

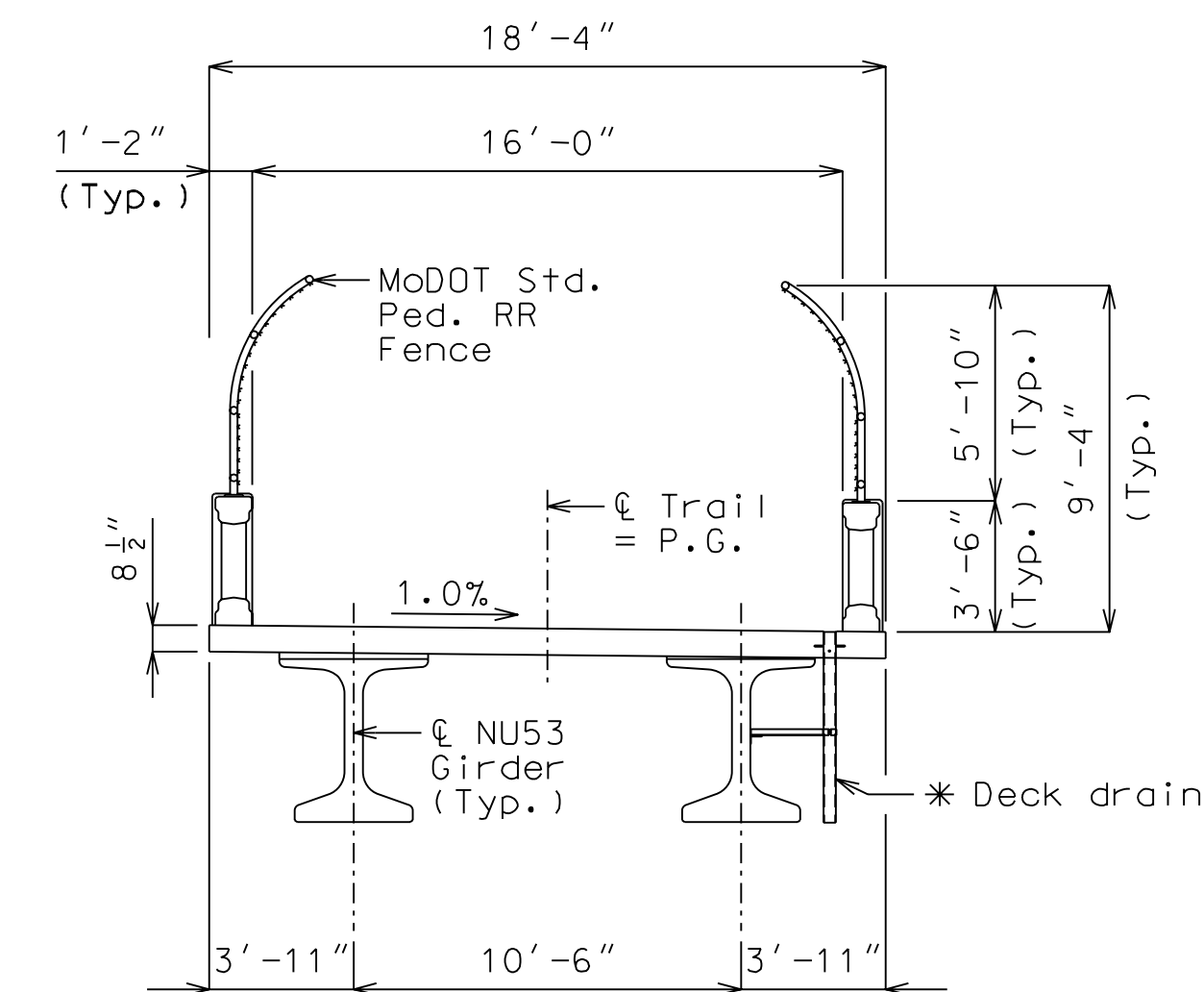
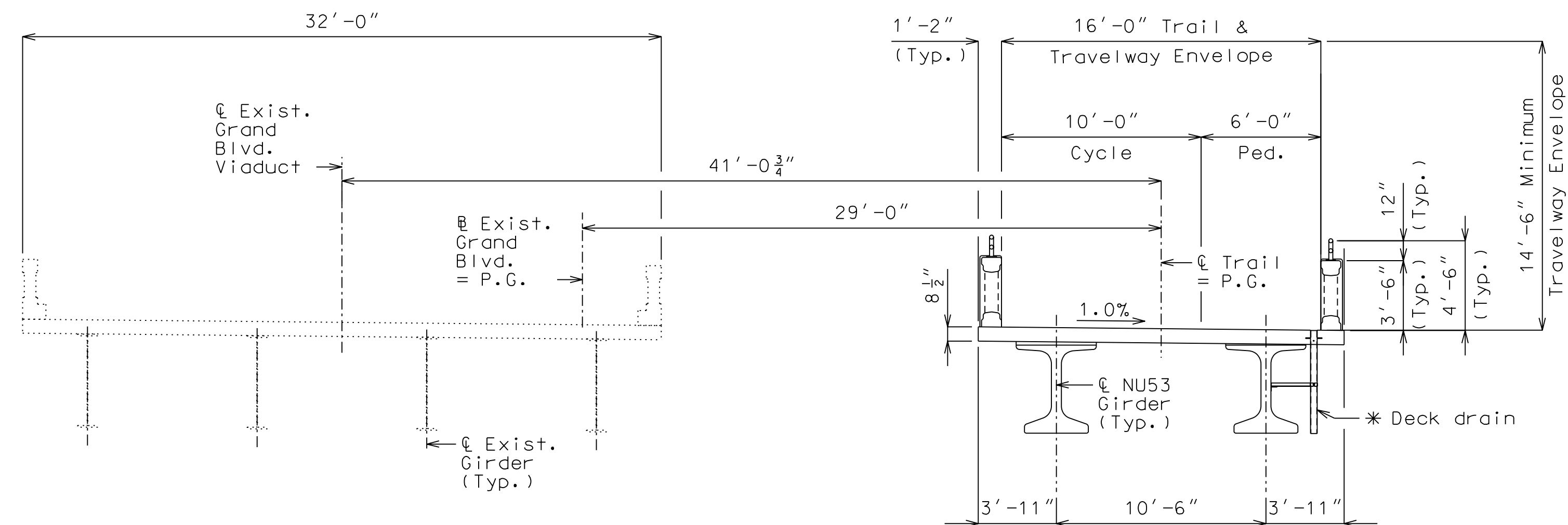


# PLAN SHOWING LENGTHS FOR ART

<b>PLANS SHOWING LENGTHS FOR ART</b>  <b>ART RFQ INFORMATION</b>	 <p>WSP USA, INC. 300 WYANDOTTE STREET SUITE 200 KANSAS CITY, MO 64105 (816) 702-4300</p>	 <p>CITY OF KANSAS CITY, MISSOURI PUBLIC WORKS DEPARTMENT</p>	<p>CAPITAL PROJECTS DIVISION 414 E. 12TH STREET 18TH FLOOR CITY HALL KANSAS CITY, MO 64106 (816) 513-2739</p>	DATE	DESCRIPTION



