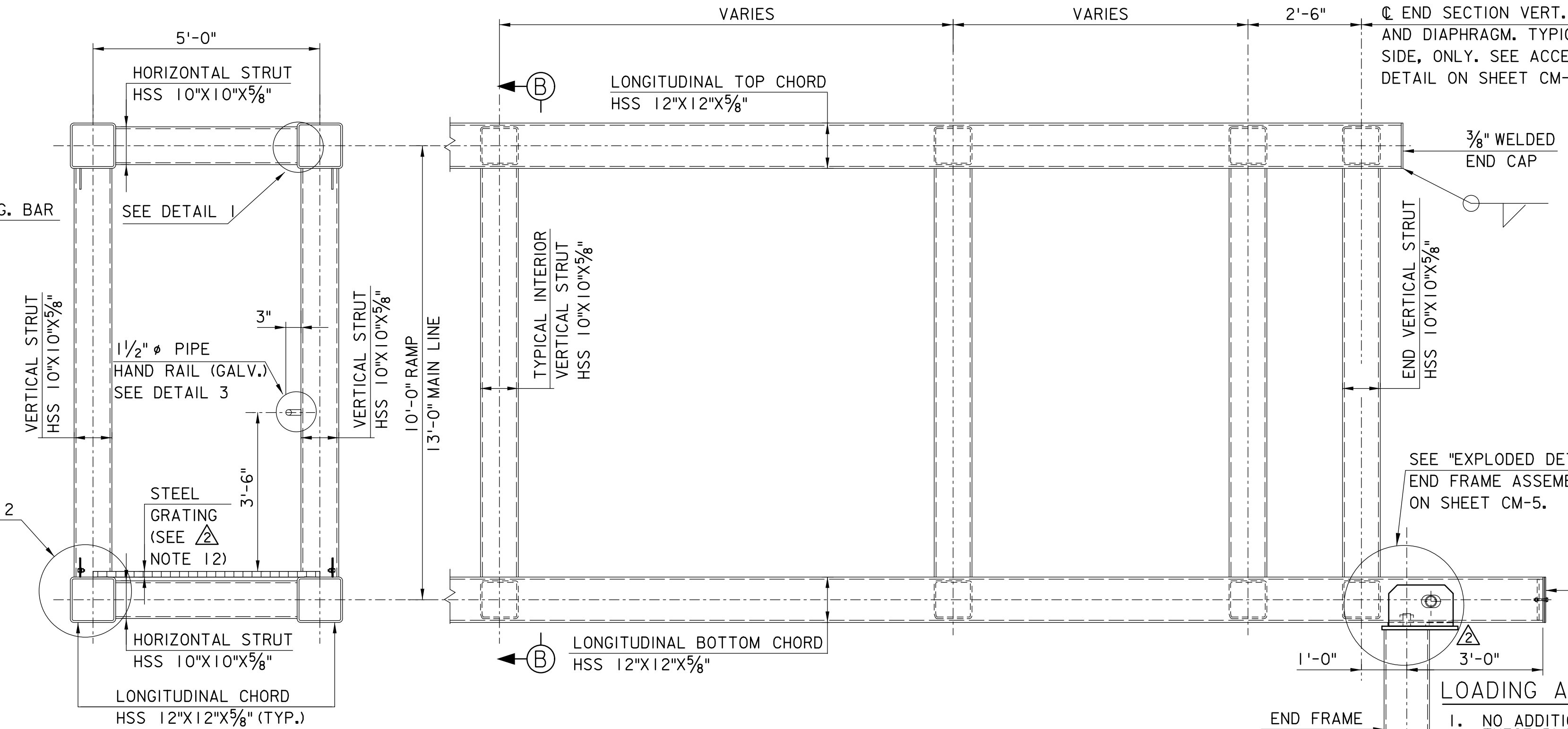
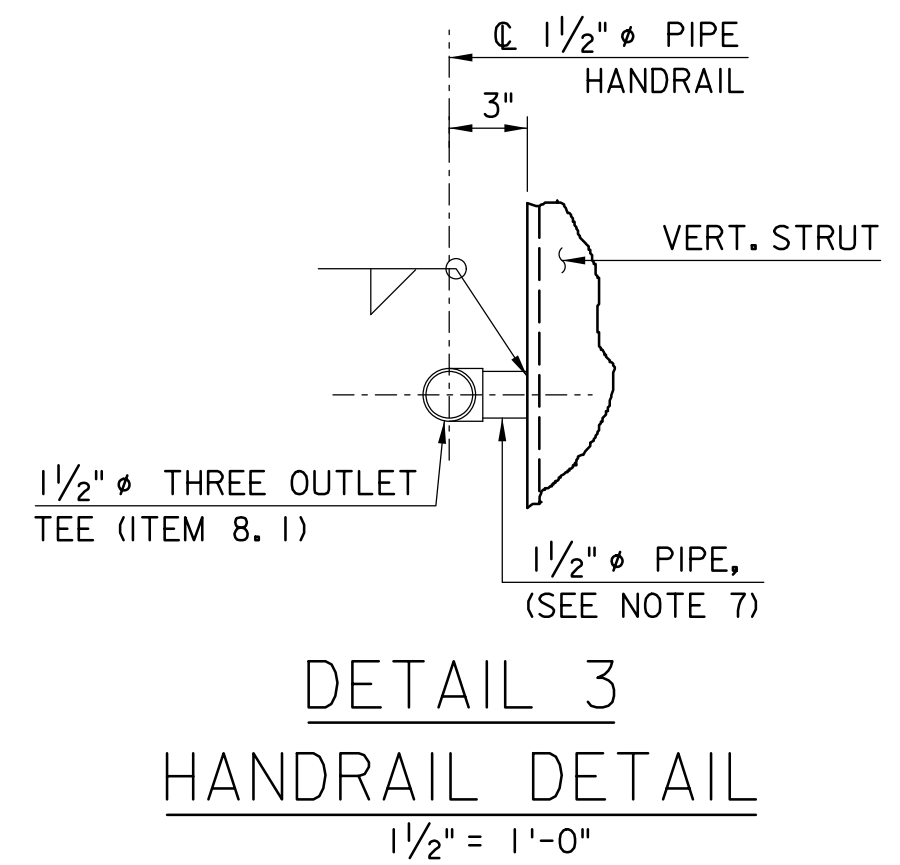


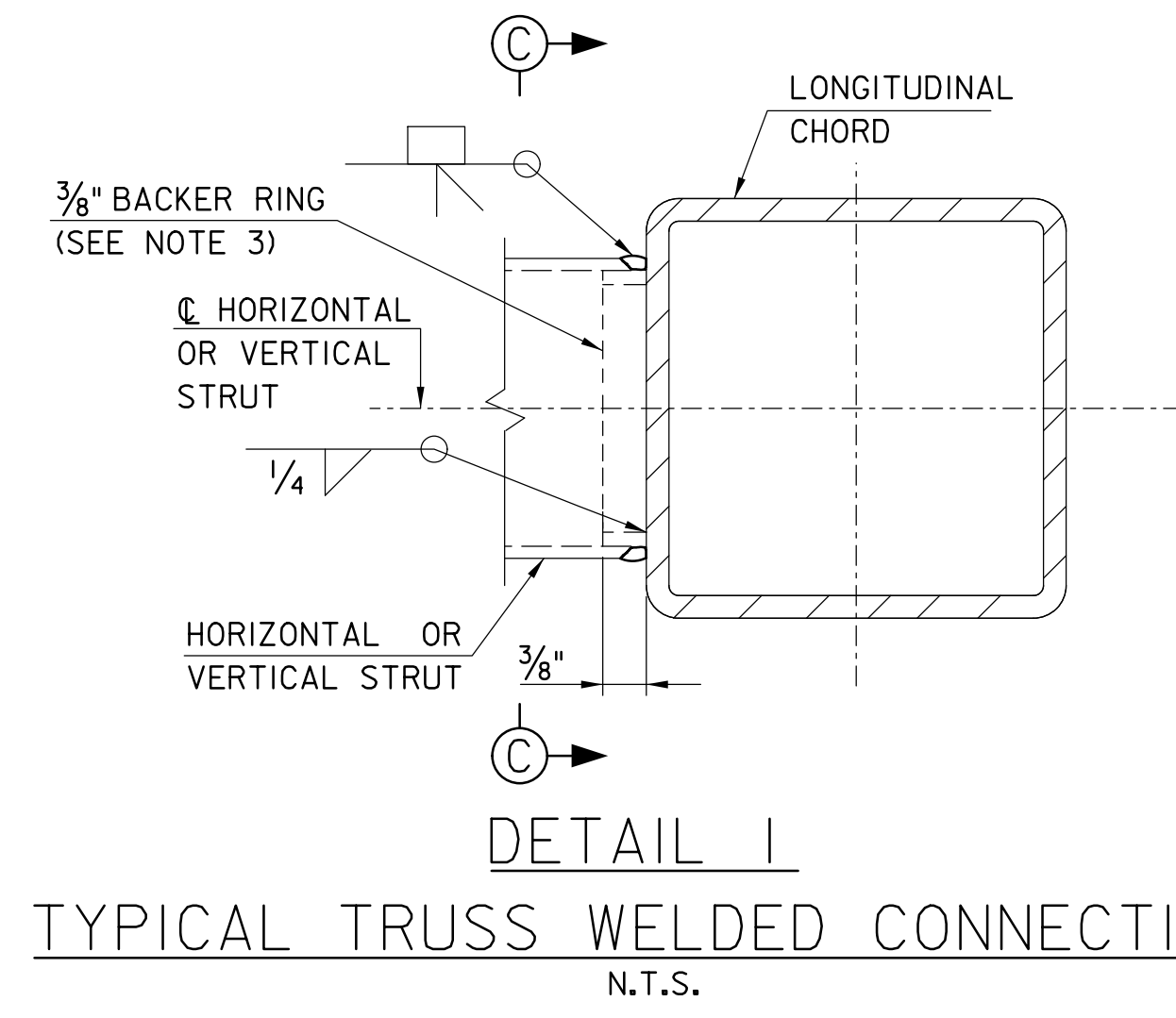
**DETAIL 2**  
STEEL GRATING ATTACHMENT DETAIL  
3" = 1'-0"



