



REQUEST FOR QUOTATION (RFQ)

RFQ NUMBER: 2024-02-E

CRACK SEALING OF ASPHALT ROADWAYS

RFQ ISSUE DATE: March 21,2024

SUBMISSION DEADLINE: April 25,2024

Section 1.0 - REQUEST

- 1.1 The Town of Drayton Valley (as may be referred to hereinafter as the “Town”) is requesting a Quotation from qualified individuals and/or businesses for the delivery of crack sealing asphalt roadways for the municipality.
- 1.2 Proponents are invited to provide alternative options or solutions to address the service need, however, the Town is under no obligation to deviate from the original specifications requested if a proponent does provide an alternative approach in their submission. April 25,2024.
- 1.3 Responses can be mailed to the Town of Drayton Valley, Box 6837, Drayton Valley, AB, T7A 1A1 or hand delivered to the Town of Drayton Valley Civic Centre, 5102-52nd Street, Drayton Valley, AB. The submission must be in a sealed envelope and clearly marked as:

Attention: Shelley Terry, GM of Municipal Services
Request for Quotation
Crack Sealing of Asphalt Roads
Town of Drayton Valley

- 1.4 Submission inquiries are to be directed to:

Bill Campbell
Public Works Manager
Town of Drayton Valley
Email Address: bcampbell@draytonvalley.ca

1.5 SUBMISSION PROCESS

1.5.1 Submission of Quotation

- a. The Proponent shall either submit one (2) copy/copies of its Submission with all accompanying schedules, appendices and addenda in a sealed envelope/package marked with the Proponent’s name and the RFQ title up to the Submission Deadline set out on the date and at the location shown on the title page of this RFQ, or alternatively, the Proponent can also submit one (1) copy of its submission with all accompanying schedules, appendices or addenda in a digital format via email to the procurement contact identified in Section 1.5.
- b. Quotations received after the Submission Deadline or in locations other than the address indicated, will not be accepted. The Town may elect to extend the Submission Deadline.
- c. Amendments to a Quotation may be submitted if delivered in writing prior to the Submission Deadline in a sealed envelope or package, marked with the Proponent’s name and the RFQ title.
- d. Quotations may be withdrawn by written notice only, provided such notice is received at the administration office of the Town prior to Submission Deadline.
- e. All costs associated with the preparation and submission of the Quotation, including any costs incurred by the Proponent after the Submission Deadline, will be borne solely by the Proponent.

1.5.2 Conflict of Interest

By submitting a Quotation, the Proponent warrants that neither it nor any of its officers or directors, or any employee with authority to bind the Proponent, has any financial or personal relationship or affiliation with any elected official or employee of the Town or their immediate families which might in any way be seen by the municipalities to create a conflict.

1.5.3 Evaluation of Quotations

- a. Quotations will be evaluated on the basis of the overall best value to the Town based on quality, service, price, and any other criteria set out herein. The evaluation will consist of two stages:
 - i. Stage 1 will consist of evaluating the Mandatory Requirements. If the Submission meets the Mandatory Requirements, the Submission will continue to Stage 2, otherwise, the submission will be deemed non-compliant and rejected.
 - ii. Stage 2 will consist of evaluating the Submission based on the Evaluation Criteria outlined in Section 1.6.5.b.
- b. After completion of Stage 2, the Town may elect to short list some of the Proponents and may require short listed Proponents to provide additional information or details, including making a presentation, supplying samples, demonstrations, and/or additional technical literature.
- c. The Town may elect to enter into negotiations with the leading Proponent or with any other Proponents concurrently. In no event will the Town be required to offer any modified terms to any Proponent prior to entering into an Agreement, and the Town will not be liable to any Proponent as a result of such negotiations.
- d. All sub-contractors of the Proponent will be included in the evaluation process. It is the responsibility of the Proponent to guarantee that all its sub-contractors will comply with all the requirements and terms and conditions set out herein.

1.5.4 Evaluation Criteria

Quotations will be evaluated for their adherence to, interpretation of and response to the request as set out in this document. The following established criteria will be used:

- a. Mandatory Criteria
 - i. Workers Compensation Board (WCB) clearance letter;
 - ii. Certificate of Recognition (COR) or Small Employer Certificate of Recognition (SECOR);
 - iii. Proof of Automobile Liability Insurance of \$5,000,000 minimum; and
 - iv. Proof of General/Professional Liability Insurance of \$5,000,000 minimum.
- b. Evaluation Criteria
 - i. Corporate profile: experience and size of the organization;
 - ii. Previous related experience and references;
 - iii. Team expertise: key personnel experience and certifications;
 - iv. Methodology: proposal conveys the Proponent's intent in a clear and concise manner; and
 - v. Co-ordination of work with the Town

1.5.5 Acceptance and Rejection of Quotations

- a. Notwithstanding any other provision in the Quotations documents, the Town has in its sole discretion, the unfettered right to:
 - i. accept any Quotations;
 - ii. reject any Quotations;
 - iii. reject all Quotations;
 - iv. accept a Quotation that is not the lowest price;
 - v. accept a Quotation that deviates from the Requirements, Specifications or the Conditions specified in this RFQ;
 - vi. reject a Quotation even if it is the only Quotation received by the Town;
 - vii. accept all or any part of a Quotation;
 - viii. split the services between one or more Proponents; and
- b. All Quotations shall be irrevocable and remain open for acceptance for at least sixty (60) days after the Submission Deadline, whether or not another Statement of Qualifications has been accepted.
- c. The Town is not under any obligation to award a Contract and may elect to terminate this RFQ at any time.

1.5.6 The Timeline for the RFQ process is as follows:

- a. RFQ issued – March 21,2024.
- b. RFQ closes – April 25,2024.
- c. Site Visit - Site tour will start at 1:30PM (MST) with Public Works Manager, on April 3,2024 at 6113 50Ave, Drayton Valley, AB.
- d. Completion of evaluation process and award May 2,2024; and
- e. Signing of Services Agreement– May 10,2024.

Section 2.0 - REQUIREMENTS

2.1 Description of Work

The Town of Drayton Valley seeks a qualified contractor to perform crack sealing of the asphalt roads listed below. The work includes:

- a. Supply all necessary materials, equipment, labor, and traffic control to perform the work in accordance with the specific specifications and as directed by the Town of Drayton Valley
- b. Monitor the quantities of linear meters of crack sealing during the work and communicate status at the end of each workday.
- c. The Contractor shall use a hot pour crack sealing material off the Alberta Transportation Approved Products list; CRACK TREATMENT / CRACK SEALANT / HOT POUR. This list is attached see Schedule C. The material must be purchased from a reputable supplier.
- d. The bidder/proponent are encouraged to inspect the roads listed to access the cracks severity and density to provide the best possible quote.
- e. Priority 2 road sections will be added to scope of work as budget allows.

2.2 Location (see attached Schedule "A" and "B")

2.2.1 Priority 1

- A. 54 St / 45 Ave/45A St from 50 St to 50 Ave. Length 1031m
- B. 46 Ave / 46 St. From 50 St to 50 Ave. Lenth 880m
- C. 55 Ave / 43 St. From 50 St to 50 Ave. Length 1200m
- D. Industrial Rd / Jubilee Ave. From 50 St to Hwy 22. Length 860m

2.3 Available Information:

The Town can supply the following information and materials:

- a. Alberta Transportation Crack Sealing Maintenance. Schedule C
- b. Alberta Transportation approved product list Schedule D

2.4 Minimum Quotation Requirements

Each Quotation shall contain the following information:

- a. a description of the Proponent's services, including experience and financial viability.
- b. unit price and any other additional costs such as travel and mobilization/demobilization.
- c. WCB clearance letter, COR/SECOR certificate, and proof of professional/general liability and automobile insurance coverage of minimum \$5,000,000.

2.5 Terms and Conditions

- a. The successful Proponent will enter into a contractual agreement (in the form of a Services Agreement) with the Town within fifteen (15) days after delivery of the Agreement to the successful Proponent by the Town.
- b. If the successful Proponent fails to execute and return the Agreement to the Town within fifteen (15) days, the Town may cease all discussions and have no obligation to the Proponent, and may, if it chooses to do so, award the Agreement to another Proponent, all without affecting any claim which the Town may have against the Proponent as a result thereof.
- c. The RFQ and the completed Quotation including the Price Form of the successful Proponent will become Schedules of the Services Agreement.
- d. The Services Agreement will be for a negotiated term with the Town, and, at the Town's discretion, for an additional term.
- e. The Service Agreement will include, but may not be limited to the following:
 - i. The startup date identified by the Proponent in the quotation and accepted by the town.
 - ii. The Proponent will be expected to deliver the services within the timeline provided.
- f. The Proponent must follow and act in accordance with the Alberta Transportation Standards and Technical Guidelines.
- g. The successful Proponent is required to have a valid Town of Drayton Valley Business License as well as any necessary Development and/or Building Permits prior to Agreement execution.
- h. The successful Proponent will assume prime contractor status for the work being done. The contractor must submit a currently valid Certificate or Recognition (CoR), or Small Employer Certificate of Recognition as part their submitted quote and submit work hazard assessment and control documentation prior to work taking place.
- i. The Town of Drayton Valley reserves the right to increase or decrease the scope of work. If there is insufficient budget to proceed with the entirety of the work, the Town reserves the right to negotiate at the time of acceptance with the Proponent(s) in order of score, by eliminating locations, reducing the estimated quantity, and attempting the bring the project within budget. Unit rates may not be changed during these negotiations. The highest scored proponent must accept the proposed reduction in scope of work at the originally submitted rate or reject it, allowing the Town to approach the next highest scored submitter.

Section 3.0 - SUBMISSION FORM



REQUEST FOR QUOTATION SUBMISSION
Crack Sealing of Asphalt Roadways
PAGE 1 OF 2

Proponent's Name: _____

Address _____

Mailing Address (if different from above) _____

Telephone: _____ Fax: _____

Key Contact Person: _____

Telephone (if different from above) _____

Email: _____

The undersigned Proponent, having carefully read and examined the RFQ, including all sections, and having full knowledge of the requirements described herein, does offer to provide the goods, and/or services in accordance with the requirements, terms and conditions set out in the RFQ and in accordance with the pricing as described within.

Signature of Authorized Signatory

Date

Print Name and Title

REQUEST FOR QUOTATION SUBMISSION

Crack Sealing of Asphalt Roadways

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REQUIRED DOCUMENTS

By initializing each item, the Proponent confirms it has completed and enclosed the following documentation in its Quotations and has identified any deviations or items of non-compliance providing an explanation of where it does not comply.

Initial

- _____ 1. The Proponent confirms that it will comply with all occupational health and safety requirements, policies and procedures of the Town and all statutory occupational health and safety requirements under, or in connection with the *Worker's Compensation Act and the Occupational Health and Safety Act*. The Proponent warrants that it is in good standing as to all WCB assessments and requirements. A copy of the WCB clearance letter is attached.
- _____ 2. Safety certification and evidence of established safety program. Include a copy of the Certificate of Recognition (COR) from the *Alberta Construction Safety Association or SECOR* and a copy of the Table of Contents of the Proponents Safety Manual.
- _____ 3. Proof of Professional/General Liability and Automobile Liability Insurance with limit not less than \$5,000,000.
- _____ 4. Brief description of Proponent's company, purpose, and history of successes including information on size of organization, number of service providers, and staff employed.
- _____ 5. Information on relevant experience performed during the last five (5) years. Indication of the number and size of other municipalities where like services have or are currently being provided.
- _____ 6. Identification of key personnel to be assigned to this Agreement, setting out their names, responsibilities, qualifications, and relevant experience.
- _____ 7. Submission of a detailed price list of the fees for all the services, identifying the total all-inclusive fee which shall include any out of the pocket expenses for the provision of services for the agreement/contract period.
- _____ 8. Submission of a detailed list of any deviations and/or variations from the terms and conditions set out in this RFQ and, if applicable, detail proposed amendments.

Schedule A



Schedule B

Conditions

1. The Town will require the successful bidder to provide a minimum notice of 5 working days to ensure that the areas to be crack filled are prepared and notices sent over the Town's website.
2. The Town is hoping to have the work done in the month of June 2024 or in coordination with the line painting activities taking place within the municipality.

Specifications for Crack filling

1. All cracks are to have all dirt and water blown out before being filled as per standard crack maintenance (Schedule C)
2. Traffic control shall include flaggers, signage and barricades where required.
3. Crack filling material will be in accordance with Alberta Transportation's approved product list (Schedule D)

Priority 1					
Section	From	To	Road Lenth (m)	Crack Lenth (m)	Cost/ Section
A - 54 St / 45 Ave/45A St	54 St	45 Ave	1031		
B - 46 Ave / 46 St	50 St	50 Ave	880		
C - 55 Ave / 43 St.	50 St	50 Ave	1200		
D - Industrial Rd / Jubilee Ave	50 St	Hwy 22	860		
Total					

Schedule C

11.0 CRACK MAINTENANCE

11.1 INTRODUCTION

Preventative maintenance for pavement surfaces is essential if you wish to delay the deterioration and extend the service life of the structure. Cracking is one of the most common distress that occurs in asphalt concrete pavements. The presence of cracks on a pavement surface allows moisture to penetrate into the base material, which can cause premature failure of the pavement structure. In order to maximize life expectancy of a pavement it is desirable to minimize the detrimental effects of the cracks. This can be accomplished by treating the cracks prior to extensive deterioration, repairing cracks, or in extreme cases overlaying the pavement.

Not treating cracks can lead to increased maintenance costs as the crack deteriorates. Spalling and potholes are common secondary distresses for untreated cracks. Maintenance treatments to fix these distresses can be much more expensive than treatments used to fix the crack initially.

In an effort to provide a consistent approach to crack maintenance activities, the following guidelines have been developed.

11.2 MAINTENANCE TREATMENTS - CRACKING

The main purpose of a crack treatment is to seal or fill the crack in order to prevent moisture from penetrating the base and subgrade thereby preventing the weakening of the roadway structure. The secondary purpose is to prevent the loss of aggregate from the edges of the cracks. Moisture entering the crack can lead to accelerated fatigue, stripping, pumping and other pavement damage. Crack maintenance encompasses many treatment options ranging from the basic maintenance application of crack filling to more drastic measure of overlaying the pavement.

Crack Treatment

A Crack Treatment involves either sealing or filling the crack. Besides preventing moisture from penetrating the base and subgrade thereby weakening the roadway structure, it also slows crack deterioration caused by material spalling from the edges of the cracks. Cracks should be treated as early as possible in the spring. The earlier this function can be completed, the more successful it will be in minimizing moisture penetration and damage.

Surface Treatment

Although preventative in nature, surface treatments such as seal coats, slurry seals, fog seals, etc., generally seal the entire surface and are most appropriate on pavements with minor hairline cracks having little or no associated edge deterioration. A surface treatment can also be used in conjunction with individual repairs of selected cracks. They are used to treat surfaces which have segregated areas and porous surfaces due to loss of aggregate.

Crack Repair

The purpose of crack repair is corrective in nature and removes or repairs extreme depressed or tented (cupping or lipping) transverse cracks. Crack repairs reduce or

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eliminate roughness in pavements and may be performed in order to delay rehabilitation. Typically pavements that exhibit few other surface distresses are good candidates for crack repair strategies. Repairs are generally made with asphalt concrete pavement mix for Mill & Fill, spray patching or a sand/sulphur slurry mix.

