

SECTION 26 01 00  
ELECTRICAL WORK GENERAL REQUIREMENTS

PART 1 – GENERAL

1.1 WORK INCLUDED

- A. Conditions of the Contract and Division One apply to all work of this Section.
- B. Contractor shall provide all materials, labor and the means and methods to complete the installation defined by the plans and these specifications.

1.2 REQUIREMENTS

- A. Other Divisions: Requirements of other divisions shall apply to this division as if repeated herein, and should work under this division require any carpentry, backfill, masonry, etc., the appropriate division requirements shall apply. This includes work required for construction of proper stands, bases, and supports for electrical materials and equipment.
- B. Rules and Regulations: All work and materials shall be in full accordance with the latest rules and regulations of the following:
  - 1. California Electrical Code
  - 2. California Building Code
  - 3. California Code of Regulations, Title 8, Electrical Safety Orders

Nothing in these drawings or specifications is to be construed to permit work not conforming to the above codes, rules, and regulations. Whenever indicated, material, workmanship, arrangement, or construction is of higher quality or capacity than that required by the above rules and regulations, the drawings and/or specifications shall take precedence. Should there be any direct conflict between the rules and regulations and the drawings and/or specifications, the rules shall govern.

- C. Permits, Fees, and Inspections: Contractor shall obtain all permits and arrange for Owner to pay required fees to any governmental agency or utility company having jurisdiction over the work of this Section. Inspections required by any local ordinances or utility companies during construction shall be arranged by the Contractor.

All work and materials covered by these specifications and accompanying drawings shall at all times be subject to inspection by the Architect or his representative. Any material not in accordance with the plans and specifications, or not installed in a neat and workmanlike manner, shall, upon order from the Architect, be removed from the premises or corrective action taken within three (3) days; and if material in question has been installed, the entire expense for removing and reinstalling shall be borne by the Contractor.

On completion of the work, satisfactory evidence shall be furnished to the Architect to show that all work has been installed in accordance with the Codes.

- D. Specifications and Contract Drawings: Accuracy of data given herein and on the drawings is as exact as could be secured, but their extreme accuracy is not guaranteed. The drawings and specifications are for the assistance and guidance of

the Contractor and exact locations, distances, levels, etc., will be governed by the construction and the Contractor shall accept same with this understanding.

Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial and not exact), but shall be followed as closely as possible. Architectural, structural, mechanical, and other drawings shall be examined noting all conditions that may affect this work. Where connections to equipment provided by other divisions are shown on electrical drawings, refer to drawings of respective division for exact locations and electrical requirements of equipment. Report conflicting conditions to the Architect for adjustment before proceeding with work. Should Contractor proceed with work without reporting conflict(s), he does so on his own responsibility, and shall alter work if directed by the Architect, at his own expense. Right is reserved to make minor changes in locations of equipment and wiring systems shown, providing change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required.

Drawings and specifications may be superseded by later detail specification and detail drawings prepared by the Architect, and the Contractor shall conform to them and to such reasonable changes in the contract drawings as may be called for by these revised drawings without extra cost to the Owner. Contractor may request additional detail(s) and such shall be conformed to without additional cost. Contractor may offer alternate detail(s), but such detail(s) shall be approved by Architect and authority having jurisdiction.

- E. Structural Requirements: Installation under this Section shall comply with the California Building Code. Obtain the Architect's approval before performing any cutting or patching of concrete, masonry, or wood structure in the building. Refer to details on structural drawings for penetration requirements through framing top plates, sill plates, beams, joists, rafters, etc. Provide notching, boring, drilling, anchor bolts, and other work in strictest conformance to structural details.
- F. Seismic Restraint Requirements: All electrical equipment and materials shall be braced against seismic forces in accordance with California Building Code Chapter 16A. Provide lateral bracing as required.
- G. Examination of Site: The Contractor shall be held to have visited the site prior to bidding and satisfied himself as to the conditions under which the work is to be performed. He shall check existing conditions which may affect his work. Where signal systems exist, and services of other firms are required, Contractor shall instruct those firms to investigate existing systems and determine labor and materials needed to add devices or modify systems. No allowances shall subsequently be made in Contractor's behalf for any extra expense to which he or his "subs" may be put due to failure or neglect to discover conditions affecting the work.
- H. Cutting of Structural Members: Unless specifically detailed on the structural drawings, cutting of joists and similar structural members is limited to cuts and bored holes located and sized in accordance with the requirements of Title 24. Cutting of structural mullions is prohibited except as specifically shown.
- I. Record Drawings: The Contractor's foreman shall keep in his possession a minimum of two (2) sets of blueline prints. One set shall be marked as the work is installed,

showing the work that has been installed, with deviations. The other set shall be marked showing deviations for the work shown and the locations of major items of equipment and feeders, dimensioned from curbs, foundations, or other landmarks. Obtain inspector's progressive approval of these marked sheets. Upon completion of the work, all work installed shall be drafted by the Contractor to reproducible drawings, which shall be the as-built drawings. Coordinate with General Contractor on requirements for reproducible record drawings.

