1. GENERAL

1.01 SECTION INCLUDES

.1 Power service connections, communication service connections, fire alarm signal and emergency power condition signal for elevator car homing relays, fused switches, and associated conduit and wire for elevator cab lighting and ventilation, and power to elevator sequence controller.

1.02 [DEFINITIONS]

.1 Machine-Room-Less (MRL) Elevator: A proprietary space saving, low energy traction elevator system using motors integrated within the hoist way lifting mechanism that eliminates the requirement for a separate machine room, with control and logic systems contained within a small room adjacent to; or in close proximity to the elevator hoistway.

1.03 RELATED REQUIREMENTS

.1 Division 14 – Conveying Equipment: Elevators.

.2 Section 26 28 13 – Fuses.

.3 Section 28 46 51.14 – Fire-Alarm Supervised Interface Hardware for Elevators.

.4 Elevator shop drawings.

1.04 WORK NOT DESCRIBED IN THIS SECTION

.1 Elevator control wiring, down drop cables, and interlock controls and wiring.

1.05 REFERENCES

.1 Accessibility for Ontarians with Disabilities Act (AODA).

.2 CSA B44:19, Safety code for elevators and escalators.

.3 CSA C22.1:21, Canadian Electrical Code, Part 1 (25th Edition), Safety Standard for Electrical Installations.

.4 Ontario Electrical Safety Code (28th edition/2021):

.1 OESC Section 38: Elevators, dumbwaiters, material lifts, escalators, moving walks, lifts for person with physical disabilities, and similar equipment.

.5 CSA C282:19, Emergency electrical power supply for buildings.

.6 Ontario Building Code.

.7 Ontario TSSA, Elevating Devices Code Adoption Document Amendment 295/22.

1.06 COORDINATION

.1 Review the work of this Section with the elevator shop drawings, which may supersede or be more stringent than the requirements of this Section.

1.07 DELIVERY, STORAGE, AND HANDLING

.1 Separate waste materials for reuse and recycling in accordance with Section 01 74 00.

2. PRODUCTS

2.01 ELEVATOR POWER DISTRIBUTION CENTRES

.1 600 V 3-phase circuit breaker complete with auxiliary contact.

.1 [The auxiliary contact shall be configured as SPST at 1 A AT 110 V AC (min). The auxiliary contact shall be open when the disconnect switch is in the open position.]

.2 [600 V], 3-phase, splitter gutter assembly complete with remote mounted fused switches complete with HRC fuses individually mounted in NEMA 1 enclosures.

.3 Fused switches to have external rotary operating handle, lockable in "OFF" position.

.4 Provide conduit and wiring from the disconnect switch to the elevator controller.

.5 Where elevators are supplied with transformers by the elevator contractor, provide conduit and wiring to the transformer, and from the transformer to the elevator controller.

3. EXECUTION

3.01 EXAMINATION

.1 Review elevator shop drawings to confirm location of electrical equipment, including in machine room or machinery spaces, where dictaged by the elevator supplier/manufacturer.

3.02 TEMPORARY POWER FOR ELEVATOR INSTALLATION

.1 Contractor to allow for temporary power to the top of the elevator hoistway as follows during the bidding stage, and coordinate exact requirements with the elevator supplier at the start of construction.

.1 Provide one 120 V, 1-Ph, 20 A circuit with L6-20R receptacle.

.2 Provide one 120/208 V, 30 A circuit with local temporary fused disconnect switch.

3.03 DISTRIBUTION ASSEMBLIES

.1 Provide lamacoid nametag indicating function of each device. Coordinate wording with elevator trade.

3.04 EQUIPMENT WIRING

.1 Elevator machine room light switch, elevator power disconnect devices, and cab light power disconnect devices placed on lock side of machine room door within elevator machine room.

.2 Coordinate location of lights, machines, and equipment installed in the elevator pit, hoistway, and machine rooms with elevator installer on site.

.3 Provide a full size ground conductor to elevator controllers. Include for a neutral conductor on all feeders to elevator controllers during the tender phase, to be confirmed with the elevator shop drawings during the submittal review phase.

3.05 FIRE ALARM

.1 Refer to Section 28 46 51.14 – Fire-Alarm Supervised Interface Hardware for Elevators.

.2 Provide fire alarm devices as indicated.

.3 Provide smoke detector in elevator machine room.

.4 Provide smoke detector at each elevator lobby.

.5 Provide linear heat detectors at top and bottom of elevator hoistway.

.6 Provide fire alarm system relays and connect to the elevator controller for automatic elevator recall.

3.06 FIRE ALARM DEVICES IN ELEVATOR HOISTWAYS

.1 Install fire alarm initiating devices to enable means for testing and maintaining those devices without having to enter the hoistway in accordance with CSA B44:19.

3.07 BRANCH CIRCUITS FOR MACHINE ROOM OR CONTROL ROOM/MACHINERY SPACE OR CONTROL SPACE LIGHTING AND RECEPTACLE(S)

.1 A separate branch circuit shall supply the machine room or control room/machinery space or control space lighting and receptacles.

.2 Required lighting shall not be connected to the load side terminals of a ground fault circuit interrupter.

3.08 BRANCH CIRCUIT FOR HOISTWAY PIT LIGHTING AND RECEPTACLES

.1 At least one 120 V, single-phase, duplex receptacle connected to a 15 A branch circuit shall be provided in the hoistway pit.

.2 A separate branch circuit shall supply the hoistway pit lighting and receptacles.

.3 Required lighting shall not be connected to the load side terminals of a ground fault circuit interrupter receptacle(s).

3.09 [BRANCH CIRCUIT FOR TOP OF HOISTWAY LIGHTING AND RECEPTACLES REQUIRED BY MRL ELEVATORS]

.1 At least one 120 V, single-phase, duplex receptacle connected to a 15 A branch circuit shall be provided at the top of the hoistway.

.2 A separate branch circuit shall supply the top of hoistway lighting and receptacles.

.3 Required lighting shall not be connected to the load side terminals of a ground fault circuit interrupter receptacle(s).

3.10 CONDUIT FOR ACCESS CONTROL AND SECURITY

.1 Provide a 27 mm (1") conduit to the elevator machine room for CCTV cameras in each elevator cab.

.2 Provide a 27 mm (1") conduit to the elevator machine room for access control card mounted in each elevator cab.

3.11 CONDUIT AND BRANCH CIRCUITS FOR TELECOMMUNICATIONS SYSTEMS

.1 Provide a 27 mm (1") conduit to the elevator machine room for voice outlet for each elevator cab. Provide base building telephone line.

.2 Provide a 27 mm (1") conduit to the elevator machine room for emergency communication in each elevator cab. Provide base building network drops.

.3 Provide one 120 V, [30 A/20 AF/1P] disconnect switch on dedicated circuit for emergency communication system in the [Machine Room] [Control Room] to serve each group of elevators. Confirm exact power requirements with the elevator supplier during shop drawing review whether a 15 A circuit is required in lieu of a 20 A circuit.

End of Section