53.5 ASPHALT PAVEMENT CRACK ROUTING AND SEALING

53.5.1 GENERAL

The Work consists of routing, cleaning and drying cracks in pavement surfaces supplying crack sealant material and sealing the routed cracks with the sealant.

53.5.2 MATERIALS

The Contractor shall supply the type and grade of asphalt/emulsified asphalt material generally accepted for this work from the Alberta Transportation Recognized Products list.

The use of other materials will be subject to the approval of the Engineer. In situations where the Contractor obtains approval to use a material not included in the "Recognized Products list", he shall provide the Engineer with the following information 5 days prior to commencing the Work:

- Name and mailing address of crack sealant supplier and manufacturer.
- Name of crack sealant product to be supplied.
- Written confirmation from the manufacturer that the crack sealant to be supplied meets all specified requirements along with test results that demonstrate that the product meets all specified requirements.

The Contractor shall verify that all crack sealant delivered and used in the Work is the type and grade ordered.

53.5.3 PROCEDURE

The work area shall be a maximum of 3 km in length.

No Work shall be performed during rain or snow or when the pavement surface is wet.

The crack sealant shall not be applied when the pavement temperature is below 10E Celsius.

Unless otherwise directed by the Engineer, all transverse cracks between 2 mm and 25 mm in width and longitudinal cracks between 2 mm and 12 mm in width shall be routed and sealed. The Contractor shall measure and record the length of every crack treated and inform the Engineer of the total when nearing the estimated amount shown on the Work Order.

Cracks shall be routed to the applicable cross-section shown on the drawing (CB6-10.6M1), keeping the crack in the centre of the rout cross-section.

Prior to the application of crack sealant, the entire road surface shall be cleaned ensuring all loose material and moisture is removed from the routed cracks and surrounding areas.

Crack sealant shall be heated and applied in accordance with the manufacturer's recommendations. Routed cracks shall be filled with crack sealant such that upon cooling, the filled crack is as shown on the drawings.

Excessive crack sealant shall be removed from the pavement surface immediately following application. Traffic shall be kept off sealed cracks until the crack sealant has cured. At locations such as intersections where this is not practical, the Contractor shall prevent tracking by applying a blotting agent to the crack sealant. When a blotting agent is used, it shall not be applied until the sealant has cooled sufficiently to prevent inclusion of the blotting agent into the sealant.

When necessary, the Contractor shall supply one of the following blotting agents:

- screened sand with a maximum topsize of 2 mm
- cement
- flyash

The use of other blotting agents shall be subject to the approval of the Engineer.

Fuel, asphalt and any other spills shall be cleaned up to the satisfaction of the Engineer at the Contractor's expense.

53.5.4 SAMPLING AND TESTING

The Contractor shall retain copies of his supplier’s QC testing results (minimum requirement of cone penetration and flow), 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.

53.5.5 ACCEPTANCE CRITERIA

Evaluation of the Work will be based on a visual inspection by the Engineer. To be acceptable, the Work must conform with the following:

- all routed cracks conform with the specified rout profile,
- the rout conforms to the path of the crack with no part of the crack outside or touching the edge of the rout cross-section,

- all routed cracks have been sealed, and
- at least 95% of the cracks treated have been filled with an adequate amount of crack sealant material.

Failure to comply with the acceptance criteria will result in the Contractor re-treating all failed cracks at his own expense.

53.5.6 TIME TO COMPLETE

The Contractor shall complete the Work within 180 days of the issuance of the Work Order.

