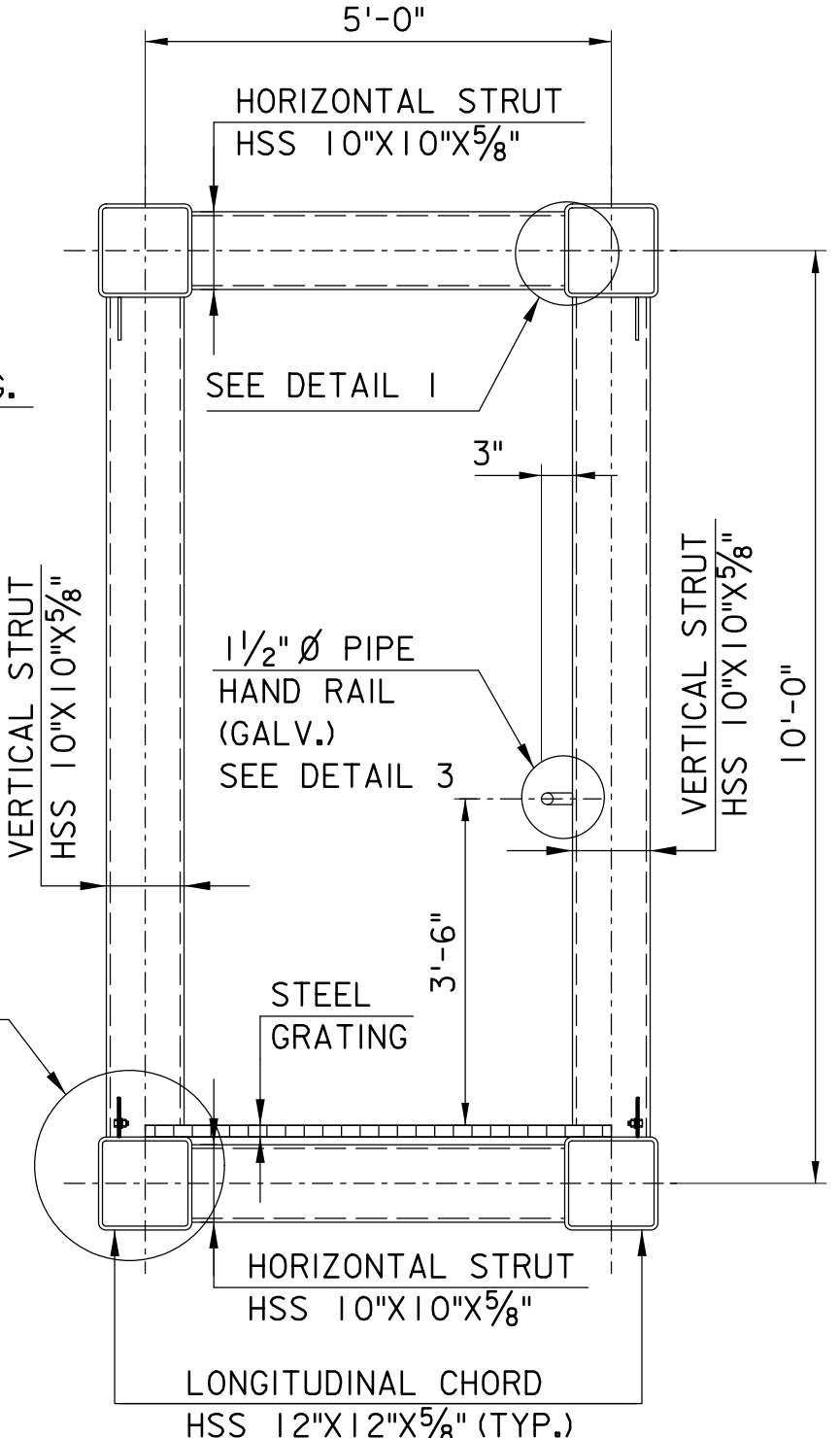
