Corporate Services Department
Supply Chain Management

**ADDENDUM NO. 1**

**Request for Tenders # T-722-25**
**Creek Way Village Long-Term Care Home Flooring Replacement and Balcony Restoration**

**TO WHOM IT MAY CONCERN:**

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This addendum, issued Thursday, April 24, 2025, must be incorporated into and made part of the above noted Request for Tenders document.

## ISSUE #1: REVISION TO THE ARCHITECTURAL DRAWING SET

Drawing A-9: Floor Plan of Escarpment Dining Hall (3rd Fl) is hereby deleted in its entirety and replaced by the revised Drawing A-9: Floor Plan of Escarpment Dining Hall (3rd Fl) attached hereto as Attachment 1.

## ISSUE #2: AMENDMENTS TO THE TECHNICAL SPECIFICATIONS

A. **Storage of Furniture:** The Contractor shall make provision for the removal, storage and reinstallment of the furniture and other equipment within the rooms where flooring replacement is required. There is no storage available within the building, hence the Contractor shall provide temporary storage (e.g. rental POD) to house removed furniture/equipment. Similarly, the Contractor shall also provide temporary storage for flooring material and other associated parts and materials due to lack of storage availability within the building.

B. **Phasing:** The Contractor shall refer to Specification and Drawing Set documentation issued in the Tender for phasing of the project. Not all floors can be worked upon as one phase. These are phased for each floor and future sub-phased within each Phase.

C. **Escarpment Flooring Area:** Refer to the revised Drawing A-9: Floor Plan of Escarpment Dining Hall (3rd Fl) for the revised flooring area.

D. **Noise While Working:** The Contractor to get prior permission from the Regional Representative on works that may be subject to noise. The normal working hours for these works is 9 am to 5 pm. If the Building Operations request the work to be stopped due to disturbance to the residents or neighboring residents, the Contractor is to remobilize again as per the agreed upon timing.

## ISSUE #3: RESPONSES TO QUESTIONS RECEIVED BY THE REGION

**Question 1:** Can you confirm if BS1 is Johnsonite which is indicated on floor plans but spec says base is Shaw Sculpture 6' High with rubber ¼ round.
thank you,

**Answer 1: The base BS1 shall be as noted on the specifications – Thermoplastic Rubber Sculptured wall base 303VS, 6" high, with Thermoplastic Quarter-round 151VS by Shaw Contract.**

**Question 2:** May SEMCO Flooring be used in place of the specified flooring?

**Answer 2: No, Bidders are to provide pricing based on the flooring specified in the Technical Specifications.**

## ISSUE #4: TENDER TECHNICAL SPECIFICATIONS

It has come to the Region's attention that the Technical Specifications contained within T-722-25 Bid Document do not contain the divisional section headers. Therefore, the 89 pages of Technical Specifications (including headers) is hereby attached as Attachment 2. NOTE: No changes to content other than the addition of headers have been made to Attachment 2. Bidders shall incorporate the amendments noted in Issue #2 to these Technical Specifications for the purposes of preparing their Bid.

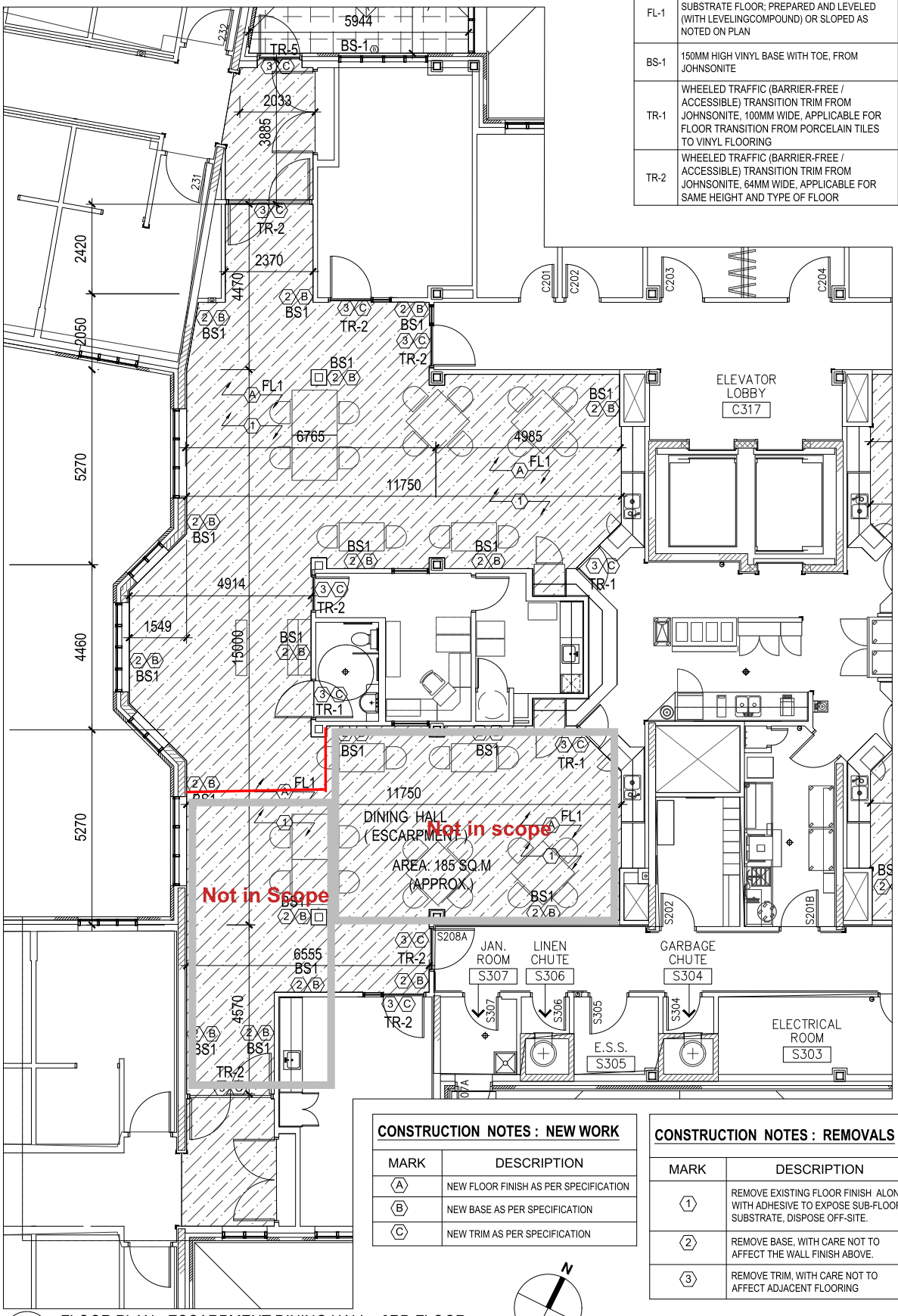
All other terms and conditions remain the same. This addendum must be acknowledged in the submitted document.

Penny Howson
Senior Strategic Sourcing Specialist

Regional Municipality of Halton
HEAD OFFICE: 1151 Bronte Rd, Oakville, ON L6M 3L1
905-825-6000 | Toll free: 1-866-442-5866

NOTE: ALL EXISTING DIMENSIONS TO BE VERIFIED AT SITE.

| MARK | FINISH SCHEDULE |
|---|---|
| FL-1 | LUXURY VINYL PLANK FLOORING, ADHERED TO SUBSTRATE FLOOR; PREPARED AND LEVELED (WITH LEVELINGCOMPOUND) OR SLOPED AS NOTED ON PLAN |
| BS-1 | 150MM HIGH VINYL BASE WITH TOE, FROM JOHNSONITE |
| TR-1 | WHEELED TRAFFIC (BARRIER-FREE / ACCESSIBLE) TRANSITION TRIM FROM JOHNSONITE, 100MM WIDE, APPLICABLE FOR FLOOR TRANSITION FROM PORCELAIN TILES TO VINYL FLOORING |
| TR-2 | WHEELED TRAFFIC (BARRIER-FREE / ACCESSIBLE) TRANSITION TRIM FROM JOHNSONITE, 64MM WIDE, APPLICABLE FOR SAME HEIGHT AND TYPE OF FLOOR |




**CONSTRUCTION NOTES : NEW WORK**

| MARK | DESCRIPTION |
|---|---|
| A | NEW FLOOR FINISH AS PER SPECIFICATION |
| B | NEW BASE AS PER SPECIFICATION |
| C | NEW TRIM AS PER SPECIFICATION |

**CONSTRUCTION NOTES : REMOVALS**

| MARK | DESCRIPTION |
|---|---|
| 1 | REMOVE EXISTING FLOOR FINISH ALONG WITH ADHESIVE TO EXPOSE SUB-FLOOR / SUBSTRATE, DISPOSE OFF-SITE. |
| 2 | REMOVE BASE, WITH CARE NOT TO AFFECT THE WALL FINISH ABOVE. |
| 3 | REMOVE TRIM, WITH CARE NOT TO AFFECT ADJACENT FLOORING |

1 / A - 9 FLOOR PLAN - ESCARPMENT DINING HALL - 3RD FLOOR

SCALE: 1:100

ARCHITtheque
Architectural and Interior Design Services
18 Spire Hillway Toronto Ontario M2H 3A2
Tel (647) 712 1565 archittheque@hotmail.com

ONTARIO ASSOCIATION OF ARCHITECTS
HITESH RATILAL KHATRI
LICENCE 7347

CREEK WAY LONG TERM CARE HOME FLOORING REPLACEMENT AND BALCONY RESTORATION

5200 CORPORATE DRIVE, BURLINGTON, ON, L7L7G7

PROJECT NO. 2401 | DATE: MARCH 2024
DRAWN BY: ADK | SCALE: 1:100
CHECKED BY: HRK | ISSUE DATE: MARCH 25, 2025

DRAWING TITLE: FLOOR PLAN OF ESCARPMENT DINING HALL ( 3rd Fl )

ISSUED FOR TENDER - PACKAGE 2

DRAWING NO. A-9

**ATTACHMENT 2**

# Technical Specifications

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**END OF SECTON**

## PART 1 - GENERAL

### 1.1 Reference:

A. These Specifications form an integral part of the Contract Documents.

B. Refer to all other parts of the Contract Documents to determine their effect on the work of each section of these Specifications.

C. The requirements of this Section and Division 1 apply to and govern the work under other divisions.

### 1.2 Standards, Standard Specifications and Standard Drawings:

A. Unless specified otherwise, be governed by the latest version of Reference Standards, Standard Specifications and Standard Drawings, at the time of tender closing.

### 1.3 WHMIS Submittals:

A. Prior to the commencement of work, provide to the Region's Representative/Architect/Consultant a list of those products which are controlled under WHMIS legislation and that are expected to be used in the performance of the work. Provide related Material Safety Data Sheets in accordance with the specified procedure for Submittals for information. Properly label all containers used in the application of products controlled under WHMIS product legislation.

B. Notify the Region's Representative/Architect/Consultant of changes to the list in writing and provide the relevant Safety Data Sheets (SDS).

### 1.4 Metric Conversion:

A. Be responsible for conversion of dimensions from metric units to imperial units and vice versa, as necessary

## PART 2 - PRODUCTS

There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Mobilization and Demobilization:

A. Supply and erect signs, barricades, hoardings and such other protection as may be required to protect the public during construction.

B. Contractor to follow IPAC standards for infectious control during Construction onsite. They would need to participate in the IPAC kickoff meeting with the Region's representative.

C. Provide hoarding or similar barricade to define Contractor's working area.

D. Ensure that the price entered in the Form of Tender for this item is consistent with the costs involved.

E. The following governs payment for Mobilization/Demobilization:

1. Sixty percent (60%) upon commencement of construction, i.e. full mobilization. Include the claim for mobilization in the first payment claim issued for the Contract subject to the Region's Representative/Architect/Consultant being satisfied that the full mobilization has taken place. If the Region's Representative/Architect/Consultant is not so satisfied, he shall allow a payment which, in his opinion, reflects the degree of mobilization effected to date

2. Remaining 40% to be paid progressively from Substantial Performance to full demobilization.

**3.2 Examination:**

A. Examine the site and any work on which the work of each Division depends. Check all dimensions, and if any discrepancies or defects are found, notify the Region's Representative/Architect/Consultant.

B. Confirm dimensions prior to commencing work and ensure that they are agreed upon by the affected trades and the Region's Representative/Architect/Consultant.

C. Designated Substance Survey Report can be found under Appendix C. Thoroughly examine the site and confirm the location of designated substances before commencing work.

D. Inform workers and sub-trades of the locations of designated substances on site before commencing work.

E. Commencement of the work implies acceptance by the Contractor of dimensions, conditions and surfaces.

**3.3 Work to Conform:**

A. Ensure that all work conforms to the Contract during its progress and upon its completion, true to the lines, levels and grades shown on the Contract Documents. Ensure that the work is built in a thoroughly substantial and workmanlike manner, in accordance with the Contract Documents, subject to such modifications and additions as may be deemed necessary by the Region's Representative/Architect/Consultant. No payment will be made for any work in excess of the requirements of the Contract Documents unless ordered in writing by the Region's Representative/Architect/Consultant.

B. Conform to applicable codes and standards including, but not limited to, those listed in Section 01 09 00.

**3.4 Maintenance of Documents on Site:**

A. Maintain at the job site, one copy of each of following:

1. Contract Documents complete with Addenda.

2. Reviewed shop drawings.

3. Change orders.

4. Other modifications to the Contract.

5. Field test records.

6. MOL notices

7. Safety inspection reports.

8. Copies of permits and approvals as applicable.

B. Maintain documents in a clean, dry, legible condition.

C. Make documents available at all times for inspection by the Project Manager/Architect/Consultant.

D. Maintain on site, one copy of each workmanship standard called for in the Specifications.

E. Maintain As-Built drawings as follows:

1. Two sets of white prints, updated with mark-ups as the project progresses, and then to be used to complete As-Built drawing.

2. Maintain project record drawings and record accurately, on the white prints, on a daily basis, work constructed differently than shown on the Contract Documents. Record all changes in the work caused by site conditions, or originated by the Region, the Region's Representative/Architect/Consultant, the Contractor or a Sub-contractor and by addenda, supplemental drawings, site instructions, supplementary instructions, change orders, correspondence and directions of regulatory authorities.

3. Record the following information:

   a) Depths of various elements of foundations in relation to the established survey datum.

   b) Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface features.

   c) Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure. Do not conceal critical work until its location has been recorded.

   d) Field changes of dimension and detail.

   e) Location of access panels for valves, controls, cleanouts, etc.

   f) Changes made by Supplemental Instructions / Proposed Change / Contemplated Change Notices / Change Order or Field Order.

4. Make available to the Region's Representative/Architect/Consultant the up-to-date record drawings identifying changes as described above for review as requested.

5. Complete the record drawings and submit them to the Region's Representative/Architect/Consultant and the Region prior to issuance of the Substantial Performance Certificate. Modify the record drawings if necessary and submit the final record drawings to the Region's Representative/Architect/Consultant and the Region prior to the issuance of the Total Performance Certificate.

6. Update these drawings and submit for monthly review. Drawings not maintained up-to-date will delay progress payments.

**3.5 Access to Site:**

A. Unless stated otherwise, reasonable access to the site will be permitted from start of construction until Substantial Performance of the Contract.

B. After Substantial Performance of the Contract, do not enter the facility without prior written authorization from the Region and restrict activities to the work duly authorized by the Region, including modifications and rectification of deficiencies. For completion of additional work other than the authorized work, obtain written approval from the Region prior to proceeding with such additional work.

C. The Region's Representative/Architect/Consultant will authorize access to the construction site.

D. Maintain proper and safe access to the existing facility at all times.

**3.6 Access to Work:**

A. The Region or persons authorized by the Region's Representative/Architect/Consultant may at any time enter upon the work and premises used by the Contractor. Provide proper and safe facilities for access. Others, such as regulatory and permitting agencies, may also, when authorized by the Region's Representative/Architect/Consultant enter upon the work and premises used by the Contractor for purposes that may be required by their agencies.

B. Provide proper facilities by means of walkways or otherwise, to secure convenient safe access to all parts of the work as may be required by the Project Manager/Architect/Consultant.

C. Place materials so that free access may be maintained at any time to all parts of the work and facilities.

**3.7 Work Areas:**

A. Work areas are defined on the Drawings or designated on site by the Region's Representative/Architect/Consultant. Confine operations to the designated areas.

**3.8 Use of Premises by Contractor:**

A. Be advised that the Contractor and their Subcontractors / Sub trades shall have reasonable, but not unrestricted use of the premises. Confine activities to the areas designated on the Contract Drawings and to the satisfaction of the Region's Representative/Architect/Consultant. No claims for additional costs will be entertained by the Region resulting from restrictions of movements on, or occupation of, the premises.

B. Do not enter upon or occupy with workers, tools, or materials of any nature, lands other than the property of the Region or within working easements as shown on the Contract Drawings, without the written permission of the proper parties. Provide a certified copy of each such consent to the Region's Representative/Architect/Consultant. Assume liabilities and additional costs for rentals or damages arising from occupation of private lands.

**3.9 Protection of Construction and Equipment:**

A. Protect new construction from damage. Do not overload any part of a structure, falsework, formwork or scaffolding. Rebuild to the satisfaction of the Region's Representative/Architect/Consultant damaged portions of the work.

B. Take precautions to protect structures and equipment until completion.

C. Protect equipment supplied and/or installed, under this contract, from damage, dust, dirt, etc., to the satisfaction of the Region's Representative/Architect/Consultant. If required, supply temporary storage can for equipment or items supplied.

D. Comply with instructions of the Region's Representative/Architect/Consultant concerning storage of equipment and materials.

E. Assume full responsibility for storage and protection of materials and equipment delivered to site.

**3.10 Protection of Existing Plant and Personnel:**

A. Do not endanger in any way the personnel, equipment, plant and existing structures of the Region. Exercise caution to keep the existing facilities free from damage due to the Contractor's work. If the measures observed by the Contractor are not considered sufficient, the Region's Representative/Architect/Consultant may order additional precautions to be taken.

**3.11 Metric Equipment:**

A. Where metric and imperial types of equipment are to be installed under the same contract, be satisfied that mating of metric and non-metric equipment is possible. Provide shop drawings to the Region's Representative/Architect/Consultant before assembly. Where materials are not available in metric units, equivalent imperial units will be acceptable.

**3.12 Photographs and Video:**

A. The Region and the Region's Representative/Architect/Consultant reserve the right to take photographs and video of the work at any time.

B. Provide, to the Region's Representative/Architect/Consultant digital photographs showing progress of the work on a monthly basis. Identify photograph based on the room / space and with respect to cardinal directions.

**3.13 Plant, Equipment and Materials provided for the Work:**

A. Ensure that temporary facilities and materials, when brought to the site, are exclusively intended for the permanent construction and completion of the work. Do not remove same or any part thereof, except from one part of the site to another, without the consent of the Region's Representative/Architect/Consultant in writing.

B. Observance of the above item does not necessarily imply approval by the Region's Representative /Architect /Consultant of the site, work or materials as the Region's Representative/Architect/Consultant may reject such items at any time.

**3.14 Region's Interest in Existing Equipment and Materials:**

A. Provide the Region with the first right of refusal for the existing equipment or material that is removed from the existing works.

**3.15 Changes to Suit Preferred Construction Method:**

A. Should the method of construction preferred by the Contractor for part or all of the works necessitate re-design, alterations, additions or changes to the structures or any part of the works, provide such changes,

re-design, alterations and/or additions, as necessary and in accordance with the Contract requirements and to the satisfaction of the Region's Representative/Architect/Consultant at no additional cost to the Region. Where required such changes, re-design, alterations and/or additions should be engineered and stamped.

B. Formally propose deviations from the Contract Documents for review by the Region's Representative/Architect/Consultant. Clearly indicate the change in value of the works caused by the deviation.

**3.16 Interpretation of Drawings and Specifications:**

A. In case of discrepancy between the Contract Drawings, Specifications or any other part of the Contract Documents, the order of precedence listed in the Contract Documents governs this Contract.

B. The Contract Drawings and Specifications are complementary to each other and what is called for by either is as binding as if called for by both. It is the intention to provide for a finished project, complete in all essentials, notwithstanding that not every item involved may be particularly mentioned or shown.

C. Notify the Region's Representative/Architect/Consultant as soon as possible if any unintentional error or omission should become known. Region's Representative/Architect/Consultant will review and propose a solution and the Contractor shall be compensated in accordance with the General Conditions.

D. The location of un-dimensioned fixtures, apparatus, outlets, conduits, piping, etc., shown on the Contract Drawings or specified are approximate. Finalize the actual locations as directed by the Region's Representative/Architect/Consultant and as required to suit conditions at the time of installation and as is reasonable.

E. Locate equipment, fixtures, piping, conduits, etc. that are un-dimensioned to create the minimum interference with pedestrian access, machinery traffic, headroom, and any other such items.

F. Take note that the Contract Drawings are prepared using SI (metric) units; however, some Contract Drawings may use imperial units particularly if they have been prepared from drawings for previous work. Be responsible for the accuracy of conversions between Imperial units and SI units.

G. Read the Drawings as a complete package even though the Contract Drawings have been divided into disciplines such as: General, Architectural, Mechanical, Electrical, Civil, Landscape, etc. disciplines. Details applicable to one section may appear on Drawings pertaining to another section or sections.

H. Read the Specifications, be it in book form or on drawings, as a complete package even though the Specifications have been divided into Divisions. Specifications relating to one division may appear in another division or divisions. Coordinate the work of the sub-trades to meet the requirements of the Contract.

**3.17 Additional Drawings:**

A. The Region's Representative/Architect/Consultant may furnish additional drawings to assist in the proper execution of the work. These drawings will be issued for clarification only and will not become the basis for extra payment. Such drawings have the same meaning and intent as if they were included with the Contract Documents.

B. The Region's Representative/Architect/Consultant may provide, at any time, drawings pertaining to additional or extra work. These drawings will be clearly identified as relating to work for extra payment.

**3.18 Explosives:**

A. Do not use explosives on this project.

B. Do not use powder-activated tools on any part of the work unless written approval for their specific use is obtained from the Project Manager/Architect/Consultant. Ensure that workers using powder-activated tools are properly trained in their use.

**3.19 Work Done in Cold Weather:**

A. Protect structures, piping, sewers, and equipment that may be exposed to frost during the construction period until the project is completed and accepted. Include such protective measures in the contract price and correct any damage sustained, to the satisfaction of the Project Manager/Architect/Consultant.

B. Submit to the Region's Representative/Architect/Consultant in writing, before construction begins and by October 1st, of each year of construction, an outline of specific frost protection measures to be implemented on this project. Be responsible for the proper implementation of frost protection measures and damages arising from freezing regardless of the review by the Region's Representative/Architect/Consultant of the frost protection measures

C. In instances where the Region's Representative/Architect/Consultant may permit or order work to be done when the minimum ambient temperature is at, about, or below 4°C, heat all material used. Provide sufficient temporary protection in the form of false work and tarpaulins, or other temporary structures to adequately enclose the portion of the work under construction. Supply, by approved means, sufficient temporary heat necessary to maintain the temperature throughout the work at or above 10°C during the construction and for a minimum of four (4) days after completion of the enclosed portion of the work.

**3.20 Patent and License Fees:**

A. Be responsible for execution and payment of all applicable patent, copyright or license fees and royalties relating to equipment or processes incorporated into the works, unless specified otherwise.

B. Save the Region and Region's Representative/Architect/Consultant harmless from damages and costs, which may arise from patent infringements.

**3.21 Professional Engineer:**

A. Where the drawings and specifications identify the requirement for a Professional Engineer, provide the services of an Engineering Practitioner licensed in the province where the Project is located.

**3.22 Loose Items:**

A. For the purpose of this Contract, loose items are items supplied under this Contract which are not directly incorporated into the works, such as furniture, spare parts, lubricants, portable pumps, etc.

B. Be responsible for the care and security of loose items until the date of Substantial Performance, at which time the Region will confirm receipt in writing for the loose items. Should the Region wish to assume any loose items prior to the date of Substantial Performance, obtain a written receipt from the Region listing the items. Replace prior to Final Acceptance any spare parts used during Warranty Period for the purpose of correcting defects in the supplied equipment. Official receipt of spare parts to take place just prior to the Final Acceptance.

C. Prepare a summary list of loose items and spare parts updated on a monthly basis. Submit the list for review by the Project Manager/Architect/Consultant.

**3.23 Assistance:**

A. Provide reasonable help to the Region's representatives in checking the setting out of the work. Provide ready access to work.

**END OF SECTION 01 00 00**

## PART 1 – GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

## PART 2 - PRODUCTS

There are no Products in this Section.

## PART 3 – EXECUTION

### 3.1 General:

A. Base the tender price upon providing the materials and equipment specified on the Contract Drawings or in the Specifications, which defines the standard of quality required.

B. Do not base the tender price upon a presumed acceptance by the Region's Representative / Architect / Consultant or the Region of a substitute item of supply.

C. Where products are named specifically by brand name or other specific details, base the tender prices on supply and installation of the products named in the Contract Documents.

D. No substitutions or alternatives are allowed for pre-selected equipment.

### 3.2 Alternatives:

A. Where more than one manufacturer or supplier's name or product is listed in the Drawings or Specifications, note that the design, as shown on the Drawings, has been based on the first named supplier, manufacturer or product listed.

B. If a product from a manufacturer or supplier other than the first named is provided, provide evidence showing the technical specifications are same or better. The onus of proving that the Alternative is at par or better than the first named product shall completely lie with the Contractor.

C. If a product from a manufacturer or supplier other than the first named is provided, assume liabilities and costs for the following:

1. The proper fit and matching of such equipment or material to surrounding pipe, equipment or material of the building, electrical, mechanical and controls or any other sub-trades, and

2. Engineering and construction costs that may subsequently arise as a result of the acceptance of the product from other than the first named manufacturer or supplier.

### 3.3 Substitutions:

A. In all cases where a substitution is proposed other than from one of the named manufacturer's or supplier's products, provide written justification to the Region's Representative / Architect / Consultant indicating the reasons for the substitution (e. g. significant delay in delivery, strikes, unavailability, improved quality or field service, significant contract cost reduction). Provide sufficient descriptive and technical information for the Region's Representative / Architect / Consultant to thoroughly compare articles or groups of articles with those specified. Failure to comply with this requirement to the Region's

Representative / Architect / Consultant satisfaction may result in rejection of the request due to insufficient information or time to evaluate it.

B. Submit requests for substitutions on the Substitution Request Form appended to the end of this Section. Requests for substitutions submitted in other ways will not be considered. Provide evidence showing the technical specifications of the Substitute product or material are same or better. The onus of proving that the Substitution is at par or better than the first named product shall completely lie with the Contractor.

C. Should the equipment or materials proposed by the Contractor be accepted, provide required changes to the Contract to suit the accepted substitution at no additional cost to the Region.

D. Do not permit subcontractors to make applications and submissions related to substitutions directly to the Project Manager/Architect/Consultant. Such applications and submissions must be made by the Contractor. Applications and submissions relating to alternatives and substitutions made by subcontractors will not be considered.

E. Ensure that, when making requests for substitutions, allowance in the schedule has been made for the Region's Representative / Architect / Consultant and the Region to fully consider the proposed substitution and to provide a response. Be aware of the response times as specified in Section 01 30 00 and make allowances for them. Be aware that no claims for costs or time will be entertained due to the time required for the consideration of substitution requests as long as the response times falls within the allowable response time as specified.

F. Be aware that no claims for costs or time will be entertained relating to the rejection or acceptance of a proposed substitution.

## SUBSTITUTION REQUEST FORM

| | | | | | |
|---|---|---|---|---|---|
| Substitute Description: | | | | Sub Request #: | |
| **OWNER:** | | | Date Sent | Date Received | Initials |
| **PROJECT:** | | Contractor → Engineer | | | |
| **CONTRACTOR:** | | Engineer → Contractor | | | |
| Specification Title: | | Description: | | | |
| Specification #: | Page/para: | Drawing #s: | | | |
| Proposed Substitution: | | | | | |
| Manufacturer: | Address: | | | Phone: | |
| Trade Name: | | Model #: | | | |
| Installer | Address: | | | Phone: | |
| History: New Product 2-5 Years Old 5-10 Years Old > 10 Years Old | | | | | |
| Details: | | | | | |
| Attached point-by-point comparative data. | | | | | |
| Attached complete dimensional information and technical data, including laboratory tests, if applicable. | | | | | |
| Attached complete information on changes to drawings and specifications which proposed substitution will require for proper installation. | | | | | |

| | |
|---|---|
| **Similar project which for product was used** | |
| Project: | Consultant: |
| Address: | Owner: |
| | Date Installed: |
| Proposed substitution affects other parts of work: No Yes; explain: | |

| |
|---|
| Savings to Owner for accepting substitution: $ |
| Proposed substitution changes contract time: No Yes; Add Deduct: Days. |
| If yes, indicate reason: |
| Proposed substitution affects the dimensions shown on drawings: No Yes; |
| If yes, indicate reason: |

| Supporting Data Attached: | Drawings | Product Data | Samples | Tests | Reports | Other, specify: |
|---|---|---|---|---|---|---|

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product, or liability is assumed for equivalent performance.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule other than specified herein.
- Cost data as stated above is complete and accurate. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances other than specified herein.
- Costs will be carried by the Contractor for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the work as necessary for accepted substitution will be complete in all respects.

Submitted by:

Contractor Signature: ***Signature Required.***

Address:

Telephone:

Attachments:

**ARCHITtheque's REVIEW AND ACTION**

| | |
|---|---|
| ☐ Substitution approved<br>☐ Substitution approved as noted<br>☐ Substitution rejected – Use specified materials.<br>☐ Resubmit as noted – Additional information required. | ARCHITtheque's estimated budget for additional design, inspection, contract administration and as-built drawings.<br><br>$ _____ |
| Signed by: | Date: |

| Additional Comments: | Contractor | Subcontractor | Supplier | Manufacturer | ARCHITtheque | Other: |
|---|---|---|---|---|---|---|

**END OF SECTION 01 03 50**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

## PART 2 - PRODUCTS

There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Supervision:

A. Maintain on the site at all times a general superintendent who is fully qualified to properly direct the progress of this Contract continuously, including the co-ordination and work of subcontractors. During periods when work on this project is not being carried out, maintain protective fencing or competent security personnel on the site to guard the site and works and the properties and possessions thereon of the Contractor and his subcontractors as well as those of the Region.

### 3.2 Sub-Trades:

A. The various Divisions of these Specifications have not necessarily been segregated into sub-trades or sub-contracts. Define the scope of work required of each sub-trade and apportion it, with special attention directed toward items or materials that are to be built into concrete, masonry, etc.

B. Coordinate architectural, structural, civil, landscape, mechanical, electrical and control work for the interior and exterior works.

C. No extra payment will be considered based on differences of interpretation of the Contract Documents, or lack of direction in the Specifications as to which trade should provide certain items or materials.

D. Should alternative or substitute product / fixture/ finish / equipment is proposed by the Contractor, this needs to be reviewed and approved prior to tender closure. The Substitution form can be found in Supplementary Condition.

### 3.3 Access:

A. At all times, maintain vehicular access along public roads used by construction vehicles.

### 3.4 Co-ordination of Construction with Operation of Existing Facilities:

A. Give operations at Creek-way Long-term Care Home precedence over construction activities.

B. Maintain the utilities and services to the Creek-way Long-term Care Home.

C. Coordinate construction activity under this Contract with the Region.

D. Upon award of the Contract, submit a list of services requiring shutdown, anticipated shutdown times and their maximum duration.

E. Provide 14 days written notice to the Region’s Representative/Architect/Consultant where a temporary shut-down of any portion of existing works is necessary to facilitate construction. Have the proposed timing of such construction reviewed by the Region’s Representative/Architect/Consultant prior to

initiation of the work related to the shutdown.

F. Provide a detailed schedule indicating each phase of the shutdown and startup of each portion of the existing works. Provide written procedures for each shutdown and startup activity.

G. Coordinate with the Region's Representative/Architect/Consultant connections of all utilities.

H. Take every precaution to avoid interfering with facility operation and maintenance. In the event of conflict between construction operations and facility operations, facility operations have priority. Reschedule construction operations, if required, without change to the Contract Price.

I. In the event of unpredictable circumstances and emergencies, the Region reserves the right to cancel scheduled work.

**3.5 Cutting, Fitting and Patching:**

A. Complete the necessary cutting, fitting and patching to ensure that the various parts of the work fit properly. Complete cutting, fitting and patching as may be required to connect the work with that of any other Contractor as indicated on the Contract Documents.

B. Do not negatively impact existing work by cutting, digging, blasting or any other construction operation.

C. Do not cut load-bearing members without the review by the Region's Representative/Architect/Consultant.

D. Be responsible for costs occasioned by ill-timed work.

E. Prior to coring into existing concrete, in order to avoid damage to any encased piping, conduits, and other concealed items in the vicinity, ensure that:
   1. The locations and the extent of cutting required are coordinated with the trade(s) involved and are accurately and carefully marked out.
   2. The walls or slabs are X-rayed prior to drilling openings to determine the location of existing services concealed in and/or behind the construction to be drilled.
   3. Acceptance is received from the Region's Representative/Architect/Consultant and shop drawings applicable to the affected area have been reviewed.

**3.6 Location of Fixtures:**

A. The location of un-dimensioned fixtures, apparatus, outlets, conduits, piping, etc., identified on the Contract Documents or as specified are approximate. Finalize the actual locations as reviewed by the Region's Representative/Architect/Consultant and as required to suit conditions at the time of installation and as is reasonable.

B. Inform the Region's Representative/Architect/Consultant of the impending installation and review with him the location details before installation.

**3.7 Roughing In:**

A. Be responsible for obtaining manufacturer's literature, for correct roughing-in and hook-up of equipment, fixtures, appliances, and other items.

**END OF SECTION 01 04 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Codes and Standards:

A. Ensure that the Work confirms to the Standards listed in Section 01 09 00. Canadian standards take precedence over American standards in the case of duplication or conflict.
B. Perform work in accordance with the requirements contained in the latest editions of applicable statutes and codes including but not limited to:
   1. Occupational Health and Safety Act (OHSA) and Regulations
   2. Ontario Building Code (OBC)
   3. Plumbing Code
   4. Ontario Electrical Safety Code (OESC)
   5. Codes or Standards by the National Fire Protection Association (NFPA)
   6. Workplace Hazardous Materials Information System (WHMIS)
   7. Codes and Standards by the Canadian Gas Association (CGA)
   8. Technical Standards & Safety Authority (TSSA)

C. Assume the designation and responsibilities of Constructor pursuant to the Ontario Health and Safety Act and regulations. It is not intended that the Region will assume the role of Constructor under any circumstances.
D. Bear the increases in costs that may result if the Region becomes designated as the “Constructor” as a result of the Contractor’s acts or lack thereof.

### 1.3 Statutory Regulations:

A. The construction of the Works and the operations connected therewith are subject to the approval, inspection, by-laws, and regulations of municipal, provincial and federal authorities and organizations concerned with roads, streets, railways, telephones, electrical supplies, gas supplies and other public services or utilities having jurisdiction in respect to any aspect of this Contract.
B. Construct habitable structures to comply with the Ontario Building Code.

## PART 2 - PRODUCTS

There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Approvals and Permits:

A. Where required Region’s Representative / Architect / Consultant, will provide a digital copy of drawings and specifications; Contractor to prepare and provide Drawings and Specifications for each application.
B. Arrange for inspections as required by applicable Codes or by authorities having jurisdiction over the Works.
C. Provide to the Region’s Representative / Architect / Consultant, on a monthly basis, a report of inspection.

**END OF SECTION 01 06 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Abbreviations:

A. The following is a general, but not necessarily complete, list of abbreviations that are referenced in the Specifications:

ABMA - American Bearing Manufacturers' Association

ACI - American Concrete Institute

AGMA - American Gear Manufacturers Association

AISC - American Institute for Steel Construction

AISI - American Iron and Steel Institute

ANSI - American National Standards Institute

ASCE - American Society of Civil Engineers

ASHRAE - American Society of Heating, Refrigeration and Air Conditioning Engineers

ASME - American Society of Mechanical Engineers

ASTM - American Society for Testing and Materials

AWS - American Welding Society

AWWA - American Water Works Association

CCDC - Canadian Construction Documents Committee

CGA - Canadian Gas Association

CGSB - Canadian Government Standards Board

CISC - Canadian Institute of Steel Construction

CSA - Canadian Standards Association

CWB - Canadian Welding Bureau

EEMAC - Electrical and Electronic Manufacturers Association of Canada

ESA - Electrical Safety Authority

IEEE - Institute of Electrical and Electronic Engineers

| | | |
|---|---|---|
| ISA | - | Instrument Society of America |
| MOECC | - | Ontario Ministry of the Environment and Climate Change |
| MTO | - | Ontario Ministry of Transportation |
| NFPA | - | National Fire Protection Association |
| NSF | - | National Sanitation Foundation |
| OBC | - | Ontario Building Code |
| OESC | - | Ontario Electrical Safety Code |
| OFC | - | Ontario Fire Code |
| OHSA | - | Occupational Health and Safety Act |
| OPSD | - | Ontario Provincial Standard Drawings |
| OPSS | - | Ontario Provincial Standard Specifications |
| SSPC | - | Steel Structures Painting Council |
| TSSA | - | Technical Standards & Safety Authority |
| ULC | - | Underwriters' Laboratories of Canada |

## PART 2 - PRODUCTS

There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Abbreviations:

A. Be responsible for understanding the abbreviations that may appear in the Contract Documents whether listed on the Drawings or Specifications or not.

B. Direct all queries to the Region’s Representative/Architect/Consultant.

### 3.2 Standards:

A. For Standards and references noted in the Drawings and Specifications, the versions in effect at the date of Tender closing apply to this Contract, unless otherwise specified.

**END OF SECTION 01 09 00**

## PART 1 - GENERAL

**1.1 Reference:**

A. Section 01 00 00 applies to and governs the Work under this Section.

**1.2 Facility Description:**

Creek Way Long-term care home located at 5200 Corporate Dr, Burlington, ON is a 144 bed, 24 hour nursing and care providing facility that is operated by Region of Halton. It is a 3 story building and it comprise of 5 home areas, Millcroft, Headon, Orchard, Escarpment and Lakeshore.

**1.3. Work Covered by Contract Documents:**

A. The work required to be done under this Contract includes the supply of material, labour, equipment, permits (if any), and other requirements, necessary for the complete construction of the works shown on the Contract Drawings and as specified herein including a guarantee of workmanship and materials for a period of 1 year(s) after the issuance of the Certificate of Substantial Performance unless otherwise stated.

B. The following is a general, but not necessarily complete, description of the work to be constructed under the Contract. The list below is not intended to specify the order of construction/execution:

1. Flooring Replacement in the following areas on First Floor, Creek Way Village Long-term Care Home, along with base, trims, etc:
   a. Hair Salon Area
   b. Lounge Area,
   c. Recreational Area
   d. Millcroft Dining Area, with part of Corridors to Residential wings

2. Flooring Replacement in the following areas on the Second floor, Creek Way Village Long-term Care home, along with base, trims, etc.:
   a. Orchard Dining Area, with part of Corridors to Residential wings
   b. Headon Dining Area, with part of Corridors to Residential wings
   c. Orchard Balcony
   d. Headon Balcony

3. Flooring Replacement in the following areas on the Third floor, Creek Way Village Long-term Care home, along with base, trims, etc.:
   a. Escarpment Dining Area, with part of Corridors to Residential wings
   b. Lakeshore Dining Area, with part of Corridors to Residential wings

   Refer to Appendix A Architectural Drawing Set

4. Drainage in First Floor Hair Salon Area.

   Refer to Appendix B Mechanical Drawing Set

**1.4 Phasing of Work:**

The following is a high level of the phasing plan proposed for construction.

A. Contractor to phase the flooring replacement work for each areas within the facility. The details of the phasing are shown below.
   1. Phase 1: First Floor Recreational Area.
   2. Phase 2: First Floor Salon and Lounge Area.
   3. Phase 3: First Floor Millcroft Dining Area (this will have 4 phases here, please refer to Appendix A

Architectural Drawings Set for details)

4. Phase 4: Second Floor Headon and Orchard Dining Areas (this will have 4 phases here, please refer to Appendix A Architectural Drawings Set for details)
5. Phase 5: Third Floor Escarpment and Lakeshore Dining Areas (this will have 4 phases here, please refer to Appendix A Architectural Drawings Set for details)
6. Phase 6: Balcony restoration.

Each phase needs to be completed and approved by the Region representative / Architect before mobilizing to the next phase.

B. The Region hold the right to rearrange the phasing sequence based on the availability of the rooms. Contractor to accommodate these changes at no additional cost to the region.
C. Contractor to submit their phasing and hoarding plan prior to mobilization, this needs to be reviewed and approved by the Region / Architect. The phasing sequence and plan will be finalized during the kickoff meeting.

**1.5 Adherence to IPAC standards during Construction:**

A. Contractors performing flooring replacement in a long-term care home must adhere to Infection Prevention and Control (IPAC) standards to minimize the risk of contamination, dust dispersion, and disruption to residents and staff.
B. The following construction protocols need to be followed, at minimum. Contractor to submit a hoarding plan for each phase and get approval from the Region representative / Consultant prior to mobilization.

1. Hoarding Structure & Containment

a. Materials: Use non-porous, cleanable materials such as polycarbonate, acrylic panels, or drywall with sealed joints.
b. Height & Sealing: Extend hoarding from floor to ceiling with a tight seal to prevent dust migration.
c. Access Points: Install self-closing doors with gaskets to maintain containment.
d. Signage: Post clear signage indicating "Construction Area – Authorized Personnel Only."

2. Ventilation & Air Quality Control

a. Exhaust Ducting: Vent exhaust air outside the facility when possible.
b. Dust Control: Implement dust suppression methods, such as misting or tack mats at entry points.
c. Cover all vents / outlets / inlets with poly at all times to prevent dust from entering and exiting the construction zone.

3. Entry & Exit Procedures

a. Worker Decontamination: Provide a separate anteroom for workers to don/doff PPE before entering or exiting the work zone.
b. Equipment Cleaning: Require tools and materials to be wiped down before removal from the containment area.
c. Material Transport: Seal and bag debris before transport through the facility.

4. Resident & Staff Safety

a. Noise Management: Schedule noisy activities during off-peak hours to minimize disruption.
b. Barrier Placement: Ensure hoarding does not block emergency exits or essential services.
c. Communication: Provide advance notice to facility management regarding work schedules and any disruptions.

5. Cleaning & Disinfection

a. Daily Cleaning: Wipe down hoarding surfaces daily with hospital-grade disinfectants.
b. Final Cleaning: Conduct thorough terminal cleaning and air quality testing before removing hoarding.
c. Pest Control: Inspect the work zone for potential pest intrusion points before dismantling hoarding.

6. Compliance & Monitoring
a. Regular Inspections: Conduct regular inspections to ensure hoarding integrity and compliance.
b. Documentation: Maintain records of inspections, air quality tests, and cleaning logs.
c. IPAC Approval: Obtain approval from the facility's IPAC lead before commencing work and after final cleaning.
d. By following these hoarding guidelines, contractors can help maintain a safe and infection-controlled environment for residents, staff, and visitors in the long-term care home during flooring replacement projects.

**PART 2 - PRODUCTS**

A. There are no Products in this Section.

**PART 3 – EXECUTION**

A. There are no Execution items in this Section.

**END OF SECTION 01 11 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Scope:

A. This section specifies restrictions for access to the site and for activities on site.

### 1.3 Access Routing for Vehicles:

A. A basic Construction Management Plan shall be provided by Contractor, showing Construction Phases, Staging, Storage, Parking and toilet facility during Flooring Replacement at Creek Way Village.

B. Vehicular access shall be from the Corporate Drive and Hobson Drive. During Flooring Replacement, provision of fire route and access to the building, access to driveway and to adjacent properties shall be maintained.

### 1.4 Phasing and Construction Restrictions

A. For the Flooring Replacement Construction of the Project, Phasing is inevitable for the continuing the function and operation of the Spaces, specifically the Dining Halls on the First, Second and Third Floors. A High-Level Phasing plan for each of these Dining Halls, has been provided, for reference. GC to include in their pricing, phasing of the work, safety requirements during each and all of the phasing, temporary enclosures and access during each and all of the phasing.

B. Phasing plan shall be submitted for review and approval. All material and equipment shall be readily available at site before commencement of any phase. At the end of each, and all phases for any particular Dining Hall, the access to the residents and staff to the finished Dining Hall area to be provided.

C. Phasing plan shall ensure that fire route is maintained at all times.

D. All access to residents shall be barrier-free compliant.

### 1.5 Hours of Work:

A. Be advised that the working hours for the Creek Way Village Flooring Replacement project for the First Floor Recreational Area, Salon and Lounge will be from 8am to 5pm, Monday to Friday. Work on weekends has to be authorized by Building Management / the Region’s Representative. The Contractor should conduct operations so as not to create a nuisance or disturb the peace of the occupants of the Long-term Care Home, the Parkview Childcare, which occupies part of the building, and that of the neighbors. The Construction work should not cause any unnecessary operational impacts for the Long-term Care Home and Childcare, and the neighboring properties and City of Burlington properties.

B. Be advised that the working hours for the Creek Way Village Flooring Replacement project for the First Floor, Second Floor and Third Floor will be as shown on the Recommended Phasing Plans (Appendix A Architectural Drawings Set), A-5, A-8 and A-11, with most of the work done during daytime 8am to 5 pm, and partial work completed during nighttime 10 pm to 6 am, and as authorized by Building Management / the Region’s representative. The Contractor should conduct operations so as not to create a nuisance or disturb the peace of the occupants of the Long-term Care Home. The Construction work should not cause

any unnecessary operational impacts for the Long-term Care Home. The Phasing Plan shall be based on the approved hours of work by the Building Management / the Region's Representative.

C. Be advised that the working hours for the Creek Way Village Balcony Restoration will be from 8am to 5pm, Monday to Friday. Work on weekends has to be authorized by Building Management / the Region's Representative. The Contractor should conduct operations so as not to create a nuisance or disturb the peace of the occupants of the Long-term Care Home

D. No work will be allowed in the month of December, at the Creek Way Village. If works is pending Contractor to demobilize first week of December and remobilize at no additional cost to the region starting week two of January.

E. Be responsible for obtaining exemption to the local noise bylaw, as required.

F. It is crucial that any noisy operations are communicated to the Region's Representative / Architect at least one week in advance and carried out subsequent to authorization by them. Additionally, such activities should be conducted between the hours stipulated by the Region's Representative.

## PART 2 - PRODUCTS

There are no Products in this Section**.**

## PART 3 - EXECUTION

### 3.1 General:

A. Keep on hand, all materials, tools, manpower and equipment required for the necessary works in advance of any Plant shutdowns or process interruptions.

B. Demonstrate to the Region's Representative / Architect / Consultant, in advance, all contingency plans including labor, material and equipment supply in the event of failure, delay, upset or stoppage.

**END OF SECTION 01 11 40**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

## PART 2 – PRODUCTS

There are no products in this Section.

## PART 3 - EXECUTION

### 3.1 Pre-construction Meeting:

A. Attend a pre-construction meeting which will be arranged by the Region's Representative/Architect/Consultant immediately upon award of the Contract. The purpose of this meeting will be to initiate the work under this Contract, to acquaint the Contractor's and the Region's Representative/Architect/Consultant's designated personnel with each other, and to discuss and determine communication chain-of- command between various parties and contact procedures, to discuss the work procedures and preliminary scheduling, and other matters as required by the Region's Representative/Architect/Consultant.

B. Ensure that a senior Contractor's representative and the designated site superintendent, as well as senior representatives from the subcontractors, are in attendance.

C. The Region's Representative/Architect/Consultant may request that representatives of suppliers be in attendance also. Comply with the Region's Representative/Architect/Consultant's request.

D. Provide emergency contacts and phone numbers for senior Contractor's representatives and designated site superintendent.

E. Provide schedule of construction, status of bonds and insurance, sequencing of work, major equipment delivery schedule, progress payment procedures, Contractor's health and safety plan, environmental management plan, emergency response plan**.**

F. The Consultant Project Manager shall chair the Pre-construction / construction Kick-off meeting, and prepare the Minutes of Meeting Report.

### 3.2 Progress Meetings:

A. Schedule progress meetings as required by the Region's Representative/Architect/Consultant. Such meetings to be held bi- weekly or more frequently should the Region's Representative/Architect/Consultant deem it necessary.

B. Prepare and distribute Agenda for the Progress meetings at least 48 hours before the meeting to all concerned / attendees.

C. Ensure the attendance of responsible persons, including the site superintendent, who have the required authority to commit the Contractor in carrying out decisions reached at the meeting. Subcontractors, equipment suppliers and others must attend when requested by the Project Manager/Architect/Consultant.

D. Provide an updated schedule of work indicating progress, use of site, temporary facilities, and schedule of shutdowns at each progress meeting.

E. Chair the progress meetings, prepare and distribute Minutes of Meeting Report within 48 hours of the meeting.

**END OF SECTION 01 20 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Categories of Submittals:

A. Submittals fall into three categories: shop drawings, submittals for information only, and requests for information.

B. Shop drawings are submittals that are required for all equipment and structures as shown on the Drawings and specified in the individual sections. The Region's Representative/Architect/Consultant will review and provide comments.

C. Submittals for information only are specified as such in the Contract Documents and include design drawings, calculations and specifications that are requested to be sealed by a Professional Engineer and any other reports or plans that do not require a shop drawing review

D. Requests for Information are questions from the contractor that require clarification from the designer.

### 1.3 Work Included:

A. Submittals covered by these requirements include, but are not necessarily limited to:

1. Shop drawings

   a) Details for all construction materials, complete with manufacturer's information, Catalogue cuts, sample, etc.
   b) Details of all mechanical, electrical and plumbing fixtures, equipment, complete with manufacturer's information, catalogue cuts, with the relevant item highlighted / marked clearly.

2. Information Only Submittals

   a) Construction Management Plan
   b) Sealed Engineering drawings and reports.
   c) Schedules for construction, demolition and removals.
   d) Staging and Sequencing Plans.
   e) Equipment, Operations and Maintenance Manuals complete with as- constructed drawings.
   f) As-Built drawings in accordance with Section 01 00 00.
   g) Corporate Health and Safety Plan.
   h) Site-Specific Health and Safety Plan
   i) Environmental Management Plan.

3. Requests for Information (RFI)

   a) Contractor shall carefully review drawings and specifications before requesting information.
   b) Information provided by Region's Representative/Architect/Consultant should be reviewed by Contractor before commencing on the work based on the response.
   c) Response to RFI shall not constitute as Contemplated Change notice or Proposed Change to the Scope of Work and shall not form a basis of any claim.

**1.4 Related Work**

A. Contract Closeout - Section 01 70 00

**1.5 Codes and Standards**

A. Applicable Region of Halton Standards.

**1.6 Contractor’s Responsibilities:**

A. Provide submittals to the Region’s Representative/Architect/Consultant as specified.

B. Be responsible for the accuracy and completeness of the information contained in each submittal and ensure that the material, equipment, or method of work is as described in the submittal. Verify that features of products conform to the specified requirements. Edit submittal documents to indicate only those items, models, or series of equipment that are being submitted for review. Cross out or otherwise obliterate extraneous materials. Coordinate submittals among the subcontractors and suppliers and ensure there is no conflict with other submittals. Notify the Region’s Representative in each case where a submittal may affect the work of trades or the Owner. Carry out any relocation of work due to interference at no additional cost to the Owner.

C. Verify that the materials and equipment to be furnished and method of work comply with the provisions and the intent of the Contract.

D. Coordinate submittals with the work so that work will not be delayed. Coordinate and schedule different categories of submittals, so that one will not be delayed for lack of coordination with another. No extension of time will be allowed because of failure to properly schedule submittals. Do not proceed with work related to a submittal until the submittal process is complete. This requires that submittals for review and comment are returned to the Contractor stamped "REVIEWED" or "REVIEWED AS NOTED"

E. Stamp and date each submittal to certify that you have reviewed the submittal in full, verified field conditions, and complied with the Contract Documents. The Consultant will not review any submittal which does not have the stamp and date of the review by the Contractor.

F. The Contractor may authorize a material or equipment supplier to deal directly with the Project Manager/Architect/Consultant with regard to a submittal. These dealings are limited to contract interpretations to clarify and expedite the work and cannot be used for the basis of a claim.

G. Ensure that all "REVIEWED" or "REVIEWED AS NOTED" submittals are available for viewing at the project site.

**1.7 Effect of Review of Contractor's Submittals:**

A. The review of methods of work, or information regarding materials or equipment the Contractor proposes to provide, shall not relieve the Contractor of their responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Region’s Representative/Architect/Consultant, the Region, or by any representative officer, employee or agent thereof. The Contractor shall have no claim under the contract on account of the failure, or partial failure, of the material, or equipment so reviewed.

B. Submittals provide information concerning features and characteristics of materials, equipment, and methods of operation selected based on the Contractor's judgment of their conformance to the specified requirements. Review of submittals does not extend to means, methods, techniques, sequences or

procedures of construction, or to verifying quantities, dimensions, weights or gauges, or fabrication processes, except where specifically indicated or required by the project requirements or to safety precautions or programs incident thereto. Review of a separate item, as such, will not indicate approval of the assembly in which the item functions.

C. The review of submittals shall not relieve the Contractor of their responsibility for errors therein, and shall not be regarded as assumption of risks or liability by the Region's Representative/Architect/Consultant, the Region, or by any representative officer, employee or agent thereof. The Contractor shall have no claim under the contract on account of the failure, or partial failure, of the material, or equipment so reviewed. A mark of "REVIEWED" or "REVIEWED AS NOTED" shall mean that the Region's Representative has no objection to the Contractor, upon their own responsibility, providing the materials or equipment proposed.

D. The Region's Representative/Architect/Consultant will review submittals for general arrangement only. Be responsible for checking dimensions, quantities, proper fitting, and construction of the work, and for furnishing materials or doing work required by the Contract Documents, which may not be indicated on shop drawings when reviewed.

**1.8 Submittal Review Procedure:**

A. Shop Drawing Procedures

1. Unless otherwise specified, within ten (10) weekdays after receipt of a shop drawing submittal for review and comment, the Region's Representative/Architect/Consultant shall review the submittal and return the marked-up shop drawing bearing the Architect's/Consultant's Shop Drawing Review stamp. The review period may be longer depending on the completeness of the submittal and number of submittals being issued. The review period may be longer if more than one items, not related or of different specification sections, are clubbed together. The returned submittal shall indicate one of the following actions:

   a) If the review indicates that the material, equipment or work method complies with the Contract Documents, the submittal will be marked "REVIEWED". In this event, the Contractor may begin to incorporate the material or equipment covered by the submittal into the work.

   b) If the review indicates limited corrections are required, the submittal will be marked "REVIEWED AS NOTED." The Contractor may begin incorporating the material or equipment covered by the submittal in accordance with the noted corrections.

   c) If the review reveals that the submittal is insufficient or contains incorrect data, the submittal will be marked "RESUBMIT AS NOTED". Make the changes to the shop drawings that the Architect/Consultant may require. Identify changes on resubmissions and indicate the revision dates. Work on this item is not to commence until the submittal has been revised, resubmitted and returned marked either "REVIEWED" or "REVIEWED AS NOTED".

   d) If the review indicates that the material or equipment does not comply with the Contract Documents, the submittal will be marked "REJECTED". Work on this item is not to commence until a new submittal is made and returned marked either "REVIEWED" or "REVIEWED AS NOTED".

2. The Contractor shall bear all costs associated with resubmission of a submittal.

3. Contractor shall carry costs of Region's Representative/Architect/Consultant and the Region's review for all shop drawing submissions required more than two (2) times.

4. Copies of corrected shop drawings shall be included in the Operations and Maintenance manual.

B. Information Only Submittal Procedure

1. Unless otherwise specified, within ten (10) weekdays after receipt of an Information Only submittal, the Region's Representative/Architect/Consultant shall acknowledge the submittal and return one (1) copy of the submittal bearing the Engineer's Information Only stamp.

C. Request for Information Procedure

1. Within five (5) weekdays after receipt of an RFI submittal the Region's Representative/Architect/Consultant shall return one (1) copy of the RFI response.

2. For any RFI where the information requested is apparent from field observations, is contained in the contract documents or is reasonably inferable from them, the Contractor shall be responsible to the Region for all reasonable costs charged by the Region's Representative/Architect/Consultant to the Region for the additional services required to provide such information.

## PART 2 - PRODUCTS

### 2.1 Construction Schedule:

A. Submit a construction schedule showing the Contract starting date and the commencement and the completion of each substantial or key portion of the work. Provide the schedule to the Region's Representative/Architect/Consultant for review within five (5) days after the signing of the Contract. Include in the schedule the work of any sub-contractor, submission dates for shop drawings, and the project completion date.

B. Construction activities with a value greater than $50,000 or a duration exceeding 1 week are to be shown as separate items in the Construction Schedule.

C. Indicate in the Construction Schedule the Critical Path of the work including, but not limited to, the following:

1. Identification and listing in chronological order of all construction, demolition and removal activities required to complete the Work, such as mobilization and other activities; all subcontractor work; major Equipment design, fabrication, factory testing, and delivery dates; equipment system testing and start-up activities; project closeout, cleanup, and site restoration; and specified work sequences, constraints, and milestones, including Substantial Performance date.

2. Project schedule shall be in the form of a Gantt chart and generated using professional computer software, such as Microsoft Project as a minimum, and updated as required at no additional cost to the Region.

3. The construction schedule shall be reviewed before and updated at each progress meeting.

4. Identify timeframe, duration, early start, and completion for each activity and sub- activity, and any critical activities.

5. Identify shop drawing submission dates related to equipment or activity on the schedule.

D. Provide sub-schedules, such as Staging Plans and Sequencing Plans as required, to further define portions of the Work.

E. The Construction Schedule shall demonstrate that the Contractor has compressed the on-site work to as short a period as possible to limit the amount of disruption to the Region's operation.

F. Provide to the Region's Representative/Architect/Consultant in writing, a step-by-step procedure outlining the proposed method of accomplishing each portion of work that requires an interruption to the operation of the facility. This proposed method of construction must be forwarded to the Region's Representative/Architect/Consultant for approval at least one (1) week in advance before any such work will be permitted. The Contractor shall include proposed specific hours (times) of work in the submission.

G. Use additional work forces and equipment, or revise methods of operation when the progress of work is not sufficient to meet the Construction Schedule at no additional cost to the Owner.

H. In the case that a Construction Schedule with insufficient detail is submitted, requests for progress payment will not be reviewed until such time that an appropriate Construction Schedule is provided.

**2.2 Shop Drawings:**

A. Submit shop drawings, for piping arrangements, support/anchors, fabrication and erection drawings, design calculations, etc., where applicable, for all work in this Contract.

B. Submit shop drawings for all temporary works that control the dimensions of any part of the structures to be constructed under this Contract, or which impose loads on parts of the completed permanent works or existing works.

C. Ensure that shop drawings of mechanical and electrical equipment show details of construction, accurate dimensions, capacities and performance characteristics.

D. Ensure that shop drawings clearly show exposed fastenings and, where applicable, installation details, relationship to the building structure and/or finishes.

E. Manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and other standard descriptive data may be accepted in lieu of shop drawings, if they:

1. Supplement standard information to provide additional information applicable to the project.
2. Show dimensions and clearances required.
3. Show performance characteristics and capacities.
4. Show wiring diagrams and controls.
5. Delete non-applicable information.

F. Submit shop drawings in SI metric, or SI and Imperial units. Shop drawings in Imperial units only will be returned by the Region's Representative/Architect/Consultant without review.

G. Prepare a Shop Drawing Log, Update and present during the Progress meetings, or when instructed.

**2.3 Samples:**

A. Where specified submit two (2) samples of material, appliances, finishes and other items included in the work. Samples must be reviewed by the Region's Representative/Architect/Consultant in writing before

the work is executed. Mark samples on the back with the type of material, mix if required, producer's name.

B. Do not use any material on the work that is in any way inferior to the reviewed samples. Review by the Region's Representative/Architect/Consultant does not obligate the Region to pay for any material other than in accordance with the Contract. The review will not prevent the rejection of any material that may be found, in the opinion of the Region's Representative/Architect/Consultant, to be unsound or unfit for use on the work or not in accordance with the reviewed samples or the requirements of the Contract. The review will not be deemed to be a waiver of objection to the work or any part thereof at any time. The decision of the Region's Representative/Architect/Consultant with respect to the acceptance or rejection of samples is final.

C. Prepare a Sample submission Log, Update and present during the Progress meetings, or when instructed.

**2.4 Coordination Drawings:**

A. Prepare Coordination Drawings for areas of potential conflict, where interference may be caused by uncoordinated use of available space by the various trades and subcontractors. Clearly show on the same drawing the proposed works of all disciplines, such as process piping, plumbing and drains, air ducts, electrical cable trays and conduits, including valve orientation and access.

B. Show piping and other services that are to be cast into concrete.

C. Submit Coordination Drawings for review as specified prior to commencement of the work.

D. Update and resubmit the Coordination Drawings when changes and relocations are to be made.

**2.5 Construction Coordination and Sequencing:**

A. Submit a detailed Schedule and Sequencing Plan outlining the steps to be taken to construct the works. Review the proposed Staging Plan and discuss timing and constraints with the Owner's operations staff. Both the Region and the Region's Representative/Architect/Consultant reserve the right to request revisions to either the stages and or the timing. Do not proceed with the work until the Staging Plan has been reviewed and accepted by the Owner.

B. Prepare and submit, to the Region's Representative/Architect/Consultant, Sequencing Plans where interferences exist and where a specific work sequence is required to avoid or minimize operational interruptions of the existing facilities. Tie the Sequencing Plans to the project schedule.

**2.6 Falsework, Shoring or Bracing Drawings:**

A. Submit drawings of falsework, shoring and bracing sealed by a Professional Engineer in the Province of Ontario. One copy of the reviewed drawings be kept on site.

