

SPECIFICATIONS

FOR

**Two (2) Enclosed Vertical Platform Lift Replacements
Citadel National Historic Site – Cavalier and North Magazine Buildings**

FOR

PARKS CANADA

ISSUED FOR TENDER

**HALIFAX CITADEL RAMPARTS
LIFT UPGRADES
SPECIFICATIONS
ISSUED FOR TENDER**

PARKS CANADA



Ray Eleid

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PART 1 - GENERAL

1.1 DESCRIPTION

- .1 In general, the work under this contract consists of, but will not necessarily be limited to, the following:
 - .1 Liaison with representatives of Scotia Elevator Consulting Limited and Parks Canada (Citadel National Historic Site) throughout the duration of the project.
 - .2 Supply and installation of two existing lifts known as NSIN 2080 located in the Cavalier Building and NSIN 2894 located in the North Magazine Building at the Citadel National Historic Site, Halifax NS. Lifts to be replaced with two (2) new full cab, enclosed vertical platform lifts. The lift entrances including doors shall be retained and integrated with the chosen manufacturer's lift. If the manufacturer cannot re-use the existing entrances they shall be responsible for all costs to install new entrances.
 - .3 Completion of miscellaneous electrical work associated with the lift replacements.

1.2 IMPLEMENTATION

- .1 This contract shall be planned and implemented by the Contractor, such that all work is carried out within the specified time frame. All measures necessary to meet this deadline including phasing shall be considered when bidding for this project.

1.3 SITE OF WORK

- .1 Work will be carried out to replace the existing enclosed vertical platform lifts (NSIN 2080 and 2894) located in the Cavalier Building and North Magazine Building at the Citadel National Historic Site, Halifax, Nova Scotia.

1.4 FAMILIARIZATION WITH SITE

- .1 Before submitting a bid, it is recommended that bidders visit the site and its surroundings to review and verify the form, nature and extent of the work, materials necessary for the completion of the works, the means of access to the site, any accommodations they may require, and in general shall obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the on-site conditions that will apply during the completion of the Works.
- .2 Contractors are to review specification Section 01 35 29.06 - Health and Safety Requirements before visiting site. Take all appropriate safety measures for any visit to site, either before or after acceptance of bid.

1.5 CODES AND STANDARDS

- .1 Perform work in accordance with the following codes and legislative requirements:
 - .1 ASME A17.1/CSA B44 Safety Code for Elevators, latest edition.
 - .2 CSA B355 Lifts for Persons with Physical Disabilities.
 - .3 Environment Act of the Province of Nova Scotia.
 - .4 Waste Material Disposal Act of the Province of Nova Scotia.
 - .5 Canadian Environmental Protection Act.
 - .6 Transportation Dangerous Goods Act.
 - .7 Canada Labour Code Occupational Health and Safety Standards.
 - .8 National Building Code of Canada, latest edition.
 - .9 Canadian Electrical Code, latest edition.
 - .10 National Fire Code of Canada, latest edition.
 - .11 Nova Scotia Occupational Health and Safety Act and Regulations.
 - .12 The Storage and Handling of Gasoline and Associated Products Regulations by the Province of Nova Scotia.
 - .13 Any other Federal, Provincial, Municipal and Local Code, Standard, Regulation, Guideline, By-Law or Ordinance having jurisdiction.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

1.6 TERMS

- .1 Unless specifically stated otherwise, the term “Engineer” as used in the Specifications and on the Drawings, shall mean the Departmental Representative (DR) as defined in the General Conditions of the Contract.

1.7 COST BREAKDOWN

- .1 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price.
- .2 Provide cost breakdown divided into major work components as directed by Departmental Representative.
- .3 Upon approval by Departmental Representative, cost breakdown will be used as basis for progress payment.
- .4 All work items and costs are to be included in the lump sum arrangement, as noted on the Bid and Acceptance Form.

1.8 WORK SCHEDULE

- .1 Submit within five (5) working days of notification of acceptance of bid, a construction schedule showing commencement and completion of all work within the time stated on the bid and acceptance form and the date stated in the bid acceptance letter.

- .2 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
- .3 As a minimum, work schedule to be prepared and submitted in the form of bar (GANTT) charts, indicating work activities, tasks and other project elements, their anticipated durations and planned dates for achieving key activities and major project milestones provided in sufficient details and supported by narratives to demonstrate a reasonable plan for completion of project within designated time (e.g., show target dates for completion of each work item, if applicable). Breakdown elements to indicate target dates for completion of each element. Generally, bar charts derived from commercially available computerized project management systems are preferred but not mandatory.
- .4 Submit schedule updates on an as-required basis and when requested by Departmental Representative. Provide a narrative explanation of necessary changes and schedule revisions at each update.
- .5 The schedule, including all updates, shall be to the Departmental Representative's approval. Take necessary measures to complete work within approved time. Do not change schedule without Departmental Representative's approval.
- .6 All work on the project will be completed within the time indicated on the Bid and Acceptance Form.

1.9 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on the drawings:
 - .1 CGSB - Canadian Government Specifications Board CSA - Canadian Standards Association
 - .2 ASTM - American Society for Testing and Materials DR - Departmental Representative
- .2 Where these abbreviations and standards are used in this project, latest edition in effect on date of bid call will be considered applicable.

1.10 SITE OPERATIONS

- .1 Arrange for sufficient space adjacent to project site for conduct of operations, storage of materials, etc. Exercise care so as not to obstruct or damage public or private property in area. Do not interfere with normal day-to-day operations in progress at site. All arrangements for space and access will be made by Contractor.
- .2 Work shall be completed during winter months (January, February, March) to minimize disturbance to building occupants and guests.

1.11 PROJECT MEETINGS

- .1 Departmental Representative will arrange bi-weekly project meetings and assume responsibility for setting times and recording minutes.
- .2 Project meetings will take place on site of work unless so directed by Departmental Representative.
- .3 Departmental Representative will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at meetings.
- .4 Have a responsible member of firm present at all Project Meetings.

1.12 PROTECTION

- .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair and replace all materials or equipment damaged in transit or storage to the satisfaction of the Departmental Representative and at no cost to Parks Canada Agency (PCA).

