

SECTION 01 99 99

PROJECT CLOSURE

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Definitions: Closeout is hereby defined to include general requirements near the end of contract duration, in preparation for final acceptance, final payment, normal termination of contract, occupancy and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in Sections of Division 02 through 34 as applicable.
- B. Time of closeout is directly related to "Substantial Completion", and therefore may be either a single time period for entire work or a series of time periods for individual parts of the work which have been noted as substantially complete at different dates, that time variation (if any) shall be applicable to other provisions of this section.

1.2 PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. General: Two weeks prior to requesting inspection of "substantial completion" (for either entire work or portions thereof), complete the following and list exceptions ...
1. List "substantially complete" areas for portion claimed with certifications and supporting documentation in accordance with the contract documents (properly installed and ready for operation), and itemize incomplete items (Contractor issued final "Punch List"), value of incomplete work, and reasons for being incomplete with supporting documentation.
 2. No GWB/SAT ceiling material shall be installed in the project area until "all" work above the ceiling line has been completed, tested, inspected, approved and accepted by specified agents and the VA COR with "all" associated test/inspection reports issued demonstrating compliance with the contract requirements.
 3. Complete start-up testing of systems, and instructions to Government's operating/maintenance personnel. Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools, equipment, and similar elements.
- B. Inspection: Upon receipt of Contractor's request, the Contracting Officer will either proceed with inspection or advise Contractor that prerequisites are not fulfilled. Following initial inspection, the Contracting Officer will either approve "substantial completion", or issue a "Deficiency Report" itemizing work which must be performed and

repeat inspection when requested and assured that work has been substantially completed. Results of completed inspections ("Deficiency Report") will form the basis of the "Punch List" to be completed for final acceptance.

1.3 PREREQUISITES TO FINAL ACCEPTANCE

A. General: Prior to requesting final inspection for final acceptance and final payment, as required by General Provisions and Conditions, complete the following and list known exceptions (if any) ...

1. Submit final payment request with final releases and supporting documentation not previously submitted and accepted.
2. Submit copy of Contractor final Punch List including resolution of Deficiency Reports resulting from earlier inspections stating that each item has been completed, resolved or otherwise delayed for acceptable circumstances with supporting documentation.
3. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
4. Submit record documents in the format specified.
5. Submit final record information (eg, electrical panel schedule, equipment data sheets).
6. Provide tools, spare parts, extra stocks of materials, and similar physical items.
7. Make final change-over of locks and transmit keys to the Contracting Officer and advise Government personnel of change-over in security provisions.
8. Complete final cleaning up requirements, including touch-up painting of marred surfaces.
9. Touch-up and otherwise repair and restore marred exposed finishes.

B. Re-inspection: Upon receipt of Contractor's notice that all work has been completed, including resolution of Deficiency Reports resulting from earlier inspections, the Contracting Officer will re-inspect the work. Upon completion of re-inspection, the Contracting Officer will either proceed to final acceptance or issue a Punch List itemizing work not completed and obligations not fulfilled as required for final acceptance. If necessary, re-inspection will be repeated until work is accepted.

1.4 RECORD DOCUMENTS

A. General: As work progresses, prepare and maintain record documents as specified herein. Each record shall be certified by the General Contractor. Do not use record documents for construction purposes;

protect from deterioration and loss in a secure, fire-resistive location accessible to the Contracting Office for reference during normal working hours. Upon completion, turn record documents over to the Contracting Officer.

- B. Record Drawings: Maintain a white-print set (blue-line or black-line) of contract drawings (including amendment and change order drawings) and shop drawings in clean, undamaged condition, with mark-up of actual installations which vary from the work as originally shown. Mark whichever drawing is most capable of showing "field" condition fully and accurately; however, where shop drawings are used for mark-up, record a cross-reference at corresponding location on working drawings. Mark with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work. Mark-up new information which is recognized to be of importance, but was for some reason not shown on either contract drawings or shop drawings. Give particular attention to concealed work, which would be difficult to measure and record at a later date. Note related CO (change order) and/or RFI numbers where applicable. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on cover of each set.
1. Four (4) weeks prior to the final inspection, the Contractor shall provide the VA COR with complete sets (2 full size, 2 reduced size) of CAD quality drawings on vellum (reproducible, clean & legible).
 2. AutoCAD (verify required version) files in the format consistent with the VA's standards on PC CD disks with all the above information incorporated.
 3. Adobe Acrobat PDF files for each AutoCAD file on PC CD disks with all the above information incorporated.
 4. The draftsmanship and information shall be comparable in all ways to the original documents, and shall be dated and noted "As-Built".
- C. Record Specifications: Maintain one copy of specifications, including amendments, change orders and similar modifications issued in printed form during construction, and mark-up variations in actual work in comparison with text of specifications and modifications as issued. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a late date by direct observation. Note related record drawing information and product data, where applicable.
- D. Record Product Data, Certifications and Laboratory Test Reports: Maintain one copy of each product data submittal, product certification,

and laboratory test report and mark-up significant variations in actual work in comparison with submitted information. Include both variations in product as delivered to site, and variations from manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the work which cannot otherwise be easily discerned at a later date by direct observation. Note related change orders and mark-up of record drawings and specifications.

- E. Record Samples and Salvaged Items: Immediately prior to date(s) of substantial completion, the Contacting Officer or designated representative will meet with Contractor on site, and will determine which (if any) of submitted samples and salvaged items maintained by Contractor during progress of the work are to be retained by the Government. Comply with the CORs instructions for packaging, identification marking, and delivery.
- F. Miscellaneous Record Submittals: Refer to other Sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the work. Immediately prior to date(s) of substantial completion, complete miscellaneous records and place in good order, appropriately identified and bound, ready for continued use and reference. Turn over to the Contacting Officer prior to final acceptance.

1.5 OPERATION AND MAINTENANCE MANUALS

- A. General: Submit in accordance with Article, OPERATION AND MAINTENANCE MANUALS, in Section 01 00 00, GENERAL REQUIREMENTS, Maintenance and operating manuals (two hard copies and one electronic copy each on compact disc) with parts/shop/service details for each mechanical and electrical system (except as otherwise specified), for each piece of equipment, and for other systems and components specified in the technical Sections of the specification. Organize manuals into suitable volumes of manageable size, as approved by the Contacting Officer. Manuals shall have table of contents (TOC), and be assembled to conform to the TOC with tab sheets covering each subject. The instructions shall be legible and easy to read. Manuals shall be hard bound and sheets consistent in size; where oversize drawings are necessary they shall be folded. The organized document shall be labeled "Operation and Maintenance Manual" with the project name, building location, contact and project numbers appearing on the cover.
- B. Contents: Manuals shall include, but not be limited to, the following data ...

1. Detailed description of each system and each of its components, including layout showing piping, valves, and controls and other components, and including diagrams and illustrations where applicable.
2. Wiring and control diagrams with data to explain detailed operation and control of each component. Provide installed electrical panel schedules using the VA format.
3. Control sequence describing start-up, operation, and shut-down.
4. Procedure for starting.
5. Procedure for operating.
6. Shut-down instructions.
7. Installation instructions.
8. Maintenance and overhaul instructions.
9. Emergency instructions and safety precautions.
10. Corrected shop drawings.
11. Approved equipment data sheet using the VA format.
12. Approved certifications and laboratory test reports (where applicable).
13. Copies of warranties.
14. Test procedures.
15. Parts list, including source of supply, recommended spare parts, and service organization convenient to building site.
16. Name, address, and telephone number of each subcontractor who installed equipment and systems, and local representative for each type of equipment and each system.
17. Other pertinent data applicable to the operation and maintenance of particular systems or equipment and/or other data specified in technical Sections of the specification.

1.6 APPROVED SUBMITTALS

Provide Contracting Officer with one copy of each final approved submittal package with all review notations and remarks indicated prior to the time that system or equipment tests are performed, and two additional copies 2 weeks before either the start of operation by the Government or any instruction period specified (whichever comes first).

PART 2 - PRODUCTS

2.1 GENERAL

- A. Keys and Special Tools: Provide Project Engineer with all keys and special tools that might be necessary for access, maintenance, and operation of installed items.

PART 3 - EXECUTION

3.1 INSTRUCTIONS TO GOVERNMENT PERSONNEL

- A. Each applicable trade shall provide qualified, factory-trained representatives to give detailed instructions to assigned Department of Veterans Affairs personnel in the operation and complete maintenance for each system and piece of equipment. Instructions for different items of equipment that are component parts of a complete system shall be given in an integrated, progressive manner. All instructors for every piece of component equipment in a system shall be available until instructions for all items included in the system have been completed. This is to assure proper instruction in the operation of inter-related systems. All instruction periods shall be at such times as scheduled by the COR and shall be considered concluded only when the COR is satisfied in regard to complete and thorough coverage of information.
- B. Instructional services of competent instructors shall be provided for a minimum of 4 hours of onsite training to designated Government employees covering the overall installation, operational methods, adjustments, care and periodic maintenance requirements for their systems. All training shall be video-taped on CD in high resolution.
- C. Each instructor shall be familiar with all parts of their respective system and shall be trained in operating theory as well as practical operation and maintenance practices. Factory trained instructors shall be employed wherever practical and available. The Department of Veterans affairs reserves the right to request the removal of, and substitution for, any instructor who, in the opinion of the COR, does not demonstrate sufficient qualifications in accordance with requirements for instructors above.
- D. Utilize the maintenance manual for the system or equipment as a text for instruction. **Instruction shall include a full and extensive review of the maintenance and operation manual.** Failure to execute this task shall require additional training sessions when this information is made available.
- E. Unless otherwise required or approved, the instruction shall be given during the regular work week after the equipment has been accepted and turned over to the Government for regular operation. Where significant changes or modifications in equipment are made under the terms of the guarantee, additional instruction shall be provided as may be necessary to acquaint the operating personnel of the changes or modifications. When more than four man-days (32 hours) of instruction are specified in

other Sections, approximately half of the time shall be classroom instruction and the other half at the site of the system or equipment.

- F. Upon completion, submit written acknowledgment with documentation to the Project Engineer demonstrating that the required instructions were successfully completed for each discipline.

3.2 FINAL CLEANING

- A. Cleaning shall include dusting, washing, HEPA vacuuming and other required sanitizing of all surfaces within immediate and adjacent affected areas. All affected areas shall be cleaned, polished and hygienically sanitized including but not limited to floors, walls, partitions, ceilings (including above removable ceiling systems ceiling tiles), fixtures, lenses, windows, equipment, furniture (built-in or free standing), shelves counters, cabinets, doors, drawers. Comply with manufacturer's instructions for cleaning operation. Close off access to areas as cleaning is completed. **Project phasing shall require cleaning to be performed in various phases.**
- B. The following minimum requirements shall be performed in addition to special cleaning requirements specified in other Sections:
1. Remove markings that are not required as permanent labels.
 2. Vacuum clean carpeted surfaces and similar soft surfaces.
 3. Clean transparent materials, including mirrors and glass, to a polished clear condition. Replace broken glass and damaged transparent materials.
 4. Clean exposed exterior and interior hard-surface finishes, to a dirt-free condition, free of dust, stains, films and similar noticeable substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
 5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, and similar spaces.
 6. Wet mop concrete floors in non-occupied spaces.
 7. Strip, wash, wax and polish to a sanitary clean condition all floor surfaces within the construction boundary and outside the boundary throughout areas of construction traffic flow throughout the project.
 8. Clean HVAC systems within the construction area to the requirements specified.

