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## ADDENDUM # 3

### Contract #30921-91345-T09 CP000420 Byron Avenue, Highcroft Avenue, and Athlone Avenue Integrated Infrastructure Replacement

Date: November 17, 2021

The following modifications and clarifications are to be made and taken into consideration when tendering on this contract and when entering into the Form of Agreement to do the work they shall become a part thereof.

#### **SPECIFICATIONS**

- Please remove and replace with revised Schedule of Price
- Please remove and replace with revised Table of contents of Section F
- Please remove and replace with revised Special Provisions F-0420-10 & F-0420-12
- New Special Provision F-0420-24 has been added to tender

#### **QUESTIONS & ANSWERS**

##### **Question 01:**

Has the city performed soil sampling and analysis up to the excess soil requirement standards? If so, have they selected any receiving sites, and do these receiving sites match the same soil classification as the project site?

##### **Answer 01:**

The City has included the Phase 2 ESA assessment and Materials Management Memo completed by GEMTEC in the tender documents. As the City intends to award this tender prior to January 1, 2022, allowable exemptions under O. Reg. 406/19: On-Site and Excess Soil Management will apply. Receiving sites have not been identified by the City.

**Question 02:**

Addendum 1 added item A-0033 for contaminated water however the pay unit is lump sum. The ESA report recommends that groundwater within specified boreholes be sampled to determine if soil impacts are present within the groundwater. It is very difficult for the contractor, at time of tender, to estimate the actual volumes of potential contaminated ground water. In previous City tenders we would typically have measurable pay items for this work. Can this item be revised to a measurable pay unit?

**Answer 02:**

See the updated Schedule of Prices.

**Question 03:**

Can you please confirm that the City will award this tender prior to January 1, 2022 and that the project will be grandfathered under the new excess soils regulation (O. Reg. 406/19: On-Site and Excess Soil Management)?

**Answer 03:**

The City intends to award this tender prior to January 1, 2022, and will apply the allowable exemptions under O. Reg. 406/19: On-Site and Excess Soil Management.

**Question 04:**

Will the City require a soils management plan to be prepared and submitted? If required should a Soils Management Plan item be included in the tender?

**Answer 04:**

The City will require that the Contractor adheres to O. Reg. 406/19: On-Site and Excess Soil Management. All associated submittals shall be included in the item Excess Soil Management Plan.

**Question 05:**

For Item A-0032 - Temporary Road Widening (added in Addendum 1) can you please confirm the depths of granular and asphalt required for this item.

**Answer 05:**

Depths of the granular base and asphalt shall be determined by the contractor.

**Question 06:**

With regards to your response to Question 9, Addendum 1. Item A-0033, contaminated groundwater storage and treatment (Provisional) Lump sum method of payment puts considerable risk on the contractor. Typically, on other City projects, we see provisional pay items for treating contaminated water - Supply of On-Site Water Treatment Facilities - up to 100,000 L/ day (Provisional) - Storage of Contaminated

Water (Provisional) - On-Site Treatment of Contaminant Impacted Water (Provisional)  
- Haul and Dispose of Contaminated Water (Provisional) all items typically have a quantity based on the size of the project to allow us to provide rates for each item mentioned above. What is the City's reasoning behind a lump sum method of payment?

**Answer 06:**

See specification F-0420-24 – Contaminated Groundwater Storage and Treatment and updated Schedule of Prices.

**Question 07:**

Items C-019 and C-020 are locked to \$0.00, are we not to bid these items?

**Answer 07:**

The intention of items C-0019 and C-0020 are to track all existing valves and hydrants that are to be transported to 951 Clyde Avenue. This is a no bid item.

Receipt of this addendum shall be acknowledged on page A-12 of the Tender. Failure to do so may result in the rejection of your Tender submission.

For further information, please contact Michelle Lemieux, Procurement Officer, Supply Services at [Michelle.Lemieux@ottawa.ca](mailto:Michelle.Lemieux@ottawa.ca).

**SECTION F**

**SPECIAL PROVISIONS**

**SECTION F**  
**SPECIAL PROVISIONS**  
**CONTRACT No. CP000420**

**CITY OF OTTAWA**  
**SPECIAL PROVISIONS**

The Contractor acknowledges that the standard technical special provisions of contract are as produced and amended by the City of Ottawa in the Standard Tender Documents for Unit Price Contract, Vol. #1: Construction Specifications Manual which is available from the City of Ottawa, Infrastructure Services Department and it is the responsibility of the Contractor to ensure that it has the correct document.

If the project requires any contract specific special provisions they shall form part of this contract document and shall be set out hereafter.

