

53.13 ASPHALT PAVEMENT - SURFACE PATCHING

53.13.1 GENERAL

The Work consists of spreading and compacting asphalt bound aggregate mix (ie: asphalt concrete pavement, asphalt stabilized base course material, or proprietary mix), by means of paver, machine (eg: motor grader), or hand on a prepared pavement surface or in a shallow excavation to the lines and dimensions as directed by the Engineer.

Painting of interim traffic markings (spotting) and referencing of the ends of no passing zones (barrier lines) is included in the Work where patching obliterates the existing pavement markings.

53.13.2 MATERIALS

The Contractor shall either “pickup” patching material from a source/asphalt plant to which the Department has access or supply the patching material, as directed by the Engineer.

Asphalt concrete patching material supplied by the Contractor shall be a coarse (mix Type 5 or similar) or fine (mix Type 8 or similar) mix produced in accordance with Specification 53.11, Production of Asphalt Concrete Pavement.

Asphalt stabilized patching material supplied by the Contractor shall be produced in accordance with Specification 53.12, Production of Asphalt Stabilized Base Course

Commercially produced proprietary patching material supplied by the Contractor shall be either QPR, Optimix, or Instant Road Repair (IRR). The use of other commercially produced products shall be subject to the approval of the Engineer.

Paint and glass beads shall be supplied by the Contractor and shall comply with the requirements of the Alberta Transportation Recognized Products List.

53.13.3 PROCEDURES

Loose debris or other objectionable material shall be removed from the areas to be patched, by brooming or other methods and a prime or tack coat applied. The Contractor shall remove and dispose of any failed Asphalt Concrete Pavement or Asphalt Stabilized Base Course in the area to be patched as directed by the Engineer.

For patching on existing pavement surfaces, the tack coat shall extend a sufficient distance beyond the edge of the repair area to allow for a smooth transition of the patching material to the existing pavement surface.

Patching material on the edges of a patch shall be "feathered" using rakes or lutes. Coarse material shall be removed from the patch edges.

Patching material shall be spread in uncompacted lifts not exceeding 100 mm in depth and compacted to produce a hard, stable surface which does not rut or otherwise distort under traffic loading.

Patching material placed in a depression shall be compacted such that the completed patch is approximately 15 mm higher than the surrounding undisturbed pavement, but with the material on the edges "feathered" to provide a smooth transition between the patch and the existing pavement surface.

Patching material placed in a patch that is in a rutted depression parallel to the wheelpaths, shall be compacted such that the completed patch is level with the adjacent undisturbed pavement. In addition, the material on the edges of the patch shall be feathered to provide a smooth transition between the patch and the existing pavement surface.

53.13.3.1 Interim Traffic Markings (Spotting)

Where newly constructed patches obliterate existing painted roadway lines, the Contractor shall provide interim painted traffic markings (spotting) on the patched area immediately upon completion of the patching work. The end points of the barrier lines shall be marked or otherwise referenced off the Work area where applicable.

All spotting must be applied using the same colour of paint as the permanent marking. Spots are to be 10 centimetres wide and 30 centimetres long, applied lengthwise to the road surface and shall delineate the travel lanes and/or edge lines as applicable. The maximum distance between spots shall be 15 metres on tangent sections and 7.5 metres on curves.

The barrier line reference marks (on centreline) and lane spots shall be completely covered with glass beads at the time of painting.

53.13.4 SAMPLING AND TESTING

The Contractor shall retain copies of his supplier's QC testing results, and undertake the quality control and quality assurance testing as required by the QC/QA Program as shown in the Special Provisions. The Contractor shall supply material samples to the Engineer for QA (Audit) testing purposes when requested.

53.13.5 ACCEPTANCE CRITERIA

Evaluation of the Work will be based on a visual inspection by the Engineer. To be acceptable, the patched area shall be adequately filled and shall provide a dense, smooth and level transition between the treated area and the adjacent undisturbed pavement surface.

The Contractor shall re-treat any failed areas at his expense.

The Contractor shall remove any loose material and leave the site in a clean condition.

53.13.6 TIME TO COMPLETE

53.13.6.1 Emergency Patches

In situations where it is necessary to undertake immediate repairs, which are normally of a temporary nature, the Contractor shall complete the Work within 2 calendar days of the issuance of the Work Order.

53.13.6.2 Non-emergency Patches

Under normal circumstances, the Contractor shall complete the Work within 60 calendar days of the issuance of the Work Order. In more urgent situations, the Contractor shall complete the Work within 10 or 30 days of the issuance of the Work Order as determined by the Engineer.

53.13.7 MEASUREMENT AND PAYMENT

53.13.7.1 General

Measurement will be in tonnes of patching material placed.