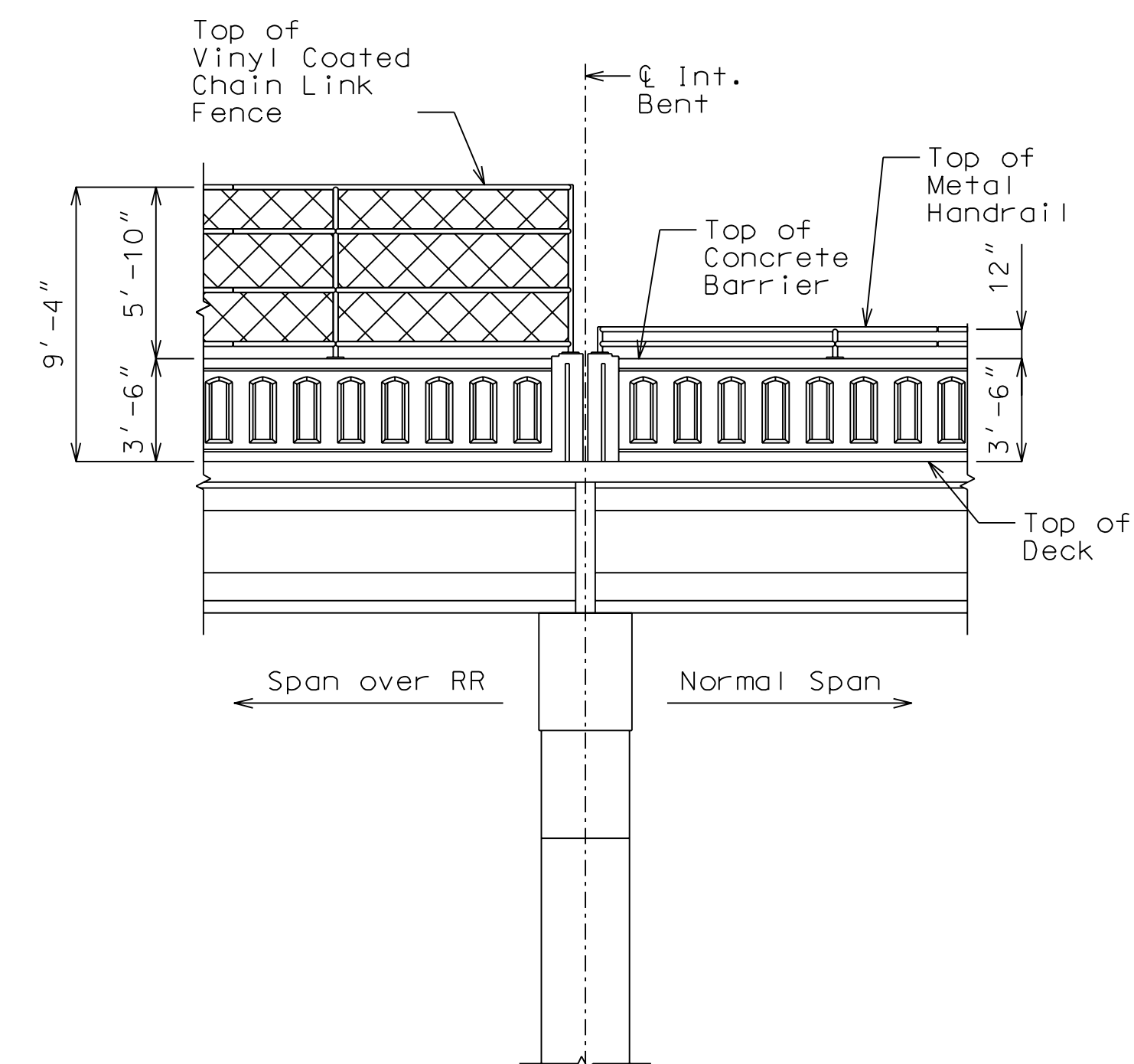
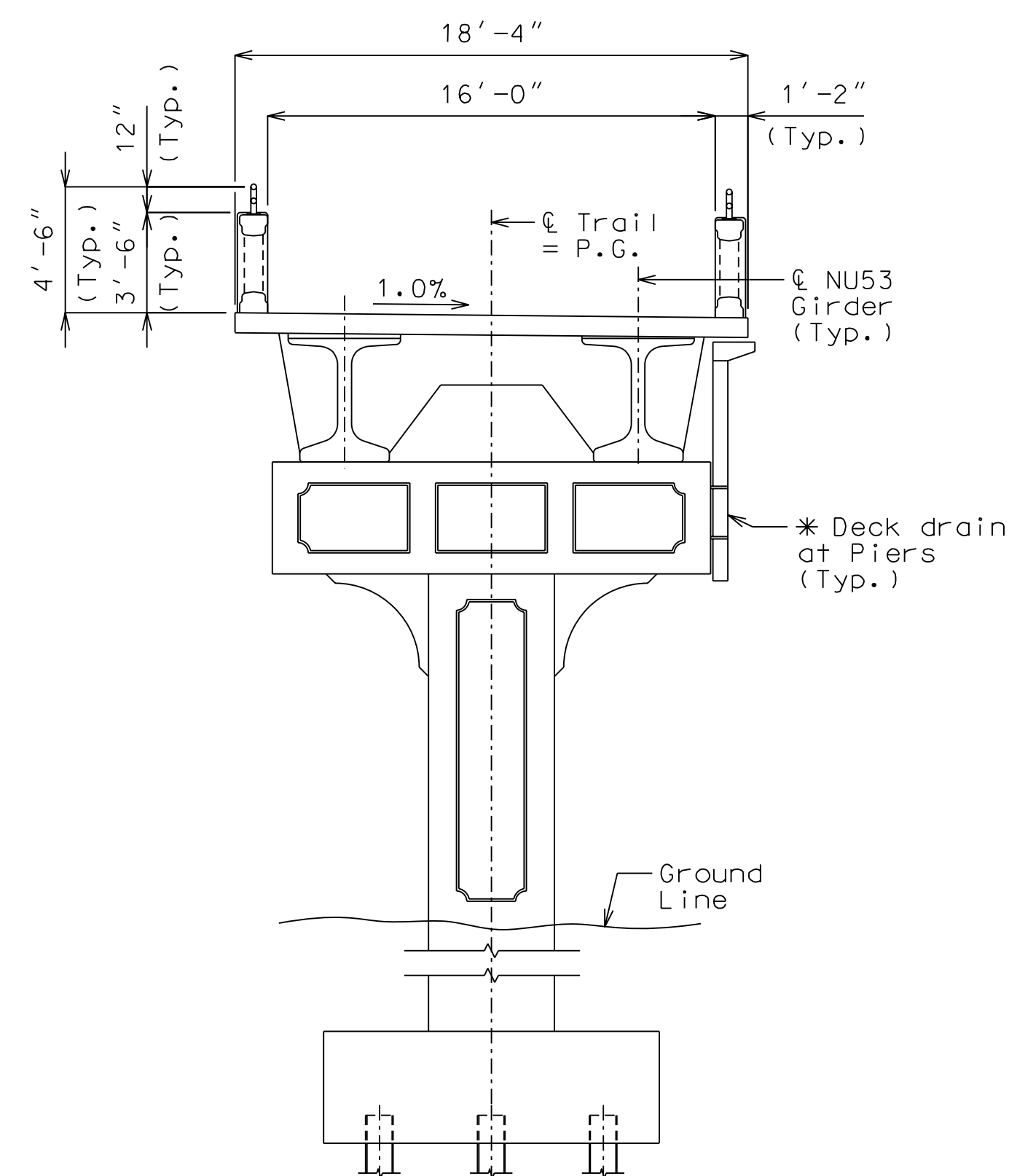
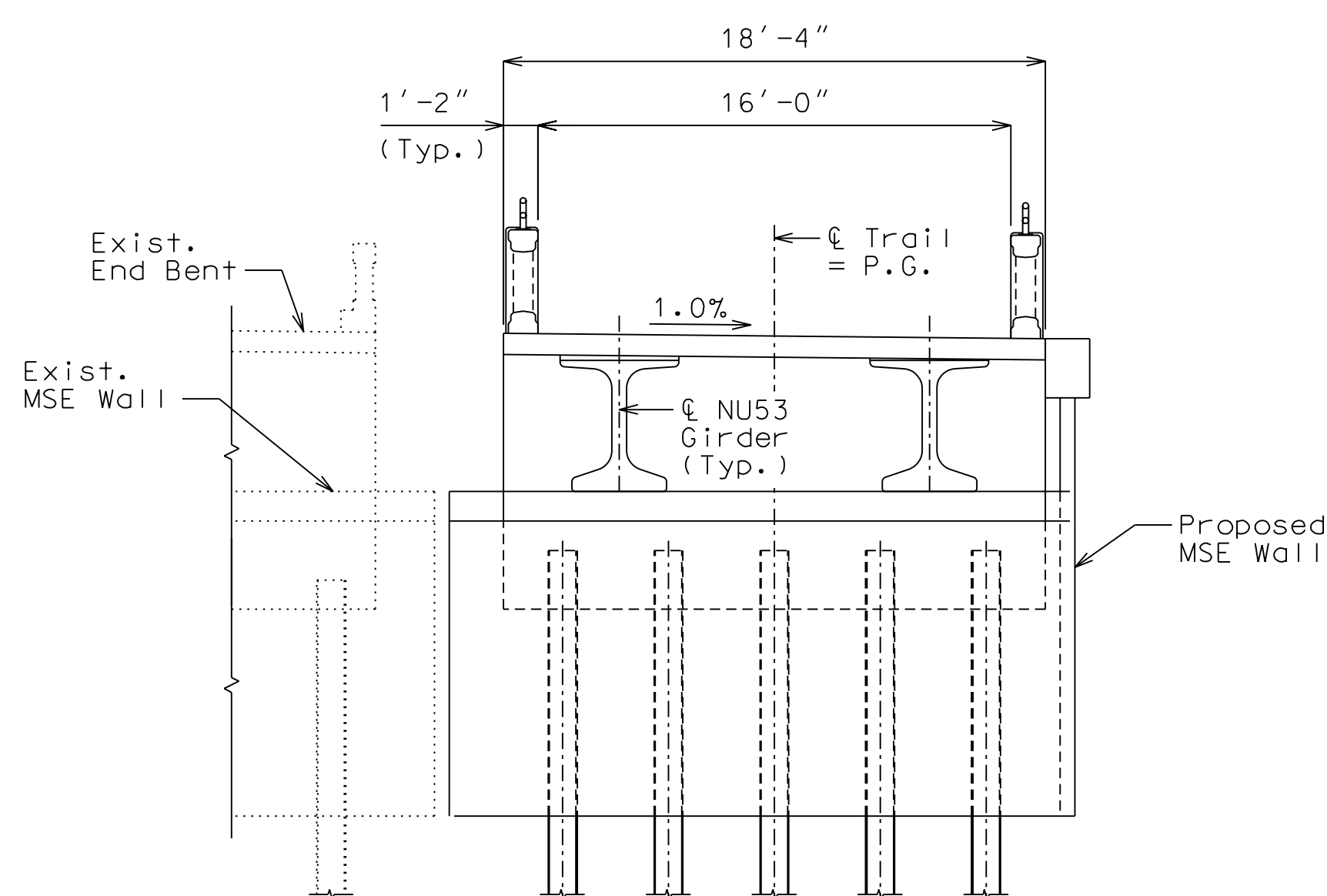


NOTES:



Fiber optic cable will be carried across the bridge attached to the barrier or bridge slab. Locations and number of conduits to be determined.

Pedestrian lighting will be provided along the entire length of the bridge. Design and locations to be determined.

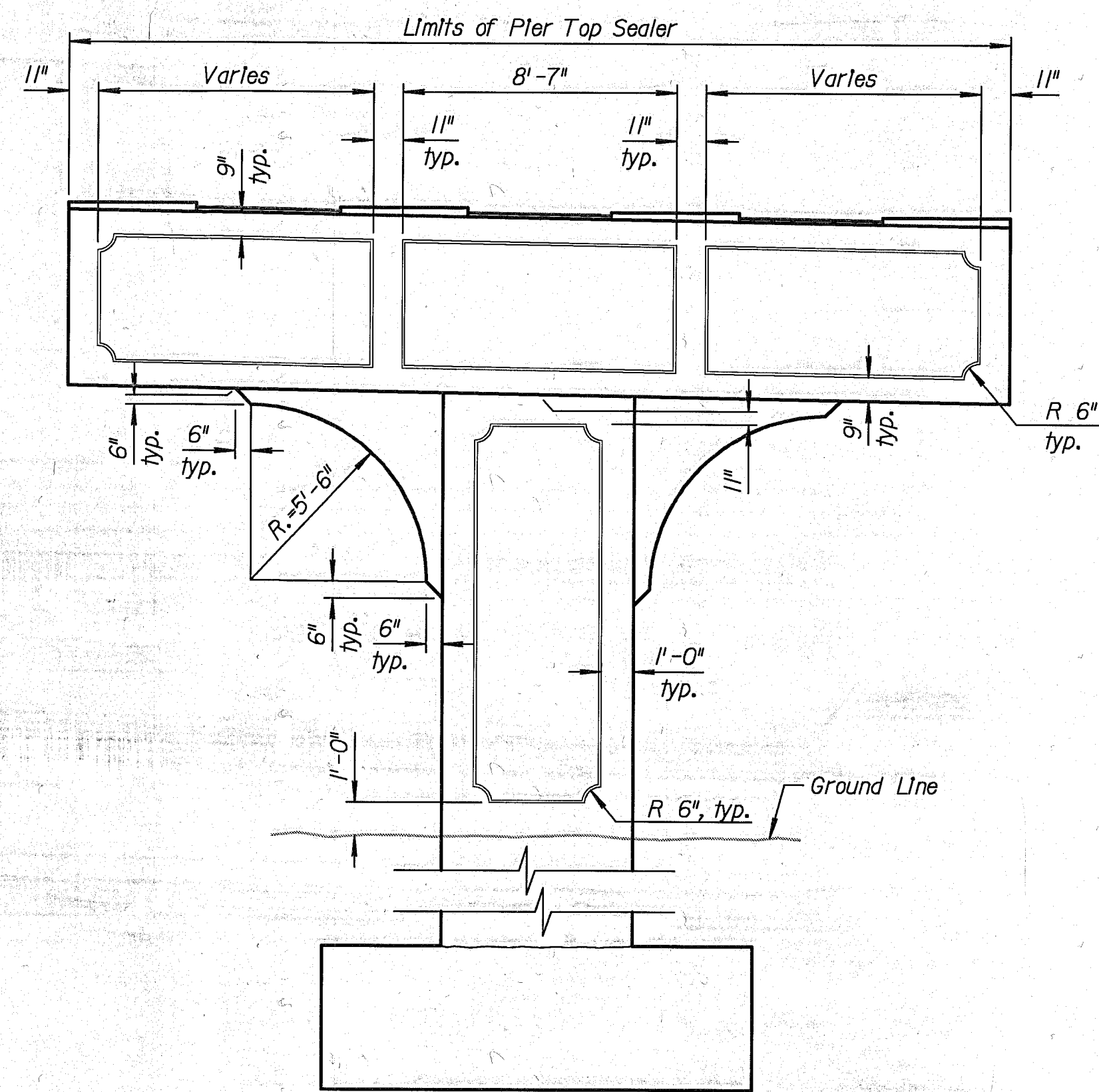
\* Deck drain size and locations to be determined. Drains to be carried to ground at piers.



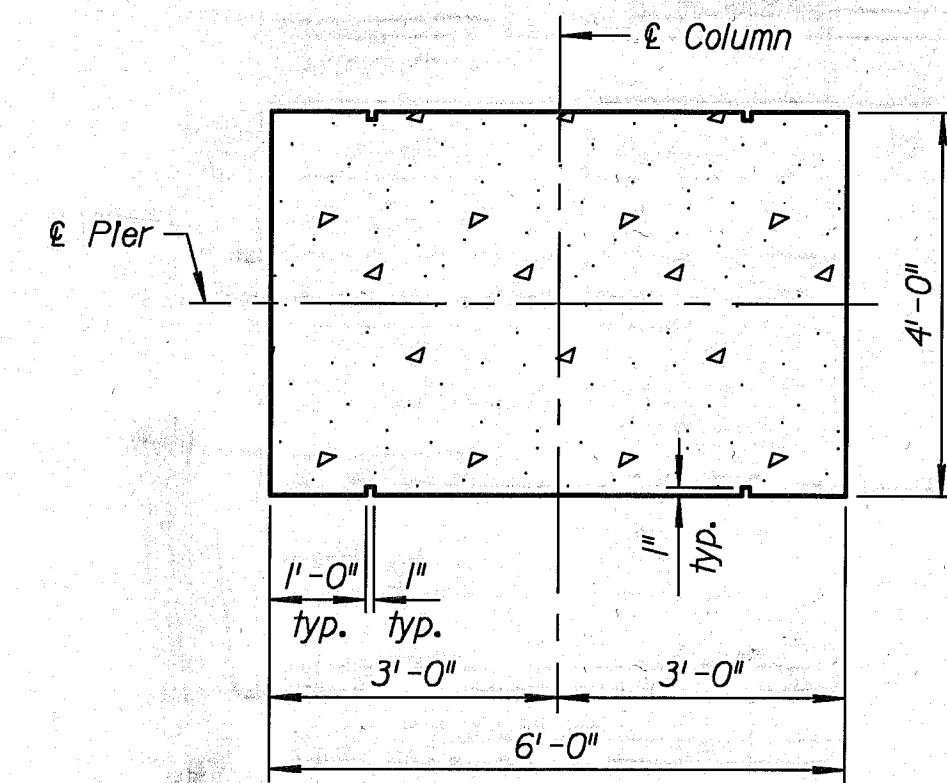
FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION

<b>TYPICAL THRU SECTION</b>  <b>ART REQ INFORMATION</b>	 <p>WSP USA INC. 300 WYANDOTTE STREET SUITE 200 KANSAS CITY, MO 64105 (816) 702-4300</p>	 <p>CITY OF KANSAS CITY, MISSOURI PUBLIC WORKS DEPARTMENT</p>	<p>CAPITAL PROJECTS DIVISION 414 E. 12TH STREET 18TH FLOOR CITY HALL KANSAS CITY, MO 64106 (816) 513-2739</p>	DATE	DESCRIPTION	SHEET NO.	TOTAL SHEETS
				-	-	19	46
				-	-	DATE PREPARED 7/14/2021	
				-	-	STATE MISSOURI	
				-	-	ROUTE GRAND BLVD.	
				-	-	CITY KANSAS CITY	
				-	-	COUNTY JACKSON	
				-	-	PROJECT NO. 890055595	
				-	-		

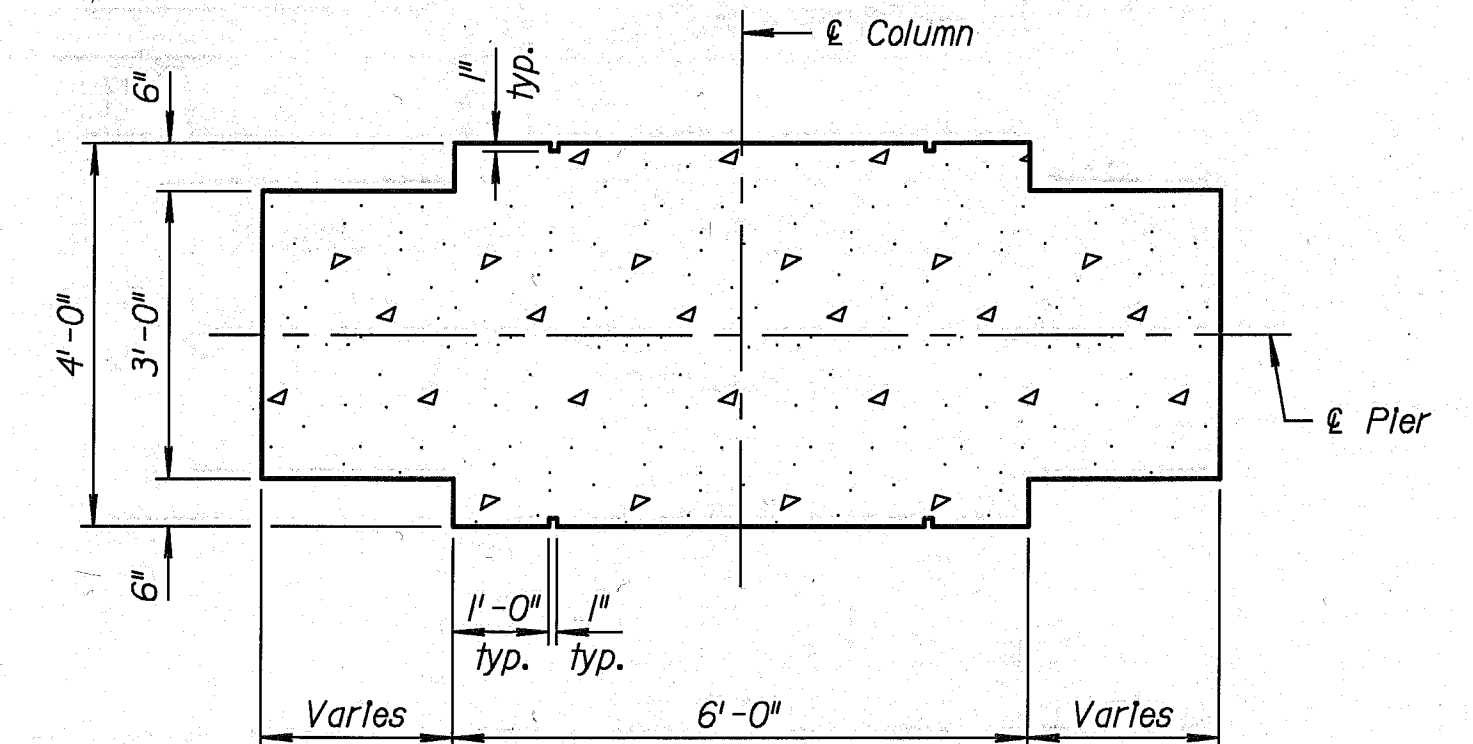




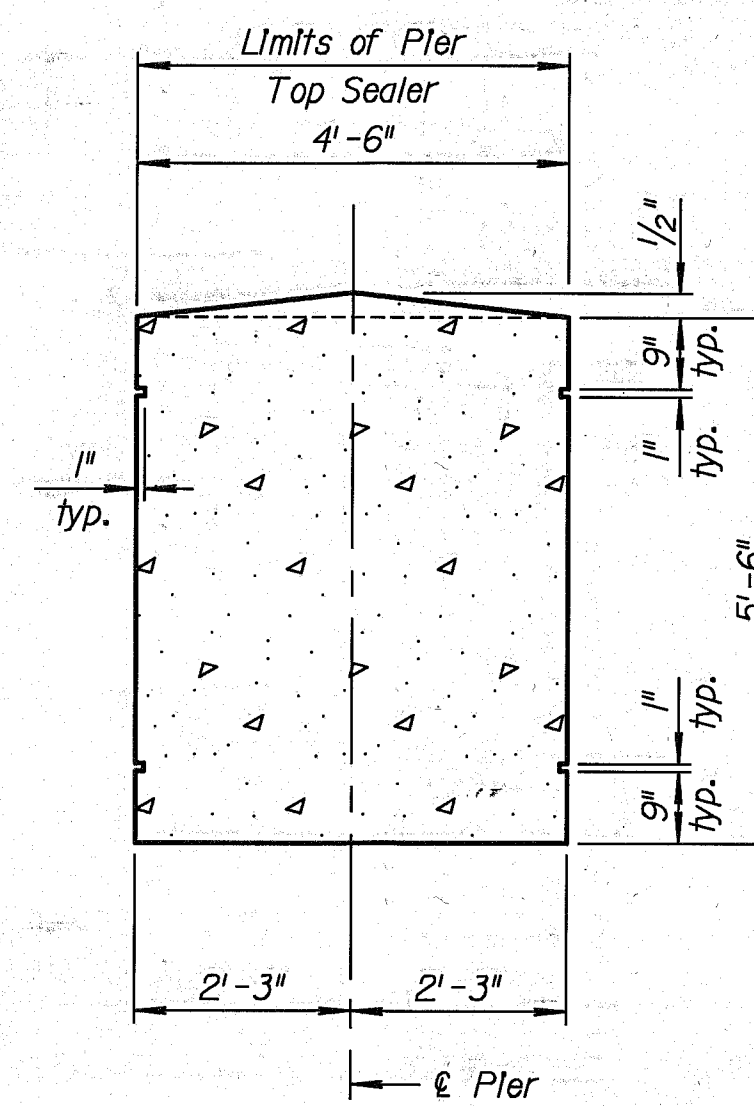
TYPICAL PIER ELEVATION



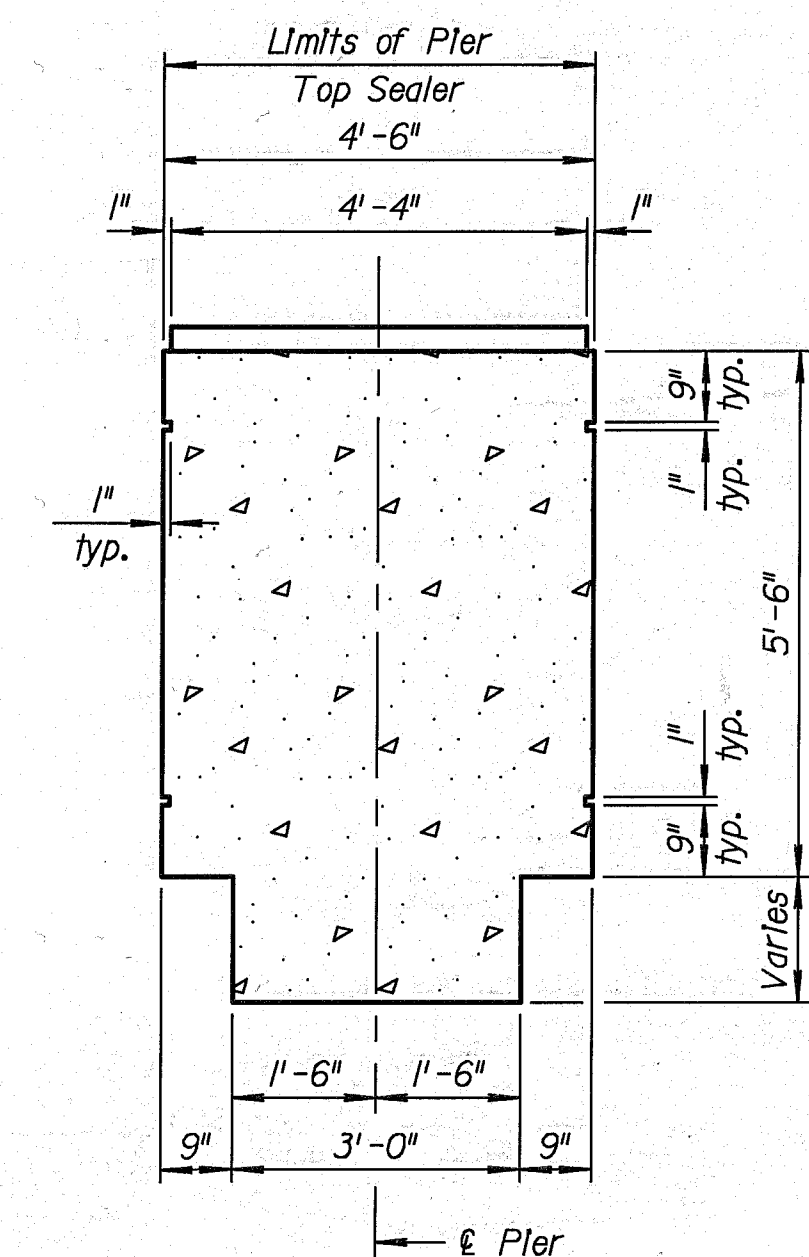
TYPICAL SECTION THRU COLUMN



TYPICAL SECTION THRU FILLET



TYPICAL SECTION THRU CAP

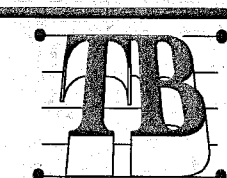


TYPICAL SECTION THRU CAP AT PAD

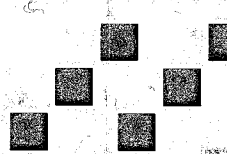
Notes:  
For additional details see Sheets 10 to 23  
Pier Top Sealer shall be applied within the limits shown and in accordance with the special provisions. The sealer shall consist of a modified urethane or polyurethane elastomeric protective coating in accordance with the special provisions

10/09/97 17:25:30  
I:\3616-01\cad\gr dpr00.sht

DATE	REVISIONS AND RECORD OF ISSUE	NO.	BY	CHK	APP
10/10/97	Partial Foundation Package No. 2				
9/16/97	Review Comments				
8/20/97	Revised Construction Issue				
8/8/97	Partial Foundation Package	1			
5/5/97	Construction Issue				



**TALIAFERRO & BROWNE, INC.**  
CONSULTING ENGINEERS-ARCHITECTS  
KANSAS CITY, MISSOURI



**McKnight Associates**  
Landscape Architects & Urban Designers  
819 Walnut, Kansas City, Missouri 64106



**JBM**  
Engineers & Planners

**BOYD BROWN STUDE & CAMBERN**  
CONSULTING ENGINEERS



**PORT AUTHORITY OF KANSAS CITY, MISSOURI**  
10 PETTICOAT LANE SUITE 250  
KANSAS CITY, MO. 64106

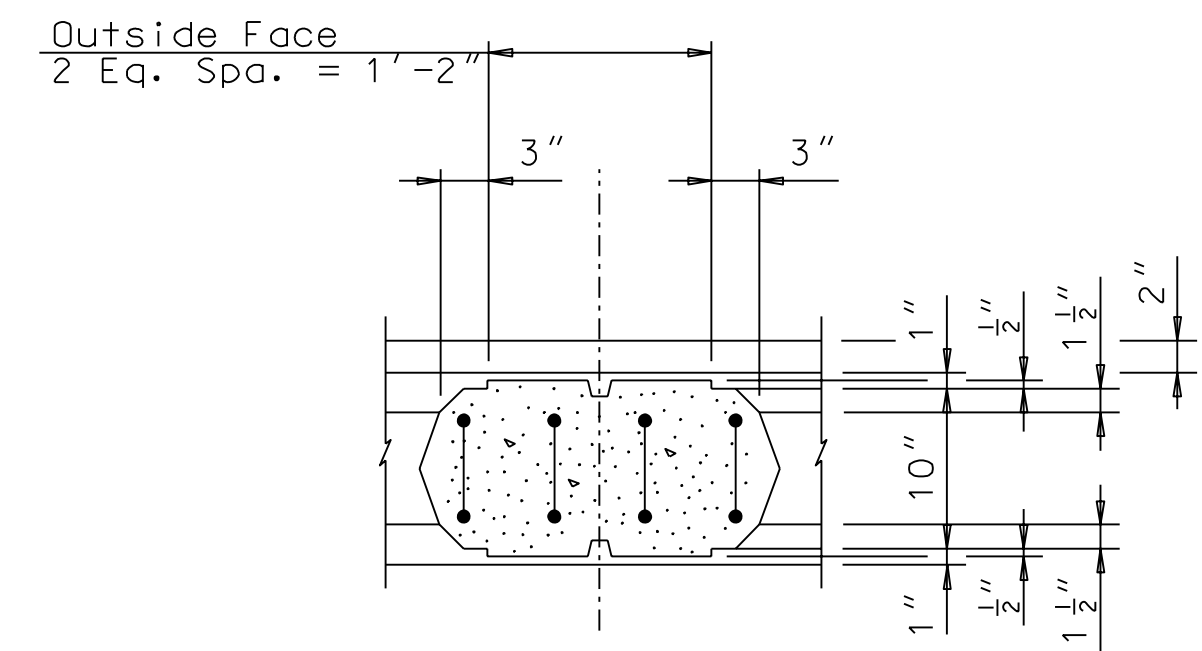
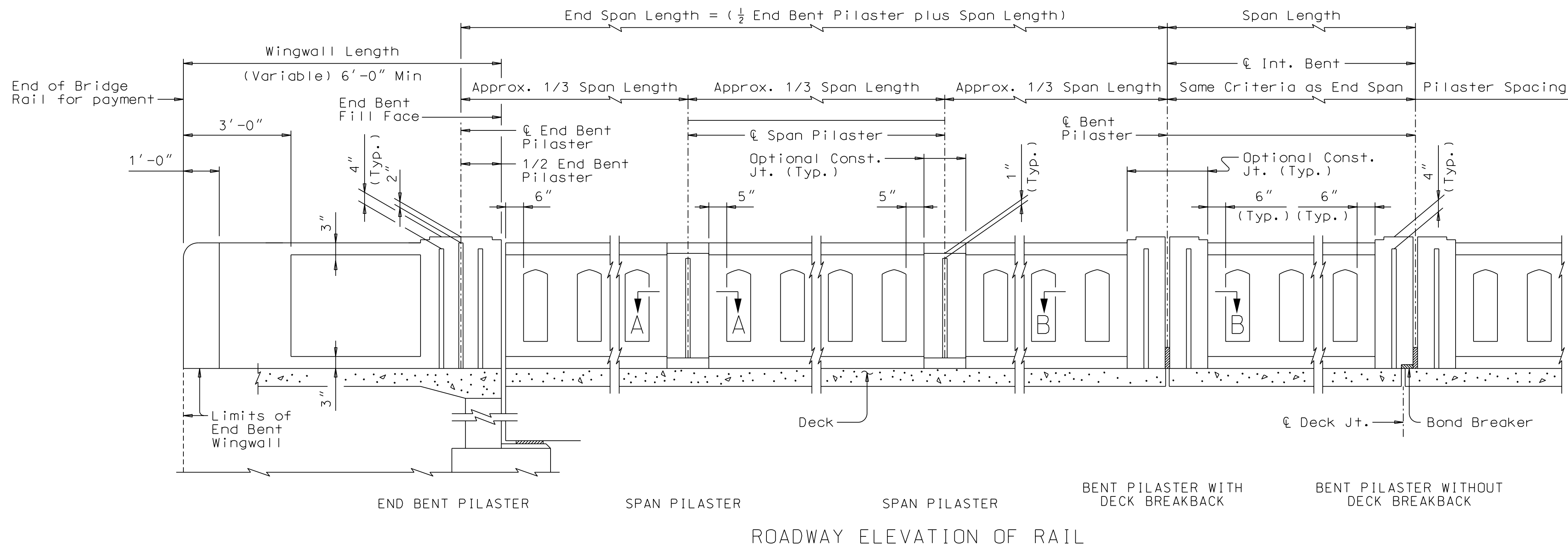
**GRAND BOULEVARD VIADUCT REPLACEMENT**

**PIER DETAILS**

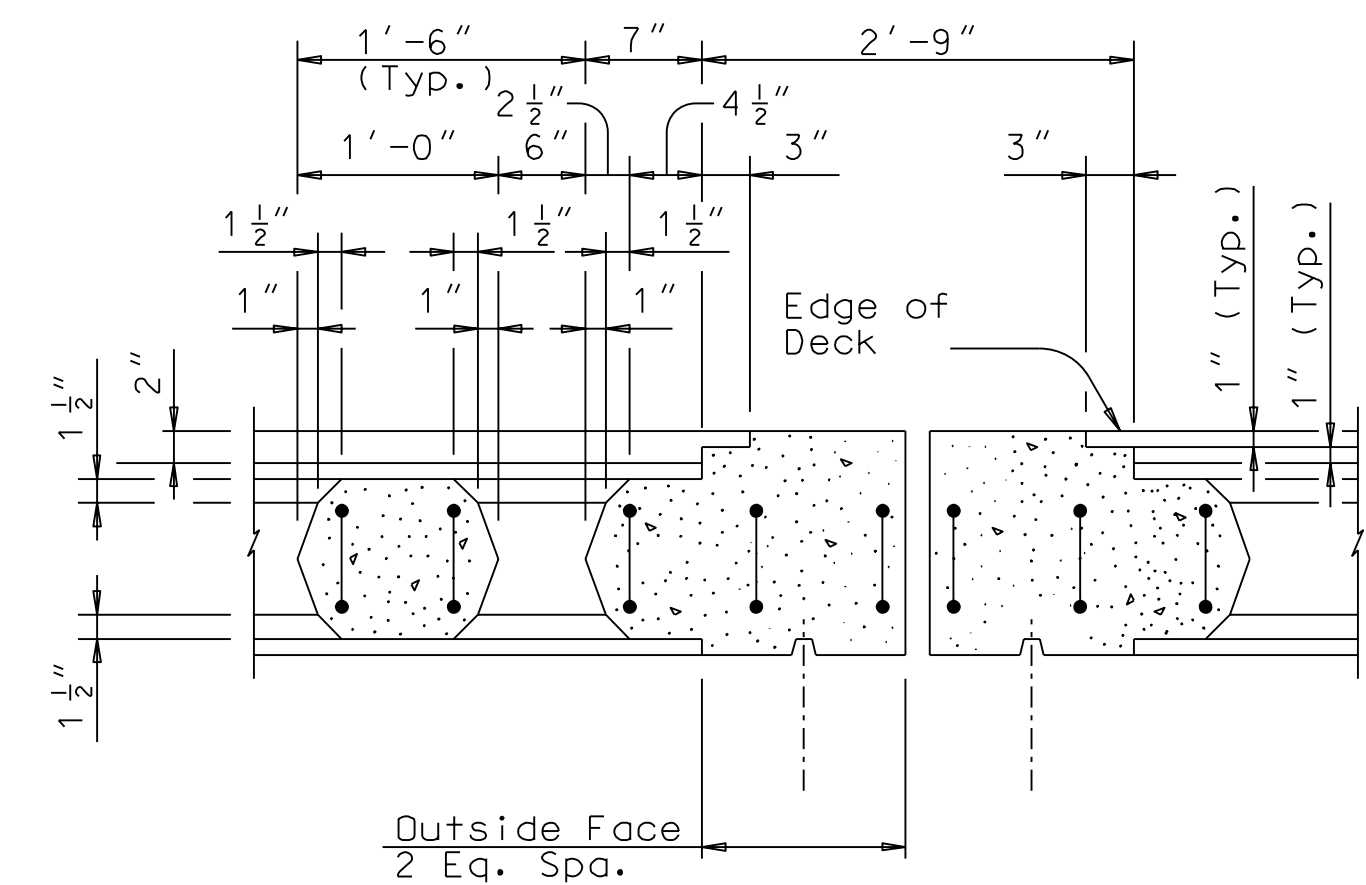
DESIGNED: PEH DATE: 4/15/97 DETAILED: TAH DATE: 4/15/97  
CHECKED: JPH DRAWN: SCALE:



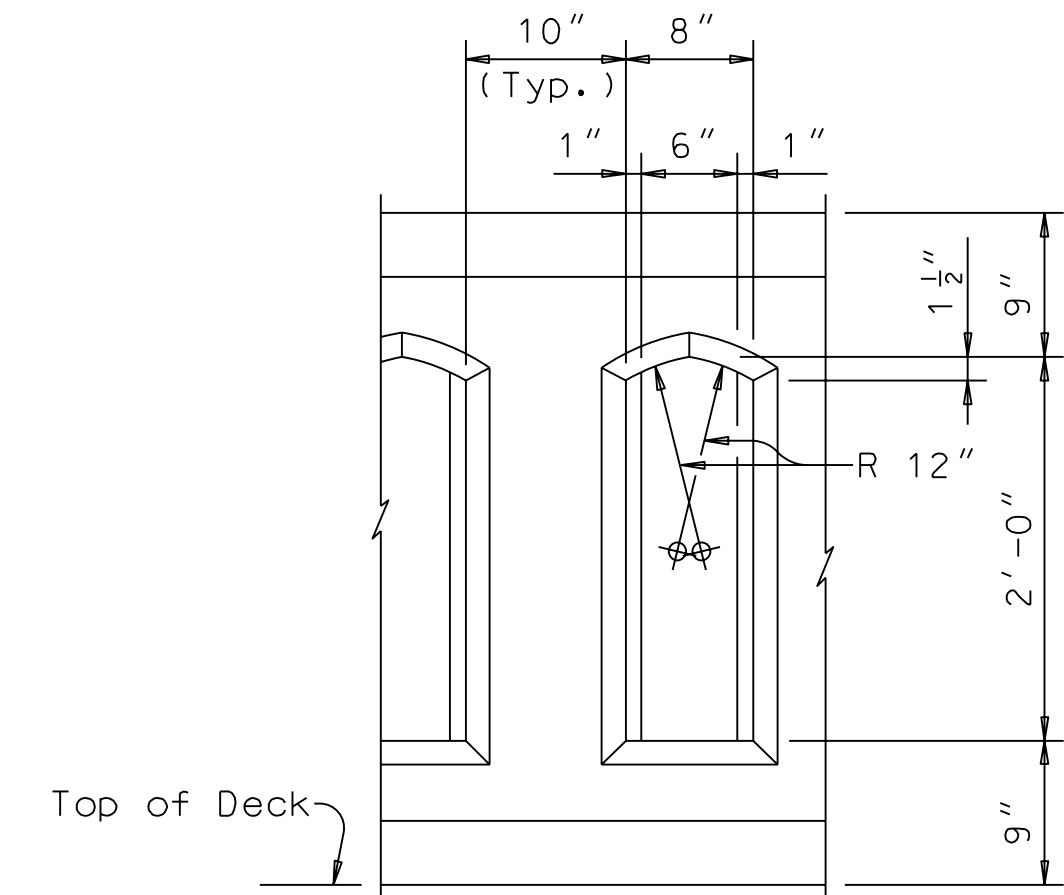
FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION



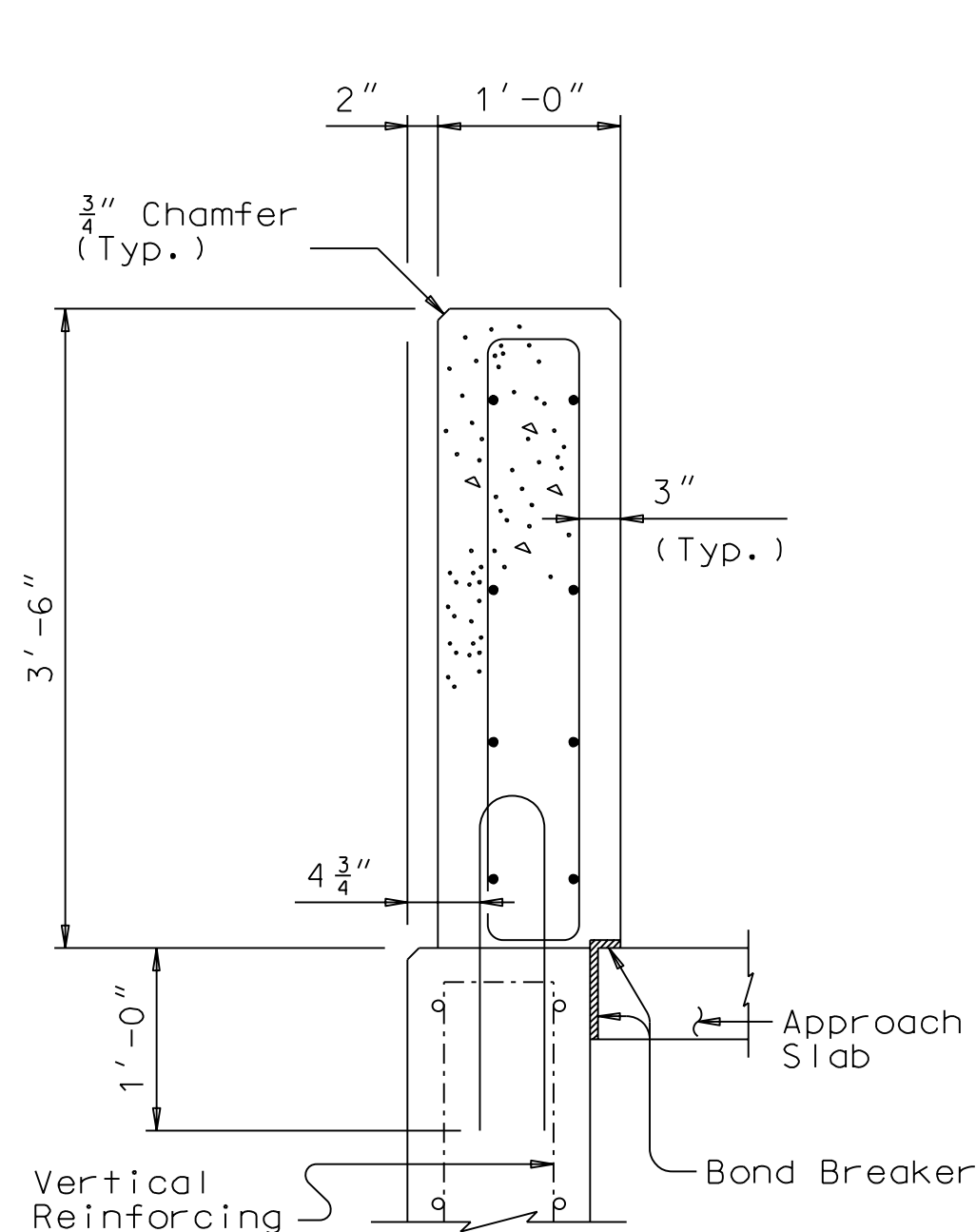
SECTION A-A



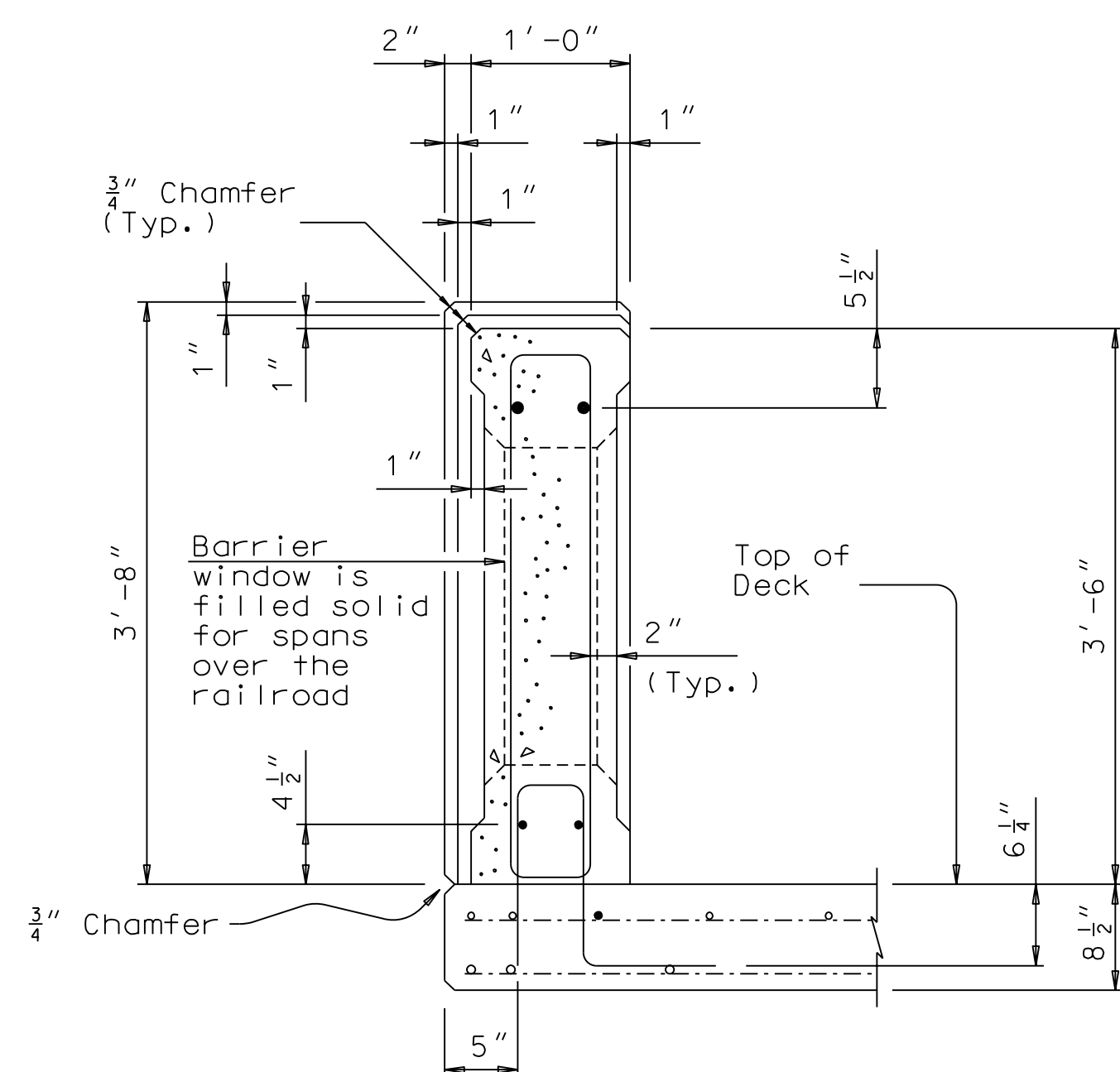
SECTION B-B



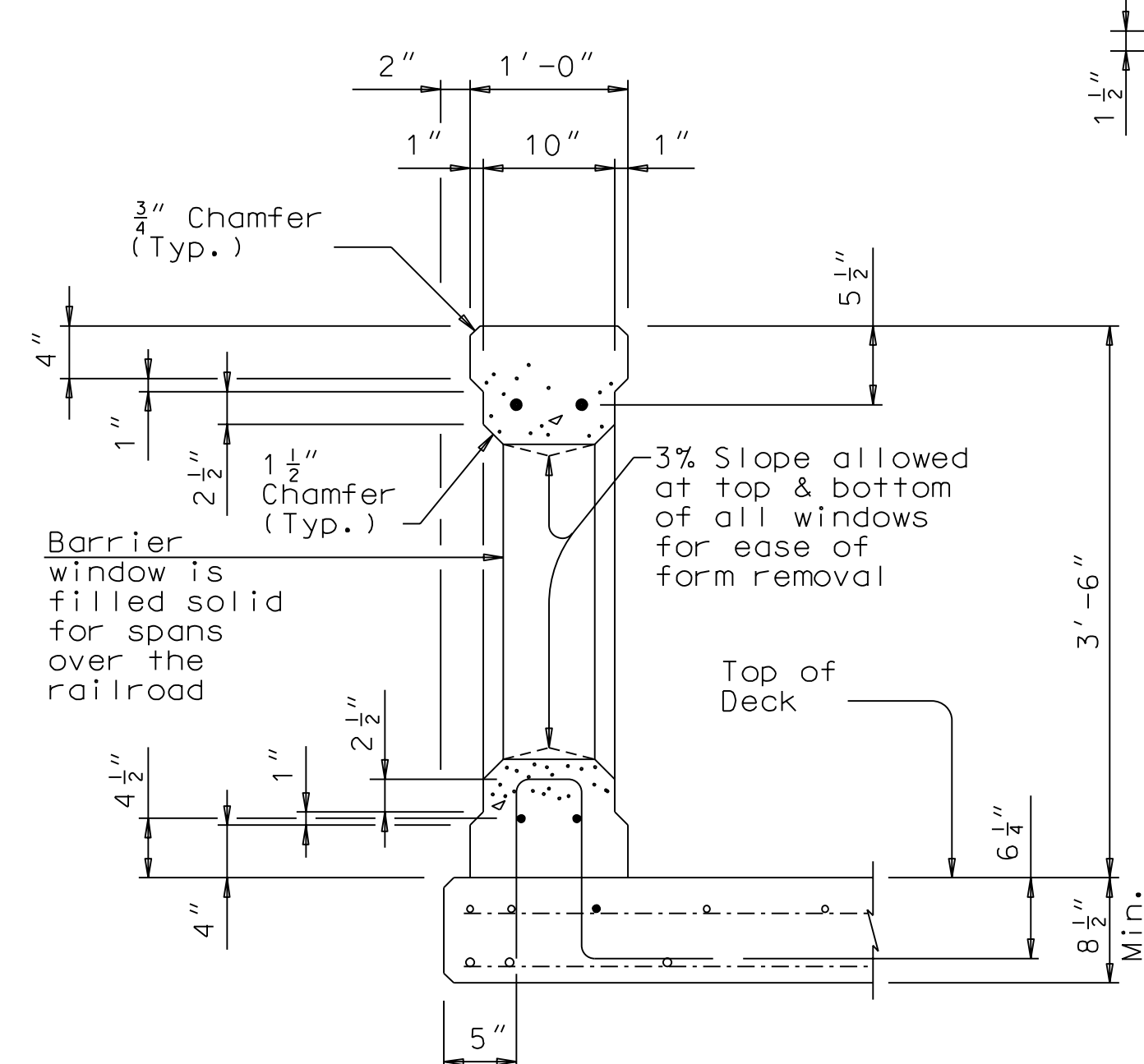
## WINDOW DETAIL



ON END BENT WINGWALLS  
OR CIP RETAINING WALLS





SECTION THRU  
POST ON BRIDGE DECK  
(SHOWING PILASTER)



SECTION THRU  
WINDOW ON BRIDGE DECK

## BARRIER ELEVATIONS

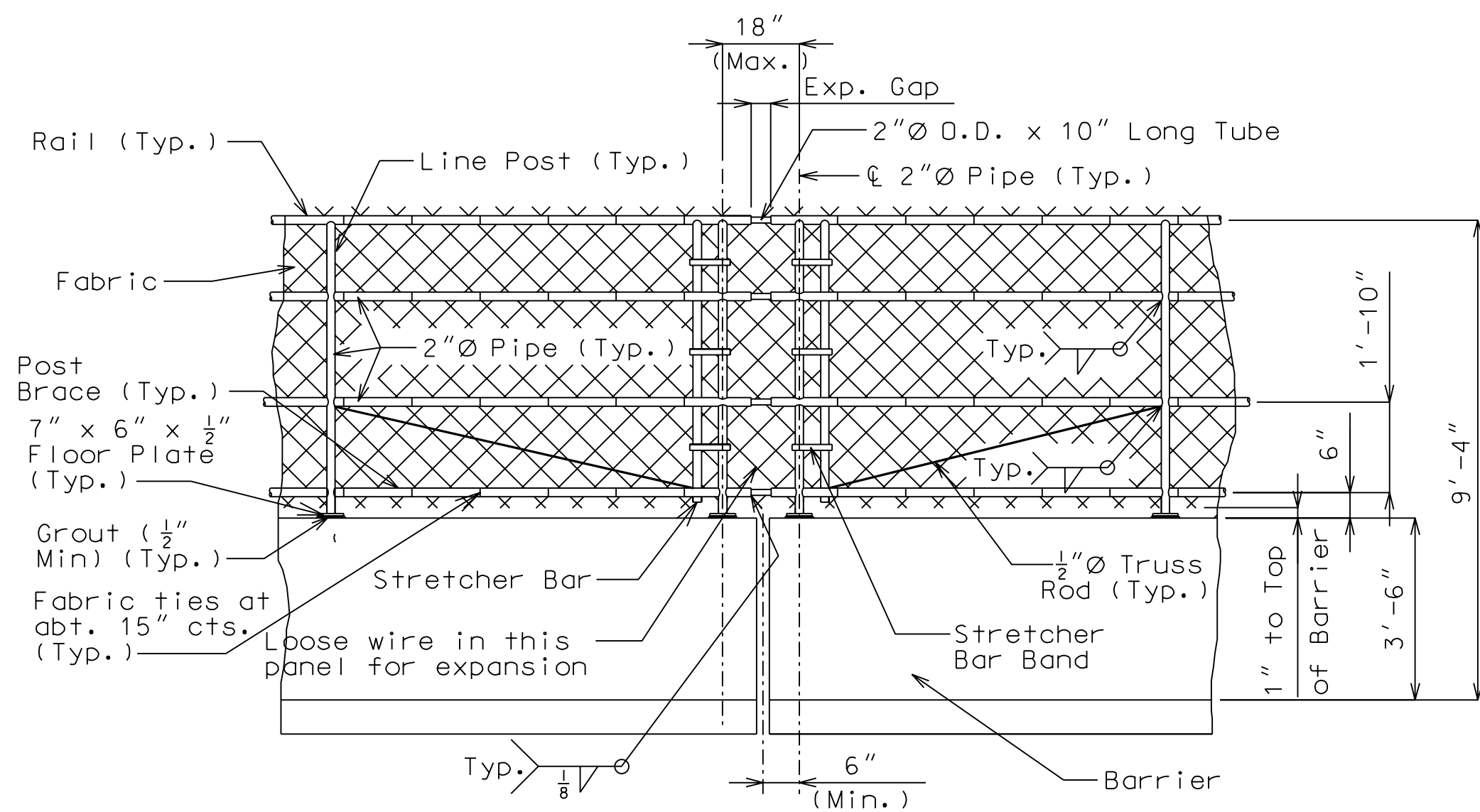
<b>BARRIER ELEVATIONS</b>  <b>ART RFQ INFORMATION</b>	 <p>WSP USA, INC. 300 WYANDOTTE STREET SUITE 200 KANSAS CITY, MO 64105 (816) 702-4300</p>	 <p>CITY OF KANSAS CITY, MISSOURI PUBLIC WORKS DEPARTMENT</p>	<p>CAPITAL PROJECTS DIVISION 414 E. 12TH STREET 18TH FLOOR CITY HALL KANSAS CITY, MO 64106 (816) 513-2739</p>	DATE	DESCRIPTION

11:15:25 AM  
User:USPY681677  
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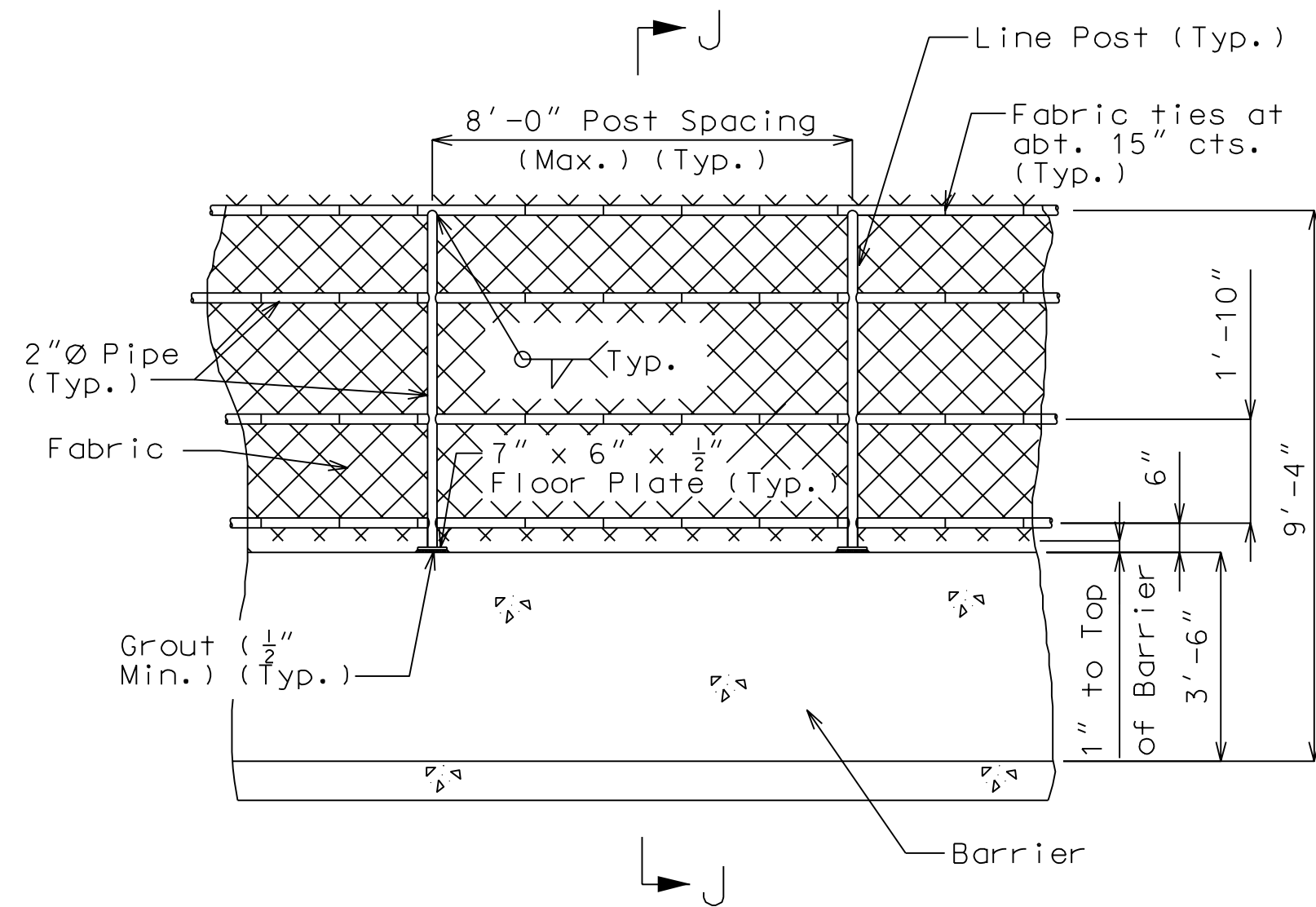
Detailed PRY 5/2021  
Checked NLW 7/2021