- J. Cleaning and Cleanup: Keep buildings and premises free from accumulated waste materials, rubbish, and debris resulting from work herein, and, upon completion of said work, remove tools, appliances, surplus materials, waste materials, rubbish, debris, and accessory items used in or resulting from said work and legally dispose of off the site.
- K. Protection: The Contractor shall protect from damage during construction the work and materials of other trades as well as the electrical work and material. Electrical equipment stored and installed on the job site shall be protected from dust, water, or any other damage.
- L. Interruption of Service: Services (power, telephone, fire alarm and other signal services) to existing building(s) and their related circuits which are to remain in operation shall not be interrupted except by specific approval of the Owner. If it is deemed necessary to shut down circuits for the installation of new work, such shut down shall be scheduled with the Owner who may, at his option, have a representative present. Any accidental interruption of service to circuits or equipment as a result of work performed by the Contractor shall, at the Contractor's expense, be restored in a manner acceptable to the Owner.
  - 1. Fire Alarm and Intrusion Alarm Systems:
    - a. Existing fire alarm system must be kept operational during work of this contract. If operation of existing system or portion of existing system is disrupted for connections into system or cutoff for any reason by work of this project, Contractor must provide fire watch. Fire watch must occur 24 hours per day and every day system is down. Fire watch proposed by Contractor must be acceptable to local fire authority and Owner. All costs for fire watch shall be Contractor's responsibility.
- M. Cooperation and Coordination: Cooperate and coordinate with other crafts in putting the installation in place at a time when the space required by this installation is accessible. Work done without regard to other crafts shall be moved at the Contractor's expense.
- N. Inspection: The Contractor shall cooperate with the Architect and shall provide assistance at all times for the inspection of the electrical work performed under this contract. He shall remove covers, operate machinery, or perform any reasonable work which, in the opinion of the Engineer, will be necessary to determine the quality and adequacy of the work.
- O. Contractor's Supervision: The Electrical Contractor shall personally, or through an authorized and competent representative, constantly supervise the work from its

beginning to its completion and acceptance. He shall, as far as possible, keep the same foreman and workers on the work from its commencement to its completion.

- P. Temporary Work: All temporary electrical equipment and materials installed for construction and safety operations shall remain the property of the Contractor and shall be removed when permanent connections have been completed. No wire, bus, or electrical equipment which is part of any of the permanent electrical systems may be used for temporary electrical service. Temporary connections shall be safe and in accordance with accepted practices. The Contractor shall be responsible for any damage or injury to equipment, materials, or personnel caused by improperly protected temporary installations. All costs for materials and installation for temporary electrical facilities and energy for their operation shall be at the expense of the Contractor. The hours of operation, level of illumination, and coverage for safety of personnel shall meet the minimum requirements of the Owner (Division of Industrial Safety).
- Q. Scheduling of Work:
1. Due to its nature, this work will have to proceed with a definite sequence of operations to minimize outages and to continue facilities to certain areas. The building(s) will remain in operation during the work and the Contractor shall make every effort to maintain required services (power and signal).
  2. Wherever the work makes it necessary to cut off a feeder, branch circuit or signal circuit and it stands to remain out of service for some time, or longer than building operations will permit, the Contractor shall make temporary connections so the required outlets, devices, or loads will continue to be operational. Some outlets, devices and wiring in the area will remain undisturbed. The Contractor shall reconnect these circuits, extending where necessary, so all circuits will operate satisfactorily upon completion of the work.
  3. Where power or signal system outages are unavoidable, such outages shall be scheduled with the Owner and shall occur at such times deemed least disruptive by the Owner.
  4. Special precautions shall be taken to insure safety of building occupants during construction. No equipment left unsupervised.
- R. Existing Work: Existing conduits in alteration, extension, and remodeling areas which are required to be extended, altered, or reconnected shall be accomplished as shown or as directed. Where existing conduits which are indicated to be revised or which will be essential to the functioning to the particular system are cut or exposed due to construction changes, new connections shall be made in the most expeditious manner as directed or indicated. Where wiring is involved, new wires shall be "pulled-in" between the nearest available, accessible, reused outlets. In all cases where new wires are required, indicated, or specified to be installed in existing conduits, if same cannot be installed, new conduits shall be provided therefore as directed. Attention is called to the fact that all new conduit, wiring, and apparatus shown on drawings or specified shall be connected to the existing systems so as to function as complete units. All conduits and electrical apparatus, etc., in place and not shown or specified to be reused or which will not be essential to the functioning of the various systems when the work is complete, shall be removed and stored where directed. No old material shall be reinstalled or reused unless so indicated on drawings or so specified. Concealed conduits which are not indicated or specified to be reused and become

exposed due to construction changes shall be removed to the nearest available, accessible, reused outlets.

Where existing panel feeders are required to be extended, altered, or reconnected, megger test existing wiring prior to alteration and after work is complete. Note any defects or deficiencies found and present to Owner in letter form. It will be assumed existing feeders in area of alteration are in good working order unless noted otherwise by Contractor.

- S. Equipment at Existing Walls and Ceilings Being Removed: Remove all electrical equipment at walls and ceilings being removed. Remove conduit and conductors back to last active remaining outlet. If conduit is routed from floor, cut below surface and patch to match existing. If conduit is routed from ceiling slab, cut flush with surface.
- T. Copies of codes, safety orders, submittals, specifications, drawings, addenda, and as built shall be on the job and in possession of person responsible for electrical work (foreman or general foreman).
- U. Guarantee: Acceptance of the contract for this work includes this guarantee: The Contractor guarantees that he has performed the work in accordance with the contract documents. Contractor also agrees to replace or repair, as new, any defective work, materials, or part which may appear within one (1) year of final payment if in the opinion of the Architect or the Owner the defect is due to workmanship or material.
- V. Warranties, guarantees, certificates, etc. that are furnished and are available for equipment and materials furnished and installed under this section shall be properly filled out as of the date of final payment and shall be delivered to the Engineer.

END OF SECTION