1.13

EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to site operations, pedestrian, vehicular traffic, and tenant operations.
- .2 Before commencing work, establish locations and extent of service lines in area of work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental Representative for any shutdown or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide temporary services to maintain critical facility systems.
- .5 Where unknown services or conditions are encountered, immediately advise Departmental Representative and confirm findings in writing.

1.14

DOCUMENTS REQUIRED

- .1 Maintain at job site, one (1) copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.

- .4 Reviewed shop drawings.
- .5 List of outstanding shop drawings.
- .6 Change Orders.
- .7 Other modifications to contract.
- .8 Field test reports.
- .9 Copy of approved work schedule.
- .10 Site specific Health and Safety Plan and other safety related documents.
- .11 Permits and Regulatory Approvals and Requirements.
- .12 Other documents as stipulated elsewhere in the Contract Documents.

1.15 PERMITS

- .1 Obtain and pay for all permits, certificates and licenses as required by Municipal, Provincial, Federal and other authorities.
- .2 Provide appropriate notifications of project to Municipal and Provincial inspection authorities.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for above referenced authorities.
- .5 Comply with all requirements, recommendations and advice by all regulatory authorities unless otherwise agreed in writing by Departmental Representative. Make requests for such deviations to these requirements sufficiently in advance of related work.

1.16 CUTTING, FITTING AND PATCHING

- .1 Execute cutting, including excavation, fitting and patching required to make work fit properly.
- .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. This includes patching of openings in existing work resulting from removal of existing services.
- .3 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

1.17 EXISTING SUB-SURFACE CONDITIONS

- .1 No information pertaining to the existing sub-surface conditions is available, but is approximate only. Contractor is responsible to confirm all sub-surface conditions prior to construction.

1.18 LOCATION OF EQUIPMENT

- .1 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .2 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for actual location.
- .3 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

1.19 ACCEPTANCE

- .1 Prior to the issuance of the Certificate of Substantial Performance, in company with Departmental Representative, make a check of all work. Correct all discrepancies before final inspection and acceptance.

1.20 WORKS COORDINATION

- .1 Contractor to be responsible for coordinating the work of the various trades, where the work of such trades interfaces with each other.
- .2 Convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required. Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 PCA will not be responsible for or held accountable for any extra costs incurred as a result of the failure to carry out coordination work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor and shall be resolved at no extra cost to PCA.

1.21 CONTRACTOR'S USE OF SITE

- .1 Construction operations, including storage of materials, for this contract not to interfere with the operations at this facility.
- .2 Contractor responsible for arranging the storage of materials on or off site and any materials stored at the site which interfere with any of the day-to-day activities at or near the site will be moved promptly at the Contractor's expense, upon request by the Departmental Representative.
- .3 Exercise care so as not to obstruct or damage public or private property in the area.

- .4 At completion of work, restore area to its original condition. Damage to ground and property will be repaired by Contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to Departmental Representative.

1.22 WORK COMMENCEMENT

- .1 Mobilization to project site is to commence immediately after acceptance of bid and submission and approval of site specific Safety Plan and Environmental Plan, unless otherwise agreed by Departmental Representative.
- .2 Project work on site is to commence as soon as possible with a continuous reasonable workforce unless otherwise agreed by Departmental Representative.
- .3 Weather conditions, short construction season, delivery challenges and the location of the work site may require the use of longer working days and additional workforce to complete the project within the specified completion time.
- .4 Make every effort to ensure that sufficient material and equipment is delivered to site at the earliest possible date after acceptance of bid and replenished as required.

1.23 FACILITY SMOKING ENVIRONMENT

- .1 No smoking on federal property.

1.24 INTERPRETATION OF DOCUMENTS

- .1 Supplementary to the General Conditions, the Division 01 sections of the specifications take precedence over technical specification in other divisions of the specifications.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 32 16.07 - Construction Progress Schedule - Bar (GANTT) Chart.

1.2 ACCESS AND EGRESS

- .1 Ensure facility's access and egress routes are maintained in accordance with relevant municipal, provincial and other regulations.

1.3 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- .2 Work shall be completed during regular business hours.
- .3 Maintain existing services to buildings.
- .4 Closures: protect work temporarily until permanent enclosures are completed.

1.4 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Execute work with least possible interference or disturbance to building operations and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

1.5 SPECIAL REQUIREMENTS

- .1 Submit schedule in accordance with Section 01 32 16.07 - Construction Progress Schedule - Bar (GANTT) Chart.
- .2 Ensure that Contractor personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 GENERAL

1. Unit prices are full compensation for the work necessary to complete each item in the Contract and in combination for all work necessary to complete the Work as a whole.
2. It is the intention to provide for a finished piece of work, complete in all essentials and details, including all items reasonably inferable from the drawings and specifications.
3. The aggregate of all unit prices and lump sum payments shall constitute full compensation for the entire work of the Contract, as shown, specified and intended, regardless of any omission in the tender documents of any items which are necessary for the completion of the work including temporary facilities, safety, etc.
4. Should there be any discrepancy regarding measurement between the Measurement and Payment Section and any other section in the specifications, the Measurement and Payment Section shall overrule the other specification section.
5. Unless otherwise specified, all materials necessary to complete the items listed in the Unit Price Table and the finished work are to be supplied by the Contractor and the cost of such material is to be included in the Contractor's prices. There will be no measurement for work not authorized, or for work beyond authorized limits as determined by the Departmental Representative.
6. All unit prices and lump sums shall include all costs applicable to the items, including labour, materials, equipment, transportation, ancillaries and all other applicable and relevant costs as intended and as required to complete the work to the full satisfaction of the Departmental Representative. The unit prices and lump sums indicated shall exclude HST.
7. All work including shoring, protection measures, etc. required to prevent damage/disturbance to existing structures of any areas damaged as a result of work or access are considered incidental to the work.
8. Disposal of excess excavated materials will not be measured but will be incidental to the work. All excess materials shall become property of the Contractor and shall be disposed of off-site at an environmentally approved disposal site.
9. The intent is to cover a range of required work as determined by the Departmental Representative on the site under established unit rates. Actual quantities may vary widely depending on the final scope of work and the condition of the various structures.
10. Shoring, bracing, cofferdams, underpinning and de-watering of excavation will not be measured separately for payment.

