

**THE REGIONAL MUNICIPALITY OF PEEL  
SUPPLEMENTAL GENERAL CONDITIONS**

**The Regional Municipality of Peel  
Supplemental General Conditions**

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For the purposes of this contract, the Ontario Provincial Standards, General Conditions of Contract (Muni. 100, 2006) shall be amended as set out herein.

**SG.1 DELAYS - GC3.07**

Clause GC3.07.01 shall be revised to include the following:

The last paragraph of Clause GC3.07.01 shall be deleted and replaced with the following:

“ Then the Contractor shall be reimbursed with the exception of item e) abnormal inclement weather, by the Owner for actual costs as the result of such delay, and the Owner shall not be liable for any other costs or damages whatsoever including, without limitation, any indirect, consequential or special damages, such as loss of profits, loss of opportunity or loss of productivity resulting from such delay.. Extension of Contract Time will be granted in accordance with subsection GC 3.06, Extension of Contract Time.

Clause GC3.07.2 shall be deleted and replaced with the following:

If the Work is delayed by labour disputes, strikes or lock-outs – affecting the Work or the Project including lockouts decreed or recommended to its members by a recognized contractor’s association, of which the Contractor is a member or to which the Contractor is otherwise bound – which are beyond the Contractor’s control, then the Contract Time shall be extended in accordance with subsection GC 3.06, Extension of Contract Time. In no case shall the extension of Contract Time be less than the time lost as the result of the event causing the delay, unless a shorter extension is agreed to by the Contractor. The Contractor shall not be entitled to payment of costs incurred as the result of such delays unless such delays are the result of actions by the Owner.

**SG.2 CLAIMS, NEGOTIATIONS, MEDIATION, ARIBITRATION – GC3.13 and GC3.14**

Clause GC3.13.05 and GC3.13.14 shall be amended as follows:

Mediation and arbitration methods of dispute are to be invoked only upon mutual consent of both parties.

Clause GC3.13.06 delete and replace with the following:

"Payment of the claim will be made on the next Payment Certificate issued after the date of resolution of the claim or dispute. Such payment will be made according to the terms of Section GC8.0, Measurement and Payment."

### **SG.3 QUALITY OF MATERIAL - GC5.02**

Clause (GC5.02.) shall be amended to add the following:

GC 5.02.04 - The Contractor shall obtain for the Contract Administrator the right to enter upon the premises of the material manufacturer or supplier to carry out such inspection, sampling and testing as specified or as requested by the Contract Administrator. No material that has not been approved by the Region shall be incorporated in the works.

Add new Clause GC5.02.10

"Testing of previously tested material and/or workmanship shall be carried out at the Contract Administrator's discretion at the Contractor's expense."

The cost of all testing and inspection of materials delivered to the site will be borne by the Regional Municipality of Peel, and arranged by the Engineer, unless otherwise specified in the contract documents.

However, any retesting to verify the quality of work or previous test results shall be carried out at the discretion of the Engineer and at the expense of the Contractor.

The Contractor shall provide to the Engineer for his use at all times, assistance and use of tools and construction equipment as required to safely procure, package and ship all test samples.

The Contractor shall make known to the Engineer the source of material at least one week prior to the time he proposes to use such material, unless otherwise specified in the Contract Documents.

Where required by the Engineer, or where otherwise specified in the contract document, to test materials and equipment, the Contractor shall supply certified copies of all tests upon all materials and equipment to be used in the construction of the works, indicating that materials comply with the specifications. Such test shall be made by an approved testing company and shall be at the Contractor's expense.

**SG.4 GENERAL CONTRACTOR'S RESPONSIBILITY - GC7.01**

Add the following at the end of Clause GC7.01.

The Contractor shall satisfy its self as to the nature of the soil, the bearing capacity and other physical characteristics included but not limited to the location of various earth or rock strata and ground water levels. Geotechnical reports or borehole logs provided to the Contractor by the Region does not relieve the Contractor of sole responsibility for determining all necessary information relevant to the construction of the works.

Add the following clause to the end of GC7.01.07.

