

Township of Hamilton
Tender # PW2018-03
Bethel Grove Culvert Extension



TOWNSHIP OF HAMILTON

TENDER # PW2018-03 – Bethel Grove Culvert Extension

Submitted by,

Name of Firm or Individual

Address (Include postal code)

Telephone No. (Include area code)

Name of Person Signing for Firm

Office of Person Signing for Firm

TENDER CLOSING DATE: Tuesday, May 1, 2018 at 3:00pm local time

To: Paul Dowber, Treasurer
8285 Majestic Hills Dr.
Cobourg, Ontario
K9A 4J7
(905) 342-2810

INFORMATION TO TENDERERS

The work specified in the Tender shall be performed in strict accordance with the following Schedule:

- A. INFORMATION TO TENDERERS Page 2 - 12
- B. INSTRUCTIONS TO TENDERERS Page 13 - 18
- C. SPECIAL PROVISIONS - GENERAL Page 19 - 33
- D. SPECIAL PROVISIONS - TENDER ITEMS Page 34 - 44
- E. GENERAL CONDITIONS Page 45
- F. STANDARD DRAWINGS Page 46 - 51
- G. STANDARD SPECIFICATIONS: It shall be the Contractor's responsibility to obtain the applicable edition of the following Ontario Provincial Standard Specifications.

OPSS No.	Date	OPSS No.	Date	OPSS No.	Date	OPSS No.	Date
PROV 127	Apr. 2017	MUNI 206	Nov. 2013	MUNI 518	Nov. 2017	MUNI 928	Apr. 2012
128	Apr. 2006	MUNI 314	Nov. 2016	805	Nov. 2015	MUNI 930	Nov. 2014
MUNI 180	Nov. 2016	MUNI 501	Apr. 2017	902	Nov. 2010		
MUNI 182	Nov. 2012	MUNI 510	Apr. 2017	904	Apr. 2010		
201	Nov. 2011	511	Nov. 2013	MUNI 905	Apr. 2017		

The Contractor, by this Tender, offers to complete the work of this Tender in strict accordance with the terms contained herein.

The bidder certifies that it has met all of its obligations to comply with the Provincial and Federal Sales Tax requirements, so that it is able to do business in Ontario.

Yes _____ No _____

The Bidder hereby acknowledges receipt of the following Addenda to the Bid Documents:

		Initials
Addendum No. _____	Date of Issue _____	_____
Addendum No. _____	Date of Issue _____	_____
Addendum No. _____	Date of Issue _____	_____

Failure to acknowledge all Addenda issued **may** result in the bid being rejected.

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By my/our signature hereunder, I/we hereby identify this as the Schedule of Tender Data, Plans and Specifications, for Tender # PW2018-03, executed by me/us bearing date the ____ day of _____, 2018 and we have fully read all related documents to tender data as listed above.

SIGNATURE: _____ POSITION _____

NAME OF FIRM _____ (COMPANY SEAL)

Privacy Legislation

Federal legislation governs the collection and use of personal information from individuals. We represent and warrant to the owner that we have obtained the CONSENT of any and all employees whose personal information we have supplied to the owner in this tender. This personal information, which includes, but is not limited to, the employees' names, education, work and project history, professional designations and qualifications. This CONSENT permits the owner to disclose this personal information to the Engineer (owner or agent) for the purpose of evaluating our bid. In the event that the tender is successful, this personal information may also be used in project administration, for contact purposes.

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Corporation of the Township of Hamilton
Bethel Grove Culvert Extension
Tender # PW2018-03

April 2018

Project No. 60515043

Township of Hamilton
Tender # PW2018-03
Bethel Grove Culvert Extension

PROJECT: TENDER # PW2018-03
BETHEL GROVE CULVERT EXTENSION

AUTHORITY: CORPORATION OF THE TOWNSHIP OF
HAMILTON

CONTRACT ADMINISTRATOR: AECOM
300 WATER STREET
WHITBY, ONTARIO L1N 9J2
Telephone: 905-668-9363 Fax: 905-576-6346

TENDERER: _____
Name

Address (include Postal Code)

Telephone and Fax Numbers

Name of Person Signing

Position of Person Signing

TENDERS RECEIVED BY: **Paul Dowber**
Treasurer
8285 Majestic Hills Drive
P.O. Box 1060
COBOURG, Ontario, K9A 4W5

Township of Hamilton
Tender # PW2018-03
Bethel Grove Culvert Extension

To: Mayor and Members of Council
Township of Hamilton

Re: Tender # PW2018-03
Bethel Grove Culvert Extension

Dear Mayor and Members of Council:

The Contractor has carefully examined the Plans, Provisions, Specifications and Conditions described herein as part of the work to be done under this Tender. The Contractor understands and accepts the said Plans, Provisions, Specifications and Conditions, and, for the prices set forth in this Tender, hereby offers to furnish all machinery, tools, apparatus and other means of construction, furnish all materials, except as otherwise specified in the Tender, and to complete the work in strict accordance with the said Plans, Provisions, Specifications and Conditions.

The Contractor understands and accepts that the quantities shown are approximate only, and are subject to increase, decrease, or deletion entirely if found not to be required.

Notification of acceptance may be given and delivery of the form of Agreement made by prepaid post, addressed to the Contractor at the address contained in this Tender.

ITEMIZED BID

In accordance with the first paragraph of this Tender, the Contractor hereby offers to complete the work specified for Tender # PW2018-03

- Spec. - The numbers in this column refer to the applicable issue of the Ontario
- No. Provincial Standard Specifications
- SP - Refers to Special Provisions
- (P) - Plan Quantity Payment Item

Item No.	Spec No.	Description	Unit	Quantity	Unit Price	Total
PART 'A': BETHEL GROVE CULVERT EXTENSION						
A1	201 206.MUNI 510.MUNI 518 902 SP	Site Preparation, including Grubbing, Unwatering, and Siltation Control	LS	1		
A2	SP	Removal and Disposal of Deteriorated Concrete	LS	1		
A3	902 SP	Earth Excavation for Structure Foundations	LS	1		
A4	904 905 SP	Concrete Structure	LS	1		
A5	314 501.MUNI SP	Backfill to Structure	LS	1		
A6	511 SP	Rock Protection	LS	1		
A7	511 SP	River Run Stone	LS	1		
A8	802 SP	Topsoil (Imported)	m3	10		
A9	804.MUNI SP	Provisional. Seed and Erosion Control Blanket	m2	80		
Total Part 'A' (carried to Summary)						

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		SUMMARY	
		Total Part 'A' - Bethel Grove Culvert Extension	
		Sub-Total (excluding HST)	
		HST (13% of Total)	
		TOTAL TENDER AMOUNT	

Tenderer's HST Registration No.....

REFERENCES

Bidders are advised that they are required to submit three (3) references on the form provided. Failure to do so may result in the bid not being accepted by the Township. References provided shall **not** be representatives employed by the Township of Hamilton or AECOM. As requested by the Township, references will be checked by the Contract Administrator or Township during the Tender review process.

Year _____

Description of Contract _____

Name of Organization _____

Contact Person _____

Telephone Number _____

Value of Contract _____

Year _____

Description of Contract _____

Name of Organization _____

Contact Person _____

Telephone Number _____

Value of Contract _____

Year _____

Description of Contract _____

Name of Organization _____

Contact Person _____

Telephone Number _____

Value of Contract _____

(These Form shall be completed and attached to the Tender Submitted)

LIST OF SUBCONTRACTORS

Bidders are advised that they are required to submit a list of Contractor's or Subcontractors on the form provided. Failure to do so may result in the bid not being accepted by the Township. All Contractors and Subcontractors must demonstrate they have a minimum of **five (5)** years successfully completing the type of work they will be performing under this Tender.

Discipline	Name of Contractor or Subcontractor	Phone Number	Contact Name

In accordance with OPS General Conditions clause 3.09, the Contractor cannot change subcontractors without prior approval from the Township.

(This Form shall be completed and attached to the Tender Submitted)

INSTRUCTIONS TO TENDERERS

GENERAL

SEALED Tenders plainly marked "Tender # PW2018-03" will be received until:

3:00 P.M., LOCAL TIME, Tuesday May 1, 2018

and shall be addressed to: Paul Dowber
Treasurer
8285 Majestic Hills Drive
P.O. Box 1060
COBOURG, Ontario, K9A 4W5

Tenders must be time-stamped at the above noted location to be considered. Late submissions will not be accepted and will be returned unopened without exception.

The use of the mail or courier services for delivery of a Tender will be at the risk of the Bidder. The Tender must come into the possession of the above-mentioned representative of the Township before the deadline for submission or the Tender will be returned to the Bidder unopened.

In the event that the Tender is hand delivered and is received past the deadline for submission, the Tender envelope will be time stamped and returned unopened to the deliverer immediately.

In the event that the Tender is received by a means other than 'in person' and is received past the submission deadline, it will be time stamped and returned unopened by courier.

Note: Since Tenders must be submitted in a sealed envelope, submissions by facsimile or electronic delivery, secured or otherwise, are not acceptable.

The onus unequivocally remains with the Bidder to ensure that Tenders are delivered to the Township, before the deadline for submission, in accordance with the submission instructions. Requests for adjustments to submitted Tenders by telephone, fax or electronically will not be considered.

The Township shall not be liable for any cost of preparation or presentation of Tenders, and all Tenders and accompanying documents submitted by the Bidder become the property of the Township and will not be returned. There will be no payment to Bidders for work related to and materials supplied in the preparation, presentation and evaluation of any Tender, nor for the Contract negotiations whether they are successful or unsuccessful.

The Township, its elected officials, employees and agents shall not be responsible for any liabilities, costs, expenses, loss or damage incurred, sustained or suffered by any Bidder, prior or subsequent to, or by reason of the acceptance, or non-acceptance by the Municipality of any Tender, or by reason of any delay in the acceptance of any Tender.

DECLARATIONS

- a) I/We declare that no person, firm or corporation other than the one whose signature or the signature of whose proper officers is or are attached to this Request for Tender, has any interest in this Tender or in the Contract.
- b) I/We further declare that this Tender is made without any connection, knowledge, comparison of figures or arrangement with any other contractor, firm or person making a similar Tender and is in all respects fair and without collusion or fraud.
- c) I/We further declare that no Township of Hamilton employee, or member of Council (or their families) is, or will become interested directly or indirectly as a contracting party or otherwise in or in the performance of the Contract or in the supplies, work or business to which it relates or in any portion of the profits of it, or of any such supplies to be used therein or any of the monies to be derived from it.
- d) I/We further declare that the statements contained in the Tender are in all respects true.
- e) I/We further declare that I/We have examined the locality and site(s) of the proposed Equipment, as well as all the specifications relating to them, prepared, submitted and rendered available on behalf of the Township of Hamilton and are hereby acknowledged to be an integral part of the Contract. I/We hereby propose and offer to enter into the Contract on the terms and conditions and under the provisions set forth in the Tender, and to accept in full payment for it the sums calculated in accordance with the actual measured quantities and unit prices attached to this Tender.

BLANK FORM OF TENDER

One copy of the Tender, on the forms provided, shall be submitted. All information requested shall be shown in the tender, in the space provided.

RIGHT TO ACCEPT OR REJECT TENDERS

The Authority reserves the right to reject any or all tenders or to accept any tender should it be deemed to be in its best interest to do so.

Tenders which are incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations, or irregularities of any kind, may be rejected as informal.

UNACCEPTABLE TENDERS

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Each Item in the Tender Form shall include a reasonable price for such Item. Under no circumstances will an unbalanced tender be considered. The Authority and the Contract Administrator will be the sole judge of such matters, and should any tender be considered to be unbalanced, then it will be rejected by the Authority.

ABILITY AND EXPERIENCE OF TENDERER

The Authority reserves the right to reject any tender where satisfactory evidence of sufficient capital, plant and experience to successfully prosecute and complete the work in the specified time, is not furnished by the Tenderer.

All Contractors and Subcontractors must demonstrate they have a minimum of five (5) years successfully completing the type of work they will be performing under this Tender. Contractors and Subcontractors shall be listed on the form provided in the Tender Form - List of Subcontractors section of the Tender Documents.

In accordance with OPS General Conditions clause 3.09, the Contractor cannot change subcontractors without prior approval from the Township.

REFERENCES

Bidders are advised that they are required to submit three (3) references on the form provided in the Tender Form section of the Tender Documents. Failure to do so may result in the bid not being accepted by the Township. As requested by the Township, references will be checked by the Contract Administrator or Township during the Tender review process.

HARMONIZED SALES TAX (HST)

The Tenderer shall NOT include any amount in his Tender unit prices for the Harmonized Sales Tax. The HST will be shown on each payment certificate and will be paid to the Contractor in addition to the amount certified for payment and will, therefore, not affect the Tender unit prices.

EXECUTE CONTRACT DOCUMENTS

Tenders shall be open for acceptance for a period of 60 days after the closing date. After this time the tender may only be accepted with the consent of the successful Tenderer.

The successful Tenderer shall execute the Contract Documents within 10 calendar days of receipt of notification of Acceptance of Tender.

Failure by the successful Tenderer to meet the above requirements will entitle the Authority to cancel the award of the Contract. The Authority may then award the Contract to one of the other Tenderers or take such other action as it chooses.

COMMENCEMENT OF WORK

The successful Tenderer shall commence work at the site within 7 calendar days of the official commencement date as specified in the written order issued in accordance with GC7.01.02 of the General Conditions.

LOCATION

The work is located within the Township of Hamilton at Bethel Grove Road 5th Line, 0.17 km East of Whitney Howard Road.

SOILS INFORMATION AND CROSS-SECTIONS

A geotechnical investigation has not been undertaken on behalf of the Authority.

TENDERERS TO INVESTIGATE

Tenderers must satisfy themselves by personal examination of the site and by such other means as they may prefer as to the actual conditions and requirements of the work.

The Tenderer shall carefully examine all plans and profiles so that the unit prices tendered are commensurate with the nature of the work.

It shall be the Contractor's responsibility to thoroughly inspect the site of the proposed works, determine the location of any buried or obstructing services and make satisfactory arrangements for interference with such service with the proper jurisdictional agency.

INQUIRIES DURING TENDERING

The Tenderer is advised that inquiries regarding the interpretation of the plans or specifications shall be directed by telephone (905-668-4021) or email to the Contract Administrator, AECOM, Attention: Matt Yates (matt.yates@aecom.com).

All inquiries must be submitted by April 23, 2018 at 12:00pm.

AWARD OF THE CONTRACT

The award of this Tender is subject to the approval of the Council of the Township of Hamilton.

DEFINITION OF OWNER/AUTHORITY AND ENGINEER/CONTRACT ADMINISTRATOR

Wherever the word "Owner" or "Authority" or "Corporation" appears in this Tender, it shall be interpreted as meaning the "Corporation of the Township of Hamilton".

Wherever the word "Ministry", "M.T.C." or "M.T.O" appears it shall be deemed to mean the "Ministry of Transportation, Ontario" or the "Corporation of the Township of Hamilton".

Wherever the word "Contract Administrator" or "Engineer" appears in this Contract it shall be deemed to mean the Consultants, AECOM, or such other officers, as may be authorized by the Authority to act in any particular capacity.

ADDENDA

The Contractor shall ensure that all addenda issued during the tendering period are signed and attached as part of the submitted bid. The Contractor must also sign and acknowledge addenda in the space provided on the Form of Tender. Failure to do so may result in the submitted Tender being rejected.

UTILITIES

Plans illustrating proposals for the relocation of utilities are available for inspection at the office of the Contract Administrator.

For additional information regarding existing utilities the Contractor may contact the following personnel:

Union Gas:

Mr. Phil Langlois
Tel: 613-968-6789, Ext. 202

Bell Canada:

Ms. Val Maidens
Tel: 705-876-2234

Township of Hamilton:

Mr. Paul Heffernan
Tel: 905-342-2810

Hydro One:

Mr. Shaun Moscrop
Tel. 888-871-3514, Ext. 3242

Cogeco:

Mr. Gary Birrell
Tel: 613-544-6311

Contractor to notify Trans Canada Pipeline and Enbridge Gas Pipeline of proposed works and obtain permits, if required.

SCOPE/LIMITS OF WORK

Due to budget constraints, the Township reserves the right to reduce or delete Items in the Tender and/or revise the limits of construction with no adjustment to unit prices.

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Clause G.C.8.01.02 of the General Conditions is revised in that there will be no additional payment for overhead cost as a result of any reduction of Tender quantities.

TENDER OPENING MEETING

The Tender opening meeting is scheduled to take place shortly after the closing time on the date of closing at the Township of Hamilton offices, 8285 Majestic Hills Drive, RR4, Cobourg, Ontario and interested bidders are invited to attend.

PROVISIONAL ITEMS

After the tender closing the Items in the Itemized Bid noted as being "Provisional" may have quantities modified or may be deleted from the Contract at the sole discretion of the Owner without negotiating with the bidders regardless of the percentage of the Tender the individual or combined "Provisional Items" represent. No consideration for loss of overhead costs will be considered should these Items be deleted from the Contract.

SPECIAL PROVISIONS – GENERAL

PLAN QUANTITY ITEMS

Measurement for payment of the Items designated (P) in the Itemized Bid is by plan quantity, as may be revised by adjusted plan quantity.

GUARANTEED MAINTENANCE

Section GC7.16 of the General Conditions is revised in that the Contractor shall guarantee and maintain the entire work called for under this Tender for a period of twenty-four (24) months.

The Contractor shall make good in a permanent manner, satisfactory to the Authority, any and all defects or deficiencies in the work, both during the construction and during the period of maintenance as aforesaid. The Contractor shall commence repairs on any work identified as defective under this clause within 48 hours of receipt of notice from the Authority or the Contract Administrator.

The decision of the Authority and the Contract Administrator shall be final as to the necessity for repairs or for any work to be done under this Section.

CONTRACT TIME AND LIQUIDATED DAMAGES

(1) Time

Time shall be the essence of this Contract.

For purposes of this Contract, GC1.04 of the General Conditions is revised, in that Contract Time means the time stipulated herein for Completion of the Work as defined in Clause GC1.06.

(2) Progress of the Work and Contract Time

The Contractor shall accomplish completion of this Contract as defined in GC1.06 of the General Conditions on or before September 14, 2018.

If the Contract time above specified 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 insure that the work will be completed within the Contract time 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 therefore.