1.2 LIFT for PERSONS WITH PHYSICAL DISABILITIES

1. Lift Replacement

Unit of Measurement: Lump Sum

This item includes the removal, disposal of existing lift(s) equipment and the supply and installation of new lift(s) equipment. The equipment included in the scope of work is per this specification and shall include lift controller, tank, valve, motor, pump, to-fro line piping, car structure, undercarriage frame, cylinder, guide rails, hoist rope, entire cab, doors and frames, car fixtures, hall fixtures, applicable car and hoistway wiring.

PART 2 - PRODUCTS

Not applicable

PART 3 – EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (Gantt chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top and activity durations are shown as date-placed horizontal bars. Generally, Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Sunday, inclusive, will provide seven (7) day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other non-working periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

1.2 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete work in accordance with prescribed milestones and time frame.

- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to Departmental Representative, within 10 business days of Award of Contract, Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within five (5) working days of receipt of acceptance of Master Plan.

1.4 PROJECT MILESTONES

- .1 This contract shall be planned and implemented by the Contractor, such that all work is carried out and completed within the specified time frame. All measures necessary to meet this deadline shall be considered as indicated when bidding this project.

1.5 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of work as Bar Chart (GANTT).
- .2 Departmental Representative will review and return revised schedules with five (5) working days.
- .3 Revise impractical schedule and resubmit within five (5) working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.6 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - .1 Award.
 - .2 Shop Drawings.

- .3 Permits.
- .4 Mobilization.
- .5 Lift replacement 1st building.
- .6 Testing and commissioning 1st lift
- .7 Lift replacement 2nd building.
- .8 Testing and commissioning 2nd lift.
- .9 Restoration.

1.7 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.8 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.
- .2 Weather related delays with their remedial measures will be discussed and negotiated.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 SUBMITTAL GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review submittals listed, including shop drawings, samples, certificates and other data, as specified in other sections of the Specifications.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work until relevant submissions are reviewed by Departmental Representative.
- .4 Present shop drawings, product data and samples in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission to Departmental Representative. Ensure during review that necessary requirements have been determined and verified, required field measurements or data have been taken, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.
 - .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
- .7 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .8 Verify field measurements and affected adjacent work and coordinate.
- .9 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .11 Submittal format: electronic copies, or alternatively paper originals or clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible copies will not be accepted and be returned for resubmission.
- .12 Make changes or revisions to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, notify Departmental Representative in

writing of any revisions other than those requested.

- .13 Keep one reviewed copy of each submittal document on site for duration of Work.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work that are specific to project requirements.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed.
- .3 Allow five (5) working days for Departmental Representative's review of each submission.
- .4 Accompany submissions with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .5 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.

- .9 Single line and schematic diagrams.
- .10 Relationship to adjacent work.
- .6 After Departmental Representative's review, distribute copies.
- .7 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .8 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .9 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .2 Testing must have been within 3 years of date of contract award for project.
- .10 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
 - .2 Certificates must be dated after award of project contract complete with project name.
- .11 Submit electronic copies of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .12 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .13 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .14 Delete information not applicable to project.
- .15 Supplement standard information to provide details applicable to project.
- .16 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, transparency copies will be returned and

fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

- .17 The review of shop drawings by PCA is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PCA approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
 - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

1.3 SCHEDULES, PERMITS AND CERTIFICATES

- .1 Upon acceptance of bid, submit to Departmental Representative copy of Work Schedule and various other schedules, permits, certification documents and project management plans as specified in other sections of the Specifications.
- .2 Submit copy of permits, notices, compliance Certificates received from Regulatory Agencies having jurisdiction and as applicable to the Work.
- .3 Submission of above documents to be in accordance with Submittal General Requirements procedures specified in this section.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 SECTION INCLUDES

- .1 Fire Safety Requirements

1.2 RELATED WORK

- .1 Section 01 35 29.06 - Health and Safety Requirements

1.3 REFERENCES

- .1 Fire Protection Standards issued by Fire Protection Services of Human Resources Development Canada as follows:
 - .1 FCC No. 301-June 1982 Standard for Construction Operations (http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/301/page00.shtml).
 - .2 FCC standards, may also be viewed at the Regional Fire Protection Services' office (previously known as the Fire Commissioner of Canada) located at 99 Wyse Road, 8TH Floor, Dartmouth, NS, Tel: (902) 426-6053.

1.4 SUBMITTALS

- .1 Submit in accordance with the Submittal General Requirements specified in Section 01 33 00.

1.5 FIRE SAFETY REQUIREMENTS

- .1 Implement and follow fire safety measures during work. Comply with following:
 - .1 National Fire Code, latest edition
 - .2 Fire Protection Standards FCC 301 and FCC 302.
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in section 01 35 29.06.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 35 24: Special Procedures on Fire Safety Requirements.

1.2 DEFINITIONS

- .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
 - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
 - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
 - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .4 PPE: personal protective equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
 - .1 Submit within 5 business days of notification of Bid Acceptance. Provide 3 copies.
 - .2 Departmental Representative will review Health and Safety Plan and provide comments.
 - .3 Revise the Plan as appropriate and resubmit within 5 business days after receipt of comments.
 - .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
 - .5 Submit revisions and updates made to the Plan during the course of Work.

- .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other department of labour organization.
 - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident reports.
- .8 Submit WHMIS MSDS - Material Safety Data Sheets.

1.4 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act for Province of Nova Scotia, and Occupational Health & Safety Regulations made pursuant to the Act.
- .2 Comply with Canada Labour Code - Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at:<http://laws.justice.gc.ca/eng/acts/L-2/>
 - .2 COSH can be viewed at:
<http://laws.justice.gc.ca/eng/regulations/SOR-86-304/index.html>
 - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9 Tel: (819) 956-4800 (1-800-635-7943) Publication No. L31-85/2000 E or F)
- .3 Observe construction safety measures of:
 - .1 Part 8 of National Building Code
 - .2 Municipal by-laws and ordinances.
- .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .5 Maintain Workers Compensation Coverage in good standing for duration of Contract.
Provide proof of clearance through submission of Letter in Good Standing.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

1.5 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.6 SITE CONTROL AND ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
 - .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.
- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
 - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. See Section 01 56 00 for minimum acceptable requirements.
 - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
 - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
- .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
- .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm.

