Oregon Department of Transportation

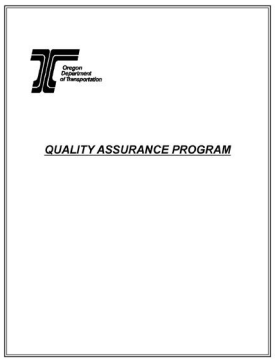
QCCS Manual

Construction Section

January 2021

CHAPTER 1
Authority and Responsibility of the Quality Control Compliance Specialist

The Oregon Department of Transportation (ODOT) has implemented a Quality Assurance (QA) program approach that complies with the FHWA Guidelines for a QA program for construction projects on the National Highway System (NHS). This program defines the responsibilities of the Contractor and ODOT in order to satisfy the needs of the program. It is available to read in its entirety in the Manual of Field Test Procedures. This program is currently used for all construction projects administered by ODOT or its consultants.



The Resident Engineer (RE) has full authority over the Work and is responsible for ensuring the Contractor provides quality and acceptable Materials and workmanship. The RE is responsible for enforcing the requirements of the QA Program and other provisions that pertain to the construction Contract.

The Quality Control Compliance Specialist Handbook provides information for use by the QCCSs to ensure the quality of all field tested materials. This handbook is meant to provide a “best practices” concept.

concrete_pour_flickr.jpg

Crew pouring concrete on a job.

Roles, Responsibilities, and Authority of the QCCS

The ODOT QCCS position was created as part of the QA Program. The RE's Quality Control Compliance Specialist (QCCS) is involved with the Project's QA activities. A QCCS is experienced and certified in all areas of field testing and documentation. The QCCS is required to maintain certification in CAgT, CEBT, CAT 1, CDT and QCT. Certification in CAT II, CCT and CMDT is recommended.

For Federally Funded projects, Local Agencies are also responsible for providing a certified technician to perform the required testing and fulfilling the requirements of the QA Program.

The QCCS is responsible for ensuring that all documentation related to the quality of materials incorporated into ODOT Construction Projects are in Close Conformance with the Contract. (See Section 00150.25.)

Refer to Section 00150.02, which specifies the authority and duties of an Inspector. They are also discussed in the Chapter 9 – Responsibility of the Project Manager of the Construction Manual. These duties are pertinent for the QCCS.

The QCCS is the representative of the RE for matters related to Materials. The QCCS may have a variety of duties, responsibilities, and authority, including:

- Those specified in Section 00150.02
- Those specified in the Manual of Field Test Procedures (MFTP).
- Those discussed in the Construction Manual.
- Those discussed in the Inspector's Manual.
- Those specifically assigned by the RE.

The duties, responsibilities, and certification requirements of the QCCS include:

- Assuring that Material(s) to be incorporated in the Work meets Contract requirements and the Contractor has properly performed all required testing. Additionally, assuring that ODOT has inspected Material at manufacturer's facilities and has performed verification testing as needed.

- Review QC and QA test reports.
- Investigate and resolve verification and Independent Assurance test result differences. Document on appropriate forms.
- Set up, organize, and update the Field Tested Materials Summary (B Summary) Form 734-1902b.
- Coordinate with the Region QAC for Verification and Independent Assurance testing.
- Verify the certification of quality control technicians and laboratories.
- Receive and submit product compliance samples to the materials laboratory.
- Receive and submit ACP and PCC mix designs for approval.

- Assuring, by visual observation, that material testing and processing of materials is performed according to the contract.
  - Observe testing of field tested materials.
  - Witness concrete trial batches.
  - Assure appropriate testing is completed.
  - Review Quality Control plan.
  - Visually accept quality for certain types of aggregate such as stone embankment.

- Assuring that the Contractor performs the Work as required by contract and the Work is producing a product with the qualities required by Contract.
  - Monitor field tested materials during construction operations.
  - Verify daily ACP plant recordation as required by MFTP.

The QCCS's Role on a Project

coresample_flickr.jpg

Core sample.

The Quality Control Compliance Specialist (QCCS) is involved with the project Quality Control and Quality Assurance activities. Each QCCS is experienced and certified in all areas of field testing and documentation. They are required to maintain certification in CAgt, CEBT, CAT 1, CDT and QCT. Certification in CAT II, CCT and CMDT are recommended as well. The QCCS assures that material(s) to be incorporated in the work meet contract requirements and the contractor has properly performed all required testing. Additionally, the QCCS assures that ODOT has inspected material at the manufacturer facilities and has performed verification testing as needed. The QCCS acts as the representative of the RE for material related items in communication with the contractor, the public, or other interested parties. This involves responding to questions or concerns from the contractor and others.

    - Create and report the statistical analysis (StatSpec) for ACP to determine payment for liquid asphalt.
    - Calculate Pay Factors (PF) and Composite Pay Factors (CPF) for determining price adjustments to ACP related items.
    - Assure appropriate testing is completed.
    - Witness calibration of profilograph equipment and smoothness testing.
    - Review statistical analysis (StatSpec) quality control during aggregate production.

- Acting as the representative of the RE for material-related items, in communication with the Contractor, the public, or other interested parties. This involves responding to questions or concerns from the Contractor and others.
    - Be the primary point of contact for quality control technicians.
    - Organize and schedule Project QA meeting. Discuss expectations and requirements before a Work process starts to verify that the Contractor understands the Contract requirements for the Work process as well as other expectations.
    - Notify QC and QA technicians in regards to the disposal of back up samples.
    - Assist with Region Assurance Specialist (RAS) with quality assurance reviews of the project documents; correct deficiencies noted on the Documentation Review Report (DRR).
    - Review changes to the MFTP.
    - Review project plans and specifications during project development.

- Recording information about the project and its happenings in the Project Diary, Daily Progress Report, or other appropriate document as approved by your RE.

The QCCS must utilize good communication skills in order to:

- Develop and maintain a good working relationship with the Contractor.
- Assure that the Contractor plans to utilize and incorporate acceptable quality of materials, processes, and workmanship in the Project Work.
- Convey Project concerns to the RE, Project Coordinator and to the Project Inspector.

In relations with the Contractor, the QCCS must:

- Inspect Work as needed and required by being aware of the Project Schedule, discussing the planned work with the Contractor, and openly communicating with the Contractor.
- Utilize good communication skills in order to develop and maintain a good working relationship.
- Discuss expectations and requirements before a Work process starts to verify

that the Contractor understands the Contract requirements for the Work process as well as other expectations.

- Act in a courteous, but firm, manner.
- Do not assume responsibility for the Contractor's operations.
- Do not operate or adjust the Contractor's equipment.
- Communicate only through the Contractor's appointed representative.
- Assure that all communications are productive and will result in timely responses and actions.
- Respond in a timely manner to all requests, commitments, needs.

The QCCS must be able to read and understand contract documents, including plans and specifications. Contact ODOT Resources for assistance with questions regarding contract documents, interpretations or administration of the contract requirements (see Chapter 2 – Resources).

The QCCS must properly record information to document quality of materials. Use proper grammar and correct spelling in all communications and writing.

If the Contractor is not performing the Work as required by contract, the QCCS must take the necessary action, including suspending the Work, to have the Contractor correct its operation. The QCCS must involve the Resident Engineer, Project Coordinator and the Project Inspector in these matters.

Familiarity with Project and Contract Documents and Requirements

The QCCS must become familiar with many documents for the project. Those include, but are not limited to:

- Project plans
- Project special provisions
- Standard specifications that relate to the project
- Changes to the contract documents, including plans and specifications
- Manual of Field Test Procedures

(The above mentioned items comprise the "Contract" for the project.)

paperwork_flickr.jpg

Discussion over plans.

Become familiar with all Contract requirements before any project Work starts, preferably prior to the preconstruction conference. The Contract requirements include restrictions needed to protect the environment, as well as restrictions specified by statute, law, or ordinance. If you have questions or need assistance, ask the RE.

Discuss with the Contractor's Quality Control Supervisor the Work for each pay item or contract operation, prior to the beginning the Work to assure that the Contractor:

- Is familiar with the contract requirements for the item or operation.
- Performs the required testing and/or provides proper quality documents for materials.
- Properly weighs delivered materials and perform check weights, if needed.

Communications with the Contractor

It is extremely important to develop and maintain a good working relationship with the Contractor. A key element to a good working relationship is clear and effective communication.

The QCCS has a key role and must communicate with a variety of individuals to ensure that the Contract requirements are met relating to the quality of the materials incorporated. Always maintain professional communication in all the various forms of speaking, listening, writing and responding to these project related individuals.

Determine whether written communication is needed to document an issue or to assure that the other party has the same understanding. Always try to resolve issues at the lowest possible level.

Verbal Communications:

- Practice reflective listening. If requested to do something, verify that you understand what is requested, know the timeframe needed to respond to the request, and that your response is timely.
- If you request someone to do something, verify that the other person knows and understands what is expected, including the timeframe for response.

- Ask questions, paraphrase responses, or use other processes to assure that both parties understand what is needed. Follow-up with reminders if needed.
- Return phone calls in a timely manner.

Written Communications:

- Understand what the QCCS's authority is regarding written communication with the Contractor and the Contractor's staff.
- Respond to timely emails and other types of written request.
- Written communication must be clear and concise. Make sure all of the spelling, grammar and punctuation is correct.
- Send written communication to the Contractor's home office and field office.
- Copy other contractors, ODOT or other Agency personnel as appropriate.

Communications working relationships with Inspectors and Quality Quantity Personnel

A QCCS must build and maintain good working relationships with members of the Agency's crew and the Contractor's staff in order to be successful. Normally Inspectors are assigned to monitor one project at a time, while the role of the QCCS is to support all the Inspectors. The QCCS acts as the Material expert, answering questions, providing over-sight of testing operations and ensuring compliance.

In order to build a strong relationship, Inspectors need to know the QCCS will support them and care about "their" Project. A good starting point is during the preliminary phase of the project. The QCCS should get in-volved with the assigned Inspector and discuss potential material related issues to see if the Inspector has any concerns or questions. In turn, the QCCS should provide input, explain the material testing requirements, and share any issues encountered in the past. This is extremely important with new Inspectors. This provides them with some confidence that the QCCS will act as a resource in the future.

During construction the QCCS should take the time to attend as many construction-related meetings as possible. This shows the Inspector that the QCCS wants to be involved, and it can also assists them with sched-uling QA-related issues. This same mindset holds true for the Contractor to helps build that relationship, too. The QCCS should make a point to be present during the start of all new construction activities. Volunteer to assist with the material-related activities and help with the workload, if time permits. This reinforces the "care" aspect and builds rapport with the inspection staff. Utilizing these interaction techniques may add time to the duties of the QCCS, but the value gained far outweighs the extra hours worked.

The Quality/Quantity personnel plays a vital role in the progression of the Project and that relationship must be built and maintained. Nobody likes to deal with the paperwork, but it's a necessary task. As a QCCS the interaction with the individuals performing this role should be on a daily bases; checking placement quantities, providing needed paperwork and discussing any problems or issues.

Like the Inspector the Quality/Quantity staff has a job to perform and it's just as important as the Inspector. At the beginning of the Project take time to assist with the setting up of books. Ask for some training on how paynotes are entered into the payment system. Determine if there were any issues or concerns with past projects and invite the RAS to share perspective. During construction, when time permits, assist with updating the ledger quantities and help run tapes on ticketed items. Educate the RAS about material testing related bid items (oil payment and the StatSpec process), and how the smoothness calculations are performed. Lend a hand with checking Inspector paynotes.

A key element of a good working relationship is that the parties must maintain strong, effective communication. To build this relationship, a QCCS has to truly show care about the people and the work they perform, which in turns shows a commitment to their success. This interaction process over time should create a positive working environment and build a foundation for improved communication which will be extremely valuable to the crew in the future.

General Daily Progress Reports (form 734-3474)

Working with multiple projects, talking daily with many different people, juggling priorities during construction season, makes it imperative that there is some means of recording your activities.

It will be up to your RE whether you as a QCCS need to fill out daily reports. There are a number of ways to keep track of significant occurrences that involved with when visiting a Project.

It is simplest to complete a General Daily Progress Report. The General Daily Progress Report is the best method to inform the RE and other crew members of what occurred on the project.

It is also possible to keep a project diary or a personal diary, or writing memos to the file.

Project Diaries

A project diary or personal diary can be helpful for larger projects with a significant amount of QA work. These documents significant can interact with testers, Contractor supervisors, the ODOT QA group, and Project Inspectors. The project diary is a good place to record samples taken as well as date submitted and/or shipped to the Central Lab. Also, the

project diary is helpful when working on multiple projects, record the projects visited, purpose of visit (if other than routine), significant conversations, materials rejected, resolution of problems, etc. It's a valuable to note all relative field work and significant events.

It is important to record significant events during the project. These records may be used to resolve disputes and claims made by the Contractor. (See Chapter 27 - Disagreements, Disputes, and Claims of the Construction Manual.) The more detailed the documentation of significant events are recorded, the easier it will be to resolve the disagreement, dispute or claim at the lowest level. Record dates, times and significant events. Document Contractor, ODOT personnel and other visitors to the Project (e.g., Region QA, OSHA). Keep all your records professional as they are subject to public records requests.

The Chapter 12A - Daily Reports/Diaries of the Construction Manual discusses daily reports. The QCCS should use some of the same methods as Inspectors to record materials information.

Some points to remember:

- Complete reports daily, if required.
- When appropriate, record information in the project diary.
- Assure that others are completing reports, as required.
- Strive to use proper grammar, spelling, and punctuation in those reports, as well as all other writings.
- All of the documents created on a project may be subject to a public records request or part of discovery in the event of a claim. Just record the facts.