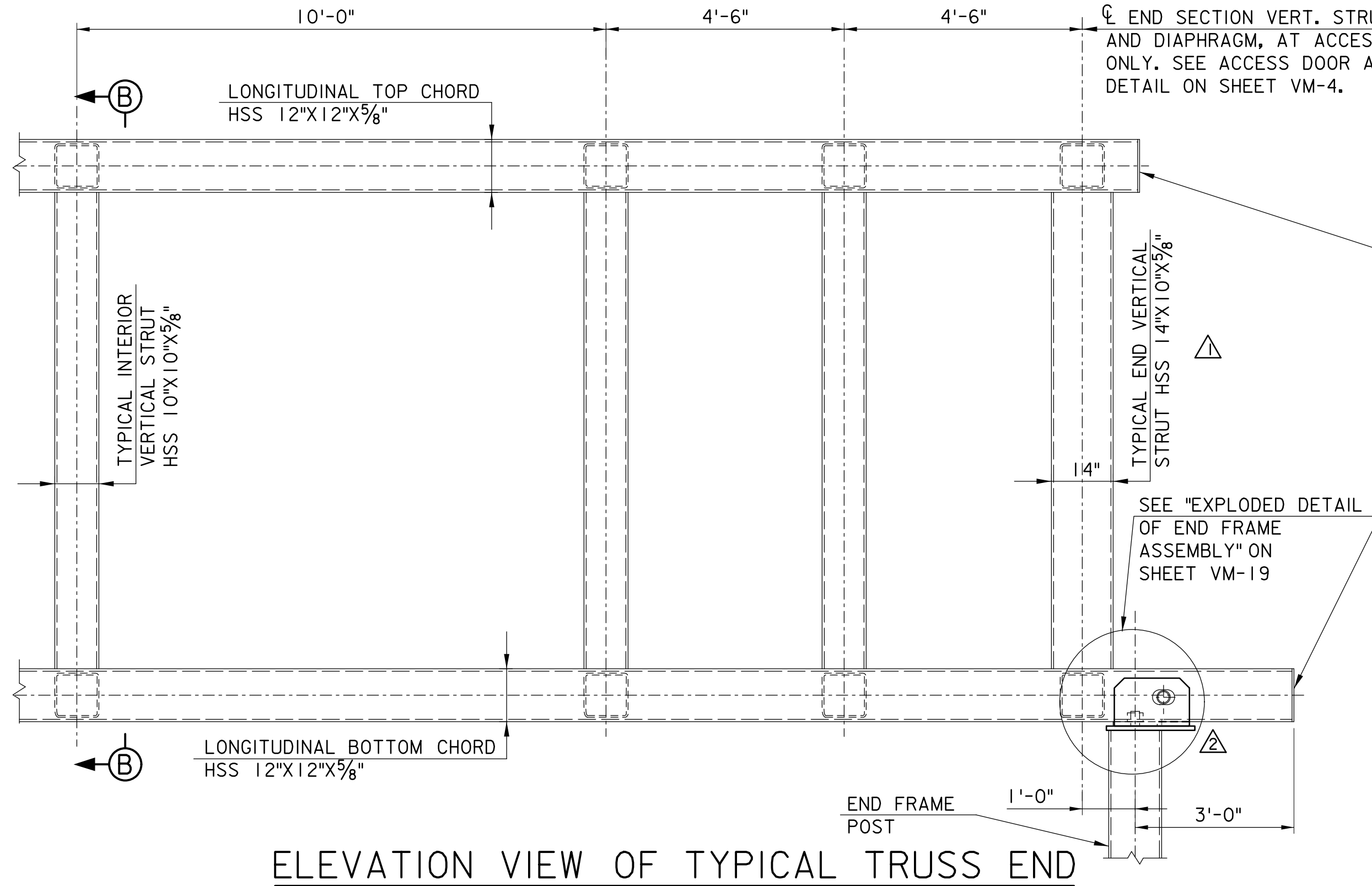


