Section 153:

WFL Specification 04/03/20

In all projects, include one of the following Section 153 requirements.

Select the appropriate bookmark (Select *Insert* tab; then select *Bookmark* icon; select bookmark) and copy that content to the project SCR:

Bookmark [Case1\_153](#Case1_153): Section 153 for larger/complex projects that require a Quality Control Manager (QCM) whose only duty is to provide QC. The QCM cannot be the superintendent;

Bookmark [Case2\_153](#Case2_153): Section 153 for larger /complex projects that require a Quality Control Manager (QCM) who may or may not be allowed to have additional duties. The QCM may or may not be the project superintendent; or,

Bookmark [Case3\_153](#Case3_153): Section 153 for smaller/less complex projects that require a Quality Control Manager (QCM) with less stringent qualifications than Case 1 or 2. The QCM may or may not have other duties beyond QC. The QCM may or may not be the project superintendent.

Consult with the COE to determine the appropriate QC specification to use.

## Section 153. — CONTRACTOR QUALITY CONTROL

04/02/21(1)– FP-14

CASE 1:

WFL Specification 04/03/20 15310010

Include the following Section 153 SCR’s as directed below in all larger/complex projects that require a Quality Control Manager (QCM) whose only duty is to provide QC.

Delete the text of this Section and substitute the following:

Description

### 153.01

This work consists of planning and implementing a construction quality process to ensure work conforms to the contract requirements. This work also includes quality control (QC) inspection and documentation, process control sampling and testing, obtaining samples for QC testing, and performing QC tests. See FAR Clause 52.246-12 Inspection of Construction.

Construction Requirements

### 153.02 Qualifications.

Provide a QC manager (QCM) with the following qualifications, and has no responsibilities for performing testing and inspection, managing the project, or performing operations other than managing quality control.

**(a)** One year of experience managing QC on highway construction projects of similar size, type, and complexity, and,

**(b)** One of the following:

**(1)** Two years’ experience as a construction project manager or superintendent on highway construction projects of similar size, type, and complexity;

**(2)** Three years’ experience as a project engineer, resident engineer, foreman, construction inspector, or equivalent on highway construction projects of similar size, type, and complexity; or

**(3)** National Institute for Certification in Engineering Technologies (NICET) Level III certification or equivalent in highway construction or highway material.

### 153.03 Quality Control Plan (QCP).

**(a) Personnel.** Provide a QCM, on-project during work, with authority to stop non-compliant work, or work that will result in non-compliance with contract requirements. Submit a letter, from a company officer or official with higher authority than the Superintendent, that authorizes the QCM to stop work.

Identify an alternate, meeting QCM qualifications, to act as QCM in the QCM’s absence. Do not use an alternate as the QCM for more than three (3) days unless approved by the CO.

At least 14 days before starting work, submit names and qualifications of the QCM, any alternate, and any additional QC personnel being used on the project. Do not use QC personnel that have not been approved by the CO.

Provide a QCM (designated and alternates) that is exclusively dedicated to, and performs no duties other than, quality control management.

Furnish additional QC staff (inspectors, testers, reviewers, and clerical assistants) to complete the work specified in this Section.

At the preconstruction conference, submit a cost breakdown of the individual items included in the lump sum.

WFL Specification 09/17/18 15310020

Include the following in all projects. Edit, add, or delete work features as required. Include those only those features that truly require a Quality Control Plan. Update/renumber lists as needed.

**(b) Development.** At least 14-days before starting a work feature, develop and submit a QCP, for each work feature listed below, to be approved by the CO. The absence of a plan does not relieve the Contractor of complying with the contract requirements. Additional QCPs, and/or activities, may be required to provide effective quality management. The CO may request a QCP for additional work features that are not listed below.

**(1)** Control of Material (Section 105);

**(2)** Construction Survey and Staking (Section 152);

**(3)** Soil Erosion and Sediment Control (Section 157);

**(4)** Clearing and Grubbing (Section 201);

**(5)** Removal of Structures and Obstructions (Section 203);

**(6)** Excavation and Embankment (Section 204);

**(7)** Rock Blasting; (Section 205);

**(8)** Earthwork Geosynthetics (Section 207);

**(9)** Structure Excavation and Backfill (Sections 208, 209);

**(10)** Roadway Obliteration (Section 211);

**(11)** Linear Grading (Section 212);

**(12)** Subgrade Stabilization (Section 213);

**(13)** Riprap (Section 251);

**(14)** Rockery, Special Rock Embankment, and Rock Buttress (Section 252);

**(15)** Recycled Asphalt Base (Section 310);

**(16)** Asphalt Concrete (Sections 401, 403);

**(17)** Concrete, Steel, and Timber Structures (Sections 552, 553, 554, 555, 557, 563, 564);

**(18)** Drainage Structures (Section 602, 604, 605, 608);

**(19)** Minor Structures (Sections 609, 615);

**(20)** Stone Masonry (Sections 620);

**(21)** Topsoil and Turf Establishment (Sections 624, 625);

**(22)** Permanent Traffic Control (Section 633, 634);

**(23)** Temporary Traffic Control (Sections 156, 635); and,

**(24)** Signal, Lighting, and Electrical Systems (Section 636).

Provide a QCP for each work feature in a format approved by the CO.

Include process control sampling and testing in the QCP. Perform process control sampling and testing according to Subsection 153.05 and the QCP.

WFL Specification 04/02/21 15310030

Include the following in all projects

### 153.04 Prosecution of Work.

Complete the following:

**(a) Preparatory and Start-up Phase.** Thoroughly address the following activities (1 through 9) for each work feature, and denote in the plan the person/position performing each activity.

**(1)** Review contract requirements, plans, and specifications independently and with construction supervisory staff.

**(2)** Check and verify that submittals, plans, and materials certifications meet contract requirements, then submit these documents at least 7 days before installation unless otherwise stated in the contract. Certify compliance by completing and signing Form WFLHD-87. An electronic version of the form is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>.

**(3)** Check site conditions for constructability, including staging, disposal, and storage areas. Verify materials delivered to the site conform to accepted materials certifications, submittals, plans, and contract requirements before incorporating into the project.

**(4)** Review construction staking to assure it meets contract requirements, accuracy, and sufficiency for each work feature.

**(5)** Provide an operational work plan. Include a brief written narrative of the activities for each work feature, describing: locations; crews; equipment; and proposed methods to complete work.

**(6)** Conduct pre-work meetings. Review contract requirements with the construction crew, foremen, and Government personnel before beginning work. Provide an overview of the operational work plan. Conduct additional pre-work meetings as necessary and when crew(s) change.

**(7)** Ensure construction methods will result in the end-product meeting contract requirements.

Include the following in the plan for applicable work features:

*(a)* The process to ensure the completed feature of work conforms to contract requirements.

*(b)* The inspection and testing frequency to ensure the process remains valid or work is being performed according to the established process.

*(c)* The action(s) to be taken and alterations to the inspection and testing frequency, if inspection or testing reveals the work is not meeting contract requirements.

Perform corrective actions as needed to ensure work meets contract requirements.

**(8)** Provide immediate on-site presence to communicate status of work to FHWA and contractor personnel and for QC issue resolution.

**(9)** Verify completed work meets contract requirements.

Revise the QCP when personnel, activities, or processes change; or when deficiencies occur in the work.

**(b) Implementation.** Implement QC activities as described in the accepted plan. Do not begin a work feature until the plan is approved by the CO and a pre-work meeting (activity 6) is performed. In the QC Reports described below, document when each activity (1 through 9) was performed, and by whom.

**(1) QC Reports.** Report the results of QC inspections that verify the work meets contract requirements as QC activities are performed. Describe the results of reviews, inspections, measurements, and testing activities. Attach original support data and test results. Document QC pre-work meetings, and discussions with the construction staff and Government personnel. Document deficiencies found in the work and describe corrective actions, adjustments to frequency of QC activities, and method or process changes to correct and eliminate future deficiencies. Provide reports to the CO daily or as otherwise approved. Include the following certification signed by the QCM:

*“I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record.”*

**(2) Notification of Completion of Work.** Submit a completed *“Notification of Completion of Work”* (Form WFLHD 470) when the phase of work listed below is ready for inspection. An electronic version of WFLHD 470 is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>.

