

**SECTION 26 05 02
EQUIPMENT CONNECTIONS AND COORDINATION**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide equipment connections and coordination in accordance with the Contract Documents.

1.02 SUBMITTALS

- A. No requirements.

PART 2 - EXECUTION

2.01 GENERAL

- A. Provide equipment connections and coordination in accordance with manufacturer's recommendations and product submittals.
- B. Provide disconnect switches for equipment. Where equipment requires fuse protection, provide fusible type disconnect switches with fuses rated in accordance with equipment manufacturer's requirements. Disconnect switches for single-phase equipment shall be thermal overload type. Locate disconnect switches in coordination with the layout of equipment. Provide supports for a free-standing installation if required to allow access to disconnect switch and/or proximity to equipment served.
- C. Provide final connections to hard-wired equipment with a minimum of two feet of liquid-tight flexible metal conduit.
- D. Verify the requirements of cord and plug equipment and provide receptacles, branch circuiting and branch circuit overcurrent protection to match. Receptacle types shown on the Drawings are for bidding purposes only.
- E. Where equipment is supplied from conduit run under or within the floor slab, extend conduit to a junction box mounted on a two-foot stub up of rigid steel conduit. Provide suitable bracing on conduit stub up.
- F. Where equipment is fed from overhead, support conduit on flanged floor type fitting.
- G. All disconnects, starters, controllers, VFD's, and associated equipment locations and mountings shall be coordinated with other trades prior to installation.

2.02 EQUIPMENT CONNECTION TYPES

- A. Provide equipment connection types as indicated on the equipment connection schedule.
- B. Equipment Connection Types:
 - 1. Type DP: Duplex pump system with controller furnished under another division of the project specifications. Provide connection to controller and connections from controller to pumps in accordance with the controller manufacturer's installation instructions. Provide connections for local controls and alarms in accordance with the controller manufacturer's installation instructions.

2. Type TP: Triplex pump system with controller furnished under another division of the project specifications. Provide connection to controller and connections from controller to pumps in accordance with the controller manufacturer's installation instructions. Provide connections for local controls and alarms in accordance with the controller manufacturer's installation instructions.
3. Type FR: Fractional horsepower single-phase motor. Provide thermal overload/disconnect switch and motor connection.
4. Type FWS: Equipment furnished with starter. Install starter and provide connection to starter and connection from starter to equipment.
5. Type M: Motor with starter provided under Division 26. Provide disconnect switch and motor connection.
6. Type SPC: Single point connection. Provide single point connection to equipment provided with factory-mounted starter/controller listed for single point power connection. Where required by code or the equipment manufacturer, provide fusible disconnect switch with fuses sized in accordance with equipment nameplate requirements.
7. Type VFD: Variable frequency drive furnished under another division of the project specifications. Install VFD and provide connection to VFD and connection from VFD to equipment.
8. Type REC: Equipment connected to a receptacle. Provide receptacle, wiring and overcurrent protection as required by the equipment manufacturer. Verify NEMA configuration of receptacle with equipment manufacturer.

2.03 ELEVATORS

- A. Locate equipment and points of connection in elevator machine rooms and elevator pits in accordance with the requirements of the elevator vendor and the Authority Having Jurisdiction.
- B. Provide a fused switch or circuit breaker, dedicated three-phase branch circuit utilizing copper conductors, and power connection for each elevator. Fused switch or circuit breaker shall be located within elevator machine room. Fuse or circuit breaker rating shall be in accordance with elevator manufacturer's requirements.
- C. Provide a dedicated 120V, 20A circuit with lockable disconnect switch and connection to each elevator cab for elevator cab lighting and ventilation.
- D. Provide a dedicated 120V, 20A circuit and connect to elevator system intercom in elevator machine room.
- E. Provide a dedicated circuit and connect to each elevator controller for control power. Circuit rating shall be in accordance with the elevator vendor's requirements.
- F. Provide weatherproof lighting fixtures, lighting switches and duplex receptacles within each elevator pit.
- G. Provide a dedicated telephone outlet for each elevator. Provide an empty ¾-inch raceway from each telephone outlet to the nearest telephone backboard.
- H. Provide empty raceways from elevator shafts to the elevator control and status panel(s). Size, quantity and location of raceway termination points shall be in accordance with the elevator vendor's requirements.
- I. Connect power supply circuits serving elevators and related controls and accessories to the emergency power distribution system.

