
26 00 10 BASIC MATERIAL AND METHODS

1.1 GENERAL REQUIREMENTS

1. The specification covering the General Conditions of the Contract, General Specifications, Instructions to Bidders and all associated sections from an integral part of this specification and shall be read in conjunction herewith.

1.2 SCOPE

1. Provide all materials, labour, plant and equipment required for a complete and working installation as herein specified and as shown on the drawings.
2. The electrical installation shall be in accordance with the current edition of the Canadian Electrical Code, Provincial and Municipal codes and regulations.
3. Obtain all permits, approvals and pay all related fees required for this installation.
4. All equipment supplied under this Contract shall be new and be C.S.A. approved.
5. Co-ordinate all telephone conduit runs with MTS before installation begins.
6. Arrange for, and co-ordinate, rough-in and final inspections with City of Winnipeg, Contract Administrator and Building Engineer.

1.3 EXAMINATION

1. Examine the architectural, interior design, structural and mechanical drawings to ensure that the work under this Contract can be satisfactorily carried out. Report any discrepancies to the Contract Administrator prior to submission of tender.
2. Examine the site, local conditions and all existing apparatus if any to be re-used and verify that the condition of this equipment is suitable for its intended use in the new construction.

1.4 SUPERVISION

1. Supervise the work at all times through a responsible and competent supervisor.
2. Full co-operation shall be shown with other trades to facilitate installations and to avoid delays in carrying out the work.

1.5 ACCURACY OF DATA

1. Drawings are schematic; exact locations, distances, levels and other dimensions shall be governed by the building as constructed.
2. Outlets or equipment shall be moved to any point within a 10' radius when the Contract Administrator requests relocation before the work has been substantially completed, without additional cost.
3. Branch circuit wiring shall be installed with circuits arranged exactly as shown on the drawings. Conduit and cable runs may be modified to suit the installation.

1.6 APPROVAL OF MATERIAL

1. Request for approval of material as equals or alternates in accordance with B6 to that specified shall be submitted to the Contract Administrator with a stamped self-addressed envelope and performance specifications three (3) working days prior to the tender submittal. Samples shall be provided on request.

1.7 SHOP DRAWINGS

1. Submit shop drawings of electrical equipment to the Contract Administrator for review. Fabrication of equipment shall not commence until the Contract Administrator has reviewed shop drawings of such equipment. Two sets shall be submitted with local Inspection Department approval where required.

1.8 "AS-BUILT" DRAWINGS

1. Keep a record set of drawings on the site at all times recording any changes that may occur. Submit these drawings to the Contract Administrator upon completion of the work. As-builts shall include circuiting of new and existing equipment to remain. Transfer changes to electronic disc AutoCAD file. Submit disc and hard copy for final review and submission to The City.
2. Submit a Certificate of Inspection from the local Inspection Authority upon completion of work and include with As-builts.
3. The Contract Administrator reserves the right to recommend that a portion of the Contract funds be withheld pending submission of acceptable as-built drawings.

1.9. TEST

1. The electrical installation shall be completely tested demonstrating that the equipment and systems installed perform in the manner intended.

1.10 GUARANTEE

1. The satisfactory operation of all work shall be guaranteed for a period of 12 calendar months after final acceptance of the building.

1.11 REQUEST FOR CHANGE

1. All quotations in response to request for change shall be submitted complete with an itemized cost breakdown of all materials and labour required in the change.

1.12. GROUNDING

1. The entire installation shall be grounded in accordance with the Canadian Electrical Code.
2. Isolated ground conductors for panels shall be minimum #6 (green insulation) and be in one continuous, separate run, to the building water

main (unless noted otherwise). Where required, panels shall be equipped with a separate isolated ground bus connected to the aforementioned ground conductor.

