NOTES:
A CURVED PANEL IS A PANEL THAT IS PIE SHAPED WITH A LONGER OUTER LENGTH THAN THE INNER LENGTH WITH TRUE RADIUS ED OUTER AND INNER STEEL.

CURVED PANELS USE STANDARD REINFORCEMENT SIMILAR TO TANGENT PANEL STANDARD REINFORCEMENT.

LAG HOLES ON 10W AND 9W CROSSINGS MUST LINE UP WITH THE CENTERLINE OF TIES.
MATERIAL SPECIFICATIONS:
1) STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 SPECIFICATIONS, WELDING TO BE PER AWS CODE.
2) ALL EXPOSED STEEL TO RECEIVE ONE COAT PRIMER.
3) END ANGLES FOR GAGE PANEL SHOULD HAVE 3/8 GAP MINIMUM TO IMPROVE SHUNT RESISTANCE. REINFORCING MATERIAL AND GLADDING TO BE CONSTRUCTED TO MEET SHUNTING REQUIREMENT. A NON-COCONDUCTIVE SPADE TO BE ATTACHED TO GAGE FRAME.
4) GLADDING ON ENDS OF PANELS SHOULD EXTEND BEYOND CONCRETE 1/8" (1/4", 3/16") TO IMPROVE MATCH WITH ADJACENT PANELS.
5) REINFORCING STEEL SHALL CONFORM TO CURRENT ASTM A615 SPECIFICATION, GRADE 60. IF ANY WELDING OF REINFORCEMENT STEEL IS REQUIRED, MATERIAL SHALL CONFORM TO ASTM A706 SPECIFICATION, GRADE 60.
6) CONCRETE MATERIAL MIXING, PLACING AND CURING TO BE IN ACCORDANCE WITH PCI "MANUAL FOR QUALITY CONTROL: PRECAST AND Prestressed Concrete" MANUAL 116, EDITION A. CEMENT SHALL HAVE NO MORE THAN 0.6% TOTAL ALKALI CONTENT. MAXIMUM WATER/CEMENT RATIO 0.44 (BY WEIGHT). AIR ENTRAINMENT 2%-4% 1% IN PLASTIC CONCRETE. SLUMP 3" MAXIMUM.
7) COPIES OF THE CONCRETE DESIGN MIX TO BE SUBMITTED TO RAILROADS FOR APPROVAL PRIOR TO THE START OF THE CASTING OPERATION.
8) TOP SURFACE SHALL BE NON-CRACK DESIGN AND IS TO BE SEAL AND ACCELERANT DUE TO GALVANIZATION.
9) CURING SHALL FOLLOW THE RECOMMENDATIONS AND PROCEDURES OF PCI IN 4TH EDITION DIVISION 4.
10) 3/16" WEEPIHOLE HOLES SHALL BE PLACED EVERY 2 FT. ALONG THE TOP OF THE STEEL FRAME ALONG A LINE 3/4" FROM OUTSIDE EDGE.
11) FLANGEWAY FILLER TO BE PERMANENTLY PREATTACHED AND HAVE THE FOLLOWING PROPERTIES:
   - TENSIILE STRENGTH (ASTM D412) 5000 PSI MIN.
   - ULTIMATE ELOMINATION (ASTM D412) 4000 PSI MIN.
   - TEAR STRENGTH (ASTM D820) AT 25 DEGREES CELSIUS. 160-FLI MIN.
   - HARDNESS (ASTM D2240) 75+10% SHORE A.
   - COMPRESSION SET (ASTM D504) 100 DEGREES CELSIUS FOR 72 HOURS 46% MAX.
   - ACCELERATED AGING TEST (ASTM D577) 72 HOURS AT 100 DEGREES CELSIUS MUST NOT EXHIBIT A REDUCTION IN PROPERTIES BY GREATER THAN 20%.
   - OZONE RESISTANCE TEST (ASTM D514) MUST HAVE NO CRACKING AFTER EXPOSURE TO 20-PHPM OZONE FOR 96 HOURS AT 40 DEGREES CELSIUS.
   - VOLUME RESISTIVITY = 1X10^5 (OHM-CM) OR GREATER (ASTM D257), BUT USING 15% NACL/WATER SOLUTION IN PLACE OF DISTILLED WATER FOR 168 HOURS AT 25 DEGREES CELSIUS AND TESTED AT 600 VDC.
   - ELECTRICAL RESISTANCE: MINIMUM RESISTANCE 13 MEGA OHM MEASURED AT 600 VDC.
   - LOW TEMPERATURE BRITTLENESS (ASTM D2137) AT 40 DEGREES CELSIUS.
   - A SAMPLE SECTION OF THE FLANGEWAY MATERIAL SHALL BE PHYSICALLY TESTED BY APPLYING A LATERAL FORCE OF 10 LBS AT 90 DEGREES CELSIUS. THE MAXIMUM LATERAL DISPLACEMENT OF THE TEST IS NOT TO EXCEED 1/4" (CROSSING TYPE TC ONLY). TEST RESULTS MUST BE SUBMITTED FOR RAILROAD APPROVAL.
   - MANUFACTURER TO DESIGN THE PREATTACHED FLANGEWAY FILLER TO ALLOW FOR REMOVAL OF PANELS FOR MAINTENANCE WITHOUT DAMAGING THE FLANGEWAY FILLER OR ANY OTHER COMPONENTS DESIGNED TO HOLD IT TOGETHER.

TOLERANCES:
1) OUT OF SQUARE 1/8" (MEASURED ALONG THE DIAGONAL)
2) LENGTH, WIDTH, AND THICKNESS: +/-1/8"
3) THE BOTTOM SURFACE, WHICH WILL BE IN CONTACT WITH THE TIES, SHALL NOT UNDERWATER IN ANY DIRECTION MORE THAN 3/32". SEE SPECIAL TESTING NOTE 3.<
4) REINFORCEMENT PLACEMENT SHALL BE +/-3/4" HORIZONTAL, +/-1/4" VERTICAL.

FINISH:
1) ALL RECEIVED MINOR CONCRETE SHALL BE FILLED TO MATCH THE DIMENSIONS USING THE PROPER BONDING AGENT AND REPAIR MATERIAL. SURFACE OF THE REPAIRED AREA TO MATCH THE COLOR AND TEXTURE OF THE SURROUNDING AREAS.
2) THE FINISH SURFACE IS TO HAVE A LIGHT BROOM FINISH OR AS APPROVED BY RAILROADS. THE ADDITION OF WATER TO THE CONCRETE SURFACE FINISH DURING CASTING IS NOT PERMITTED.

SPECIAL TESTING:
1) TWICE ANNUALLY, VENDORS SHALL SUBMIT (VIA AN INDEPENDENT TESTING LABORATORY TO THE RAILROADS) THE FOLLOWING TEST ON THE APPROVED MIXTURE DESIGN:
   + ASTM C669 FREEZE/THAW
   + ASTM C227 MORTAR BAR METHOD
   + ASTM C1200 AT TOTAL ALKALI BURDEN = 0.08%
2) GAGE PANELS SHALL BE DESIGNED WITH SHUNT RESISTANT FEATURES IN ORDER TO PROVIDE A MINIMUM ELECTRICAL RESISTANCE IN ACCORDANCE WITH THE STANDARD ELECTRICAL TEST (Dwg 30090).
3) A REPRESENTATIVE SAMPLE OF PANELS SHALL BE CHECKED PERIODICALLY FOR BOTTOM FLATNESS BY USING A STRAIGHT EDGE CALIBRATED TO WITHIN +/-1/32" AND A TAPER GAGE AS FOLLOWS:
   6 POSITIONS OF FLATNESS (——) CHECK FLATNESS AT EACH POSITION USING TAPER GAGE.

GENERAL:
1) THE MANUFACTURER SHALL BE ISO 9000 OR AAR M-1003 CERTIFIED. ALL TESTING PERSONNEL SHALL BE MINIMUM OF ACI LEVEL I CERTIFIED.
2) THE FABRICATOR SHALL BE RESPONSIBLE FOR LOADING AND PROPERLY SECURING ALL PRECAST CONCRETE MEMBERS FOR SHIPMENT.
3) THE MANUFACTURER SHALL WARRANTY PRODUCT FOR A MINIMUM OF TEN YEARS AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP.
4) MANUFACTURER TO PERMANENTLY MARK EACH PANEL WITH A CONCRETE PRINT FOR SIZE OF RAIL, WEIGHT OF PANEL, MANUFACTURED DATE, MONTH/DATE/YEAR OF MANUFACTURE, AND CROSSING TYPE. END OF EACH PANEL TO BE STENCIL PAINTED WITH SIZE OF RAIL, WEIGHT OF PANEL AND CROSSING TYPE.
NOTES:
1. THIS CROSSING IS TO BE INSTALLED ON ROADWAYS WITH HIGHWAY TRAFFIC VOLUMES LESS THAN 500 VEHICLES PER DAY AND LIMITED TRUCK TRAFFIC.
2. AN APPROVED 1/4" THICK CONFORMAL PAD IS REQUIRED BETWEEN CONCRETE TIE AND CONCRETE PANEL.
3. END RESTRAINTS ARE NOT REQUIRED WITH THIS CROSSING.
4. SEE STD DWG 200000 FOR TYPICAL DETAILS CROSSING TYPE - 85C

COMMON STANDARDS

LAYOUT FOR CONCRETE PANELS ON 8'-6" LONG CONCRETE TIES (85C)

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<th>DATE: MAY 24, 2004</th>
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<td>540-01310</td>
<td>NON-STOCK</td>
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CROSS SECTION - GAGE PANEL

3/8" DIA. x 4" LONG HEADED ANCHOR STUD (8 PCS TOTAL) (END FRAME)

1/2" DIA. x 1/2" LONG HEADED ANCHOR STUD (4 PCS TOTAL) (END FRAME)

Prestressed Concrete Panels
For 10' Concrete Ties (10C)

Notes:
28 Day Concrete Compressive Strength = 7000 psi
Min. Transfer Compressive Strength = 4500 psi

Prestressing wire shall be 5.25mm DIA. conforming with ASTM A-881 "Steel Wire Deformed, Stress Relieved or Low Relaxation for Prestressed Concrete Ties" with a minimum breaking strength of 8800 Lbf.

Wire shall be tensioned in accordance with PCI requirements to 6960 Lbf per wire.

Crossing Type - 10C
FIELD PANEL

GAGE PANEL

NOTES:
1/4" CONFORMAL RUBBER INTERFACE PAD TO BE PLACED BETWEEN PANEL AND TIES.

CROSSING TYPE - 10C

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<th>FIELD PANEL WEIGHT</th>
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<tr>
<td>133-141</td>
<td>8&quot;</td>
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<td>2150 LBS.</td>
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LAYOUT FOR CONCRETE PANELS ON 10'-0" LONG CONCRETE TIES (10C)
CROSS SECTION - PRECAST FIELD PANEL

1/2" DIA. x 10" LONG DEFORMED BAR ANCHORS (16 PCS) (SIDE FRAME)
1 1/2" MIN. COVER
1/2" DIA. x 2-1/2" LONG HEADED ANCHOR STUD (16 PCS TOTAL) (SIDE FRAME)
#5 REBAR 83" LONG TOP (4 PCS)
93" LONG BTM (3 PCS)
1 1/2" MIN. COVER
#5 REBAR 14" LONG BOTTOM (7 PCS)
#5 REBAR 16" LONG TOP (7 PCS)