**PART 3 - EXECUTION**

**3.1 Transmittal Procedure for Submittals:**

A. When the Contract Documents require a submittal, submit the specified information as either hard-copy submissions or electronic submissions as follows:

1. Electronic Submissions

   a) Send an email to the Region's Representative/Architect/Consultant with the Submittal. Submittals shall have a Submittal Transmittal form / Cover page.

   b) All submittals shall be named using the following nomenclature:

   [1]-R [2]-[3]-[4].pdf, where the fields in the filename are defined as follows:

   [1] = Specification and clause number

   [2] = Revision number

   [3] = Region oh Halton Project Reference

   [4] = Submittal/Shop Drawing title

   c) At the request of the , Representative/Architect/Consultant the Contractor shall submit native files of certain submittals (MS Word, MS Excel, MS Project, etc.) to help expedite the review process.

   d) The Region's Representative/Architect/Consultant reserves the right to require that a submittal be based only in hard-copy or only in electronic format.

B. For Shop Drawings and Information only Submittals, attach Form 01300-A Submittal Transmittal Form included at the end of this Section. Apply a unique number, sequentially assigned, on the transmittal form. Original submittal numbers to have the following format: "XXX"; where "XXX" is the sequential number assigned by the Contractor. Resubmittals to have the following format: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter assigned for resubmittals, i.e., A, B, or C being the 1st, 2nd, and 3rd resubmittals, respectively. Submittal 25B, for example, is the second resubmittal of submittal 25.

C. On the transmittal form, clearly identify Contract, Region oh Halton Contract No., Contractor Project No., Pertinent Drawing No., Specification Sheet No. and Article No., as applicable, for the submittal.

D. Use a separate transmittal for each specific item, class of material, equipment, and items specified in separate, discrete sections, for which the submittal is required. Submittal documents common to more than one piece of equipment to be identified with all the appropriate equipment numbers. Make submittals for various items with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.

E. Submittals for Request for Information are to be completed on Form 01300-B Request for Information Form.

F. Submittals for operation and maintenance manuals, information and data are to be accompanied by a properly completed Form 01700-A, Operation and Maintenance Transmittal Form included in Section 01 70 00.

**3.2 Submittal Completeness:**

A. Submittals that do not have all the information required to be submitted, including acknowledgement of deviations, are not acceptable and will be returned without review.

B. Bear the cost of any delay or cost implications arising from the improper submittals.

**3.3 Shop Drawing Submittal Compliance:**

A. Include in every shop drawing submission, a copy of the relevant specification section, with addendum updates included, and all referenced and applicable sections, with addendum updates included. Check-mark each paragraph to indicate compliance with the specification or mark otherwise to indicate requested deviations from specified requirements. Check marks (✓) denote full compliance with a paragraph in its entirety. If deviations from the specifications are indicated, underline each point of deviation and denote by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance with the specified requirements. Provide in the submittal a detailed, written justification for each deviation.

B. Failure to include a copy of the marked-up specification sections, along with justifications for any requested deviations to specified requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

**3.4 Sealed Engineering Drawing Submittal Procedure:**

A. For all submittals that require a Professional Engineers seal, an initial submittal should be made prior to the placing of the Engineer's seal. Comments will be provided to the Professional Engineer and the Contractor. Submit the sealed final drawings for Information Only.

**3.5 Construction Schedule:**

A. Update the progress schedule when requested by the Region's Representative/Architect/Consultant. As a minimum, distribute revised progress schedule at each progress meeting as per Section 01 20 00.

B. If an activity is not completed by its latest scheduled completion date and this failure may extend the Contract Time (or may affect the project critical path), within 7 days of such failure, submit a written statement as to how the non-performance will be corrected and the original schedule will be maintained.

C. All schedules must indicate contingency and alternative dates and times in the event of postponement of any activity for any reason.

D. Regardless of the schedule or schedules submitted by the Contractor, the Project Manager/Architect/Consultant reserves the right to direct the Contractor by employing whatever means necessary, to expedite the work.

E. Submission of a schedule does not relieve the Contractor from their responsibility for the completion of the Work in the time required by the Contract.

**See Form 013000-A Submittal Transmittal Form and Form 013000-B Request for Information on the next pages which form part of Section 01 30 00.**

## 013000 - A SUBMITTAL TRANSMITTAL FORM

| | | | |
|---|---|---|---|
| Submittal Description: | | Submittal #: | |
| Spec Section and/or drawing number: | | | |

| Project Information | Routing | Date Issued | Date Received |
|---|---|---|---|
| Owner: | Contractor to Engineer: | | |
| Project Name: | Engineer to Contractor: | | |
| Contractor Name: | | | |

Type of submission: ☐ Shop Drawings ☐ Information Only Submittal ☐ other

Remarks: _____

| Item | Section No. | Description | Review action* | Reviewer initials | Review comments attached? |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

*
REV = Reviewed = No exceptions taken;
RAN = Reviewed as noted = Make corrections noted; RSN = Resubmit as noted = Amend and resubmit; REJ = Rejected = Rejected
RIO = Reviewed for Information Only

ARCHITtheque's Stamp

Contractor to Certify either A or B

☐ **A** We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, and specified (no exceptions).

☐ **B** We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

Certified By:

_____
(Name)

_____
(General Contractors Signature)

**013000 - B REQUEST FOR INFORMATION FORM**

| | | | |
|---|---|---|---|
| Project Name: | | Project Number: | |

| | | | |
|---|---|---|---|
| Date: | | RFI # | |
| Subject: | | | |
| Drawing #: | | Specification #: | |
| Cost Impact: ☐ Yes ☐ No | Schedule Impact: ☐ Yes ☐No | | Attachment: ☐ |
| Question: | | | |
| | | | |
| Contractor Suggestion: | | | |
| | | | |
| ARCHITtheque's Response: | | | |
| | | | |
| Answered By: | | Response Date: | |

Within ten (10) weekdays after receipt of an RFI submittal the Region Representative /Architect/Consultant shall return one (1) copy of the RFI response.

**END OF SECTION 01 30 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Inspection:

A. All materials supplied by the Contractor shall be subject to review and inspection by the Region's Representative /Architect/ Consultant at time of delivery and prior to installation or placement. Materials will be rejected if they do not meet contract specifications.

B. The Project Manager/Region may instruct Contractor to conduct Quality Assurance testing on materials and equipment to be incorporated into permanent works before delivery to site.

C. Provide facilities for handling and inspection of materials**.**

## PART 2 - PRODUCTS

### 2.1 Quality of Materials:

A. Ensure that materials, fixtures, fittings, appliances and equipment and appurtenances provided under this Contract are new, the best of their kind for the application, and free from any defects; to the satisfaction of the Region's Representative /Architect/ Consultant.

## PART 3 - EXECUTION

### 3.1 Inspection and Testing:

A. Perform work under the Contract to the satisfaction of the Region's Representative /Architect/ Consultant. Adhere to the provisions of the Contract, especially with regard to the quality of the workmanship and materials, to the satisfaction of the Consultant and the Region's Representative. The Region's Representative /Architect/ Consultant may stop the work entirely if there is not a sufficient quantity of suitable and approved material on the site to carry on the work properly, or for any good and sufficient reason. Immediately obey orders given by the Region's Representative /Architect/ Consultant relating to quality of material or workmanship or in respect of safety or public convenience. The Region's Representative /Architect/ Consultant may have any worker suspended for incompetency, substance abuse, negligence or disregard of orders. Ensure that any worker so suspended is removed from the site promptly.

B. The Region's Representative /Architect/ Consultant may inspect, test and reject materials and equipment and the process of preparation or manufacture of materials or equipment at any time. The Region's Representative /Architect/ Consultant will provide reasonable notice of the materials and equipment which he proposes to inspect or test during the process of preparation or manufacture, save that in the case of materials or equipment specifically stated in the Contract as required to be tested or inspected by, or in the presence of, the Region's Representative /Architect/ Consultant, the Region's Representative /Architect/ Consultant will not give such notice. Notify the Region's Representative /Architect/ Consultant in writing at least seven days in advance of the commencement of preparation or manufacture of each item of such materials or equipment of the time and place at which such preparation or manufacture is to commence in order that the Region's Representative /Architect/ Consultant may be present.

C. Notwithstanding compliance with the foregoing paragraphs, if any material or equipment prepared or manufactured away from the site of the works and required by the Contract or by the Region's Representative /Architect/ Consultant to be inspected, or tested by, or in the presence of, the Consultant at

the place of preparation or manufacture become ready for delivery to the site of the works without being inspected or tested as required, notify the Consultant in writing and do not have such material or equipment delivered to the site of the works until authorized to do so in writing by the Region's Representative /Architect/ Consultant .

D. In any event, do not incorporate into the work material or equipment required by the Contract or by the Region's Representative /Architect/ Consultant to be inspected or tested by, or in the presence of, the Region's Representative /Architect/ Consultant until the required inspection or testing has been carried out to the satisfaction of the Region's Representative /Architect/ Consultant .

E. Provide and ensure that all Sub-contractors and those carrying out the process of preparation or manufacture provide every reasonable facility and co-operation to assist the Region's Representative /Architect/ Consultant in carrying out inspection and testing.

F. Do not cover up work without having it inspected and passed by the Region's Representative /Architect/ Consultant. If ordered by the Region's Representative /Architect/ Consultant, open for inspection any work covered up without prior inspection by the Region's Representative /Architect/ Consultant. Make good again openings, excavations and disturbances of property, resulting from the inspection to the satisfaction of the Region's Representative /Architect/ Consultant.

G. Be responsible for the obligations under the Contract regardless of the approval by the Region's Representative /Architect/ Consultant or failure of the Region's Representative /Architect/ Consultant to carry out an inspection. Do not interpret action or lack of action of the Region's Representative /Architect/ Consultant as being an acceptance of defective or improper work or material. Remove and replace properly or otherwise rectify such work or material to the satisfaction of the Region's Representative /Architect/ Consultant.

H. If it is required by the Contract, local laws or by-laws or the Architect/Consultant to have any part of the works inspected by others, give the Architect/Consultant and the other parties' concerned, reasonable notice of the time and date proposed for the inspection.

I. Where required by the Region's Representative /Architect/ Consultant, supply certified copies of tests reports pertaining to materials or equipment to be used in the construction of the works, indicating that materials comply with the Specifications. Ensure that such tests are made by an approved testing company.

J. Any and all materials or manufactured products, including pipe, may be tested. Supply samples for testing as directed of materials or manufactured products being used or proposed for use in the work. Provide adequate time in the project schedule for testing as specified.

K. Immediately remove from the site materials whose test specimens fail to meet specified requirements and those materials that are rejected upon inspection.

L. The Region will pay the costs of testing except for the following:

1. Inspection and testing required by law, ordinances, rules, regulations or orders of public authorities.
2. Inspection and testing performed exclusively for the Contractor's convenience, or testing performed for items or parts designed and built by the Contractor.
3. Testing, adjustment and balancing of mechanical and electrical equipment and systems.
4. Mill tests and certificates of compliance.
5. Tests specified to be carried out by the Contractor under the supervision of the Consultant.
6. Inspection and testing of water retaining structures and tanks as specified.

M. Where test specimens fail to meet specified requirements or where re-testing is required to verify the quality of work previously tested, provide additional test specimens and pay for the additional testing until satisfactory test results are obtained.

N. Ensure that the cost of specified testing is included in the cost of the Contract.

O. Quality control inspections, other than those noted above to be paid for by the Contractor, will be carried out by inspectors or inspection services under the direction of the Consultant on behalf of the Region, and at the Region's cost. Provide clear access to work areas to be inspected and assist as required by providing safety equipment, ladders, materials, etc., for these inspections, including but not necessarily limited to, welding X-ray inspections, concrete testing, painting inspections and compaction tests.

**3.2 Receipt and Acceptance of Materials:**

A. During the process of unloading any material, etc., inspect it for loss or damage in transit in the presence of the Region's Representative /Architect/ Consultant. Notify the agent of the carrier of any loss or damage to the shipment.

B. The Region's Representative /Architect/ Consultant may reject materials supplied by the Contractor if found faulty or defective upon delivery. Replace such faulty or defective materials. Be responsible for removing faulty or defective materials and replacing same with good materials regardless of when the defects are discovered. Carefully unload equipment and materials in an approved manner to avoid injury thereto. Provide ample facilities for handling the equipment.

**3.3 Quality Assurance:**

A. The Region Representative/Region may request any required samples at any reasonable time.

B. Preliminary testing may be performed by the Region or his agency, and only results of testing on delivered materials shall dictate acceptability of materials for incorporation into the work.

C. The Region will perform Quality Assurance testing using its own forces which are CSA certified. Alternatively, the Region may appoint a CSA-certified agency to conduct QA testing on its behalf. Quality Assurance testing will be at a frequency determined by the Region.

D. The costs of all Quality Assurance testing, except as noted otherwise, shall be borne by the Region.

E. The Contractor may request that the Region's, or his agent's, Quality Assurance equipment be tested for CSA compliance. All costs for such tests shall be at the Contractor's expense where such equipment is found to be in compliance. Co-operate with the Consultant's and Owner's inspection staff. Provide concrete, aggregates and other materials for tests.

F. Additional testing required to prove the adequacy of construction shall be at the Contractor's expense, where the routine test shows the construction to be inadequate, or where the Contractor's materials and procedures have not been as specified, or when work has proceeded without approval or inspection.

G. Where the Region's Quality Assurance testing differs from the Contractor's Quality Control results, the Region's results shall govern and all additional Quality Assurance testing shall be billed to the Contractor at a rate of not less than $250 per re-test except where such re-tests are carried out by the Region's agency in which case such re-tests shall be billed at a rate of 110% of the invoiced amount.

**END OF SECTION 01 40 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

B. Ontario Traffic Manual (OTM), Book 7 – Temporary Conditions, current revision.

### 1.2 Work Included:

A. The work under this Section includes, but is not limited to, provision of:

1. Access to the site and the work.

2. Temporary facilities including site and building enclosures, storage areas, shelters, sanitary facilities, Consultant's field office.

3. Temporary utilities.

4. Temporary controls, including fire protection, first aid, security, traffic control.

5. Temporary equipment to maintain essential utilities during construction.

## PART 2 - EXECUTION

### 3.1 General:

A. Any disruption of operating facilities must be accommodated by temporary facilities to the satisfaction of the Region's Representative / Architect / Consultant.

B. All schedules must indicate contingency and alternative dates and times in the event of postponement for any reason, or breakdown of temporary by-pass equipment during the shutdown.

C. Comply with local Police, Fire Department and EMS requirements regarding notification of all interested parties concerning the construction work and provisions for traffic movement.

### 3.2 Access:

A. Provide access to the site and work as required, in a proper and safe fashion. The Region's Representative / Architect / Consultant may assist in space allocations.

B. Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to the work. Obtain approval from the Region's Representative / Architect / Consultant before constructing temporary roads.

C. Provide construction warning signs along traveled roads as required or as requested by the Region's Representative / Architect / Consultant. Keep temporary road surfaces over backfilled excavations free from potholes.

D. Provide for mud and snow removal and dust suppression, as required during the construction period.

E. Vehicular Access to Adjacent Properties

1. Vehicular access to all properties within and adjacent to the Working Area shall be maintained at all times except when Contractor's operations reasonably necessitate a temporary restriction. Such restrictions shall be kept to a minimum and shall be coordinated with the affected property Region/s or occupant/s. Vehicular access shall be the responsibility of the Contractor. All traffic arrangements shall be subject to the approval of the Contract Administrator and the Local Municipalities.

F. Repair promptly damage to existing roads, walks, and other existing facilities.

**3.3 Location of Temporary Facilities:**

A. Coordinate the location of temporary facilities with the Facilities Manager subject to the satisfaction of the Region's Representative / Architect / Consultant.

B. Contractor's storage facilities shall be located within a compound indicated on the Contract Drawings.

**3.4 Traffic Control:**

A. Maintain work site in a condition, which shall allow access for Region's staff and vehicles.

**3.5 Installation and Removal:**

A. Provide temporary utilities, facilities and controls to execute the work expeditiously.

B. Remove temporary utilities, facilities and controls at the conclusion of Contract, unless otherwise directed by Consultant.

C. Site to be left in tidy and clean condition after removal of temporary facilities.

**3.6 Storage of Material and Equipment:**

A. Storage areas, on site, shall be shown on the Construction Management Plan. Region's Representative / Facility Manager shall assist in designating the storage areas.

B. Store materials to ensure the preservation of their quality and fitness for the work.

C. Store materials on wooden platforms or other hard, clean surfaces a minimum of 150 mm off the ground.

D. For materials and equipment not suitable for storage in the open, provide weather tight heated storage sheds with raised floors, a minimum of 150 mm off the ground for the storage of equipment, as required by the Consultant and/or equipment manufacturers. Supply to the Region's Representative / Architect / Consultant all storage instructions from equipment suppliers well in advance of the scheduled delivery dates.

E. Locate stored materials to facilitate inspection.

F. Handle and store products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions.

G. Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in the work.

H. Store products subject to damage from weather in weatherproof enclosures.

I. Store cementitious products clear of earth or concrete floors, and away from walls.

J. Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.

K. Store sheet materials, lumber, etc. on flat, solid supports and keep clear of ground. Slope to shed moisture.

L. Store and mix paints and coatings in a heated and ventilated room. Remove oily rags and other combustible debris from the site daily. Take every precaution necessary to prevent spontaneous combustion.

M. Remove and replace damaged products to the satisfaction of the Region's Representative / Architect / Consultant.

N. Do not use private property for storage purposes without the written permission of the property Region. Pay rental charges and damages associated with occupying private lands.

**3.7 Temporary Building Enclosures:**

A. Provide temporary enclosures for the work as required for weather protection and heating purposes.

B. Erect enclosures to allow accessibility for installation of materials and working inside the enclosure.

C. Keep temporary buildings, and area of work in a clean and sanitary condition at all times and do not permit to become a health hazard or a nuisance to adjoining properties.

**3.8 Temporary Shelter and Sanitary Facilities:**

A. Provide and properly maintain in clean condition, a suitable privy or water closet for the Contractor's personnel as required by the Construction Safety Act, in location as shown on the Contract drawings.

B. Provide all required toilet supplies.

C. Provide and maintain drinking water and washing facilities as required by the Construction Safety Act.

D. Provide shelter for workers.

**3.9 Temporary Fire Protection:**

A. During the entire construction period provide fire extinguishers in temporary office, as well as in other locations reasonably required, and all other fire protection necessary to protect the project and to comply fully with the requirements of insurance underwriters for the project and local, provincial and federal authorities.

**3.10 Temporary First Aid Facilities:**

A. Provide and maintain the necessary first aid items and equipment as required.

B. Designate employees who are properly instructed to be in charge of first aid. Ensure that at least one

such employee is always available on the site while work is being conducted. Comply with the Construction Safety Act and Regulations for Construction Projects.

**3.11 Temporary Utilities:**

A. Make arrangements for the supply of water, electrical power, gas, sanitary facilities, heat, and any other temporary services required during construction. Be responsible for all fees, permits and charges, including arrangements for all necessary applications, incurred throughout the construction period until the date of acceptance as established by the Consultant.

B. Be responsible for providing electrical power generators as required to maintain construction activities and all temporary facilities at no extra cost to the Region, if temporary electrical power supply is delayed or unavailable from the local authority.

C. Permanent utilities installed under this Contract may be used for construction requirements provided that no guarantees are affected thereby. Make good any damage.

D. Operate equipment according to the requirements of the Ontario Ministry of Labour under the Occupational Health and Safety Act and Regulations for Construction Projects.

E. Arrange, pay for and maintain temporary electrical power supply until Substantial Performance as follows:

1. Temporary facilities for power, where required outside the plant, such as pole lines and underground cables with the approval of the local utility company.

2. Connection to the existing power supply system in accordance with the Ontario Electrical Safety Code. Provide meters and switchgear as required by the utility company and the Consultant.

3. Electrical power and lighting system as installed under this Contract may be used for construction requirements provided that no guarantees are affected thereby. Make good any damage and replace all lamps which have been used for three months or longer.

F. Pay the costs of temporary heat and ventilation used during the course of construction, including costs of installation, fuel, operation, maintenance and removal of equipment. Do not use direct-fired heaters discharging waste products into work areas unless prior approval is given by the Region’s Representative / Architect / Consultant. Provide temporary heat and ventilation in enclosed areas, to:

1. Facilitate progress of work.

2. Protect work and products against dampness and cold.

3. Prevent moisture condensation on surfaces.

4. Provide ambient temperatures and humidity levels for storage, installation and curing of materials.

5. Provide adequate ventilation to meet health regulations for safe working environment.

6. Prevent hazardous accumulation of dust, fumes, mist, vapours or gases in areas occupied during construction.

7. Prevent harmful accumulation of hazardous substances into the atmosphere of occupied areas.

8. Ensure that the disposal of exhaust materials will not result in harmful exposure to persons or the environment.

9. Ventilate storage spaces containing hazardous or volatile materials.

10. Ventilate temporary sanitary facilities.

11. Remove harmful elements even though the work process ceased.

G. Maintain strict supervision of operation of temporary heating and ventilating equipment, to:

1. Enforce conformance with applicable codes and standards.

2. Enforce safe practices.

3. Prevent abuse of services.

4. Prevent damage to finishes.

H. Ensure that direct-fired combustion units are vented to the outside.

**3.12 Temporary Equipment:**

A. Be responsible for operation, maintenance, power supply, power cost, and fuel during construction, and removal of all temporary equipment at completion of works.

**3.13 Not Used**

**3.14 Security:**

A. Be responsible for the security of construction site materials, tools, equipment and construction.

**3.15 Traffic Signs and Barricading:**

A. The Contractor shall be responsible to supply and erect all construction signs, barricades, delineators, flashing lights and such other devices and protection as may be required by the Ontario Traffic Manual, Book 7 and the Contract Drawings both inside and outside the Working Area.

**3.16 Traffic Control and Parking:**

A. Observe load and truck route restrictions on the access road and streets to be used.

B. Locate parking areas for vehicles on the project site as directed by Region’s Representative/Facility manager.

**3.17 Removal and Restoration of Temporary Facilities and Controls:**

A. Remove temporary facilities and controls from the site on completion of the works, or as otherwise ordered in writing by the Region’s Representative / Architect / Consultant.

B. As each portion of the work is completed, as determined by the Region’s Representative / Architect / Consultant, restore disturbed areas, roadways, fences, building, etc. equal to or better than the initial condition and clean up the construction area as instructed by the Region’s Representative / Architect /

Consultant.

C. Leave clean and in good order, roads, parking areas, walks, sodded, seeded and other areas disturbed by the construction. Failure to make satisfactory progress in the execution of this work within forty-eight (48) hours of receipt of written notice from the Region's Representative / Architect / Consultant may result in having the surplus material removed, or re-grading any area or performing any work necessary to leave the site in a satisfactory condition and having the costs deducted from payments due under the Contract.

**END OF SECTION 01 50 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Regulations:

A. Occupational Health & Safety Act R.S.O. 1990 (as amended).

B. Ontario Ministry of Labour – O. Reg. 278/05 – Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations, under the Occupational Health & Safety Act.

C. Ontario Ministry of Labour – R.R.O. 1990, Reg. 837 – Designated Substances – Asbestos, as amended by O. Reg. 279/05.

D. Ontario Ministry of Environment – R.R.O. 1990, Reg. 347 – General – Waste Management, under the Environmental Protection Act, as amended to O.Reg. 395/07.

E. Ontario Ministry of Transportation – R.R.O. 1990, Reg. 261 – General, under the Dangerous Goods Transportation Act, as amended to O. Reg. 252/02.

F. CSA Standard Z94.4-02: Selection, Use and Care of Respirators.

### 1.3 Construction Safety Measures:

A. Observe and enforce construction safety measures required by the latest edition of the following documents: the National Building Code, the Ontario Building Code, Occupational Health and Safety Act and Regulations for Construction Projects, other applicable safety regulations, and municipal statutes and authorities.

B. Comply with all Federal, Provincial and Municipal Health and Safety Acts, Regulations and By-Laws and with all applicable industry safety standards.

C. Comply with Ontario Regulation 145/00 which amends Ontario Regulation 213/91 (Construction Projects) made under the Occupational Health and Safety Act (OHSA).

D. In the event of conflict between any provisions as above, the most stringent provision governs.

E. Assume the role of the ‘Constructor’, as defined by the Occupational Health and Safety Act and Regulations unless otherwise specified in the Contract Documents.

## PART 2 - PRODUCT

There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Overloading:

A. Ensure that no part of the Work is subjected to a load that will endanger its safety or will cause permanent deformation.

**3.2 Special Protection and Precautions:**

A. Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labeling and the provision of Safety Data Sheets (SDS) acceptable to Labour Canada.

B. Inform the Owner/Facility Manager of the location of hazardous materials and ensure that these materials are not kept stored or used on site without the Owner's prior consent or approval.

C. Comply with the Region's Health and Safety policies, programs, rules and requests.

D. Provide to the Region's Representative/ Architect / Consultant for review, a copy of Contractor's current Health and Safety Policies and Program. Implement the Health and Safety program prior to the commencement of construction.

E. If workers fail to comply with any program, policy, rule, or request regarding health and safety, the Region reserves the right to remove that person from the Work.

F. Ensure that Subcontractors and suppliers are aware of and comply with all the Region's Health and Safety policies, programs, rules and requests. Obtain copies of all Subcontractors' Health and Safety Policies and Programs prior to such Subcontractor commencing work on the site if and when requested.

G. Maintain on site at a location accessible to all workers, the Region's Representative/ Architect / Consultant and the Region, current MSDSs.

H. Provide the Region's Representative with a list of Designated Substances that will be brought to the site prior to commencing work. Material Safety Data Sheets (MSDS) and the hazardous material inventory for each substance listed must be kept on site.

I. List of Designated Substances at the Site:

1. Be advised that the designated substances are or may be present on the site and within the limits of this Contract:

2. Refer to the Hazardous Building Materials / Designated Substance Survey Report included with the tender documents.

3. Prior to commencement of this work, provide written notification to the local office of the Ministry of Environment of the location(s) proposed for disposal of Designated Substances. Provide a copy of the notification to the Region's Representative/ Architect / Consultant a minimum of two weeks in advance of the commencement of the work.

J. Health and Safety Warnings:

1. The Region's Representative shall have the right to issue warnings and/or to stop any Contractor's work if the Contractor fails to comply with any requirements under this Section.

2. Similarly, the Region's Representative/ Architect / Consultant and the Region shall have the right to issue warnings and/or stop work for any Contractor violations of the contract including the Region's health and safety policy, programs, rules and/or if the Contractor creates a health or safety hazard.

3. The Region reserves the right to have a hazard corrected at the Contractor's expense.

**3.3 Safety Equipment and Hazardous Areas and Materials:**

A. Safety equipment such as gas detection equipment for explosive or toxic gases or oxygen deficiency, safety harness, Self-Contained Breathing Apparatus (SCBA) and ropes are to be made available to the resident inspection staff. When it is required for the resident inspection staff to enter manholes, elevated areas or other potentially hazardous areas, provide competent personnel to assist with the entry into the said areas with the inspection staff and personnel with the necessary safety equipment to be present as required.

B. Provide personal protective equipment for Contractor's own workers where prescribed.

C. Work areas suspected of containing explosive or toxic gases or that are oxygen deficient must be routinely tested for presence of same before any work is done. Make safe work areas that are found to be hazardous before work proceeds, in accordance with safe practice and applicable statutes.

D. Post warning signs at hazardous areas or where hazardous materials are stored and install protective barriers. Instruct personnel in proper safety procedures.

E. Identify areas considered to be hazardous locations and comply with requirements of the Ministry of Labour.

F. Use only non-sparking tools in potentially explosive areas.

**3.4 Confined Space:**

A. Confined space entry procedures must be followed when performing work within this tank.

B. Persons intended to work in confined spaces must have formal training in performing work in confined spaces.

1. Provide proof of valid certificates of such training for all workers prior to entry of such workers into Confined spaces.

2. Provide all necessary safety equipment for entry into confined spaces.

3. Where workers are required to enter a confined space, as defined by the OHSA, O. Reg. 632/05, ensure that workers of the Contractor and all Subcontractors follow the requirements of the above legislation, including but not limited to having:

   a) A method for recognizing each confined space to which the program applies.
   b) A method for assessing the hazards to which workers may be exposed.
   c) A method for the development of confined space entry plans (which include on-site rescue procedures)
   d) A method for training workers.
   e) An entry-permit system.

4. Supply the necessary tools and equipment to perform the confined space entry. These items include, but are not limited to, required documentation, gas detectors, breathing equipment, fall protection and rescue equipment.

**END OF SECTION 01 54 50**

## PART 1 - GENERAL

### 1.1 Section Includes:

.1 Temporary Barriers and Enclosures.

### 1.2 Related Sections:

A. Section 01 50 00 – Temporary Facilities and Controls.
B. Section 01 54 50 – Safety Requirements.

### 1.3 Installation and Removal:

A. Provide temporary controls in order to execute Work expeditiously.
B. Remove from site all such work after use.

### 1.4 Hoardings:

A. Erect temporary full height plywood hoardings, between the construction area and area which is operational and occupied by the residents & staff. The plywood hoarding shall have adequate structural support and framing, and shall enclosure the work area in totality. The plywood hoarding will have a swing door, 1200 mm wide, barrier-free compliant, with latching, and locking, where required.
B. Erect full height dust-tight Plastic sheet separation, between the construction area and area which is operational and occupied by the residents & staff, with provision of access. These temporary hoarding shall be erected where they are not required for more than a day. The Plastic sheet temporary hoarding shall have adequate structural support and framing.
C. The plywood hoardings should enclose the space for storing material and utensils, adequate for carrying out all demolition and construction work.
D. Provide at least one lockable pedestrian door for access for construction personnel.
E. Ensure services required for demolition and construction are within the Hoarding.
F. Provide Graphic, in form of high quality Vinyl or high quality Adhesive Paper for the full height and width of the Hoarding, on the Public side/s of the Hoarding. Painting may be acceptable.
G. Provide clear signage ‘CONSTRUCTION IN PROGRESS’ and as required by law, on the Hoardings. The signage shall be at eye-level and clearly visible. Provide clear signage to indicate access or restriction of access, requirement of safety gear, etc.
H. Hoardings shall be removed, and erected, as required for Phasing of the Work.
I. All the Hoardings shall be removed after substantial completion of the Work,
J. Provide the Phasing plan, with drawings, showing the location and extent of Hoardings, for each and all phases during the progress of construction work.
K. Include on Construction Schedule the installation of Hoardings tasks.
L. Protect hoarding from damage by equipment and construction procedures.

### 1.5 Guard Rails and Barricades:

A. Provide secure, rigid guard rails and barricades around any open shafts, open stair wells, open edges of floors and roofs.
B. Provide as required by governing authorities.

**1.6 Weather Enclosures:**

Not Used

**1.7 Dust tight Plastic Screens:**

A. Provide dust tight screens or insulated partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.

B. Maintain and relocate protection until such work is complete.

**1.8 Access to Site:**

A. Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

B. If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractor's use of roads.

**1.9 Public Traffic Flow:**

A. Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect the public.

**1.10 Fire Routes:**

A. Maintain Fire Exit routes; where required provide and maintain alternative fire exit route. Provide and maintain competent signal flag operators to direct public to safe exit route.

**1.11 Protection for off-site and Public Property:**

A. Protect surrounding private and public property from damage during performance of Work.

B. Be responsible for damage incurred.

**1.12 Protection of Building finishes:**

A. Provide protection for finished and partially finished building finishes and equipment during performance of work.

B. Provide necessary screens, covers, and hoardings.

C. Include in Project Construction Schedule the installation of Hoardings, Barricades and Guard rails, Weather enclosures, Dust tight screens. Confirm with the Region locations and installation schedule 3 days prior to installation.

D. Be responsible for damage incurred due to lack of or improper protection.

**END OF SECTION 01 56 00**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

### 1.2 Environmental Measures:

A. Meet or exceed the requirements of environmental legislation and regulations, including amendments in force for the duration at the work provided that in case of conflict or discrepancy, the more stringent requirements apply.

B. Construct this project in accordance with construction and restoration guidelines established by the Ministry of Environment and the Ministry of Natural Resources, or other applicable approval agencies, and Owner's requirements through Work Permit Regulations.

### 1.3 Codes and Standards:

A. Miscellaneous - OPSS Division 5 and 200

### 1.4 Submittals:

A. Submit an Environmental Management Plan to the Region's Representative / Architect / Consultant, in accordance with Section 01 30 00, prior to commencement of construction.

## PART 2 - PRODUCTS

There are no Products in this Section

## PART 3 - EXECUTION

### 3.1 Enforcement:

A. Protection of the environment is considered to be of prime importance during the work.

B. Progress payments will not be made to the Contractor while any requirements for environmental protection are outstanding.

C. Take immediate action to correct environmental deficiencies at the direction of the Region's Representative / Architect / Consultant.

D. In the event that deficiencies in work are not corrected in a timely manner, the Region's Representative / Architect / Consultant may take the necessary corrective action and may deduct the cost thereof from payments under the Contract.

### 3.2 Disposal of Water:

A. Do not pump or drain water containing deleterious materials into waterways and sewers. Intercept concentrated run-off from un-stabilized areas and divert to a temporary ditch or other stabilized areas under sheet flow conditions.

**3.3 Pollution Control:**

A. Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

B. Maintain all construction equipment properly, to minimize exhaust emissions.

C. Clean all construction equipment prior to entering public roadways to avoid spilling of construction debris. Collect construction debris in a designated area, for ultimate disposal off site.

**3.4 Dust and Mud Control:**

A. Take such steps as required to prevent dust and mud nuisance resulting from construction operations within the building and site. Carry out dust control practices at all locations: inside the building, on site and on adjacent roads.

B. Do not initiate chemical means of dust control without prior approval of the Consultant.

C. Transport excessively dusty materials in covered haulage vehicles.

D. Where the work requires saw-cutting of the asphalt or the saw-cutting or grinding of concrete, use blades and grinders of the wet type together with sufficient water to prevent the incidence of dust.

E. Ensure that all debris and mud tracked upon traveled roadways resulting from construction operations or the delivery of materials to the site are removed at the end of each day’s operation.

F. Mud Control:

1. Be responsible for all dirt and mud that is tracked onto the roadways from vehicles entering or leaving the job site, and immediately proceed with clean-up operations as part of contract. If, after written instruction, or if, in the opinion of the Region’s Representative / Architect / Consultant, the Contractor has not, or cannot, sufficiently remove mud from the road, the Region’s Representative / Architect / Consultant may arrange the necessary clean-up with all costs being charged to the Contractor.

2. Comply with local municipal by-laws regarding mud control.

3. Keep public roadways clean and free of mud unless closed to through traffic with the permission of the Consultant.

G. Repair promptly damage to existing roads, walks, and other existing facilities due to construction activities.

**3.5 Noise Control:**

A. Ensure that vehicles and equipment are provided with efficient muffling devices to minimize noise levels in the project area. Provide noise barriers as required to limit the noise level at site boundaries in accordance with local by-laws.

B. Establish and maintain site procedures consistent with the objective that noise levels from the construction area be minimized, and in accordance with local by-laws.

**3.6 Construction Wastes:**

A. Provide sufficient suitable refuse containers throughout the site to receive and control construction wastes. Keep containers closed to prevent contents from blowing around site.

B. Segregate and store waste materials so as to maximize recycling opportunities.

**3.7 Equipment Maintenance and Refueling:**

A. Undertake a detailed review of the construction site to plan access routes and fueling areas. Do not refuel or maintain equipment in, adjacent to or within 30 m of, watercourses. Establish suitable fueling and maintenance areas subject to the approval of the Consultant and restrict maintenance and fueling to these areas. Submit procedures for the interception and rapid clean up, and disposal and reporting of spillage that does occur to the Consultant for review prior to starting work.

B. Keep materials required for clean-up of fuel spillages readily accessible on site.

C. Store fuel in accordance with MOE and other applicable guidelines/regulations.

D. Clean construction equipment prior to entering roadways.

E. Do not clean equipment in locations where debris may gain access to sewers or watercourses.

**3.8 Not Used.**

**3.9 Fires:**

A. Do not light fires or burn rubbish on site.

**3.10 Tree Protection:**

A. Not Used

**3.11 Cleaning and Disposal of Wastes:**

A. Dispose of all wastes and rubbish off site in accordance with applicable legislation. Do not bury wastes on site.

B. Do not dispose of wastes, fuels, lubricants, pesticides or volatile materials into water courses or sewers.

C. Clean during the course of the work, before the start-up of a part of the works, and at completion, as required.

D. Conduct cleaning and disposal operations to comply with local ordinances and anti- pollution laws.

E. Store volatile wastes in covered metal containers, and remove from premises daily.

F. Prevent accumulation of wastes which may create hazardous conditions.

G. Maintain the project site and adjoining public properties free from accumulation of waste materials and rubbish.

H. Provide on-site dump containers for collection of waste materials and rubbish.

I. Provide adequate ventilation at all times when volatile or noxious substances are used.

J. Do not burn debris on the project site or adjacent areas.

**3.12 Transport of Dangerous Goods:**

A. Comply with Federal Regulation “Transport of Dangerous Goods Act, 1992” administered in the Province by the Ministry of Transportation Ontario.

**3.13 Environmental Management Plan:**

A. Ensure that the Environmental Management Plan contains procedures to mitigate environmental impacts due to construction that includes the following components as a minimum in addition to items identified elsewhere in the Contract Documents:

1. All machinery and equipment operated by the Contractor and related hauling trucks shall have muffling systems that are up-to-date and fully operable. Trucks shall shut off engines while loading and unloading.

2. All mitigation measures outlined in the Environmental Management Plan included in the Contract Documents.

B. The Environmental Management Plan may be required to be submitted to the Conservation Authority and/or the Ministry of National Resources, prior to the commencement of the work. Coordinate with the review agencies such that the schedule of the work is not delayed. No additional payment will be authorized for issues arising from the review of the Environmental Management Plan.

**END OF SECTION 01 56 10**

## PART 1 - GENERAL

### 1.1 Reference:

A. Section 01 00 00 applies to and governs the work under this Section.

## PART 2 - PRODUCTS

A. There are no Products in this Section.

## PART 3 - EXECUTION

### 3.1 Cleaning:

A. Clean all areas prior to contract closeout, as required, to the satisfaction of the Project Manager/Architect/Consultant.

B. Refer to Section 01 56 10 for requirements for storage and disposal of wastes.

C. Use only cleaning materials recommended by the manufacturer on surfaces to be cleaned, and as recommended by cleaning material manufacturer.

D. Remove waste materials and rubbish from the project site.

E. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from interior and exterior finished surfaces open to view including glass and other polished surfaces, and mechanical and electrical fixtures.

F. Not Used

### 3.2 Removal of Temporary Facilities:

A. Remove temporary facilities from site on completion of the works, in accordance with Section 01 50 00.

### 3.3 Project Record Documents:

A. Refer to Section 01 00 00 for requirements for maintenance of as-constructed documents on site.

B. At the completion of the project and in advance of final inspection, neatly transfer as-constructed notations to the second set of white prints and submit both sets to the Project Manager/Architect/Consultant.

### 3.4 Operating and Maintenance Data:

A. Within one (1) week of Substantial Completion, submit to the Consultant for review one (1) draft copy of a set of manuals containing complete instructions for the maintenance of materials supplied. Following the Consultant’s review submit to the Consultant two (2) copies of the final version of the manuals and one (1) digital copy in .PDF and Microsoft Word formats of the manuals.

B. Digital copy of the operating and maintenance manual is to include a Microsoft Word Table of Contents with hyperlinks to each individual PDF file.

C. Submittals for operation and maintenance manuals, information and data are to be accompanied by a properly completed Form 01700-A, Operation and Maintenance Transmittal Form included at the end of this Section.

D. Have the manuals bound in expanding barlock binders similar to Grand & Toy Catalogue No. ACCO 05436-0 with dividers and drawing pockets. Emboss the front and the spine of each binder with the following information:
   1. Owner's name.
   2. Contract number.
   3. Year of completion.
   4. Volume number (e.g. 1 of 3).
   5. Set number (e.g. 1 of 6).
   6. Contractor's name.

E. Refer to Section 01 30 00 for additional submittal requirements.

F. The manuals will include the following information:
   1. The manual shall be divided in accordance with the Division and Section format of the Specifications and shall include tabs for each section.
   2. The manual shall include the table of contents, contractor's, subcontractor's names and contact details.
   3. Instructions for the care and maintenance of the building components, including, but not limited to, the care of coatings, roofing systems, joint seals, as well as manufacturers' data with suppliers' names and addresses for, finishing hardware, doors, etc.
   4. Contact persons, companies, names, mail and e-mail addresses and telephone and facsimile numbers of sub-contractors and suppliers.
   5. Guarantee commencement date, and duration of guarantee. Copies of various product and/or equipment guarantees.
   6. A final, reviewed copy of shop drawings and product data sheets.
   7. A complete list of instructions and names of products to be used for the cleaning of and the maintaining of finished building surfaces.
   8. Copies of signed inspection/installation reports.
   9. Guarantees and Warranties.
   10. Provide one (1) PDF file per item.

**3.5 Touch-up and Repair:**

A. Perform touch up of paint on buildings, equipment, piping, conduits, etc.

B. Repair construction damage to the buildings, equipment and furnishings.

C. Repair damage to interior and exterior areas.

**3.6 Warranty and Maintenance:**

A. The Warranty and Guarantee periods commence at Substantial Performance of the entire project, unless otherwise agreed to by the Region in writing.

