

Part 1 General

1.1 TAXES

- .1 Pay all taxes properly levied by law (including Federal, Provincial and Municipal).

1.2 FEES, PERMITS AND CERTIFICATES

- .1 Pay all fees and obtain all permits.
- .2 Provide authorities with plans and information for acceptance certificates.
- .3 Obtain inspection certificates as evidence that work conforms to requirements of Authority Having Jurisdiction.

1.3 WORK RESTRICTIONS

- .1 Use of Site and Facilities.
 - .1 Execute work with least possible interference or disturbance to the normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated. Refer to paragraph 1.3.2 Special Scheduling Requirements below for work that must be done during "off hours".
 - .2 Departmental Representative will maintain existing services to building and provide for occupant, visitor and vehicle access.
 - .1 Coordinate deliveries with Departmental Representative along routes indicated on Contract Drawings.
 - .3 Contain deliveries and temporary parking within area designated by Departmental Representative. Temporary parking permitted for Contractor employees in company-marked vehicles only.
 - .4 Designated Delivery Access routes to Courtyards:
 - .1 Designated vehicle and personnel access routes assigned by Departmental Representative:
 - .1 Exterior: to North garage door via Garage Podium.
 - .2 Interior: North garage door entrance through the east-west access corridor to designated construction yard.
 - .2 Security escort required along designated access routes.
- .2 Special Scheduling Requirements.
 - .1 When Court is in recess, carry out work during "regular hours", Monday to Friday from 07:00 to 18:00 hours.
 - .2 Give Departmental Representative 48 hours notice for work to be carried out during the following "off hours":
 - .1 Monday to Friday from 19:00 to 06:00 hours and on Saturdays, Sundays, and statutory holidays.
 - .3 Deliver and pick up materials during "off hours", unless directed in writing by Departmental Representative.

1.4 CONSTRUCTION PROGRESS SCHEDULE

- .1 Schedule and execute work with least possible interference or disturbance to the normal use of premises.

- .2 Within one (1) week of award of contract submit bar chart construction schedule for work, indicating anticipated progress stages within time of completion. When the Departmental Representative has reviewed schedule, take necessary measures to complete work within scheduled time.
 - .1 Changes to approved schedule: Submit proposed changes to approved schedule in writing minimum seven (7) days in advance of proposed changes. Obtain Departmental Representative's approval before proceeding with changes to schedule.

1.5 STAGING PLAN

- .1 Submit Staging Plan outlining work stages in compliance with specified implementation restrictions and in accordance with submitted schedule.
 - .1 Obtain approval of Departmental Representative before executing staging plan.
 - .2 Proposed changes to approved Staging Plan: Obtain written approval of Departmental Representative before proceeding with changes.
 - .3 Work in staging areas during indicated times only.

1.6 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

- .1 Produce Traffic Management Plan based on Work Restrictions above and Contract Drawings. Include:
 - .1 Illustrate how vehicles and trucks will access the North Garage Door.
 - .2 Material delivery dates and times on plan.
 - .3 Vehicle and truck types.
 - .4 Flagmen.
 - .5 Traffic signage.
- .2 Submit Traffic Management Plan for review minimum 7 days before proposed implementation.

1.7 ADMINISTRATIVE REQUIREMENTS

- .1 Employ and assign to Work, competent and authorized representative as Supervisor. Supervisor must:
 - .1 Have site-related working experience specific to activities associated with the Work.
 - .2 Be on site to supervise work during execution of Work.

1.8 SUBMITTAL PROCEDURES

- .1 Provide submittals listed for review to Departmental Representative in orderly sequence to not cause delay in work.
- .2 Proceed with work affected by submittals only after review is complete.
- .3 Provide inspection certificates as evidence that work conforms to requirements of Authority Having Jurisdiction.
- .4 Shop Drawings:
 - .1 Submit five (5) copies of shop drawings: bearing stamp and signature of qualified Professional Engineer registered or licensed in Province of Ontario.

- .2 The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.
- .3 Commence manufacture or order materials only after shop drawings are reviewed.
 - .1 When requested by Departmental Representative, make changes to submitted shop drawings consistent with Contract Documents. Resubmit as directed by Departmental Representative.
- .5 Product Data:
 - .1 Submit five (5) copies of product data: manufacturer's catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
 - .2 Cross reference product data information to applicable portions on Contract Documents.
 - .3 Delete information not applicable to the Work.
 - .4 Submit product data minimum 5 days before undertaking respective work.
- .6 Submit photographs of surrounding properties, objects and structures liable to be damaged or be the subject of subsequent claims.