WFL Specification 04/03/20 15310040

Include the following in all projects. Edit, add, or delete work features as required. List only applicable Sections.

Allow 1 working day for the following work to be inspected:

*(a) Survey and staking**(field stakes and notes).* Provide survey notes for the following:

*(1)* Control points – before disturbing original control points;

*(2)* Clearing limits – before starting clearing and grubbing operations;

*(3)* Slope stakes – before clearing operations or topsoil removal;

*(4)* Subexcavation – after staking and prior to backfilling;

*(5)* Guardrail – before starting installation;

*(6)* Bridge – before starting work on each component;

*(7)* Walls – before starting work;

*(8)* Fence and Gates – before starting installation;

*(9)* Culverts – before starting installation, and;

*(10) Structural plate pipe footings – before starting installation.*

*(b)* Construction work.

*(1)* Erosion control devices – prior to any ground disturbing activities;

*(2)* Sub grade – before placing pavement structure;

*(3)* Any pavement structure layer requiring hubs – before placing next layer;

*(4)* Structural excavation – before backfilling;

*(5)* Forms and reinforcing steel – before placing concrete; and

*(6)* Concrete deck – before placing concrete (perform checks of all deck pour requirements, including dry run results before inspection).

The CO may request submission of a form WFLHD 470 for worked not specifically listed in this subsection, or may not require a form for the listed work.

WFL Specification 04/03/20 15310050

Include the following in all projects

### 153.05 Sampling and Testing.

Perform process control sampling and testing according to the *Sampling, Testing, and Acceptance Requirements* table included at the end of each Section.

Perform QC sampling and testing as defined in the QCP.

Allow the CO the opportunity to witness all sampling and/or testing. When requested, sample and split QC samples according to AASHTO or other acceptable procedures. Immediately perform splits when required. Deliver and label split QC samples according to Subsection 154.03.

Provide the following documentation:

**(a) Test Results.** Label test results with the same information required by Subsection 154.03. Attach work sheets, used to determine test values, to the test result forms when submitted.

**(b) Control Charts.** Maintain linear control charts identifying project number and name; pay item number; test number; each test parameter; upper and/or lower specification limits applicable to each test parameter; and test results. Use control charts to document process variability; identify production and equipment problems; and identify potential pay factor adjustments. Correct processes when problems exist. Post charts at the Contractor’s project testing lab and on site.

### 153.06 Acceptance.

Contractor QC will be evaluated under Subsections 106.02 and 106.04 based on the demonstrated ability of the Contractor’s QC system to ensure that work meets the contract requirements.

If Government testing and inspections (quality assurance) indicate the Contractor’s QC system is ineffective or the plans are not being followed, make immediate improvements to correct inadequacies. Submit written notifications of improvements and modifications to the system.

A maximum of 10 percent of the total progress payment amount will be retained and affected project work may be stopped if a QCP is not accepted, the plan is not being followed, or work does not meet contract requirements.

Measurement

### 153.07

Measure the Section 153 items listed in the bid schedule according to Subsection 109.02.

Payment

### 153.08

The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 153 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment for the lump sum item will be prorated based on the work completed for this Section.

## Section 153. — CONTRACTOR QUALITY CONTROL

04/02/21(2)– FP-14

CASE 2:

WFL Specification 09/26/18 15320010

Include the following Section 153 SCR’s as directed below in larger /complex projects that require a Quality Control Manager (QCM) who may or may not be allowed to have additional duties. The QCM may or may not be the project superintendent.

Delete the text of this Section and substitute the following:

Description

### 153.01

This work consists of planning and implementing a construction quality process to ensure work conforms to the contract requirements. This work also includes quality control (QC) inspection and documentation, process control sampling and testing, obtaining samples for QC testing, and performing QC tests. See FAR Clause 52.246-12 Inspection of Construction.

Construction Requirements

### 153.02 Qualifications.

Provide a QC manager (QCM) according to the following:

**(a)** One year of experience managing QC on highway construction projects of similar size, type, and complexity, and

**(b)** One of the following:

**(1)** Two years’ experience as a construction project manager or superintendent on highway construction projects of similar size, type, and complexity;

**(2)** Three years’ experience as a project engineer, resident engineer, foreman, construction inspector, or equivalent on highway construction projects of similar size, type, and complexity; or

**(3)** National Institute for Certification in Engineering Technologies (NICET) Level III certification or equivalent in highway construction or highway material.

### 153.03 Quality Control Plan (QCP).

**(a) Personnel.** Provide a QCM, on-project during work, with authority to stop non-compliant work, or work that results in non-compliance with contract requirements. Submit a letter, from a company officer or official with higher authority than the Superintendent, that authorizes the QCM to stop work.

Identify an alternate, meeting QCM qualifications, to act as QCM in the QCM’s absence. Do not use an alternate as the QCM for more than three (3) days unless approved by the CO.

At least 14 days before starting work, submit names and qualifications of the QCM, any alternate, and any additional QC personnel being used on the project. Do not use QC personnel that have not been approved by the CO.

WFL Specification 09/17/18 15320020

Include the following when the QCM is not allowed to have any duties other than Quality Control Management. Coordinate with COE.

Provide a QCM (designated and alternates) that is exclusively dedicated to, and performs no duties other than, quality control management.

WFL Specification 09/17/18 15320030

Include the following when the QCM may have other duties, but there are limitations on which project personnel are allowed to be the QCM. Coordinate with COE.

Only the [INSERT ONE OR MORE OF THE FOLLOWING AS APPLICABLE: project manager, superintendent, foreman, testing technician, or traffic control supervisor] may perform work as the QCM in addition to their other assigned duties.

WFL Specification 04/03/20 15320040

Include the following in all projects

Furnish additional QC staff (inspectors, testers, reviewers, and clerical assistants) to complete the work specified in this Section.

At the preconstruction conference, submit a cost breakdown of the individual items included in the lump sum.

WFL Specification 09/17/18 15320050

Include the following in all projects. Edit, add, or delete work features as required. Include those only those features that truly require a Quality Control Plan. Update/renumber lists as needed.

**(b) Development.**  At least 14-days before starting a work feature, develop and submit a QCP for each work feature listed below, to be approved by the CO. The absence of a plan does not relieve the Contractor of complying with the contract requirements. Additional QCPs, and/or activities, may be required to provide effective quality management. The CO may request a QCP for additional work features that are not listed below.

**(1)** Control of Material (Section 105);

**(2)** Construction Survey and Staking (Section 152);

**(3)** Soil Erosion and Sediment Control (Section 157);

**(4)** Clearing and Grubbing (Section 201);

**(5)** Removal of Structures and Obstructions (Section 203);

**(6)** Excavation and Embankment (Section 204);

**(7)** Rock Blasting; (Section 205);

**(8)** Earthwork Geosynthetics (Section 207);

**(9)** Structure Excavation and Backfill (Sections 208, 209);

**(10)** Roadway Obliteration (Section 211);

**(11)** Linear Grading (Section 212);

**(12)** Subgrade Stabilization (Section 213);

**(13)** Riprap (Section 251);

**(14)** Rockery, Special Rock Embankment, and Rock Buttress (Section 252);

**(15)** Recycled Asphalt Base (Section 310);

**(16)** Asphalt Concrete (Sections 401, 403);

**(17)** Concrete, Steel, and Timber Structures (Sections 552, 553, 554, 555, 557, 563, 564);

**(18)** Drainage Structures (Section 602, 604, 605, 608);

**(19)** Minor Structures (Sections 609, 615);

**(20)** Stone Masonry (Sections 620);

**(21)** Topsoil and Turf Establishment (Sections 624, 625);

**(22)** Permanent Traffic Control (Section 633, 634);

**(23)** Temporary Traffic Control (Sections 156, 635); and

**(24)** Signal, Lighting, and Electrical Systems (Section 636).

Provide a QCP for each work feature in a format approved by the CO.

