

SPECIAL PROVISIONS – CONTRACT ITEMS SUPPLEMENTARY

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A8. CONSTRUCTION SIGNS, TRAFFIC CONTROL & TRAFFIC MANAGEMENT PLAN

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, GC7.06 and OPSS 706, the following shall also apply:

Interference with normal flow of traffic shall be kept to a minimum. The Contractor shall be prepared to supply and erect any barricades and signs which may be required for complete control of both pedestrians and vehicular traffic including competent flag persons in accordance with Ontario Manual of Uniform Traffic Control Devices. The Contractor shall further provide a Traffic Control and Management Plan in accordance with the most recent amendments to the Occupational Health and Safety Act. The Traffic Control and Management Plan shall include drawings, plans, sketches, etc., illustrating the layout of typical signage. The lump sum price shall be deemed to have included this provision.

The contractor shall notify and coordinate all work with CN Rail including but not limited to: notification of work for streets that have a rail crossing(s), coordinating work around CN schedules and obtaining all necessary permits and CN on-site safety personnel where required.

The contractor is not to perform any work or stage any equipment or materials within 15.25m (50 feet) of any CN Rail crossing.

All costs associated with this provision shall be included in the unit prices bid.

The contractor shall allow for at least two (2) separate mobilizations to the area to complete the work. If there are available funds to complete additional streets at the end of the contract, the contractor will not be paid for the costs associated with remobilizing if they have already left the area.

The Contractor shall also be responsible for supplying their hired help with any necessary safety and/or protective equipment required to perform the work safely.

A minimum of one lane of traffic shall be maintained at all times during construction. Two lanes of traffic shall be maintained at all other times. The Contractor's proposed sequencing and staging of works and operations is to make due allowance for this requirement. Work within intersections shall also be staged such that a minimum of one lane of traffic is maintained on the cross streets.

On **all streets and laneways** one lane of traffic may be closed to traffic during construction, in accordance with the "Traffic Control Manual for Roadway Work Operations". At all other times, all lanes of traffic shall be maintained. Road closures of any kind will only be allowed on an exception basis, and only upon approval of the Project Manager. The Contractor must submit potential road closure requests to the City, in writing, at least one (1) week prior to implementation, for review and approval. Allowances for such operations must be made in the Contractor's Traffic Control and Management Plan; all associated costs will be the Contractor's responsibility.

It is of critical importance that all planned construction activities be coordinated with the City's Operational, Traffic, Parking and Transit Departments. Notification on at least a weekly basis of planned works (schedule) will be required to ensure that the necessary detour signage, parking accommodations, bus routing and maintenance activities account for the active work zones within the project area. The Contractor must also work closely with the City's Construction Inspector and Contract Administrator to keep affected property owners informed of potential impacts to their businesses and residences and to minimize disruption to access and servicing of properties by planned construction activities.

Winter Maintenance

The successful Contractor will be responsible for winter control maintenance in compliance with Provincial minimum maintenance standards for snow clearing, storage and removal, salting and sanding activities within the construction work zones during the course of the contract, including maintaining the sidewalks within the project area. All unit prices bid will be deemed to have included allowance for these provisions.

Property Access

Pedestrian access to all businesses and residences is to be maintained at all times whenever possible. Access closures are to be scheduled at least two (2) business days in advance between the City, the Contractor and the Business owner and/or Residents, including the type and form of any temporary access provisions. Any disruption to pedestrian access is to be kept to a minimum duration.

On **all streets and laneways** the Contractor will be required to backfill all their trench cut and install temporary restoration in accordance with the Regional Municipality of Niagara specifications at the end of the day's operations so that all lanes of two-way traffic can be maintained at night. All hazards and obstructions shall be properly barricaded and delineated with flashers in accordance with the Ontario Manual of Uniform Traffic Control Devices.

Communications

It will be the Contractor's responsibility to inform the various businesses and residences of, and/or the placement of no parking signs the day before, in order to reduce/eliminate any problems with parked vehicles that may interfere with their operations. Access to the abutting businesses and residences must be maintained at all times.

The Contractor shall advise the Police Department, Fire Department and Niagara Emergency Medical Service on a daily basis, with current status of the construction as it pertains to the passage of traffic within the contract limits.

The Contractor shall co-ordinate with Niagara Falls Transit to ensure minimum interruption to their bus schedules on **all streets and laneways**. Niagara Transit, school buses and garbage service vehicles will be given priority to maintain their schedule.

The Contractor shall also maintain/provide existing pedestrian access at all times to the businesses and residents during all phases of construction in an acceptable manner.

The traffic control signage requirements shall include the following:

Supply, locate, erect, operate, maintain, relocate as necessary and remove all necessary traffic signs, construction signs, including delineators, barricades and flashing lights, in accordance with the Ontario Traffic Manual (OTM) Book 7 and the latest edition of the "Traffic Control Manual for Roadway Work Operations - Field Edition".