The City of Ottawa Standard Special Provisions which are provisions of this Contract are:

| <b>Clause No.</b> | <b>Rev. Date</b> | <b>Description</b>   |
|-------------------|------------------|--|
| F-1001            | March 2021       | Field Office for Contract Administrator                    |
| F-1002            | March 2009       | Payment Adjustment for Changes in the Fuel Price Index     |
| F-1005            | March 2016       | Erosion and Sediment Control                               |
| F-1006            | March 2019       | Contract Initiation  |
| F-1010            | March 2017       | Traffic Control Plan                                       |
| F-1011            | March 2017       | Pre-Construction Inspection                                |
| F-1012            | March 2021       | Police Assistance at Intersection                          |
| F-1013            | March 2015       | Construction Site Pedestrian Control Plan                  |
| F-1014            | March 2006       | Steel Interlocking Pedestrian Barriers                     |
| F-1015            | March 2019       | Granular A for Temporary Pedestrian Walkway                |
| F-1016            | March 2017       | Asphalt for Temporary Pedestrian Walkway                   |
| F-1017            | March 2017       | Stone Dust for Temporary Pedestrian Walkway                |
| F-1018            | March 2014       | Pedestrian Barrier   |
| F-1019            | March 2017       | Supply, Maintain and Remove Portable Variable Message Sign |
| F-1201            | March 2021       | Use of Explosives  |
| F-2060            | March 2019       | Earth Excavation, Grading (Including Removals)             |
| F-2120            | March 2021       | Select Subgrade Material for Trench Final Backfill         |
| F-3101            | March 2019       | Price Adjustment for Performance Graded Asphalt Cement     |
| F-3106            | March 2021       | Material Specification for Superpave Hot Mix Asphalt Mixes |

**SECTION F**  
**SPECIAL PROVISIONS**  
**CONTRACT No. CP000420**

|        |            |  |
|--------|------------|--|
| F-3110 | March 2019 | Asphalt sidewalk, Medians, Boulevards, Islands, Private Walks and Driveways  |
| F-3111 | March 2019 | Material Transfer Vehicle  |
| F-3130 | March 2021 | Hot Mix Asphalt – End Result   |
| F-3147 | March 2021 | Material Selection for Aggregates – Base, Subbase, Select Subgrade, and Backfill Material  |
| F-3510 | March 2021 | Concrete Sidewalk, Medians, Boulevards and Islands   |
| F-3511 | March 2021 | Concrete Sidewalk “All Inclusive”  |
| F-3512 | March 2016 | Tactile Walking Surface Indicators   |
| F-3514 | March 2019 | Replace and/or Extend Private Walks and/or Steps   |
| F-3515 | March 2019 | Concrete Driveways   |
| F-3531 | March 2021 | Concrete Curb and Gutter   |
| F-3532 | May 2001   | Precast Concrete Curb  |
| F-3550 | March 2021 | Interlocking Concrete Pavers   |
| F-4031 | March 2019 | Rock Excavation for Sewers and Watermains  |
| F-4050 | March 2009 | Pipe Subdrain  |
| F-4070 | March 2021 | Maintenance Holes, Catch Basins, Ditch Inlets and Chambers   |
| F-4080 | March 2019 | Installation, Adjusting or Rebuilding Maintenance Holes, Catch Basins, Curb Inlets, Ditch Inlets, Valve Boxes and Valve Chambers |
| F-4090 | March 2019 | Cleaning and Televising Sewers   |
| F-4100 | March 2021 | Pipe Sewers  |
| F-4101 | March 2019 | Connecting to Existing Maintenance Holes, Catch Basins, Ditch Inlets Culverts and Sewers   |
| F-4102 | March 2019 | Extruded Polystyrene (XPS) Insulation for Sewers   |
| F-4104 | March 2021 | Abandonment of Sewer Infrastructure  |
| F-4109 | March 2015 | Preparation of Existing Pipe for Trenchless Sewer Rehabilitation   |
| F-4110 | March 2015 | CCTV Inspection of Existing Sewer Pipe for Trenchless Sewer Rehabilitation   |
| F-4112 | March 2016 | Cured-in-Place Building Laterals   |
| F-4113 | March 2015 | Sequence of Work (Trenchless)  |
| F-4114 | March 2019 | By-Pass Pumping (Trenchless)   |
| F-4115 | March 2015 | Treatment of Curing Water  |
| F-4117 | March 2019 | Sewer Frost Tapers   |
| F-4491 | March 2021 | Commissioning of Watermains  |
| F-4492 | March 2019 | Thrust Restraint of Watermains and Fittings  |
| F-4493 | March 2021 | Tracing Wire for Watermains and Non-Metallic Forcemains  |
| F-4494 | March 2021 | Cathodic Protection of New Watermains and Fittings   |

**SECTION F**  
**SPECIAL PROVISIONS**  
**CONTRACT No. CP000420**

|        |            |   |
|--------|------------|---|
| F-4930 | March 2021 | Temporary Potable Water Supply Services                       |
| F-5103 | March 2019 | Removal of Asphalt Pavement, Partial Depth                    |
| F-5104 | March 2019 | Precision Milling   |
| F-6011 | March 2019 | City of Ottawa Streetlighting                                 |
| F-6101 | March 2017 | Removal of Electrical Equipment                               |
| F-6151 | March 2019 | Pole Erection   |
| F-6171 | March 2009 | Roadway Luminaires  |
| F-6202 | March 2021 | Traffic Control Maintenance Holes, Handholes, and Foundations |
| F-6203 | March 2021 | Traffic Control Conduit and Ground Rods and Plates            |
| F-6209 | March 2021 | Installation of Detector Loops                                |
| F-6211 | March 2015 | Bicycle Counter Installation on Cycling Lanes                 |
| F-6212 | March 2015 | Bicycle Counter Installation on Cycle Tracks                  |
| F-6213 | March 2015 | Bicycle Counter Installation on Multi-Use Pathway             |
| F-7211 | March 2011 | Steel Beam Guide Rail, Cable Guide Rail, and Delineator Posts |
| F-8011 | March 2013 | Tree Protection   |
| F-8021 | March 2017 | Topsoil, Imported   |
| F-8024 | March 2019 | Warranty Period Maintenance for Planting                      |
| F-8025 | Aug. 2001  | Labour  |
| F-8026 | March 2019 | Equipment Rates   |
| F-8028 | March 2013 | Sweeper/Flusher   |
| F-8031 | March 2017 | Sodding, Staked and Unstaked                                  |
| F-8041 | March 2011 | Seeding and Mulching  |
| F-8045 | March 2013 | Miscellaneous Reinstatement of Adjacent Properties            |
| F-8047 | March 2021 | Hedgerows, Nursery Stock and Reforestation                    |
| F-9040 | March 2021 | Concrete Structures   |
| F-9043 | March 2009 | Cementing Materials   |
| F-9045 | March 2021 | Concrete – Materials and Production                           |

If this project requires any contract specific General Special Provisions they shall form part of this contract document and shall be set out hereafter:

| <b>Clause No.</b> | <b>Date</b> | <b>Description</b>                               |
|-------------------|-------------|--|
| F-1007            | August 2021 | Sewer Flow Management Plans and Flow Maintenance |
| F-4930            | Nov. 2021   | Temporary Potable Water Supply Services          |
| F-0420-01         | August 2021 | Provisional Items                                |
| F-0420-02         | August 2021 | Temporary Pedestrian Walkway                     |
| F-0420-03         | June 2021   | Temporary Asphalt                                |

**SECTION F**  
**SPECIAL PROVISIONS**  
**CONTRACT No. CP000420**

|           |             |  |
|-----------|-------------|--|
| F-0420-04 | August 2021 | Watermain Vibration Monitoring                             |
| F-0420-05 | August 2021 | Protection and Support of 1050mm Dia. Watermain            |
| F-0420-06 | August 2021 | Temporary Granular 'A' (provisional)                       |
| F-0420-07 | August 2021 | Utility Protection   |
| F-0420-08 | June 2021   | Soil Chemical Analysis                                     |
| F-0420-09 | August 2021 | Decommissioning of Monitoring Wells                        |
| F-0420-10 | August 2021 | Dewatering and Groundwater Management                      |
| F-0420-11 | August 2021 | Protection of Existing Storm Sewer                         |
| F-0420-12 | August 2021 | Management of Soils, Excess Material and Contaminated Soil |
| F-0420-13 | August 2021 | CCTV of Unknown Laterals                                   |
| F-0420-14 | June 2021   | Cleaning and Televising Existing Sewers                    |
| F-0420-15 | August 2021 | Rock Excavation  |
| F-0420-16 | August 2021 | Select Subgrade Material                                   |
| F-0420-17 | August 2021 | Horizontal Drilling for Service Connection, any size       |
| F-0420-18 | August 2021 | Miscellaneous Plumbing Repairs                             |
| F-0420-19 | August 2021 | Earth Excavation – Grading, Including All Removals         |
| F-0420-20 | August 2021 | Pavement Markings and Symbols                              |
| F-0420-21 | August 2021 | Partial Rebuild of Existing Structures                     |
| F-0420-22 | August 2021 | Demarcation Tile   |
| F-0420-23 | Nov. 2021   | Temporary Road Widening                                    |
| F-0420-24 | Nov. 2021   | Contaminated Groundwater Storage and Treatment             |