Project Schedule

As required by Section 00180.41 of the contract and as discussed in the Chapter 11 - Before On-Site Work Can Begin of the Construction Manual, the Contractor must submit a Project Schedule that meets the requirements of the contract and reflects the Contractor's plans for the project Work.

The QCCS must be knowledgeable about the Project Schedule so the QCCS may:

- Plan work needed by the RE's office
- Schedule Region QA staff for Verification Tests

The QCCS must inform the RE of any delays to the Project and record necessary information that is needed to analyze those delays. Contact the RE if the Contractor is not providing the updated Project Schedule as needed.

Pre-Work Construction Conference (Pre-Con)

The Contractor shall meet with the RE for a preconstruction conference before any Work is performed and within 30 calendar days of the Notice to Proceed (as required by Section 000180.42, unless otherwise approved in writing by the Agency).

Objectives to be accomplished during the preconstruction conference include:

- Identify key personnel and channels of communication.
- Review the Project Work schedule.
- Share the Project Work schedule with Utilities and receiving information on utility relocations and potential conflicts with facilities

Persons who should attend a preconstruction conference include:

- Key personnel from the Contractor and its subcontractors
- RE, Assistant RE, Inspectors, QCCS, Contract Administration Specialist or/and office personnel responsible for processing documentation and payment
- Region Environmental Coordinator
- Office of Civil Rights representative
- ODOT Transportation Project Manager (TPM)
- Affected Utility and Railroad representatives
- Engineer of Record (EOR) and other design personnel
- FHWA
- Labor Compliance Officer
- Other appropriate personnel (Maintenance, other local government representatives, etc.)

The Contract also requires key personnel of the RE and Contractor to meet prior to other specified operations, including production of aggregates, paving, or bridge deck placement.

Quality of Materials and Work

Refer to the Chapter 12B - Quality of the Construction Manual, Section 00165 – Quality of Materials in the Oregon Standard Specifications for Construction, and the Quality Assurance Program in the Manual of Field Test Procedures (MFTP). Also, refer to the requirements for materials and workmanship that are included in the specification for each Work item.

All material and workmanship that the Contractor incorporates into the project must comply with applicable contract requirements, except as allowed under Section 00150.25.

The Contractor must perform testing and/or provide quality documentation as required.

That information is specified in one or more of the following. (Also, see Chapter 3 of this handbook.)

- Standard Specifications or Special Provisions for the particular Work item.
- The Manual of Field Test Procedures.
- The Non-Field Tested Materials Acceptance Guide.
- The "Blue" and "Green" sheets for traffic signals and other electrical Work also help to identify the quality requirements for those items.
- Contract Change Orders for the particular Work item.

For field-tested materials, refer to the QA Program included in the Manual of Field Test Procedures. Under the QA Program:

- The Contractor:
  - Must utilize certified testing technicians and laboratories to test materials and processes, and to perform other quality control processes, to assure that the materials, processes, and the resulting products comply with contract requirements.
  - Must perform, and is fully responsible for, all quality control needed to assure that its materials and processes will provide a final product that complies with contract requirements.
- To do this:
  - The Contractor's supervisor, workers, and testing technician must develop a Work process; including required quality control testing that will produce the specified product. This is the responsibility of the Contractor.
  - The Contractor's testing technician must perform testing, early in the process, to determine and assure that the process will produce a product that meets contract requirements.
  - If the product does not meet contract requirements, the supervisor, workers, and testing technician must modify the Work process, do further quality control testing, and re-process or remove the earlier Work until the process produces an acceptable product. The Inspector, the QCCS, or a member of the Region QA Team may be involved.
  - As the Work progresses, the supervisor, workers, and testing technician perform other visual observation or testing, in addition to the minimum required by Contract, to assure that

an acceptable product is being produced. If any party detects unacceptable process or results, the Contractor must modify and correct the process and product.

The QCCS's duties and responsibilities include those listed below, but may also involve the RE and members of the Region QA Team:

- May be involved with the Contractor in defining its original Work process and quality control measures.
- Reviews (inspects) the Work process and resulting product to verify that an acceptable product is being produced.
- Reviews the quality control testing and the test results and product to assure compliance with requirements. If any defects or errors are found, requires the Contractor to correct them and the affected product. Returns incomplete or incorrect worksheets to the Quality Control manager or the technician.
- Reserves the right, at any time, to request samples of the materials or products to verify that the Contractor's test results represent the material, process, or product, and that the material and the resulting product comply with contract requirements. The QCCS should assure that the Region QA team performs a verification test early in the Work process to check the validity of the Contractor's testing and Work.

If the Contractor has supplied or incorporated material that does not conform to contract requirements, but that ODOT has determined to be acceptable to remain in place, refer to the Quality Price Adjustments section of this handbook and Chapter12C - Quality Price Adjustments of the Construction Manual. Some items require ODOT, or the contracting representative, to make an adjustment for the payment of material or work that consistently meets or exceeds the contract requirements. Also, materials that are not within specification, but are suitable for the use intended, will stay in place with a negative adjustment to the Contractor.

The requirements for the quality of the material and final product (including workmanship) are specified in the specification for each Work item. The Contractor may be responsible to perform testing or other verification to show quality of Work. The Inspector must assure that the Contractor performs the testing or verification, and that the Work quality conforms to Contract requirements.

The QCCS must:

- Assure that the Contractor's testing processes and results are acceptable by proper paperwork reviews and direct visual observations.

- Assure that ODOT's QA staff performs verification and Independent Assurance testing as required including a verification test early in the Work process to help assure that the process is appropriate.
- If unacceptable material is delivered to the Project, notify the Contractor that it is unacceptable.
- Assure that the submitted quality documentation fulfills Contract requirements.
- Inspect the material, either visually or by other appropriate methods, to detect damage or contamination and assure that the material is acceptable for use.
- Verify that the quality of the material and Work product meets Contract requirements. If the quality is not acceptable, require the Contractor to modify its processes such that the product meets contract requirements and require the Contractor to repair deficient Work or remove and replace it. Involve the RE.
- Identify areas of deficient Work or material. Work with the Project Inspector, Project Coordinator and RE to determine whether the Work or material must be removed and replaced or whether it may remain with an adjustment in price. Assist the RE by calculating the adjustment in price.
- Identify Work or material that is eligible for a bonus payment, calculate the bonus payment, and notify the RE.

Material Sources

Refer to the Chapter 22 - Sources of Materials of the Construction Manual and Section 4A of the MFTP. Section 00160.01 of the Standards requires the Contractor to notify the Resident Engineer (RE) of its proposed Material sources of supply.

The QCCS with Inspector assistance as appropriate must:

- If the Contractor will use a prospective source, assure that the RE or Project staff notifies the Region Geologist of the planned use.
- Assure that Product Compliance testing is current, or that a new sample is tested at the ODOT Central Materials Lab, and that the test results indicate that the source is acceptable for use.
- For manufacture of steel or other fabricated material, assure that the material will be inspected at the fabrication site.
- Assure that the testing is being properly performed, that the test results are acceptable, and that verification testing will also be performed by ODOT.
- If there is any indication that material does not meet contract requirements, take necessary action to assure that corrective action occurs. Involve the RE.

Quantities of Materials to Be Produced

Refer to the Chapter 23 - Quantities of Materials to Be Produced of the Construction Manual.

The QCCS may be asked to assist the Inspector to:

- Before production starts, calculate and check the quantities needed to perform the project Work. The Contractor should also be checking quantities before beginning production and comparing its calculations with those of ODOT or the contracting representative. Work with the RE and Contractor to resolve any disagreements on the needed quantities.
- Assure that the qualities of the produced materials are acceptable.
- If the Contractor requests payment for Materials on hand, assure that quantities are measured and calculated and paid on the Progress Estimate. The Inspector may also be involved in calculating the cost to be paid for the Material. Also, refer to the Chapter 12F - Materials Stored or On Hand of the Construction Manual.
- If material is left over after contract Work is complete and the Contractor requests payment for it, refer to the Chapter 23 - Materials Left Over or Produced for a Third Party of the Construction Manual.

Quantities of Work Performed (includes both Progress Estimate and Final)

Refer to the Chapter 12D - Quantities of the Construction Manual.

The QCCS must work with the Inspector to assure:

- All required quality documentation is provided before material is incorporated into the project.
- Check, or assist in checking, paynotes and other Source Documents that have been prepared by others for payment to the Contractor for Work performed, and specification Materials incorporated into the Project.

Disagreements

Refer to Section 00199 of the contract and the Chapter 27 - Disagreements, Disputes, and Claims of the Construction Manual.

The QCCS, as well as keeping the RE informed, must:

- Be aware of issues or concerns that could result in disagreements.
- When the Contractor raises new issues or concerns, address the issues or concerns.

- Attempt to resolve the Contractor's issues or concerns, within the authority and capability of the Inspector.
- Seek advice and guidance from the RE, as needed, to try to resolve the disagreement.

When the disagreement is not resolved immediately between the Inspector and Contractor, work with the RE:

- If work involving the disagreement is progressing, record resources and information about the work under disagreement, while the parties attempt to resolve the issue.
- If needed, request further information from the Contractor to be better able to understand the disagreement.
- To perform needed analysis of the disagreement.
- To document all issues throughout the resolution process.

Resolve all issues as soon as possible and at the lowest possible level.

Safety

As discussed in the Chapter 17 - Safety of the Construction Manual. Refer to the Construction Manual for actions to assure that the project area is safe for workers, ODOT or Contract representatives and other Project employees, and the public.

The QCCS and others may be exposed to a degree of risk by being in close proximity to particular materials as they are delivered, used, constructed, removed, etc. Before becoming exposed to new or unfamiliar materials:

- Seek input from the Contractor.
- Review the Material Safety Data Sheet (MSDS) for the material, as appropriate.
- Request guidance and advice from the RE.
- Check the safety program's Hazard Assessment Worksheets for Personal Protective Equipment Policy.
- Seek other information to determine potential hazards, and if protective clothing or other devices are needed.

Conclusion

The role of the QCCS is an extremely important position within the structure of the Resident Engineers crew. Many different aspects encompass the daily routine of the QCCS, but office-related paperwork and field observations are the primary job responsibility of this position. To be successful as a QCCS, organizational skills and strong communication abilities are key characteristics this individual must possess.

CHAPTER 2
Resources

General

This section will cover the resources that are available for QCCSs to use in the course of their duties. Some of the resources available are manuals, written documents and other ODOT personnel who are technical experts.

Personnel (Construction Resources)

ODOT personnel includes, but is not limited to, personnel within the Resident Engineer's (RE) office, other Quality Control Compliance Specialists (QCCS), the Quality Assurance Coordinator (QAC), Quality Assurance Technician (QAT), the Contract Administration Engineer (CAE), Region Assurance Specialist (RAS), and the QA Engineer (QAE).

There is also personnel within ODOT who have a more focused expertise and may be used as a resource. This includes Technical Experts in Structural Services, Laboratory Services, and Pavement Services. See the Discipline-specific Contacts Technical Resource List.

The QACs are located in each of the five Regions. They are an available resource for questions regarding the proper sampling, handling and testing of construction materials as well as construction procedures.

Written Documentation and Publications

The Construction section has a wide selection of manuals that provide guidance in the administration of ODOT Construction Projects. It is im-

portant to note that some of these documents may contain conflicting specifications or contract requirements. ODOT has prescribed a hierarchy of what document shall supersede in the case of conflicting information/ specifications. See Section 00150.10 of the Standard Specification for Highway Construction.

- Contract Change Orders (CCO)
- Contract Specific Special Provisions
- Stamped Agency-prepared drawings specifically applicable to the Project and bearing the Project title
- Reviewed and accepted, stamped Working Drawings
- 3D Engineered Models and supplemental Agency-prepared line, grade and Cross Section data applicable to the Project
- Standard Drawings and Details
- Approved unstamped Working Drawings and 3D Construction Models
- Standard Specifications for Highway Construction (see Special Provisions for applicable edition
- All other Contract Documents not listed above

Access Project Specific Bid and Award Information along with Electronic Plans and Specifications on the ODOT Procurement webpage eBIDS for Internal Users (for ODOT Employees).

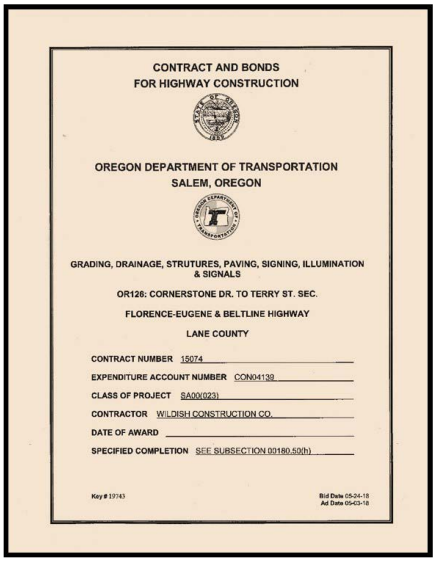
Other Manuals and Documents

- Acronyms – (Quality Assurance Program Introduction)
- Asphalt Concrete Pavement Inspector Certification Manual
- Bridge Construction Inspector Certification Manual
- Construction Manual
- Drilled shaft Construction Inspector Certification Manual
- Environmental Construction Inspector Certification Manual
- Erosion and Sediment Control Manager Manual
- Field Staff Training Guide
- General Construction Inspector Training Manual
- Inspector's Manual
- Intelligent Compaction User Guide
- Laboratory Manual of Test Procedures
- Manual of Field Test Procedures (MFTP)
- Nonfield-Tested Materials Acceptance Guide (NTMAG – See Sec. 00165.10(b))
- Pavement Data Collection Manual
- Pavement Design Guide

- Quality Assurance Program (located in the MFTP Sec. 2A)
- Qualified Products List (QPL Current Version- see Sec. 00160.05)
- Traffic Signal Inspector Certification Manual

ODOT Special Provisions

The ODOT Special Provisions are the contractual agreement between ODOT or the contracting representative (Local Agency or Consultant RE) and the Contractor. This document includes the project specific Standard Specifications that have been deleted or modified and Boilerplate Special Provisions that are not included in the Standard Specifications.