53.5.7 MEASUREMENT AND PAYMENT

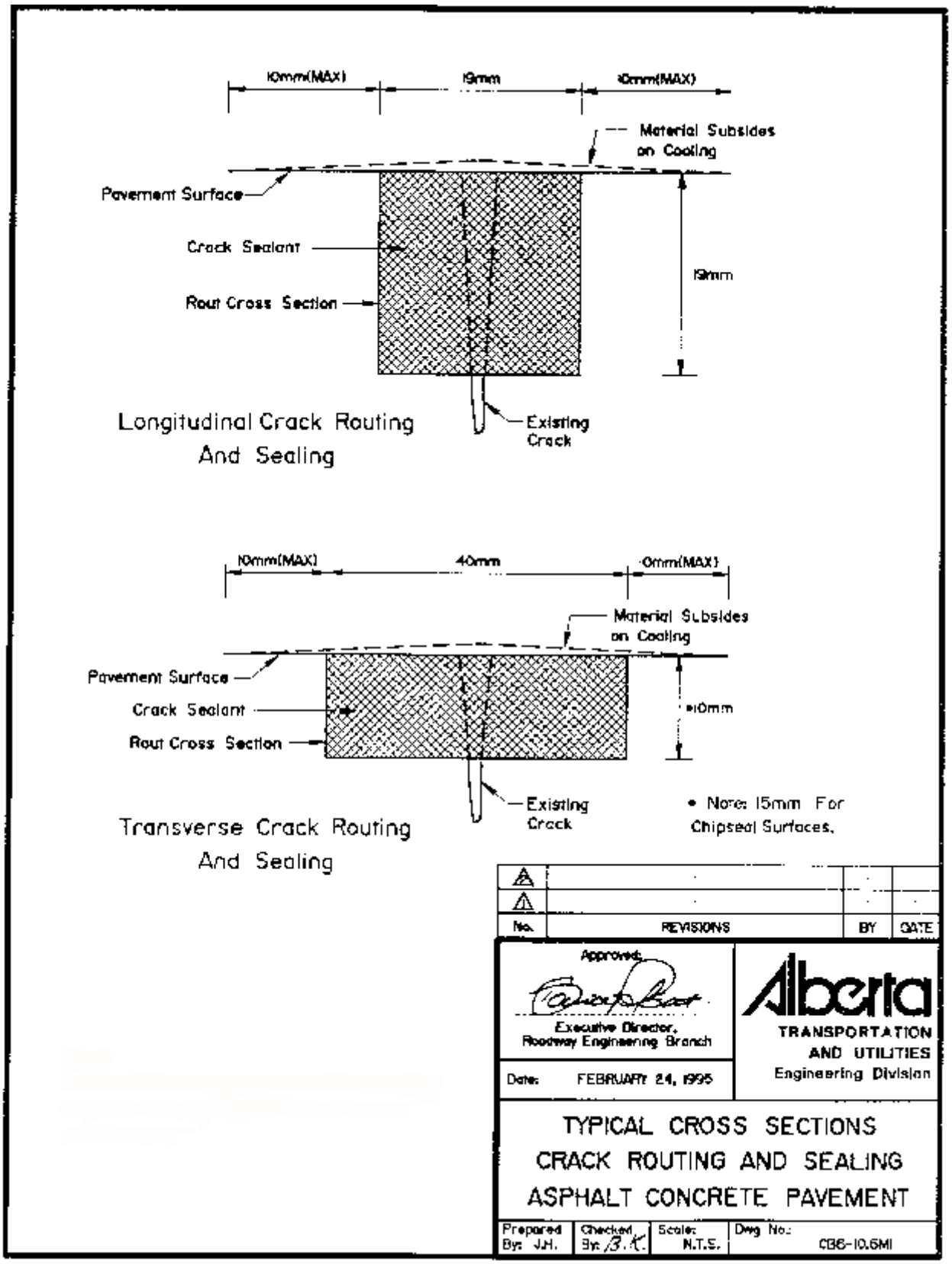
Measurement will be in metres of the length of crack routed and sealed.

Payment will be made at the unit price bid per metre for "Crack Routing and Sealing". This payment will be full compensation for routing, cleaning and drying the cracks, cleaning the pavement surface, supplying and applying the crack sealant, measuring and recording the length of cracks treated and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

When the Engineer directs the Contractor to apply one of the aforementioned blotting agents, a supplementary payment will be made at the unit price bid per length of crack treated for “Crack Sealing - Blotting.” This payment will be full compensation for supplying and applying the blotting agent, and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

53.5.8 WARRANTY

The warranty period for this Work shall be 1 year. At the end of the warranty period at least 90% of all treated cracks must continue to be sealed.


10mm(MAX)
15mm
10mm(MAX)
Material Subsides on Cooling
Pavement Surface
Crack Sealant
Rout Cross Section
15mm
Existing Crack
Longitudinal Crack Routing And Sealing
10mm(MAX)
40mm
10mm(MAX)
Material Subsides on Cooling
Pavement Surface
Crack Sealant
Rout Cross Section
10mm
Existing Crack
Transverse Crack Routing And Sealing
• Note: 15mm For Chipseal Surfaces.
No.
REVISIONS
BY
DATE
Approved:
Executive Director, Roadway Engineering Branch
Date: FEBRUARY 24, 1995
Alberta
TRANSPORTATION AND UTILITIES
Engineering Division
TYPICAL CROSS SECTIONS
CRACK ROUTING AND SEALING
ASPHALT CONCRETE PAVEMENT
Prepared By: J.H.
Checked By: B.K.
Scale: N.T.S.
Dwg No.: CB6-10.6MI