## **DEWATERING AND GROUNDWATER MANAGEMENT**

**OPS 517, OPS 518 apply except as amended or extended herein. City of Ottawa specification D-031 is deleted and replaced with this specification.**

### **Scope of Work**

This Special Provision provides the dewatering requirements for the installation of underground works and includes the use of techniques required to complete the work such as sump and pump, infiltration or settling pits, wells, well points, discharge of water to storm and/or sanitary/combined sewers, and construction staging/methods to reduce groundwater infiltration into excavations, as well as treatment of impacted groundwater. This special provision does not include dewatering or water treatment required for trenchless operations; this is included under the relevant trenchless items. This specification also applies to external water sources and surface water runoff that has entered the trench.

### **Submittals**

The Contractor shall submit a Dewatering and Groundwater Management Plan (GWMP) a minimum of 10 working days prior to start of dewatering operations which must include (but not be limited to) dewatering equipment, procedures, flow calculations, discharge locations, schedule, monitoring and testing plan, contact information for the person responsible for the site, and contingency plans for excessive water flow, sediment loading and overflows. The plan must also describe the method of contaminated groundwater testing, storage, and treatment for both chemical contaminants and excessive total suspended solids that exceed City Sewer Use Limits and Provincial Water Quality Objectives (PWQOs), including equipment lists, treatment volumes, calculations, and limitations. The plan shall be signed by the Contractor to indicate that all the requirements, conditions and procedures of the GWMP have been read and understood. The plan shall be coordinated with the Erosion and Sediment Control plan to ensure erosion impacts to the surroundings from dewatering operations are minimized.

If discharge to a water body/channel is required, the Contractor shall submit an additional plan a minimum of 20 working days prior to start of the discharge operations showing flow volumes and calculations and quantity and quality control of the flow, and monitoring plan to treat water prior to discharge to the water body, along with overflow contingency procedures in case of emergency. The contract drawings show layouts of the dewatering and Erosion and Sediment control measures in some locations; the Contractor shall note that these are conceptual layouts and shall generate their own plans.

### **General**

The Contractor must apply for a Discharge Permit and comply with the provisions of the Discharge Permit and the Sewer Use By-law (including City Storm Sewer Use Discharge Limits, and City Sanitary and Combined Sewer Use Discharge Limits). No dewatering will be

## **DEWATERING AND GROUNDWATER MANAGEMENT**

permitted until the Contractor has received a copy of the Discharge Permit from the City. For sanitary/combined sewer discharges, at a minimum, the Contractor must obtain an interim discharge approval letter from the City's Sewer Use Program, prior to the Contractor discharging to the sanitary/combined sewer. A copy of the letter shall be provided to the Contract Administrator prior to commencing any discharge operations.

The Contractor shall review the Hydrogeological Report by Gemtec Consulting Engineers and Scientists Limited (June 2021) to ensure the planned work approach is feasible and will be in compliance with the City discharge limitations.

The Contractor shall be responsible for measuring the volume of water discharged to the sewers or to any other location to ensure compliance with the Permit to Take Water (PTTW) and Sewer Use By-Law/Discharge Permit. The Contractor will be required to install a calibrated metering device on all discharge lines. Recent calibration certificates for each meter are to be provided to the Contract Administrator prior to use. The Contractor is responsible for supplying, protecting and maintaining these metering devices throughout the contract to ensure that continuous metering of the flow is provided so that monthly totals of the volume discharged can be determined. Approval for the metering devices shall be obtained from the Contract Administrator prior to installation. The volume of water shall be forwarded to the Sewer Use Program and the Contract Administrator on a monthly basis.

No water from construction operations shall be allowed to be discharged into any water body. The plan shall be coordinated with the Erosion and Sediment Control plan.

The management and or treatment of groundwater to meet total suspended solids and Sewer Use discharge criteria and PWQOs shall be the sole responsibility of the Contractor. Water that does not meet the requirements for discharge to the storm sewer, but meets the requirements for discharge to the sanitary/combined sewer, can only be discharged to the sanitary/combined sewer with a Contractor held SSA in place.

The Contractor is responsible for meeting all requirements, permits, fees and testing related to the Sewer Use By-law prior to discharging water to the sewers within the project limits, and City and RVCA and PWQO requirements for water body discharge. The Contractor shall include these requirements in the price for this item.