Rehabilitation

Pavement rehabilitation is corrective in nature and is used to cover over all surface distresses and used to strengthen the pavement structure. Surface rehabilitation strategies include Hot In-place Recycling (HIR), Cold Mill and Inlay and overlay. Individual repairs of selected cracks such as, reinforcement, Mill & Fill, spray patching, etc. can be done in conjunction with and prior to rehabilitation.

In general, rehabilitation with or without a crack treatment/repair will improve the resistance to reflective cracking for non-working cracks. However, rehabilitation on working cracks will experience reflective cracking within 1-3 years without crack repair and 2-5 years with crack repair.

Non-working cracks are defined as cracks that have less than 2.5 mm movement during a given year. These are typically longitudinal cracks. Working cracks are defined as cracks that have 2.5 mm movement or greater in a given year. These are typically transverse cracks.

11.3 EFFECT OF PAVEMENT CONDITION

Careful consideration must be given to existing pavement condition to ensure a successful treatment. Crack density and edge deterioration are two major factors in deciding what treatments to apply. If a pavement is badly deteriorated, and has significant cracking, crack filling or crack sealing may not be the most effective treatment on a life cycle cost basis.

Crack Density

Crack density is a measure as to how closely spaced the transverse cracks are on a given length of roadway. The following table was developed by the Michigan Department of Transportation to determine crack density.

Linear Crack Length per 100 m Pavement Section	Density
< 10 meter	Low
10 meter to 135 meter	Moderate
> 135 meter	High

Table 1.1 – Crack Density (MDOT)

Crack Edge Deterioration

Edge deterioration is a measure of how much the crack edge has deteriorated. The following table from the Surface Condition Rating Manual for Alberta Transportation can be used to determine severity of Edge Deterioration.

11.0 CRACK MAINTENANCE

Edge Deterioration	Severity
Crack width < 3mm	Slight
Crack width 3 to 10 mm or Secondary Cracking	Moderate
Crack width > 10 mm or Block Cracking	Extreme

Table 11.2 Edge Severity (Surface Condition Rating Manual)

11.4 DETERMINING THE APPROPRIATE CRACK MAINTENANCE APPLICATION

When the Surface Condition Rating indicates that there is cracking in an asphalt pavement, the complete circumstances of the pavement should be carefully assessed prior to taking action. The type and orientation of the cracks to be treated should be established, along with the climatic conditions, pavement structure composition, traffic characteristics, and future rehabilitation plans. This will help determine the frequency and amount of annual crack movement that can be expected, and consequently the quality of the material required, and whether a short, medium, or long term treatment of the cracks is most appropriate.

Crack Density	Average Level of Edge Deterioration (percent of crack length)		
	Slight (0 to 25)	Moderate (26 to 50)	Extreme (51 to 100)
Low	Monitor or Crack Treatment	Crack Treatment	Crack Treatment or Crack Repair
Moderate	Crack Treatment	Crack Treatment	Crack Repair
High	Surface treatment	Surface Treatment	Rehabilitation

Table 11.3 Guidelines for Determining Crack Maintenance Activities

11.5 CRACK TREATMENT OPTIONS – SEALING VERSUS FILLING

Crack sealing and crack filling are two distinct activities and it is important to understand the differences between the two treatments to effectively treat the cracks.

“Crack sealing” is a more intensive operation that is intended to prevent water from entering the pavement structure. The treatment involves routing the crack to a specific configuration and placing a high-quality sealant in it.

“Crack filling” is a less intensive operation and is intended to reduce the amount of water infiltration into the pavement and reinforce the adjacent pavement. This treatment involves placing a crack filler, generally a cold-pour bituminous emulsion, into the crack without affecting the crack geometry.

11.0 CRACK MAINTENANCE

Crack Sealing is carried out to seal ordinary working cracks (greater than 2.5 mm of horizontal crack movement).

- For cost-effective, short-term crack treatment performance (between 1 and 3 years) in pavement with ordinary working cracks and moderate traffic levels (5000 AADT or less), a crack sealant applied as a filler (i.e. an overband or flush-fill configuration) is considered most appropriate.
- For cost-effective medium-term crack treatment performance (between 3 and 5 years) under the above conditions, a modified rubberized sealant placed in a shallow (40X10 mm) or standard (19X19 mm) reservoir with overband configuration (Rout & Seal) is considered most appropriate.
- For cost-effective, long-term crack treatment performance (say, between 5 and 8 years) under the above conditions, a modified low modulus rubberized asphalt sealant installed in a standard or shallow reservoir with overband configuration should be used. These materials provide a high level of flexibility and adhesiveness, so that annual crack movements can be accommodated. Moreover, the combination of a reservoir and an overband helps to maximize sealant performance.

Crack Sealing (Rout and Seal) is recommended if:

- Crack opening between 3-12 mm and pavement is less than five year old. Pavements with crack opening between 12-20 mm should be evaluated to determine whether or not routing is appropriate. Pavements with crack openings greater than 19 mm should be cleaned and filled without routing. Types of cracks considered for routing and sealing are:
 - Transverse cracks.
 - Edge cracks.
 - Longitudinal cracks on low volume roads. (Avoid wheel path cracking, unless treatment is followed up with a chip seal that year)

Crack Sealing (Rout and Seal) is not recommended if:

- Crack opening is less than 3 mm.
- Cracks are alligator (or map) type.
- Crack is severe in density. It is assumed that rout and seal would be ineffective in delaying further deterioration.
- Pavement is more than 10 years old, or is being considered for rehabilitation.
- Longitudinal cracks with moderate to high traffic unless treatment is followed up with a chip seal that same year (centre line, midlane, wheel track single crack, and meandering cracks).

Crack Filling is carried out to fill non-working cracks (less than 2.5 mm of horizontal movement).

- For cost-effective, short-term crack filler performance (1 to 3 years) in pavements with non-working cracks and low to moderate traffic levels, asphalt

11.0 CRACK MAINTENANCE

cement, cold pour or hot pour sealant placed in a flush-fill or overband configuration is considered most appropriate.

- For cost-effective, long-term crack filler performance (say, between 5 and 8 years) under the above conditions, an asphalt rubber or rubberized asphalt placed in either a flush-fill or overband configuration is considered most appropriate. The higher quality of these materials and the added life provided by the overband make for the most cost effective options in this scenario.

The following Table provides recommended Crack Treatment Criteria for determining which cracks to seal and which to fill, given various crack characteristics. In comparison to crack filling, crack sealing involves much more planning and uses specially formulated materials and more sophisticated equipment.

Crack Characteristics	Crack Treatment Activity	
	Crack Sealing	Crack Filling
Width, mm	5 to 25	5 to 25
Edge Deterioration (i.e., spalls, secondary)	Minimal to None ($\leq 25\%$ of crack length)	Moderate to None ($\leq 50\%$ of crack length)
Annual Horizontal Movement, mm	≥ 2.5	< 2.5
Type of Cracks	Transverse thermal cracks Transverse reflective cracks Diagonal/meandering cracks	Longitudinal reflective cracks Longitudinal cold-joint cracks Longitudinal edge cracks Distantly spaced blocked crack

Table 11.4 – Crack Sealing Versus Crack Filling

11.6 CRACK PERFORMANCE

Central and Northern Alberta can experience horizontal crack movements in excess of 20 mm. This extreme amount of crack movement requires a high level of workmanship to ensure that the crack is located in the centre of the rout and the use of high quality modified rubberized asphalt materials.

Performance of the crack treatment is dependent on three factors: initial pavement condition, product selection, and production installation. It is very important that the crack/rout be as clean and dry as possible. Sealant should be applied soon after the crack has been routed and cleaned with the hot-air lance. Air temperature, AC surface temperature and humidity all need to be considered during the product installation. Route and seal should not be applied following a rain event. The pavement must be as dry as possible. In addition to that, the selection of what time of the season the crack sealant should be applied is often a compromise between the effect of crack movement on sealant performance and sealant installation.

11.0 CRACK MAINTENANCE

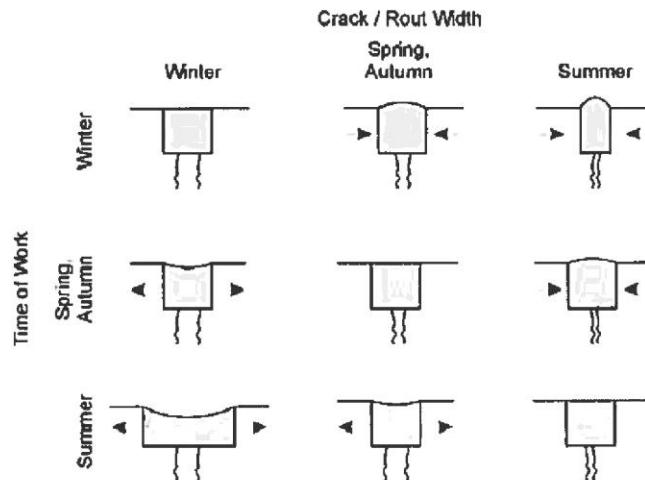


Figure 11 -1 Effect of Crack opening and time of work of sealant strain (National Guide to Sustainable Municipal Infrastructure).

On the basis of crack movement spring and autumn would appear to be the most effective time to do crack sealing. However in the spring, frost is usually coming out of the ground and pavement moisture is normally high.

Cool air temperatures can reduce the temperature of the pavement surface thus causing a hot-pour sealant to gel more quickly. As a result of this, sealant penetration is reduced which can then lead to lower than expected adhesion and performance. Crack sealant should not be applied when the pavement temperature is below 10 ° Celsius. Crack sealing in the summer months reduces the effect of air temperature.

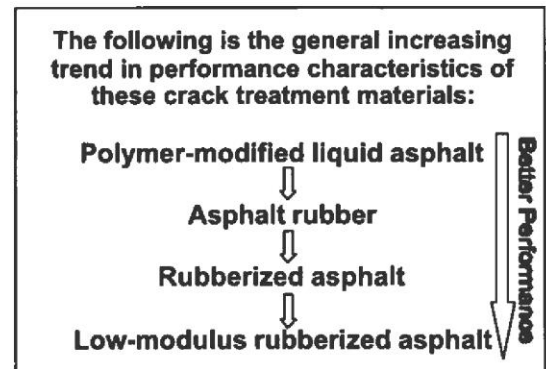
Crack filling with cold-pour bituminous emulsions should be applied in late spring when the air temperature is 10 ° Celsius or higher. This will permit sufficient time for the emulsion to shed its residual water. Low temperatures and high relative humidity will extend curing time. In addition, a filler that experiences freezing temperatures or rain within 24 hours of application will be adversely effective. Crack filling can be done on non-working cracks during the summer months.

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Material

There are many different crack sealing/filling materials, each with distinct characteristics. The principal material families and types are as follows:

- Cold-applied thermoplastic materials
 - Liquid asphalt (emulsion, cutback)¹
 - Polymer-modified liquid asphalt
- Hot-applied thermoplastic materials
 - Asphalt cement¹
 - Mineral-filled asphalt cement¹
 - Fiberized asphalt
 - Asphalt rubber
 - Rubberized asphalt
 - Low-modulus rubberized asphalt
- Chemically cured thermosetting materials
 - Self-leveling silicone



In order to provide for proper accommodation of traffic, crack maintenance must be carried out on one lane at a time with signs and properly attired flagpersons directing traffic. Signing must be in place in accordance with the appropriate signing diagram in the Traffic Accommodation manual.

11.7 SURFACE TREATMENT OPTIONS

Surface treatments are used to eliminate hairline cracking.

- For cost-effective, long-term performance (8+ years) seal coating, micro surfacing or slurry sealing are considered most appropriate.
- Fogging of slight deteriorated cracks is also an very effective treatment.

11.8 CRACK REPAIR OPTIONS

Crack repair is carried out on cracks with extreme edge deterioration (cupping or lipping). Spray Patching and Mill & Fill are two treatments that can be considered for crack repair.

- For cost-effective, medium-term crack repair performance (3 to 4 years) with low to moderate traffic levels, spray patch and sand/sulphur slurry patch (thermo patch) are considered most appropriate. Spray patching should only be considered if cracks are depressed more than 10 mm. It can be used as a pre-overlay treatment.
- For cost-effective, long-term crack repair performance (5 to 8 years) with low

¹ Crack Filling only

11.0 CRACK MAINTENANCE

to moderate traffic levels, Mill & Fill is considered most appropriate. Mill & Fill should be used at locations where tented, or failed transverse cracks exist. This treatment will improve the ride and restore structural integrity at the repaired locations. Note, Mill & Fill can be used as a pre-overlay repair. It should not be considered if the base of the structure is weak. A more extensive repair is required.

11.9 REFERENCES

Alberta Transportation and Utilities "Failures Definition" Handbook.

- Crack Sealing; Hot and Cold Pour Emulsion (Code 1680)
- Crack Sealing; Rubberized Asphalt Crack (Code 1690)
- Spray Patch (Code 1790)
- Transverse Crack Repair Mill and Fill (Code 1870)
- Transverse Crack Repair Spray Patch (Code 1880)
- Transverse Crack Repair Sand (Sulphur Slurry Patch) (Code 1890)

SHRP-H-348 "Asphalt Pavement Repair Manuals and Practice".

FHWA-RD-99-143 "LTPP Pavement Maintenance Materials: SHRP Crack Treatment Experiment, Final Report".

"Sealing and Filling of Crack For Bituminous Concrete Pavements – Selection and Installation Procedures", Michigan Department of Transportation, 1999.

"Guidelines for Sealing and Filling Cracks in Asphalt Concrete Pavement", Issue No. 10, National Guide to Sustainable Municipal Infrastructure, March 2003

"Guidelines for Assessing Pavement Preservation Strategies", Alberta Transportation, June 2002

Schedule D



PRODUCTS LIST

CRACK TREATMENT

Reference Material - [11.0 Crack Maintenance Guidelines and Procedures](#).

CRACK SEALANT

The following are pre-qualified by the department to supply the listed products. These products shall meet the requirements as linked below.

COLD POUR

PROVEN PRODUCTS	TRIAL PRODUCTS	POTENTIAL PRODUCTS
(ASPH-12) EC101 (Ace, McAsphalt, M&M, Pounder, W.R. Meadows), Western Asphalt Products		Arctiline Groove Filler (Expiry Date: Sept. 2021) 0

PROPRIETARY

PROVEN PRODUCTS	TRIAL PRODUCTS	POTENTIAL PRODUCTS

HOT POUR

PROVEN PRODUCTS	TRIAL PRODUCTS	POTENTIAL PRODUCTS
(ASPH-13) HC200 (Husky, W.R. Meadows)		
Deery 3723 crack sealant REPORT (2010) REPORT (2011)		

CRACK ROUTING AND SEALING - RUBBERIZED CRACK SEALANT (HOT POUR RUBBERIZED)

The following are pre-qualified by the department to supply the listed products. These products shall meet the supplier's specifications.

PROPRIETARY

PROVEN PRODUCTS	TRIAL PRODUCTS	POTENTIAL PRODUCTS
CRAFCO 522		
Deery 101 ELT REPORT - H28 REPORT - H16		
MACSEAL 6690-4 MOD		
Nuvo 6690 Typ IV Report		

SPRAY PATCH (See [SURFACE TREATMENT](#))

SILICONE HIGHWAY SEALANT

PROPRIETARY

PROVEN PRODUCTS	TRIAL PRODUCTS	POTENTIAL PRODUCTS

CONCRETE CRACK FILLER

- Recommended Gravity-Flow Crack Fillers - Potential
- [Approved](#)