Surfacing Specifications

General Information:

The RAILROAD shall have the right to make any subsequent changes in the nature of the Scope of Work for this Project, either before or after it commences, and such changes shall in no way affect or negate the obligations of this Contract. If such changes appreciably affect the cost of material to the SUPPLIER, it shall so notify the RAILROAD in writing before proceeding with the transportation of materials, and the cost shall be equitably adjusted by the RAILROAD.

The Contractor(s) are responsible to work with Rail Signal Contractor (CDL) to provide adequate coverage for any signal disruption, as well as replacing bond wires, or placing signals out/in service. Any additional cost associated with CDL work, will be bore by the Contractor(s).

The Contractor(s) is required to conduct a follow-up inspection of the quality of work at the end of each day. Contractor(s) will be responsible for immediate repairs to the following: broken joint bars, kinked rail, broken bond wires, down ties, broken rail, high spikes, etc.)

SKOL – Surfacing Specifications (In Reference to BNSF Standard Plans)

Track Tamping, Lining and Surfacing Requirements

Tamp, line, and surface track as follows:

Perform tamping of track including lifting, lining, and surfacing. The tamper shall meet the following requirements:

New wood tie plugs shall conform to AREMA Manual of Railway Engineering Volume 1, Chapter 30, Part 3 – Solid Sawn Timber Ties.

New track spikes must conform to the AREMA Manual for Railway Engineering, Chapter 5, Part 2, Track Spikes.

New rail anchors shall fit the rail section specified shall conform to AREMA Manual for Railway Engineering, Volume 1, Chapter 5, Part 7 – Rail Anchors.

Other OTM:

Track bolts and nuts shall conform to the AREMA Manual for Railway Engineering, Chapter 4, Part 3 – Joining of Rail.

Spring washers shall be 3/8” heavy duty carbon steel for the supplied bolts and shall conform to both the AREMA Manual for Railway Engineering, Chapter 4, Part 3 – Joining of Rail.

The tamper shall be capable of external control of both line and grade and shall be capable of external control of alignment utilizing a laser guidance system.

The tamper shall be an automatic, vibratory, squeeze-type power tamper equipped with fully functional laser liner and 16 tamping heads, capable of raising both rails simultaneously and maintaining cross-level.

The tamper shall be a production type tamper-liner capable of lifting, lining, and surfacing track and turnouts within the specified track tolerances and with the specified ballast.

The tamper and equipment to be used for tamping operations will be subject to approval by the Engineer.

Every tie in the track shall receive two (2) or more full insertions of the tamping heads and shall be tamped from a point 15 inches inside each rail on both sides of the ties to the end of the ties. Tamping will not be permitted in the center of the tie between the above stated limits. Where raising the track has resulted in a void under the center of the tie, lightly fill the center space. Tamp both ends of a tie, inside and outside of the rail, simultaneously.

Accomplish track surfacing by a method that will not cause undue bending of rail, straining of joints, and damaged rail fastenings. Raise both rails at one time and as nearly uniform as possible. Limit each track lift to an amount that will not endanger the horizontal, vertical, and longitudinal stability of the track.

Lift all ties that are pulled loose during surfacing operations; all down and cornered ties shall be raised to their proper elevation. Clean plate surface of dirt and ballast, plug, spike, and re-tamp to provide full bearing against the rail.

High spikes within the surfacing limits shall be removed, tie plugs installed, and new spikes driven down.

Surface and align track to the tolerances specified in this Section. The number of surfacing passes shall be as necessary to obtain the Engineer's acceptance of the alignment.

The runoff at the end of raise shall not exceed 1/4 inch in 31 feet of track unless otherwise approved by the Engineer.

Where super elevation in curves that exceeds 1", every effort should be made to reduce that elevation to appropriate levels based on posted track speed. Unless a fixed structure does not allow to do so.

Tamp ties to provide solid bearing against the base of the rail after the track is raised to grade at final surfacing. Just prior to final dressing, stabilize track with a dynamic track stabilizer. Bring up all down ties.

During track tamping and stabilizing, add, re-tamp, and re-compact ballast to maintain the depth of ballast indicated by SKOL Managers.

Upon completion of tamping, surfacing and lining operations, the track shall have been fully ballasted, tamped, surfaced, lined, stabilized, and dressed as shown on the Contract Drawings and specified in this Section.

Remove excess ballast from the track. After completion, no ballast shall remain on the tops of the ties, tie plates, or fastening systems.

Excess material shall be leveled off adjacent to the track zone so as to not to create a drainage problem.

Surfacing:

Track should not be surfaced until sufficient ballast is distributed to provide recommended ballast section after surfacing.

Track should not be raised more than necessary to maintain good surface.

When surfacing track out-of-face, both rails should be raised simultaneously, maintaining cross level.

Maintain the side slope of the ballast line from the outermost edge of the shoulder to the top of the subgrade or sub ballast with a uniform 3 to 1 slope when possible.

Proper surfacing techniques help provide a sustainable long-term track structure. In many cases providing a small lift to the track structure 2" or greater can help promote increased drainage. When performing surfacing operations, the ideal lift height is 1 – 2 inches for wood ties.

Track surfacing shall be done by methods that will prevent undue bending of the rail or straining of the joints. The amount of track lift shall not endanger the horizontal or vertical stability of the track. The track shall be initially raised so that a final raise of not less than one inch nor more than three inches will be required to bring it to finished surface. All ties that pulled loose shall be replaced to proper position, shall have full bearing against the rail, and be properly secured to the rail.

Final Dressing of Ballast:

The Contractor shall provide the necessary templates for shaping the ballast sections. The edge of ballast shall be brought to true line by means of shovels, forks, or ballast regulating machines. The ballast shoulders shall be uniformly formed and compacted. All excess ballast shall be removed, and deficiencies of ballast shall be supplied.

2/17/2021	JLW / DRW
REV DATE	BY / SUB

WATCO

WATCO
STANDARD SPECIFICATIONS
REHABILITATION PROJECTS
SURFACING SPECIFICATIONS

SECTION NO.	1000
STANDARD DRAWING	SPEC.1000.102
REVISION	SHEET NO. 03 OF 03
SCALE	NTS