

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Related sections
 - .1 Section 14 00 00 – Additional General Conditions

1.2 SYSTEM DESCRIPTION

- .1 Modernize the existing elevators as described in the following tables and the requirements of this section:
 - .1 (1) existing elevator (no 2s) hydraulic type with above ground cylinder.
- .2 The following requirements must be met for all elevators described in this section:
 - .1 Barrier-Free in accordance with CAN/CSA B651-18, Barrier-Free Design.
 - .2 Bilingual Markings:
 - .1 Provide identification and instructions on operating panels and on signal equipment in English and French except where design is such that inference is obvious and readily understood.
 - .3 Retain existing car speed and capacity.
 - .4 Provide equipment to suit the existing hoistway and machine room dimensions.
 - .5 Check all dimensions on site.
 - .6 Design and modernize elevator in accordance with ASTM A17.1-2010/CSA B44-2010, local codes and regulations.

.3 Existing system – Elevator #2s

System BEFORE modernization:

Unit number :	2s
Designation :	Passengers
Installation date :	2005
Floor served :	3 stop : 1, 2, 3
Nominal speed :	100 fpm
Capacity :	2000 lb
Machine manufacturer :	Otis
Machine type :	Hydraulic - submersible, above ground cylinder
Motor manufacturer :	US Motor
Controller manufacturer :	Otis
Controller type :	Relay
Dispatch type :	Simplex
Door type :	Side Opening 1 speed
Door dimensions :	36" X 84"
Door fire rating :	ULC 1h1/2

Car equipment description**Fixture**

Position indicator	Digital
Car lantern	Provided
Arrival gong	
Floor gong	
Voice synthesizer	Not Provided
Button - height	Conform
Button - model	Otis
Braille	Provided
Independant service	Provided
Emergency In-car Operation	Provided
Communication system	Provided (intercom)

Equipment

Emergency light	Provided
Door protection	Infrared
Handrail	3 sides
Handrail - height	Conform
Door operator	Otis
Interlock	Otis
Car guides	Roller
Inspection unit	Conform
Refuge area	Provided

Hall equipment description**Fixture**

Position indicator	Digital
Hall lantern	
Gong	
Button - height	Conform
Button - model	Otis
Braille	
Emergency Recall	Provided
Operation	
Emergency power	Not Provided
Battery backup	Provided

Equipment

Interlock	Otis
Door track	Otis
Door closer	Enrolling
Door fire pin	Bottom & Top
Mechanical access	Provided (lev 1, 2)
Electrical access	Provided

1.3 PERFORMANCE REQUIREMENTS**.1 Codes and Regulations**

- .1 Design, supply and install all equipment in accordance with the latest editions of the ASTM A17.1-2010/CSA B44-2010 Code (update included), CAN/CSA-B651-18 Code and any other federal, provincial and municipal regulations applicable for this type of installation, including the National building Code of Canada and the Quebec Electrical Code.

Part 2 Products**2.1 CAR DOOR EQUIPMENT**

- .1 Render operational the door lock to restrict the opening of the car door from the inside when it is outside the unlocking zone as required by article 2.12.5 of ASTM A17.1-2010/CSA B44-2010.

2.2 HOISTWAY ACCESS SWITCHES

- .1 Render operational the hoistway access switches in order to restart the elevator following the use of the car roof access switch.

2.3 RIDE QUALITY

- .1 Eliminate the abnormal vibration of the car when it arrives at the extreme landings and when using the pit access switches.

2.4 CAR INTERCOMMUNICATION SYSTEM

- .1 Supply and install a plate labelled "PRESS TO CALL" above & "EMERGENCY" below with embedded Braille inscription.
- .2 Supply and install a plate labelled "COMMUNICATION ESTABLISHED WHEN LIGHT ON" indicating that communication is established.
- .3 Install these plates near the call button of the existing communication system on the car operating panel.
- .4 Cover the existing inscriptions and remove the existing red indicator light on the control panel in the car.

2.5 CAB

- .1 Supply and install a metal guard rails at all edges (on the 3 sides without door) of the roof as required ASTM A17.1-2010/CSA B44-2010 code. Position the guard to optimize space on the roof of the cab.

2.6 SAFETY STOP FOR MAINTENANCE

- .1 Supply and install a complete safety stop system for maintenance in the elevator pit including the following requirements and elements:

