

**Guide Specifications**

The following specification is intended to be used, generally verbatim, in the contract documents. [Specifier Notes] shall be deleted during the editing process. Where [ ] appears in this document, this indicates requirements which are optional depending upon the project scope and conditions. Edit as appropriate for the project. The A/E consultant shall take ownership and responsibility for the contents of this section and is expected to modify other portions as necessary to accurately reflect conditions of the project. For draft copies during the design process, annotate any deletions by lining through the proposed change, and use bold lettering for any proposed additions.

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**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
  - 1. Training of Owner's personnel.
  - 2. Maintenance Materials submission.
  - 3. Substantial Completion.
  - 4. Final Acceptance.

**1.03 SEQUENCE OF CLOSE-OUT**

- A. The Contractor's superintendent shall perform a review of all installed work (general, mechanical, electrical) and note any corrections, touch-up, or otherwise restore marred, exposed surfaces that are necessary to comply with the Contract Document requirements before requesting the A/E to review the Work. The Contractor shall develop a written correction list (pre-punch list) and track the completion of the items by initialing and dating each item, signifying that it has been reviewed and properly completed.
- B. Comply with items under SUBSTANTIAL COMPLETION by submitting documentation and the Contractor's initialed correction list to the A/E with a written request that the A/E reviews the project.
- C. Upon receipt of the information from the Contractor, the A/E will visit the site and review the Project with the Owner for compliance with the Contract Documents. The A/E will develop a punch-list of any work that still needs corrections. If the list is incidental corrective punch work to complete, the A/E will issue the notice of Substantial Completion with the corrections list attached. If the correction work is still significant, the Contractor shall complete the corrections in the same format as its pre-punch list and request additional reviews by the A/E as necessary to establish that the Project is complete to the point where the Substantial Completion notification can be issued.
- D. Provide operation and maintenance instruction on installed equipment to the Owner.
- E. The Contractor shall correct any outstanding punch list items and submit all other close-out documentation to the A/E as indicated under FINAL ACCEPTANCE. When punch lists have been verified by the A/E as being complete and all documentation is satisfactory and accepted by the A/E, the A/E will issue its recommendation for Final Acceptance to the Owner.

- F. Upon receipt of the A/E's notification of Final Acceptance, the Owner shall, through administrative action, declare the Project as being accepted, starting the 45 day lien period.

1.04 PROJECT RECORD DOCUMENT SUBMITTAL

Refer to Section 0178 0, Closeout Submittals.

1.05 OPERATION AND MAINTENANCE MANUALS

Refer to Section 01780, Closeout Submittals.

1.06 OPERATING INSTRUCTION OF OWNER'S PERSONNEL

- A. The Contractor shall provide for operating and maintenance instruction of Owner's personnel for items installed under this contract. Contractor shall provide for this instruction at a mutually agreeable time and place, which may be outside of Contractor's normal working hours.
  - 1. Prior to any training, the Contractor is to complete all system start-up and functionality testing. The Contractor/Sub-contractor will then assist the Owner's commissioning agent to review and confirm the systems are performing in accordance with the Contract Documents. Commissioning shall be completed prior to the Contractor and major subcontractors providing qualified personnel for conducting full on-site operation and maintenance training and instruction to Owner's designated user personnel and maintenance crews. Instruction shall include the proper operation, adjustment and maintenance of all general, mechanical and electrical operating systems and equipment. Contractor shall schedule this period in advance with the Owner and appropriate subcontractor or vendor's representative. This shall be scheduled one (1) week after submittal of the final Operating and Maintenance Manuals so that such information will be available for Owner staff familiarization prior to the time of this instructional period. Provide a minimum of eight (8) hours of such training and instructions on site, unless otherwise directed, conducted to Owner's satisfaction. Such instruction shall be given in time blocks not exceeding (4) hours in any one-day and shall be exclusive of off-site factory training for the energy management system.
  - 2. At each training session, provide a sign-in sheet for signature of all Owner staff that attends. Identify the sign-in sheet with the training being provided and the date of the training. Submit the sign-in sheet(s) with FINAL ACCEPTANCE procedure.
  - 3. Except as otherwise specified, arrange for each installer of work requiring continuing maintenance or operation to meet with Owner's personnel at project site to provide basic instructions needed for proper operation and maintenance of entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures.
  - 4. Use operation and maintenance manuals as the basis for instruction. Review contents of manual with personnel in full detail to explain all aspect of operations and maintenance; include as a minimum record documentation, tools, spare parts and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning and renewal of finishes, and similar procedures and facilities.
  - 5. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and similar operations. Review maintenance and operations in relation with applicable warranties, agreements to maintain bonds, and similar containing commitments.
  - 6. In addition, provide (4) hours training for the energy management system.
  - 7. Provide a minimum of (4) hours additional follow-up training sessions to be conducted four (4) months following initial training. Systems/equipment to be covered under these training sessions shall be as determined by the Owner.
  - 8. In addition to or in conjunction with these training sessions, provide for (4) seasonal adjustment training sessions of the energy management system.
- C. For additional requirements for operating instructions, see respective Specification Sections.