(3) Liquidated Damages

It is agreed by the parties to the Contract that in case all the work called for under the Contract is not completed by the date specified, or as extended in accordance with Section GC3.07 of the General Conditions, a loss or damage will be sustained by the Authority. Since it is and will be impracticable and extremely difficult to ascertain and determine the actual loss or damage which the Authority will suffer in the event of and by reason of such delay, the parties hereto agree that the Contractor will pay to the Authority the sum of **ONE THOUSAND DOLLARS (\$1,000.00)** as liquidated damages for each and every calendar days delay in achieving completion of the work beyond the date prescribed. It is agreed that this amount is an estimate of the actual loss or damage to the Authority which will accrue during the period in excess of the prescribed date for completion.

The Authority may deduct any amount under this paragraph from any moneys that may be due or payable to the Contractor on any account 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 Authority.

CONTRACTOR'S AUTHORIZED REPRESENTATIVE

Authorized representative as referenced in GC7.01.10 is defined as an employee of the Contractor.

OPS GENERAL CONDITIONS

Wherever in this Contract reference is made to the General Conditions, it shall be interpreted as meaning the OPS General Conditions of Contract, OPSS MUNI 100, November 2006 (Municipal oriented, where applicable).

LAYOUT BY CONTRACTOR

Prior to the commencement of any construction layout, the Contractor shall verify the accuracy of all temporary and permanent benchmarks and primary alignment control shown on the Contract Drawings. The Contractor shall also perform random checks on all survey control points and existing centreline road profiles. The Contractor shall provide a Summary Report of all aforementioned checks made to the Contract Administrator prior to the commencement of construction layout. Any discrepancies between the Contract Drawings and field checks shall be reported immediately to the Contract Administrator.

Costs associated with field verification work undertaken by the Contractor shall be included in the Contractor's tender bid.

The Contractor shall be responsible for all layouts necessary for construction in full accordance with the provisions of Section GC7.02 "Layout" of the General Conditions of the Contract.

PAYMENTS

Except as herein provided, payments under this Contract will be made in accordance with Section GC8.02.03 of the General Conditions.

Notwithstanding the provisions of the General Conditions respecting certification and payment, the Authority may withhold 2-1/2 percent of the total value of work performed beyond the expiration of 46 days from the date of publication of the Certificate of Substantial Performance, to enable the Contract Administrator to produce the final detailed statement of the value of all work done and material furnished under the Contract. As a condition of holdback reduction from 10% to 2-1/2%, the Contractor shall supply a Statutory Declaration as defined in GC8.02.03.07.03(b) and advertise the Certificate of Substantial Performance per GC8.02.03.04.03.

As a condition of Progress Payment Certificate processing, the Contractor must provide a current WSIB Clearance Certificate and a Statutory Declaration in support of each Progress Payment Certificate and an updated project schedule as directed by the Contract Administrator.

All interim monthly certificates are not conclusive as to the value or quality of services provided and payment certificates are subject to reopening and readjustment.

The Completion Payment Certificate to include release of the remaining holdback will be issued within 120 days after the date for completion as specified under GC1.06. The date for interest due to late payment shall commence following 180 days after the date of completion of the work.

As a condition of the final holdback payment, the Contractor shall provide the required Property Owner's Releases as specified elsewhere, as appropriate. Acceptance by the company of the final holdback payment shall constitute a waiver of claims by the company against the Municipality, except those previously made in writing in accordance with the Contract and still unsettled.

The Contractor shall include in his price for the publication of the Certificate of Substantial Performance. Publication is mandatory whether Contractor requests Substantial Performance or not.

The Contractor is advised that the Authority may withhold payment on Interim and Holdback Release Certificates up to 30 calendar days from the date of receipt of the executed Payment Certificates.

Payments made hereunder, including final payment shall not relieve the Contractor from its obligations or liabilities under the Contract.

The Authority shall have the right to withhold from any sum otherwise payable to the Contractor such amount as may be sufficient to remedy any defect or deficiency in the work pending correction of it.

The Contractor shall include in his price for the publication of the Certificate of Substantial Performance. Publication is mandatory whether Contractor requests Substantial Performance or not.

UTILITIES

Sections GC2.01 and GC7.12 02) of the General Conditions are deleted in their entirety and are replaced by the following:

The Contractor shall be responsible for the protection of all utilities at the job site during the time of construction.

The Authority will be responsible for the relocation of utilities where required. However, no claims will be considered which are based on delays or inconvenience resulting from the relocation not being completed before the start of this Contract.

The location and depth of underground utilities shown on the Contract drawings are based on the investigations made by the Authority. It is, however, the Contractor's responsibility to contact the appropriate agencies for further information in regard to the exact location of all utilities, to exercise the necessary care in construction operations and to take such other precautions as are necessary to safeguard the utilities from damage.

HAUL ROADS

When so required by the Contract Administrator, payment for maintenance and restoration of haul roads will be made for the materials provided and the work performed as specified, at tender prices, or at negotiated prices.

DUST CONTROL

As a part of the work required under Section GC7.06 of the General Conditions, the Contractor shall take such steps as may be required to prevent dust nuisance resulting from his operations either within the right-of-way or elsewhere or by public traffic where

it is the Contractor's responsibility to maintain a roadway through the work.

Where the work requires the sawing of asphalt or the sawing or grinding of concrete, blades and grinders of the wet type shall be used together with sufficient water to prevent the incidence of dust, wherever dust would affect traffic or wherever dust would be a nuisance to residents of the area where the work is being carried out.

The cost of all such preventative measures shall be borne by the Contractor.

TRAFFIC CONTROL, FLAGGING

Flagging for traffic control on this Contract shall be in conformance with the procedure outlined in OTM Book 7 (Ontario Traffic Manual), and as per the requirements of the Ontario Health and Safety Act Reg. 213/91, Section 69.1.

CONTRACTOR'S SUPPLY OF CONSTRUCTION SIGNS

In accordance with Section GC7.07 of the General Conditions, the Contractor is responsible for the supply, erection, maintenance and subsequent removal of all temporary traffic controls, including signs, lights, barricades, delineators, cones, detour signage, etc., required on the work.

Traffic controls shall be provided in general accordance with the latest edition of the "OTM Book 7".

A Traffic Control Plan indicating all traffic signage layout and types in a neat legible manner shall be submitted for approval by the Contract Administrator a minimum of two weeks prior to construction commencement and shall be in accordance with the latest edition of the "OTM Book 7". Revisions to the Traffic Control Plan shall be made to reflect ongoing changes on the project as needed and shall be approved by the Contract Administrator.

Traffic controls shall be operational before work affecting traffic begins.

MAINTENANCE OF TRAFFIC

It is understood that implementation of traffic controls will require ongoing review and adjustment to suit construction operations.

No deviation from the above procedure will be allowed except with the approval of the Engineer.

Notwithstanding the preceding, the Contractor shall at all times maintain the roadway surface within the Contract limits in a condition satisfactory to the Engineer and such that any emergency vehicles may have immediate access to any building located within the limits of this Contract. The Contractor shall be responsible for all signing at the Contract limits and within the Contract limits. The Contractor shall ensure the signing is properly maintained while in use. It shall be the Contractor's responsibility to directly

notify Police, Fire, Hospital and Ambulance services of road closures at least 24 hours in advance of such closures and to notify these same authorities when such closures are no longer in effect.

It is the responsibility of the Contractor to visit the site to become familiar with existing traffic volumes and patterns. AADT (Average Annual Daily Traffic) is 240. However, the Contractor shall take into consideration all traffic into and out of the job site area as will occur during regular working hours.

No claims for delays due to traffic will be considered for compensation.

The Contractor shall be responsible for all detour signing outside Contract limits.

EMERGENCY AND MAINTENANCE MEASURES

Whenever the construction site is unattended by the general superintendent, the name, address and telephone number of a responsible official of the contracting firm, shall be given to the Contract Administrator. This official shall be available at all times and have the necessary authority to mobilize workmen and machinery and to take any action as directed by the Contract Administrator in case emergency or maintenance measures are required regardless whether the emergency or requirement for maintenance was caused by the Contractor's negligence, act of God, or any cause whatsoever.

Should the Contractor be unable to carry out immediate remedial measures required, the Authority will carry out the necessary repairs, the costs for which shall be charged to the Contractor.

MANAGEMENT AND DISPOSAL OF EXCESS MATERIAL

The requirements of OPSS 180 shall apply to this Contract, revised as follows:

- .1 Section 180.03, Definitions, shall be amended by the addition of the following:
Work area: means the road allowance, right-of-way, and property with a boundary common to the road allowance or right-of-way within the Contract limits.
- .2 Subsection 180.07.02, Conditions on Management by Re-Use, shall be amended by the addition of the following:

Recycled hot mix asphalt or excess bituminous pavement shall not be used as trench backfill or bedding.

The Contractor shall be responsible for obtaining a copy of applicable Form Nos. OPSF 180, OPSF 180-1, OPSF 180-2, 180-3, 180-4 and OPSF 180-5 for use where appropriate with respect to disposal of excess material.

If disposal of Material is within Township limits, the Contractor is required to have the property owner get a Township Fill Permit.

OCCUPATIONAL HEALTH AND SAFETY ACT 1991 - DESIGNATED SUBSTANCES

In accordance with the requirements of Part III 30.(1) of the Occupational Health and Safety Act, the Authority has determined that the designated substances as listed hereunder are present on any of the site within the limits of this Contract.