The Contractor is responsible for the installation, daily maintenance and removal of all construction signage throughout the contract.

Regulatory signs and street name signs cannot be removed without approval from the City.

Any existing signs removed by the Contractor to accommodate construction shall be kept operational by placement on a temporary support.

All regulatory signs and street name signs will be replaced permanently by City forces.

Basis for Payment

In addition to the payment provisions noted in the Niagara Peninsula Standard Contract Document, the final ten percent (10%) of the lump sum price bid for this item will be held until project completion, contingent on the return of the Contract Signs in a condition satisfactory to the Contract Administrator. The lump sum price bid shall be deemed to include full compensation for all the provisions noted herein.

A9. CONTINGENCY ALLOWANCE

The Contractor shall include in their tender the indicated contingency allowance in the Form of Tender.

Basis for Payment

Payment from this item will only be made for additional work approved in writing by the Contract Administrator. Work completed before receipt of written approval will not be compensated.

B1. TEST PITS (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, the following shall also apply:

Exploratory test holes shall be at locations and depths as directed by the Contract Administrator and must be witnessed by the Contract Administrator or assigned delegate.

Backfill shall be Granular 'A', compacted to 100% Standard Proctor Maximum Dry Density. Alternatively, clear stone may be used as backfill material where hydrovac

excavation equipment is used. Disposal of the excavated material shall be in accordance with Special Provisions – Contract Items Supplementary, Item B2.

The purpose of these test holes shall be to verify existing underground infrastructure where a design change is required or as determined by the Contract Administrator.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials, equipment and Granular 'A' backfill, necessary to complete the work.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be considered if written approval is not sought in advance.

B2. EARTH EXCAVATION

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS.MUNI 206 and OPSS.MUNI 510, the following shall also apply:

Work under this item will also include the removal of asphalt, concrete, brick pavers and excavations of full road allowance widths as described herein.

The Contractor is responsible for sawcutting, excavating, separating and delivering any concrete or asphalt material to an approved recycling facility. Thickness of the concrete and asphalt will vary; however, no additional compensation will be made for the various depths. The removal of interlocking brick pavers shall also include removal of any concrete and/or granular base.

All asphalt and concrete must be sawcut. Sawcutting shall be to the limits shown on the construction drawings or as directed by the Contract Administrator.

Roadway/laneway excavation shall be inclusive of all required excavation from property line to property line on all roadways and include any additional quantities, as shown on the contract drawings. Plotted cross-sections, where not included within the Issued for Tender drawing set, shall be available upon request.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment including sawcutting, and disposal of surplus or unsuitable excavated materials, necessary to complete the work as noted on the contract drawings or as directed by the Contract Administrator.

B3. GRANULAR MATERIAL

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS 314, 401 and 402, the following shall also apply:

All granular materials shall conform to the requirements of OPSS.MUNI 1010.

The unit price bid shall be complete compensation for the supply, hauling, placement, grading and compaction to the specified Standard Proctor Maximum Dry Density of Granular 'A', 'B', 'M' and Cold Recycled Mix/RAP materials.

The final road crossfall shall be between 2% and 2.5%.

This item will be utilized for the Granular 'A' material for bedding, cover and backfill of all items for the water distribution system, sanitary sewer and storm sewer system when specified in the contract or indicated on the contract drawings. Only virgin Granular 'A' will be accepted for pipe bedding and cover.

This item will be utilized for the Granular 'A' or Granular 'B' under roads, driveways, and sidewalks and shall be placed at a depth specified in the contract or as indicated on the contract drawings. Only virgin Granular 'A' will be accepted for road base.

This item will be utilized for the Granular 'M' for shoulder restoration and shall be placed at a depth as specified in the contract or as indicated on the contract drawings.

Granular 'A' or Granular 'B' must be installed on all road and sidewalk trenches to the existing grade to provide safe access. Granular 'M' must be installed on shoulders to the existing grade to provide safe access.

The Contractor will be responsible for maintaining granular surfaces until the restoration work is carried out. The Contractor must include in this unit price bid all labour and equipment to remove the excess granular from the trenches prior to final restoration, and delivery of the granular to a location specified by the Contract Administrator. The Contractor is responsible to remove the granular in a manner that avoids contamination of the granular with asphalt, concrete or native material. Any contaminated material shall be removed at the Contractor's expense. Any cost for these requirements must be included in the unit price bid for the granular.

The unit price bid for this item shall include the fine grading and compaction of the sub-base immediately preceding the placement of granular road base material. No roadway granular is to be placed until the subgrade elevation has been checked by the City's Inspector.

Payment for all material quantities shall be determined by net weight as recorded by a Government certified weigh scale. The supplier will be responsible for providing suitable scales for all materials to be weighed. Weigh bills (tickets), shall be provided for each load of granular in accordance with SPGS G32.

Weigh tickets received after the monthly Progress Payment has been finalized, for deliveries made within that month's Progress Payment period **will NOT be accepted.**

The onus shall be on the Contractor to ensure that the City's Inspector is furnished with all weigh tickets on a daily basis, since these will form the method of measurement.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

Recycled Material

Recycled concrete (RCM) will not be permitted on this project.