1.13. WORKMANSHIP

1. Install equipment, conduit and cables in a workmanlike manner to present a neat appearance to the satisfaction of the Contract Administrator. Install conduit and cable runs parallel and perpendicular in chases, behind furring or above ceilings. In areas where systems are to be exposed (electrical room only), install neatly and group to present a tidy appearance.
2. Install equipment and apparatus requiring maintenance, adjustment or eventual replacement with adequate clearances and accessibility for same.
3. Include, in the work, all requirements shown on the shop drawings or manufacturers' installation instructions.
4. Replace work unsatisfactory to the Contract Administrator without extra cost.
5. All conduit must be clipped to structural concrete by means of anchors or supported by Unistrut hangers as close to U/S as possible. Tie wraps for wire hanging and fastening is not acceptable, unless pre-authorized by The City. Perforated strapping is also unacceptable.
6. All support material for all luminaires, outlet boxes, junction boxes, etc. in a non-combustible building shall be of non-combustible material. Wood is not acceptable.

1.14 IDENTIFICATION OF EQUIPMENT

1. All equipment, including receptacles, shall be identified with engraved lamacoid nameplates either screwed or riveted in place. Self-adhesive type is not acceptable. Where Phenolic plastic coverplates are utilized, the circuit identification to be attached to the outlet box, visible when the coverplate is removed.

1.15 CUTTING AND PATCHING

1. Arrange and pay for all cutting and patching as required for the electrical installation.

1.16 WIRING METHODS

1. Unless otherwise shown on the drawings, all wires shall be copper, minimum #12 AWG with 90°C x-link insulation. Wiring to be installed in conduit.
2. Wiring in concrete or masonry construction shall be in steel electrical metallic tubing (EMT). Provide a separate grounding conductor in EMT conduit runs embedded in concrete slabs. Conduits installed in areas exposed to moisture shall have watertight fittings.
3. All wiring in finished areas shall be concealed. Conduits shall be run at right angles to the building lines.
4. Conduit and wiring shall be grouped where possible and clipped in a neat and workmanlike manner.

5. AC-90 cable to be used for drops from conduit systems to recessed lighting fixtures in accessible ceilings or outlet boxes in steel stud walls only. Home runs shall be in conduit. Maximum run of AC-90 in accessible ceiling space shall be 5'-0".
6. Existing AC-90 runs to base building panels shall be removed and replaced with conduit and wire within this Contract. All unused communication and power wiring in ceiling space shall be removed.
7. Each circuit for computer equipment shall have a separate neutral conductor.
8. Conduit runs shall be installed and inspected before AC-90 runs are installed to ensure conformance with Item 3 herein.

26 00 90 WORK IN EXISTING BUILDING

1. The building shall remain open and in normal operation during the construction period of this contract.
2. Where existing services such as electrical power, fire alarm system, television system, are required to be disrupted and/or shutdown coordinate the shut-downs with The City and carry out the work at a time and in a manner acceptable to them. Carefully schedule all disruptions and/or shutdowns and ensure that the duration of same is kept to a minimum. Submit for approval, a written schedule of each disruption at least 72 hours in advance of performing work and obtain The City's written consent prior to implementing.
3. Should any connections be required to maintain services during work in the existing building, supply and install all necessary material and equipment and provide all labour at no extra cost. Should any existing system be damaged, make full repairs without extra cost, and to the satisfaction of The City.
4. The drawings indicate major items of equipment to be deleted or relocated but may not indicate every item of equipment or conduit to be deleted or relocated. Be responsible for determining which existing equipment is to be deleted or relocated by examining the site and Construction Documents.
5. Where existing devices (receptacles, switches) mounted on a wall which will be covered with a new finish, provide an extension ring, coverplate, etc. as required to mount the device to the new wall.
6. Existing junction boxes shall remain accessible.
7. Refer to General Conditions for phasing and staging of work and adhere to that program. Comply with instructions regarding working hours necessary to maintain the building in operation.
8. It shall be the responsibility of the Electrical Subcontractor to ensure that any coring of holes through the deck will not penetrate existing conduits, cables or mechanical equipment in or under the floor slabs. He shall be responsible to take any and all action as deemed necessary by the Building Engineer to correct any such penetrations at his cost. No coring shall be undertaken unless permission is given by the Building Engineer.
9. When new ceilings are to be installed, existing devices are to be relocated down to new ceiling unless otherwise noted.
10. Where existing ceilings are to be lowered down, all excess devices are to be relocated down to new height and all runs to be extended to suit.