CONTRACT AND BONDS
FOR HIGHWAY CONSTRUCTION

OREGON DEPARTMENT OF TRANSPORTATION
SALEM, OREGON

GRADING, DRAINAGE, STRUTURES, PAVING, SIGNING, ILLUMINATION & SIGNALS

OR126: CORNERSTONE DR. TO TERRY ST. SEC.

FLORENCE-EUGENE & BELTLINE HIGHWAY

LANE COUNTY

CONTRACT NUMBER 15074

EXPENDITURE ACCOUNT NUMBER CON04139

CLASS OF PROJECT SA00(023)

CONTRACTOR WILDISH CONSTRUCTION CO.

DATE OF AWARD

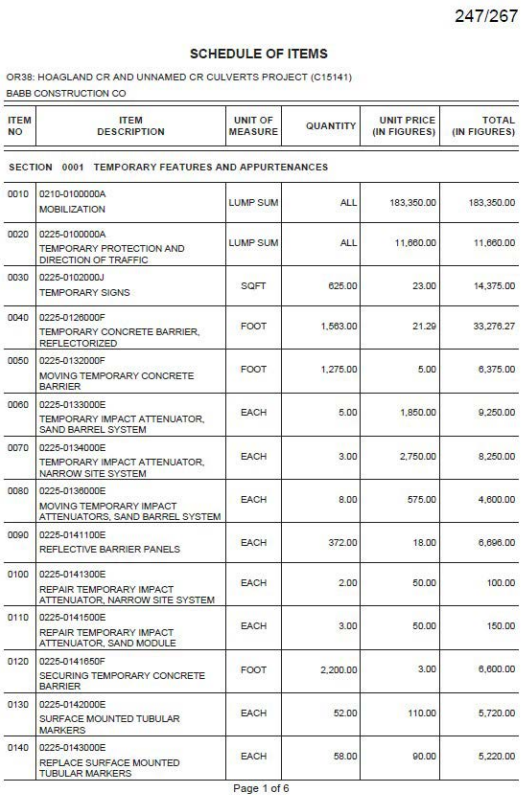
SPECIFIED COMPLETION SEE SUBSECTION 00180.50(h)

Key # 19743

Bid Date 05-24-18
Ad Date 05-03-18

The "Schedule of Items" can also be found in the Special Provisions. The bid item schedule will include the necessary basic information to begin the summary sheets forms 734-1902a and 734-1902b.

The information included is as follows:



247/267

SCHEDULE OF ITEMS

OR38: HOAGLAND CR AND UNNAMED CR CULVERTS PROJECT (C15141)
BABB CONSTRUCTION CO

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES					
0010	0210-0100000A MOBILIZATION	LUMP SUM	ALL	183,350.00	183,350.00
0020	0225-0100000A TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LUMP SUM	ALL	11,660.00	11,660.00
0030	0225-0102000J TEMPORARY SIGNS	SQFT	625.00	23.00	14,375.00
0040	0225-0126000F TEMPORARY CONCRETE BARRIER, REFLECTORIZED	FOOT	1,563.00	21.29	33,276.27
0050	0225-0132000F MOVING TEMPORARY CONCRETE BARRIER	FOOT	1,275.00	5.00	6,375.00
0060	0225-0133000E TEMPORARY IMPACT ATTENUATOR, SAND BARREL SYSTEM	EACH	5.00	1,850.00	9,250.00
0070	0225-0134000E TEMPORARY IMPACT ATTENUATOR, NARROW SITE SYSTEM	EACH	3.00	2,750.00	8,250.00
0080	0225-0136000E MOVING TEMPORARY IMPACT ATTENUATORS, SAND BARREL SYSTEM	EACH	8.00	575.00	4,600.00
0090	0225-0141100E REFLECTIVE BARRIER PANELS	EACH	372.00	18.00	6,696.00
0100	0225-0141300E REPAIR TEMPORARY IMPACT ATTENUATOR, NARROW SITE SYSTEM	EACH	2.00	50.00	100.00
0110	0225-0141500E REPAIR TEMPORARY IMPACT ATTENUATOR, SAND MODULE	EACH	3.00	50.00	150.00
0120	0225-0141650F SECURING TEMPORARY CONCRETE BARRIER	FOOT	2,200.00	3.00	6,600.00
0130	0225-0142000E SURFACE MOUNTED TUBULAR MARKERS	EACH	52.00	110.00	5,720.00
0140	0225-0143000E REPLACE SURFACE MOUNTED TUBULAR MARKERS	EACH	58.00	90.00	5,220.00

Page 1 of 6

- Bid item number
- Item description
- Unit of measure (i.e., each, foot, sq. ft.)
- Estimated quantity – Estimated quantities for hybrid lump sum items are found in the Special Provision for that item (e.g., concrete, rebar).
- Unit price
- Total cost of each bid item

Project Plans and Standard Drawings – Link to the Electronic Bidding to access Project Specific Plans and a link to the ODOT Standard Drawings.

The Project Plans consist of Standard and Supplemental Drawings, and approved unstamped and reviewed stamped Working Drawings.

The Plans have site specific drawings, noted by project name in the title block, and standard drawings for generic details. Significant sheets to the QCCS are:

- Typical sections of roadway designs.
- Detail drawings of embankment construction, retaining walls, drainage, etc.
- Pipe data sheets for lengths and type of pipes, inlets and manholes (refer to plan notes for placement, amount of cover material).

- Profiles for locations and estimated volumes of fills and excavations.
- Plans and notes for drainage and utilities, and for alignment.
- Details and general notes for structures, wing-wall backfill and bridge end panels.
- Typical sections for pipe backfill, drainage details, bridge rail, pole bases, etc.

Manual of Field Test Procedures

(Latest revision Current with Project Advertisement Date)

The Manual of Field Test Procedures (MFTP) is updated yearly by the Construction Section 00165.10(a) - The most current version on the date of advertisement is the version in effect for the project.

This document, updated yearly, contains the policies and procedures related to field-tested materials. It is designed to be used by ODOT and Contractor technicians for compliance with the requirements of the QA Program and related QA specifications. The manual is divided into four sections:

1. **Test Procedures** – These are the accepted test procedures and yellow sheets (ODOT modifications) that must be followed by all technicians.

2. **QA Program** – Description of the program including the roles and responsibilities of the Contractor, the RE, Region QA group, and Salem Construction Section are found here. Lab and technician certification programs are also described. In the Independent Assurance (I.A.) subsection are the Independent Assurance Parameters for evaluating I.A. tests. In addition, product specific requirements for all three types of QA testing (Quality Control, Verification, and Independent Assurance) are listed. A trouble-shooting guide is also included.

3. **Report Forms and Examples** – Contains blank forms for all the types of testing commonly used, and examples of how they should be filled out.

4a. **Source Compliance** – Contains the sampling and frequency requirements for source (raw material) and product compliance testing. These are quality tests performed by the ODOT central lab. A list of aggregate sources, by region, gives the test frequencies based on source history.

4b. **Small Quantity Schedule** – Gives the requirements for accepting small quantities of specific materials, with the RE's waiver of normal acceptance testing.

4c. **Laboratory Samples** – This subsection outlines the requirements for sample sizes, and types of containers for various products.

4d. **Field Tested Materials Guide** – This subsection lists all the tests required, their frequencies, and sublot sizes, for each field-tested product.

Note: Section 00165.20 Order of Precedence for Field Tested Materials – Used to resolve conflicting references or when no reference is made to materials specifications, sampling and testing frequencies, or test methods.

00165.20 Order of Precedence For Field Tested Materials

00165.20 Materials Specifications and Test Method References - References to materials specifications and test methods of ODOT, WAQTC, AASHTO, ASTM, other governmental agencies, or other recognized organizations mean those officially adopted and in current use by the agency or organization on the date of Advertisement.

If there are conflicting references, or if no reference is made to materials specifications, sampling and testing frequencies, or test method, the Engineer will resolve any discrepancies between these documents in the following orders of precedence:

Field-Tested Materials:

- Contract Change Orders;
- Special Provisions;
- ODOT Laboratory Manual of Test Procedures;
- MFTP; and
- Standard Specifications.

Nonfield-Tested Materials:

- Contract Change Orders;
- Special Provisions;
- ODOT Laboratory Manual of Test Procedures; and
- Standard Specifications.

Material test methods:

- ODOT;
- WAQTC;
- AASHTO;
- ASTM;
- Other recognized national organizations, such as ANSI, AWPA, IMSA, ISSA, and UL; and
- Industry standards in the location where the Work is being performed.

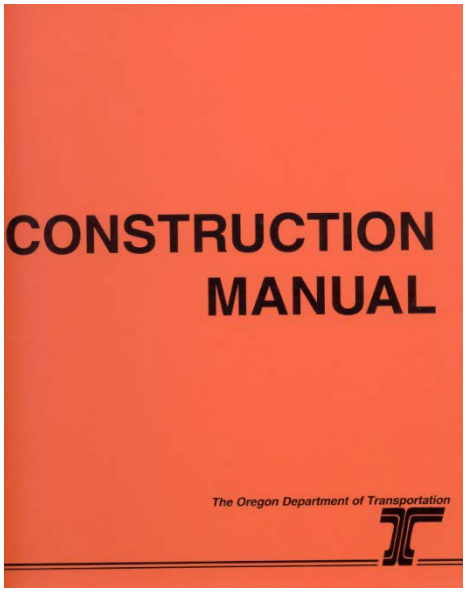
Sampling and testing frequencies:

- Contract Change Orders;
- Special Provisions;
- MFTP; and
- Standard Specifications.

If the Contractor identifies conflicting references or if no reference is made, the Contractor shall immediately request a clarification from the Engineer.

54

Construction Manual



The Construction Manual describes the ODOT policies and procedures used for the administration of construction contracts. While a general knowledge of what is covered in each section is useful, there are many sections that the QCCS must be thoroughly familiar with.

Sections the QCCS must become familiar with are:

- **Chapter 12 - Project Records** – This section is made up of the purple tab subsections that cover the various types of project documentation procedures. Of particular interest to the QCCS are the subsections.
    - **Chapter 12A - Daily Reports / Diaries** – Day-to-day records of Project activity and progress are extremely important. The Resident Engineer (RE) is responsible for ensuring Project Records are kept, and that they are accurate and adequate records of the progress of the Project.
    - **Chapter 12B - Quality** – The Contract documents specify the minimum requirements for the quality of Materials and Work to be furnished or performed under the Contract. The Resident Engineer (RE) must assure that the Materials incorporated and Work performed by the Contractor is in close conformance with Contract requirements.
    - **Chapter 12C –** Quality Price Adjustments – The Contractor must furnish Materials and perform the required Work in a manner that closely conforms to Contract requirements. As stated in Section 00150.25, if the Material furnished or the Work performed are not in close conformance, the Resident Engineer (RE) may order the Materials or Work to be removed and replaced or may allow the Materials or Work to remain in place at a reduction in payment.
    - **Chapter 12 - D Quantities –** General measurement guidelines are defined in Subsection 00190.10. These include the guidelines for measuring Work or Materials on the unit basis, length basis, area basis, weight basis, volume basis, time basis and lump sum basis. Specific measurement requirements may be contained in the individual "Measurement" Subsection of the Standard Specifications or Special Provisions.
    - **Chapter 12F –** Materials Stored or On-hand – The RE may

authorize advance payment for Materials that are stored or on hand if the total value of Materials exceeds $1,000, or if the value of a single class of Material exceeds $500, and if the other conditions of Section 00195.60 are satisfied. The RE must assure that the requirements have been fulfilled before payment is initiated for the Material.

- **Chapter 13 - Contract Time –** This chapter includes definitions for First, Second, and Third Notification. Weekly Statement of Time Charges and calculating and assessing Liquidated Damages are in this chapter as well.
- **Chapter 15 - Change Orders / Force Account / Work by Public –** This section explains what the different types of change orders are (Contract Change Order, Extra Work Order, and State Force Order), when they are needed, and how to fill out the forms that document each of the change order types.
- **Chapter 22 - Sources of Materials –** This section outlines why the prime contractor needs to notify the RE of the sources of the materials that will be incorporated into the project. The QCCS needs to be sure the contractor understands their responsibilities under this section.
- **Chapter 23 - Quantities of Materials to Be Produced –** This short section explains the importance of verifying the quantities of materials to be produced for the project so that ODOT can avoid incurring additional costs associated with either underestimating or overestimating quantities. It also explains vehicle measure, the different ways to measure asphalt cement, and weigh memos.
- **Chapter 25 - Payments to Contractors / Retainage –** Some QCCSs are involved with making contract payments, either directly or as a backup person. This section has the policies and procedures that govern the making of payments to the Contractor. Retainage and the Reduction of Retainage are also explained in this section.
- **Chapter 33 - Materials Left Over or Produced for a Third-Party –** This section details the options for disposal of materials that are unused at the end of the project. This section ties in with the Material Quantities section above.
- **Chapter 37 - Submittal of Final Project Documentation –** Because the QCCS is usually involved with putting the final documentation together, the QCCS should be very familiar with this section. It outlines exactly what documentation is required for final project submittal to the Construction Section in Salem.
- **Chapter 39 - Landscape Establishment Periods –** This section explains the purpose of plant establishment periods, what they entail, and what the Contractor and RE responsibilities are in accomplishing this work.

Inspector's Manual

The Inspector's Manual includes direction from the specification owners and/or technical experts on the critical inspection areas for a given specification. It covers general guidance, Inspector's manual tables, forms, checklists, materials, documentation, and reading slope stakes.

Qualified Products List

(Current Version at time of Letting)

The Oregon Department of Transportation's Structure Services Unit evaluations products to determine their compliance with construction Project specifications.

Results of these evaluations are published semi-annually in the Qualified Products List, a comprehensive list of all finished products found to be acceptable by ODOT for use with specific categories in roadway construction.

Acceptance of a product that is on the QPL will be documented with an FIR (Field Inspection Report) that indicates which list the product is on and other documentation, if required. For temporary items, record the QPL item number on the installation sheet or paynote.

At the back of the QPL booklet is a section for rejected products, the "R" list. These products have a history of low quality when used on ODOT projects. Do not use these products!

There may also be conditionally qualified products listed as "C". If a Contractor proposes to use a product that is not on the "A" or "Q" lists, it may be conditionally qualified. Contact the Produce Evaluation Coordinator.

Misc. Resources

Construction Page List – Link to web page that provides a complete list of web pages under the Construction section.

View a complete list of engineering manuals in ODOT.

Aggregate Source Information System (ASIS) – Find a quarry and access reports on ODOT aggregate sources.

Certified Laboratories – Link to spreadsheet with complete list of laboratories that are currently certified.

Certified Technician Official Registry – The Oregon Department of Transportation has established a strategy for quality control and quality assurance in its dealings with construction of transportation facilities. The

ODOT's Quality Assurance program requires all personnel and laboratories performing materials testing and/or project inspections to be certified. The level of certification is dependent on the specific type of testing to be performed.

CON-CAL (Reduction Computation) – Price Reduction Computations for Low-Strength Non-Statistical Concrete ("CON-CAL" Program). This program will calculate either a price reduction, or rejection of the concrete represented by the test. See Chapter 12C - Quality Price Adjustments in the Construction Manual.

Construction Forms – Link to forms for use during construction-related activities.

Construction Materials Testing Fees – Link to estimated cost for testing services. Used to assess price adjustments to the Contractor for missed testing or may be used to estimate costs for additional testing for CCOs.

Construction Section Materials Labs – All ODOT Region labs' contact information.

Contract Administration Personnel – Link to the contact information for the Contract Administration Engineer, Construction Claims, Project Documentation, Contractor Payments and the Region Assurance Specialists.

Contract Administration Status Reports – Links to status reports produced by the Contract Administration group. If you have any questions regarding these reports or would like to be placed on a distribution list to receive notification when these reports have been updated, please send an email to Contract Services.

Contract Payment System (CPS) – Link to Access the Contract Payment System or request access.

Doc Express – Link to Doc Express, ODOT's current document management system.

FileNet – Link to FileNet to access ODOT lab reports. If you have any questions about specific lab reports or about FileNet, please send an email to lab reports email address.

MFTP ACP Aggregate (tables are now online) – Product Compliance testing of aggregate is separate from the Quality Control testing performed by the Contractor during aggregate production. These tests are

used to evaluate the durability and soundness of the aggregate products. In this section, Product Compliance is defined, the sources numbering method is described, and sampling frequency is outlined.

Monthly Asphalt Cement Material Price (MACMP) – Two asphalt cement material price lists will be established each month by the Agency and will be based on the published prices of PG 64 22 asphalt cement furnished by Poten & Partners, Inc. One MACMP will be based on the average prices for the Pacific Northwest, Portland Oregon area, and the other MACMP will be based on the average prices for the Boise, Idaho area. This information is needed to determine if an Asphalt Escalation or De-escalation Adjustments needs to be assessed for the fluctuating price of ACP items. See Section 00195.10 of the Special Provisions to see if your Contract meets the requirements for Asphalt Cement Price Escalation/De-escalation.

Monthly Fuel Prices (MFP) – Monthly fuel prices are the average weekly prices obtained from the OPIS weekly listing, dated the first Monday of each month for HS No. 2 diesel fuel for Portland, Oregon. This information is needed to determine if a Fuel Cost Price Escalation or De-escalation Adjustment needs to be assessed for the fluctuating price of Fuel. See Section 00195.11 of the Special Provisions to see if your Contract meets the requirements for a Fuel Price Escalation/De-escalation.

Regional QA contacts – Link to current Quality Assurance personnel in the five ODOT Regions.

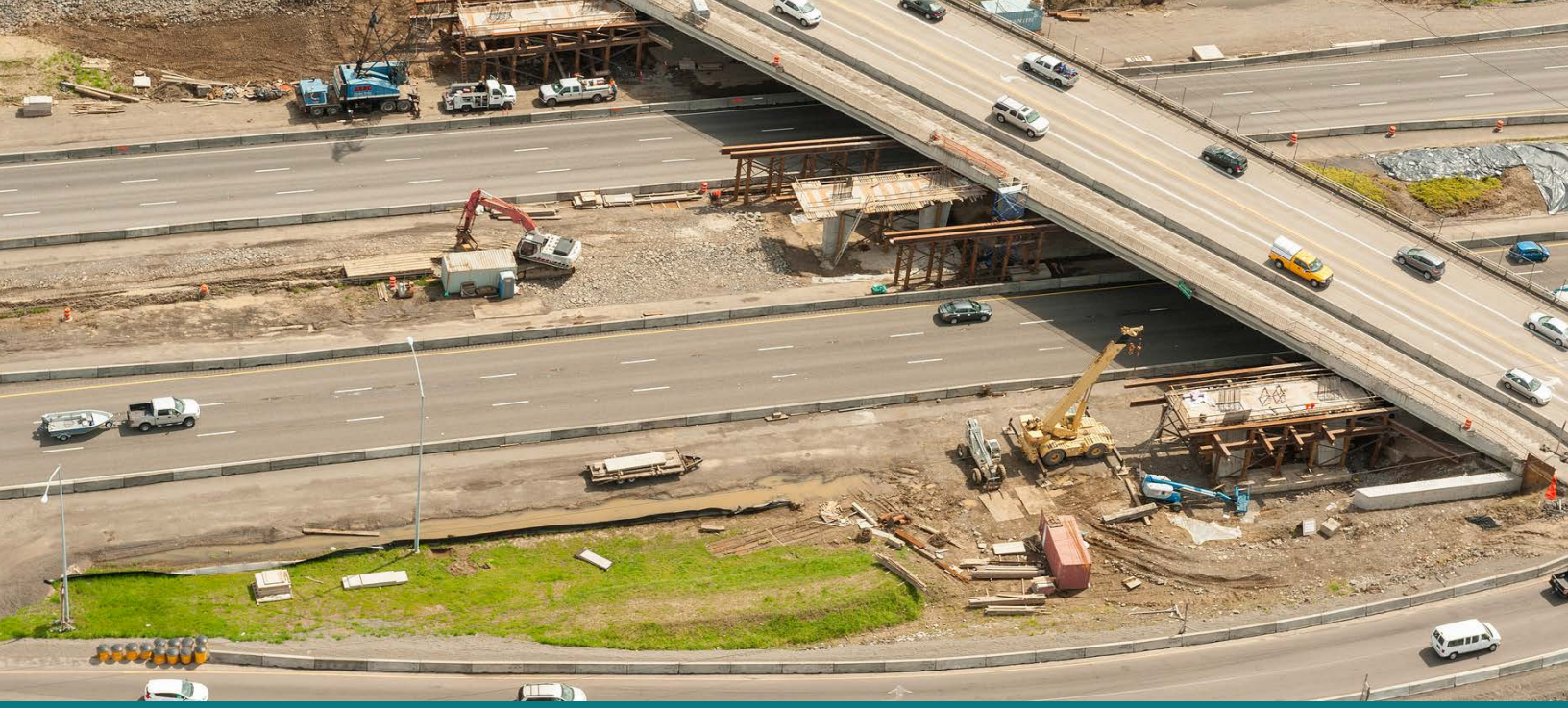
Smoothness NO LINK – ODOT Pavement Services has developed a spreadsheet used to calculate a price adjustment for pavement smoothness as addressed in the Contract Special Provisions in Section 00745 for asphalt concrete and in Section 00755 for Portland Cement Concrete pavements. See Chapter 12C - Quality Price Adjustments in the Construction Manual.

Standard Specification Boilerplate Special Provision 00195.12(a) through 00195.12(d) – Check the Contract Special Provisions to see which steel items are eligible. The Contractor must submit, in writing whether they intend to participate or not. If the Contractor determines that they wish to participate, it must select which of the qualified steel items are included in the escalation/de-escalation adjustment calculation.

State Materials Lab Building
800 Airport Road SE
Salem, Oregon 97301
Phone: 503-986-3000
Fax: 503-986-3096

StatSpec – Version 3.10.4 – In order to simplify the statistical analysis of Materials defined in Section 00165.30, ODOT has developed an Excel Spreadsheet called StatSpec. StatSpec is used to calculate pay factors (PF) and composite pay factors (CPF) used in determining asphalt bonuses for superior quality Materials and price adjustments (reductions) for non- specification Materials. StatSpec is also used to calculate the quality levels of test results from the Contractor's process control. See Chapter 12C - Quality Price Adjustments in the Construction Manual.

Steel Material Values – Steel material values are used to determine and calculate steep material price escalation and de-escalation adjustments according to Standard Specification Boilerplate Special Provisions 00195.12(a) through 00195.12(d).



CHAPTER 3
Contract Requirements and Organization

It is the responsibility of the Region Engineer (RE) and staff to ensure that all materials incorporated in the Construction Project comply with the Contact Plans and Specifications.

Acceptability of the materials and work is the basis for payment to the Contractor (see Section 00150.25 of the Standard Specifications). For materials that are not in close conformance to the Contract, they are either rejected or accepted at a reduced price if determined suitable for the intended use. If there is no basis for acceptance (e.g., missing test results or other quality documentation), then ODOT has no documentation to support the payment.

In order to determine the acceptability of the materials, it is important to become familiar with the Contract requirements. The Contract documents that contain the Material requirements will be discussed in this chapter.

Organization of the documents is also important. These documents will be reviewed by the Region Assurance Specialist (RAS) throughout the

life of the project. They may also be reviewed by other agencies (e.g., ODOT Internal Audits, Secretary of State, Federal Highway Administration (FHWA)). Missing, lost or unverified Material documentation may also result in loss of federal funding on FHWA funded projects.

The documents and records include those that are needed to justify that the Work has been completed according to Contract requirements, and that payment has been properly made.

Project records and other documentation must be proper and current. At any time during the life of the Project, the Project Records may be reviewed or audited by a number of parties, including:

- Construction Section personnel
- ODOT's Internal Audit and Review group
- Federal Highway Administration (FHWA)
- Region personnel
- Representatives of Department of Justice or attorneys for a Contractor
- Any other group performing an audit
- A person reviewing records under the Public Records Law

The QCCS is responsible to ensure that:

- The Project meets the requirements specified in the plans and specifications.
- All required tests are performed, documented, and submitted. The RE is also responsible for informing the QAC of project schedules, current quantities, and anticipated sampling requirements so verification testing can be accomplished.
- The Contractor's QC program meets required standards. This is accomplished by performing inspections of Contractor's personnel, testing procedures, and testing equipment.
- The Contractor and Region Quality Assurance Laboratory is notified in writing within five working days of an IA/Verification sample's completion as to which backup samples may be discarded or that an investigation is in progress. Upon the completion of an investigation, inform the Contractor in writing which backup samples may be discarded. Written notification will identify the Lot/Sublots, include the IA test results, and, if required, the resolution of an IA investigation.

In order to determine which materials are specified in the Contract, track quantities incorporated and required testing, the QCCS must:

- Review the Materials Specifications prior to the preconstruction conference.

- Breakdown the requirements for all Materials for each bid item, noting the expected QC, QA and any special considerations.
- List required tests, minimum frequencies and estimated quantities on the Test Summary sheets.
- Incorporate the use of checklists.
- Track incorporated quantities of Material on spreadsheets.
- Provide information regarding any change in Material requirements with the Project Inspector.

A QCCS will attend a significant number of meetings during the life of a Project and must take that opportunity to collect, share and discuss construction-related issues. There are several different types of meetings that will occur, but typically fall into the category of preconstruction, during construction and post construction. All are valuable and serve a unique purpose. In order to benefit from the meeting, a QCCS should prepare or "do their homework" prior to the meeting to take advantage of the opportunity and be as productive as possible. Others involved will appreciate the extra effort and will feel the meeting had value. This also affords a great opportunity to reinforce communication skills and build rapport.

In order to be effective during any type of meeting, a QCCS should take the time to prepare and outline what will be discussed, identify pertinent issues, and present the information in a logical order. One way to ensure success is to develop a checklist based on the type meeting. Many checklists have been developed over the years and can be utilized or modified to meet the need of the QCCS.

Contract Requirements for Field Tested Materials

For each section of Work that applies to construction Contract determine the required documentation that clearly shows that the materials incorporated into the construction project meets the Contract specifications.

The Contract Documents, including Contract Change Orders, Special Provisions, Plans and Specifications, are intended to describe all of the items of Work necessary to complete the Project.

Section 00150.10 Coordination of Contract Documents – The Contract Documents, including, but not limited to, Contract Change Orders, the Special Provisions, the Plans, and the Standard Specifications, are intended to collectively describe all of the items of Work necessary to complete the Project.

a. Order of Precedence – The Engineer will resolve any discrepancies between these documents in the following order of precedence:
    - Contract Change Orders;
    - Special Provisions;

- Stamped Agency-prepared drawings specifically applicable to the Project and bearing the Project title;
- Reviewed and accepted, stamped Working Drawings;
- 3D Engineered Models and supplemental Agency-prepared line, grade and Cross Section data applicable to the Project;
- Standard Drawings;
- Approved unstamped Working Drawings and 3D Construction Models;
- Standard Specifications; and
- All other Contract Documents not listed above.