Under no circumstances will recycled material of any kind be permitted for use as pipe bedding, pipe cover or road base material.

RAP Road Base Material:

The proposed material must conform to the provisions of OPSS 334 for both composition (physical properties) and gradation as specified for RAP material. Access to the contractor's recycled material stockpile(s) is to be made available for sampling and testing by a QA/QC testing company retained by the City to verify compliance with the above noted provision. The contractor may submit their own testing results to the Contract Administrator for review and approval, but the City reserves the right to undertake any confirmatory testing it deems necessary prior to approving use of any proposed recycled material on this project.

The RAP road base material shall be placed at a thickness of 65mm at the center of the roadway and tapered to the road edge to match the existing shoulder elevation. Only where the existing shoulder is low and resulting in an unsafe roadside condition will granular 'M' be placed.

The unit price bid shall include the supply, placement and compaction of additional RAP materials in potholes and other low-spots to avoid the reflection of these areas in the finished surface.

Recycled Granular

Consideration may be given for the use of recycled granular for deep trench backfill.

Where recycled material is imported as a substitution for virgin granular material, the cost savings will be shared between the Contractor and the Owner.

The successful Contractor shall submit a written proposal to utilize recycled granular to the Contract Administrator at the pre-construction review meeting. The Contractor must include with the written proposal certified copies of laboratory testing results confirming that the proposed recycled granular material conforms to the provisions of OPSS.MUNI 1010 for both composition (physical properties) and gradation as specified for Granular 'A'.

The City reserves the right to undertake any additional confirmatory testing it deems necessary, prior to approving the use of recycled material on this project. Therefore, access to the Contractor's recycled material stockpile(s) is to be made available for

sampling and testing by a QA/QC testing company retained by the City to verify compliance with the above noted provision. The provisions of NPSCD General - Item G8 will apply to payment for testing in this regard.

Basis for Payment

Measurement for payment for recycled granular will be by the tonne (t).

Payment for all recycled granular quantities shall be determined by net weight as recorded by a Government certified weigh scale. The supplier will be responsible for supplying suitable scales for all recycled granular to be weighed. Triplicate numbered weigh bills shall be provided by the representative for each load of material as soon as delivery has been accepted.

Tenderers shall note that weigh bills for recycled granular materials will only be accepted for payment when delivery is made in the presence of the City's Inspector. Tenderers are advised to familiarize themselves with the Inspector's normal work hours.

All weigh tickets pertaining to all materials paid for by weight must show either "Tare and Net" or "Gross and Net" weights, if printimatic tickets are used. If printimatic tickets are not used, then the "Gross", "Net" and "Tare" must be given, otherwise the tickets will not be considered for payment.

No deliveries of recycled material to the site are to be made until written approval is received from the Contract Administrator. Approval will be subject to confirmation that the material complies with quality criteria and that cost savings will be shared between the Contractor and the Owner.

B6. SUBDRAIN (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 405, the following shall also apply:

The unit price bid shall include coring into all structures as required for the connection of the subdrains, regardless of the concrete thickness. The unit price bid shall also include all labour, materials and/or equipment necessary to make the subdrain connection to the outlet structure.

All labour, materials (including Granular material and all necessary compaction) and equipment required to excavate and install the subdrain shall be included in the unit price.

PVC subdrain coupling connectors shall be used where the connection to existing subdrain is required. The unit price bid shall include this requirement.

The unit price bid shall include the provision of test pits to verify the existence or location of existing subdrains if deemed necessary or as directed by the Contract Administrator.

It is the Contractor's responsibility to satisfy themselves as to the existing conditions and make allowance in their unit price bid, accordingly.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B8. CONCRETE CURB & GUTTER (PROVISIONAL)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 353, the following shall also apply:

The unit prices bid shall also include the following:

- Supply and installation of steel rods as shown on Dwg. NFS-B03 at all catchbasin and curb repair sections..
- Supply and placement of 32MPa concrete.
- Any type of curb and/or gutter – match existing specifications.
- Required excavation to accommodate new installation, if not otherwise included in Contract Item SPCS B2 Earth Excavation.
- All asphalt removal (including temporary asphalt curbs/infills), disposal and restoration with HL8 HS minimum width 0.3m and a thickness of 75mm
- All required Granular “A” material and compaction.
- Any length of curb and/or gutter as directed by the Contract Administrator or Inspector.
- Surveying to ensure proposed curb repairs will allow for adequate surface drainage to roadway CB’s.
- **Item B8 g)** shall include any type of private curbs including decorative/landscaping curbs including poured-in-place and precast, to match existing specifications.

The Contractor shall take due precaution to protect green concrete from being damaged, marred or defaced, particularly at driveway entrances. In the event that the green concrete is marred or damaged in any way, the Contractor shall breakout and replace the damaged sections. Patching or grinding of damaged, marred or defaced concrete will not be accepted. The unit price bid shall be deemed to have made due allowance for this requirement.