1.7 PROTECTION

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

- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

1.8 FILING OF NOTICE

- .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
 - .1 Departmental Representative will assist in locating address if needed.

1.9 PERMITS

- .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.
- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

1.10 HAZARD ASSESSMENTS

- .1 Perform site specific health and safety hazard assessment of the Work and its site.
- .2 Carryout initial assessment prior to commencement of Work with further assessments as needed during progress of work.
- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.

1.11 PROJECT/SITE CONDITIONS

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
 - .1 Known latent site and environmental conditions:
 - .1 Buried utilities.
 - .2 Facility on-going operations:
 - .1 Vehicle traffic from operational parking lot.
 - .3 Construction hazards:
 - .1 Heavy equipment traffic.
- .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.
- .3 Include above items in the hazard assessment of the Work.

- .4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.12 MEETINGS

- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
 - .1 Superintendent of Work
 - .2 Designated Health & Safety Site Representative
 - .3 Subcontractors
- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations.

- .3 Keep documents on site.

1.13 HEALTH AND SAFETY PLAN

- .1 Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
- .2 Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - .2 Control measures used to mitigate risks and hazards identified.
 - .3 On-site Contingency and Emergency Response Plan as specified below.
 - .4 On-site Communication Plan as specified below.
 - .5 Name of Contractor's designated Health & Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
 - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plan shall include:
 - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
 - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, location of firefighting equipment and other related data.
 - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
 - .4 Emergency Contacts: name and telephone number of officials from:
 - .1 General Contractor and subcontractors.
 - .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
 - .3 Local emergency resource organizations.

- .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of PARKS CANADA AGENCY (PCA) and Facility Management contacts.
- .4 On-site Communication Plan:
 - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
 - .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.
- .7 Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

1.14 SAFETY SUPERVISION

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
 - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work.
 - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
 - .3 Conduct site safety orientation session to persons granted access to Work Site.
 - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
 - .5 Stop the Work as deemed necessary for reasons of health and safety.
- .3 Health & Safety Site Representative must:
 - .1 Be qualified and competent person in occupational health and safety.
 - .2 Have site-related working experience specific to activities of the Work.
 - .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
 - .1 Conduct regularly scheduled safety inspections of the Work on a

minimum bi-weekly basis. Record deficiencies and remedial action taken.

- .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
- .7 Keep inspection reports and supervision related documentation on site.

1.15 TRAINING

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and safety procedures and practices pertinent to their assigned task.
- .2 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, 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.

1.16 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site:
 - .1 Wear appropriate PPE pertinent to the Work or assigned task; minimum being hard hat, safety footwear, safety glasses and hearing protection.
 - .2 Immediately report unsafe condition at site, near-miss accident, injury and damage.
 - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
 - .4 Obey warning signs and safety tags.
- .2 Brief persons of disciplinary protocols to be taken for non-compliance. Post rules on site.

1.17 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 will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

1.18 INCIDENT REPORTING

- .1 Investigate and report the following incidents to Departmental Representative:
 - .1 Incidents requiring notification to Provincial Department of Occupational Safety and Health, Workers Compensation Board or to other regulatory Agency.
 - .2 Medical aid injuries.
 - .3 Property damage.
 - .4 Interruptions to Facility operations.
- .2 Submit report in writing within five (5) days of incident.

1.19 HAZARDOUS PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site.
 - .1 Post on site.
 - .2 Submit copy to Departmental Representative.
 - .3 For interior work in an occupied Facility, post additional copy in one or more publically accessible locations.

1.20 BLASTING

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

1.21 CONFINED SPACES

- .1 Abide by occupational health and safety regulations regarding work in confined spaces.
- .2 Obtain an Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.
 - .1 Obtain permit from Facility Manager
 - .2 Keep copy of permit issued.

1.22 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

1.23 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
- .2 Post other documents as specified herein, including:
 - .1 Site specific Health and Safety Plan
 - .2 WHMIS data sheets

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.2 DEFINITIONS

- .1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals or plant life when released into the environment.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.3 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prior to commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by Departmental Representative. Environmental Protection Plan is to present comprehensive overview of known or potential environmental issues which must be addressed during construction.
- .3 Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .4 Environmental protection plan: include:
 - .1 Names of persons responsible for ensuring adherence to Environmental Protection Plan.
 - .2 Names and qualifications of persons responsible for manifesting hazardous waste to be removed from site.
 - .3 Names and qualifications of persons responsible for training site personnel.
 - .4 Descriptions of environmental protection personnel training program.
 - .5 Erosion and sediment control plan which identifies type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
 - .6 Spill Control Plan: including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
 - .7 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.

- .8 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project site.
- .9 Contaminant prevention plan that: identifies potentially hazardous substances to be used on job site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- .10 Waste water management plan that identifies methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.

1.4 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.5 DISPOSAL OF WASTES AND HAZARDOUS MATERIALS

- .1 Do not bury rubbish and waste materials on site. Dispose at approved landfill sites as specified in Section 01 74 21.
- .2 Do not dispose of hazardous waste or volatile materials such as mineral spirits, paint thinner, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.
- .3 Store, handle and dispose of hazardous materials and hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .4 Dispose of construction waste materials and demolition debris, resulting from work, at approved landfill sites only. Carry out such disposal in strict accordance with provincial and municipal rules and regulations. Separate out and prevent improper disposal of items banned from landfills.
- .5 Establish methods and undertake construction practices which will minimize waste and optimize use of construction materials. Separate at source all construction waste materials, demolition debris and product packaging and delivery containers into various recycling abilities of various materials and avoid disposal of debris at landfill site(s) in a "mixed state". Where recycling firms specializing in recycling of specific materials exist, transport such materials to the recycling facility and avoid disposal at landfill sites.
- .6 Communicate with landfill operator prior to commencement of work, to determine what specific construction, demolition and renovation waste materials have been banned from disposal at the landfill and at transfer stations.

1.6 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site

free from water.

- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing regulations and requirements.
- .4 Pumped water must meet applicable federal, provincial and municipal standards before it can be discharged to a surface water body. If regulatory guidelines exceedances are noted, the Departmental Representative has the right to issue stop pumping instructions to the Contractor. Contractor will not be compensated for any delays associated with retrofitting equipment to meet guidelines.
- .5 Provide control devices such as filter fabrics, sediment traps and settling ponds to control drainage and prevent erosion of adjacent lands. Maintain in good order for duration of work.