1.07 MAINTENANCE MATERIALS

- A. Provide maintenance materials (tools, spare parts, extra stock, etc) indicated in other sections of the specifications.
  - 1. Submit a receipt to the Owner identifying the product and quantity that is being provided.
  - 2. Obtain Owner's signature on the receipt.

1.08 SUBSTANTIAL COMPLETION

- A. Substantial Completion is defined in the General Conditions. Before requesting A/E's review for certification of Substantial Completion, complete the following, and provide a written request for Substantial Completion.
  - 1. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 2. Advise the Owner of pending insurance changeover requirements.
  - 3. Advise the Owner's personnel of changeover in security provisions.
  - 4. Complete startup testing and commissioning of systems; submit Balancing Logs.
  - 5. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, surplus materials, and similar elements.
  - 6. Complete final clean-up requirements.
  - 7. Return all keys that were issued to the Contractor.

1.09 FINAL ACCEPTANCE

- A. Before requesting certification of Final Acceptance and final payment, complete the following. Submit all of the following items together – no partial submittals will be accepted.
  - 1. Submit an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the Owner of property might in any way be responsible, have been paid or otherwise satisfied. (AIA Document G706).
  - 2. Submit Contractor's Affidavit of Release of Liens (AIA Document G706A): If any liens are filed and cause the Owner to employ the services of any attorneys, the cost of the services will be deducted from the retainage.
  - 3. Submit a letter from the Contractor's Bonding Company addressed to Owner and submitted to A/E approving release of final payment and waiving submittal of final receipts as well as a statement confirming the extension of the Bond for the one-year warranty period. Final receipts from all subcontractors and material and equipment suppliers shall be furnished to the A/E by the Contractor if the Surety does not waive this requirement.
  - 4. Submit a copy of the A/E's final review list ("punch list") of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, identifying the name and company of the individual who confirmed completion of each item, and date when confirmation inspection was performed.
  - 5. Submit consent of surety to final payment on AIA Form G707.
  - 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 7. Submit certified Statement(s) indicating asbestos or lead containing material were not utilized or incorporated on the Project provided by Contractor under this contract.
    - 8. Submit final As-Built Documents.
    - 9. Submit final Operation and Maintenance Manuals.
  - 10. Submit final Warranties, Bonds, and Permit Manual.
  - 11. Submit evidence of completion of commissioning of designated building systems.
  - 12. Submit evidence of compliance with requirements of governing Authorities.
    - a. Certificate of Occupancy, if not submitted at time of Substantial Completion. (Note: Certificate of Occupancy is required to be submitted with Substantial Completion Request unless otherwise exempted by Owner in writing.)
    - b. Others as required by Regulatory Agencies.

13. Submit all other required close-out documents.

1.10 REVIEW FEES

- A. The A/E will complete one initial and one final project review of the Work at Substantial Completion and at Final Acceptance to establish and verify completion of punch list work. Should it be necessary for the A/E to perform any additional reviews due to failure of Work to comply with completion status claimed by the Contractor, the Contractor shall bear all costs incurred by the A/E for each additional review required until the Work is satisfactorily completed. This compensation shall be at the A/E's standard hourly billing rate at the time of the review, and expenses associated with the visit. Compensation by the Contractor will be through a deductive change order to the Contractor's contract.

END OF SECTION 01770