Slab
Elevation at ζ of Girder
(Prior to Forming for Slab)

Deflections due to weight
of slab and barrier curb.

Finished bottom of
slab elevations

ζ Bearing

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)																					
	Span (1-2) (48'-4½" C brg - C brg.)					Span (2-3) (77'-8" C brg - C brg.)										Span (3-4) (67'-4" C brg - C brg.)					
	C brg.	.25	.50	.75	C brg.	C brg.	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	C brg.	C brg.	.25	.50	.75	C brg.
Girder No. 1	769.64	769.84	770.03	770.19	770.33	770.34	770.47	770.59	770.70	770.80	770.88	770.94	770.99	771.02	771.04	771.05	771.06	771.20	771.28	771.31	771.28
Girder No. 2	769.73	769.94	770.12	770.29	770.43	770.45	770.58	770.71	770.82	770.92	771.00	771.06	771.11	771.15	771.17	771.18	771.19	771.34	771.43	771.46	771.44
Girder No. 3	769.70	769.91	770.10	770.26	770.41	770.43	770.57	770.69	770.81	770.91	771.00	771.06	771.12	771.15	771.18	771.19	771.20	771.36	771.46	771.49	771.50
Girder No. 4	769.45	769.67	769.86	770.03	770.19	770.21	770.34	770.48	770.59	770.70	770.79	770.86	770.91	770.95	770.98	771.00	771.01	771.17	771.27	771.32	771.35
Girder No. 5	769.21	769.43	769.63	769.80	769.96	769.98	770.12	770.25	770.38	770.48	770.57	770.65	770.70	770.75	770.78	770.80	770.81	770.97	771.09	771.14	771.17

Elevations are based on a constant slab thickness of $8\frac{1}{2}$ " and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier curb.

SLAB DETAILS

Note: This drawing is not to scale. Follow dimensions.

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22	33											
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INT. BENT DIAPHRAM DATA	
INT. BENT DIAPHRAM	DIM. A
BENT 2	
GIRDER 1-2	10'-11 5/8"
GIRDER 2-3	10'-10 1/2"
GIRDER 3-4	10'-9 7/16"
GIRDER 4-5	10'-8 1/2"
BENT 3	
GIRDER 1-2	10'-11 5/8"
GIRDER 2-3	10'-10 1/2"
GIRDER 3-4	10'-9 7/16"
GIRDER 4-5	10'-8 1/2"

DIAPHRAGM DETAILS

Note: This drawing is not to scale. Follow dimensions.

Notes:

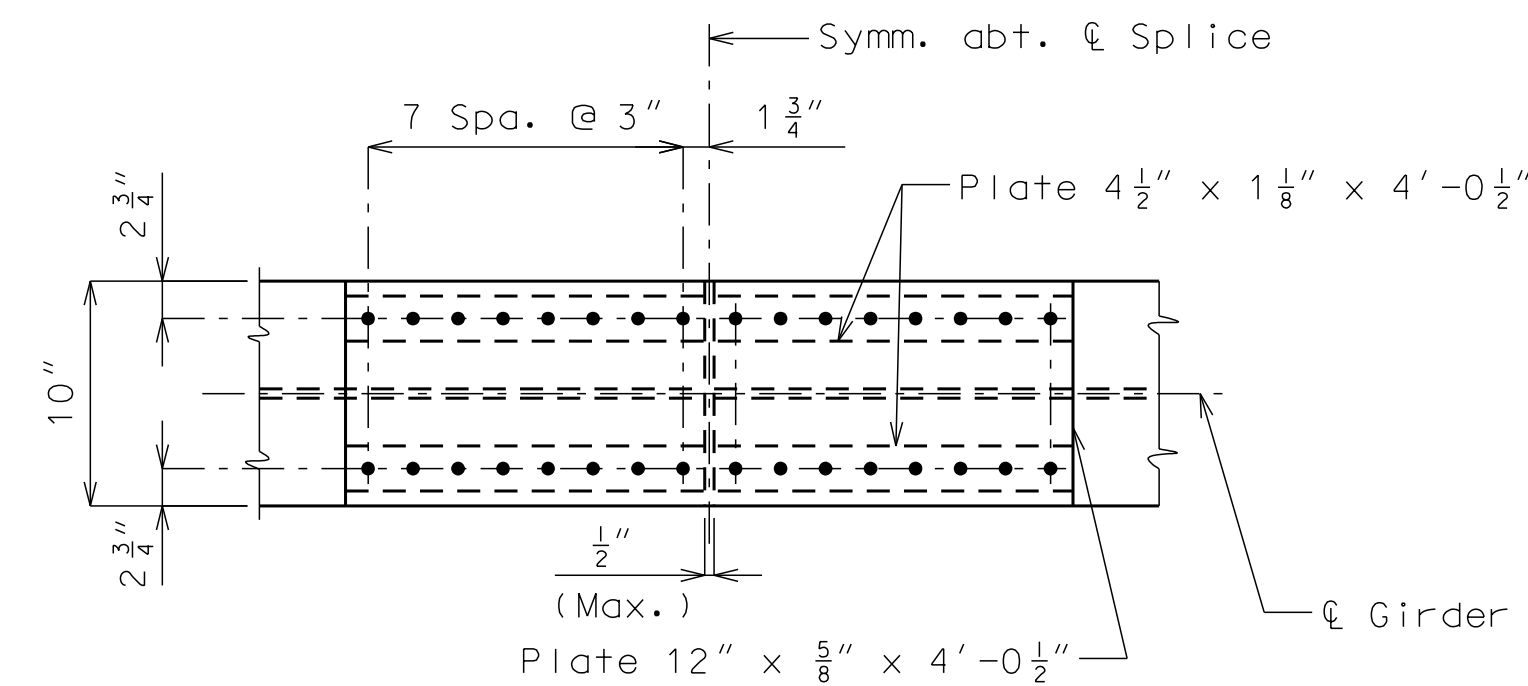
All structural steel for diaphragms shall conform to the requirements of ASTM A709 Grade 50W.

All bolts shall be 3/4 inch high strength steel bolts with 13/16 inch Ø holes.

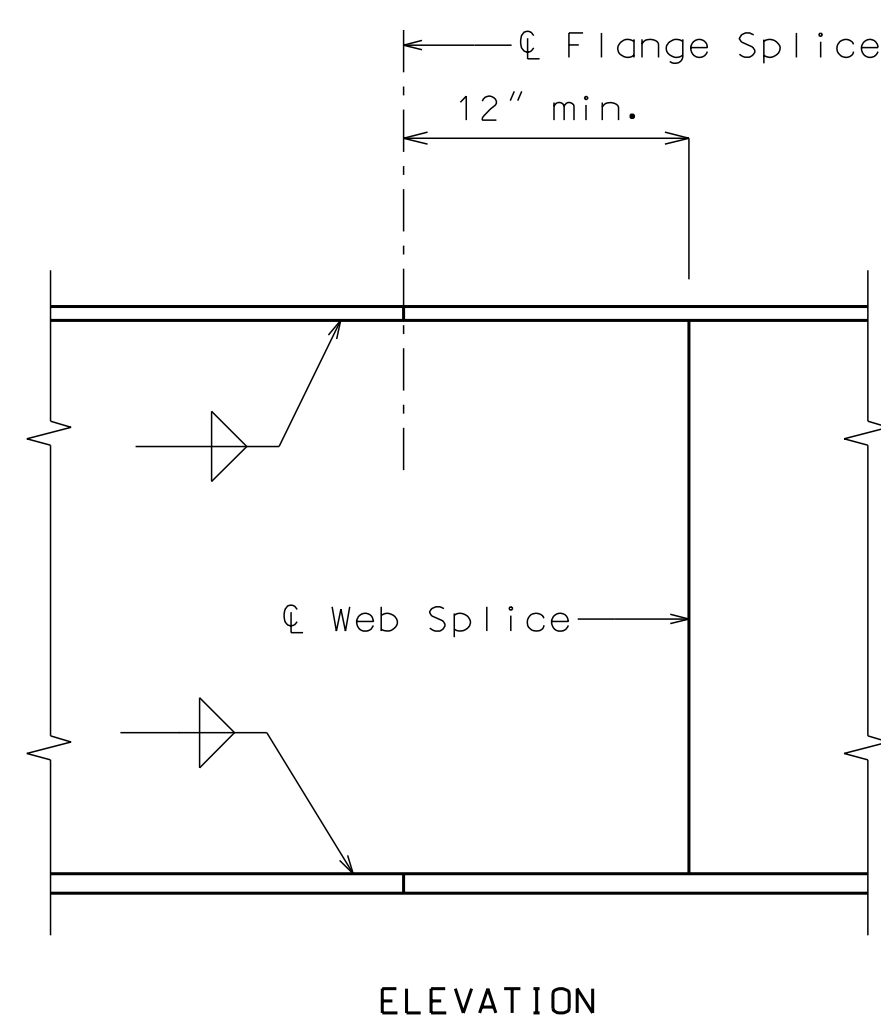
For locations of diaphragms, see Girder Elevation Sheets No. 17-21.

For Structural Steel Notes, see Plan of Structural Steel Sheet No. 16.

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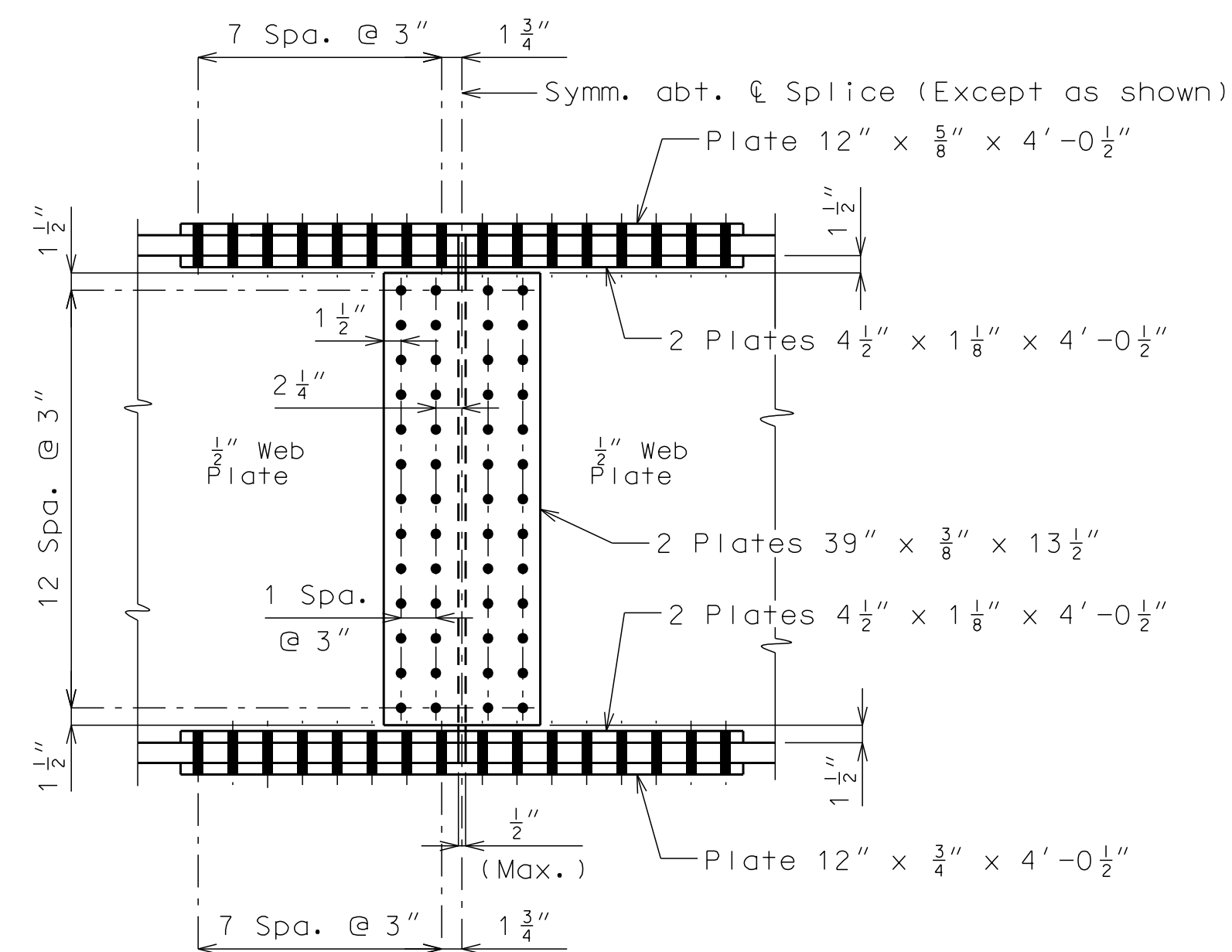


PLAN OF TOP FLANGE SPLICE PLATE



WELDED SHOP WEB AND FLANGE SPLICE

Welded shop web and flange splices may be permitted when detailed on the shop drawings and approved by the engineer. No additional payment will be made for optional welded shop web and flange splices.