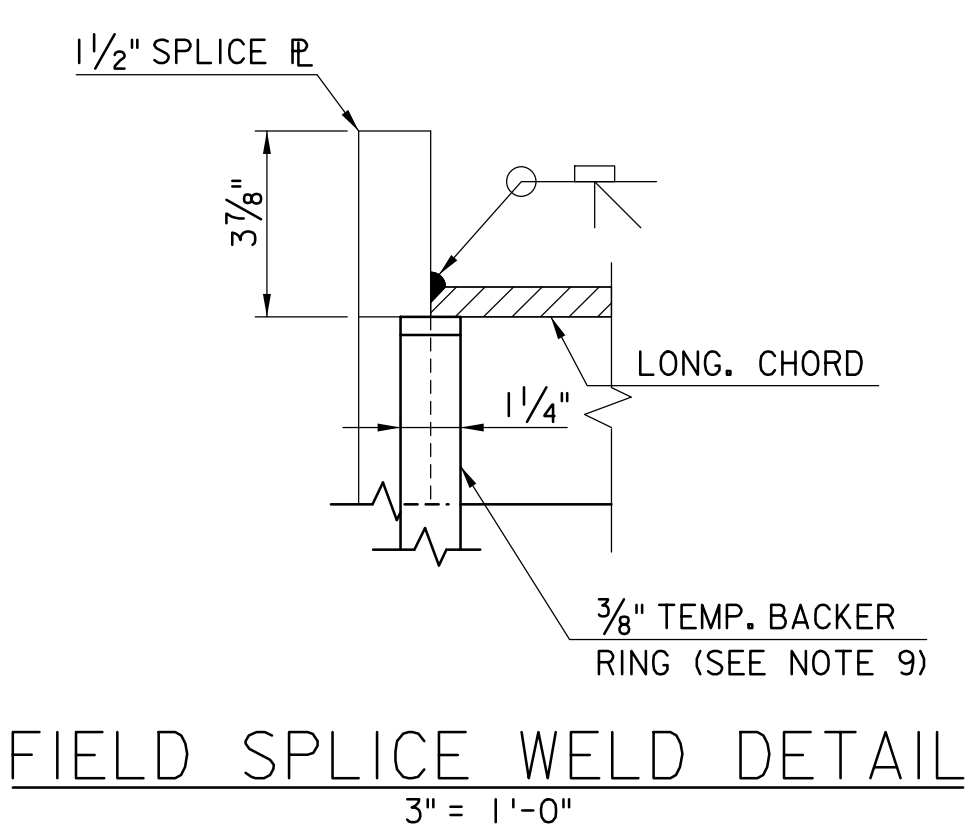
**SECTION B-B**  
1/2" = 1'-0"  
**ELEVATION VIEW OF TYPICAL TRUSS END**  
(FENCE, GRATING, HANDRAIL AND SIGNS NOT SHOWN FOR CLARITY)  
1/2" = 1'-0"



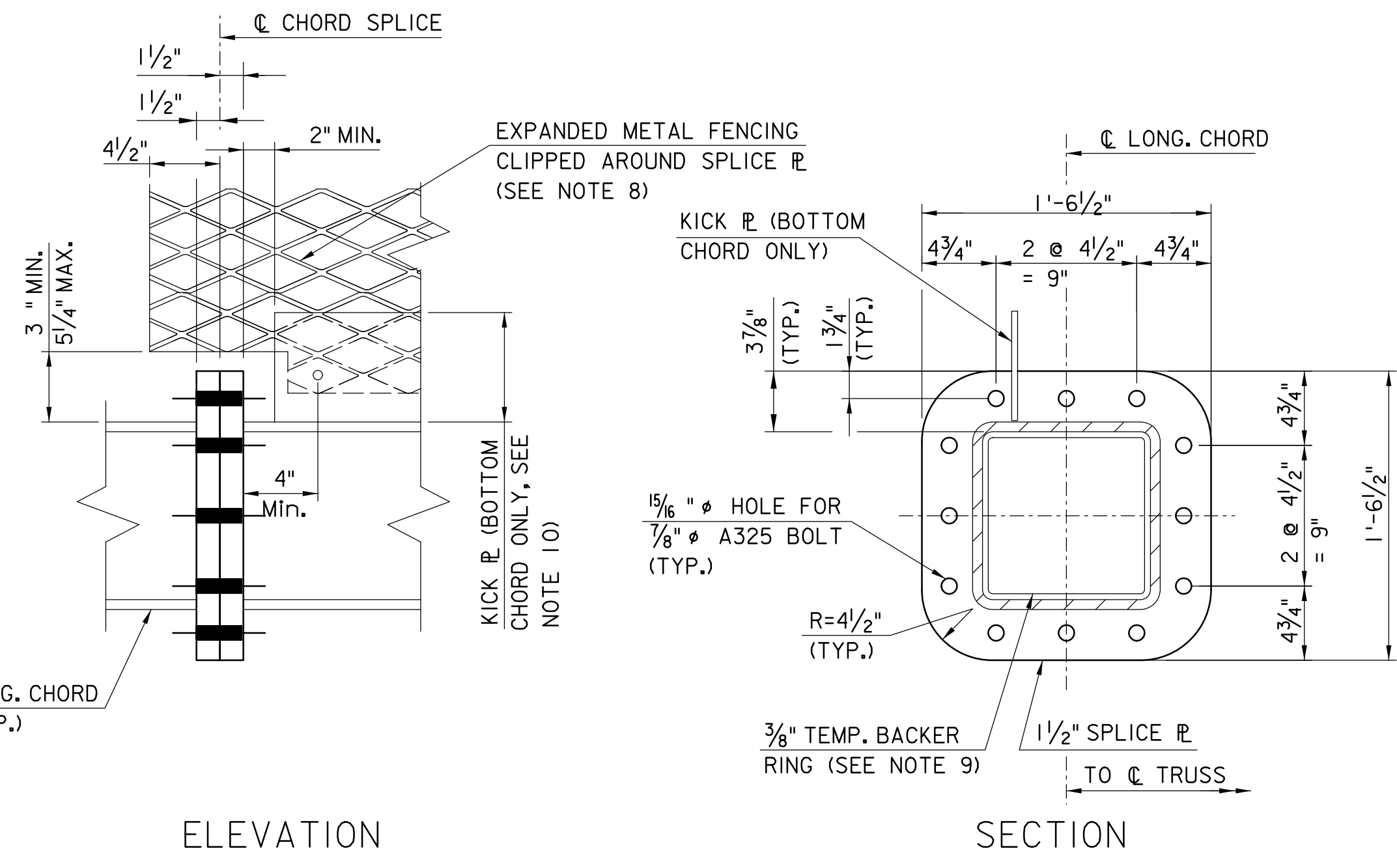
**DETAIL 3**  
HANDRAIL DETAIL  
1/2" = 1'-0"  
NOTE:  
HANDRAIL TO EXTEND FOR FULL LENGTH OF TRUSS FROM END DIAPHRAGM TO END DIAPHRAGM.



**DETAIL 1**  
TYPICAL TRUSS WELDED CONNECTION  
N.T.S.



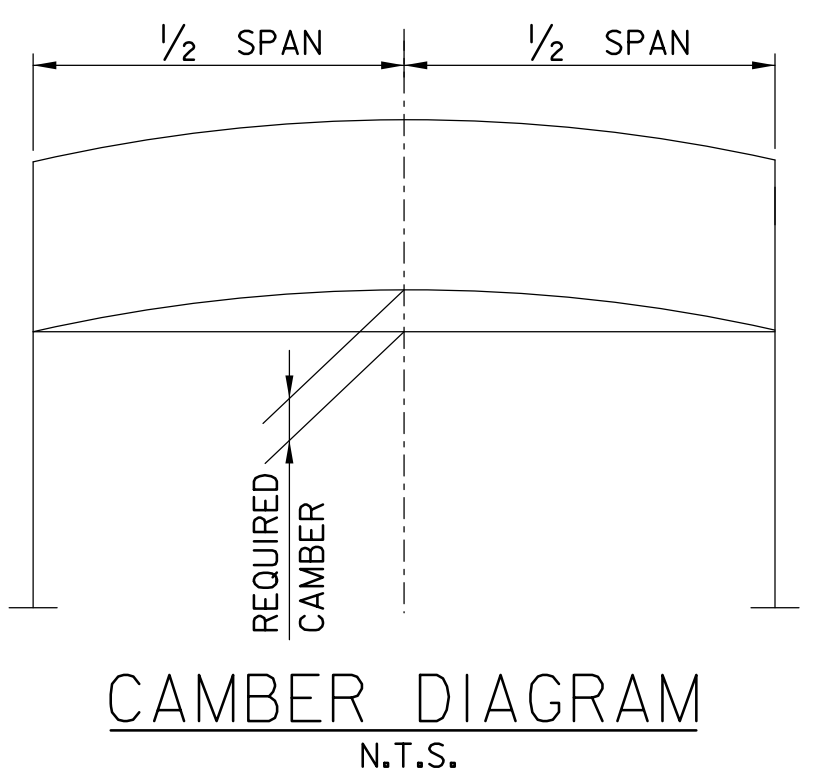
**FIELD SPLICE WELD DETAIL**  
3" = 1'-0"



**ELEVATION**  
**SECTION**  
**FIELD SPLICE DETAIL**  
1/2" = 1'-0"

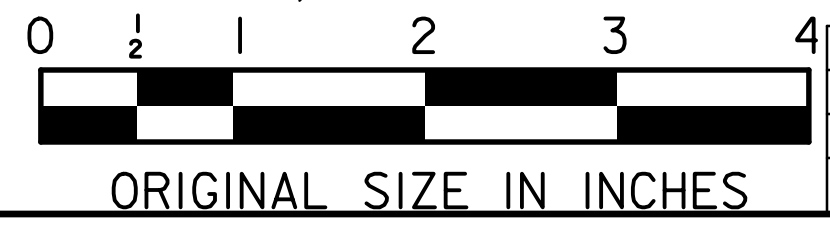
- LOADING AND DESIGN NOTES:**
- NO ADDITIONAL SIGN AREA OR APPURTENANCES MAY BE USED IN CONJUNCTION WITH THESE PLANS WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE AUTHORITY.
  - WIND FORCES ON HYBRID CHANGEABLE MESSAGE SIGN HAVE BEEN DETERMINED USING A DRAG COEFFICIENT (CD) OF 1.2.
  - EXPANDED METAL 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 HCMS 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 CM-9 FOR LOCATIONS AND DETAILS OF WIRE PULL HOLES AND HAND HOLES.
  - FOR FENCE ATTACHMENT DETAILS, SEE SHEET CM-5.
  - 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 COPE 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 CM-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 CM-2.
  - IT IS THE RESPONSIBILITY OF THE FABRICATOR TO SUPPLY ALL MATERIAL NECESSARY FOR THE FENCE SPLICE AT THE TRUSS SPLICE LOCATIONS. 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 CLIP AND NUT INSERT.
  - ATTACH ALL INDIVIDUAL STEEL WALKWAY GRATING PANELS TO ONE ANOTHER WITH PERFORATED STAINLESS STEEL LOCKING CABLE TIES (ITEM 1.5). USE 3 CABLE TIES EVENLY SPACED AT EACH JOINT. JOIN TOGETHER USING AVAILABLE TENSIONING TOOL.

**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 HCMS 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 HCMS 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.  
FOR STRUCTURAL LENGTHS NOT SHOWN IN THE CAMBER TABLE, USE THE REQUIRED CAMBER FOR THE NEXT LONGER SPAN SHOWN.



**CAMBER DIAGRAM**  
N.T.S.

CAMBER	
SPAN	REQ. CAMBER
120'	3 1/2"
100'	3"
80'	2 1/4"
60'	1 1/2"



APP.	NO.	DATE	REVISION
	2	10/23	ADDED NOTE AND REVISED LOCK PIN BRACKET
	1	4/11	REVISED DETAILS
	0	1/10	ORIGINAL DRAWING

**NEW JERSEY TURNPIKE AUTHORITY**  
**NEW JERSEY TURNPIKE**

**OVERHEAD SPAN HCMS SUPPORT STRUCTURES**  
**TRUSS AND FIELD SPLICE DETAILS**

OFFICE OF THE CHIEF ENGINEER NEW JERSEY TURNPIKE AUTHORITY	2010 STANDARD DRAWING
WOODBRIDGE NEW JERSEY	<b>CM-4</b>