Notes on a drawing shall take precedence over drawing details. Dimensions shown on the drawings, or that can be computed, shall take precedence over scaled dimensions.

Refer to the Oregon Standard Specification for Construction. (The most current version specified in the Contract at time of bid, this can be found in the Special Provisions.)

Section 00165 - Quality of Materials outlines the quality requirements specified for materials incorporated in the Construction Project.

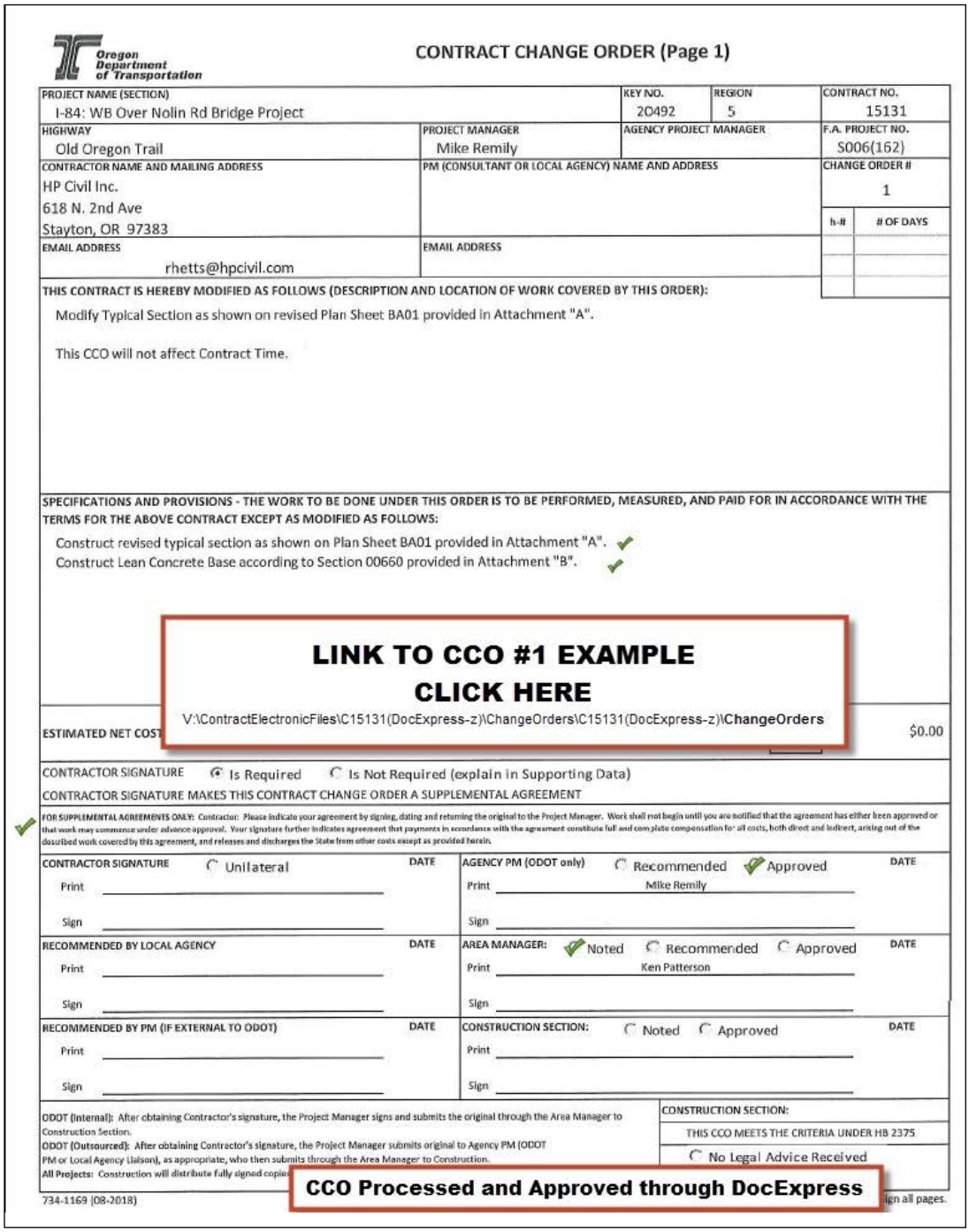
Project/Contract Drawings/Standard Drawings

The Project specific Special Provisions add to, change, or modify the Standard Specifications for Construction.

Chapter 15 – Contract Change Orders / Force Account / Work by Public Forces Construction Manual

Changes to the plans, quantities, or details of construction are inherent in the nature of construction and may be necessary during the course of construction. Because these are changes in the original Contract, a Contract Change Order will need to be written, processed and approved.

CCO #1 Example
Change in Materials and Contract Estimated Quantities



Oregon Department of Transportation

CONTRACT CHANGE ORDER (Page 1)

PROJECT NAME (SECTION)		KEY NO.	REGION	CONTRACT NO.
I-84: WB Over Nolin Rd Bridge Project		20492	5	15131
HIGHWAY	**PROJECT MANAGER**	**AGENCY PROJECT MANAGER**		**F.A. PROJECT NO.**
Old Oregon Trail	Mike Remily			S006(162)
CONTRACTOR NAME AND MAILING ADDRESS	**PM (CONSULTANT OR LOCAL AGENCY) NAME AND ADDRESS**			**CHANGE ORDER #**
HP Civil Inc. 618 N. 2nd Ave Stayton, OR 97383				1
				h-# / # OF DAYS
EMAIL ADDRESS	**EMAIL ADDRESS**			
rhetts@hpcivil.com				

THIS CONTRACT IS HEREBY MODIFIED AS FOLLOWS (DESCRIPTION AND LOCATION OF WORK COVERED BY THIS ORDER):

Modify Typical Section as shown on revised Plan Sheet BA01 provided in Attachment "A".

This CCO will not affect Contract Time.

SPECIFICATIONS AND PROVISIONS - THE WORK TO BE DONE UNDER THIS ORDER IS TO BE PERFORMED, MEASURED, AND PAID FOR IN ACCORDANCE WITH THE TERMS FOR THE ABOVE CONTRACT EXCEPT AS MODIFIED AS FOLLOWS:

Construct revised typical section as shown on Plan Sheet BA01 provided in Attachment "A". ✔
Construct Lean Concrete Base according to Section 00660 provided in Attachment "B". ✔

LINK TO CCO #1 EXAMPLE
CLICK HERE
V:\ContractElectronicFiles\C15131(DocExpress-z)\ChangeOrders\C15131(DocExpress-z)**ChangeOrders**

ESTIMATED NET COST $0.00

CONTRACTOR SIGNATURE ◉ Is Required ○ Is Not Required (explain in Supporting Data)

CONTRACTOR SIGNATURE MAKES THIS CONTRACT CHANGE ORDER A SUPPLEMENTAL AGREEMENT

FOR SUPPLEMENTAL AGREEMENTS ONLY: Contractor: Please indicate your agreement by signing, dating and returning the original to the Project Manager. Work shall not begin until you are notified that the agreement has either been approved or that work may commence under advance approval. Your signature further indicates agreement that payments in accordance with the agreement constitute full and complete compensation for all costs, both direct and indirect, arising out of the described work covered by this agreement, and releases and discharges the State from other costs except as provided herein.

CONTRACTOR SIGNATURE ○ Unilateral	DATE	AGENCY PM (ODOT only) ○ Recommended ✔ Approved	DATE
Print		Print Mike Remily	
Sign		Sign	
RECOMMENDED BY LOCAL AGENCY	**DATE**	**AREA MANAGER:** ✔ Noted ○ Recommended ○ Approved	**DATE**
Print		Print Ken Patterson	
Sign		Sign	
RECOMMENDED BY PM (IF EXTERNAL TO ODOT)	**DATE**	**CONSTRUCTION SECTION:** ○ Noted ○ Approved	**DATE**
Print		Print	
Sign		Sign	

ODOT (Internal): After obtaining Contractor's signature, the Project Manager signs and submits the original through the Area Manager to Construction Section.
ODOT (Outsourced): After obtaining Contractor's signature, the Project Manager submits original to Agency PM (ODOT PM or Local Agency Liaison), as appropriate, who then submits through the Area Manager to Construction.
All Projects: Construction will distribute fully signed copies

CONSTRUCTION SECTION:
THIS CCO MEETS THE CRITERIA UNDER HB 2375
○ No Legal Advice Received

CCO Processed and Approved through DocExpress

734-1169 (08-2018) ...ign all pages.

CCO #1 Example
Supporting Data Sheet

Oregon Department of Transportation

CONTRACT CHANGE ORDER (Page 2)

PROJECT NAME (SECTION)				CONTRACT NO.		CCO NO.
I-84: WB Over Nolin Rd Bridge Project				15131		1
PAY ITEM	SUB JOB	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	AMOUNT
4001A	011	0500CCE440CAA Lean Concrete Base 6" Thick	1.00	LS	$19,550.00	$19,550.00
4001B	011	0700CCE44PCAM Reduce Bl 390	-135.00	ton	$100.00	($13,500.00)
4001C	011	0600CCE44PCAM Reduce Bl 380	-121.00	ton	$50.00	($6,050.00)
				CCO (Page 2) TOTAL		$0.00

CONTRACT CHANGE ORDER #1

4001A - Lean Concrete Base 6" Thick, added to Contract and must meet the requirements of Sec. 0660 as provided in Attachment "B" of the change order

4001B- Aggregate Base under Bid Item 38, decrease quantity by 135 Tons

4001C - Level 3, 12 Inch ACP Mixture under Bid Item 39, decrease quantity by 121 Tons

(Note: Example CCO processed through DocExpress)

CONTRACTOR SIGNATURE	DATE	PROJECT MANAGER OR LOCAL AGENCY LIAISON SIGNATURE	DATE

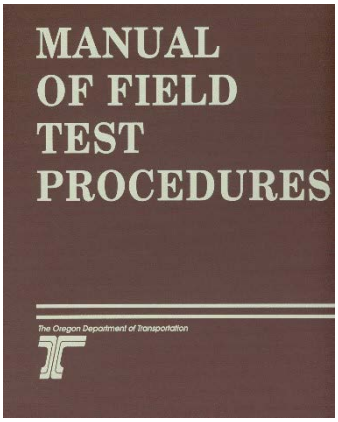
734-1169 (08-2018) Contractor: Sign all pages.

Manual of Field Test Procedures

Field-Tested Materials – Field-tested Materials will be accepted according to the ODOT Manual of Field Test Procedures (MFTP). The MFTP is published once per year and is available from the ODOT Construction Section.

The MFTP is designed to be used by Contractor and Agency technicians for the sampling and testing of construction materials, and to determine their conformance to ODOT specifications.

Included in the MFTP are the Test Procedures, the Quality Assurance Program, report forms and examples, and the Field Tested Materials Acceptance Guide.



Determine the testing requirements for the various Materials, testing frequency for the estimated quantity of Material, and the estimated number of tests to be performed.

Note: Section 00165.20 - Order of Precedence for Field Tested Materials – Used to resolve conflicting references or when no reference is made to materials specifications, sampling and testing frequencies, or test methods.

Example of Determining Testing Frequencies
(see Chapter 2)

Contractor's Quality Control Plan

The Contractor is responsible for providing quality control sampling and testing, furnishing Material of the quality specified, and furnishing QL levels during aggregate production, when required. The Contractor's Quality Control technician must perform or observe the sampling operations. Testing operations will be performed by a certified technician. The certified technician, who performs the sampling and testing procedures, must sign the testing documentation.

Contractor quality control tests will be used for acceptance only if verified by tests performed by an independent group, Region Quality Assurance (10% verification of the Contractor quality control).

Small quantities of some materials may be accepted when requested by the contractor and approved by the Resident Engineer (see Section 4(B) of MFTP).

Prior to the Quality Control Conference, request the Contractor's quality control plan. The minimum requirements for the written Contractor's quality control plan are outlined in the Manual of Field Test Procedures (MFTP Section 1A Parameters Appendix B):

- Must identify material sources, suppliers, and subcontractors
- Provide technician and lab certifications
- Provide scale certifications
- Must clearly state when test results and other related documents are to be submitted to the RE

- Plan must be approved by the RE

The quality control plan should contain the different technicians and the certifications they hold. Typically, a copy of the technician's certification is included with the quality control plan that shows the various certifications held by the individual.

Preconstruction Conference (Pre-Con)

The preconstruction conference is a critical meeting and sets the tone for future meetings. However, many times the Pre-Con is formatted for construction-related aspects and may not be the appropriate forum to discuss Materials testing and QA-related issues. See Chapter 11 – Before On-Site Work Can Begin of the Construction Manual. A quality control conference may be required for larger projects where more testing is required.

- Prior to the meeting, review the Special Provisions and note any changes, additions, deletions or unique areas that should be discussed. Put together a list of expectations (e.g., submitting paperwork in a timely fashion, adherence to the QA program and frequency requirements).
- Identify who will set up the meeting and discuss how much time can be allotted for your discussion. Normally during the preconstruction conference, many of the suppliers are not present and this is your target audience. (The Contractor should have a list identifying who will perform the various activities.)
- It is recommended to use the time during this meeting to introduce yourself and briefly outline the QA concepts. This helps the Contractor to understand how the suppliers will interact. Schedule a QA-style meeting with a representative of the prime, RE, Inspector for the project, Region QAC and the various Quality Control entities working on the project. Also, provide a copy of the Quality Assurance Program to the Contractor. This demonstrates that you are a resource and presents a positive first impression.
- During the meeting, ensure you present yourself as a resource and show your willingness to assist with problems as they arise.
- After the meeting, send out a reminder to all the parties. Include a copy of the Quality Control requirements outlined in Appendix G of the Quality Assurance Program. This will assist the QCCS in collecting the needed information and help the suppliers gather the required documents.
- Schedule a quality control conference. Include the QC Manager, certified technicians, Contractor representatives, suppliers and Inspectors.

