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GENERAL NOTES (ALL HVAC and ELECTRICAL)

Mechanical

- All piping above ground in finished spaces shall be concealed. Cost is included in cost of Split-System Air Conditioner.
- Existing conditions shown on drawings are based on field surveys, record drawings and other available documents. It is the contractor's responsibility to verify existing conditions prior to bidding and the start of work.
- Locate mechanical equipment so as to provide adequate filter removal and maintenance access space.
- All work shall be installed in a neat and workmanlike manner and in accordance with current general specifications and all applicable codes, ordinances and regulations and as directed and approved by the Engineer.
- Coordinate with Mechanical and Electrical trades the location of all piping, ductwork and equipment to avoid interferences.
- Provide 6 inch reinforced concrete pad for graded and floor mounted equipment. Dowel pad to concrete slab with number 3 dowels rods at 18" on center around perimeter. Reinforce concrete pad with one layer of number 3 bars at 18" on center each way. Precast pad is not permitted. Cost is included in cost of Split-System Air Conditioner.
- Size refrigerant piping per equipment manufacturer's recommendation.
- Dimensions on drawings denote english measurements.
- Route 3/4 inch minimum condensate drain to nearest floor drain. Cost is included in cost of Split-System Air Conditioner.
- Manufacturer's or equivalent model numbers shown on the drawings are subject to change. Equipment or component specifications and drawing descriptions shall govern.
- Equipment supplier shall furnish motors, relays, and starters for HVAC equipment. These components shall be either mounted on the equipment or furnished loose but attached to equipment containers. Starters shall be magnetic type with disconnect means and contain thermal overload protection in accordance with the service factor (sf) nameplate rating of the motor and equipment manufacturer's recommendations. Exception to this requirement is furnishing of starters for equipment fed by MCC's, as shown on electrical drawings. Cost is included in cost of Split-System Air Conditioner.
- All work associated with refrigerants including demolition of air conditioner and installation of new split systems shall comply with Section 608 of the Clean Air Act of 1990 as amended by City of Chicago. Demolition work cost is included in cost of HVAC Demolition (Mechanical and Electrical). New work cost is included in cost of Split-System Air Conditioner.

- Conform to procedures applicable in IDOT Standard Specification Section 107 when discovering hazardous or contaminated materials.
- Provide all necessary offsets in ductwork/piping to avoid structure.
- Service valves shall be installed on each piece of equipment. Cost is included in cost of Split-System Air Conditioner.
- Provide cleanouts in accordance with local codes. Cost is included in cost of Split-System Air Conditioner.
- Contractor shall coordinate all piping penetrations with other contractors to avoid interferences.
- All valves shall be accessible.
- Contractor shall refer to Architectural drawings for exact dimensions and plumbing fixture layouts and locations.

Mechanical Demolition

- The cost of the Items listed below are included in cost of HVAC Demolition (Mechanical and Electrical).
- Demolition of HVAC equipment includes removal of heating system in its entirety and includes but is not limited to: removing a gas fired boiler with the associated flue and controls in the east control building, and removing two electric boilers, power wiring and controls in the west control building, 12 Radiators and fin tubes, 12 unit heaters, and the interconnecting piping for all heating devices including all associated hangers. The electrical connections for the boilers are being removed to the nearest junction box with cable being removed to the associated panel board. Paint and patch all surfaces to match new Architectural work as part of HVAC Demolition (Mechanical and Electrical).
 - Render any roof patching permanently water tight.
 - Demolish in an orderly and careful manner as required to accommodate new work. Protect existing elements and finishes which are to remain.
 - Repair all demolition performed in excess of that required at no extra cost to the owner.

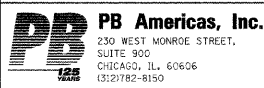
Electrical

- Comply with the latest approved edition of the National Electrical Code, OSHA, drawings, and specifications.
- Perform work in accordance with NECA 1-2000, standard practice for good workmanship in electrical contracting.
- For 120/208 volt, three-phase, four-wire circuits, conform to the colors: phase A=black, phase B=red, phase C=blue, neutral=white.
- For 277/480 volt, three-phase, four-wire circuits, conform to the colors: phase A=brown, phase B=yellow, phase C=orange, neutral=gray.
- Use of insulation color white, gray, green, green with yellow tracer not permitted for ungrounded branch circuit or feeder conductors.
- Conform to the following insulation colors: equipment grounding conductor=green; isolated grounding conductor=green with yellow tracer.
- Use #12 AWG THHN wire, minimum, for branch circuit and feeder wiring, including ground wires, unless noted. Run ground wire in every conduit that contains feeder or branch circuit wiring. Aluminum wire not permitted. Cost of this item is included in Cable Assembly in Conduit.
- Furnish new panelboards identified as part of the work with current and accurate typewritten circuit panel schedule card. Hand-corrected or handwriten cards not permitted.
- Manufacturer's or equivalent manufacturer's part numbers are subject to verification. Drawing and specification descriptions shall govern.
- Verify overcurrent protection size for installed mechanical equipment with the manufacturer and revise if required. Cost is included in Panelboards and Panel Mounted Circuit Breakers.

Electrical Demolition

- The cost of the Items listed below are included in cost of HVAC Demolition (Mechanical and Electrical).
- Disconnect electrical systems in work areas scheduled for demolition; coordinate electrical outages with the owner.
 - Existing conditions shown are based upon reasonable review of available records and field observations. It is possible that reported conditions do not reflect new or previously demolished equipment or wiring. In some cases, these drawings omit equipment and wiring not expected to impact in-contract work. Verify existing conditions and dimensions shown on drawings and report discrepancies to the engineer before demolition.
 - Cut conduit behind walls and below floors; patch surfaces and finishes to match existing fire ratings and finishes.
 - Without additional cost to the Owner, replace equipment, facilities, and materials damaged as a result of demolition work.
 - Remove abandoned wiring back to source of supply. Abandoning wiring in place is permitted only to preserve circuits that remain in common raceways.
 - Unintended interruption of circuits feeding lighting, receptacles, or other equipment may be incidental to in-contract electrical demolition. Intercept and reconnect these circuits to the nearest circuit panel.
 - Disconnect and remove abandoned, switches, contactors, starters, and other distribution equipment.
 - Disconnect and remove electrical devices and equipment servicing utilization equipment that has been removed (i.e. HVAC equipment) unless noted.
 - Clean and repair electrical materials and devices that remain (or are reused by owner's permission). Remove daily demolished materials and clean debris from site.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS AND
HVAC AND ELECTRICAL GENERAL NOTES
FOR STRUCTURE NO. 016-2445**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424.2B-1-2	COOK	14	2
CONTRACT NO.			60P18	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

SHEET NO. ME1 OF ME3 SHEETS