SEE PAGE 1 MATCHLINE A

SEE PAGE 3 FOR ALTERNATE FROG INSTALLATION

SEE PAGES 1 - 5 FOR COMPLETE TURNOUT INFORMATION

NOTES:
UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

NO. 9 TURNOUT 133 LB
AND CROSSOVER

FOR MAINTENANCE ONLY
ALTERNATE NO. 9 RBM FROG

SEE PAGES 1 - 5 FOR COMPLETE TURNOUT INFORMATION

NOTES:

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

NO. 9 TURNOUT 133 LB
AND CROSSOVER

FOR MAINTENANCE ONLY
**NOTES:**

- LINES OF TURNOUT REQUIRE A MINIMUM GAP OF CLEAR BALLAST UNDER THE TIE.

- THIS PLAN IS BASED ON 100 LB. RAIL MATERIAL, BUT MAY ALSO BE USED ON OTHER RAIL SECTIONS.

- RAIL DIFFERENCES WILL OCCUR FROM AND TO SWITCH PLATE DEPENDANCE, PROOF AND SWITCH TO CENTERLINE. PROOF LENGTH, ETC. RELATIVE TO RAIL SECTIONS EMPLOYED.

- ALL RAIL TO BE HEAD HARDENDED.

- STOCK RAILS OF 112 LB. OR HEAVIER RAIL SECTION ARE TO BE PRESENTED BY THE MANUFACTURER.

- ADJUSTABLE RAILS SHOWN ARE SYMBOLIC ILLUSTRATIONS ONLY. ACTUAL RAIL SPACING EMPLOYED IS DEPENDENT ON THE MANUFACTURER.

- 10% SPACED LAYOUTS USED WITH A NO. 5 TURNOUT HAVE DIFFERENT TURNOUT PLATE ARRANGEMENTS THAN THOSE USED WITH A NO. 3 OR NO. 10 TURNOUT.

- INSTALL INSULATED JOINTS WHERE INDICATED AND WHEN REQUIRED BY SIGNAL SYSTEMS. ALL INSULATED JOINTS ARE TO BE SHOWN. LOCATION OF INSULATED JOINTS ON CROSSOVER MILEAGE IS SHOWN AND BASED ON A MINIMUM OF 2 TRACK CENTERS. WHERE THERE ARE 3 TRACK CENTERS TO BE TERMINED, BUT INSULATED JOINTS MUST NOT BE SHOWN OVER 2 FT.

- ALL Switch RAILS AND BASE PLATES TO BE TREATED WITH SWITCH PAINT.

- SEE RAIL 100 LB., OR 100 LB. RAILS TO BE USED ON ALL TRACK TURNOUTS.

- A MINIMUM 6 IN. GAP MUST BE MAINTAINED BETWEEN THE RAILS OF METAL TO PLATES LOCATED BEYOND THE INSULATED JOINTS AT THE SWITCH HEAD AREA TO PROVIDE PROPER TRACK CIRCUIT OPERATION.

- COACH SCREWS REQUIRED TO FASTEN FROM BASE PLATE AND ROAD RAILS TO TIE.

- SWITCH PLATES SEE STD # 2580

- POWER SWITCH OPERATION SEE STD # 1800

- SELF CLOSED PROD SEE STD # 3000

- BENT STOCK RAIL SEE STD # 1850

- HEEL ANGLE 11-3/4"-11-1/4"

- THICKNESS AT POINT 1/4"

- ANGLE AT POINT 11-3/4-11-1/4"

- RADIAL (CIRCULAR CURVE) 2.325" X 2.325"

- VERTICLE DISTANCE 8 1/4"

- THICKNESS AT POINT 1/4"

- ANGLE AT POINT 11-3/4-11-1/4"

- RADIAL (CIRCULAR CURVE) NONE

- VERTICLE DISTANCE 8 1/4"

- ACTUAL LEAD 78-11/16"

- RADIUS OF CENTERLINE 384-7/8"

**TURNOOUT BILL OF MATERIAL**

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<tr>
<th>QTY.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>180</td>
<td>19&quot; TIE PLATES</td>
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<tr>
<td>400</td>
<td>19&quot; RAIL</td>
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<tr>
<td>1</td>
<td>19&quot; F.L. SWITCH POINT</td>
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<tr>
<td>1</td>
<td>19&quot; R.L. 19&quot; RAIL</td>
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<td>1</td>
<td>8 1/4&quot; SELF CLOSED PROD</td>
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<tr>
<td>1</td>
<td>12 1/8&quot; STRAIGHT STOCK RAIL</td>
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<td>10 5/8&quot; BENT STOCK RAIL</td>
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<tr>
<td>155</td>
<td>135 LB. RAIL</td>
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<tr>
<td>1</td>
<td>SWITCH PLATE PACKAGE</td>
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<td>FROM PLATE PACKAGE</td>
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**FOR MAINTENANCE ONLY**

SEE PAGES 1-5 FOR COMPLETE TURNOUT INFORMATION

**UNION PACIFIC RAILROAD**

**ENGINEERING STANDARDS**

**NO. 9 TURNOOUT 133 LB AND CROSSOVER**

**ADOPTED:** FEB. 28, 1992

**REvised:** JAN. 10, 2006

**FILE NO.: 5015F**

**STD DWG:** 5015F

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NO. 9 CROSSOVER BETWEEN YARD TRACKS 13'-0" TRACK CENTERS

CROSS-OVER DATA

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<th>Distance Between 1/2 frog points</th>
<th>Track Center</th>
<th>Main Track</th>
<th>Cross-over</th>
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<td>29'-12 1/16&quot;</td>
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