



**General Conditions, Supplementary General Conditions, Standard Specifications,
and Standard Drawings**

Revisions for November 2018

CITY OF KITCHENER

**Development Services Department
Engineering Services**

The following summarizes significant specification revisions for contracts tendered after November 21st, 2018.

The City of Kitchener List of Exclusions and Modifications to the Ontario Provincial Standards General Conditions of Contract has been updated to reflect the proposed revisions to be published November 2018.

Supplementary General Conditions

a) SGC 29 Site Cleanliness

Added: "The Contractor shall maintain the Working Area in a tidy condition and free from the accumulation of waste, debris and prevent dust nuisance, mud, and ponding water, other than that caused by the Owner or others.

The Contractor shall supply at their cost waste bins for the collection of their employees' and Sub-Contractors employees' waste."

Standard Specifications

- a) Added CKSS 314.01.02 Construction – Granular Base Scarify and Reshaping

Scarifying and reshaping of the granular base shall be required due to the existing asphalt mat being removed and it becomes necessary to redistribute quantities of the existing granular road base to meet the specified roadway profile without adding new granular material.

Following the completion of reshaping the granular roadway surface, the Contractor in the presence of the Contract Administrator shall inspect all structures including sanitary and storm maintenance holes, catchbasins, valve chambers, water valve boxes and gas valves. All debris caused by construction must be immediately cleaned at the Contractor's expense.

- b) Added CKSS 314.02.02 Measurement for Payment – Granular Base Scarify and Reshaping

Payment will be measured by the square metre of area shaped. The Contractor shall notify the Contract Administrator when they intend to complete this work.

- c) Added CKSS 314.03.02 Basis for Payment – Granular Base Scarify and Reshaping

Payment of this item to the Contractor shall only be provided when the work is completed with a heavy equipment mechanical grader. Completion of this work with a trim dozer will not be deemed as an acceptable alternative.

- d) Added CKSS 407.01.01 Material – Precast Structures

Precast maintenance holes for use with exfiltration pipes shall be a minimum of 1500mm nominal inside diameter unless otherwise specified.

- e) Added CKSS 407.01.04 Material – Hydrodynamic Separator

The hydrodynamic separator shall be certified as per the Canadian ETV Program General Verification Protocol (May 2013), where testing has been conducted by an independent 3rd party technology performance testing laboratory. Sediment scour and re-suspension performance testing and light liquid re-entrainment testing demonstrating that light liquids are captured after a spill are effectively retained during high flow rates must be included.

Hydrodynamic separator make and model shall be as shown on the contract drawings or as specified elsewhere in the Contract Documents.

No internal component shall be modified or replaced.

The Contractor shall ensure that the hydrodynamic separator unit supplied and installed perform to a level sufficient to removing the particle size distribution expected from the City of Kitchener as approved by the Agency.

The hydrodynamic separator shall be precast concrete, with inert materials used for internal component parts.

The separator shall remove sediment from storm water during frequent wet weather events, downstream to high flow bypass to prevent scouring. The separator shall treat a minimum of 90 per cent of the annual runoff volume and shall be capable of removing 80 per cent of the total suspended sediment load. The separator must be capable of trapping silt and clay size particles from arterial road runoff with a particle size distribution as per Table 1 below. The PSD includes a broad range of particles from clay to coarse sand. Sediment removal performance shall be the

equivalent of inorganic ground silica with a specific gravity of 2.65, uniformly mixed to meet the following particle size distribution.

Table 1 – Particle Size Distribution of Sediment

City of Kitchener PSD		
Particle Size (µm)	% Retained	Accum. Passing
<2	1.05%	0.00%
2	1.05%	1.05%
5	2.10%	2.10%
8	3.16%	4.21%
20	2.10%	7.36%
45	1.05%	9.47%
75	2.10%	10.52%
106	30.70%	12.63%
425	20.05%	43.33%
850	17.63%	63.38%
2000	12.20%	81.00%
4750	6.80%	93.20%
12500	0.00%	100.00%
19000	0.00%	100.00%

The hydrodynamic separator shall be installed underground as part of the storm sewer system and shall be structurally designed for Canadian Highway Bridge Design Code (CHBDC) traffic loading at the surface. The storage in the separator shall be vertically oriented. The separator shall be maintainable from the surface via one access point without requiring entry into the separator.

f) CKSS 407.02.01 Construction – Precast Structures

Added “Diversion maintenance holes which include an internal weir and/or orifice plate shall not be benched.

g) Added CKSS 407.03.02 Measurement for Payment – Hydrodynamic Separator

Measurement for payment of this item shall be for each hydrodynamic separator device regardless of the depth.

h) Added CKSS 407.04.03 Basis for Payment – Hydrodynamic Separator

The price for this item shall be for all labour, equipment and materials required to supply and install the hydrodynamic separator including all internal components at locations shown on the contract drawings. The cost to supply and install frames and covers with adjustment units shall be included in the unit price of this item.

i) CKSS 408.01 Construction

Revised: “Maintenance hole adjustments are to be made only after binder asphalt has been laid.”

To: “Access to water valves and gas valves shall be maintained at all times.

j) CKSS 410.02.02 Material - Exfiltration Pipe

Revised: “The pipe shall meet the requirements of OPSS 1840 and OPSD 1801,....”

To: "The pipe shall meet the requirements of OPSS 1841,....

k) Added CKSS 410.02.04 Material – Filter Sock

Filter sock shall meet the requirements of ASTM D6707 type A fabric.

l) Added CKSS 410.02.05 Material – Casing Pipe

Casing pipe shall be PVC DR-28 and a minimum of 100mm diameter. Where casing pipe needs to be larger based on the carrier pipe the casing pipe shall be a minimum of two (2) nominal pipe sizes larger.

m) CKSS 410.03.04 Construction – Exfiltration Pipe

Filter sock shall be installed from end to end of pipe terminating at the maintenance hole structure. A minimum overlap of 500mm shall be provided.

As soon as the exfiltration pipes are connected to the maintenance hole the Contractor shall install the plugs to prevent the introduction of sediment contamination during construction.

n) Added CKSS 410.03.08 Construction – Filter Sock

The filter sock shall be installed from end to end of pipe terminating at the maintenance hole structure. A minimum overlap of 500mm shall be provided.

o) CKSS 410.04.03 Measurement for Payment - Exfiltration Pipe

Added: "The per metre rate shall be measured from centre of maintenance hole to maintenance hole."

p) CKSS 410.05.01 Basis for Payment - Exfiltration Pipe

Revised: "The price for this item shall be for all equipment, labour, and materials to install perforated pipe and solid wall pipe in an exfiltration trench system, including all connections to storm structures."

To: "The price for this item shall be for all equipment, labour, and materials to install perforated pipe and solid wall pipe in an exfiltration trench system, including all connections to storm structures, caps and couplers. The price per metre shall be for both exfiltration pipes from maintenance hole to maintenance hole. The cost for this work shall also include the supply and installation of the filter sock."

q) Added CKSS 410.05.05 Basis for Payment – Casing Pipe

Where Casing pipe is required for the installation of service connections through LID stormwater facilities the work for this item shall also include the supply and installation of spacers, joint restraints and end seals.

r) Added CKSS 441.02.04 Construction - Service Connection Pit

The Contractor shall be responsible to choose the most suitable and safe method available to maintain an open service connection pit. The use of temporary orange plastic construction fencing shall not be considered an acceptable method of maintaining a safe pit. Options for maintain a safe open pit available to the Contractor are as follows;

- Temporary chain link construction fencing i.e. fast fence or approved equivalent,
- Metal plate covering with caisson,
- Backfill the pit and excavate at final connection.

s) CKSS 441.04.04 Basis for Payment - Services

Added: "The Contractor shall include in their unit price for water services the cost to maintain a safe service connection pit."

t) Added CKSS 442.01.01 Construction – Water Service

Corrosion protection for water services shall be as per CKSD 1104.010.

u) CKSS 481.01 Material

Revised: "The observation port cap shall be a 150mm (6.25 inch) inside diameter by 300mm (12 inch) tall Wellmaster Flush Mount Protector bolt-down cover available from Wellmaster Pipe and Supply Inc. (Tel: 1-800-387-9355) or approved equivalent."

To: "The observation port cap shall be a 6 Inch Cleanout cover (150mm) inside diameter by DomCast Components & Assemblies or approved equivalent."

v) Added CKSS 510.01.02 Removal – Removal of Asphalt, Partial Depth

The Contractor at the direction of the Contract Administrator and as directed on the contract drawings shall cold plane the existing asphalt pavement including temporary transverse and longitudinal ramping.

Where the entire thickness of the asphalt area is removed, the Contractor shall provide and maintain a reasonable road base surface for local access of motorised vehicles and pedestrians. In addition, the unit price bid shall also include the placement of temporary ramps using existing material at all intersections, entrances, driveways and walkways within the limits of the project. If new granular material is required for temporary ramp installation, the Contractor shall be paid under the appropriate unit price bid in the Form of Tender. Under no circumstance, shall an access or temporary ramp be removed for a significant amount of time prior to replacement of asphalt, without direction of the Contract Administrator.

The Contractor shall coordinate the cold planing of asphalt areas and subsequent replacement of the first course layer in a timely manner as not to cause a prolonged inconvenience to the public. The maximum time interval between these operations upon the completion of the asphalt removal shall not exceed a 2-day working period. Should the duration of these operations exceed this period, the Contractor shall maintain the moisture content of the road base materials as specified by the Contract Administrator by supplying and placing sufficient amounts of water and calcium chloride at their own expense.

Following the completion of the cold planing of asphalt areas, the Contractor in the presence of the Contract Administrator shall inspect all structures including sanitary and storm manholes, catchbasins, water valve chambers, water valve boxes and gas valves. All debris caused by construction must be immediately cleaned at the Contractor's expense.

w) Added CKSS 510.04.02 Measurement for Payment – Removal of Asphalt, Partial Depth

The price for this item shall be measure per square metre of area planed off of the existing pavement regardless of the thickness removed.

- x) CKSS 517.02.02.01 Dewatering – Storage Tank for Dewatering Effluent

Added: “The tank shall be closed from the top and shall not be open to the environment to prevent contamination of dewatering effluent.”

Standard Drawings

- a) CKSD 820.010

Revised the port in asphalt detail.

- b) CKSD 821.012

Revised to include a casing pipe for the service pipe through the seal. Service pipe refers to any pipe crossing the trench.

- c) Added CKSD 1104.010