Quality Control Conference

The purpose of this meeting is to review the Contractor's quality control plan. Project checklists or test summaries may be used to create an agenda.

Prior to the meeting, ensure time is taken to review the Contract documents and note critical items that should be discussed. Ensure these are documented in your notes. The easiest way to prepare is take the Standard Specifications and cross reference the Special Provisions and note changes. Review the entire section. Pay particular attention to the field material testing aspects and annotate the section reference for easy retrieval during the meeting. Don't forget to include the Quality Assurance requirements that pertain to the area in discussion.

Obtain a schedule from the QC Manager for all materials intended for delivery. Discuss the importance of keeping it updated and notifying the QCCS of changes.

Quality Control – Identify Material Sources, identify the manufactured products for which inspection is needed, and identify the inspection processes.

Identify materials that will be accepted under the Small Quantity Guide. Request a written explanation that clearly identifies the equipment and process proposed before commencement of the Work. The request must also be accompanied by the appropriate documents listed in bullets one through seven of the Small Quantity Guideline.

Cover material conformance documents. Also, discuss the required Certified Technician and Certified Laboratories.

Focus on the topic under discussion and be prepared to answer questions. If you can't answer a question correctly, and in accordance with the contract requirements, indicate that you don't know or are unsure, but will research and obtain the needed information. Assure that you understand the question. Write it down and provide the Contractor with an approximate timeline to expect the answer. This is a key element in regards to building a strong relationship with the Contractor.

Acceptance of Small Quantities of Field Tested Materials

The Resident Engineer has the option to waive normal Quality Control (QC) sampling and testing. The Manual of Field Test Procedures contains a method for accepting relatively small quantities of field-tested materials without following the normal QC sampling and testing frequencies. These materials are addressed in the in the Field-Tested Materials Small Quantity Guideline (Chapter 4b of the MFTP).

The Contractor may request in writing, before commencement of the work, that normal QC sampling and testing of materials be waived for the materials listed in the Small Quantity Table in Chapter 4b of the MFTP. The written request should clearly identify the equipment and process proposed before commencement of the work. The request must also be accompanied by the appropriate documents listed in bullets one through seven of the Small Quantity Guideline.

Small Quantity Acceptance

(Bullet 6 of the Small Quantity Guidelines)

For Section 00745 (ACP, Statistical Acceptance), acceptance shall be based on Section 00745.17 or on QC and QA data for the same Mix Design used on other projects within the past 12 months.

Contractor Schedule

The Contract requires that the Contractor prepare and submit its Project Work schedule to the RE for review 10 Calendar Days prior to the Pre-Con (see Section 00180.41).

During the Project, the Contractor is also required to submit a supplemental "look ahead" Project Work schedule each week to the RE, which shall:

- Identify the sequencing of activities and time required for prosecution of the Work.
- Provide for orderly, timely, and efficient prosecution of the Work.
- Contain sufficient detail to enable both the Contractor and the RE to plan, coordinate, analyze, document, and control their respective Contract responsibilities.

Quality Control Testing

The infomation provided here is a simplified summary of the required tests. See the Manual of Field Tested Procedures, Section 4D, for a more comprehensive list of test procedures and frequencies.

Section 00330 Earthwork

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician
- Test Frequencies
  - Maximum Density – AASHTO T99
  - Bulk Gravity – AASHTO T85

- Family of Curves – R 75
- Coarse Particle Correction – AASHTO T 99 Annex A
- Density in Place – AASHTO T-310
- Moisture Content – AASHTO T 255/T 265 OR T 217
- Observe Deflection – ODOT TM 158 (Sec. 00330.43)

- Test Frequencies - refer to Section 4D of the Manual of Field Tested Procedures

Section 00390 Riprap Protection

- Certified Technician
  - CGI – General Construction Inspector (Gradation)
- Tests to Be Performed
  - Soundness – AASHTO T 104 (Central Materials Lab)
  - Degradation – ODOT TM 208 (Central Materials Lab)
  - Specific Gravity and Absorption – AASHTO T 85 (Central Materials Lab)
  - Gradation (VISUAL BY REGION ENGINEER (Section 00390.13))
- Test Frequencies: 1/source and 1/year
- Contractor Submits to RE:
  - Sampling – Source Review and Product Compliance Testing for Aggregate
  - Sample Data Sheets (Form 734-4000)

Section 00405 Bedding and Backfill

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician
- Tests to be performed
  - Maximum Density – AASHTO T99
  - Bulk Gravity – AASHTO T85
  - Coarse Particle Correction – AASHTO T 99 Annex A
  - Density in Place – AASHTO T 310
  - Moisture Content – AASHTO T 255/T 265 OR T 217
  - Family of Curves – R 75
  - Observe Deflection – ODOT TM 158

- Test Frequencies: 1/Aggregate Source, 1/Soil Type for Max Density, 1/300 ft. of Trench Length and 1/1.5 ft. of depth/fill

Section 00440 & 00759 Minor Structure Concrete

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician
- Tests to be performed
  - Sampling – WAQTC TM 2
  - Air Content – AASHTO T 152
  - Density (unit weight) & Yield – AASHTO T 121
  - Slump – AASHTO T 119
  - Temperature – AASHTO T 309
  - Strength – AASHTO T22 & T 23
- Test Frequencies: 1/20 yd3 or 1/day, for each mix design

Section 00540 Concrete Bridges

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician
- Tests to be performed:
  - Sampling – WAQTC TM 2
  - Air Content – AASHTO T 152
  - Density (unit weight), Yield & Water/Cement Ratio – AASHTO T 121
  - Slump – AASHTO T 119
  - Temperature – AASHTO T 309
  - Strength – AASHTO T22 & T 23

Note: Aggregate and Production Testing is required.

- Test Frequencies: See Table 00540-1 in the Manual of Field Tested Procedures

Section 00641 Aggregate Subbase, Base and Shoulders

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician

- Tests to be performed
  - Maximum Density – AASHTO T99
  - Bulk Gravity – AASHTO T85
  - Family of Curves – R 75
  - Coarse Particle Correction – AASHTO T 99 Annex A
  - Density in Place – AASHTO T-310
  - Moisture Content – AASHTO T 255/T 265
  - Observe Deflection – ODOT TM 158 (Sec. 00330.43)

Note: Aggregate and Production Testing is required.

Section 00745 Hot Mixed Asphalt Concrete (ACP)

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician

- Tests to be performed
  - Gyratory Specimen – ODOT TM 326
  - Bulk Specific Gravity – AASHTO T 166
  - Maximum Specific Gravity – AASHTO T 209
  - Tensile Strength Ratio – AASHTO T 283
  - Sieve Analysis – AASHTO T-30
  - Moisture – AASHTO T 329
  - Asphalt Content – AASHTO T 308
  - Control Strip – TM 306
  - MAMD – ODOT T 305
  - Nuclear Density – AASHTO T 355

- Test Frequencies:
  - 1/1000 ton sublot for mixture
  - 5/1000 ton sublot for density as well as density testing for the control strip

    NOTE: Also requires Aggregate Production testing

Section 00754 Plain Concrete Pavement Repair
Section 00755 Continuously Reinforced Concrete Pavement
Section 00756 Plain Concrete Pavement
Section 00758 Continuously Reinforced Concrete Pavement Repairs

- Certified Technician
  - CDT – Certified Density Technician
  - CEBT – Certified Embankment & Base Technician

- Tests to be performed
  - Sampling – WAQTC TM 2
  - Air Content – AASHTO T 152
  - Slump – AASHTO T 119
  - Density (unit weight), Yield & Water/Cement Ratio – AASHTO T 121
  - Temperature – AASHTO T 309
  - Strength – AASHTO T22 & T 23

Note: Aggregate and Production Testing is required.

- Test Frequencies: Minimum 1/day and 1/100 yd^3 for repairs for paving 1/1000 lane feet slip formed pavement sublot or 1/100 yd^3 non-slip formed and minimum 1/day.

Technician Certifications

Training	Description	Certification Duration
Quality Control Technician (QCT)	Performs testing of fresh Portland cement concrete including sampling, temperature, slump, unit weight, air content, and fabrication of specimens for strength testing, and performs other duties as required by specifications. Prerequisite – Completion and certification from the ACI Concrete Field Testing Technician Grade 1 course.	Initial: 5 years Recertification: 5 years
Concrete Strength Testing Technician (CSTT)	Responsibilities include testing the compressive flexural strength of hardened concrete cylinders or beams, proper capping of specimens (bonded and unbonded), visual evaluation of broken specimens, and ensuring proper handling of field fabricated samples upon arrival at testing laboratories.	Initial: 5 years Recertification: 5 years
Concrete Control Technician (CCT)	Responsible for proportioning and adjusting concrete mixtures to meet job requirements for quality as required by specifications.	Initial: 3 years Recertification: 3 years
Certified Mix Design Technician (CMDT)	Prepares ACP and EAC mix designs, including all material testing and data analysis necessary to properly complete a design, and prepares designs for both dense and open-graded ACP mixtures.	Initial: 3 years Recertification: 5 years
Certified Embankment and Base Technician (CEBT) or WAQTC Equivalent	Tests soils and aggregates to establish the relative maximum density and optimum moisture for use in compaction testing of subgrade soils and aggregate bases, and determines the specific gravities of aggregate.	Initial: 3 years Recertification: 5 years
Certified Density Technician (CDT) or WAQTC Equivalent	Performs in-place density testing of soils, aggregates and asphalt mixtures as well as determining percentages of course and fine material. Additional Requirement – CDT must possess a current radiation safety certification card issued by an approved source.	Initial: 3 years Recertification: 5 years

Training	Description	Certification Duration
Certified Asphalt Technician II (CAT-II)	Manages the volumetric properties of asphalt mixes by controlling plant operations, troubleshoots ACP sampling and testing processes, and makes adjustments to ACP production and laydown procedures. Prerequisite – Completion of the CAT-I certification at least once.	Initial: 3 years Recertification: 5 years
Certified Asphalt Technician I (CAT-I) or WAQTC Equivalent	Performs sampling and testing for ACP and EAC mixtures, such as AC content, maximum specific gravity, sieve analysis, and other tests and duties required by current specifications.	Initial: 3 years Recertification: 5 years
Certified Aggregate Technician (CAgT) or WAQTC Equivalent	Performs tests on aggregates including sieve analysis, fracture, and sand equivalency, as well as other duties required by current specifications for aggregate materials	Initial: 3 years Recertification: 5 years

CHAPTER 4
Test Summary

The purpose of the Test Summary is to help organize the quality documentation for the Materials incorporated in to the Construction Project. It allows the user to easily track test results and other supporting quality documentation for both Field-Tested and Nonfield-Tested Materials. It also makes reviewing, auditing and retrieving documents much easier and quicker. (See Chapter 12B – Quality of the Construction Manual.)

How to Construct the Test Summary

Start with the bid schedule located in the Contract Special Provisions and a Test Summary "A" sheet (ODOT form 734-1902A) for Nonfield-Tested Materials located on the Construction Forms website.

- Fill in the Contract No. (e.g., C15123) in the upper right hand corner and the Project Name.
- List the Item No. (bid item number) and the Bid Item Description. The "A" sheet has space for 6 Items.
- Use the Nonfield-Tested Materials Acceptance Guide (NTMAG – See Sec. 00165.10(b)) for the standard documentation requirements for nonfield-tested items. Remember to check the Contract Special Provisions and any CCOs for changes, additions or modification to quantities and/or the Standard Specifications.
- Enter in the Unit (unit of measure) and Original Quantity (original estimated quantity) for each Item.
- Continue entering nonfield-tested items using new "A" sheets as necessary.

SCHEDULE OF ITEMS

OR38: HOAGLAND CR AND UNNAMED CR CULVERTS PROJECT (C15141)

BABB CONSTRUCTION CO

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES					
0010	0210-0100000A MOBILIZATION	LUMP SUM	ALL	183,350.00	183,350.00
0020	0225-0100000A TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LUMP SUM	ALL	11,660.00	11,660.00
0030	0225-0102000J TEMPORARY SIGNS	SQFT	625.00	23.00	14,375.00
0040	0225-0126000F TEMPORARY CONCRETE BARRIER, REFLECTORIZED	FOOT	1,563.00	21.29	33,276.27
0050	0225-0132000F MOVING TEMPORARY CONCRETE BARRIER	FOOT	1,275.00	5.00	6,375.00
0060	0225-0133000E TEMPORARY IMPACT ATTENUATOR, SAND BARREL SYSTEM	EACH	5.00	1,850.00	9,250.00
0070	0225-0134000E TEMPORARY IMPACT ATTENUATOR, NARROW SITE SYSTEM	EACH	3.00	2,750.00	8,250.00
0080	0225-0136000E MOVING TEMPORARY IMPACT ATTENUATORS, SAND BARREL SYSTEM	EACH	8.00	575.00	4,600.00
0090	0225-0141100E REFLECTIVE BARRIER PANELS	EACH	372.00	18.00	6,696.00
0100	0225-0141300E REPAIR TEMPORARY IMPACT ATTENUATOR, NARROW SITE SYSTEM	EACH	2.00	50.00	100.00
0110	0225-0141500E REPAIR TEMPORARY IMPACT ATTENUATOR, SAND MODULE	EACH	3.00	50.00	150.00
0120	0225-0141650F SECURING TEMPORARY CONCRETE BARRIER	FOOT	2,200.00	3.00	6,600.00
0130	0225-0142000E SURFACE MOUNTED TUBULAR MARKERS	EACH	52.00	110.00	5,720.00
0140	0225-0143000E REPLACE SURFACE MOUNTED TUBULAR MARKERS	EACH	58.00	90.00	5,220.00

Oregon Department of Transportation

TEST SUMMARY FOR NON-FIELD TESTED MATERIALS (A)

CONTRACT NO. | SHEET OF

PROJECT NAME

PREPARED BY | DATE

ITEM NUMBERS AND DESCRIPTIONS

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	FIR REPORT NO.	DATA SHEET NO., OR MATERIALS LAB. "I" REPORT NO.	INSPECTION/ LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS "I" REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	INCORPORATED QUANTITIES						ITEM NO.	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION
		F		L	T	Q	QI	E	O											
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

734-1902A (8-2010)

http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

Test Summary “B” sheet or “B-QA” (ODOT form 734-1902B & 1902BQA) for Field Tested Materials located on the [Construction Forms](#) website.