1.9 REGULATORY REQUIREMENTS

- .1 References and Codes:
 - .1 Materials: new unless specified otherwise.
 - .2 Work to conform to the minimum applicable standards of the "References" indicated in the specification sections, the National Building Code of Canada 2010 (NBC) and all applicable Provincial and Municipal codes. In the case of conflict or discrepancy the most stringent requirement applies.
- .2 Building Smoking Environment:
 - .1 The Building is a non-smoking environment.
 - .2 Obey smoking restrictions on building property.
- .3 Hazardous Material Discovery:
 - .1 Stop work immediately when material resembling spray or trowel-applied asbestos, Polychlorinated Biphenyl (PCB), mould or other designated substance is encountered during installation work.
 - .1 Take preventive measures and promptly notify Departmental Representative.
 - .2 Proceed only when written instructions have been received from Departmental Representative.

1.10 FIRE SAFETY REQUIREMENTS

- .1 Comply with both the National Building Code of Canada 2010 and the National Fire Code of Canada 2010 for safety of persons in buildings in the event of a fire and the protection of buildings from the effects of fire, as follows:

- .1 The National Building Code (NBC): for fire safety and fire protection features that are required to be incorporated in a building during construction.
- .2 The National Fire Code (NFC):
 - .1 The on-going maintenance and use of the fire safety and fire protection features incorporated in buildings.
 - .2 The conduct of activities that might cause fire hazards in and around buildings.
 - .3 Limitations on hazardous contents in and around buildings.
 - .4 The establishment of fire safety plans.
 - .5 Fire safety at construction and demolition sites.

1.11 HAZARDOUS MATERIALS

- .1 Hazardous Materials: product, substance, or organism that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .2 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and the provision of Material Safety Data Sheets (MSDS).

1.12 TEMPORARY UTILITIES

- .1 Do not use existing services.
- .2 Provide service requirements for execution of the Work from off-site sources.

1.13 CONSTRUCTION FACILITIES

- .1 Access Scaffold:
 - .1 Scaffolding: in accordance with Section 01 54 23 – Temporary Scaffolding, and CSA Z797 – Code of Practice for Access Scaffold.
- .2 Site Storage:
 - .1 Equip and maintain the storage space in Designated Construction Yards assigned by Departmental Representative.
 - .2 Avoid encumbering site with stored materials or equipment.
 - .3 Move stored products and equipment that interfere with operations of Departmental Representative or other contractors.
 - .4 Obtain and pay for use of additional storage or work areas needed for operations.
 - .5 Do not load or permit to load any part of work with weight or force that will endanger work.
- .3 Where security is reduced by work: provide temporary means to maintain security.
- .4 Provide Sanitary Facilities in designated construction yard. Keep facilities clean.
- .5 Signage:
 - .1 Provide common-use signs related to traffic control, information, instruction, use of equipment, public safety devices, etcetera, in both official languages or by the use of commonly understood graphic symbols and to approval of Departmental Representative.
 - .2 No advertising is permitted on this project.

1.14 TEMPORARY BARRIERS AND ENCLOSURES

- .1 Dust Control:
 - .1 Prevent spread of dust for the protection of workers, finished areas of work and the public.
- .2 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.
- .3 Protection:
 - .1 Protect work against damage until take-over.
 - .2 Protect adjacent areas against the spread of dust and dirt beyond the work areas.
 - .3 Protect operatives and other users of site from all hazards.
- .4 Work zones:
 - .1 Work zone locations include:
 - .1 East Courtyard
 - .2 West Courtyard
 - .3 Flat roofs adjacent to glazed skylight roof.
 - .2 Install proper site separation and identification in order to maintain "Time and Space" throughout the life of the Work.
 - .3 Coordinate communication between parties involved:
 - .1 When Building Operations staff require access to equipment in order to operate the building.

1.15 COMMON PRODUCT REQUIREMENTS

- .1 Quality of Work:
 - .1 Carry out work using qualified licensed workers or apprentices in accordance with Provincial Act respecting manpower vocational training and qualification.
 - .2 Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers.
 - .3 Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.
- .2 Storage, Handling and Protection:
 - .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions.
 - .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove packaging or bundling until required in work.
- .3 Manufacturer's Instructions:
 - .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions.
 - .2 Do not rely on labels or enclosures provided with products.
 - .3 Obtain written instructions directly from manufacturers.