B. Unless otherwise specified, provide a one (1) year warranty for all components of the work.

C. Promptly correct any defects during the Warranty Period.

D. Be responsible for all maintenance during the progress of the work up to the date of completion and rectification of deficiencies during the Warranty Period.

E. Be responsible for extended warranties and/or guarantees as detailed in the various sections of the Specifications.

F. Submit the required guarantee/warranty certificates and/or written documentation as specified.

G. Repairs during Warranty Period:

1. Perform all repairs required upon receipt of verbal or written notices from Region's Representative/Architect/Consultant.

2. Repair or make good settlements and defects on surfaces of backfilled trench or excavations.

3. Repair all damages to structures caused by settlement of ground adjacent to or over excavation.

4. All deficient work shall be rectified within one (1) week of receipt of the written deficiency report from the Consultant. If the Contractor fails to repair all noted deficiencies to the Consultant's satisfaction within this time, Region have the right to have any and all outstanding repairs completed at the Contractor's expense.

See Form 017000-A Operation and Maintenance Transmittal Form on the next page which forms part of Section 01 70 00.

## 017000 – A OPERATION AND MAINTENANCE TRANSMITTAL FORM:

Date: _____ Submittal No: _____

To: _____ Contract No: _____

_____ Spec. Section: _____

_____ Submittal Description: _____

Attention: _____ From: _____

| Checklist | Contractor | | | |
|---|---|---|---|---|
| | Satisfactory | N/A | | |
| 1. Table of contents | | | | |
| 2. Equipment record forms | | | | |
| 3. Manufacturer information | | | | |
| 4. Vendor information | | | | |
| 5. Safety precautions | | | | |
| 6. Operator prestart | | | | |
| 7. Start-up, shutdown, and post-shutdown procedures | | | | |
| 8. Normal operations | | | | |
| 9. Emergency operations | | | | |
| 10. Operator service requirements | | | | |
| 11. Environmental conditions | | | | |
| 12. Lubrication data | | | | |
| 13. Preventive maintenance plan and schedule | | | | |
| 14. Troubleshooting guides and diagnostic techniques | | | | |
| 15. Wiring diagrams and control diagrams | | | | |
| 16. Maintenance and repair procedures | | | | |
| 17. Removal and replacement instructions | | | | |
| 18. Spare parts and supply list | | | | |
| 19. Corrective maintenance man-hours | | | | |
| 20. Parts identification | | | | |
| 21. Warranty information | | | | |
| 22. Personnel training requirements | | | | |
| 23. Testing equipment and special tool information | | | | |

Remarks: _____ Contractor's Signature _____

[1] See Section 01 30 00, Transmittal Procedure for Submittals

**END OFSECTION 01 70 00**

## Part 1 General

### A.1 SECTION INCLUDES

A. Alteration project procedures.

B. Removal of designated building equipment and fixtures.

C. Removal of designated construction.

D. Disposal of materials.

E. Identification of utilities.

### A.2 RELATED REPORTS AND SECTIONS

Designated and Hazardous investigation Report.

### A.3 ALTERATION PROJECT PROCEDURES

A. Remove and cut work in a manner to minimize damage and to provide means of restoring products and finishes to specified condition.

B. Where new work abuts or aligns with existing, provide a smooth and even transition.

C. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Consultant for review.

D. In case of any Designated and Hazardous substance is encountered, Contractor to stop work and inform the Project Manager. The General requirement to Control, Containment and Removal of the designated substance shall be completed by Specialized Contractor engaged by the Contractor.

### A.4 ADMINISTRATIVE REQUIREMENTS

A. Sequencing:

1. Sequence activities to demolish the Work in the following stages order:
   a) Hoarding and enclosures for asbestos abatement by asbestos abatement contractor, in accordance with the Phasing plan.
   b) Asbestos abatement by asbestos abatement contractor.
   c) Selective demolition in abated project site as required by abatement/ demolition / general contractor. Flooring demolition / removal, in accordance with the Phasing of the Floor Replacement work.

B. Describe demolition removal procedures and schedule. Provide Phasing Plan for review and Approval of the Region's Representative / Project Manager / Architect.

C. Schedule Work to precede new construction work.

D. Adhere to Work Restriction, Section 01 11 40, for performing demolition work creating dust and noise.

### 1.10 SUBMITTALS FOR REVIEW

A. Section 01 30 00: Submittals.

Shop Drawings: Indicate demolition and asbestos abatement; location and construction of temporary work.

**1.11 CLOSEOUT SUBMITTALS**

A. Section 01 70 00 Contract Closeout.

B. Documentation: Accurately record actual locations of subsurface obstructions, capped utilities.

**1.12 REGULATORY REQUIREMENTS**

A. Conform to applicable code for demolition work, dust control, products requiring electrical disconnection reconnection.

B. Obtain required permits from authorities.

C. Do not close or obstruct egress width to any building or site exit.

D. Do not disable or disrupt building fire or life safety systems without prior written notice to Region as specified in Section 01 11 40.

E. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials and notify Consultant and Region Project Manager.

**1.13 PROJECT CONDITIONS**

A. Conduct demolition to minimize interference with adjacent and occupied building areas.

B. Cease operations immediately if structure appears to be in danger and notify Consultant. Do not resume operations until directed.

**Part 2 Products**

**2.1 Not Used**

**Part 3 Execution**

**3.1 PREPARATION**

A. Erect and maintain temporary partitions to prevent spread of dust, odours, and noise. Coordinate with Section 01 50 00 and 01 56 00.

B. Protect existing materials which are not to be demolished.

C. Prevent movement of structure; provide bracing and shoring.

D. Mark location and termination of utilities.

E. Provide appropriate temporary signage including signage for exit or building egress.

**3.2 DEMOLITION**

A. Disconnect, remove and cap identify designated utilities within demolition areas.

B. Demolish in an orderly and careful manner. Protect existing supporting structural members.

C. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.

D. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.

Remove Temporary Work.

**END OF SECTION 02 41 19**

## Part 1 General

### 1.1 SECTION INCLUDES

A. Preparing substrate surfaces.

B. Sealant and joint backing.

### 1.2 RELATED SECTIONS

A. Fire stopping

B. Doors and Frames

C. Gypsum Board Assemblies

D. Section 09 91 10 Painting

### 1.3 REFERENCES

A. ASTM C834-10 - Standard Specification for Latex Sealants.

B. ASTM C919-12 - Standard Practice for Use of Sealants in Acoustical Applications.

C. ASTM C920-14 - Standard Specification for Elastomeric Joint Sealants.

D. ASTM C1184-13 - Standard Specification for Structural Silicone Sealants.

E. ASTM C1193-13 - Standard Guide for Use of Joint Sealants.

F. ASTM C1311-10 - Standard Specification for Solvent Release Sealants.

G. ASTM C1330-02(2013) - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.

### 1.4 ADMINISTRATIVE REQUIREMENTS

A. Section 01 04 00 Coordination

B. Coordination:

1. Coordinate with other work having a direct bearing on work of this section.
2. Coordinate the work with all sections referencing this section.

### 1.6 SUBMITTALS FOR REVIEW

A. Section 01 30 00 Submittals

B. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations and colour availability.

### 1.7 SUBMITTALS FOR INFORMATION

A. Section 01 30 00 Submittals.

B. Installation Data: Manufacturer's special installation requirements.

.1 Indicate special procedures, surface preparation, perimeter conditions requiring special attention.

**1.8 CLOSEOUT SUBMITTALS**

Section 01 70 00 Contract closeout, and other relevant sections.

**1.9 QUALITY ASSURANCE**

A. Products of This Section: Manufactured to ISO 9000 certification requirements.

B. Perform sealant application work to ASTM C1193.

C. Perform acoustical sealant application work to ASTM C919.

D. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five (5) years documented experience.

E. Applicator Qualifications: Company specializing in performing the work of this section with minimum three (3) years documented experience and approved by the manufacturer.

**1.10 SITE CONDITIONS**

Ambient Conditions:

1. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

**1.11 WARRANTY**

A. Warranty: Provide a five (5) year warranty for failure to meet specified requirements including coverage for installed sealants and accessories which fail to achieve water tight seal air tight seal, exhibit loss of adhesion or cohesion, or do not cure.

B. Manufacturer's Warranty: Provide manufacturer's twenty (20) year material warranty for installed silicone sealant.

**Part 2 Products**

**2.1 SEALANTS**

A. Silicone Elastomeric Sealant (Type A): ASTM C920, Type S, Grade NS, Use NT, SWRI Validated; single component, neutral curing, non-sagging, non-staining, non-bleeding, low modulus; primer-less application, colour to match existing.

1. All-temperature gunnability: -29 to 50 degrees C.
2. Shore A Hardness: 35
3. Movement: 50%
4. Tack-free Time, 50% RH: 120 min.
5. Curing time, 50 % RH at 25°C: 7 – 14 days.
6. Working time: 30 min.
7. VOC content: max 66 g/L
8. Ultimate Tensile Strength: 200 psi
9. Ultimate Elongation: 1200
10. Tensile Adhesion: 80 psi
11. Dowsil 756 SMS Silicone

B. Siliconized Acrylic Latex (Type A): ASTM C834; Type OP , Grade NF; single component, non-sagging, non-staining, non-bleeding, paintable; colour: white, paintable

1. Elongation Capability 12.5%.
2. Service Temperature Range -54 to 82 degrees C.
3. Shore A Hardness Range 15 to 25.
4. Product: Tremflex 834, manufactured by Tremco, Inc.

C. Sanitary Silicone Sealant (Type B): ASTM C920, Grade NS, Class 25, Use NT; single component, acetoxy curing, non-sagging, non-staining, mildew resistant; colour as selected.

1. Elongation Capability 25%.
2. Service Temperature Range -54 to 82 degrees C.
3. Shore A Hardness Range 15 to 35.
4. Product: Dowsil 786 Silicone sealant or Tremsil 200 Sanitary by Tremco, Inc.

**2.2 ACCESSORIES**

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: ASTM C1330, round, closed cell; polyethylene foam rod, oversized 30% to 50% larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

E. Masking tape: Non-staining, non-absorbent type compatible with sealant and adjacent surfaces.

F. Setting Blocks and Spacers: Compatible with silicone sealant and recommended by sealant manufacturer.

**Part 3 Execution**

**3.1 EXAMINATION**

A. Verify existing conditions before starting work.

B. Verify that substrate surfaces and joint openings are clean, dry, and free of frost and ready to receive work.

C. Verify that joint backing and release tapes are compatible with sealant.

**3.2 PREPARATION**

A. Remove loose materials and foreign matter which might impair adhesion of sealant.

B. Clean and prime joints to sealant manufacturer's written instructions.

C. Perform preparation to ASTM C1193 for solvent release and latex base sealants.

D. Perform preparation to sealant manufacturer's written instructions.

E. Protect elements surrounding the work of this section from damage or disfiguration.

**3.3 INSTALLATION**

A. Perform installation in accordance with ASTM C1193 for solvent release and latex base sealants, ASTM C919 for acoustical sealants.

B. Install sealant to sealant manufacturer's written instructions.

C. Measure joint dimensions and size materials to achieve required 2:1 width/depth ratios.

D. Install joint backing to achieve a neck dimension no greater than 1/3 of the joint width.

E. Install bond breaker where joint backing is not used.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

H. Tool joints concave channel shaped as detailed.

**3.4 CLEANING**

A. Cleaning installed work.

B. Clean adjacent soiled surfaces.

**3.5 PROTECTION OF FINISHED WORK**

A. Remove masking tape and excess sealant.

B. Protect sealants until cured, remove temporary glass supports.

**3.6 SCHEDULE**

A. Silicone Elastomeric sealant – Type A - for Balcony slab and wall

B. Silicone Acrylic sealant – Type B – for all other application

C. Sanitary silicone sealant – Type C – in any wet area, balcony drain

**END OF SECTION 07 92 00**

## Part 1 General

### 1.1 SECTION INCLUDES

A. Resilient Plank Flooring

B. Thermoplastic Rubber Wall Base

### 1.2 RELATED SECTIONS

A. Division 1 Specification Section

B. Section 02 41 19 – Selective Demolition.

C. Wall materials to receive application of base.

### 1.3 REFERENCES

A. ASTM E84-15a - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. ASTM F1066-04(2014) e1 - Standard Specification for Vinyl Composition Floor Tile.

C. ASTM F1861-08(2012) e1 - Standard Specification for Resilient Wall Base.

D. CAN/ULC-S102.2-10 - Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies.

### 1.4 SUBMITTALS FOR REVIEW

Section 01 30 00 - Submittals.

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colours.

B. Shop Drawings: Indicate seaming plan, borders and patterns.

C. Samples:

.1 Submit two (2) samples, 150 mm x 150 mm in size illustrating colour and pattern for each floor material for each colour specified.

.2 Submit two (2) 150 mm long samples of base material for each colour specified.

### 1.5 SUBMITTALS FOR INFORMATION

A. Section 01 30 00 Submittals.

B. Installation Data: Manufacturer's special installation requirements including special procedures, perimeter conditions requiring special attention.

### 1.6 CLOSEOUT SUBMITTALS

A. Section 01 70 00 Contract Closeout.

B. Operation and Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

**1.7 MAINTENANCE MATERIAL SUBMITTALS**

A. Comply with Division 1 - Maintenance and extra material requirements.

B. Extra Stock Materials:

1. Provide 5% of floor area for each type of resilient flooring material (FL-1 and FL-2)
2. Leave 20' - 0" (6100mm) of coil stock of each type of Thermoplastic Wall Base 174CA and 303VS & 151VS (quarter-round profile) boxed in original containers and clearly Extra stock shall be of same production run as installed Products. Store extra stock in location as directed by Region

**1.8 QUALITY ASSURANCE**

A. Products of This Section: Manufactured to ISO 9000 certification requirements.

B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five (5) years documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section with minimum five (5) years documented experience and approved by the manufacturer.

**1.9 REGULATORY REQUIREMENTS**

A. Conform to applicable code for flame/smoke rating requirements to CAN/ULC-S102.2.

**1.10 DELIVERY, STORAGE, AND PROTECTION**

A. Delivery:

1. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, batch or lot number and date of manufacture.
2. Material should be delivered to job site and checked for completeness and shipping damage prior to job start.

B. Storage:

1. Store materials in accordance with manufacturer’s written instructions.
2. Keep containers sealed until ready for use. Material should be stored in a dry, enclosed, protected area from the elements.
3. Do not subject material to excessive heat or freezing.
4. Shelf life: Established based on manufacturer’s written recommendation for each material being used. For Sikafloor Decoflake System the shelf life is 2 years in original unopened packaging. Store dry between 5 - 32°C (41 - 89°F) Condition product to 18 - 30 °C (65- 86 °F) before use.

C. Handling:

1. Protect materials during handling and application to prevent damage or contamination.
2. Protect roll materials from damage by storing on end.
3. Condition materials for use accordingly to manufacturer's written instructions prior to application.
4. Record material lot numbers and quantities delivered to jobsite/storage.

**1.11 SITE CONDITIONS**

A. Ambient Conditions:

1. Store materials for three (3) days prior to installation in area of installation to achieve temperature stability or as recommended by manufacturer.
2. Maintain ambient temperature required by adhesive manufacturer three (3) days prior to, during, and twenty-four (24) hours after installation of materials.

**Part 2 Products**

**2.1 MANUFACTURERS**

A. Fuzion Flooring

B. Shaw Contract

**2.2 MATERIALS – Heavy Duty Engineered Luxury Vinyl Tile / Plank – FL1**

A. Manufacturer – Fuzion Flooring,

B. Style - Smart Drop Elite 9 Luxury Vinyl

C. Thickness – 5mm

D. Wear layer – 20 mil (0.5mm)

E. Size – 175 x 1220 mm (7" x 48")

F. Core and coating – Solid Fibreglass core for premium stability, Ceramic Bead Coating for extra scratch resistance

G. Edge detail and Finish – Bevelled edge, Embossed finish.

H. Certification – Floorscore

I. Class – Class II, Type B

J. Installation – Adhered / Glued down to substrate

K. Colour – SPD 6450 – Buttermilk

.1 **MATERIALS – Heavy Duty Commercial Luxury Vinyl Tile / Plank – FL2**

A. Manufacturer – Shaw Contract

B. Style and Collection – 0648V , Solitude

C. Thickness – 5mm

D. Wear layer – 20 mil (0.51mm)

E. Size – 150 x 1220 mm (6” x 48”)

F. Core and coating – Solid Fibreglass core for premium stability, Coating for extra scratch resistance, Exoguard

G. Edge detail and Finish – Straight Edge, Exoguard.

H. Certification – Floorscore

I. Class – Class III, Type B

J. Style and Colour – 0648V, Cocoa 48103

K. Installation – Adhered / Glued down to substrate, S 150-95 Resilient tile spray, or 4200 / 2200 Resilient tile adhesive, or 4151 Multi-use Premium Adhesive, or as recommended by the manufacturer.

L. Performance and Testing – Should pass Residual indentation (ASTM F1914), Resistance to Heat (ASTM F1514), Resistance to light (ASTM F1515)

M. Slip residence – Coefficient of Friction (ASTM D 2047) should be more than 0.6 for ADA compliance

**2.3 MATERIALS - BASE**

A. Shaw Contract: Product: Thermoplastic Rubber Sculptured Wall Base (with quarter round as detailed below item .2)

1. Style: 303VS
2. Size: 6” high, Roll 96’-0” long
3. Total Thickness: 1/4” (6.350mm)
4. Construction and Finish: Thermoplastic Rubber, Sculptured base
5. Installation: glued down, adhesive 141VS Wall Base Adhesive or 166 VS Wall Base Adhesive, or as recommended by manufacturer

B. Shaw Contract: Product: Thermoplastic Rubber Quarter Round

1. Style – 151VSThrough body colour construction
2. Size – 3 / 4”radius (.75”) x 96” long
3. Installation: glued down, adhesive 141VS Wall Base Adhesive or 166 VS Wall Base Adhesive, or as recommended by manufacturer

C. Features and Performance for Base and Quarter Round:

1. Through body colour construction
2. Zero Stress whitening on corners,
3. Classification (ASTM F1861) – Type TP, Group 1, Style B
4. Radiant Panel (ASTM E648) – Class 1, Pass
5. Flexibility (ASTM F137). Resistance to Light (ASTM F515). Resistance to Chemical (ASTM F925) - Pass

D. Base and Quarter Round colour:

1. For Later Selection from Standard, in-stock colours.

**2.5 ACCESSORIES**

A. Subfloor Filler: Cementitious patching and levelling compound that meet or exceed maximum moisture level and pH requirement. Use of gypsum-based patching or levelling compounds which contain Portland or high alumina cement and meet or exceed compressive strength of 3,000 psi are acceptable. Refer to filling compounds recommended by adhesive material manufacturer.

B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.

C. Edge Strips / Trims:

1. Product: Resilient Vinyl transition from resilient flooring to Ceramic tile / Porcelain tile / Epoxy flooring.

**Part 3 Execution**

**3.1 EXAMINATION**

A. Verify existing conditions before starting work.

B. All subfloors must be clean, flat, dry and structurally sound. Verify concrete floors are dry to a maximum moisture content of 7%, and exhibit negative alkalinity, carbonization, or dusting, pH level between 7 & 10. Subfloor must be flat – 3/16” in 10’-0” or 1/8” in 6’-0”.

C. Verify floor and lower wall surfaces are free of substances that may impair adhesion of new adhesive and finish materials.

**3.2 PREPARATION**

A. Remove all flooring (floor finishes) to expose the substrate / concrete flooring.

B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects, with sub-floor filler, and grind the high spots, to achieve smooth, flat, hard surface.

C. Prohibit traffic until filler is cured.

D. Vacuum clean substrate / sub floor and lower wall surfaces.

E. Apply primer to floor and wall base surfaces, as required by the manufacturer.

**3.3 INSTALLATION - RESILINET FLOORING**

A. Install Resilient flooring to manufacturer's written instructions.

B. Install in a climate controlled environment with temperature between 14° to 29° C, or average temperature of 21° C.

C. To minimize shade variation, mix and install planks from several cartons.

D. Spread only enough adhesive to permit installation of materials before initial set.

E. Set flooring in place, press with heavy roller to attain full adhesion.

F. Maintain ¼" (6.35mm) perimeter expansion space. Do not fasten wall base or edge strips / trims to the planks.

G. Terminate flooring at centre line of door openings where adjacent floor finish is dissimilar.

H. Install edge strips at unprotected or exposed edges, and where flooring terminates.

I. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

J. Install feature strips, edge strips and floor markings where indicated. Fit joints tightly.

**3.4 INSTALLATION - BASE**

A. Fit joints tight and vertical.

B. Mitre internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use pre-moulded units.

C. Install base on solid backing. Bond tight to wall surfaces.

D. Scribe and fit to door frames and other interruptions.

**3.5 CLEANING**

A. Remove access adhesive from floor, base, and wall surfaces without damage.

B. Clean, floor and base surfaces in accordance with manufacturer's written instructions.

**3.6 PROTECTION OF FINISHED WORK**

A. Protecting installed work with breathable floor covering (EZcover) till Substantial completion.

B. Prohibit traffic on floor finish for forty-eight (48) hours after installation.

**END OF SECTION 09 65 10**

## Part 1 General

### 1.1 SECTION INCLUDES

Epoxy Flooring System – Coloured Epoxy binder with multi-coloured vinyl flakes and UV stable transparent top coat.

### 1.2 RELATED SECTIONS

A. Division 1 Specification Section

B. Section 02 41 19 – Selective Demolition.

### 1.3 REFERENCES

A. ASTM E96-16 Standard Test Methods for Water Vapor Transmission of Materials

B. ASTM D638-10, Standard Test Method for Tensile Properties of Plastics

C. ASTM D2240- 05 (2010), Standard Test Method for Rubber Property-Durometer Hardness.

D. ASTM D4060-10, Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

E. ICRI Guideline No. 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays.

F. CAN/ULC S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

### 1.4 SUBMITTALS FOR REVIEW

A. Section 01 30 00 - Submittals.

B. Product Data: Submit manufacturer's Product data, including physical properties and appearance options including: standard colours, variable surface textures and surface sheen.

C. SDS: Submit Safety Data Sheet for each product being used.

D. Samples:
   1. Submit two (2) samples, 150 mm x 150 mm in size illustrating colour and pattern for floor material for each colour specified.
   2. Submit two (2) 150 mm long samples of base material for each colour specified.

### 1.5 SUBMITTALS FOR INFORMATION

A. Section 01 30 00 Submittals.

B. Installation Data: Manufacturer's special installation requirements including special procedures.

### 1.6 CLOSEOUT SUBMITTALS

A. Section 01 70 00 Contract Closeout.

B. Operation and Maintenance Data: Include cleaning and maintenance instructions and procedures, recommended maintenance materials, and suggested schedule for cleaning.

### 1.7 ADMINISTRATIVE REQUIREMENTS

A. Pre-application Meeting:

B. Convene a pre-application meeting two (2) weeks before commencing the Work of this Section in accordance with Section 01 20 00 – Project Meetings rrequire attendance of parties directly affecting Work of this Section, including the Region, Contractor, Consultant, Applicator, Manufacturer's technical representative and other Subcontractors affected by the Work of this Section to review the following:

1. Surface preparation.
2. Priming.
3. Application.
4. Curing and protection.
5. Co-ordination with other Work

## 1.8 QUALITY ASSURANCE

A. Products of This Section: Manufactured to ISO 9000 certification requirements.

B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five (5) years documented experience.Manufacturer shall be certified under ISO 9001. All liquid materials, including primers, resins, curing agents, finish coats, and sealants are manufactured and tested under an ISO 9001 registered quality system.

C. Installer / Applicator Qualifications: Company specializing in performing the work of this section with minimum five (5) years documented experience and approved by the manufacturer. Applicator shall submit a list of five (5) projects of similar size, scope and complexity.

Applicators: Use experienced applicators having a record of successful in-service resinous flooring system applications similar in material and extent to those specified in this Section and as follows:

1. Applicators must have completed flooring manufacturer’s training program for Products specified.
2. Applicators must be licensed, certified or approved in writing by the flooring manufacturer for the Products specified.

## 1.9 REGULATORY REQUIREMENTS

Conform to applicable code for flame/smoke rating requirements to CAN/ULC-S102.2. and CAN/ULC S102-10

## 1.10 DELIVERY, STORAGE, AND PROTECTION

A. Delivery:

1. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, batch or lot number and date of manufacture.
2. Material should be delivered to job site and checked for completeness and shipping damage prior to job start.

B. Storage:

1. Store materials in accordance with manufacturer's written instructions.
2. Keep containers sealed until ready for use. Material should be stored in a dry, enclosed, protected area from the elements.
3. Do not subject material to excessive heat or freezing.
4. Shelf life: Established based on manufacturer's written recommendation for each material being used. For Sikafloor Decoflake System the shelf life is 2 years in original unopened packaging. Store dry between 5 - 32°C (41 - 89°F) Condition product to 18 - 30 °C (65- 86 °F) before use.

C. Handling
1. Protect materials during handling and application to prevent damage or contamination.
2. Condition materials for use accordingly to manufacturer's written instructions prior to application.
3. Record material lot numbers and quantities delivered to jobsite/storage.

**1.11 SITE CONDITIONS**

A. Ambient Conditions:
1. Store materials for three (3) days prior to installation in area of installation to achieve temperature stability or as recommended by manufacturer.
2. Maintain ambient temperature required by manufacturer three (3) days prior to, during, and twenty-four (24) hours after installation of materials.
3. Minimum / Maximum substrate temperature 10 °C/30 °C (50 °F/86 °F).
4. Relative Ambient Humidity: maximum ambient humidity 85% (during application and curing).
5. Substrate temperature must be 3 °C (5.5° F) above the measured dew point.
6. Moisture content of the substrate must be <4 % when the system is applied.
7. Do not apply to porous surfaces where moisture vapour transmission will occur during application.

**1.12 MAINTENANCE MATERIAL SUBMITTALS**

A. Comply with Division 1 - Maintenance and extra material requirements.

B. Extra Stock Materials:
Leave 20' - 0" (6100mm) of coil stock of each type of Thermoplastic Wall Base 174CA boxed in original containers and clearly

Extra stock shall be of same production run as installed Products. Store extra stock in location as directed by Region

**Part 2 Products**

**2.1 MANUFACTURERS**

A. Basis of Design Manufacturer: Sika Canada Inc.

B. Alternatives and Substitutions: Refer to Section 01 03 50.

**2.2 MATERIALS - FLOORING**

A. Sikafloor DecoFlake System, Decorative Flake Flooring System, 3 mm (1/8 in) thick, comprising of 4 components:

1. Sikafloor 261
2. Sikafloor 2002, and
3. Sikafloor DecoFlake.
4. Sikafloor 317

B. The following is the sequence:

1. Primer - Sikafloor 261 applied at 5 $m^2$/L (203 $ft^2$/US gal) (8 mils w.f.t.), broadcast mono colour quartz aggregate to saturation (using the predominant colour of the flake blend) onto the wet primer approximately 5 kg/$m^2$ (1 lb/$ft^2$) to build layer thickness
2. Body coat – Sikafloor 261 applied at 1.3 $m^2$/L (53 $ft^2$/US gal) (30 mils w.f.t.) broadcast multi - coloured Sikafloor® DecoFlake® flakes to saturation onto wet body coat, approximately 1 kg/$m^2$ (20 lb/100 $ft^2$)
3. Grout coat – Sikafloor 2002 applied at 4 $m^2$/L (163 $ft^2$/US gal) (10 mils w.f.t.)
4. Finish Coat - Sikafloor 2002 applied at 8 $m^2$/L (325 $ft^2$/US gal) (5 mils w.f.t.)
5. Top Coat – Sikafloor 371 applied for matte finish

C. The following shall be properties of the Flooring material, Sikafloor 261 and 2002) at 27°c and 50%RH

1. Solids content 100 %
2. Pot Life 250g (8.8oz.) 30 - 40 min
3. Shore D (7 days) ASTM D2240 85
4. Elongation ASTM D638 4%
5. Tensile Strength ASTM D638 28 MPa (4061 psi)
6. Compressive Strength ASTM C579 70 MPa (10 152 psi)
7. Flexural Strength ASTM C580 83 MPa (12 038 psi)
8. Modulus of Elasticity ASTM C580 1287 MPa (186 663 psi)
9. Flammability ASTM D635 Self extinguish
10. Water Absorption (2h boil) ASTM D570 < 0.36 %

**2.3 MATERIALS - BASE**

A. Shaw Contract: Product: Thermoplastic Rubber Cove Wall Base

1. Style: 174CA
2. Size: 6” high, Roll 96’-0” long
3. Total Thickness: 1/8” (3.175mm)
4. Finish: Thermoplastic Rubber
5. Installation: glued down, adhesive 141VS Wall Base Adhesive or 166 VS Wall Base Adhesive, or as recommended by manufacturer

B. Features and Performance

1. Through body colour construction
2. Zero Stress whitening on corners,
3. Classification (ASTM F1861) – Type TP, Group 1, Style B
4. Radiant Panel (ASTM E648) – Class 1, Pass
5. Flexibility (ASTM F137). Resistance to Light (ASTM F515). Resistance to Chemical (ASTM F925) - Pass

C. Base colour:

1. For Later Selection from Standard, in-stock colours.

**2.4 ACCESSORIES**

A. Subfloor: 50mm thick New Concrete Slab, as specified on the drawings.

B. Subfloor filler: High Density Rigid Foam Insulation, to achieve the existing level and slope.

C. Bond breaker: Bitumen impregnated fibreboard, along the perimeter of the New Concrete Slab.

D. Sealants: Silicone sealant, compatible to Epoxy Flooring. GC to confirm the compatibility with the manufacturer.

E. Trims: as specified on the drawings

**Part 3 Execution**

**3.1 EXAMINATION AND PREPARATION**

A. Verify existing conditions before starting work.

B. Remove the existing Concrete tiles, along with the pedestal and spaces. Remove any screed, or fill, below the tiles, to expose the Rigid Insulation below.

C. Review the condition of the existing rigid insulation. If the existing rigid insulation is deteriorated, remove the existing rigid insulation. Install new rigid insulation, sloped to achieve the drainage. The rigid insulation material for the required thickness should have an RSI 3.52 or more.

D. No waterproofing, bond breaking, flashing should be disturbed.

E. The New Concrete Slab surface must be clean and sound. Remove any dust, laitance, grease, oil, dirt, curing agents, impregnations, wax, foreign matters, coatings and deleterious material from the surface by appropriate mechanical means, in order to achieve a surface profile equivalent to ICRI-CSP 3-5. The compressive strength of the New Concrete should be at least 35 MPa (3625 psi) at 28 days and at least 1.5 MPa (218 psi) in tension at the time of application of Sikafloor® DecoFlake® System Resins.

F. The New Concrete Slab shall have aggregates of ½”, and reinforced with one layer of welded wire mesh WWF 6X6 6/6 at mid-height of slab.

G. Saw cuts to ¼” depth, after 24-48 hours, as noted on the drawings. Fill saw cuts with suitable sealant after application of Sikafloor Epoxy Finish.

H. Provide perimeter bond breaker, caulked on top.

**3.2 Not Used**

**3.3 INSTALLATION**

A. Mixing: Pre-mix each component, in correct mix ratio as instructed by the manufacturer. Mix for three (3) minutes using a low-speed drill (300 - 450 rpm) to minimize entrapping air. Use an *Exomixer* type mixing paddle. During the mixing operation, scrape down the sides and bottom of the pail with a flat or straight edge trowel at least once to ensure thorough mixing. When completely mixed, the Sikafloor resin should be uniform in color and consistency. Mix only that quantity that can be used within its pot life.

B. The following shall be sequence of Application:

1. **Primer** - Apply neat Sikafloor-261 over the slab as a primer using a brush, roller or squeegee at a uniform coverage without ponding. Remove excess in case of ponding. Broadcast mono colour quartz aggregate to saturation (using the predominant colour of the flake blend) onto the wet primer. Allow primer to cure sufficiently to be able to resist foot traffic without damaging the surface. Once cured, sweep and vacuum excess aggregate from surface before applying the Body coat
2. **Body Coat -** Apply neat binder Sikafloor-261 over primed surface using a notched squeegee and back roll immediately with a roller to provide a uniform surface.
3. **Broadcast Application -** Broadcast pre-blended DecoFlake into the binder to saturation. Broadcast in a manner so that DecoFlakes fall vertically into the binder. Broadcast to the maximum fill rate. This will provide a completed application, resulting in dry broadcast DecoFlakes covering the entire surface. Allow broadcast system to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess DecoFlakes from the surface. Removal of excess DecoFlakes is carried out by sweeping, followed by vacuuming, until surface is free of all loose particles and dust. When necessary, lightly sand with 100 grit disk to remove imperfections, after sweeping up DecoFlakes and before vacuuming.
4. **Grout Coat -** Apply Sikafloor-2002 using a non-marking squeegee and back roll to a uniform gloss without ponding.
5. **Finish coat -** Once the Grout coat is cured, lightly sand to remove minor surface imperfections. Remove all sanding debris using an industrial vacuum. Roll apply finish coat of Sikafloor-2002 to a uniform gloss without ponding.
6. **Top Coat** - Apply top coats of Sikafloor-317 to change the surface sheen and to produce a matte appearance

**3.4 INSTALLATION - BASE**

A. Fit joints tight and vertical. Maintain minimum measurement of 450 mm (18 inches) between joints.

B. Mitre internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use pre-moulded units.

C. Install base on solid backing. Bond tight to wall surfaces.

D. Scribe and fit to door frames and other interruptions.

**3.5 CLEANING**

A. Epoxy Resins, once hardened, can only be removed by mechanical means. Tools and equipment should be cleaned by Epoxy Cleaner. Applicators should wash soiled hands and skin thoroughly in hot soapy water.

B. Remove access adhesive from floor, base, and wall surfaces without damage, during and following the installation of Wall base.

C. Clean, floor and base surfaces in accordance with manufacturer's written instructions.

**3.6 PROTECTION OF FINISHED WORK**

A. Protect the Epoxy flooring from dampness, condensation and water contact during the initial 24 hour cure period.

B. Protecting installed work, after the initial 24 hours cure, with breathable floor covering (EZcover) till Substantial completion.

C. Prohibit traffic on floor finish for forty-eight (48) hours after installation.

**END OF SECTION 09 67 00**

## Part 1 General

### 1.1 SECTION INCLUDES

A. Supply and install paint where affected by any demolition and/or construction work within the scope of work of this project, and as specified herein.

B. Provide paint to exposed (visible in completed work) surfaces where affected by any demolition and/or construction work within the scope of work of this project and as specified herein.

C. Painting and finishing shall include all new surfaces and all existing base building surfaces, ducts, piping and conduits which are exposed and fall within the scope of work of this project.

### 1.2 RELATED SECTIONS

A. Comply with Division 1, Section 01 04 00 Co-ordination.

B. Co-ordinate cutting and patching and making good at mechanical and electrical service penetrations and exposed mechanical and electrical service lines

C. Mechanical Division - Heating, Ventilating, and Air-Conditioning (HVAC) and Mechanical Identification.

D. Electrical Division – Electrical Identification.

### 1.3 REFERENCES

A. ASTM D523-89 – Standard Test Method for Specular Gloss

B. OPCA - Ontario Painting Contractors Association

C. SSPC - Steel Structures Painting Council, "Steel Structures Painting Manual, Vol. 2"

D. ULC - Underwriters' Laboratories of Canada

E. Occupational Health and safety Act, O. Reg. 213/91 and 692

F. National Fire Code of Canada

G. SMAQMD Rule 1113 Architectural coatings, latest Amendment

H. CAN/ULC-S102 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

### 1.4 ADMINISTRATIVE REQUIREMENTS

A. Section 01 04 00 Co-ordination.

B. Coordination: Coordinate with other Work having a direct bearing on Work of this section.

C. Scheduling:

1. Schedule painting operations to prevent disruption of and by other trades.

2. Schedule painting operations to prevent disruption of occupants in and about building.

### 1.5 SUBMITTALS FOR REVIEW

A. Section 01 30 00 Submittals.

B. Product Data:

1. Submit Product data on all specified finishing products.
2. Submit copies of WHMIS MSDS - Material Safety Data Sheets.
3. Samples:

a) Submit two (2) samples, 100 x 150 mm (4 x 6 inch) in size illustrating selected colors and textures for each color selected on similar substrate to which it is to be applied.

b) Furnish additional samples as required until colors, finishes and textures are approved.

c) Obtain written approvals of samples. Approved samples to be the quality standard for final finishes

4. Installation Data: Manufacturer's special installation requirements including special surface preparation procedures and substrate conditions requiring special attention.
5. Schedule

a) If requested, submit Work schedule for various stages of Work when painting occupied areas for Consultant’s review and Region’s approval.

b) Submit schedule, for approval, minimum of forty-eight (48) hours in advance of proposed operations.

**1.6 CLOSEOUT SUBMITTALS**

A. Section 01 70 00 Contract Closeout.

B. Record Documentation: Upon completion, provide itemized list of products used including the following:

1. Manufacturer's name.
2. Product name, type and use.
3. Color coding number.
4. Manufacturer's Material Safety Data Sheets (MSDS).

**1.7 MAINTENANCE MATERIAL SUBMITTALS**

Extra Stock Materials: Provide properly packaged maintenance material as follows.

1. 4 X1 gal of each coating type and color to the Region / Facility Manager.
2. Label each container with color, type, texture and room locations in addition to manufacturer's label.

**1.8 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five (5) years documented experience.

B. Installer Qualifications: Qualified journeypersons or apprentices, provided they work under direct supervision of qualified journeyperson in accordance with trade Regulations Company specializing in performing the work of this section with minimum three (3) years documented experience.

C. Conform to OPCA Painting Manual requirements for materials, preparation and workmanship.

D. Paint Products: Paint manufacturers and paint Products listed under the Approved Product List section of the OPCA manual and in this Section.

E. Field Sample: A sample area located in the building will be designated by the Project Manager/Architect/Consultant. Apply samples of finishes in the sample area in the presence

of the Region's Representative / Architect / Consultant, Contractor and paint manufacturer. Apply the samples with the correct material, number of coats, colour, texture and degree of gloss required. Refinish if required, until acceptance is obtained. Leave test areas undisturbed until completion of the work. Accepted work in the test area will serve as a standard for similar work throughout the Project.

## 1.9 REGULATORY REQUIREMENTS

A. Conform to applicable code for flame and smoke rating requirements for finishes, storage, mixing, application and disposal of paint and related waste materials.

B. Meet SCAQMD Rule 1113 Architectural Coatings and regulatory requirements limiting the emission of volatile organic compounds.

C. Perform surface preparation and painting in accordance with recommendations of the following:

1. Paint manufacturer's instructions,
2. SSPC PA 3, Guide to Safety in Paint Applications.
3. Federal, Provincial and Local agencies having jurisdiction.

## 1.10 DELIVERY, STORAGE, AND PROTECTION

A. Deliver products to site in sealed and labeled containers showing manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, colour designation, and written instructions for mixing and reducing.

B. Store paint materials at minimum ambient temperature of 7 degrees C (45 degrees F) and a maximum of 32 degrees C (90 degrees F), in dry, ventilated area and as required by manufacturer's written instructions.

C. Provide adequate fireproof storage lockers and warnings as required by authorities having jurisdiction for storing toxic and volatile/explosive/flammable materials.

## 1.11 SITE CONDITIONS

A. Ambient Conditions:

1. Do not perform painting or decorating Work when ambient air and substrate temperatures are below 10 degrees C (50 degrees F) for both interior and exterior work, or as required by paint product manufacturer.
2. Do not perform painting or decorating Work when relative humidity is above 85% or when dew point is less than 3 degrees C (5 degrees F) variance between the air/surface temperatures required by paint Product manufacturer.
3. Provide suitable weatherproof covering and sufficient heating facilities to maintain minimum ambient air and substrate temperatures for twenty-four (24) hours before, during and after paint application.
4. Do not perform painting and decorating Work when maximum moisture content of substrate exceeds:
   a) Wood: 15%.
   b) Plaster and Gypsum Wallboard: 12 %.
   c) Masonry, Concrete, and Concrete Unit Masonry: 12%.
   d) Concrete Floors: 8%.

.5 Conduct moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple cover patch test.

.6 Test concrete, masonry and plaster surfaces for alkalinity as required.

.7 Provide minimum lighting level of 323 lux (30 ft. candles) is provided on surfaces to be painted or decorated.

**1.12 WASTE MANAGEMENT AND DISPOSAL**

A. Dispose of waste materials in accordance with Provincial Local authorities having jurisdiction.

B. Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.

C. Place non-reusable materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.

D. To reduce contaminants entering waterways, sanitary/storm drain systems or into the ground, adhere to the following procedures:

1. Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
2. Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
3. Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
4. Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
5. Dry out empty paint cans prior to disposal or recycling.
6. Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate

E. Set aside and protect surplus and uncontaminated finish materials and deliver or arrange collection for verifiable re-use or re-manufacturing.

**1.13 WARRANTY**

Warrant work of this Section for period of 5 years against defects and/or deficiencies in accordance with General Conditions of the Contract. Promptly correct any defects or deficiencies which become apparent within warranty period, to satisfaction of Consultant and at no expense to Region. Defects include but are not limited to; material shrinkage, cracking, splitting and defective workmanship including but are not limited to failure in bubbling, blistering and delamination.

**Part 2 Products**

**2.1 MATERIALS**

A. "Top Line" products only are acceptable. Supply top line quality, manufactured by Benjamin Moore & Co. Ltd., or PPG Canada Inc., or Sherwin-Williams Company, or other manufacturer acceptable to the Project Manager/Architect/Consultant.

B. The Owner/Project Manager/Architect/Consultant reserve right to refuse any paint or finishing material if in its opinion not suitable or adequate for the use for which it is proposed.

C. Paint and finishing materials shall be highest grade available by the manufacturer for the specific application. Products submitted as “or equal” options must be 0 VOC content and meet the same performance specifications of the products listed herein.

D. Finish Schedule are based on products manufactured by:

1. Benjamin Moore and Co. Ltd.

E. Paint shall have excellent flowing and brushing properties. Paint shall cure free of sags, runs, wrinkles to yield desired finish specified

F. All paints must meet the VOC guidelines in accordance with the VOC Legislation announced by the Government of Canada, Canada Gazette, and in effect as of September 9th, 2010. All materials used shall be lead and mercury free and shall have the lowest VOC content possible while maintaining the performance characteristics required for the project.

G. Where required, paints and coatings shall meet flame spread and smoke developed ratings designated by local Code requirements and/or authorities having jurisdiction.

## 2.2 MIXING AND TINTING

A. Coatings: Ready-mixed and pre-tinted; re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

B. Paste, Powder or Catalyzed Paint: Mixed in accordance with manufacturer's written instructions.

C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

1. Do not exceed paint manufacturer's recommendations for addition of thinner. Do not use kerosene or any such organic solvents to thin water-based paints.
2. Thin paint for spraying in accordance with paint manufacturer's instructions.

## 2.3 FINISH AND COLOUR

A Finish: To Custom, Premium Grade finish requirements.

B Colours: The Colours to match to existing surfaces or existing adjacent surfaces.

C Type of paint, finish, and colour:

1. WL-1: Super Hide K 357, 0 VOC, Acrylic paint, Waterborne Egg shell finish, Colour: to match existing adjacent.
2. DPT-1: Super Hide K 355, 0 VOC, Acrylic paint, Waterborne Flat finish, Colour: to match existing adjacent.
3. Primer: For both WL-1 and DPT-1: Super Hide K 354, 0 VOC, Latex primer

## 2.4 GLOSS/SHEEN RATINGS

A. Paint gloss is defined as the sheen rating of applied paint with the following values:

| Gloss Level | Description | Gloss @ 60 degrees | Sheen @ 85 degrees |
|---|---|---|---|
| G1 | Matte Finish (flat) | 0 to 5 | 10 max. |
| G2 | Velvet-Like Finish | 0 to 10 | 10 to 35 |
| G3 | Eggshell Finish | 10 to 25 | 10 to 35 |
| G4 | Satin-Like Finish | 20 to 35 | 35 min. |
| G5 | Traditional Semi-Gloss Finish | 35 to 70 | |
| G6 | Traditional Gloss | 70 to 85 | |
| G7 | High Gloss Finish | More than 85 | |

B. Gloss level ratings of painted surfaces as specified:

1. All walls: Eggshell or Semi-gloss Finish
2. All trim and doors: Semi-gloss
3. All signage Flat
4. All ceilings Flat

**2.5 EXTERIOR PAINT SYSTEMS**

Not Used

**2.6 INTERIOR PAINT SYSTEMS**

A. Woodwork - Vertical Surfaces for Painting

1. 1st Coat: Multi-purpose Acrylic primer (1.8 mils dft)
2. 2nd Coat: : Alkyd paint, Semi-Gloss
3. 2nd Coat: : Alkyd paint, Semi-Gloss
4. Finish: (Semi-gloss)

B. Gypsum Board and Plaster - Vertical Surfaces

1. 1 coat 0 VOC Latex Sealer or 1 coat Super Hide K 354 Acrylic Latex primer
2. 2nd Coat: Super Hide K 357 Acrylic paint (1.8 mils dft)
3. 3rd Coat: Super Hide K 357 Acrylic paint (1.8 mils dft)
4. Finish: Eggshell

**Part 3 Execution**

**3.1 EXAMINATION**

A. Verify existing conditions before starting work.

B. Verify that substrate conditions surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

D. Test shop applied primer for compatibility with subsequent cover materials.

.1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that

airborne particles will not affect quality of finished surface.

.2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits.

.3 Apply paint when previous coat of paint is dry or adequately cured.

## 3.2 PREPARATION

A. Prepare surfaces in accordance with OPCA requirements.

B. Remove and store or mask miscellaneous hardware and surface fittings such as electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to painting. Clean and replace upon completion of painting Work in each area. Remove doors before painting to paint bottom and top edges and re-hung.

C. Protect adjacent surfaces and areas, including rating and instruction labels on doors, frames, equipment, piping, from painting operations with drop cloths, shields, masking, templates, or other suitable protective means.

D. Correct defects and clean surfaces which affect work of this section. Start of finish painting of defective surfaces indicates acceptance of substrate will be at no cost to Owner/Region.

E. Confirm preparation and primer used with fabricator of steel items.

F. Seal with shellac and seal marks which may bleed through surface finishes.

G. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

H. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials. Apply compatible latex based sealer or primer.

I. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.

J. Concrete Floors: Remove contamination; acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

K. Copper Surfaces Scheduled for a Paint Finish: Remove contamination by steam, high pressure water, or solvent washing. Apply vinyl etch primer immediately following cleaning.

L. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

M. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

N. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

O. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by power tool hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

P. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Prime metal items including shop primed items.

Q. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

R. Wood and Metal Doors Scheduled for Painting: Seal top and bottom edges with primer.

**3.3 APPLICATION**

A. Apply paint in accordance with OPCA Painting Manual Custom and Premium Grade finish requirements.

B. Apply products to adequately prepared surfaces, within moisture limits and acceptable environmental conditions.

C. Apply paint finish in areas where dust is no longer being generated or when wind or ventilation conditions will not affect quality of finished surface.

D. Apply each coat to uniform finish.

E. Tint each coat of paint progressively lighter to enable confirmation of number of coats.

F. Unless otherwise approved, apply a minimum of four (4) coats of paint where deep or bright colours are used to achieve satisfactory results.

G. Sand and dust between each coat to provide an anchor for next coat and to remove defects visible from a distance up to 1000 mm (39 inch).

H. Vacuum clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.

I. Allow applied coat to dry before next coat is applied.

J. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

K. Continue paint finish behind wall-mounted items such as chalk, tack boards, paintings, and signs.

L. Prime concealed surfaces of interior exterior woodwork with primer paint.

**3.4 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT**

A. Refer to Mechanical Division and Electrical Division for schedule of colour coding and identification banding of equipment, duct work, piping, and conduit. If not included on drawings or specifications, follow the best practices and local by-laws and regulations.

**3.5 FIELD QUALITY CONTROL**

A. Acceptable Surfaces:

1. No visible defects are evident on horizontal and vertical surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39 inch).
2. No visible defects are evident on ceiling, soffit and other overhead surfaces when viewed at normal viewing angles.
3. Uniformity of colour, sheen, texture, and hiding across full surface area.

**3.6 CLEANING**

A. Clean installed work. Collect waste material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

**END OF SECTION 09 91 00**

## PART 1 - GENERAL

A. The general contractor is to supply and install a complete mechanical system including all labor, material and equipment necessary to complete the work as shown and/or specified herein.

B. Existing equipment's, ducts are shown for reference only. Visit job site and examine all existing conditions which affect the work. Also visit job site prior to quoting and fabrication. Any additional costs incurred by failure to do so shall be the responsibility of the contractor.

C. Pay and obtain all required permits, fees, licenses, certificate of inspections, etc. provide and submit drawings to the authorities if required.

D. Conform to building code and standards, local by-laws and authorities having jurisdiction.

E. Co-ordinate with other trades regarding location of equipment, control device locations, distribution system, etc. to avoid conflict.

F. Provide shop drawings to all new equipment and systems.

G. Guarantee in writing for the material and workmanship including the manufacturer's guarantee for the period of one year from the date of acceptance.

H. The contractor is to locate the exact dimensions and positions of openings and holes where cutting may be required in floors and/or walls for passage of pipes, ducts, etc.

I. Cutting and patching is necessary, it shall be done by the general contractor. Refer to structural drawings for roof reinforcing details.

J. Testing, adjusting and balancing to be done by a NEBB / AABC certified contractor. Adjust all systems to the satisfaction of the engineer and the authorities having jurisdiction.

K. All materials to have flame spread ratings as required by authorities having jurisdiction.

L. Standards: equipment, material and installation shall conform to appropriate provision of ASME, ARL, ASTM, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, OBC as applicable.

M. Warranty: the mechanical contractor shall unconditionally warrant all work to be free of defects in material and workmanship for a period of one (1) year from the date of final acceptance. All defective material or work to be replaced or repaired free of charge during that time.

N. The contractor is responsible for all cutting and patching as required for all trades including holes and openings for equipment entry and exit, conduits, piping, vents, louvres and duct systems. X-ray all concrete wall and floor slab as needed and obtain owners approval before any core drilling.

O. All wiring, new equipment and new services installed in the ceiling space must be plenum rated as per OBC requirement.

P. All duct penetrations through the fire rated wall/floor/ceiling assembly shall be provided with fire dampers. all pipe penetration through the fire rated wall/floor/ceiling assembly shall be sealed with appropriate fire-retardant materials to maintain the fire rating integrity of the building and to meet all applicable codes and standards.

Q. Close-out documents (prior to issuance of close-out letter)

R. The contractor shall keep a separate set of white prints on site and note all changes and deviations from the original design. Two sets of these plans along with updated AUTOCAD 2010 drawings showing all as-built conditions shall be forwarded to the engineer at the completion of this contract before applying for final payment.

S. Operation and maintenance manuals: operation and maintenance manuals shall be submitted by the contractor prior to final acceptance by the Consultant as contract close-out documents. Operation and maintenance manuals shall contain shop drawings, product data, operating instructions, maintenance and repair data, manufacturer's warranties, as-built/record drawings, air-balancing report/sprinkler certificate, installer certificates etc.

**PART 2 – GENERAL DEMOLITION NOTES (AS APPLICABLE)**

A. This drawing is intended to assist the contractor with costing the demolition as necessary for the contract. It is not to be taken as an all-inclusive inventory of the work. The contractor must establish the full extent of this work from on-site examination and review of existing as-built drawings as available.

B. Demolition shall be coordinated with the owners authorized representative and taken prior approval to do so.

C. Limit access by construction personnel to only those areas of good all existing surfaces disturbed by new work. Limit removal of items to the smallest area possible and make good all existing surfaces disturbed by new work.

D. Take all precautions necessary to protect the existing structure, etc. not part of demolition work. Provide and place bracing or shoring as required. Be responsible for safety and support all parts of the building structure, utilities or parts of such building or structure and be liable for any movement, settlement, damage or injury.

E. All waste materials shall be removed from site, unless otherwise specified by the owner. Coordinate with owner. Control dust with dust-proof partition around working areas.

**PART 3 – PLUMBING DEMOLITION NOTES (AS APPLICABLE)**

A. The contractor shall be responsible for verifying on site all locations and sizes of all services & equipment prior to the commencement of work.

B. All openings that result from the removal of equipment or services shall be neatly patched with suitable new materials to suit existing construction.

C. Plumbing vents are not indicated or identified. Remove all redundant vents were required while maintaining integrity of existing systems to remain.

D. Maintain integrity of existing systems that are to remain or be modified.

E. Patch and make good all surfaces where demolition, removal or alterations occur. Surfaces to be finished flush with adjacent planes. Texture and paint to match existing adjacent surfaces and/or

appearances.

F. All demolition work to be carried out with respect to Canadian safety rules. All the removed equipment to be disposed unless noted otherwise.

## PART 4 – PIPING FOR HEATING, CHILLED WATER, GLYCOL SYSTEMS

A. Steel pipe to ASTM A53 grade B seamless pipe as follows- to NPS 6, schedule 40

B. Fittings and valves

1. P cocks: iron body, bronze plug and washers, air tested, flanged or threaded ends.

2. Drain valves: ball valve bronze compression stop with nipple and cap; Toyo 5046 ball valve with cap and chain, 3/4" to 2".

3. Hose bib: bronze or red brass, replaceable hexagonal disc, hose thread spout, chrome plated where exposed.

4. Size shock absorbers to standard pdi - wh20l. Acceptable product: Zurn, Amtrol, Diatrol.

5. Air vents: screwdriver vents in cabinet accessible on side of top. pipe mounted c/w brass petcock and 1/4" vent tube. Acceptable product: Armstrong.

6. Thermometer well: 20 mm npt x 65 mm socket x l50 mm nominal length at insulated piping at temperature measuring devices.

7. Rad valves: .1 shut off valve at supply. Acceptable product: Toyo 252, Dahl, Kitz

8. Lock shield flow control valve at return, key operated. Acceptable product: Dahl 1301-m valve with venturing flow unit.

## PART 5 – PLUMBING SPECIFICATIONS

A. All items of specification related to the services indicated on the drawings shall apply to the project. The bidding requirements and general requirements (applicable sections) of architectural specifications shall also govern the work of this division.

B. Plumbing and Drainage:

1. Provide and complete plumbing, drainage, vent and water primer piping to all plumbing fixtures as indicated on the drawings for complete and proper operation of the fixtures.

2. All piping shall conform to part 7 of the Ontario Building Code (latest edition).

3. The following piping specification is general and covers various types of services and shall be applicable to the services indicated on the drawings. Materials shall be new and free from defects

C. Domestic Hot and Cold Water:

1. ABOVE GROUND: Sizes up to and including 50mm - type 'l' hard copper tubing with soldered pressure fittings.

2. UNDER GROUND: Size 75mm and less shall be type 'k' copper tubing, soft temper with wrought copper solder fittings. Size 100mm and larger shall be cement lined ductile iron ANSI class 52 with Tyton joints to the standards and specifications of the regional municipality. All ductile water-mains having direct contact with surrounding soil are to be insulated with Polyethylene encasement to ANSI A.15, where accepted by local authorities provide alternate price for polyvinyl chloride (PVC) pipe class 150 per A.W.W.A. C-900-75 with mechanical joints for underground watermains 100 mm and larger.

D. Sanitary Drains and Vents:

1. ABOVE GROUND: Size up to and including 50mm - type dwv copper tubing with cast brass alloy drainage fittings. Size 75 mm and over - class 4000 cast iron mj pipes and fittings, (or hub & spigot) or (dwv copper tubing with cast brass alloy drainage fittings).

2. UNDER GROUND: Size up to and including 40mm - type 'k' copper tubing with cast solder fittings. Size 50 mm and larger - class 4000 cast iron 'mj' pipes and fittings (or hub & spigot) stack & fixture footings shall be cast iron or copper as required. Where accepted by local authorities provide an alternate price for polyvinyl chloride (PVC) pipe per CSA B181.2 (SDR 35 and 28) complete with ring tight joints and gasketed fittings per CSA B182.1.

E. Storm Drains:

1. ABOVE GROUND: Size 75mm and over - class 4000 cast iron mj pipes and fittings, (or hub & spigot) or (dwv copper tubing with cast brass alloy drainage fittings).

2. UNDER GROUND: Polyvinyl chloride (PVC pipe per CSA B181.2 (SDR 35 and 28) complete with ring tight joints and gasketed fittings per CSA B182.1.

**PART 6 – INSULATION**

A. Insulate the following:

1. Sections of ducts and pipes as noted or shown on drawings.
2. All domestic/heating water piping (hot, cold and re- circulating).
3. Horizontal runs of sanitary drains.
4. Rain-water leaders, chilled water piping, condensate piping (all pipes).

B. Reference Standards:

1. Meet NFPA 90a-1985. Maximum flame spread rating of 25 and maximum smoke developed rating of 50 in accordance with NFPA 255-1984 and CAN 4-S102-M83 for all components of insulation system. Materials tested in accordance with ASTMc411-82.

2. Submit detailed list of material for each service stating manufacture, 'k' value, density, finish, flame spread and smoke ratings, permeability, materials, finishes, cements and adhesives.

C. Materials

1. Insulation, jackets and adhesives shall be incombustible and in compliance with Ontario Building Code. Products containing asbestos shall not be used.

2. All insulation products used shall be fully tested and approved as fire retardant by underwriters' laboratories of Canada limited.

3. Materials shall be of Canadian manufacture where available, of best quality of their respective kinds and of uniform pattern throughout.

MINIMUM FIXTURE CONNECTION SCHEDULE

| MARK | HW | CW | WASTE | VENT | REMARKS |
|---|---|---|---|---|---|
| WC | – | 1/2"ø | 3"ø | 2"ø | WATER CLOSET (flush tank) |
| LV | 1/2"ø | 1/2"ø | 1 1/2"ø | 2"ø | LAVATORY |
| KS | 1/2"ø | 1/2"ø | 1 1/2"ø | 2"ø | KITCHEN SINK |
| FD, FFD | – | 3/8"ø | 3"ø | 2"ø | FLOOR / FUNNEL FLOOR DRAIN (SEE NOTE) |

DRAIN NOTE:
FLOOR DRAIN (FD) SHALL BE TRAPPED, VENTED AND FLUSHED WITH FLOOR LEVEL.
COORDINATE AND VERIFY THE TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH LATEST ARCHITECTURAL DRAWINGS. REFER TO PLUMBING DRAWING FOR FIXTURE SCHEDULE.
FOR WATER CLOSET WITH FLUSH VALVE PROVIDE 1"ø DCW PIPING CONNECTION
FOR URINAL WITH FLUSH VALVE PROVIDE ¾"ø DCW PIPING CONNECTION

NOTE BEFORE COMMENCING WORK:
THE CONTRACTOR SHALL CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS & EQUIPMENT AND COORDINATE WITH OTHER TRADES ON SITE TO PREVENT INTERFERENCE.
THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES TO THE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

4. All insulating materials shall be fire retardant. Adhesives shall be waterproof and incombustible flame resistant. Combustible wrappings or vapour barriers used in conjunction with thermal insulating materials shall be treated to reduce their combustibility so that flame spread classification of entire assembly, as determined according to method of fire hazard classification for building materials ASTM #84-68, shall not exceed 25 and smoke developed number shall not exceed 50. Submit report from an approved testing laboratory confirming foregoing ratings.

5. Wheat pastes shall not be used.

6. Canvas covering shall be close weave fibre fire retarding canvas of weights specified, 4 oz. where concealed and at least 6 oz. where exposed to view.

7. The consultant reserves right to demand test samples to composite insulation systems for fire hazard test rating.

8. Bands and clips to secure insulation around ducts shall be ½" aluminum bands.

D. Piping and Equipment Insulation

1. Unburied domestic cold water/chilled water piping: 1" (25 mm) for DCW/1.5"(40mm) for

CHW thick heavy density glass fibre preformed pipe insulation with maximum of 0.033 conductivity at 10oc mean with factory applied vinyl foil kraft laminated glass fibre reinforced fire resistive vapour barrier jacket with not more than 1.15 perm rating (asj) with sealed lapped joints.

2. Unburied domestic re-circulation and hot water piping: heavy density glass fiber preformed pipe insulation with maximum 0.043 conductivity at 93oc mean with factory applied fire resistive vapor barrier jacket of not more than 1.15 perm rating. use 1” (25 mm) thickness on piping up to 1” (25mm) size, and 1½” (40mm) thickness on piping 1½” (40mm) and above.

3. Unburied rain water leaders and storm drains both exposed and concealed: insulate with 1” (25 mm) thick fiberglass pipe covering with factory applied aluminum fire resistant vapor barrier and sealed lapped joints. Insulate underside of roof hoppers.

4. Horizontal runs of sanitary drains: insulate as for storm drains above. Also insulate horizontal wastes from urinals, toilets and drinking fountains concealed in ceiling spaces to vertical stack.

5. valves and fittings: 1” (25 mm) glass fibre blanket conforming to CGSB #51- BF11 compressed to same thickness as adjoining insulation and secured with jute twine over this apply smooth coat of insulating cement and recover with 4 oz (135.6 g/m2) canvas on cold water piping wrap blanket with foil faced friction tape overlapped to form vapour barrier before applying insulation cement. Seal all vapour barriers.

6. End joints shall be covered with a 4” (100 mm) wide factory supplied strip of the same material as the insulation jacket and sealed with adhesive.

7. At all fittings and valves, insulation ends shall be mitred and fittings, etc., shall be tightly wrapped with glass fibre blanket built up to an equivalent thickness. Aluminum foil 2 mil thickness shall be wrapped over the blanket insulation to provide a vapour barrier and the whole wrapped with glass fabric membranes saturated with brush coat of vapour proof mastic.

8. Provide Zeston 2000 or equivalent PVC jacketing and molded fitting covers and taped or glued joints. pvc material thickness shall be a minimum of 0.5 mm (typical for all exposed piping insulation and insulated equipment)

9. Provide Mcguire Prowrap PVC seamless thermal-insulating covers for plumbing fixture strainers, p-traps, continuous wastes, and supplies. Covers shall incorporate an anti-microbial additive to inhibit bacterial growth.

**END OF SECTION 21 23 00**