*ADD THE FOLLOWING SECTION:*

SECTION 113 – CONTRACTOR QUALITY CONTROL ORGANIZATION AND QUALIFICATION OF LABORATORIES AND TECHNICIANS

113.01 GENERAL

* 1. This section describes the minimum Contractor Quality Control Organization indicating chain of command and position descriptions. Depending on the size of the project, all of the positions may not be required. The contractor must submit the organization to the Engineer for approval. The information shall be submitted to the Engineer and approved prior to the beginning of the work.
	2. The Contractor Quality Control material sampling shall be obtained from an NAQTC qualified person. The Contractor shall not accept material samples from a subcontractor or material supplier unless the Contractor NAQTC technician observes and documents the sampling.
	3. The Qualifications, Scope of Work and Responsibilities, Communication, and Reporting for each position are related to the execution of the Project Quality Control Program only. Other roles, responsibilities, and reporting requirements may be required by the Engineer in the Contract specification. This Program does not address those roles or responsibilities, nor is it intended to diminish their intent.

113.02 ORGANIZATION

* 1. The minimum chain of command positions are titled as follows:
		1. Position 1 - Contractor Principal Representative.
		2. Position 2 - Professional Engineer (PE).
		3. Position 3 - Responsible Person-in-Charge (RPC).
		4. Position 4 - Quality Control Coordinator (QCC).
		5. Position 5 - Quality Control Testing Technician.
		6. Position 6 - Quality Control Laboratory Technician.
	2. Suggested formats for providing the information to submit to the Engineer are shown in Tables 1 through 6 later in this section, which reference the position titles.
	3. Qualifications and experience requirements are provided for each QC position. The minimum experience requirements for selected positions are as follows:
		1. The Responsible Person-in-charge (RPC) shall be a quality control project manager level having a minimum of 8 years experience in construction managing the type of construction implemented on the contract. The RPC shall have the ability to read and understand construction Drawings and Specifications. The RPC shall have stop work authority.
		2. For the testing QC Laboratory, the Professional Engineer who is in responsible charge of the testing shall be a Nevada State licensed Civil Professional Engineer, with a minimum of 5 years experience in construction materials. The field testing technicians shall be NAQTC and/or ACI Concrete Field Technician Grade I certified and the Laboratory testing technician shall be NAQTC and/or ACI Concrete Laboratory Testing Technician Level 1 certified.
		3. The Quality Control Coordinator (QCC) is a quality control administrator that ensures that the documents are coordinated to all levels of the project with a minimum of 2 years of experience in this type of work or have evidence in the resume of the ability to coordinate documents. The QCC shall have the same qualifications as the Quality Control Testing Technician, the ability to read and understand construction Drawings and Specifications.
	4. Resumes of all RPC, QCC, PE, inspection, and material testing personnel shall be submitted.
	5. The Contractor shall verify that qualifications of each employee match those required by the position that individual will hold and will be valid for the duration of the project. If personnel will require recertification during the contract duration, the Contractor shall indicate those personnel and the process for ensuring that the recertification is accomplished.
	6. The Contractor shall complete the Position Description Form (Tables 1 through 6) for each position including: Name, Signature, Discipline, Employer, Stop-Work Authority, Certifications, and Title as applicable and submit to the Engineer for approval. Work shall not proceed until approved by the Engineer. One form will be used per position per individual. The form will include all disciplines of work and the related certifications for which the individual is qualified.
	7. The testing staff utilized for a specific item of work may be comprised of any individual that has demonstrated competence and completed the appropriate form. Only technicians with appropriate certifications and work experience will be used for that item of work.
	8. The acceptance of the work is by the Engineer or his designated representative.

113.03 LABORATORIES

* 1. All laboratories, whether primary or subcontracted shall be AASHTO R18, AMRL/CCRL accredited including ASTM D 3666 (Asphalt Concrete and Aggregates), D 3740, C1077, effective June 1, 2012.
	2. For laboratories with multiple facilities, the Contractor shall identify the location of the lab providing the service. This lab is project specific for the actual work that will be performed.
	3. Separate laboratories may be used in conjunction with the Primary QC Laboratory. Prior to their use, the Contractor shall provide a submittal for each QC Laboratory. The approved submittal will then be added to QC program as an amendment.
	4. With the exception of “chemical testing” (i.e. binder, cement), QC Laboratory reviewing personnel in responsible charge are required to be Professional Engineers, registered in the State of Nevada, regardless of whether the QC Laboratory utilized is primary or secondary.

| **Table 1 - Contractor Principal Representative** |
| --- |
|  | Position Number | Position Title | Stop-Work Authority |
| **1** | **Contractor Principal Representative (CPR)** | **Yes** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**Perform corporate oversight for the Quality Control.Determine course of action for Quality Control at highest level of Conflict Resolution process.Quality Control related issues within the Organization. |
| 2 | **Communication - Provide direct access for the following individuals:**RPCQuality Control CoordinatorProfessional Engineer |
| 3 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
| CLV | QC Conflicts | Resolve within One Week |
| QC Professional Engineer | After QC Resolutions | 1 Day |

| **Table 2 - Quality Control Professional Engineer** |
| --- |
|  | Position Number | Position Title | Stop-Work Authority |
| **2** | **Professional Engineer (PE)** | **Yes** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**In responsible charge over Quality Control Testing, both field and laboratory testing.Signature for all testing reports.Liaison for the Prime Contractor for Materials and testing related issues.Provide consultation to Prime Contractor as requested.Aid in providing resolution in material deficiencies. |
| 2 | **Maintain open and effective communication with the following individual on a twice weekly basis:**Testing Technician (Field & Lab)Source / Plant Inspector (when an employee of Engineer) |
| 3 | **Maintain open and effective communication and testing oversight with the following individuals on a daily basis:**RPC |
| 4 | **Have direct access to the following individual:**Contractor Principal RepresentativeRPC |
| 5 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
| RPC | QC Conflicts - Investigation | Resolve Within 1 day of Test Completion or 3 days for other material issues |
| RPC or designee | Monthly Report of Field and Lab Results | At time of Pay Estimate |
| Final Report of Field and Lab Results | Within 2 weeks from “Substantial Completion” |
| Deficiencies in Lab Test Results | Immediately upon completion of testing |
| QC Technician | After Resolution | 1 hour |

| **Table 3 - Responsible Person in Charge (RPC)** |
| --- |
|  | Position Number | Position Title | Stop-Work Authority |
| **3** | **Responsible Person in Charge (RPC)** | **Yes** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**Expedite Conflict Resolution.Educate Lead / Foreman of responsibilities to the QC Program.Generate or advise QC coordinator to review and forward Materials Submittals.Measurement and reporting of daily quantities. |
| 2 | **Maintain open and effective communication and testing oversight with the following individual on a daily basis:**Principal Representative |
| 3 | **Have direct access to the following individual:**Principal RepresentativeProfessional Engineer |
| 4 | **Communication - Provide direct access for the following individual:**Quality Control CoordinatorTesting Technician (Field & Lab) |
| 5 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
| QCC | QC Conflicts - Investigation | Resolve within 1 day |
| Foreman | Materials Delivery and Quantities | Log Daily |

| **Table 4 - Quality Control Coordinator (QCC)** |
| --- |
|  | Position Number | Position Title | Stop-Work Authority |
| **4** | **Quality Control Coordinator (QCC)** | **Contractor Option** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**Schedule inspection with the EngineerDispatch Testers.Generate, close, and maintain file system for Activity Cards.Generate, close, and maintain file system for Advance Notification Cards.Generate, track, and maintain all Logs.Perform the Administration for all Quality Control documentation.Perform routine audits of Quality Control and documentation.Review materials submittals for compliance with Contract Documents.Review materials Testing Technician test results.Receive, Log, and Schedule sampling of Materials Delivery and Quantities.Measurement, Calculation, and reporting of Testable Quantities.Report deficiencies. |
| 2 | **Maintain open and effective communication with the following individuals on a twice weekly basis at a minimum:**Professional Engineer |
| 3 | **Maintain open and effective communication and testing oversight with the following individuals on a daily basis:**RPCTesting Technician (Field & Lab) |
| 4 | **Have direct access to the following individuals:**Contractor Principal RepresentativeQuality Assurance Coordinator  |
| 5 | **Communication - Provide direct access for the following individuals:**RPCQuality Control Technician |
| 6 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
|  RPC | Activity Card Close-out | Daily |
| Advanced Notification Cards | Prior to Days Work  |
| Generation of Activity Card | Daily |
| Deficiencies | Immediately |
| Materials Delivery Log | Daily |
| Sample Log and Scheduling of Samples for Materials Delivered | Daily |
| Deficiency Log | Daily |
| Monthly QC Reports | With Monthly Pay Estimate |
| Final QC Report | End of Construction |
| QC Resolutions | 1 Hour |
| Activity Cards | Prior to Days Work |
| QC Conflicts | Resolve within 2 Hours |
| QC Resolutions | 1 Hour |
| **Table 5 - Quality Control Field Testing Technician** |
|  | Position Number | Position Title | Stop-Work Authority |
| **5** | **Quality Control Field Technician (QCFT)** | **Contractor Option** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**This individual is the “support” for the Quality Control Coordinator.Verifies conformance of materials through testing.Advisor to Quality Control Coordinator in regard to testing.Responsible for accurately testing, sampling, and reporting of results for construction materials.Responsible for identifying deficient or non-compliant work, as related to testing.Responsible for notifying Quality Control and Quality Assurance of status of work, as related to testing. |
| 2 | **Maintain open and effective communication and testing oversight with the following individuals on a daily basis:**RPCProfessional EngineerQuality Assurance CoordinatorEngineers Inspector |
| 3 | **Have direct access to the following individual:**Quality Control CoordinatorQuality Assurance Coordinator |
| 4 | **Communication - Provide direct access for the following individuals:**Quality Control CoordinatorQuality Control Lab Technician |
| 5 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
| QCC | Test results | Attach to Activity Card at the end of the Event. |
| Deficiencies | Immediately upon failing test or observation |
| Informational Testing | Before performing informational tests |
| RPC | Test Results | Attach to Activity Card at the end of the Event. |

| **Table 6 - Quality Control Laboratory Testing Technician** |
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|  | Position Number | Position Title | Stop-Work Authority |
| **6** | **Quality Control Laboratory Technician (QCLT)** | **Contractor Option** |
| Name: |  |
| 1 | **Scope of Work and Responsibilities:**This individual is the “support” for the Professional Engineer.Verifies conformance of materials and work through testing.Advisor to Quality Control Coordinator in regard to testing.Responsible for accurately testing, sampling, and reporting of results for construction materials.Responsible for identifying deficient or non-compliant material, as related to testing.Responsible for notifying Quality Control and Quality Assurance of status of work, as related to testing. |
| 2 | **Maintain open and effective communication and testing oversight with the following individuals on a daily basis:**Quality Control CoordinatorProfessional Engineer |
| 3 | **Have direct access to the following individual:**Quality Control CoordinatorQuality Assurance CoordinatorProfessional Engineer |
| 4 | **Communication - Provide direct access for the following individual:**Quality Control CoordinatorProfessional Engineer |
| 5 | **Communication protocol:** |
| **To Whom** | **What** | **When** |
| QCC | Test results | Immediately |
| Deficiencies | Immediately Upon Failing Test or Observation |
| Professional Engineer | Test results | Immediately |
| Deficiencies | Immediately Upon Failing Test or Observation |

END OF SECTION 113