



TENDER NO. 19-267

RA-5 CROSSWALKS & RECTANGULAR RAPID FLASHING BEACONS

VARIOUS LOCATIONS

Standard Specifications

for

Municipal Services

TENDER SUBMITTED BY: _____

**HALIFAX REGIONAL MUNICIPALITY
RA-5 CROSSWALKS & RECTANGULAR RAPID FLASHING BEACONS
VARIOUS LOCATIONS
TENDER NO. 19-267**

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JANUARY 2019

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1. Overview .1 This document is a standard supplement to be read in conjunction with the Standard Specifications for Municipal Services, Part II, as developed by the Nova Scotia Road Builders Association (NSRBA) and the Consulting Engineers of Nova Scotia (CENS) Joint Committee on Contract Documents.

The Halifax Regional Municipality, in response to a need and desire to standardize tender specification practices, has adopted as its model the Standard Specifications for Municipal Services.

As active participants on the Joint Committee during the development of the Standard Specification document, staff of the Halifax Regional Municipality has become familiar with and contributed input into the creation of this standardized approach to Municipal Specification development.

It is acknowledged that the Standard Specifications for Municipal Services is a general resource tool and reference document for Municipal Works undertaken within the Halifax Regional Municipality. This standard document may not include all requirements of an HRM project. Additional specification requirements will be provided as supplementary specifications.

2. Availability of the Standard Specifications for Municipal Services Copies of the Standard Specifications for Municipal Services are available from SpecTech Limited, 18 Laurier Street, Dartmouth, NS, B3A 2G7; telephone (902) 233-9362 or e-mail nsmunicipalservices@gmail.com

3. Updating and Feedback The Standard Specifications for Municipal Services will be updated periodically according to feedback from users, industry needs and changes in codes and regulations.

4. Statement The following statements will apply to all HRM tenders applicable to Municipal Works.

These Contract Documents have been prepared for use with and are required to be read in conjunction with the Standard Specifications for Municipal Services as published by the Nova Scotia Road Builders Association and the Consulting Engineers of Nova Scotia Joint Committee on Contract Documents. Copies of the Standard Specifications for Municipal Services are available as outlined in section 2, above.

**** End ****

PROJECT: **Tender No. 19-267**
RA-5 Crosswalks & Rectangular Rapid Flashing Beacons
Various Locations – Central / Western Region

OWNER: Halifax Regional Municipality
Customer Service Center, 1st floor Alderney Gate
40 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N5

ENGINEER: Director, Transportation and Public Works
Halifax Regional Municipality
P.O. Box 1749
Halifax, Nova Scotia, B3J 3A5

1. Tender Submission .1 Tenderers shall complete and submit the following documents: Summary Sheet, Tender Form (Section 00 41 43), any applicable Tender Security, and any other documentation expressly required to be submitted by the Owner, for the above project in a sealed envelope CLEARLY MARKED as follows:

Tender No. 19-267
RA-5 Crosswalks & Rectangular Rapid Flashing Beacons
Various Locations – Central / Western Region
Closing at 2:00 p.m., local time **Tuesday, September 17, 2019.**

Procurement Section
Halifax Regional Municipality
c/o Customer Service Center, 1st floor Alderney Gate
40 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N5

2. Post-Bid Submissions .1 Tenderers shall provide with their tender submissions (or within 48 hours after tender closing) proof of Workers' Compensation Board (WCB) insurance (if required by law) and a current and valid Letter of Good Standing issued by an audit firm endorsed by Workers' Compensation Board of Nova Scotia to audit for the type of work covered by this tender. The letter must indicate that the tenderers current standing falls into one of the following categories:

- .1 Certificate of Recognition
- .2 Audit Pending

-
- .3 In the Process
- .2 Where the tenderer has not yet obtained a Certificate of Recognition, the tenderer must submit a letter from the WCB endorsed audit firm indicating the tenderer is “in the process” (maximum six (6) months) of obtaining the Certificate of Recognition. “In the process” is defined as the completion of the four mandatory courses (Safety Basics, Safety Orientation, Safety Audit and Leadership) and completion of training required by the Occupational Health and Safety Act (such as, but not limited to WHMIS, TDG, TCP, Confined Space and First Aid) and for a period no greater than six (6) months.
3. Tender Opening .1 Tenders will be opened within one (1) business day of tender closing. Opening will not be public.
4. Fees for Contract Documents .1 Fees for Contract Documents provided by HRM Procurement or its designate are non-refundable.
5. Accuracy of Referencing .1 Indexing and cross-referencing in the Contract Documents are for convenience only.
6. Conditions of Tendering .1 Tenderers are required to become fully aware of the content of all Contract Documents in preparation of their tender submissions.
- .2 Contract Documents are non-transferable. Tenders will not be accepted from tenderers that have not obtained the Contract Documents from HRM Procurement, or its designate.
7. Tenderers to Investigate .1 Tenderers will be deemed to have familiarized themselves with the Place of Work and working conditions and all other conditions which may affect performance of the Contract. No plea of ignorance of such conditions as a result of failure to make all necessary examinations will be accepted as a basis for any claims for extra compensation or an extension of time.
8. Site Investigation .1 With permission of the Owner, tenderers may visit and examine the Place of the Work and subsurface conditions to satisfy themselves of the conditions which may be encountered. Failure of the Owner to grant permission to a tenderer who failed to visit the Place of the Work during a published meeting will not negate Section 00 21 00, Tenderers to Investigate, Subsection 7.
- .2 The Owner may arrange a published meeting at the Place of the Work to review the requirements of the Contract with tenderers.

- .3 When a mandatory bidders' meeting is offered, tenderers submitting bids must have attended the mandatory bidders' meeting and mandatory site visit on the date and at the time specified herein. Any bids received from tenderers that did not attend the mandatory bidders' meeting or mandatory site visit, arrived late, left early or failed to sign the attendance sheet will be disqualified and rejected.
9. Clarification and Addenda
- .1 Tenderers shall notify the Engineer not less than three (3) working days before Tender Closing of omissions, errors or ambiguities found in the Contract Documents. If the Engineer considers that correction, explanation or interpretation is necessary; a written addendum will be issued on the Nova Scotia Public Tenders website. All addenda will form part of Contract Documents.
- .2 The Engineer's representative during the tendering of this project shall be **Husnoor Chowdhury, P.Eng., telephone 902-490-4423**.
- .3 Tenderers are deemed to have read and considered all addenda issued by HRM. The onus is on each tenderer to make any necessary amendments to its bid prior to the closing date based on any addenda issued. HRM may, in its sole discretion, disqualify a bid or require a tenderer to acknowledge all addenda in writing prior to contract award if the tenderer fails to do so in its bid. The tenderer is deemed to have read and considered all addenda issued by HRM. The onus is on tenderers to make any necessary amendments to their bids based on the addenda.
10. Preparation of Tender
- .1 The tender submission must be legible and written in ink or typewriter. All blank spaces are to be filled in and all items must be bid, unless the tender specifically permits otherwise. **Tenders submitted with missing unit prices will be rejected as non-compliant. Tenders that contain any qualifying statements added or alterations to the tender form, unless specifically authorized in the Contract Documents, will be rejected as non-compliant.** Any corrections must be initialled by the person signing the tender.
11. Taxes
- .1 The Total Tender Price shall include all taxes except Harmonized Sales Tax (HST).
- .2 The tenderer shall indicate on each application for payment, as a separate amount, the appropriate Harmonized Sales Tax that the Owner is legally obliged to pay. This amount will be paid to the tenderer in addition to the amount certified for payment under the Contract.