- (1) The Contractor, for purposes of the Ontario Occupational Health and Safety Act, shall be designated as the Constructor for this project and shall assume all of the responsibilities of the Constructor as set out in that Act and its regulations. The foregoing shall apply notwithstanding that the successful Vendor has been referred to as the 'Contractor' in this and any other related document.
- (2)
  - (a) The Contractor acknowledges that they have read and understood the Occupational Health and Safety Act and Regulations for Construction Projects (latest edition, as amended).
  - (b) The Contractor covenants and agrees to observe strictly and faithfully the provisions of the said Occupational Health and Safety Act and all regulations and rules promulgated thereunder.
  - (c) The Contractor agrees to indemnify and save the Agency harmless for damages or fines arising from any breach or breaches of the said Occupational Health and Safety Act.
  - (d) The Contractor agrees to assume full responsibility for the enforcement of the said Occupational Health and Safety Act to ensure compliance therewith.
  - (e) The Contractor further acknowledges and agrees that any breach or breaches of the Occupational Health and Safety Act whether by the Contractor or any of its sub-contractors may result in the immediate termination of this contract.
  - (f) The Contractor shall allow access to the work site on demand to representatives of the Agency to inspect work sites to

ensure compliance with the Occupational Health and Safety Act.

- (g) The Contractor agrees that any damages or fines that may be assessed against the Agency by reason of a breach or breaches of the Occupational Health and Safety Act by the Contractor or any of its sub-contractors will entitle the Agency to set-off the damages so assessed against any monies that the Agency may from time to time owe the Contractor under this contract or under any other contract whatsoever.
  
- (3) Where hazardous materials, physical agents and/or designated substances are used in the performance of the required work, the successful Contractor shall ensure that the requirements of the Ontario Occupational Health and Safety Act and associated regulations are complied with.
  
- (4) The Region of Peel reserves the right to cancel any contract for non-compliance with the terms set out herein, health and safety regulations, the Environmental Protection Act, associated regulations and other applicable legislation.
  
- (5) The Contractor shall perform the Work so as to cause the public the least inconvenience possible. In particular, the Contractor shall not obstruct any street, thoroughfare, or footwalk longer or to a greater extent than necessary.
  
- (6) The Contractor shall take all reasonable precaution necessary to ensure the safety of the workers and the general public, particularly children who may play in the area of work.

Add New Clause GC7.01.17 as follows:

The Contractor shall attend Progress and Co-ordination Meetings as directed by the Engineer.

The Contractor's representative at these meetings shall be Resident Supervisor or Engineer, and/or a competent and reliable person who is familiar with these works. The Contractor's representative shall have full authority to make decisions on the Contractor's behalf.

Add the Following to GC7.03 New Clauses GC7.03.04 as follows:

Vehicles and equipment are not allowed to enter any driveway. Any claims for damage arising from such incidents will be the sole responsibility of the Vendor.



## **SG.5 APPROVAL AND PERMITS -GC7.09**

Add new Clause GC7.09.03 In the event of works affecting local municipal roads, the Contractor must notify the local area municipality concerned, i.e. Mississauga, Brampton or Caledon, 48 hours prior to commencing work. A representative of the Agency will accompany the Contractor to obtain the Road Cut Permit of the applicable municipality. The Engineer will be given a copy of the permit. The local town/municipality will issue a Road Cut Permit to cover the entire project; however, verbal notification must be given to the local town/municipality Department 48 hours in advance of each work location change which necessitates revisions in detours or single lanes of traffic.

Through traffic must be maintained at all times by the Contractor at his expense. All traffic control will be executed as required by the road cut permit. Sign requirements will be as per the latest revision of the Ontario Traffic Manual (OTM). The cost of providing all signs, delineators, flagmen, etc. will be at the Contractor's expense and should be included in the relevant tender items.

No work will be allowed if there is no flagperson on full-time duty when two lanes of traffic (one in each direction) cannot be maintained.

The Contractor must file with the local Town/municipal Department the name and telephone number of a person who will be on duty at all times in case of emergency.

It is the responsibility of the contractor to comply with the Road Occupancy Permit conditions and all other conditions of the local municipality when undertaking works on roads under local municipal jurisdiction.

The Contractor is to include all additional costs relating to compliance with local municipal road cut permit conditions in his tendered unit prices.

Vehicles and equipment are not allowed to enter any driveway. Any claims for damage arising from such incidents will be the sole responsibility of the Vendor.”

Add New Clause GC 7.03.05 The Vendor shall provide safe and free vehicular and pedestrian movement at all times to all properties with existing access. Where there is no alternative but to shut off access temporarily to a property, the Vendor shall first notify the persons affected and shall work so as to keep the period of the inconvenience to a minimum. Notwithstanding, any closure of

the inconvenience to a minimum. Notwithstanding, any closure of access must be approved by the Project Manager in writing prior to closing.

