

DIVISION 16 - ELECTRICAL

Section 16050 - Basic Electrical Materials and Methods

Introduction

The design shall be set up such that all equipment shall be provided and installed with the highest degree of quality and workmanship in both the type of equipment installed and the quality of the equipment installed.

Part 1 - General

- All work associated with the installation of electrical equipment at this site shall be accomplished by skilled workmen which are experienced in the type of work for which they are to accomplish. The contractor shall be licensed to do commercial or industrial electrical work. Each work crew shall consist of a maximum of 1 helper for each journeyman electrician. For all work involving the installation of medium voltage (above 600v) equipment the work shall be accomplished by a contractor having a class A-17 license. The workers on medium voltage systems shall be journeyman electricians. The definition for a journeyman electrician will be that the electrician shall have completed a minimum of 5 years in a combination of training and education of electrical equipment installation under the direction of skilled journeymen electricians.
- The plans and drawings are complimentary and anything indicated by either shall be required to be installed as if it were indicated on both.
- All work shall be installed and coordinated with all other trades. Conflicts shall be solved through a joint decision by the trades and shall be presented to the University for their approval.
- It is the responsibility of the contractor to visit the site prior to bid, and familiarize himself with any and all site conditions.
- Laboratory panels shall be accessible to users, not locked in electrical/mechanical rooms.
- Use of the metal clad cable, special restrictions:
 - Metal Clad (MC) cable will be permitted under the following circumstances:
 - In walls, for electrical outlets, stud wall construction, dry locations.
 - Following strict procedures regarding the routing. Each wall may have the MC cable running horizontally to adjacent receptacles. The run of MC cable shall not run horizontally to adjacent walls. Instead, the run shall go up in the wall to a J-box in the interstitial ceiling space.
 - Horizontal runs of circuitry in the interstitial ceiling space shall be in EMT or GRC. Home runs shall be EMT or GRC.
 - Metal Clad (MC) cable shall meet the following:
 - It shall be steel with factory installed conductor, stranded copper wire, each conductor color coded.
 - The end fittings shall be Arlington Industries, SNAP 2 IT with insulated throats. Substitutions will not be considered.
- All other wiring systems shall be as specified.
- Elevators shall have their own direct feed feeders, from the main service switchboard, panel or mains.

Part 2 - Products

- All products specified for use at this site shall be UL listed or CSA certified for the use specified herein.
- Provide submittals for all equipment as indicated in the section under which it is specified in accordance with the provisions of Division 01300.
- All equipment shall be protected from the elements between time of delivery to site and actual installation. No equipment shall be installed until it is obvious that no normal damage will occur to the equipment between the time of installation and the end of the contract. All equipment, whether installed or on site awaiting installation, remains the property of the contractor until the end of the contract.
- **Conduit Sleeves / Concrete Walls & Floors Above Grade**
 - Shall be schedule 40 steel
 - Sized for full dimensions of insulation and fire caulked where required
 - Install in all exterior walls, fire walls and floors
 - Floor sleeves to extend 1" above floor surface
- Conduit sleeves in non-rated, non-masonry walls or partitions. Provide 24 gage galvanized steel.
- **Part 3 - Execution**
- All work shall be accomplished in accordance with the latest NEC. A copy of the latest code book and project specifications shall be kept at the premises.
- Prior notice of any power shutdowns or any disruptions to existing facilities shall be coordinated by the contractor as directed by the Construction Project Manager.
- All work shall be inspected prior to covering and any work covered prior to inspection will be made available for inspection at the option of the Construction Project Manager. No additional fees will be provided to uncover work covered prior to inspection.

End of Section 16050