INFORMATION TO TENDERERS

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|-----|--|----|---|
| 12. | <u>Tender Security</u> | .1 | For bids over \$100,000 the tenderer shall provide with its tender, Tender Security in the amount of 10% of the Total Tender Price, in the form of a Certified Cheque or Money Order payable to the Owner, or a Bid Bond on CCDC Form 220. |
| 13. | <u>Return of Tender Security</u> | .1 | Tender Security will be returned to:

.1 all tenderers except the three lowest acceptable/best value tenderers (as determined by HRM) within seven (7) days of Tender Opening.

.2 remaining tenderers within fourteen (14) days of the date of Award and receipt of an executed Agreement, specified Contract Security, and Insurance documents. |
| 14. | <u>Contract Security</u> | .1 | Refer to Section 00 72 45 - General Conditions of the Civil Works Contract, subsection GC24-SECURITY for form and amount of the Civil Works Contract Security. |
| 15. | <u>Insurance</u> | .1 | Refer to Section 00 72 45 - General Conditions of the Civil Works Contract, subsection GC21-INSURANCE, for insurance required. |
| 16. | <u>Form of Agreement</u> | .1 | Refer to Section 00 41 43 - Tender Form, subsection 2.9 for requirements related to the execution of the Form of Agreement. |
| 17. | <u>Amendment or Withdrawal of Tender</u> | .1 | Tenders may be amended or withdrawn by letter or facsimile (902-490-4206) . Amendment or withdrawal by facsimile must be certified by registered letter postmarked prior to date and time of closing. |
| | | .2 | Amendment of individual unit prices is the only acceptable price amendment. Amendments shall not disclose either original or revised total tender price. |
| | | .3 | Head amendment or withdrawal as follows: “[Amendment] / [Withdrawal] of Tender for []; Tender # []”. Sign as required for Tender, and submit at the address given for receipt of Tenders prior to time of Tender Closing. |
| 18. | <u>Reserved Rights</u> | .1 | The Owner reserves the right to accept whichever bid the Owner believes represents best value. “Best Value” means the bid that is determined by the Municipality to be in its best interests, and not necessarily the bid with the lowest Total Tender Price. Factors may include price, life cycle cost considerations, environmental and social considerations, delivery, servicing, past |

INFORMATION TO TENDERERS

experience and performance, and any other criteria or factors stated in this call for tenders or in other Contract Documents;

- .2 The Owner reserves the right to reject all tenders if none is considered to be satisfactory and, in that event, at its option, to call for additional tenders.
3. Without limiting the generality of any other provision hereof, the Owner reserves the right to reject any tender:
 - (a) that contains any irregularity or informality;
 - (b) that is not accompanied by the security documents required;
 - (c) that is not properly signed by or on behalf of the tenderer;
 - (d) that contains an alteration in the quoted price that is not initialled by or on behalf of the tenderer;
 - (e) that is incomplete or ambiguous; or
 - (f) that does not strictly comply with the requirements contained in these instructions.

Notwithstanding the foregoing, the Owner shall be entitled, in its sole discretion, to waive any irregularity, informality, or non-conformance with these instructions in any tender received by the Owner.

- .4 HRM may, in its absolute discretion, reject a Tender submitted by a Tenderer if:
 - a) the Tenderer, or any officer or director of the Tenderer;
 - b) any related company of the Tenderer through common ownership, control or otherwise; or
 - c) any intended sub-contractor of the Tenderer,

is or has been engaged, either directly or indirectly through another corporation, in a legal action (including arbitration or the service on HRM of formal notice of intent to commence a legal action) against HRM, its elected or appointed officers and employees in relation to:
 - i) any other contract with HRM; or

INFORMATION TO TENDERERS

- ii) any matter arising from HRM's exercise of its powers, duties, or functions under the Halifax Regional Municipality Charter or another enactment within five years of the date of this Call for Tenders.

In determining whether to reject a tender under this clause, HRM will consider whether the litigation is likely to affect the Tenderer's ability to work with HRM, its consultants and representatives and whether HRM's experience with the Tenderer (or any of the individuals or entities referenced above) indicates that HRM is likely to incur increased staff and legal costs in the administration of this contract if it is awarded to the Tenderer.

- .5 In the event that a number of tenderers submit bids in substantially the same amount, the Owner may, at its discretion, call upon those tenderers to submit further bids.
- .6 No term or condition shall be implied, based upon any industry or trade practice or custom, any practice or policy of the Owner or otherwise, which is inconsistent or conflicts with the provisions contained in these instructions or the Contract Documents.
- .7 Under no circumstances shall the Owner be liable for any losses or damages arising from the Owner's rejection of any tender for any reason whatsoever. Notwithstanding the foregoing, the Owner's liability for any losses or damages resulting from the Owner's failure to fulfill any of its obligations under this tender, the Owner's acceptance of a non-compliant tender, or the Owner's awarding of a contract to a non-compliant tenderer shall in all circumstances be limited to the lesser of actual damages suffered or five thousand dollars (\$5,000.00).

19. Cancellation of Tender .1 The Owner reserves the right to cancel any request for tender at any time without recourse by the tenderer. The Owner has the right to not award the Work for any reason including choosing to complete the Work with the Owner's own resources.

20. Contingency Allowance .1 A contingency allowance may be included in the Tender Form for the use and convenience of the Owner. Tenderers shall not construe that the inclusion of the allowance implies that any part or all of the allowance shown will be expended or paid to the tenderer to whom a contract is awarded. Expenditures from the contingency allowance will be made only upon the issuance to the tenderer of an approved change order, and only in the amount dictated by such a change order.

21. Responsible Bidder .1 HRM intends to only contract with responsible tenderers who are in the business of providing the goods and/or services bid upon

and can provide proof that they can furnish satisfactory performance based on past work experience with HRM, other

companies, or government agencies, and have the financial, managerial, and resource capabilities for the size of the project.

Satisfactory performance includes meeting all of the requirements of the various federal and provincial regulations and agencies for completion of the Work and making payments to subcontractors in a timely basis. The evaluation process may include reference checks, third party credit checks, site visits, and/or the tenderer may be asked to allow HRM to complete personal credit and/or criminal record checks if information is not otherwise available or adequate. Tenderers found unacceptable during the evaluation process will not be given further consideration.

22. Transparency

In accordance with the *Public Procurement Act*, the name of tenderers and the name and total value of the successful tenderer's bid will be publicly advertised on the Nova Scotia Public Tenders web portal.

The Municipality is subject to the Freedom of Information and Protection of Privacy provisions contained within the *Municipal Government Act* at Part XX. Any document submitted to the Municipality in response to this call for tenders is subject to this legislation and tenderers should be aware that any member of the public is entitled to request a copy of the document. In response to such a request, the Municipality may be required to disclose some or all of the information in accordance with the criteria set out in the legislation, including sections 462, 480 and 481(1).

**** End 00 21 00 ****

SALUTATION:

To: Procurement Section
Halifax Regional Municipality,
c/o Customer Service Center, 1st floor Alderney Gate
40 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N5

For: **Tender No. 19-267**
RA-5 Crosswalks & Rectangular Rapid Flashing Beacons
Various Locations – Central / Western Region

From:

1. TENDERER DECLARES:

- .1 That this tender was made without collusion or fraud.
- .2 That the proposed Work was carefully examined.
- .3 That the tenderer has visited the Place of the Work and is familiar with local conditions.
- .4 That Contract Documents and Addenda No. _____ to _____ inclusive were carefully examined, and that all the above were taken into consideration in preparation of this tender.
- .5 That the tenderer has read and agrees to all applicable Terms and Conditions for Unit Price Contracts as published on the Halifax.ca website. (www.halifax.ca/procurement) and as referenced in the Contract Documents.
- .6 I (We) propose to engage our own forces and/or subcontractors on the various sections of the Work as stated below:

2. TENDERER AGREES:

- .1 To enter into a contract to supply all labour, material and equipment and to do all work necessary to perform the Work as described and specified herein for the unit prices stated in the Schedule of Quantities and Unit Prices.
- .2 That the Total Tender Price shall be the sum of the tendered unit prices multiplied by the estimated quantities for each item in the Schedule of Quantities and Unit Prices, excluding the Harmonized Sales Tax.
- .3 That the unit prices shall be the basis for the Total Tender Price, and if the amount tendered for an item does not agree with the sum of the tendered unit price multiplied by the estimated quantities for that item, then the amount tendered for that item and the Total Tender Price shall be corrected by the Owner accordingly.
- .4 That if all bids exceed HRM's estimated contract value, HRM may in its discretion:
 - .1 award the contract for the bid amount;
 - .2 negotiate changes in the scope of work with the lowest priced or best value tenderer to achieve an acceptable contract price; or
 - .3 cancel the Tender, and commence a new procurement.
- .5 That the Owner reserves the right to make any changes, additions or deletions to the estimated quantities.
- .6 That this tender is valid for acceptance for sixty (60) days from the time of Tender Closing.
- .7 That measurement and payment for items listed in the Schedule of Quantities and Unit Prices shall be in accordance with provisions contained in Section 01 22 00 - Measurement and Payment, and Section 00 74 00 - Supplementary Specifications.
- .8 To provide evidence of ability and experience within seven (7) days of request, including: experience in similar work, work currently under contract, senior supervisory staff available for the project, equipment available for use on project, and financial resources.
- .9 To execute in duplicate the Form of Agreement and forward same together with the specified Contract Security and insurance documents to the Owner within five (5) business days of written notice of award, unless the Owner provides permission otherwise.
- .10 That failure to execute the Form of Agreement and/or failure to provide specified insurance documents or Contract Security within time required will constitute grounds for forfeiture of Tender Security.

- .11 That if Tender Security is forfeited, the Owner will retain difference in money between Total Tender Price and amount for which the Owner legally contracts with another party to perform the Work and will refund balance, if any, to tenderer.
- .12 .1 Time for completion of the Rectangular Rapid Flashing Beacons Work to Total Performance is November 30, 2019. The Contractor shall order the traffic signal equipment within one (1) week of the start date as indicated on the Order to Start Work. Civil works (concrete curb and gutter, sidewalk, asphalt and landscaping work associated with the reinstatement of disturbed areas) shall be completed within a 2-week time frame.
- Time for completion of the RA-5 Crosswalks Lights Work to Total Performance is March 31, 2020. The Contractor shall order the traffic signal equipment within one (1) week of the start date as indicated on the Order to Start Work. Civil works (concrete curb and gutter, sidewalk, asphalt and landscaping work associated with the reinstatement of disturbed areas) shall be completed within a 3-week time frame per intersection.
- .2 The Contractor may complete other work in 2019 however all temporary measures related to starting the work and carrying it over to 2020 shall be at their cost.
- .2 If the Contractor does not finish prior to the cut off dates described in Section 00 41 43 of the Contract documents, the Contractor shall be responsible for all temporary measures described in Section 00 41 43 (2.12.7) at no cost to HRM.
- .3 If the Contractor chooses to perform any portion of work in 2020 it shall be paid at the unit rates provided by the Contractor when the tender closes in 2019. The Contractor shall not be eligible for an increase in unit rates regardless of the work is performed in 2019 or 2020.
- .4 It is the intention that construction work be carried out in such a manner that the requirements of the Contract Documents are strictly adhered to. The onus is on the tenderer not to begin construction if it is likely that weather conditions may prevent the Work from being completed on time or from meeting the requirements of the Contract Documents. The recommended cut off for concrete sidewalk construction is October 15, and for concrete curb and asphalt pavement is October 31. The HRM quality management measures shall be followed if construction does continue into cold weather and requires cold weather protection measures. Such measures shall be at the tenderer's expense. In the event that construction work begins and cannot be completed to the requirements of the Contract Documents, the tenderer shall provide and maintain temporary measures to ensure a safe construction site, which may include temporary street, driveway and sidewalk paving; erosion and sedimentation control; snow and ice control; and other measures required by the Engineer, all at no additional cost to the Owner. The Owner shall

not entertain any request from the tenderer for additional costs incurred to complete the Work after the cut off dates listed above.

For safety reasons salt may have to be placed on streets and sidewalks over the winter months. The tenderer shall be responsible for any damage to newly installed curb and sidewalk which is caused by the placement of salt.

- .13 That, in accordance with Section 00 72 45 - General Conditions of the Civil Works Contract, subsection GC 34.4, Liquidated Damages shall be calculated and payable at the rate of \$1,000.00 per working day during any Period of Delay.
- .14 That the Contract Documents include:
 - .1 Standard Specifications for Municipal Services listed in Table of Contents, latest edition.
 - .2 Project Documents
 - .1 Information to Tenderers (Section 00 21 00)
 - .2 Tender Form (Section 00 41 43)
 - .3 Form of Agreement (Section 00 53 43)
 - .4 Supplementary General Conditions (Section 00 73 00)
 - .5 Supplementary Specifications (Section 00 74 00)
 - .6 Drawings
Drawing No. 19020301, RA-5 Installation, Glendale Dr. at Rankin Dr., August 30, 2019, Revision #2
Drawing No. 19020302, Glendale Dr. at Smokey Dr., RA-5 Installation, August 30, 2019, Revision #2
Drawing No. 19020303, Old Sambro Rd. at Schnare St., RA-5 Installation, August 30, 2019, Revision #2
Drawing No. 19020304, Thomas Raddall Dr. at BMO and Hwy2 at Coach Ave., RRFBS, August 30, 2019, Revision #2
 - .7 Addenda as issued and as confirmed in subsection 1.4 of this section

SCHEDULE OF QUANTITIES AND UNIT PRICES

Tenderers Initials

Rectangular Rapid Flashing Beacons – Various Locations, Central/Eastern Region

No.	Item	Unit	Est. Qty.	Unit Price	Amount
<u>STORM SEWER</u>					
32.	Catchbasins				
	.1 Installation of New Catchbasins (Provisional)				
	.1 1050 mm dia. Precast Concrete c/w S361 frame and grate	Ea.	2	_____	_____
33.	Catchbasin Leads (Provisional)				
	.1 Catchbasin Leads Including Reinstatement				
	.2 250 mm dia. PVC DR35	m	20	_____	_____
38.	Remove Existing Structures (Provisional)				
	.1 Remove Catchbasin	Ea.	2	_____	_____
<u>STREET CONSTRUCTION</u>					
40.	Gravels				
	.3 Type 1 - 150 mm thick	m ²	100	_____	_____
	.4 Type 1 - 200 mm thick	m ²	130	_____	_____
	.5 Type 2 – thickness varies (Provisional)	t	50	_____	_____
	.19 Surge Rock (Provisional)	t	30	_____	_____
41.	Placement Materials				
	.1 Reinstatement Tape (Provisional)	m	250	_____	_____
42.	Asphaltic Concrete				
	.1 Asphaltic Concrete				
	.1 Type C-HF - 40 mm thick	m ²	10	_____	_____
	.2 Type C-HF - 50 mm thick	m ²	200	_____	_____
	.6 Type B-HF - 50 mm thick	m ²	10	_____	_____
	.9 Type B-HF - 100 mm thick	m ²	200	_____	_____
43.	Curb				
	.1 Concrete Curb and Gutter	m	170	_____	_____
44.	Sidewalk				
	.1 Concrete Sidewalk - 100 mm thick	m ²	380	_____	_____
46.	Traffic Sign Base				
	.1 Urban Traffic Sign Post	ea.	5	_____	_____
49.	Driveway Reinstatement				
	.2 Asphalt – 65mm thick	m ²	35	_____	_____

SCHEDULE OF QUANTITIES AND UNIT PRICES



Tenderers Initials

**Rectangular Rapid Flashing Beacons – Various Locations, Central/Eastern Region,
Continued**

No.	Item	Unit	Est. Qty.	Unit Price	Amount
<u>LANDSCAPING</u>					
50.	Topsoil and Sod .1 150 mm thick	m ²	150	_____	_____
57.	Handrail and Fences .6 Bollard - 91 mm Steel Pipe	Ea.	3	_____	_____
<u>ADDITIONAL ITEMS</u>					
60	Trench Excavation – Rock (Provisional)	m ³	20	_____	_____
65.	Pavement Markings				
	.2 Stop Bars	m	5	_____	_____
	.4 Crosswalks	m	12	_____	_____
	.5 Zebra Crosswalks	m	58	_____	_____
	.8 Arrows	Ea.	9	_____	_____
	.15 Removal of Existing Markings	LS	2	_____	_____
<u>ELECTRICAL</u>					
80	Direct Buried Conduit .5 2 – 50 mm dia.	m	120	_____	_____
81	Traffic Concrete Base				
	.1 As Per Tender Drawings (RRFBs)	Ea.	4	_____	_____
	.3 Type 70	Ea.	6	_____	_____
	.15 Pedestrian Push Button Base	Ea.	1	_____	_____
85.	Traffic Signal Installation				
	.1 Materials - Traffic Signal Installation				
	.1 Materials - Glendale Dr. at Rankin Dr. (RA-5 Crosswalk Lights)	LS	1	_____	_____
	.2 Materials - Glendale Dr. at Smokey Dr. (RA-5 Crosswalk Lights)	LS	1	_____	_____
	.3 Materials – Old Sambro Rd. at Schnare St. (RA-5 Crosswalk Lights)	LS	1	_____	_____
	.4 Materials – Thomas Raddall Dr. at BMO Rectangular Rapid Flashing Beacon	LS	1	_____	_____
	.5 Materials – Hwy2 at Coach Avenue Rectangular Rapid Flashing Beacon	LS	1	_____	_____

SCHEDULE OF QUANTITIES AND UNIT PRICES

Tenderers Initials

Rectangular Rapid Flashing Beacons – Various Locations, Central/Eastern Region, Continued

No.	Item	Unit	Est. Qty.	Unit Price	Amount
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ELECTRICAL, Continued

85.2	Labour – Traffic Signal Installation				
.1	Labour – Glendale Dr. at Rankin Dr. (RA-5 Crosswalk Lights)	LS	1	_____	_____
.2	Labour – Glendale Dr. at Smokey Dr. (RA-5 Crosswalk Lights)	LS	1	_____	_____
.3	Labour – Old Sambro Rd. at Schnare St. (RA-5 Crosswalk Lights)	LS	1	_____	_____
.4	Labour – Thomas Raddall Dr. at BMO Rectangular Rapid Flashing Beacon	LS	1	_____	_____
.5	Labour – Hwy2 at Coach Avenue Rectangular Rapid Flashing Beacon	LS	1	_____	_____

MISCELLANEOUS

90.	Project Information Sign	Ea.	5	_____	_____
94.	Tactile Walking Surface Indicator	m	57	_____	_____
92.5	Remove Guiderail	m	12	_____	_____

TOTAL TENDER PRICE \$ _____

SIGNATURE

Dated this _____ Day of _____, 20 ____.

Name of Company

Witness

Signature of Signing Officer

Name and Title (Printed)

Witness

Signature of Signing Officer

Name and Title (Printed)

Company Address

Telephone Number

Fax Number

The tenderer must have the legal capacity to contract. If the tenderer is a sole proprietorship, a partnership or a corporate body, the tenderer must provide, if requested by THE OWNER, a statement and any requested supporting documentation indicating the laws under which it is registered or incorporated together with the registered or corporate name and place of business. This also applies to tenderers submitting a bid as a joint venture. Failure to properly execute submitted documents will result in rejection of your tender. **IF YOU HAVE ANY QUESTIONS IN THIS REGARD, PLEASE CONTACT THE HALIFAX REGIONAL MUNICIPALITY PROCUREMENT DEPARTMENT PRIOR TO TENDER CLOSING TIME FOR CLARIFICATION OF THIS OR ANY OTHER DETAILS.**

SUMMARY

Tenderer shall complete the Summary Sheet, Tender Form (Section 00 41 43), any applicable Tender Security, and any other documentation expressly required to be submitted by the Owner.

THIS AGREEMENT made this _____ day of _____ 2019

BETWEEN

(hereinafter called the "Contractor")

OF THE FIRST PART

- and -

HALIFAX REGIONAL MUNICIPALITY
(hereinafter called the "Owner")

OF THE SECOND PART

WITNESSETH AS FOLLOWS:

1. The Owner hereby accepts the tender of the Contractor for the performance of the Work.
2. The Contractor hereby agrees to perform the Work in accordance with the terms and conditions set out herein and pursuant to the Contract Documents described in Section 00 71 00 - Definitions.
3. In consideration of the Contractor's performance of the Work, the Owner hereby covenants to pay to the Contractor in good and lawful money of Canada, a Total Tender Price of:

\$ _____

or such other sum as may be ascertained in accordance with the Contract Documents at the times and in the manner prescribed in the Contract Documents.

The above amount excludes the Harmonized Sales Tax.

4. The Contractor agrees that the Owner may offset all payments to the Contractor for work completed or goods supplied, or services provided, against amounts owing to the Owner by the Contractor.
5. The parties agree that the quantities shown in the Tender Form, Schedule of Quantities and Unit Prices are estimated quantities of the Work only and they are not to be taken as the final and correct quantities of the Work to be executed by the Contract and that payment will be made on the basis of the unit prices and lump sums tendered, and applied to the measured quantities of the Work finally carried out and further that payment of these unit prices fulfills all the Owner's obligations and liabilities under the Contract.
6. In this Form of Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Contract Documents.

Delete Section 00 73 00 of the Standard Specifications for Municipal Services, as developed and published by the Nova Scotia Road Builders Association and the Consulting Engineers of Nova Scotia (CENS) Joint Committee on Contract Documents, in its entirety and replace with the following:

****** End 00 73 00 ******

- INTENT**
- .1 The Work is to be performed in accordance with the Standard Specifications for Municipal Services, Part II (latest edition) (the “Specifications”) as developed and published by the Nova Scotia Road Builders Association and the Consulting Engineers of Nova Scotia (CENS) Joint Committee on Contract Documents, except as modified herein.
 - .2 These Supplementary Specifications modify and take precedence over the Specifications sections to which they refer.

SECTION 00 21 00 - INFORMATION TO TENDERERS

Delete in its entirety and replace with new section 00 21 00 in this document.

SECTION 00 41 43 - TENDER FORM

Delete in its entirety and replace with section in this document.

SECTION 00 53 43 - FORM OF AGREEMENT

Delete in its entirety and replace with section in this document.

SECTION 00 71 00 - DEFINITIONS

Delete in its entirety and replace with section as found on the Owner’s web site, <https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>

SECTION 00 72 45 - GENERAL CONDITIONS OF THE CIVIL WORKS CONTRACT

Delete in its entirety and replace with section as found on the Owner’s web site, <https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>

SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS

Delete in its entirety and replace with section in this document.

SECTION 01 10 00 - GENERAL REQUIREMENTS

- (a) 2. Summary of Work Page 1, delete subsection 2.1 and replace with the following:

“1. These projects are located in the communities of Spryfield, Clayton Park, Lower Sackville, and Fall River in the Halifax Regional Municipality on Old Sambro Rd. at Schnare St., Thomas Raddall Dr. at BMO, Glendale Dr. at Rankin Dr., Glendale Dr. at Smokey Dr., and Hwy2 at Coach Ave.

The construction work generally consists of the Installation of new Rectangular Rapid Flashing Beacons including poles, bases and associated equipment. Also, the installation of RA-5 crosswalk lights including (but not limited to) supply and installation of new RA-5 crosswalk lights, bases, poles, PXO controllers, side-mounted beacons, conduit. This work also includes concrete curb and gutter, sidewalk, asphalt, pavement markings, and landscaping work associated with the reinstatement of disturbed areas.”

- (b) 3. Scheduling and Coordination Page 1, add the following:

“5. Notify residents in writing the day prior to the placement of concrete curb and/or sidewalk that their driveway will not be accessible for three days after concrete placement.”

“6. Notify Halifax Transit in writing five (5) business days in advance of work that will render a bus stop inaccessible.”

“7. Notify Canada Post in writing five (5) business days in advance of work that will render a community mailbox inaccessible.”

- (c) 4. Setting Out The Work Page 1, add the following:

“3. Provide layout for new utility poles and guys and/or relocation of existing utility poles and guys. Coordinate work and layout with utilities.”

- (d) 7. Submittals Page 2, remove section 7.1 and replace with the following:

7.1 Shop Drawings

“1. The Contractor shall provide shop drawings and manufacturer(s)’ data as required in the contract documents. These drawings and data shall be provided in a timely fashion so as to cause no delay in the work, or in the works of any Subcontractors.

2. The information submitted shall clearly show in detail dimensions, materials of construction, finish, performance, service and installation requirements, and other pertinent information.

3. The Contractor shall check the shop drawings prior to submission, and shall determine and verify all field measurements, field construction criteria, materials, catalogue numbers and similar data, and shall check and coordinate each shop drawing with the requirements of the Work and the Contract Documents. Each shop drawing shall be signed and dated to confirm compliance with above requirements, and any deviations from the requirements of the contract documents shall be explicitly noted in writing. Engineer will not review shop drawings where it is evident that they do not meet these requirements.
4. The Engineer's review is for the sole purpose of ascertaining conformance with the general design concept, and shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or for meeting all of the requirements of the Contract Documents. The Contractor shall be responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the Work of all Subcontractors.
5. The Contractor shall submit shop drawings and product data electronically in PDF file format. Where it is not practical to submit electronic copies and where approved by the Engineer, the Contractor may submit three (3) paper copies of shop drawings.
6. As needed, the Contractor shall make any corrections as noted by the Engineer and shall resubmit.
7. The Contractor shall not proceed with work involving relevant products until completion of shop drawing review.
- (e) 8. Record Drawings Page 3, delete section 8 and replace with the following:

"8 As Built Drawings
.1 Do not bury pipework and appurtenances or other portions of the Work until necessary measurements have been taken.
.2 Supply a hard copy mark-up of the issued for construction drawings, electronic survey coordinates and elevations representative of all manholes, catchbasins, structures, pipe work and buried portions of the work to the Engineer. Information must be received by the Engineer prior to final payment."
- (f) 10. Temporary Site Facilities Page 5, add the following:

“10.8 Side Guard Protection:

All vehicles over 4500 kg are required to have side guard protection installed between the front and rear wheel, except where impractical as follows:

- .1 Vehicles such as road graders, loaders, planers, compactors and other similar equipment, and vehicles which routinely operate off-road on uneven terrain and require greater ground clearance between axles than the side guards permit are exempt at this time.

Acceptable side underride protection can be provided by any combination of vehicle body, fuel tanks, tag axles, tool boxes, or purpose-built side guards that achieve the goal of shielding vulnerable road users from being swept underneath the vehicles rear wheels. The required criteria are as follows:

- Min. 2 kN impact strength;
- Max. 350 mm ground clearance;
- Max. opening between tire and side guard 300 mm;
- Max. opening between bottom of vehicle and side guard 350 mm;
- Side guard to be flush with outer edge of wheel;”

- (g) 12. Traffic Control Page 5, delete subsection 12.1 and replace with the following:

“1.1 Provide traffic control in accordance with Temporary Workplace Traffic Control Manual, latest edition, as issued by the Nova Scotia Department of Transportation and Infrastructure Renewal. A traffic control plan is required for all work performed within the Owner’s right-of-way.

The basic objective of each traffic control plan is to permit the contractor to work within the Owner’s right-of-way efficiently and effectively, while maintaining a safe and efficient movement of vehicles and pedestrians around or through temporary workplaces and to protect workers in temporary workplaces from errant vehicles.

Traffic control plans shall be submitted to the Owner for review prior to commencement of the work and will be reviewed by the Owner within five (5) working days. A traffic control plan that does not include all of the required elements listed below will be found incomplete, and returned for revision and re-submittal. Proposed street closures will require separate approval from the Engineer.

The following checklist is provided to assist Contractors in establishing uniformity in the development of traffic control plans. This checklist should be used as a guide to ensure that all of the basic elements are covered.

- Traffic control plans shall be legible; using either ink or computer generated graphics.
- Indicate project name, tender number and date.
- Indicate the estimated duration of the construction work and subsequent traffic control on the plan.
- Indicate contractor's name, address and telephone number. Include name and telephone number of the 24-hour contact person representing the contractor and the name and telephone number of the traffic controller.
- Indicate north arrow and scale or NOT TO SCALE (N.T.S.).
- Use a legend to define all symbols.
- Show all streets in the work zone vicinity to ensure proper orientation.
- Show location and dimensions of the construction work zone.
- Show staging area and materials storage area, as appropriate.
- Show existing pavement markings, painted crosswalks, hatching and bike lanes. Dimension roadway widths, individual lane widths, bike lane widths, median dimensions, etc.
- Show all existing traffic signals and traffic control signs.
- Show existing curbs, curbs and gutters, sidewalks, driveways and intersections in the construction work zone including areas affected by taper transition.
- Indicate posted speed limits.
- Indicate locations of construction signs, delineators and barricades.
- Label all taper lengths and widths, delineator spacing and sign spacing.
- Show all existing and proposed parking restriction zones and signs, as appropriate.
- Signs and barricades will be required to direct pedestrians through or around the construction work zone and shall be shown on the traffic control plan.
- Minimum lane widths in accordance with the Traffic Control Manual Supplement.
- Minimum sidewalk clear width shall be 1.5 m.
- If work is done in phases, submit a separate traffic control plan for each phase.
- All temporary traffic control devices shall be removed from view when not in use.
- Maintain all traffic control devices 24 hours per day and 7 days per week.
- Provisions must be made for workers and work vehicles to enter and exit the work area safely.”

Page 5, delete subsection 12.2 and replace with the following:

- “2. In the “core area” of the Halifax Regional Municipality, additional requirements for traffic control are stipulated in the Traffic Control Manual Supplement, as found on the Owner’s web site at <https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>”
- (h) 15. Waste Management and Disposal Page 6, add the following:
- “5. Maintain uninterrupted access for garbage, green cart and recycling collection at all times. The garbage, green cart and recycle bins shall be fully accessible to the waste collection workers. Where uninterrupted service cannot be maintained the Contractor must bring garbage, green bins and recyclables to a location accessible for collection and return garbage and green bins to the designated property.”
- (i) 17. Site Cleanup Page 7, add the following:
- “1. Construction sites shall be kept neat and tidy and undergo a thorough cleanup at the end of each working day, to the satisfaction of the Engineer. This includes, but not limited to, the following on a daily basis (or more frequent intervals if required); removal of gravel/soils/debris from paved and landscaped areas, removal and disposal of waste materials/garbage, grading (and if required gravelling) of travelled ways to ensure a smooth unimpeded passage of vehicles, application of dust control measures, maintenance of safety and traffic control equipment (signs, barricades, cones, etc.) and the immediate (48 hours) trimming of damaged tree limbs as per section 32 91 10 - PROTECTION OF EXISTING TREES. In addition, the cleaning of concrete trucks shall not occur in the curb and gutter, catch basins, manholes, paved surfaces and landscaped areas.”

SECTION 01 22 00 - MEASUREMENT AND PAYMENT

- (a) Delete in its entirety and replace with new section 01 22 00 as found on the Owner’s web site, <https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>
- (b) Page 46, delete Item 85 in its entirety and replace with the following:

“85. Traffic Signal Installation (RA-5 crosswalk lights and RRFBs)

.1 Materials

Unit of Measurement: lump sum (LS)

This item includes: the supply and installation of all RA-5 crosswalk lights, Rectangular Rapid Flashing Beacons (RRFBs), all required traffic signal equipment including all poles, mast arms, wires, installation of PXO controller (s) where required and any other necessary appurtenances, traffic signals, push buttons, overhead wiring, transformer bases, solar engines, and all incidentals and associated hardware and wiring, etc. required to complete the work.

This item does not include the supply of traffic signal cable; which will be supplied to the contractor by HRM.

.2 Labour

Unit of Measurement: (LS)

This item includes: installation of all required traffic signal equipment; poles, push buttons, overhead wiring, rectangular rapid flashing beacons, solar engines, davit arms, pulling of all wires, all connections, grounding, final wiring including overhead, testing, demonstration and commissioning including CSA certification not included under Item No. 85.1. Anti-seize compound to be applied to all screws in weather exposed equipment. This item also includes the removal of all traffic signal equipment not to be re-used plus delivery to the HRM Mackintosh Street depot. The Contractor shall schedule and supply the traffic control for overhead electrical inspections by the Engineer at the completion of the work.

This item also includes daylight testing all the ends of each traffic signal conduits for each corner and ensure all conduits are in good conditions and clear and clear up debris.”

(c) 2.15 Pedestrian (RA-5) Signals Page 10, replace 2.15 with the following:
(SECTION 34 41 13 – TRAFFIC SIGNAL SYSTEMS)

“.1 Standard Design – comes with amber Beacons and Mast Arm Hangers as per the following specifications:

- .1 Illuminated face – walking man symbol 609 mm x 762 mm inside white border sign painted yellow (highway yellow).
- .2 Aluminum body to be treated prior to painting to prevent premature peeling and blistering.
- .3 Lexan lens 5 mm thick, (slide in, slide out, replacement).
- .4 Face light source to be LED lighting by Ecolight 40w post light retrofit 412 series.
- .5 Down light source to be LED lighting by Ecolight 40w street light retrofit 312 series.
- .6 Mogul sockets for both internal LED lights to be firmly secure to withstand the weight of the LED bulbs and movement of the sign.
- .7 Bottom of sign opening to be wire mesh or Plexiglass.
- .8 Switch inside to provide disconnect to lamp socket.

- .9 No exposed wiring inside sign, except where terminal ends in bottom of hanger.
- .10 All seams to be welded in main body construction.
- .11 Top of fixture to be reinforced to absorb strain of being mounted on hanger, minimum 6 mm aluminum plate.
- .12 Fortran cushion hanger, rubber cushioned mast wire hanger han555.
- .13 Each sign to be complete with two (2) 300 mm amber LED lens polycarbonate traffic signals, one attached to each side of the sign. Signal on right to face forward, signal on left to face away.
- .14 Stainless steel hinges with removable pins to hold both door faces on sign to main sign and stainless latch to close door faces to main sign. Doors to wing upwards freely with no obstructions. Hinges aligned for easy replacement.
- .15 CSA labled.
- .16 Wiring diagram with component parts list to be provided.
- .17 Safety chains and eye bolts on top to keep signs from turning in high winds.
- .18 Warranty: 1 year against defects in materials and workmanship, 3 years on painted surfaces against peeling and blistering.”

(d) Page 12, delete item 33 and replace with the following:

“33. Catchbasin Leads

Unit of Measurement: metre (m)

Method of Measurement: along centerline of pipe from centre of catchbasin to centre of main sewer, centre of manhole, or termination point indicated.

This item includes: excavation, backfilling including Type 2 gravel as specified, supply and placement of pipe complete with all fittings, connections and reinstatement as specified.”

(r) Page 50, delete item 94 and replace with the following:

“94. Tactile Walking Surface Indicator Plates

Unit of Measurement: Each

This item includes: supply and installation of Tactile Walking Surface Indicators as per Manufacturer's instructions and reinstatement as per Drawings and specifications."

SECTION 01 57 00 - ENVIRONMENTAL PROTECTION

Permits and Approvals

(a) Permits and Approvals

Page 3, Subsection 6, add the following:

"4 When required, erosion and sediment control plans to be submitted for approval of Nova Scotia Department of Environment and Labour and Owner prior to start of construction and should be reviewed at the project preconstruction meeting."

SECTION 03 30 00 - CONCRETE

PART 2 – PRODUCTS

2.1 Materials Page 2, delete subsection .3 and replace with the following:

"3 Aggregates: to CSA-A23.1. For exposure Classes C-XL, C-1, C-2, C-3, C-4 and F-1, test data is required from a company certified by the Canadian Council of Independent Laboratories that shows measures taken to mitigate alkali silica reaction. The data shall be submitted at least 10 (ten) business days prior to concrete placement. Further submission during the construction season is required if there is a change in the quality or quantity of materials in the concrete mix design. The submittal shall include test results for alkali-aggregate reaction for aggregates used in the mix design, and the proposed concrete mix design based on CSA Standard Practice A23.2-27A-14.

To confirm conformance with the specified expansion limits of CSA Standard Practice A23.2-27A-14, alkali aggregate reactivity data for each aggregate source shall be provided according to CSA Test Method A23.2-14A or CSA Test Method A2.2-25A-14 provided there are three consecutive acceptable tests within the last 6 years.

Where supplementary cementing materials are employed to mitigate potentially deleterious expansions, the minimum level of supplementary material shall be in accordance with Table 7 of CSA Standard Practice A23.2-27A. Concrete curb and gutter, pavers, and sidewalks shall be classified as St3 and retaining walls as St4 according to Table 5 of the standard practice.

Non-reactive course and fine aggregate, as defined in CSA A23.1-14, shall be used for bridge structures and for cold weather concrete work constructed under the HRM Quality Management Plan for sidewalk, curb and gutter. Prior to the start of any project using non-

reactive aggregate, the ready mix concrete supplier shall have at the place of production, sufficient quantity of aggregate to complete the entire concrete section scheduled for that day.

Upon acceptance of the aggregates, the source and method of manufacture shall not be altered for the duration of the contract. Aggregates shall be stored and maintained in such a manner to avoid the inclusion of foreign materials in the concrete and such that no equipment will be operated on the stockpiles. The stockpiles shall be constructed to prevent segregation or contamination. Fine aggregate shall be washed and classified to conform to the gradation limits specified in CSA Standard A23.1. Coarse aggregates shall consist of washed crushed stone having a nominal size of 20 mm. The maximum combination of flat, elongated and flat and elongated particles, as defined in CSA A23.2-13A, shall not exceed 10% of the mass.

PART 3 - EXECUTION

3.8 Curing and Protection Page 6, add the following:

“.6 Curing or sealing of concrete to be carried out as directed by the Engineer.”

3.10 Defective Work Page 7, add the following:

“.4 Defective sidewalk slabs (including driveway ramps) shall be evaluated for spalling based on the following criteria:

SECTION 05 50 00 - METAL FABRICATIONS

PART 3 - EXECUTION

3.1 Installation Page 4, delete subsection 3.1.6 and replace with the following:

“.6 Prepare surfaces in accordance with SSPC Surface Preparation Standards and apply two coats of finish paint to items scheduled for painting in Supplementary Specifications.”

Condition	Depth of Spalling	Area (%) of Panel
1C	≤ 3 mm (1/8")	5 to 15%
1R	≤ 3 mm (1/8")	> 15%
2C	> 3 mm (1/8") & ≤ 6 mm (1/4")	2 to 10%
2R	> 3 mm (1/8") & ≤ 6 mm (1/4")	> 10%
3C	> 6 mm (1/4")	0 to 5%
3R	> 6 mm (1/4")	> 5%
Legend: C: no payment for the slab/panel R: removal and replacement of the slab/panel		

SECTION 31 20 00 - EARTHWORK

- (a) 1.1 Work Included Page 1, delete Subsection 1.1 and replace with the following:
- “1 This section specifies requirements for all earthwork operations. Work includes supply of products and excavating, bedding, backfilling, compacting, shoring, dewatering, disposal of unsuitable and surplus materials, supply and placement of catchment devices and supply and installation of trench cage.”
- (b) 1.4 Definitions Page 2, delete Subsection 1.4.4 and replace with the following:
- “4 Common: All excavated soil which is not rock or topsoil.”
- (c) 1.4 Definitions Page 2, delete Subsection 1.4.6 and replace with the following:
- “6 Surplus material: excavated material not required for re-use, including material not exceeding the Tier 1 RBSLs and CCME Commercial guidelines.”
- (d) 2.1 Materials Page 3, Subsection 2.1.1, add the following:
- “Contractor shall provide geotechnical certification that the proposed select backfill material is suitable for the use intended.”
- (e) 2.1 Materials Page 6, Subsection 2.1, add the following:
- “2.1.10 Conversion of in-place pay volume (pay area times thickness) to unit tonnage for gravel shall be at the rate of 2.2 tonnes per cubic metre.”
- 2.1.11 Conversion of in-place pay volume (pay area times thickness) to unit tonnage for impacted soil shall be at the rate of 2.0 tonnes per cubic metre.”
- (f) 3.1 Excavation Page 7, add the following:
- “15 When granite curb is excavated it shall remain the property of the Owner. The Contractor shall handle the granite curb in such manner as to avoid damage and deliver the material to a site designated by the Engineer.”
- (g) 3.7 Bedding and Backfilling Page 9, delete subsection 3.7.2, and replace with the following:
- “2 Pipe bedding material to be Type I gravel from 150 mm below the pipe or 25% of the nominal diameter of the pipe, whichever is greater, to 300 mm above the top of the pipe to the full width of the excavated trench. Backfill area around manholes, catchbasins and structures to be Type II gravel to a minimum of 300 mm from the structure. Remaining trench backfill from the bedding to the subgrade to be approved selected material from the site.”

- (h) 3.7 Bedding and Backfilling Page 10, add the following:
- “.12 In areas of excessive ground water the Engineer may approve the substitution of the specified pipe bedding with 28 mm clear stone completely surrounded with geotextile separator to prevent the migration of fines into the clear stone.
- (i) 3.9 Mass Excavation and Embankment Page 11, add the following:
- “.13 When tree roots are encountered from trees which are not identified for removal, roots must be grinded using a trailer or towable stump grinding unit having sufficient capacity to adequately grind the tree roots to accommodate proposed construction. The grinding unit must be in good working condition complete with all recommended shields and guards. The Contractor must provide staff to act as “spotters” to accompany the root grinding operation to direct/guide persons who in any way may be at risk of debris cast from the root grinding operation.”
- .14 Prior to excavation around any manhole within the workplace (existing or newly constructed as part of the tender), the contractor shall supply and install catchment devices in all manholes prior to work commencing on the manhole.
- Such catchment devices shall be constructed and installed in a manner so as not to impede the flows through the manhole and shall be removed after all work is completed.”
- (j) 3.11 Road Gravels Page 12, add the following:
- “.3 Following removal of asphalt and/or existing gravels, but before the placement of new material, the lowest material type shall be proof rolled by means of a fully loaded tandem (20 t). All soft and yielding material, as observed by the Engineer, shall be removed and replaced with suitable material.”
- “.4 Shouldering material shall be placed and graded within 1 week of placement of top lift of asphalt.”

SECTION 32 12 16 - ASPHALT CONCRETE PAVING

- (a) Delete in its entirety and replace with section S-1 Specification for Hot Mix Asphalt Concrete, S-2 Specification for Performance Graded Asphalt Binder, S-3 Asphaltic Concrete and Portland Cement Concrete (Planing/Profiling) and S-4 Pavement Markings as found on the Owner’s web site:
<https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>

SECTION 32 16 00 - WALKS, CURBS AND GUTTERS

- (a) PART 2 - PRODUCTS

2.1 Materials Page 1, delete subsection 2.1.1 and replace with the following:

“1 Concrete: to Section 03 30 00, slump of 80 mm ± 20 mm; total air content at point of discharge of 5 to 8 percent; minimum 28 day compressive strength of 35 MPa, and maximum water cementing materials ratio of 0.45. Slump shall be 50 mm ± 20 mm when a slip form machine is used to place concrete. Concrete placed under quality management plan for cold weather protection shall have a maximum fly ash content of 10%; total air content 6 to 8 percent; minimum temperature of concrete 16°C (at time of placement).

Compressive strength test results shall be evaluated in accordance with the relevant clause of the current CSA Standard A23.1. Each 28 day compressive strength test result not meeting this acceptance criterion which is less than 31.5 MPa and greater than or equal to 28 MPa will result in a \$500.00 penalty. No penalties shall be assessed if the sampling and testing is shown not to be in accordance to this standard. The concrete represented by any 28 day compressive strength result less than 28 MPa shall be removed and replaced at the Contractor’s expense. The Consultant performing sampling and testing of the plastic concrete will cast four compressive strength test specimens for testing at 7 (1), 28 (2) and 56 (1) days. If the 56 day test is found to have a minimum compressive strength of 31.5 MPa, no penalty will be assessed.

Prior to removal, the Contractor may elect to core the area represented by the test result to identify the extent of removal. The coring operation and subsequent core repair and testing shall be undertaken by a concrete testing laboratory and technical staff certified by the Canadian Council of Independent Laboratories (CCIL). The compressive strength tests shall be performed in accordance with the current edition of CSA Test Method A23.2 and evaluated in accordance with the relevant clause(s) of the current edition of CSA Standard A23.1. The Contractor shall be responsible for the cost of coring and testing. The concrete shall not be removed if the core results are greater than or equal to 28 MPa.

Penalties shall not be assessed for loads less than 4 m³.”

2.2 Asphalt Concrete Mix Page 2, add the following as section 2.2:

“2 Asphalt Concrete Mix to HRM Standard S-1 Specification for Hot Mix Asphalt Concrete.”

(b) PART 3 - EXECUTION

3.1 Fine Grading Page 2; add the following as section 3.1.2

“2 For sidewalk and curb replacement within three (3) metres of existing trees, replace Type 1 gravel only at the direction of the Engineer.”

3.3 Concrete Surfaces Page 3; add the following as section 3.3.5

“5 Quality Management Plan – Cold Weather

The cut-off date for concrete sidewalk work is October 15, and for concrete curb and gutter is October 31. Beyond these dates, concrete shall meet the requirements of the HRM Quality Management Plan for cold weather.

Granular base for sidewalk shall be dry and free of ice or frost at the time of concrete placement. Base courses below 0 degrees Celsius shall be preheated to above the freezing point prior to placement of concrete.

Immediately after placing, consolidation and strike off, the concrete shall be covered with either insulation blankets or 6 mil polyethylene plastic film to retain heat until final finishing. Plastic film may only be used if the ambient temperature is forecast to remain above 0°C. If plastic film is used, the Contractor shall monitor the temperature within the film, and the Contractor shall place insulation blankets prior to the temperature falling below 5°C. The Contractor shall at all times maintain at site sufficient insulation blankets to cover the entirety of the new concrete.

The blankets shall be temporarily removed for final finishing and replaced immediately after finishing is complete. Blankets shall remain in place until the concrete reaches a compressive strength of 20 MPa. Field cured samples shall be used (cured in same environment as sidewalk or curb environment) to determine removal time of concrete blankets.

When 20 MPa compressive strength has been reached and the surface is dry, an application of silane sealer shall be applied. The sealer shall be 40 percent silane, Hydrozo Enviroseal 40 or approved equal.

Verification that the concrete supplied meets the cold weather protection requirements shall be computer printouts of the batch supplied.

HRM may conduct and record the results of random temperature readings under the insulation blankets during the curing period.

The Engineer will issue a notice when concrete operations cease for the year and quality management for cold weather protection is no longer appropriate. The Contractor shall provide temporary measures to ensure public safety until permanent infrastructure is in place.”

3.4 Asphalt Concrete Surfaces Page 3; remove section 3.4.1 and replace with the following:

“1 Place asphalt concrete mix in accordance with HRM Standard S-1 Specification for Hot Mix Asphalt Concrete.”

3.5 Backfilling Page 3, add the following:

“2 The bottom of the granular base and sub-base for curb is to match that of street gravels or 150 mm thick minimum, whichever is greater.”

“3 Curb bedding shall be 150mm Type 1 gravel. The remainder is to match type and depth of street gravels.”

“4 Outside edge of curb bedding to be 150 mm behind curb at surface, and increase 100 mm for each 200 mm below curb.”

SECTION 32 90 00 – PLANTING OF TREES, SHRUBS AND GROUNDCOVER

Delete in its entirety and replace with new section 32 90 00 as found on the Owner’s web site:
<https://www.halifax.ca/business/doing-business-halifax/procurement/terms-conditions>

SECTION 32 91 10 - PROTECTION OF EXISTING TREES

(a) Part 2 - PRODUCTS

Page 2, delete subsection 2.2 and replace with the following:

2.2 Fencing

“1 Fencing: minimum height of 1.3 m and of heavy duty construction of either snow fencing or flexible rubber-coated chain link material supported by a minimum of 76 mm x 76 mm wooden stakes at a minimum spacing of 1.5 m apart to provide a rigid barrier around the tree. Fencing to include top and bottom wooden rail minimum 28 mm x 89 mm.”

(b) Part 3 - EXECUTION

Page 2, add subsection 3.2.3 as follows:

3.2 Construction Methods

“3 For infrastructure work within the tree protection zone, excavate only within 150 mm of the infrastructure. All remaining soil and grassed areas within the tree protection zone to remain intact.”

(c) Part 3 - EXECUTION

Page 2, delete subsection 3.3.4 and replace with the following:

3.3 Tree Protection and Protection Zone

“4 Establish a protection zone for all trees and shrubs scheduled to be preserved on site.

Table & T-3.1 & Guideline for determining critical protection zones for trees

<u>Trunk & Diameter (DBH*)</u>	<u>Minimum & Protection Radius</u>
≤ 10 cm	1.2 m
11-30 cm	2.0 m
31-40 cm	3.4 m
41-50 cm	4.6 m
51-60 cm	6.0 m
61-70 cm	7.0 m
71-80 cm	8.0 m
> 80 cm	9.0 m

* Diameter at breast height”

(d) Part 3 - EXECUTION

Page 2, delete subsection 3.6.4 and replace with the following:

3.6 Root Pruning

“4 Root pruning within the tree protection zone requires root exploration via air powered soil excavation tool or hydro vacuum unit to first remove the soil and expose the roots. Damaged roots under two (2) cm in diameter shall be pruned using a cleaned and sharpened tool such as hand pruners, loppers or a sharpened spade. Damaged roots 2-6 cm in diameter shall be pruned using a clean and sharp tool, such as a handsaw, hand pruner, loppers or concrete cut-off saw. All roots over 6 cm in diameter must be assessed by the Urban Forester/Engineer prior to pruning.”

(e) Part 3 - EXECUTION

Page 5, delete subsection 3.9.1, 3.9.2, 3.9.3 and 3.9.4 and replace with the following:

3.9 Trees Damaged, Removed or Lost Due to Construction

“1 Restrict tree removal to areas indicated or designated by Engineer.

Trees removed by the Owner’s contractors or sub-contractors, without prior authorization from HRM Urban Forestry or the Engineer, shall be replaced at the contractor’s expense, at a rate one tree for every 60 mm

(2½") of trunk diameter measured at chest height. The location and species of replacement trees to be determined by HRM Urban Forestry. Replacement trees to be a minimum 60 mm (2½") caliper.

If a HRM tree is damaged, the municipality may hold the responsible party liable and hold them subject to a penalty. Damages may include but are not limited to: bark tear, limb and branch breakage, root damage, compaction of root area, removal of roots during excavation and loss of bark due to mechanical impacts.

Where limbs or roots are involved, the penalty will be \$100.00 per 2.5 cm (1") diameter measured at the attachment point between parent stem and damaged limb. In the case of roots, the measurement is taken at the point where the damaged root attaches to the parent. In the case of bark tear, the same penalty applies but measurement is taken at widest part of affected area.

If HRM Urban Forestry assesses a tree, and finds it to be unstable, no longer structurally sound or damaged to the point where it is no longer viable, the Owner will seek compensation for the tree in accordance with HRM policy."

SECTION 32 91 19 - TOPSOILING AND FINISH GRADING

PART 2 - PRODUCTS Page 3, delete subsection 2.2.2 and replace with the following:

- “.2 Topsoil to be rated to Landscape Nova Scotia Standard Topsoil Triangle, 1990, or latest revision, rating A. Manufacture topsoil or topsoil derived from site sources is to be improved as necessary to meet topsoil qualifications above.”

PART 3 - EXECUTION

3.1 Preparation of Existing Grade for Seeding, Sodding and Planting Page 6, add the following:

- “.3 Topsoil debris remaining on asphaltic concrete surfaces shall be removed by a power sweeper.”

SECTION 32 92 00 - SEEDING AND SODDING

PART 2 - PRODUCTS Page 3, delete subsection 2.5.3 and replace with the following:

- “.3 Ratio for year one maintenance applications: May 3:0:0, July 3:1:3, September 1:2:3, or as recommended by the Nova Scotia Agriculture College Soils Department or by an approved soils lab. At the completion of the year one maintenance applications, provide the Owner with a copy of maintenance records showing dates of performed maintenance and tasks performed.”

SECTION 33 01 30 – CCTV INSPECTION

Add new section 33 01 30 from the latest revision of the Halifax Regional Water Commission's Standard Specifications.

SECTION 33 11 00 - WATER MAIN

Delete in its entirety and replace with new section 33 11 00 from the latest revision of the Halifax Regional Water Commission's Standard Specifications.

SECTION 33 31 00 – SANITARY SEWERS

Delete in its entirety and replace with new section 33 31 00 from the latest revision of the Halifax Regional Water Commission's Standard Specifications.

SECTION 33 34 00 - PRESSURE SEWERS

Delete in its entirety and replace with new section 33 34 00 from the latest revision of the Halifax Regional Water Commission's Standard Specifications.

SECTION 33 39 00 - PRECAST MANHOLES, CATCHBASINS AND STRUCTURES

Delete in its entirety and replace with new section 33 39 00 from the latest revision of the Halifax Regional Water Commission's Standard Specifications.

(a) 3.5 Adjusting Tops of Existing Units Page 5 add the following:

“.4 On arterial and collector roadways hardware shall be either adjusted or ramped within 48hrs.”

ADD THE FOLLOWING SECTIONS

S-1 Specification for Hot Mix Asphalt Concrete
S-2 Specification for Performance Graded Asphalt Binder
S-3 Asphaltic Concrete and Portland Cement Concrete Planing / Profiling
S-4 Pavement Markings
Appendix 'A' Traffic Control Manual Supplement
Appendix 'B' Additional Details

**** End 00 74 00 ****