26 05 35 OUTLET BOXES

1. Outlet, junction and switch boxes shall be galvanized pressed steel of size and type to suit each individual application.
2. Outlets shall not be located anywhere on the outside curtain wall. Outlets shown thus shall be mounted on the nearest dividing wall 2' from outside wall, or nearest furred out column.

26 06 21 MECHANICAL EQUIPMENT WIRING

1. Provide starters and wiring for all heating, ventilating and plumbing equipment unless specified otherwise.
2. Control wiring for mechanical equipment shall be performed by Div. 15 Electrical Subcontractor shall provide 120V circuit in location designated by Controls Contractor.
3. Electrical subcontractor to provide all control wiring for The City supplied equipment and as designed on drawing.
4. Refer to the mechanical drawings for the exact location of mechanical equipment requiring an electrical connection.

26 06 22 MISCELLANEOUS APPARATUS AND APPLIANCES

GENERAL

1. Provide all required electrical devices, components, conduits, fittings, wiring, disconnects, and miscellaneous equipment to make all connections to equipment.
2. Be familiar with the apparatus being supplied and carefully coordinate and cooperate with the supplier/installer to ensure a proper and complete installation.

DOOR ASSIST

1. Provide empty conduit system complete with outlet brass and pullwire.
2. Obtain wiring diagram from door assist system supplier prior to installation of conduit system.
3. Provide power connection as required.
4. Co-ordinate with General Contract and Architectural drawings prior to rough in.

RECEPTACLES

1. Where equipment has line cord and plug, ensure cap is compatible with receptacle. Provide cord sets to equipment where required.

1. CONTROLS 26 09 10

1. All controls shall be supplied by this section. Provide all wiring diagrams for line voltage wiring by Division 26 Electrical Subcontractor. Coordinate all requirements of Division 26 with Electrical Subcontractor prior to submitting bid.
2. All thermostats in exposed areas shall be complete with lockable Lexcan vandal resistant guards. Thermostats shall be 7-day programmable with night set back functions and 3-hour override function.
3. Provide all control dampers for installation by Ventilation Contractor 23 30 10.
4. System shall be complete with all necessary wiring, interlocks, devices and software necessary to ensure a complete and operational system.
5. Set, operate and co-ordinate all devices for fully functional system.
6. All wiring to meet Division 26 specification requirements as well as all applicable codes and by-laws.
7. Sequence of operations:
 1. AHU-1
 1. Air Handling Units shall be built to the level of quality as herein specified and to the description of the Air Handling Unit Schedule.
 2. Substitution of any product other than that specified, must ensure no deviation below the stated capacities, air flow rate, heat transfer rate, filtration efficiency and air mixing quality. Power requirements must not be exceeded, and where specifically defined, sound power levels must not be exceeded. Applications for "equal" or "alternate" must address these factors.
 3. Unless stated otherwise, air-handling units are to be shipped to the job in one piece, factory assembled. Modular units assembled to achieve a close proximation to the intent of this specification will not be considered equal. All equipment shall where specified and applicable, be pre-wired, and factory certified by an approved testing agency such as ETL, UL, CSA prior to shipment.
 4. Pre-wired air handling units shall bear an approved label with all the necessary identification marks, electrical data, and any necessary cautions as required by the Canadian Electrical Code.
 5. All electrical circuits shall undergo a dielectric strength test, and shall be factory tested and checked as to proper function.
 6. The air handling units and major components shall be products of manufacturers regularly engaged in the production of such equipment and with a minimum of fifteen continuous years of proven production experience.

7. Air Handling Units shall be as manufactured by Engineered Air and be base bid. Alternate products must show savings and clearly indicate all areas where they do not meet specified product.
2. **UNIT CONSTRUCTION**
 1. Unit casing shall be of minimum 18 gauge (1.3mm) satin coat galvanized sheet metal. Surfaces shall be cleaned with a degreasing solvent to remove oil and metal oxides and primed with a two-part acid based etching primer. Finish coat shall be an electrostatically applied enamel, to all exposed surfaces. All unprotected metal and welds shall be factory coated.
 2. All walls, roofs and floors shall be of formed construction, with at least two breaks at each joint. Joints shall be secured by sheet metal screws or pop rivets. Wall and floor joints shall be broken in and on all outdoor units roof joints broken out (exposed) for rigidity. All joints shall be caulked with a water resistant sealant.
 3. Units shall be provided with access doors to the following components: fans and motors, filters, dampers and operators, access plenums and humidifiers/wet cells, electrical control panels, burner compressor compartments. Access doors shall be large enough for easy access. Removal of screwed wall panels will not be acceptable.
 4. Units shall be provided with hinged access doors, with extruded neoprene gasket, fully lined, and a minimum of two camlock fasteners for all units up to 48 in. (1220 mm) high.
 5. All units shall be internally insulated with 1"(25mm) thick 1 1/2 lb./cu.ft. (24 kg./cu.m.) density, neoprene coated fibre glass thermal insulation. 1 1/2 lb./cu.ft. (24 kg/cu.m.) insulation shall be secured to metal panels with a fire retardant adhesive and welded steel pins at 16" (400mm) o/c. 3 lb./cu.ft. (48 kg/cu.m.) insulation is secured with steel angles. All longitudinal insulation joints and butt ends shall be covered by a sheet metal break to prevent erosion of exposed edges. Drain pans and all floor areas shall be insulated on the underside.
 6. Cooling coil drain pans shall be fabricated of stainless steel and are an integral part of the floor paneling, a minimum of 2" (51mm) deep, with welded corners. Drain pans shall extend a minimum of 6" (152mm) downstream of coil face and be provided with a 1 1/2" (38mm) S.S. M.P.T. drain connection. Drain pans must have a fast pan and be sloped and pitched such that there is no standing water. Intermediate fast pans shall be provided between cooling coils where required for effective moisture removal.
 3. **FANS**
 1. Centrifugal fans shall be rated in accordance with AMCA Standard Test Code, Bulletin 210. Fan manufacturer shall be a member of AMCA. All fans and fan assemblies shall be dynamically balanced during factory test run. Fan shafts shall be selected for stable operation at least 20% below the first critical RPM. Fan shafts shall be provided with a rust inhibiting coating.

2. Single low pressure forward curved fans of 18" (457mm) or less diameter, shall be equipped with permanently lubricated cartridge ball bearings, supported by a 3 point "spider" bearing bracket in the fan inlets. All other forward curved fan assemblies shall be equipped with greaseable pillow block bearings, supported on a rigid structural steel frame.
 3. Drives shall be adjustable on fans with motors 7 1/2 HP (5.6 kW) or smaller. On fans with larger motors, fixed drives shall be provided. All drives shall be provided with a rust inhibiting coating. The air balancer shall provide for drive changes (if required) during the air balance procedure.
 4. Fan-motor assemblies shall be provided with vibration isolators. Isolators shall be bolted to steel channel welded to unit floor, which is welded to the structural frame of the unit. The isolators shall be neoprene-in-shear type for single 9" (230mm) to 15" (380mm) diameters forward curve fans. All other fans shall incorporate vertical spring type isolators with leveling bolts, bridge bearing waffled pads with minimum 1" (25mm) static deflection designed to achieve high isolation efficiency.
 5. Fan motors shall be ODP (open drip proof) type.
4. GAS HEAT SECTION (DJ, DJE) - Indirect Fired
1. General
 1. Heating units shall be indirect natural gas fired approved for both sea level and high altitude areas. The entire package, including damper controls, fan controls, and all other miscellaneous controls and accessories shall be approved by an independent testing authority and carry the approval label of that authority as a complete operating package.
 2. All units must exceed the ASHRAE 90.1 requirement of steady state efficiency at low fire.
 3. Operating natural gas pressure at unit(s) manifold shall be ___7"w.c.(1750 Pa).
 4. Gas fired units shall be approved for operation in -40°F(-40°C). Packaged controls to allow operation below -40°F(-40°C) that shutdown at -40°F(-40°C) by control package is not acceptable.
 2. Heat Exchanger/Burner Assembly
 1. Heat exchanger shall be a primary drum and multi-tube secondary assembly constructed of titanium stainless steel with multi-plane metal turbulators and shall be of a floating stress relieved design. Heat exchanger shall be provided with condensate drain connection. The heat exchanger casing

shall have 1"(25mm) of insulation between the outer cabinet and inner heat reflective galvanized steel liner. Blower location shall be engineered to improve the required air flow pattern around the heat exchanger. Using duct type furnaces and closed coupled blowers are not acceptable.

2. Units with optional high efficiency heat exchangers (DJE) shall be tested and certified to ANSI/CSA standards to provide a minimum of 80% efficiency throughout the entire operating range as required by ASHRAE 90.1. The manufacturer shall be routinely engaged in the manufacture of this type of high efficiency equipment.
3. Gas fired multi-zone sections shall incorporate the high efficiency heat exchanger (DJE) design and high turndown burner. The multi-zone head shall be constructed of hot and cold decks arranged in a blow-through configuration. The use of draw-through cooling with re-heating of cooled air to meet zone heat demands is not acceptable.
4. The heat exchanger/burner assembly shall be a blow through positive pressure type. Units incorporating the DJM module shall have an interrupted pilot ignition system to provide increased safety. Units using continuous or intermittent pilots are not acceptable.
5. Flame surveillance shall be from the main flame after ignition not the pilot flame. The burner and gas train shall be in a cabinet enclosure. Atmospheric burners or burners requiring power assisted venting are not acceptable.
6. The heat exchanger/burner assembly shall include 15:1 turndown for all input ranges from 100MBH to 1400MBH (29.3 kW to 410 kW). The high turn down heat exchanger/burner assembly minimum input shall be capable of controlling 6.7% of its rated input, excluding the pilot assembly, without on/off cycling and include built in electronic linearization of fuel and combustion air. Efficiency shall increase from high to low fire.

3. Venting

4. Outdoor venting when installed close to a parapet or wall.

1. Venting is to be provided by the installing contractor using materials approved for outdoors. Installation and venting provisions must be in accordance with CAN/CSA Standard B149.1, ANSI Z223.1-NFPA54 and local authorities having jurisdiction. Where flue requirements exceed 6" (150 mm) above the unit casing height, it is the installing contractor's responsibility to provide and install venting including all structural-supporting requirements. Support is to be independent of the unit.

5. FILTERS

1. Filter sections shall be provided with adequately sized access doors to allow easy removal of filters. Filter removal shall be from one side as noted on the drawings.
 2. 2"(50mm) Pleated Panel Disposable Filters: An optimum blend of natural and synthetic fiber media with a rust resistant support grid and high-wet strength beverage board enclosing frame with diagonal support members bonded to the air entering and air exiting side of each pleat. Permanent re-usable metal enclosing frame. The filter media shall have a minimum efficiency of 20-25% on ASHRAE Standard 52.1-92, and a minimum of MERV 6 per ASHRAE 52.2. Rated U.L. Class 2.
6. DAMPERS
1. Damper frames shall be U--shaped galvanized metal sections securely screwed or welded to the air handling unit chassis. Pivot rods of 1/2" (13mm) aluminum shall turn in nylon or bronze bushings. Rods shall be secured to the blade by means of straps and set screws.
 2. Blades shall be 18 gauge (1.3mm) galvanized metal with two breaks on each edge and three breaks on centerline for rigidity. The pivot rod shall "nest" in the centerline break. Damper edges shall interlock. Maximum length of damper between supports shall be 48"(1219 mm). Damper linkage brackets shall be constructed of galvanized metal.
 3. Dampers shall be standard construction and include blade ends sealed with an adhesive backed foamed polyurethane gasketing. Outdoor air dampers also include an all weather PVC seal fastened with a positive lock grip and pliable overlap edge on entering air side of interlocking edges. Dampers are interlocked from the center.
7. MECHANICAL COOLING
1. Compressors shall be hermetic type, 3600 RPM, set on resilient neoprene mounts and complete with line voltage break internal overload protection, internal pressure relief valve and crankcase heater.
 2. Air Cooled Condenser
 1. Condenser coils shall be copper tube type, mechanically expanded into aluminum fins. Coils shall be factory tested with air at 300 psig (2070 kPa) while immersed in an illuminated water tank.
 2. Condenser fans shall be direct driven propeller type arranged for vertical draw through airflow. Motors shall be weather resistant type, with integral overload protection and designed for vertical shaft condenser fan applications. Fan and motor assemblies shall be mounted on a formed orifice plate for optimum efficiency with minimum noise level.

3. Condenser to form an integral part of the unit.
3. Packaged Air Conditioning Units
 1. Packaged units shall be ETL approved and operate down to 50°F (10°C) as standard. Where applicable, multiple refrigeration circuits shall be separate from each other. Refrigeration circuits shall be complete with liquid line filter-driers, and service ports fitted with Schraeder fittings. Units with over 6 Ton hermetic compressors and all units with semi-hermetic compressors shall also incorporate load compensated thermal expansion valves with external equalizers and combination sight glass moisture indicators. Semi-hermetic compressor units shall have condensers designed for 15°F (8°C) liquid sub-cooling and be equipped with suction line filters and liquid line manual shutoff valves. The complete piping system shall be purged and pressure tested with dry nitrogen, then tested again under vacuum. Each system shall be factory run and adjusted prior to shipment.
 2. Packaged units shall be supplied with R-22 refrigerant.
 3. Provide hot gas bypass on the lead compressor to maintain adequate suction pressure in the event of low loads. This feature shall be provided on all VAV and Make-Up Air applications with less than four stages of cooling control.
 4. Compressors shall be located on the side of the unit in a service enclosure complete with hinged access doors complete with camlock fasteners handles for ease of service. Units to have a minimum of 4 compressors.
 5. C-TRAC3 Controller
 1. The controller shall automatically start in heating, economizer, or cooling mode based on continuously monitored ambient temperature and load requirements.
 2. The controller shall include an adjustable low limit set point for freeze protection to cease equipment operation in the event of low discharge temperature. If the discharge air temperature falls below the adjusted set point, the blowers will shut down and the outside air dampers shall close.
 3. If the discharge air temperature approaches the low limit set point, the controller shall automatically reduce the economizer minimum fresh air down to half of its original setting to compensate.
 4. Dual sensors shall be used in the discharge air for precise temperature control.
 1. (Fan Control)
 2. When a DJM2 controller is used as a secondary controller, the C-TRAC3 shall automatically pre-heat and cool down the

heat exchanger before enabling or disabling the supply blower.

8. SEQUENCE OF OPERATION

1. Disconnect switch (by others) 'on', service switch 'on', fire alarm contacts (by others) 'closed' (jumper if not required).
2. Time clock in 'occupied' mode, outside air damper opens to 10% minimum position (adjustable). Blower will delay on and run continuously. The CTRAC controller with an integral reference setpoint fixed at 70°F (21.1°C) will sequence heating(see note 1), economizer and 3 stages of mechanical cooling(see note 2) to maintain the required discharge air temperature. Room sensor/setpoint will reset the discharge air temperature between 60°F (15.6°C) to 102°F (38.9°C) to satisfy room setpoint requirements. Outside air damper reverts to minimum position when ambient temperature is above 70°F (21.1°C) or when mechanical cooling is on.
3. Time clock in 'unoccupied' mode, outside air damper closes. Unit is off.
4. Mechanical cooling is locked out when ambient is below 50°F (10°C).
5. Auto bypass low limit will stop unit operation if the discharge air temperature falls below 40°F (4.4°C).

END OF SECTION

26 24 16 PANELBOARDS

1. New panelboards shall match the existing. Load centres are not acceptable. Panels shall be complete with panel trim having concealed hinges and trim mounting screws, locking door with flush catch. Provide two keys for each panel.
2. Circuit breakers shall be bolt on moulded case with thermal breakers rated at 10,000A symmetrical.
3. Affix typewritten directory to the inside of the panelboard indicating loads controlled by each circuit.
4. Panelboards to be surface or recessed mounted as indicated.
5. Revise the directory in existing panels to suit revised circuiting (typewritten). Place existing directory behind new directory for verification by Contract Administrator.

26 27 10 MAIN DISTRIBUTION

1. Arrangement and size of components shall be as shown on drawing.
2. Provide new breakers for renovations as shown on drawing and appropriate mounting hardware to sit existing distribution. Exact requirement to be determined prior to tender closing.

26 27 26 WIRING DEVICES

1. Colours of receptacles, switches, outlets and coverplates shall be confirmed with Contract Administrator.
2. Switches shall be totally enclosed in moulded housing, 15AC1 or 20AC1 series, 15 amps or 20 amps, 125 VAC as indicated equal to Hubbell No. 1201, P & S No. 15AC1, or Bryant No. 4801. Mount switches 48" A.F.F. unless otherwise noted.
3. Receptacles shall be 15 ampere, 125 VAC, ivory, parallel slot, U-ground, side and back wiring screw terminate. Approved manufacturers are: Hubbell No. 5262, Arrow Hart No. 5262, Bryant No. 5262. Mount receptacles 16" A.F.F. unless noted otherwise.
4. Isolated ground receptacles shall be Pass & Seymour IG6200 pr Bryant No. GF-5262-I with orange face. Mount receptacle 16" A.F.F. unless noted otherwise.
5. Incandescent lighting dimmer controls shall be Lutron Nova T rated at 1500, 1000 or 600 watts as indicated on drawing. Colour of dimmer snap-on cover shall be ivory colour or shall match existing, unless indicated otherwise on drawing. Mount dimmers 48" A.F.F. unless otherwise noted.
6. Provide stainless steel coverplates for recessed devices.

26 50 00 LIGHTING

1. Supply and install all luminaires complete with lamps. All new luminaires shall be provided with electronic ballast, Power Smart approved.
2. Install luminaires supplied by The City, as indicated.
3. Re-lamp all fixtures to be re-used.
4. Any unused fixtures above the ceiling must be removed and circuits terminated. Turn fixtures over to The City.
5. Lighting shall adhere to the Manitoba Hydro Power Smart Program. Linear fluorescent ballasts shall be applicable for the "Premium" rebate category (dimnable and 8' systems are under one rebate level).
6. All compact fluorescent fixtures shall contain Power Smart approved ballasts. T5 fluorescent fixtures. Pulse start fixtures to be totally enclosed.
7. To ensure these products are supplied, and to facilitate the application process, shop drawings shall include the quantity, manufacturer, catalogue number and a specification sheet of each ballast to be used in each linear and compact fluorescent fixture.
8. A copy of the Power Smart Listing should be provided with each applicable product submitted.
9. A summary of total quantity, manufacturer and catalogue number shall be provided for furtherance to The City's representative for application preparation. This is to be submitted with approval shop drawings.

26 52 10 UNIT EQUIPMENT FOR EMERGENCY LIGHTING

1. Provide emergency lighting battery units as indicated. Units shall be wall mounted and cord connected units shall be equal to Lumacell RGS Series, Ready-Lite LD series and Emergi-Lite 12ESL. Units shall be complete with the number of head indicated on drawing and shall be rated or 250 watts for minimum of 60 minutes.
2. Remote head shall be 20-watt double head units equal to Lumacell MQ2, Ready-Lite RQ1 and Emergi-Lite EF9DQ.
3. Wire shall be minimum #12 AWG unless refused by code or noted otherwise.

26 53 11 EXIT LIGHTS

1. Exit lighting shall be L.E.D. type and shall be connected to 120V power and battery bank unit. Exit light shall be equal to Emergi-Lite: LE-EX50 Series, Lumacell: LE 400 Series, Ready-Lite: RX Series. Units shall be suitable for end to wall, wall. Ceiling, recess for pendent mounted as indicated.
2. Wire shall be minimum #12 AWG unless refused by Code or noted otherwise.

26 53 12 SELF-CONTAINED EMERGENCY & EXIT LIGHTING

1. Provide self contained exit sign, self-contained combinations exit sign and emergency lighting, and self-contained emergency lighting heads. Unit shall be battery units as indicated. Units shall be wall mounted and cord connected units shall be equal to Lumacell RGS Series, Ready-Lite LD series and Emergi-Lite 12ESL.
2. Wire shall be minimum #12 AWG unless refused by code or noted otherwise.