9. HEPA vacuum the inside/outside sections of the building baseboard perimeter heating fin tube components within the construction area to insure clean and healthy operation.
 10. Wet wipe surfaces of equipment clean. Remove excess lubrication and other substances.
 11. Clean and polish plumbing fixtures to a sanitary condition free of stains.
 12. Clean light fixtures and lamps of debris and stains to function with full efficiency.
 13. Clean other items to a condition of sanitation acceptable for intended service use.
- C. Damaged surfaces and items within the contract limits shall be patched, repaired, refinished, painted and/or replaced as necessary with materials comparable to the surrounding material and surface equal to new conditions unless otherwise noted or directed by the VA Project Engineer. Finished surfaces shall be indistinguishable from the surrounding area.
- D. Protection Removal: Except as otherwise indicated or requested by the Contacting Officer, remove temporary protection devices and facilities which were installed during course of the work to protect previously completed work during remainder of construction period.

3.3 PARTIAL CHECKLIST PRIOR TO BENEFICIAL OCCUPANCY

The Contractor is required to ensure that all the following list items are completed:

1. Mechanical Systems -

- Completion of Mechanical System Inspecting & Testing Checklist as specified in Section 23 05 11, REQUIREMENTS FOR MECHANICAL INSTALLATIONS.
- Verification of Air Conveyance System Cleanliness as specified in Section 23 31 00, HVAC DUCTS AND CASINGS.
- Equipment is operating correctly, air/water/steam flow balanced and thermostatic sensors control temperature as designed.
- All parameters met per specifications (actual measurements) with documentation.
- Equipment labeled, access doors tagged with belt and filter sizes designated.
- Balancing Report for all HVAC piping and duct systems.
- Mechanical/Plumbing System Valve Schedule sheets.
- As-built plans with pipe/ductwork diagrams.

- Equipment Data Records - Removed and/or Installed.
2. Electrical Systems -
- Completion of Electrical System Inspecting & Testing Checklist as specified in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.
 - Completion of NEC Compliance Checklist as specified in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.
 - All parameters met per specifications (actual measurements) with documentation.
 - All panelboard labeled, circuits traced out, directories updated and panelboard schedule sheets completed (in typed format).
 - Each receptacle and switch identified as to circuit & panelboard number.
 - Master electrical one-liner updated.
 - As-built plans with wiring diagrams.
 - Equipment Data Sheets.
3. Facility Communication Systems -
- Computer networks, special system alarms to digitizers, fire alarms.
 - Code Blue, Code Green, Emergency Call, intercoms, et al, etc.
 - HVAC energy management system.
4. Warranty -
- Contractor shall provide name and telephone number of qualified service organization to perform emergency repairs on a 24-hour basis. Each trade shall provide a minimum 1 year (24 hour on call) labor/parts service for equipment troubleshooting and correction. Warranties' starting dates may not be the same for all systems so they must be explicitly stated with supporting documentation.

3.4 CONTRACT COMPLETION

- A. Notification: Contractor shall notify the Contracting Officer in writing with supporting documentation, when all work has been completed in accordance with the contract requirements.
- B. Acceptance: Final Inspection shall not be performed until Contractor issued final Punch List work is completed or otherwise resolved for acceptance with supporting documentation. All test and documentation for electrical and mechanical systems must be complete per contract requirements. Additional final Punch Lists may be developed in

Dayton VAMC
Dayton, Ohio

Improve Campus Access and Security
Project 552-16-101

collaboration with Project A/E including COR, Contacting Officer,
Department Service (customer) and appropriate technical personnel from
the Department of Veterans Affairs.

- C. Keys issued to the Contractor by the VA shall be returned to the VA COR
at the completion of beneficial occupancy. Project completion is not
achieved until all assigned VA keys have been returned.

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ATTACHMENTS FOLLOW

ATTACHMENT A: Equipment Data Record

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Project 552-16-101

Equipment Data Record: Contractor Removed and/or Installed Equipment

VA Project Name & Number:

General Contractor Name & Address:

Subcontractor Name & Address:

Manufacturer:

Vendor:

Project Device Name:

Mfg's Device Name:

Model #:

Serial #:

VA #:

Bar Code #:

Acquisition Date:

Acquisition Value:

Life Expectancy:

Warranty Expiration Date:

Equipment Location:

Facility Utilities Altered:

Filter Size/Type/Qty:

Belt Size/Type/Qty:

M & O Comments: