



GENERAL NOTES:

1. CONCRETE COMPRESSIVE STRENGTH: @ 28 DAYS=6000 psi MINIMUM
2. FOR NEW TIMBER CROSSING MATERIAL, REFER TO AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTER 30, PART 3 - SOLID SAWN TIMBER TIES.
3. NEW TRACK SPIKES MUST CONFORM TO THE AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTER 5, PART 2, TRACK SPIKES.
4. NEW RAIL ANCHORS SHALL FIT THE RAIL SECTION SPECIFIED SHALL CONFORM TO AREMA MANUAL FOR RAILWAY ENGINEERING, VOLUME 1, CHAPTER 5, PART - RAIL ANCHORS.
5. OTHER OTM:
 - A. TRACK BOLTS AND NUTS SHALL CONFORM TO THE AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTER 4, PART 3 - JOINING OF RAIL.
 - B. SPRING WASHERS SHALL CONFORM TO THE AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTER 4, PART 3 - JOINING OF RAIL.
6. PANDROL PLATES WITH E-CLIPS TO BE UTILIZED TO SECURE RAIL UNDER THE EXTENT OF CONCRETE PANELS & 10' PAST IN EITHER DIRECTION.
PANEL DESIGN TO CONFORM TO BNSF/UP COMMON STANDARDS.
7. GEOTEXTILE FABRIC SHALL BE A MINIMUM OF 10' WIDE ON THE PREPARED SUB-GRADE OF THE TRACK ZONE AND INCLUDING:
 - A. CARE TO BE TAKEN TO KEEP THE WRINKLES TO A MINIMUM. LONGITUDINAL AND TRANSVERSE FABRIC JOINTS SHALL OVERLAP A MINIMUM OF 3' OR SHALL BE SEWN. TRANSVERSE LAPS SHALL BE IN THE DIRECTION OF STONE PLACEMENT.
 - B. FILTER FABRIC DAMAGED BY EQUIPMENT OR OTHER CAUSES SHALL BE REPLACED OR REPAIRED FOLLOWING INSTALLATION BY PLACING A PATCH OVER THE DAMAGED AREA.
9. GEOTEXTILE FABRIC SHALL BE UTILIZED AT THE BOTTOM OF THE BALLAST SECTION, EXTENDING A MINIMUM OF 5' PAST EDGE OF TRAVELED WAY.

GENERAL NOTES (CONT'D):

14. 7" x 9" x 10' WOOD TIES (GR. 5) SHALL BE USED UNDER THE CROSSING PANELS, EXTENDING A MINIMUM OF 6 TIES PAST THE CROSSING IN BOTH DIRECTIONS.
15. TIE SPACING TO BE A MAXIMUM OF 19 1/2" O.C. AND CENTERED ON THE ENDS OF EACH CROSSING PANEL.
16. EACH CROSSING SHALL CONSIST OF WELDED RAIL THROUGHOUT THE EXTENT OF THE CROSSING AND EXTEND A MINIMUM OF 15' BEYOND THE EDGE OF ROADWAY. THE CROSSING RAIL SHALL BE WELDED AND MEET AREMA/SKOL CWR STANDARDS.
17. ALL JOINTS SHOULD BE EITHER FIELD WELDED OR GLUED AND INSULATED JOINTS GLUED UPON COMPLETION OF EACH WORKDAY AND ADJUSTED TO RAIL NEUTRAL TEMPERATURE.
18. FINAL LOCATION OF FIELD WELDS SHALL BE WITHIN THE TIE-CRIB AREA. TIES MAY REQUIRE LOCATION AND SPACING TO ACCOMMODATE THE WELDS.
19. UPON THE CONCLUSION OF THE CWR INSTALLATION, THE WELDS SHALL BE ULTRASONICALLY TESTED, BY AN INDEPENDENT CONTRACTOR FOR INTERNAL DEFECTS AND WRITTEN RESULTS PROVIDED TO A SKOL MANAGER BEFORE THEY ARE ACCEPTED. DEFECTIVE WELDS FOUND SHALL BE REMOVED AND ANOTHER WELD INSTALLED, TESTED AND WRITTEN RESULTS PROVIDED AT THE CONTRACTORS EXPENSE.
20. 6" UNDERDRAINS SHALL BE UTILIZED IN EACH QUADRANT OF A ROAD CROSSING IN AREAS WHERE POSITIVE DRAINAGE CAN BE MAINTAINED. PIPE SHALL BE PLACED ON THE TOP OF SUBBALLAST, SLOTS POINTED DOWNWARD, AND WRAPPED WITH GEOTEXTILE FABRIC.
21. END PANEL MUST BE INSTALLED AT EACH CONCRETE END PANELS.
22. PRE-DRILL PILOT HOLES IN TIES PRIOR TO INSTALLING LAG SCREWS.
23. ALL TIMBER FASTENERS SHALL BE CAMCAR TEXTRON TIMBER SCREWS OR EQUAL: 5/8" X 12" SQUARE HEAD TO SECURELY FASTEN THE TIMBER CROSSING MATERIAL. TIMBER FASTENERS SHALL BE COUNTERSUNK.

