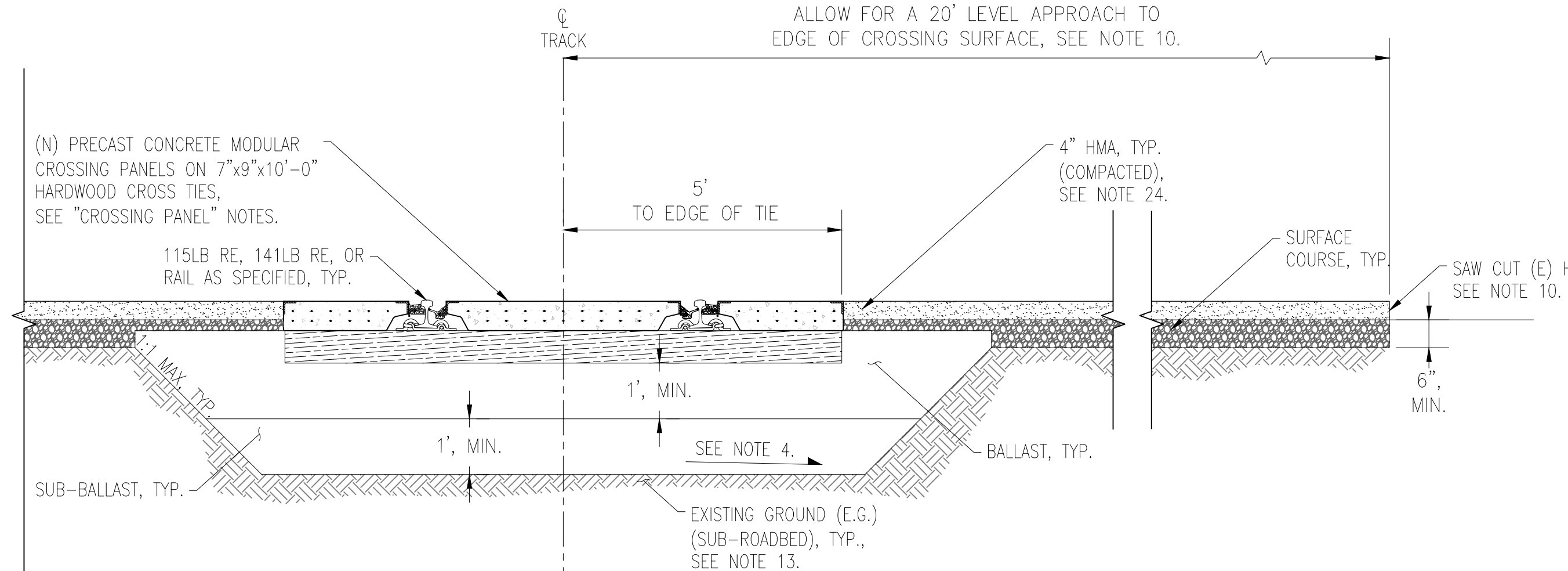


GENERAL NOTES:

- PROVIDE NEW 7"x9"x10'-0" HARDWOOD CROSS TIES WITH PLATES AND e-CLIPS ON THROUGH THE LENGTH OF THE CROSSING AT 19'-1/2" ON CENTER, OR AS SPECIFIED BY THE MANUFACTURER, AND A MINIMUM OF TWELVE (12) TIES BEYOND THE CROSSING IN BOTH DIRECTIONS.
  - 5'-1/2" RAIL BASE - PANDROL TPL-26M TIE PLATE WITH e-CLIPS:
  - 6" RAIL BASE - PANDROL VICTOR TIE PLATE WITH e-CLIPS.
- RAIL:
  - ALL RAIL JOINTS MUST BE WELDED THROUGHOUT THE CROSSING. NO JOINTS ALLOWED WITHIN 19'-6" OF THE CROSSING PANELS.
  - ALL WELDS WITHIN THE CROSSING SHALL BE GROUND FLUSH SO AS TO NOT INTERFERE WITH THE FLANGEWAY FILLER.
  - WELDERS AND WELDING KITS PROVIDED BY THE CONTRACTOR MUST BE APPROVED BY THE CHIEF ENGINEER.
  - STAGGER JOINTS A MINIMUM OF 6'-6".
  - THE INNER TWO (2) HOLES SHALL BE DRILLED ON NEW RAIL AND CONNECTED TO THE EXISTING RAIL WITH NEW 3/8" (MIN.) ANGLE BARS AND STRUCTURAL FASTENERS.
  - BOX ANCHOR EVERY TIE FOR ONE HUNDRED EIGHTY-FOUR (184) TIES BEYOND THE CROSSING IN BOTH DIRECTIONS; UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SPECIFIED ON THE PLANS. PANDROL PLATES SHALL COUNT AS BOX ANCHORS.
- BALLAST DEPTH SHALL BE, AT A MINIMUM, 12" BELOW THE TIE, AS MEASURED AT THE LOW RAIL.
- SUB-GRADE SHALL SLOPE TO PREVAILING DRAINAGE SIDE ON TANGENT TRACK AND TO THE INSIDE OF THE CURVE ON CURVED TRACK.
  - SUB-GRADE SLOPE TO BE SPECIFIED ON THE PLANS OR BY THE ENGINEER IN THE FIELD.
- EXCAVATION (NATIVE MATERIAL) MAY BE USED FOR THE ROADBED EMBANKMENT IF IT MEETS REQUIREMENTS FOR SELECTED MATERIAL, TYPE A. SUB-BALLAST MAY ALSO BE FOR THE ROADBED EMBANKMENT.
- WITHIN THE WORK LIMITS FOR THE ADDITIONAL 7"x9"x10'-0" HARDWOOD CROSS TIES, EXCAVATE MATERIAL A MINIMUM OF 2'-0" BELOW THE BOTTOM OF TIE, AS MEASURED FROM THE LOWEST RAIL AT ITS FINAL ELEVATION FOR THE SIDE NEAREST THE WORK.
  - RECONSTRUCT THE BALLAST SECTION IN ACCORDANCE WITH ARRC STANDARD DRAWING X-01.01 USING CLASSIFIED MATERIALS.
- IN MOST CASES, THE TRACK WILL NEED TO BE RAISED THROUGH THE CROSSING TO MATCH EXISTING TRACK DESIGN GRADES.
  - TRACK RUNOFF FROM THE CROSSING SHALL BE NO GREATER THAN 1/4" PER 62'-0".
- EXTEND THE ROAD SURFACE LEVEL WITH THE CROSSING SURFACE A MINIMUM OF 20'-0" BEYOND THE EDGE OF CROSSING.
  - TAPER THE PAVEMENT FROM THE EDGE OF PAVEMENT TO THE ROAD WIDTH TO THE TRANSITION POINT ON THE SLOPED (END RAMP) PANELS.
  - GRADE ROAD SURFACES TO DRAIN AWAY FROM THE CROSSING.

CONSTRUCTION:

