

SECTION 014500

QUALITY CONTROL

PART 1 - GENERAL

1.1 QUALITY CONTROL PLAN

- A. General: The Contractor shall furnish for approval by the City and Engineer, a Contractor Quality Control (CQC) Plan within 10 calendar days after Notice to Proceed. The plan shall identify personnel, procedures, instructions, records, and any forms to be used.

1.2 QUALITY CONTROL ORGANIZATION

- A. Contractor Quality Control (CQC) System Manager: CQC System Manager shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This person shall demonstrate their ability to perform correctly the duties required to the satisfaction of the City and shall be physically at the Site whenever Work is in progress and will be in charge of the Contractor's Quality Control program for this project. All the Contractor's submittals for approval shall be reviewed and modified or corrected as needed and approved correct prior to forwarding of such submittals to the City and Engineer.
- B. Personnel: The personnel of the CQC staff shall be fully qualified by experience and technical training to perform their assigned responsibilities and shall be directly hired by and work for the Contractor.

1.3 SUBMITTALS

- A. Submit in accordance with Section 013000 – Shop Drawings, Submittals and Samples. The CQC System Manager shall be responsible for certifying that all submittals comply with the contract requirements. Perform work using persons fully qualified to produce workmanship of specified quality.
- B. The Contractor Quality Control Plan: This plan shall include as a minimum, the following:
1. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall report to the Project Manager or someone higher in the Contractor's

organization.

2. The name, qualifications, duties, responsibilities, and authorities of each person assigned a CQC function.
 3. A copy of a statement signed by an authorized official of the Contractor's firm, which describes the responsibilities and delegates the authorities of the CQC System Manager.
 4. Procedures for scheduling and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents.
 5. Control testing procedures for each specific test.
 6. Names of independent testing laboratories to perform required testing. (Testing laboratories must be approved by the City.)
 7. Reporting procedures including proposed reporting formats.
 8. Hazard Communication Program required under OSHA requirements.
- C. Acceptance of CQC Plan: Acceptance of the plan by the City is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction.
- D. Notification of Changes to CQC Plan: After acceptance of the CQC plan, notify the City in writing of any proposed change. Proposed changes are subject to acceptance by the City.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 CONTROL

A. Contractor Quality Control is the means by which the Contractor assures that his/her construction complies with the requirements of the Contract Documents. The controls shall be adequate to cover all construction operations, including both onsite and offsite operations and will be keyed to the proposed construction sequence. The controls shall include at least three phases of inspection for all definitive features of work as follows:

1. Preparatory Inspection: This shall be performed prior to beginning any definable feature of work. It shall include a review of contract requirements; a check to assure that all materials and/or equipment have been tested, submitted, and approved; a check to assure that

provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials, equipment, and sample work to assure conformance with the Contract Documents and that all materials and/or equipment are on hand.

2. Initial Inspection: This shall be performed as soon as a representative portion of the particular feature of work has been accomplished and shall include examination of the quality of workmanship and a review of control testing for compliance with contract requirements, use of defective or damaged materials, omissions, and dimensional requirements.
3. Follow-up Inspection: These shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. Such inspection shall be made a matter of record in the CQC documentation as required below. Final follow up inspections shall be conducted and deficiencies corrected prior to the addition of new features of work.

3.2 TESTS

- A. Test Procedures: Perform tests specified or required to verify that control measures are adequate to provide a product which conforms to contract requirements. Contractor shall procure the services of an industry recognized independent testing laboratory. A list of tests which the Contractor understands they are to perform shall be furnished as a part of the CQC Plan to the City. The list shall give the test name, specification paragraph containing the test requirements, and the personnel and laboratory responsible for each type of test.
- B. Perform the following activities and record and provide the following data:
 1. Verify that testing procedures comply with Contract requirements.
 2. Verify that facilities and testing equipment are available and comply with testing standards.
 3. Verify that test instrument calibration data are checked against certified standards.
 4. Verify that recording forms, including the test documentation requirements, have been prepared.

3.3 COMPLETION INSPECTION

- A. At the completion of all Work or any increment thereof established under this Contract, the CQC System Manager shall conduct a completion inspection of the Work and develop a "punch list" of items which do not conform to the Contract Documents. Such a list shall be included in the CQC documentation and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or their staff shall make a second completion inspection to ascertain that all deficiencies have been corrected and so notify the City and Engineer. The completion inspection and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire Work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.4 DOCUMENTATION

- A. Maintain current records of quality control operations, activities and tests performed including the work of suppliers and subcontractors. These records shall be on an acceptable form and indicate a description of trades working on the project, the numbers of personnel working, the weather conditions encountered, any delays encountered, and acknowledgment of deficiencies noted along with the corrective actions taken on current and previous deficiencies. In addition, these records shall include factual evidence that required activities or tests have been performed, including but not limited to the following:

1. Type and number of control activities and tests involved.
2. Results of control activities or tests.
3. Nature of defects, causes for rejection, etc.
4. Proposed remedial action.
5. Corrective actions taken and results of retesting.

- B. These records shall cover both conforming and defective or deficient features and shall include a statement that supplies and materials incorporated in the Work comply with the requirements of the Contract. Legible copies of these records shall be furnished to the City.

3.5 NOTIFICATION OF NONCOMPLIANCE

- A. The City will notify the Contractor of any noncompliance with the foregoing requirements. After receipt of such notice, the Contractor shall immediately take corrective action. Such notice, when delivered to the Contractor or their representative at the Site, shall be deemed

sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the City may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION