

REMOVAL AND REPLACEMENT OF TURNOUT

****From Rutland-Burlington VTRY(3)**

- xx. DESCRIPTION. This work shall consist of installing a new No. 10 115RE welded turnout(s) including a complete switch timber package of the size and type, and at the location(s) indicated in the Contract Documents, or as ordered by the Engineer.
- xx. GENERAL REQUIREMENTS. Removed material (except ties and timbers) not reinstalled shall remain the property of the Owner. These materials shall be boxed to ensure all parts are not lost or misplaced, and stored at a site designated by the Engineer. Removed timbers will become the property of the Contractor. They shall be removed from the work site and disposed of in an environmentally acceptable manner.
- xx. MATERIALS. New turnout package shall include the following: rail, switch points, stock rails, floating heel block assembly, vertical switch rods, adjustable rail braces, insulated gage plate, switch plates, turnout plates, transition plates, frog plates, screw spikes 15/16" x 6", pandrol tie plate, pandrol e-clip, track bolts w/nut 1-1/8" x 6", washers, cotter keys 1 set 7" x 9" switch timbers, rail anchors, joint bars, pandrol "c" clips, pandrol "c" plates, No.10 RBM frog, 13' hook flange guardrails, switch stand, and red/green switch target.

Turnout packaged materials will be supplied by the Owner and shall be New as indicated in the Contract Documents, and as specified herein, and conform to the Portfolio of Trackwork Plans, AREMA Manual - current edition, for the turnout number furnished.

Turnout rail weight 115RE, Frog angle (number), and type shall be as indicated in the Contact Documents.

- xx. CONSTRUCTION REQUIREMENTS. The Contractor shall be cautious when unloading, handling, and installing a turnout package. Care shall be taken to prevent rail bending, switch timbers splitting, and loss or damage to associated switch materials.

Prior to work commencement, the Contractor will be required to make all the necessary turnout measurements and rail layout to provide for proper installation of the turnout and to avoid unnecessary rail cuts.

Workmanship and installation shall conform to the Contract Documents, Manufacturer's Design, and as specified in the Portfolio of Trackwork Plans, AREMA Manual - current edition.

Rail cuts may only be made by rail saws or rail abrasive cutting wheels. Cutting rail with torches or track chisels will not be permitted.

When necessary to make new bolt holes in rail they shall only be drilled with a rail drill; no other method is permissible. Rail shall be drilled before joint bars are applied. Bolt holes are

to be of the size prescribed for rail section and joint bar type.

Rail joints shall be applied before the track is spiked. The joint bars are to be properly lined up and properly seated with rail in vertical position. Bolts should be tightened by starting in the middle of the joint and working towards the ends.

All permanent joint bars shall be fully bolted with bolts/spring washers/nuts installed. The bolts shall be inserted alternately from gage to field side. All bolts shall be tightened to a tension of between 90 and 133kN (20,000 and 30,000 lbs) per bolt.

Lag screws shall be used to secure all plates. Driving of timber lag screws with a sledgehammer or spike maul is prohibited.

Turnouts shall be gaged by adjusting the rail opposite the line rail. For construction, the following deviations from standard gage apply: Minimum 4'-8 $\frac{1}{4}$ " , Maximum 4'-8 $\frac{3}{4}$ " .

Timbers shall be spiked to standard track gage unless otherwise directed by the Engineer.

No spikes shall be driven against the end of joint bars.

Track spikes shall not be driven into round plate holes.

Unless pre-plated, all timbers shall be bored for installing lag screws. If insertion is accomplished by hydraulic method, no boring will be necessary.

All switch plates shall have timber lag screws installed. The gage plate shall have all holes lagged with lag screws.

Spikes or timber lag screws which are bent while being installed and that do not meet proper alignment or designated head contact will be removed. The hole shall be plugged properly and new spike or timber lag screw installed.

To the extent practical, rail anchors shall be installed in the box anchor method 200 linear feet each side of the welded turnout installed.

All insulated joints to be suspended type.

Insulated joint stagger: Minimum- 32 inches/ Maximum -56 inches.

New turnouts shall be field welded to include frog, switch points, and stock rails.

Thermite and flash butt are acceptable methods for in track field welding.

All field welded joints must clear tie plates by 4 inch minimum; ties may be shifted where necessary.

Flash Butt Welding shall meet the requirements of the specification entitled: Chapter 4, Section 3.10 General

Specification for in Track Rail Welding Using Electric Flash Butt (EFB) Welding, Section 3.11 Specification for Quality Assurance of Electric Flash Butt Welding, AREMA Manual, current - edition.

Thermite Welding shall meet the requirements of the specification entitled: Chapter 4, Section 3.14 Specification for the Quality Assurance of Thermite Welding of Rail, AREMA Manual - current edition.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Removal and Replacement of Turnout) of the type specified to be measured for payment will be the number of each turnout installed in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Removal and Replacement of Turnout) of the type specified will be paid for at the Contract unit price per each. Payment will be full compensation for installing the turnout, including all required welding, and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Ballasting, surfacing, and installation of insulated joints will be paid for separately under the appropriate Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Removal and Replacement of Turnout)(No. <input checked="" type="checkbox"/> Turnout)	Each