

## SECTION 265400 – BASIC ELECTRICAL REQUIREMENTS

### PART 1 - GENERAL

- A. Work related to Division 26 of the Specifications is described in other Divisions. All Divisions and Sections of these Specifications apply even though not described here.

#### 1.1 WORK INCLUDED

- A. This Division of the Specification covers procedures, products, methods, and other electrical aspects of this Contract. Other portions of the Contract Documents may contain electrical requirements also.

#### 1.2 DEFINITIONS

- A. In modification of definitions made elsewhere in this Specification, where the words "furnish", "provide", and "install" appear in this Division, or a manufacturer is indicated with item or product catalog number listed, install and furnish the item complete and operating for the purpose of function intended, unless otherwise noted.
- B. All references to power system voltages are RMS per definition in NEC Article 100.
- C. "Engineer" means the designated person or firm assigned to be the Owner's representative regarding the electrical portions of the Contract.

#### 1.3 SUBMITTALS

- A. Follow requirements of the Contract Documents that describe submittal requirements. Make submittals on the following items:
  - 1. Any product as indicated in individual specification sections.
- B. Provide complete data substantiating compliance of the submitted item with Contract Documents.
- C. Operation and Maintenance Data: Submit the following prior to final acceptance and Contractor's request for final payment for Division 26 Work in conformance with the Project Closeout requirements of the General Conditions and Division 1.
  - 1. As-built drawings and schedules.
  - 2. Provide three complete sets of Maintenance and Operation Manuals including, but not limited to, the following:
    - a. Schematic diagrams, installation wiring diagrams and instructions and Maintenance / Operation Manuals for all signaling, control systems, and equipment.
    - b. Copies of certificates of Code Authority acceptance, and test data and other special guarantees, warranties, etc. specified elsewhere and/or indicated on the Drawings.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Acceptance at site:
  - 1. Do not use scratched, marred, or deformed materials.
  - 2. Do not use fixtures, materials, or equipment in wet cartons or boxes, stored in, or exposed to rain, water, dust, dirt, or snow.

#### 1.5 SEQUENCING AND SCHEDULING

- A. Cooperation with Other Crafts: Cooperate with other crafts and/or contracts as may be necessary for the proper execution of the Work in the construction.
- B. Prior to the installation and connection of the Division 26 Work, verify the requirements indicated in Division 26 with the requirements and characteristics of the other Divisions, the Owner, and/or other contractor's equipment.
- C. Obtain wiring or schematic diagrams for confirmation and connections. Obtain equipment nameplate data and compare to design drawings. Bring deviations to the attention of the Engineer.
- D. Consult the Drawings of all other trades or crafts to avoid conflicts with cabinets, counters, equipment, structural members, etc. Conflicts shall be resolved with the Engineer, prior to rough-in.
- E. Safety: In accordance with generally accepted construction practices, the Contractor is solely and completely responsible for conditions of the job site, including the safety of all persons and property during performance of the Work. This requirement applies continuously and is not limited to normal working hours.

#### 1.6 WARRANTY

- A. General Warranty: Without additional charge, replace any work or material which develops defects, except from abuse, within one (1) year from final acceptance, unless otherwise noted.
- B. Contractor's warranty shall include payment toward normal cost of labor for replacement of ballasts.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. General: Like items from one manufacturer; i.e., fixture types, switches, receptacles, breakers, panels, etc., unless specifically noted otherwise on Drawings or in Contract Documents.

## 2.2 MATERIALS

- A. Provide electrical materials of the type and quality indicated, or prior approved substitutes, new and listed by the Underwriters' Laboratories, bearing their label, wherever standards have been established and label service is regularly furnished by them. Brand names and catalog numbers are used to establish standards of performance and quality. The description of materials listed herein governs in the event that catalog numbers do not correspond to the materials described.

## 2.3 ACCESSORIES

- A. Special Features and Incidentals: Include special features, finishes, descriptions or requirements indicated in the Contract Documents for particular items or equipment, but not included by or in the item's listed catalog number.
- B. Provide and install as part of the Contract work, all incidentals, hangers, brackets, supports, framing, backing, etc., not specifically mentioned herein or noted on the Drawings, but required to complete the system or systems, in a safe and satisfactory working condition.

## 2.4 FABRICATION

- A. Shop/Factory Finishing: Unless noted otherwise, modify manufacturer's products at the factory to comply with any special requirements noted. The Contractor is responsible for compliance.

## **PART 3 - EXECUTION**

### 3.1 VERIFICATION

- A. Verification of Conditions: The Bidder is expected to visit the site of proposed construction. Verify and inspect the site to determine the conditions that affect this Work. No allowances will be made for conditions that may be determined by cursory inspection.
- B. Include in the Bid price all costs for the work and/or the materials required to comply with the Contract Documents based on existing conditions, or the conditions otherwise described in the Contract Documents where other work is expected to occur prior to the start of electrical construction.
- C. Failure to visit the site and verify conditions affecting work of this Division does not relieve the Contractor from the necessity of doing any and all work which is necessary to make all electrical installations and systems complete.
- D. Provide electrical equipment and distribution in accordance with NEC 240.83.
- E. Construction Documents: Electrical Drawings are diagrammatic, with symbols representing electrical equipment, outlets, and wiring. Verify equipment ratings and loads.

- F. Determine the routing and installation of electrical wiring and equipment with conditions of construction and acceptance of the Engineer.
- G. When deviations from the Drawings are required to make the electrical installation conform to site constraints or to problems associated with other crafts, obtain the Engineer's approval prior to making any deviations from Drawings.
- H. Data given herein and shown on Electrical Drawings is as exact as could be secured, but absolute accuracy is not guaranteed.
- I. Clarification:
  - 1. Prior to submitting a Bid, bring to the attention of the Engineer any ambiguous, conflicting, or unclear instructions. Such items will be clarified by the Engineer in Addendum form.
  - 2. In the event that time does not permit clarification prior to Bid opening, the Drawings govern in matters of quantity, the Specifications in matter of quality. In event of conflict on the Drawings or in the Specifications, the greater quantity and the higher quality apply.
- J. Should the Contract Documents indicate a condition conflicting with the Governing Codes and Regulations, refrain from installing that portion of the Work until clarified by the Engineer. Remove and correctly install, as part of the Contract Work, any Work which was installed in violation of the Governing Codes.

### 3.2 INSTALLATION

- A. Codes and Permits:
  - 1. Comply with the latest Rules and Regulations of the Codes of the State and local authorities having jurisdiction. The Contractor is responsible for reviewing the applicable Codes prior to commencing the Work.
  - 2. Furnish all materials and labor required for compliance with these Rules and Regulations. Items in excess of Code requirements take precedence.
  - 3. Unless otherwise noted in the Contract Documents, obtain and pay for all required permits, plan check charges, and certificates. Deliver Certificates of Acceptance from the Code-Enforcing Authorities to the Engineer.

### 3.3 FIELD QUALITY CONTROL

- A. Tests:
  - 1. Conduct tests of equipment and systems to demonstrate compliance with the requirements specified in Division 16.
  - 2. Provide a journeyman electrician with tools, meters, instruments, and other test equipment required. Remove and replace trims, covers, fixtures, test materials, systems, methods, and workmanship in the presence of the Engineer for a final review at completion of the Work.
  - 3. In the presence of the Engineer conduct thorough tests of all control systems. Tests conducted by equipment/system authorized manufacturer's representative are permitted with prior approval.

- B. Inspection: Do not close in or cover Work prior to review by the Engineer.
- C. The Contractor is responsible for the cost of uncovering and making repairs where Work has been closed in or covered prior to review by the Engineer. This includes trenches and conduits stubbed out from buildings.

### 3.4 CLEANING

- A. Tools and Materials:
  - 1. Keep tools and materials in an orderly manner throughout the construction phase.
  - 2. Upon completion of the Work, remove all excess supplies, materials, tools, etc., furnished by the Electrical Contractor and subcontractors.
- B. Dirt, Debris, and Dust:
  - 1. Remove all dirt and debris caused by the execution of the electrical work from the job site at frequent intervals appropriate to the progress of the Work, or as directed by the Engineer.
  - 2. Leave the entire electrical system installed under this Contract clean, dust-free, and in proper working order.
- C. Other Trades: Bring unsafe or unclean conditions created by other trades or contractors that impact electrical construction work to the attention of the Project Manager.

### 3.5 NOISE CONTROL

- A. Noise producing devices shall not be placed on walls which are common to occupied spaces, unless specifically called for on the Drawings. Where such devices must be mounted on walls common to occupied spaces, they shall be mounted or isolated in such a manner as to effectively prevent the transmission of their inherent noise to the occupied space.
- B. Ballasts, contactors, and like equipment, which are found to be noticeably noisier than other similar equipment on the project, will be deemed defective and require replacement.

END OF SECTION 265600