

GENERAL

- 1 The electrical system shall comply with the requirements of the latest edition of the Canadian Electrical Code and with all provincial and municipal laws, rules and ordinances, and to the authority having jurisdiction.
- 2 Provide all materials, labour and equipment necessary for installing, testing and replacing in initial operation the complete electrical system.
- 3 Examine all plans and specifications pertaining to this Contract. Notify Contract Administrator of errors or omissions before submitting the price. Failing such notification, this Contractor shall meet all such requirements without extra cost to the City.
- 4 Obtain all necessary permits, pay all necessary fees and give all necessary notices.
- 5 All equipment supplied under this Contract shall be new and shall be CSA and locally approved.
- 6 All Work shall be laid out in its mechanical appearance. It shall be logically arranged for simplicity of accessibility and electrical efficiency.
- 7 Provide lamacoid nameplates for all electrical equipment/devices. Mount nameplates on all equipment to indicate function, designation voltage and power of devices:
 - Normal power: white/black letters,
 - UPS/emergency: yellow/black letters.
 Provide listing of lamacoids to Contract Administrator for approval prior to ordering.
- 8 The Contractor is to examine the conditions of the Site and be responsible for relocating or removing and replacing all equipment necessary for the Work required for this project.
- 9 All Work completed shall be accomplished in a first class and Workmanlike style.
- 10 Submit 3 copies of shop drawings to Contract Administrator, within 2 days of award of Contract for approval and inclusion in O&M manuals.
- 11 This specification is not intended to restate the applicable codes. The Contractor will be responsible for providing all grounding, access panels, etc. and following all wiring methods.
- 12 Prior to scheduling final inspection, Contractor is to ensure that all Work is completed and in particular that O&Ms are completed, all nameplates installed, verification tests have been done and certificates have been received that indicate Work installed conforms to requirements of the authority having jurisdiction.

WORK IN EXISTING BUILDING

- 1 The building shall remain open and in normal operation during the construction period.
- 2 Where existing services such as electrical power, fire alarm system, sound system, etc. are required to be disrupted and/or shut down, coordinate the shutdowns with the City and carry out the Work at a time and in a manner acceptable to them. Carefully schedule all disruption and/or shutdowns and ensure that the duration of same is kept to the absolute minimum. Allow for scheduling of shutdowns to after operating hours.
- 3 Should any temporary connections be required to maintain services during Work in the existing building, supply and install all necessary material and equipment and provide all labor at no extra cost. Should any existing system be damaged, make full repairs without extra cost, and to the satisfaction of the Contract Administrator.
- 4 Patch and repair walls, floors and ceilings in existing areas that have been damaged or cut open due to the new electrical installation.
- 5 Where new cables or conduits have been installed through existing fire rated walls, seal opening around cables and conduit to maintain fire rating.
- 6 New electrical equipment/devices required to be tied into existing electrical systems shall match the existing manufacturer and system.
- 7 Where services are concealed within walls, floors or ceilings, and cannot be visually recognized, Contractor shall provide acceptable means to locate and identify concealed services prior to commencing Work.

CLEANING

- 1 Maintain the Work in tidy condition, free from the accumulation of waste products and debris.
- 2 Remove waste material and debris from Site and deposit in waste containers at the end of the each Working day.
- 3 Clean interior areas prior to commencement of finish Work. Maintain areas free of dust and other contaminants during finishing operations.

PANELBOARDS

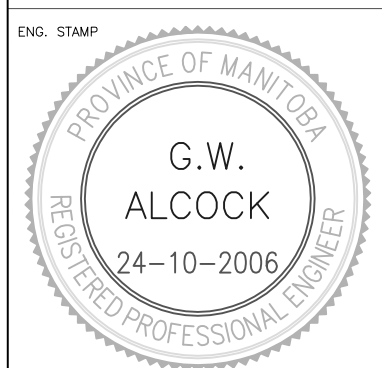
- 1 Install circuit breakers in panelboards before shipment.
- 2 Panelboards: to CSA C22.2 No.29-1989(R2004).
- 3 Bus and breakers in branch circuit panelboards, shall be rated for 10kA (symmetrical) interrupting capacity minimum or as indicated.
- 4 Provide panel cover for panelboard complete with two keys for each.
- 5 Multi-pole breakers shall be of one piece construction with common trip.
- 6 Mains shall be suitable for bolt-on with thermal and magnetic tripping. Each breaker to be identified with permanent number identification as to circuit number and phase.
- 7 Tubs code gauge galvanized steel, reversible top and bottom, solderless connections, copper bus with neutral of same ampere rating as mains. Adjustable molded insulator assemblies integral with bus bars.
- 8 Load centers shall not be accepted.
- 9 Provide nameplate for each panelboard to indicate panel designation and voltage.
- 10 Complete circuit directory with typewritten legend showing location and load of each circuit.
- 11 Locate panelboards and mount securely, plumb true and square to adjoining surfaces. Install surface mounted panelboards on plywood backboards.
- 12 Trim and door finished to be baked gray enamel flush or surface mounted as indicated.

WIRING METHODS

- 1 Conductors shall be copper. Minimum wire size shall be #12 AWG RW90 unless as noted.
- 2 Install a separate EMT conduit for each electrical system run. BX will be allowed in finished walls only.
- 3 Mark all wires to indicate designation and/or function with self adhesive numbers at each termination and junction.
- 4 Outlet, junction and switch boxes shall be galvanized steel and sized according to the latest edition of the CEC and to suit each application.
- 5 All conduits to have separate insulated ground conductor.
- 6 The entire installation shall be grounded in conformance with latest edition of the CEC.
- 7 Install approved vapor boxes for each junction box mounted on a vapor barrier surface. Assure that all the wire penetrations are caulked.
- 8 Run conduit parallel to building lines with maximum 4 (four) 90 degrees bends.
- 9 All devices, wiring and electrical equipment shall be securely attached to the building structure to acceptable industry standards.

DELIVERABLES

1. Contractor shall maintain at the job Site one set of plans, which he shall clearly note all changes or deviations from the Contract document as the job progress. Submit to the Contract Administrator at the competition of the Work.
2. Provide 3 (three) copies of O&M manuals. O&M manuals to be in accordance with the requirements of technical bulletin #15 issued by the joint MAA/WCA committee and the Contract general conditions. Submit one preliminary copy to the Contract Administrator prior to competition of Work. Revise as directed and submit final copies, also include a copy of the panel directories and all inspections and testing certificates.

Rev.	By:	DATE:
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THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT BUILDING SERVICES DIVISION 100 MAIN STREET, MAIN FLOOR WPG, MB. R3C 1A4 (204) 986-7266		
PROJECT: Emergency System Upgrade St. James Centennial Pool, 644 Parkdale		
SHEET TITLE: Conditions		
ENG. STAMP 	PROJECT NO: 663-2006	DRAIN BY: VCA CHECKED BY: GWA APPROVED BY: GWA
DWG. NO. J_E-4	SCALE: DATE: 24 October, 2006	REV: 0