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**The TEXT indicated with < > is to be selected or filled in by the Specifier to meet the requirements of the project.**

**If any of the SECTIONS (i.e. 1.02, 1.03, etc.) below are not required for the project do NOT delete the Section, but rather change the title of the Section to “NOT USED” (i.e. 1.02 NOT USED) so that numbering of specification references is preserved, and delete the specification language in this Section below the title.**

## **PART 1 GENERAL**

### **1.01 SECTION INCLUDES**

- A. Testing Laboratory Services.
- B. Qualification of Laboratory.
- C. Laboratory Duties.
- D. Limitations of Authority of Testing Laboratory.
- E. Contractor’s Responsibilities.
- F. Specific Tests, Inspections, and Methods Required.
- G. Submittals.

### **1.02 RELATED SECTIONS**

- A. Conditions of Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- B. Respective sections of Specifications: Certification of products.

### **1.03 TESTING LABORATORY SERVICES**

- A. UTILITIES will employ and pay for services of an independent testing laboratory to perform specified testing.
  - 1. CONTRACTOR shall cooperate with the laboratory to facilitate execution of its required services.
  - 2. Employment of laboratory shall in no way relieve CONTRACTOR's obligations to perform the Work.
- B. CONTRACTOR shall employ and pay for services of an independent testing laboratory to perform specified services and testing.

### **1.04 QUALIFICATION OF LABORATORY**

- A. CONTRACTOR shall ensure the independent testing laboratory meets "Recommended Requirements for Independent Laboratory Qualifications," published by American Council of Independent Laboratories.

- B. CONTRACTOR shall ensure the laboratory is authorized to operate in the State of Colorado.
- C. CONTRACTOR shall submit a copy of the report of inspection of facilities made by the National Institute of Standards and Technology for the laboratory during the most recent inspection, with memoranda of remedies of any deficiencies reported from the inspection.
- D. CONTRACTOR shall ensure that testing equipment:
  - 1. Is calibrated at reasonable intervals by devices of accuracy traceable to either:
    - a. National Institute of Standards and Technology.
    - b. Accepted values of natural physical constants.

#### 1.05 LABORATORY DUTIES

- A. CONTRACTOR shall require the laboratory to cooperate with UTILITIES, <and Engineer,> and CONTRACTOR and provide qualified personnel.
- B. CONTRACTOR shall require the laboratory to perform specified inspections, sampling, and testing of materials and methods of construction:
  - 1. In accordance with specified standards.
  - 2. That ascertain compliance of materials with requirements of Contract Documents.
- C. CONTRACTOR shall require the laboratory to promptly notify UTILITIES, <and Engineer,> and CONTRACTOR of observed irregularities or deficiencies in the Work or products.
- D. CONTRACTOR shall require the laboratory to promptly submit electronic copies of written report of each test and inspection to UTILITIES, <and Engineer,> and CONTRACTOR. Each report shall include:
  - 1. <Results of testing.>
  - 2. <Testing logs.>
  - 3. <Outstanding deficiencies.>
  - 4. <Various statistical data.>
  - 5. <Testing curves.>
  - 6. <.....>
- E. CONTRACTOR shall require the laboratory to promptly submit an electronic written report of each test and inspection and 1 copy each to UTILITIES, <and Engineer,> and CONTRACTOR, and 1 copy to record documents file. Each report shall include:
  - 1. Date issued.
  - 2. Project title and number.
  - 3. Testing laboratory name, address, and telephone number.
  - 4. Name and signature of laboratory inspector.
  - 5. Date and time of sampling or inspection.
  - 6. Record of temperature and weather conditions.
  - 7. Date of test.
  - 8. Identification of product and Specification section.
  - 9. Location of sample or test in Project.
  - 10. Type of inspection or test.
  - 11. Results of tests and compliance with Contract Documents.
  - 12. Interpretation of test results, when requested by UTILITIES <and Engineer>.
- F. CONTRACTOR shall require the laboratory to perform additional tests as required by UTILITIES <and Engineer>.

#### 1.06 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
  - 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Approve or accept any portion of Work.
3. Perform any duties of CONTRACTOR other than independent third party testing.
4. Stop the Work unless in identifying a life safety hazard.

#### 1.07 CONTRACTOR'S RESPONSIBILITIES

- A. CONTRACTOR shall cooperate with laboratory personnel, and provide access to Work and to manufacturer's operations.
- B. CONTRACTOR shall secure and deliver to laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
- C. CONTRACTOR shall provide laboratory with preliminary design mix proposed to be used for concrete, and other materials mixes which require control by testing laboratory.
- D. CONTRACTOR shall furnish copies of products test reports as required to UTILITIES <and Engineer>.
- E. CONTRACTOR shall furnish incidental labor and facilities:
  1. To provide access to Work to be tested to the laboratory.
  2. To obtain and handle samples at Project Site or at source of product to be tested.
  3. To facilitate inspections and tests.
  4. For storage and curing of test samples.
- F. CONTRACTOR shall notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests. When tests or inspections cannot be performed after such notice, CONTRACTOR shall reimburse UTILITIES for expenses incurred by UTILITIES related to such scheduled testing.
- G. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by an independent testing company. Payment for re-testing or re-inspection will be CONTRACTOR's responsibility.
- H. CONTRACTOR shall employ and pay for services of separate, equally qualified independent testing laboratory to perform additional inspections, sampling, and testing required:
  1. For CONTRACTOR's convenience.
  2. When initial tests indicate Work does not comply with Contract Documents.
- I. CONTRACTOR shall make arrangements with laboratory and pay for additional samples and tests required for CONTRACTOR's convenience.
- J. Nothing in this Specification shall relieve CONTRACTOR of its obligation to perform Work in accordance with requirements of the Contract Documents.

#### 1.08 SPECIFIC TESTS, INSPECTIONS, AND METHODS REQUIRED

- A. Specific test shall be performed in accordance with the Contract Documents. Testing may include but is not limited to:
  1. <Laboratory Compaction Characteristics of Soil Reports.>
  2. <Concrete Compressive Strength Test Reports.>
  3. <Field Density Test Reports.>
  4. <Summary of Reinforcing Steel Observations.>

5. <Welding Inspection Test Reports.>
6. < .>

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

3.01 SUBMITTALS

- A. Submittals to be provided by the CONTRACTOR shall include but are not limited to the following:
  1. Material Test Reports: CONTRACTOR shall prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
  2. Field Test Reports: CONTRACTOR shall prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

END OF SECTION