Oregon Department of Transportation

TEST SUMMARY FOR FIELD TESTED MATERIALS (B)

CONTRACT NO.	SHEET OF

PROJECT NAME	ITEM NO	DESCRIPTION	UNIT	ORIG. QUANT.	FINAL QUANTITY
PREPARED BY / DATE					

TESTING BY | TEST METHOD AND FREQUENCY | QUANTITIES

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	REPORT NO.	DATA SHEET NO.	INSPECTION REPORT / LAB REPORT NO.	QUALITY CONTROL BY CONTRACTOR	REGION QUALITY VERIFICATION	REGION INDEPENDENT ASSURANCE	CONTRACTOR INDEPENDENT ASSURANCE (SPLIT SAMPLE)	SOURCE MATERIAL (QUALIFYING)	MIX DESIGN	DENSITY	STRENGTH	VISUAL	IN COMPLIANCE INCORPORATED	NON-COMPLIANCE INCORPORATED	☐ WORK PHASE ☐ AGGR. PROD ☐ MIX PRODUCTION ☐ DENSITY ☐ OTHER — EXPLANATIONS AND NON-COMPLIANCE
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																

734-1902B (8-2009) http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

Oregon Department of Transportation

TEST SUMMARY FOR FIELD TESTED CONCRETE MATERIALS (B-QA)

CONTRACT NO.	SHEET OF

PROJECT NAME	CLASS OF CONCRETE:	UNIT	ORIG. QUANTITY	FINAL QUANTITY
PREPARED BY / DATE				

TESTING FREQUENCIES:

TEST METHOD AND FREQUENCY

DATE MATERIAL PLACED	BID ITEM NUMBER	DESCRIPTION OF WORK (curb, inlet, etc.)	QUANTITY PLACED	ACCUMULATIVE QUANTITY	MIX DESIGN #	REGION - QUALITY VERIFICATION	INSPECTION / LAB REPORT NO.	CYLINDERS Y or N?	AIR CONTENT	SLUMP	W/C RATIO / YIELD	TEMPERATURE	DENSITY	BREAK RESULTS	28-DAY BREAK RESULTS	ADJUSTMENT FOR NON-COMPLIANCE MATERIALS? Y or N	COMMENTS

- Fill in the Contract No. (e.g., C15999) in the upper right hand corner and the Project Name.
- List the Item No. (bid item number) and the Bid Item Description.
- In the section called "Test Method and Frequency," fill in the tests (by name or number) and their frequency. This information is found in the MFTP, Section 4D. Check the Contract Special Provisions and any CCOs for changes, additions or modification to quantities and/or the Standard Specifications.
- Continue with "B" sheets for subsequent field-tested in the Schedule of Items (Bid Item Schedule). (Oils for ACP, EAC, tack, etc., should be put on "B" sheets.) Test Summary Items (bid items) should be kept in numerical order.

Some field-tested items, particularly ACP (but also Concrete items), have a lot of testing associated with them. It is a good practice to group the same type test reports on separate "B" sheets. Note the "Work Phase" check box on the far right of the sheet. All the aggregate production tests for an ACP item may be put on one page, while all the mix production tests may be put on a second page, etc.

When the Project specifies a large quantity of ACP, having a single "B" sheet for each separated size of aggregate is a helpful way to organize the tests. Similarly for mix production, individual pages should be used for each lot or type of test (MDV or Compaction tests, for example).

Some bid items have both field-tested and nonfield-tested components. Use an "A" sheet and a "B" sheet for these. An example is culvert pipe. An "A" sheet is needed for the pipe, and a "B" sheet to record the testing of the pipe backfill. If there are multiple pipe items, and the pipe quantities are small, use one "B" sheet for all of pipe. Record the backfill testing and note which culvert pipe item the test is for in the "Explanation" column.

All Contract Change Orders need to be listed in the Test Summary, too. Follow the same guidelines as for other bid items. Copies of all change orders need to be included to help the reviewer check for quality requirements.

Completing the Test Summary

Each line on the Test Summary represents a document or group of documents. The supporting quality documents and tests are usually filed in notebooks in Doc Express drawers by bid item, in numeric order per the naming conventions. Field tested items with a large amount of quality compliance testing are usually filed in their own separate notebooks. The documents should be filed in the same order as they appear on the Test Summary. This allows easy review of the documents for compliance with the Contract Specifications.

An Inspector submits a FIR (Field Inspection Report) accepting a quantity of material, with the other acceptance documents attached. As an example: a Quality Compliance Certification ("Q") and a Certificate of Material Origin ("O" or "CMO"- required for steel and iron on federal aid projects).

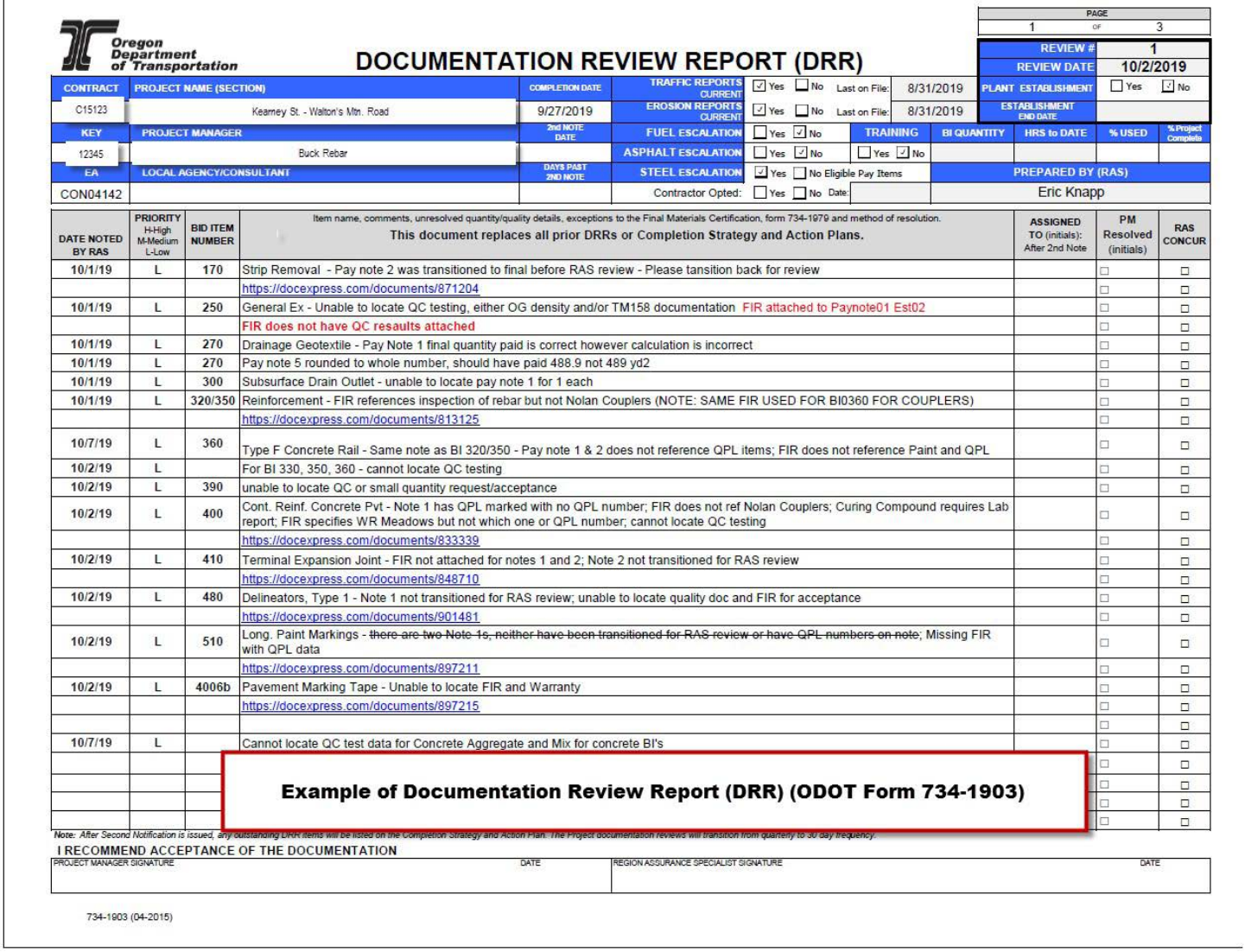
- Going left to right on the "A" sheet, enter the date from the FIR.
- Enter the FIR number. (This may need to assign the number to the FIR if it has been left blank.)
- Check the box labeled "Q".
- Check the box labeled "O".
- Enter the quantity of material the FIR represents. If needed, note in the explanation column the type material and any other pertinent information.
- All the documentation information should be on one line of the Test Summary.
- Staple all of the documents together.
- If more of the same material is incorporated at a later date, an additional FIR is needed and the information recorded on the next line of the Test Summary.
- If a lab report was also required, but came in later, just add the lab report number to the line previously made, and attach the lab report to those supporting documents. Lab reports may have a FIR on the bottom of the report. Note, it isn't necessary to fill the FIR on the bottom of the report if the material was accepted on a previous FIR.

When the same certifications cover material for more than one bid item, it isn't necessary to make copies for each bid item for which it pertains. Just reference those documents by noting "see BI####. (bid item number and description) for quality documents", and check the appropriate boxes.

The Test Summary "A" and "B" sheets need to reflect that the quantity was accepted, and documents supporting the quantity of Materials incorporated must be equal to, or greater than the quantity paid for.

When reviewing a Test Summary, the RAS will note each item that does not have complete acceptance documents to cover the quantity already paid for on the Documentation Review Report (DRR).

For nonfield-tested items, the FIR needs to show the quantity accepted in the same units as the bid item. For "Lump Sum" field-tested Items, the quantity should represent the unit of measure for the estimated quantity of materials specified in the Project Special Provisions. "All" is not an acceptable FIR quantity unless the material is incidental to the bid item (e.g., hardware for signs or traffic signals).



Oregon Department of Transportation

DOCUMENTATION REVIEW REPORT (DRR)

PAGE 1 OF 3

CONTRACT	PROJECT NAME (SECTION)	COMPLETION DATE				REVIEW #	1
C15123	Kearney St. - Walton's Mtn. Road	9/27/2019	TRAFFIC REPORTS CURRENT	☑ Yes ☐ No	Last on File: 8/31/2019	REVIEW DATE	10/2/2019
			EROSION REPORTS CURRENT	☑ Yes ☐ No	Last on File: 8/31/2019	PLANT ESTABLISHMENT	☐ Yes ☑ No
KEY	PROJECT MANAGER	2nd NOTE DATE	FUEL ESCALATION	☐ Yes ☑ No	TRAINING ☐ Yes ☑ No	BI QUANTITY	HRS to DATE	% USED	% Project Complete
12345	Buck Rebar		ASPHALT ESCALATION	☐ Yes ☑ No					
EA	LOCAL AGENCY/CONSULTANT	DAYS PAST 2ND NOTE	STEEL ESCALATION	☑ Yes ☐ No	Eligible Pay Items	PREPARED BY (RAS)			
CON04142			Contractor Opted:	☐ Yes ☐ No	Date:	Eric Knapp			

DATE NOTED BY RAS	PRIORITY H-High M-Medium L-Low	BID ITEM NUMBER	Item name, comments, unresolved quantity/quality details, exceptions to the Final Materials Certification, form 734-1979 and method of resolution. **This document replaces all prior DRRs or Completion Strategy and Action Plans.**	ASSIGNED TO (initials): After 2nd Note	PM Resolved (initials)	RAS CONCUR
10/1/19	L	170	Strip Removal - Pay note 2 was transitioned to final before RAS review - Please tansition back for review		☐	☐
			https://docexpress.com/documents/871204		☐	☐
10/1/19	L	250	General Ex - Unable to locate QC testing, either OG density and/or TM158 documentation FIR attached to Paynote01 Est02		☐	☐
			FIR does not have QC resaults attached		☐	☐
10/1/19	L	270	Drainage Geotextile - Pay Note 1 final quantity paid is correct however calculation is incorrect		☐	☐
10/1/19	L	270	Pay note 5 rounded to whole number, should have paid 488.9 not 489 yd2		☐	☐
10/1/19	L	300	Subsurface Drain Outlet - unable to locate pay note 1 for 1 each		☐	☐
10/1/19	L	320/350	Reinforcement - FIR references inspection of rebar but not Nolan Couplers (NOTE: SAME FIR USED FOR BI0360 FOR COUPLERS)		☐	☐
			https://docexpress.com/documents/813125		☐	☐
10/7/19	L	360	Type F Concrete Rail - Same note as BI 320/350 - Pay note 1 & 2 does not reference QPL items; FIR does not reference Paint and QPL		☐	☐
10/2/19	L		For BI 330, 350, 360 - cannot locate QC testing		☐	☐
10/2/19	L	390	unable to locate QC or small quantity request/acceptance		☐	☐
10/2/19	L	400	Cont. Reinf. Concrete Pvt - Note 1 has QPL marked with no QPL number; FIR does not ref Nolan Couplers; Curing Compound requires Lab report; FIR specifies WR Meadows but not which one or QPL number; cannot locate QC testing		☐	☐
			https://docexpress.com/documents/833339		☐	☐
10/2/19	L	410	Terminal Expansion Joint - FIR not attached for notes 1 and 2; Note 2 not transitioned for RAS review		☐	☐
			https://docexpress.com/documents/848710		☐	☐
10/2/19	L	480	Delineators, Type 1 - Note 1 not transitioned for RAS review; unable to locate quality doc and FIR for acceptance		☐	☐
			https://docexpress.com/documents/901481		☐	☐
10/2/19	L	510	Long. Paint Markings - ~~there are two Note 1s, neither have been transitioned for RAS review or have QPL numbers on note~~; Missing FIR with QPL data		☐	☐
			https://docexpress.com/documents/897211		☐	☐
10/2/19	L	4006b	Pavement Marking Tape - Unable to locate FIR and Warranty		☐	☐
			https://docexpress.com/documents/897215		☐	☐
					☐	☐
10/7/19	L		Cannot locate QC test data for Concrete Aggregate and Mix for concrete BI's		☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

Example of Documentation Review Report (DRR) (ODOT Form 734-1903)

Note: After Second Notification is issued, any outstanding DRR items will be listed on the Completion Strategy and Action Plan. The Project documentation reviews will transition from quarterly to 30 day frequency.