1.7 PERMITS

- .1 All guidelines and instructions stated on permits must be strictly adhered to.

1.8 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
- .5 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when storage began.
- .6 Have emergency spill response equipment and rapid clean-up kit, appropriate to work, at site. Locate adjacent to work and where hazardous materials are stored. Provide personal protective equipment as required for clean-up.
- .7 Report, to Federal and Provincial Department of the Environment, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment. Also notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 78 00 - Closeout Submittals.

1.2 INSPECTION

- .1 Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
- .3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed. Pay costs to uncover and make good such Work.
- .4 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.

1.3 INDEPENDENT INSPECTION AGENCIES

- .1 Departmental Representative will engage and pay for service of Independent Inspection and Testing Agencies for purpose of inspecting and testing portions of Work except for the following which remain part of Contractor's responsibilities:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative.
 - .6 Additional tests specified in Clause 1.4.2.
- .2 Where tests or inspections by designated Testing Agency reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work.

- .3 Employment of inspection and testing agencies by Departmental Representative does not relax responsibility to perform Work in accordance with Contract Documents.

1.4 ACCESS TO WORK

- .1 Furnish labour and facility to provide access to the work being inspected and tested.
- .2 Cooperate to facilitate such inspections and tests.
- .3 Make good work disturbed by inspections and tests.

1.5 PROCEDURES

- .1 Notify Departmental Representative sufficiently in advance of when work is ready for tests, in order for Departmental Representative to make attendance arrangements with Testing Agency. When directed by Departmental Representative, notify such Agency directly.
- .2 Submit representative samples of materials specified to be tested. Deliver in required quantities to Testing Agency. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to obtain and handle samples on site. Provide sufficient space on site for Testing Agency's exclusive use to store equipment and cure test samples.

1.6 REJECTED WORK

- .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.
- .2 Make good damages to existing or new work, including work of other Contracts, resulting from removal or replacement of defective work.

1.7 TESTING BY CONTRACTOR

- .1 Provide all necessary instruments, equipment and qualified personnel to perform tests designated as Contractor's responsibilities herein or elsewhere in the Contract Documents.
- .2 At completion of tests, turn over two (2) copies of fully documented test reports to Departmental Representative. Additionally, obtain other copies in sufficient quantities to enable one (1) complete set of test reports to be placed in each of the maintenance

manuals specified in Section 01 78 00.

1.8 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment balancing reports for electrical and building equipment systems.
- .2 Refer to Section 01 33 00 – Submittal Procedures.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 52 00 - Construction Facilities.
- .2 Section 01 56 00 - Temporary Barriers and Enclosures.

1.2 INSTALLATION AND REMOVAL

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use or as directed by Departmental Representative.

1.3 TEMPORARY HEATING AND VENTILATION

- .1 Pay for costs of temporary heat, and pumping used during construction, including costs of supply, installation, fuel, operation, maintenance, and removal of equipment, if applicable.
- .2 Provide temporary heating and hoarding as required 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.
- .4 Allow Departmental Representative to inspect methods for fire safety.

1.4 TEMPORARY POWER AND LIGHT

- .1 Departmental Representative will not provide or pay for temporary power during construction for temporary lighting and operating of power tools.
- .2 Arrange for connection with appropriate utility company. Pay all costs for supply, installation, maintenance and removal.
- .3 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Contractor.
- .4 Provide and maintain temporary lighting throughout project.
- .5 Coordinate with all PCA Staff.

- .6 Supply and install temporary facilities for power to approval of local power supply authorities.
- .7 Provide and pay for temporary power and lights for use of Departmental Representative site office.

1.5 TEMPORARY COMMUNICATION FACILITIES

- .1 Provide and pay for temporary telephone, fax and data hook up, line(s) and equipment as necessary for own use and use of Departmental Representative.

1.6 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.

1.7 SANITARY FACILITIES

- .1 Provide sanitary facilities to be supplied by Parks Canada.
- .2 Contractor to keep area clean. Failure to do so will result in restricted use of on-site facilities

1.8 ACCESS

- .1 Provide and maintain adequate access to project site.
- .2 All surface modifications are restricted to the identified construction corridors. Accurate delineation of these corridors by field survey prior to commencement of construction is required.
- .3 All vehicle traffic is restricted to existing roadways. Parking is limited to 2 spaces in designated parking area. All other parking is off site. There shall be no parking in parade area.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END

PART 1 - GENERAL

1.1 INSTALLATION AND REMOVAL

- .1 Indicate use of supplemental or other staging area.
- .2 Remove from site all such work after use.

1.2 SITE STORAGE/LOADING

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.3 CONSTRUCTION PARKING

- .1 Parking for two vehicles will be permitted on site in parking designated parking area. No parking in parade area.
- .2 Provide and maintain adequate access to project site.

1.4 CONSTRUCTION SIGNS AND NOTICES

- .1 Contractor or sub-contractor advertisement signboards are not permitted on site.
- .2 Only notices of safety or instructions are permitted on site and must be in both official languages: English and French.
- .3 Safety and Instruction Signs and Notices:
 - .1 Signs and notices for safety and instruction shall be in both official languages. Graphic symbols shall conform to CAN/CSA-Z321-96 (R2001).
- .4 Maintenance and Disposal of Site Signs:
 - .1 Maintain approved signs and notices in good condition for duration of project and dispose of off-site on completion of project or earlier if directed by Departmental Representative.

1.5 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Protect travelling public from damage to person and property.
- .2 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.

- .3 Dust control: adequate to ensure safe operation at all times.
- .4 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

1.2 GUARD RAILS AND BARRICADES

- .1 Provide secure, rigid guard rails and barricades around open excavations.
- .2 Provide as required by governing authorities.

1.3 ACCESS TO SITE

- .1 Provide and maintain access roads, crossings, ramps and construct runways as may be required for site access including snow clearing of work areas.

1.4 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.5 PROTECTION OF BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection. A walk through inspection is to be completed by Departmental Representative to document condition of work space before work is to start.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 REFERENCES

- .1 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether products or systems are in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .3 Cost for such testing will be borne by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

1.2 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.3 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or

other remedial action may be authorized in ample time to prevent delay in performance of Work.

- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.4 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 when applicable.
- .2 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 Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 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.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.5 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.

- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.6 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

1.7 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.8 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.9 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

1.10 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants.
- .2 Protect, relocate or maintain existing active services. When services are encountered,

cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 – GENERAL

1.1 EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.

1.2 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

1.3 RECORDS

- .1 Maintain a complete, accurate log of work as it progresses.
- .2 On completion of work, prepare record drawings identifying all equipment and systems added or modified as part of this project.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 GENERAL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile wastes in covered metal containers, and remove from premises at end of each working day.
- .3 Prevent accumulation of wastes which create hazardous conditions.
- .4 Provide adequate ventilation during use of volatile or noxious substances.

1.2 MATERIALS

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 CLEANING DURING CONSTRUCTION

- .1 Maintain project grounds, and public properties in a tidy condition, free from accumulation of waste materials and debris. Clean areas on a daily basis.
- .2 Provide onsite garbage containers for collection of waste materials and debris.
- .3 Remove waste materials and debris from the site or building each day.

1.4 FINAL CLEANING

- .1 In preparation for acceptance of the Work perform final cleaning.
- .2 Inspect finishes, fitments and equipment. Ensure specified workmanship and operation.
- .3 Broom clean exterior paved and concrete surfaces; rake clean other surfaces of grounds.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 35 43 - Environmental Procedures.
- .2 Section 03 30 00 - Cast-in-Place Concrete.

1.2 DISPOSAL REQUIREMENTS

- .1 Burying or burning of rubbish and waste materials is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, paint, paint thinner or unused preservative material into waterways, storm, or sanitary sewers is prohibited.
- .3 Do not dispose of preservative treated wood through incineration.
- .4 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
- .5 Dispose of treated wood, end pieces, wood scraps and sawdust at a sanitary landfill.
- .6 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.
- .7 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, demolition and construction waste materials have been banned from disposal in landfills and at transfer stations. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
- .8 Transport waste intended for landfill in separated condition, following rules and recommendations of Landfill Operator in support of their effort to divert, recycle and reduce amount of solid waste placed in landfill.
- .9 Collect, bundle and transport salvaged materials to be recycled in separated categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities.
- .10 Sale of salvaged items by Contractor to other parties not permitted on site.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Contractor and Subcontractors: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Departmental Representative Inspection.
- .2 Departmental Representative Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Operation of systems have been demonstrated to Departmental Representative.
 - .5 Work is complete and ready for final inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

1.2 CLEANING

- .1 In accordance with Section 01 74 11 - Cleaning.
- .2 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

PART 1 - GENERAL

1.1 PROJECT RECORD DOCUMENTS

- .1 Departmental Representative will provide two (2) white print sets of contract drawings and two (2) copies of Specifications Manual specifically for “as-built” purposes.
- .2 Maintain at site one (1) set of the contract drawings and specifications to record actual as-built site conditions.
- .3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative at any time during construction.
- .4 As-Built Drawings:
 - .1 Record changes in red ink on the prints. Mark only on one (1) set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set (also by use of red ink). Submit both sets to Departmental Representative. All drawings of both sets shall be stamped “As-built Drawings” and be signed and dated by Contractor.
 - .2 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
 - .3 Record following information:
 - .1 Horizontal and vertical location of various elements in relation to Geodetic Datum.
 - .2 Field changes of dimension and detail.
 - .3 All design elevations, sections, and details dimensioned and marked-up to consistently report finished installation conditions.
 - .4 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings must also be marked-up and dimensioned to reflect final as-built conditions and appended to the as-built drawing document.
 - .5 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and consistently depicting the changed condition as it applies to all affected drawing details.
- .5 As-built Specifications: legibly mark in red each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly items substituted from that specified.
 - .2 Changes made by Addenda and Change Orders.
 - .3 Mark up both copies of specifications; stamp “as-built”, sign and date similarly to drawings as per above clause.
- .6 Maintain As-built documents current as the contract progresses. Departmental

Representative will conduct reviews and inspections of the documents on a regular basis. Frequency of reviews will be subject to Departmental Representative's discretion.

1.2 REVIEWED SHOP DRAWINGS

- .1 Compile two (2) full sets of all reviewed shop drawings.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END

Part 1 General

1.1 SECTION INCLUDES

- .1 The existing two lifts known as NSIN 2080 located in the Cavalier Building and NSIN 2894 located in the North Magazine Building at the Citadel National Historic Site, Halifax NS are to be replaced with two (2) new full cab, enclosed vertical platform lifts. The lift entrances including doors shall be retained and integrated with the chosen manufacturer's lift. If the manufacturer cannot re-use the existing entrances they shall be responsible for all costs to install new entrances.

1.2 REFERENCES

- .1 ASME A17.1-2013/ CSA B44-13 - Safety Code for Elevators and Escalators.
- .2 CSA B355-15 - Lifts for Persons with Physical Disabilities.
- .3 CSA C22.1-15 - Canadian Electrical Code, Part I (23rd edition), Safety Standard for Electrical Installations.
- .4 CAN/ULC-S104-10 - Standard Method for Fire Tests of Door Assemblies.
- .5 CSA-B44.1-14/ASME-A17.5-2014 - Elevator and Escalator Electrical Equipment.
- .6 CSA-W55.3-08 - Certification of Companies for Resistance Welding of Steel and Aluminum.
- .7 NEMA LD3-2005 - High Pressure Decorative Laminates (HPDL).
- .8 NFPA 80-2016 – Standard for Fire Doors and Other Opening Protectives.
- .9 NFPA 252-2012 – Standard Methods of Fire Tests of Door Assemblies.
- .10 Health Canada/Workplace Hazardous Materials Information System (WHMIS): Material Safety Data Sheets (MSDS).
- .11 National Building Code of Canada (NBCC) 2010.
- .12 Nova Scotia Building Code Regulations 2011 and Provincial Elevator Act and Regulations.