- J. Provide conduit and wire between elevator controllers and automatic transfer switches and make connections required for automatic recall and operation of elevators from the emergency power distribution system in the event of power failure.

2.04 MECHANICAL EQUIPMENT

- A. Provide electrical connections to mechanical equipment.
- B. Where motor controllers are furnished by others, install controller and provide connections at line and load side of controllers.
- C. Where reduced voltage, multiple speed, duplex, triplex, lead-lag, pony motor or other unusual controller types are utilized, coordinate specific requirements of motor(s) and controller and provide required wiring between motor(s) and controller.
- D. Provide branch circuits and connections to chiller oil heaters and pumps.
- E. Provide branch circuits and connections to sump and sewage ejector pump alarm bell systems. Connect to emergency power distribution system.
- F. Where electric duct heaters are provided with remote power panels, provide branch circuits between remote panel and duct heater elements in accordance with the equipment manufacturer's recommendations.
- G. For electric water coolers verify whether the equipment is hard wired, cord- and plug-connected and whether a remote chiller is provided. Provide circuiting and connections to match.

2.05 OWNER-FURNISHED EQUIPMENT

- A. Provide electrical connections to Owner-furnished equipment.
- B. Inspect Owner-furnished equipment for damage, defects, missing components, etc. Report deficiencies to the Owner immediately. Do not install or connect deficient equipment.
- C. Provide supports, fastenings, and auxiliary hardware necessary for a complete installation in accordance with the finished building conditions.

2.06 KITCHEN EQUIPMENT CONNECTIONS

- A. Provide electrical connections to kitchen equipment. Coordinate work with food service drawings and product submittals.
- B. Provide junction boxes, outlets, stainless steel cover plates, cords and plugs, disconnect switches and other appurtenances not built into kitchen equipment but required for a complete installation.
- C. Kitchen Hood Fire Protection System:
- D. Provide 120V, 20A dedicated circuit to fire protection system control panel. Connect to emergency power system.
- E. Provide shunt trip breakers and/or contactors with connections to fire protection control panel to automatically disconnect power to electrical equipment (including kitchen hood

lighting fixtures) located beneath the kitchen hood upon activation of the fire protection system. Restoration of power will first require clearing the fire alarm signal and the manual reapplication of power.

- F. Provide connections to solenoid gas valves and gas service reset system to automatically interrupt gas service to equipment located beneath the kitchen hood upon activation of the fire protection system.
- G. Provide connections to kitchen hood water wash system for automatic operation upon activation of the fire protection system.
- H. Provide a local kitchen exhaust fan control switch for each kitchen hood. Connect to kitchen hood exhaust and make-up fans for automatic operation upon activation of the fire protection system.
- I. Connect kitchen hood fire protection system to building fire alarm system. Provide a separate alarm zone and a separate trouble zone for each kitchen hood fire protection system.
- J. Walk-In Type Refrigerators and Freezers:
- K. Provide connections to remote temperature sensors and indicating devices.
- L. Provide connections to freezer door heating coils.
- M. Provide empty conduits for beverage dispensing lines. Size and quantities of conduits shall be in accordance with the food service equipment vendor's requirements.
- N. Interlock exhaust and make-up fans serving dishwashing hoods for automatic operation with dishwashing equipment.

2.07 LAUNDRY EQUIPMENT

- A. Provide electrical connections to laundry equipment. Coordinate work with laundry equipment drawings and product submittals.
- B. Provide junction boxes, outlets, stainless steel cover plates, cords and plugs, disconnect switches and other appurtenances not built into laundry equipment but required for a complete installation.
- C. Provide electromagnetic overload protection for air compressors and vacuum pumps.

END OF SECTION 26 05 02