

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT

REQUEST FOR TENDERS

Contract Number: C15-20-19 (H)

Red Hill Valley Parkway Resurfacing

Closes: 3:00 pm, Hamilton time
Monday, April 8th, 2019

***** ELECTRONIC BID SUBMISSIONS ONLY *****

Issued by Procurement Section
Corporate Services Department

Request for Tenders C15-20-19 (H)

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COMMUNICATIONS

All questions related to this Request for Tenders (RFT) or for clarification on completing the Form of Tender shall be submitted through the Bidding System by clicking on the "Submit a Question" button for the specified Request for Tenders document and shall be directed to:

Barbara Kinrade, CPPB
Procurement Specialist

All questions related to this Request for Tenders (RFT) or any clarification with respect to this RFT must be made no later than **3 Business Days prior** to the closing date of this RFT in order that City staff may have sufficient time to respond. The City reserves the right to extend the deadline for questions if required regarding this RFT.

Written answers or clarifications to issues of substance shall be shared with all bidders and issued as part of the RFT in the form of an Addendum. **All bidders are advised that any Addenda issued will only be posted on the following website:**

https://hamilton.bidsandtenders.ca

It is the sole responsibility of each bidder to check the website for any and all Addenda that have been issued for this Request for Tenders.

City of Hamilton
Corporate Services Department
Procurement Section
Phone: 905 546 2773
Fax: 905 546 2327
Email: procurement@hamilton.ca

Barbara Kinrade, CPPB
Procurement Specialist
Telephone: (905) 546-2424, extension 5422
Email: barbara.kinrade@hamilton.ca

TENDER NOTICE

Contract Number: C15-20-19(H)

Red Hill Valley Parkway Resurfacing

Closing 3:00pm, Hamilton time, Monday, April 8th, 2019

Only electronic Bid submissions shall be accepted and received through the Bidding System by the closing date and time stated above.

There is no public opening for this Request for Tenders.

1.0 SCOPE OF WORK

A brief summary of the work involved in this Contract is for the asphalt resurfacing of the Red Hill Valley Parkway and associated Works, which consists of approximately:

- 292,300 square metres of road resurfacing
- 39,900 tonnes of asphalt paving.
- 9,000 linear metres of guiderail removals
- 9,800 linear metres of guiderail installation/repairs
- Pavement markings.

After the closing, the lowest compliant Bidder will be notified they shall provide confirmation (within 5 business days), of the following minimum requirements, in order to confirm they are capable of completing this project:

- 5-Yrs of experience as a General Contractor on MTO Paving projects
- Shall have at least 5 Spreaders, 2 Asphalt Material Transfer Vehicles, and 5 Milling machines (of various widths) in working condition and available solely for the project
- Ability to produce 2,000 metric tonnes of asphalt per 12 hours.

2.0 CONTRACT REQUIREMENTS

Bidders are advised of the following Contract requirements for this Request for Tenders:

2.1 City of Hamilton Labour Trades Obligations

There are no labour trade obligations applicable to this Request for Tenders, this Request for Tenders is open to all bidders.

2.2 Bid Security

Bid security: **$500,000.00**

The City will only accept a digital bid bond in an electronically verifiable and enforceable (e-Bond) format.

2.3 Performance and/or Labour and Material Payment Security

The Successful Bidder will be required to provide a Performance bond in an amount equal to 50% of the Base Bid Price, excluding any contingency amount and all Value Added Taxes; Labour & material payment bond, in an amount equal to 50% of the Base Bid Price excluding any contingency amount and all Value Added Taxes. The bonds shall be in the prescribed forms set out in the Construction Act.

3.0 SITE MEETINGS

3.1 Mandatory Site Meeting

There are no scheduled site meetings for this Request for Tenders.

4.0 TO OBTAIN DOCUMENTS

4.1 Free Preview of Bid Documents

A complete set of Request for Tenders document may be viewed for free on the City of Hamilton's bid opportunities website **https://hamilton.bidsandtenders.ca.**

4.2 Purchase of Bid Documents

The Request for Tenders document is available for online purchase only.

Online: **https://hamilton.bidsandtenders.ca**

Fee: $53.00 non-refundable, tax included + applicable bids&tenders^{TM} fees

4.3 Accommodations for Bidders with Disabilities

In accordance with the Ontario Human Rights Code, Ontarians with Disabilities Act, 2001 (ODA) and Accessibility for Ontarians with Disabilities Act, 2005 (AODA), the City of Hamilton will accommodate for a disability, ensuring full and equitable participation throughout the bid process.

If a bidder requires this Request for Tenders in a different format to accommodate a disability, the bidder must contact the Tender Coordinator as soon as possible and in any event prior to the closing date. The Request for Tenders in the different format will be issued only to the requesting bidder and all Addenda will be issued in such different format only to the requesting bidder.

Procurement Manager
City of Hamilton

CITY OF HAMILTON

REQUEST FOR TENDERS

INSTRUCTIONS TO BIDDERS

(Revised December 24, 2018)

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INSTRUCTIONS TO BIDDERS

Notice to prospective bidders: The Instructions set out herein define your obligations and limit your rights. Read carefully.

1 Interpretation

In these Instructions to Bidders,

1.1 the provisions shall be read with changes of gender, number or corporate status as the context may require;

1.2 a reference to any Act, by-law, rule, procedure or regulation shall be deemed to include a reference to any substitution or amendment thereof;

1.3 the headings to each section are inserted for convenience of reference only and do not form part of the Request for Tenders;

1.4 any reference to an officer of the City shall be construed to mean the person holding that office from time to time, the designate or deputy of that person, and shall be deemed to include a reference to any person holding a successor office or the designate or deputy of that person.

1.5 unless expressly stated to the contrary, the number of days shall be calculated by,

1.5.1 counting all days including Saturdays, Sundays and public holidays, provided, however, that if the final day of any period shall fall on a Saturday, Sunday or public holiday, then the final day shall be deemed to be the next day which is not a Saturday, Sunday or public holiday;

1.5.2 where “month” is referred to, it shall be a calendar month.

2 Definitions

Capitalized words and phrases used in these Instructions to Bidders, Supplementary Instructions to Bidders, and the Form of Tender shall have the following meanings, unless expressly stated otherwise.

“Addendum” means a written change issued to the Request for Tenders.

“Alternative” means anything for which bidders provide a price in a manner that gives the City options in determining the actual Work of the Contract and may include such items as an optional product, system, installation, method, design and requirement. The City shall not be obliged to purchase an Alternative when accepting a Bid, but may, at its discretion elect to purchase all, some or none of the Alternatives offered.

“Alternative Price” means the amount stipulated by the bidder for an Alternative, which can be stated as an addition, a deduction, or no change to the Base Bid Price. The Successful Bidder shall be obliged to adhere to the Alternative Price quoted in its Bid.

“Base Bid Price” means the amount stated in the Form of Tender by the bidder, for the Work without considering any Alternative or Alternative Price and includes all Provisional Items and Provisional Prices (if any). Excluding Taxes or other applicable sales or value added taxes, imposed under the Laws of Ontario and the Laws of Canada applicable therein.

“Bid” means a submission made by a bidder in response to the Request for Tenders.

“Bid Security” means the security submitted by a bidder with its Bid which provides financial protection to the City should the Successful Bidder not enter into the Contract or commence the Work following the issuance of a purchase order, and/or not provide the specified security required under the Contract.

“Business Day” means a day which is not a Saturday, Sunday, public holiday or day when the administrative offices of the City are closed.

“Bidding System” means the electronic system used by the City for the advertisement of public bid opportunities at the following website: https://hamilton.bidsandtenders.ca, and which is required to be used for all dissemination of information by or on behalf of the City and submissions from bidders for this Request for Tenders.

“City” means the City of Hamilton, and where an authority or discretion is conferred upon the City under the Request for Tenders, means the appropriate official of the City as designated or appointed under its governing by-laws, resolutions or policies from time to time.

“Contract” means the agreement by formal contract executed by both the City and the Successful Bidder, or by purchase order issued by the City, to perform the Work, including the supply and delivery of all labour, Goods, Services, equipment and incidentals necessary for the proper and satisfactory execution of the Work, and the fulfillment of all other contractual obligations and undertakings, all in accordance with the Request for Tenders, and any written supplementary agreements which form part of the Contract.

“Form of Tender” means the City’s forms entitled Form of Tender and Schedule of Prices, and any other documents that are supplied as part of the Request for Tenders and which are to be completed and confirmed by the bidder and submitted back to the City in their entirety through the Bidding System.

“Good” means any product of any description required to be installed, supplied or consumed in order to complete the Work.

“Lump Sum Price” means an all inclusive one price that applies to a single item, or specific Service as set out on the Form of Tender.

“OPSS” means Ontario Provincial Standards

“OPSD” means Ontario Provincial Standards Drawings

“Procurement Manager” means the City’s Procurement Manager or his or her delegate or designate.

"Procurement Section Office" means 120 King Street West, 9th Floor, Suite 900, Hamilton, Ontario L8P 4V2.

"Project Manager" means the person designated by the City to administer and oversee the Work.

"Provisional Item" means work or a portion of work the City may wish to have performed but which may be removed, at no additional cost to the City from the scope of the Work at any time. Where such item is removed, the City will deduct the relevant Provisional Price from the Base Bid Price after the award of the Contract.

"Provisional Price" means the amount stipulated by the bidder for a Provisional Item which is to be included in the Base Bid Price.

"Procurement Policy" includes those City purchasing policies found at: hamilton.ca/buying-selling-city/bids-tenders/procurement-policy-by-law

"Procurement Section Office" means 120 King Street West, 9th Floor, Suite 900, Hamilton, Ontario L8P 4V2.

"Request for Tenders" means all of the following documents, and in the event of a conflict between them, each shall enjoy priority against the others (subject to any express term or condition to the contrary) in accordance with the following successive order:

(a) any Addendum;

(b) Special Provisions

(c) any Contract drawings

(d) any Supplementary General Conditions or Supplementary Conditions;

(e) the General Conditions;

(f) the Specifications, with any Supplementary Specifications (if any) taking priority over the standard Specifications;

(g) the Supplementary Instructions to Bidders

(h) these Instructions to Bidders;

(i) the standard form text of the Form of Tender as prescribed by the City;

(j) the sample Contract;

(k) any other documents that form a part of the Request for Tenders.

"Service" means a service of any description required in order to complete the Work, whether commercial, industrial, trade or otherwise, and includes all professional, technical and artistic service, and the transporting, acquiring, supplying, storing and otherwise dealing in a Good.

"Specifications**"** means all written or printed requirements and standards forming part of the Request for Tenders and pertaining to the method and the manner of performing the Work or Service, to the scope of Work and to the quality of a Good to be furnished under the Contract.

“Stipulated Price” means a single, all inclusive, one price that applies to all of the Work.

“Successful Bidder” means the bidder to whom the City has awarded the Contract.

“Taxes" or “Value Added Taxes” means such sum as shall be levied upon the Base Bid Price by the Federal or Provincial or Territorial Government and is computed as a percentage of the Base Bid Price and includes the Goods and Services Tax, the Ontario Retail Sales Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the Proponent by the tax legislation;

“Tender Coordinator” means the single point of contact for the Request for Tenders and will be the person named on the Communications page of the Request for Tenders.

“Tender Notice” means the public notification of the Request for Tenders.

“Total Contract Price’ has the same meaning as Base Bid Price.

“Unit Price” means any component price as set out on the Form of Tender.

“Work” means the whole of the work, the supply and delivery of a Good, the delivery and performance of any Services, the total construction and related services, material, matters and things required to be completed, supplied, mentioned or referred to in performing or executing the work in full in accordance with the requirements set out in the Request for Tenders.

3 Guidelines Regarding Bid Irregularities

As a guide to the bidder, but without qualifying any rights and privileges reserved to the City, the bidders guidelines set out below is indicative of the manner in which discretion reserved by the City is to be exercised with respect to non-compliant Bids. However, the City shall not be liable to any bidder or other person where it elects to exercise a discretion, reserved privilege or right in a manner different from that indicated below. An irregularity that goes beyond the scope of the bidders Guidelines set out below shall be considered by the Procurement Manager.

BIDDERS GUIDELINES		
IRREGULARITY		**RESPONSE**
1.	Qualified or conditional Bid (A Bid restricted by a statement added to the Form of Tender or a covering letter or alterations to the Form of Tender).	Automatic rejection unless the Request for Tenders specifically permit such qualification or condition.
2.	A Bid received in a format not specified in the Request for Tenders such as hardcopy submission, fax, email, etc.	Automatic rejection.
3.	A Bid received on documents other than those documents supplied by the Bidding System.	Automatic rejection.

BIDDERS GUIDELINES		
IRREGULARITY		**RESPONSE**
4.	Bid Security: Amount of Bid Security provided by bidder is insufficient, does not name correct Municipality as obligee, or no Bid Security is provided or is not otherwise in compliance with the Request for Tenders requirements.	Automatic rejection.
5.	Execution of Bid bond: Corporate seal or electronic signature of bidder, or both, are missing. Corporate seal or electronic signature of bonding company, or both, are missing.	Automatic rejection. Automatic rejection
6.	Bid Security: Digital bid bond not provided or not an electronically verifiable and enforceable e-Bond.	Automatic rejection.
7.	Other irregularities.	An irregularity that goes beyond the scope of the Bidders Guidelines may be considered by the Procurement Manager.

4 Bid Submission and Form of Tender

4.1 Every Bid **shall**

4.1.1 be submitted on the City's prescribed Form of Tender in its entirety;

4.1.2 be completed in English;

4.1.3 have all of the required blank spaces provided on the Form of Tender completed by the bidder;

4.1.4 include all material, Goods, Services, equipment and labour, required to complete the Work; and

4.1.5 state all prices in Canadian funds, unless otherwise stipulated.

4.2 Electronic Bid submissions only, shall be accepted and received by the Bidding System, on or before the closing date and time stated in the Request for Tenders. A Bid submitted by mail, in person, fax, e-mail or other electronic means, other than through the Bidding System, will not be accepted.

4.3 Bidders shall have a Bidding System vendor account and must be registered as a plan taker for this Request for Tenders. Only plan takers will have access to download this Request for Tenders document, receive Addendum email notifications, download Addendum and to submit their Bid electronically through the Bidding System.

If a bidder has obtained the Request for Tenders document from a third party, the onus is on the bidder to create a Bidding System vendor account and register as a plan taker for the bid opportunity.

4.4 Time is of the essence with respect to the submission of a Bid. It is the **sole** responsibility of each bidder to ensure that its Bid is received by the Bidding System on or before the closing date and time stated in the Request for Tenders document. The closing time shall be determined by the Bidding System web clock.

Bidders are advised that the timing of their Bid submission is based on when the Bid is **RECEIVED** by the Bidding System, not when a Bid is submitted by a bidder, as Bid transmission can be delayed in an "internet traffic jam" due to file transfer size, transmission speed, etc.

Bidders shall allow sufficient time to upload their Bid submission, including any attachments. Late Bid submissions shall not be accepted by the City's Bidding System.

4.5 The Bidding System will send a confirmation email to the bidder advising that their Bid was submitted successfully. If an email confirmation is not received, contact technical support at bids&tenders™ via email: support@bidsandtenders.ca or by telephone 1-800-594-4798.

4.6 It is the exclusive responsibility of each bidder to submit a complete Bid in accordance with the Request for Tenders.

4.7 All documents prepared and Work carried out by a bidder in preparing a Bid, and all oral presentations to the City in connection with a Bid, shall be without cost to the City, and neither the City's publication of a Request for Tenders nor the submission of a Bid shall be construed to oblige the City to award a Contract.

4.8 All words and phrases forming part of a Bid should be written out in full, and abbreviations should not be used.

4.9 No amendment may be made to a Bid after it has been submitted, except in the circumstances set out in Article 6.4 and Article 14 – Withdrawal of Bids by Bidder of these Instructions to Bidders.

5 Bid Security

5.1 Each bidder shall submit with its Bid a Bid Security in the form of a digital bid bond in an electronically verifiable and enforceable (e-Bond) format naming the City of Hamilton as obligee, in the amount set out in the Supplementary Instructions to Bidders.

For additional information regarding e-Bonds Bidders should contact their surety company or visit the Surety Association of Canada website: https://www.surety-canada.com/en/ebonding/index.html

5.2 A scanned PDF copy of bonds, original certified cheque, bank draft, money order or any other format other than a digital bid bond is not acceptable and shall be rejected.

5.3 Bidders shall upload their Bid Security to the Bidding System, in the bid submission file labelled “Bid Bond”. All Instructions and details for assessing authentication shall be included with the digital bond uploaded in the Bidding System.

5.4 A Bid Security shall, include such terms, be in a form, be executed appropriately and be provided by an issuer authorized to do business in the Province of Ontario, satisfactory to the City in its reasonable discretion.

5.5 When a Bid is accepted by the City, the Successful Bidder will enter into a Contract for the performance of the Work. The Successful Bidder will commence the Work, following the issuance of a purchase order or notice to proceed, and will give the specified security required under the Request for Tenders and the Contract within 10 Business Days of request by the City.

5.6 The digital bid bond will not be returned to the bidder.

5.7 The term of the Bid Security shall be for a minimum period of 90 days after the closing date of the Request for Tenders. Where the irrevocability period for a Bid is extended in accordance with Article 10.2 of these Instructions to Bidder, the bidder shall also ensure that the term of the Bid Security is extended for the same period of time as the irrevocability period.

5.8 A Bid submitted without the required Bid Security will be rejected by the City.

5.9 Each bidder that submits a Bid will be deemed to have acknowledged and agreed that the amount of the Bid Security required with respect to a Bid constitutes a genuine pre-estimate on the part of the City of the damages that will be suffered by the City as a result of a failure or refusal on the part of the Successful Bidder to enter into a Contract, to commence the Work following the issue of a purchase order or notice to proceed, and/or to give the specified security required under the Request for Tenders and the Contract.

5.10 In the event of a failure or refusal on the part of the Successful Bidder to enter into the Contract, to commence the Work following the issue of a purchase order or notice to proceed, and/or to give the specified security required under the Request for Tenders and the Contract, the City shall declare the Bid Security forfeited and the Successful Bidder may be held responsible at the City’s discretion for any increased costs or damages incurred by the City over and above the amount of that Bid Security.

5.11 In addition to the Reserved Privileges of the City set out at Article 16 of the Instructions to Bidders, the City may at its discretion, in the event of a failure, refusal or default on the part of the bidder to enter into the Contract, to commence the Work following the issue of a purchase order or notice to proceed, and/or to give the specified security required under the Request for Tenders and the Contract, annul the award or terminate the Contract, accept the next lowest compliant Bid, advertise for new tenders, or carry out the Work in any manner deemed in the best interests of the City. In such a case, if required by the City, the bidder shall pay the City the difference between the Base Bid Price and any greater sum that the City may be obligated to pay by reason of the

failure, refusal or default of that bidder, including the cost of any advertisement for new tenders.

6 Addenda and Clarification of the Request for Tenders

6.1 The City reserves the right at any time prior to the award of the Contract,

6.1.1 to withdraw or cancel the Request for Tenders;

6.1.2 to extend the time for the submission of Bids; or

6.1.3 to modify the Request for Tenders,

by the publication of an Addendum, which shall become part of the Request for Tenders, and the City shall not be liable for any expense, cost, loss or damage incurred or suffered by any bidder (or any other person) as a result of its so doing.

6.2 Without limiting the City's right, Article 6.1 may apply to situations where no Bid is compliant or an insufficient number of bids have been received.

6.3 Any Addendum shall be posted on the following website and is sufficiently served upon any prospective bidder if so posted at: https://hamilton.bidsandtenders.ca.

6.3.1 In addition to the above method of posting, the City may also notify prospective bidders of any Addendum by any other method it deems appropriate, including email, telephone, fax, courier, hand-delivery or by personal delivery. The need for additional notification and the method(s) to be used shall be in the absolute discretion of the City and notification shall be to the co-ordinates provided by the bidder to the City at the time it obtained the Request for Tenders from the City.

6.3.2 It is the sole responsibility of each bidder to check the website and ensure that it has received any and all Addenda issued by the City. Bidders shall confirm in the Form of Tender that they have received, examined and provided for all Addenda issued under the Request for Tenders. Bidders may in writing, seek confirmation of the number of Addenda issued under the Request for Tenders from the Tender Coordinator.

6.4 Where a bidder submits their Bid prior to the Request for Tenders closing date and time and an Addendum has been issued by the City, the Bidding System automatically **WITHDRAWS** the bidder's Bid submission and changes the Bid submission to an **INCOMPLETE STATUS** (**NOT accepted by the City**). The withdrawn Bid can be viewed by the bidder in the "**MY BIDS**" section of the Bidding System. The bidder is solely responsible to:

6.4.1 Make any required adjustments to their Bid;

6.4.2 Acknowledge all Addenda that have been issued for this Request for Tenders; and

6.4.3 Ensure the re-submitted Bid is **RECEIVED** by the Bidding System before the closing date and time stated in the Request for Tenders.

6.5 All communication between a bidder and the City (including requests for information or clarification) **shall** be set down in writing and directed to the Tender Coordinator named in the Communications page.

6.6 Any request directed to the City with respect to Article 6.5 prior to the closing date and time of the Request for Tenders must allow sufficient time for a written response or clarification to be issued by the City prior to the closing date and time, should the City consider it necessary to issue such response or clarification.

6.7 A written response or clarification of substance shall be shared with each bidder and issued in the form of an Addendum.

6.8 The City shall not be bound by any oral:

6.8.1 instruction;

6.8.2 amendment or clarification of the Request for Tenders;

6.8.3 information; or

6.8.4 advice or suggestion,

provided by any member of the City's staff or consultant to the City concerning the Request for Tenders or the manner in which the Work is to be carried out and the bidder bears any and all risk in relying on such representation.

6.9 Bidders shall acknowledge receipt of any Addenda when submitting their Bid through the Bidding System. Bidders shall check a box for all Addenda and any applicable attachments that has been issued before a bidder can re-submit their Bid submission online.

7 Bidder Responsibilities

7.1 The Contract shall only be between the City and the Successful Bidder. Neither the City nor its consultant shall be construed to have any contractual relationship with the Successful Bidder's employees, subcontractors or material suppliers, or their respective employees or suppliers.

7.2 Each bidder shall be responsible for:

7.2.1 ensuring that it has conducted a thorough inspection of the site, has investigated and examined the Request for Tenders and any other document made available to the bidder by the City and has delivered to the City any request for information in respect of all questions arising out of the foregoing inspections, investigations and examinations in respect to the site;

7.2.2 reviewing all drawings, reports, tests and other documents with respect to site, subsurface or otherwise concealed physical conditions which have been provided or made available to the bidder by the City in relation to the Request for Tenders and shall be responsible for any site, subsurface or otherwise concealed physical condition set out in or inferable from any such report; and

7.2.3 ensuring that they have conducted a sufficient and appropriate scope of inquiry into the manner, method(s) and magnitude of the work that is proposed in the Request for Tenders such that they have established a clear and full understanding of the Work being undertaken and are able to fully appreciate the consequences of that Work in preparing their Bid.

7.3 The cost of any Work which results from encountering any condition that is described in or properly inferable from the information referred to in Article 7.2 above shall be included in the bidder's Base Bid Price.

8 Opening of Bids

There is no public opening for this Request for Tenders. All Bids shall be electronically opened and posted on the Bidding System, https://hamilton.bidsandtenders.ca, following the closing date and time of the Request for Tenders. The name of the bidder and the Base Bid Price shall be posted for each Bid received.

9 Review of Bids & Bid Verification

9.1 Following the electronic opening, each apparently eligible Bid will be examined by the Procurement Manager to confirm that they are compliant and otherwise complete.

9.2 Unless expressly stated otherwise, the City shall apply a standard of substantial compliance against each Bid.

9.3 The City is not obliged to seek verification of any aspect of a Bid, however, the City may, if it determines that it is appropriate to do so under the circumstances, verify any aspect of any Bid received, at any time, in order to resolve an ambiguity in either the language used or any other vague or uncertain aspect of the Bid.

9.4 Such verification shall not alter the Bid, constitute negotiation or re-negotiation of the price or any other aspect of the Bid, and all correspondence with a bidder for the purposes of such verification shall be conducted through the Procurement Manager.

9.5 The review or verification of a Bid with a bidder shall not oblige the City to enter into a Contract with a particular bidder, nor shall it constitute an acceptance of a Bid.

9.6 All verification under this section shall form part of the Bid, be in writing, and be in a form satisfactory to the City.

10 Acceptance & Irrevocability of Bid

10.1 A Bid shall be irrevocable and open for acceptance by the City of Hamilton for a period of 90 days following the closing date and time of the Request for Tenders.

10.2 Where the City is unable to award a Contract prior to the expiry of the irrevocability period, the City may, on or prior to that expiry date, make a request to each of the compliant bidders to confirm, in writing, their willingness to hold their Bid prices, extend the term of their Bid Security and extend the irrevocability period for the specific period of time requested by the City.

11 Award of Contract

11.1 The City shall notify the Successful Bidder as soon as practicable after the award of the Contract. Despite any requirement for the formal execution of a Contract, the Contract shall be deemed to arise upon the award of the Contract to the Successful Bidder.

11.2 Where a Request for Tenders is awarded to a bidder in respect of the Work and in accordance with the provisions of the Request for Tenders and Bid, the bidder shall be required to either:

11.2.1 execute a Contract on the form set out in the Request for Tenders and approved by the City's Legal Services Division; or

11.2.2 where the form of Contract in Article 11.2.1 is not required they shall be assigned a contract number and the Request for Tenders and the Bid shall become the Contract in respect of the Work.

11.3 The award letter will identify documents required by the City prior to being able to issue a purchase order, the timeline for providing those documents to the City and the name of the Project Manager who will coordinate the start date for the Work.

11.4 The Base Bid Price for each compliant Bid received as well as the Contract award information may be obtained from the following website: https://hamilton.bidsandtenders.ca.

12 Conflict of Interest, Lobbying and Collusion

12.1 The City may reject any Bid submitted where a bidder is in contravention of the City's Procurement Policy with respect to conflict of interest.

12.2 Other than as expressly permitted or required in the Request for Tenders a bidder and their representative shall not, with respect to the Request for Tenders or the Work, make any public comment, respond to questions in a public forum, or carry out any activities to publicly promote or advertise their qualifications, their Bid, or their interest in this competitive procurement process.

12.3 For greater certainty, a bidder shall not communicate with the City regarding this procurement except through the Tender Coordinator identified on the Communications

page of the Request for Tenders who shall be the City's single point of contact for the bidder during this process.

12.4 The bidder acknowledges that this Bid is made without any connection, comparison of figures or arrangements with, or knowledge of, any other person making a Bid for the same Work and is in all respects fair and without collusion or fraud.

13 Confidentiality

13.1 A bidder should be aware that all information submitted is being collected under authority of the Municipal Act, 2001, and may be used in the City's review of Bids and in the Contract that is entered into with the Successful Bidder. In this regard, the bidder should be aware that:

13.1.1 the bidder's name and Base Bid Price at a minimum will be made public. In addition, certain contractual information must be disclosed to Council and accordingly may become part of the public record; and

13.1.2 all correspondence, documentation and information provided by a bidder to the City as part of a Bid may be reproduced for the purposes of reviewing the bidder's Bid and/or for the purposes of an audit of the procurement process.

13.2 All such information is also subject to collection in accordance with the Municipal Freedom of Information and Protection of Privacy Act ("MIPAD") and Personal Health Information Protection Act ("PHIPS") and City policies and procedures related to the collection and administration of such records. For greater particularity and direction regarding how such issues of confidentiality will be handled and may affect a bidder's rights, the bidder should reference the City's policies related to Freedom of Information on the City's website under the Office of the City Clerk at hamilton.ca. In preparing the Bid, the bidder should note the following:

13.2.1 a bidder may mark as confidential any scientific, technical, commercial, proprietary or similar confidential information contained in its Bid, the disclosure of which could cause it injury, excluding the Base Bid Price and its name. A bidder shall not identify the whole of a Bid as confidential. A watermark or rubber stamp imprint is suitable to identify confidential parts of a Bid.

13.3 All correspondence, documentation and information provided by the City, its employees, agents or representatives to any bidder in connection with, or arising out of the Request for Tenders remains the property of the City and must not be used for any purpose other than for replying to the Request for Tenders. Confidentiality of records and information of the City relating to the Work described in the Request for Tenders must be maintained at all times. If any proprietary or confidential information belonging to, or in the care of, the City is disclosed to any bidder by the City's employees, agents, representatives and independent Contractors, or any other person at the request of the City in connection with the Request for Tenders, the bidder shall:

13.3.1 safeguard all such information;

13.3.2 maintain in strict confidence and not reproduce or disclose any such information to any person except as required by law or as expressly permitted in advance by the City in writing;

13.3.3 return forthwith all such information as may be in documentary form or recorded electronically by the closing date and time; and

13.3.4 not use any such information for any purpose other than the purpose for which it was provided by the City or by any other person at the request of the City.

14 Withdrawal of Bids by Bidder

14.1 Withdrawal of a Bid after its been submitted and received by the Bidding System, is permitted only prior to the closing date and time of the Request for Tenders.

14.2 Requests made after the closing date and time of the Request for Tenders to withdraw a Bid received by the Bidding System will be disregarded.

14.3 A Bid withdrawn prior to the closing date and time of the Request for Tenders may be revised and re-submitted at any time prior to that closing date and time. Bidders are solely responsible to ensure:

14.3.1 Any required revisions are made to their Bid;

14.3.2 Acknowledge all Addenda that have been issued for this Request for Tenders; and

14.3.3 Ensure the re-submitted Bid is received by the Bidding System prior to the closing date and time of the Request for Tenders

15 Price

15.1 No variation in Bid price(s) shall be permitted after the closing date and time of the Request for Tenders except where the City corrects an obvious computational or other mathematical error evident on the face of the Bid. Only extensions, subtotals and totals shall be corrected. No modification to individual prices, either Unit Price or Lump Sum Price, shall be made by the City.

15.2 Where the bidder is instructed to price the Work on a Stipulated Price basis only, no corrections to the Base Bid Price shall be made by the City.

15.3 The Base Bid Price must be quoted on an all-in basis and include the provision and delivery of all necessary labour, Goods, materials, warranty and maintenance requirements, Services, tools, equipment, supplies, utilities, levies and duties and other incidentals, and for performing all the Work and providing all Services contemplated under the Contract.

15.4 As various parts of the Work may or may not be exempt from Value Added Taxes, the bidder is required to refer to the Supplementary Instructions to Bidders for details, if any, respecting payment exemptions, rebates and Value Added Taxes.

16 Reserved Privileges of the City

The City shall have the following reserved privileges, which may be exercised or waived in its absolute discretion.

16.1 The City may reject a Bid on the following basis:

16.1.1 the City may reject any Bid, the lowest Bid or all Bids, may cancel the Request for Tenders or may cancel the Request for Tenders and require the submission of new Bids;

16.1.2 any extraordinary or unjustified disparity between the lowest Bid and the other Bids received by the City;

16.1.3 the need to avoid the use of unproven technology and methodologies;

16.1.4 the prior record of the bidder as a Contractor to the City;

16.1.5 a Bid submitted by a person which in the opinion of the City or its professional advisors, does not possess the experience, or financial, technical, personnel or other resources that may reasonably be expected to be necessary in order to carry out the obligations that the bidder proposes to assume under the terms of its Bid.

16.2 Where the Contract is awarded to the lowest compliant bidder, the City may negotiate amendments to the Contract or to the Work to be done or Services or materials to be supplied under the Contract.

16.3 Where none of the Bids are compliant and in the opinion of the City it is impractical to reissue a new Request for Tenders, the City will reject all of the Bids and may permit Bids to be submitted without issuing a new Request for Tenders.

16.4 Where the Base Bid Price for the lowest compliant Bid received substantially exceeds the estimated procurement cost of the Work, the City may negotiate with the lowest compliant bidder for a reduction to the Base Bid Price.

16.5 The City maintains the right to verify any information provided or contained in any Bid.

16.6 The City reserves the ability to exercise the rights, privileges and authority contained in the Procurement Policy and procedures thereunder with respect to the Request for Tenders.

17 Notice to Proceed and Start Date

17.1 The City may issue a written notice to proceed to the Successful Bidder prior to the execution of any required Contract.

17.2 Work shall commence on the start date specified in the notice to proceed, unless otherwise agreed by the Successful Bidder and the City.

18 Applicable Law and Limit on Liability

18.1 The City shall not be liable, in any way, to the bidder for any delays, or costs associated with delays, in the Request for Tenders process.

18.2 The bidder agrees that,

18.2.1 any action or proceeding relating to the Request for Tenders process shall be brought in an Ontario court of competent jurisdiction and any such action or proceeding shall be issued at the Hamilton, Ontario office of that Court and for that purpose each party irrevocably and unconditionally attorns and submits to the jurisdiction of that Ontario court at Hamilton, Ontario;

18.2.2 it irrevocably waives any right to and will not oppose any Ontario action or proceeding relating to the Request for Tenders process on any jurisdictional basis, including forum non conveniens; and

18.2.3 it will not oppose, in any other jurisdiction, the enforcement against it of any judgment or order duly obtained from an Ontario court in Hamilton, Ontario as set out above.

18.3 If a bidder is required by applicable law to hold or obtain a licence, permit, consent or authorization to carry on an activity contemplated in its Bid, neither acceptance of the Bid nor execution of the Contract shall be considered to be approval by the City of carrying on such activity without the requisite licence, permit, consent or authorization.

18.4 The bidder agrees that if the City commits a material breach of the Request for Tenders (that is, a material breach of Contract A), the City's liability to the bidder and the aggregate amount of damages recoverable against the City for any matter relating to or arising from that material breach, whether based upon an action or claim in Contract, warranty, equity, negligence, intended conduct or otherwise, including any action or claim arising from the acts or omissions, negligent or otherwise, of the City, shall be no greater than the Bid preparation costs that the bidder seeking damages from the City can demonstrate.

19 Accommodations for Bidders with Disabilities

19.1 In accordance with the Ontario Human Rights Code, Ontarians with Disabilities Act, 2001 (ODA) and Accessibility for Ontarians with Disabilities Act, 2005 (AODA), the City of Hamilton will accommodate for a disability, ensuring full and equitable participation throughout the bid process.

19.2 If a bidder requires this Request for Tenders in a different format to accommodate a disability, the bidder must contact the Tender Coordinator as soon as possible and in any event prior to the closing date. The Request for Tenders in the different format will be issued only to the requesting bidder and all Addenda will be issued in such different format only to the requesting bidder.

20 Electronic Funds Transfer

In this Section, the term "EFT" refers to electronic funds transfer and may also include the payment information transfer. All payments made by EFT shall only be made as a direct deposit to a Canadian chartered bank.

20.1 Method of Payment

All payments by the City under this Tender shall be made by electronic funds transfer (EFT) save and except where:

a. the funds payable under the terms of the Contract are only payable in a single lump sum and not payable by instalments or progress payments or otherwise than a single lump sum payment; or

b. the City is unable to release one or more payments by EFT, in which case the Successful Bidder agrees to either:

   i. accept payment by cheque or some other mutually agreeable method of payment; or

   ii. request the City to extend payment due dates until such time as the City makes payment by EFT,

subject to subsection 20.3 Suspension of Payment.

20.2 Mandatory Submission of Successful Bidder's EFT Information

a. The Successful Bidder is required to provide the City with the information required for the City to make payment by EFT. A purchase order will not be issued to the Successful Bidder without this requisite information.

b. In the event that the EFT information changes, the Successful Bidder shall be responsible for providing forthwith the updated information to the City.

20.3 Suspension of Payment

a. The City is not required to make any payment under this Tender until its designated officer has received the correct EFT payment information from the Successful Bidder. Until receipt of the correct EFT information, any invoice or contract payment request shall be deemed not to be a proper invoice or valid request for the purpose of payment under this Contract. No interest or any other manner of claim whatsoever for delayed or non-payment shall be permitted as a result of incorrect EFT information or improper delivery of EFT payment information.

b. If the EFT information changes after submission of correct EFT information, the City shall have thirty (30) days within which to update the changed EFT

information after its receipt by the designated officer to the extent payment is made by EFT. However, the Successful Bidder may request that no further payments be made until the updated EFT information is implemented by the City's payment office. If such suspension would result in a late payment under any payment terms of this Contract, the Successful Bidder's request for suspension shall extend the due date for payment by the number of days of the suspension.

20.4 **Liability for Uncompleted or Erroneous Transfers**

a. If an uncompleted or erroneous transfer occurs because the City used the Successful Bidder's EFT information incorrectly, the City remains responsible for making a correct payment.

b. If an uncompleted or erroneous transfer occurs because the Successful Bidder's EFT information was incorrect, or was revised within thirty (30) days of City's release of the EFT payment transaction instruction, and

(i) funds are no longer under the control of the City's payment office, the City is deemed to have made payment and the Successful Bidder is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the City's payment office, the City shall not make payment and the provisions of subsection 20.3 Suspension of Payment shall apply.

20.5 **EFT and Timely Payment**

A payment shall be deemed to have been made in a timely manner in accordance with the payment terms of the Contract if, in the City's EFT payment transaction instruction released to its bank, the date specified for settlement of the payment is on or before the last date for due payment under the terms of the Contract, provided the specified payment date is a valid date when the City's bank is open for business.

20.6 **Liability for change of EFT Information by Financial Agent**

The City is not liable for errors resulting from changes to EFT information provided by the Successful Bidder's financial agent.

Supplementary Instructions to Bidders

(Revised September 7, 2018)

1 Taxes

All prices shall be quoted exclusive of Taxes and the City may adjust any price quoted contrary to this requirement; unless otherwise specified in the Form of Tender or any Special Provisions.

Bidders shall expressly disclose any other applicable sales, customs or excise tax or duty, including a levy or duty imposed as a Special Import Measure, and other taxes to which any Work or supply of Services or materials may be subject, other than Tax.

2 Bid Security

Bidders shall submit Bid Security in accordance with Article 5 Bid Security of the Instructions to Bidders in the amount of not less than **$500,000.00.**

3 Insurance Requirements

The Successful Bidder shall, after award of the Contract, provide insurance certificates in accordance with General Conditions Form 200.03 Contractor's Responsibility to Third Parties.

4 Performance and Labour and Materials Payment Bonds

The Successful Bidder shall, after award of the Contract, provide the City with a performance bond and a labour and materials payment bond as specified in General Conditions Form 200.03.01 Performance and Other Security as amended by the following:

Paragraph (a) and (b) in Section 200.03.01 Performance and Other Security are deleted and replaced by the following:

(a) a performance bond , in an amount equal to 50% of the *Base Bid Price*, excluding any contingency amount and all Value Added Taxes covering the performance of the *Contract*, **including the warranty period** and the *Contractor's* requirements with respect to the correction of deficiencies, excluding all extended warranties; and

(b) a labour and material payment bond, in an amount equal to 50% of the *Base Bid Price excluding any contingency amount and all Value added Taxes* covering payment for labour, *Products*, or both.

5 Record and Reputation

See the City of Hamilton Procurement Policy for specific requirements and obligations at:

hamilton.ca/buying-selling-city/bids-tenders/procurement-policy-by-law

6 Joint Ventures

For greater certainty, a Bid must be submitted by a single entity as the bidder. The City will not accept a Bid from a collection of entities jointly submitting as the bidder. The single entity submitting the Bid must not be a special purpose company incorporated solely for the purpose of entering into a Contract with the City regarding the Work. The bidder shall be expected to perform the Work either through itself, or through itself and any subcontractors.

7 City of Hamilton Labour Trades Obligations

There are no labour trade obligations applicable to this Request for Tenders, this Request for Tenders is open to all Bidders.

8 Award of Contract

Subject to the Reserved Privileges of the City set out in Article 16 of the Instructions to Bidders, the Contract shall be awarded to the compliant Bid with the lowest Base Bid Price.

9 Bid Submission

Electronic Bid submissions only, shall be accepted and received by the Bidding System, **on or before 3:00 p.m., Hamilton time, Monday, April 8th, 2019.**

10 Approximate Quantities/Locations

Estimated quantities/locations are indicated in the Schedule of Prices provided in the Bidding System for the sole purpose of comparing Bids. While these quantities/locations are based on past use and anticipated future requirements, the City is not bound to purchase these quantities or any minimum quantities. The City reserves the right to increase or decrease the estimated quantities at the prices quoted without penalty.

11 Brand Name

11.1 Any reference to the trade name, brand name or catalogue number of a particular manufacturer shall be understood to have been made solely for the purpose of establishing and describing general performance and quality levels of the item to be supplied, unless specified otherwise.

11.2 No reference to the trade name, brand name or catalogue number of a particular manufacturer shall be construed to restrict bidders to that manufacturer, but Bids shall be deemed to be invited for generic no-name equals and comparable equipment of any manufacturer.

11.3 Despite subsection (2), if an item other than the one specified is bid, it is the bidder's responsibility to demonstrate that the product bid meets the specifications, and the bidder shall submit brochures and samples upon request and provide full specifications in detail on the item(s) bid. The City shall be the sole judge (in it's absolute discretion) as to whether an item bid meets its specifications.

11.4 Despite subsections (1 to 3) if the product or material specified is listed on one of the approved products list, the bidder shall ensure that the brand name, manufacturer, model or catalogue number match those specified on the current version of the approved product list, which can be found at: hamilton.ca/develop-property/policies-guidelines/construction-and-material-specifications

12 Ontarians with Disabilities Act, 2001 (ODA) and The Accessibility for Ontarians With Disabilities Act, 2005 (AODA)

12.1 The Successful Bidder shall ensure that all of its employees, agents, volunteers and any subcontractors comply with all applicable accessibility laws, regulations and by-laws, including but not limited to the Ontarians with Disabilities Act, 2001 (ODA), the Accessibility for Ontarians with Disabilities Act, 2005 (AODA), Ontario Regulation 429/07 (Accessibility Standards for Customer Service) and Ontario Regulation 191/11 (Integrated Accessibility Standards), during the term of the Contract.

12.2 Without limiting the generality of the foregoing, the Successful Bidder shall ensure that all of its employees, agents, volunteers and any subcontractors who, as part of the Contract:

(a) deal with members of the public or other third parties, or

(b) participate in developing policies, practices and procedures governing the provision of goods or services to members of the public or other third parties, receive training about the provision of its goods or services to persons with disabilities. The Successful Bidder shall ensure that such training includes, without limitation, a review of the purposes of the AODA and the requirements of Ontario Regulation 429/07.

12.3 Prior to commencing Work, the Successful Bidder shall provide a Statement of Acknowledgement to the City that it has read and understands the City's AODA Customer Service Standard Handbook; that it has provided the training required by said Handbook; and that it will comply with the requirements of said Handbook and applicable accessibility laws, regulations and by-laws.

12.4 The City reserves the right to inspect the Successful Bidder's training records relating to Ontario Regulation 429/07 and Ontario Regulation 191/11, which must describe its training policy and summarize the training, including to whom the training has been given and when the training was given. The City also reserves the right to require the Successful Bidder to amend its training policies, practices and procedures if the City deems the training is not compliant with the requirements of Ontario Regulation 429/07 and Ontario Regulation 191/11.

See City of Hamilton's AODA Customer Service Standard Handbook at: hamilton.ca/government-information/accessibility-services/accessibility-standards

13 POLICIES, REGULATIONS, AND GUIDELINES

The Successful Bidder shall be aware of and adhere to all of the applicable City Policies and Legislation set out on the City of Hamilton website at hamilton.ca

SCHEDULE OF PLANS

The Plans listed form part of the Contract Documents. The Plans illustrate, the nature and extent of the Work to be performed.

LIST OF DRAWINGS

PLAN No.	SHEET	STREET	DESCRIPTION
17-H-16	K	Red Hill Valley	Project Key Map
17-H-16	1 - 25	Red Hill Valley	From : Mud Street to Q.E.W Limits Road Resurfacing and Associated Works
17-H-16	GR1 to	Red Hill Valley	Guide Rail Drawings
PM-K	-	Red Hill Valley	Pavement Marking Design Key Map
PM-1 to PM-23	-	Red Hill Valley	Pavement Marking Design
DT: TM-1 to TM-6	-	Red Hill Valley Parkway	Traffic Management Control Plans
17-H-16	PVMS	Red Hill Valley	Portable Variable Message Signs (PVMS) Trailer Locations
05-H-52	S1	Red Hill Valley	Red Hill Valley Project - Mainline Structure North of CNR General Arrangement FOR INFORMATION ONLY
06-H-14	S1	Red Hill Valley	Red Hill Valley Project - Escarpment Bridge General Arrangement FOR INFORMATION ONLY

SAMPLE

CONTRACT FOR WORK

THIS CONTRACT made the _____ day of _____ two thousand _____

BETWEEN _____

(hereinafter called the "Contractor")

and CITY OF HAMILTON hereinafter called the "City"

WITNESSETH, that the Contractor covenants and agrees with the City that in consideration of the payments to be made by the City in the manner and at the times hereinafter mentioned, that the Contractor shall, with due expediency and in a thoroughly workmanlike manner, do and perform the whole of the Work and manufacture, furnish, supply, deliver and install the materials or equipment hereinafter mentioned, with due expedition and in a thoroughly workmanlike manner, in strict accordance with all of the Contract Documents, all of which are made part of this Contract as if embodied herein, even if they are not physically attached hereto, and will furnish all materials, tools, plant, machinery, labour, and workmanship required for the Work, together with transportation of the same, and all other things necessary for the due and proper execution of the Work in the manner aforesaid and will do all such Work and furnish all such materials according to the directions and to the satisfaction of the General Manager.

.01 The Work referred to in this Contract **C15-20-19 (H) Title: Red Hill Valley Parkway Resurfacing** consists of:

.02 The Contractor agrees that it will commence the Work when required and ordered by the General Manager and will proceed therewith at a rate satisfactory to the General Manager, Public Works Department , and will complete the same within the time prescribed herein or, where specified in the "Time for Completion and Liquidated Damages". If the Work shall not have been completed or said materials supplied and delivered by the date specified in the "Time for Completion and Liquidated Damages", the Contractor will pay to the City the sum prescribed in the "Time for Completion and Liquidated Damages", for every working day the Work remain incomplete, which amount may be recovered as a debt, or may be set-off against any money payable under this Contract or otherwise.

.03 It is hereby provided and agreed that if the Contractor shall fail or default in any way in the performance of the covenants herein contained, or shall neglect to perform the Work and furnish materials therefore or deliver the supplies when ordered to the satisfaction of the General Manager, or to proceed with the work with such dispatch as the General Manager shall require, then and in every such case, it shall and may be lawful for the City and it is hereby empowered, to enter upon, and complete the Work, and for that purpose to take possession of all plant, machinery, tools and materials provided therefore by the Contractor, or to enter into a contract with any other person or persons who may agree to execute such Work, or deliver such supplies and further that the Contractor shall forfeit and pay to the City the difference, if any, between the price the City may have to pay for the completion of such Work and delivery of such supplies and the price herein agreed to be paid, or in the alternative, the City may in the event of such failure or default act under the performance of contract security provided herein, and such action may be in addition to the rights of the City as aforesaid.

.04 The City covenants with the Contractor that if the Work shall be duly and properly executed and materials provided as aforesaid, according to the directions of the General Manager and to his or her satisfaction within the period aforesaid, and if the Contractor shall observe all the provisions, terms and conditions of this Contract, the City will pay the Contractor, for the performance of the Work the **Total Contract Price** of

_____/Dollars

Base Bid Price	$ _____
Value Added Taxes	$_____
Total Contract Price	$_____

in accordance with the terms of payment in the special provisions and General Conditions, provided that no money shall become due or be payable under this Contract unless or until a Progress, Completion or Final Payment Certificate that such money is due to the Contractor has been signed by the General Manager, Public Works Department, the possession of which Certificate is hereby made a condition precedent to the Contractor's right to be paid or to maintain any action for such money or any part thereof. The General Manager, Public Works Department may authorize payment at his or her sole discretion.

.05 And the Contractor covenants with the City that the Contractor will from time to time, and at all times, indemnify and save harmless, the City from and against all claims, demands, expenses, fines, damages, injuries, actions, causes of action, suits, interest, liens and costs whatsoever on account of the Work, or on account of the delivery or non-delivery of the plant, materials or equipment or which may be incurred by reason or in consequence of the execution or non-execution or defective or negligent execution thereof, and shall pay to the City, on demand, any and all expenses, fines, losses, costs, interest, payments, or damages which may be sustained by it by reason or in consequence of any such claims, demands, expenses, fines, damages, injuries, actions, causes of action, suits, interest, liens and costs whatsoever and any monies paid or payable by the City in settlement or discharge thereof, or on account thereof, may be deducted from any monies payable to the Contractor in the hands of the City, on account of this Contract, or may be recovered from the Contractor as monies paid at the Contractor's request; and the Contractor agrees to pay to the City, on demand, its reasonable costs of defending, negotiating or settling any such suits, claims, prosecutions, demands, actions, causes of actions or liens as it may in its discretion incur and such monies may be deducted from any monies payable by the City to the Contractor or held by the City on any account of the Contractor whatsoever. And further, any petition in bankruptcy of the Contractor or other assignment or liquidation for the benefit of creditors shall be deemed to be a default by the Contractor under this Contract, and any lien unpaid after demand to pay therefore within five days by the City, other than a lien of the Contractor, registered against the lands affected by this Contract, shall be deemed to be a default by the Contractor under this Contract. The indemnity of the Contractor in this paragraph shall be deemed to be in addition to and not in lieu of any contract for insurance held by the City, which may affect this Contract. Further, the rights to indemnity contained in this paragraph shall survive the expiration or any termination of this Contract, anything in this Contract to the contrary notwithstanding.

.06 The Contractor covenants and agrees that all workers employed by the Contractor and its subcontractors to perform the Work set out in this Contract shall be paid or provided with wages, benefits and hours of work in accordance with the Fair Wage Policy and the Fair Wage Schedule of the City of Hamilton, which were in effect on the date of the closing of the tender for this Contract. The Contractor further covenants and agrees that it shall comply in all respects

with such Fair Wage Policy and Fair Wage Schedule and that it is fully responsible for ensuring that all of its subcontractors on this Contract also comply in all respects with such Fair Wage Policy and Fair Wage Schedule. The Fair Wage Policy and Fair Wage Schedule of the City of Hamilton, form part of this Contract even if they are not physically attached hereto and are to be considered as terms of this Contract.

.07 The Contractor agrees that any reference to The Regional Municipality of Hamilton-Wentworth in any of the Contract Documents that form a part hereof shall be deemed to be a reference to the City of Hamilton.

IN WITNESS WHEREOF the said parties have hereunto affixed their authorized signatures and Seals,

Signed, Sealed and Delivered in the presence of:

FOR: .....
Contractor

.....
Authorized Signature(s)

.....
Name (Please Print)
Title

.....
(Witness)

.....
Date

CITY OF HAMILTON

.....
Approved
Director, Engineering Services
Engineering Services

.....
General Manager, Public Works

.....
Mayor or Designate

……
Approved
Business Administrator
Engineering Services

.....
Date

CITY OF HAMILTON

CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL

Latest edition of the following documents are not bound in this Request for Tender but form part of the Contract Documents:

Form 200 - General Conditions

Form 300 - General Construction Requirements

Form 400 - Specifications for the Installation of Watermains

Form 400 – Appendix A

Form 500 - Specification for Sewer Pipe Materials

Form 600 - Specification for Granular Fill Materials

Form 700 - Specification for Portland Cement

Form 800 - Specification for Hot Mix Asphalt

Form 900 - Specification for Standard Compaction Requirements

Form 1000 - Amendments to OPSS and OPSD

Approved Products List

Road Standard Drawings (RD)

Waterworks Standard Drawings (WM)

Sewer Standard Drawings (SEW)

Park Standard Drawings (PK)

Access to the City of Hamilton Construction and Material Specifications Manual

The above noted Standard Specifications, Drawings and General Conditions are not bound in the Contract documents but are in the City of Hamilton Construction and Material Specifications Manual. This manual is available for a non-refundable fee of $99.25 (includes HST) from the Public Works Department,
77 James Street North, Suite 320, 3rd floor Hamilton, Ontario, L8R 2K3.

The Manual is also available for download, free of charge, at:

hamilton.ca/develop-property/policies-guidelines/construction-and-material-specifications

SPECIAL PROVISIONS
GENERAL

1. CONSTRUCTION AND MATERIAL SPECIFICATION MANUAL

All Work in this Contract shall be in accordance with the latest version of the City's Construction and Material Specification Manual. All bidders are responsible to obtain and include for the latest revisions.

https://www.hamilton.ca/develop-property/policies-guidelines/construction-and-material-specifications

For this project, Form 800 Specification for Hot Mix Asphalt is not applicable.

2. SCOPE

A brief summary of the work involved in this Contract is for the asphalt resurfacing of the Red Hill Valley Parkway (RHVP) and associated Works, which consists of approximately:

- 292,300 square metres of road resurfacing
- 39,900 tonnes of asphalt paving.
- 9,000 linear metres of guiderail removals
- 9,800 linear metres of guiderail installation/repairs
- Pavement markings.

After the closing, the lowest compliant Bidder will be notified they shall provide confirmation (within 5 business days), of the following minimum requirements, in order to confirm they are capable of completing this project:

- 5-Yrs of experience as a General Contractor on MTO Paving projects
- Shall have at least 5 Spreaders, 2 Asphalt Material Transfer Vehicles, and 5 Milling machines (of various widths) in working condition and available solely for the project
- Ability to produce 2,000 metric tonnes of asphalt per 12 hours.

3. CO-ORDINATION

The Contractor shall co-ordinate the Works in this Contract with any City Contracts and Utilities having Works in the area of this project, as required. It will be the Contractor's responsibility to schedule and co-ordinate their Work in order to avoid delays etc. The Contractor shall have no basis for additional costs or claims for these requirements.

Ministry of Transportation (MTO)

The City has submitted an application to the Ministry of Transportation (MTO) for the closure of the Red Hill Valley Parkway access off the QEW.

It is the Contractor's responsibility to ensure that communication of all closures is completed in a timely manner so as to provide advance warning to the public and other agencies affected by such closures. The Contractor shall ensure that a comprehensive work schedule is provided to the Project Manager **five (5) weeks** ahead of any construction so that the Project Manager may review the schedule prior to the mandatory Traffic Coordination meeting. This meeting will provide timing and notice to the public, as well as ensure that the closures and affected areas surrounding the closures are reviewed and discussed prior to construction.

It shall be the Contractor's responsibility to ensure that all notification of traffic closures for the MTO is completed in the allocated time frame and with the appropriate paperwork as required by the MTO.

Failure to notify and submit all required MTO documentation will result in refusal of the closure by the MTO with no claim for additional time or compensation to the City.

Ramp Closures - QEW Access Ramps to the Red Hill Valley Parkway

The Contractor is advised that the MTO will provide and install advanced warning signs in locations selected by them. Coordination with the MTO is required to ensure that the advanced warning sign information is accurate and up to date. The duration of the advanced signing will be at the discretion of the MTO.

The Contractor shall coordinate and ensure that advance warning of access ramp closures for this resurfacing Contract have been completed prior to start of construction.

Prior to re-opening the ramps to traffic, the Contractor shall ensure that the limits of construction have been swept and cleaned of any loose or deleterious material from the road surface.

Utility Locates

The Contractor shall obtain all required utility locates prior to the start of any excavation. Photocopies of all locates obtained by the Contractor for this project shall be placed in a designated location in the site trailer. Where there is no site trailer, photocopies of all locates shall be provided by the Contractor to the City's Project Manager on the Contract. The City will not be reviewing or checking the accuracy of locates provided, locate accuracy and excavation remain the responsibility of the Contractor.

4. WORK SCHEDULE

Due to the high impact to local traffic and the public in general, construction on the Red Hill Valley Parkway (RHVP) will **only** be permitted as outlined below:

- The Contractor **will not** be permitted to place Warm Mix Asphalt in this Contract.
- Contractor shall have a continuous 24-hr, 7 days a week operation with paving activity taking place during the day when OPSS specified temperatures for placing Hot Mix Asphalt are achievable.
- To minimize the impact to the road users, the Contractor shall pave the mainline and ramps in one direction at a time. All paving Work shall be done **from North to South**.
- For the northbound lanes, the Work shall take place in sections such that the paved portions of the mainline and ramps are open to traffic as construction progresses.
- The Contractor **must** schedule their work such that all southbound lanes, including ramps on the RHVP and the Lincoln M. Alexander Parkway (LINC) are open and available to traffic from June 3, 2019 to June 9, 2019.
- Paving activity or lane closures on the Mud Street **East-West on-ramp** (to LINC) shall be done only after the Works on the RHVP (including ramps) have been completed and open for traffic.
- The Contractor shall adhere to the following construction sequence;

    1. Northbound (down bound) mainline, then
    2. Northbound ramps, then
    3. Southbound (up bound) mainline, then
    4. Southbound ramps, and finally
    5. On-ramp to LINC from Stone Church Street and Mud Street (E-W on-ramp)

Construction Schedule

The Contractor shall mobilize their forces immediately upon notification of award of this Contract in accordance with the Notice to Proceed, and shall complete all Works by **July 22, 2019.**

Events within the Area of Construction

The Contractor is advised that the following event is being held at the Hamilton Golf & Country Club in early June.

RBC Canadian Open June 3, 2019 to June 9, 2019

The Contractor must schedule their work such that all southbound lanes and ramps on the RHVP and the LINC shall be open and available to traffic from June 3, 2019 to June 9, 2019.

5. TRAFFIC REQUIREMENTS:

Traffic requirements shall be as in accordance with Form 300.32 and as outlined below. All emergency access must be maintained at all times.

The Contractor shall have no basis for increased working time due to these Traffic Requirements and all associated costs will be deemed to be included in the Unit Price Bid.

- The Contractor will only be permitted to close the RHVP in one direction at a time. All Works under this Contract shall be completed during the highway closures.
- The works in the northbound lanes shall take place in sections such that the completed portions of the mainline and ramps are open to traffic as the construction progresses.

Paving in Echelon

For the purpose of laying and levelling of all surface course asphalt under this Contract, paving in echelon is **mandatory**. Refer to SP 42 for additional information relating to paving in echelon.

C.S.A.O. Qualified Flagpersons

Where necessary, the Contractor shall use C.S.A.O. qualified flag persons and/or proper barricading and signing procedures when and as required and as directed by the Project Manager.

6. CLEARING AND GRUBBING

Where there is no specific item for clearing and grubbing, the costs for any clearing and/or grubbing that may be encountered shall be included in any other appropriate item/or items.

7. SUPPLY OF MATERIALS

The Contractor shall supply all materials for this Contract unless specifically noted otherwise in the Schedule of Prices. All materials shall meet the specifications as laid out and the appropriate Approved Materials List, latest edition.

8. CITY OFFICE CLOSURE

The Contractor will NOT work on this Contract on any day the City Administrative Office are closed unless approved in writing by the City

9. DELETION OF SECTIONS AND/OR DELAY OF CONSTRUCTION

The Contractor is advised that the City reserves the right to delete any or all sections before or after the tender award and/or delay construction of any or all sections in this Contract, at its discretion.

The Contractor shall have no claim for any compensation against the City of Hamilton for the deletion of sections and/or delays of construction of any or all sections in this Contract.

10. SUBSTANTIAL COMPLETION

Prior to receiving their substantial completion the Contractor must arrange to walk the entire job site with the City's Project Manager or designate and operate all appurtenances and confirm all clean up and restoration has been completed to the satisfaction of the Project Manager. At this time all deficiencies will be identified and must be corrected.

11. MAINTENANCE REVIEW

The Contractor shall maintain the Works during the 24 month period in accordance with Form 200.07.

12. USE OF HYDRANTS

The Contractors will be permitted to use existing fire hydrants as a source of water for construction Works on this project. The use of hydrants shall be in accordance with Form 300.11.

13. LIQUIDATED DAMAGES AND TIME FOR COMPLETION

Time

Time shall be the essence of the Agreement.

Progress of the Work and Time for Completion

The Contractor shall commence Work in accordance with Section 200.05.02 of the General Conditions and shall complete all Works by **July 22, 2019.**

Liquidated damages will be applied to each outstanding completion date(s) separately and the application of Liquidated Damages and/or disincentive will be cumulative.

The Contractor is to work continuously and expeditiously until the completion of the Works. Should the Contractor leave the site before all Works are completed, Liquidated Damages will be charged.

If this time limit specified above is not sufficient to permit completion of the Work by the Contractor working a normal number of hours each day or week on a single daylight shift basis, it is expected that additional and/or augmented daylight shifts will be required throughout the life of the Contract to the extent deemed necessary by the Contractor to ensure that the Work will be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions will be considered to be included in the prices bid for the various items of Work and no additional compensation will be allowed therefor.

Working time shall be charged until the date of acceptance of the Work by the Project Manager as specified in Section 200.02.07 and 200.02.08 of the General Conditions.

The Contractor will not work on this Contract on a Saturday, Sunday or any day the City Administrative Office are closed unless approved in writing by the City

Extension of Time

Section 200.05.04 of the General Conditions shall apply in its entirety to these Special Provisions.

Liquidated Damages

It is agreed by the parties to the Contract that in case all the Work called for under the Contract is not finished or completed by the completion date(s) as set forth in these Special Provisions, damage will be sustained by the City and the parties hereto agree that the Contractor will pay to the City, the sum of **FIVE THOUSAND DOLLARS ($5,000.00)** for liquidated damages for each day and every calendar days delay in finishing the Work in excess of the completion date(s) prescribed and it is agreed that this amount is an estimate of the actual damage incurred by the City which will accrue during the period in excess of the prescribed completion date(s).

Liquidated damages will be applied to each outstanding completion date(s) separately and the application of Liquidated Damages and/or disincentive will be cumulative.

The City may deduct any amount due under this paragraph from any monies that may be due or payable to the Contractor on any account or Contract whatsoever. The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action or other alternative that may be available to the City.

The Contractor shall have no claim for an extension to the specified completion date(s), additional payment or a reduction in the amount of liquidated damages charged due to delays caused by inclement weather conditions. The Contractor shall make appropriate arrangements and pay all costs associated with recovering lost working time caused by inclement weather conditions.

The Contractor shall not be assessed with Liquidated Damages for any delay caused by Acts of the Province, any Foreign State, Fire, Flood, Epidemics, Quarantine Restrictions, Embargoes or delays of Sub-Contractors due to such causes.

If the time available for the completion of the Work is increased or decreased by reason of alterations or changes made under Section 200.02.06 of the General Conditions, the completion date(s) shall be increased or decreased as determined by the Project Manager.

If the time available for the completion of the Work is increased or decreased because of an overrun of a major item in the Contract, the Project Manager in their sole

discretion, may increase or decrease the completion date(s) by adding or subtracting therefrom, as the case may be, a number of days calculated from the difference between the actual quantity and the estimated tender quantity divided by the average daily production of the most productive 50% of the working time shown on the Contractor's schedule provided that this basis for calculation may not be used where in the opinion of the Project Manager, all or any of the relevant major items are carried out concurrently, and the decision of the Project Manager shall be final.

14. AMENDMENT TO FORM 200 – GENERAL CONDITIONS

Form 200, Section .03.13 Indemnification is hereby deleted and replaced with the following:

.03.13 Indemnification

.03.13.01 The Contractor shall indemnify, defend, and hold the City, including its elected officials, officers, employees, agents, affiliates and representatives (collectively referred to as the "Indemnified Party") harmless against any and all claims, demands, costs (including legal costs on a substantial indemnity basis), penalties, fines, fees, royalties, damages (including indirect, special, remote, and/or consequential damages) and causes of action, including, without limitation, proprietary or personal injury (including death) that arise from, either directly or indirectly, or relate to,

(a) the Contractor, its officials, directors, officers, employees, agents, affiliates, partners (general or limited), joint venturers, contractors, Subcontractors, and other representatives (collectively referred to as the "Indemnifying Party"), under this Contract,

(i) negligently carrying out any obligation to which it is subject,
(ii) failing to carry out any obligation to which it is subject,
(iii) negligently exercising any right to which it is entitled, or,
(iv) exercising any right to which it is entitled in a manner which is inconsistent with the terms and conditions of this Contract,

or any combination thereof, except to the extent that the same are caused by the negligence or deliberate wrong-doing of the Indemnified Party, or

(b) any patent, trademark, copyright infringement or other breach of any intellectual property right of any person, for which the Indemnifying Party is responsible.

.03.13.02 The City shall notify the Contractor upon receipt of any such claim or demand that it receives. No settlement shall be made nor consent to judgment given without prior written approval of Contractor and its insurers, which approval shall not be unreasonably withheld.

.03.13.03 The rights to indemnity contained herein shall survive the early termination or expiry of this Contract.

.03.13.04 The City may enforce the rights of indemnity conferred on any Indemnified Party under section 03.13.01 on their behalf and to the same extent as if they were parties to this Contract.

.03.13.05 The rights to indemnity provided for in this section shall be deemed to be in addition to any rights with respect to insurance in favour of the Indemnified Party provided in this Contract.

SPECIAL PROVISIONS
TENDER ITEMS

SP33. CLOSE CUT CLEARING

33.01 General

Close cut clearing shall be in accordance with OPSS 201 as amended by the Construction and Materials Specification Manual and this special provision.

33.02 Construction

This item shall include all the labour and equipment necessary to clear and remove from the site all hedges, bush and trees (all sizes), fences etc. that are in the way of driver site lines.

33.03 Payment

33.03.01 Measurement for Payment

Measurement for payment shall be by square metres of area cleared.

33.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP34. SURFACE SMOOTHNESS REQUIREMENTS

34.01 Scope

The purpose of this item is to assist the Contractor and Project Manager in determining the locations of settlements or “dips” along the existing surface of the mainline of the RHVP and in some cases on off ramps. These locations will be used in conjunction with the Dip Repair Items.

A final assessment will be made as part of this item to ensure all dips have been addressed.

This Special Provision amends the requirements of OPSS 310 as follows:

34.02 References

Ministry of Transportation Publications:

LS-100 Rounding-Off of Test Data and Other Numbers

LS-296 Method of Test for Calibrating, Correlating and Conducting Surface Smoothness Measurements Using an Inertial Profiler
SP-024 Manual for Condition Rating of Flexible Pavements – Distress Manifestations

American Association of State Highway and Transportation Officials:

AASHTO MP 11-08 – Standard Equipment Specification for Inertial Profiler
AASHTO PP 49-08 – Standard Practice for Certification of Inertial Profiling Systems
AASHTOPP 50-07 – Standard Practice for Operating Inertial Profilers & Evaluating Pavement Profiles

American Society for Testing and Materials (ASTM):

ASTM E 950 - 98 - Standard Test Method for Measuring the Longitudinal Profile of Travelled Surfaces with an Accelerometer Established Inertial Profiling Reference

34.03 Definitions

For the purpose of this special provision, the following definitions apply:

DMD (or Distance Measuring Device) is a device for measuring longitudinal distance along a profile measured by an Inertial Profiler.

Existing Surface means the original pavement surface prior to construction under the Contract.

Final Measurements means the set of three measurements taken by an Inertial Profiler on a given pavement section.

Incident of Localized Roughness means a location where localized roughness with similar +ve or –ve deviation in mm has been identified at stations that are within $\pm$ 2m of one another in at least two of the three runs that were measured by the applicable inertial profilers. Its station and average deviation shall respectively be considered to be the average station and the average deviation for the individual localized roughness locations that were identified in the 2 or 3 applicable runs.

Initial Measurements means the first set of three measurements taken by an Inertial Profiler on a given pavement section.

International Roughness Index (IRI) is a specific mathematical transform of a true profile in which a low pass filter (usually consisting of a moving average with a 250mm base length) followed by a “Quarter Car Filter” are applied to the true profile then the absolute values of the vertical vibration of the “Quarter Car Filter” are accumulated and divided by the sublot length. It’s expressed in units of m/km.

Localized Roughness is based on the difference (i.e. deviation in mm) between the average profile for the left and right wheel paths, which has had both a high pass Butterworth filter and a low pass moving average filter applied to it, and the same filtered average profile which has had a 7.62m moving average filter applied to it.

Profiler Operator means any person who can provide a written statement to the Ministry by the manufacturer of an inertial profiler that that person has been adequately trained in that inertial profiler's operation and that person has also taken the Ministry's own training in the use of Transtec's ®ProVAL software.

QA Profiler means an inertial profiler operated by on behalf of the City for acceptance purposes**.**

Quarter Car Filter calculates the suspension deflection of a simulated mechanical system with a response similar to one corner (a quarter) of a passenger car travelling at 80 km/hr.

SublotSublot means a continuous traffic lane of pavement; excluding the shoulder, which has been measured by inertial profiler for purposes of repairs/payment adjustments and normally having a length of 100m, measured horizontally for highway survey purposes.

Subsequent Measurements means any measurements by an inertial profiler taken after the initial measurements**.**

Tolerance(s) means measurements of deviations which are taken using a rigid metal straight edge.

Unfiltered Data File means a data file from an inertial profiler representing the profile of a pavement surface determined from the raw measurements taken by the laser sensors after being adjusted by the measurements taken by the accelerometer(s) and the "smoothing-out" of any electrical "noise" but before any user-controlled data filter factors are applied.

Wheel paths mean 0.9m on each side of the centreline of the actual trafficked lane. The trafficked lane does not include adjacent paved areas such as paved shoulders or tapers.

34.04 Equipment

34.04.01 Smoothness Measuring Device

34.04.01.01 Profile Measuring Device (PMD)

The Contractor shall conduct surface smoothness measurements using a PMD, which has been approved by the City.

All smoothness measuring devices used for surface smoothness measurements shall consist of inertial profilers conforming to the minimum requirements of an ASTM

Class 1 Profilometer Standard/Specification (ASTM Standards, Vol. 04.03 Designation: E 950-98) and meeting the additional requirements stated in LS-293, AASHTO MP 11-03 and this Specification.

All inertial profilers to be used on the Contract site will be correlated at one or more Correlation Site(s) on *a yearly basis*. In addition, all inertial profilers will be properly calibrated before taking any measurements each day, in accordance with the requirements of LS-296.

All inertial profilers used for acceptance will be operated under the direct supervision of a Ministry-approved profiler Operator at a minimum speed of 60 km/hr and no more than the speed which is required to exceed a sampling interval of 25.4 mm.

34.05 Quality Control

34.05.01 Smoothness Correction of Pavement Surface(s)

Smoothness correction of pavement shall be done in accordance with the Dip Repair Items provided and associated Special Provisions.

34.05.02 Surface Tolerance and Smoothness

Each course of pavement after final compaction shall be smooth and true to the established crown and grade and shall be free from deviations determined as follows:

a. Tolerances Determined by Straight Edge:

Tolerances shall be measured using a rigid metal straight edge, 3m in length, which has been approved by the Project Manager.

Tolerance measurements shall be carried out by the Contractor for quality control. In addition, at any time, the Contractor may be required to take additional tolerance measurements at the direction of and in the presence of the Project Manager or their representative.

b. Surface Smoothness:

The Contractor shall measure the pavement surface using an approved PMD on all areas of surface courses where the posted speed limit of the in-service pavement will be greater than 60 km/hour.

The following areas shall be exempt from PMD measurements:

- shoulder widenings;
- detours and other temporary pavement that will be removed or overlaid under the Contract;
- longitudinal joints;

- curves with a centerline radius of less than 300m and pavement within the super-elevation transition, i.e., slope changes, of such curves;
- within 10m of the end of a placement where the paving Contractor is not responsible for the adjoining surface;
- within 15m of the expansion joints on the roadway side of the abutments and within 10m of expansion joints on adjacent bridge deck sections for sections greater than 50m in length where the expansion joints are being installed prior to paving;
- bridge decks and bridge deck sections less than 50m in length;
- where damage occurs to the pavement which is beyond the reasonable control of the Contractor

34.06 General

Prior to the commencement of field data collection, the Contractor shall consider factors that may otherwise interrupt the continuous and accurate collection of data. Consideration should be given to a travel route or collection pattern to ensure thorough coverage of the road requiring multiple passes.

At least 5 business days prior to beginning any surface smoothness-related repairs (dips), the Contractor shall submit a written proposal to the Project Manager with the sublot and repair locations including the appropriate stations, length of each repair area, distance between the ends of the repair areas on the same lane that are within 100m of each other.

Upon completion of the project, the Contractor shall complete a final assessment of the road and provide the following information to the City, so that it may be included in the City's Road Database.

34.06.01 Deliverables

1) The Contractor shall deliver all data through an FTP site or on an external hard drive. Note: The Contractor shall not destroy any inspection data without approval from the City of Hamilton.

2) The Contractor shall deliver all pavement infrastructure attribute data, pavement infrastructure surface condition data and pavement infrastructure roughness condition data, and all data shall be submitted in Microsoft Access database format, ready for upload into IPS System Version 8.5, as per the Inspection Data Requirements reference document, supplied by the City of Hamilton upon Contract award.

3) The Contractor shall deliver a report on discrepancies between any lengths provided by the City of Hamilton and the lengths measured in the field. Discrepancies greater than 20% should be delivered in the form of an electronic Excel spreadsheet, indicating the unique segment identification number, the length provided by the City of Hamilton and the actual field length.

4) The Contractor shall deliver a report of explanations for why particular road segments could not be inspected, if any, in the form of an electronic Excel spreadsheet, indicating the unique segment identification number and the reason why the segment was not inspected.

34.04 Payment

34.04.01 Measurement for Payment

Measurement for payment shall be Lump Sum.

34.04.02 Basis of Payment

Payment at the Lump Sum Price Bid for the above tender item shall include all costs for equipment, labour and materials associated with the Surface Smoothness testing and recording.

SP35. DIP REPAIRS

Dip areas are to be repaired prior to resurfacing the RHVP, in order to re-establish a smooth rideable surface. Dip repair shall include any required milling, planing, sweeping, removal and disposal of millings, the supply, placement of tack coat, and placement and compaction of Hot mix asphalt.

Areas of repair will be determined by the Project Manager upon inspection and evaluation of the pre-condition profilograph results for the existing road surface.

The quantities given are for estimating purposes only, and the actual areas to be repaired shall be determined by the Project Manager upon inspection and evaluation of the pre-condition profilograph results for the existing road surface.

Payment for dip repairs shall be as per SP37 – Asphalt Milling, SP41 Tack Coat, and SP42 – Superpave Asphalt.

SP36. ROAD REPAIRS ADJACENT TO CURB, CONCRETE BARRIER WALL AND CHAMBER ADJUSTMENTS

36.01 General

Roadway repairs adjacent to existing curb shall be in accordance with OPSS 206(MUNI), 310(MUNI), 314(MUNI) and 350 as amended by the Construction and Materials Specification Manual and this special provision.

36.02 Construction

Repairs shall extend no further than 0.6m from the face of the existing curb, barrier wall or chamber adjustment. All road repairs exceeding 0.60metres from the face of the curb are to be directed by the Project Manager. Repairs shall include:

- Saw cutting and excavation to the required depth and disposal of all excavated materials including, but not limited to, asphalt pavement and/or concrete road base.

- Supply, placement, grading and compaction of Granular "A" as required (min. 150mm depth)

- Supply, placement and compaction of surface asphalt at the specified depth.

The restoration of the road adjacent to the curb and catch basin adjustments shall be as follows:

- 90mm Superpave 12.5 FC2, Traffic Category D, PG58V-28 asphalt cement.
- and 150mm Granular "A" (minimum)

The restoration of the road adjacent to Barrier Wall reconstruction and manhole adjustments shall be as follows:

- 240mm Superpave 12.5, Traffic Category D, PG58V-28 asphalt cement.
- and 150mm Granular "A" (minimum)

36.03 Payment

There will be no separate payment for road repairs adjacent to curb, concrete barrier wall or chamber adjustments. All cost for repairs shall be included in the curb, concrete barrier wall and chamber adjustment construction Item.

SP37. ASPHALT MILLING

37.01 General

Asphalt milling shall be in accordance with OPSS.MUNI 510 as amended by the Construction and Materials Specification Manual and this special provision.

The Contractor shall have a continuous 24-hr operation with paving activity taking place during the day when OPSS specified temperatures for placing Hot Mix Asphalt are achievable.

All asphalt millings from this project shall be removed and disposed of by the Contractor. Asphalt millings from this project will not be permitted to be used as RAP in the production of HMA for any City of Hamilton project.

The addresses of all dump sites to be used to deposit milling materials together with letters of permission from the property owners involved shall be submitted to the Project Manager for approval.

37.02 Equipment

The milling machines shall be self-propelled and capable of picking up milled material and discharging into truck. The machine should be capable of producing a lacing pattern not greater than 10mm deep and shall be equipped with an on-board water spray system to effectively control dust and particulate emissions during the milling operation.

All equipment including but not limited to, milling machines, sweepers, loaders and trucks of sufficient number and size suitable for handling and disposing the milled asphalt shall be provided by the Contractor. All equipment shall be in good repair and be capable of removing all of the milled material on a continuous basis. The City will not entertain any additional cost or claims by the Contractor due to inadequate amount of equipment, labour and trucking due to poor planning on their part.

37.03 Construction

This item shall include all costs to conduct any required asphalt milling to the specified depth and width as indicated on the Contract documents and will include sweeping, removal and disposal of millings. Milling limits shall be as shown on the Contract drawings, around all catch basins and maintenance holes and any other areas not accessible by the milling machine.

Prior to milling, the Contractor shall review roadway profile and crossfall with the Project Manager to ensure proper drainage. Areas of the road profile that do not provide positive drainage shall be shaped using the milling operation. Road cross fall shall be re-established whenever possible.

The milled surface shall be free of stepped joints, tears, gouges, breaks or excessive grooves and shall be cleaned in a manner satisfactory to the Project Manager.

No loose material or clumps of packed millings will be permitted to remain on the pavements. It shall be the Contractor’s responsibility to sweep and remove all milled material from the milled surface prior to the placement of the surface course. This includes debris as a result of underlying defects, delamination, rutting etc.

As a requirement of this Contract, the Contractor shall inspect all milled surfaces continually during the operation, for any safety related concerns and shall report the same immediately to the Project Manager to establish corrective actions. Areas that require emergency repairs will be paid on a time and material basis, as authorized by the Project Manager.

It shall be the Contractor’s responsibility to prevent milled material from entering catch basins and/or maintenance holes. Any material entering the same will be removed at the Contractor’s expense. The Contractor shall inspect that all catch basins and/or maintenance holes and valve chambers are clean at the end of every closure and shall remove all preventative devices from the catch basins.

The Contractor will allow the Project Manager the opportunity to evaluate the condition of the existing road base and determine the extent of any required base repairs. There will be no additional payment for any delay to the Contractor caused by the time required for the City to conduct these road base evaluations.

The scheduling of milling operations shall be approved by the Project Manager prior to the start of any works.

37.04 Payment

37.04.01 Measurement for Payment

Measurement for payment shall be by square metre.

37.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP39. PLANE EXISTING ASPHALT

39.01 General

This item shall be in accordance with OPSS.MUNI 510 as amended by the Construction and Materials Specification Manual and this special provision.

39.02 Construction

This item shall include all costs to mill/plane existing asphalt, including the sweeping, removal and disposal of all millings, as necessary to remove excess asphalt as a result of over paving the mainline onto the ramps.

39.03 Payment

39.03.01 Measurement for Payment

Measurement for payment shall be by the linear metre.

39.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the Work.

SP41. TACK COAT

41.01 General

The composition and application of tack coat shall be in accordance with OPSS.MUNI 310 as amended by this special provision.

Tack coat material shall be supplied from a source listed on the Ministry of Transportation Designated Source for Materials (DSM) List.

41.02 Construction

This item shall include all costs to clean the roadway and to supply and place the tack coat to the road surface.

41.02.01 Application of Tack Coat

310.07.03.01 of OPSS.MUNI 310 is amended by the addition of the following:

Areas of tack coat ponding must be rectified/removed immediately upon identification through the use of absorbent and disposed of properly. Costs for removal and replacement of the affected area will be the responsibility of the Contractor with no cost or claim to the City.

Where tack coat is tracked onto existing pavement, or onto adjacent streets, the Contractor will be required to clean all fouled pavements daily as directed. The cost of all such cleaning measures shall be borne solely by the Contractor.

41.02.03 Quality Assurance

41.02.03.01 Compliance

Emulsified asphalts used for tack coat shall be according to OPSS.MUNI 1103.

41.02.03.02 Inspection

The City may inspect shipping containers for cleanliness at any time.

41.02.03.03 Sampling

Samples of material being supplied may be taken at any time, according to ASTM D 140 from either the supplier's plant or any shipment in the presence of City Representatives. Sample material taken prior to delivery shall be at no extra cost to the City.

A minimum of one sample per 10,000 Tonnes of HMA placed will be required.

41.02.03.04 Testing

Samples may be tested by the Owner according to the tests listed in material requirement tables.

Failure of any sample to conform to any of the material requirements shall be cause for rejection of the material. Rejected materials shall be replaced at no extra cost to the City.

41.03 Payment

41.03.01 Measurement for Payment

Measurement for payment shall be by square metre.

41.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the Work.

SP42. SUPERPAVE ASPHALT

42.01 General

This specification covers the requirements for hot mix asphalt design, supply, placement and compaction of specified asphalt produced using the Superpave method.

The Contractor shall have a continuous 24-hr operation with paving activity taking place during the day when OPSS specified temperatures for placing Hot Mix Asphalt are achievable.

Superpave types shall be as specified in the Contract documents and shall be approved prior to use.

Unless otherwise amended herein, the design, materials, production and placement of hot mix asphalt shall conform to the following:

- OPSS.MUNI 310 – Construction Specification for Hot Mix Asphalt
- OPSS.MUNI 1003 – Material Specification for Aggregates – Hot Mix Asphalt
- OPSS.MUNI 1101 – Material Specification for Performance Graded Asphalt Cement
- OPSS.MUNI 1151 – Material Specification for Superpave and Stone Mastic Asphalt Mixtures.

42.02 Superpave Asphalt Mixes

Superpave asphalt mixes shall be produced and placed in accordance with this Special Provision.

The use of Warm Mix will not be permitted in this Contract.

Form 800 – Specification for Hot Mix Asphalt is **not** applicable for this project.

Hot mix asphalt shall be Superpave 12.5 FC2. Traffic Category D, incorporating PG 58V-28 asphalt Cement and shall be in accordance with Tables 1 and 2 of OPSS.MUNI 1151, and shall be approved prior to use.

The Performance Graded Asphalt Cement (PGAC) shall be in accordance with OPSS.MUNI.1101, as amended by this Special Provision.

42.02.01 Design Requirements

42.02.01.01 Submission and Design Requirements

The design of the Superpave mix shall be in accordance with the requirements of OPSS.MUNI 1151 Material Specification for Superpave and Stone Mastic Asphalt Mixtures, as amended by this Special Provision.

42.02.01.02 Superpave Mix Verification

1151.04.02.02.02 of OPSS.MUNI 1151 is amended by the addition of the following:

After receiving the asphalt mix design from the Contractor's own laboratory or from a hired firm's laboratory, the Contractor shall provide asphalt mix verification test results in accordance with the following criteria:

a) The tests must be performed by a laboratory independent from the firm producing the asphalt mix design.

b) The laboratory performing verification testing must have a valid "Certificate of Conformance" issued by the Canadian Council of Independent Laboratories (CCIL) Asphalt Laboratory Certification Program and be qualified under the following categories:

   (i) Asphalt Mix Design – Marshall and Superpave Methods (Type A)

   (ii) Asphalt Mix Compliance – Marshall and Superpave Methods (Type B)

All verification testing must be reviewed and accepted by the City of Hamilton prior to the start of any paving operations.

The mix design shall be submitted for acceptance at least 4 weeks before construction. The mix design shall be reviewed and approved by the City. Prior to construction, a trial batch shall be submitted to the Project Manager for verification and approval.

The submitted mix design shall include the JMF and the documents listed in Section 1151.04.05 of OPSS.MUNI 1151 The mix design that does not include the required documents will not be reviewed and accepted.

42.02.01.03 Asphalt Cement Requirements

The minimum asphalt cement content of the approved JMF shall be 5.2 percent.

42.02.02 Materials

42.02.02.01 Aggregate

Aggregates used shall be in accordance with OPSS.MUNI 1003 Material Specification for Aggregates – Hot Mix Asphalt, and as amended by this Special Provision.

The use of any RAP material will not be permitted in the production of Hot Mix Asphalt under this Contract.

42.02.02.02 Performance Graded Asphalt Cement (PGAC)

Performance Graded Asphalt Cement shall be in accordance with OPSS.MUNI 1101 - Material Specification for Performance Graded Asphalt Cement, as amended by the following:

1101.05 of OPSS.MUNI 1101 is amended by the addition of the following:

The grade of asphalt cement shall be PG 58V–28.

In accordance with ASTM M332 standard, the dynamic shear, T 315, G*sinδ carried out on the residue from pressurized aging vessel (PAV), shall be maximum 6,000 kPa for 58V -28.

1101.08.03 of OPSS.MUNI 1101 is amended by the addition of the following:

A sample of asphalt cement shall be taken at the beginning of the asphalt paving project.

At the discretion of the Project Manager, more asphalt cement samples will be required.

A minimum of one sample per 5,000 tonnes of asphalt mix will be required.

Table 1 of OPSS.MUNI 1101 is deleted in its entirety and replaced with the following:

Table SP42-1

Additional testing requirements and acceptance criteria for PGAC grades

Property and Attributes (Unit)	Test Method	Results Reported Rounded to the Nearest	Acceptance Criteria	Rejectable
Ash Content, % by mass of residue (%)	LS-227	0.1	≤ 0.6	>0.6
Low temperature limiting grade (LTLG) (°C)	LS-308	0.5	≤ -25	> -25
Grade Loss (°C)	LS-308	0.5	≤ 6.0	> 6.0
CTOD, δt (mm)	LS-299	0.1	≥ 8.0	< 8.0
Non-recoverable creep compliance at 3.2 kPa (Jnr-3.2) (kPa-1) PGAC 58V-28	Multiple Stress Creep Recovery (MSCR) testing according to AASHTO T 350 testing conducted at a temperature of 58 °C	0.01	≤ 1.0	> 1.0
Average percent recovery at 3.2 kPa (R3.2) (%)		0.1	> the lesser of [(29.371) (Jnr-3.2)$^{-0.2633}$] or 55	≤ the lesser of [(29.371) (Jnr-3.2)$^{-0.2633}$ -10] or 45
Percent difference in non-recoverable creep compliance between 0.1 kPa and 3.2 kPa, Jnrdiff (%)		0.1	N/A Testing carried out only for information purpose	

42.02.03 Construction

The supply and placement of hot mix asphalt shall be in accordance with OPSS.MUNI 310 Construction Specification for Hot Mix Asphalt, as amended

42.02.03.01 Pre-pave Meeting

At least one (1) week prior to any scheduled milling or paving operation to occur, a mandatory Pre-pave meeting shall be held. The Contractor shall ensure that all required documentation relating to the milling and paving operations has been

submitted for review and approved prior to the meeting. The items shall include, but are not limited to, the following:

a) Approved mix designs and Job Mix Formulas;
b) Proposed milling and paving dates and paving equipment to be used;
c) Asphalt placement and compaction rolling patterns;
d) Roadway, lane closures and vehicle access restrictions;
e) Tack coat scheduling and application patterns.

42.02.03.02 Asphalt Plant Inspection

The Contractor shall permit access to the City's representative in order to monitor the asphalt mix production.

The asphalt plant's health and safety procedures that may be required shall be provided by the Contractor in advance.

The Contractor shall supply copies of plant records during asphalt production for each day.

42.02.03.03 Tack Coat

Prior to the application of any of surface coarse asphalt, tack coat shall be applied. Hot-mix asphalt can be placed only after the tack coat is cured (changes the colour from brown to black and becomes sticky).

42.02.03.04 Placement of Surface Course Asphalt

Where concrete curb exists, the finished elevation of the surface course asphalt shall be placed so as to be flush with the lower edge of curb.

42.02.03.05 Use of Paving Equipment – Paving in Echelon

OPSS.MUNI 310.07.07 is amended with the addition of the following paragraph:

Paving in Echelon is mandatory. The pavers shall be operated continuously at the same time and shall maintain a distance of not more than 50m from adjacent pavers so that a hot joint is obtained between the lanes of HMA being placed. The Contractor shall supply sufficient personnel to adequately control the paving operations simultaneously.

42.02.03.06 Asphalt Material Transfer Vehicle

OPSS.MUNI 310.07.07 is amended with the addition of the following paragraph:

A Shuttle Buggy® Asphalt Material Transfer Vehicle (AMTV) is required for all paving operations, including paving using only one paver. The use of an AMTV will be paid for by the tonne.

42.02.03.07 Compaction/Construction of Joints

The density of the mix at any joint shall be within 1.5 percent of the mainline mat density. Compaction of joints shall be measured within 0.3 m from the joint. All joints must be entirely tack-coated and must butt up to a vertical face.

42.02.03.08 Review of Joint Quality

Prior to the expiry of the 24 month maintenance period, all joints in surface course asphalt shall be reviewed. The review will consider weld quality, proper compaction and separation. All joints showing signs of separation or poor welding shall be re-heated and compacted to achieve a welded joint. All repairs to longitudinal joints shall be at the cost of the Contractor.

42.02.03.09 Aggregate Gradation and Asphalt Cement Content Acceptance

OPSS.MUNI 310.08.04 is deleted and replaced by the following:

If the HMA is borderline for aggregate gradation or asphalt cement content specified in the table below, the Contractor shall take immediate corrective action through process control at the HMA plant. A total of three consecutive borderline test results for any attribute representing up to 1,000 tonnes of HMA production shall result in the work being deemed rejectable.

Table SP42-2
Production Tolerances on the Job-Mix Formula
Aggregate Gradation and Asphalt Cement Content

Mix	Attribute	Tolerances on the Job-Mix Formula % (Note 1)		
		Acceptable	Borderline	Rejectable
Surface Course	DLS, 4.75mm sieve size	< 5.0	5.0 to 7.5	>7.5
	600 µm sieve size	< 3.5	3.5 to 5.0	>5.0
	75 µm sieve size	< 2.0	2.0 to 3.0	>3.0
	Asphalt Cement Content	< 0.20	0.2 to 0.30	>0.30
Note 1: Tolerances on the job-mix formula apply as both plus and minus from the job-mix formula percent.				

Rejected HMA due to aggregate gradation, such as non-compliance on the DLS 4.75mm, 600 µm, or 75 µm sieve sizes, or non-compliance due to the asphalt cement

content specified in the table above, shall be subject to review and corrective actions, including material removal and replacement with acceptable HMA at the Contractor's expense.

The asphalt cement content and aggregate gradation shall be determined for each day's mix production for a given plant location on the basis of the sampling frequency criteria in the table below.

Table 6 found in OPSS.MUNI 310 is hereby deleted and replaced by the table below.

Table SP42-3
Sampling Frequency

MATERIAL	MINIMUM SAMPLING FREQUENCY
Surface Course	One sample per 250 tonnes of HMA produced or part thereof
Aggregate	One sample per 10,000 tonnes of HMA produced or part thereof
Asphalt Cement	One sample per 5,000 tonnes of HMA produced or part thereof
Tack Coat	One sample per 10,000 tonnes of HMA placed or part thereof
Note: A set of test samples are to include a QC sample (for the Contractor), a QA sample (for The City) and a Hold (for The City) packed in separate cardboard boxes supplied by the paving Contractor.	

Field samples for quality assurance and/or quality control testing shall be Quarter Master Samples obtained during asphalt placement and compaction procedures that meet the minimum sample size of 20 kg. Samples obtained from the spreader hopper or truck box shall not be used for QA/QC testing.

42.02.03.10 Lot and Sublot Sizing

For this Contract, Lots and sublots shall be taken to establish sampling criteria for QA testing purposes. Lots shall be sized based upon the following criteria:

Each lot shall consist of maximum of 40 sublots of equal size to a maximum size of 250 tonnes. Each lot shall consist of a maximum of 10,000 tonnes or the amount of asphalt placed in one week's paving operation, whichever is less. In the event that the paving operation exceeds 10,000 tonnes, an additional lot(s) for that week's paving operation will be established by the Project Manager.

Samples shall be taken and collected by the Contractor at locations determined selected through a random number by the Project Manager or the City's representative. These samples shall be representative of the paving operations. The box samples shall be identified by lot and sublot, and shall be marked to identify each individually. In addition, each sample shall be labelled to include the following minimum identification:

1. Contract Number;
2. Location of Sampling;
3. Date and Time of sampling;
4. Asphalt type;
5. Load number;
6. Load tonnage.

Two of the samples from each sample location shall be the property of The City.

42.02.03.11 Air Voids Acceptance for HMA Production

The production of air voids for all HMA mixes shall be evaluated according to table below.

Table 9 found in OPSS.MUNI 310 is hereby deleted and replaced by table below.

Table SP42-4
Laboratory Air Void Criteria for Hot Mix Asphalt Production (LS-265)

Mix	Air Voids (%)		
	Acceptable	**Borderline**	**Rejectable**
All Mixes	3.0 to 5.0	2.0 to 2.9 and 5.1 to 6.0	< 2.0 and > 6.0

If the HMA is borderline for air voids as specified in the above table, the Contractor shall be notified in writing and shall take immediate corrective action through process control at the HMA plant. A total of three consecutive borderline test results representing up to 1,000 tonnes of HMA production shall result in the work being deemed rejectable.

Rejected HMA due to air voids shall be subject to review and corrective actions, including material removal and replacement with acceptable HMA at the Contractor's expense.

42.02.03.12 Asphalt Layer Segregation

All hot mix asphalt shall be inspected for segregation in accordance with the following:

42.02.03.12.01 Types of Segregation

Segregation consists of areas with comparatively coarser texture than that of the surrounding pavement. All segregation is deemed to be deficient materials and/or workmanship, regardless of the type, location, cause or severity. The Contractor shall provide traffic control, as required, to conduct all segregation assessments.

Two main types of segregation are recognized:

Mid-lane Segregation: consists of any continuous or semi-continuous longitudinal mark or “streak”, typically no greater than 300mm in width. Such segregation is often found in the middle of the lane, in the vicinity of a paver’s gearbox, but may be located anywhere across the width of the lane.

Other Segregation: consists of discrete areas or patches of regular, irregular or chevron shape.

42.02.03.12.02 Severity of Segregation

The severity of segregation is categorized as follows:

Slight Segregation: The pavement matrix is in place between the coarse aggregate particles; however there are slightly more coarse aggregate particles in comparison with the surrounding acceptable mix.

Medium Segregation: The pavement has significantly more coarse aggregate particles than the surrounding acceptable mat and usually exhibits some lack of surface matrix.

Severe Segregation: The pavement appears very coarse, with coarse aggregate particle against coarse aggregate particle and the pavement has little or no matrix.

42.02.03.12.03 Paving Segregation

If the Contractor fails to prevent slight segregation in paving, the Project Manager will issue a written warning and request the Contractor to address the problem. The Contractor may be allowed to continue paving at the discretion of the Project Manager. If medium segregation is observed, the paving operation will be stopped. The Contractor shall prove to the satisfaction of the Project Manager that the paving can be continued without any medium segregation.

42.02.03.12.04 Correction of Segregation

If the Contractor’s actions fail to prevent continued slight to medium segregation from any source, the Project Manager may instruct the Contractor to cease paving until the problem has been corrected and the City shall not be held responsible for any additional costs that the Contractor may incur as a result.

From the time that the Contractor receives notification of mid-lane segregation, the Contractor will be allowed a maximum of 100 tonnes of mix to be placed on the Contract, in order to demonstrate the effectiveness of any repairs and/or adjustments that have been made to a defective paver.

The Contractor shall demonstrate the repairs and/or adjustments to the paver, which is acceptable to the Project Manager. If the Contractor is unable to eliminate segregation to the satisfaction of the Project Manager, by making repairs or adjustments to the paver within the allowable 100 tonnes of hot mix, then the Contractor shall discontinue the use of that machine and/or material.

42.02.03.12.05 Mid-Lane Segregation

Medium to severe mid-lane segregation shall be repaired by removal and replacement at no cost to the City. Slight mid-lane segregation will be accepted into the work with no payment reduction.

42.02.03.12.06 Other Segregation

The disposition of Other Segregation shall be as follows:

Slight Segregation: Slightly segregated mix will be accepted into the work with no payment reduction.

Medium Segregation: Medium segregation in all HMA lifts shall be repaired at the direction of the Project Manager at no cost to the City.

Severe Segregation: All severely segregated mix shall be repaired by removal and replacement at no cost to the City.

Levelling or padding courses with a total thickness which is less than that is normally placed in a lift of hot mix (i.e., usually 40mm), that is not machine-laid and any areas of “handwork” shall not be assessed on the basis of segregation but on the basis of other workmanship-related problems. However, if they deteriorate prior to being overlaid by another pavement course, the Project Manager will assess the causes of the deterioration before determining responsibility for the cost of repairs.

42.02.03.12.07 Repairs

All repairs shall be subjected to the approval by the Project Manager.

Repairs shall consist of removal and replacement with new hot mix.

Repairs for segregated hot mix shall be from edge of pavement to edge of pavement.

A paver shall be used for all repairs.

Repairs shall be:

To the full depth of the subject lift; and

Entirely tack-coated.

Hot mix used in all repairs shall meet the requirements of this Special Provision. All repairs shall be done in a workmanlike manner complying with all requirements for placing hot mix stated in the Contract. All repaired areas must be entirely tack-coated and all transverse joints in surface course repairs must butt up to a vertical face.

For surface course, all repairs for remedial work due to visually defective mix, including pavement removal and replacement, traffic control and any other work which has to be redone such as line painting shall be made entirely at the Contractor's expense.

42.03.01 Payment Adjustment for Variations in Asphalt Cement in HMA – Bid AC

42.03.01.01 Bidding Requirements

The asphalt cement content of mix designs for bidding purposes shall be 5.2 percent.

The minimum asphalt cement content of the Job Mix Formula (JMF) must be equal to or greater than 5.2 percent.

42.03.01.01 Price Adjustments

The Contractor shall submit to the Project Manager, a request for payment adjustment based on the criteria set forth in this SP. The Price used to calculate the payment adjustment shall be based on the Actual AC incorporated into the HMA and the applicable AC bid % provided in above table.

The payment adjustment calculated using this formula is full compensation for any and all PGAC grades specified.

Actual AC shall be defined as the average AC content obtained from samples taken during paving operations

HMA Quantity shall be defined as the actual amount of hot mix asphalt placed and accepted into the work, in tonnes.

Contractors should bid the hot mix asphalt item using the cost of the PGAC specified. The AC Price Index is only a tool for qualifying hot mix prices and is not intended as a standard AC price to be incorporated into the Contract Bid.

Asphalt payment adjustment will only be considered on items where the measurement for payment quantity specified in the Schedule of Price is the tonne.

The City of Hamilton will use the Asphalt Price Index issued the month prior to tender close to determine the adjustment, if any:

Payment adjustment* = HMA Qty x (Actual AC – Bid AC) x AC Price
*Negative value indicates payment to City

The price correction shall be deemed to include all costs excluding taxes associated with the difference in AC content between the bid and actual mix design. Contractor shall submit all required documentation upon request.

Example 1 – Actual AC higher than Bid AC:

HMA Specified = Superpave 12.5mm PG 58-28
HMA Qty = 10,000 tonnes
Actual AC = 5.4 %
Bid AC for Superpave 12.5 = 5.2 %
Applicable Price Index = $312/ tonne (Price Index in effect the month prior to tender closing)

Price Adjustment = [10,000 x (0.054 – 0.052)] x 312 = $ 6240
(Payment adjustment to be paid to the Contractor)

Example 2 – Actual AC lower than Bid AC:

HMA Specified = Superpave 12.5mm PG 58-28
HMA Qty = 10,000 tonnes
Actual AC = 4.9%
Bid AC for Superpave 12.5 = 5.2%
Applicable Price Index = $312/ tonne (Price Index in effect the month prior to tender closing)

Price Adjustment = [10,000 x (0.049 – 0.052)] x 312 = $ 9360 (Credit to City)

42.03.02 Payment Adjustment for Changes in the "Asphalt Cement Price Index"

The price index will be based on the price, excluding taxes, FOB the depots in the Hamilton area, of asphalt cement grade PG 58-28 or equivalent. One index will be used to establish and calculate the payment adjustment for all grades. The payment adjustment calculated shall be considered full compensation for any and all PGAC grades specified and is independent of any other payment adjustments made to the hot mix tender items.

As of July 2006 the price index for each month will reflect the average of the same month's prices and be published on the last day of the month and be retroactively applied to HMA laid in the same month. Contractors should bid the hot mix asphalt item using the cost of the PGAC specified. The AC Price Index is only a tool for

qualifying hot mix prices and is not intended as a standard AC price to be incorporated into the bid.

The City of Hamilton will use the Asphalt Price Index issued the month prior to tender close to determine the adjustment, if any:

A payment adjustment per tonne of asphalt cement will be established for each month in which paving occurs when the price index for the month differs by more than $15.00/tonne from the price index for the month prior to tender close. When the price index differential is less than $15.00/tonne, there will be no payment adjustment for that month. Only the amount of the change that is greater than $15.00 is used to calculate payment adjustments.

Adjustments will only be considered on items where the measurement for payment quantity specified in the Schedule of Price is by the tonne. The payment adjustment per tonne will apply to the quantity of asphalt cement in the hot mix accepted into the Work during the month for which it is established.

The payment adjustment for each month will be calculated by the following means:

42.03.02.01 When AC Prices are Rising by more than a $15.00/tonne difference:

The payment adjustment to be paid to the Contractor is the result of subtracting the price index in effect when the tender was submitted from the price index in effect when paving took place, minus the $15.00 float, multiplied by the number of tonnes of PGAC incorporated in the mix(s) as determined from the average of samples taken during paving operations. If the answer is negative, no adjustment is made.

42.03.02.02 When AC Prices are Falling by more than $15.00/tonne difference:

The payment adjustment made in favour of the Owner is the result of subtracting the price index in effect when paving took place, plus $15.00 from the price index when the tender was submitted, multiplied by the number of tonnes of PGAC incorporated in the mix(s) as determined from the average of samples taken during paving operations.

The quantity of new asphalt cement includes all grades of asphalt cement supplied by the Contractor with and without polymer modifiers. For each month in which a payment adjustment has been established, the quantity will be calculated using the hot mix quantity accepted into the Work and its corresponding asphalt cement content as determined from the average of samples taken during paving operations.

42.03.02.03 Examples of Payment Adjustment Calculations

Example 1 – AC Prices Increasing:

- PGAC 58-28 specified, 3,000 tonnes of SP 9.5 @ 5.2% AC (156.0 tonnes AC)

- The Price index on April 5, 2006 on tender closing is $332.90(actual)/tonne, PG 58-28
- The applicable Price Index as published on August 31st effective for the August 17th-24th, 2006 actual paving dates is $475(fictional)/tonne (PG 58-28)
- Payment adjustment to be paid to the Contractor:
- [($475 - $15) - $332.90] x 156 tonnes AC = $19,827.60

Example 2 – AC Prices Decreasing:

- PGAC 58-28 specified, 4,500 tonnes of SP 19 @ 4.6% AC (207.0 tonnes AC)
- The Price index on July 5, 2006 on tender closing is $500(fictional)/tonne
- (PG 58-28)
- The applicable Price Index as published on October 31st effective for the October 11th-18th, 2006 actual paving dates is $470(fictional)/tonne, PG 58-28
- Payment for hot mix items reduced by:
- [$500 – ($470+ $15)] x 207 tonnes AC = $3,105.00

42.03 Payment

42.03.01 Measurement for Payment

Measurement for payment for each type of HMA shall be by mass in tonnes.

42.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender item shall include all costs for equipment, labour and materials associated with the design, supply and placement of Superpave surface course asphalt and all required QA/QC testing. Payments and the application of any adjustment factors will be made on asphalt quantities confirmed with original weigh tickets.

SP45. ADJUSTMENTS OF MAINTENANCE HOLES AND CATCH BASINS (PROVISIONAL)

45.01 General

This item shall include all costs to adjust the elevations of all existing catch basins, maintenance holes, and valve chamber frames and covers to match the surface elevation of the proposed road.

Frames and covers requiring a change in elevation up to and including 300mm shall be considered an adjustment under this item.

This item shall also include any asphalt road restoration, curb restoration and topsoil and seed restoration as specified in SP36, SP54, and SP66. All cost for restoration shall be included in the catch basin and manhole adjustment Items.

45.02 Materials

Concrete for permanent adjustment shall be 32Mpa in accordance with OPSS.MUNI 1350 and Form 700.

Concrete for permanent adjustments within the roadway, including catch basins, shall be 32Mpa high-early strength (48hr mix) with polypropylene fibers reinforcement Fibermesh 300 or approved equivalent. Fibre reinforcement shall be applied per the manufacturer's specifications.

Concrete placed to finished grade shall be a heavy broom finish.

45.03 Construction

This item shall include all costs to adjust the elevations of all existing catch basins, maintenance holes, and valve chamber frames and covers to match the final surface elevation of the proposed road.

All forming and removal and disposal of forms and all debris shall be included.

Removal and disposal of the existing adjustment, removal and re-installation of existing frames and covers or the installation new frames and covers to finished grade. The supply of new frames and covers shall be paid under a separate item.

45.03.01 Adjustment of Maintenance Hole, Catch Basin – Standard Method

Maintenance hole and catch basin adjustments by standard method shall be done using one continuous pour of concrete extending from underside of the frame and cover to 150mm below the top of the chamber on the outside. The minimum horizontal concrete thickness shall be 150mm.

In areas of concrete road base, catch basin adjustments shall include the placement of a 12mm closed cell polyethylene foam expansion joint material around concrete adjustment flush with the top of the adjacent concrete road base as per OPSD 551.032.

45.04 Payment

45.04.01 Measurement for Payment

Measurement for payment shall be as specified in the Schedule of Prices.

45.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP47. FRAMES AND COVERS (PROVISIONAL)

47.01 General

Frames and covers shall be in accordance with OPSS 407, OPSS 1850, as amended by the Construction and Materials Specifications Manual and this special provision.

47.02 Materials

All frames and covers shall be in accordance with the OPS standard referenced and shall be selected from the appropriate Approved Products List.

47.02.01 Catch Basins

Unless otherwise specified, frames and covers shall conform to OPSD 400.100

47.02.02 Maintenance holes

Unless otherwise specified, frames and covers shall conform to OPSD 401.010.

47.02.03 Valve Chambers

Not applicable.

47.03 Construction

This item shall include the costs to supply the required frames and covers on an existing structures and shall include the removal and disposal of the existing frames and covers.

47.04 Payment

47.04.01 Measurement for Payment

The Contractor will be paid for each structure where all required frames and covers are installed. There will be no additional payment or payment adjustment for the required size of the frames and covers or for structures requiring multiple sets of frames and covers.

Measurement for payment shall be by each frame and cover (as a set) supplied / replaced.

47.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP54. CONSTRUCT CONCRETE CURB

54.01 General

Concrete curb shall be in accordance with OPSS.MUNI 353 as amended by the Construction and Materials Specifications Manual and this special provision.

54.02 Material

Granular A material shall be in accordance with OPSS.MUNI 314 and 1010. Material shall be supplied from an approved source and shall meet the requirements of OPSS.MUNI 1010, Form 600 and 900.

Concrete shall be in accordance with Form 700.

54.03 Construction

This Item shall include all costs for any required excavation and disposal, grading, shaping and compaction required to construct the proposed curb, and all costs to:

- saw-cut and excavate, remove and dispose of all existing materials including but not limited to existing concrete curb, asphalt, granular materials, topsoil and sod
- supply, regrade and compact fill where required.
- supply and place and compact any required granular A material and concrete.
- construction of the proposed curb in repair locations determined by the Project Manager.
- Supply and installation of dowel bars into adjacent existing curbs (300mm 15M dowel bars).
- road repair adjacent to curb in accordance with SP36
- topsoil and seed restoration in accordance with SP66
- construct curb offsets at catch basins as per RD-110.01 and RD110.02 and curb outlets where required.

All handwork and forming at any obstructions such as poles or catch basins shall be included in the price bid. There shall be 225mm offset from face of curb to face of all obstructions in sidewalks.

This item shall include all costs for the supply, placement and compaction of Granular base material as required to create a flat surface for the proposed curb construction.

54.04 Payment

54.04.01 Measurement for Payment

Measurement for payment shall be as specified in the Schedule of Prices.

54.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work, including asphalt road repairs adjacent to curb and sod restoration.

SP66. TYPE-1 SEED

66.01 General

All topsoil and seed shall be in accordance with OPSS 802 and 804(MUNI) as amended by the Construction and Materials Construction Manual and this special provision.

66.02 Construction

This Item shall include all costs to:

- excavate, remove and dispose of all existing materials including but not limited to granular, asphalt or concrete sidewalks, culverts, curbs, boulevards and driveways
- supply, regrade and compact fill where required in accordance with the sections and grades detailed in the Contract drawings
- supply and place seed with a minimum 150mm of topsoil.
- all excavation, removal and disposal of existing concrete, asphalt and/or earth materials necessary to place the required topsoil and seed at the locations required.

Supply and placement of 150mm topsoil and Type I seed including all grading, shaping, compaction.

The Contractor shall water and maintain seed to ensure sufficient growth until acceptance by the Project Manager.

Where in the opinion of the Project Manager, the Contractor has failed to provide the required maintenance to ensure sufficient growth, the Contractor shall re-apply and maintain seed to all areas identified by the Project Manager at no cost to the City.

66.03 Payment

66.03.01 Measurement for Payment

There will be no separate payment for topsoil and seed. All cost for topsoil and seed restoration shall be included in the curb construction and chamber adjustment Items.

SP74. PROJECT SIGN

74.01 General

Project signs shall be placed at approved locations at the limits of the project site prior to the start of work.

74.02 Materials

Project signs shall be manufactured by the City's Traffic Operations Centre and shall be made of light weight coroplast or other material and have an approx. dimension of 1.2m x 2.4m (4' x 8').

74.03 Construction

This item shall include all costs to pick-up, deliver, install, maintain and remove all project sign boards as required. Signs shall be supported using adequate wooden bracing to ensure that the sign is secured against any movement and are clearly visible. The Contractor shall supply 4' x 8' plywood backers for each project sign board.

The Contractor shall take delivery of Project Sign Boards at the City of Hamilton's Traffic Operations Centre at 1375 Upper Ottawa Street, Hamilton, deliver and install at the construction site at locations to be determined by the Project Manager.

Federal Gas Tax Funding signs shall be returned to the City of Hamilton's Traffic Operations Centre at 1375 Upper Ottawa Street, Hamilton.

74.04 Payment

74.04.01 Measurement for Payment

Measurement for payment shall be by each project sign installed.

74.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP76. SUPPLY AND INSTALL GUIDE RAIL

76.01 General

Guiderail shall be in accordance with OPSS.MUNI 721, OPSS 740, OPSS 1504, OPSS 1505 and this special provision.

76.02 Construction

To facilitate construction of the proposed works, the Contractor shall remove the existing steel beam guide rails, channels, posts, anchor blocks, anchoring systems, guide rail wires, end treatments, related hardware at locations specified in the Contract Drawings.

PLEASE NOTE: The Contractor shall carefully remove, store and reinstate any personal memorial / photographs / flowers / items as the guide rail or end treatments are being removed and reinstalled. The expectation is that these items will be reinstalled as the Work progresses daily, and if items are required to be stored, the Contractor will arrange to store in a safe dry location until reinstatement is possible. The City Project Manager will catalogue and photograph all locations prior to removals, in the event there is no Project Manager at the specific location, the Contractor is to photograph the location for confirmation.

Pending the exclusion note above, all other items shall be recycled if possible, or disposed, all included in the Unit Price Bid.

The Contractor shall supply and install new guide rail posts and install the new steel beam guide rails and all required signage as per Ontario Provincial Standards, Contract Drawings and Specifications:

Construction Specification for Steel Beam Guide Rail	OPSS 721
Material Specification for Steel Beam Guide Rail	OPSS 1504
Material Specification for Channel Components for Steel Beam Guide Rail	OPSS 1505
Steel Beam Guide Rail	OPSD 912.130
Steel Beam Guide Rail With Channel	OPSD 912.130
Type M20 Steel Beam Guide Rail	OPSD 912.185
Type M20 Steel Beam Guide Rail Adjacent to 2H:1V Slope	OPSD 912.186
Type M30 Steel Beam Guide Rail Adjacent to Concrete Curb	OPSD 912.188
Type M Transition Rail	OPSD 912.124
Type M Rail	OPSD 912.125
Steel Beam Plastic Offset Block	OPSD 912.127
Steel Beam Leaving End Treatment	OPSD 912.235
Type M Steel Beam Leaving End Treatment	OPSD 912.255
Type M Reduced Deflection Treatment Installation	OPSD 912.316
Structure Connection with Channel Termination	OPSD 912.430
Concrete Barrier Connection	OPSD 912.480
MASH Sequential Kinking Terminal (MSKT)	OPSD 922.186
SMART Crash Cushion (TL-3)	OPSD 923.482
TAU-II Crash Cushion	OPSD 923.382
QuadTrend Crash Cushion	OPSD 922.131

Steel Beam Guide Rail Post (Replace Damaged)	OPSD 912.104
Steel Beam Guide Rail Offset Block (Replace Damaged)	OPSD 912.103
Object Marker Sign (Wa-33L, 300 x 900 mm)	OPSD 912.257
Object Marker Sign (Wa-33R, 300 x 900 mm)	OPSD 912.257
Object Marker Sign (Wa-33LR, 450 x 900 mm)	OPSD 912.257
Oversize Plow Marker Sign (Wz-2, 250 x 250 mm)	OPSD 912.257
I-Flex 16 One Way DG I-Beam Hinged Guiderail Reflector 4X4, White –	OPSS 721
I-Flex 16 One Way DG I-Beam Hinged Guiderail Reflector 4X4, Yellow -	OPSS 721
I-Flex 16 Two Way DG I-Beam Hinged Guiderail Reflector 4X4, Yellow -	OPSS 721
PCBM 16 Two Way DG Hinged Barrier Reflector 4X4, White – (MUTCD)	OPSS 740
PCBM 16 Two Way DG Hinged Barrier Reflector 4X4, Yellow - (MUTCD)	OPSS 740
Post Mounted Delineator, White (Type A 125 x 125 mm)	OPSD 984.101
Post Mounted Delineator, Yellow (Type A, 125 x 125 mm)	OPSD 984.101

Prior to installation of new steel guide rail the Contractor shall backfill (with crushed Limestone Screenings) and compact to 95% standard proctor density the holes created from removal of existing posts.

Where damaged posts are being replaced with new posts and offset block assemblies, the Contractor shall remove, salvage, store and reinstall existing steel beam guide rails on the new posts.

Payment for steel beam guide rail Reduced Deflection Treatment shall be for all additional costs required to supply and install steel beam guide rail as per OPSD 912.316. For bridge pier locations, multiple piers for a bridge will be counted as one installation.

Successful Contractor is not to remove any more existing roadside protection than can be replaced within **(1) one** working day.

76.02.01 Install Object Marker Signs

As specified in the Contract drawings, the Contract shall include all labour, material and equipment necessary to remove any existing object marker signs and posts and supply and install object marker signs, including posts as per OPSD 984.201 and as identified on the Contract Drawings specific to guiderail installations

76.02.02 Install Oversize Plow Marker Signs

As specified in the Contract drawings, the Contract shall include all labour, material and equipment necessary to remove any existing plow marker signs and posts and to supply and install oversized plow marker signs, including posts as per OPSD 984.202 and as identified on the Contract Drawings specific to guiderail installations

76.02.03 Install I-Beam Hinged Guiderail Reflector

As specified in the Contract drawings, the Contract shall include all labour, material and equipment necessary to remove any existing guide rail reflectors and to supply and install hinged guiderail reflectors.

The Contractor shall reference OTM Book 11 and OTM Book 11 ‘Table 4’ for spacing of guiderail reflectors and installation of spacing shall be specified as per OTM and manufacturers installation guidelines. Spacing shall be reviewed with and approved by the Project Manager.

Hinged guiderail reflectors shall be fastened on steel posts as per Manufacturers installation guidelines, and anchored and secured with method that is approved by the manufacturer and full adherence to the environmental and temperature limitations of the adhesive or anchoring product.

76.02.04 Install Hinged Concrete Barrier Reflector

The work shall include all labour, material and equipment necessary to supply and install new hinged concrete barrier reflectors as specified in MUTCD.

The Contractor shall reference MUTCD and OPSS 740 for straightaways and curve spacing which specifies spacing a minimum of 60 m along mainline tangents, and 30 meters on ramp tangents.(Refer to Section 3F.04 Delineator Placement and Spacing). Installation shall be as specified and recommended by manufacturers’ installation guidelines. Spacing shall be reviewed with and approved by the Project Manager.

Hinged concrete barrier reflectors shall be fastened on the concrete barriers within the Project limits as per manufacturer’s installation guidelines, and anchored and secured with method that is approved by the Manufacturer and full adherence to the environmental and temperature limitations of the adhesive or anchoring product.

At no time shall any drilling or anchoring be conducted on the bridge structures unless specified by the Project Manager.

76.02.05 Install Post Mounted Delineator

The work shall include all labour, material and equipment necessary to supply and install new post mounted delineators as specified in OTM Book 11. The Contractor shall reference OTM Book 11 Section 4.3 for spacing post mounted delineators. Installation shall be as specified and recommended by manufactures guidelines.

Post mounted delineators are to be installed where concrete barriers and guiderails terminate, and installed along all straightaways and curves within the project limits.

For straightaways and areas along the mainline that do not have existing guiderails or concrete barriers, the Contractor shall use the OTM Book 11 spacing which

specifies spacing a minimum of 60 m along mainline tangents and as per Table 4 along horizontal curves. Spacing shall be reviewed with and approved by the Project Manager.

SP85. SILTATION CONTROL FENCING

85.01 General

Siltation control fencing shall be in accordance with OPSS 805 as amended by the Construction and Materials Specifications Manual and this special provision.

85.02 Construction

This item shall also include the supply, installation, maintenance and removal of silt fence required to prevent soil erosion and sediment from leaving the work area and entering nearby watercourses. All siltation control fencing shall be in accordance with OPSD 219.110.

The location and length of silt fence required shall be as shown on the Contract drawings and/or as directed by the project Manager.

85.03 Payment

85.03.01 Measurement for Payment

Measurement for payment shall be by horizontal linear metre.

85.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

SP89. TRAFFIC CONTROL

89.01 General

All traffic control shall be in accordance with the following:

- OPSS 706 as amended;
- Ministry of Transportation (MTO), Ontario Traffic Manual, Book 7 - Temporary Conditions;
- MTO Central Region Temporary Conditions – Traffic Management – Advance Notification, Advance Warning and Alternative Route Signing for Provincial Highways;
- Special Provision General - Traffic Requirements.

This item shall include all cost for coordination with the Ministry of Transportation (MTO), supply, placement and maintenance of all advance road closure warning signs,

road closure signs, detour signs and temporary conditions signage, as per the Traffic Management Plans (DT:TM-1 to DT:TM-6), and drawing 17-H-16 (PVMS). The exact location of signs will be determined at the time of Construction by the City. Contact Traffic Operations Construction Coordinator at 905-546-2424, extension 1889 to coordinate.

All traffic control on the Red Hill Valley Parkway, including ramp closures will be the responsibility of the Contractor.

The Contractor shall install and maintain all traffic control measures and devices that may be required to do the Work. All traffic control signage shall be manufactured, supplied, installed, maintained and removed by the Contractor.

The closure and re-opening of QEW Ramps will be the responsibility of the MTO or their representative. The Contractor shall coordinate with the MTO and the Freeway Traffic Management System COMPASS, all MTO ramp closures at least 1 week in advance of the closures. The Contractor shall pay for all cost associated with the closures and re-openings of QEW Ramps. The City will reimburse the Contractor for these charges out of the Cash Allowance Item provided in the Schedule of Prices. The Contractor must submit all MTO invoices to the City for reimbursement. There will be no mark-up permitted on these invoices.

89.03 Payment

89.03.01 Measurement for Payment

Measurement for payment for all traffic control and related temporary works shall be by lump sum.

89.03.02 Basis of Payment

This item shall apply to all traffic control for the entire project.

The supply, placement and maintenance Portable Variable Message Signs (PVMS) is covered under a separate Item.

Payment at the Lump Sum Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

The lump sum price will be pro-rated and paid in equal monthly instalments for the duration project, whenever there is active construction.

SP96. TRAFFIC SIGNAL INFRASTRUCTURE

96.01 General

The installation of traffic signal infrastructure shall be as shown on the drawings and as directed in the field.

96.02 Construction

Traffic components shall be installed in accordance with OPSS 602(MUNI), 603(MUNI), 616 and DT:0111-01 and DT:0111-02.

This item shall include all costs for all pavement sawcutting, trench excavation, trench wall stabilization and disposal of excavated materials, including asphalt, concrete road base.

These items shall also include all costs to excavate, remove and dispose of all existing traffic plant including, pole bases, concrete footings, ducts, handholes or any other plant no longer in use as a result of the proposed works. Excavation shall be backfilled with acceptable native material or Granular A and compacted.

The Contractor shall be responsible for protection of all existing underground traffic infrastructure that is not to be replaced. Any traffic infrastructure damaged by the Contractor shall be repaired and/or replaced at the Contractor's expense.

The Contractor shall supply all materials necessary unless specifically noted otherwise in the Schedule of Prices and/or on DT:0111-01 and/or on DT:01111-02. All works related to the traffic installations shall be subject to the review and approval by a representative of the City's Traffic Engineering or Traffic Operations sections.

Where utilities have works to co-ordinate with the work proposed in this Contract, it will be the Contractor's responsibility to schedule and co-ordinate their work in order to avoid delays.

Where proposed traffic ducts are to be connected to existing hydro chambers the Contractor shall schedule and co-ordinate the works to avoid delays.

96.03 Payment

96.03.01 Measurement for Payment

Measurement for payment shall be as defined in the Schedule of Prices.

96.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP101. SUPPLY AND INSTALL, REPLACE GUIDE RAIL END TREATMENTS

101.01 General

Guiderail shall be in accordance with OPSS 732 and this special provision.

101.02 Construction

The Contractor shall remove the existing steel beam guide rails, guide rail wires, end treatments and related hardware. All items removed shall be disposed of off-site by the Contractor.

The Contractor shall install additional guiderail posts, offset blocks, assemblies, transitions, leaving end treatments, concrete barrier connections and MASH sequential kinking terminals as specified in the Contract Drawings.

Successful Contractor is not to remove existing end treatments that cannot be replaced within **the same** working day.

101.02.01 Install End Treatments and Marker Signs

The work shall include all labour, material and equipment necessary to install a new MSKT Energy Attenuator, (MASH Sequential Kinking Terminal System), steel beam leaving end treatment, steel beam Type M20 and M30 leaving end treatment and all required signage as per OPSD 912.257, OPSD 984.201, OPSD 984.202, OPSD 922.186, OPSD 912.235, OPSD 912.255.

101.03 Payment

101.03.01 Measurement for Payment

Measurement for end treatment payment shall be per each complete end treatment system, excluding marker signs, installed.

Measurement for object marker sign payment shall be per each complete object marker and oversize reflector sign with post installed.

Measurement for plow marker sign payment shall be per each complete oversize reflector sign with post installed.

101.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP102. BAR CODING ON MATERIAL DELIVERY INVOICES

102.01 General

The Contractor shall supply delivery invoices with bar codes for each delivery of hot-mix asphalt and granular materials in accordance with OPSS 102 as amended by this special provision.

102.02 References

Section 102.02 is amended with the following:

- American National Standard for Materials Handling – Bar Code Symbols on Unit Loads and Transport Packages (ANSI MH10.8M-1983)

- The platform scale shall be equipped with a direct cable connection to the computer for the purpose of sending mass measurements.

- A printing device connected by direct cable connection to the computer shall be capable of electronically producing, in black ink only, tickets conforming to the requirements specified in this Special Provision.

102.03 Mass Measurements

OPSS 102.07.01 is deleted and replaced by the following:

The Contractor shall provide personnel to conduct the mass measurements. The mass measurements shall be sent to the printing device using a print command on the computer. Any form or override of the printing process, except total transaction rejection, will not be allowed.

The system shall be capable of detecting vehicle overloads, and of automatically signalling overload occurrence to the system operator.

Tickets shall be supplied by the Contractor. Bar codes shall be printed directly onto the weigh ticket or onto labels. Bar coded labels shall be affixed to the owner's copy of the ticket before it leaves the weigh scale building.

The following information shall be displayed as bar code groups printed in a column or left to right configuration:

- Truck Number

- Tare Weight

- Net Weight

- Ticket Number

The words "Truck", "Tare", "Net" and "Ticket" must appear beneath each appropriate bar code group.

Conventional alphanumerics shall be used elsewhere on the ticket to express the exact information contained in the bar codes.

Automated reading failure rates greater than one reading failure in twenty tickets scanned and attributable to the density or configuration of the bar codes are not acceptable. Where such rates of reading failure occur, the Contractor must take corrective action to enhance the bar code symbology to an acceptable level immediately following notification of the problem.

The bar code symbols shall conform to the American National Standard for Materials Handling – Bar Code Symbols on Unit Loads and Transport Packages (ANSI MH10.8M-1983) for 3 of 9 bar code (Code 39).

The minimum bar code height shall be shall be 6.4mm or 15 percent of the bar code length, whichever is greater.

In addition to the bar code group information, each weigh ticket shall contain the following:

- License plate number of Unit(s)
- time and date of transaction
- Truck Owner
- Contract Number
- type of material (for asphalt materials, the description shall include the ‘type of Superpave mix’, ‘traffic category’ and ‘PG AC Grade’)
- source of material
- gross weight
- overload notation
- running total of each material
- a place for the checker to sign

For each Contract, the following reports shall be produced daily:

- truck register, including allowable gross weight for all vehicles;
- truck tare report for all vehicles, including old and new tares, and time recorded;
- summaries for each type of material;
- summaries for all cancelled loads.

The above noted reports shall be available and delivered to the City at the end of each day.

A sample weigh ticket from each source must be supplied to the owner two weeks prior to the delivery of the material.

OPSS 102.07.04 is deleted and replaced by the following:

Weigh scales shall be open and available to Provincial Police Officers, and/or any other designated inspection staff commissioned by the City for the purpose of checking the mass loads of vehicles employed on this Contract.

Scale houses or trailers shall be accessible during normal Contract working hours so that weighing records may be examined.

102.04 Payment

102.04.01 Basis of Payment

OPSS 102.10.01 is hereby deleted and replaced with the following:

There will be no separate payment weighing of material. All costs to meet this requirement shall be included in the price(s) of the item(s) for the materials to be placed or the work to be done and shall be deemed to include full compensation for all labour, equipment and material required to carry out the weighing operation including any delay or inconvenience due to any checking or testing carried out by the City.

SP105. PAVEMENT MARKINGS

105.01 General

The Contractor shall supply pavement markings in accordance with OPSS 710, 1712, 1713, 1714, 1716, 1750, the Manual of Uniform Traffic Control Devices and this special provision.

The work of pavement marking includes: Traffic control plan, surface preparation, pre-marking and pavement marking application.

105.02 Material

The application of pavement marking materials shall conform to the following requirements and the manufacture’s recommendations.

Water-Borne Traffic Paint (OPSS 1716) shall be used between May 1 and October 15 where the pavement temperature is 10° C and above. Paint temperature shall be between 40° and 70° C.

Organic Solvent Based Traffic Paint (OPSS 1712) shall be used where the pavement surface temperature is below 10° C.

Durable (Extruded) Field Reacted Polymeric Material pavement markings (OPSS 1714) shall be used for:
(1) all directional arrow symbols,
(2) all 1-1 lane skips, and radius skips (100mm or 200mm)
(3) all railway crossings including crossing symbol and associated stop bars (2 x 300mm)
(4) all standard cross-walks, (100mm line wide)
(5) all stop bars, (300mm or 600mm wide)
(6) ladder style pedestrian cross-walks including bars (450mm wide at 450mm spacing) and outside lines (100mm wide),
(7) all bicycle facility symbols and longitudinal lines (100mm or 200mm), bicycle lane symbols, shared use lane symbols, diamond symbols, buffer hatching (100mm or 200mm), coloured longitudinal lines (100mm or 200mm), coloured areas (example: bike boxes), all cross-ride markings including elephant's feet (200mm x 200mm), arrows, pedestrian and bike symbols),
(8) all wording (example: 'ENDS' or 'BUS ONLY'),
(9) bicycle loop detection symbols,
(10) 'Yield to Pedestrian' lines (i.e. shark teeth), (600mm wide x 900mm long x 300mm space)
(11) reserved lane diamonds,

Durable (Spray) Field Reacted Polymeric Material pavement markings (OPSS 1714) (98:2 Ratio) shall be used for:
(1) Solid Line, Yellow (100mm wide)
(2) Dual (Double) Line, Yellow (100mm wide)
(3) Lane Line, Yellow Skip (100mm wide, 3m paint, 3m gap)
(4) Lane Line, Yellow Skip (100mm wide, 3m paint, 6m gap)
(5) Solid Line, White (100mm or 200mm wide)
(6) Lane Line, White Skip (100mm wide, 3m paint, 3m gap)
(7) Lane Line, White Skip (100mm wide, 3m paint, 6m gap)
(8) Lane Line, White Skip (100mm wide, 3m paint, 9m gap)
(9) Lane Line, White Skip (200mm wide, 3m paint, 3m gap)
(10) Lane Line, White Skip (200mm wide, 3m paint, 6m gap)

105.03 Equipment

105.03.01 Centre, Lane and Edge Lines

The paint and glass beads shall be applied with a self-propelled lane line marking machine(s). The unit(s) shall be capable of producing high quality markings with true edges free from variation. The unit shall have positive skip mechanism capable of painting one or three metre line segments with three, six or nine metre skips between lines and shall be capable of spraying at the full force required as soon as it is turned on and to remain at constant pressure to produce a uniform shade. The pressurized

application of drop-on glass beads will take place simultaneously and shall be uniformly applied.

When painting on Freeways when the road is not closed, the "follow" safety vehicle or vehicles shall meet Ministry of Labour of Ontario requirements with regard to signing, signalization, crash protection and positioning. There shall at all times be at least one safety vehicle behind the longitudinal line striping machine during the pavement marking operation.

The painting unit and "follow" vehicle(s) shall be equipped with a full complement of lights for safety and night time operation. The vehicles shall be equipped in accordance with the requirements in the Ontario Traffic Manual Book 7. Traffic Control Manual For Roadway Work Operations. A fluorescent red flag or warning light shall be installed on the end of the boom during painting operations.

The loading of paint into the unit shall take place on the property of the Contractor only. Where the loading or re-loading of paint is required on-site, it shall be done in a location and method that ensures that no paint can be spilled onto adjacent properties or enter any ditches or sewer systems. Contractor to ensure that a method of spill control is available at all times.

105.03.02 Transverse Markings

The unit(s) used to perform this work shall be relatively light, portable, fully self-contained and stand on a minimum of three (3) tires. The unit shall be capable of producing high quality markings with true edges free from variation from 76mm to 150mm wide. The unit shall have a minimum capacity of twenty-three (23) litres and a minimum bead capacity of 22.5 kilograms. The paint delivery to the surface shall be by means of a pneumatic system through a spray gun which is capable of applying drop-on glass beads simultaneously. The unit shall have a hand spray gun attachment with at least three (3)m of hose.

105.04 Construction

This item shall include all costs to supply and apply all required pavement markings and the reflectorizing drop-on glass beads as well as labour and necessary equipment.

Pavement markings shall include all lines and symbols including centre, edge, lane, other transverse lines, hatching, stop bars, crosswalks, arrows and any other markings as shown on the pavement marking drawings.

Where there is no Contract pavement marking drawing, pavement markings shall conform to OTM Book 11.

All paint lines and markings shall consist of 2 coats of White or Yellow colour, drop-on glass beads. Pavement markings to be in accordance with the Ontario Traffic

Manual, unless directed otherwise. All durable marking applications will include 1 coat, unless otherwise directed.

All roadways shall be pre-marked and painted as soon possible, weather permitting, after paving operations are complete. Prior to the placement of any pavement markings, the Contractor shall pre-mark the entire limits of the project as required. All pre-marking shall be in accordance with the paving marking drawings provided and approved by the Project Manager prior to the placement of any pavement markings.

All work to be done under this Contract shall be done to the satisfaction of the City. Inspectors are required to ensure the provisions of the Specifications are adhered to, especially regarding quality of workmanship and materials and establishing quantities of paint used to his satisfaction.

105.04.01 Traffic Control

In carrying out the work or any portion thereof, the convenience of the public must always be specifically considered and provided by the Contractor who must not obstruct any street, thoroughfare or sidewalk longer than is absolutely necessary in the opinion of the City.

Roadways shall not be left without temporary lane delineation (TC-54 barrels or temp pavement markings etc. or final markings. Traffic control shall be provided at all times during painting operations as per the Ontario Traffic Manual Book 7. Lane closures shall be used to minimize paint tracking and allow sufficient drying time.

The Contractor will be required to use traffic cones or barricades when applying all transverse pavement markings. The traffic cones shall be a minimum of 45 cm in height, have a solid conical shaped body and be fluorescent red or orange in colour with a 5 cm wide high intensity white/silver retro-reflective band within 8 cm from the top of the traffic cone. Barricades shall be black and orange striped, with retro-reflectivity in the orange portions.

Traffic Control offices(s) may also be required during the application of transversal pavement markings and ladder bar markings. The Contractor is to arrange for any Traffic Control required and all costs are the responsibility of the Contractor.

The Contractor will be responsible for the permanent repair to the line damaged if a vehicle drives over a wet line and will be responsible for the removal of all tracking.

105.04.02 Quality Control - Paint and Glass Beads

All traffic paint and drop-on glass beads shall conform to OPSS 1712, 1716, 1750 and the following:

All layout and line painting accuracy is to be +/- 0.1 metre and shall be conducted using automated line layout to achieve accurate spacing and length of the lines.

All traffic paint and beads supplied by the Contractor shall meet the Ministry of Transportation of Ontario (MTO) Designated Sources of Material Lists DSM# 5.85.40.

The Contractor shall provide a letter of compliance to the Project Manager prior to the start of any painting operations the manufacturer of the paint to confirm that the product meets the specification for traffic paint OPSS 1712, 1716 and specification for glass beads OPSS 1750.

The Contractor shall be responsible for providing the City with the following information regarding the paint and glass beads proposed for use:

- Name of Manufacturer
- Manufacturer's batch number
- MTO approval number

The Contractor, where requested, shall provide a sample of the paint of beads being applied. The Contractor will comply immediately with this request and supply a minimum of 1 litre of paint or 0.5 kg of beads.

In the event that any of the paint or glass beads used fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint those sections where the non-specified paint and glass beads from the same batch were applied.

105.04.03 Paint Thickness

Paint application shall produce a wet paint thickness of 15 Mils to 20 Mils and a dry thickness of 8 Mils to 10 Mils. The Contractor will permit regular measurement of paint thickness by City staff. When requested, the Contractor shall discontinue application of beads momentarily to allow the sampling of paint thickness.

In the event that the thickness of the paint fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint all areas painted from the last test to the time of testing on that day’s painting.

105.04.04 Bead Application

All painted lines shall have glass beads applied. The rate of glass beads is to be 0.7 kg. per litre of paint applied. Beads must be applied such that the beads are evenly distributed and cover at least 80% of the width of the line. In the event that the quantity or distribution of the glass beads fails to meet the specifications, the Contractor shall be responsible for the total cost to repaint those sections of the roads where the beads were improperly applied.

Beads are to be applied immediately after the paint. Beads are to be applied to the paint using a pressurized application for all longitudinal lines. Gravity application of

beads will only be accepted for transverse hatching, arrow and symbol paint. The use of premix beads will not be accepted.

105.04.05 Painted Line Dimensions

Standard lane, edge and centre lines, as well as crosswalk and hatching lines, are to be 100mm minimum to 115mm maximum in width. Lines narrower than 100mm will be repainted by the Contractor.

Lines wider than 115mm will be removed in accordance with the section entitled "Errors, Tracking and Corrections" and repainted. with the Contractor responsible for the total cost to repaint those sections of the road.

Where double width lines are required, all standards in the above paragraph shall be doubled. Spacing between the lines shall be 110mm, plus/minus 10mm.

The edge of the painted line shall be clean and straight. In the event the line edge quality deteriorates, the Contractor may be asked to cease application and make necessary repairs to restore the line edge quality.

Lane dividing lines are typically 3m painted, with a 6m space. Some special markings are 3m painted and 3m space or 1m painted, 1m space. The nominal 3m skips shall be 3.05m plus/minus 0.05m. Skips shorter than 3.00 m will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road.

Spacing shall be 6.10m plus/minus 0.10, Spaces greater than 6.10 m will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road, unless this was an existing pattern. Payment is based on a standard 3.05 skip, and no extra charges will be entertained for skips longer than 3.05m.

Stop bars are to be nominal 300mm. Stop bars narrower than 270mm will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those sections of the road. Payment is based on 3 standard 100mm lines for 300mm stop bars and 6 standard lines for 600mm stop bars. For 600mm stop bars, minimum width is 560mm.

Arrows are to be as per the Ontario Traffic Manual Book 11, figure 53. Beads are required on arrows. 80% bead coverage is the minimum acceptable. Improperly painted arrows will be repainted by the Contractor, with the Contractor responsible for the total cost to repaint those arrows.

105.04.06 Errors and Tracking

The Contractor shall be responsible for the corrections of any errors or tracking. All errors and tracking must be permanently corrected (removal of error and repainting of line) within two business days. All corrections must be by means of soda blasting, water blasting or sand blasting. A rotary grinder shall not be used. The use of black-out paint

or stripalene as a method of correction will not be permitted. All debris from any form of removal must be properly removed and disposed of in accordance with the Ministry of the Environment regulations.

105.04.07 Removal of Existing Pavement Markings

Where removal of existing pavement markings is required, the Contractor is responsible to remove and properly and legally dispose of all debris and surplus material accumulated at the site. When requested, the Contractor shall provide a photocopy of the original Certificate of Approval from a waste management company and a bonafide photocopy of the original Certificate of Approval from the place of disposal for all debris and surplus material to be disposed of by the Contractor under this Contract.

The method of removal must not cause any of the following conditions;

- permanent scarring of the road surface;
- any dishing or gouging;
- not remove large aggregates and fines;
- affect structural integrity of top asphalt layer.

Work shall include all clean-up. Existing pavement markings may consist of paint and/or various forms of Durable. Contractor may contact the City of Hamilton Traffic Operations if they wish to examine samples of materials to be removed.

The method of removal shall be pressurized spray. Grinding, etching, or other non-pressurized spray methods is not permitted. For pressurized spray, no specific media is required.

Bidders must specify the media which they intend to use in the line removal process prior to any removals. Environmentally friendly products are preferred. Where sand is used, only non-silica sand shall be permitted.

The pressurized spray shall have dust suppressed sufficiently to control dust.

All lines to be removed will be within the travelled roadway.

Contractor shall maintain vehicular traffic in all directions on roads where removals are taking place. Full road closures shall not be permitted to facilitate line removal.

105.05 Payment

105.05.01 Measurement for Payment – Linear Metre

Measurement for payment shall be based as specified in the Schedule of Prices.

When measurement for payment is in linear metres, it will be the linear metre of painted areas, excluding gaps. Measurements will be to the nearest 1 metre for transverse markings and the nearest 5m for longitudinal markings.

Payment for arrows shall be based on the number of arrows painted, with one arrow being defined as one stem. Multiple arrow heads on a single stem will be defined as a single arrow.

The City will provide a Pavement Marking Plan to the Contractor prior to the start of paving operations.

105.05.03 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP106. SUPPLY INSURANCE AND PERFORMANCE, LABOUR AND MATERIALS PAYMENT BONDS

106.01 Insurance Requirements

The Successful Bidder shall, after award of the Contract, provide insurance certificates in accordance with General Conditions Form 200.03 Contactor's Responsibility to Third Parties, and in accordance with the amendments to the following section(s):

.03.07 Builders Risk

Not applicable.

.03.10 Pollution Liability Insurance

The Contractor shall provide Contractors Pollution Liability Insurance covering the Contractor's liability for bodily injury, property damage and environmental damage resulting from pollution and related cleanup costs incurred, all arising out of the work or services to be performed under this Contract by or on behalf of the Contractor in an amount of not less than $2,000,000 per claim or per occurrence, which coverage shall be maintained in force for 12 months following the termination of this Contract. Coverage shall be provided for both work performed on site, as well as during the transport of any hazardous materials if applicable. City of Hamilton shall be named as an additional insured.

106.02 Performance, Labour and Materials Payment Bonds

The Successful Bidder shall, after award of the Contract, provide the City with a performance bond and a labour and materials payment bond as specified in General Conditions Form 200.03.01 Performance and Other Security as amended.

106.03 Payment

Payment of this item shall be made on the first Payment Certificate. Where requested, the Contractor shall supply detailed invoicing from the surety outlining the premium cost breakdown.

106.03.01 Measurement for Payment

Measurement for payment shall be by lump sum.

106.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation to supply the required bonds for the duration of the Contract.

SP108. TRAFFIC DETECTION LOOPS

108.01 General

The Contractor shall contact the Project Manager a minimum of 72 hours prior to working in the areas affecting loops. The Contractor shall schedule and co-ordinate the loop installation with the paving and pavement marking installation.

Where applicable, the cost of all repairs to the existing shoulders, sod and curbs damaged in the installation shall also be included.

108.02 Construction

108.02.01 Red Light Camera Loops

In addition to all other requirements in SP96, loops installed for Red Light Cameras also include the following requirements:

Red light camera loops will only be placed in the final course of asphalt. Slots must be approximately 5mm wide and 60mm deep. The depth must not vary by more than +/- 10mm. A minimum of 300mm must be maintained from metal objects embedded in the roadway. When the circumference of the loop window is greater than 9m, 3 turns shall be used. For loop windows with a circumference of less than 9m, 4 turns shall be used.

108.02.02 Loop Layout

With the exception of Red Light Camera loops, all loops shall be placed in the binder course of asphalt as directed by the Project Manager. The location of loops placed in the binder course of asphalt shall be marked by the Project Manager and Contractor, and approximate locations have been identified on the Contract drawings.

The Contractor shall accurately lay out the loops on the pavement to the dimensions indicated in the contract. Saw-cutting of slots shall not commence until the Project Manager has inspected and approved the loop layout.

The Contractor shall as part of this Contract, install 1.8 m x 1.8 m diamond loops in pairs per lane, wiring shall have four (4) turns in each diamond loop. Sets of diamond loops shall be spaced fire (5) meters apart along each travelled lane. As per Contract drawing DT:-0111-01, the Contractor shall use #14 AWG cable for the specified loops on the Red Hill Valley Parkway.

The total locations have been identified below:

1. NB and SB between the Greenhill On-ramp and the beginning of the curve near the railway (5 lanes total – 10 pulse/diamond loops)
2. SB approximately halfway between the Queenston On-ramp and King Off-ramp (3 lanes total – 6 pulse/diamond loops)
3. NB and SB approximately 400 m north of the Mud Street overpass (5 lanes total – 10 pulse/diamond loops)
4. NB and SB approximately 175 m North of the Queenston Road overpass (4 lanes total – 8 pulse/diamond loops)

As part of the installation the Contractor shall provide the necessary wiring, rigid conduits, necessary ducting and hand wells to store wiring for future use and integration. The Contractor is to provide hand wells in one shoulder specified on-site by the City's Project Manager.

The Contractor shall report any instance where the layout of a loop crosses a major pavement crack, butt, expansion joint or transition area. In such instances, the loop shall be re-marked into separate loops, each commencing approximately 300mm away from the irregularity.

108.02.03 Work Requiring Replacement of Existing Loop Detectors

Prior to commencing milling operation, the Contractor must verify the locations of all existing loop detectors and cables.

Prior to commencement of any pavement milling operations the Contractor will disconnect the existing loop detector cables from the loop home-run cables at the roadside electrical chamber. Any damage to the loop home-run cables or sensor units in the cabinets resulting from failure to disconnect the cables shall be rectified to the original conditions by City staff at the contractor's expense.

The Contractor shall locate, label and cap the home-run cables in the maintenance holes prior to the milling operation.

108.02.04 Loop Cable

The loop shall be installed with the size, winding direction, configurations, number of turns and type of cables as indicated in the Contract drawing DT:-0111-01, TR.-8.01, TR.-8.02, and MTOD – 2950.020

The loop cable end which progresses clockwise shall be marked at the splice point with two bands of electrical vinyl tape.

Cable in slots shall be firmly and carefully tamped in place using a blunt instrument on each successive turn of cable. Cables shall be held in place, to prevent floating, using 25mm lengths of foam backer rod at 600mm centres.

Where it is deemed necessary by the Project Manager for cables to be installed in slots crossing pavement irregularities, all cables shall be installed through split neoprene tubing.

Loop cables between the loop and the splice point, including those in the slot, shall be twisted together to form a consistent lay of 10 turns per metre. The entire loop shall be formed of a continuous length of wire without splices.

The Contractor shall identify each loop with a permanent vinyl sleeve wire marker at the splice point.

108.02.05 Installation of Rigid PVC Duct with Flexible Duct End

A hole shall be drilled through the pavement to accommodate a rigid PVC duct complete with flexible duct end at the location indicated in the Contract.

Where required, the rigid PVC conduits shall be installed as indicated in the Contract by excavation of the shoulder, backfill and compaction with Granular 'A' and restoration of the shoulder pavement.

108.02.06 Sealant

Sealing compound shall be installed in slots as protection for loop cables.

Cold pumped compounds shall be installed using a pressure pump or cartridge gun conforming to the manufacturer's instruction.

The sealing compound shall be allowed to set conforming to the manufacturer's instruction prior to allowing vehicles to cross the loop. Cement dust may be added to tacky sealant where necessary.

Please Note: The Contractor shall install loop wires into the base course of asphalt, and no placement or saw cutting is permitted to be made into the top course of asphalt. No traffic is allowed over the area until the installation is complete and the sealant has hardened in accordance with the manufacturer's instructions.

Further to item 7(b) of DT:0111-01, loop sealant for installation in binder course of asphalt shall be:

- Chemque Canada Ltd. Q-Seal 295S, or approved equal, where ambient temperature at the time of loop installation and curing is at or above 18º Celsius (65º Fahrenheit) and rising.

- o Chemque Canada Ltd. Q-Seal 295M, or approved equal, where ambient temperature at the time of loop installation and curing is below 18º Celsius (65º Fahrenheit).

108.02.07 Disconnection/Reconnection of Existing Loops

When milling work will impact loop detectors and cables that lead to loop detectors, these cables and loops shall be disconnected at the roadside electrical chambers prior to milling operations. Milling shall be to the full width of the pavement in the loop detector location. Upon reinstallation, the cables and loops shall be reconnected by City staff.

108.02.08 Proof of Performance Testing

Testing of loops shall be done at the roadside chamber prior to sealing the slots and prior to the installation of the surface course.

The Contractor shall carry out testing to ensure that the detector loops perform to the specified standards as shown on the sample Detection Loop Test Record document. A copy of the document can be requested from Traffic Signal Systems at 330 Wentworth Street North. Copies of the Detection Loop Test Record document will be provided to the Contractor. One document shall be completed for each loop installation. All test records will be forwarded to the Project Manager immediately upon completion of the loop installations.

Loop installations must meet the specified test results prior to sealing the slots and installation of the surface course.

108.03 Payment

108.03.01 Measurement for Payment

Measurement for payment shall be by linear metre of saw-cutting.

108.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

SP109. CATCH BASIN SEDIMENT TRAPS

109.01 General

The Contractor shall be responsible for the installation of sediment traps inside catch basins as shown on the Contract drawings or as directed.

109.02 Materials

The catch basin sediment trap shall be a product specifically designed for this purpose. It shall incorporate a heavy duty geotextile material that is adequately supported and designed to fit inside the catch basin. No gaps or openings that allow sedimentation to flow past shall be permitted.

Siltsack® by Terrafix or approved equivalent shall be used.

109.03 Construction

Catch basin sediment traps shall be installed prior to the start of grading, excavation or any work where silt may enter into the catch basin. Contractor shall supply, install maintain and remove sediment traps as required.

Sediment that is accumulated in the trap shall be removed on a regular basis and immediately prior to the removal of the trap. Damaged sediment traps shall be replaced immediately. Removal of accumulated silt shall be done in a manner that avoids escape of the sediment into the catch basin. All accumulated sediment shall be removed and disposed of by the Contractor.

109.04 Payment

Payment of this item shall be made for each catch basin sediment trap installed.

109.04.01 Measurement for Payment

Measurement for payment shall by each.

109.04.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

SP115 ELECTRONIC PORTABLE VARIABLE MESSAGE BOARD (PVMS)

115.01 Scope

For the duration of the Contract, the Contractor shall install, maintain, remove and relocate as required, electronic PVMS to provide up to date information of closures and construction progress.

The Contractor shall place the electronic PVMS (Midsize 1.6m x 2.5m) at the locations shown in drawing 17-H-16 (PVMS). The exact installation location will be determined by Traffic Operations.
Contact Bob Butrym at 905-546-2424 extension 1889.

The timing for the installation of PVMS will be determined during the mandatory traffic coordination meeting.

115.02 Installation

Electronic PVMS shall be installed a minimum of one (1) week prior to construction and shall be maintained at all times during construction by the Contractor. The PVMS shall be used for advanced warning and information in advance of the start of Construction. Wording of the message board will be provided by the City.

115.03 Payment

115.03.01 Measurement for Payment

Measurement for payment shall be per each electronic portable message sign. The price per each PVMS will be pro-rated and paid in equal monthly instalments for the duration project.

115.03.02 Basis for Payment

Payment at the Unit Price Bid shall include all costs for labour, materials and equipment required to complete this work.

SP119 RUMBLE STRIPS

119.01 General

This special provision covers the requirements for the grinding of the Rumble Strips into the surface course of fully or partially paved, asphalt shoulders.

The Rumble strips shall be placed along the shoulders of the roadway in accordance with Ministry of Transportation Ontario's standard drawings MTOD 503.020 and MTOD 503.021.

119.02 Construction

This item shall include all costs associated with the grinding of rumble strips into the surface course asphalt along the shoulders of the proposed road. This work is to be completed only by a competent Contractor familiar with the Ministry of Transportation Ontario's method of rumble strip construction.

Rumble strips shall be ground in the paved shoulders using a rotary type cutting head capable of producing a smooth surface to the lines and dimensions shown in the drawings.

The Rumble Strips shall be placed after the final pavement markings have been placed. The pavement surface shall be cleaned and all debris shall be disposed of before and after construction of the rumble strips.

Rumble strips shall not be placed on bridge decks, and within 200mm of routed and filled transverse joints.

119.03 Payment

119.03.01 Measurement for Payment

Measurement for payment shall be by the linear metre of the paved shoulder in which the Rumble Strip has been placed.

119.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, Equipment and material to do the work.

Payment will not be made for the removal and replacement of any rejected asphalt shoulders or Rumble Strips.

Any damage to the final pavement markings shall be repaired as per OPSS 710 at no cost to the City. Payment will not be made for final pavement markings in shoulders that are rejected.

SP120 SEALING OF BRIDGE EXPANSION JOINTS

120.0 General

This item shall include all cost for all labour, materials and equipment for the sealing of the bridge expansion joints with the surface course asphalt using Denso Band Hot Asphalt Joint Sealing Compound and Primer (or approved equivalent).

Contractor shall install the **15mm (T)** x **50mm (W)** Denso Band (or approved equivalent) as per the manufacturer's installation instructions.

Denso Contact Information:
90 Ironside Crescent,
Unit 12,
Toronto, Ontario,
M1Z 1M3
Phone: 416-291-3435 FAX: 416-291-0898

120.01 Payment

120.01.01 Measurement for Payment

Measurement for payment shall be by the horizontal linear metre.

120.01.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP121 REMOVAL AND DISPOSAL OF CONCRETE BLOCKS

121.0 General

This item shall include all cost for all labour, materials and equipment to remove and dispose the existing concrete blocks as noted on drawing 17-H-16 (GR12).

121.01 Payment

121.01.01 Measurement for Payment

Measurement for payment shall be by per each block removed and disposed.

121.01.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.

SP130. CONSTRUCT CONCRETE BARRIER WALL

130.01 General

This Item shall include all cost for all labour, materials and equipment to remove and dispose damaged concrete barrier wall, and replace the same with poured in place concrete barrier wall in accordance with OPSD 911.130, OPSD 911.382 and OPSS 740 as amended by this Special Provision.

130.02 Construction

This Item shall include all costs to:

- Saw-cut, remove and dispose of all existing materials including but not limited to existing concrete, granular and earth materials.
- supply and place and compact any required granular A material and concrete.
- construction of the proposed concrete barrier wall in accordance with OPSD 911.130 Type A, at the location shown on the drawings and as determined by the Project Manager.
- Supply and installation of dowel bars in accordance with OPSD 911.382
- road repair adjacent to curb in accordance with SP36

- seed restoration including 150mm topsoil in accordance with SP66

This item shall include all costs for the supply, placement and compaction of Granular base material as required to create a flat surface for the proposed barrier wall construction.

130.03 Payment

130.03.01 Measurement for Payment

Measurement for payment shall be as specified in the Schedule of Prices.

130.03.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and Material to do the work.

SP800. TOPSOIL

800.01 General

This item shall include all cost for all labour, materials and equipment to supply and place topsoil as specified in the Contract documents, in accordance with OPSS 802.

The Contractor shall make topsoil available at source to the Project Manager for inspection. All topsoil shall be subject to Project Manager's approval before use on job site.

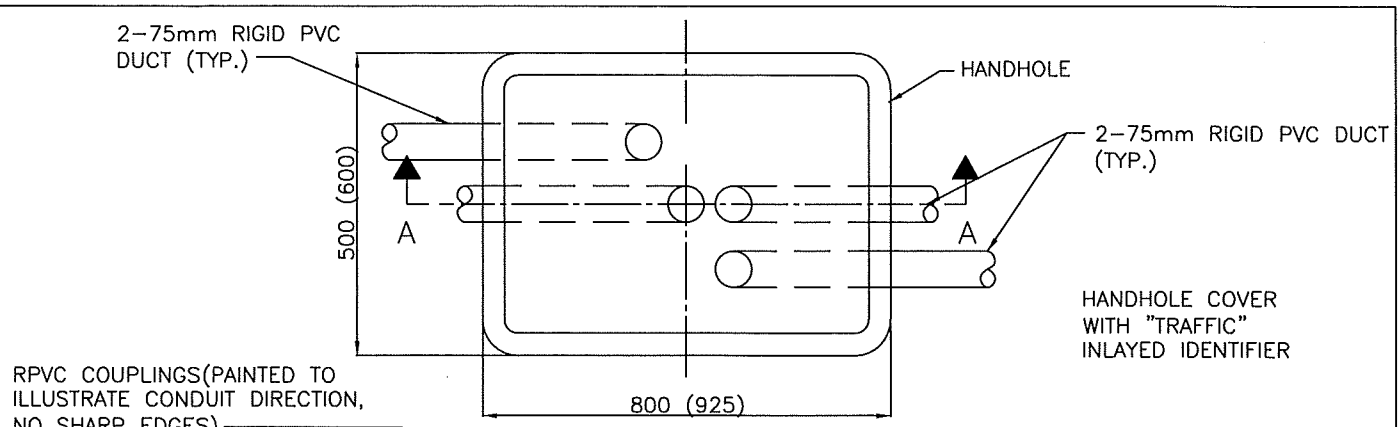
800.02 Payment

800.02.01 Measurement for Payment

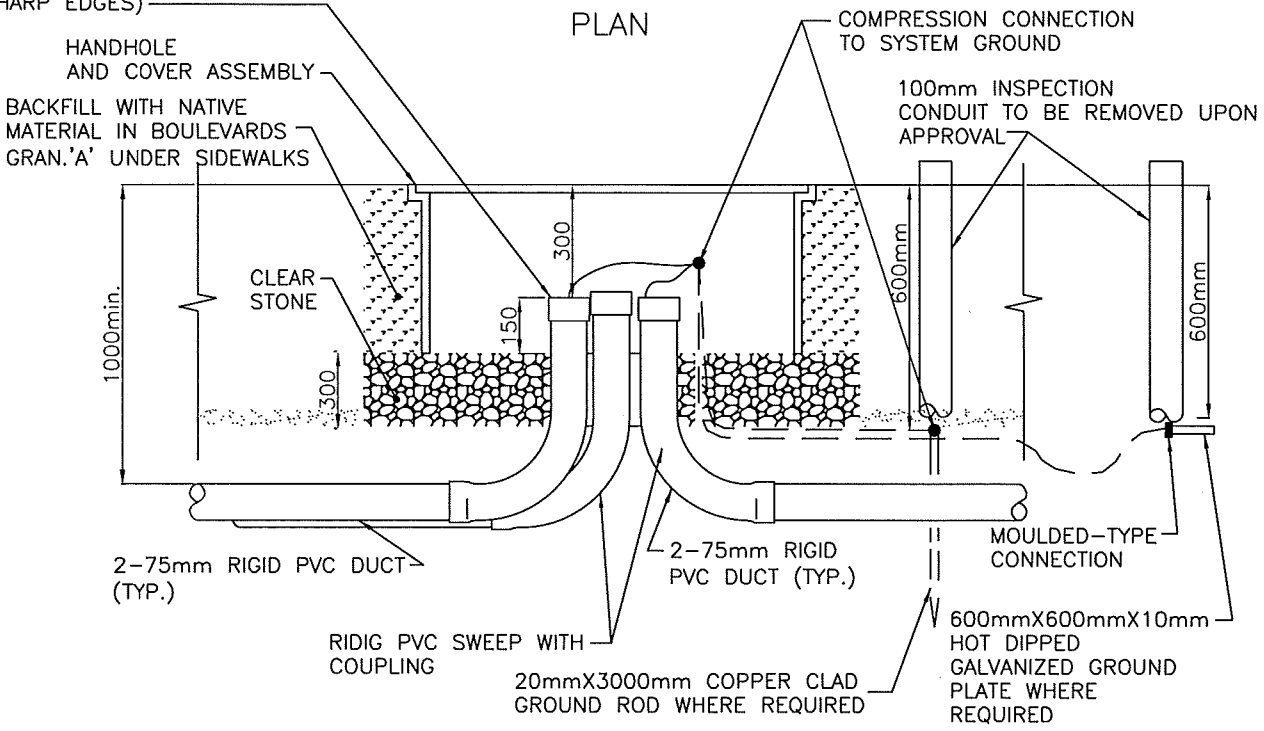
Measurement for payment shall be in cubic metres.

800.02.02 Basis of Payment

Payment at the Unit Price Bid for the above tender items shall be full compensation for all labour, equipment and material to do the work.



PLAN



SECTION A–A

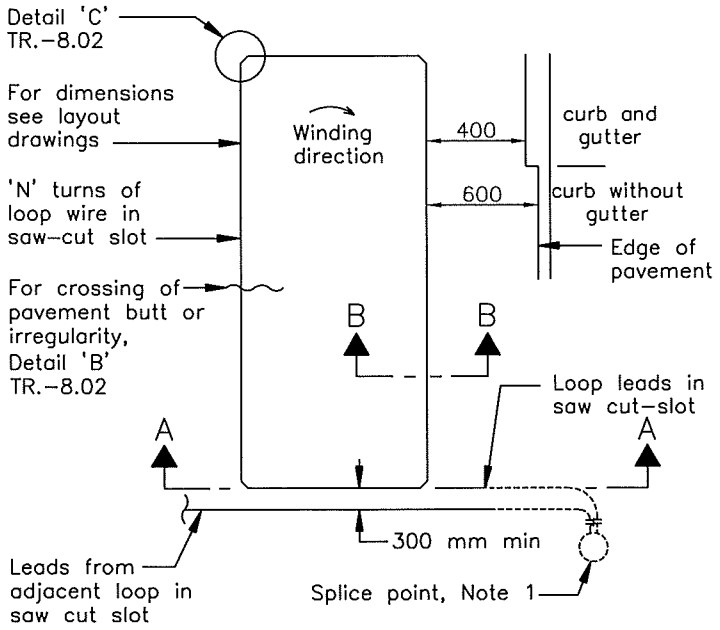
NOTES:

1. TOP OF HANDHOLE SHALL BE LEVEL TO CONFORM TO FINISHED GRADE.
2. ALL DUCTS USED IN OPEN CUT INSTALLATION TO BE RIGID PVC CONDUITS.
3. END OF ALL DUCTS MUST BE CAPPED UNTIL WIRES PULLED.
4. BACKFILL UNDER ROAD AND IN ISLAND TO BE GRANULAR.
5. 300mm OF CLEAR DRAINAGE STONE SHALL BE USED UNDER HAND ASSEMBLIES.
6. ALL DUCTS MUST BE FREE AND CLEAR OF ALL DEBRIS AND OBSTRUCTIONS (DIRT, STONE, ETC.)
7. CONTRACTOR TO SUPPLY AND PLACE 5mm POLYPROPYLENE FISH ROPE IN ALL DUCTS.
8. CONTRACTOR TO SUPPLY AND INSTALL GROUND ROD OR PLATE AND CONNECTOR AT ALL NEW HANDHOLES WHERE INDICATED IN CONTRACT.
9. END OF ALL DUCTS MUST HAVE RPVC COUPLINGS INSTALLED.
10. 100mm INSPECTION CONDUIT REQUIRED FOR GROUND ROD OR PLATE CONNECTION OUTSIDE OF HANDHOLE.
11. HANDHOLES AND COVERS SHALL MEET ANSI/SCTE77–2013 TIER 15 LOAD RATING.
12. ALL HANDHOLES SHALL HAVE SELF TAPPING STAINLESS STEEL HEX BOLTS WITH WASHERS AND GROMMETS.

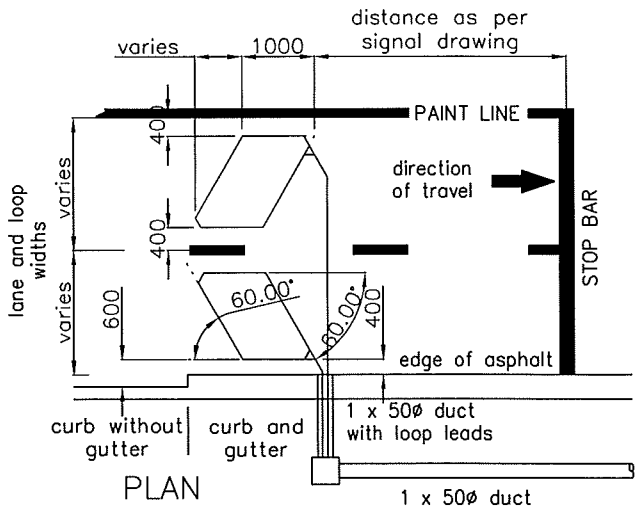
CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT – TRAFFIC

PREFABRICATED HANDHOLE INSTALLATION DETAILS

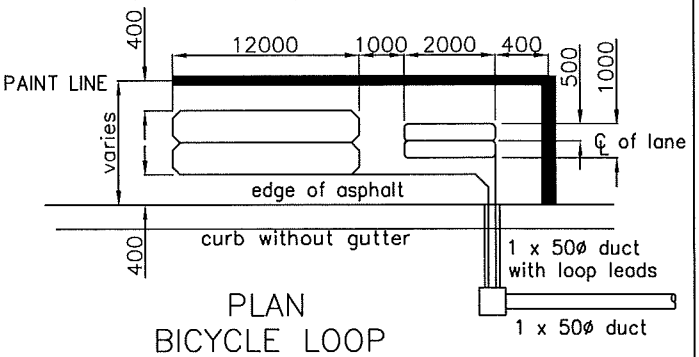
DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED (N.T.S)	DATE OCT 17/18	REV No		HAMILTON STD No TR.-1.05



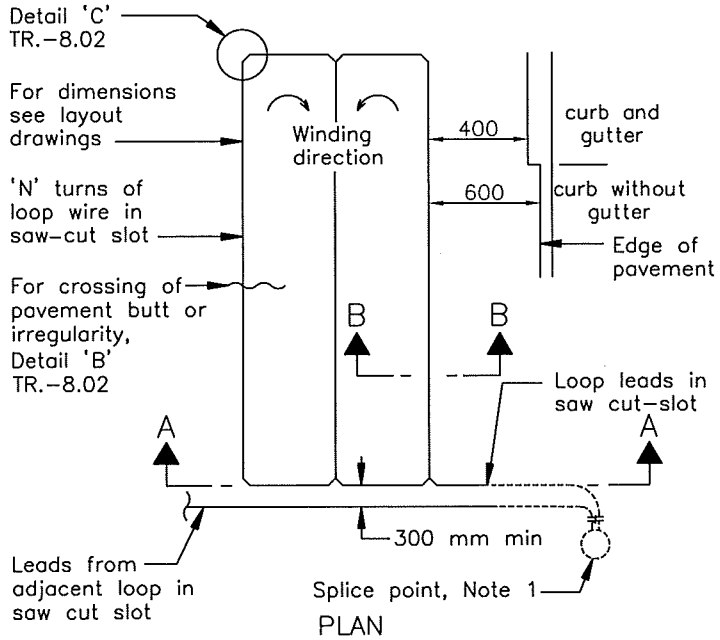
PLAN
DIPOLE LOOP
(3 TURNS TYP.)



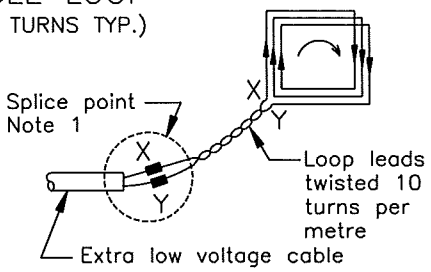
PLAN
PULSE LOOP
(3 TURNS TYP.)



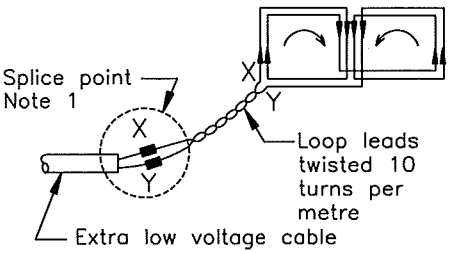
PLAN
BICYCLE LOOP
(2–4–2 TURNS TYP.)



PLAN
QUAD LOOP



DIPOLE LOOP
CONNECTIONS



QUAD LOOP
CONNECTIONS

NOTES:

1 For location of junction box, manhole or pole splice, refer to layout drawings.

A For sections A–A & B–B, refer to TR.–8.02.

B For splice to extra low voltage cable, refer to TR.–8.03.

C Vehicle presence loops and bicycle loops–Number of turns 2–4–2

D All loops to located in centre of lane.

CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT – TRAFFIC

LOOP DETECTOR INSTALLATION

DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED (N.T.S)	DATE OCT 17/18	REV No		HAMILTON STD No TR.-8.01

C15-20-19 (H) - Tender for Red Hill Valley Parkway Resurfacing

Opening Date: March 15, 2019 8:00 AM

Closing Date: April 8, 2019 3:00 PM

***** *IMPORTANT* *****

Bidders are advised to review and confirm their bids&tenders™ vendor account is set up in the bidder's correct LEGAL name.

This name must exactly match the name on all documentation required of the Successful Bidder, eg; insurance certificate, WSIB certificate.

Schedule of Prices

* Denotes a "**MANDATORY"** field

Do not enter $0.00 dollars unless you are providing the line item at zero dollars to the City of Hamilton (unless otherwise specified).

If the line item and/or table is "**NON-MANDATORY**" and you are not bidding on it, leave the table and/or line item blank. Do not enter a $0.00 dollar value.

Section A - General

Item No.	Spec No.	Category	Description	Unit of Measure	Estimated Quantity	Unit Price *	Extended Price
A.1	SP106	General	Supply Insurance and Performance, Labour and Materials Payment Bonds.	lump sum	1		
A.2	SP89	General	Traffic Control.	lump sum	1		
						Subtotal:	

Section B - Road Resurfacing

Item No.	Spec No.	Category	Description	Unit of Measure	Estimated Quantity	Unit Price *	Extended Price
B.1	SP34	Pre and post construction Profilograph	Surface Smoothness Assessment to establish and confirm areas of dip repairs.	lump sum	1		
B.2	SP74	Project sign board	Install Project sign board.	each	4		
B.3	SP74	Project sign board	Install "Federal Gas Tax Fund" sign board.	each	4		
B.4	SP115	Portable Electronic Message Board	Supply, install and maintain 1.6m x 2.5m electronic Portable Electronic Message Boards (PVMS) for the duration of the project. See 17-H-16 (PVMS).	each	16		
B.5	SP85	Silt Fence	Supply and install siltation control fencing - OPSD 219.110. (Provisional)	linear metre	40		
B.6	SP47	Replace existing frame and covers	Sewer manholes, OPSD 401.010. (Provisional)	each	3		
B.7	SP47	Replace existing frame and covers	Catch basins, OPSD 400.100. (Provisional)	each	10		
B.8	SP45 SP36	Adjustments	Maintenance holes by standard method, including road restoration.	each	5		
B.9	SP45 SP36 SP54 SP66	Adjustments	Catch basins by standard method, including curb repairs, road restoration, and grass seeding (Provisional).	each	15		
B.10	SP109	Sediment Traps	Install Catch basin sediment traps.	each	101		
B.11	SP54 SP36 SP66	Concrete Curb	Construct concrete barrier curb with Standard Gutter, OPSD 600.040, including asphalt repair adjacent to curb, and top soil and seed restoration. (Provisional)	linear metre	50		
B.12	SP35 SP37	Dip Repairs	Mill existing surface course asphalt in dip repair areas (average 40mm deep).	square metre	5500		
B.13	SP35 SP41	Dip repairs	Tack coat dip repair areas.	square metre	5500		

B.14	SP35 SP42 SP102	Dip repairs	Supply and place asphalt in dip repair areas to re-establish a smooth rideable surface, average 70mm thick, Superpave 12.5 FC2, (Traffic Category D), PG 58V-28 asphalt cement. All paving to be done during the day.	tonne	1050		
B.15	SP39	Plane	Plane/mill asphalt over pavement at ramps.	linear metre	545		
B.16	SP35 SP37	Milling	Mill existing surface course asphalt in dip repair areas (average 50mm deep).	square metre	292320		
B.17	SP41	Tack Coat	Tack coat.	square metre	292320		
B.18	SP42 SP102	Asphalt	Supply and place Superpave 12.5 FC2, (Traffic Category D), PG 58V-28 asphalt cement, 50mm thick. All paving to be done during the day.	tonne	39900		
B.19	SP42 SP102	Asphalt	Costs for paving using an Asphalt Material Transfer Vehicle.	tonne	39900		
B.20	SP120	Sealing of bridge expansion joints	Seal bridge expansion joints in surface coarse asphalt using Denso Band Hot Asphalt Joint Sealing Compound or approved equivalent.	linear metre	325		
B.21	SP119	Rumble Strips	Rumble Strips along shoulders (main line only), MTOD 503.020 and MTOD 503.021.	linear metre	19770		
						Subtotal:	

Section C - Pavment Markings

Item No.	Spec No.	Category	Description	Unit of Measure	Estimated Quantity	Unit Price *	Extended Price
C.1	SP105	Pavement Markings	Longitudinal Yellow (SPRAY ON DURABLE) - solid, 10 cm.	linear metre	21600		
C.2	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - solid, 10 cm.	linear metre	13750		
C.3	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - solid, 20 cm.	linear metre	12100		
C.4	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - 3/9 skip, 10 cm.	linear metre	4150		
C.5	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - 3/3 skip, 20 cm.	linear metre	2800		
C.6	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - 3/6 skip, 10 cm.	linear metre	780		
C.7	SP105	Pavement Markings	Stop bars (SPRAY ON DURABLE) - white, 60 cm.	linear metre	102		
C.8	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - 1/1 skip, 10 cm	linear metre	26		
C.9	SP105	Pavement Markings	Longitudinal White (SPRAY ON DURABLE) - 3/3 skip, 10 cm	linear metre	550		
C.10	SP105	Pavement Markings	Transverse White (SPRAY ON DURABLE) - 0.5m Long, 30 cm.	linear metre	10		
C.11	SP105	Pavement Markings	Arrows LEFT or RIGHT - White.	each	55		
C.12	SP105	Pavement Markings	Arrows STRAIGHT - White.	each	3		
C.13	SP105	Pavement Markings	Arrows STRAIGHT with RIGHT - White.	each	18		
C.14	SP105	Pavement Markings	Arrows Combined RIGHT with LEFT - White.	each	3		
						Subtotal:	

Section D - Guiderails

Item No.	Spec No.	Category	Description	Unit of Measure	Estimated Quantity	Unit Price *	Extended Price
D.1	SP76	Guide Rail	Steel Beam Guide Rail removal, complete, including guide rail posts, end treatments and marker signs & posts (all types).	linear metre	7600		
D.2	SP76	Guide Rail	Remove and replace existing damaged Guide Rail Posts including Offset Block Assemblies and the removal, salvaging and reinstallation of existing Guide Rail on new posts as per OPSD 912.130, OPSD 912.104.	each	10		
D.3	SP76	Guide Rail	Remove and replace existing damaged Guide Rail Offset Block Assemblies only OPSD 912.130, OPSD 912.104.	each	4		
D.4	SP76	Guide Rail	Remove and replace existing damaged Guide Rail including Offset Block Assemblies OPSD 912.130, OPSD 912.104.	linear metre	262		
D.5	SP76	Guide Rail	Install additional post for approach to concrete barrier to match spacing as per OPSD 912.480.	lump sum	1		
D.6	SP130	Concrete Barrier	Remove and replace existing damaged cast-in-place Concrete Barrier (Type A) including saw-cutting and dowels OPSD 911.130, OPSD 911.382.	linear metre	10		
D.7	SP76	Guide Rail	Install Steel Beam Guide Rail, complete, as per OPSD 912.130.	linear metre	84		
D.8	SP76	Guide Rail	Install Steel Beam Guide Rail with channel, complete, as per OPSD 912.130.	linear metre	202		
D.9	SP76	Guide Rail	Install Type M20 Steel Beam Guide Rail, complete, as per OPSD 912.185.	linear metre	5450		
D.10	SP76	Guide Rail	Install Type M20 Steel Beam Guide Rail adjacent to 2H:1V slope, complete, as per OPSD 912.186.	linear metre	38		
D.11	SP76	Guide Rail	Install Type M30 Steel Beam Guide Rail adjacent to concrete curb, complete, as per OPSD 912.188.	linear metre	1950		
D.12	SP76	Guide Rail	Install Type M transition rail OPSD 912.124.	each	86		
D.13	SP101	Guide Rail	Supply and install Steel Beam Guide Rail Leaving End Treatment OPSD 912.235.	each	1		
D.14	SP101	Guide Rail	Supply and install Type M Steel Beam Guide Rail Leaving End Treatment OPSD 912.255.	each	55		
D.15	SP76	Guide Rail	Supply and install Type M Steel Beam Guide Rail Reduced Deflection Treatment Installation OPSD 912.316.	each	18		
D.16	SP76	Guide Rail	Supply and install Structure Connection with Channel Termination including removal of Existing OPSD 912.430.	each	13		
D.17	SP76	Guide Rail	Supply and install Concrete Barrier Connection OPSD 912.480.	each	4		
D.18	SP101	Guide Rail	Supply and install MASH Sequential Kinking Terminal (MSKT) OPSD 922.186.	each	63		

D.19	SP76 SP101	Signs	Supply and install Object Marker Signs (Wa-33L, 300 x 900 mm and Wz-2, 250 x 250 mm), including post OPSD 984.201.	each	44		
D.20	SP76 SP101	Signs	Supply and install Object Marker Signs (Wa-33R, 300 x 900 mm and Wz-2, 250 x 250 mm), including post OPSD 984.201.	each	25		
D.21	SP76 SP101	Signs	Supply and install Object Marker Sign (Wa-33LR, 450 x 900 mm and Wz-2, 250 x 250 mm), including post OPSD 984.201.	each	4		
D.22	SP76 SP101	Signs	Supply and install Oversize Plow Marker Sign (Wz-2, 250 x 250 mm), including post OPSD 984.202.	each	71		
D.23	SP76	Signs	Supply and install I-Flex 16 One Way DG I-Beam Hinged Guiderail Reflector 4X4, White.	each	380		
D.24	SP76	Signs	Supply and install I-Flex 16 One Way DG I-Beam Hinged Guiderail Reflector 4X4, Yellow.	each	1200		
D.25	SP76	Signs	Supply and install I-Flex 16 Two Way DG I-Beam Hinged Guiderail Reflector 4X4, Yellow.	each	10		
D.26	SP76	Signs	Supply and install PCBM 16 Two Way DG Hinged Barrier Reflector 4X4, White.	each	18		
D.27	SP76	Signs	Supply and install PCBM 16 Two Way DG Hinged Barrier Reflector 4X4, Yellow.	each	130		
D.28	SP76	Signs	Supply and install Post Mounted Delineator, White (Type A 125 x 125 mm) OPSD 984.101.	each	300		
D.29	SP76	Signs	Supply and install Post Mounted Delineator, Yellow (Type A, 125 x 125 mm) OPSD 984.101.	each	700		
D.30	SP800	Top Soil	Fill ground around existing poles, culverts, CBs, etc. with Imported topsoil including fine grading.	cubic metre	30		
D.31	SP121	Removals	Remove soil build up along existing guide rail and dispose off-site.	cubic metre	4		
D.32	SP121	Removals	Remove concrete blocks and dispose off-site as noted on drawing 17-H-16 (GR12).	each	2		
D.33	SP96 SP108	Detection Loops	Supply and install pulse/diamond loop MTOD-2950.020, and TR 8.01. (TR 8.01 is attached to the specifications).	linear metre	1200		
D.34	SP96 SP108	Detection Loops	Supply and install 15.0 m long quadrapole loop - TR 8.01. (TR 8.01 is attached to the specifications).	linear metre	1100		
D.35	SP96	Underground Electrical Box	Supply and install Type-II medium rectangular hand hole (approx. L:800 x W:500 x D:450mm) including supply and install ground electrodes; OPSD 2113.010, OPSD 2117.02, OPSS 2401.05.01, and TR 1.05. (TR 1.05 is attached to the specifications).	each	3		
D.36	SP96	Underground Ducts	Supply and place 50mm dia. PVC traffic duct including all connections via OPEN TRENCH METHOD (DT:0111-01, DT-0111-02).	linear metre	35		
D.37	SP33	Clearing and Grubbing	Close cut clearing.	square metre	300		
						Subtotal:	

Section E - Cash Allowances

Item No.	Spec No.	Category	Description	Unit of Measure	Extended Price
E.1	SP89	General	Cash Allowance for M.T.O. Ramp Closures	(Cash Allowance)	$ 30,000.00
E.2	SP42	Surface and Binder Asphalt	Payment adjustment for Changes in the Asphalt Price Index and Bid AC. (Provisional).	(Cash Allowance)	$ 250,000.00
				Subtotal:	$ 280,000.00

Summary Table

Bid Form	Amount
Section A - General	
Section B - Road Resurfacing	
Section C - Pavment Markings	
Section D - Guiderails	
Section E - Cash Allowances	$ 280,000.00
Total Contract Price:	

Specifications

Bidder's Business Structure

The City of Hamilton reserves the right to verify the business name and structure of the bidder, whether or not this section is completed, to ensure that the bidder is an existing legal entity. If the bidder is not an existing legal entity, the Bid will be rejected.

Business Structure of Bidder *	If 'Corporation' Selected, Specify Where Incorporated:	If 'Other' Selected, Specify Business Structure:	Registered Business Name of Bidder (if applicable):
Select A Value			

Bidder's Business Structure - COPY

The City of Hamilton reserves the right to verify the business name and structure of the bidder, whether or not this section is completed, to ensure that the bidder is an existing legal entity. If the bidder is not an existing legal entity, the Bid will be rejected.

Business Structure of Bidder *	If 'Corporation' Selected, Specify Where Incorporated:	If 'Other' Selected, Specify Business Structure:	Registered Business Name of Bidder (if applicable):
Select A Value			

Documents

It is your responsibility to ensure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the City. If the attached file(s) cannot be opened or viewed, your Bid shall be rejected.

BONDING UPLOAD SECTION

Each Bid submission must be accompanied by a **digital** bid bond.

The City will only accept submissions that include the bid bond in an electronically verifiable and enforceable (e-Bond) format.

A scanned PDF copy of the bond is not acceptable.

- Bid Bond * (mandatory)

Form of Tender

The bidder hereby acknowledges and agrees:

1. Submission of Bid
I/We the undersigned bidder, having examined the locality and site of the Work as well as all the Request for Tenders documents, hereby tenders and offers to furnish all material, labour, service, equipment and all incidentals, and to render all services and pay all applicable taxes (other than any Value Added Taxes) and all other charges as specified and/or as necessary for performance and completion of the above referred to Work, all in full accordance with the Request for Tenders documents provided to the bidder by the City (receipt of which is hereby acknowledged) on a Unit Price basis for the Base Bid Price as provided in this Bid.

2. Base Bid Price
I/We confirm all prices provided in this Bid:

- Are in Canadian funds;
- Include Provisional Items, if applicable;
- Does not include contingency allowances;
- Include cash allowances as indicated in the Schedule of Prices, if applicable; and
- Does not include Value Added Taxes.

3. Quantities
I/We acknowledge that the Base Bid Price is based on the Schedule of Prices. The quantities in the Schedule of Prices are approximate. I/We agree that the final valuation for purposes of payment under the Contract will be made on the basis of actual quantities measured during and on completion of the Work at the prices in the Schedule of Prices.

4. Addenda
I/We have made any necessary inquiries with respect to Addenda issued by the City and have ensured that we have received, examined and provided for all Addenda to the Request for Tenders in this Bid.

5. Commencement and Completion
If awarded the Request for Tenders, I/we agree and undertake that:

- I/we will provide all necessary documents required as set forth prior to the commencement of the Work.
- I/we will commence the Work following receipt of a notice to proceed and otherwise in accordance with the Contract. I/We agree to have achieved “Substantial Performance” of the Works as described in the *Construction Act* and in accordance with the requirements set out in the Contract.
- In the event that I/we fail to perform the Contract as provided, I/we understand and agree that I/we shall be liable to liquidated damages and other remedies as specified in the contract documents.

6. Contract
It is understood and agreed by me/us that a binding Contract shall come into being upon acceptance of this Bid by the City. The subsequent execution of the Contract for Works is a formality and not a condition precedent to the existence of a binding contract. The documents listed in the List of Contract Documents for this Project shall constitute the contract, subject to such modifications as may be agreed to in writing between the parties.

7. Occupational Health and Safety
I/We understand and agree that the Work must be conducted in a safe manner. Accordingly, I/we confirm that I/we and all subcontractors used on the Work for the City of Hamilton will comply with all applicable laws, regulations and by-laws of Canada, the Province of Ontario and the City of Hamilton, including but not limited to the Occupational Health and Safety Act, and all applicable regulations thereunder. Further, without limiting any of the foregoing, I/we confirm that I/we have both a written occupational health and safety policy and program to implement that policy, and that all of our employees, subcontractors and any other persons performing the Work shall be appropriately trained, licensed and certified, as required to perform the Work.

8. Fair Wage Policy and Schedule
I/We agree to comply in all respects with the City of Hamilton’s Fair Wage Policy and to be fully responsible for ensuring that all of my/our subcontractors also comply in all respects with said Fair Wage Policy at: hamilton.ca/buying-selling-city/bids-tenders/fair-wage-policy-and-fair-wage-schedule

9. Electronic Funds Transfer
I/We acknowledge and agree to provide the City with the information required for the City to make payment by EFT.

10. Execution
If this Bid is accepted by the City and the Request for Tenders is awarded to me/us, I/we agree to provide and pay for the proof of insurance, WSIB clearance certificate, performance of contract security and a labour and material payment bond as required by the contract documents, my/our health & safety manual and any other document identified in the award letter as being required by the City prior to it being able to issue a purchase order and to execute the Contract, in quadruplicate, all within 10 Business Days after the City has issued the award letter or within such longer time as the City may specify.

11. Bid Security
I/We have submitted the Bid Security as specified in the Request for Tenders. The Bid Security shall be irrevocable for **90 CALENDAR DAYS**

after the closing date and time of the Request for Tenders.

In the event of default or failure on my/our part to execute the Contract as required above and to provide the specified security required under the Request for Tenders and the Contract, I/we agree that the City may at its discretion do one or more of the following: declare the Bid Security forfeited, annul the award or terminate the Contract, accept the next lowest compliant Bid, advertise for new tenders, or carry out the Work in any manner deemed in the best interests of the City. In such a case, if required by the City, I/we shall pay the City the difference between the Base Bid Price stated above and any greater sum that the City may be obligated to pay by reason of that default or failure, including the cost of any advertisement for new tenders.

12. Time Open for Acceptance

I/We agree and confirm that this Bid is irrevocable and is to continue open to acceptance by the City for a period of **90 CALENDAR DAYS** after the closing date and time of the Request for Tenders. The City may at any time within the above **90 CALENDAR DAY** period accept this Bid whether or not any other Bid has previously been accepted, upon notice of acceptance and award in writing to me/us, personally delivered or mailed to me/us by ordinary prepaid mail, to the address provided in the Bid submission, or delivered by fax to the fax number provided in the Bid submission. Any notice mailed or faxed shall be deemed to have been received on the date mailed or faxed. Any notice personally delivered shall be deemed to have been received on the date the notice is personally delivered.

13. No Collusion / Conflict of Interest

I/We hereby declare that no person, firm or corporation other than me/us has any interest in this Bid or in the proposed Contract for which this Bid is made. I/We further declare that this Bid is made without any connection, comparison of figures or arrangements with, or knowledge of, any other person making a Bid for the same work and is in all respects fair and without collusion or fraud.

I/We confirm that we comply with Article 12 - Conflict of Interest, Lobbying and Collusion of the Instructions to Bidders and Article 6 – Joint Ventures of the Supplementary Instructions to Bidders.

I/We understand that, without limiting or restricting any other right or privilege of the City, the City may terminate the Contract where the bidder is in contravention with the City's Purchasing Policy with respect to conflict of interest or vendor eligibility.

14. Interpretation

I/We confirm that we have received no oral information, instruction or advice from any officer, employee, agent or consultant of the City which changes the content of the Request for Tenders and all Addenda thereto.

I/We acknowledge and agree that we have not assumed that any information concerning our operations, business or personnel or any other information required to be provided by us when submitting our Bid is known to the City, regardless of whether such information may be actually previously known to the City or not. Further, we acknowledge and agree that all information to be provided by us is to be complete and full and in such detail as required.

15. Provisional Items

I/We understand and agree that, after the award of the Request for Tenders, the City reserves the right to delete from the Base Bid Price one or more of the items identified in the Schedule of Prices as Provisional Items, without penalty or compensation to the Successful Bidder for credit at the price shown in the Schedule of Prices. All prices are inclusive of all duties and taxes applicable, except for Value Added Taxes.

I/We understand that if I/we are awarded the Request for Tenders, I/we are not entitled to payment for any Provisional Item except where the Work is carried out by me/us, as directed by the City and in accordance with the Contract and where payment was previously approved by the City.

I/We agree that the Unit Prices provided for each Provisional Item include all costs required for complete execution of the item of Work, including the bidder's office staff, site supervisory staff, project management costs, clerical and other costs for documentation, materials, labour, equipment, delivery, handling, statutory charges, overhead and profit, other related charges, inclusive of all other duties and taxes applicable, and similar charges on account of such item of Work. Unit Prices entered shall exclude all Value Added Taxes.

I/We agree that if the quantity actually required for each item of Work is more or less than estimated, the extended price for such item of Work will be increased or decreased respectively using the same Unit Price or Lump Sum Price specified in the Schedule of Prices.

16. Use of Union Contractors and Subcontractors

I/We acknowledge that the City is bound by the collective agreement between the Carpenters' Employer Bargaining Agency ("EBA") and the Carpenters' District Council of Ontario of the United Brotherhood of Carpenters and Joiners of America ("Union") for the Industrial, Commercial and Institutional (ICI) Sector ("Carpenters' ICI Collective Agreement"). Article 7 – City of Hamilton Labour Trades Obligations of the Supplementary Instructions to Bidders sets out whether the Successful Bidder or the Successful Bidder's contractors or subcontractors must be signatory to the Union.

I/We further acknowledge and agree that for all work covered by the Carpenters' ICI Collective Agreement, the Successful Bidder or the Successful Bidder's contractors or subcontractors, as applicable, shall be bound by the Carpenters' ICI Collective Agreement. The City reserves the right to request confirmation of same prior to the award of the Contract and at any time during the term of the Contract and failure to provide proof of this confirmation within two Business Days of request by the City will result in the rejection of this Bid or be deemed to be a default under the Contract.

17. Accessibility for Ontarians with Disabilities Act, 2005

I/We confirm that I/we and all subcontractors used on the Work for the City of Hamilton will comply with all applicable accessibility laws, regulations and by-laws of Canada, the Province of Ontario and the City of Hamilton, including but not limited to the Ontarians with Disabilities Act, 2001 (ODA), the Accessibility for Ontarians with Disabilities Act, 2005 (AODA), Ontario Regulation 429/07 (Accessibility Standards for Customer Service) and Ontario Regulation 191/11 (Integrated Accessibility Standards), throughout the term of the Contract. Without limiting the generality of the foregoing, I/we shall provide to the City, prior to commencing Work, a Statement of Acknowledgement that I/we have read and understand the City's AODA Customer Service Standard Handbook (the "Handbook"), that I/we have provided the training required by the Handbook, and that I/we will comply with the requirements of the Handbook and applicable accessibility laws, regulations and by-laws. See City of Hamilton's AODA

Customer Service Standard Handbook at: hamilton.ca/government-information/accessibility-services/accessibility-standards

18. Compliance with City of Hamilton By-laws

I/We declare that I/we are in compliance with all municipal by-laws as they pertain to the City of Hamilton in respect of the operation of my/our business and in respect of the Work described in the Request for Tenders. I/We understand and agree that if this statement is untrue or incorrect, the City of Hamilton shall be entitled at its sole discretion to reject this Bid, or if such untruth or incorrectness comes to light after this Bid is accepted, to terminate or refuse to enter into, as applicable, any Contract and to pursue any other legal recourse the City deems appropriate, and that such untruth or incorrectness shall be a default under the Contract.

19. Procurement Policy

In submitting a Bid in response to the Tender, I/we agree and acknowledge that I/we have read and will be bound by the terms and conditions of the City's Procurement Policy. I/We understand that the City's Procurement Policy can be viewed on the City's website at hamilton.ca/buying-selling-city/bids-tenders/procurement-policy-by-law.

☐ I/WE agree to be bound by the terms and conditions and have authority to bind the Bidder and submit this Bid on behalf of the Bidder.

Conflict of Interest

Except with the prior express written consent of the City, **prior to submitting this Bid**, vendors are required to notify the City in writing, of any potential conflict of interest that may arise prior to the award of any contract and fully disclose any details thereof. Failure on the part of a vendor to declare a conflict of interest to the City and to obtain the City's prior express written consent to waive the conflict of interest shall result in the vendor being ineligible to Bid and shall form a basis for rejection of a Bid submitted to the City.

Do you have a potential conflict of interest? ○ **Yes** ○ **No**

Acknowledgement of Addenda

The Bidder acknowledges and agrees that any Addenda below form part of the bid document.

Please check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the Addenda.

File Name	I have reviewed the below addendum and attachments (if applicable)	Pages
There have not been any addenda issued for this bid.		