CROSS SECTION - PRESTRESSED FIELD PANEL

1 1/8" MIN. COVER TO REBAR (1 3/8" NOM.)
1/2" DIA. x 10" LONG DEFORMED BAR ANCHORS (16 PCS) (SIDE FRAME)
8 WIRES 2 1/8" MIN. SPACING
1/2" DIA. x 2 1/2" LONG HEADED ANCHOR STUD (16 PCS TOTAL) (SIDE FRAME)
#5 REBAR 14" LONG BOTTOM (7 PCS)
#5 REBAR 18" LONG TOP (7 PCS)
1 3/8" MIN. COVER TO REBAR (2 1/4" NOM.)
7 WIRES 2 1/8" MIN. SPACING

FOR GAGE PANELS, SEE DWGS 500110 & 500120.

PRECAST NOTES:
1. CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
   1. 28 DAY = 6000 psi MINIMUM
   2. SHIPMENT = 4000 psi MINIMUM
   3. REMOVAL FROM FORMS = 2500 psi MINIMUM.

PRESTRESSED NOTES:
1. 28 DAY CONCRETE COMPRESSIVE STRENGTH = 7000psi
   MIN. TRANSFER COMPRESSIVE STRENGTH = 4500psi

2. PRESTRESSING WIRE SHALL BE 5.25mm DIA. CONFORMING WITH
   ASTM A-611 "STEEL WIRE DEFORMED, STRESS RELIEVED OR LOW
   RELAXATION FOR PRESTRESSED CONCRETE TIES" WITH A MINIMUM
   BREAKING STRENGTH OF 8500 LBF.

3. WIRE SHALL BE TENSIONED IN ACCORDANCE WITH PCI
   REQUIREMENTS TO 6900LBF PER WIRE.

COMMON STANDARDS

PRESTRESSED AND PRECAST CONCRETE PANELS FOR 9'-0"
LONG WOOD TIES (9W)

REV. NO.: 1  DWG NO: 200201
NOTES:
1. THIS CROSSING IS TO BE INSTALLED ON ROADWAYS WITH HIGHWAY TRAFFIC VOLUMES LESS THAN 500 VEHICLES AND LIMITED TRUCK TRAFFIC.

2. 1/4" RUBBER INTERFACE PAD TO BE PLACED BETWEEN PANEL AND TIES FOR 141 LB. RAIL SECTION. PAD TO BE NAILED TO TIES.

3. CROSSING TYPE - 9W

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<th>RAIL SIZE</th>
<th>PANEL HEIGHT</th>
<th>GAGE PANEL WEIGHT</th>
<th>FIELD PANEL WEIGHT</th>
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<tbody>
<tr>
<td>115</td>
<td>7 1/8&quot;</td>
<td>2650 LBS.</td>
<td>1125 LBS.</td>
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<tr>
<td>133-141</td>
<td>7 7/8&quot;</td>
<td>3125 LBS.</td>
<td>1275 LBS.</td>
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</table>

LAYOUT FOR CONCRETE PANELS ON 9'-0" LONG WOOD TIES (9W)
**CROSS SECTION - GAGE PANEL**

- 1 1/8" MIN COVER TO REBAR (1 3/8" NOM.)
- 3" x 2 1/2" SIDE (MIN) x 3/8" ASTM A36 STEEL ANGLE (TYP)
- 5/8" DIA. x 24" LONG DEFORMED BANCHORS (16 PCS) (SIDE FRAME)
- 1/2" DIA. x 2 1/2" LONG HEADED ANCHOR STUD (16 PCS TOTAL) (SIDE FRAME)
- 10 WIRES ON 5" CENTERS
- 3 1/2" GAP
- 8 WIRES ON 6" CENTERS
- 1 3/8" MIN COVER TO REBAR (2 1/4" NOM.)

**CROSS SECTION - FIELD PANEL**

- 1 1/8" MIN COVER TO REBAR (1 3/8" NOM.)
- 1/2" DIA. x 18" LONG DEFORMED BAR ANCHORS (16 PCS) (SIDE FRAME)
- #5 REBAR 22" LONG (7 PCS)
- 10 WIRES (2 1/8" MIN. SPACING)
- 1 5/8"

- 1/2" DIA. x 2 1/2" LONG HEADED ANCHOR STUD (16 PCS TOTAL) (SIDE FRAME)
- #5 REBAR 20" LONG (7 PCS)
- 9 WIRES (2 1/8" MIN. SPACING)

**NOTES:**
- 28 DAY CONCRETE COMPRESSIVE STRENGTH = 7000psi
- MIN. TRANSFER COMPRESSIVE STRENGTH = 4500psi

PRESTRESSING WIRE SHALL BE 5.25mm DIA. CONFORMING WITH ASTM A-881 "STEEL WIRE DEFORMED, STRESS RELIEVED OR LOW RELAXATION FOR PRESTRESSED CONCRETE TIES" WITHA A MINIMUM BREAKING STRENGTH OF 8800 LBF.

WIRE SHALL BE TENSIONED IN ACCORDANCE WITH PCI REQUIREMENTS TO 6960LBF PER WIRE.

**CROSSING TYPE - 10W**

**PRESTRESSED CONCRETE PANELS FOR 10'-0" LONG WOOD TIES (10W)**

**FILE OWNER: UPRR**
**DATE: APRIL 24, 2001**
**REV. NO.: 0**
**DWG NO.: 200101**
NOTES:
1/4" RUBBER INTERFACE PAD TO BE PLACED BETWEEN PANEL AND TIES FOR 141 LB. RAIL SECTION. PAD TO BE NAILED TO TIES,

CROSSING TYPE - 10W

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<th>RAIL SIZE</th>
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<th>GAGE PANEL WEIGHT</th>
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<td>115</td>
<td>7 1/8&quot;</td>
<td>2850 LBS.</td>
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<td>133-141</td>
<td>7 7/8&quot;</td>
<td>3125 LBS.</td>
<td>1675 LBS.</td>
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LAYOUT FOR CONCRETE PANELS ON 10'-0" LONG WOOD TIES (10W)
PLAN VIEW OF PANEL WITH TIMBER TIES

PLAN VIEW OF PANEL & JOINT
WELD LOCATION W/ CONCRETE TIES

CONCRETE PAVEMENT

7" MIN. ASPHALTIC CONCRETE OR ASPHALT INSTALLED IN NO MORE THAN 3" LIFTS

HIGH DENSITY AND CONCRETE TIE TRACKS

PLACE GEOTEXTILE AT NATURAL GROUND AND WRAP PERFORATED PIPES (SEE NOTES)

TYPICAL BALLAST AND ASPHALT DETAIL

NOTES:
SEE PAGE 2 FOR NOTES AND MORE DETAILS.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

INSTALLATION OF ROAD CROSSINGS W/ PRECAST CONCRETE PANELS

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NOTES:
1. CROSSING PANEL SUPPORT THROUGH THE CROSSING MUST BE UNIFORM. CONCRETE TIE SPACING IS TO BE A MAXIMUM OF 24" CENTER TO CENTER. WOOD TIE SPACING IS TO BE A MAXIMUM OF 19 1/2" CENTER TO CENTER. TIE SPACING MUST BE ADJUSTED TO SUPPORT THE ENDS OF THE PANELS.

2. CROSSING SITE IS TO BE INSPECTED PRIOR TO START OF INSTALLATION TO DETERMINE THAT PROPER DRAINAGE AND SURFACE SUPPORT IS PROVIDED. TRACK GRADE IS UNIFORM AND EXISTING TIES ARE AT LEAST 10' LONG.

3. IF CONDITIONS WARRANT, SITE IS TO BE OVER-EXCAVATED AND CROSSING DRAINAGE SYSTEM Installed USING COMPACTED, WELL GRADED GRANULAR FILL: SUBBALLAST, GEOTEXTILE AND PERFORATED DRAINAGE PIPE (IF REQUIRED) INSTALLED PER DETAILS OF THIS DRAWING.

4. ADDITIONAL SITE DRAINAGE INCLUDING PROPER DRAINAGE AT EACH QUADRANT OF CROSSING SHALL BE COMPLETED TO ENSURE CROSSING DRAINAGE.

5. PRECAST PANELS ARE TO BE HANDLED AND SUPPORTED AT SPECIFIED LIFTING INSERT LOCATIONS ONLY. LIFTING EQUIPMENT AND CONNECTION INSERTS ARE TO BE PROPERLY SIZED TO HANDLE THE LENGTH OF PANELS BEING INSTALLED. LIFTING DEVICES ARE AVAILABLE FROM COMPANY WAREHOUSE.

6. APPROACH ASPHALT ROADWAY PAVING IS TO MEET STATE DOT HIGHWAY SPECIFICATIONS AND INSTALLED ACCORDINGLY. ASPHALT IS TO BE INSTALLED WITH PAVER WITH MAXIMUM 3" LIFTS AND LAID PARALLEL TO CROSSING TO MINIMIZE APPROACH SETTLEMENTS.

7. GEOTEXTILE AND PIPE TO BE INSTALLED ONLY AT LOCATIONS WHERE REQUIRED BY STATE OR LOCAL AGENCIES OR WHERE DESIGNATED BY CHIEF ENGINEER.

8. GALVANIZED ELASTIC FASTENERS ARE TO BE USED WITHIN THE CROSSING AREA AND ON THE (S) TRANSITION TIES ON EACH SIDE OF THE CROSSING. PANDROL E-CLIPS TO BE USED ON WOOD TIE CROSSINGS AND SAFELOK CLIPS ON CONCRETE TIE CROSSINGS.

9. ALL RAIL JOINTS IN CROSSING AREA TO BE WELDED, DO NOT INSTALL BOLTED JOINT BARS.

10. REPORT CROSSING GATE MALFUNCTIONS TO 24 HR UPFR CROSSING HOT LINE AT 1-800-848-8716.

11. ALL EXCEPTIONS TO THIS PLAN MUST BE APPROVED BY THE CHIEF ENGINEER.
NOTES:
1) USE OF THIS STANDARD FOR NEW CONSTRUCTION IS LIMITED TO INDUSTRIAL LEAD TRACKS, AND SPUR TRACKS WHERE THE AVERAGE DAILY TRAFFIC VOLUME DOES NOT EXCEED 200. USE ON MAIN LINES IS RESTRICTED TO TEMPORARY REPAIRS TO EXISTING CROSSING SURFACES.

2) CROSSING SITE IS TO BE INSPECTED PRIOR TO START OF INSTALLATION TO DETERMINE THAT PROPER DRAINAGE AND SURFACE SUPPORT IS PROVIDED. TRACK GRADE IS UNIFORM.

3) FOR COMPLETE RENEWAL OF CROSSING & NEW CONSTRUCTION, TRACK STRUCTURE INCLUDING RAIL, GTM, TIES, BALLAST, AND ROADBED MUST BE IN EXCELLENT CONDITION. ALL TIES MUST BE 9 FT. LONG, SPACED AT 18 1/2" CENTERS AND EXTEND 3 TIES BEYOND END OF CROSSING. NEW 2" X 6" Ties TO BE INSTALLED IF NECESSARY. CROSSING SITE MUST BE OVER-ECCAVATED AND CROSSING DRAINAGE SYSTEM INSTALLED USING COMPACTED, WELL-GRADED GRAVELY BALLAST. SUBLA BALLAST, DRAINAGE, AND DRAINAGE PIPE MUST BE REQUIRED INSTALLED PER DETAIL OF THIS DRAWING. ADDITIONAL SITE DRAINAGE INCLUDING PROPER DRAINAGE AT EACH QUADRANT OF CROSSING SHALL BE COMPLETED TO ENSURE CROSSING DRAINAGE. SUBBALLAST SECTION TO BE A MAXIMUM OF 4" WHEN COMPLETE RENEWAL OF EXISTING CROSSING, FOR NEW CONSTRUCTION, CROSSING SITE TO BE IN ACCORDANCE WITH CONSTRUCTION DESIGN STANDARDS OR AS REQUIRED BY STATE OR LOCAL AGENCIES. USE OF GEOTEXTILE AND DRAINAGE PIPE TO BE ONLY AT LOCATIONS WHERE REQUIRED BY STATE OR LOCAL AGENCIES OR WHERE SPECIFICALLY DESIGNATED BY THE CHIEF ENGINEER.