A total tolerance (or elevation variance) of 3mm will be accepted as a reasonable variance from the specified curb and gutter elevations. If the total tolerance is exceeded, the Contractor shall, at their own expense, remove and replace the concrete curb and gutter to the satisfaction of the Contract Administrator, at no additional cost to the contract.

Private curb restoration shall include all necessary saw cutting.

If the contractor is not able to match the existing specifications of the private curbs exactly, a suitable alternative may be used. The contractor will be responsible for consulting the homeowner before selecting a suitable alternative.

The exact location of dropped curbs as directed by the Contract Administrator or Inspector will be deemed to be included in the unit price bid. Adjustments in the field will be conducted by the Contract Administrator or the City's representative.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B10. SAWCUTTING PAVEMENT (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents, the following shall also apply:

This item shall also apply to additional sawcutting of asphalt and/or concrete where approved by the Contract Administrator and not otherwise referenced within the contract, the Special Provisions – Contract Items Supplementary specifications or noted on the contract drawings.

Basis for Payment

Measurement for payment will be made per linear metre as measured in the field. Payment will be made at the unit price bid in the Schedule of Quantities and Unit Prices.

All other sawcutting costs shall be included in the appropriate item as specified in NPSCD General - Item G13.

This item is provisional and requires prior written approval by the Contract Administrator. Compensation will not be provided if written approval is not sought in advance.

B11. ASPHALT MILLING

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents, the following shall also apply:

In Item B 11 a) payment for this item shall be by the square metre for areas that require butt joints at the paving limits. Butt joints shall be limited to 3 m in width where ever possible. It is up to the contractor to determine if a butt joint is needed to produce a satisfactory finished product.

In Item B 11 b) payment for this item shall be by the square metre for areas that require to be milled up to 75mm in thickness to accommodate RAP and/or Surface Treatment. It is up to the contractor to determine the depth needed to produce a satisfactory finished product.

Disposal of the asphalt millings shall be the responsibility of the Contractor.

The unit price bid shall be deemed to have made due allowance for this requirement.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B13. ADJUSTMENT OF APPURTENANCES

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 408, the following shall also apply:

Payment for these works shall include the adjustment of existing (and remaining) maintenance holes, catchbasins, ditch inlets, valve chambers and/or valve boxes located within the road allowance. No payment will be made under this item for newly constructed appurtenances.

Under no circumstances shall HDPE adjustment units be used on this contract.

The unit price bid shall include all materials, equipment and labour necessary to ensure that the final elevation of each appurtenance matches the final elevation of the proposed asphalt works.

All structures are to be set to surface (finished) elevation.

All costs associated, including the supply and installation of new frames, covers and grates, new valve/curb boxes, precast adjustment units, mortar or concrete, placement and compaction of Granular 'A' (as required) and Hot Mix Asphalt (as required), as well as any excavation and/or the breaking out of concrete within the road base, shall be deemed to have been included in the unit price bids under this item.

Replace Existing Valve/Curb Boxes

This item may be used where an existing valve and/or curb box cannot be successfully adjusted in the field and only upon written prior approval from the Contract Administrator.

No separate or additional payment will be made for the supply of materials and/or labour required to adjust new valve or curb boxes. Any and all costs associated with the adjustment of these valve and curb boxes shall be deemed to be included in the appropriate unit prices.

Replace Existing Maintenance Hole/Valve Chamber Frame & Cover, Catchbasin/Ditch Inlet Frame & Grate

Unless specifically identified on the contract drawings and in the Schedule of Quantities and Unit Prices any replacement of existing 'frame and covers' or 'frame and grates' must receive written prior approval from the Contract Administrator. Payment will not be entertained where the Contractor has failed to secure this approval.

Hinged catchbasin covers shall open away from the roadway.

Replacing the 'frame and cover' or 'frame and grate' of an existing (and remaining) maintenance hole/valve chamber or catchbasin/ditch inlet shall include the salvage and delivery of the existing frame and cover/grate to the City's Service Centre at no additional cost to the contract.

No separate or additional payment will be made for the supply of materials and/or labour required to adjust new frames and covers/grates on existing (and remaining) maintenance holes/valve chambers or catchbasins/ditch inlets. Any and all costs associated with the adjustment of these frames, covers and grates shall be deemed to be included in the appropriate unit prices.

Salvaged Materials

Salvaged frames, covers and grates and valve/curb boxes shall be delivered to the City's Service Centre at 3200 Stanley Ave, as directed by the Contract Administrator at no additional cost to the contract. Deliveries to the Service Centre must be made between 8:00 am - 4:00 pm, Monday to Friday.

Basis for Payment

The unit price bid shall include all materials, equipment and labour necessary to ensure that the final elevation of each appurtenance matches the final elevation of the proposed asphalt works.

Where materials are to be salvaged and delivered to the City's Service Centre, 50% of the unit price bid shall be paid upon removal of the item and the remainder shall be paid upon receipt of the item at the Service Centre.

B14. SUPPLY AND PLACE HOT MIX ASPHALT

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Documents and OPSS 310, the following shall also apply:

Clause 14.09 of the NPSCD for price adjustment provisions is not applicable under this contract.

All materials shall conform to the requirements of OPSS.MUNI 1003 and OPSS 1150.

At the limits of the proposed road works, the base asphalt thickness shall be increased to match the existing top course asphalt over distance of 2 metres. This provision shall be included in the unit price bid.

No extra payments will be made for any hand work involved in spreading or compacting the hot mix asphalt around radius, intersections, trench areas, areas between the existing asphalt and new gutters, curbs.

Item B14a) shall be used in areas where base repairs are needed before or after the RAP material has been laid, as directed by the Contract Administrator. This item shall also include any hand work required to form a temporary asphalt curb.

The unit price bid for Item B14a) shall also include the placement of temporary ramping at all wheelchair depressions and other areas as instructed by the Contract Administrator.

Asphalt trench restoration shall be required once the granular backfill is completed. The restoration shall consist of a minimum of 130mm of HL8 HS for all trenches.

Basis for Payment

As stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B15. ASPHALT WALKWAYS & DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, OPSS 311, OPSS 314, and Special Provisions – Contract Items Supplementary, Item B14, the following shall also apply:

Existing asphalt driveway depths are to be matched if thickness is greater than that specified in the Niagara Peninsula Standard Contract Document, which are deemed to be the minimum requirement.

The unit price bid for this item shall be complete compensation for the preparation and additional handwork that may be required to restore driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has created or caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

The Contractor must take all due precaution not to disturb any areas outside the limits required to complete the proposed works safely. Areas disturbed outside these limits will be repaired in accordance with the specifications outlined in this contract at the Contractor's own expense and solely at the discretion of the Contract Administrator.

Winter Work

The Contractor shall make due allowance in the unit price bid for the additional effort required to maintain asphalt driveways during winter construction.

The extent of the driveway restoration will be in accordance with the initial sawcut limit as approved by the Contract Administrator, prior to the asphalt driveway removal. Any subsequent asphalt damage, maintenance and/or repair will be the Contractor's responsibility at no additional cost to the contract. Once any part of the asphalt is removed to facilitate construction, the Contractor must inspect the driveway on a daily basis to remove any broken asphalt pieces and maintain an even granular surface so as to minimize the risk of damage to pedestrians, vehicles, snowploughs and/or snow blowers.

Services

Where the installation of sanitary services, cleanouts or water services requires the excavation of existing asphalt driveway, the entire driveway bay shall be removed from edge to edge and from the back of curb or sidewalk to a neat straight sawcut line behind the new installation. The sawcut line shall be made prior to all excavation or removals and shall be perpendicular to both edges of the driveway. The sawcut shall be made sufficiently behind the cleanout or curb stop to allow for the safe installation of the new service so as to provide a neat finished match line. Should this matchline become damaged, a new sawcut limit will be required and shall be completed at no additional cost to the contract (or Property Owner).

Curb boxes are to be set flush with the new driveway surface.

Trenches in the driveways shall be completely backfilled with Granular 'A' with all granular material compacted to 100% SPMDD.

Cleanouts in asphalt shall be installed to the finished asphalt grade complete with a flat cleanout cap flush with the finished surface.

Basis for Payment

The unit price bid shall include all necessary labour, materials and equipment to complete the work in accordance with the specifications of this contract including, but not limited to, sawcutting, removals, disposals, surface preparation, backfilling, grading, compaction, bond breaker and tack coat.

In addition to the above, the unit price bid will cover any required restoration work between the contract limits (property line) and building face, where directed by the Contract Administrator.

All costs associated with the supply and installation of cleanout caps, supply and placement of Granular 'A' and compaction shall be included in the unit price bid for this item.

Supply and placement of Hot Mix Asphalt shall be paid for separately under the appropriate item in the Schedule of Quantities and Unit Prices.

B16. CONCRETE PAVEMENT & DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 350, the following shall also apply:

Existing concrete driveway depths are to be matched if thickness is greater than that specified in the Niagara Peninsula Standard Contract Document, which are deemed to be the minimum requirement.

The unit price bid for this item shall be complete compensation to restore private driveways and driveways adjacent to sidewalk removals or as otherwise noted on the contract drawings or directed by the Contract Administrator.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has created or caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

The Contractor must take all due precaution not to disturb any areas outside the limits required to complete the proposed works safely. Areas disturbed outside these limits will be repaired in accordance with the specifications outlined in this contract at the Contractor's own expense and solely at the discretion of the Contract Administrator.

Services

Where the installation of sanitary services, cleanouts or water services requires the excavation of existing concrete driveways, the entire driveway bay shall be removed from edge to edge and from the back of curb or sidewalk to a neat straight sawcut line behind the new installation. The sawcut line shall be made prior to all excavation or removals and shall be perpendicular to both edges of the driveway. The sawcut shall be made sufficiently behind the cleanout or curb stop to allow for the safe installation of the new service so as to provide a neat finished match line. Should this matchline become damaged, a new sawcut limit will be required and shall be completed at no additional cost to the contract (or Property Owner).

Curb boxes are to be set flush with the new driveway surface.

Trenches in the driveways shall be completely backfilled with Granular 'A' with all granular material compacted to 100% SPMDD.

Cleanouts in asphalt shall be installed to the finished asphalt grade complete with a flat cleanout cap flush with the finished surface.

Basis for Payment

The unit price bid shall include all necessary labour, materials and equipment to complete the work in accordance with the specifications of this contract including, but not limited to, sawcutting, removals, disposals, surface preparation, backfilling, grading, compaction, and bond breaker.

In addition to the above, the unit price bid will cover any required restoration work between the contract limits (property line) and building face, where directed by the Contract Administrator.

All costs associated with the supply and installation of cleanout caps, supply and placement of Granular 'A' and compaction shall be included in the unit price bid for this item.

B17. ADJUST PAVING (STONE) BRICK DRIVEWAY

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, the following shall also apply:

As per the Niagara Peninsula Standard Contract Document, the Contractor shall replace any paving stones broken or damaged as a result of removal or stolen from the stockpile, at no additional cost to the contract.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

Should paving stones be left over and the property owner would like to keep the extra paving units, the Contractor is to stockpile the paving stones in a safe manner and secure place for the owner. If the property owner does not wish to keep the extra paving units, they will become the property of the Contractor for his reuse and/or disposal. Paving stones shall not be removed from site without the permission of the property owner. Any stones that are removed from site without the property owner's permission are to be replaced by the Contractor at no additional cost to the contract.

Basis for Payment

The unit price bid for this item shall be complete compensation to restore sidewalks, driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

The unit price bid shall include the cost to supply and place a 50mm limestone screening bedding and a sharp course granular sand between the pavers.

In addition to the above, the unit price bid will cover any required restoration work between the contract limit (property line) and building face, where directed by the Contract Administrator.

All costs associated with the supply and installation of cleanout caps, supply and placement of Granular 'A' and compaction shall be included in the unit price bid for this item.

Payment shall be as stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

B18. GRANULAR DRIVEWAYS

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document and OPSS 314, the following shall also apply:

The Contractor is to note that the granular driveway thicknesses specified in the NPSCD are minimum requirements. Existing driveway depths are to be matched if greater.

All granular driveways are to be compacted to 100% Standard Proctor Maximum Dry Density.

The Contractor is to adjust the driveway gradient where required to allow for positive drainage from the driveway and housewalks. Where the restored driveway has caused ponding, the Contractor shall adjust and restore the driveway and gradient at no additional cost to the contract. Driveway gradient adjustments must not negatively impact vehicle access.

Basis for Payment

The unit price bid for this item shall be complete compensation to restore driveway aprons and driveways, as necessary, and as directed by the Contract Administrator.

Payment shall be as stipulated in the Niagara Peninsula Standard Contract Document and priced as per the breakdown of items as indicated in the Schedule of Quantities and Unit Prices.

All costs associated with the supply and installation of cleanout caps, supply and placement of Granular 'A' and compaction shall be included in the unit price bid for this item.

B19. REGRADING OF DITCHES AND SWALES (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Contract Document and OPSS.MUNI 206, the following shall also apply:

This item shall be used for:

a. Existing Ditches and Swales

Cut and/or fill of existing ditches/swales in accordance with the contract drawings or at the direction of the contract administrator, regardless of cut/fill depths; and

b. New Ditches and Swales

Cut of new ditches/swales in accordance with the contract drawings or at the direction of the contract administrator, regardless of cut depths.

The work shall include excavating, hauling, handling and placing in embankments, shaping, compacting, trimming of earth material and the management of excavated material.

Excess and/or unsuitable excavated material related to cut/fill of existing and new ditches/swales shall be removed from site at no additional cost to the contract.

Basis for Payment

Measurement for payment will be per linear meter, measured along the centreline of the ditch or swale.

The unit price bid for this item shall be complete compensation to complete the work and includes removal and disposal of excess or unsuitable excavated material.

B21. TOPSOIL AND SOD

In addition to the conditions stipulated in the Niagara Peninsula Contract Document, OPSS 802 and OPSS 803, the following shall also apply:

All areas to be sodded shall be graded to provide proper drainage. Any areas on private property shall also be included.

All unnecessary damage to front lawns, boulevards or grass areas caused by the Contractor's carelessness shall be reinstated at his/her own expense.

Topsoil

Topsoil shall be a PREMIUM BLEND, weed free, and naturally sterilized through composting.

The blend shall consist of:

- 50% Triple Mix (30% mixture of topsoil, sands, and shredded wood mulch/30% mixture of black organic compost and manure/30% mixture of peat loam); and
- 50% Premium Topsoil (50% mixture of topsoil, sands, and shredded wood mulch/ 25% mixture of black organic compost/ 25% mixture of composted cow manure).

In general, the resulting topsoil mix should meet the following parameters:

pH:	6.5 – 7.5
Potassium:	100 – 120 ppm
Phosphorous:	15 – 30 ppm
Magnesium:	100 – 120 ppm
Organic Matter:	≥ 3%

Unless otherwise specified, the minimum depth of applied Premium Blend Topsoil shall be 100 mm.

Basis for Payment

Measurement for payment shall be square metre of area topsoiled and sodded.

The unit price bid shall include all materials, equipment and labour necessary to complete the work and shall include grading and the supply and application of fertilizer and water necessary to ensure growth within the one year maintenance period.

B22. TOPSOIL, SEED AND MULCH

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, Special Provisions – Contract Items Supplementary, Item B21, OPSS 802 and OPSS.MUNI 804, the following shall also apply:

All areas to be seeded shall be graded to provide proper drainage. Any areas on private property shall also be included.

All unnecessary damage to front lawns, boulevards or grass areas caused by the Contractor's carelessness shall be reinstated at his/her own expense.

Topsoil

Topsoil shall be a PREMIUM BLEND, weed free, and naturally sterilized through composting.

The blend shall consist of:

- 50% Triple Mix (30% mixture of topsoil, sands, and shredded wood mulch/30% mixture of black organic compost and manure/30% mixture of peat loam); and
- 50% Premium Topsoil (50% mixture of topsoil, sands, and shredded wood mulch/ 25% mixture of black organic compost/ 25% mixture of composted cow manure).

In general, the resulting topsoil mix should meet the following parameters:

pH:	6.5 – 7.5
Potassium:	100 – 120 ppm
Phosphorous:	15 – 30 ppm
Magnesium:	100 – 120 ppm
Organic Matter:	≥ 3%

Unless otherwise specified, the minimum depth of applied Premium Blend Topsoil shall be 100mm.

Hydraulic Seed & Mulch

Hydraulic seed and mulch shall be placed in accordance with OPSS.MUNI 804.

The seed mix shall meet the requirements of the "Standard Roadside Mix" outlined in Appendix Table A-1 of OPSS.MUNI 804. Quality Assurance and specifically Performance Measures will be per OPSS.MUNI 804.08.01.

Basis for Payment

Measurement for payment shall be square metre of area topsoiled and seeded.

The unit price bid shall include all materials, equipment and labour necessary to complete the work and shall include grading and the supply and application of fertilizer and water necessary to ensure growth within the one year maintenance period

B24. APPLICATION OF WATER FOR DUST CONTROL (PROVISIONAL ITEM)

In addition to the conditions stipulated in the Niagara Peninsula Standard Contract Document, the following shall also apply:

Filling of water application vehicles from municipal hydrants will no longer be permitted. The City has installed a smart card water filling station, located across from the Service Centre located at 3200 Stanley Avenue.

The station is equipped with new technology allowing Contractors to pre-pay for water credit on a swipe card system that can be refilled once the card has been emptied. The cost of the swipe card is \$15.00 and may be purchased at the Service Centre. To set up a water filling account please contact Environmental Services at 905-356-7521, Extension 6322.

Water shall be applied by means of approved equipment capable of uniform and controlled distribution.

Basis for Payment

Water will be measured in cubic metres.

Payment at the unit price bid in the Schedule of Quantities and Unit Prices shall be deemed full compensation for all water, carrying, application and any other costs involved with this dust control operation.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be provided if written approval is not sought in advance.

B26. SURFACE TREATMENT

The provisions of OPSS 304 and OPSS 1006 shall apply except as amended or extended herein.

The contractor is not to perform any work or stage any equipment or materials within 15.25m (50 feet) of any CN Rail crossing

Item B26c) to be a black trap rock that meets the Class 1 specifications for use on the urban roadways for the surface treatment process.

This item shall also include the provision of commercial sweeping of the class 1 aggregates from roads inside the urban area, in and around intersections and any area

deemed necessary by the Contract Administrator after a period of not more than two weeks from the date of placement of the aggregate.

B30. BASE REPAIRS GENERAL

The unit price bid per cubic metre of base repair shall include the following:

- Local Roads:
 - Excavation of the road base and earth to a depth of 420 mm, including fine grading and compaction of the sub-grade.
 - Supply and placement of 340mm depth of granular A material including grading and compaction to 100% Standard Proctor Density.
 - Disposal of the excavated material as specified in Clause 2 of the Special Provisions.
- Collector/Arterial:
 - Excavation of the road base and earth to a depth of 600 mm, including fine grading and compaction of the sub-grade.
 - Supply and placement of 520mm depth of granular A material including grading and compaction to 100% Standard Proctor Density.
 - Disposal of the excavated material as specified in Clause 2 of the Special Provisions.