DETAIL 2
STEEL GRATING ATTACHMENT DETAIL

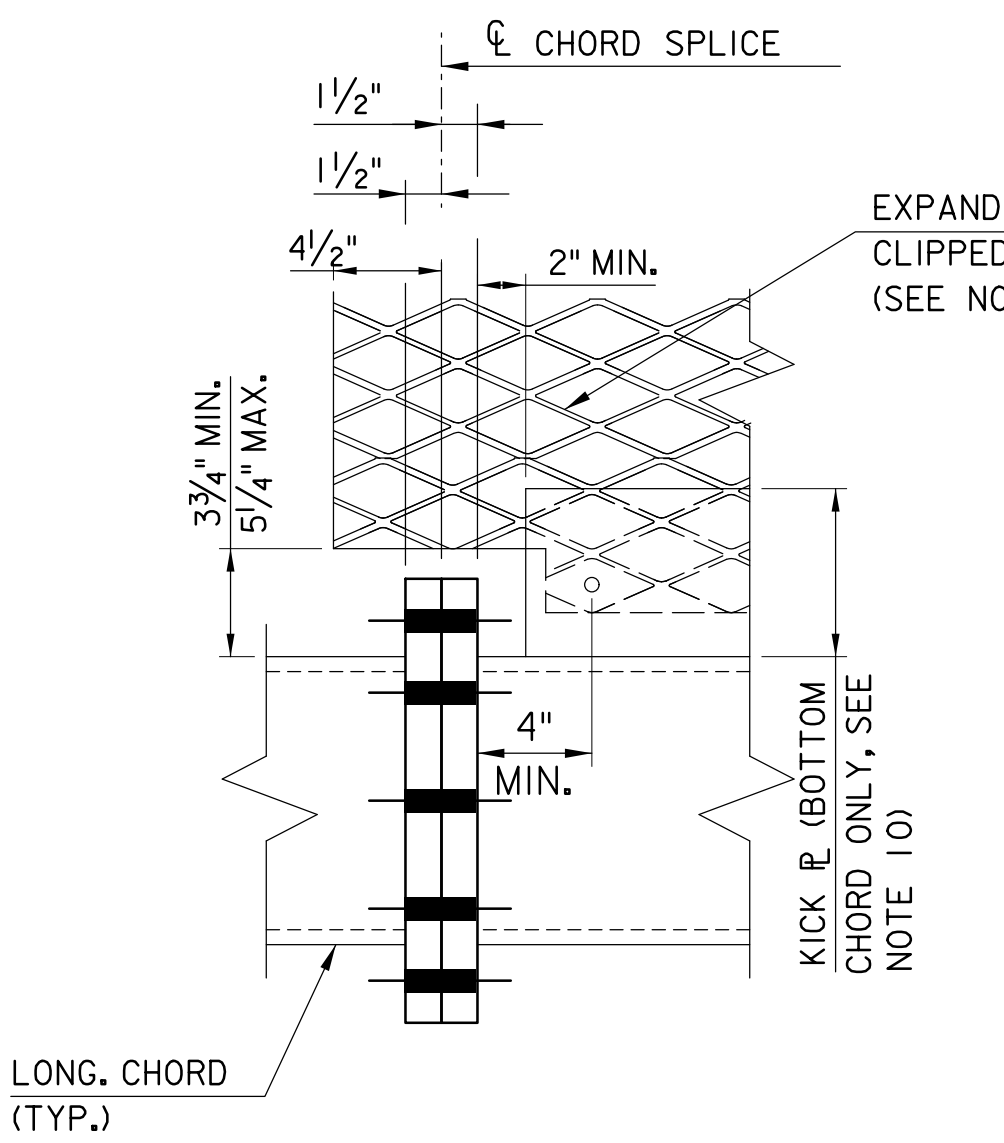


SECTION B-B
1/2" = 1'-0"

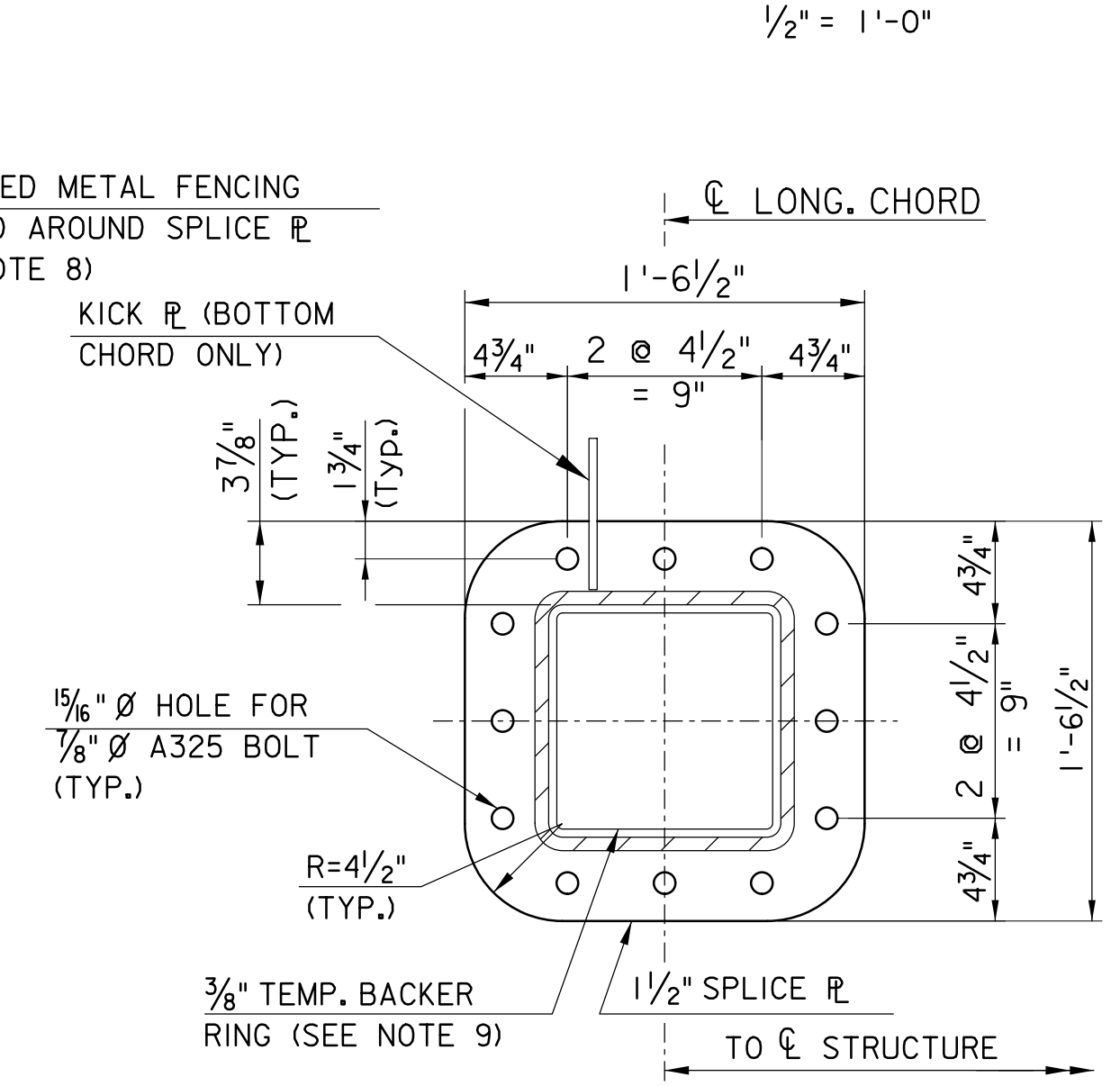


ELEVATION VIEW OF TYPICAL TRUSS END

(FENCE, GRATING, HANDRAIL AND SIGNS NOT SHOWN FOR CLARITY)



ELEVATION



SECTION

FIELD SPLICE DETAIL

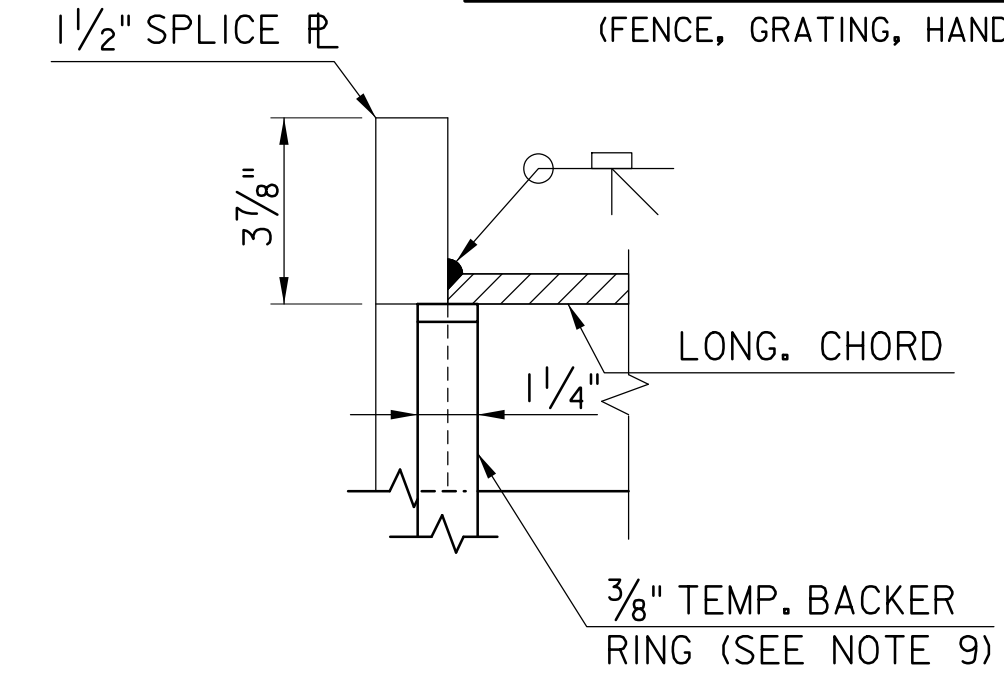
1/2" = 1'-0"

CAMBER NOTE:

CAMBER SHALL BE OBTAINED BY ONE OF THE FOLLOWING METHODS:
 1) INCREASING THE LENGTH OF THE TOP CHORDS AND DECREASING THE LENGTH OF THE BOTTOM CHORDS TO CREATE CONCENTRIC ARCS. THE INDIVIDUAL TOP AND BOTTOM CHORDS MAY BE FORMED INTO ARCS VIA AN APPROVED MECHANICAL OR HEAT BENDING METHOD.
 2) MITER THE TOP AND BOTTOM CHORDS VIA FIELD SPLICE CONNECTIONS WITH AN APPROVED FULL PENETRATION GROOVE WELD. MITERED SPLICES WILL NOT BE PERMITTED AT THE VMS PANEL LOCATION AND WILL PREFERABLY BE LOCATED 12" FROM VERTICAL STRUT LOCATIONS. A MINIMUM OF TWO (2) MITERED SHOP WELDED SPLICE CONNECTIONS WILL BE REQUIRED IN ORDER TO ENSURE THE PORTION OF THE TRUSS SPAN SUPPORTING THE VMS PANEL IS PLUMB AND LEVEL WHEN VIEWED IN ELEVATION.
 3) ALTERNATE METHOD AS APPROVED BY THE ENGINEER.

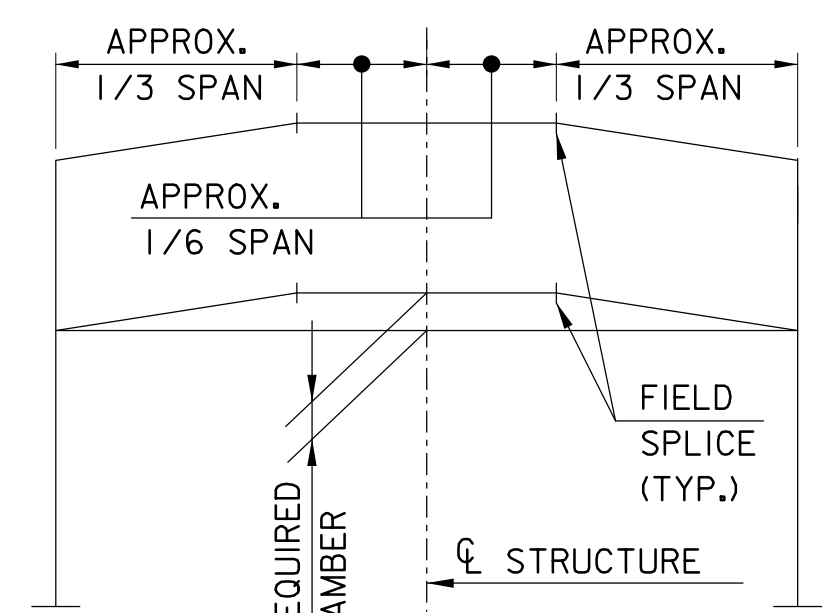
NO FORCE SHALL BE APPLIED IN ORDER TO OBTAIN THE CAMBER EXCEPT AS NOTED IN METHOD 1. THE REQUIRED CAMBER SHALL BE AS PROVIDED IN TABLE B ON THIS SHEET.

TABLE B			
SPAN LENGTH, L	DEAD LOAD CAMBER	ARCH. CAMBER	TOTAL CAMBER
90'-100'	1"	1 1/4"	2 1/4"
105'	1 1/4"	1 1/4"	2 1/2"
110'	1 1/4"	1 1/2"	2 3/4"
115'-120'	1 1/2"	1 1/2"	3"
125'-130'	1 3/4"	1 1/2"	3 1/4"
135'-140'	2"	1 3/4"	3 3/4"
145'-150'	2 1/4"	1 3/4"	4"