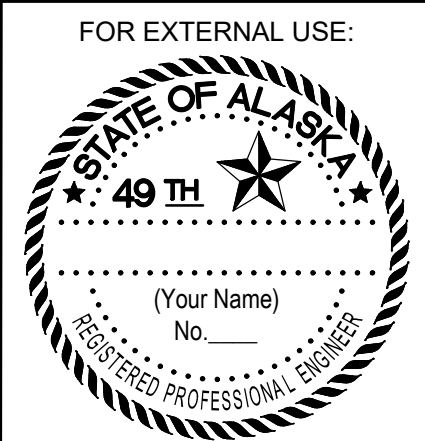
- REMOVE TRACK IN ACCORDANCE WITH SECTION 803.
- SAW CUT TRANSVERSE JOINTS IN EXISTING ASPHALT IN ACCORDANCE WITH SUBSECTION 401-3.17 AS DIRECTED BY THE ENGINEER OR AS SHOWN ON THE PLANS. IF NOT SHOWN IN THE PLANS AND WHERE APPLICABLE, MAINTAIN A MINIMUM OF 50'-0" FROM THE CENTERLINE OF THE NEAREST TRACK.
- REMOVE PAVEMENT LAYERS IN ACCORDANCE WITH SUBSECTION 202-3.05.
- EXCAVATE, AS REQUIRED, IN ACCORDANCE WITH SECTION 203. KEEP EXCAVATION TO A MINIMUM TO REDUCE SETTLEMENT ADJACENT TO THE CROSSING.
- GRADE AND SHAPE EXISTING GROUND (E.G.) PRIOR TO THE PLACEMENT OF CLASSIFIED MATERIALS.
  - IF EXISTING GROUND IS SOFT, CONSULT THE ENGINEER. ADDITIONAL EXCAVATION, IMPORTATION OF CLASSIFIED MATERIAL, AND/OR PLACEMENT OF GEOTEXTILE MATERIAL MAY BE REQUIRED.
- COMPACT IN SITU MATERIAL IN ACCORDANCE WITH SUBSECTION 203-3.05 "COMPACTION WITHOUT MOISTURE AND DENSITY CONTROL".
- WHEN REQUIRED, PLACE GEOTEXTILE MATERIAL IN ACCORDANCE WITH SECTION 630.
- PLACE, GRADE, AND SHAPE SELECTED MATERIALS, TYPES A AND C, IN ACCORDANCE WITH SUBSECTION 203-3.03.
- COMPACT SELECTED MATERIAL, TYPE A IN ACCORDANCE WITH SUBSECTION 203-3.04 "COMPACTION WITH MOISTURE AND DENSITY CONTROL".
- PLACE AND GRADE AGGREGATE BASE/SURFACE COURSES IN ACCORDANCE WITH SUBSECTION 301-3.01.
- SHAPE AND COMPACT AGGREGATE BASE COURSES IN ACCORDANCE WITH SUBSECTION 301-3.03 "SHAPING AND COMPACTION".
- PLACE RAILROAD BALLAST OF THE TYPE INDICATED ON THE PLANS IN ACCORDANCE WITH SUBSECTION 309-2.01.
- PERFORM RAILROAD TRACK CONSTRUCTION IN ACCORDANCE WITH SECTION 802.
- UPON COMPLETION OF THE TRACK WORK; PLACE ADDITIONAL BALLAST AS NEEDED TO TAMP, SURFACE, AND DRESS BALLAST IN ACCORDANCE WITH SUBSECTION 309-3.02.
- AFTER FINAL SURFACING IS COMPLETED, INSTALL THE MODULAR CROSSING PANELS IN ACCORDANCE WITH SECTION 617 AND THE MANUFACTURER'S RECOMMENDATIONS.
- CONSTRUCT ONE OR MORE COURSES OF HOT MIX ASPHALT (HMA) PAVEMENT ON APPROVED SURFACES IN ACCORDANCE WITH SECTION 401.
- EDGE OF NEWLY PLACED PAVEMENT SHALL BE A MINIMUM OF 2'-0" FROM THE EDGE OF THE NEAREST FULL PANEL (NOT THE SLOPED PANEL).
- WHEN INDICATED ON THE PLANS, FURNISH AND PLACE TRAFFIC MARKINGS OF THE TYPE, COLOR, DIMENSIONS, AND AT THE LOCATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH SECTION 670.



**B** MODULAR CROSSING PANEL SECTION B-B  
X-03.01 SCALE: 1/2"=1'0"

UTILITIES:

VERIFY ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.  
LOCATE CALL CENTER OF ALASKA (811):  
- ANCHORAGE .....1.907.278.3121  
- FAIRBANKS .....1.907.459.6400  
- STATEWIDE .....1.800.478.3121  
CALL CENTER WILL NOTIFY SUBSCRIBED UTILITIES ONLY,  
OTHER UTILITIES NEED TO BE CONTACTED INDIVIDUALLY.



