

PART 1 - GENERAL

- 1.1 SCOPE OF WORK .1 Testing and commissioning are called for throughout the documents. This does not relieve this trade from providing all testing and commissioning necessary to ensure that systems and equipment operate as required and that they interface with other systems and equipment as required.
- 1.2 COMMISSIONING .1 The purpose of the commissioning process is to fully test all building electrical components and operating procedures by challenging these systems to realistic operation conditions.
- .2 The Commissioning activities shall be co-ordinated by the General Contractor.
- .3 Commissioning activities for the electrical systems must have available up to date as-built drawing information and accurate Operations and Maintenance Manuals. These documents shall be a major part of this activity.
- .4 Contractor shall be responsible for all outside suppliers, equipment manufacturers, test agencies and others as identified in the commissioning sections of this specification. The cost associated with this requirement shall be included as part of the tender price.
- 1.3 SUBMITTALS .1 The electrical sub-contractor shall be responsible for ensuring all activities are properly documented in a binder and co-ordinated through the General Contractor.
- .2 As-built drawings and data books must be available two weeks prior to commissioning for review and use by the Commissioning Team prior to the start of the commissioning activities.
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1.3 SUBMITTALS
(Cont'd)

- .3 Contractor to submit the following documentation:
- .1 Fire Alarm System Verification certificate from the fire alarm manufacturer, stating that the panel and all devices have been checked and certified. Provide a document, signed by the Contractor and the manufacturer.
 - .2 Verification certificates from the various manufacturer's representatives, along with a document signed by the Owner and the equipment manufacturer, stating that all equipment is properly installed, adjusted and operating, including;
 - .1 Fire Alarm System.
 - .2 Video Surveillance System.
 - .3 Card Access and door operation systems.
 - .4 Emergency Power System.
 - .5 Lighting and Controls.
 - .3 Verify in writing that all the electrical connections and components associated with the mechanical systems are properly installed and operational, including but not limited to:
 - .1 Motor starters. (Correct fuses, overloads, etc.)
 - .2 Disconnect switches.
 - .3 Correct motor rotation.
 - .4 Proper size breakers and conductors.

1.4 PREPARATION

- .1 Provide test instruments required for all activities as defined in the commissioning documents.
- .2 Verify all systems are in compliance with the requirements of the construction documents prior to the precommissioning check out operation.
- .3 Confirm all scheduled activities have identified personnel available.
- .4 Where systems or equipment do not operate as required, make the necessary corrections or modifications, re-test and re-commission.

- 1.5 SYSTEM DESCRIPTION
- .1 Perform all start up operations, control adjustment, trouble shooting, servicing and maintenance of each item of equipment as required.
 - .2 Owner will provide list of personnel to receive instructions and will co-ordinate their attendance at agreed upon times.
 - .3 Prepare and insert additional data in the operations and maintenance manuals and update as-built drawings for additional data that becomes apparent during the commissioning exercise.
 - .4 Instruct personnel in all phases of operation and maintenacne using operation and maintenance mauals as the basis of instruction.

- 1.6 FINAL REPORT
- .1 Assemble all testing data for inclusion in the commissioning documents.
 - .2 Each form shall bear signature of recorder, and that of supervisor of reporting organizer.

PART 2 - PRODUCTS

- 2.1 NOT USED
- .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED
- .1 Not Used.