

SECTION 01452 - CONTRACTOR'S QUALITY CONTROL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Administrative and procedural requirements for Contractor quality assurance and quality control.
- B. Related Requirements:
1. Construction Contract between Walmart and Contractor: Inspections, testing, and approvals required by public authorities.
 2. Section 01455 - Testing, Adjusting, and Balancing: Contractor procurement of test and balance for heating, ventilating, and air conditioning systems.
 3. Section 01770 - Contract Closeout: Project Record Documents.
 4. Appendix B - Testing, Inspection, and Observation by Owner.
 - a. Quality Requirements of Owner's Construction Testing laboratory (CTL) and services. (Formerly included in Section 01458.)
 - b. Architect-Engineer Site Observation: Site observation by Owner's Architect and Engineer Consultants.
 - c. Civil Engineering Consultant Site Observation: Site observation by Owner's Civil Engineering Consultant.
- C. Contractor testing and inspection are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
1. Contractor testing and inspection includes testing or inspection to be performed by and under the responsibility of the General Contractor as well as that required by the manufacturer, manufacturer's representative, product supplier, or other party under the responsibility of the Contractor.
 2. Requirements in this section are independent of testing and inspection specified for the Owner's Construction Testing Laboratory (CTL) specified in Appendix B. Testing and inspection by the CTL will be paid for by the Owner at no cost to the Contractor.
 3. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 4. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner's CTL, Walmart Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

- A. Testing: Evaluation of systems, primarily requiring physical manipulation and analysis of materials, in accordance with approved standards.
- B. Inspection: Evaluation of systems primarily requiring observation and engineering judgement.
- C. Quality Assurance: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will substantially comply with construction documents.
- D. Quality Control: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction substantially comply with construction documents.
- E. Quality assurance and quality control may be performed by either the Contractor or the Construction Testing

Laboratory employed by the Owner.

- F. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify or demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- G. Architect of Record (AOR): The prime consultant in charge of overall design and coordination of the building.
- H. Engineer of Record (EOR): The Registered Engineer in responsible charge of engineering design for the project.
- I. Structural Engineer of Record (SER): The Registered Engineer in responsible charge of the structural design for the project.
- J. Civil Engineering Consultant (CEC): The Registered Engineer in responsible charge of the civil design for the project.
- K. Architect - Engineer (A/E): A collective term to include the AOR, CEC, SER, and the Mechanical, Electrical, and Fire Protection EOR.
- L. Construction Testing Laboratory (CTL): The independent testing and inspection agency employed by the Owner.
- M. Test and Balance Agent (TBA): The HVAC testing and balancing agency employed by the Contractor.
- N. Special Inspector (SI): The Special Inspector under the direct supervision of a registered civil/structural engineer (unless otherwise specified) regularly engaged in inspection, and experienced with the type of work requiring related testing and inspection. The categories of special inspector are specified in Appendix B.
- O. Building Official: The Officer or his duly authorized representative charged with the administration and enforcement of the local building code.
- P. Deviation: A deviation is any item or component of work that does not substantially conform to the requirements of the construction documents and which has not been corrected by the end of business on the day it is identified.

1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect/Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. Refer uncertainties to Architect/Engineer for a decision before proceeding.

1.4 SUBMITTALS

- A. Submit Test and Inspection Reports within three working days of T&I occurrence.
- B. Submit required reports and other items to the following:
 - 1. AOR: (Construction Administration Leader).
 - a. One copy (Site work T&I).
 - b. Three copies (Bldg T&I). AOR will transmit one copy of Bldg T&I to SER.
 - c. Report of non-conforming work.
 - 2. Contractor: Three copies.
 - 3. Building Official: Quantities as required.

1.5 REPORTS

- A. Submit reports as required herein and conduct and interpret tests and inspections.
- B. Testing and Inspection Report: Submit test and inspection reports including the following information:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Store number.
 - 4. Firm name and address.
 - 5. Name and signature of tester or inspector.
 - 6. Name and seal of registered engineer in responsible charge (as applicable).
 - 7. Date and time of sampling.
 - 8. Date of test or inspection.
 - 9. Identification of product and specification section.
 - 10. Location in project, including elevations, grid location and detail.
 - 11. Type of test or inspections.
 - 12. Results of tests or inspections and interpretation of same.
 - 13. Observations regarding compliance with Contract Documents or deviations therefrom.
- C. Submit a separate final signed report stating whether the work requiring inspection is, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and the applicable workmanship provisions of the building code.
- D. Reports shall be made on 8-1/2 by 11 white paper, suitable for photocopying and binding in booklet form. Sheets shall have the CTL letterhead (including phone number and address). Larger sheets shall be folded and bound into the booklet.
- E. Tests and inspections reports indicating non-conformance (deviations) to the Contract Documents shall be brought to the attention of the A/E within 24 hours upon discovery.
- F. Contractor shall send an RFI to the A/E on the same day of non-conformance (deviation) notification.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 QUALITY CONTROL

- A. Quality control shall be the responsibility of the Contractor.
- B. The Owner will perform testing and inspection (T & I) but only as a means of verification to the Owner of Contractor quality control performance. Owner T & I shall not be considered Quality Control or Quality Assurance as defined herein. Owner T & I and Contractor obligations with respect to Quality Control shall be pursuant to related provisions of Articles 2.3.3, 2.3.4, 2.4.1, 2.5.2, 2.6.2, and 3.2.2 of the Construction Contract between Walmart and Contractor.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- C. T & I by the Owner will be conducted by the Owner's Construction Testing Laboratory at no cost to the Contractor in accordance with Appendix B, except that costs for failing tests will be deducted from the sum due to the Contractor.

- D. Owner T & I results and reports will be available as information to Contractor.
- E. Owner's T & I shall not be relied on by the Contractor as an indication of conformance or nonconformance of work nor shall the Contractor be dependent on the Owner's CTL test results for verification of satisfactory work in place.
- F. Work found by the Owner's CTL to be defective or in non-compliance with Contract Documents shall be corrected based on the CTL T&I results except when proven otherwise by subsequent CTL or Contractor conducted tests.
- G. In-place work will be subject to testing and inspection by the Owner's CTL at any time during the progress of the work.
- H. Test reports conducted by and at the discretion of the Contractor shall be provided to the Owner upon request when reason exists to suspect non-compliance or when used for comparison to CTL conducted tests.
- I. Any testing agency, if employed by the Contractor for purposes of Contractor Quality Control, shall not be the same entity engaged by the Owner.
- J. Contractor shall pay for:
 - 1. Tests and inspections at the source or prior to incorporation into the Work of materials, products, or equipment to certify compliance with Contract Documents.
 - 2. Tests, samples, inspection, or engineering services the Contractor determines appropriate for performance of Work or for Contractor's convenience.
 - 3. Tests and inspections when initial tests or inspections indicate Work does not comply with Contract Documents.
 - 4. Tests and inspections required or conducted by public authorities as part of permits or inspection fees.
 - 5. Other tests and inspections indicated to be "by Contractor."
- K. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and to provide storage and curing of test samples. Provide lift equipment as required for inspection personnel of the Owner or the Owner's representatives.
- L. Provide 14 days written notice to A/E prior to expected time for operations requiring observation, inspecting, and testing. If work to be observed is covered prior to notification, uncover work as required.
- M. Notify in writing the Walmart Construction Manager three working days prior to expected time for operations requiring inspecting and testing services.
- N. Repair and protect the work regardless of assignment of responsibility for inspection, testing, or similar services.
 - 1. Protect work exposed by or for quality assurance and quality control service activities.
 - 2. Upon completion of inspection, testing, sample-taking, and similar services, restore constructed areas to conform to Contract Documents.
- O. Costs, including without limitation additional professional fees and expenses, of any required redesign or re-engineering required by non-conforming tests and inspections will be deducted from the sum due the Contractor.
- P. Provide a Letter of Conformance at the completion of the Project to the Walmart Construction Manager, with copy to the AOR, stipulating that the Project has been built per the Contract Documents. An example is attached at the end of this Section.
- Q. Maintain a copy of Contract Drawings and Specifications with all Addenda and Change Orders. Use the Contract Documents supplemented by the approved shop drawings and applicable material and workmanship provisions of the Code for testing and inspection of the work.
- R. Provide qualified personnel at site to comply with schedule and submit reports for each test and inspection as defined in Part 3 of this Section.

- S. Perform specified inspection, sampling, and testing of products in accordance with specified standards.
- T. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- U. Perform testing and inspection in a timely manner to avoid delay of work.
- V. Notify Walmart Construction Manager and CEC or AOR, as applicable, of observed non-conformance of Work or Products. If observed deviations from the Contract Drawings, Specifications, or building code will be probable cause of subsequent rejection of work or material, notify the Walmart Construction Manager and, CEC or AOR sufficiently in advance for determination to continue operations or take corrective measures before continuing.
- W. Deviations from the Contract Documents will be entered into the on-line Walmart Observation Log by other parties performing Quality Control construction observation. The Contractor shall track deviations, as defined above, and resolutions and remedial repairs to deviations and subsequent conformance to the Contract Documents on the Observation Log. (www.bldgportal.com, enter username and password, select Observation Log. Follow instructions on the Observation Log website.)
- X. The Walmart Construction Manager in conjunction with the CTL and/or SI will determine when to involve the AOR or EOR for remedial action.
- Y. If additional A/E site or FPT visits are required beyond those described in Section 01454 as determined by Walmart to determine correction to non-conforming work, the Contractor shall reimburse the Owner the sum of \$4000 for each additional visit to cover A/E expenses. Additional A/E site observations or FPTs will be performed as required until all deviations have been corrected by the Contractor and closed by the A/E consultant.
- Z. Cooperate with CTL/SI personnel, and provide access to the Work and to Contractor's facilities.
- AA. Submit test and inspection reports to the A/E consultant and other designated persons as specified in individual sections. Submit test and inspection reports to the Building Official as required.
- BB. Testing and inspection by the Building Official does not preclude the normal field involvement and site observations by the A/E consultant, nor shall it relieve the Contractor of any responsibility to complete the work in accordance with the approved drawings and specifications.
- CC. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

3.2 PRODUCTION TESTING

- A. General Requirements:
 1. Testing shall be conducted as specified in the individual specification sections.
 2. If inspection of fabricators work is required, the Owner's representative may require testing and inspection of the work at the plant, before shipment. Owner, Architect, and Structural Engineer of Record (SER) reserve the right to reject material not complying with the Contract Documents.
 3. Testing and inspection shall be performed in accordance with the industry standard used as the reference for the specific material or procedure unless other criteria are specified. In the absence of a referenced standard, tests shall be accomplished in accordance with generally accepted industry standards.
 4. Work shall be checked as it progresses, but failure to detect any defective work or materials shall in no way prevent later rejection if defective work or materials are discovered, nor shall it obligate Owner to accept such work.

END OF SECTION

[Example Conformance Letter from Contractor. Text in parentheses are to be edited for each individual project]

[Date]

[Mr. Construction Manager]
Walmart Construction
Sam M. Walton Development Complex
2001 S. E. 10th Street
Bentonville, Arkansas 72716

[Re: Supercenter (Store #xxx) – City, State]

[Dear Construction Manager:]

The purpose of this letter is to state to Walmart Stores, Inc. that, to the best of our knowledge, the construction on the above referenced project has been completed in substantial conformance with the approved Contract Documents.

We performed construction testing, observation, and testing as required by the Contract Document. To our knowledge, no outstanding items exist except as may be otherwise entered and shown on the Walmart Observation Log.

Sincerely,

[GENERAL CONTRACTOR]
[Include signature and date of signature]

cc:
File
[ARCHITECT OF RECORD]
[ENGINEER OF RECORD]