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- .2 Design the maintenance safety stop system to allow safe access to the workspace in the pit. The access maneuver must be capable of being performed by a single elevator mechanic.
 - .3 Provide and install the connection and programming of this maneuver to the elevator controller.
 - .1 When the posts are in place in the fixed bases, only allow movement of the car using the inspection device.
 - .4 Supply and install two posts meeting the following requirements:
 - .1 The length of the posts must allow their handling by a single mechanic.
 - .2 The posts must be able to support the weight of the car.
 - .3 Provide the lower end with a key of at least 50 mm in length allowing the post to be properly positioned in its fixed support.
 - .4 Provide the upper end of the post with a 12mm thick plate which will serve as a support for the lower car frame.
 - .5 Paint the posts yellow
 - .6 When the car rests on the posts, access to the pit must be restricted.
 - .5 Supply and install two fixed bases meeting the following requirements:
 - .1 Provide bases composed of a minimum 450mm high tube to ensure the stability of the posts and a minimum 10mm thick base plate.
 - .2 Provide the fixed bases with a keyway allowing the correct positioning of the post in its fixed support.
 - .3 Equip each fixed base with a switch to send a signal to the controller when the posts are in place in the fixed bases. The switch used must be a robust model of the same type as the limit switches installed in the duct.
 - .4 Position the fixed bases on each side of the shock absorbers.
 - .5 Permanently fix the bases on the floor of the pit.
 - .6 Paint with a water-based polyurethane paint (odorless).
 - .6 Provide and install an inspection device in the pit that meets the following requirements:
 - .1 Provide and install near the access ladder a portable device, yellow, for maneuvering at inspection speed with constant pressure buttons. Provide the following buttons:
 - .1 Up
 - .2 Make active
 - .3 Down
 - .4 Start / stop
 - .5 Normal / inspection
 - .6 Emergency stop (mushroom type)
 - .2 Provide a sufficient length of mobile wiring to maneuver from the landing.
 - .3 Provide a fixed location, easily accessible, on one of the walls to store the portable device and wind up the mobile wiring
 - .4 Provide for the connection of the portable device to the controller.
 - .5 Provide an interlock between the two inspection devices (cabin roof and mechanical room). When one device is active, the second device cannot take control of the elevator.
 - .6 Supply and install all the wiring required to connect this device to the controller.
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Part 3 Execution**3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions, and data sheet.

3.2 INSTALLATION

- .1 Install hoistway, machine room, and other elevator materials and components in accordance with ASTM A17.1-2010/CSA B44-2010, local codes, regulations and manufacturer's written instructions.

3.3 FIELD QUALITY CONTROL

- .1 Verification requirements include:
 - .1 Materials and resources.
 - .2 Storage and collection of recyclables.
 - .3 Construction waste management.
 - .4 Resource reuse.
 - .5 Recycled content.
 - .6 Local/regional materials.
 - .7 Certified wood.
 - .8 Low-emitting materials.

3.4 SITE TESTS

- .1 Perform and meet tests required by ASTM A17.1-2010/CSA B44-2010.
 - .1 Submit test data forms in accordance with Section 01 91 13 16 - Commissioning Forms before requesting an inspection by the Departmental Representative.
 - .2 Perform real time testing of Emergency Operation (Emergency Recall Operation - Phase I & Emergency In-car Operation - Phase II) and emergency power operation with Departmental Representative.
- .2 Supply instruments and execute specific tests.
- .3 Furnish test and approval certificates issued by jurisdictional authorities.
- .4 At agreed time during twelve month warranty period, and with building normally occupied using normal building traffic, conduct tests to verify performance. Furnish event recording of hall call registrations, time initiated, and response time throughout entire normal working day.

3.5 CLEANING

- .1 Remove protective coverings from finished surfaces and components.
- .2 Clean surfaces and components ready for inspection.

3.6 ADJUSTMENTS

- .1 Adjust door opening and closing times to suit handicapped users in accordance with Departmental Representative instructions.
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- .2 Adjust control system to cause elevators to answer hall calls during working day within performance criteria specified.
- .3 Adjust for smooth acceleration and deceleration of car as so not to cause passenger discomfort.
- .4 Adjust automatic floor levelling feature at each floor.

3.7 SCHEDULE OF WORK

- .1 The work shall be coordinated with Departmental Representative.

3.8 SEQUENCE OF WORK

- .1 Schedule the modernization sequence in accordance with Section 01 14 00 - Work restrictions.
- .2 Schedule a maximum of 2 weeks per elevator for modernization works.
- .3 The final sequence of work must be submitted before the start of work for approval by Departmental Representative.

3.9 DISMANTLEMENT

- .1 Coordinate equipment dismantlement with Departmental Representative.
- .2 Following dismantlement, dispose of equipment in accordance with Section 01 74 21.

3.10 INSERTING AND REMOVING EQUIPMENT

- .1 The Contractor is responsible for the insertion and removal of the equipment described in this section.
- .2 The contractor is responsible for providing all equipment necessary for insertion, handling and installation of the equipment in the machine room or in the hoistway.
- .3 Access to the machine room is from the corridors and stairways of the building.
- .4 The Contractor is responsible to verify the paths and provide equipment to meet the dimensions of access constraints.
- .5 No new opening will be made in the machine room.

3.11 WELDING WORK

- .1 If welding works are required on the site, obtain all necessary approvals by Departmental Representative before performing the works.
- .2 All site welds must be made by a qualified welder and identified with his identification mark.

3.12 TOUCH UP WORK

- .1 Ensure that all exposed metal surfaces are painted.
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- .2 At the end of the work, retouch and repair all finished surfaces assembled at the factory, where the finish is altered or damaged.
- .3 Repair or replace any damaged item, without charge, before the substantial completion of work.

3.13 LIFTING WORKS

- .1 If the car finishes are altered for the purposes of lifting work, they shall be repaired at the end of the work at the expense of the contractor.
- .2 Supply and install a temporary hoist beam suitable for car loads.
 - .1 Temporary hoist beam can be installed either on top of the car rails (once cut to the right height), bolted into the side of the rail or any other recognized method.
 - .2 Provide a drawing, sealed by engineer, showing the installation of the beam.

END OF SECTION