1.16 EXAMINATION AND PREPARATION

- .1 Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.

1.17 EXECUTION

- .1 Patch and Make Good:
 - .1 Patch and make good surfaces cut, damaged or disturbed, to Departmental Representative's approval. Match existing material, colour, finish and texture.
- .2 Unless otherwise specified, materials for removal become the Contractor's property. Take removed materials from site.

1.18 WASTE MANAGEMENT

- .1 Comply with Environmental Protection Act, Ontario Regulations: O. Reg. 102/94 – Waste Audits and Waste Reduction Work Plans; and O. Reg. 103/94 – Industrial, Commercial and Institutional Source Separation Programs; for waste management on construction and demolition projects.

1.19 CLOSEOUT SUBMITTALS

- .1 Guarantees and Warranties:
 - .1 Before completion of work collect all manufacturer's guarantees or warranties and deposit with Departmental Representative.

1.20 CLEANING

- .1 Clean up as work progresses. At the end of each work period, and more often if ordered by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up generally.
- .2 Upon completion remove scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.
- .3 Clean areas under contract to a condition equal to what previously existed and to approval of Departmental Representative.

1.21 SECURITY CHECK

- .1 Personnel employed on this project will be subject to security check. Obtain requisite clearance, as instructed, for each individual required to enter the premises.

1.22 COST BREAKDOWN

- .1 Before submitting first progress claim, submit breakdown of Contract Amount in detail as directed by Departmental Representative and aggregating the Contract Amount. After approval by Departmental Representative cost breakdown will be used as the basis of progress payments.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

PART 1 – GENERAL

1.1 REGULATORY REQUIREMENTS

- .1 An investigation into the presence of designated substances for the Courtyard Chimney Rehabilitation Project at the Supreme Court of Canada, 301 Wellington Street, Ottawa, Ontario was performed in order to meet the requirements of the Canada Labour Code under Part II, Section 124 that every employer shall ensure that the health and safety at work of every person employed by the employer is protected. Furthermore, Section 125(1)(z.14) of the *Canada Labour Code* stipulates that the employer will take all reasonable care to ensure that all persons granted access to the work place, other than the employer's employees, are informed of every known or foreseeable health and safety hazard to which they are likely to be exposed in the work place. Also, it was performed to meet the requirements of Section 30 of the Ontario Occupational Health and Safety Act, Revised Statutes of Ontario, 1990, Chapter O.1. By having a Designated Substances Report (DSR) conducted, the PWGSC Departmental Representative will be able to inform his or her employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the duration of the project. The informed Departmental Representative will then be able to impose appropriate health and safety precautions for all applicable personnel as required.
- .2 The designated substances identified in the *Occupational Health and Safety Act* and its corresponding regulations are:
 - .1 **Acrylonitrile:** "Designated Substances"
O. Reg 490/09, as amended.
 - .2 **Arsenic:** "Designated Substances"
O. Reg 490/09, as amended.
 - .3 **Asbestos:**
 - .1 "Designated Substances"
O. Reg 490/09, as amended.
 - .2 "*General – Waste Management*"
O. Reg 347/90, as amended
 - .3 "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations"
O.Reg 278/05 (as amended)
 - .4 *PWGSC Departmental Policy DP 057 – "Asbestos Management"*
 - .4 **Benzene:** "Designated Substances"
O. Reg 490/09, as amended.
 - .5 **Coke Oven Emissions:** "Designated Substances" *O. Reg 490/09, as amended.*

- .6 **Ethylene Oxide:** "Designated Substances"
O. Reg 490/09, as amended.
- .7 **Isocyanates:** "Designated Substances"
O. Reg 490/09, as amended.
- .8 **Lead:**
 - .1 "Designated Substances"
O. Reg 490/09, as amended.
 - .2 "General – Waste Management"
O. Reg 347/90, as amended
 - .3 Canada Consumer Product Safety
Surface Coating Materials
Regulations SOR/2005-109, as
amended (2011)
- .9 **Mercury:**
 - .1 "Designated Substances"
O. Reg 490/09, as amended.
 - .2 "General – Waste Management"
O. Reg 347/90, as amended
- .10 **Silica:** "Designated Substances"
O. Reg 490/09, as amended.
- .11 **Vinyl Chloride:** "Designated Substances"
O. Reg 490/09, as amended.
- .3 All contractors requesting tenders from
subcontractors shall furnish this report to
subcontractors.

1.2 VALIDITY DATE

- .1 DST Consulting Engineers Inc. (DST),
conducted the on-site survey for this report
on March 6, 2014. The three (3) chimneys
which are to be rehabilitated as part of this
project were inaccessible at the time of the
site visit. Two (2) chimneys of similar size and
composition located directly to the north west
of the courtyard chimneys was selected for
inspection. Results will be extrapolated from
those to the chimneys to be rehabilitated. The
interior of these chimneys were accessible
through small hatches.
- .2 The scope of work for this report involved a
visual inspection of building materials and
contents for the presence of suspected
designated substances within the project
areas.
- .3 From the visual inspection, suspect materials
were sampled and analyzed, (where
necessary), for select designated
substances. On the basis of this inspection, a
total of twelve (12) bulk samples of suspected

asbestos-containing material (ACM) samples and two (2) bulk samples of mortar suspected of containing lead were collected from the project areas.

Samples were then submitted for analysis at Paracel Laboratories Ltd., located at 300-2319 St. Laurent Boulevard, Ottawa, ON K1G 4J8.

The bulk asbestos samples were analyzed using Polarized Light Microscopy (PLM). This analytical method complies with the United States Environmental Protection Agency (U.S. EPA) Method 600/R-93/116.

The mortar samples were analysed using EPA 6020 - Digestion - ICP-Mass Spectrometry.

- .4 The survey was limited to those areas that could be accessed by non-destructive means. The visual inspection was limited to readily accessible areas of chimneys assumed to be representative of the chimneys involved in the project. Destructive testing was not included in the investigation.
- .5 It is possible that designated substances are present in non-accessible areas and concealed spaces, or additional confined spaces. No other areas outside the defined work boundaries have been assessed.
- .6 Prior to beginning work, it must be confirmed with the Departmental Representative that no additional designated substances have been brought to the project area.
- .7 In addition, the survey refers to polychlorinated biphenyls (PCBs) and halocarbons; however, it does not refer to other substances that may be present in the day-to-day usage for specialized equipment or areas in buildings (i.e., lead shields, fume hoods, chemicals, etc.).
- .8 There is a possibility that materials that could not be reasonably identified within the scope of this assessment or which were not apparent during previous site visits may exist. Should any designated substance be encountered in the course of demolition or renovation, work must be stopped, preventative measures taken, and the Departmental Representative must be notified immediately. **Do not proceed until written instructions have been received.**

PART 2 - DESIGNATED SUBSTANCES

2.1 SURVEY RESULTS

.1 **ACRYLONITRILE:** Not Identified

.2 **ARSENIC:** Not Identified

.3 **ASBESTOS:** Not Identified

Asbestos is a naturally occurring material. In general, it has historically been intentionally added to many building materials in the construction industry to increase thermal or chemical resistance properties. More common uses are thermal insulation for pipes and boilers, structural steelwork fireproofing, floor tiles and in-wall and ceiling plasters. There are two classes of asbestos-containing materials: friable and non-friable. Friable asbestos-containing materials are loose in composition or can be easily crumbled using hand pressure. Non-friable asbestos-containing materials are more durable and are held together by a binder such as cement, vinyl or asphalt.

Representative bulk samples, collected from materials located within the project areas have been analyzed for asbestos. Analytical results indicate that no samples contain asbestos in the project areas.

Table 1 summarizes the analytical results of bulk samples collected during the site investigation:

Table 1: Asbestos Sample Results by PLM

Sample number	Material	Sample Location	Asbestos Type	Asbestos content (%)
NW-01A	Brick mortar- grey	North west chimney (west)	n/d	n/a
NW-01B			n/d	n/a
NW-01C			n/d	n/a
NW-02A	Parging mortar- grey/white	North west chimney (west)	n/d	n/a
NW-02B			n/d	n/a
NW-02C			n/d	n/a
NW-03A	Caulking- black	North west chimney (east and west)	n/d	n/a
NW-03B			n/d	n/a
NW-03C			n/d	n/a
NW-04A	Parging mortar- grey/white	North west chimney (east)	n/d	n/a
NW-04B			n/d	n/a
NW-04C			n/d	n/a