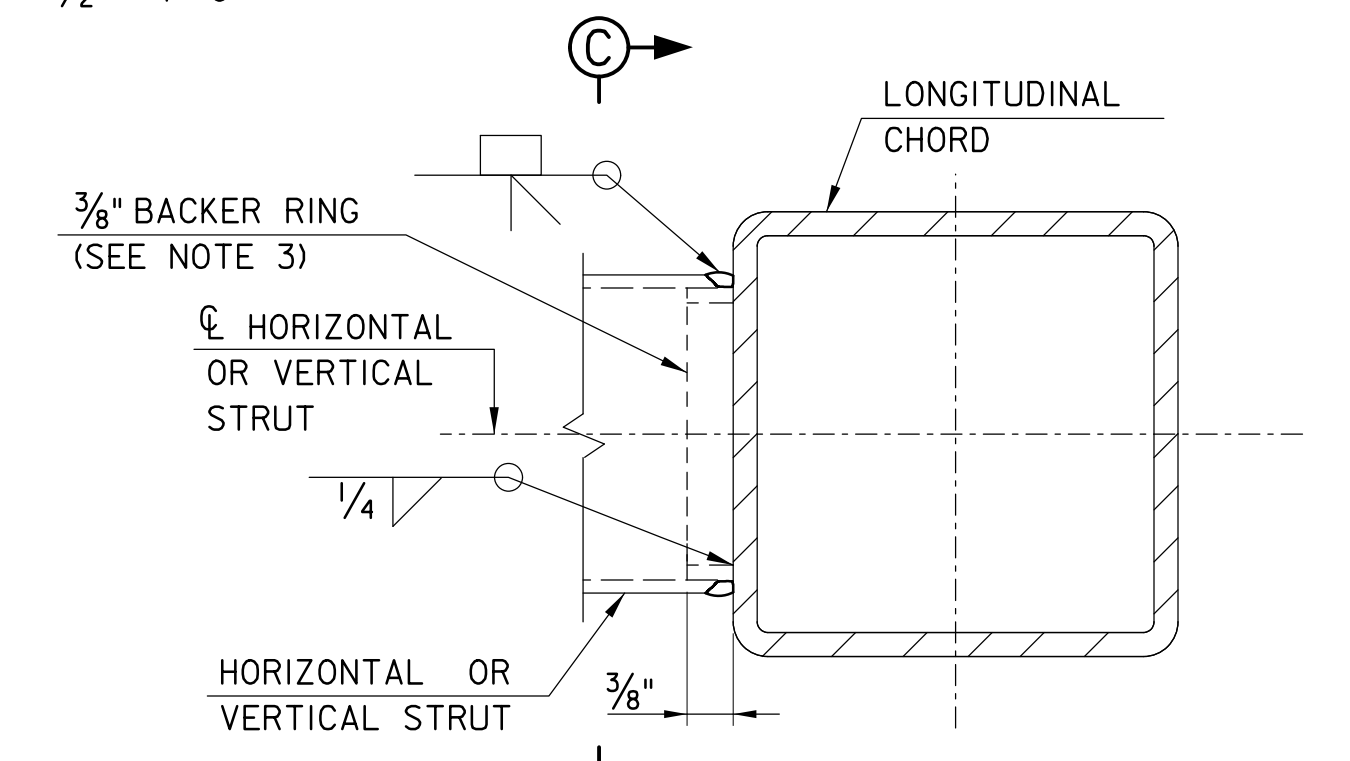
FIELD SPLICE WELD DETAIL

3" = 1'-0"



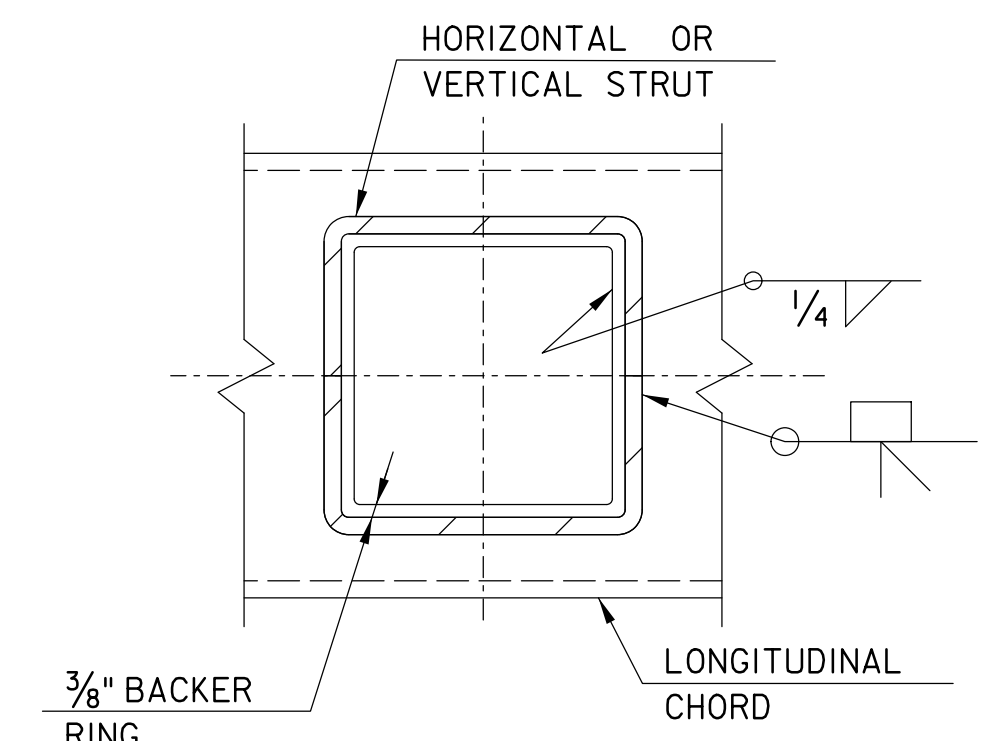
CAMBER DIAGRAM

N.T.S.



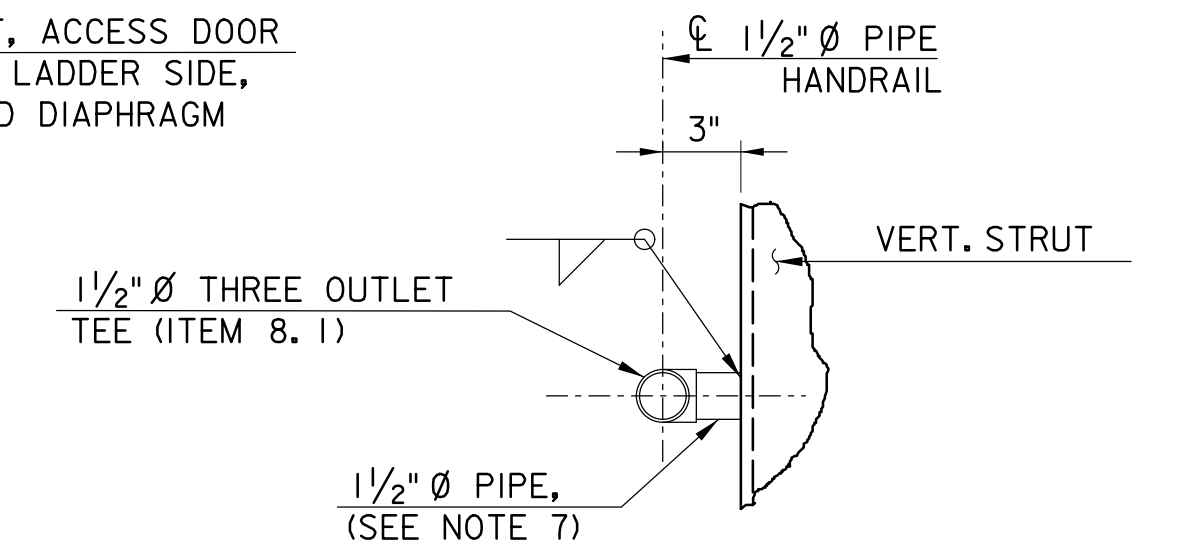
DETAIL 1
TYPICAL TRUSS WELDED CONNECTION

N.T.S.



SECTION C-C

N.T.S.



DETAIL 3
HANDRAIL DETAIL

NOTE:
HANDRAIL TO EXTEND FOR FULL LENGTH OF TRUSS FROM END DIAPHRAGM TO END DIAPHRAGM.

LOADING AND DESIGN NOTES:

- NO ADDITIONAL SIGN AREA OR APPURTENANCES MAY BE USED IN CONJUNCTION WITH THESE PLANS WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE AUTHORITY.
- WIND FORCES ON VARIABLE MESSAGE SIGN AND VARIABLE SPEED LIMIT SIGN HAVE BEEN DETERMINED USING A DRAG COEFFICIENT (CD) OF 1.2.
- EXPANDED METAL FENCING SHOWN IN THESE STANDARD DRAWINGS HAS AN OPEN AREA RATIO OF 75%.
- STEEL GRATING SHOWN IN THESE STANDARD DRAWINGS HAS AN OPEN AREA RATIO OF 71%.
- THE SIGN SUPPORT STRUCTURE HAS BEEN DESIGNED TO THE REQUIREMENTS OF AASHTO FATIGUE CATEGORY II.
- SEE DESIGN MANUAL EXHIBITS 2-405 THROUGH 2-411 FOR REQUIRED PEDESTAL OFFSET AND PROTECTION.