4) IN ALL INSTALLATIONS THE RAIL JOINTS SHOULD FALL OUTSIDE THE CROSSING AREA MINIMUM OF 15 FEET FROM THE END OF THE CROSSING.

5) USE OF CLAMPS IS REQUIRED IN EACH TIE CRIB WITHIN THE LIMITS OF THE CROSSING; CLAMPS MUST BE ATTACHED PRIOR TO PLACEMENT OF ASPHALTIC CONCRETE (SEE SECTION DETAILS).

6) HOT MIX ASPHALTIC CONCRETE MUST COMPLY WITH STATE D.O.T. SPECIFICATIONS AND BE PLACED IN 2 INCHES MINIMUM & 4 INCHES MAXIMUM LLIFTS. CARE MUST BE TAKEN DURING COMPACTING OF ASPHALT TO PREVENT DAMAGE TO HOLD DOWN CLAMPS. RUBBER SEAL SHOULDN'T BE ROLLER PARALLEL TO THE RAIL UNTIL THE FINAL LIFT AND COMPACTING. FINAL LIFT OF ASPHALT IS TO BE LEVEL WITH THE TOP OF RAIL FOR 30 INCHES FROM THE FIELD SIDE OF THE RAIL.

7) SLOPE EDGE OF PAVING TO RETURN TO ORIGINAL EDGE OF PAVING ALIGNMENT. LENGTH OF TRANSITION WILL DEPEND ON LOCAL CONDITIONS.

8) AT THE TIE-IN POINT WITH THE EXISTING PAVEMENT, THE OLD PAVEMENT MUST BE MED DOWN A MINIMUM 2" TO ELIMINATE A FEATHER EDGE ON THE NEW PAVEMENT.

9) USE STATE D.O.T. SPECIFICATION FOR THE ASPHALT SPRAY TACK COAT.

10) ENVIRONMENTAL RULES OF THE GOVERNMENT BODY HAVING AUTHORITY WILL BE FOLLOWED WHEN DISPOSING OF THE PAVEMENT REMOVED FROM THE CROSSING.

11) MATERIAL USED ON HD SIDE RAIL SEAL SHALL HAVE AN ELECTRICAL RESISTANCE OF A MINIMUM OF 10 MEGOHMS AT 500 VOLS DC.

12) REPORT CROSSING GATE MALFUNCTIONS TO 24 HR UPRR CROSSING HOT LINE AT 1-800-548-8710.

13) ALL EXCEPTIONS TO THIS PLAN MUST BE APPROVED BY THE CHIEF ENGINEER.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS
LIGHT DUTY ROAD CROSSING
ASPHALT WITH RUBBER SEAL SECTIONS

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STANDARD ELECTRICAL TEST

ELECTRICAL TEST STEPS:

1. BATTERY SHALL BE 5.0 (FIVE) AMPS OR GREATER.

2. SLABS ARE READY FOR TESTING WHEN 72 HOURS HAVE ELAPSED FROM CASTING OF CONCRETE.

3. MUST BE LESS THAN 2.0 (TWO) AMPS TO PASS THE TEST. RE-TEST AFTER TWO (2) DAYS IF GREATER THAN 2.0 (TWO) AMPS. REJECT IF AMPERAGE REMAINS ABOVE 2.0 (TWO) AMPS.

4. 0.3-0.4 AMPS IS A NORMAL READING. 2.0 (TWO) AMPS OR LESS PASS THE TEST.