The Contractor is deemed to have included in the appropriate tender items for all costs associated with dewatering in accordance with OPSS 517 and 518, such as setting up the acceptable Dewatering Plan, implementation, maintenance, monitoring and removal and reinstatement on completion. Dewatering shall include the following:

- Unless otherwise approved, all water shall be discharged to approved sewers or be stored and treated prior to discharge as per the approved follow-up discharge plan, or as per requirements of the Discharge Permit.

## DEWATERING AND GROUNDWATER MANAGEMENT

- The Contractor shall be responsible for preparing Dewatering Plans with the above minimum submittal details. The plans shall be prepared by a Professional Engineer licensed in the Province of Ontario. The Dewatering Plans shall outline procedures to be undertaken for the dewatering of open cut sections of the construction.
- One of the provisions of the City's Sewer Use By-law is that the quantity of suspended solids discharged to the sanitary/combined sewers shall not exceed 350 mg / Litre or storm shall not exceed 15 mg / Litre. The Contractor will be responsible for controlling the amount of total suspended solids in the water including but not limited to filtering and settling measures to meet the Sewer Use By-law parameters for acceptable total suspended solids. If total suspended solids exceed the City's acceptance limit the Contractor will be responsible for implementing measures to reduce the total suspended solids to an acceptable level at no extra cost to the City. Concentrations of other contaminants will not be evaluated until the Contractor has reduced TSS to below sanitary sewer discharge limits.
- The Contractor shall carry out analytical testing of the water discharged to the sewers as per the Sewer Use Agreement. The City may also carry out analytical testing of the water discharged to the sewer system to verify compliance. The Contractor shall cooperate with the City and/or the City's appointed testing consultant, to provide safe access to the sewer system for water sample recovery under normal dewatering operating conditions. The Contractor shall also carry out analytical testing of any water discharged to local water bodies as per approved plan and provide results to Contract Administrator upon request or as per submission schedule specified by City and the RVCA to ensure compliance with PWQOs. The Contractor shall be aware that sampling / testing frequency is site specific and can vary throughout the project and shall be conducted in accordance with the SSA, when required. Upon request, the Contractor shall provide the Contract Administrator copies of all test data within 24 hours. The Contractor shall notify the Contract Administrator immediately when dewatering effluent exceeds allowable sewer discharge limits. Ongoing sampling may be required by the Sewer Use Program as per the SSA.
- The Contractor will be responsible for the maintenance of all dewatering piping during the course of the contract. The Contractor shall make frequent inspections to check the condition of the piping. Any damage or replacement shall be the responsibility of the Contractor.
- The Contractor shall inspect all water quantity/quality controls used for treatment of water prior to discharge into a water body (if required) on a daily basis, and will be responsible for maintenance of these controls, including making improvements if requested by City, City's Inspector, RVCA comments, or Contract Administrator.
- Upon completion of the contract, the Contractor shall be responsible for the removal of all dewatering equipment and all reinstatement required.

## **DEWATERING AND GROUNDWATER MANAGEMENT**

- Water shall be disposed of so as not to be injurious to public health or safety, to property, to the environment or to any part of the work completed or under construction. Pumped water from the dewatering system shall be directed and disposed of to the City of Ottawa sewers, or a water body upon approval. Surface pumped water shall be directed to a sediment control device prior to discharge to adjacent storm sewers.
- The Contractor shall be responsible for measuring the actual volume of water discharged to the sewer system and report the volume values as per the Sewer Use Agreement.
- Water discharged to the environment and not to a sanitary or storm sewer shall be tested on a minimum frequency of 1 per week.

The contractor shall choose methods to limit the length of excavations and the duration that excavations are open to minimize the amount of dewatering required.

The dewatering to the sewer system shall be subject to sewer capacity constraints. The discharge of construction waters during precipitation events (rain, snow melt, etc.) shall be prohibited unless a sewer monitoring program has been approved and is implemented to ensure no adverse effect from dewatering is realized.

### **Contact Information for Sewer Use Program**

The Sewer Use Program can be contacted through the Sewer Use Duty Officer at 613-580-2424 ext. 23326 or by email [sup-pue@ottawa.ca](mailto:sup-pue@ottawa.ca)

### **Measurement for Payment**

For treatment of contaminated dewatered groundwater and groundwater that exceeds suspended solid and other contaminant limitations or for treatment of water prior to discharge to a water body to ensure compliance with PWQOs, payment will be in accordance with the contract items provided for Mobilization/Demobilization of Groundwater Treatment System (Provisional), On Site Treatment of Contaminated Impacted Water (Provisional), Operating Groundwater Treatment System (Provisional), Supply of On-Site Groundwater Storage (Provisional), Groundwater Testing (Provisional), and Haul and Dispose of Contaminated Water (Provisional).

All volumes, for the purpose of reporting volumes to meet the Discharge Permit requirements, shall be measured and agreed between the Contractor and the Contract Administrator on site on an ongoing basis.

### **Basis of Payment**

## **DEWATERING AND GROUNDWATER MANAGEMENT**

Payment shall be full compensation for all labour, equipment and material costs associated with obtaining all permits and approvals for discharge/disposal of groundwater including, but not limited to, sampling, metering/measurement, preparation of the GWMP and reporting. Additionally, the Contractor shall be responsible for all costs associated with managing, pumping and discharging of groundwater during construction. A separate provisional payment is to include treatment of groundwater in excess of the Sewer Use By-law and treatment of suspended solids.

Payment for each of these separate items shall be based upon the following schedule:

- a) 25% upon satisfactory installation of the dewatering system and treatment system;
- b) 50% pro-rated into equal payments over the terms of the contract; and
- c) 25% upon removal of the system after completion of the work.

Where the Contractor elects to haul water off site, which can be treated/managed on site, no compensation will be provided.

No additional payment will be provided for increased handling, testing, staging, delays, modified construction methods or on site storage to meet the requirements of this Special Provision.

No payment will be made under this item for dewatering or water treatment required for trenchless operations; include under the relevant Trenchless payment item.

No claim shall be made by the Contractor for additional costs, scheduling implications and/or delays associated with not having the required permits and approvals in place before dewatering activities are required.

## **MANAGEMENT OF EXCAVATED SOILS, EXCESS MATERIALS AND CONTAMINATED SOIL (PROVISIONAL)**

### **Scope of Work**

This Special Provision provides the requirements for the management of excavated soils, excess materials, and contaminated soil.

### **General**

#### **Amendment to General Conditions**

The Contractor is advised that this item will not be considered a Major Item, in accordance with GC1.04 and so the provisions of GC8.01.02.01), a) and b) will not apply to this item.

#### **Amendment to OPSS 180**

OPSS 180 shall apply except as amended and extended herein.

All references to Regulation 347 of the Environmental Protection act shall be replaced with Regulation 347/558.

No hazardous waste has been identified within the project limits.

The following reports and memos were prepared by GEMTEC for the project:

- Phase I Environmental Site Assessment, April 2020
- Phase II Environmental Site Assessment, September 2020
- Geotechnical Investigation, June 2021
- Excess Soils Re-Use and Disposal Technical Letter, July 2021

The above noted reports and memos are provided in electronic format for review by the Contractor.

### **Conditions on Management as Non-hazardous Solid Industrial or Commercial Waste**

Subsection 180.07.05 of OPSS 180 is amended by the addition of the following:

## **MANAGEMENT OF EXCAVATED SOILS, EXCESS MATERIALS AND CONTAMINATED SOIL (PROVISIONAL)**

### **General**

Pavements and concrete are not subject to MECP landfilling and shall be disposed of at a licensed pit or quarry for subsequent reuse as engineered materials.

Environmental screening and testing on the in-situ soils indicate that the majority of the Right-of-Way is in exceedance of MECP Table 1, MECP Table 2, MECP Table 3, and MECP Table 7 (where applicable) Standards.

### Re-use Criteria

Excavated soils will need to be managed in accordance with the environmental recommendations discussed in the Phase II ESA and Excess Soils Re-Use and Disposal Technical Letter.

The majority of the fill and native clay soils that will be excavated can be managed through re-use on the project.

Alternatively, the existing fill materials may be disposed of off-site at a licensed facility (i.e., landfill and/or treatment facilities) authorized to accept such material.

Where the Contract Administrator determines that the fill is of insufficient quality to support the infrastructure being constructed, the Contractor shall remove the material from site as directed.

### **Management of Excess Materials**

It is anticipated that excess materials will be generated as a result of the construction. The work will require scheduling and staging of the work such that excavated materials can be re-used in other portions of the work. The Contractor shall schedule and conduct construction activities as per the following conditions:

- 1) The Contractor shall re-use excavated materials as directed prior to backfilling with imported subgrade materials.
- 2) The Contractor shall preferentially remove from site unimpacted materials for the purpose of recycling or clean fill disposal prior to removing impacted soils subject to MECP landfilling.
- 3) Where insufficient unimpacted materials are available for recycling or clean fill disposal, the Contractor shall dispose of excess impacted soils at a licensed

## **MANAGEMENT OF EXCAVATED SOILS, EXCESS MATERIALS AND CONTAMINATED SOIL (PROVISIONAL)**

MECP landfill.

- 4) Materials not subject to MECP landfill disposal shall not be mixed with the contaminant impacted subgrade materials subject to landfill disposal.

All costs associated or attributed to non-compliance with the materials management conditions contained herein shall be the sole responsibility of the Contractor. This includes mixing of clean materials with contaminant impacted soils and ineffective scheduling of construction activities to make effective re-use of site generated soils.

### **Measurement for Payment**

Measurement for payment for the management and disposal of excess materials as non-hazardous solid industrial or commercial waste shall be by the tonne under Item "Haulage of Contaminated Material to a MECP Licensed Landfill (Provisional)".

The Lump Sum item "Sewer Flow Management Plan" shall not be measured.

### **Basis of Payment**

Section 180.10 of OPSS 180 is deleted and replaced with the following:

The Contractor shall be responsible for coordination with the MECP Licensed Landfill including notification of haul vehicles on a daily basis. No additional compensation shall be provided for the management of materials on site as backfill or management of excess materials as disposable fill/recycling including soil which is solely impacted by de-icing agents (road salt) or which do not exceed MECP Table 2. Where an alternative disposal site is designated by the Contract Administrator, the difference in haul costs shall be negotiated with the owner on a per tonne-km basis.

All costs associated with acquiring approvals, releases, tipping fees, coordination and agreements shall be included in these tender items. **No additional payment will be made for increased handling, scheduling, delays, construction staging or stockpiling of materials for reuse on site, recycling or disposal.** All costs associated with the excavation, on site management and backfilling shall be deemed to be included in the tender items requiring such excavation.

Payment for the contract lump sum price for the item "Excess Soil Management Plan" shall be full compensation for the plan preparation and implementation, including all



**MANAGEMENT OF EXCAVATED SOILS, EXCESS MATERIALS AND  
CONTAMINATED SOIL (PROVISIONAL)**

associated submittals, and shall include all labour, equipment, and materials to supply, construct, monitor and maintain all associated measures. Payment shall be based upon the following schedule:

- a) 25% upon satisfactory submission of the first Excess Soil Management Plan.
- b) 75% pro-rated into equal payments over the term of the contract.

## **CONTAMINATED GROUNDWATER STORAGE AND TREATMENT**

### **1.0 Scope of Work**

This Special Provision provides the requirements for the supply of on-site water treatment facilities, haul/disposal of heavily contaminated water and on-site treatment for contaminants in excess of the Sewer Use By-law, with the exception of suspended solids.

### **2.0 Amendment to General Conditions**

Due to the variable nature of contaminated groundwater treatment requirements, the Contractor is advised that the items noted within this specification shall not be considered a Major Item, in accordance with GC1.04 and so the provisions of GC8.01.02.01), a) and b) will not apply to the items noted within this specification.

### **3.0 General**

The costs associated with the supply of treatment facilities shall be included in the item 'Mobilization/Demobilization of Groundwater Treatment System (Provisional)' and shall be by each mobilization.

The costs associated with the treatment of impacted groundwater shall be included in the items 'On Site Treatment of Contaminant Impacted Water (Provisional)' and 'Operating Groundwater Treatment System (Provisional)' and shall be by the cubic metre and by the week respectively.

The costs associated with the on-site storage of impacted groundwater (up to 40,000 L/d) shall be included in the item 'Supply of on-site Groundwater Storage (Provisional)' and shall be by the week.

The costs associated with daily analytical testing of the impacted groundwater shall be included in the item 'Groundwater Testing (Provisional)' and shall be paid by each test completed.

The costs associated with the haul and disposal of heavily contaminated water/hydrocarbons shall be included in the item 'Haul and Dispose of Contaminated Water (Provisional)' and shall be by the cubic metre.

### **4.0 Requirements**

Mobilization/Demobilization of Groundwater Treatment System (Provisional)

When directed by the Contract Administrator, the Contractor shall supply water treatment facilities capable of treating water to limits identified in the Sewer Use Agreement. The supply of the facility shall include all settling tanks, separation tanks, heating as required, filters, other equipment, mobilization/ demobilization required to conduct the work. The facilities shall be suitable for the treatment of the groundwater impacts and contaminants identified in the report prepared by Golder Associates titled "Phase II Environmental Site Assessment."

The total of each individual unit shall be capable of treating up to 40,000 L/d. Multiple units may be required to deal with the quantity of water encountered during excavation. Compensation will be provided for each unit that is required to be on site.

Example: For the treatment of 80,000 L/day requiring 2 units, the contractor shall be compensated for 2 items.

#### Operating Groundwater Treatment System (Provisional)

The Contractor shall be compensated for the operation of the groundwater treatment system. All costs associated with operation of the treatment system shall be included in the per week price.

#### On Site Treatment of Contaminant Impacted Water (Provisional)

The Contractor shall be compensated for the actual quantity of water processed through the treatment units supplied. All costs associated with water treatment shall be included in the per litre price including the cost to supply/dispose of carbon, disposal of sediments, all labour and other materials to conduct the work. The costs to dispose of heavily contaminated water/fuel resulting from oil-hydrocarbon separation as part of the treatment process will be compensated under the item 'Haul and Dispose of Contaminated Water (Provisional)'

#### Supply of On-Site Groundwater Storage (Provisional)

Treated water will require analytical testing prior to discharge to the sanitary sewer. Due to the 24 hour period required to complete the testing, all treated water shall be stored on site prior to discharge to the sanitary sewer.

The total of each individual unit shall be capable of storing up to 40,000 L/d. Multiple units may be required to deal with the quantity of water encountered during excavation. Compensation will be provided for each unit that is required to be on site.

Example: For the treatment of 100,000 L/day requiring 3 units, the contractor shall be compensated for 3 items.

No compensation will be provided for water stored beyond the period of time required to obtain the analytical test results without authorization of the Contract Administrator.

#### Haul and Dispose of Contaminated Water (Provisional)

Where in the opinion of the Contract Administrator, the level of contamination precludes the management of contaminated water on site, or on site water treatment, the Contractor shall dispose of groundwater directly from site using a MOE licensed hauler.

Heavily contaminated water/fuel generated as a by-product of water-hydrocarbon separation as part of on-site water treatment operations shall be disposed of under this item.

This item can also be used to remove water from the site until such time as treatment units are installed and ready for use at the approval of the Contract Administrator.

No compensation will be provided for water hauled from site by the Contractor without authorization of the Contract Administrator. Where the Contractor elects to haul water off site in lieu of managing water on site, no compensation will be provided.

There will be no payment under this item for the Contractor to achieve the acceptable Total Suspended Solids limit for discharge.

## **5.0 Measurement of Payment**

### **Mobilization/Demobilization of Groundwater Treatment System (Provisional)**

The Mobilization/Demobilization of Groundwater Treatment System item shall be applied when the water treatment system is deployed to the site and ready to operate. The payment shall include all costs to transport the equipment to the site, a full charge of new activated carbon filter (or alternative appropriate filter media) and disposal of the media as required. This item shall also include all costs associated with regulatory fees and permits to operate and discharge effluent from the system unless otherwise specified here-in. Cleaning and removal of the system from the site shall also be included in the cost of this item. Measurement for payment of this item shall be for each unit mobilized to the site.

### **On Site Treatment of Contaminated Impacted Water (Provisional)**

Measurement for payment of this contract items shall be in cubic meters of contaminated water and shall include all costs associated with any required media replacement.

**Operating Groundwater Treatment System (Provisional)**

Measurement for payment of this contract items shall be by the number of weeks required for the operation of on-site treatment of groundwater system.

**Storage of Contaminated Groundwater (Provisional)**

Measurement for payment of this contract item shall be by the number of weeks required for storage of contaminated water.

**Groundwater Testing (Provisional)**

Measurement for payment of this contract items shall be or each analytical test required for impacted groundwater.

**Haul and Dispose of Contaminated Water (Provisional)**

Measurement for payment of this contract items shall be in cubic meters of contaminated water hauled and disposed of off-site.

**6.0 Basis of Payment**

GC 8.01.02 Variations in Tender Quantities is amended by the following: GC 8.01.02.01 (b) is deleted in its entirety. The Contractor will not be reimbursed for changes in tender quantities.

**Mobilization/Demobilization of Groundwater Treatment System (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to mobilize each on-site water treatment facilities including demobilization.

**On Site Treatment of Contaminated Impacted Water (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to treat the contaminated impacted water.

**Operating Groundwater Treatment System (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to operate the groundwater treatment system.

**Supply of On-Site Groundwater Storage (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to store contaminated groundwater on for up to 24 hours pending results of analytical testing.

**Groundwater Testing (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to complete analytical testing required of groundwater to meet the requirements of the sewer use agreement.

**Haul and Dispose of Contaminated Water (Provisional)**

Payment at the Contract Price for the above tender item shall be full compensation for all labour, equipment, and material to haul and dispose of contaminated water.