

CONTRACT DOCUMENTS and SPECIFICATIONS of LABOUR AND MATERIALS

for the

CASSIDY ROAD CULVERT REPLACEMENT/REPAIR (I0-03-2025)

for the

MUNICIPALITY OF NORTH MIDDLESEX





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Spriet Reference No. 224256

June 2025

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A.1 LOCATION

The job site is Cassidy Road, 1.5 km south of New Ontario Road, in the Municipality of North Middlesex.

A.2 <u>OWNER</u>

Where the term "Owner" is used in these specifications and other contract documents, the same refers to the Municipality of North Middlesex or its authorized representatives.

A.3 <u>ENGINEER</u>

Where the term "Engineer" appears in these specifications, the same shall apply to Spriet Associates London Limited, Consulting Engineers.

A.4 <u>CONTRACTOR</u>

Where the term "Contractor" is used in these specifications, the term shall apply to the General Contractor who shall be responsible for his sub-contractor's compliance with the requirements of the contract drawings and the specifications.

Nothing contained in the Contract Documents shall create any contractual relation between any sub-contractor and the Owner.

The sub-contractor shall be bound to the Contractor by the terms of the General Conditions, Drawings, and Specifications insofar as they relate or may be applied to the work of the sub-contractor, all the obligations and responsibilities that the Contractor assumes toward the Owner. The Contractor agrees to be bound to the sub-contractor by all the obligations the Owner assumes to the Contractor under the General Conditions, drawings and specifications.

A.5 <u>TENDER DOCUMENTS</u>

Tenders must be submitted electronically through the Municipality of North Middlesex Bids and Tenders platform no later than:

JULY 10TH, LOCAL TIME, AT 10:00 AM, 2025

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

All blanks must be legibly and properly filled in on the printed forms supplied for that purpose, otherwise the tender may be declared informal. Should any uncertainty arise as to the proper manner of doing so the requisite information will, upon request, be given by the Engineer.

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

All tenders shall remain valid for 60 days after closing date of tender period. If, after 60 days, no contract has been signed between Owner and Contractor, the tender will no longer be valid.



A.6 TENDER SECURITY

The tender shall be accompanied by a certified cheque or bid bond for 10% of the tender price.

Tender security shall guarantee that, if awarded the contract, the Contractor will execute and enter into a satisfactory contract with the Owner and submit a 50% Performance Bond and a 50% Labour and Materials Bond.

Tender Security shall be made payable to the Owner. Tender Security of unsuccessful bidders will be returned upon award of the Contract.

A.7 SURETY BONDS

The Surety or Performance Bond shall be in an amount equal to 50% of the contract sum and the Labour and Materials Bond shall be in an amount equal to 50% of the contract sum and the cost thereof shall be included in the proposal.

The Bonds shall be to the approval of the Solicitor for the Owner and shall guarantee faithful performance of the contract. The Surety Bond shall remain in full force and effect for twelve months after the completion and acceptance of the work.

The Owner will allow the option of retaining the certified cheque for 10% of the Tender Price for twelve (12) months after completion and acceptance of the work in lieu of submitting Surety Bonds.

A.8 <u>CONTRACT DOCUMENTS</u>

The Contract Documents consist of the following:

- (a) The General Conditions of the Standard Construction Document CCD2 adopted by the Canadian Construction Association and the Engineering Institute of Canada.
- (b) Drawings as listed in Section D of this Specification.
- (c) Specifications for Labour and Materials and Addenda thereto if any.
- (d) Tender Form and Agreement.

A.9 EXPLANATION TO BIDDERS

No oral interpretation will be made. Any interpretation made to Bidders will be in the form of an Addendum to the Specifications, which will be forwarded to all Bidders.

Discrepancies, omissions or doubt as to the meaning of drawings and specifications should be communicated at once to the Engineers for interpretation. Bidders should act promptly to allow sufficient time for a reply to reach them before the submission of their bid and any such interpretation made by the Engineer prior to the receipt of bids shall be made a part of the contract.

A.10 <u>TESTS</u>

Testing of materials and construction will be carried out by the Engineer, the cost of which shall be borne by the Owner. In the event of test failures, the cost of re-testing shall be borne by the Contractor.



A.11 CONCRETE AND REINFORCING STEEL N/A

Concrete will be supplied by the Contractor and will be included in the unit price quoted for reinforced concrete. Reinforcing steel will also be supplied by the Contractor and paid for as indicated in the Form of Tender.

A.12 PROGRESS PAYMENTS

The Contractor shall submit to the Engineer at the end of each calendar month a fully itemized statement showing the estimated value of the permanent work executed up to the end of the month and the value of major items of material and equipment on site for incorporation into the permanent structure.

The Owners will pay the Contractor at the end of each calendar month an amount equal to ninety percent (90%) of the value of all materials on site and all work completed to the satisfaction of the Engineer and in accordance with the Contract Documents.

Ten percent (10%) of all monies due to the Contractor shall be retained by the Owners as a holdback. The holdback will be released to the Contractor sixty (60) days after the date of completion and acceptance of the work. At this time, the Contractor must furnish to the Engineer the following:

- a) A statutory declaration that all liabilities incurred by the Contractor in carrying out the Contract have been paid and that there are no liens, garnishees, attachments or claims relating to the work.
- b) A satisfactory clearance certificate from the Workplace Safety and Insurance Board.
- c) A release by the Contractor, releasing the Owners from all further claims relating to the Contract.

A.13 CURRENT M.T.O. FORM NO. 9 AND O.P.S.S. STANDARDS

Where the term "Ministry" is used in the specifications of the current O.P.S.S. Construction Specification Division 9, which are referred to in the following subsections of these specifications the term shall be replaced with the term Municipality. The current O.P.S.S. Specifications for Construction shall apply to the construction for all items on this project.

A.14 FAIR WAGE POLICY

The Ministry of Labour Roads and Structures Fair Wage Policy applies to this contract.

The Contractor must ensure that wages paid to workmen must be at least equal to the Fair Wage Schedule.

A.15 STARTING TIME AND COMPLETION OF WORK

The Contractor shall commence work under this contract within ten (10) days notification from the Engineer and shall fully complete the work thereunder within the length of time stipulated in the Contract.



A.16 DATE OF COMPLETION

The Total Contract shall be completed within four (4) weeks from the time the Contractor commences work. Road closures cannot exceed 15 days. The Total Contract shall be completed no later than **November 1, 2025.** No in water works shall be permitted between March 15, 2025 and July 15, 2025.

Requests for extension of time <u>will not be granted</u> except where, in the opinion of the Engineer, unusual circumstances warrant such extension.

A.17 LIQUIDATED DAMAGES

In the event of delay in the completion of the entire contract beyond the period herein described or beyond the period to which such time may be extended by the Corporation, the Contractor shall pay to the corporation one thousand dollars (\$1,000.00) for each and every calendar day that the time consumed in said performance and completion extends beyond the final date herein prescribed and this sum will be considered Liquidated Damages that the Corporation will suffer by reason of said delay and default.

Said sum or sums, in view of the difficulty of ascertaining the losses which the Corporation will suffer by reason of delay in the performance of the said works, is hereby agreed upon fixed and determined by the parties hereto as the liquidated damages that the Corporation will suffer by reason of said delay and default and not as a penalty; and the Corporation may deduct and retain the amounts of such liquidated damages out of the monies which may be due or become due to the Contractor under the Contract.

A.18 <u>LOWEST OR ANY TENDER</u> not necessarily accepted.

A.19 SALES TAXES

The Tenderer shall include in the Total Tender Price the Harmonized Sales Tax on all materials, equipment, etc. purchased by him for use on this project.

Where a change in Canadian Federal or Provincial taxes occurs after the Tender Closing Date for this contract, and this change could not have been anticipated at the time of bidding, the municipality will increase or decrease contract payments to account for the exact amount of tax change involved.

Claims for compensation for additional tax cost shall be submitted by the Contractor to the Engineer. Such claims for additional tax costs shall be submitted not later than 30 days after the date of acceptance of the work.

Where the Contractor benefits from a change in Canadian Federal or Provincial Government taxes, the Contractor shall submit to the Engineer, a statement of such benefits. This statement shall be submitted not later than 30 days after the date of acceptance of the work.

The Engineer reserves the right to make deductions from regular progress payments to compensate for the estimated benefit from decreased tax costs. Such deductions will be set-off from contract payments pending receipt of the statement itemizing the benefits which have resulted from a decrease in tax costs at which time the final payment adjustment will be determined.



A.20 THE CONSTRUCTION ACT

The Construction Act applies to this contract and to all sub-contracts arising from this contract and to all services and materials supplied under this contract.

A21 <u>UTILITIES</u>

The attention of the Contractor is drawn to the presence of utility pole lines and underground utilities within the right-of-way. The Contractor shall co-operate with all authorities to ensure that services and utilities are protected from damage during the performance of the work. The Contractor will be responsible for determining the location of all utilities and will be held liable for any damage to overhead and underground utilities caused by his operations. Arrangements have been made with the utility companies to relocate their plant where necessary. The cost of any necessary relocation work shall be borne by the Owner. No allowance or claims of any nature will be allowed on account of delays or inconveniences due to utilities relocation.

A.22 NOTIFICATION

The Contractor, before starting construction, shall give the following 48 hours notice:

The Owner:	Samuel Shannon, Director of Infrastructure Phone No: (519) 294-6244 x 3223 Municipality of North Middlesex
The Engineer :	Brandon Widner, P. Eng.

Spriet Associates London Limited Phone No: (519) 672-4100

The Contractor to notify all applicable authorities (Police, Fire, Ambulance, School Board, etc.) at least 72 hours prior to road closure.

A.23 ROADWAY CLOSURE

The roadway will remain closed during the bridge construction. The Owner is required to maintain road closed signage either side of culvert and detour signage at intersections both sides of construction with signs TC-7, TC-7tA, TC-7tB and Rb-92 in accordance with Ontario Traffic Manual Book 7.

A.24 WORK PERMITS

The Contractor is to engage the sediment and erosion control measures for construction as indicated on the drawings.

The successful Contractor will be given a copy of the D.F.O. and/or local Conservation Authority Work permit (if applicable) as soon as approval is received. The Contractor is to keep a true copy of these Permits and conditions on site at all times.



B.1 WORK INCLUDED

Provide all labour, materials and equipment and supervision necessary to complete the work of all trades as shown or described on or reasonably inferable from the drawings including the following:

- a) Co-ordination of the work of all trades
- b) Preliminary examination of the site
- c) Clearing the site
- d) General protection
- e) Sequence of construction
- f) Maintain lines and grades
- g) Temporary structures
- h) Enforcement of regulations
- i) Keeping drawings and specifications on the job
- j) Shop drawings
- k) Control of debris
- I) Final cleanup

B.2 ADDITIONS TO THE CONTRACT N/A

B.3 EXAMINATION OF SITE

All Contractors shall, before presenting Tender, inspect the site and be familiar with its conditions and the circumstances under which he will be forced to operate.

No extra amount will be allowed the Contractor for any work necessitated by unfamiliarity with existing conditions, which conditions could be ascertained before presenting the proposal.

B.4 <u>CLEARING THE SITE</u>

Remove brush and trees over the site of the structure except such as the Engineer may decide to retain. Brush and trees to be chipped or removed from site and disposed of.

B.5 <u>GENERAL PROTECTION</u>

- a) Provide adequate protection at all times against possible accidents to workmen or other persons by means of fences, railings, lights, warning signs and other suitable precautions.
- b) Trees and shrubs that are to be retained shall be protected by substantial wood casing or railing.
- c) Provide adequate protection against damage to the work by weather and frost.
- d) The Contractor shall be responsible for the protection of all work completed and any material on the site.

Cost of a watchman, if required, shall be borne by the Contractor.



B.6 REJECTED WORK OF MATERIAL

The Contractor shall, within twenty-four hours after receiving written notice from the Engineer to the effect, proceed to remove from the grounds or structures all materials condemned by the Engineer, whether worked or unworked, and to take down all portions of the work which the Engineer shall by written notice condemn as unsound or improper or as in any way failing to conform to the drawings and specifications and shall make good all work in other lines damaged by such removal.

The Contractor shall not permit any part of the structures to be loaded with a weight that will endanger its safety.

B.7 MATERIALS AND WORKMANSHIP

The Contractor shall proceed in a workmanlike manner and unless otherwise specified, furnish materials of the best quality of respective kinds. All workmanship and materials shall be stored to the approval of the Engineer.

All materials not specifically named on the drawings or specified shall be subject to approval before delivery to the job unless such approval is not required by the Engineer.

B.8 PROGRAMME OF WORK

A programme of work, including all trades, shall be prepared by the Contractor and submitted to the Engineer in triplicate within 7 days of the awarding of the contract.

This programme shall have been checked and agreed to by all sub-contractors and shown completion by the date determined from the Form of Tender.

Delays due to failure of sub-contractors to carry out their work will be entirely the responsibility of the General Contractor.

B.9 <u>TEMPORARY SERVICES</u>

a) <u>Telephone (N/A)</u>

The Contractor shall provide temporary local and long-distance telephone for his own use and available to sub-trades and the Engineer.

b) <u>Heating</u>

The Contractor shall supply and maintain all temporary heating required during construction.

c) <u>Electric Power</u>

The Contractor shall make all arrangements with the proper authorities for the supply of electrical energy required for construction purposes. The Contractor shall provide, install and maintain all wiring and equipment and shall pay for the energy used during construction.



B.9 <u>TEMPORARY SERVICES</u> (cont'd)

d) <u>Water</u>

The Contractor shall make arrangements for the supply of water for all purposes, including the mixing of concrete, washing of forms, curing of concrete, etc.

e) Sanitary Facilities

The Contractor shall provide temporary sanitary facilities for the use of all workers in conformation with local and provincial regulations.

B.10 TEMPORARY STRUCTURES

- a) Provide adequate watertight storage as required for the materials of all trades.
- b) The Contractor shall provide on the site a weathertight office for the Contractor's use and that of the Engineer's Inspector, the cost of which shall be included in the total contract price. (NOT APPLICABLE)

B.11 INSURANCE

- a) Contractor's Liability Insurance and Workmen's Compensation: The Contractor shall effect and maintain insurance to cover his obligations under all applicable worker's compensation laws.
- b) Bodily Injury Liability: The contractor shall effect and maintain a Comprehensive General Liability Policy or its equivalent covering claims for bodily injury, including death arising from and during operations under his Contract whether performed by himself, by a sub-contractor or by anyone directly or indirectly employed by either of them in the sum of \$5,000,000.00.
- c) Property Damage: The Contractor shall effect and maintain Property Damage Liability Insurance to cover his and sub-contractor's operations in the sum of \$5,000,000.00.
- d) The Insurance: Coverage shall include the Municipality, Spriet Associates and the Contractor. Proof of adequate insurance may be requested prior to commencement or work.

B.12 PLANS

The successful Bidder will be issued with two sets of plans for building purposes, permits, etc. Any sets required beyond this number will be charged actual cost of printing.

B.13 DRAWINGS, SPECIFICATIONS AND SHOP DRAWINGS

Drawings and specifications are instruments of service and as such shall remain the property of the Engineer and shall be returned by the Contractor on completion of estimating and/or construction of the work.

Drawings and specifications shall form a part of the contract.



B.13 <u>DRAWINGS, SPECIFICATIONS AND SHOP DRAWINGS</u> (cont'd)

The drawings and specifications are for the construction of the designated project only and shall not be used for any other structure without the written consent of both the Owner and Engineer.

The Contractor shall be responsible for keeping complete sets of working drawings, shop drawings, details, sketches and specifications available on the job.

Should any drawing be amended, the Contractor shall make sure that all originals are destroyed and replaced with amended sheets.

A complete set of all such documents should be available conveniently mounted in the construction office.

B.14 QUALIFICATION AND SUPERINTENDENT

Persons or firms submitting tenders shall actually be engaged in the lines of work required by the specifications and shall be able to refer to work of a similar character performed by them. A list of projects constructed in the last 5 years along with Owner references must be submitted for review, if so requested by the Owner or Engineer. Failure to confirm adequate experience may result in rejection of the Tender.

The Contractor shall employ a competent Superintendent to supervise the work. The Engineer reserves the right to require that a Superintendent, not properly qualified in his opinion, be removed and replaced with a fully competent and satisfactory Superintendent.

B.15 EXISTING STRUCTURE

- a) Unless otherwise indicated on the drawings, the removal of the existing structure is to be included as part of the contract and shall be paid for as indicated in other sections of the specifications.
- b) Any materials suitable for salvage shall, unless otherwise noted, become the property of the Contractor.
- c) All broken concrete, asphalt, steel, etc. and other trash shall be removed from the site and disposed of by the Contractor. A letter of permission from the Owner of the site will be required, as well as evidence that any disposal site has MOECP clearance.

B.16 MAINTENANCE OF LINES AND GRADES

- a) The Engineer will locate the structure and establish a benchmark for construction.
- b) The Contractor shall establish and maintain all lines and grades for construction. Substantial batter boards, lines and secondary benchmarks shall be constructed and maintained.
- c) The Engineer will check all grades and levels; however, this in no way relieves the Contractor of his responsibility for construction to correct alignment and grade.



B.17 TEMPORARY ACCESS

The Contractor will construct and maintain all temporary access required to facilitate construction. The access roads shall be approved by the landowner and/or the Municipality or his authorized representative.

This access will be removed and the site restored to its original condition as part of the final cleanup and a clearance letter is required upon completion.

B.18 <u>SUB-CONTRACTORS</u>

Each Bidder shall submit with the bulk tender a complete list of all the persons or firms to which he proposed to sublet any part of the work and the trades or diversion of the work which are sublet to each. The Owner reserves the right to approve the sub-contractor. Failure to comply with this Clause may result in rejection of the bid.

B.19 SHOP DRAWINGS

Where necessary, the Contractor shall take accurate dimensions at the job and shall submit samples, catalogues, shop drawings and schedules to the Engineer for approval before commencing the various items of work.

The approval of the Engineer must be obtained on shop drawings, etc. before the work is put in hand, but this approval shall not relieve the Contractor of his responsibility for the adequacy and accuracy of the data submitted or of furnishing adequate, sufficient or properly integrated work or material as drawn or specified.

B.20 HOIST

Where hoists are required by the General Contractor, same shall be maintained in first class condition, properly constructed to meeting inspection requirements.

B.21 <u>CO-OPERATION</u>

The various Contractors employed on the work shall be expected to co-operate in the prosecution of the work to the extent that the entire project shall move along as a co-ordinated unit and each Contractor is expected to provide other Contractors affected with such information as will expedite the progress of the work in all its phases.

B.21 <u>CO-OPERATION</u>

Before proceeding with his work, each sub-contractor shall examine the site and the complete work of other trades to insure that he has a firm, accurate and workable base for his own work. Any unsatisfactory conditions or errors shall be immediately reported to the Contractor and all work affected shall be suspended until conditions are made satisfactory. If an imperfect base condition or error is not reported, the sub-contractor will be held responsible to the Contractor for any defect in the finished work of his trade.



B.22 SPECIFICATION SECTIONS

The Division of the Specifications into Sections is not intended to control the Contractor in dividing the work among sub-contractors or to limit the scope of work performed by any trade under a given section. The Engineer will not undertake to settle any differences between the Contractor and his sub-contractors as to the inclusion or exclusion of work or material items.

The reference in the Specifications regarding the division or separation of the work among types of trades or occupations are only for the suggested purposes of co-ordinating the work of the different trades, etc., but it shall be the contractor's responsibility for the proper co-ordination and completions whether performed by the Contractor or sub-contractors, if any.

B.23 CLEAN UP

The Contractor shall be expected to keep the premises reasonably free from accumulation of debris, trash, etc., in connection with his work during progress of the construction and on completion of the construction, all debris shall be removed from the site. It shall be the responsibility of the General Contractor to see that all his sub-contractors comply with this condition and to act in event of their non-compliance before the premises can be accepted as complete.

B.24 MAINTENANCE

The Contractor shall repair and make good any damages or fault in the structure that may appear within one year after its completion (as evidenced by the final payment certificate) as the result of imperfect or defective work done or materials furnished certified by the Engineer as being due to one or both of these causes, but nothing herein contained shall be construed as in any way restricting or limiting the liability of the Contractor under the laws of the country, province or locality in which the work is being done.



To the Corporation of the Municipality of North Middlesex

RE: Cassidy Road Culvert Replacement/Repair IO-03-2025 Municipality of North Middlesex Our Job No. 224256

Having carefully examined the drawings and specifications for the construction of:

Cassidy Road Culvert

as well as the premises and conditions affecting the work, the undersigned offers to furnish all Labour, Equipment, and Materials required to complete the whole of the work in accordance with said documents for the following unit prices:

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
1	Traffic control, road closure	L.S.			
2	Clearing and grubbing for structure, stream alignment, ditching as necessary	L.S.			
3	Removal of 6m of the west side of the existing culvert, including disposal of existing structure, etc., complete	L.S.			
4	Standard excavation for proposed pipe including removal and disposal of excess material off site	L.S.			
5	Install temporary coffer dam on upstream and downstream side of excavation for dam and pumping of water around site	L.S.			
6	Supply and install silt fence along any spoil piles and straw bales for roadway ditch runoff incl. redirecting ditches away from construction	L.S.			
7	Dewatering of excavation	L.S.			
8	Supply and place 19mm crushed stone bedding material, including filter cloth surround (approx. 60 tonnes)	L.S.			
9	Supply and install 32 meters of 1800mm diameter 2.8mm CSP with 68mm x 13mm corrugation profile	L.S.			
	Carried Forward				



Cassidy Road Culvert Replacement/Repair

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
			Brought	t Forward	
10	Stream channelization at ends of culvert, complete	L.S.			
11	Supply and install quarry stone rip-rap protection with filter blanket on both ends of culvert and road ditching	L.S.			
12	Strip topsoil, stockpile, and redistribute on new road slopes, by-pass channel, etc. (approx. 500m²)	L.S.			
13	Supply and install hydro seeding (approx. 500m ²)	L.S.			
14	Supply and install Granular B (Approx 600 Tonnes)	L.S.			
15	Pressure Grouting of existing culvert	L.S.			
16	Locating and Supporting existing waterline during construction as required	L.S.			
17	Cost of 50% Performance Bond and 50% Labour and Materials Bond	L.S.			
18	Overhead, administrative, and miscellaneous costs not included in all other Form of Tender items	L.S.			
19	Contingency	L.S.			\$15,000.00
			Sub	-Total	
H.S.T. (13%)					
			ТО	TAL	

(Total Written in Full)

/100 Dollars

The above total amount includes all applicable Harmonized Sales Tax (HST).



Cassidy Road Culvert Replacement/Repair

We also agree that extra work done on the written order of the Engineer and not covered by any of the unit prices shall be paid for in accordance with Part 5 and 6 in the General Conditions of the Contract Document.

We also agree that if our tender is accepted, we will furnish a Performance Bond for 50% and a Labour and Materials Bond for 50% of the Contract amount, such bonds shall be acceptable in every way to the Owner. We agree to maintain all of the work for a period of one year from the date of acceptance of same by the Engineer.

If awarded the Contract, we agree to complete the work within four (4) weeks of commencing but complete the same no later than November 1st, 2025.

We enclose herewith a bid bond or certified cheque for \$_____ as tender security.

OFFERED ON BEHALF OF THE CONTRACTOR

Name	Date
Address	Witness
Signature	
Phone No	Corporate Seal

ACCEPTED ON BEHALF OF THE MUNICIPALITY OF NORTH MIDDLESEX

Mayor	
Clerk	
Date	Seal

This Proposal or Tender form, when signed and offered by the Contractor, shall constitute a formal and binding contract when accepted by and signed on behalf of the Municipality of North Middlesex .



SECTION D

LIST OF DRAWINGS

CASSIDY ROAD CULVERT

MUNICIPALITY OF NORTH MIDDLESEX

Drawing No.

Description

1

Cassidy Road Culvert - Plan, Sections, and Notes



The Instructions to Bidders and General Requirements (Sections A & B), are part of this specification and shall govern the work of this Section.

1.2 SCOPE OF WORK

It is a requirement of this project that the Contractor is entirely responsible for the provision and maintenance of all signing required for the proper execution of this project as outlined herein or hereafter. It is a further requirement that all signing <u>must</u> conform to the Standards as outlined in the "Traffic Control Manual for Roadway Works Operations" as prepared and issued by the Ministry of Transportation. All signs shall be of "new" quality and must be totally reflective at night and shall be maintained in such condition by the Contractor.

The road will remain closed for the duration of construction. The Contractor must provide access to existing laneway entrances at all times.

The Contractor is liable for any accidents, property damage, etc. that may occur in the section where local traffic is being maintained.

Any traffic control signs moved for the convenience of the Contractor will be immediately replaced and any damage will be charged to the Contractor. Stop signs, etc. must remain in position at all times and if for any reason a stop sign is removed for any purpose it must be replaced immediately with a legal temporary sign and the Contractor is legally responsible.

Contractor to provide minimum 7 days' notice to the Municipality before any road closure and obtain a road occupancy permit from the Municipality.

1.3 <u>DETOUR</u>

Road closure and detour signage at intersection to be by the Contractor.

1.4 <u>PAYMENT</u>



The Instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this section.

2.2 EXCAVATION AND BACKFILL

All excavation and backfill necessary for the execution of the project shall be in accordance with the specifications of the current OPSS Muni Division 9, Section 902 - "Excavation and Backfill" as outlined under the following sub-sections:

902.01Scope902.02Reference902.03Definitions902.05Materials902.07Construction902.07.03Unwatering Structure Excavation902.07.04Backfilling

2.3 LINES AND LEVELS

The Engineer will set the centre line for the new bridge, establish a benchmark and a reference datum for all dimensions.

From this data, the Contractor will establish all lines and grades and be responsible for the maintenance of the whole of the setting out.

2.4 <u>PAYMENT</u>

Payment for excavation and backfill shall be on a lump sum basis as indicated in the Form of Tender. Backfill material shall be supplied at the price quoted in the Form of Tender. Payment for unwatering structure excavation shall be on a lump sum basis as indicated in the Form of Tender.

2.5 STREAM CHANNELIZATION



The Instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this Section.

3.2 REMOVAL OF EXISTING STRUCTURES

Existing structure, retaining walls, curbs, asphalt, pipes, railings, etc. shall be demolished and removed from the site and disposed of at sites which have a certificate of approval from the Ministry of the Environment.

The work included under this Section shall be further described by the following specifications:

Current OPSS Muni Division 5 Section 510 - Demolition and Removal of Structures

Subsections

510.01 Scope
510.07 Construction, except that the use of explosives will not be allowed
510.07.03 Disposal of Debris
510.07.06 Backfilling and Trimming

3.3 PAYMENT



The Instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this section.

4.2 CLEARING AND GRUBBING

Clearing of brush and trees and removal of stumps shall be done by the Contractor as follows. The brush, wood and stumps shall be disposed of by the Contractor. Clearing and grubbing is required under the whole area of the new embankment as well as cut areas and along area of culvert bypass channel.

4.3 <u>PAYMENT</u>



5.1 <u>DESCRIPTION</u>

All excess excavated material from roadway construction to be hauled away and disposed of by Contractor. Contractor to find a suitable site for excess material.

5.2 <u>PAYMENT</u>



The Instructions to Bidders and General Requirements (Sections A & B), are part of this specification and shall govern the work of this Section.

6.2 WORK INCLUDED

Contractor to supply pipes to site including all couplers, adapters, etc.

6.3 MATERIALS

The materials and manufacture of these culverts shall meet the current Specifications for Corrugated Steel Pipe Products (G401-07) metric or its successor as issued by the Corrugated Steel Pipe Institute.

The materials shall conform to the latest standards of the OPSS Prior 1801.

6.4 <u>PAYMENT</u>



The Instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this Section.

7.2 <u>PLACING</u>

All work necessary for the execution of the project shall be in accordance with the specification of the OPSS Prior 421.

7.3 <u>SUPPLY</u>

The Contractor shall supply all the necessary plant, labour, and materials required to complete the project according to the plans and specifications.

7.4 <u>EXCAVATION, PREPARTATION OF CORRUGATED STEEL PIPE BED AND</u> <u>BACKFILLING</u>

The trench shall be excavated to a depth of 0.3m below the line for the bottom of the pipe and then Granular 'A' bedding shall be placed as shown on drawings and compacted to 98% of the standard proctor dry density in maximum of 150mm lifts.

If poor soil conditions are encountered, the Engineer may instruct the Contractor to install crushed stone bedding which shall be fully enclosed in geotextile. Cover material around the pipe shall be approved Granular "B" type 2 material tamped in 200mm layers to height shown on the drawings and shall be deposited simultaneously on alternate sides. All fill materials shall be compacted to a minimum dry density of 98% of the Standard Proctor Maximum Dry Density in pounds per cubic foot, as determined by the current A.A.S.H.O. Standard Density Test.

7.5 <u>PAYMENT</u>

Payment of standard excavation and installation of pipe shall be on a lump sum basis as outlined in the Form of Tender.



The Instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this Section.

8.2 <u>SCOPE OF WORK</u>

Native creek substrate is to be removed from the construction area, stockpiled, and redistributed in new creek bottom after construction is complete. The new channel is to have a low flow area and pool as shown on the drawings.

Quarry stone rip-rap shall be placed in locations described on drawings. No broken concrete rip-rap shall be placed at or below water level shown on drawings.

Restored stream banks that were disturbed shall be hydro seeded as per Section 22 if not specified differently in the Engineer's drawings.

8.3 <u>PAYMENT</u>



9.1 <u>DESCRIPTION</u>

This work shall consist of constructing a protective covering of approved stone as indicated on the drawings or as directed by the Engineer and shall include the required excavating, trimming and consolidating of foundations as directed and will include the supply of all materials, the hauling and delivery of all rock and other materials and all labour and equipment incidental to the handling and placing.

9.2 <u>ROCK</u>

Stone for rip-rap shall consist of 300mm to 450mm size rough unhewn quarry stone and shall be approved by the Engineer. The stone shall be dense, resistant to the action of air and water and suitable in all other respects for the purpose intended. The largest rocks procurable shall be supplied and in no case shall any fragment measure less than one cubic foot in volume. Spalls shall be supplied to fill open joints.

9.3 PLACING

The rip-rap shall commence in a trench below the toe of the slope. Stones shall be placed by derrick or by hand to the required length, thickness and depth conforming to the lines given by the Engineer and shall be firmly bedded into the slopes. Stones shall be set normal to the slope and placed so that the largest dimension is perpendicular to the face of the wall, unless such dimension is greater than the specified thickness of the wall. The rip-rap shall be thoroughly compacted as construction progresses. The largest stones shall be placed in the bottom courses and for use as headers through subsequent courses. No shaping of stones will be required, but the contractor shall build to reasonable semblance of courses with stones laid closely and voids chinked with spalls. Stones shall be assorted in the wall so that each rear stone will be embedded into the slope of the embankment.

9.4 PAYMENT

Payment shall be made on the lump sum basis as shown on the Tender Form for items that include "rip-rap".

9.5 SPECIAL PROVISION

The existing concrete structure may be used for rip-rap if the concrete is broken down into 450mm max. size pieces. All rebar is to be cut flush and removed from the concrete pieces. Mix with other stone if there is insufficient broken concrete in order to provide a uniform appearance. No concrete rip-rap is to be used in or adjacent to the waters edge.

Any broken concrete that measures more than 600mm in any one direction will be rejected and removed from site by Contractor.



The Instructions to Bidders and General Requirements (Section A & B) are part of this specification and shall govern the work of this section.

10.2 CONSTRUCTION

The roadway/laneway sub-grade shall be constructed to conform to the typical roadway/ laneway sections shown on the plans. The Contractor shall use the methods and standards of construction outlined in OPSS Muni Division 2, Section 206 "Construction Specifications for Grading".

Earth fill material will be available to the Contractor from the cut areas. The Contractor shall use the cut material to fill and construct the road embankments as detailed on the drawings.

Unless otherwise specified or approved by the Engineer, all earth embankments shall be built in 200mm layers, compacted as indicated on sections.

10.3 PAYMENT

The cost of the above work shall be included in the price bid for the road work items in the Form of Tender and Agreement.



The Instructions to Bidders and General Requirements (Sections A & B), are part of this specification and shall govern the work of this Section.

11.2 SCOPE OF THE WORK

The work to be done shall consist of the supply and placement of granular materials for the construction of sub-base and base courses for roadways, driveways, widenings, shoulders, sidewalk and curb and gutter to the thicknesses, lines and grades, and compaction as shown on the Contract Drawings or as directed by the Engineer.

11.3 CONSTRUCTION SPECIFICATIONS

In general, the supply and placement of granular materials shall be in accordance with OPSS 314 - Untreated Granular Sub-Base, Base, Surface, Shoulder and Stockpiling and all referenced specifications.

Compaction of granular materials shall be in accordance with OPSS 501 - Compacting.

11.4 MATERIALS

All granular materials shall conform to OPSS Muni 1001 - Aggregates - General and OPSS Muni 1010 - Aggregates - Granular A, B, M and Select Sub-Grade Material. The contractor will be required to submit to the Engineer confirmation that the granular materials supplied meet the requirements of the specification.

11.5 MEASUREMENT AND PAYMENT

Granular materials shall be measured in tonnes for that quantity supplied, placed and compacted as specified herein and to the compacted depths as shown on the Contract Drawings.

Payment will be made at the unit price for the appropriate item appearing in the Form of Tender and Agreement and such payment shall be compensation in full for the supply of all labour, equipment and materials necessary to complete the work as specified herein. Water and calcium chloride required for compaction shall be measured in cubic meters for that amount supplied and applied.



The instructions to Bidders and General Requirements (Sections A & B) are part of this specification and shall govern the work of this Section.

12.2 STRIPPING AND STOCKPILING

The Contractor shall be required to strip and stockpile topsoil from the existing areas to be disturbed for roadway approach construction. The Contractor shall be responsible for all necessary work/negotiations to establish suitable stockpile locations on private property or road allowance.

12.3 <u>REDISTRIBUTION/DISTRIBUTION</u>

Upon completion of the new road fill slopes, stockpiled topsoil shall be redistributed on these areas in an even layer of 100mm depth.

In all areas where a shortfall of topsoil occurs, whether due to lack of sufficient original depth or rejection of stockpiled material due to contractor's operations, imported topsoil from acceptable sources conforming to OPSS 570 shall be imported at the Contractor's expense to provide the specified depths. Topsoil shall be uniformly spread, graded and cultivated prior to seeding or sodding. All clods or lumps shall be pulverized and any roots or foreign matter shall be raked up and removed as directed.

12.4 PAYMENT

Payment for stripping, stockpiling, and later redistribution of topsoil shall be on a lump sum basis as outlined in the items of the Form of Tender and Agreement and shall be full compensation for the supply of all labour and equipment necessary to do the work.



The Instructions to Bidders and General Requirements (Sections A & B), are part of this specification and shall govern the work of this Section.

13.2 SEEDING AND MULCHING

The Contractor shall supply and install materials on the new cut/fill slopes, road ditches and other disturbed areas.

All areas shall be hydro seeded and mulched in accordance with OPSS 804 and with the following application rates:

Primary seed (120 kg/ha): 10% White Clover 15% Fiesta Perennial Ryegrass 25% Tall Fescue 15% Creeping Red Fescue 10% Chewings Fescue 15% Timothy 10% Dornie Kentucky Bluegrass Nurse crop (60 kg/ha) Fertilizer (350 kg/ha) Bonded Fibre Matrix (3700 dry kg/ha)

Italian (Annual Ryegrass) 8-32-16 HP-FGM or Equivalent

Seeding to be completed immediately after construction or in the following Spring.

13.3 HAND SEEDING

Seed shall be same mixture and rate as specified in 20.2. Seed to be supplied by the contractor shall be "high quality grass seed" harvested during the previous year, and shall be supplied to the project in the supplier's original bags on which a tag setting out the following information is affixed:

Year or Harvest Type of Mixture fertilizer requirements

Placement of seed shall be by means of an approved mechanical spreader. All areas on which seed is to be placed shall be loose at the time of placing seed, to a depth of 25mm. Seed and fertilizer shall be spread in accordance with the supplier's recommendations unless otherwise directed by the Engineer. Thereafter it will be the responsibility of the property owner to maintain the area in a manner so as to promote growth.

13.4 PAYMENT

Payment for seeding and mulching or seeding shall be on a lump sum basis as outlined in the Form of Tender and Agreement and shall be compensation in full for supply of all labour, equipment and materials to do the work. Holdback will not be released till seeding it established, contractor is responsible to ensure seeding is maintained till establishment.



Grout shall be a Cementous Grout Mix (slurry) with a minimum 28-day strength of 10 MPa. Grout shall be installed by pressure grouting. Contractor to provide grout mix and work procedure to contract administrator for approval prior to ordering materials and commencing work.