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Project management and coordination procedures.
- .2 Coordination:
 - .1 Coordinate with other work having a direct bearing on work of this section.
 - .2 Coordinate installation of sleeves, block outs, elevator equipment with integral anchors (inserts), and other items to be embedded in concrete or masonry.
 - .3 Provide templates, sleeves, elevator equipment with integral anchors, and installation instructions in time for installation.
- .3 Pre-installation Meetings:
 - .1 Convene pre-installation meeting one week prior to beginning work of this section and on-site installations.
 - .1 Verify project requirements.
 - .2 Review installation conditions.
 - .3 Co-ordination with other building subtrades.

- .4 Review manufacturer's installation instructions and warranty requirements.
- .5 Require attendance of persons directly involved with the work of this section

1.4 SUBMITTALS FOR REVIEW

- .1 Submission procedures in accordance with Section 01 33 00.
- .2 Product Data: Manufacturer's data sheets on each product to be used, including:
 - .1 Signal and operating fixtures, operating panels, indicators.
 - .2 Cab design, dimensions, layout, and components.
 - .3 Cab and hoistway door and frame details.
 - .4 Electrical characteristics and connection requirements.
- .3 Shop Drawings:
 - .1 Show typical details of assembly, erection and anchorage.
 - .2 Include wiring diagrams for power, control, and signal systems.
 - .3 Show complete layout and location of equipment, including required clearances and coordination with hoistway.
- .4 Selection Samples: For each finished product specified, provide two complete sets of color chips representing manufacturer's full range of available colors and patterns.

1.5 CLOSEOUT SUBMITTALS

- .1 Closeout Submittals;
 - .1 Submit the following in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Project Record Documents:
 - .1 Record actual locations of equipment, names of equipment manufacturers and suppliers, concealed conduit and boxes, concealed devices, disconnects.
 - .3 Operation and Maintenance Data:
 - .1 Include description of elevator system's method of operation and control including group supervisory control system, motor control system, door operation, signals, firefighter's service, emergency power operation, and special or non-standard features provided.
 - .2 Provide parts catalogues with complete list of equipment replacement parts with equipment description and identifying numbers.
 - .3 Legible schematic wiring diagrams covering electrical equipment installed, including changes made in final work, with symbols listed corresponding to identity or markings on both machine room and hoistway apparatus.
 - .4 Instruct Owner in maintenance of special finishes.

1.6 QUALITY ASSURANCE

- .1 Manufacturer Qualifications: Firm with experience in manufacture of vertical platform lifts.

- .2 Installer Qualifications: Licensed to install equipment of this scope, with evidence of experience with specified equipment. Lead mechanic shall hold a current Class B Certificate of Competency from the Provincial elevator authority. Installer shall maintain an adequate stock of replacement parts, have qualified people available to ensure fulfillment of maintenance and callback service without unreasonable loss of time in reaching project site.
- .3 Perform Work to ASME A17.1 2013/CSA-B44 13, CSA-B44.1, CSA-W55.3, CSA-C22.1, and as supplemented in this section.
- .4 Fabricate and install door and frame assemblies to NFPA 80, if a new frame and door is required.
- .5 Installer: Employees and supervisor on payroll of elevator equipment supplier/manufacturer.
- .6 The same lead installer shall install these lifts from the day the project is manned until substantial completion. The same lead installer shall be present on the job-site whenever work is being carried-out on the project.
- .7 Do not apply trade marks visible to the general public on any piece of equipment.
- .8 Only non-proprietary products are to be used on this project. The controller will be marked signifying that it is non-proprietary.
 - .1 Provide with turn-over documents any and/or all diagnostic tools or devices that are used to set up, initialize and/or perform ongoing diagnostics/alterations with respect to the maintenance or upgrade of the elevator control system. In lieu of providing this/these separate tool(s) have this/these tool(s) incorporated into the design (placed onboard) of the elevator control system.
 - .2 Provide, with elevator, a monitoring device that monitors and provides information on the integrity of the elevator's suspension means if the integrity of the suspension means is not readily visible and cannot be checked by traditional methods.
 - .3 Insure the elevator parameters or elevator specific software can be copied or supply a spare set of parameters to the owner.
 - .4 Any tools, computers and onboard devices, or otherwise, that are used for setting parameters, maintenance, service, diagnostic or repair of the elevator equipment shall not be required to be reset or shall not time out after a pre-set amount of time or number of trips. This equipment shall be available for use on an as needed basis for the life of the equipment and the equipment manufacturer shall not limit their use in any way.
 - .5 In the case where the elevator manufacturer is not the elevator maintenance contractor, the elevator system installed with this project (the elevator equipment), cannot be designed to prevent other contractor's from performing diagnostics, trouble-shooting, adjusting and/or modifying the existing control equipment on an ongoing basis.
 - .6 Include with your Bid Submission a letter stating the products you will be supplying for this project will be non-proprietary and meet the above requirements.
- .9 Health and Safety: Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle components in accordance with Section 01 61 00 – Common Product Requirements and in accordance with manufacturer's written instructions.
- .2 Packing, Shipping, Handling and Unloading:
- .3 Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- .4 Storage and Protection:
- .5 Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
- .6 Waste Management and Disposal:
 1. Separate waste materials for reuse and/or recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 2. Collect and separate for disposal paper, plastic, polystyrene and corrugated cardboard packaging material for recycling in accordance with Waste Management Plan (WMP).
 3. Divert unused metal materials from landfill to recycling facility as approved by Consultant.

1.8 REGULATORY REQUIREMENTS

- .1 Provide platform lifts in compliance with the latest editions of:
 - .1 CSA B355 - Lifts for Persons with Physical Disabilities.
 - .2 CSA B44.1/ASME A17.5 - Elevator and Escalator Electrical Equipment.
 - .3 C22.1 - Canadian Electrical Code.
 - .4 ASME A17.1 2013/CSA B-44 13 Safety Code for Elevators.

1.9 PROJECT CONDITIONS

- .1 Do not use lifts for hoisting materials or personnel during construction period.

1.10 WARRANTY AND MAINTENANCE

- .1 Warranty: Manufacturer shall warrant the lift materials and workmanship for one (1) year following completion of installation.
 - .1 Maintenance: Provide full maintenance on the device to correspond with the manufacturer's warranty period.
 - .2 This maintenance shall include quarterly visits to perform preventative maintenance on the lift. The visits shall include procedures as outlined in the manufacturer's/ installer's preventative maintenance program.
 - .3 Maintenance to include all parts and labour for callback service that is not the cause of misuse, vandalism or any other reason beyond the reasonable control of the lift contractor.
 - .4 Maintenance to include all travel time and expenses for quarterly visits and callback service.
- .2 The base bid price shall include the cost of this 12 month's maintenance service for the lifts.

