

**DIVISION 1 - GENERAL REQUIREMENTS**  
**Section 01700 - Project Closeout**

**1. GENERAL**

**1.01 SUBSTANTIAL COMPLETION**

- A. The Contractor shall:
1. Submit written certification to the Construction Manager upon substantial completion of the project.
  2. Submit list of major items to be completed or corrected.
- B. The Construction Manager shall make an inspection after receipt of certification. Contact School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager to schedule inspection.
- C. The substantially complete inspection shall include, but not be limited to:
1. The projects contracted work and any additional change orders.
  2. All equipment and systems tested and shown operational in the presence of the School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager.
- D. After the inspection the Engineer of Record and Construction Manager shall:
1. Prepare, and submit to the Contractor, a list of items to be completed or corrected, as determined by the inspection, along with the designated timeframe for completion.
  2. Prepare and issue a Certificate of Substantial Completion, containing:
    - a. The date of substantial completion.
    - b. A list of items to be completed or corrected by the Contractor.
    - c. The timeframe within which the Contractor shall complete or correct the work of the above listed items.
    - d. The time and date the Owner will assume possession of the work or designated portion thereof.
    - e. The responsibilities of the Contractor for:
      - (1) Insurance.
      - (2) Utilities.
      - (3) Operation of mechanical, electrical and other systems.
      - (4) Maintenance and cleaning.
      - (5) Security.
    - f. The signature of the:
      - (1) Principal.
      - (2) Contractor.
      - (3) Engineer of Record
      - (4) CPS Operation Project Manager Representative
      - (5) CPS Office of Technology Service Project Manager
  3. Prepare and issue to the Owner a Certificate of Substantial Completion.

- E. Should the Engineer of Record and/or CPS Operation Project Manager Representative consider the work not to be substantially complete:
  - 1. The Engineer of Record and CPS Operation Project Manager Representative shall immediately notify the Contractor, in writing, stating the reasons. The Contractor shall complete the work, and then send a second written notice to the Engineer of Record and CPS Operation Project Manager Representative certifying that the Project, or designated portion of the Project, is substantially complete.
  - 2. The Engineer of Record and CPS Operation Project Manager Representative shall then re-inspect the work upon Contractors request at a scheduled re-inspection time. The Contractor must contact the Construction Manager to reschedule re-inspection of the project.

## 1.02 FINAL INSPECTION

- A. The Contractor shall submit written certification that:
  - 1. The Contract Documents have been reviewed.
  - 2. The Project had been inspected for compliance with the Contract Documents.
  - 3. The Work has been completed in accordance with the Contract Documents.
  - 4. The equipment and systems have been tested during the substantial completion and are shown operational in the presence of the Construction Manager, School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager
  - 5. The Project is completed, and is ready for final inspection.
- B. The Construction Manager shall make an inspection after receipt of certification. Contact School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager to schedule inspection.
- C. When the School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager consider the work is finally complete and in accordance with the requirements of the Contract Documents, the Architect / Engineer of Record and CPS Operation Project Management Representative shall request the Contractor to make Project Closeout submittals.
- D. If the work is not considered complete:
  - 1. The Engineer of Record and CPS Operation Project Manager Representative shall immediately notify the Contractor, in writing, stating the reasons.
  - 2. The Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written notice to the Construction Manager certifying that the work is complete.
  - 3. The Contractor shall complete the work, and then send a second written certification to the Construction Manager notifying that the Project is complete.
  - 4. The Construction Manager shall make an inspection after receipt of certification. Contact School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager to schedule inspection.

5. When the School Principal, Building Engineer, Architect / Engineer of Record, CPS Operation Project Manager Representative, and CPS Office of Technology Service Project Manager consider the work is finally complete and in accordance with the requirements of the Contract Documents, the Architect / Engineer of Record and CPS Operation Project Management Representative shall request the Contractor to make Project Closeout submittals.

### 1.03 RE-INSPECTION COSTS

- A. Should the Architect / Engineer of Record be required to perform second inspections because of failure of work to comply with the original certifications of the Contractor, the **Architect / Engineer of Record will be compensated for additional services, which will be deducted from the Contractor's final payment.**

### 1.04 CLOSEOUT SUBMITTALS

The Architect / Engineer of Record and/or Contractor shall submit the following to the School Principal, CPS Office of Technology Service and CPS Department of Operation:

All documentation will be provided in Electronic Format (**readable**) in:

- AutoCAD 2000
- XP Professional-Word
- XP Professional-Excel
- Microsoft Project 2000

Test results will be converted to Word or Excel.

OCR program will be used to convert scanned documentation.

- A. The following Closeout documentation will be provided to CPS Office of Technology Service, CPS Department of Operations, and the School Principal:
  1. Two (2) CD-R sets-readable on MultiRead drives
  2. Two (2) CD-RW sets- readable on MultiRead drives
  3. One (1) set of Binders
- B. Project Record Documents and Manuals (Submittals) shall include but not be limited to:
  1. Training Manual
  2. Operations and Maintenance Manual
  3. Warranty Manual
  4. Test Results
  5. As-Built Drawings
  6. CPS LAN Project Manual
- C. Project Record Documents and Manuals format will include all of the following provisions for: Training of on site users, Future operations and maintenance of the facility, System warranty for active and passive components with installer qualifications, and System test results.

1. Training Manuals shall include the following information with regards to the Individual installation:
  - a. Agenda for the Training Meeting
  - b. Explanation of the CPS Network Infrastructure
  - c. Set up of computers on Network
  - d. Power up and Shut down Procedure
  - e. LAN and Concentrator Layouts
  - f. MDF Room Layout
  - g. Switch Maintenance and Configuration
  - h. Schools one line layout diagram
  
2. Operations and Maintenance Manuals shall include the following information with regards to the individual installation:
  - a. CPS LAN Project Manual (LAN scope of work for the project)
  - b. Equipment Manuals for all Active components installed on the project
  - c. Addenda
    1. All addenda for the Project and its Documents pertaining to the addenda
  - d. Bulletins
    1. All Bulletins in reference to the Project and Documents
  - e. Request for Information (RFI) Documents
    1. Any Requests for information on the project shall be included
    2. All response to RFI Requests shall also be included and directly associated and/or connected to the RFI in the Manual
  - f. Request Change Order (RCO) Documents
    1. Any Requests for Change Orders on the project shall be included
    2. All Response to RCO Requests shall also be included and directly associated and/or connected to the RCO in the Manual
  - g. Field Orders
    1. All Field Orders and any paperwork associated with the Field order shall be included in the Manual
  - h. Meeting Minutes
    1. Meeting minutes from weekly meetings shall be included in Manual
  - i. Insurance documents or certificates
  - j. Permits issued for the project
  - k. Concentrator details (individually as installed on the project per location)
  - l. Workstation Outlets (Typical)
    1. Vertical MMTV outlet
    2. Teachers workstation outlet
    3. Student workstation outlet

4. Administration Workstation outlet
3. Warranty Manuals shall include the following information with regards to the individual installation
  - a. Contractors Guarantee and Warranty Information
  - b. Manufacturers Hardware/Software Warranty and Software License:
    1. For all passive components and equipment
      - a. Connectivity
      - b. Cabling
    2. For all active components and equipment
      - a. Switches
      - b. Routers
      - c. UPS Systems
      - d. Access Points
      - e. TVSS
  - c. Installers Certification and Qualifications
  - d. Equipment (Active components) listing including:
    1. Manufacturers part number
    2. Product specifications
    3. Serial numbers
    4. Configuration
    5. Photographs of completed installations of active and passive components located in concentrators and MDF/IDF locations
    6. Photographs of completed installations of MSB and electrical panel locations
  - e. Procedure for obtaining warranty services
    1. Installing contractor, address, telephone number, and e-mail/web address
    2. Connectivity mfg., address, telephone number, and e-mail/web address
    3. Cabling mfg., address, telephone number, and e-mail/web address
    4. Switch mfg., address, telephone number, and e-mail/web address
    5. Router mfg., address, telephone number, and e-mail/web address
    6. UPS System mfg., address, telephone number, and e-mail/web address
    7. TVSS mfg., address, telephone number, and e-mail/web address
4. Test Results and Documentation
  - a. Documentation of Certification Testing device including but not limited to
    1. Manufacturer
    2. Model
5. Product specs
  - a. Data Tests

- b. Data qualifications and test summary
  - c. Data cable identification
  - d. Fiber Tests
  - e. Fiber qualification and test summary
  - f. Fiber cable identification
  - g. Coax Tests
  - h. Coax qualification and test summary
  - i. Coax cable identification
  - j. Voice Tests
  - k. Voice qualification and test summary
  - l. Voice cable identification
  - m. MMTV Tests
  - n. MMTV qualification and test summary
  - o. MMTV cable identification
6. Closeout
- a. Project Record Documents, Specifications to be provide also on Magnetic media (readable in Excel, Word, and/or Microsoft Project 2000).
  - b. Operation and Maintenance Data.
  - c. As Built Drawings on Sepias and copies in Magnetic media (readable by AutoCad ver. 2000) for Windows.
  - d. Cabling test reports to be provide on Magnetic media (readable in Excel or Word).
  - e. Electrical Panel Schedules to be provide on Magnetic media (readable in Excel or Word).
  - f. Guarantees and 15 year Performance/Product guarantee for infrastructure cabling/devices.
  - g. Permits.
- D. One Binder will be provided per MDF with documentation (i.e. Excel, Word, Pictures, panel schedules, etc.) from:
- 1. Sections 17195, 16195.
  - 2. AS-Build / one line drawings
  - 3. One (D) size prints

Note: Provide One (1) copy on CD-R Disk with previous information (1.04 D.).

**END Section 01700**