

SPECIFICATIONS
OF
LABOUR AND MATERIALS
FOR

CULVERT NO. 110 REHABILITATION 2025
CULVERT NO. 111 REHABILITATION 2025
CULVERT NO. 119 REHABILITATION 2025
CULVERT NO. 126 REHABILITATION 2025
CULVERT NO. 127 REHABILITATION 2025
AND
BRIDGE NO. 208 REHABILITATION 2025

FOR THE
MUNICIPALITY OF SOUTHWEST MIDDLESEX
SM-005-26



Discover Life. Pure & Simple.



SPRIET ASSOCIATES LONDON LIMITED
CONSULTING ENGINEERS
155 YORK STREET
LONDON, ONTARIO
N6A 1A8

TEL:(519)672-4100



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A.1 LOCATION

Culvert No. 110 is located on CPR Drive, approximately 1.0km west of Dundonald Road.
Culvert No. 111 is located on CPR Drive, approximately 1.1km west of Big Bend Road.
Culvert No. 119 is located on Knapdale Drive, approximately 1.8km west of Dundonald Road.
Culvert No. 126 is located on Argyll Drive, approximately 1.8km east of Dundonald Road.
Culvert No. 127 is located on Argyll Drive, approximately 1.7km west of Old Airport Road.
Bridge No. 208 is located on Gentleman Drive, approximately 0.6km west of Melbourne Road.

A.2 OWNER

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

A.3 ENGINEER

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

A.4 CONTRACTOR

Where the term "Contractor" is used in these specifications, the term shall apply to the General Contractor who shall be responsible for his sub-contractors' 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 TENDER

Tenders to be entitled for consideration must be made on the forms provided herein and shall be submitted within a sealed envelope to the attention of Mauro Castrilli at the Municipality of Southwest Middlesex. Proponents are required to submit two (2) paper copies and one electronic copy (Flash Drive) in **one sealed envelope** marked confidential. No facsimile transmission or electronic delivery of Proposals will be accepted.

Submissions shall be endorsed: "CULVERT NO. 110 REHABILITATION 2025, CULVERT NO. 111 REHABILITATION 2025, CULVERT NO. 119 REHABILITATION 2025, CULVERT NO. 126 REHABILITATION 2025, CULVERT NO. 127 REHABILITATION 2025, and BRIDGE NO. 208 REHABILITATION 2025" and shall arrive at the Municipal office (153 McKellar Street, Glencoe ON N0L 1M0) no later than:

10:00 AM, LOCAL TIME, FRIDAY JANUARY 30, 2026



All questions, inquiries and clarifications regarding this Tender are to be submitted to Mauro Castrilli, Municipality of Southwest Middlesex (mcastrilli@southwestmiddlesex.ca) and Chris Lierman (clierman@spriet.on.ca), Spriet Associates, by Friday, January 23, 2026, at 11:00 A.M., local time. Where an inquiry results in a change or a clarification to the tender, the Municipality will issue an addendum. Addenda will not be issued within 48 hours of closing, with the exception of postponing the closing date.

All blank spaces shall be completely filled in. Numbers shall be stated in writing as well as in figures. There shall be no alterations or erasures and the tenders shall be signed by the Bidders or in the case of a Corporation, by its proper officers and the Corporate Seal shall be affixed. The Owner reserves the right to reject all or any tenders received. The contract, when awarded, shall be made for each branch or division of the work or for the whole work as deemed in the best interest of the Owner. The owner reserves the right to authorize or remove all or any of the three (3) bridges and culverts from the project award.

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 Bid Bond for 10% of the Tender Price and an Agreement to Bond executed under its corporate seal by the Surety Company proposed to obtain the required bonds.

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 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.

A.8 CONTRACT DOCUMENTS

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 TESTS

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 CEMENT AND REINFORCING STEEL

Cement will be supplied by the Contractor and will be included in the price quoted in the Form of Tender. Reinforcing steel (if required) will also be supplied by the Contractor and paid for through the related Form of Tender item(s).

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 forty-five (45) 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 Workers' Compensation Board.
- (c) A release by the Contractor, releasing the Owners from all further claims relating to the Contract.

A.13 CURRENT OPSS DIVISION NO. 9 AND OPSS STANDARDS

The current OPSS Specifications for Construction shall apply to the construction for all items on this project.

A.14 THE MINISTRY OF LABOUR AND FAIR WAGE REGULATIONS

The Ministry of Labour Fair Wage Policy applies to any contract that has an estimated tender value over \$70,000.00.



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 upon notification from the Engineer and shall fully complete the work thereunder within the length of time stipulated in the Contract.

In water works must be avoided between March 15th and July 15th in accordance with Conservation Authority requirements.

A.16 DATE OF COMPLETION

Total Contract construction shall be completed by October 31, 2026.

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 five hundred dollars (\$1,500.00) 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 LOWEST OR ANY TENDER NOT NECESSARILY ACCEPTED.

The Owner reserves the right to reject all or any tenders received. The lowest bid may not necessarily be accepted. Tenders that include specific unit prices significantly different than all other submitted tenders for the same item may be rejected by the owner. The Owner reserves the right, upon award of the tender, to reduce the extent of work to be performed in this contract, including potential removal of specific sites included in this tender, based on higher tendered versus estimated costs at the Owner's sole discretion. The contract, when awarded, shall be made for each branch or division of the work or for the whole work as deemed in the best interest of the Owner.

A.19 SALES TAXES

The tender shall be submitted with the Harmonized Sales Tax (H.S.T.) included, as noted in the Form of Tender.

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.

A.19 SALES TAXES (cont'd)

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, R.S.O. 1990 c.C.30 applies to this contract and to all sub-contracts arising from this contract and to all services and materials supplied under this contract.

A.21 NOTIFICATION

The Contractor, before starting construction shall give the following 10 days notice:

The Owner: Mauro Castrilli, Manager of Public Works
Municipality of Southwest Middlesex
Phone No: (519) 287-2015 (Ext. 8119)

The Engineer: Chris Lierman, P. Eng.
Spriet Associates London Limited
Phone No: (519) 672-4100 (Ext. 111)

The Contractor shall notify all applicable authorities (Police, Fire, Ambulance, School Board Etc.) at least 10 days prior to road closure. A list of authorities required is available from the Municipality.

A.22 ROADWAY CLOSURE

The roadway may be closed to through traffic for duration of the project and the Contractor is required to notify the adjacent properties accordingly. The Contractor shall provide all traffic control for roadside work including detours and flagging as required to perform the work and provide signage in accordance with the M.T.O. Ontario Traffic Manual Temporary Conditions. Contractor is required to submit a traffic plan to the Engineer for approval prior to commencing work.

All signs to be engineering grade reflective from an approved 3M supplier.



- B1. The General Conditions governing these specifications and Contract shall be those published by the Canadian Construction Documents Committee and approved by the Engineering Institute of Canada which accompany the Canadian Standard Construction Document -CCDC2-2008. An index of the above general conditions are as follows:

GENERAL CONDITIONS**PART 1 GENERAL PROVISIONS**

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Document Review
- GC 3.5 Construction Schedule
- GC 3.6 Supervision
- GC 3.7 Subcontractors and Suppliers
- GC 3.8 Labour and Products
- GC 3.9 Documents at the Site
- GC 3.10 Shop Drawings
- GC 3.11 Use of the Work
- GC 3.12 Cutting and Remedial Work
- GC 3.13 Cleanup

PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Progress Payment
- GC 5.3 Progress Payment

- GC 5.4 Substantial Performance of the Work
- GC 5.5 Payment of Holdback upon Substantial Performance of the Work
- GC 5.6 Progressive Release of Holdback
- GC 5.7 Final Payment
- GC 5.8 Withholding of Payment
- GC 5.9 Non-conforming Work

PART 6 CHANGES IN THE WORK

- GC 6.1 Owners Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Condition
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price

PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Negotiation, Mediation, and Arbitration
- GC 8.3 Retention of Rights

PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances and Materials
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

PART 11 INSURANCE-BONDS

- GC 11.1 Insurance
- GC 11.2 Contract Security

PART 12 INDEMNIFICATION-WAIVER-WARRANTY

- GC 12.1 Indemnification
- GC 12.2 Waiver of Claims
- GC 12.3 Warranty



B.2 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
- (l) Final cleanup

B.3 ADDITIONS TO THE CONTRACT (N/A)

- (a) The additional cost to supply and install 300mm size quarry stone rip-rap with filter cloth lining in the stream by-pass channel if erosive soils are encountered.
- (b) The additional cost for restoration or stream work as requested by the M.N.R. above and beyond that indicated on the drawings or in these specifications.

B.4 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.5 CLEARING THE SITE

Remove brush and trees over the site of the structure except such as the Engineer may decide to retain. The brush, rubbish and felled trees shall be removed from the site.

B.6 GENERAL PROTECTION

- (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.6 GENERAL PROTECTION (cont'd)

- (b) Trees and shrubs that are to be retained shall be protected by substantial wood casing or tree protection fencing.
- (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 shall be borne by the Contractor.

B.7 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.8 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.9 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 with 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.10 TEMPORARY SERVICES

- (a) Telephone

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



B.10 TEMPORARY SERVICES (cont'd)**(b) Heating**

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

(c) Electric Power

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.

(d) Water

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.11 TEMPORARY STRUCTURES

- (a) Provide adequate watertight storage as required for the materials of all trades.

B.12 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 and the Contractor. Proof of adequate insurance may be requested prior to commencement of work. Additional Insured shall include Spriet Associates London Limited and Englobe Corporation.

B.13 PLANS

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



B.14 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.

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.

B.15 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.16 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 may be required, as well as evidence that any disposal site has MOE/MECP clearance.

B.17 MAINTENANCE OF LINES AND GRADES

- (a) The Contractor shall establish and maintain all lines and grades for construction. Substantial batter boards, lines and secondary bench marks shall be constructed and maintained.
- (b) The Engineer will check all grades and levels; however, this in no way relieves the Contractor of his responsibility for construction to correct elevation.



B.18 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.19 SUB-CONTRACTORS

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.20 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.21 HOIST

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

B.22 CO-OPERATION

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 coordinated 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.

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.23 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 coordinating the work of the different trades, etc., but it shall be the contractor's responsibility for the proper coordination and completions whether performed by the Contractor or sub-contractors, if any.

B.24 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.25 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.

B.26 M.N.R. WORK PERMIT (N/A)

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 M.N.R., D.F.O. and/or local Conservation Authority Work Permit as soon as approvals are received. The Contractor is to keep a true copy of these Permits and conditions on site at all times.

B.27 UTILITIES

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. The cost of any necessary relocation work shall be borne by the Municipality. No allowance or claims of any nature will be allowed on account of delays or inconveniences due to utilities relocation, or for inconveniences and delays caused by working around or with existing utilities not relocated.



To the Mayor and Council
of the Municipality of Southwest Middlesex

Re: Culvert No. 110 Rehabilitation 2025
Culvert No. 111 Rehabilitation 2025
Culvert No. 119 Rehabilitation 2025
Culvert No. 126 Rehabilitation 2025
Culvert No. 127 Rehabilitation 2025
Bridge No. 208 Rehabilitation 2025
Our Job No. 225115

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

CULVERT NO. 110, CULVERT NO. 111, CULVERT NO. 119, CULVERT NO. 126, CULVERT NO. 127
AND BRIDGE NO. 208 REHABILITATION 2025

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:

SECTION 1 - CULVERT NO. 110				
ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Repair deteriorated top of north wall by chipping and removing unsound concrete (refer to photos 1, 2, 3 & 3B). Sand blast exposed rebar and paint it with zinc rich paint. Install 2 - 15M @ 300mm O.C. dowels, staggered, use HIT-HY 200 Epoxy by Hilti, provide 152mm embedment and 2 - 15M cont. along wall. Refer to Detail D1 on contract drawings. Form and pour MTO approved concrete mix as per contract drawings. Approx. 0.50 cu.m. required.	L.S.	1	\$
2.	Repair more severe construction joint deterioration by chipping and removing delaminated concrete (refer to photos 4 & 5). Sand blast exposed rebar and paint with zinc rich paint. Patch with grout. Approx. 0.11 cu.m. required.	L.S.	1	\$
3.	Repair concrete deterioration on north elevation by chipping and removing delaminated concrete (refer to photo 6). Sand blast exposed rebar and paint it with zinc rich paint. Patch with grout. Approx. 0.03 cu.m. required.	L.S.	1	\$
4.	Repair severe concrete deterioration at north west corner of west abutment by chipping and removing unsound concrete (refer to photos 7 & 11). Sand blast exposed rebar and paint it with zinc rich paint. Install 15M dowels on a 300mm x 300mm grid, use HIT-HI 200 Epoxy by Hilti, provide 152mm embedment. Install 15M at 300mm each way (vertical and horizontal) fastened to the dowels. Form and pour MTO approved concrete mix as per contract drawings. Approx. 0.50 cu.m. required.	L.S.	1	\$
Carried Forward:				\$



SECTION 1 - CULVERT No. 110 (cont'd)				
ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
Brought Forward:				\$
5.	Repair deteriorated concrete at underside of deck on north elevation by chipping and removing unsound concrete (refer to photo 8). Sand blast exposed rebar and paint with zinc rich paint. Install 15M at 300mm O.C. dowels and use HIT-HY 200 Epoxy by Hilti. Provide 152mm embedment and 1 - 15M cont. along the repair. Refer to Detail D2 on contract drawings. Form and pour MTO approved concrete mix as outlined on contract drawings. Approx. 0.10 cu.m. required.	L.S.	1	\$
6.	Repair deteriorated construction joint on north elevation by cutting a 'V' groove along the joint (refer to photo 9). Apply bonding agent SikaTop 100 and patch with SikaTop123 Plus mortar. Approx. 0.01 cu.m. required.	L.S.	1	\$
7.	Repair deteriorated concrete surface by chipping unsound concrete and parging (refer to photo 10). Approx. 0.10 cu.m. required.	L.S.	1	\$
8.	Repair deteriorated concrete on top of south wall at the easterly end by chipping and removing unsound concrete (refer to photo 12 and 15). Sand blast exposed rebar and paint it with zinc rich paint. Install 2 - 15M at 300mm O.C. dowels, staggered, use HIT-HY 200 Epoxy by Hilti. Provide 152mm embedment and 2 - 15M cont. along the wall. Refer to detail D1 on contract drawings. Form and pour MTO approved concrete mix as per contract drawings. Approx. 0.10 cu.m. required.	L.S.	1	\$
9.	Repair cracks at east ends of northerly and southerly elevations by cutting a 'V' groove along the cracks (refer to photo 13). Apply bonding agent SikaTop 100 and patch with SikaTop123 Plus Mortar. Approx. 0.002 cu.m. required.	L.S.	1	\$
10.	Repair concrete deterioration on top of south wall by chipping and removing delaminated concrete (refer to photo 14). Sand blast exposed rebar and paint it with zinc rich paint. Patch with grout. Approx. 0.01 cu.m. required.	L.S.	1	\$
11.	Erosion control measures including stilling basin, silt fence, backwater dams	L.S.	1	\$
12.	Unwatering incl. pumping or piping ditch water around construction	L.S.	1	\$
TOTAL SECTION 1 - CULVERT NO. 110				\$



