

**SECTION 01700**  
**CONTRACT CLOSEOUT**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Closeout procedures.
- B. Final cleaning.
- C. Project record documents.
- D. Adjusting.
- E. Operation and maintenance data.
- F. Warranties.

**1.02 CLOSEOUT PROCEDURES**

- A. General Conditions Article 14 contains detailed requirements for Project closeout. Sequence of closeout procedures is as follows:
  - 1. Contractor submits written request for initial closeout inspection to Owner.
  - 2. Owner and Contractor conduct **initial closeout inspection using approved FINAL O&M manuals.**
  - 3. Owner prepares "punchlist" of items to be completed, showing time limit for their completion and submits to Contractor.
  - 4. Contractor completes items on punchlist and requests re-inspection.
  - 5. Owner and Contractor conduct re-inspection.
  - 6. If, on the basis of re-inspection, Owner believes Project to be substantially complete, Owner prepares and submits to Owner for approval a **tentative certificate of Substantial Completion**, which shall include a list of all remaining items to be completed and time limit for their completion. List of items to be completed will include, as applicable to the Project, deficiencies in cleaning and in submittal of spare parts and extra materials, Operation and Maintenance manuals, inspection certificates from regulatory agencies, Record Drawings, warranties and other items required by the Contract Documents.
  - 7. When Owner approves the tentative certificate, he issues to the Contractor a **definitive** Certificate of Substantial Completion as described in the General Conditions.
    - a. **The definitive certificate of Substantial Completion fixes the date of Substantial Completion**
    - b. **In no event will the Work be certified as substantially complete until at least 90 percent of the Work is completed.**

c. **Partial utilization of any portion of the Work does not constitute Substantial Completion.**

8. When Contractor completes the list of items, as issued with the **definitive** Certificate of Substantial Completion, he requests final inspection.
9. Owner and Contractor conduct final inspection.
10. If Owner agree that all items on the list have been completed, Contractor will submit Final Application for Payment.
11. Contractor submits to the Owner Final Application for Payment, including all documents required by General Conditions' Paragraph 14.07.A and any other portion of the Contract Documents; Final Payment will not be made until the Owner has received these documents. Final Application for Payment shall identify total adjusted Contract Price, previous payments, and amount remaining due.
12. Owner makes final payment to Contractor, deducting the amount of liquidated and/or other damages and the amount of any unresolved claims, which have been filed against the Owner in connection with the Work.

1.03 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior glass and surfaces; remove temporary labels, stains and foreign substances.
- C. Polish transparent and glossy surfaces.
- D. Sweep clean concrete floors.
- E. Remove paint spatters from all exposed surfaces.
- F. Remove paint from mechanical and electrical equipment nameplates.
- G. Replace filters of operating equipment.
- H. Clean debris from roofs, gutters, downspouts, and drainage systems.
- I. Remove debris from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, and manholes.
- J. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication.
- K. Clean light fixtures and lamps to function with full efficiency.
- L. Sweep and remove stains and foreign deposits from paved areas.
- M. Rake landscaped areas.

- N. Remove waste and surplus materials, rubbish, and construction facilities from the site. Do not burn waste materials, or bury debris or excess materials on Owner's property, or discharge volatile or other hazardous materials into drainage systems. Remove waste materials from the Project site and dispose of in a lawful manner.

#### 1.04 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents and record on them actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other Modifications to the Contract.
  - 5. Reviewed Shop Drawings, Product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress, including surveys to record changes in location or elevation of above and below-grade physical project features.
- D. Specifications: Legibly mark and record at each Product Section description of actual Products installed, including the following:
  - 1. Manufacturer's name and Product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and Modifications.
- E. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Measured elevations of foundations in relation to site datum.
  - 2. Measured horizontal and vertical locations and slope of underground utilities and appurtenances, referenced to site datum and baselines.
  - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - 4. Field changes of dimension and detail.
  - 5. Details not on original Drawings.
- F. Delete title block and seal (by crossing out) from Record Drawings.

- G. Include the following Contractor's signed statement on each Record Drawing sheet:  
These Record Drawings have been prepared by

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(Name of Contractor)

and accurately reflect as-built conditions. Responsibility for accuracy of the Record Drawings rests with the Contractor.

- H. Submit documents to Owner with request for closeout inspection. (See Paragraph 1.021.02.A.1 of this Section.).
- I. **Definitive Certificate of Substantial Completion will not be issued until acceptable Record Drawings have been submitted.**

1.05 ADJUSTING

- A. Adjust operating Products to ensure smooth and unhindered operation.

