



8.0

Construction

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8.0 Construction

Construction of site works including vegetation removal, topsoil stripping, grading, servicing and surface works on municipal or private lands within the City of Waterloo may not commence until all applicable approvals, permits, and clearances are in place. Details of required approvals and permits for each phase of construction are included in Sections 4.0, 5.0 and 6.0 of this manual; however, a general summary of requirements is as follows:

- All required Engineering and Landscape Drawings stamped “Accepted” by City
- Confirmation of required MOE approvals
- Other Ministry and Agency Approvals (e.g. GRCA, Hydro One, Waterloo North Hydro)
- All required permits
- City acceptance of proposed Contractor
- Proof of Contractor Insurance
- WSIB forms
- Installation and acceptance of all Erosion and Sedimentation Controls
- Posting of performance securities (i.e. Letters of Credit or Cash Deposits)
- Payment of all Fees

8.1 Safety

All construction work must be completed in accordance with the Occupation Health and Safety Act and associated regulations including O.Reg. 213/91. Maintenance of a safe work site is the responsibility of all parties involved in the project. In particular, the Developer/Developer, Consultant, Contractors and Sub-contractors are expected to maintain a high degree of awareness and responsibility for safety on construction sites in Waterloo. If unsafe conditions are observed, appropriate steps must be taken to rectify the situation as soon as possible. Any legislated or site-specific protocols for reporting safety incidents must be addressed immediately.

It is strongly recommended that Contractors obtain the necessary staff and resources to prepare for any potential risks and hazards on a project-by-project basis. Health and Safety Policies and protocols should be posted in a conspicuous location on site. Trained staff should be employed to implement those safety policies/protocols in accordance with applicable regulations. Signs must be posted on site indicating all Personal Protective Equipment requirements for the project. The City recommends that early contact be made with the Ontario Ministry of Labour (MOL) to address specific project requirements and notice procedures.

8.2 Construction Lien Act

In accordance with the Construction Lien Act, a 10% holdback of all payments to the Contractor must be maintained to address any possible liens on the work. As outlined in the applicable development agreement, it is the Developer/Developer’s responsibility to address the discharge of any liens registered on the improvements. The City will not be held responsible for any claims, damages or costs associated with the proposed development.

8.3 Insurance

For all work done on municipal lands, the Contractor must provide proof of a general comprehensive liability insurance policy in the amount of at least five million dollars that insures the City from any loss or damage arising from the work. The City must also be named as coinsured on the policy and the policy must remain in effect until the public works of the project have been assumed by the City. For specific requirements that apply to your project please consult a copy of the development agreement that applies to your project.

8.4 Approved Contractors

The City reserves the right to approve the proposed contractor for all works to be completed on municipal lands including the municipal right-of-way. City staff must be notified of the intended contractor and written approval of the same must be received prior to commencement of any construction activities.

8.5 Plans and Drawings for Construction

All site works must be constructed using only those drawings stamped as “Accepted” by the City. Should any design changes be required, new stamped drawings must be issued to reflect the revisions.

In addition to the drawings noted previously, the following items detailing construction practices and requirements may be required for Site Plan Development:

- Conceptual Workspace Management Plan providing details of proposed construction activity including vehicle and equipment parking, material storage, site and emergency access, and additional relevant construction details
- Construction Traffic Plan that outlines management of construction traffic utilizing municipal roadways including construction and delivery equipment as well as personal vehicle traffic related to construction in accordance with the latest edition of the Ontario Traffic Manual, Book 7
- Watermain Commissioning Plan detailing construction, testing, and sampling requirements for new watermain installation in accordance with the Safe Drinking Water Act
- Project Signage – A project sign posted near the property line and within public view that lists the name of the Engineer and the General Contractor and their respective 24-hour emergency telephone numbers and contacts

8.6 Permit Requirements

The following is a list of permits that may be required to complete the proposed works:

- City of Waterloo Site Alteration Permit
- GRCA Fill Permit
- Demolition Permit
- MOE Permit to Take Water (Construction Dewatering)
- City of Waterloo Work Permit
- Region of Waterloo Work Permit
- Region of Waterloo Access Permit
- Building Permit
- Region of Waterloo LRT Transit Authority

It is the Contractors responsibility to ensure that all applicable permits are received prior to commencement of applicable construction activities.