CROSSING PANELS:

- PANELS ARE TO BE MANUFACTURED FOR THE SPECIFIC RAIL WEIGHT AND FASTENING SYSTEM INDICATED ON THE PLANS.
- WITHIN CURVES 3' OR GREATER, PANELS SHALL BE DESIGNED FOR THE INDIVIDUAL CURVE(S).
- PANELS ARE TO BE FABRICATED BY BY A COMPANY THAT IS REGULARLY ENGAGED IN THE FABRICATION OF RAILROAD CROSSING MATERIALS AND SHALL BE APPROVED BY THE CHIEF ENGINEER.
- A SET OF PANELS CONSIST OF ONE (1) GAUGE PANEL AND TWO (2) FIELD PANELS.
- EACH CROSSING SHALL HAVE SIX (6) SLOPED (END RAMP) PANELS: TWO (2) RIGHT, TWO (2) LEFT, AND TWO (2) GAUGE.
- EACH PANEL SHALL CLEARLY SHOW WEIGHT OF PANEL, RAIL WEIGHT, DATE OF CAST, AND CROSSING TYPE (WHEN APPLICABLE).
- PANEL LENGTH SHALL BE 8'-1 1/2" FOR 10'-0" HARDWOOD CROSS TIES SPACED AT 19'-1/2" ON CENTER.
- PANEL EDGES SHALL BE FRAMED WITH L3x3x3/8".
- SLOPED PORTIONS OF THE END RAMP PANELS SHALL BE PROTECTED, AT A MINIMUM, WITH 3/16"t PLATE.
- PANELS SHALL BE PROVIDED WITH RUBBER FIELD AND GAUGE FLANGEWAY FILLERS.
- UTILIZE CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7,000PSI.
- PROVIDE 3/4"ø LAG SCREWS, OF THE LENGTH SPECIFIED BY THE MANUFACTURER FOR THE WEIGHT OF RAIL SPECIFIED, TO SECURE THE PANELS IN PLACE. A MINIMUM 10% OVERAGE SHALL BE INCLUSIVE TO THE QUANTITY.

MATERIALS:

- HOT MIX ASPHALT PAVEMENT: IN ACCORDANCE WITH THE SUBSECTION 401-2.09 FOR THE TYPE AND CLASS SPECIFIED ON THE PLANS. IF NOT SPECIFIED, ASSUME TYPE II CLASS A. USE MATERIALS SPECIFIED UNDER SECTION 401.
- ROADBED EMBANKMENT: SELECTED MATERIAL, TYPE A IN ACCORDANCE WITH SUBSECTION 703-2.07.
- SUB-BALLAST: AGGREGATE BASE COURSE, GRADING C-1 IN ACCORDANCE WITH SUBSECTION 703-2.03.
- SURFACE COURSE: AGGREGATE BASE COURSE, GRADING D-1 IN ACCORDANCE WITH SUBSECTION 703-2.13.
- BALLAST: TYPE 3 (FOR MAIN LINE TRACK) OR 4A (FOR INDUSTRY TRACK) IN ACCORDANCE WITH SUBSECTION 703-2.17.
- TIE PLATES: AS SPECIFIED FOR THE CORRESPONDING RAIL BASE WIDTH.

**ALASKA**  
RAILROAD

STANDARD PLAN

PRECAST CONCRETE MODULAR  
CROSSING

ADOPTED AS A  
STANDARD PLAN BY: Brian A. Lindamood, P.E., S.E.  
Chief Engineer

ADOPTION DATE: 01/01/2024

LAST CODE AND STANDARDS REVIEW  
BY: BAO DATE: 01/29/2024