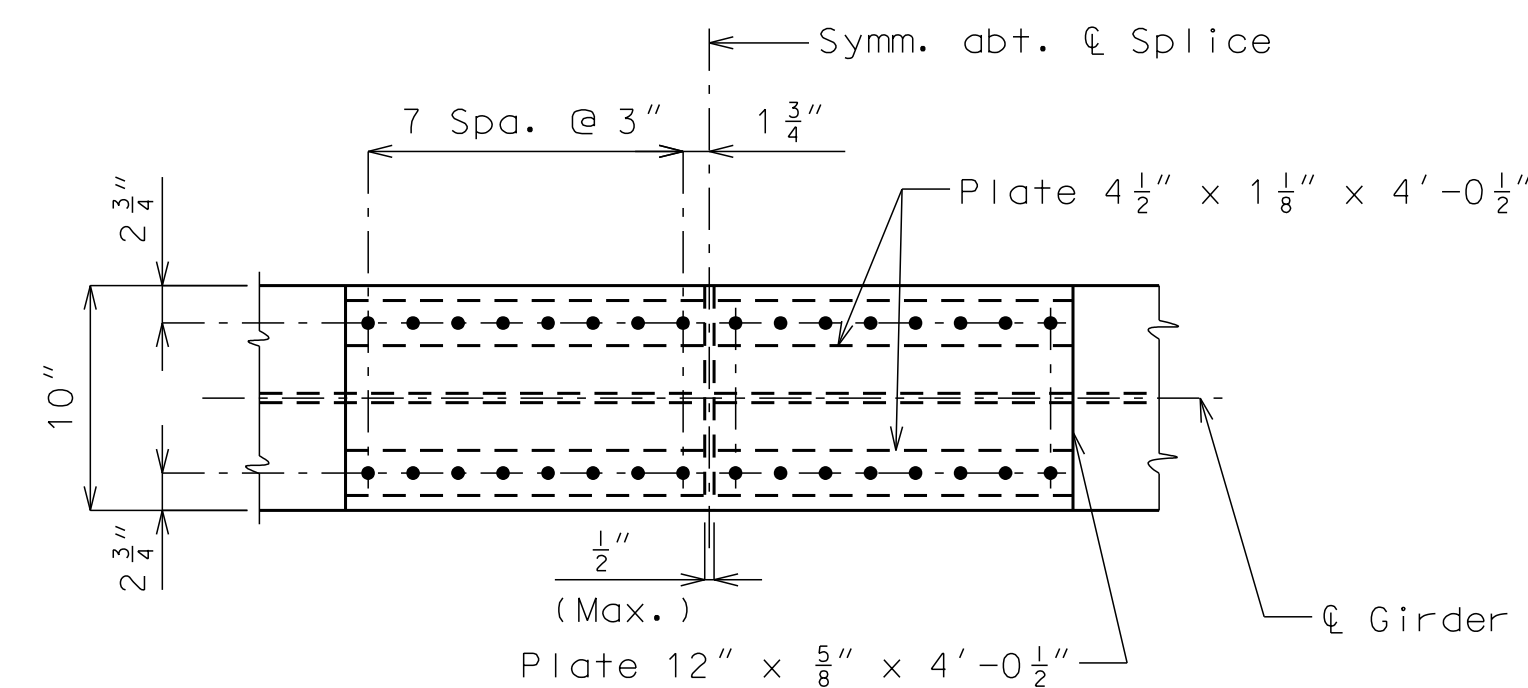


DETAIL OF BOLTED FIELD SPLICE

Use 7/8"Ø high strength bolts with 15/16"Ø holes.

Contact surfaces shall be in accordance with Sec 1081 for surface preparation.

Splice detail is
approximate and subject to change



PLAN OF BOTTOM FLANGE SPLICE PLATE

SPLICE PLATE DETAILS OF AESTHETIC STEEL GIRDER

Note: This drawing is not to scale. Follow dimensions.

Reinforcement shown is approximate and subject to change

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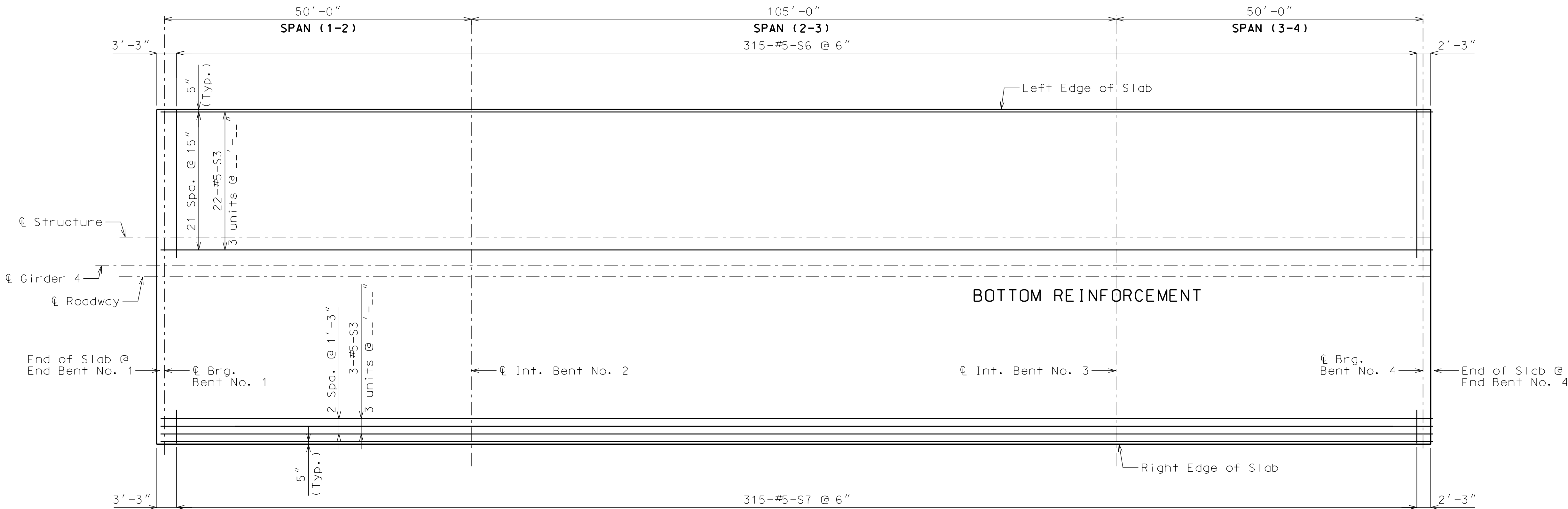
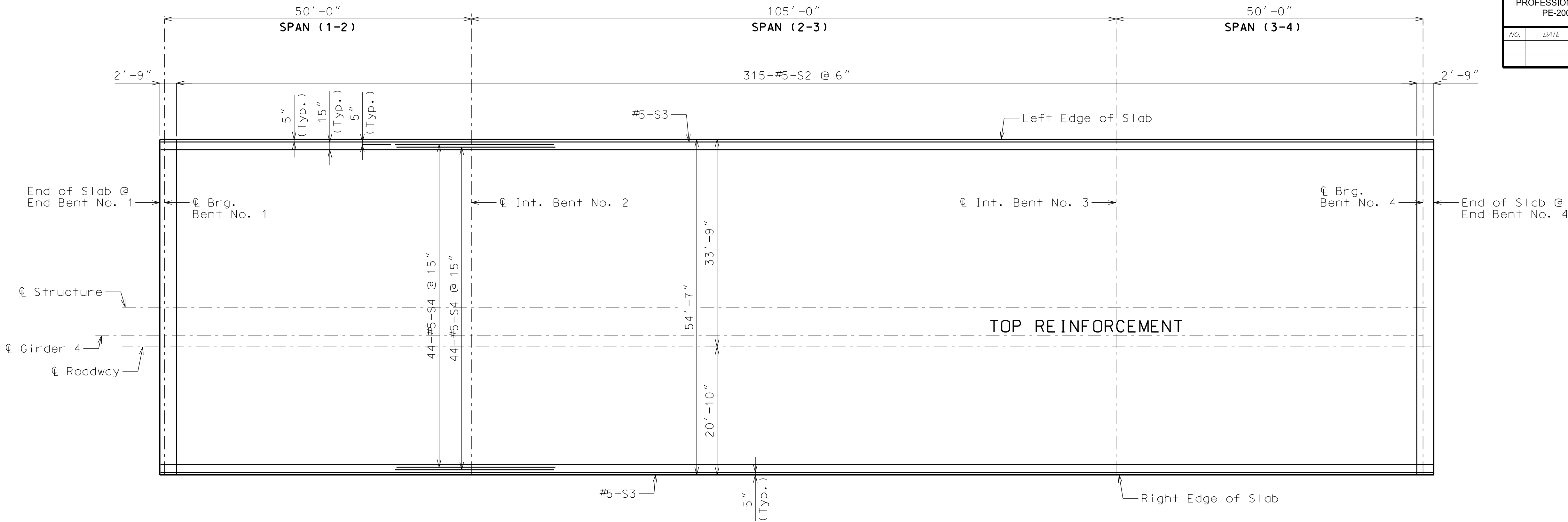
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PLAN OF SLAB SHOWING REINFORCING

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Diagram showing the elevation of the left barrier curb. It includes dimensions for spans (SPAN 1-2: 48'-9", SPAN 2-3: 70'-0", SPAN 3-4: 48'-9") and bents (Int. Bent No. 2, Int. Bent No. 3). Reinforcement details include #5-R1, #5-R2, and #5-R3 bars spaced as shown in the Part Elevation of Barrier Curb. The curb is 2'-0" high at the ends and 2'-6" high in the middle.

ELEVATION OF LEFT BARRIER CURB
Longitudinal dimensions are horizontal.

Diagram showing the elevation of the right barrier curb. It includes dimensions for spans (SPAN 1-2: 48'-9", SPAN 2-3: 70'-0", SPAN 3-4: 48'-9") and bents (Int. Bent No. 2, Int. Bent No. 3). Reinforcement details include #5-R1, #5-R2, and #5-R3 bars spaced as shown in the Part Elevation of Barrier Curb. The curb is 2'-0" high at the ends and 2'-6" high in the middle.

ELEVATION OF RIGHT BARRIER CURB
Longitudinal dimensions are horizontal.

Diagram showing the part elevation of the safety barrier curb. It includes dimensions for the curb height (10'-0" total, 6" base) and reinforcement details (2-#5-R Bars, #5-R1, R3 and R4 @ abt. 12" cts.).

PART ELEVATION OF SAFETY BARRIER CURB

Diagram showing the R-Bar Permissible Alternate Shape. It includes dimensions for the curb height (2'-8" total, 6" base) and reinforcement details (2-#5-R Bars, #5-R1, R3 and R4 @ abt. 12" cts.).

R-BAR PERMISSIBLE ALTERNATE SHAPE

SECTION A-A
Use a minimum lap of 3'-1" for #5 horizontal safety barrier curb bars.
The cross-sectional area above the slab = X.XX sq. ft.

CONVENTIONAL-FORMED SAFETY BARRIER CURB

Diagram showing the part elevation at a formed joint. It includes dimensions for the joint filler (1/4" Joint Filler (Sec 1057)) and sealant (Silicone Joint Sealant).

PART ELEVATION AT FORMED JOINT

Diagram showing the section thru a saw cut joint. It includes dimensions for the backer rod (3/8" Backer Rod) and sealant (Silicone Joint Sealant).

SECTION THRU SAW CUT JOINT
(Use when conduit is required)

General Notes

Top of safety barrier curb shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

All exposed edges of safety barrier curb shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Safety Barrier Curb per linear foot.

Concrete in the safety barrier curb shall be Class B-1.

Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Safety Barrier Curb.

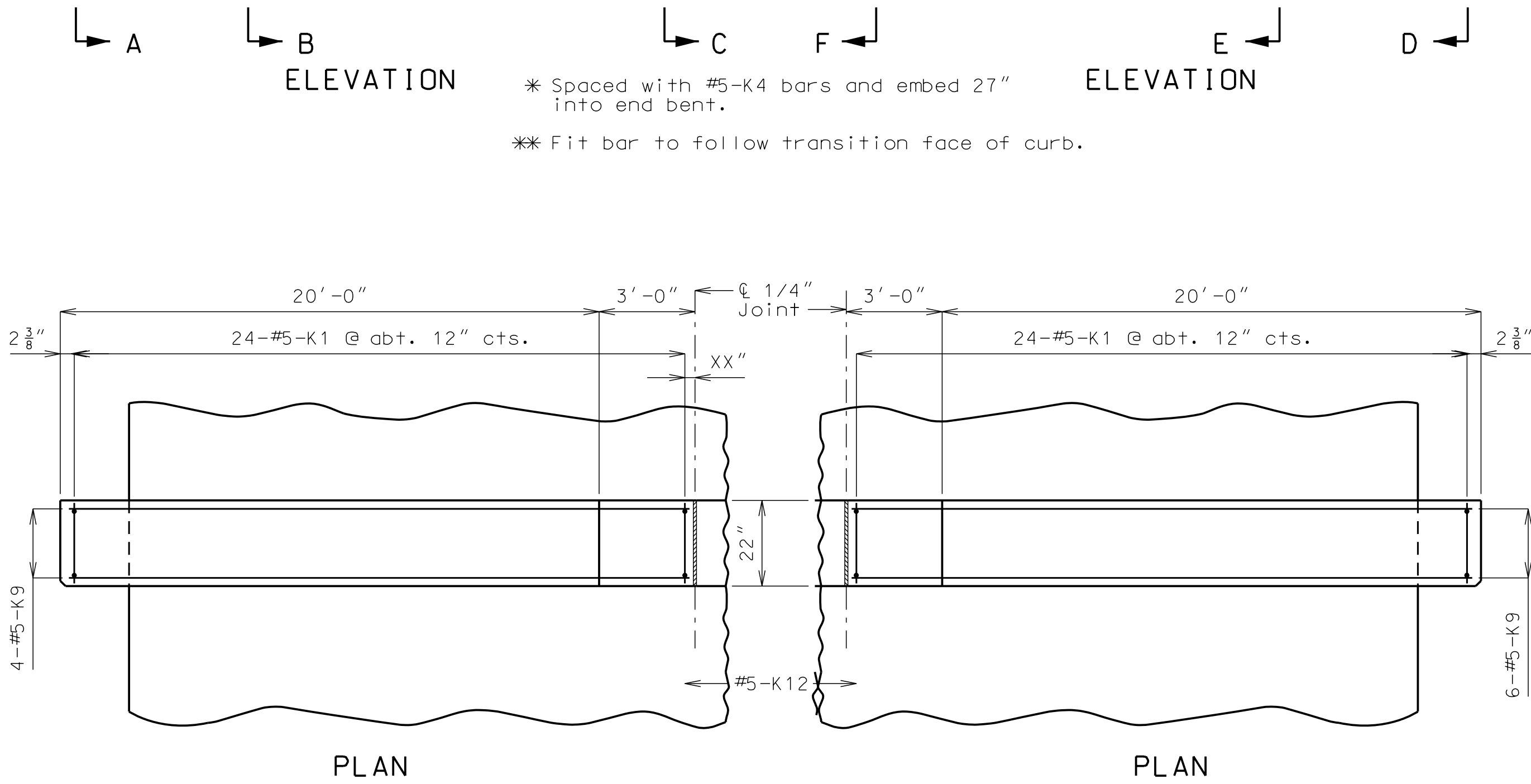
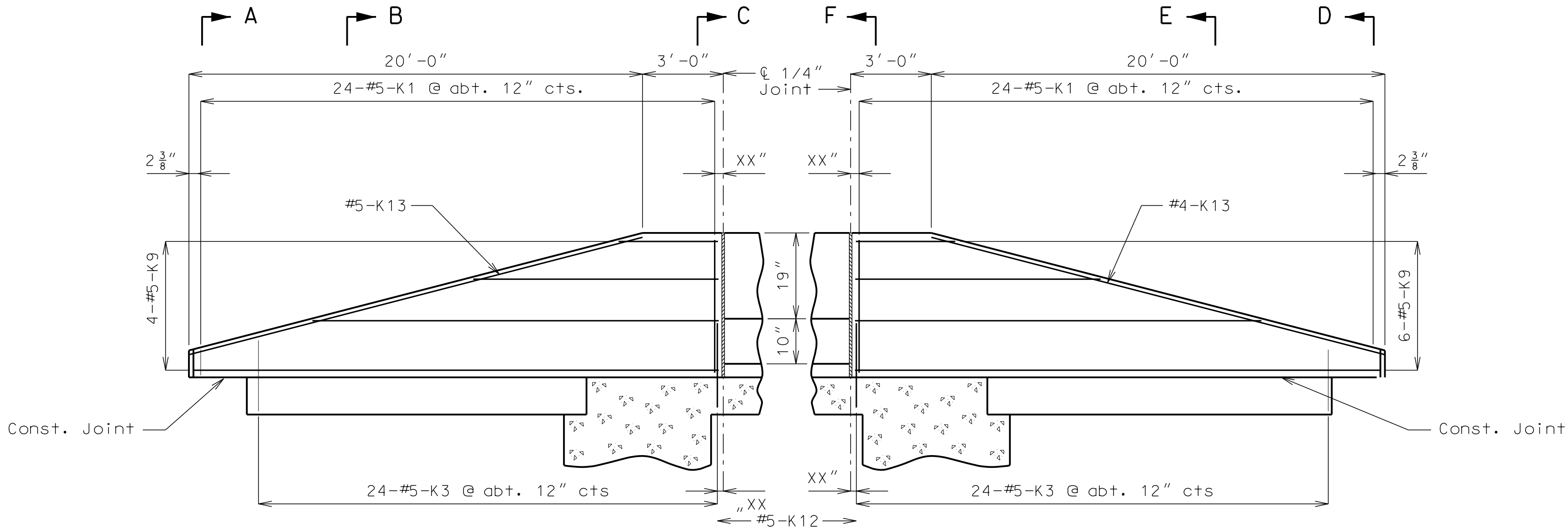
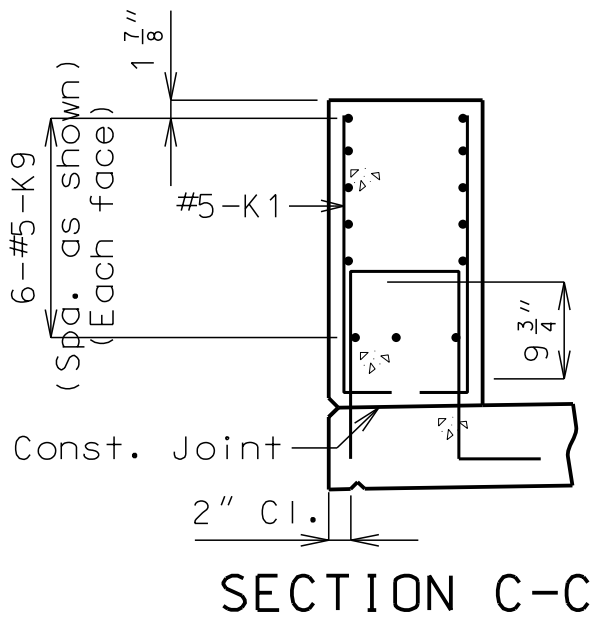
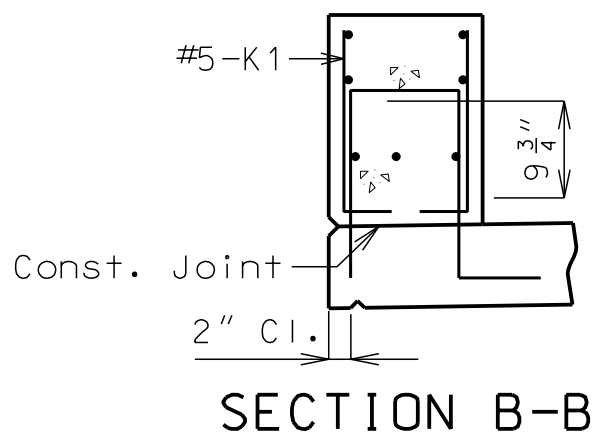
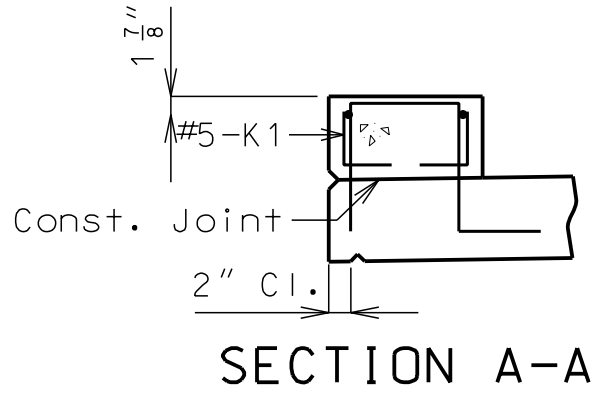
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Plastic waterstop shall not be used with saw cut joints.

Note: This drawing is not to scale. Follow dimensions.

East Bridge : 60% Plans

Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059



General Notes

Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Safety Barrier Curb.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

Use a minimum lap of 2'-7" between K9 and K10 or K13 bars.

CONVENTIONAL-FORMED SAFETY BARRIER CURB
AT END BENTS ON CONCRETE APPROACH SLAB

(Left barrier curb shown, right barrier curb similar)