8.7 Construction Guidelines

All construction must be completed in accordance with the latest editions of the Ontario Provincial Standards for Roads and Public Works, the Ontario Building Code, and the Region of Waterloo Design Guidelines and Supplemental Specifications for Municipal Services (DGSSMS), as applicable.

8.8 Pre-Construction Meeting

When all approvals are in place and all permits have been issued, a pre-construction meeting must be scheduled on-site prior to commencement of construction. Representatives from the contractor, consultant and City should attend the meeting to discuss project requirements including personnel, scheduling, MOL notification, safety and any site specific issues that must be addressed.

8.9 Inspection

It is a requirement of all development in the City of Waterloo that construction completed under the supervision of a Licensed Professional Engineer or Landscape Architect where applicable. As outlined in the required Subdivision and Site Plan agreements, the Engineer is responsible to provide site supervision sufficient to confirm that all works have been installed in accordance with the accepted contract drawings and documents as well as good engineering practice. The Engineer must provide written records of inspection and testing of the works and is required to provide certification of the works upon completion.

In addition to the inspection provided by the Engineer, City staff should be contacted 48 hours prior to completion of major items, so that municipal review may be completed. Inspection can be arranged by contacting the municipal staff as follows:

Site Plans

- Private Lands 519-747-8752
- City Lands 519-886-2310

Subdivisions

- Start of Maintenance 519-747-8752
- End of Maintenance 519-886-2310

Individual contact information for specific City staff related to a project should be obtained prior to start of construction.

During construction, City staff have the right to inspect the project at any time, without notice. If the work is not being completed in accordance with the accepted drawings, good engineering practice, or a contractor that is not approved, City staff have the right to stop work until the issues are resolved.

8.10 Water Distribution

No person, other than an authorized member of City staff, is permitted to operate any water valves or appurtenances that are part of the City's municipal drinking water distribution system. A minimum of 48 hours' notice is required to for City water operations staff to inspect/operate water works. The contact person is:

Water Operations Manager 519-886-2310

Prior to installation of any water services, a Watermain Commissioning and Testing Plan must be approved by Water Operations Staff, and any backflow prevention devices must be inspected and certified. Prior to connection to the municipal system, all testing and sampling must be completed, passed, and approved by the Manager of Water Operations.

8.11 Erosion and Sedimentation Control

All erosion and sedimentation control measures including tree protection fencing as required on site must be maintained and kept in good repair until the lands have been stabilized by hard surfaces or vegetative cover. Inspections of the control measures must be completed on a regular basis and after every significant rainfall event. Any repair work and sediment removal must be completed as required to ensure that all measures are functioning as designed. The Engineer retained by the Developer/developer will ensure that contractors undertake the necessary work to maintain erosion and sediment control and provide written confirmation of corrective action when requested by the City.

8.12 Site Maintenance

For the duration of construction, the Contractor is responsible for maintaining a clean work site and for preventing any impact on adjacent lands. The Contractor must ensure that adjacent City or Regional Roads are clean, free of mud, dust and debris. Public roads, sidewalks and boulevards that may experience adjacent/nearby construction activity must not be impacted in any manner that will pose risk to the public, including pedestrians, cyclists and motorists. The Contractor must scrape or sweep the roadway on a regular basis. If the road is not maintained in an acceptable manner, City forces will complete the required work at the Developer's expense. The Engineer retained by the Developer will ensure that Contractors maintain a clean work site and do not adversely impact any adjacent City lands. The Engineer will provide written confirmation of corrective action when requested by the City.

8.13 Warranty Period

Site works including underground servicing, surface works installation and landscaping are subject to warranty for quality and conformance to accepted design drawings. The warranty period for maintenance begins on written City approval of the works in question and lasts for a period of one or two years, as applicable. Items must be maintained free of defects duration of the warranty period. At the end of the warranty, any outstanding defects must be repaired and then City staff will complete a final inspection. If all works are found to be in order, the City will provide written approval of acceptance, and any remaining securities may be released.