Bold items exceed the 0.5% regulated concentration of asbestos, as per O.Reg. 278/05, as amended
n/d – none detected, n/a- not applicable

.4 **BENZENE:** Not Identified

.5 **COKE OVEN EMISSIONS:** Not Identified

.6 **ETHYLENE OXIDE:** Not Identified

.7 **ISOCYANATES:** Not Identified

.8 **LEAD:** Trace amounts identified

Lead is a naturally occurring metal. It was used primarily in paint prior to the 1980s to increase the drying process. Lead in paint becomes a danger when it is old or damaged, as it creates lead dust and chips. Lead can also be found in soldered joints installed on piping up to the mid-1990s and in older cast iron bell and spigot joints.

- .1 According to the Federal Canada Consumer Product Safety *Surface Coating Materials Regulations* SOR/2005-109, as amended, allowable concentration of lead of surface coatings is 0.009 percent by weight (weight of lead to weight of paint), which is equivalent to 90 parts per million (ppm).
- .2 Even at very low concentrations, there may be potential for exposure to very high levels of lead depending on the activities performed that disturb the lead-containing materials. At low lead concentrations, conducting a risk assessment to assess the potential for exposure is required to determine the need to follow precautionary measures.
- .3 No paints were identified during the chimneys survey.
- .4 Two representative bulk samples of mortar, collected from materials located within the project areas have been analyzed for lead content. Analytical results indicate that no samples contain lead in the project areas. Table 2 summarizes the analytical results of the samples of building materials collected from the project areas that were analyzed for lead content.

Table 2: Lead in Mortar Sample Results Results by ICP (Inductively Coupled Plasma) - Mass Spectrometry

Sample ID	Sample Description	Sample Location	Lead Content (ppm)
Pb-01	Mortar	North-west chimney	6
Pb-02	Mortar	North-west chimney	17

Based on analytical sampling and limited observations noted during the survey no materials containing significant amounts of lead were identified in the project area.

- .9 **MERCURY:** Not Identified
- .10 **SILICA: Identified**
Free crystalline silica is assumed present in concrete and mortar throughout the project areas.
- .11 **VINYL CHLORIDE MONOMER:** Not Identified
- .12 **POLYCHLORINATED BIPHENYLS (PCBs):** Not Identified
- .13 **HALOCARBONS:** Not Identified
- .14 **DUST/ASH/SOOT:** Identified
A limited visual evaluation of the interior of the chimneys showed some dust/ash/soot.

2.2 RECOMMENDATIONS

SILICA

.1 Silica occurs as crystalline material in cement. Crystalline silica is regulated under "Designated Substances" O.Reg 490/09, as amended, of the *Occupational Health and Safety Act* as a Designated Substance.

.2 Silica dust can be generated through such processes as blasting, grinding, crushing, and sandblasting silica-containing material. Since silica is presumed present in concrete, plaster and drywall within the project areas, appropriate respiratory

protection and ventilation must be donned during the demolition and modifications of these structures.

.3 The Occupational Health and Safety Branch of the MoL has published the document entitled "*Guideline: Silica on Construction Projects*". This document classifies the disturbance of materials containing silica as Type 1, Type 2 or Type 3 work, and assigns different levels of respiratory protection and work procedures for each classification. These work procedures should be followed when performing work involving the disturbance of silica-containing materials.

**DUST/ASH/SOOT
(NOT RECOGNIZED AS A DESIGNATED SUBSTANCE)**

.1 During any disturbance to interiors of the chimneys, measures to control residual dust levels (e.g. wetting) should be used to control possible dust emissions. Dermal and respiratory protection may be required.

7. CONTRACTORS DUTIES

The contractor must review the designated substance report and take the necessary precautions to protect the health and safety of the workers and the environment. As per Section 30(4) of the *Ontario Occupational Health and Safety Act*, the party hiring the contractor (i.e., PWGSC Departmental Representative) shall ensure that the contractor and subcontractor (if any) for the project has received a copy of the designated substance report prior to entering a binding contract for the supply of work on the project. As per Section 27(2) (a, b, and c) of the *Ontario Occupational Health and Safety Act*, while onsite, the contractor supervisor shall exercise every reasonable precaution for the protection of a worker. If you have any questions about the designated substance report, please contact the PWGSC Departmental Representative.

The contractor shall also complete all reporting requirements to comply with applicable regulations.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 14 25 – Designated Substances Report.

1.2 REFERENCES

- .1 Province of Ontario
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990, c.0.1 as amended and O.Reg. 213/91 as amended – Updated April 1, 2015.
 - .2 Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 00 10 – General Instructions.
- .2 Submit Hazard Assessment Site-Specific Safety Plan within 5 days after date of Notice to Proceed and prior to commencement of Work. Hazard Assessment Site-Specific Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
 - .3 Document: indexed format and in a 3-ring binder.
- .3 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 1 week after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 2 days after receipt of comments from Departmental Representative.
 - .1 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .4 Submit proof of WSIB coverage within 7 days of contract award.
- .5 Submit proof of submission to authority having jurisdiction of Filing of Notice of Project.
- .6 Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative weekly.
- .7 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
- .8 Submit copies of written report within 24 hours of following occurrences:
 - .1 Accident
 - .2 Injury

- .3 Near-miss incident
 - .4 Fire
 - .5 Explosion
 - .6 Chemical spill
- .9 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 00 10 – General Instructions.
- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
- 1.4 SAFETY ASSESSMENT**
 - .1 Perform site specific safety hazard assessment related to project.
- 1.5 MEETINGS**
 - .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.
- 1.6 REGULATORY REQUIREMENTS**
 - .1 Do Work in accordance with Section 01 00 10 – General Instructions.
- 1.7 PROJECT/SITE CONDITIONS**
 - .1 Work at site will involve contact with:
 - .1 Silica.
- 1.8 GENERAL REQUIREMENTS**
 - .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
 - .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- 1.9 COMPLIANCE REQUIREMENTS**
 - .1 Comply with Ontario Health and Safety Act, R.S.O. 1990, c. 0.1 and Ontario Regulations for Construction Projects, O. Reg. 213/91.
- 1.10 UNFORSEEN HAZARDS**
 - .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of the Work:
 - .1 Follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.
 - .2 Immediately advise Departmental Representative of following occurrences:

- .1 Accident
- .2 Injury
- .3 Near-miss incident
- .4 Fire
- .5 Explosion
- .6 Chemical spill

1.11 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.12 BLASTING

- .1 Blasting or other use of explosives is not permitted.

1.13 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.

1.14 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Canadian Standard Association (CSA International)
 - .1 CAN/CSA S269.2-M87 (R2003), Access Scaffolding for Construction Purposes.
 - .2 CSA Z797-09(R2014) – Code of Practice for Access Scaffold.
- .2 Province of Ontario
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990, c.0.1 as amended and O.Reg. 213/91 as amended – Updated April 1, 2015.

1.2 ADMINISTRATIVE REQUIREMENTS

- .1 Scaffold rental.
 - .1 Commences from date on which written approval of scaffold erection is received by Departmental Representative.

1.3 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 00 10 - General Instructions.
- .2 Submit shop drawings for scaffolding, stamped by a Registered Professional Engineer, registered in the Province of Ontario.
- .3 Indicate on shop drawings:
 - .1 Material specifications, details and information necessary for assembly and erection of scaffolding, including anchorage to existing building.
 - .2 Protection measures for existing building's heritage character elements.
 - .3 Show superimposed service dead, live and lateral loads.
 - .1 Include location and magnitude of imposed point loads on existing structure.
 - .4 Temporary works required to ensure existing building's capacity is not exceeded.
- .4 Submit design calculations for scaffolding.
- .5 Submit proof of review and approval of scaffolding erection by a Professional Engineer licensed in the Province of Ontario.
 - .1 Additions or modifications to scaffolding must be approved by Professional Engineer in writing.

1.4 QUALIFICATIONS

- .1 Qualifications of personnel erecting, using and dismantling temporary scaffolding and components:
 - .1 Certification of fall arrest training in accordance with Ontario Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O., 1990.

1.5 REGULATORY REQUIREMENTS

- .1 Occupational Health and Safety Act, R.S.O. 1990.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Designated Delivery Access Routes to Courtyards:
 - .1 Security escort required along designated access routes.
 - .2 Designated vehicle and personnel access routes assigned by Departmental Representative.
 - .1 Allowable loading – Garage podium slab:
 - .1 East and North sides: 7.2 kPa.
 - .2 West side: 4.8 kPa.
 - .2 Allowable loading – North garage door entrance through North basement level (east-west) access corridor to Courtyard: 4.8 kPa.
 - .2 Site Storage area: in accordance with Section 01 00 10 – General Instructions.
 - .3 Handling: along designated access routes and in accordance with Article 3.3 Protection of In-Place Conditions below.

1.7 SITE CONDITIONS

- .1 Existing conditions.
 - .1 Existing structure reports and drawings: available from Departmental Representative.

1.8 WASTE MANAGEMENT

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 00 10 – General Instructions.

Part 2 Products

2.1 DESIGN AND PERFORMANCE REQUIREMENTS

- .1 Design system scaffolding in accordance with CAN/CSA S269.2 and CSA Z797.
- .2 Design system scaffolding to accommodate requirements of the Work including:
 - .1 Dead loads, live loads and wind loads in accordance with applicable codes and industry standards.
 - .2 Temporary placement of material on scaffolding decks per platform level to a maximum load of 227 kg.
 - .3 Use of scaffold by teams of maximum 5 persons at a time.
 - .4 Permitted safe allowable loading:
 - .1 Flat roof adjacent to glazed skylight: 2.4 kPa.
 - .2 Courtyard slab: 4.8 kPa.
 - .3 Sloped copper roofs: 1.9 kPa.

- .4 Garage Podium slab West side: 4.8 kPa.
- .5 Garage Podium slab East and North sides: 7.2 kPa.
- .5 Anchorage:
 - .1 Anchor into horizontal mortar joints only.
 - .1 The stone units are heritage character elements. The faces and arrises of stone units are not acceptable anchoring locations.
 - .2 Damage to building is unacceptable. Repair and make good as directed by Departmental Representative.
- .6 Clearances:
 - .1 Standing head clearance minimum 1800 mm.
 - .2 Between lowest scaffolding component and glazed skylight roofing: minimum 300 mm.
- .7 Access stairs for scaffolding and platform levels.
- .8 Safety netting:
 - .1 Between scaffolding and glazed skylight roofing.
 - .2 Between scaffolding and roofing.
 - .3 At exterior of Overall Work Area of scaffold.
- .9 Components:
 - .1 Provide, install and maintain ramps, ladders, platforms, guard rails and temporary stairs.
 - .1 Provide two (2) means of egress at each level.
 - .2 Hoist: provide and install hoist required for conveying materials and equipment and ensure maintenance.
- .10 Provide, install and maintain working platforms and side brackets for each level indicated on Contract Drawings. Areas include Masonry Work Area and Area for Storage, Tools and Traffic on Contract Drawings.
 - .1 Masonry Work Areas: 610 mm wide work area supported with side brackets. Masonry work not in contract.

2.2 MATERIALS

- .1 Scaffolding materials: in accordance with CAN/CSA S269.2 and CSA Z797.

Part 3 Execution

3.1 GENERAL

- .1 Design, construct, maintain, dismantle and remove scaffolding in accordance with:
 - .1 CAN/CSA-S269.2 and CSA Z797.
 - .2 Occupational Health and Safety Act and Regulations for Construction Projects.

3.2 PREPARATION

- .1 Maintain access to building during the Work.
- .2 Provide enclosures, bridging, and other necessary devices required to protect building occupants and public.

- .3 Provide and maintain adequate access to project site for duration of The Work.

3.3 PROTECTION OF IN-PLACE CONDITIONS

- .1 Provide protection for existing building finishes, elements and equipment during performance of the Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Special Protection Measures:
 - .1 Protect designated heritage brass doors in east-west access corridor during delivery and handling during the Work.
- .4 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .5 Be responsible for damage incurred due to lack of or improper protection.

3.4 ERECTION

- .1 Erect scaffolding within 5 working days of Departmental Representative's notification to proceed.
- .2 Maintain scaffolding in satisfactory condition for duration of the Work.

3.5 SITE QUALITY CONTROL

- .1 Obtain review and approval of scaffolding erection by a Professional Engineer licensed in the Province of Ontario.
- .2 With optional scaffolding rental period extension:
 - .1 Provide additional reviews and approvals of scaffolding by Professional Engineer licensed in the Province of Ontario, when requested by Departmental Representative.

3.6 REMOVAL

- .1 Dismantle scaffolding within 5 working days of Departmental Representative's notification to proceed.
- .2 Allow Departmental Representative access to inspect repairs at anchor locations, during scaffolding removal.
- .3 Allow Departmental Representative access to carry out repointing of masonry joints at anchor locations, during scaffolding removal.

END OF SECTION