Designated Substance	Identified on this Site	Location
Acrylonitrile	Not Tested	
Arsenic	Not Tested	
Asbestos	Not Tested	
Benzene	Not Tested	
Coke Oven Emissions	Not Tested	
Ethylene Oxide	Not Tested	
Isocyanates	Not Tested	
Lead	Not Tested	
Mercury	Not Tested	
Silica	Not Tested	
Vinyl Chloride	Not Tested	

It is the responsibility of the Contractor to ensure that all sub-contractors performing work under this Contract have received a copy of this specification, where Designated Substances are identified as being present at the site of the work.

The Contractor shall comply with the governing Ministry of Labour Regulations respecting protection of workers, removal, handling and disposition of the Designated Substances encountered on this Contract.

Prior to commencement of this work, the Contractor shall provide written notification to the Ministry of the Environment at 300 Water Street, Peterborough, Ontario, K9J 8M5, of the location(s) proposed for disposal of Designated Substances. A copy of the notification shall be provided to the Contract Administrator a minimum of two weeks in advance of work starting.

In the event that the Ministry of the Environment has concerns with any proposed disposal location, further notification shall be provided until the Ministry of the Environment's concerns have been addressed.

All costs associated with the removal and disposition of Designated Substances herein

identified, shall be deemed to be included in the appropriate tender Items.

Should a Designated Substance not herein identified be encountered in the work, then management of such substance shall be treated as Extra Work.

The requirements of Section GC4.03 of the General Conditions of the Contract shall apply.

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS)

Reporting

Section GC4.03.06 is deleted and replaced with the following:

Prior to the commencement of work the Contractor shall provide, to the Contract Administrator, a list of those products controlled under WHMIS which he expects to use on this Contract. Related Material Safety Data Sheets shall accompany the submission. All containers used in the application of products controlled under WHMIS shall be labeled.

The Contractor shall notify the Contract Administrator of changes to the list in writing and provide the relevant Material Safety Data Sheets.

SPILLS REPORTING

Spills or discharges of pollutants or contaminants under the control of the Contractor, and spills or discharges of pollutants or contaminants that are a result of the Contractor's operations that cause or are likely to cause adverse effects shall forthwith be reported to the Contract Administrator. Such spills or discharges and their adverse effects shall be as defined in the Environmental Protection Act R.S.O. 1980. All spills or discharges of liquid, other than accumulated rain water, from luminaires, internally illuminated signs, lamps, and liquid type transformers under the control of the Contractor, and all spills or discharges from this equipment that are a result of the Contractor's operations shall, unless otherwise indicated in the Contract, be assumed to contain PCB's and shall forthwith be reported to the Contract Administrator.

This reporting will not relieve the Contractor of his legislated responsibilities regarding such spills or discharges.

PROTECTION OF WATER QUALITY

At all times, the Contractor shall maintain existing stream flows and shall control all construction work so as not to allow sediment or other deleterious materials to enter streams.

No waste or surplus organic material including topsoil is to be stored or disposed of within 30 metres of any watercourses. Run-off from excavation piles will not be permitted to drain directly into watercourses but shall be diffused onto vegetative areas

a minimum of 30 metres from the watercourse. Where this measure is not sufficient or feasible to control sediment entering the watercourses, sedimentation traps or geotextile coverage will be required.

If dewatering is required, the water shall be pumped into a sedimentation pond or diffused onto vegetated areas a minimum of 30 metres from the watercourses and not pumped directly into the watercourses.

No machinery shall enter the creek bed of any watercourse. Movement of construction equipment in the vicinity of any creeks shall be limited to the minimum required for construction.

The Contractor shall not carry out equipment maintenance or refueling or store fuel containers within 100 metres of any watercourse. The Contractor shall not stockpile construction debris or empty fuel/pesticide containers within the Contract limits.

ENVIRONMENTAL PROTECTION PLAN

The Contractor's attention is drawn to the following environmental protection requirements, which will impact construction activities within or in close proximity to all bodies of water. These measures are in addition or complimentary to the works included for erosion and sediment control under other Items in the Tender.

- Sediment and erosion control Items included in this Contract shall be implemented prior to any other construction in the vicinity of any watercourses, in order to prevent any sediment from entering the watercourse (including soil from exposed banks) and to prevent any downstream transport of re-suspended sediment. All disturbed areas shall be stabilized upon completion of works or attainment of final grades.
- Temporary erosion and sedimentation works should be maintained until vegetation has been re-established to a sufficient degree so as to provide adequate protection to disturbed work areas.
- All sediment traps, check dams and silt fence will be cleaned, as a minimum, when they are 50% filled. Maintenance of these devices is essential. Lack of co-operation on the part of the Contractor will be considered as a major violation to the Plan and the Contract and will result in a shutdown of the project operations until maintenance is performed to the Engineer's satisfaction.
- All disturbed areas shall be topsoiled (if necessary) and re-vegetated immediately after final grading is completed.
- Construction procedures and handling/storage of toxic materials shall conform to Ontario Ministry of the Environment regulations.
- Stockpile or spoil materials shall be prevented from entering any watercourse. No grading or concrete pours shall occur over or close to the water without

adequate barrier measures in place beforehand. The Contractor shall advise the Engineer in advance of placement of any stockpiled material so that the Engineer can determine what protective measure, if any, are necessary.

- Any in-water works (i.e. channel tie-ins, pumping, etc.) will only be permitted during the period from July 1 to September 15.
- All activities, including maintenance procedures, must be controlled to prevent the entry of petroleum product, silt, debris, rubble, concrete or other deleterious substances into the watercourse. Vehicular refueling and maintenance, including the storage of fuel containers, must be conducted 30 m away from the watercourse banks.
- Maintenance of all proposed vegetation, once established, will be a critical component of the Contract during the guarantee period. All temporary erosion and sediment control structures constructed (except dewatering traps) will remain in place during this period unless the Engineer requests their removal. Prior to the end of the guarantee period, if all vegetation has established successfully, these measures shall be removed (upon notification by the Engineer) as noted under their particular Items in the Special Provisions - Tender Items.
- All dewatering discharges must be directed to a dewatering trap. Materials from the excavation of the trap shall be removed from the site or controlled as the Engineer directs. The Contractor shall be wholly responsible for the adequate design and maintenance of the dewatering system (ie. pumps, cofferdams, etc.). The design will be subject to the review and approval of the Engineer before any work proceeds.
- Maintain continuous and uninterrupted flow downstream of the construction site. Extreme reduction in stream discharge and water level above and below the site must be avoided.
- No machinery shall enter the creek bed of any watercourse. Movement of construction equipment in the vicinity of watercourses shall be limited to the minimum required for construction.
- All construction work in areas which in the Engineer's opinion may have adverse effects on the watercourse shall be monitored by a designated representative of the Contractor to ensure compliance with the Plan.
- All clauses pertaining to the construction/placement of erosion and sediment controls in the Special Provisions-General and the Contract Items, will form an integral part of the project Environmental Protection Plan.

TRAFFIC AND STREET SIGNS

The Contractor will be responsible for the removal and salvage of existing traffic and

street signs, and their delivery to the Authority's Works Department Yard, for re-erection by the Authority following completion of the work.

Scheduling for sign removal shall be as approved in advance by the Contract Administrator.

Regulatory signs such as "Stop" and "Yield" must be maintained throughout.

GARBAGE COLLECTION

The Contractor will be responsible for ensuring that garbage collection, including recyclables, is maintained and when necessary, the Contractor shall make arrangements directly with the collecting agency, to permit and coordinate pick-up.

PREPARATION AND POSTING OF REQUIREMENTS FOR WORK IN CONFINED SPACES

Clause GC7.01.06 of the OPS General Conditions of Contract is amended by the addition of the following:

Detailed written procedures addressing the confined space requirements of the Occupational Health and Safety Act and Ontario Regulations for Construction Projects, Ontario Regulation 213/91, shall be clearly posted at the project site and available to all personnel, including the Contractor's workers, Authority staff, Contract Administrator, and Ministry of Labour inspectors.

The procedures must include the rescue procedures to be followed during a rescue or evacuation of all personnel from an unsafe condition or in the event of personal injury.

The Contractor shall have personnel trained in rescue procedures readily available on site.

CONFINED SPACE ENTRY

Without relieving the Contractor of his responsibilities under the Occupational Health and Safety Act the Contractor shall be responsible for the supply of personal protective equipment for the use of the Contract Administrator, in connection with confined space entry while the Contractor is operating on site.

The following equipment shall be made available on request:

- Mechanical Ventilation Equipment
- Gloves
- Gas Detector (C95-80)
- Full body harness securely attached to a rope
- Rope
- Gas mask or dust, mist or fume respirator (optional)
- 30 minute self-contained breathing apparatus (need not be worn but, if

- required, be readily available to supply air for instant egress)
- 7 minute Escape Pack
- Explosion-proof temporary lighting
- Adequate clothing to ensure protection against abrasions and contamination.

In addition the Contractor shall provide a competent person who shall inspect all safety equipment prior to use to ensure that it is in good working order and appropriate for the task at hand.

ENTRY ONTO PRIVATE PROPERTY

The Contractor shall not enter private property or property which is to be acquired to construct the works without the prior consent of the Contract Administrator. This requirement will be strictly enforced.

STORAGE AREAS

Clause GC3.06.01 of the General Conditions of Contract is amended by the addition of the following:

The use of the road right-of-way as a long term storage area is not allowed under this Contract. The storage of materials and movement of equipment will only be allowed for normally accepted construction practices.

GENERAL LIABILITY INSURANCE

The Contractor shall provide General Liability Insurance in accordance with Clause GC6.03.02.01 of the General Conditions of the Contract. The Corporation of the Township of Hamilton and AECOM Canada Ltd. shall be named as additional insureds.

CONSTRUCTION LIEN ACT

The Contractor shall give the Authority notice in writing, immediately, of all lien claims or potential lien claims coming to the knowledge of the Contractor or his agents.

When a claim for lien is filed by a sub-contractor, labour or material supplier or equipment renter acting under the Contractor, and proceedings are commenced by the Authority to vacate the lien, the Contractor agrees and shall forthwith pay to the Authority, in addition to their reasonable legal fees therefore, all interest costs and expenses incurred by the Authority and an additional sum equal to ten percent (10%) of the sum found to be owing as liquidated damages, and such remedy shall be in addition to any other remedy available to the Authority under the Contract Documents.

Where any lien claimant asks from the Authority the production for inspection of the Contract Documents or the state of the accounts between the Authority and the Contractor, the Contractor shall be liable for an administration fee of Two Hundred Dollars (\$200.00) for each request made as compensation for the preparation of such accounting or for the preparation of the Contract, or both, as the case may be, and the

Contractor acknowledges that such administrative fee shall be properly deductible, if the Authority should so choose, from monies otherwise payable to the Contractor under the terms of the Contract Documents.

Where an application is brought to a judge of a competent jurisdiction to compel production of any particular document to a lien claimant, the Contractor further agrees to indemnify the Authority from reasonable legal fees incurred in appearing on such an application and in addition agrees to pay to the Authority its reasonable costs incurred in producing such documents to the extent that the same is made necessary under the disposition of the matter by such judge, and the Contractor further agrees that such reasonable costs and fees incurred by the Authority as stated herein may be properly deductible from monies otherwise payable to the Contractor under the terms of the Contract Documents.

VARIATIONS IN TENDER QUANTITIES

Clause GC.8.01.02 (b) of the General Conditions of Contract is amended as follows:

The last sentence beginning “Alternatively” and ending “paid” is deleted and replaced by “The Municipality shall not be liable to the Company for loss of anticipated profit”.

PROPERTY OWNER CLAIMS DURING CONSTRUCTION

The Contractor shall be the primary contact for claims made by homeowners and other property owners within the project limits during construction processes. The Contractor shall inform the Contract Administrator of said claims, immediately upon receipt. The Contractor shall inform the Township, in writing, their intentions with regard to resolution of said claim within twenty-four (24) hours of receipt.

If it is deemed by the Township that the Contractor is not adequately providing and/or retaining the services to resolve a claim by homeowners within the project limits during construction, the Township may elect to holdback sufficient funds to resolve the claim. All claims, negotiations, and/or mediation completed under this Contract, including Arbitration, shall be completed in Accordance with clauses and subclauses of GC 3.13 and 3.14 of the General Conditions of Contract.

The application of this clause shall not make the Township or Contract Administrator liable in any way for subsequent performance, and in no way relieves the Contractor from his continuing responsibilities in accordance with this Contract.

PROPERTY OWNER’S RELEASE OF PRIVATELY OWNED LAND USED BY THE CONTRACTOR

Upon completion of the Contract, the Contractor shall provide the Authority with two (2) copies of a form of release signed by each property owner, upon whose land he has entered for purposes associated with the Contractor's operations but not for the purpose of undertaking works stipulated in the Contract:

Township of Hamilton
Tender # PW2018-03
Bethel Grove Culvert Extension

Date: _____, 2018

To: **Mr. Paul Heffernan**
Manager of Operational Support & Infrastructure
Corporation of the Township of Hamilton
8285 Majestic Hills Drive, P.O. Box 1060
Cobourg, Ontario. K9A 4W5

Re: Tender # PW2018-03

Dear Sir:

I hereby certify that _____
(Name of Contractor)

have fulfilled the terms of our agreement and have left my property in a satisfactory condition.

I have accepted their final payment and release _____
(Name of Contractor)

and the Corporation of the Township of Hamilton from further obligations.

Yours very truly,

.....

Signature.....

Property Owner's Name.....Lot.....Concession.....

Township of.....

(Please complete above in printing)

Final payment will not be released to the Contractor until all the applicable forms of release have been signed by the property owners and received by the Authority.

SPECIAL PROVISIONS – TENDER ITEMS

PREFACE - GENERAL NOTES

1. Watercourse/Fisheries Protection

At all times, the Contractor's operations shall be controlled so as to prevent the entry of deleterious materials to the watercourse. Controls shall include, but not be restricted to, the following:

- a) Erosion and sedimentation control, and protection of environmentally sensitive areas, shall be in compliance with requirements that may be specified elsewhere in the Tender. Sediment and erosion control measures shall be implemented prior to work and maintained during the work phase. All disturbed areas are to be stabilized upon completion of work prior to removal of erosion and sediment control devices.
- b) Working platforms and other debris containment systems configured to:
 - i) allow the safe capture and disposal of concrete and other materials removed;
 - ii) prevent debris from removal processes from entering the watercourse;
 - iii) eliminate disturbance the watercourse during installation, maintenance and removal

All such systems shall be implemented prior to the commencement of removals and shall be maintained throughout the working phase.

- c) Where the Tender does not require work in watercourses or on watercourse embankments, equipment shall not be operated within such areas.
- d) Where the Tender requires work in watercourses or on watercourse banks, operation of equipment within such areas shall:
 - i) be kept to the minimum necessary to perform the specified work;
 - ii) comply with operational constraints that may be specified elsewhere in the Tender;
 - iii) otherwise proceed in a continuous fashion so as to minimize the duration of such work.
- e) Construction material, excess material, construction debris, and empty containers shall be stored a minimum of 30 metres away from watercourses and watercourse embankments.
- f) All equipment maintenance, cleaning and refueling shall be controlled so as to prevent any discharge of petroleum products. Vehicular maintenance and

refueling shall be conducted a minimum of 30 metres from watercourses and watercourse banks at a location or locations approved by the Contract Administrator.

g) No in-water construction will be permitted. Any such damage may result in the Contractor being liable to charges under the Federal Fisheries Act.

h) Motorized equipment shall not travel in the active portion of the watercourse.

The material obtained from any cleaning-out of sediment traps (i.e. check dams or filter bags) shall become the property of the Contractor and shall be disposed of outside the limits of the Tender at the Contractor's expense and in accordance with the Environmental Protection Act and Regulations and as directed by the Contract Administrator.

In the event that the Contract Administrator determines noncompliance with the environmental protection plan, the Contractor shall cease those operations as directed by the Contract Administrator. Such operations shall remain suspended until otherwise directed by the Contract Administrator in writing.

2. Refueling Areas

Procedures for the interception and rapid clean-up and disposal of spillages that do occur shall be submitted to the Contract Administrator for review prior to starting work. All materials required for clean-up of fuel spillages shall be maintained readily accessible on site.

No fuelling of any equipment shall be carried out within thirty (30) metres of any watercourse. Similarly, all on-site fuel tanks shall be placed at minimum thirty (30) meters from the watercourse

Any spills apt to cause impairment to the natural environment must be immediately reported by the Contractor to the Contract Administrator and to the local Ministry of the Environment District Office.

3. Restoration

Restoration shall not be undertaken as a final project task but shall be initiated as soon as backfilling and compaction activities have been completed, except as otherwise approved by the Contract Administrator. All existing grassed areas disturbed by the Contractor's operation for any reason, shall be repaired with a 200 mm depth of topsoil and placement of erosion control blankets with seed, as specified.

The Contractor shall not permit any excavated materials or other material to be deposited in any watercourses except those materials indicated in the contract documents (i.e. rock protection). These specified materials are to be placed in the dry.

4. General

It is intended that the works proposed be executed in such a manner which, to the fullest possible extent, minimizes any adverse effect on the cultural and natural environment of the project area. The environmental conditions of the contract stated herein must be complied with in all respects. It is the responsibility of the Contractor that all personnel be sufficiently instructed so that the work is carried out in a manner consistent with minimizing environmental insult.

Where, in the opinion of the approving Authority, any of the terms, conditions, undertakings and agreements herein have not been complied with or performed in a suitable manner, or at all, the Authority has the right to immediately withdraw its permission to continue the work but may renew its permission upon being satisfied that the defaults or deficiencies in the performance of this work by the Contractor have been remedied. No compensation will be made to the Contractor for the withdrawal of permission to do the work resulting from noncompliance with the requirements of approving authorities or for any delays incurred.

PART 'A' - BETHEL GROVE CULVERT EXTENSION

ITEM No.A1 – SITE PREPARATION, INCLUDING GRUBBING, UNWATERING, AND SILTATION CONTROL

Under this Item and for the Contract Price, the Contractor shall supply all labour, equipment, and materials required to complete the following works in accordance with the Contract Drawings and to the satisfaction of the Contract Administrator:

- Prepare and implement a traffic control plan including supplying and placing traffic control devices such as signs, barriers, and temporary lane markers;
- Clear and grub all trees, stumps, and brush as required to accommodate installation of temporary unwatering and siltation controls, removal of deteriorated concrete, construction of the new structure, and final grading of roadway embankments within the right-of-way;
- Remove and dispose of all obstacles including guide rail and posts, rubble boulders, timbers, and other items not specifically provided for under other Tender Items to accommodate installation of temporary unwatering and siltation controls, construction of the new structure, backfilling, rock

- protection, and grading of approaches;
- Clean-up and all incidental work not included in specific Tender Items.

