



DOT-FHWA QA/QC Plan Sample

Selected pages (not a complete plan)

Part 1: Project-Specific Quality Plan

Part 2: Quality Manual

Part 3: Submittal Forms

Contact:

FirstTimeQuality

410-451-8006

QUALITY ASSURANCE/QUALITY CONTROL PLAN

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C. QUALITY CONTROL PLANS

(Ref. U.S. DOT FP-03 153.04)

Project phases of work and Tasks subject to process control procedures are listed on the Quality Controlled Tasks form. The form is included as an exhibit in this subsection.

A series of inspections will be performed on each Task including

- Tests specified by contract requirements
- Material inspections
- Task Job-ready inspections
- Work in process inspections
- Task Completion inspections

Near project completion [CompanyName] performs a punch-out QC inspection, corrects all deficiencies. If the customer performs a final inspection, [CompanyName] corrects all deficiencies. The customer may verify completion of the project by a final acceptance inspection.

LISTING OF QUALITY CONTROLLED CONSTRUCTION TASKS

A listing of project Tasks is included on the Quality Control Task List is included as an exhibit in this subsection.

The Quality Manager identifies each phase of construction Task that requires separate quality controls. Each Task triggers a set of requirements for quality control inspections before, during and after Tasks.

Specifically, Task that required for the following Tasks listed on the Master Tasks form included as an exhibit in this subsection.

Additional detail on [CompanyName] policies and procedures for the preparation of the Task appear in Quality Manual section 2.5 Identification of Quality Controlled Task.

TASK QUALITY CONTROL PLANS

A quality control plan is prepared for each quality controlled Task. Each Quality Control Plan is recorded on DOT Form 470 and included as exhibits in this subsection.

Specifically, the quality control plans include descriptions of the following QC activities:

- Preparatory QC Activity 1. Independently and with contractor staff review contract requirements plans and specifications.
- Preparatory QC Activity 2. Check and verify submittals, plans and materials certifications for contract requirements and submit to FHWA Provide statement and signature of verification.
- Preparatory QC Activity 3. Check site conditions for constructability, including staging, disposal and storage areas. Identify potential quality control issues. Verify the materials delivered to the site conform to accepted materials certifications, submittals, plans and contract requirements.
- Preparatory QC Activity 4. Review construction staking to assure accuracy and sufficiency at each stage of construction.

**[CompanyName][CompanySuffix]
Master Task List**

Version 20131215

Project ID	Project Name		
[ProjectNumber]	[ProjectName]		

Task	Approved By	Date
Section 152 Construction Survey and Staking		
Section 201 Clearing and Grubbing		
Section 203 Removal of Structures and Obstructions		
Section 204 Roadway Excavation		
Section 205 Rock Blasting		
Section 207 Earthwork Geotextiles		
Section 208 Structural Excavation and Backfill for Selected Major Structures		
Section 209 Structure Excavation and Backfill		
Section 211 Roadway Obliteration		
Section 212 Linear Grading		
Section 251 Riprap		
Section 252 Special Rock Embankment and Rock Buttress		
Section 253 Gabions and Revet Mattresses		
Section 255 Mechanically-Stabilized Earth Walls		
Section 256 Permanent Ground Anchors		
Section 258 Reinforced Concrete Retaining Walls		
Section 260 Rock Bolts		
Section 301 Untreated Aggregate Courses		
Section 303 Road Reconditioning		
Section 308 Minor Crushed Aggregate		
Section 309 Emulsified Treated Asphalt Base Course		
Sections 401, 402, or 403 Hot Asphalt Concrete Pavement		
Section 404 Minor Hot asphalt Concrete		
Section 409 Asphalt Surface Treatment		

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D. QUALITY CONTROL SAMPLING AND TESTING

(Ref. U.S. DOT FP-03 153.05)

The Quality Inspection and Test Plan form lists inspections and tests that will be performed on this project. The Quality Inspection and Test Plan exhibit is included as an exhibit in this subsection.

Results of inspections and tests will be recorded as follows:

- Task inspection results will be recorded on the Task Inspection Form.
- Test results will be recorded on the Inspection and Test Form.
- Daily inspections of work in process will be recorded on the Daily Quality Control Report.

Form exhibits are included as an exhibit in this subsection.

REQUIRED SAMPLING AND TESTING

Sampling and testing will be provide as listed in Table 153-1, included as an exhibit in this subsection.

MATERIAL QUALITY INSPECTIONS

Material quality inspections and tests ensure that purchased materials meet purchase contract quantity and quality requirements. The Superintendent inspects or ensures that a qualified inspector inspects materials prior to use for conformance to project quality requirements.

The Superintendent ensures that each Task that uses the source inspected materials proceed only after the material has been accepted by the material quality inspection or test.

PREPARATION OF INSPECTION AND TEST PLAN

The Quality Manager prepares quality inspection and test plans for a project that identifies:

**Table 153-1
Quality Control Sampling and Testing Requirements**

Material or Product	Characteristic	Test Method or Specification	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Section 301 Untreated Aggregate Courses						
Aggregate base Grading (Aggregate Production)	Gradation	AASHTO T 27 & AASHTO T 11	1 for each 6 hours of production but not less than 2 for each day	Flowing aggregate stream (bin or belt discharge) or conveyor belt	Yes when requested	End of shift
	Fractured faces	ASTM D 5821	"	"	"	"
	Sand equivalent	AASHTO T 176 Alternate Method No. 2, Referee Method	"	"	"	"
	SE/P ₇₅ Index	See Subsection 101.04	"	"	"	"
Aggregate surface course (Aggregate Production)	Gradation	AASHTO T27 & AASHTO T 11	1 for each 6 hours of production but not less than 2 for each day	Flowing aggregate stream (bin or belt discharge) or conveyor belt	Yes, when requested	End of shift
	Fractured faces	ASTM D 5821	"	"	"	"
	Liquid limit	AASHTO T 89	"	"	"	"
	Plasticity Index	AASHTO T 90	"	"	"	"
Subbase Grading (Aggregate Production)	Gradation	AASHTO T27 & AASHTO T 11	1 for each 6 hours of production but not less than 2 for each day	Flowing aggregate stream (bin or belt discharge) or conveyor belt	Yes, when requested	End of shift
	Fractured faces	ASTM D 5821	"	"	"	"
	Sand equivalent	AASHTO T 176 Alternate Method No. 2, Referee Method	"	"	"	"
	SE/P ₇₅ Index	See Subsection 101.04	"	"	"	"
Section 309 Emulsified Asphalt Treated Base Course						
Emulsified asphalt treated aggregate base Grading	Gradation	AASHTO T27 & AASHTO T 11	1 for each 6 hours of production but not less than 2 for each day	Flowing aggregate stream (bin or belt discharge) or conveyor belt	Yes, when requested	End of shift
	Fractured faces	ASTM D 5821	"	"	"	"

Table 153-2						
Quality Control Inspection and Measurement Requirements						
Activity	Characteristic	Specification or Activity	Tolerance and Reference	Measurement or Inspection Frequency	Point of Inspection or Measurement	Reporting Time
Section 152 Construction Survey and Staking						
Construction staking	Construction staking	Measurements to check accuracy and adequacy of construction staking	Subsection 152.03 and Table 152-1	15% of staked, lines points or marks. and 100% of staked or surveyed points, marks or lines on bridges, walls or other major structures	Completed staking	End of shift
Section 201 Clearing and Grubbing						
General clearing	Clearing and grubbing preparation, preservation of adjacent vegetation	Visual inspection	Subsection 201.03	Daily	Clearing operation	24 hrs
Clearing	Falling, rounding areas and trimming	"	Subsection 201.04	"	"	"
Grubbing	Grubbing excavation and embankment areas and backfill	"	Subsection 201.05	"	"	"

QUALITY MANUAL

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7. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

7.1. OVERVIEW

The construction process plan defines how project work is to be done and approved for the overall project. The construction process plan is communicated to all key personnel, subcontractors and suppliers in a startup meeting. As the project proceeds, Task plans provide additional details of how each individual Task is carried out. Tasks planning meetings are used to communicate expectations of the Task plan to key personnel responsible for carrying out the Task.

7.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from [CompanyName], subcontractors and suppliers meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Quality Assurance/Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements
- Project organization chart and job responsibilities
- Methods of communication and contact information
- Location of project documents and records

7.3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

7.3.1. TASK REQUIREMENTS REVIEW

In preparation for the start of an upcoming Task, the Superintendent reviews an integrated and coordinated set of documents that collectively define quality requirements for the Task including:

- Objectives and acceptance criteria of the Task
- Quality standards that apply to the Task
- Work instructions, process steps, and product installation instructions that apply to the Task
- Shop drawings
- Submittals
- Tools and equipment necessary to perform the work
- License, certification, or other qualification requirements of personnel assigned to work
- Required records of the process and resulting product
- The subcontractor contracted to perform the work, if applicable
- Customer contract requirements
- Required quality inspections and tests
- Method for clearly marking nonconformances to prevent inadvertent use
- Location of quality system records and documents

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- Personnel training

7.3.2. PREPARATORY SITE INSPECTION

The Superintendent also performs a quality inspection of the work area and:

- Assesses completion of required prior work
- Verifies field measurements
- Assures availability and receiving quality inspection status of required materials
- Identifies any nonconformances to the requirements for the Task to begin
- Identifies potential problems

7.3.3. TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a Task, the Superintendent conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the Task quality requirements and reinforces heightened awareness for critical requirements. Topics for a Task quality plan meeting include:

- Conflicts that need resolution
- Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the Task
- Record keeping requirements and the availability of necessary forms
- Review methods and sequences of installation
- Special details and conditions
- Standards of workmanship
- Heightened awareness of critical quality requirements
- Quality risks
- Tasks quality inspection form

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List of Included Forms

Standard Forms:

- Point Of Contact List
- Project Organization Chart
- Project Quality Communications Plan
- Quality Manager Appointment Letter
- Project Manager Appointment Letter
- Superintendent Appointment Letter
- Personnel Certifications and Licenses
- Project Personnel Resumes
- Project Subcontractor and Supplier List
- Training Plan
- Training Log
- Regulatory Codes and Industry Standards
- Project Regulatory Building Codes
- Controlled Materials Form
- Metals Material Receiving Inspection Report
- Material Inspection and Receiving Report
- Inspection and Testing Standards
- Quality Inspection and Test Plan
- Test Equipment Calibration Plan and Log
- Quality Controlled Work Task List
- Daily Production Report
- Work Task Inspection Form
- Nonconformance Report
- Punch List
- Project Completion Inspection Form
- System Document Control Form
- Project Records Control Form
- Project Quality System Audit Form

[CompanyName][CompanySuffix] Nonconformance Report <small>Version 20131125</small>		
Nonconformance Report Control ID	Project ID	Project Name
	[ProjectNumber]	[ProjectName]
Preparer Signature/ Submit Date		Quality Manager Signature / Disposition Date
Description of the requirement or specification		
Description of the nonconformance, location, affected area, and marking		
Disposition	<input type="checkbox"/> Replace <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Use As-is	
	Approval of disposition required by customer representative? Yes <input type="checkbox"/> No <input type="checkbox"/> Customer approval signature /date: _____	
Corrective Actions	<input type="checkbox"/> Corrective actions completed Name/Date: _____	
	Customer acceptance of corrective actions required? Yes <input type="checkbox"/> No <input type="checkbox"/> Name/Date: _____	
Preventive Actions		
	<input type="checkbox"/> Preventive actions completed Name/Date: _____	

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**Industry-Specific Information
Available by Division**

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07 Thermal and Moisture Protection	23 HVAC	33 Utilities
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