B36. REMOVE, STORE AND REINSTATE (PROVISIONAL ITEMS)

This item shall be used for the careful removal, storage and reinstatement of items noted on the contract drawings. Any item damaged for any reason shall be replaced at the expense of the Contractor as directed by the owner. **It should be noted that the Owner may not be the City of Niagara Falls.**

Signs

This item shall be used for the careful removal, storage and reinstatement of signs, other than traffic or regulatory signs, as directed by the Contract Administrator. Where the sign is not the property of the City of Niagara Falls, the Contractor shall seek the Owner's permission before removal.

This item shall include all labour, materials and equipment necessary to remove the sign, store the sign for the required duration, and complete the reinstatement of the sign to existing or better condition. Reinstatement will include any underground/aboveground support and/or base requirements as directed by the Owner.

If the sign is damaged, the Contractor shall notify the Owner. The Contractor shall repair or replace the sign in accordance with the Owner's requirements at no additional cost to the contract.

Street Furniture

This item shall be used for the careful removal, storage and reinstatement of street furniture (furniture) as directed by the Contract Administrator. Street furniture may include benches, refuse containers, planters, bike racks, bollards, or any other object within the construction limits. Where the furniture is not the property of the City of Niagara Falls, the Contractor shall seek the Owner's permission before removal.

This item shall include all labour, materials and equipment necessary to remove the furniture, store the furniture for the required duration, and complete the reinstatement of the furniture to existing or better condition. Reinstatement will include any underground/aboveground support and/or base requirements as directed by the Owner.

If the furniture is damaged, the Contractor shall notify the Owner. The Contractor shall repair or replace the furniture in accordance with the Owner's requirements at no additional cost to the contract.

Landscape Items

This item shall be used for the careful removal, storage and reinstatement of landscape items as directed by the Contract Administrator. Landscape item may include bushes, hedges, fences (any material), boulders, bird baths, or any other item within the construction limits. Where the landscape item is not the property of the City of Niagara Falls, the Contractor shall seek the Owner's permission before removal.

This item shall include all labour, materials and equipment necessary to remove the landscape item, store the landscape item for the required duration, and complete the reinstatement of the landscape item to existing or better condition. Reinstatement will include any underground/aboveground support and/or base requirements as directed by the Owner.

If the landscape item is damaged, the Contractor shall notify the Owner. The Contractor shall repair or replace the landscape item in accordance with the Owner's requirements at no additional cost to the contract. In the case of living vegetation such as bushes, hedges, etc., the Contractor shall replace the item at no additional cost to the contract over the duration of the maintenance period if it does not survive transplant.

Basis for Payment

Payment shall be as per the units indicated in the Schedule of Quantities and Unit Prices for each item noted.

B38. IMPORTED CLEAN FILL MATERIAL (PROVISIONAL ITEM)

The unit price bid for Item B38 shall be paid by the cubic metre for fill material that is brought in from outside the limits of this contract. Imported fill material shall be used in areas where the new travelled surface of the roadway is higher than the existing shoulder/ditch. The fill material shall be used to raise the elevation of the shoulder/ditch to match the roadway. The material shall be placed in 200mm lifts and compacted to

98% Standard Proctor Density. This shall be done at the direction of the Contract Administrator.

The unit price bid shall include loading, hauling, placement and compaction of the native material and spreading grass seed on the native material.

It will be up to the contractor to source-out **clean, contaminant-free** fill material at no additional cost to the contract.

This item is provisional. Prior written approval must be provided by the Contract Administrator. Compensation will not be provided if written approval is not sought in advance.

PROVISIONAL ITEMS

NOTE: Provisional items have been included within this contract in an effort to receive competitive pricing in the unlikely event that they may be required during construction. These items may be related to any infrastructure works (Roads/Sewer/Watermain) within the specific Section of the Schedule of Quantities and Unit Prices and as such have been separated within these supplementary specifications.

All Provisional Items must be approved by the Contract Administrator.

P1. 32MPA CONCRETE

This concrete shall have minimum 28 day strength of 32 MPa. The price indicated in the Schedule of Quantities and Unit Prices per cubic metre (m³) shall include supply and placement of concrete in trench at any depth for whatever purpose as directed by the Contract Administrator.

P4. UNSHRINKABLE FILL

The provisions of OPSS 1359 apply as amended herein. All unshrinkable fill materials shall conform to the requirements of OPSS.MUNI 1350.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment necessary to supply and place unshrinkable fill for whatever purpose as directed by the Contract Administrator.

P5. 19MM CLEAR STONE

All 19mm clear stone materials shall conform to the requirements of OPSS.MUNI 1010.

Basis for Payment

Payment at the unit price bid for this item shall include all labour, materials and equipment necessary to complete the work for supplying and placing the 19mm clear stone as shown on the contract drawings or as directed by the Contract Administrator. Payment will be by the tonne, based on submitted weigh tickets for same.