Payment for hauling from Department sources or from the closest Contractor's source of material acceptable to the Engineer will be made in accordance with Specification 55.2, Hauling.

Removal and disposal of any failed ACP and ASBC material will be paid as Extra Work.

Supplying and applying paint and glass beads will not be paid for separately but shall be considered incidental to the Work.

53.13.7.2 Department Supply of Patching Material

Payment will be made at the applicable unit price bid per tonne for:

"Asphalt Concrete Pavement Patching (Paver) - Pickup and Place",
"Asphalt Concrete Pavement Patching (Machine) - Pickup and Place",
"Asphalt Concrete Pavement Patching (Hand) - Pickup and Place",

Payments will be full compensation for preparing the surface, supplying and applying the prime or tack coat, picking up, placing and compacting the asphalt concrete patching material, and all labour, equipment, tools and incidentals necessary to complete the Work.

When an Emergency Patch is required and material can be obtained from a Department Source, payment will be made at the unit price bid per tonne for "Emergency Patch - Pickup and Place". This payment will be full compensation for picking up, placing and compacting the asphalt concrete patching material, the accelerated scheduling required to complete the Work within 2 days, and all labour, equipment, tools and incidentals necessary to complete the Work.

53.13.7.3 Contractor Supply of Patching Material

Payment will be made at the applicable unit price bid per tonne (for the type of mix specified) for:

- "Asphalt Concrete Pavement Patching (Paver) - Supply and Place",
- "Asphalt Concrete Pavement Patching (Machine) - Supply and Place",
- "Asphalt Concrete Pavement Patching (Hand) - Supply and Place",
- "Asphalt Stabilized Base Course Patching (Machine) - Supply and Place"
- "Asphalt Stabilized Base Course Patching (Hand) - Supply and Place"
- "Proprietary Mix Patching (Machine) - Supply and Place" or
- "Proprietary Mix Patching (Hand) - Supply and Place"

Payments will be full compensation for preparing the surface, supplying and applying the prime or tack coat, supplying the asphalt binder, producing the crushed aggregate, producing, placing and compacting the asphalt pavement patching material, and all labour, material, equipment, tools and incidentals necessary to complete the Work.

When an emergency patch is required and material is obtained from a Contractor Supply Source, payment will be made at the unit price bid per tonne for "Emergency Patch - Supply and Place". This payment will be full compensation for supplying, placing and compacting the patching material, the accelerated scheduling required to complete the Work within 2 days, and all labour, equipment, tools and incidentals necessary to complete the Work.

Payment for the supply of aggregate for asphalt concrete pavement and asphalt stabilized base course mixes will be made in accordance with Specification 55.4, Supply of Aggregate.

No separate payment for supply of aggregate will be made for proprietary mixes.

53.13.7.4 Graduated Payment Scale

For Work Orders which require:

- ! that only a single patch be constructed, and the actual quantity of material used to construct the patch is in excess of 25 tonnes or,
- ! that in excess of 100 tonnes of patching material is placed within a specified work area up to 3 km in length,

the applicable unit price bid for patching will be reduced by the amount bid per tonne for "Surface Patching Price Adjustment - Single Patch" or "Surface Patching Price Adjustment - 100 tonnes". These unit price adjustments will apply to the applicable quantity of material reported for payment (under the Work Order) with the exception that the price adjustment will not be applied for of any material used for a patch classified as an "Emergency Patch" or a "Hand Patch". For example, if a Work Order requires a quantity of 90 tonnes of patching be performed with one of the patches (non-emergency, paver or machine) requiring 30 tonnes of material, the unit price adjustment for "Surface Patching Price Adjustment - Single Patch" will be applied to only 30 tonnes.

In situations where both price adjustments apply to the same Work Order, only the "Surface Patching Price Adjustment - 100 tonnes" will be used. For example, if a Work Order requires a total of 110 tonnes of patching material to be used within a 3 km work area and one of the patches requires 30 tonnes of material, only the price adjustment for "Surface Patching Price Adjustment - 100 tonnes" will apply, but it will apply to the entire 110 tonnes.

53.13.7.5 Premium Payments

In urgent situations where the Contractor is required to complete Non-Emergency Patches within 10 calendar days of the issuance of the Work Order, an additional payment will be made at the unit price bid per occurrence for "Surface Patching - Premium". This payment will be full compensation for complying with the accelerated scheduling required to complete the Work.

In less urgent situations where the Contractor is required to complete non-emergency patches within 30 calendar days of the issuance of the Work Order, an additional payment will be made at the unit price bid per occurrence for "Surface Patching - Interim Premium". This payment will be full compensation for complying with the accelerated scheduling required to complete the Work.

53.13.8 WARRANTY

The warranty period for surface patches shall be 1 year, except for Emergency Patches which shall be 7 days.