1.06 OPERATION AND MAINTENANCE DATA

- A. Furnish Operations and Maintenance manuals for each piece of mechanical or electrical equipment supplied under this Contract.
- B. Submit an electronic draft copy of each manual, in .pdf format, to the Owner for review at least 30 days prior to the 60 percent payment. At draft stage, inclusion of approved Shop Drawings may be omitted.
- C. Following approval of the draft copies and at least 30 days prior to the 90 percent payment, furnish for the Owner's review and approval an electronic copy of the proposed final manuals, in .pdf format, which will be labeled PRELIMINARY.
- D. **Owner must review the PRELIMINARY manuals and deem them acceptable for use as the basis for instructions, before start-up and testing of the facility is initiated.** Preliminary manuals shall include APPROVED shop drawings. Submittal of the PRELIMINARY manuals does not constitute acceptance of the manuals as FINAL; Contractor is still required to follow specified procedures, by providing any additional information required by Owner, until the manuals are deemed FINAL by Owner.
- E. **Owner must review and approve the FINAL bound manuals before the initial closeout inspection is authorized to be conducted.**
- F. Include the following materials in the manuals for each piece of equipment supplied under this Contract:
1. Equipment name, location, and number of units.
  2. Manufacturer's name, address, and phone number.

3. Name, address, and phone number of the nearest certified manufacturer's representative.
  4. Nameplate data for basic unit as well as components such as motor and drive.
  5. Approved Shop Drawings, corrected to as-built conditions.
  6. Manufacturer's bulletins, schematics, diagrams, and supplemental material which is necessary to provide a complete functional description of the subject equipment and component parts including basic configuration and nomenclature; operating principles and characteristics including test data and performance curves where applicable; dimension drawings; and capacity or conditions of service.
    - a. If the manufacturer's bulletins cover more than one size, model, or configuration, clearly indicate the information covering the specific unit or units supplied under this Contract.
  7. Detailed written procedures to be used for all modes of operation including any precautions for personal safety or for prevention of damage to the equipment. This includes initial start-up, normal operation, emergency operation, shutdown, and restarting. Describe required operating checks, calibration, and field performance measurements.
  8. Guides to testing and troubleshooting. Include a chart giving symptoms, probable cause, and remedies.
  9. Instructions with easily understood schematics or diagrams for disassembling and assembling the equipment for overhaul and repair.
  10. A lubricating schedule showing lubrication point, frequency, and recommended lubricant, including one or more major brand alternates. Include lubrication recommendations for periods when equipment is in standby or storage.
  11. Recommended preventive maintenance measures and frequency of performance. Describe each recommended maintenance measure in terms of procedure, tools, parts, materials, or test equipment necessary to perform the procedure.
  12. Complete parts list with parts assembly drawing (preferably by exploded view), recommended list of spare parts to be kept "in stock", and ordering information.
  13. Identification of any special tools required for proper maintenance.
  14. Any additional information required to maintain equipment warranty.
- G. For equipment that will function as part of a system, assemble data in a manner that describes the operation and maintenance of the entire system. Provide systems information described below, corrected to as-built conditions:
1. Process and instrumentation drawings.
  2. Ladder diagrams.
  3. Wiring diagrams including one-line diagrams, schematic or elementary diagrams, and terminal board identification diagrams.
  4. Piping and interconnection drawings.
  5. Circuit board schematics with components' models and descriptions.
- H. Submit an electronic copy of the final Operation and Maintenance manuals, in .pdf format, to the Owner for final approval.

- I. **Owner will not issue Definitive Certificate of Substantial Completion until approved Operations and Maintenance Manuals have been submitted. Partial approvals of the final manual will not be made.**

#### 1.07 WARRANTIES

- A. Provide duplicate notarized copies of approved warranty certificates. Include warranty certificates in final O&M Manuals.
- B. Assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in PDF form.
- D. Submit prior to final Application for Payment.
- E. Date of warranty shall be no earlier than the date of Substantial Completion.
- F. When Work is delayed beyond the initial date of Substantial Completion, provide updated/extended Warranty Certificate within ten days after acceptance of Work, listing date of acceptance as start of warranty period. Costs for providing updated/extended warranties shall be at no cost to the Owner.
- G. **For warranties with coverage period exceeding the Correction Period, make provisions for direct assignment of warranty to Owner. Cost for these warranties shall be included in the Contract Price.**
- H. **Owner will not approve Final Application for Payment without approved Warranty Certificates.**

#### PART 2 - PRODUCTS

NOT APPLICABLE TO THIS SECTION

#### PART 3 - EXECUTION

NOT APPLICABLE TO THIS SECTION

**END OF SECTION**