1. GENERAL

1.01 SECTION INCLUDES

.1 Internally illuminated "Running Man" exit sign units for ordinary location use.

1.02 RELATED REQUIREMENTS

.1 Section 26 52 13.13 – Emergency Lighting: Emergency Battery Units.

1.03 REFERENCES

.1 CSA Group:

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

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

.3 CSA C22.2 No. 141-15 (R2020), Emergency lighting equipment.

.4 CAN/CSA-C860-11 (R2020), Performance of Internally Lighted Exit Signs.

.2 International Organization for Standardization (ISO)

.1 ISO 7010:2011 – Graphical symbols – Safety colours and safety signs.

.2 ISO 3864-1:2011 – Graphical symbols -- Safety colours and safety signs -- Part 1: Design principles for safety signs and safety markings

.3 Ontario Building Code.

.4 Underwriters Laboratories of Canada (ULC)

.1 ULC/ORD-924-02, Standard for Emergency Lighting and Power Equipment.

.2 CAN/ULC-S572-10, First Edition Standard for Photoluminescent and Self-Luminous Exit Signs and Path Marking Systems.

1.04 SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00.

.2 Product Data: Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish, and limitations.

.3 Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.

1.05 EXTRA MATERIALS

.1 Allow the cost for material and for installation of an additional five exit signs, single face or dual face, to be installed as directed by the Consultant during construction. Include 15.24 m (50 feet) of wire and conduit per exit sign.

1.06 QUALITY ASSURANCE

.1 Exit signs units shall be ULC Listed and/or CSA Certified to CSA C22.2 No. 141 and CSA C860.

.2 Furnished products are listed and/or certified by third party agencies as suitable for the intended purpose.

.3 Manufacturer Qualifications: Products shall be free of defects in material and workmanship.

.4 All units will be certified that they have been tested prior to shipping.

1.07 DELIVERY, STORAGE, AND HANDLING

.1 In accordance with Section 01 61 00.

1.08 WASTE MANAGEMENT AND DISPOSAL

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

1.09 WARRANTY

.1 Product is warranted free of defects in material and workmanship for a minimum of one year from substantial completion.

2. PRODUCTS

2.01 EXIT SIGNS, GENERAL

.1 Manufacturers

.1 Aimlite.

.2 BeLuce (formerly Beghelli).

.3 Emergi-Lite.

.4 Lithonia (Acuity Brands Lighting).

.5 Lumacell.

.6 Stanpro.

.7 Other manufacturers as indicated in Section 26 52 13.13.

.2 Substitution Limitations:

.1 Manufacturer of exit signs to be the same as manufacturer of emergency lighting battery units and remote heads specified in Section 26 52 13.13.

.2 No manufacturer substitutions.

.3 Description

.1 Green and White LED Pictogram "Running Man" exit sign.

.2 The pictogram sign shall be certified as CSA 22.2 No. 141, and meet ISO 3864-1 and ISO 7010.

.3 The pictogram legend shall have a minimum illuminated dimension of 5.9" high and 11.13" with ISO 3864-1 and ISO 7010 pictogram printed on a pure-acrylic panel.

.4 The sign shall include a standard single face with optional double-faceplate included.

.5 Not acceptable:

.1 Red LED EXIT signs.

.2 Externally illuminated photoluminescent, or non-electrical radioluminescent type of pictogram signs are unacceptable.

.4 Mounting

.1 The canopy shall universal to allow for wall, end, or ceiling mount.

.5 Electrical

.1 The LED light source shall be long-life white Light-Emitting Diodes and shall provide uniform illumination of the pictogram in normal and emergency operation.

.2 The sign shall operate with universal 2-wire AC input voltage of 120 to 347 Vac at less than 3 Watts, and universal 2-wire DC input

voltage from 6 to 24 Vdc at less than 2.5 Watts for single and double face legends with a single arrow either left or right.

.3 If arrow left and arrow right is required for T intersection, the contractor shall supply and install two separate pictogram signs.

.4 The pictogram edge-lit exit sign where indicated on the plans in a self-powered configuration shall use a sealed Nickel-Cadmium battery of 2.4 V nominal voltage and shall stay illuminated during emergency operation for at least two hours upon AC failure.

2.02 ALL-PLASTIC PICTOGRAM EXIT SIGN, COMMERCIAL GRADE

.1 Manufacturers

.1 Lumacell LP series.

.2 Beghelli VE2-RM series.

.3 Equivalent products from manufacturers as described in Article 2.01 of this section.

.2 Materials

.1 The sign shall come standard with a canopy and shall be suitable for wall, end, or ceiling mounting. The frame, faceplates, back plate and canopy shall each be constructed of a one-piece UV-stabilized thermoplastic material colored factory white.

2.03 STEEL PICTOGRAM EXIT SIGNS

.1 Manufacturers

.1 Lumacell LS series.

.2 Equivalent products from manufacturers as described in Article 2.01 of this section.

.2 Materials

.1 The housing assembly shall be constructed of steel in [factory white] [black] [grey] colour.

.2 The frame and back plate shall each be of a one-piece steel construction.

.3 The faceplate(s) shall be constructed of robust clear poly-carbonate panels with an opaque border coloured factory-white.

.4 Each face plate shall come standard with two legend films for pictogram and directional indicators.

2.04 EXTRUDED ALUMINUM PICTOGRAM EXIT SIGNS

.1 Manufacturers

.1 Lumacell LA series.

.2 Beghelli QR-RM series.

.3 Equivalent products from manufacturers as described in Article 2.01 of this specification.

.2 Materials

.1 The housing assembly shall be constructed of extruded aluminum in [factory white] [black] [grey] [brushed aluminum] colour.

.2 The housing shall be constructed of rugged extruded aluminum and have a maximum depth of 2-1/2".

.3 The faceplate(s) shall be constructed of extruded aluminum and shall incorporate a protective clear poly-carbonate panel.

.4 Each face plate shall come standard with two legend films for pictogram and directional indicators.

2.05 SLIM PROFILE EDGE-LIT PICTOGRAM EXIT SIGNS FOR SURFACE MOUNTED APPLICATIONS

.1 Manufacturers

.1 Lumacell LAE series.

.2 Equivalent products from manufacturers as described in Article 2.01 of this specification.

.2 Materials

.1 The housing assembly shall be constructed of extruded aluminum with textured finish and [textured aluminum] [off-white] colour.

.2 The canopy shall be of die-cast aluminum and allow for wall, end, or ceiling mount.

.3 The legend shall be printed on a pure-acrylic panel.

.4 The panel shall come standard with double-face legend, for single-face and double-face applications.

2.06 DIE-CAST EDGE-LIT PICTOGRAM EXIT SIGNS FOR SURFACE OR RECESSED MOUNTING APPLICATIONS

.1 Manufacturers

.1 Lumacell LDE series.

.2 Equivalent products from manufacturers as described in Article 2.01 of this specification.

.2 Materials

.1 Surface mount:

.1 When specified for surface mount, the unit shall come standard with a trim plate, trim ring, back box and canopy made of die-cast aluminum with [brushed aluminum] [black] [chrome] [polished brass] [factory white] [bronze] finish.

.2 The trim plate shall have a [angular] [circular] [flat (fully recessed)] profile and allow for wall or ceiling mount installation.

.2 Recessed ceiling mount:

.1 When specified for recessed ceiling-mount, the unit shall come standard with a flat trim plate of die-cast aluminum with [brushed aluminum] [black] [chrome] [polished brass] [factory white] [bronze] finish, a back box of galvanized steel, and a hardware kit for back box installation between ceiling joists. The back box shall be provided with conduit knock-outs at the top, back and end.

.3 The legend shall be printed on a pure-acrylic panel.

.4 The panel shall come standard with double-face legend, for single-face and double-face applications.

2.07 ALL-CLIMATE, HARSH ENVIRONMENT PICTOGRAM EXIT SIGN

.1 Manufacturers

.1 Lumacell LN series

.2 Beghelli FTZ-FM series.

.3 Equivalent products from manufacturers as described in Article 2.01 of this specification.

.2 Materials

.1 The equipment shall be certified for NEMA-4X and designed specifically for high abuse areas, wet location, and cold weather applications.

.2 The equipment frame shall be of industrial grade polyvinyl chloride with a gasket around lenses and canopy. The faceplate(s) shall be constructed of heavy-duty vandal resistant polycarbonate and feature an even illuminated legend.

.3 Finish colour: [black] [white].

3. EXECUTION

3.01 INSTALLATION

.1 Install exit lights to manufacturer's recommendations, listing requirements, CSA standard and local regulatory requirements.

.2 Ensure exit signs are not obscured. Where an exit sign is to be installed in an area with no ceiling, provide a suitable pendant mount.

.3 [Connect fixtures to exit light circuits normal power supply and emergency battery units specified in Section 26 52 13.13.]

[OR]

.4 [Connect fixtures to exit light emergency power supply circuits.]

.5 Ensure that emergency lighting circuit breaker is locked in ON position.

.6 If arrow left and arrow right is required for T intersection, the contractor shall supply and install two separate pictogram signs.

3.02 FIELD QUALITY CONTROL

.1 Comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.03 CLEANING

.1 Proceed in accordance with Section 01 74 00.

.2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

3.04 TESTING AND COMMISSIONING

.1 When installation of emergency lighting equipment is complete, contractor shall commission and test the entire system and adjust if necessary.

.2 Contractor shall certify in writing to the consultant that the system is complete, installed per CSA C22.2 No. 141, has been tested, and operates for the specified battery run time.

.3 Contractor shall notify owner and consultant at least ten days prior to proposed testing date and schedule testing at time and date acceptable to the owner.

.4 Installation shall be in accordance to the electrical code and manufacturer's instructions.

.5 Provide breaker lock on emergency lighting circuit at source panelboard.

3.05 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by exit sign installation.

End of Section