SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services 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. The quality of all work shall be the responsibility of the Contractor.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.

C. See Divisions 02 through 49 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: 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 comply with requirements.

C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing, to establish product performance and compliance with industry standards.

E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

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 Contracting Officer 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. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Contracting Officer for a decision before proceeding.

1.4 SUBMITTALS

A. Quality Control Plan:

1. After contract award and before the Pre-Construction conference, submit for approval a written Contractor Quality Control (CQC) plan.
2. If the plan requires any revisions or corrections, the Contractor shall resubmit the plan within 10 days.
3. The Government reserves the right to require changes in the plan during the contract period as necessary to obtain the quality specified.
4. No change in the approved plan may be made without written concurrence by the Contracting Officer.

B. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Contractor's Quality Control Daily Reports: Submit showing all inspections and tests on the first workday following the date covered by the report. Quality Control Supervisor shall utilize the forms attached at the end of this Section.

D. Test Reports

1. Test reports shall be completed by the person performing the test.
2. Submit Daily Test Information Sheets with Quality Control Daily Reports.

3. Submit failing test results and proposed remedial actions within four hours of noted deficiency.
4. Submit three copies of complete test results not later than one calendar days after the test was performed.

E. Off-Site Inspection Reports: Submit prior to shipment.

F. If the CQC plan and Quality Control Daily Reports are not submitted as specified, the Contracting Officer may retain all payments until such time a plan is accepted and implemented, or may retain payments for work completed on days there are no Quality Control daily reports.

G. Permits, Licenses, and Certificates: For NPS records, submit 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.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Contractors Quality Control Staff:

1. The Contractor's Quality Control Supervisor may also perform the duties of Project Superintendent
2. The Contractor's designated Quality Control Supervisor shall be on the project site whenever contract work is in progress.
3. The Contractor's job supervisory staff may be used to assist the Quality Control Supervisor supplemented, as necessary, by additional certified testing technicians.

C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by Contract, is acceptable to the Contracting Officer.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.

2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
3. All measuring devices, laboratory equipment, and instruments shall be calibrated at established intervals against certified standards in accordance with NBS requirements. Upon request, measuring and testing devices shall be made available for use by the Government for verification tests.

G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.6 QUALITY CONTROL

A. NPS Responsibilities: Where quality-control services are indicated as NPS responsibility, Contracting Officer will engage a qualified testing agency to perform these services.

1. Contracting Officer 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.

B. Tests and inspections not explicitly assigned to NPS are Contractor's responsibility. Inspect and test work as needed to ensure that the quality of materials, workmanship, construction, finish, and functional performance are in compliance with applicable specifications and drawings. and those required by the Building Code. Perform quality-control services required of Contractor by the Building Official, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

   i. Contractor shall not employ the same entity engaged by NPS, unless agreed to in writing by the Contracting Officer.

2. Where quality-control services are indicated as Contractor's responsibility, submit the appropriate report, for each quality-control service.
3. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
4. The Contracting Officer may designate locations for tests
5. Submit additional copies of each written report directly to the Building Official, when they so direct.

C. 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.

D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with NPS and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Contracting Officer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.7 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: NPS will engage a qualified testing agency to conduct special tests and inspections in accordance with Chapter 17 of the International Building Code as required by the contract documents, with the following exceptions:

1. The contractor is responsible for performing Special tests and inspections for the following work:

i. Soil gradation.
ii. Soil density.
iii. Soil compaction.
iv. Concrete slump.

v. Concrete air entrainment.
vi. Concrete strength.
vii. Reinforcing placement for structures in Seismic Design Categories A, B and/or areas in which the basic wind speed is 90 mph or less.

PART 2 - PRODUCTS

2.1 QUALITY CONTROL PLAN

A. The Quality Control Plan shall include:

1. A list of personnel responsible for quality control and assigned duties. Include each person's qualifications.
2. A copy of a letter of direction to the Contractor's Quality Control Supervisor outlining assigned duties.
3. Names, qualifications, and descriptions of laboratories to perform sampling and testing, and samples of proposed report forms.
4. Methods of performing, documenting, and enforcing quality control of all work.
5. Methods of monitoring and controlling environmental pollution and contamination as required by regulations and laws.

PART 3 - EXECUTION

3.1 OFF-SITE CONTROL

A. Items that are fabricated or assembled off-site shall be inspected for quality control at the place of fabrication.

3.2 ON-SITE CONTROL

A. Notification:

1. Notify the Contracting Officer at least 48 hours in advance of the preparatory phase meeting.
2. Notify the Contracting Officer at least 24 hours in advance of the initial and follow-up phases.

B. Preparatory Phase: Perform before beginning each feature of work.

1. Review control submittal requirements with personnel directly responsible for the quality control work. As a minimum, the Contractor's Quality Control Supervisor and the foreman responsible for the feature of work shall be in attendance.
2. Review all applicable specifications sections and drawings related to the feature of work.
3. Ensure that copies of all referenced standards related to sampling, testing, and execution for the feature of work are available on site.
4. Ensure that provisions have been made for field control testing.
5. Examine the work area to ensure that all preliminary work has been completed.

6. Verify all field dimensions and advise the Contracting Officer of discrepancies with contract documents.
7. Ensure that necessary equipment and materials are at the project site and that they comply with approved shop drawings and submittals.
8. Document all preparatory phase activities and discussions on the Contractor's Quality Control Daily Report.

C. Initial Phase:

1. As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.
2. Review control testing procedures to ensure compliance with contract requirements.
3. Document all initial phase activities and discussions on the Contractor's Quality Control Daily Report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

D. Follow-Up Phase: Inspect and test as work progresses to ensure compliance with contract requirements until completion of work.

E. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be required on the same feature of work for the following reasons:

1. Quality of on-going work is unacceptable.
2. Changes occur in the applicable quality control staff, on-site production supervision, or work crew.
3. Work on a particular feature of work is resumed after a substantial period of inactivity.

3.3 DOCUMENTATION

A. Maintain Quality Control Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports (attached) of quality control activities and tests.

B. Quality Control Daily Reports may not be substituted for other written reports required under clauses of the contract, such as Disputes, Differing Site Conditions, or Changes.

3.4 ENFORCEMENT

A. The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff or the Contracting Officer.

3.5 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

CONTRACTOR'S QUALITY CONTROL DAILY REPORT

REPORT NO. _____ SHEET 1 OF _____

PROJECT				CONTRACT NO.	DATE
PARK				CONTRACTOR'S REPRESENTATIVE ON THE JOB	
WEATHER (Rain, Snow, Cloudy, Windy, etc.)	RAINFALL Inches	TEMPERATURE MAX.	MIN.	GROUND CONDITIONS (Dry, Damp, Wet, Frozen, etc.)	

1. PRIME CONTRACTOR

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY PRIME CONTRACTOR:

MATERIALS DELIVERED	OFFICIAL VISITORS TO SITE

2A. SUBCONTRACTOR, _____: (If more than one subcontractor use copies of following page.)

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

3. SPECIFIC INSPECTIONS: (Inspections performed, results, and corrective actions)

4. TESTING: ☐1 Check if any testing was performed today. (Complete and attach Test Report Information Sheets.)
Type and Location of Testing: _____

5. VERBAL INSTRUCTION RECEIVED FROM GOVERNMENT ON CONSTRUCTION DEFICIENCIES OR RE-TESTING REQUIRED:

6. REMARKS:

7. CERTIFICATION:

I certify that the above report is complete and correct and that I, or my authorized representative, have inspected all work performed this day by the prime contractor and each subcontractor and determined that all materials, equipment, and workmanship are in strict compliance with the plans and specifications except as may be noted above. _____

Contractor's Quality Control Representative

SUBCONTRACTOR WORK CONTINUED:	CONTRACT NO.	REPORT NO. _____ SHEET ____ OF ____

2 SUBCONTRACTOR,						
NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments
WORK PERFORMED BY SUBCONTRACTOR:						

2 SUBCONTRACTOR,						
NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments
WORK PERFORMED BY SUBCONTRACTOR:						

2 SUBCONTRACTOR,						
NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments
WORK PERFORMED BY SUBCONTRACTOR:						

2 SUBCONTRACTOR,						
NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	COMMENTS
WORK PERFORMED BY SUBCONTRACTOR:						

DAILY TEST REPORT INFORMATION SHEET

CONTRACT NO._____ REPORT NO. _____

SHEET _____ OF _____

1. Individual Making Inspection or Test:	
2. Testing Laboratory; Name:	Phone #:
Address:	
3. Description of Work and Test Method:	
4. Location of Samples and Tests or Inspections:	
5. Specification Section:	
6. Inspection or Test Data:	
7. Test Results and Interpretations of Test Results:	
8. Comments or Professional Opinion About Compliance of Inspected Work or Tested Work with contract Document Requirements:	
9. Recommendations:	
10. Corrective Actions Taken:	

CERTIFICATION:

I certify that the above testing report is complete and correct and that all testing performed this day for this contract is in strict compliance with the plans and specifications except as noted above.

_____

Signature of Inspector