Part 2 Products

2.1 MANUFACTURERS

- .1 Acceptable Manufacturers:
 - .1 Garaventa Lift, Elvoron.
 - .2 Savaria, Prolift SCL.
 - .3 Global Tradiff GT 100C.
 - .4 Approved alternate.
- .2 Requests for substitutions will be considered in accordance with contract documents.

2.2 FULL CAB ENCLOSED VERTICAL PLATFORM/WHEELCHAIR LIFT

- .1 Provide two lifts to be identical to the existing ones located on site.
- .2 Capacity:
 - .1 Both Lifts - 1000 lbs. (455 kg)
- .3 Floor to Floor Lifting Height: Both Lifts - 126" (3200 mm) - (to be confirmed by contractor).
- .4 Nominal Car Dimensions:
 - .1 Both Lifts - 36 inches (914 mm) W by 60 ½ inches (1537 mm) D.
- .5 Car Configuration:
 - .1 On/Off Same Side (front openings only).
- .6 Landing Openings:
 - .1 36 inches (914 mm) wide openings.
 - .2 All Landings: Provide Fire Doors interlocked (electrical and mechanical) with Lift controls.
 - .3 Doors shall be supplied with vision panels and shall be finished in powder paint.
- .7 Door Construction:
 - .1 The existing hoistway door frames shall be re-used. If door frame are required to be replaced because contractor cannot integrate existing doors with their new lift; Provide new doors and frames which shall be fire rated with 1-1/2 hour B label rating. The door and frame shall be pre-hung, constructed of 16 gauge (1.5 mm) steel, with a vision panel, delayed action door closer, pull handle and integrated electrical and mechanical interlock. Doors mount flush to the inside wall of the hoistway.
 - .2 If the manufacturer cannot re-use the existing entrances, Contractor shall be responsible for all costs to install new entrances including the removal of existing entrances, new wallboard, crack fill, paint etc.
- .8 Manual Door Operators: Allows door to be manually open when the platform arrives at a landing. Will also allow door to be manually opened at landing by pressing call button. Lift shall be able to be called without a key.
- .9 Hoistway Overheads and Pits:
 - .1 Overhead: 120" (3048 mm) – minimum.

- .2 Pit Depth: 10" (305 mm).
- .3 Pit Mount: Lift to be mounted in existing pit dimensions with no alterations.
- .4 Include for all code related pit stop, limit switches, and safety rail blocks.

- .10 Hydraulic Drive:
 - .1 Drive Type: 1:2 Roped hydraulic.
 - .2 Include all required hydraulic pump, motor, valve, hoses, shutoff valve (in the pit and in the machine room), and oil.
 - .3 Emergency Operation: Automatic emergency lowering device to lower platform.
 - .4 Safety Devices:
 - .1 Slack chain safety device.
 - .2 Shoring device.
 - .5 Travel Speed: 30 fpm (.15 m/second).
 - .6 Power Supply: 208V/3Ph/60Hz

- .11 Car Controls: 24 VDC control circuit with the following features.
 - .1 Direction Control: Illuminated constant pressure buttons.
 - .2 Illuminated and audible emergency stop switch shuts off power to lift and activates audio alarm equipped with battery backup.
 - .3 Lift shall be able to operate without key control.
 - .4 Emergency Telephone: Platform shall be equipped with code compliant integrated telephone with a stainless steel faceplate. Telephone shall operate in the event of power failure. A telephone line shall be supplied to the lift by others.
 - .5 Digital Floor Display.

- .12 Call Station Controls: 24 VDC control circuit with the following features.
 - .1 Direction Control: Illuminated constant pressure buttons.
 - .2 Lift shall be able to be called without key control.
 - .3 Call Station Mounting:
 - .1 Lowest:
 - .1 Mounted on the adjacent wall.
 - .2 Second Floor:
 - .1 Mounted on the adjacent wall.

- .13 Safety Devices and Features:
 - .1 Grounded electrical system with upper, lower, and final limit switches.
 - .2 At all landings a solenoid activated interlock shall electrically monitor that the door is in the closed position and the lock is engaged before lift can move from landing.
 - .3 Pit stop switch.
 - .4 Electrical disconnect shall shut off all power to the lift.

- .14 Finishes
 - .1 Car Walls:
 - .1 Shall be finished with plastic laminate from manufacturer's standard selection.
 - .2 Hall Doors and Frames:
 - .1 Existing shall be reused. If lift manufacturer cannot re-use the existing entrances then it is their responsibility to complete all work required to install new entrances.
 - .3 Car Operating Panel:

- .1 Brushed Stainless Steel
- .4 Car Handrail:
 - .1 Brushed Stainless Steel
- .5 Hall Call Stations:
 - .1 Brushed Stainless Steel
- .6 Flooring:
 - .1 Shall be High Performance Safety Flooring: Altro Maxis Conquest MXD2502. To be supplied by the lift contractor.
- .15 Emergency Lowering Device
 - .1 Provide a battery operated emergency lowering device for the lift. In the event of a power failure the device shall automatically lower the lift to the lowest landing.

Part 3 Execution

3.1 EXAMINATION

- .1 Do not begin installation until substrates have been properly prepared.
- .2 Verify hoistway and machine space are of correct size and within tolerances.
- .3 Verify required landings and openings are of correct size and within tolerances.
- .4 Verify electrical rough-in is at correct location.
- .5 If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- .1 Clean surfaces thoroughly prior to installation.
- .2 Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- .1 Install lifts in accordance with applicable regulatory requirements including CSA B355, and manufacturer's instructions.
- .2 Install system components and connect to building utilities.
- .3 Accommodate equipment in space indicated.
- .4 Startup equipment in accordance with manufacturer's instructions.
- .5 Adjust for smooth operation.

3.4 FIELD QUALITY CONTROL

- .1 Perform tests in compliance with CSA B355 and required by authorities having jurisdiction.
- .2 Schedule tests with agencies and Architect, Owner, and Consultant present.

3.5 PROTECTION

- .1 Protect installed products until completion of project.
- .2 Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION