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| Version | Date | Description of Revisions |
| 1 | November 17, 2015 | New Spec |
| 2 | March 21, 2016 | Revised Based on Legal comments #640937-v1A (AAM) |
| 3 | May 1,2017 | Revised to reflect OPSS.MUNI 517 (Apr 2017) and OPSS.MUNI 518 (Apr 2017) |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# GEneral

## Summary

### This Section includes the operation and maintenance of the dewatering system.

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for [[item]... specified under this Section.

### *[List Sections specifying products installed but not supplied under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### *[List Sections specifying related requirements.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: [Optional short phrase indicating relationship].

### Section 01060 – Regulatory Requirements

### Section 01300 – Submittals

### Section 01561 – Environmental Protection

### Section 02230 – Site Preparation for Pipelines, Utilities and Associated Structures

### Section 02240 – Dewatering- General

### Section 02241 – Provide Water Control Plan, Dewatering, Discharge Plan and Groundwater Monitoring Program

### Section 02242 – Supply Install and Subsequently Remove Dewatering System

### Section 02244 – Retain Specialty Subcontractor To Monitor Existing Groundwater Levels and Discharge Water Quality in Accordance With PTTW

### Section 02245 – Restoration Works Associated With Dewatering Activities

### Section 02246 – Bypass Pumping or Fluming and Unwatering

### Section 02314 – Tunnelling

### Section 02315 – Trenching, Backfilling and Compacting

## References

### Conservation Authorities Act

#### R.R.O. 1990 Reg. 112: Conservation Areas- Lake Simcoe Region

#### R.R.O. 1990 Reg. 119: Conservation Areas- Metropolitan Toronto and Region

### Ontario Ministry of the Environment and Climate Change

#### Guide to Permit to Take Water

### Ontario Provincial Standards for Roads and Public Works (OPSS)

#### OPSS.MUNI 517 (Apr 2017) Dewatering of Pipeline, Utility and Associated Structure Excavation

#### OPSS.MUNI 518 (Apr 2017) Control of Water From Dewatering Operations

### Ontario Water Resources Act R.S.O. 1990 c. O.40

#### O. Reg. 387/04 Water Taking and Transfer

### Regional Municipality of York

#### Bylaw 2011-56 Discharge of Sewage, Storm water and Land Drainage Bylaw (Amended 2014)

## Measurement and Payment

*[Choose one of the following payment language provisions that best suits the individual project.*

*If this Section is not specifically referenced by an item in the Bid Form, please use the following language:*

### 1. The work of this Section will not be measured separately for payment. All costs associated with the work of this Section shall be included in the Contract Price.

*OR If this Section is specifically referenced in the Bid Form, use the following language and identify the relevant item in the Bid Form:*

### All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

*If the work of this Section is to be measured and paid for by several different methods, please amend the standard wording given above to reflect the different methods of measurement and payment.*]

### Payment for the work of this Section under Item No. [ ] in the Bid Form shall be made on a monthly basis for the operation and maintenance of the dewatering system for the duration of the dewatering efforts. Payment will be pro-rated for dewatering operations that are less than a month in duration.

# PRODUCTS (Not Used)

# EXECUTION

## General

### The unit price tendered for this Work shall include the following:

#### The Contractor shall, at its expense, engage a professional engineer licensed in Ontario, with demonstrated competence in the work of this Section to supervise the operation and maintenance of the dewatering systems, including treatment, filtration and aeration prior to discharge.

#### The Contractor shall operate, and maintain the dewatering system, to continuously control groundwater including the lateral tracking of groundwater underneath existing structures, for the duration of the Contract.

#### Prevent any surface run-off from entering excavations.

#### Provide the appropriate filter screens so that no soil or foundation material is removed, and the more stringent suspended solids concentration is achieved as required by the MOECC PTTW, the [TRCA/LSRCA] Permit and the Region’s Sewer Use Bylaw.

#### Maintain the groundwater level a minimum of 1.0 metre below the pipe invert elevation, or lower, as may be required in order to permit placing geotextiles, bedding placement and compaction, installation of the watermain, sewers, under-drains, concrete mudmat, and similar items, on firm dry undisturbed sub-grade.

#### Dispose of water from the excavation according to the parameters set out in the [Name of Permit], file number [ ], dated [ ], [Name of Report, Project Number and Date]and the conditions of the MOECC Permit to Take Water *[insert permit number]*.

#### Dispose of water removed from the excavation in such a way so that it will not be injurious to public health, private property or to any operation of the Work completed or under construction under this Contract or by the Region’s Other Contractor for [List related contract and contract number].

### Discharge to sewers shall require the approval of the Local Municipality and the Region, and all such sewer discharge shall comply with all applicable sewer use bylaws and regulations. The Contractor shall be responsible for any and all flow calculations and flow capacity calculations and approvals.

### In the event that the Contractor, through its groundwater treatment method, is unable to achieve compliance criteria in the above noted subsections, then the groundwater shall be trucked away for disposal at a Region owned and operated wastewater treatment plant or discharged into the nearest Region owned and operated sanitary sewer with sufficient surplus capacity.

### The Contractor shall pay for all costs for the discharge of the groundwater (including, but not limited to transportation costs) at the Region’s wastewater treatment plant or the discharge into the nearest Region owned and operated sanitary sewer, including all approvals necessary and the investigation costs and calculations to confirm there is adequate capacity at no additional cost to the Contract.

### Maintain groundwater at the required level until all of the following conditions have been met:

#### Structures are completely built and watermains installed, where the designed self-weight of the structure resists the buoyancy forces.

#### Bedding, cover and backfilling placement and compaction to the final grade is complete.

#### Under-drains and other permanent devices, which protect the structures against buoyancy forces, are operational.

#### Obtain the Consultant's written consent prior to allowing a rise in the groundwater level or prior to shutting down the dewatering system at specific locations.

### Dewatering systems shall be installed to minimize traffic impacts (including but not limited to installation of wells in boulevards, installation during off-peak hours etc.), as the Region will not permit long term lane closures on [list Regional Roads] to specifically accommodate dewatering. Any dewatering equipment to be installed within the pavement must be approved by the Region and shall be placed below the surface and covered with steel plates placed flush with the pavement.

### Provide sufficient redundancy in each system to keep excavations free of water and meet the requirements specified in the Contract Documents in the event of component failure. Provide 100 percent emergency power backup with automatic startup and switchover in the event of an electrical power failure.

### No additional payment will be made for dewatering in areas where sub-excavation may be required.

**END OF SECTION**