All brush, logs, stumps, and other debris resulting from the Contractor's operations under this Item shall be disposed of by the Contractor off site at a location to be arranged by the Contractor at no additional cost to the Township and to the satisfaction of the Contract Administrator. Burning of trees, brush, and other debris will not be permitted within the limits of the contract.

In addition to the work required herein and further described under OPSS 201, the Contractor shall remove and dispose of all boulders within the limits of the required clearing and grubbing operation. All boulders encountered under these operations shall be disposed of away from the site at no additional cost to the Owner.

Any damage caused by the Contractor's operations to the surrounding property shall be repaired by the Contractor at no additional cost to the Owner.

All removals from the site shall remain the property of the Contractor to be disposed of by the Contractor off the limits of the Contract, at a location arranged for by the Contractor at his own expense and to the satisfaction of the Contract Administrator. When hauling rubble, excavated material or fill materials from or to the site, the Contractor shall comply with the requirements of the Highway Traffic Act.

Suitable excavated earth material may be used as fill material for the embankment construction to the extent as shown on the Drawings or as directed by the Contract Administrator.

Materials excavated under this Item which are surplus to or unsuitable for the fill requirements shall be disposed of by the Contractor at his own expense, and to the satisfaction of the Contract Administrator.

The price tendered for this Item shall be compensation in full for all work associated with this Item.

Work under this Item shall not commence without prior approval in writing from the Contract Administrator.

Under this Item and for the Contract Price, the Contractor shall carry out all work, as outlined in OPSS 902, to ensure that all concrete work is undertaken in the dry.

Under this item and for the Contract Price, the Contractor shall also supply all equipment, labour, and materials to construct and subsequently remove all silt control fences, temporary cofferdams, and other devices and installations required for environmental protection and siltation control as required to accommodate and construct the work shown on the Drawings.

Stream flows are to be maintained through the site at all times during construction. To facilitate that, the contractor shall propose and implement a means to bypass the water

around the works. Pumps and other active means of moving water around the work are prohibited after September 15th.

Discharge points of all pumps utilized in unwatering the work and removing sediments from the sediment traps shall be located away from the watercourse to permit the natural filtration of the sediments by the soil and vegetation, as directed by the Contract Administrator.

The Contractor shall submit six (6) copies of his detailed drawings and specifications for his proposed methods of unwatering and environmental protection for the Contract Administrator's

review. The Contractor shall be wholly responsible for the adequacy of his method of unwatering and environmental protection/siltation control.

The Contractor is advised that the unwatering scheme and environmental protection plan shall be subject to the approval of the Ministry of Natural Resources, the Ganaraska Conservation Authority, and the Contract Administrator.

In particular, the following work will be required:

- a) The Contractor will be required to maintain the existing stream flows and shall control all construction work so as to not allow sediment or other deleterious materials to enter the creek. No waste or surplus organic material, including topsoil, is to be stored or disposed of within 30 meters of any watercourse. Run-off from excavations will not be permitted to drain directly into watercourses but shall be diffused onto vegetative areas a minimum of 30 meters from the watercourse. Where this is not sufficient or feasible to control sediment entering the watercourse, sediment traps or geotextile coverage will be required. If dewatering is required, the water shall be pumped into a sedimentation pond or diffused onto vegetative areas a minimum of 30 meters from the watercourse and not pumped directly into the watercourse.
- b) Silt fences shall be installed as shown on the Contract Drawings and as directed by the Contract Administrator.
- c) Sediment trap shall be installed in any road ditches emptying into the watercourse at the site and the accumulated sediments shall be pumped out, as required and prior to removal of the traps, as directed by the Contract Administrator.
- d) Supply all labour, materials, and equipment to construct the temporary cofferdams as shown on the Drawings and as directed by the Contract Administrator. Cofferdams shall be installed to isolate the work zone from the stream at the site prior to commencement of the construction and remain in place until the work of each stage is completed.

- e) The streambed shall be resurfaced with a 150 mm thickness of washed river run stone material where disturbed during construction. Payment for the supply and placement of river run stone shall be included under Item No. 7.
- f) No machinery shall be allowed to enter the creek bed of the watercourse. Movement of construction equipment in the vicinity of the creek shall be limited to the minimum required for construction. The Contractor shall not carry out equipment maintenance or refuelling or store fuel containers within 100 meters of the watercourse. The Contractor shall not stockpile construction debris or empty fuel / pesticide containers within the Contract limits.
- g) Any stockpiled materials shall be stored and stabilized away from the water.
- h) The Contractor shall have on-site, at all times, an appropriate spills management plan in place, including spill control and absorbent materials and instructions regarding their use to facilitate rapid clean-up should a spill occur.
- i) Only clean material free of fine particulate matter shall be placed in the water.
- j) All sediment and erosion control measures shall be inspected daily to ensure that they are functioning properly and are maintained and/or upgraded as required.
- k) If the sediment and erosion control measures are not functioning properly, no further work shall occur until the sediment and/or erosion control problem is addressed.
- l) All disturbed areas of the work site shall be stabilized and re-vegetated as required.
- m) Sediment and erosion control measures shall be left in place until all areas of the work site have been stabilized.

The Contractor is advised that no in-water works may be carried out prior to July 1, 2018 or after September 15, 2018.

In order to comply with the requirements of regulatory agencies and to avoid charges under the Lakes and Rivers Improvement Act, the Fisheries Act, and/or the Fill, Construction, and Alteration to Waterways Regulations, the Contractor shall provide an Environmental Inspector who will be required to be on site full-time during any construction activities on or near any watercourse and must be familiar with the items of the Contract and the above legislation related to environmental protection. This individual may be the Contractor's site foreman if he/she is appropriately qualified.

The Environmental Inspector will monitor all construction activities that may negatively impact the natural environment, have the authority to stop work as necessary, and order

inappropriate activities to be altered or cease. He will be required to contact the appropriate agencies/authorities immediately in case of an infraction of the Lakes and Rivers Improvement Act, the Fisheries Act, and/or the Fill, Construction, and Alteration to Waterways Permit issued by the Ministry of Natural Resources and/or Federal Department of Fisheries and Oceans, or the Authorization for Works or Undertakings Affecting Fish Habitat issued by the Federal Department of Fisheries and Oceans. He will assume complete responsibility if any charges are laid in this regard.

ITEM No.A2 – REMOVAL AND DISPOSAL OF DETERIORATED CONCRETE

Under this Item and for the Contract Price, the Contractor shall demolish and completely remove the portions of deteriorated concrete at each end of the existing culvert to accommodate the construction of the culvert extension, as directed by the Contract Administrator.

All removals from the existing structure, except as specifically noted, shall remain the property of the Contractor to be disposed of by the Contractor off the limits of the Contract, at a location arranged for by the Contractor at his own expense and to the satisfaction of the Contract Administrator. When hauling rubble, excavated materials or fill from or to the site, the Contractor shall comply with the requirements of the Highway Traffic Act.

Blasting will not be permitted for any work under this Item.

Work under this Item shall not commence without prior approval in writing from the Contract Administrator.

ITEM No.A3 – EARTH EXCAVATION FOR STRUCTURE FOUNDATIONS

Under this Item and for the Contract Unit Price the Contractor shall excavate all materials of whatever nature that may be encountered, including all loose material and/or organic materials, to

permit the construction of the culvert extension foundations to the lines and grades shown on the Drawings or set by the Contract Administrator. If after excavating to the lines and elevations shown on the Drawings, the material encountered should prove to be unacceptable as a foundation, the Contractor shall perform additional excavation as directed, payment for which will be made under this Item.

Under this Item and for the Contract Price, the Contractor shall also perform all necessary excavation to realign and shape the stream bed and banks upstream and downstream of the new structure as required to provide proper hydraulic flow conditions at the structure site, as indicated on the Drawings and as directed by the Contract Administrator.

Under this Item and for the Contract Unit Price the Contractor shall retain the services of a qualified Geotechnical Consultant to verify the load bearing capacity of the founding soils under the structure foundations and to direct the Contractor if improvements are required. The Geotechnical Consultant shall be identified at the project start-up meeting and credentials shall be submitted to the Contract Administrator for approval. The Contractor

shall submit a letter from the Geotechnical Consultant identifying the Consultant and stating that the soils under the foundations have the load bearing capacity as identified on the Drawings prior to the placement of any concrete.

Only that excavation below the final streambed level to the plan dimensions of the bedding and cut-off walls, as shown on the Drawings or to such additional depth as directed by the Contract Administrator, will be paid under this Item.

The Contract Price for the applicable structure items will be full compensation for all other excavation which may be required for the structure, including granular backfill, creek realignment, and rock protection, as shown on the Drawings and as directed by the Contract Administrator

The Contractor shall dispose of all excavated materials that are unsuitable for or in excess of the fill requirements under this Contract at a location arranged for by the Contractor at his own expense and to the satisfaction of the Contract Administrator.

ITEM No.A4 – CONCRETE STRUCTURE

Under this Item and for the Contract Price, the Contractor shall supply all materials and install the new culvert extensions, including the supply, installation, and removal of all concrete formwork, reinforcing steel, steel dowels, epoxy, and placing and curing concrete, all in accordance with OPSS 904 and 905 and the details shown on the Drawings. The Contractor shall submit the rebar shop drawings to the Contract Administrator for review.

ITEM No.A5 –BACKFILL TO STRUCTURE

Under this Item and for the Contract Price, the Contractor shall supply, place, and compact, in accordance with OPSS 501, the suitable native material or Granular 'A' material required for the structure backfill, as shown on the Drawings and as directed by the Contract Administrator.

The extent of the Contract Price item for placing granular backfill to the culvert shall be as shown on the Drawings. Where, however, the Contractor has excavated beyond these limits, or has failed to place earth fill up to the lower limits, he shall supply, place and compact, to the satisfaction of the Contract Administrator, either earth or granular material, whichever the Contract Administrator shall direct, as required to fill the resulting excess volume. All costs of supplying and placing such additional material shall be deemed to be included in the Contract Price.

Water shall be applied to the material to assist compaction, as directed by the Contract Administrator, and shall also be included in the Contract Price.

The Contractor shall advise the Contract Administrator, not less than three weeks before starting any granular operations, of the equipment and all details of the operation which he proposed to use and the Contract Administrator may make such changes as he may

deem necessary, both at this time and during the progress of the work.

The backfill material shall be compacted throughout to a minimum dry density of 95% of the maximum dry density as determined by the current Ministry of Transportation of Ontario procedure.

The Contractor shall supply and use such hand-operated mechanical tamping equipment, or towed or self-propelled roller, or combination thereof as will adequately compact the material throughout. The type and quantity of the compacting equipment and all details of the placing and compaction operation, including the rate, method, sequence, and the lift thickness, shall be subject to the approval of the Contract Administrator.

ITEM No.A6 – ROCK PROTECTION

The work shall be performed in general compliance with the plans, OPSS 511, and as directed by the Contract Administrator and shall consist of providing a protective covering of approved rock on the stream banks and approach embankments as shown on the Drawings.

The Contractor shall supply all materials for this Item. Rock shall be an imported quarry or field stone material; the quality of the rock shall be reviewed by the Contract Administrator. Rock subject to marked deterioration by water or weather will not be accepted. The 200-400 mm rip rap rock shall fulfill the gradation requirements of RTAC Class I as follows:

Gradation Limits for Rock Protection

	Less than 450 mm	100%
Maximum Allowable	Less than 350 mm	80%
Maximum Allowable	Less than 300 mm	50%
Maximum Allowable	Less than 200 mm	20%
Maximum Allowable	Less than 75 mm	0%

Placing shall be done in such a manner that the surface of the finished rock protection shall have a uniform appearance and be without segregation. The rock thickness shall be as shown on the Drawings.

The Contract Price for the rock protection shall constitute full compensation for the supply of the rock, the supply and placing of a 300 mm thick Granular 'A' bedding where used over native material on the stream banks and downstream embankment slope, any excavation or trimming required for the bedding of the rock, the hauling and placing of the rock, and all items incidental to the completion of the work in accordance with the Specifications.

ITEM No.A7 – RIVER RUN STONE

The work shall be performed in general compliance with the plans, OPSS 511, and as directed by the Contract Administrator and shall consist of supplying and placing a covering of approved river run stone on the stream bed upstream and downstream of the culvert and in the invert of the culvert continuously through the structure, to the limits

shown on the Drawings and as directed by the Contract Administrator.

The Contractor shall supply all materials for this Item. The river run stone shall be sound material, of a natural, rounded shape and clear of all fines. The quality of the stone shall be approved by the Contract Administrator. Rock subject to marked deterioration by water or weather will not be accepted. The 50-150 mm river run stone shall satisfy the gradation requirements as follows:

Gradation Limits for Stone Protection

	Less than 150 mm	95%
Maximum Allowable	Less than 100 mm	50%
Maximum Allowable	Less than 50 mm	30%
Maximum Allowable	Less than 25 mm	0%

Placing shall be carried out in such a manner that the surface of the finished stone layer shall have a uniform plane\flat appearance, be without segregation, and the top surface shall be flush with the streambed and shall extend for the limits as indicated on the Drawings or directed by the Contract Administrator. The stone layer shall be 150 mm minimum thickness over the rock protection within the watercourse and 400 mm thick within the culvert extension. The stone layer shall extend along the watercourse, as indicated on the Drawings.

The Contract Price for the river run stone shall constitute full compensation for the supply of the rock, any excavation or trimming required, the hauling and placing of rock, and all items incidental to the completion of the work in accordance with the Specifications.

ITEM No.A8 – TOPSOIL (IMPORTED)

Under this Item and for the Contract Unit Price, the Contractor shall supply and place imported topsoil over the areas to be seeded or sodded to a minimum consolidated depth of 100 mm. The quality of topsoil provided by the Contractor will be subject to the Contract Administrator’s approval.

Measurement under this Item shall be made by the cubic metre.

Payment for this Item at the Contract Unit Price shall be full compensation for the supply and placement of the topsoil, to the satisfaction of the Contract Administrator.

ITEM No.A9 – SEED AND EROSION CONTROL BLANKET

The work shall be performed in general compliance with the plans, OPSS 804.MUNI, and as directed by the Contract Administrator and shall consist of supplying and installing biodegradable erosion control blankets and supplying and placing seed in all disturbed areas not covered by rock protection.

The seed mix shall be the Salt Tolerant Mix (Canada #1 Ground Cover Mixture). The seed mix shall consist of native species in the following ratios:

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Species:	Ratio:
Tall Fescue	25%
Fults Alkali Grass	20%
Creeping Red Fescue	25%
Perennial Ryegrass	20%
Hard Fescue	10%

The seed application rate for broadcasting shall be 180 kg / ha.

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Bethel Grove Culvert Extension

GENERAL CONDITIONS

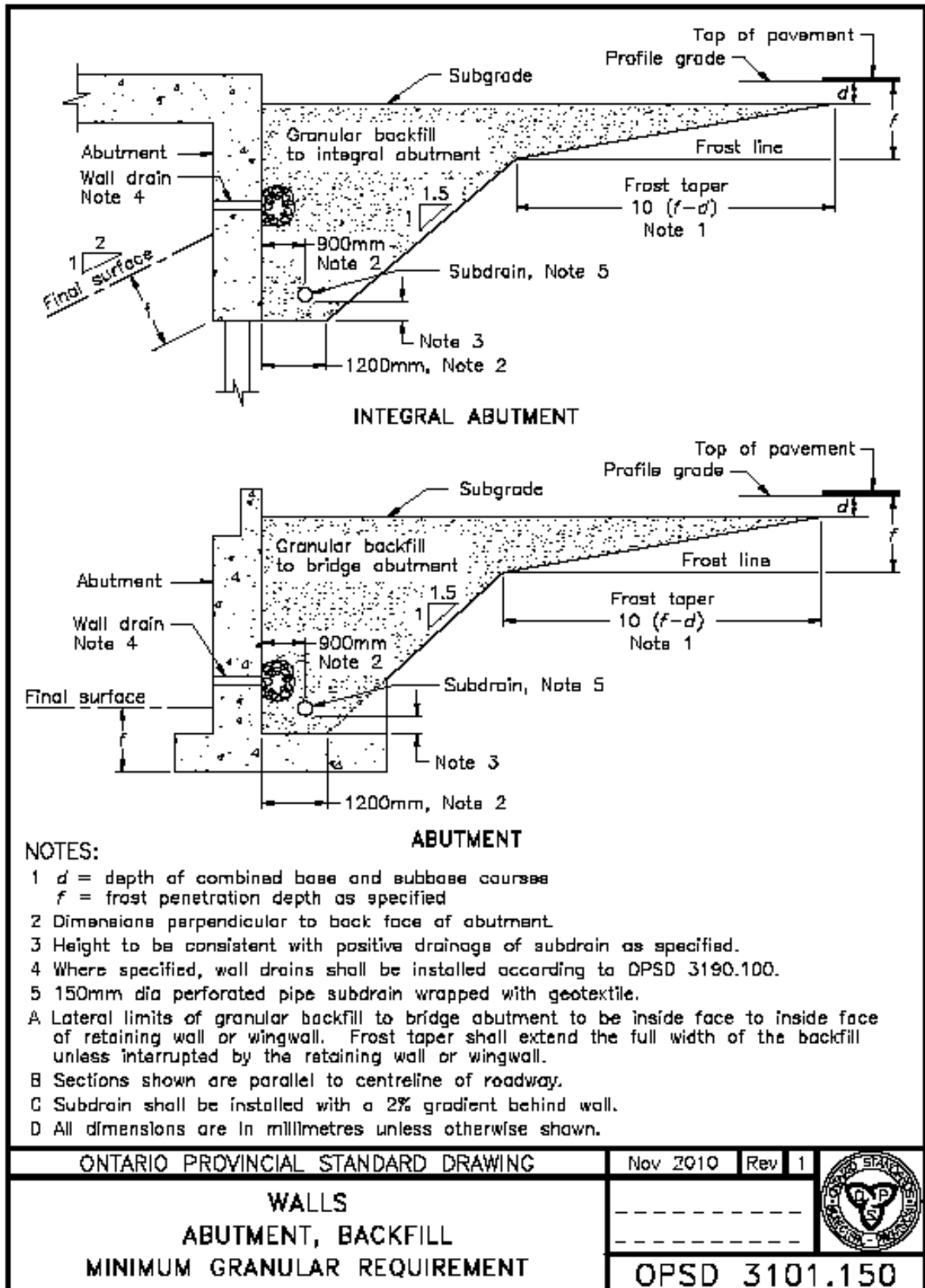
OPSS.MUNI 100 GENERAL CONDITIONS OF CONTRACT