Include process control sampling and testing in the QCP. Perform process control sampling and testing according to Subsection 153.05 and the QCP.

WFL Specification 04/02/21 15320060

Include the following in all projects

### 153.04 Prosecution of Work.

Complete the following:

**(a) Preparatory and Start-up Phase.** Thoroughly address the following activities (1 through 9) for each work feature, and denote in the plan the person/position performing each activity.

**(1)** Review contract requirements, plans, and specifications independently and with construction supervisory staff.

**(2)** Check and verify that submittals, plans, and materials certifications meet contract requirements, then submit these documents at least 7 days before installation unless otherwise stated in the contract. Certify compliance by completing and signing Form WFLHD-87. An electronic version of the form is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>.

**(3)** Check site conditions for constructability, including staging, disposal, and storage areas. Verify materials delivered to the site conform to accepted materials certifications, submittals, plans, and contract requirements before incorporating into the project.

**(4)** Review construction staking to assure it meets contract requirements, accuracy, and sufficiency for each work feature.

**(5)** Provide an operational work plan. Include a brief written narrative of the activities for each work feature, describing locations; crews; equipment; and proposed methods to complete work.

**(6)** Conduct pre-work meetings. Review contract requirements with the construction crew, foremen, and Government personnel before beginning work. Provide an overview of the operational work plan. Conduct additional pre-work meetings as necessary and when crew(s) change.

**(7)** Ensure construction methods will result in the end-product meeting contract requirements.

Include the following in the plan for applicable work features:

*(a)* The process to ensure the completed feature of work conforms to contract requirements.

*(b)* The inspection and testing frequency to ensure the process remains valid or work is being performed according to the established process.

*(c)* The action(s) to be taken and alterations to the inspection and testing frequency, if inspection or testing reveals the work is not meeting contract requirements.

Perform corrective actions as needed to ensure work meets contract requirements.

**(8)** Provide immediate on-site presence to communicate status of work to FHWA and contractor personnel and for QC issue resolution.

**(9)** Verify completed work meets contract requirements.

Revise the QCP when personnel, activities, or processes change or when deficiencies occur in the work.

**(b) Implementation.** Implement QC activities as described in the accepted plan. Do not begin a work feature until the plan is approved by the CO and a pre-work meeting (activity 6) is performed. In the QC Reports described below, document when each activity (1 through 9) was performed, and by whom.

**(1) QC Reports.** Report the results of QC inspections that verify the work meets contract requirements as QC activities are performed. Describe the results of reviews, inspections, measurements, and testing activities. Attach original support data and test results. Document QC pre-work meetings, and discussions with the construction staff and Government personnel. Document deficiencies found in the work and describe corrective actions, adjustments to frequency of QC activities, and method or process changes to correct and eliminate future deficiencies. Provide reports to the CO daily or as otherwise approved. Include the following certification signed by the QCM:

*“I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record.”*

**(2) Notification of Completion of Work.** Submit a completed *“Notification of Completion of Work”* (Form WFLHD 470) when the phase of work listed below is ready for inspection. An electronic version of WFLHD 470 is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>.

WFL Specification 04/03/20 15320070

Include the following in all projects. Edit, add, or delete work features as required. List only applicable Sections.

Allow 1 working day for the following work to be inspected.

*(a) Survey and staking**(field stakes and notes).*Provide survey notes for the following:

*(1)* Control points – before disturbing original control points;

*(2)* Clearing limits – before starting clearing and grubbing operations;

*(3)* Slope stakes – before clearing operations or topsoil removal;

*(4)* Subexcavation – after staking and prior to backfilling;

*(5)* Guardrail – before starting installation;

*(6)* Bridge – before starting work on each component;

*(7)* Walls – before starting work;

*(8)* Fence and Gates – before starting installation;

*(9)* Culverts – before starting installation; and

(10) Structural plate pipe footings – before starting installation.

*(b) Construction work.*

*(1)* Erosion control devices – prior to any ground disturbing activities;

*(2)* Sub grade – before placing pavement structure;

*(3)* Any pavement structure layer requiring hubs – before placing next layer;

*(4)* Structural excavation – before backfilling;

*(5)* Forms and reinforcing steel – before placing concrete; and

*(6)* Concrete deck – before placing concrete (perform checks of all deck pourrequirements, including dry run results before inspection).

The CO may request submission of a form WFLHD 470 for worked not specifically listed in this subsection, or may not require a form for the listed work.

WFL Specification 04/03/20 15320080

Include the following in all projects

### 153.05 Sampling and Testing.

Perform process control sampling and testing according to the *Sampling, Testing, and Acceptance Requirements* table included at the end of each Section.

Perform QC sampling and testing as defined in the QCP.

Allow the CO the opportunity to witness all sampling and/or testing. When requested, sample and split QC samples according to AASHTO or other acceptable procedures. Immediately perform splits when required. Deliver and label split QC samples according to Subsection 154.03.

Provide the following documentation:

**(a) Test Results.** Label test results with the same information required by Subsection 154.03. Attach work sheets, used to determine test values, to the test result forms when submitted.

**(b) Control Charts.** Maintain linear control charts identifying project number and name; pay item number; test number; each test parameter; upper and/or lower specification limits applicable to each test parameter; and test results. Use control charts to document process variability; identify production and equipment problems; and identify potential pay factor adjustments. Correct processes when problems exist. Post charts at the Contractor’s project testing lab and on site.

### 153.06 Acceptance.

Contractor QC will be evaluated under Subsections 106.02 and 106.04 based on the demonstrated ability of the Contractor’s QC system to ensure that work meets the contract requirements.

If Government testing and inspections (quality assurance) indicate the Contractor’s QC system is ineffective or the plans are not being followed; make immediate improvements to correct inadequacies. Submit written notifications of improvements and modifications to the system.

A maximum of 10 percent of the total progress payment amount will be retained and affected project work may be stopped if a QCP is not accepted, the plan is not being followed, or work does not meet contract requirements.

Measurement

### 153.07

Measure the Section 153 items listed in the bid schedule according to Subsection 109.02.

Payment

### 153.08

The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 153 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment for the lump sum item will be prorated based on the work completed for this Section.

## Section 153. — CONTRACTOR QUALITY CONTROL

04/02/21(3)– FP-14

CASE 3:

WFL Specification 09/17/18 15330010

Include the following Section 153 SCR’s as directed below in all smaller/less complex projects that require a Quality Control Manager (QCM) with less stringent qualifications than Case 1 or 2. The QCM may or may not have other duties beyond QC. The QCM may or may not be the project superintendent.

Delete the text of this Section and substitute the following:

Description

### 153.01

This work consists of planning and implementing a construction quality process to ensure work conforms to the contract requirements. This work also includes quality control (QC) inspection and documentation, process control sampling and testing, obtaining samples for QC testing, and performing QC tests. See FAR Clause 52.246-12 Inspection of Construction.

Construction Requirements

### 153.02 Qualifications.

Provide a QC manager (QCM) with at least three years’ experience in areas of material testing, inspection, management, supervision, and QC.

### 153.03 Quality Control Plan (QCP).

**(a) Personnel.** Provide a QCM, on-project during work, with authority to stop non-compliant work, or work that results in non-compliance with contract requirements. Submit a letter, from a company officer or official with higher authority than the Superintendent, that authorizes the QCM to stop work.

Identify an alternate, meeting QCM qualifications, to act as QCM in the QCM’s absence. Do not use an alternate as the QCM for more than three (3) days unless approved by the CO.

At least 14 days before starting work, submit names and qualifications of the QCM, and any alternate being used on the project. Do not use QC personnel that have not been approved by the CO.

WFL Specification 09/17/18 15330020

Include the following when the QCM is not allowed to have any duties other than Quality Control Management. Coordinate with COE.

Provide a QCM (designated and alternates) that is exclusively dedicated to, and performs no duties other than, quality control management.

WFL Specification 09/17/18 15330030

Include the following when the QCM is not allowed to be the project manager, superintendent, etc. Coordinate with COE

Only the [INSERT ONE OR MORE OF THE FOLLOWING AS APPLICABLE: project manager, superintendent, foremen, testing technicians, or traffic control supervisor] may perform work as the QCM in addition to their other assigned duties.

WFL Specification 04/03/20 15330040

Include the following in all projects

At the preconstruction conference, submit a cost breakdown of the individual items included in the lump sum.

WFL Specification 09/17/18 15330050

Include the following in all projects. Edit, add, or delete work features as required. Include those only those features that truly require a Quality Control Plan. Update/renumber lists as needed.

**(b) Development.** At least 14-days before starting a work feature, develop and submit a QCP for each work feature listed below, to be approved by the CO. The absence of a plan does not relieve the Contractor of complying with the contract requirements. Additional QCPs, and/or activities, may be required to provide effective quality management. The CO may request a QCP for additional work features that are not listed below.

**(1)** Control of Material (Section 105);

**(2)** Construction Survey and Staking (Section 152);

**(3)** Soil Erosion and Sediment Control (Section 157);

**(4)** Clearing and Grubbing (Section 201);

**(5)** Removal of Structures and Obstructions (Section 203);

**(6)** Excavation and Embankment (Section 204);

**(7)** Rock Blasting; (Section 205);

**(8)** Earthwork Geosynthetics (Section 207);

**(9)** Structure Excavation and Backfill (Sections 208, 209);

**(10)** Roadway Obliteration (Section 211);

**(11)** Linear Grading (Section 212);

**(12)** Subgrade Stabilization (Section 213);

**(13)** Riprap (Section 251);

**(14)** Rockery, Special Rock Embankment, and Rock Buttress (Section 252);

**(15)** Recycled Asphalt Base (Section 310);

**(16)** Asphalt Concrete (Sections 401, 403);

**(17)** Concrete, Steel, and Timber Structures (Sections 552, 553, 554, 555, 557, 563, 564);

**(18)** Drainage Structures (Section 602, 604, 605, 608);

**(19)** Minor Structures (Sections 609, 615);

**(20)** Stone Masonry (Sections 620);

**(21)** Topsoil and Turf Establishment (Sections 624, 625);

**(22)** Permanent Traffic Control (Section 633, 634);

**(23)** Temporary Traffic Control (Sections 156, 635); and

**(24)** Signal, Lighting, and Electrical Systems (Section 636).

Provide a QCP for each work feature in a format approved by the CO.

Include process control sampling and testing in the QCP. Perform process control sampling and testing according to Subsection 153.05 and the QCP.

WFL Specification 09/17/18 15330060

Include the following in all projects

### 153.04 Prosecution of Work.

Complete the following:

**(a) Preparatory and Start-up Phase.** Thoroughly address the following activities (1 through 3) for each work feature, and denote in the plan the person/position performing each activity.

**(1)** Check and verify that submittals, plans, and materials certifications meet contract requirements, then submit these documents at least 7 days before installation unless otherwise stated in the contract. Certify compliance by completing and signing Form WFLHD-87. An electronic version of the form is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>

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**(2)** Conduct pre-work meetings. Review contract requirements with the construction crew, foremen, and Government personnel before beginning work. Conduct additional pre-work meetings as necessary and when crew(s) change.

**(3)** Ensure construction methods will result in end-products meeting contract requirements.

Include the following in the plan for applicable work features:

*(a)* A brief narrative of how the work will be accomplished describing the methods, crews, and equipment.

*(b)* The process to ensure the completed feature of work conforms to contract requirements.

*(c)* The inspection and testing frequency to ensure the process remains valid or work is being performed according to the established process.

*(d)* The action(s) to be taken and alterations to the inspection and testing frequency, if inspection or testing reveals the work is not meeting contract requirements.

Revise QC plans when personnel, activities, or processes change or when deficiencies occur in the work.

**(b) Implementation.** Implement QC activities as described in the accepted plan. Do not begin a work feature until the plan is approved by the CO and a pre-work meeting (activity 2) is performed. In the QC Reports described below, document when each activity (1 through 3) was performed, and by whom.

**(1) QC Reports.** Report the results of QC inspections that verify the work meets contract requirements as QC activities are performed. Describe the results of reviews, inspections, measurements, and testing activities. Attach original support data and test results. Document QC pre-work meetings, and discussions with the construction staff and Government personnel. Document deficiencies found in the work and describe corrective actions, adjustments to frequency of QC activities, and method or process changes to correct and eliminate future deficiencies. Provide reports to the CO daily or as otherwise approved. Include the following certification signed by the QCM:

*“I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record.”*

**(2) Notification of Completion of Work.** Submit a completed *“Notification of Completion of Work”* (Form WFLHD 470) when the phase of work listed below is ready for inspection. An electronic version of WFLHD 470 is available at:

<https://highways.dot.gov/federal-lands/construction/forms-wfl>

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Include the following in all projects. Edit, add, or delete work features as required. List only applicable Sections.

Allow 1 working day for the following work to be inspected.

*(a) Survey and staking**(field stakes and notes).*Provide survey notes for the following:

*(1)* Control points – before disturbing original control points;

*(2)* Clearing limits – before starting clearing and grubbing operations;

*(3)* Slope stakes – before clearing operations or topsoil removal;

*(4)* Subexcavation – after staking and prior to backfilling;

*(5)* Guardrail – before starting installation;

*(6)* Bridge – before starting work on each component;

*(7)* Walls – before starting work;

*(8)* Fence and Gates – before starting installation;

*(9)* Culverts – before starting installation; and

*(10) Structural plate pipe footings – before starting installation.*

*(b) Construction work.*

*(1)* Erosion control devices – prior to any ground disturbing activities;

*(2)* Sub grade – before placing pavement structure;

*(3)* Any pavement structure layer requiring hubs – before placing next layer;

*(4)* Structural excavation – before backfilling;

*(5)* Forms and reinforcing steel – before placing concrete; and

*(6)* Concrete deck – before placing concrete (perform checks of all deck pourrequirements, including dry run results before inspection).

The CO may request submission of a form WFLHD 470 for worked not specifically listed in this subsection, or may not require a form for the listed work.

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Include the following in all projects

### 153.05 Sampling and Testing.

Perform process control sampling and testing according to the *Sampling, Testing, and Acceptance Requirements* table included at the end of each Section.

Perform QC sampling and testing as defined in the QCP.

Allow the CO the opportunity to witness all sampling and/or testing. When requested, sample and split QC samples according to AASHTO or other acceptable procedures. Immediately perform splits when required. Deliver and label split QC samples according to Subsection 154.03.

Provide the following documentation:

**(a) Test Results.** Label test results with the same information required by Subsection 154.03. Attach work sheets, used to determine test values, to the test result forms when submitted.

**(b) Control Charts.** Maintain linear control charts identifying project number and name; pay item number; test number; each test parameter; upper and/or lower specification limits applicable to each test parameter; and test results. Use control charts to document process variability; identify production and equipment problems; and identify potential pay factor adjustments. Correct processes when problems exist. Post charts at the Contractor’s project testing lab and on site.

### 153.06 Acceptance.

Contractor QC will be evaluated under Subsections 106.02 and 106.04 based on the demonstrated ability of the Contractor’s QC system to ensure that work meets the contract requirements.

If Government testing and inspections (quality assurance) indicate the Contractor’s QC system is ineffective or the plans are not being followed; make immediate improvements to correct inadequacies. Submit written notifications of improvements and modifications to the system.

A maximum of 10 percent of the total progress payment amount will be retained and affected project work may be stopped if a QCP is not accepted, the plan is not being followed, or work does not meet contract requirements.

Measurement

### 153.07

Measure the Section 153 items listed in the bid schedule according to Subsection 109.02.

**Payment**

### 153.08

The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 153 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Payment for the lump sum item will be prorated based on the work completed for this Section.