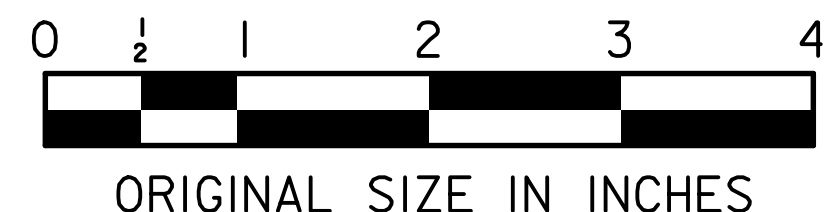
NOTES:

- CHORDS AND STRUTS OF THE TRUSS ARE TO BE USED AS ROUTING CONDUITS FOR VMS/VSLs POWER AND CONTROL WIRING. SPECIFIC CHORD TO STRUT CONNECTIONS WILL REQUIRE WIRE PULL HOLES. SPECIFIC STRUTS WILL REQUIRE HAND HOLES TO FACILITATE THE INSTALLATION OF THE ASSOCIATED WIRING THROUGH THE WIRE PULL HOLES. SEE SHEET VM-22 FOR LOCATIONS AND DETAILS OF WIRE PULL HOLES AND HAND HOLES.
- FOR FENCE ATTACHMENT DETAILS, SEE SHEET VM-19.
- FULL PENETRATION WELDED CHORD TO STRUT CONNECTION WITH THE BACKER RING ATTACHED TO THE CHORD WITH A CONTINUOUS FILLET WELD AROUND THE INTERIOR FACE OF THE RING. THE THICKNESS OF THE BACKING RING SHALL NOT EXCEED 3/8".
- STEEL GRATING SHALL BE COPED TO FIT AROUND VERTICAL STRUT MEMBER AND SPLICE PLATES, AS REQUIRED.
- WASHER SHALL BE OVERSIZE FENDER-WASHER, MIN. O.D.=1.625", MIN. THICKNESS=0.056"
- FOR ITEMS LIST, SEE SHEET VM-10.
- PIPE TO BE WELDED TO VERTICAL STRUT SHALL BE OF THE SAME MATERIAL AS THE VERTICAL STRUT, AS DEFINED IN NOTE 3A ON SHEET VM-17.
- IT IS THE RESPONSIBILITY OF THE FABRICATOR TO SUPPLY ALL MATERIAL NECESSARY FOR THE FENCE SPLICE AT THE TRUSS FIELD SPLICE LOCATION(S). THE FENCE SPLICE MATERIAL, INCLUDING ALL BOLTS, NUTS AND WASHERS FOR THE SPLICE STRAP ASSEMBLIES, SHALL BE ATTACHED TO THE TRUSS IN SUCH A MANNER THAT THEY WILL BE READILY ACCESSIBLE DURING ERECTION, IN THE PANEL ADJACENT TO THE SPLICE PLATES.
- FULL PENETRATION GROOVE WELD LONGITUDINAL CHORD TO SPLICE PLATE. UPON COMPLETION OF WELD, BACKER RING SHALL BE CHIPPED OUT AND GROUND SMOOTH.
- AT TOP CHORD FIELD SPLICE, THE FENCING TAB PLATE SHALL BE ADJUSTED AS NECESSARY.
- A FABRICATED STEEL SPACER IS REQUIRED BETWEEN THE SADDLE CLIPS AND NUT INSERTS.

NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

90'-150' OVERHEAD SPAN VMS/VSLs SUPPORT STRUCTURE
TRUSS & FIELD SPLICE DETAILS

OFFICE OF THE CHIEF ENGINEER NEW JERSEY TURNPIKE AUTHORITY	2010 STANDARD DRAWING VM-18
WOODBRIDGE NEW JERSEY	



APP.	NO.	DATE	REVISION
	2	10/23	REVISED LOCK PIN BRACKET DETAIL
	1	3/11	ADDED NOTE
	0	8/10	REISSUED DRAWING

CONTRACT NO.

SHEET NO. OF