

SECTION 014500
QUALITY CONTROL

PART 1 - GENERAL

1.01 QUALITY CONTROL CONCEPTS

- A. Quality Control Services include inspections, tests, and related actions, including reports, performed by the Contractor, independent agencies, and governing authorities during and after the execution of the Work to evaluate that the Work complies with the Contractual requirements. Quality Control Services do not include Contract enforcement activities performed by the University or its Professional.
- B. Inspection and Testing Services may be required to verify compliance with requirements specified or indicated, and are considered to be part of Quality Control Services. Such Inspection and Testing Services do not relieve the Contractor of responsibility for compliance with Contract requirements.
- C. Specific Quality Control requirements for individual construction activities are specified in the respective Technical Specification sections for those construction activities. Those Quality Control requirements cover production of standard products as well as customized fabrication, installation, and construction. Requirements for Quality Control Services may also be required by governing authorities.
- D. Quality Control Services specified are not intended to limit the Contractor's quality control procedures to facilitate compliance with Contract requirements, and do not relieve the Contractor of responsibility for compliance with the Contract requirements.
- E. Requirements for which the Contractor is to provide Quality Control Services, and which are also being conducted by the University, its Professional, and/or authorities having jurisdiction, are not limited by provisions of this Section.

1.02 RESPONSIBILITIES

- A. Contractor.
 - 1. Separate Prime Contractors shall provide those Quality Control Services specified in the Technical Specification sections, or required by governing authorities, related to their Work, except where they are specifically indicated to be the responsibility of another Separate Prime Contractor, or the responsibility of the University, its Professional, or another entity.
 - 2. The Contractor shall employ qualified individuals and/or qualified contracted testing laboratories, consultants, or other qualified individuals or firms to conduct their Quality Control Services.
 - 3. Specified Quality Control Services may include specific requirements for Inspection and Testing Services, and if indicated to be the responsibility of the Contractor, the Contractor shall employ a testing laboratory, consultant, or other qualified individual or firm to perform the inspection or test.
- B. University. University inspections and tests are addressed in paragraph 1.05 below.
- C. Re-testing.

1. The Contractor is responsible for re-inspection or re-testing where results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with the Contract Document, regardless of whether the original inspection or test was the Contractor's responsibility.
2. The Contractor is responsible for re-inspection or re-testing of construction that is revised or replaced by the Contractor and where required inspections or tests were performed on original construction, regardless of whether the original inspection or test was the Contractor's responsibility.
3. Responsibility for re-inspection/re-testing includes arrangement, coordination, and cost of, and any impacts related to the conduct of, such re-inspection or re-test.

1.03 PROCEDURES

- A. Any testing laboratory, consultant, or other qualified individual or firm engaged for Quality Control Services shall be licensed to operate in the Commonwealth of Pennsylvania.
- B. Any testing laboratory engaged shall be prequalified as complying with Recommended Requirements for Independent Laboratory Qualification by the American Council of Independent Laboratories, and shall specialize in the types of inspections and tests to be performed.
- C. If the Contractor is required to engage an Inspection and Testing Service, and the University has also employed an Inspection and Testing Service for the same or related services, the Contractor shall not employ the same Service engaged by the University, unless otherwise approved in writing by the University.
- D. Where Quality Control Services are indicated as the responsibility of the University or its Professional, the University will furnish to the Contractor the names, addresses, and telephone numbers of those testing laboratories, consultants, or other qualified individuals or firms to be engaged, and a description of the types of inspections and tests they will perform.
- E. The Contractor shall cooperate with the University and governing authorities, and any other entities engaged by either of them, performing required inspections, tests, and similar services, and the Contractor shall provide reasonable auxiliary services as requested. Auxiliary services required include but are not limited to:
 1. Providing access to the Work.
 2. Furnishing incidental labor and facilities necessary to facilitate inspections and tests.
 3. Providing preliminary design mix or other design data related to the inspections or tests.
 4. Taking adequate quantities of representative samples of materials that require testing, or assisting in taking samples.
 5. Providing facilities for storage and curing of test samples, and delivering samples to testing laboratories.
 6. Securing and protecting inspection, sampling, and test equipment at the Project site.
- F. Contractors and all entities performing inspections, tests, and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. Contractors, the University, and each entity shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests. The General

Construction Contractor is responsible for coordinating and scheduling times for inspections, tests, taking samples, and similar activities whenever those activities affect more than one Prime Contractor.

- G. Prior to and during inspecting, testing, and similar services, the Contractor responsible for that inspection, test, or similar service shall protect any construction exposed for or by the inspection or test, or any unfinished construction in the vicinity of the inspection or test. Upon completion of inspections, testing, and similar services, the Contractor responsible for that inspection, test, or similar service shall repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.

1.04 SUBMITTALS

- A. The Contractor shall submit Qualifications Data for any Inspection and Testing Service that the Contractor plans to engage to perform inspections, testing, and similar services. Qualifications Data shall include proof of qualifications, in the form of a recent report on the inspection of the Inspection and Testing Service by a recognized authority.
- B. The Contractor shall submit a Schedule of Tests and Inspections, in tabular form, which includes the following:
 - 1. Technical Specification section number and title
 - 2. Description of inspection and/or test
 - 3. Identification of applicable standards
 - 4. Identification of inspection and/or test methods
 - 5. Number of inspections and tests required
 - 6. Time schedule or time span for inspections and tests
 - 7. Entity responsible for performing inspections and tests
 - 8. Requirements for obtaining samples
 - 9. Unique characteristics of each Quality Control Service
- C. The Contractor shall submit, for the University's records, copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- D. The Contractor shall submit to the University required reports of inspections, tests, and similar services. Reports from Inspection and Testing Services shall consist of a certified written report of each inspection, test, or similar service, and such reports shall be submitted through the Contractor to the University.
- E. The Contractor shall submit three (3) copies of any inspection or test report to the University. If the inspection or test was required by a governing authority, the Contractor shall submit additional copies of that inspection or test report directly to that governing authority.
- F. Reports of each inspection or test shall include, at a minimum, the following:
 - 1. Date of report
 - 2. Contract number and Project title
 - 3. Name, address, and telephone number of testing entity
 - 4. Identification of product and Technical Specification section
 - 5. Dates and locations of samples, tests, and inspections
 - 6. Names of individuals conducting the inspection or test
 - 7. Designation of the test method
 - 8. Complete inspection or test data
 - 9. Test results and an interpretation of test results
 - 10. Ambient conditions at the time of sampling and testing

11. Comments or professional opinion as to whether inspected or tested Work complies with Contract requirements
12. Recommendations on re-testing
13. Name and signature of authorizing individual

1.05 UNIVERSITY INSPECTIONS AND TESTS

- A. Inspections and tests which will be the responsibility of the University are identified in the various Technical Specification sections. These inspections and tests will be performed by an independent entity engaged by the University, or by the University's Professional, without expense to Contractor. The University reserves the right to change, at any time, the inspections and tests for which it will be responsible.
- B. Inspections and tests paid for by the University are for the sole benefit of the University. The inspection and test results will be available to the Contractor for his use. If the Contractor desires additional inspections and tests for his own quality control monitoring and purposes, the Contractor shall pay for those additional inspections and/or tests.
- C. The University, at its own expense, may perform any other Quality Control Services it deems necessary to supplement or verify the Contractor's Quality Control Services, and to supplement its Contract enforcement activities. The University may either utilize its Professional or employ a testing laboratory, consultant, or other qualified individual or firm to conduct these services.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION 014500