SECTION 2 - CULVERT NO. 111

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Repair vertical and horizontal cracks on northerly curb by cutting "V" groove along the cracks (refer to photos 1, 2 & 3). Apply bonding agent SikaTop100 and patch with SikaTop123 Plus Mortar. Approx. 0.004 cu.m. required.	L.S.	1	\$
2.	Repair diagonal cracks on northerly elevation by cutting "V" groove along the cracks (refer to photos 4 & 5). Apply bonding agent SikaTop100 and patch with SikaTop123 Plus Mortar. Approx. 0.004 cu.m. required.	L.S.	1	\$
3.	Repair vertical and horizontal cracks on southerly curb by cutting "V" groove along the cracks (refer to photos 6 & 8). Apply bonding agent SikaTop100 and patch with SikaTop123 Plus Mortar. Approx. 0.003 cu.m. required.	L.S.	1	\$
4.	Repair concrete deterioration on top of south curb by chipping and removing delaminated concrete (refer to photo 7). Sand blast exposed rebar and paint it with zinc rich paint. Patch with grout. Approx. 0.02 cu.m. required.	L.S.	1	\$
5.	Repair deteriorated concrete on top of south wall at the easterly end by chipping and removing unsound concrete (refer to photo 9, 10 & 11). Sand blast exposed rebar and paint it with zinc rich paint. Install 2 - 15M at 300mm O.C. dowels, staggered, use HIT-HY 200 Epoxy by Hilti. Provide 152mm embedment and 2 - 15M cont. along the wall. Refer to detail D1 on contract drawings. Form and pour MTO approved concrete mix as per contract drawings. Approx. 0.08 cu.m. required.	L.S.	1	\$
6.	Repair diagonal cracks on southerly elevation by cutting "V" groove along the cracks (refer to photos 12 & 13). Apply bonding agent SikaTop100 and patch with SikaTop123 Plus Mortar. Approx. 0.004 cu.m. required.	L.S.	1	\$
TOTAL SECTION 2 - CULVERT NO. 111				\$

SECTION 3 - CULVERT NO. 119

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Remove and dispose of existing concrete block retaining walls, complete	L.S.	1	\$
2.	Supply and install shot rock rip-rap protection along slopes, including geotextile fabric, as outlined on contract drawings (approx. 30 cu.m. required).	L.S.	1	\$
Carried Forward:				\$



SECTION 3 - CULVERT NO. 119				
ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
Brought Forward:				\$
3.	Remove and dispose of existing 450mm diameter CSP culverts as outlined on contract drawings (2 locations), complete	L.S.	1	\$
4.	Supply and install 8m - 450mm diameter HDPE culvert, including bedding backfill and restoration, complete	L.S.	1	\$
5.	Supply and install 12m - 450mm diameter HDPE culvert, including bedding backfill and restoration, complete	L.S.	1	\$
6.	Supply and install 8m - 375mm diameter HDPE culvert, including bedding backfill and restoration, complete	L.S.	1	\$
7.	Supply, place and compact 300mm thick Granular 'A' at existing laneway, as outlined on contract drawings	L.S.	1	\$
8.	Supply and install Wz-2 and Wa-33L as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
9.	Supply and install Wz-2 and Wa-33R as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
10.	Erosion control measures including stilling basin, silt fence, backwater dams, complete	L.S.	1	\$
TOTAL SECTION 3 - CULVERT NO. 119				\$

SECTION 4 - CULVERT NO. 126				
ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Backfill existing washout area with important Granular 'B' material and rip rap protection as outlined on contract drawings (2) locations, complete	L.S.	1	\$
2.	Supply and install shot rock rip-rap protection along slopes, including geotextile fabric, as outlined on contract drawings (approx. 35 cu.m. required).	L.S.	1	\$
3.	Remove and dispose of existing 375mm diameter CSP culvert as outlined on contract drawings, complete	L.S.	1	\$
Carried Forward:				\$



SECTION 4 - CULVERT NO. 126

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
Brought Forward:				\$
4.	Supply and install 12m - 375mm diameter HDPE culvert, including bedding backfill and restoration, complete	L.S.	1	\$
5.	Supply and install Wz-2 and Wa-33L as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
6.	Supply and install Wz-2 and Wa-33R as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
7.	Supply, place, and compact 300mm thick Granular 'A' at existing laneway, as outlined on contract drawings	L.S.	1	\$
TOTAL SECTION 4 - CULVERT NO. 126				\$

SECTION 5 - CULVERT NO. 127

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Repair concrete deterioration at bottom of westerly abutment, northerly elevation by chipping and removing delaminated concrete (refer to photo 1). Sand blast exposed rebar and paint with zinc rich paint, patch with grout. Approx. 0.06 cu.m. required.	L.S.	1	\$
2.	Remove 5m of ex. CSP culvert and replace with 5.0m of 375mm diameter HDPE culvert as outlined on contract drawings, including shot-rock rip-rap protection, complete	L.S.	1	\$
TOTAL SECTION 5 - CULVERT NO. 127				\$



SECTION 6 - BRIDGE NO. B208

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Supply and install steel beam guiderail as outlined on contract drawings, complete	L.S.	1	\$
2.	Supply and install Wz-2 and Wa-33L as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
3.	Supply and install Wz-2 and Wa-33R as per OPSD 984.201 and OPSD 984.202 (2 locations), complete	L.S.	1	\$
4.	Repair eroded concrete deterioration underside the drains on west abutment (see photos 7, 8 and 9) and near the north drain on each abutment (see photo 13) by chipping and removing deteriorated concrete. Sandblast exposed rebar, paint with zinc rich paint and grout. Approx. 0.09 cu.m. required.	L.S.	1	\$
5.	Repair deteriorated chamfered north corner on the east abutment by chipping for a depth of approximately 200mm and removing unsound concrete (see photos 10 & 11). Sand blast exposed rebar and paint with zinc rich paint. Install 2 - 15M at 300mm O.C. dowels, use HIT-HY 200 epoxy by Hilti, provide 152mm embedment. Provide 2 - 15M cont. vertical bars and 15M at 300mm O.C. open tie bars along the vertical edge repair. Refer to detail on contract drawings. Form and pour MTO approved concrete mix as per notes. Approx. 0.80 cu.m. required.	L.S.	1	\$
6.	Repair deteriorated concrete at north end of west abutment at top by chipping and removing deteriorated concrete (see photo 4). Sand blast exposed rebar, paint with zinc rich paint and patch with grout. Approx. 0.02 cu.m. required.	L.S.	1	\$
7.	Repair horizontal crack at top of west wing wall (see photo 3) and at bottom side of deck on north elevation (see photos 5 & 6) by cutting a 'V' groove along the crack. Apply bonding agent SikaTop 100 and patch with SikaTop123 Plus Mortar. Approx. 0.004 cu.m. required.	L.S.	1	\$
8.	Repair deteriorated concrete by chipping and removing deteriorated concrete (see photos 1 - 2, 19 - 28 and 30 - 36). Sand blast exposed rebar, paint with zinc rich paint and patch with grout. Approx. 0.60 cu.m. required.	L.S.	1	\$
9.	Repair horizontal crack by cutting a 'V' groove along the cracks (see photos 14, 17 and 18). Apply bonding agent SikaTop 100 and patch with SikaTop123 Plus Mortar. Approx. 0.005 cu.m.	L.S.	1	\$
10.	Repair deteriorated concrete barrier rail by fully chipping and removing concrete from the deteriorated area (see photo 15 and 29). Sand blast exposed rebar and paint with zinc rich paint. Install dowels as per detail provided on contract drawings. Form and pour MTO approved concrete mix as per notes. Approx. 0.20 cu.m. required.	L.S.	1	\$
TOTAL SECTION 6 - BRIDGE NO. 208				\$



SECTION 7 - MISCELLANEOUS				
ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	TOTAL
1.	Cost of 50% Performance and 50% Labour and Materials Bond	L.S.	1	\$
2.	Traffic control and signage	L.S.	1	\$
3.	Contingency Allowance			\$ 35,000.00
TOTAL SECTION 7 - MISCELLANEOUS				\$



SUMMARY

SECTION 1 - CULVERT No. 110	\$ _____
SECTION 2 - CULVERT No. 111	\$ _____
SECTION 3 - CULVERT No. 119	\$ _____
SECTION 4 - CULVERT No. 126	\$ _____
SECTION 5 - CULVERT No. 127	\$ _____
SECTION 6 - BRIDGE No. 208	\$ _____
SECTION 7 - MISCELLANEOUS	\$ _____
 SUB-TOTAL	 \$ _____
 PLUS 13% HST	 \$ _____
 TOTAL TENDER	 \$ _____

_____/100 Dollars

(Total Written in Full)

The above total lump sum amount includes all applicable taxes.



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 6 in the General Conditions of the Contract Document.

We also 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 commence work upon notification from the Engineer and complete the same no later than October 31, 2026.

We enclose herewith a bid bond for 10% of the contract value as tender security.

OFFERED ON BEHALF OF THE CONTRACTOR

Name Date

Address Witness

Telephone No.

Signature (Corporate Seal)

ACCEPTED ON BEHALF OF THE MUNICIPALITY

Signing Authority

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 Southwest Middlesex.



PROOF OF ABILITY

If the Contractor has not completed similar work for the Municipality of Southwest Middlesex during the preceding two years, this page must be completed. This information will be used by the Municipality of Southwest Middlesex to determine if the Contractor is, in the opinion of the Municipality of Southwest Middlesex, qualified to adequately perform the work.

1. DATE, NAME AND LOCATION OF PROJECT: _____

DESCRIBE WORK COMPLETED BY YOUR COMPANY: _____

TOTAL VALUE OF THE PROJECT: \$ _____

\$ VALUE OF YOUR PORTION OF THE PROJECT: \$ _____

NAME, TITLE AND PHONE NUMBER OF REFERENCE TO CONTACT: _____

2. DATE, NAME AND LOCATION OF PROJECT: _____

DESCRIBE WORK COMPLETED BY YOUR COMPANY: _____

TOTAL VALUE OF THE PROJECT: \$ _____

\$ VALUE OF YOUR PORTION OF THE PROJECT: \$ _____

NAME, TITLE AND PHONE NUMBER OF REFERENCE TO CONTACT: _____

3. DATE, NAME AND LOCATION OF PROJECT: _____

DESCRIBE WORK COMPLETED BY YOUR COMPANY: _____

TOTAL VALUE OF THE PROJECT: \$ _____

\$ VALUE OF YOUR PORTION OF THE PROJECT: \$ _____

NAME, TITLE AND PHONE NUMBER OF REFERENCE TO CONTACT: _____

4. DATE, NAME AND LOCATION OF PROJECT: _____

DESCRIBE WORK COMPLETED BY YOUR COMPANY: _____

TOTAL VALUE OF THE PROJECT: \$ _____

\$ VALUE OF YOUR PORTION OF THE PROJECT: \$ _____

NAME, TITLE AND PHONE NUMBER OF REFERENCE TO CONTACT: _____



LIST OF SUB-CONTRACTORS**Description of Work****Contractor**

_____	NAME: _____
	ADDRESS: _____
	PHONE: _____
_____	NAME: _____
	ADDRESS: _____
	PHONE: _____
_____	NAME: _____
	ADDRESS: _____
	PHONE: _____
_____	NAME: _____
	ADDRESS: _____
	PHONE: _____
_____	NAME: _____
	ADDRESS: _____
	PHONE: _____



CULVERT NO. 110 REHABILITATION 2025
CULVERT NO. 111 REHABILITATION 2025
CULVERT NO. 119 REHABILITATION 2025
CULVERT NO. 126 REHABILITATION 2025
CULVERT NO. 127 REHABILITATION 2025
BRIDGE NO. 208 REHABILITATION 2025

FOR THE MUNICIPALITY OF SOUTHWEST MIDDLESEX

CULVERT NO. 110 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
1	CULVERT C110 – CPR Drive
2	CULVERT C110 – CPR Drive

CULVERT NO. 111 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
3	CULVERT C111 – CPR Drive
4	CULVERT C111 – CPR Drive

CULVERT NO. 119 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
5	CULVERT C119 – Knapdale Drive

CULVERT NO. 126 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
6	CULVERT C126 – Argyll Drive

CULVERT NO. 127 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
7	CULVERT C127 – Argyll Drive

BRIDGE NO. 208 REHABILITATION 2025

<u>Drawing No.</u>	<u>Description</u>
8	BRIDGE 208 – Gentleman Drive
9	BRIDGE 208 – Gentleman Drive
10	BRIDGE 208 – Gentleman Drive



1.1 GENERAL CONDITIONS

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 SIGNAGE

The Contractor shall provide for all signage for traffic control at the construction site. Contractor will be requested to submit a traffic control plan for approval before commencing work. The Contractor shall allow access to the adjacent properties from either direction with the roadway closed to through traffic during construction. All signage to be in accordance with M.T.O. Ontario Traffic Manual Book 7 Temporary Conditions.

1.3 PAYMENT

Payment for Traffic Control shall be on the basis of the lump sum items for "Traffic Control" in the Form of Tender and shall be full compensation for all labour, equipment and materials required to do the work.



2.1 GENERAL CONDITIONS

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 PLACING

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

2.3 SUPPLY

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

2.4 EXCAVATION, PREPARATION OF H.D.P.E. PIPE BED AND BACKFILLING

The trench shall be excavated to a depth of 200mm below the line for the bottom of the pipe and then granular 'A' bedding shall be placed as shown on drawings. Cover material around the pipe shall be approved Granular 'A' material tamped in 200mm layers to height shown on the drawings and shall be deposited simultaneously on alternate sides. Native backfill material shall be salvaged and re-used as noted 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. Payment of standard excavation and installation of pipe shall be on a lump sum basis as outlined in the Form of Tender. Payment for the supply and installation of 19mm crushed stone bedding material and Granular "B" cover material shall be on a lump sum basis as outlined in the Form of Tender.



3.1 GENERAL CONDITIONS

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

3.2 REMOVAL AND DISPOSAL

The Contractor shall remove and dispose of the existing corrugated steel pipe culvert as shown on the drawings.

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

Current OPSS 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

Payment for this work will be on the basis of the lump sum tender and shall be full compensation for all labor, equipment and materials required to perform the work.



4.1 DESCRIPTION

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 labor and equipment incidental to the handling and placing.

4.2 ROCK

Stone for rip-rap shall consists of 300mm size rough unhewn quarry stone or 300mm – 500mm shot-rock as noted on Contract Drawings 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.

4.3 PLACING

The rip-rap, including shot-rock, shall commence in a trench below the toe of the slope or as shown on Contract Drawings. 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.

All rip-rap to be placed on non-woven filter blanket type Terrafix 270R or equivalent.

4.4 PAYMENT

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



5.1 GENERAL CONDITIONS

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

5.2 CONSTRUCTION OF ROADWAY

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

Unless otherwise specified or approved by the Engineer, all earth embankments shall be built using the 150mm Layer Compaction Method.

5.3 GRANULAR 'A' AND 'B' (SELECT)

Granular 'A' and 'B' (Select) material shall conform to the latest O.P.S.S. 1010. Subsection 1010.05.03 is amended by the addition of the following: "Granular 'B' - Select" physical requirements shall conform with "Table 1 Physical Requirements" Granular 'B' Type 1 and the following gradation chart:

GRANULAR 'B' SELECT	
SIEVE SIZE	% PASSING
100.0mm	100
37.5mm	65-100
22.4mm	57-90
4.75mm	25-75
1.18mm	10-65
0.300mm	5-35
0.075mm	0-8

5.4 PAYMENT

Payment for the construction of roadway shall be on the basis as outlined in the Form of Tender and Agreement and shall be compensation in full for all items as specified, including compensation for compaction.



6.1 DESCRIPTION

All excess excavated material from bridge, culvert, or roadway construction to be hauled away and disposed of by Contractor in accordance with all applicable Standards and Regulations.

The Contractor shall be responsible for finding a material disposal location suitable to the Engineer with the written permission of the Owner of the property concerned.

6.2 PAYMENT

Payment shall be made on the lump sum basis as shown in applicable Form of Tender items in which disposal of excess material is anticipated.



7.1 GENERAL CONDITIONS

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 CONCRETE STRUCTURES

All concrete work necessary to complete the work as described by the drawings and specifications shall be in accordance with the specifications of the current OPSS Division 9, Section 904(Metric) "Concrete Structures" as outlined under the following subsections:

904.01	Scope
904.02	Reference
904.03	Definitions
904.05	Materials
904.06	Equipment
904.07	Construction
904.07.02	Curing
904.07.03	Cold Weather Concreting
904.07.04	Hot Weather Concreting
904.07.05	Forming Joints
904.07.06	Surface Finish - Formed Surfaces
904.07.07	Surface Finish - Open Surfaces
904.07.08	Removal of Formwork and Falsework
904.08	Quality Assurance
904.09	Measurement of Payment
904.10	Basis of Payment

7.3 MATERIALS FOR CONCRETE

Cement

All cement shall be supplied by the Contractor.

Aggregates

The requirements of OPSS Division 10, Section 1001 Material Specification for Aggregates - General, and OPSS Section 1002, Material Specification for Aggregates - Concrete, and OPSS 1350 material specification for concrete (materials and production) shall apply to this contract. Fine and coarse aggregates for structural concrete must be supplied from the aggregate sources list of the M.T.O



7.4 FORMWORK AND FALSEWORK

The erection of formwork and falsework shall comply with OPSS Section 919. The Contractor shall submit to the Engineer 3 copies of detailed working drawings of all falsework certified by a Professional Engineer who is licensed by the Association of Professional Engineers of Ontario.

7.5 MISCELLANEOUS MATERIALS

All miscellaneous materials shown on the drawings, drains, jointing materials, epoxy, etc., with the exception of reinforcing steel and which are not specifically mentioned in the Form of Tender, shall be supplied and installed by the Contractor as part of the contract and shall be assumed to be included in the unit price bid for "Concrete" in the Form of Tender.

7.6 DECK CURING (N/A)

The concrete deck shall be covered for curing for a minimum of 4 days with a double layer of burlap wetted down thoroughly and covered with an opaque plastic cover. The burlap must be pre-soaked for a period of 24 hours before application. Hot weather protection will be as specified in OPSS Section 904. No extra payment will be made for the above.

7.7 MEASUREMENT AND PAYMENT

Concrete for bridge and culvert repairs and construction will be paid for at the Contract Lump Sum Price for the class of concrete specified. Measurement to be plan quantity measurement as outlined on Contract Drawings and Form of Tender to the neat dimensions as per OPSS 904.09.03 Unless otherwise provided for in the Contract, this shall be payment in full for furnishing all materials and for all labour and equipment necessary for the complete structure, with the exception of reinforcing steel, as shown on the plans and described in the specifications.

There will be no measurement for above items as per OPSS 904.09.04.

No additional payment will be made for over-excavation of footings unless directed to do so by Engineer due to removal of existing structure footings. Engineer may in this case instruct Contractor to fill over excavated footings with lean concrete.



8.1 GENERAL CONDITIONS

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 CONCRETE REMOVAL

Concrete removal of the delaminated concrete will be done in accordance with OPSS 928.

Environment

The Contractor shall take measures to protect the environment by controlling, collecting, and disposing of all concrete and debris resulting from the concrete removal operation in a manner acceptable to the Ministry as specified elsewhere in the Contract.

Access to Work Areas

The Contractor shall provide adequate access to facilitate any inspection or measurement of the work by the Engineer.

Removal Procedure

The Contractor shall remove all loose and delaminated concrete and concrete designated for removal from areas as specified in the Contract and as demarcated by the Engineer prior to the work. The minimum depth of repairs is 50mm for horizontal surface and 100mm for vertical surface (75mm where no reinforcing steel is exposed).

Removal Procedure

All concrete shall be removed using chipping and/or jack hammers. Chipping hammers shall be 7.0 Kg maximum. Jack hammers shall be 14.0 Kg maximum. Jackhammers shall be used for the removal of concrete in front of and between the reinforcing bars. Only chipping hammers shall be used for the removal of concrete behind and within 25mm of any reinforcing bar.

Concrete shall be removed in such a manner as to prevent damage to adjacent concrete and utilities that are to remain in place.

Reinforcing steel, pre-stressing tendons, shear connectors, structural steel or other components that are to remain in place shall not be damaged or loosened. The Contractor shall ensure that hammers do not come into contact with reinforcing bars in a manner which will cause debonding of bars in adjacent concrete areas not being repaired.



Removal Procedure (cont'd)

Concrete surrounding any exposed reinforcing steel shall be removed locally to provide a minimum clearance of 25mm all around the reinforcing steel.

If existing reinforcing steel is not exposed during removal of scaled concrete and sound concrete does not have to be removed in this area for other reasons, existing concrete shall not be removed more than that required to expose the surface of sound concrete except where the Contract specifies a minimum depth of removal for scaled concrete.

Where reinforcing bars have been exposed, concrete removal shall extend along the bars until they are free from heavy rust. Concrete covering the bars at the edge of the repair area will be sounded by the Engineer for local delamination before removal operations are completed.

Where the area of concrete removal with exposed reinforcing steel exceeds 2m², the reinforcing steel shall be retied at every second intersection point and shall be supported to maintain the steel mat in its original location. Supports conforming to OPSS 905, shall be placed as required and tied securely to the reinforcing steel.

The Contractor shall provide the Engineer with metal straight edges to facilitate measurement for payment.

Disposal of Removed Materials

As part of the removal operation the Contractor shall supply all necessary equipment and operators to load, haul and dispose of the material resulting from the removal of concrete. Disposal of resultant debris shall be carried out as arranged by the contractor in a manner acceptable to the MECP.

8.3 MEASUREMENT FOR PAYMENT

Sub-section 928.09.01 of OPSS 928, is deleted and replaced with the following:

The measurement for payment will be included within the concrete removal and repair item.

8.4 BASIS OF PAYMENT

Subsection 928.10.01 of OPSS 928, is deleted and replaced with the following:

Payment at the contract price for the above tender items shall be full compensation for all labour, equipment and materials required to do the work including the provision of access to work areas when there is no separate tender item.



9.1 GENERAL CONDITIONS

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

9.2 SURFACE PREPARATION

Where the new patching mortar is to extend over the original surface, that portion of existing surface shall be roughened by scabbling, chipping or bush hammering. The surfaces receiving new patching mortar shall be abrasive blast cleaned in conformance with OPSS 904.

9.3 SUPPLY OF PATCHING MORTAR

The Contractor will be required to supply and place new patching mortar to replace concrete removed due to deterioration. Immediately prior to placing new concrete, all exposed reinforcing steel is to be sand blasted and exposed concrete areas shall be dampened but not wet. Patching mortar shall be Sika Top – 123 Plus Mortar in addition to Sika Top 100 Bonding agent.

9.4 PLACING, FINISHING AND CURING OF PATCHING MORTAR

Not more than one hour before placement of new patching mortar, all dust and loose material shall be removed from the prepared surfaces by air blasting. The concrete surface to be refaced shall be maintained in a wet condition for a period of one hour with no free standing water immediately prior to placing of the concrete. The placing, finishing and curing of patching mortar shall conform to the requirements of the manufacturer.

9.5 PAYMENT

Payment for new patching mortar will be made on a lump sum basis and shall be full compensation for all labour, equipment and materials required to do the work as outlined on Contract Drawings and Form of Tender.

9.6 SPECIAL

This section to be read in conjunction with SECTION 2.



10.1 GENERAL CONDITIONS

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

10.2 STEEL BEAM GUIDE RAIL

Work to be done in accordance with O.P.S.S. 552.

Supply and installation to be in accordance with O.P.S.D. 912.124, 912.315, 912.430, and 922.186.

10.3 STRUCTURE CONNECTION (N/A)

Supply and installation to be in accordance with M.T.O.D. 912.109 as modified.

10.4 EXTRUDER END TREATMENT

Work to be done in accordance with O.P.S.S. 552.

Supply and installation to be in accordance with O.P.S.D. 922.186.

10.5 PAYMENT

Payment for steel beam guide rail including extruder and terminal end treatment shall be in accordance with the lump sum items in the Form of Tender for this work and shall be full compensation for the supply of all labour, equipment and materials to do the work.