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

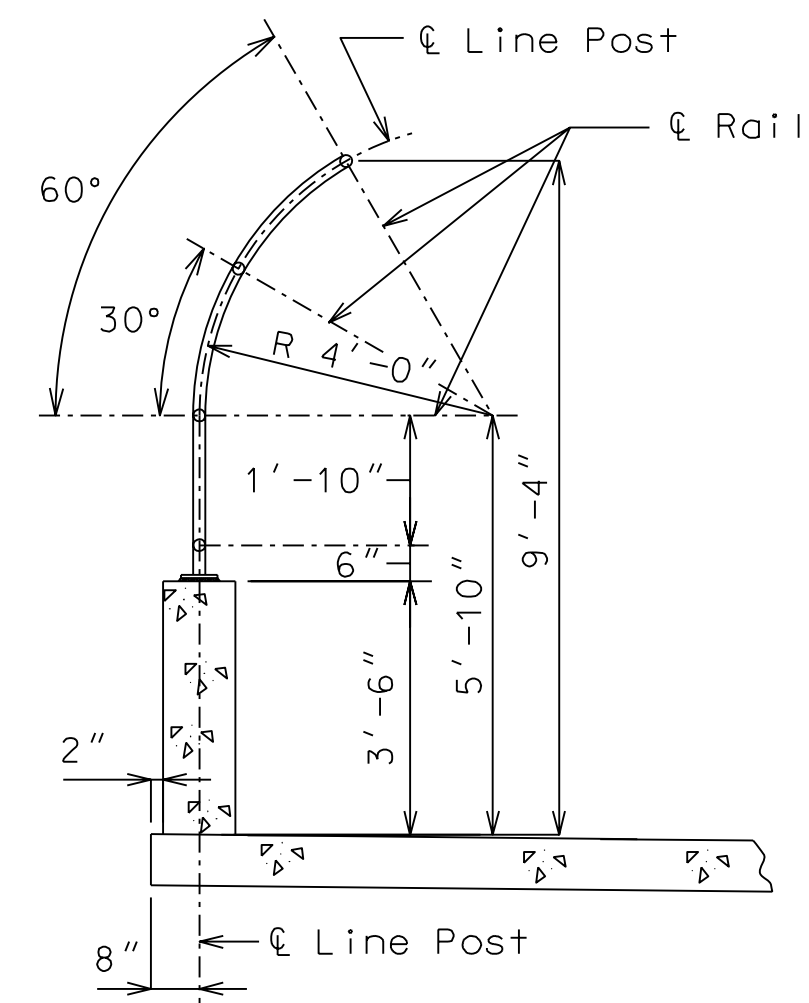
FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION



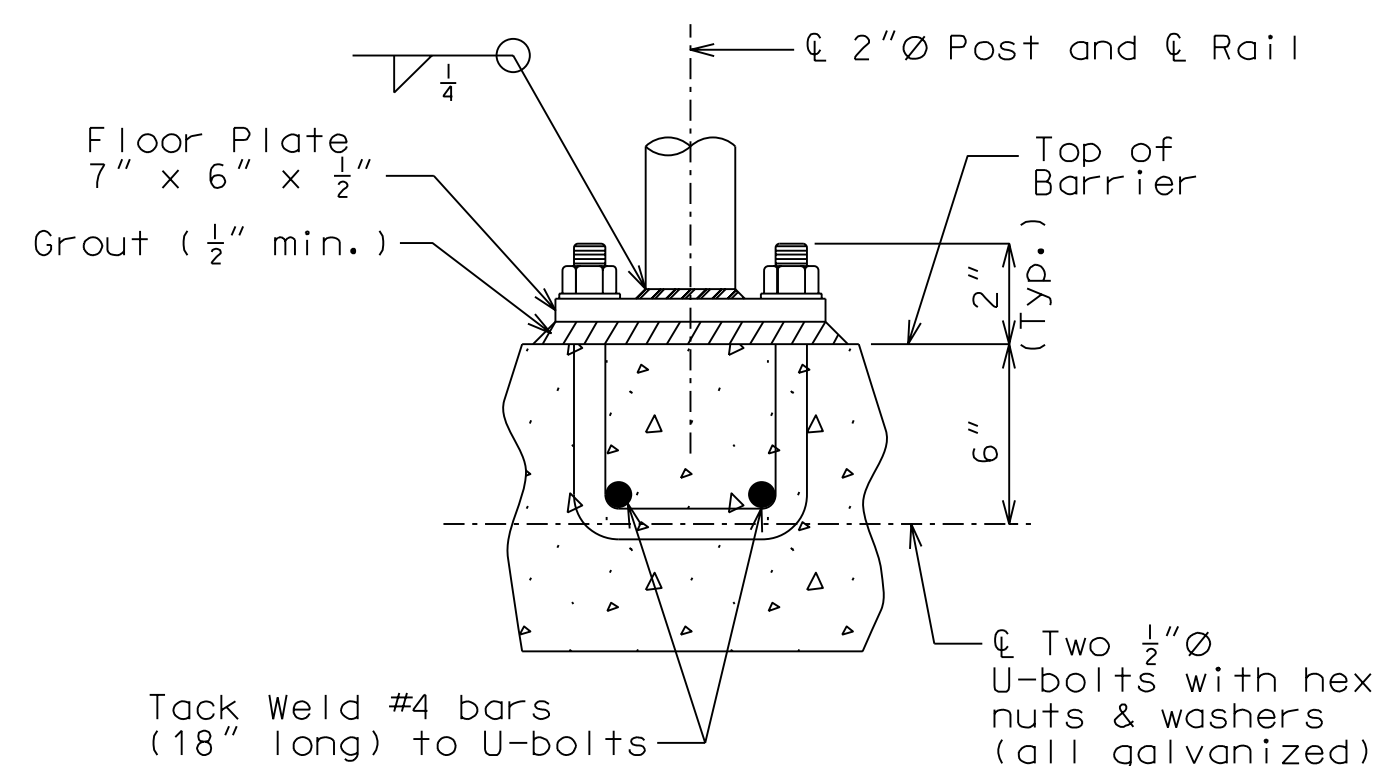
ELEVATION AT EXPANSION GAP



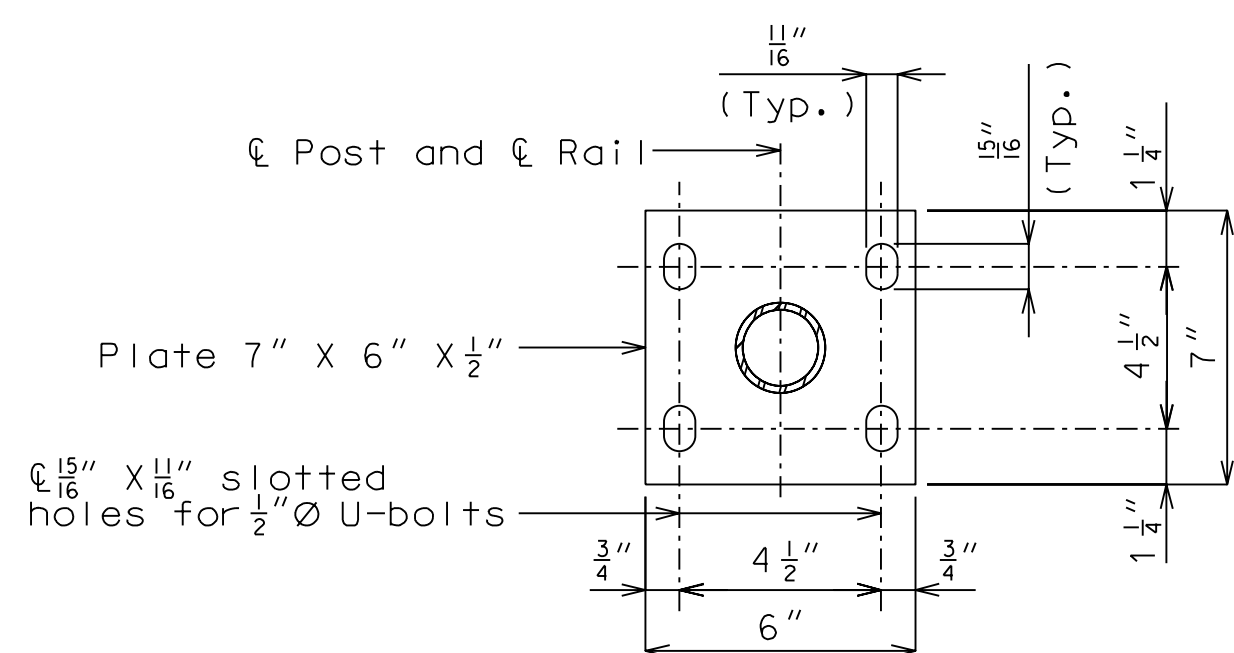
ELEVATION SHOWING POST SPACING



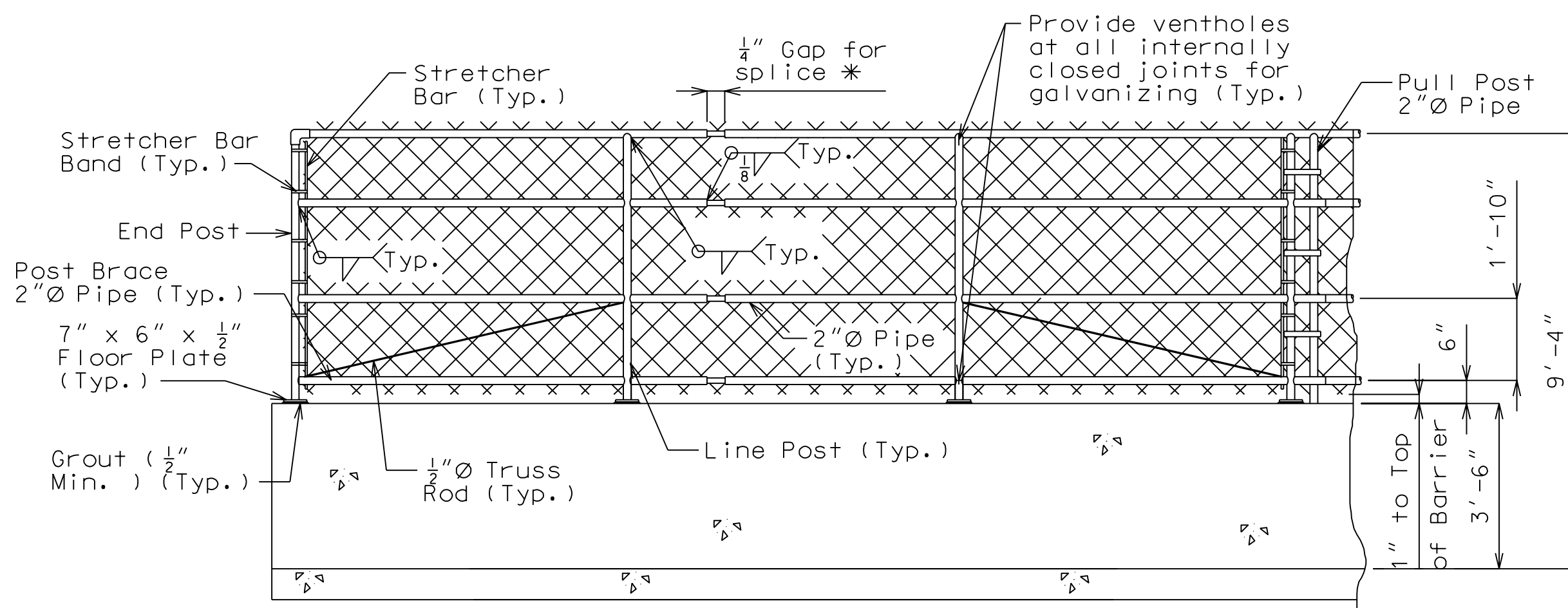
SECTION J-J



POST CONNECTION  
(TYPICAL)



### PLAN OF FLOOR PLATE



ELEVATION AT SPLICE

\* At about 30'-0" centers with at least one splice gap between pull or end posts.

GENERAL NOTES:

Pedestrian guard fence (Chain link type) shall be installed over railroad corridors, and shall be in accordance with Sec 1043 except all fabric shall have the top and bottom edges knuckled.

All posts shall be vertical. Grout of 1/2" minimum thickness shall be placed under floor plates to provide for vertical alignment of posts.

~~Payment for furnishing, galvanizing and erecting the fence and frame complete with anchor bolts and washers will be considered completely covered by the contract unit price for Curved Top Pedestrian Fence (Structures) per linear foot.~~

Dimensions of pedestrian guard fence are measured horizontally.

The maximum spacing allowed between pull posts and end posts is 100 ft. Post brace and 1/2"Ø truss rod are required for panels adjacent to pull posts and end posts only.

Connect the lower end of the 1/2"Ø truss rod to the bottom of the pull posts and end posts to which the stretcher bar is attached.

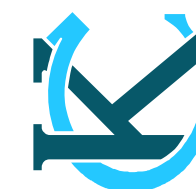
Curved Top Pedestrian Fence (Structures) will be measured to the nearest linear foot for each structure measured along the bottom outside edge of the barrier from Sta. 104+96.05 to Sta. 106+20.30 and Sta. 112+05.45 to Sta. 112+87.42.

Core wire size for wire fabric shall be 6 gage minimum.

SHEET NO. 21	TOTAL SHEETS 46
DATE PREPARED 7/14/2021	
STATE MISSOURI	
ROUTE GRAND BLVD.	
CITY KANSAS CITY	
COUNTY JACKSON	
PROJECT NO. 89005595	

[illegible]CITY OF KANSAS CITY, MISSOURI  
PUBLIC WORKS DEPARTMENT

TAL PROJECTS DIVISION  
414 E. 12TH STREET  
18TH FLOOR CITY HALL  
KANSAS CITY, MO 64106  
(816) 513-2739



WSP USA INC.  
300 WYANDOTTE STREET  
SUITE 200  
KANSAS CITY, MO 64105  
(816) 702-4300

**CURVED TOP PEDESTRIAN  
CHAIN LINK FENCE  
ART RFQ INFORMATION**

[illegible]



# Bike/Ped Bridge Project Location



# Bridge Barrier Height

- Bridge barriers need to be tall enough to protect pedestrians & bicyclists
- AASHTO LRFD Bridge Design Specifications requires a total barrier height of 42"
- AASHTO Guide for Development of Bicycle Facilities suggests a total barrier height between 42-48"
- KDOT Bridge Manual requires 54" barrier for bicycles
- **Due to the bridge height above the groundline, WSP proposes providing additional barrier height = 54" to protect bicyclists in the case of an accident or crash.**

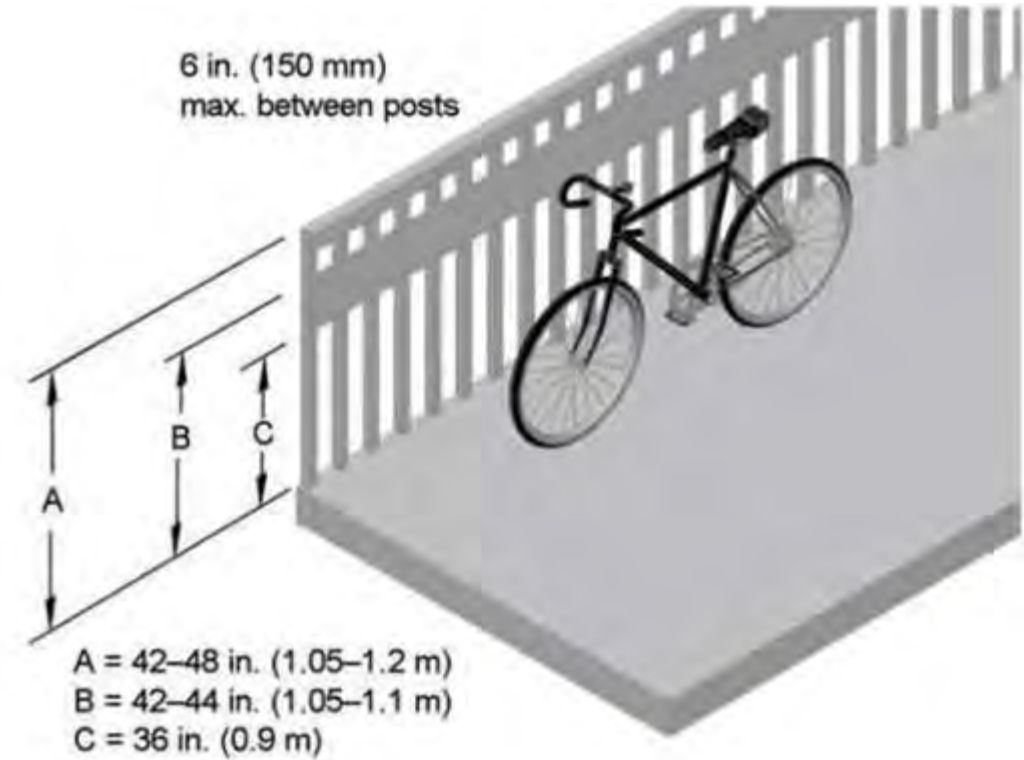


Figure 5-11. Bridge Railing

Images of barriers and/or fencing are examples only.  
Final designs have not been selected.



## Bridge Barrier Style

TxDOT Decorative Rail

Crash Level: TL-2

Height: 42" Concrete +  
12" Steel Handrail



KDOT Corral Rail

Crash Level: TL-3

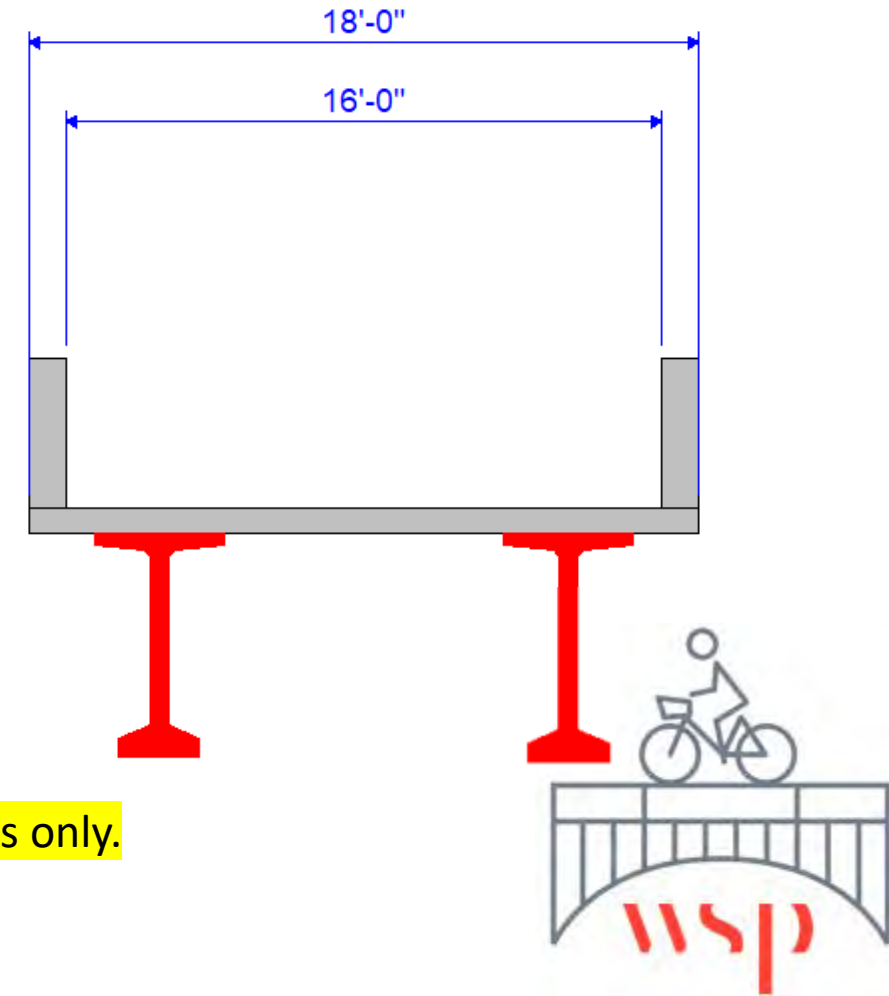
Height: 32" Concrete +  
22" Steel Handrail



Solid Section Barrier

Crash Level: TL-3

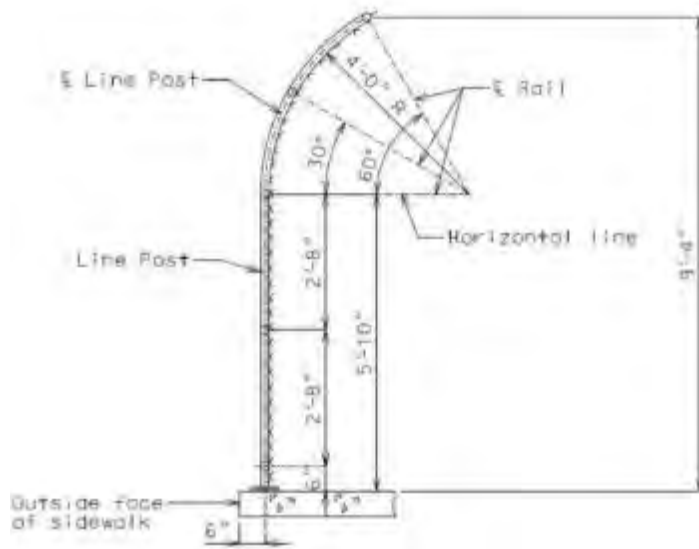
Height: 54" Concrete (less w/rail)





## Bridge Railroad Fence

MoDOT Standard Railroad Fence  
Height: 9'-4" above deck surface, 4'-10" above 54" barrier



Heart of America Railroad Fence  
Height: Variable fence on bridge barrier

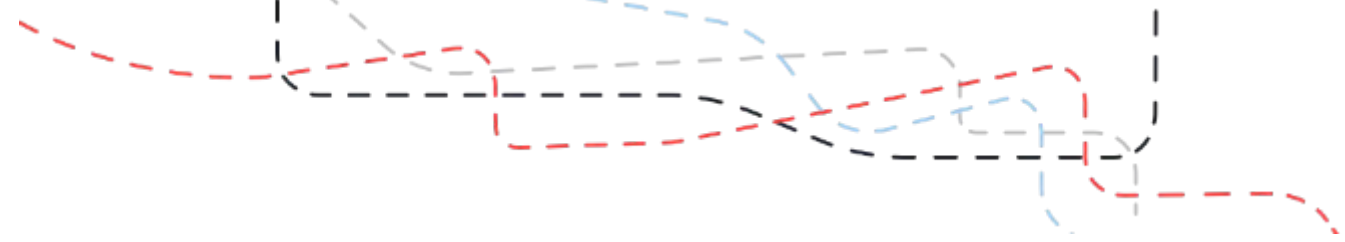


Town of Kansas Bridge Type Fence  
Enclosure  
Height: Variable, must accommodate Emergency Vehicle access





# Barrier Railing Styles



Chain Link Pipe Railing:  
See middle image of previous page

Stainless Steel Pipe Railing



Decorative Steel Railing



Images of barriers and/or fencing are examples only.  
Final designs have not been selected.



## Pier Style

### Traditional Single Column Pier

- Round Column
- Straight/Tapered Rectangular Cap



### Grand Blvd Road Bridge Pier

- Square Column w/Rounded chamfer
- Rectangular Cap