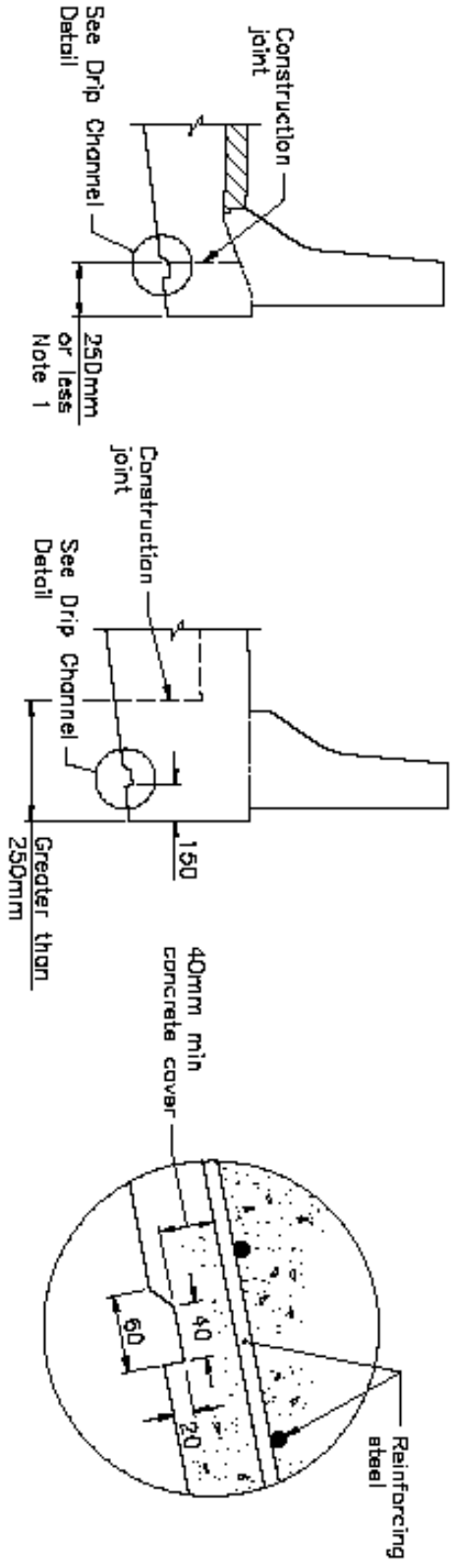
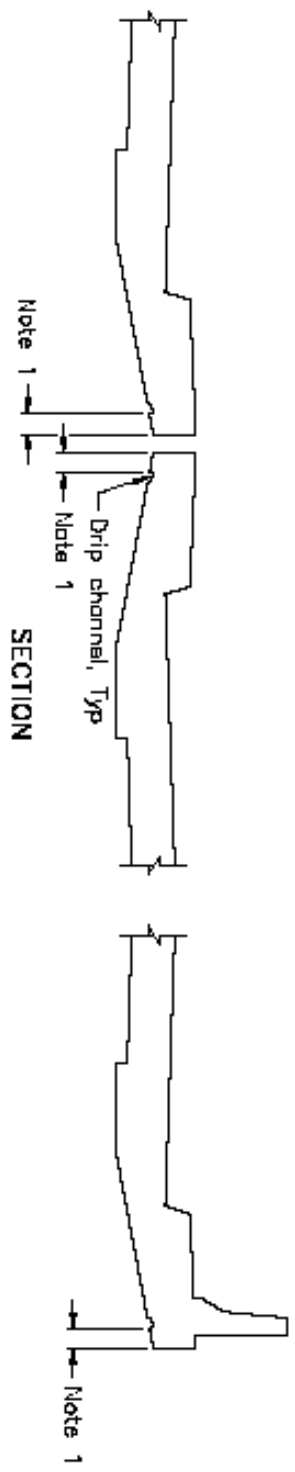
The OPSS.MUNI 100 General Conditions have not been reproduced as part of these Contract Documents.

It will be the Contractor's responsibility to obtain current copies of these documents.

STANDARD DRAWINGS

STANDARD NO.	DESCRIPTION
OPSD 3101.150	WALL – ABUTMENT BACKFILL MINIMUM GRANULAR REQUIREMENTS
OPSD 3390.100	DECK DRIP CHANNEL
OPSD 3941.200	FIGURES IN CONCRETE SITE NUMBER AND DATE LAYOUT
OPSD 803.010	BACKFILL AND COVER FOR CONCRETE CULVERTS
OPSD 219.130	HEAVY DUTY SILT FENCE BARRIER
MTOD SS114-1	RIGID FRAM OPEN FOOTING CULVERT
S1	General Arrangement
S2	Culvert Details
S3	Environmental Control and Work Plan





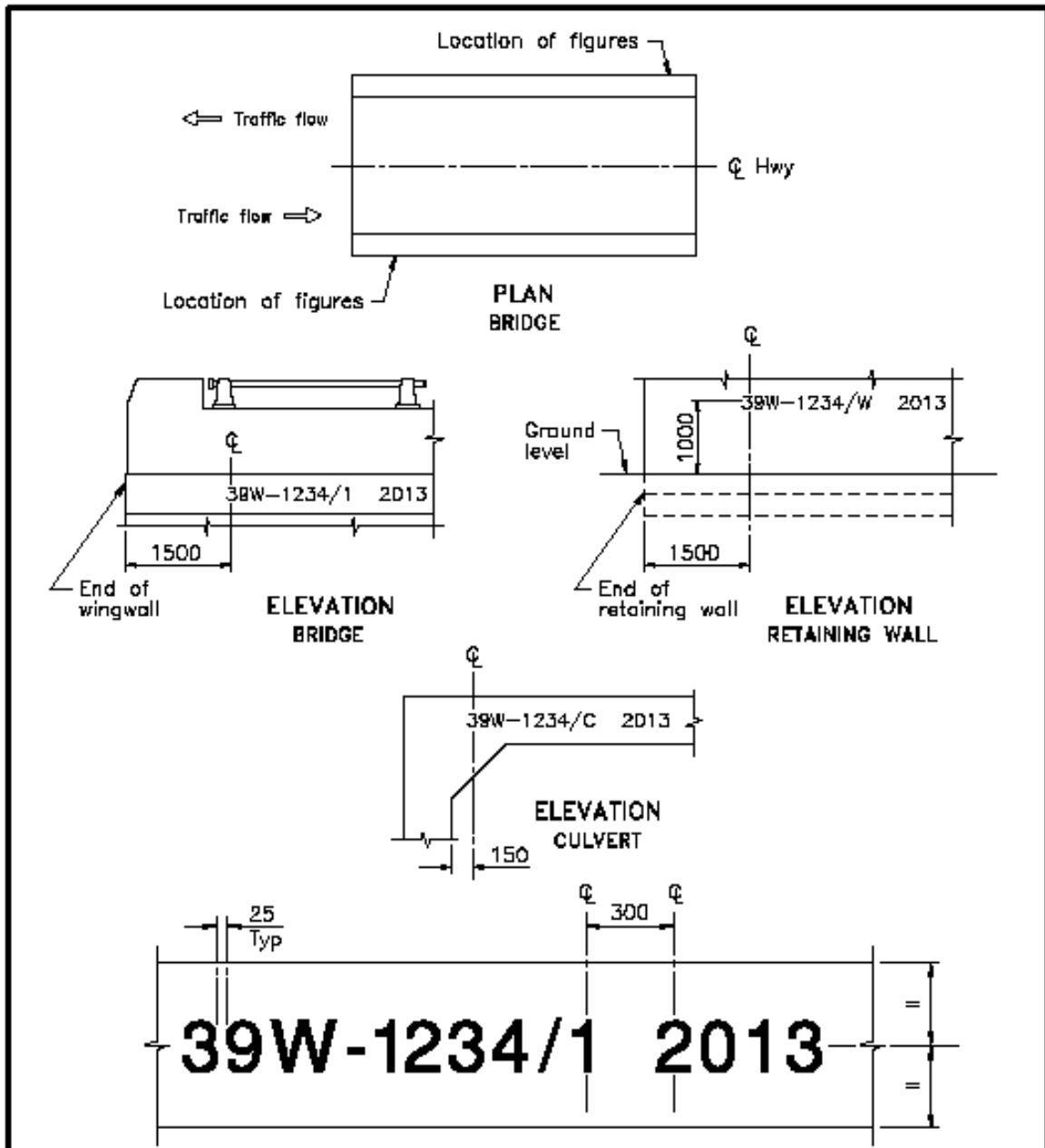
LOCATION OF DRIP CHANNEL WITH CONSTRUCTION JOINT **DRIP CHANNEL DETAIL**

NOTES:

- 1 This dimension shall be 150mm, unless a vertical construction joint is within 250mm of the edge of structure, as shown.
- A Drip channel detail applies to all types of concrete deck slabs.
- B Drip channel shall be continuous along soffit.
- C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING		Nov 2012	Rev 2
DECK			
DRIP CHANNEL			
		OPSD 3390.100	





NOTES:

- A Figure forms shall be cast on the bridge fascia or face of culvert top slab or outside face of retaining wall.
- B "DATE" shall be the original year of construction.
- C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 2	
FIGURES IN CONCRETE SITE NUMBER AND DATE LAYOUT	_____ _____		
OPSD 3941.200			