GENERAL NOTES (CONT'D):

24. A MINIMUM OF 8" OF CLEAN BALLAST SHALL BE PLACED BELOW TIE.
25. SUBGRADE SHALL BE CROWNED IN THE MIDDLE, AND COMPACTED TO 95% COMPACTION (ASTM D1557).
26. COMPROMISE JOINT BARS SHALL HAVE MATCHED BARS, I.E. LH/RH AND SHALL BE A MINIMUM OF 30" IN LENGTH AND BE OF SOUND DESIGN AND DIMENSION TO MATCH RAIL SECTION PER SKOL SPECIFICATIONS.
27. EACH SIGNALIZED CROSSING SHALL CONSIST OF A MINIMUM 15FT I-BOND FROM THE SIGNALIZED CROSSING. INSULATED JOINTS SHALL BE PORTEC CONTINUOUS OR EQUIVALENT AND BE SUPPLIES WITH PORTEC BLACK BELT-MARK II INSULATION OR EQUIVALENT.
28. ONCE RAIL IS INSTALLED WITHIN THE CROSSING, THE RAIL IS TO BE WELDED TO THE EXISTING TRACK PER AREMA AND RAILROAD STANDARDS.
29. SOLID BOX-ANCHOR EVERY TIE WITHIN THE CROSSING AND 25' IN EITHER DIRECTION OF CROSSING.
30. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH LOCAL ENTITIES AND SIGNAL MAINTAINERS REGARDING TRAFFIC CONTROL AND ROAD CLOSURES.
31. CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING UTILITIES TO REMAIN. THE REPAIR OF ANY UTILITY OR OTHER ANCILLARY DAMAGES CAUSED DURING CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE CROSSING CONSTRUCTION PAYITEM.
32. CONTRACTOR SHALL PRESENT TO THE ENGINEER THEIR SCHEDULE FOR ALL CROSSING WORK AT LEAST 2 WEEKS PRIOR TO BEGINNING CONSTRUCTION AND 72 HOURS PRIOR TO CLOSING THE CROSSING.
33. ALL MATERIALS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS UNLESS STOCKPILE OF MATERIAL IS SPECIFIED BY THE ENGINEER.
34. CROSSING SHALL BE RETURNED TO SERVICE AT THE END OF EACH WORKDAY UNLESS AUTHORIZED BY THE ENGINEER.

GENERAL NOTES (CONT'D):

35. CONTRACTORS SHALL COMPLETE ONLINE ROADWAY WORKER ORIENTATION PRIOR TO STARTING ANY WORK.
36. ALL MATERIAL REMOVED FROM THE SCOPE OF WORK SHALL BE DISCUSSED IN DETAIL AT THE PRE-BID MEETING. THE REMOVAL SPECIFICATIONS REGARDING RAIL AND OTM WILL BE BASED UPON THE SKOL'S DISCRETION. ALL PACKAGING MATERIALS (SPIKE KEGS, ANCHOR BAGS, TIE BANDING, PALLETS) SHALL BE PLACED AT LEAST 25FT FROM AN ACTIVE RAIL LINE AT THE NEAREST CROSSING AND SEPARATE OF OTHER MATERIAL PILE UNLESS REQUIRED BY THE ENGINEER TO BE PROPERLY DISCARDED.

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CHECKED BY	DRW
APPROVED BY	JLW
ADPTED	10/22/2020
REVISED	2/17/2021



WATCO
ENGINEERING STANDARDS
TYPICAL ROAD CROSSING DETAIL
HEAVY TRAFFIC LINES & INDUSTRY LEADS

SECTION NO.	5000
STANDARD DRAWING	ENG. 5000.103
REVISION	REV-01
SHEET NO.	01 OF 01
SCALE	NTS