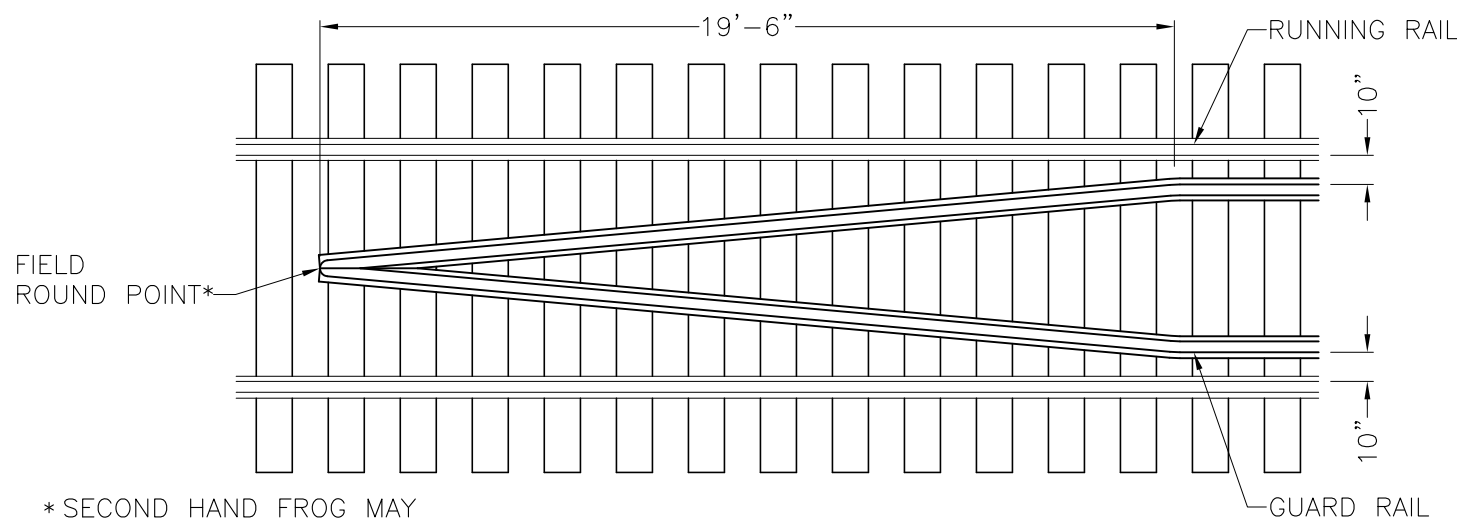


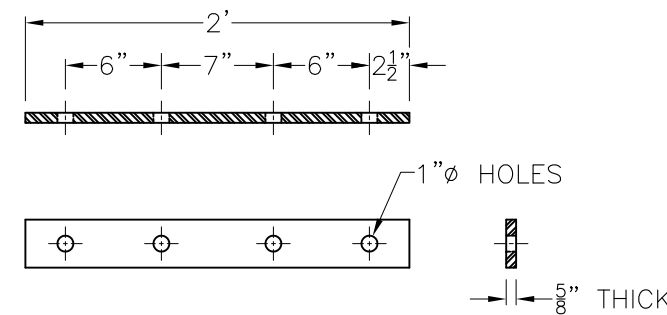
**PLAN OF GUARD RAIL**  
SCALE: 1/16" = 1'-0"

\* INCREASE TO 100' FOR NEW BRIDGES WHERE ROADBED RECONSTRUCTION INCLUDES ENGINEERING FABRIC.

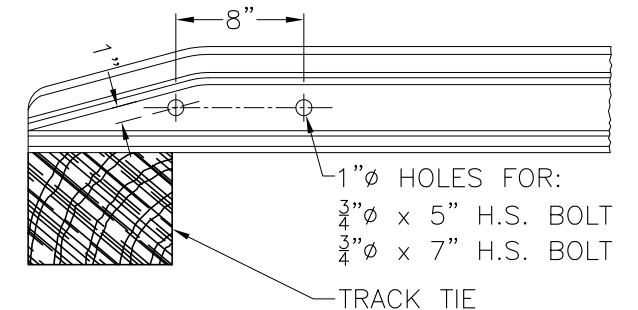


**DETAIL OF POINT**  
SCALE: 1/4" = 1'-0"

\* SECOND HAND FROG MAY BE USED INSTEAD OF POINTING GUARD RAIL.



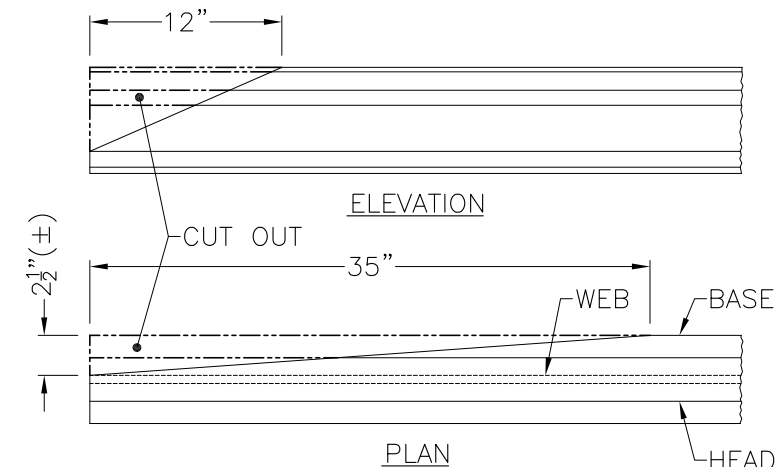
**DETAIL OF FISH PLATE JOINT FASTENING**  
SCALE: 1" = 1'-0"



**DETAIL OF BOLTING POINT**  
SCALE: 1" = 1'-0"

**NOTES**

- PLACE -
1. ON ALL STEEL BRIDGES.
  2. WHEN NEAR RAIL IS WITHIN 10' OF A SUPPORT OF AN OVERHEAD STRUCTURE.
  3. IN TUNNELS WITH TIMBER LINING.
  4. ON OTHER BRIDGES AND STRUCTURES AS DIRECTED BY THE CHIEF ENGINEER.
- MATERIAL - GUARD RAILS TO BE SECOND HAND 115 LB. OR 90 LB. RAIL ON MAIN TRACK. RAIL SHOULD BE MINIMUM OF 30' LENGTHS ON CURVES AND 10' LENGTHS ON TANGENTS. GUARD RAILS TO BE FASTENED TOGETHER WITH 24" ANGLE BARS USING STANDARD BOLTS WITH NUTS AND LOCKWASHERS. ONLY ONE BOLT PER RAIL END IS REQUIRED WITH NUTS TOWARD CENTERLINE OF TRACK.
- SPIKING - GUARD RAIL TO BE SPIKED TO EACH TIE ON BALLAST SECTION AND BALLAST DECK BRIDGES, AND EVERY OTHER TIE ON STRUCTURES. ALL TIES WILL BE EQUIPED WITH TIE PLATES (UNLESS OTHERWISE PROVIDED).



**RAIL CUTTING FOR POINT**  
SCALE: 1" = 1'-0"

<b>ALASKA RAILROAD CORPORATION</b> OFFICE OF THE CHIEF ENGINEER P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 (907) 265-2456		
STANDARD <b>INNER GUARD RAIL</b> (FOR NEW BRIDGES)		
APPROVED:	DATE:	FILE: s100-31.dwg
DESIGNED BY:	SCALE: AS NOTED	<b>100.31</b>
DRAWN BY: BBF	DATE: 7/31/2002	
APPROVED BY: ENG DEPT		