Add new Clause GC 7.03.06

If the Contractor enters into an agreement with an individual or Municipality for the use of land for the disposal of stumps, fill or for any other reason, a copy of said Agreement clearly stating the obligations of all concerned and signed by both parties shall be submitted to the Region.

Add new Clause GC 7.03.07

The Contractor shall comply with all Federal and Provincial Acts and Regulations and Municipal By-laws regarding the use of land for these purposes.

Add new Clause GC7.03.08

The Contractor shall not enter upon or occupy with labour, plant or materials any lands other than those within the working limits unless and until consent has been received by him from the owners and a certified copy of such a consent has been furnished to the Engineer. Any rentals or damages paid for occupying private lands shall be at the Contractor's expense.

## **SG.6 EXCESS LOADING OF MOTOR VEHICLES – GC7.05**

Delete Clause GC7.05.01 and replace with the following:

Where a vehicle is hauling material for use on the work under this Contract, in whole or in part upon a public highway and where a motor vehicle registration is required for such vehicle, the Contractor shall not cause or permit such vehicle to be loaded beyond the legal limit, as specified in the *Highway Traffic Act*, R.S.O. 1990, as amended and regulations thereunder whether such vehicle is registered in the name of the Contractor or otherwise, except where there are designated areas of the Contract where overloading is permitted. The Contractor shall be responsible for weighing disputed loads.

Notwithstanding any other provision of this Contract, the printed weigh tickets, without reference to overloading will be accepted for payment. This acceptance will not, however, exempt the vehicles registered in the name of the Contractor or otherwise, from complying with the legal weight limits as specified in the *Highway Traffic Act*, R.S.O. 1990, as amended.

## **SG.7 MAINTAINING ROADWAYS AND DETOURS - GC7.07**

Delete Clause GC7.07 –.07) and replace with the following new Clause GC7.07.07:

"The Contractor will bear the cost of maintaining, in a satisfactory condition for traffic, a road through the working area. The road through the work will include any detour constructed in accordance with the contract document or required by the Contract Administrator. Compensation for all labour, equipment and materials for detours shall be at the contract prices appropriate to the work. Notwithstanding the foregoing, the cost of blading required to maintain the surface of such roads and detours shall be deemed to be included in the prices bid for the various tender items and no additional payment will be made."

#### **SG.8 CONTRACTORS' RIGHT TO STOP THE WORK OR TERMINATE THE CONTRACT – GC7.11**

Clause GC7.11.02 is deleted in its entirety.

Delete Clause GC7.11.04 and replace with new Clause GC7.11.04 as follows:

The Contractor's written notice to the Owner shall advise that if the default is not corrected in the 7 days immediately following the receipt of the written notice, or the Owner commences the correction within seven (7) days and provides the Contractor with an acceptable schedule for the correction and the default is not corrected in accordance with this schedule, the Contractor may, without prejudice to any other right or remedy the Contractor may have, stop the Work or terminate the Contract.

#### **SG.9 WARRANTY - GC7.16**

Delete Clause GC7.–16.02) and replace with new Clause GC7.16.02

"Subject to the previous paragraph the Contractor shall correct promptly, at no additional cost to the owner, defects and/or deficiencies in the work which appear prior to and during the warranty period noted below from the date of preliminary acceptance. The Contract Administrator will promptly give the Contractor written notice of observed defects or deficiencies."

In certain emergency situations where the safety of the public is at risk due to a deficiency, the Engineer will endeavour to contact the Contractor by telephone. If the Contractor fails to correct the deficiency within an agreed period of time, or cannot be contacted at all, the Engineer, at his option, may make any corrections necessary. In such case, the Contractor shall be responsible for the full cost, charges and expenses of such work.

Warranty Period of “24 months” shall replace “12 months” within the clauses of this section.

Warranty Holdback

In reference to GC7.15, Warranty Period:

A warranty period hold back will be retained on all of the Region's projects.

**SCALE OF WARRANTY HOLDBACK**

<b>Contract Value</b>	<b>Formulae</b>	<b>Max. Holdback</b>
\$ 0 - 50,000	Actual @ 10%	5,000
\$ 50,000 - 100,000	5,000 + (Actual - 50,000) @ 5%	7,500
\$100,000 - 300,000	7,500 + (Actual - 100,000) @ 4%	15,500
\$300,000 - 500,000	15,500 + (Actual - 300,000) @ 3%	21,500
\$500,000 - and up	21,500 + (Actual - 500,000) @ 2%	No Maximum

This amount less any monies due to the Region will be released following the satisfactory completion of warranty period.

The Contractor may apply for early release of holdback after the first 12 months of the warranty period. If there are no deficiencies, then the Contractor may apply for release of 80% of the warranty holdback with a minimum of \$5000 to be held for the remaining 12 months of the warranty period.

**SG.10 VARIATIONS IN TENDER QUANTITIES – GC8.01.02**

Replace “Completion Certificate” with “Substantial Performance Certificate”.

**SG.11 PAYMENT - GC8.02**

**SG.11.1 Advance Payment for Material - GC8.02.02**

Clause GC8.02.02.01) shall be amended to read:

"The Owner may make advance payments for material intended for incorporation in the Work upon the written request of the Contractor and according to the following terms and conditions:

- a) the Contractor shall deliver the materials to a site approved by the Contract Administrator and the Contractor shall in advance of receipt of shipment of the material, arrange for adequate and proper storage facilities and notify the Contract Administrator of their location(s).

The remainder of Clause GC8.02.02 is unchanged."

**SG.11.2 Certification and Payment - GC8.02.03**

The following is in addition to clause GC8.02.03.06:

The issuance by the Engineer of a letter certifying that the entire work has been completed will not mean that the Engineer assumes any responsibility or liability, in full or in part, for the Contractor's responsibilities and liabilities at the completion of the Contract or in the future to carry out all the work and any part of it in accordance with the terms and specifications of this Contract.

Clause GC8.02.03.07.03 (a) is deleted.

Clauses GC8.02.03.08, GC8.02.03.09 and GC8.02.03.10 are deleted in their entirety.

Clause GC8.02.03.11 - 01) shall be revised to read:

Pursuant to Section 12 of the Construction Lien Act 1990 - Set-off by Trustee, the Owner may retain from monies owing to the Contractor under this or any other contract an amount sufficient to cover any outstanding or disputed liabilities including the cost to remedy deficiencies, the reduction in value of substandard portions of the Work, claims for damages by third parties which have not been determined in writing by the Contractor's insurer, undetermined claims by the Owner under paragraph (a) of Clause GC8.01.02, Variations in Tender Quantities, any assessment due the Workers' Compensation Board and any monies to be paid to the workers in accordance with Clause GC8.02.06, Payment of Workers and as well any liquidated damages assessed by the Owner pursuant to Clause GC8.02.09.

Clause GC8.02.03.12 shall be deleted in its entirety.

**SG.11.3 Payment on Time and Material Basis - GC8.02.04**

Clause 8.02.04.01-01) is amended to read:

"Working Time" means each period of time during which a unit of equipment and/or labour is actively and of necessity engaged on a specific operation.

Clause 8.02.04.08-01, (a), (b) and (c) are replaced by the following:

- 5% of the amount

Clause GC8.02.04.09-04) is amended to read:

The final "Summary for Payment of Accounts on a time and Material Basis" shall be submitted by the Contractor within 30 days after the completion of the work on a Time and Material Basis.

All claims for extra work must be submitted on a form acceptable to the owner.

**SG.12 GEOTECHNICAL INFORMATION GC 2.01.02**

Add the following to Clause GC2.01.02

The geotechnical information contained herein is an approximation of ground conditions only and is provided to assist the Vendor in ascertaining the predominant ground conditions that the Vendor is likely to encounter, and is not a representation or warranty by the owner as to ground conditions. Notwithstanding this information, the ground conditions between boreholes may vary considerably and the Vendor specifically acknowledges that it assumes all risks and liabilities associated with ground conditions. Additionally, the Vendor shall be responsible to ensure adequate trench shoring for actual ground conditions in accordance with the requirements of the Occupational Health and Safety Act.

**SG.13 WORKING HOURS, NIGHT, SATURDAY, SUNDAY AND HOLIDAY WORK**

The following will take precedence where applicable in the General Conditions.

### **SG.13.1 Working Hours**

The contractor shall note that the performance of work on all Region projects shall be in accordance with the most current Road Occupancy Permit in effect and as obtained by the Contractor.

In the event the Road Occupancy Permit does not specify approved working or lane closure hours, the Contractor will only be permitted to work Monday to Friday between the hours of 9:00 a.m. and 3:30 p.m.

### **SG.13.2 Sunday or Holiday Work**

- a) No work shall be permitted on Sunday, Statutory Holidays and Holidays stipulated by Regional Policy, except in the case of an emergency.
- b) The following days will be recognized Holidays as stipulated by Regional Policy:
  - New Year's Day,
  - Family Day,
  - Good Friday,
  - Victoria Day,
  - Canada Day,
  - Civic Holiday (August),
  - Labour Day,
  - Thanksgiving Day,
  - Christmas Day,
  - Boxing Day.
- c) When any of the above noted holidays, except Boxing Day, falls on Saturday the preceding Friday or succeeding Monday shall be designated as the holiday; when Boxing Day falls on a Saturday or Sunday, the following Monday shall be designated as a holiday and when Boxing Day falls on Monday, the following Tuesday will be designated as Boxing Day holiday.

### **SG.13.3 Night Works**

The Engineer may order work to proceed on a two or three eight-hour shift basis if he deems this necessary to speed up the installation, or he may order any work to be carried out in whole or in part at night. No work, however, shall be undertaken at night without the Engineer's written consent.

In the event night work is approved or ordered by the Engineer, the contractor shall provide all the necessary number of electric or other approved efficient lights to enable the necessary work to be carried out in an efficient, safe and satisfactory manner.

The compensation for night work, if any, shall be agreed upon between the Contractor and the Engineer, unless unit prices are quoted in the Tender.

#### **SG.13.4 Saturday Work**

It is noted that Saturday is not considered a holiday under this clause; however, work will only be permitted with written permission of the Engineer.

#### **SG.14 STORAGE OF MACHINERY**

The Contractor shall be governed by the direction of the Engineer in all matters connected with or concerning storage of machinery, materials and supplies along the line of work and shall at his own cost shift or remove such machinery, materials and supplies immediately upon notice from the Engineer and to location or locations acceptable to the Engineer.

#### **SG.15 UTILITIES**

##### **SG.15.1 Relocations**

The Region will be responsible for any necessary permanent relocations of hydro, bell, gas, and cable t.v. along the lines of construction. In the event that all utilities requiring relocation have not been relocated prior to the time when the Contractor commences work, he will be required to co-operate with the utility companies and work around the utilities such that the existing services are protected until such time as they can be removed from the line of construction.

##### **SG.15.2 Stakeouts**

Before commencing work on any street the Contractor must obtain stakeouts from all utilities concerned. Before exposing any



underground utility which may be encountered in the course of construction, the Authority concerned must be notified 48 hours in advance. Any disturbances of existing underground utilities must meet with the approval of the Authority concerned.

The Region will, at the Contractor's request, stake out the existing watermain. The Contractor is not to sawcut the asphalt until the stake out has been done.

The Contractor is to note that if the Region is unable to stake-out the sanitary sewer connections, the Region will provide the Contractor with a T.V. report showing the location of the tee for the sewer connections.

Storm sewer connections are under the jurisdiction of the City. There will be no stake out from the City. If the Contractor damages any storm sewer connections due to his operations, the Contractor has to repair or replace same to the satisfaction of the Engineer. The cost for such repair should be included in the price for the watermain or sanitary sewer construction.

If the Contractor damages a water service which is found over 1 metre from the stake-out, the Region will only pay the Contractor for the repair cost. No claim will be accepted for the delay due to incorrect stakeout.

### **SG.15.3 Crossing the Existing Utilities**

The Contractor is required to verify the elevation of all existing utilities at the crossing point by test holes so that the watermain can be adjusted to clear them. No extra will be allowed for this work except through payment under the appropriate tender items.

### **SG.15.4 Protection of Live Utilities**

The Contractor will be held responsible for the protection of all live utilities whether aerial or underground, including telephone cables, hydro cables, gas main, water main, sewers, cable t.v., etc., during the time of construction and will be held liable for any damage to same. The Contractor shall, at his expense, and as required by the Engineer or respective utility company, hand dig to accurately locate any underground utility. He shall assume that the utility is within 1 metre either way of the stake out. This includes hand digging at the Contractors expense, all excavations located within 1

metre (horizontally measured), from a gas main or gas service whether or not the gas main or gas service is shown on the contract plans and drawings.

The Contractor shall, at his expense, provide for the temporary support of all existing services being crossed by the proposed works including the temporary support of utility poles. Such support shall be in accordance with the requirements of the respective utility and the Engineer. Where concrete and timber is ordered left in place by the Engineer, it may be paid for by the Region under the appropriate items in the Form of Tender.

Should any drains, cables, culverts or other utility within the limits of this contract be unexpectedly encountered, the Contractor shall protect such utility and shall immediately notify the Engineer in writing.

#### **SG.15.5 Removal of Abandoned Utilities**

The Contractor assumes all risks and responsibilities to remove abandoned underground utilities which interfere with the proposed works as directed by the Engineer. All abandoned underground utilities removed by the Contractor shall be disposed of off site at the Contractor's expense. This applies to all abandoned utilities shown on the contract plans and drawings. Remaining abandoned underground utilities shall be adequately blocked at the Contractor's expense. The Contractor may be entitled to additional payment under the appropriate item in the Form of Tender for such remedial works.

#### **SG.15.6 Conflicts with Utilities**

The Contractor assumes all the risks and responsibilities arising out of any conflicts between the proposed works and existing utilities whether or not the utilities are shown on the contract plans and drawings. Where such conflicts occur, the Engineer shall forthwith advise the Contractor of the necessary remedial action which may include additional trenching, relocation of the utility or other such measures. The Contractor may be entitled to additional payment under the appropriate item in the Form of Tender for any such remedial works.

## **SG.16 REGULATION OF PITS AND QUARRIES**

The Contractor shall have regard to the provisions of the *Aggregate Resources Act*, R.S.O. 1990, Ch. A.8. and regulations thereto, as amended.

All costs related to this statute will be deemed to have been included in the appropriate tender items and no separate payments will be made .

## **SG.17 WEIGHING MATERIALS**

For the purpose of measuring items to be paid for by weight, the Contractor, at his own expense, shall arrange for access to a truck as requested by the Engineer. The scale shall be of sufficient capacity and dimensions to fully contain the loaded vehicle in one setting and to permit weighing of the entire load in one operation.

Weight tickets shall be supplied by the Contractor showing the date, source of material, type of material, truck number, gross, tare and net weights, place of dumping, and providing spaces for the signature of the weighman and the Engineer or his agent.

The two (2) copies of the weight tickets, filled in by the weighman, shall be delivered by the truck driver to the Corporation's agent in the field at the dumping point. The Corporation's agent will then fill in the place of dumping and sign both copies, keep one and the other to be returned to the scales by the driver. Tickets shall be kept separate for each day and for each type of material weighed.

Tickets not signed by the Corporation's agent by the day's end, will not be accepted for payment.

### **Underloads**

A charge for liquidated damages will be imposed by the Region of Peel relating to underloads. The Engineer will spot check vehicles throughout the Contract at a conveniently located weight scale. If the check weight is found to be less than that indicated on the weigh ticket, the difference in tonnage will be applied to all the loads delivered to the project on that one day. All costs herein involved are to be borne by the Contractor.

**SG.18 DISPOSAL OF SURPLUS OR UNSUITABLE EXCAVATED MATERIALS**

Material excavated in carrying out the work of the various tender items included in this Contract and which is unsuitable for or which is surplus to the requirements for backfill or embankment construction, shall be disposed of by the Contractor outside the limits of this Contract at locations arranged for by the Contractor. Broken concrete, curbs, asphalt and other debris must be removed from the site as soon as possible and not accumulated.

**SG.19 OTHER CONTRACTORS WITHIN OR ADJACENT TO THE LIMITS OF THE CONTRACT**

As other work may be in progress within and adjacent to the limits of this Contract the Contractor shall co-operate with other Contractors or Utility Companies and they shall be allowed free access to their work at all times. The Engineer reserves the right but shall not be required to alter the method of operations on this Contract to avoid interference with other work.

In order to co-ordinate his work with that of others, the Contractor shall notify the utility companies and others 48 hours prior to commencing work.

**SG.20 PROTECTION OF EXISTING WATERMAIN AND WATER SERVICES**

**SG.20.1 Excavation under Watermains**

In the case of a trench crossing under an existing cast iron watermain, the maximum unsupported length of watermain before replacement with approved material is required, shall be selected from the following table:

	<b>STABLE SOIL</b>		<b>UNSTABLE SOIL</b>	
	<b>Maximum Allowable Unsupported Length of Watermain No Joint Exposed</b>		<b>Maximum Allowable Unsupported Length of Watermain No Joint Exposed</b>	
<b>W/M Dia.</b>	<b>W/M at 1.5 m Cover</b>	<b>W/M at 2.5 m Cover</b>	<b>W/M at 1.5 m Cover</b>	<b>W/M at 2.5 m Cover</b>

100 mm	1.4 m	1.0 m	1.0 m	0.8 m
150 mm	1.7 m	1.4 m	1.4 m	1.1 m
200 mm	2.0 m	1.7 m	1.7 m	1.5 m
250 mm	2.5 m	2.1 m	2.0 m	1.8 m
300 mm	3.0 m	2.7 m	2.5 m	2.1 m

In the foregoing, if a joint is within the unsupported watermain length, the maximum allowable length is to be reduced by 50%.

Stable soils shall be defined as either shale or cohesive soils (clay and clayey soils) and unstable soils shall be fills and non-cohesive soils (gravel, sand, silt and gravelly soils).

Allowable conditions for depth of watermain between 1.5 m and 2.5 m may be interpolated from the above table. For depth of watermain greater than 2.5 m, the allowable condition may be extrapolated from the table, but no greater than 3 m.

If the vertical separation between the watermain and the sewer is greater than 1.2 m, shoring shall be left in place to maintain a secure trench wall.

The protection of cast iron watermains larger than 300 mm will be considered on an individual basis.

**SG.20.2 Tunnelling under Watermains**

When tunnelling under an existing cast iron watermain, the minimum length of tunnel shall be 1.5 m, and the minimum vertical separation from tunnel roof to watermain shall be 1 m. The void in the tunnel is to be pressure filled with grout.

**SG.20.3 Interruption of Water Service**

The vendor shall insure minimal water service interruption during the installation and connection of new watermains and services. Each interruption of service other than for individual residents, will require approval from the Project Manager. If warranted, the Project Manager may specify that certain water service interruptions be restricted to night time, Sunday's or holidays. In these cases the Vendor will be eligible to claim extra costs for labour only. No extra claims for labour will be considered for works performed on Saturdays.

## **SG.21 WORK OVER OR IN THE VICINITY OF GAS MAINS**

This section covers precautions necessary when heavy construction equipment (gross weight greater than 10 tonnes) is to be operated in the vicinity of buried pipelines where no pavement exists or where grading operations are taking place. This shall apply to the prime Contractor as well as his sub-contractors and suppliers involved in heavy equipment operation.

The location of the gas main must first be staked out by the gas company.

The Contractor will confirm the location and depth of the main by excavating test holes as necessary and paid for under the appropriate tender items.

### **SG.21.1 Equipment Moving Across Pipeline**

Crossing locations for heavy equipment are to be kept to a minimum.

The crossing locations shall be determined between the Utility Company's inspector and the Contractor after reviewing the nature of the construction operations, the types and number of equipment involved, as well as the line and depth of the existing gas main.

Once the crossing locations have been established, heavy equipment shall be restricted to crossing at these locations only. The Contractor shall ensure that his personnel are made aware of these restrictions.

Pipelines shall be protected from possible damage at crossing locations by constructing beams over the staked line unless a minimum cover of twice the pipe diameter or 1.0 m (whichever is greater) has been verified. When required, beams for pipe sizes less than NPS 12 shall have a minimum depth of 0.5 m NPS 12 and larger lines require a minimum berm depth of 1.5 m.

Equipment shall be operated at "dead-slow" speeds when crossing pipelines in order to minimize impact loadings

Any works by any means occurring with-in 30m of a National Energy Board (NEB) regulated pipeline (such as TNPL, ICPL, Enbridge Pipelines, etc) will require the vendor to make application in writing to the pipeline company affected for approval. Upon written approval from the pipeline company the vendor must submit notification of commencement of construction to the pipeline

company prior to commencement and arrange for inspection no less than 3 working days prior to commencement.

### **SG.21.2 Equipment Moving Along Pipeline**

Heavy equipment may be operated parallel to existing pipelines provided that a minimum offset of 1.0 m is maintained on sizes less than NPS 12, and 2.0 m on NPS 12 and larger lines.

Only lightweight rubber-tired equipment shall be operated directly over existing gas pipelines unless a minimum pipe cover of twice the pipe diameter or 1.0 m (whichever is greater) can be verified.

When working directly over existing gas pipelines all equipment movements shall be transverse to staked location rather than parallel to it.

### **SG.21.3 Compaction Equipment**

Unless specified otherwise by the Operating Authority hand-held compaction equipment shall be used within 1.0 m of the sides or top of all gas pipelines.

Heavier compaction equipment may be used once pipe cover equals the greater of twice the diameter or 1.0 m.

## **SG.22 DEPTH OF EXCAVATION AND TRENCH STABILIZATION**

### **SG.22.1 Depth of Excavation**

Trenches shall be excavated to the depth required by the foundations of the pipe and appurtenances shown on the drawings and, where conditions make it necessary, to such additional depth as may be required by the Engineer. The bedding shown in the Contract drawings shall be placed on undisturbed ground. No adjustments in payment will be made where the depth of excavation varies due to change in pipe elevation not exceeding 300 mm. For grade changes of more than 300 mm, additional payment shall be in accordance with the appropriate tendered unit price in the Form of Tender.

### **SG.22.2 Trench Stabilization**

Where the excavated trench is in close proximity to an existing curb or utility trench (i.e. watermain, sewer), it is the Vendor's responsibility to stabilize the trench in a suitable manner to install the watermain/sanitary sewer, at their own cost. The Vendor is further reminded that slow progress due to close proximity to the existing watermain or other utilities will not be compensated.

### **SG.23 TEMPORARY RESTORATION**

Cold mix asphalt must be placed at the road crossings immediately after backfill. The unit price for installation of cold mix asphalt shall include the cost of removal and disposal of the cold mix asphalt and excess Granular "A" material for the final re-instatement with hot mix, hot-laid asphalt. In addition, where two full lanes of traffic cannot be maintained at the end of each day, the Vendor shall place sufficient width of cold mix at the edge of the roadway to provide a two-lane platform.

The vendor will maintain the cold mix asphalt in good condition at no additional cost to the Agency until final restoration.

### **SG.24 SHALE REMOVAL**

Shale or thinly bedded limestone material which may be encountered in road, sewer, utility or pole base excavation and which, in the opinion of the Engineer, may be removed by conventional excavation methods using a hydraulic backhoe shall not be classified as rock and no extra payment will be considered.

### **SG.25 EXISTING ROAD**

The Contractor should be very careful to choose and operate his equipments to avoid any damage to existing roads. Any existing asphalt, concrete curbs and sidewalks, shoulder or grass areas, which are damaged by the Contractor due to his operation, will be replaced by the Contractor to the satisfaction of the Engineer at the Contractor's cost. Concrete sidewalks and curbs which are damaged by the Contractor have to be removed from joint to joint and reconstructed to the requirement of the applicable Municipality.



## **SG.26 EXISTING TREES**

All trees have to be preserved and protected unless otherwise instructed by the Engineer prior to the commencement of the works. Larger mature trees will require tunnelling (or auguring) anywhere within the dripline (the outer most edge of the tree crown) of the tree.

No storage of excavated material, construction equipment and material or fuel will be allowed on a boulevard or road close to a tree.

Should installation of new (or replacement of existing) private services to or beyond the streetline conflict with an existing tree, the contractor will be required to auger these particular service leads.

Any construction equipment having vertical exhaust stacks must have horizontal stack deflectors to prevent exhaust damage to existing street trees. Deflectors must be adjusted in such a way so that hot exhaust gases are directed away from trees or portions thereof.

Any articulating arm equipment (eg. cranes, backhoes) must not operate under the crowns of any street trees where the articulating arm can come in contact with the branches. If this is unavoidable, the contractor must arrange for an on site inspection as soon as possible and proceed only after an approval by the Engineer.

Any roots or branches damaged as a result of excavating must be properly pruned to reduce further injury to the tree(s).

Any compensation to homeowners or municipalities for damaged or dead trees resulting from the Contractors operations will be the sole responsibility of the Contractor.

## **SG.27 EROSION CONTROL**

Erosion control and sedimentation control measures as required by the appropriate Conservation Authority shall be incorporated in the works to ensure that there is no sediment discharge to the watercourses. These may include sedimentation ponds, straw bales, rip-rap dams, filter beams, siltation fences or sand bags as required to retard and filter sedimentation from the construction area.

The payment for these works including all labour and materials for construction and maintenance of these devices in good working order will be as per the appropriate tender item in the Form of Tender.