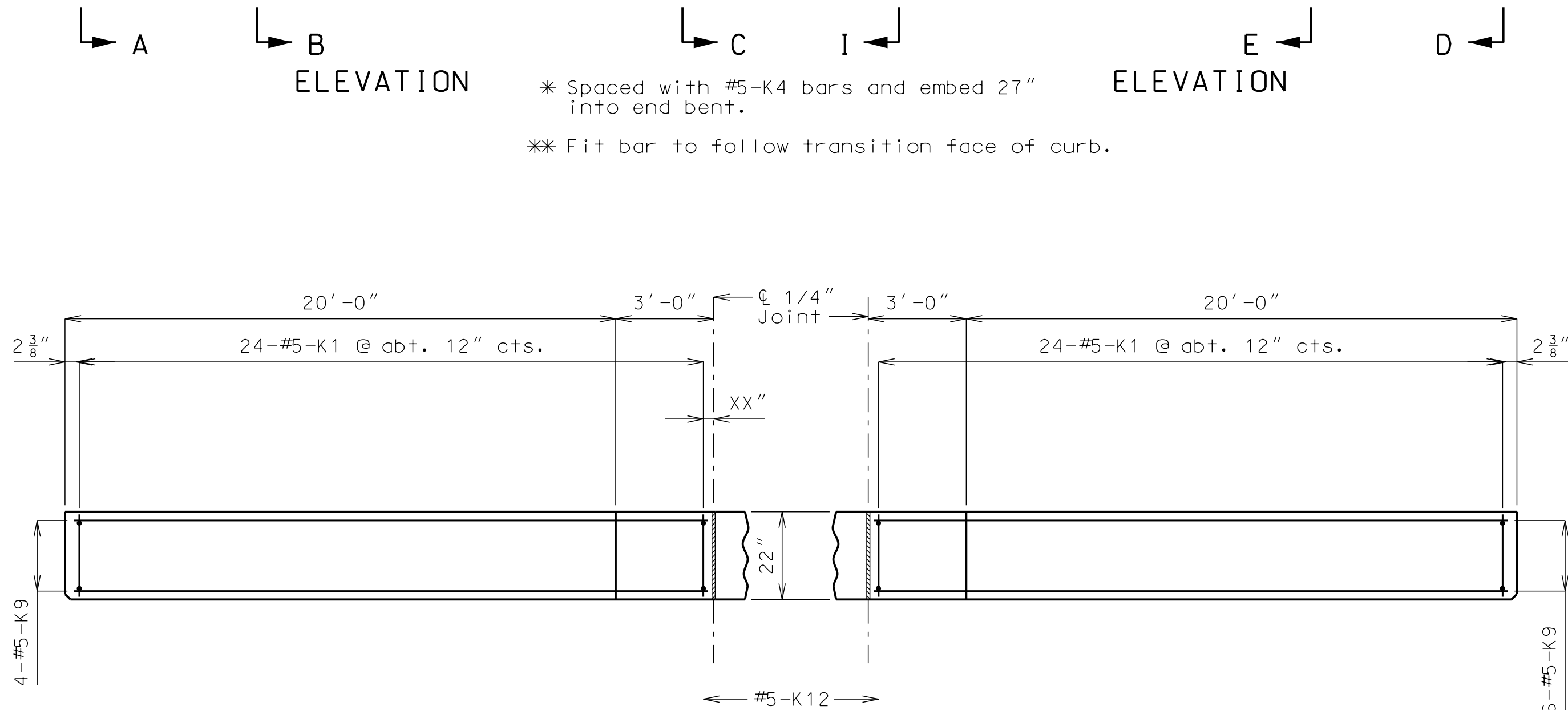
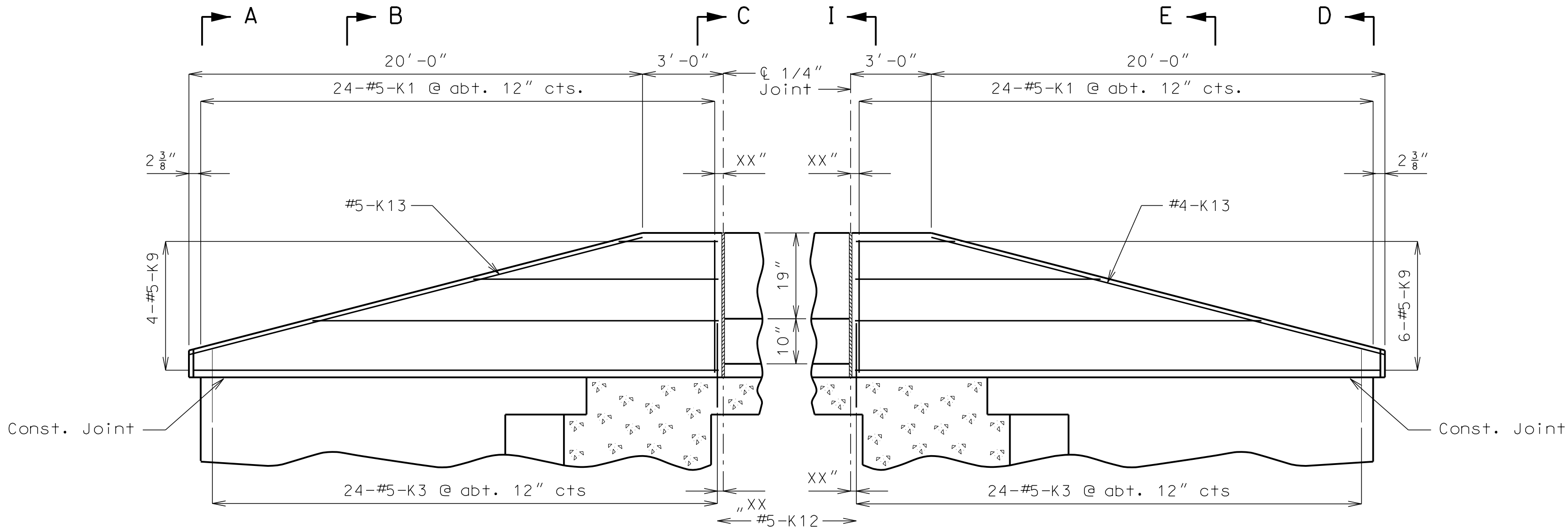
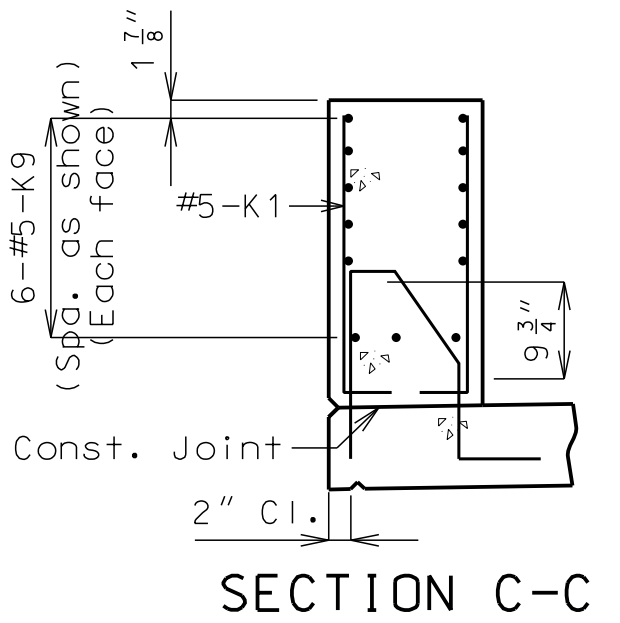
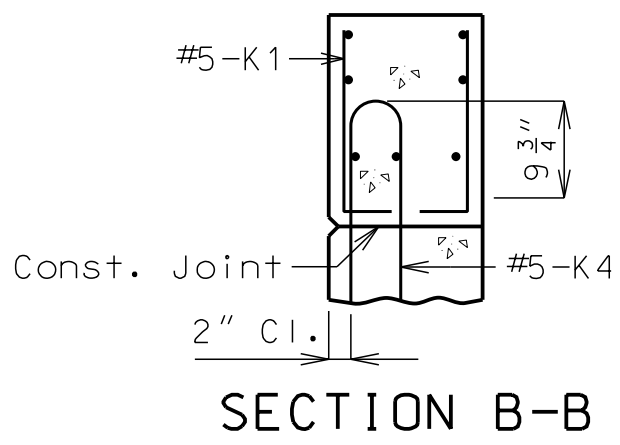
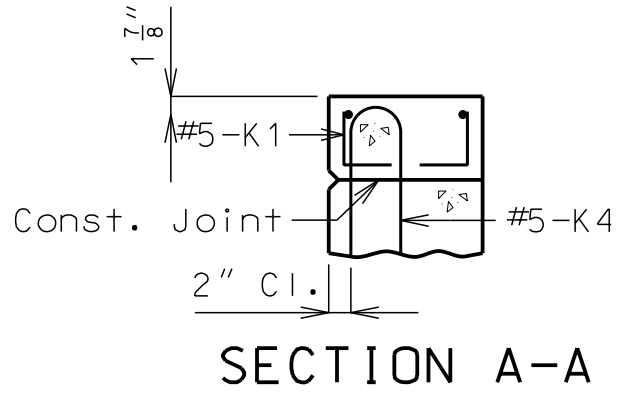
"PRELIMINARY PLANS NOT APPROVED FOR CONSTRUCTION."	DATE: 10-11-19	
	DESIGN BY: JJM	
	DRAWN BY: DWM	
	PROJECT NO.: 12720	
9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com	SHEET NO.	TOTAL SHEETS
	28	33
Bridge Plans Paragon Star Development Kansas City, Missouri		
JOSHUA J. MILLER PROFESSIONAL ENGINEER PE-2009010386		
NO.	DATE	REVISIONS
		BY
		APPROVED

Detailed
Checked

Note: This drawing is not to scale. Follow dimensions.

Sheet No. of

Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059



General Notes

Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Safety Barrier Curb.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

Use a minimum lap of 2'-7" between K9 and K10 or K13 bars.

CONVENTIONAL-FORMED SAFETY BARRIER CURB AT END BENTS ON WING

(Left barrier curb shown, right barrier curb similar)

Note: This drawing is not to scale. Follow dimensions.

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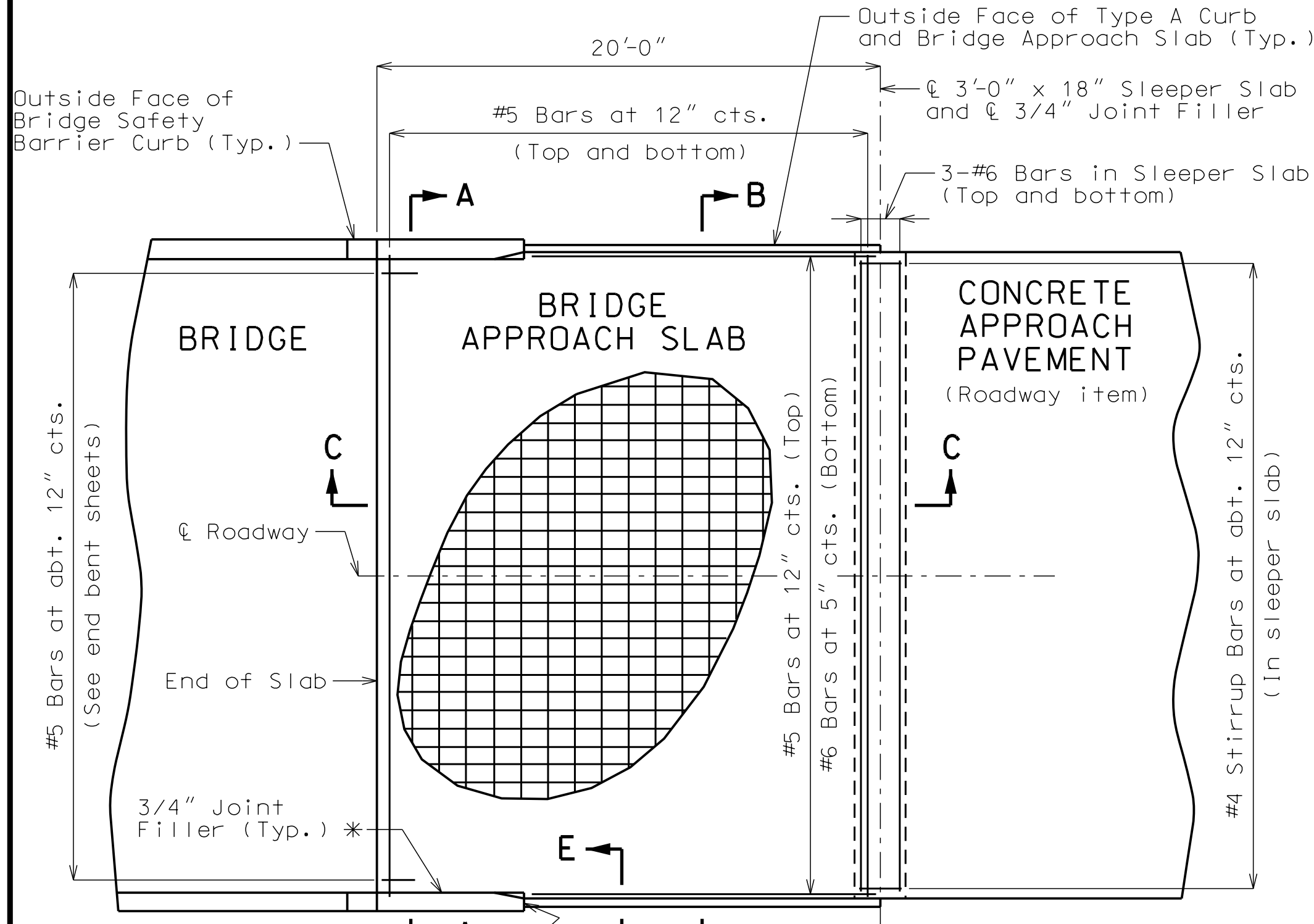
29 33

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PE-2009010386

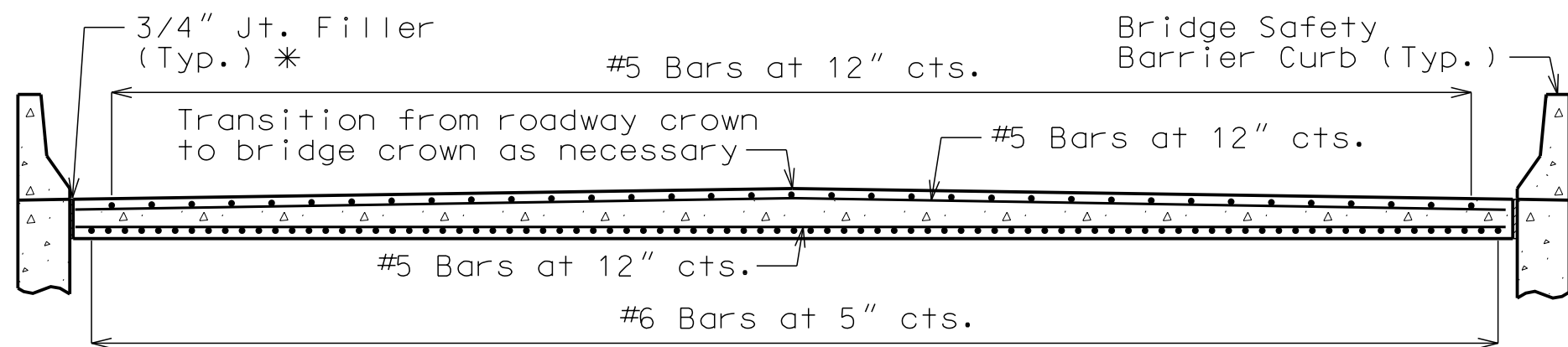
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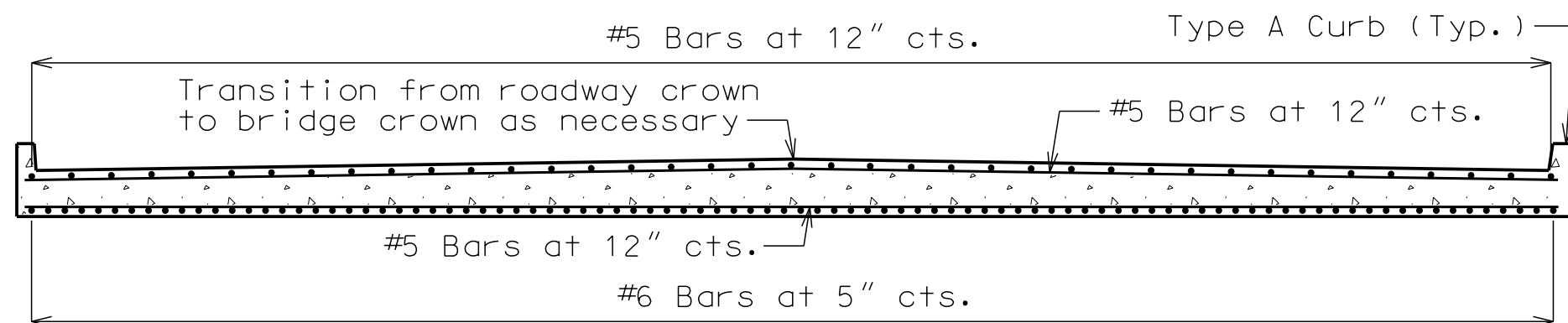
Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059



PART PLAN SHOWING REINFORCEMENT

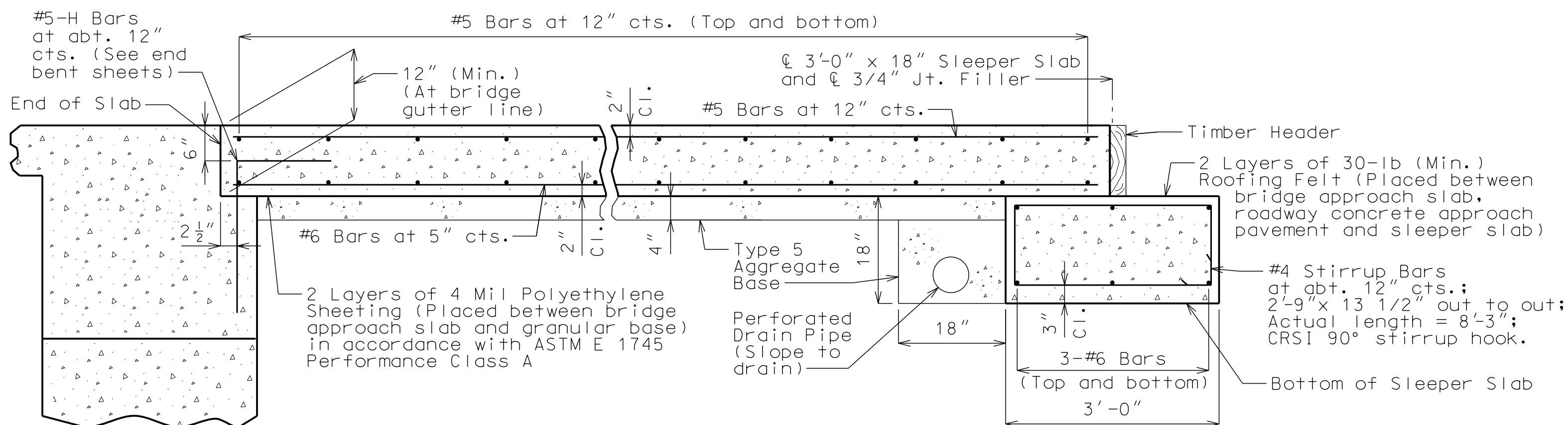


SECTION A-A



SECTION B-B

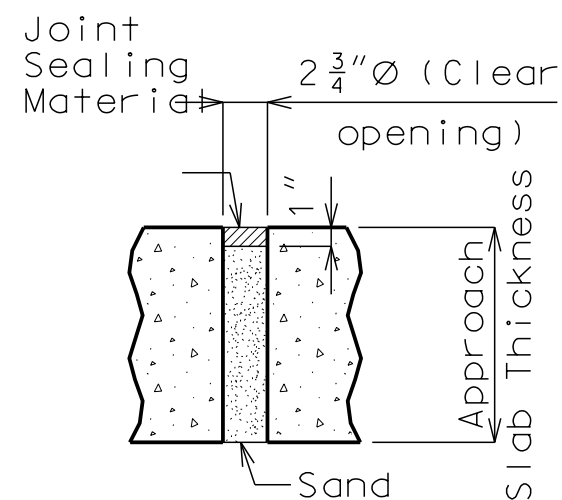
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION C-C

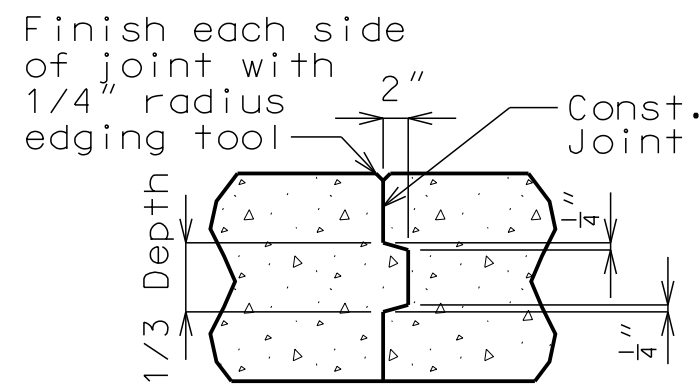
DETAILS OF BRIDGE APPROACH SLAB (MAJOR ROAD)

Note: This drawing is not to scale. Follow dimensions.

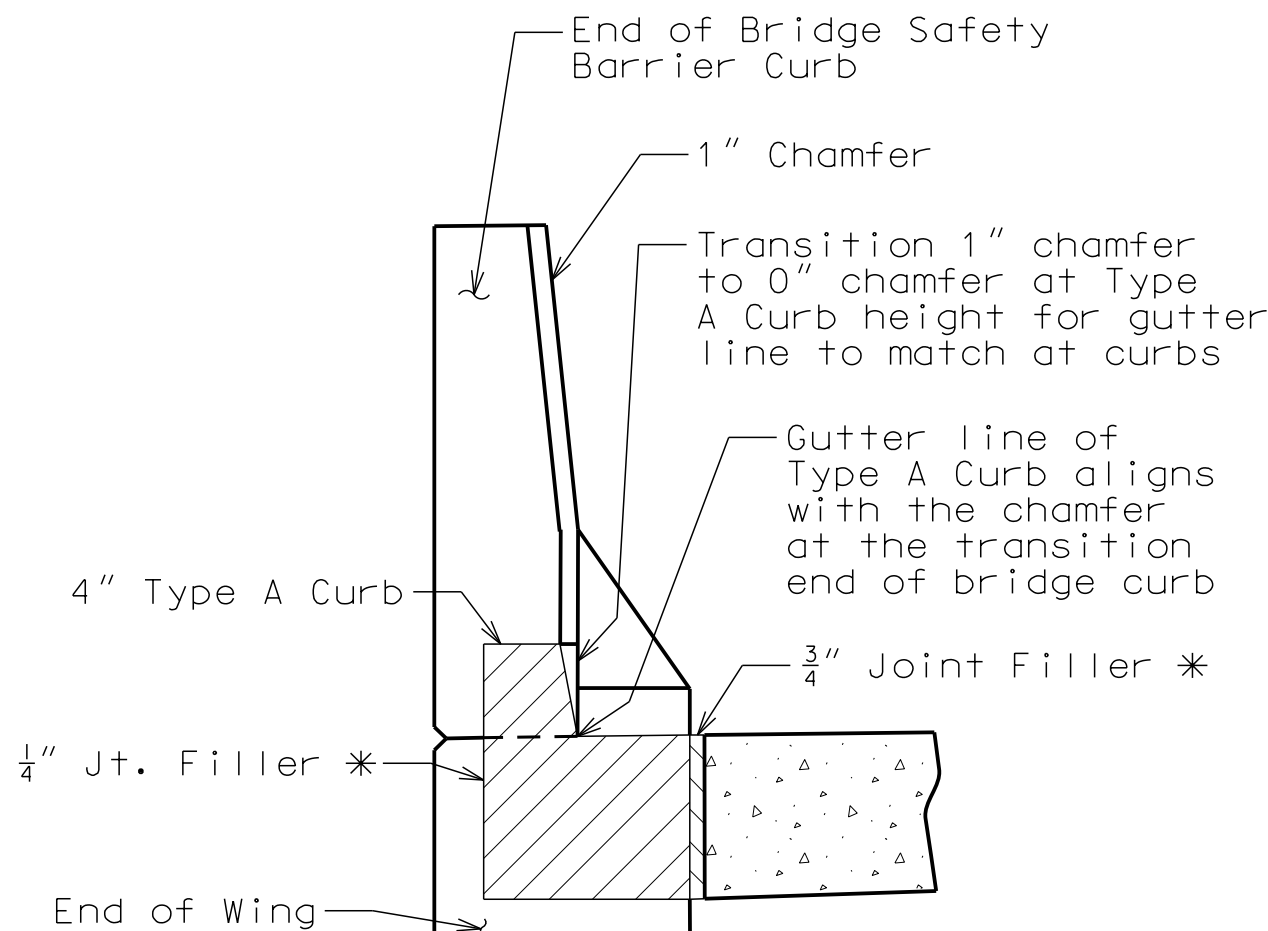


UNDERSEAL ACCESS HOLE DETAIL

(If required)

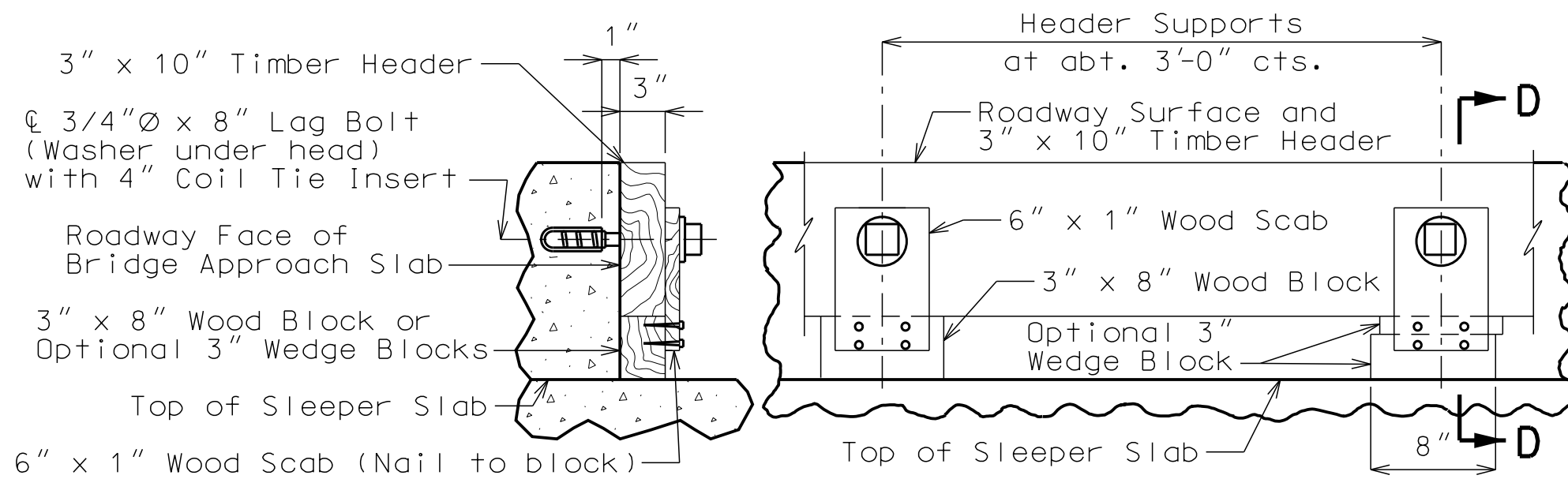


CONST. JOINT DETAIL



SECTION E-E

(Between curbs)



SECTION D-D
DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

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General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by lap splicing the #5 bars 29".

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge before pouring the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For Concrete Approach Pavement details, see roadway plans.

See Missouri Standard Plans Drawing 609.00 for details of Type A Curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major Road) per square yard.

* Seal joint between vertical face of approach slab and wing with "Silicone Joint Sealant for Saw Cut and Formed Joints" in accordance with Sec 717.

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Kansas City, Missouri

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As-Built Pile Data					
Pile No.	Length in Place (ft)	PDA Nom. Axial Compressive Resistance (kips)	PDA End of Drive Blow Count (blows/in.)	Actual End of Drive Blow Count (blows/in.)	Remarks
1					END BENT NO. 1
2					
3					
4					
5					
6					
7					
					INT. BENT NO. 2
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

As-Built Pile Data					
Pile No.	Length in Place (ft)	PDA Nom. Axial Compressive Resistance (kips)	PDA End of Drive Blow Count (blows/in.)	Actual End of Drive Blow Count (blows/in.)	Remarks
22					INT. BENT NO. 3
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					END BENT NO. 4
37					
38					
39					
40					
41					
42					

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal
D. PDA test pile
E. Minimum tip elevation controlled
(Use when actual blow count is less than PDA blow count due to minimum tip elevation requirement. A plus sign (+) shall be placed after the PDA nominal axial compressive resistance value indicating actual value is higher than PDA value.)

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Note: This drawing is not to scale. Follow dimensions.

East Bridge : 60% Plans

EAST BRIDGE
(50'-105'-50') PRESTRESSED CONCRETE NU-GIRDER SPANS

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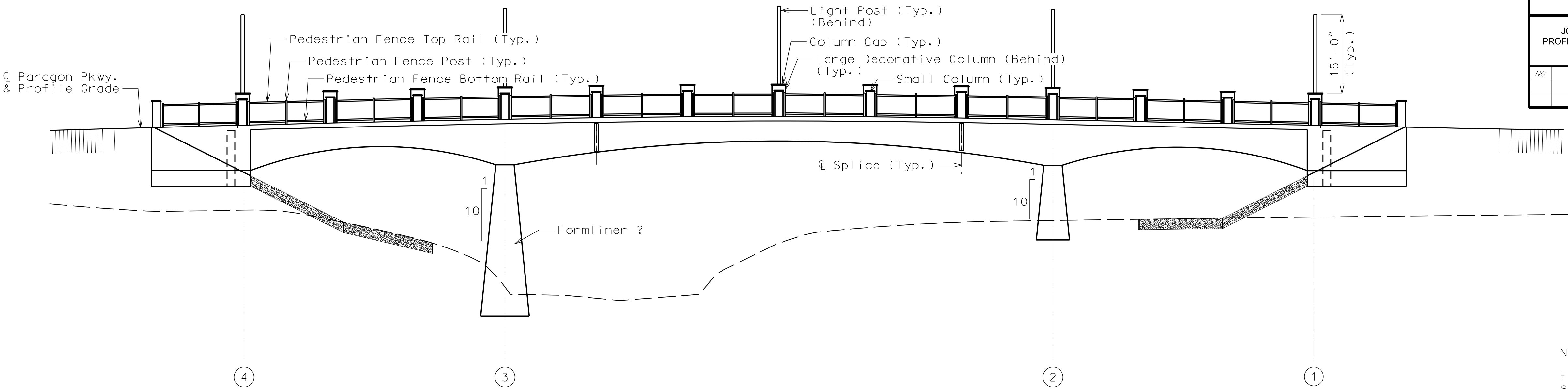
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32	33

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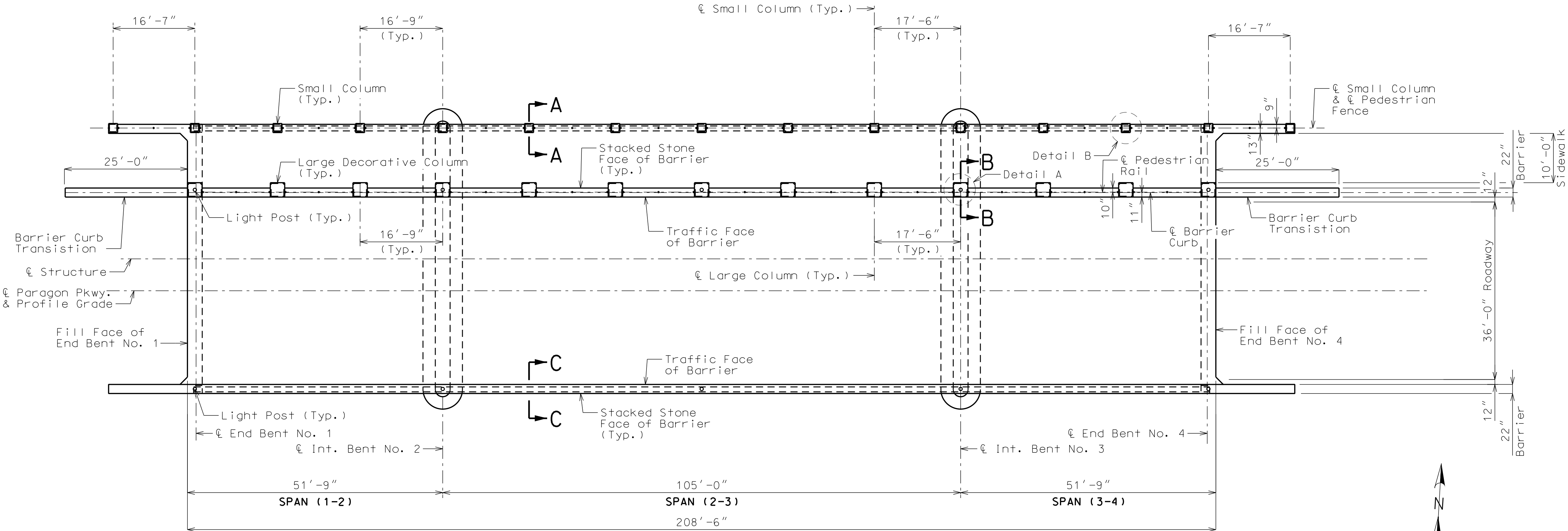
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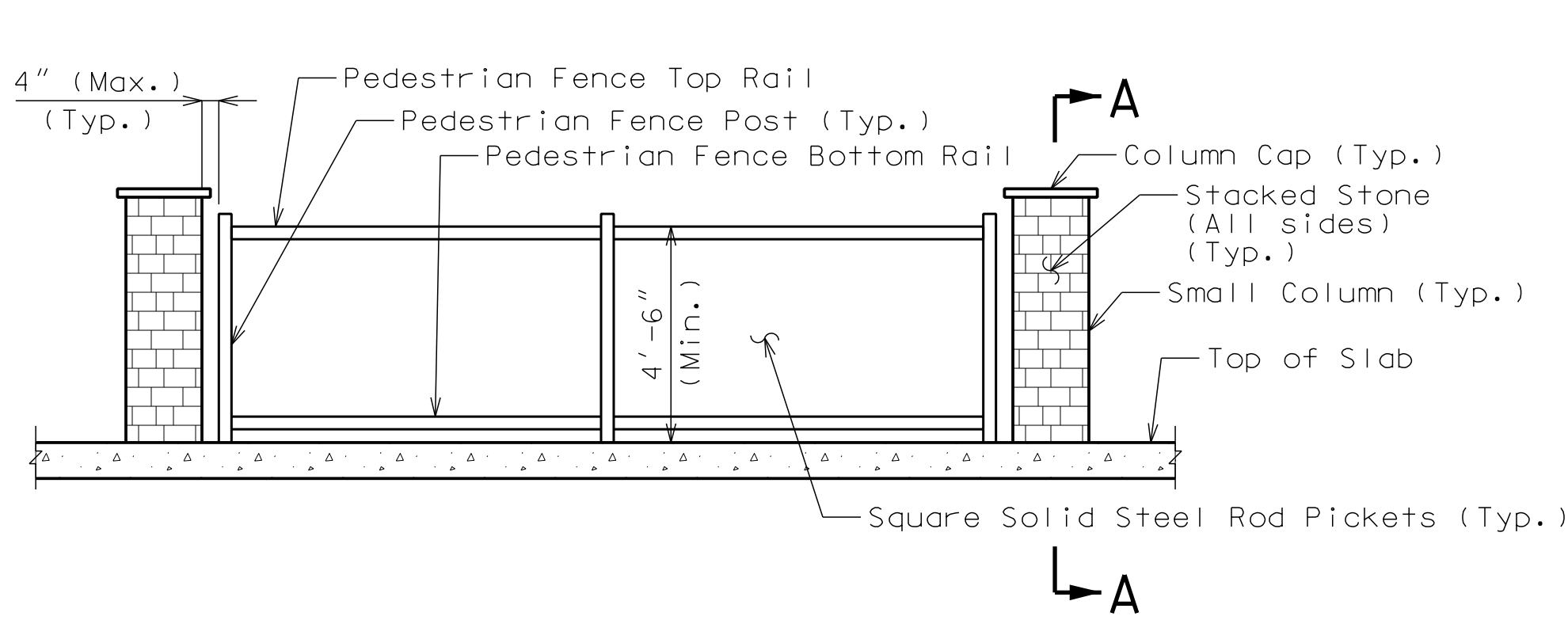
ELEVATION
(Looking South)

Notes:
For Detail A, Detail B, Section A-A, B-B & C-C,
see Sheet NO. 5.

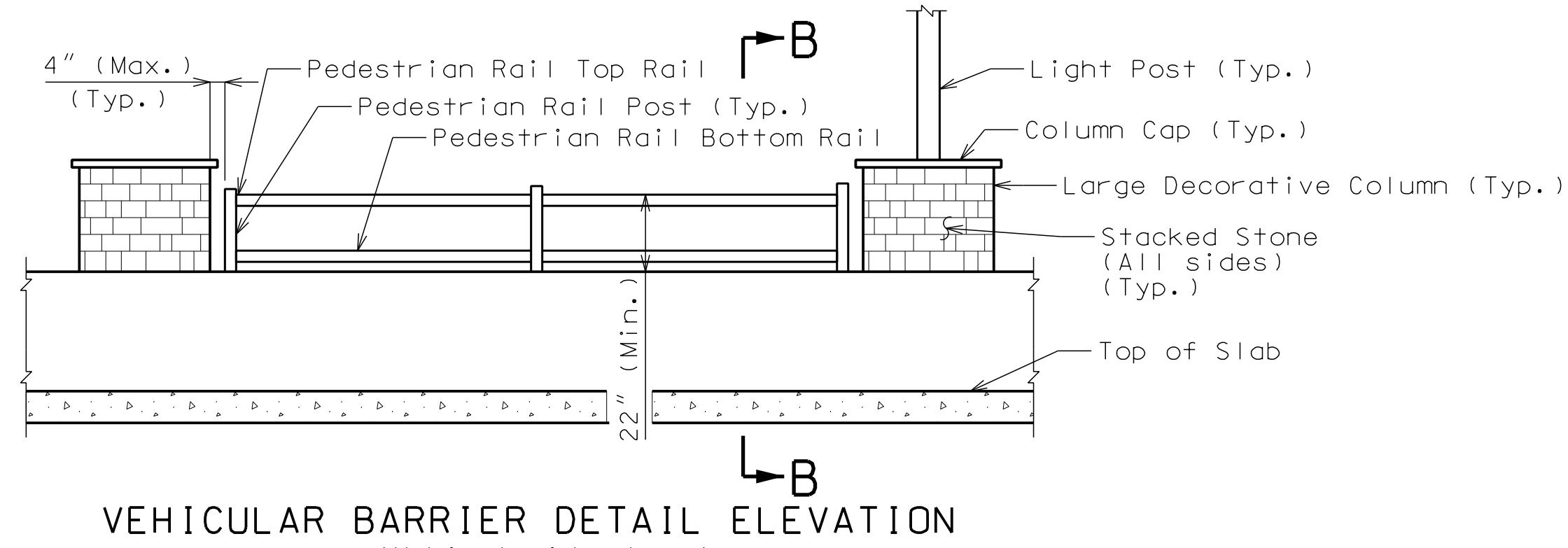


PLAN

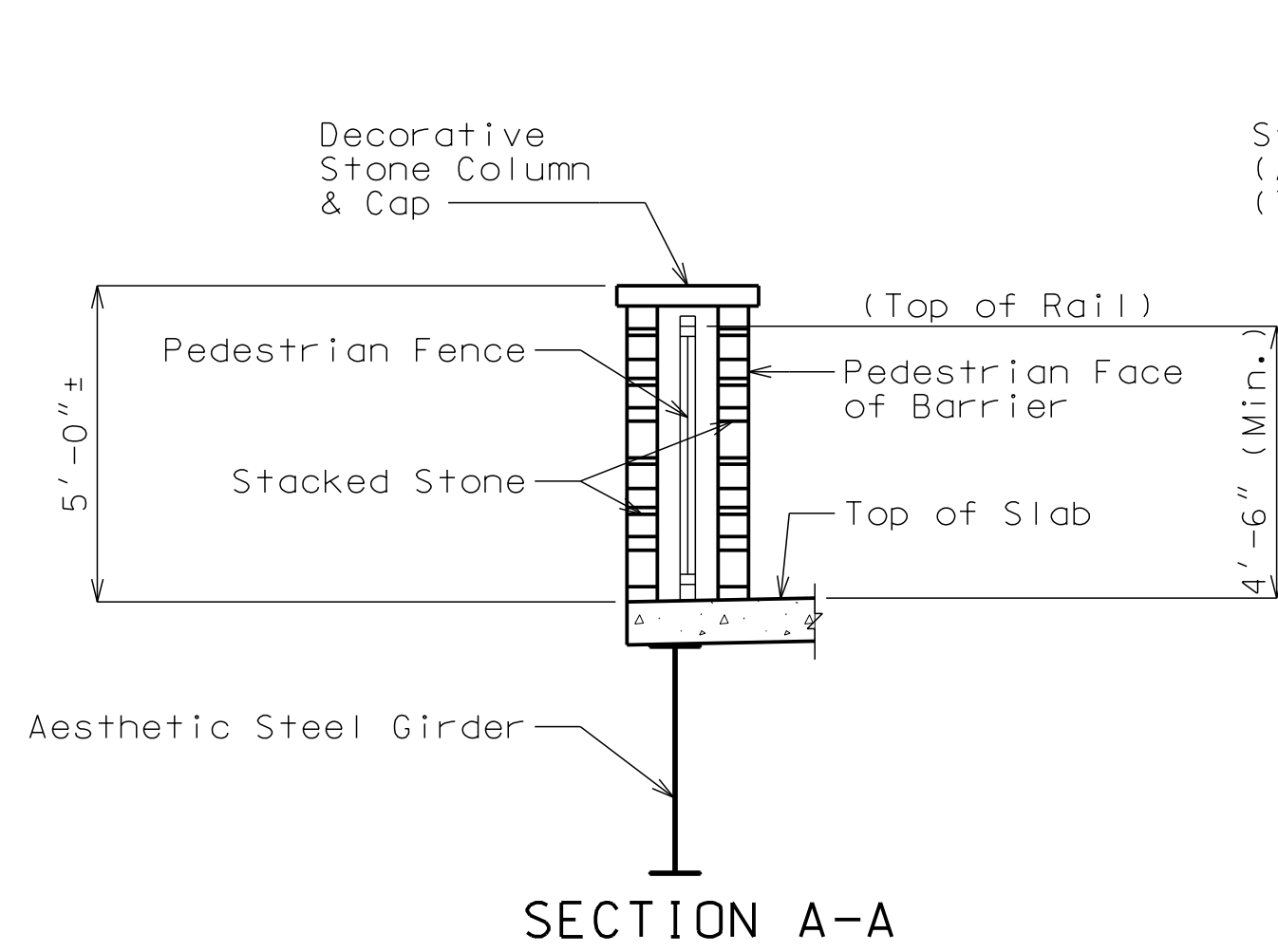
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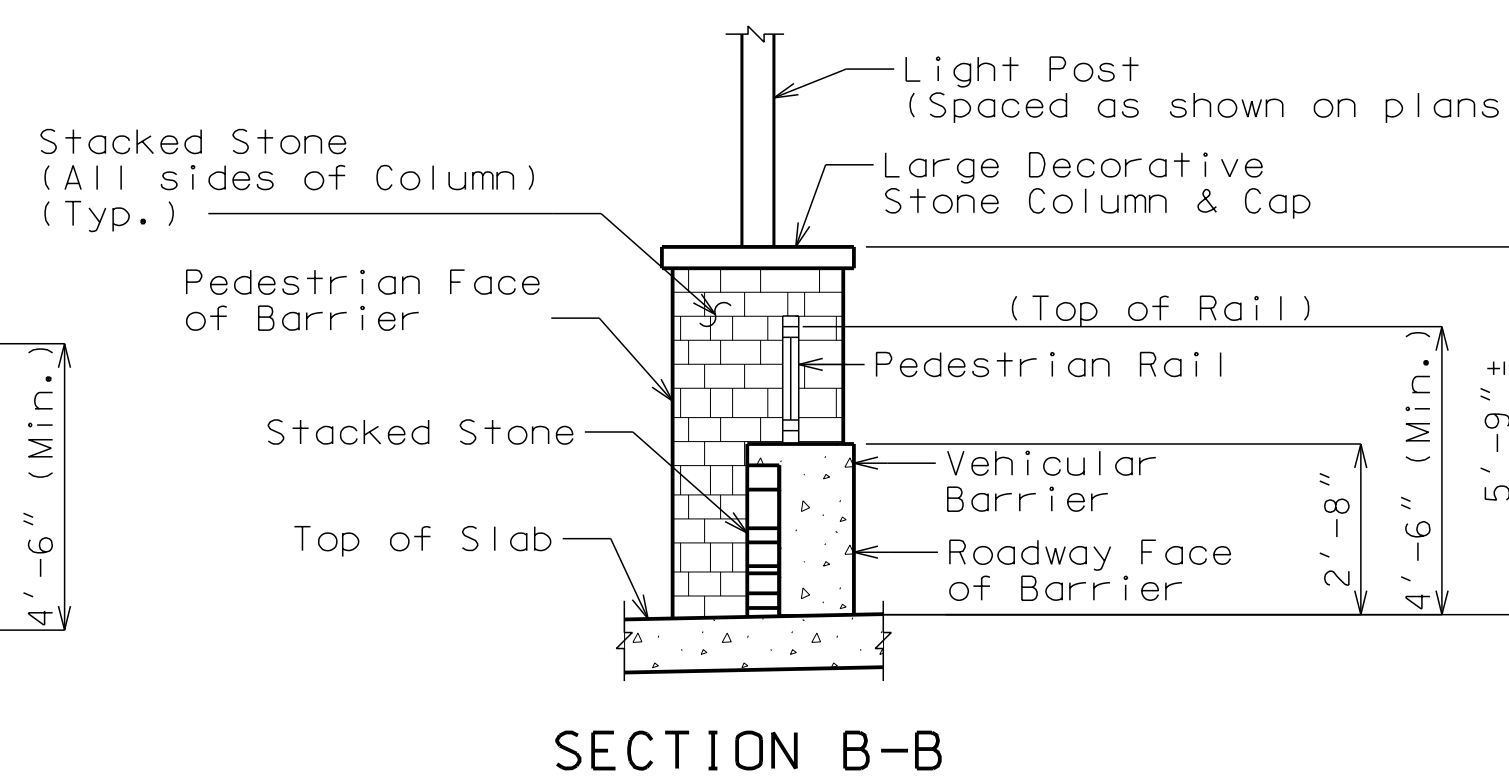
PEDESTRIAN FENCE DETAIL ELEVATION



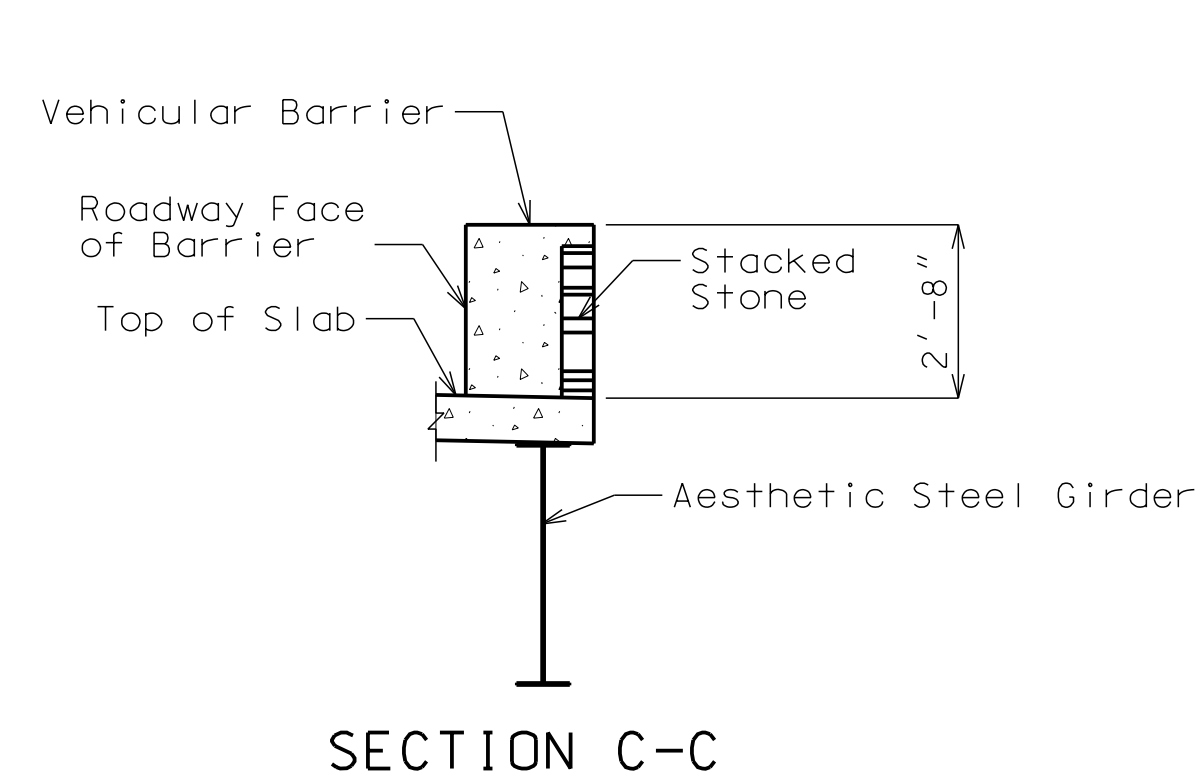
VEHICULAR BARRIER DETAIL ELEVATION
(Vehical side shown)



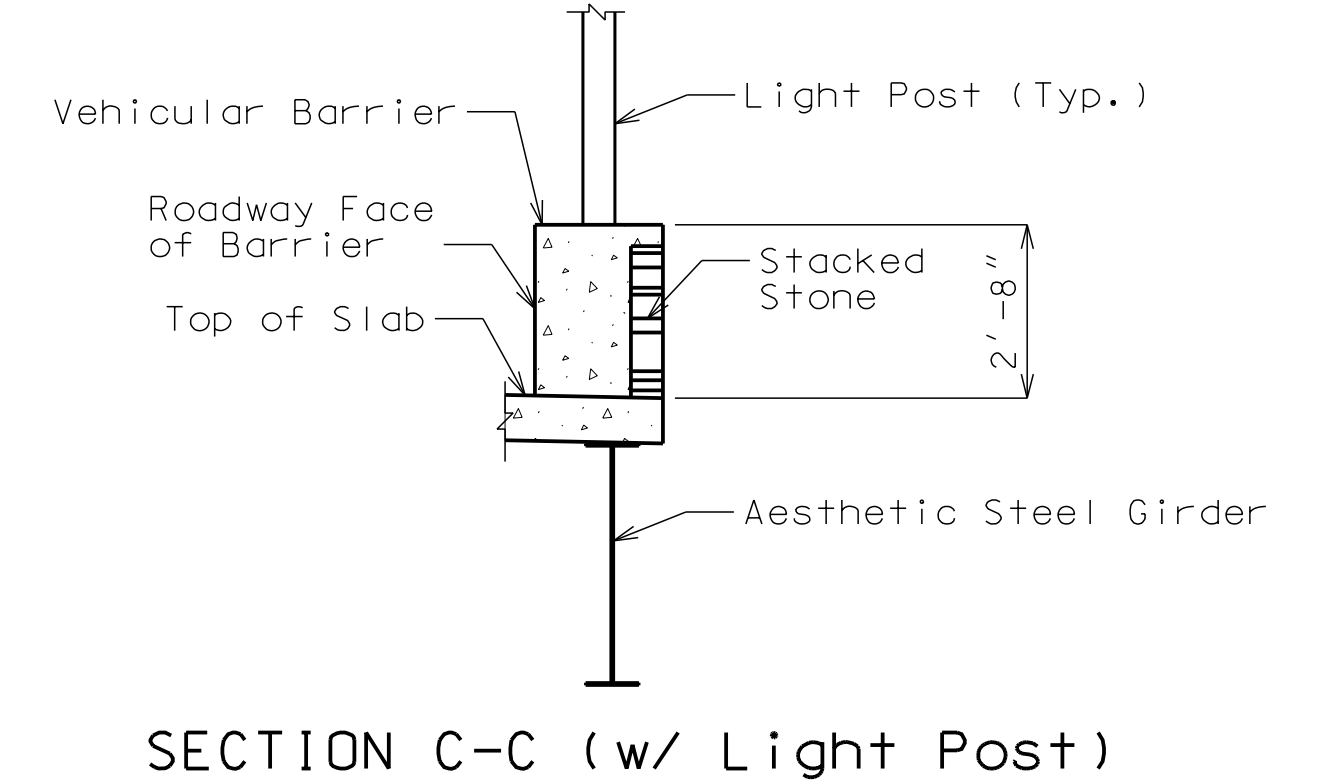
SECTION A-A



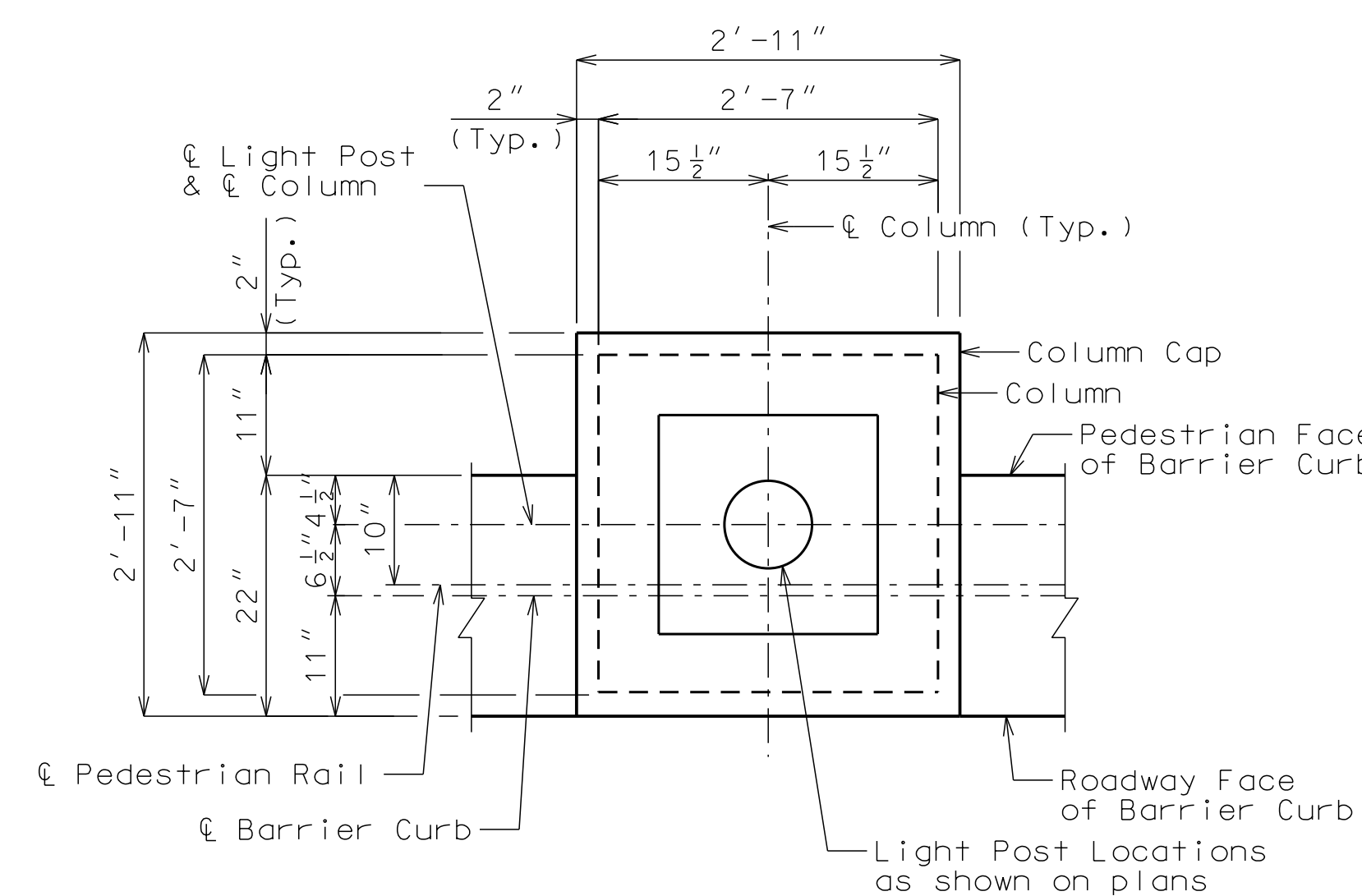
SECTION B-B



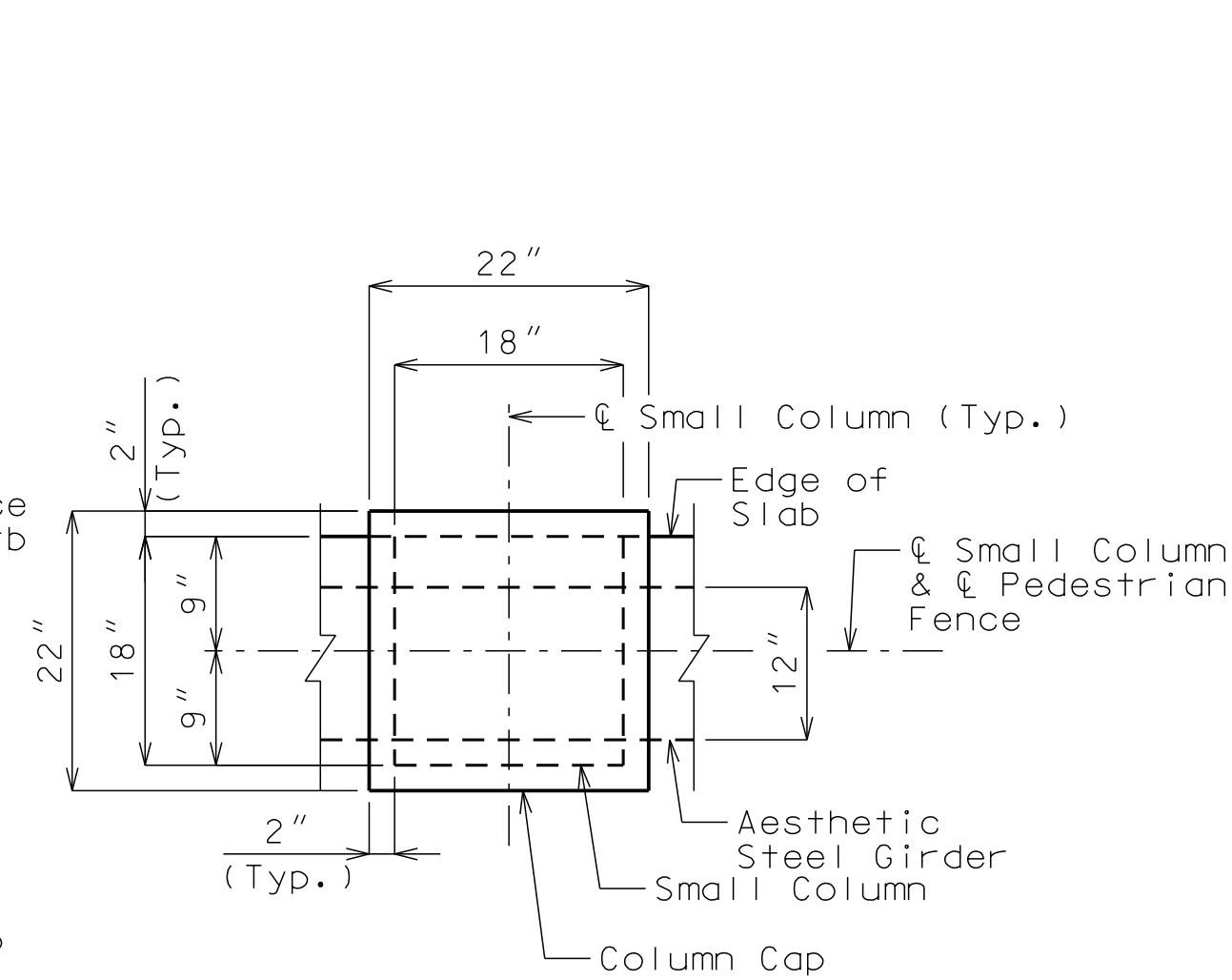
SECTION C-C



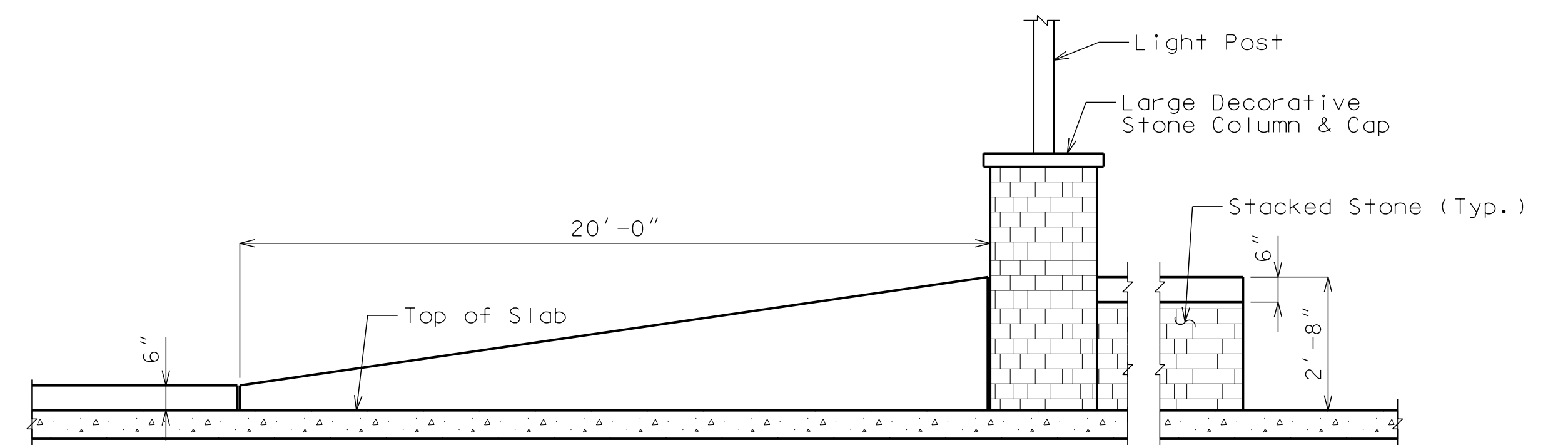
SECTION C-C (w/ Light Post)



DETAIL A



DETAIL B



VEHICULAR BARRIER CURB TRANSITION DETAIL
(Pedestrian side shown)

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