I RECOMMEND ACCEPTANCE OF THE DOCUMENTATION

PROJECT MANAGER SIGNATURE	DATE	REGION ASSURANCE SPECIALIST SIGNATURE	DATE

734-1903 (04-2015)

For field-tested items, the number of passing tests must equal or exceed the number required for the quantity paid to date.

For both field-tested and nonfield-tested items, the acceptability of the Materials and Work is the basis for payment to the Contractor (see Section 00150.25 of the Standard Specifications). For materials that are not in close conformance to the contract, they are either rejected or accepted at a reduced price (Chapter 12C - Quality Price Adjustments of the Construction Manual), if determined suitable for the intended use. A Price Adjustment will need to be calculated and assessed to the Contractor on the next pay estimate. If the Material is found to be unsuitable, then it must be removed and replaced. If there is no basis for acceptance (e.g., missing test results or other quality documentation), then ODOT has no documentation to support the payment for that Material. Note, this on the Test Summary.

When completing the Test Summary "B" sheets, each test does not always need to be listed separately. For StatSpec, aggregate production, mix production, or just to summarize the testing, then list "StatSpec" on

one line, and show the number of each test performed under each test method listed.

For some field-tested items list each test report. Earthwork and aggregate base compaction testing are usually listed by the test report. Clearly indicate when tests are failing. Subsequent test reports showing that those failing tests have been corrected should be shown in the Test Summary in a manner easily followed by the reviewer.

For portland cement concrete (PCC) mixture, list each concrete pour. This will help track the quantity of mix placed so that adherence to the test frequency can readily be tracked.

The test frequencies vary depending on the quantity of material placed per day. It is important to record the quantity of each pour. In addition, track concrete testing by mix design. If there are multiple concrete items that use the same mixture, list all the concrete pours of that mix under one bid item "B" sheet and cross reference with a note in the explanation column for the other multiple bid items.

Any failing concrete tests should be clearly marked, along with the amount represented by that test. Commercial grade concrete may have more than one CGC mix being used on the job, but on the same bid item, machine placement combined with hand placement. In this case, it is much easier to track each PCC mix on its own "B" sheet.

Always list ODOT lab reports individually and note if they passed or failed. Failing lab reports must be addressed. Options are:

- Rejection of the material
- Quality Price Adjustment – Chapter 12C of the Construction Manual
- Change of specification by Contract Change Order (CCO)

Verification/independent assurance tests should be listed on one line and noted if both verification and I.A. tests passed or failed. If either one or both failed, clearly show in the Test Summary that they were resolved. This is important! You cannot accept the Contractor's quality control tests until validated by passing I.A. and verification tests. How the failing test was resolved needs to be addressed in the supporting documentation, preferably attached to the failing test in question. Until you have acquired experience resolving failed I.A. and verification tests, discuss the tests with the RE and include a proposed resolution.

An example of an Independent Assurance / Verification Report (Form 734-5232) is included.

ACP Aggregate IA/V Results

PROJECT NAME (SECTION)			CONTRACT No.
MATERIAL DESCRIPTION	BID ITEM No.	DATE SAMPLED	PROJECT MANAGER
CONTRACTOR	SUPPLIER		SOURCE No.
QA TEST No. ID	QC TEST No. ID	TEST PROCEDURE or PROCESS UNDER INVESTIGATION - (ONLY IF IA/V PARAMETERS NOT MET)	

☐ **Met I.A. Parameters** ☐ **Q.A. Met Verification** ☐ **Q.A. Compares Reasonably to Ongoing QC Data**

☐ **Failed I.A. Parameters** ☐ **Q.A. Failed Verification** ☐ **Q.A. Does Not Compare Reasonably to Ongoing QC Data**

Note: According to QA Program, VI. Product Specific QC/QA Testing Plan, any failing condition will prompt an Investigation.

Gradation Sieve Size	Tolerances (±)	Contractor Q.C. Results	ODOT Q.A. Results	JMF Target	Specifications Lower	Specifications Upper	Difference	IA Parameters	Met IA Parameters	Out of IA Parameters
#200										

Particle Analysis

	Contractor Q.C. Results	ODOT Q.A. Results	JMF Target	Specifications Lower	Specifications Upper	Difference	IA Parameters (±)	Met IA Parameters	Failed IA Parameters
Fracture two face									
1"									
3/4"									
1/2"									
#4									
Fracture one face									
#8									
Wood Particles:									
Elongated Pieces:									
Sand Equivalent:									

REMARKS:

QCCS NAME	CERTIFICATION NUMBER	SIGNATURE	DATE

734-5232 (12-2019)

The Test Summary needs to show that all the required documentation for each item has been collected, is acceptable, and represents the quantity paid for. Keep in mind that the reviewer knows little about the Project. Notes and explanations in the Test Summary are very helpful.

Use other good Test Summary examples and talk to other QCCSs and your RAS about "Best Practices". Constructing quality Test Summaries comes with understanding their purpose, and experience in working with them.

Oregon Department of Transportation

TEST SUMMARY FOR NON-FIELD TESTED MATERIALS (A)

CONTRACT NO. 15117 | SHEET 1 OF 9

PROJECT NAME: Tumble Creek Bridge
PREPARED BY: Desiree Goodell
DATE: 3/25/2019

ITEM NO.	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY
0490	EA	4	4
0500	EA	10	10
0510	EA	8	9
0520	EA	3	3
0530	EA	4	4
0540	EA	2	2

LINE	DATE OF SAMPLE, TEST, OR INSPECTION	FIR REPORT NO.	DATA SHEET NO. OR MATERIALS LAB. "I" REPORT NO.	INSPECTION/ LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS "I" REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	0490 Delineators, Type 1	0500 Delineators, Type 4 Alternate 2	0510 Delineators, Type 6	0520 Milepost Marker Psots	0530 Culvert Drainage Markers, Type I	0540 culvert Drainage Markers, Type 2	EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION
		F		L	T	Q	QI	E	O	INCORPORATED QUANTITIES						
1	06/28/2019	1											3			
2	05/02/2019	1												4		QPL 2474
3	06/28/2019	1													2	
4	08/19/2019	1				X			X			9				QPL 4958
5	07/26/2019	1				X			X	4						Warranty
6	07/26/2019	1				X			X		10					QPL 4572
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

Example of Test Summary "A" Sheet

734-1902A (8-2010) http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

CHAPTER 5
Quality Price Adjustments

The Contractor must furnish Materials and perform the required Work in a manner that closely conforms to Contract requirements. As stated in Section 00150.25 of the Standard Specifications, if the Material furnished or the Work performed is not in close conformance, the Resident Engineer (RE) may order the Materials or Work to be removed and replaced, or may allow the Materials or Work to remain in place at a reduction in payment.

Construction Materials and Work:

- Materials and/or Work that are in close conformance with the Contract requirements and are paid at full price.
- Specified Materials and/or Work that is in close conformance with, or exceeds the Contract requirements, will be paid at the full price plus a premium price adjustment (bonus).
- Materials and/or Work that is not in close conformance with the requirements, but considered suitable for the intended purpose, may be approved for use with an appropriate adjustment (reduction) in price.
- Materials and/or Work that is not in close conformance with the contract requirements, and not considered suitable for the intended purpose, shall be rejected and not be incorporated into the finished work unless the defects are corrected in a manner acceptable to the RE.

There are two types of adjustments: Standard and Non-Standard. The differences will be discussed below. Additional information regarding both Standard and Non-Standard price adjustments can be found in the Construction Manual in Chapter 12C - Quality Price Adjustments.

Standard Adjustments

Standard adjustments are calculations for Materials that meet or exceed Specification or fail to achieve required standards. ODOT has developed an established price for Materials to provide a consistent evaluation process. This process applies either a bonus payment for superior materials and workmanship, or a reduction in payment for inferior materials or workmanship.

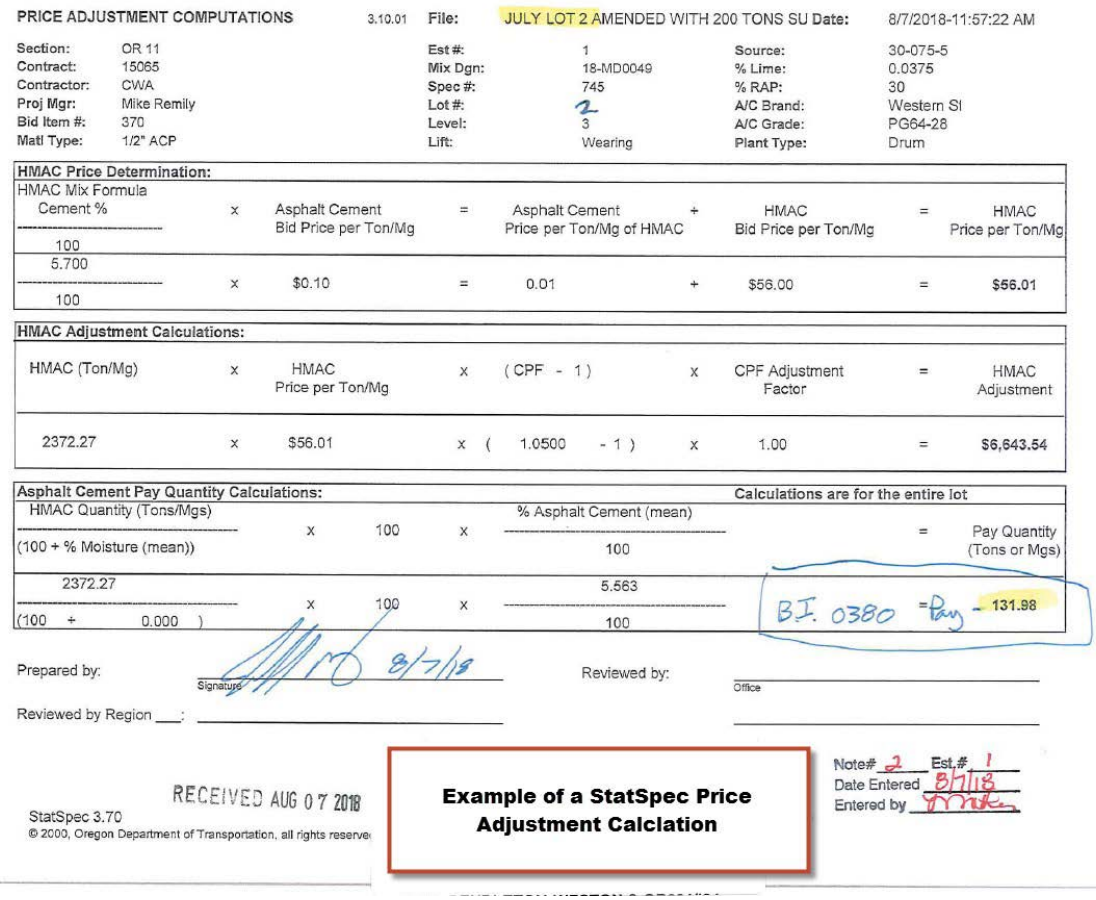
Some Contracts also allow the Contractor to receive a premium price adjustment (bonus) for Work or Materials that meet the requirements for such an adjustment.

A Contract Change Order (CCO) is not required if one of the standard price adjustments listed in Section 12C-2 of the Construction Manual is used.

StatSpec Price Adjustment Calculation for ACP

(Also used to calculate payment for asphalt cement)

Note: Moisture must be included to obtain an accurate binder quantity.



PRICE ADJUSTMENT COMPUTATIONS 3.10.01 File: JULY LOT 2 AMENDED WITH 200 TONS SU Date: 8/7/2018-11:57:22 AM

Section:	OR 11	Est #:	1	Source:	30-075-5
Contract:	15065	Mix Dgn:	18-MD0049	% Lime:	0.0375
Contractor:	CWA	Spec #:	745	% RAP:	30
Proj Mgr:	Mike Remily	Lot #:	2	A/C Brand:	Western SI
Bid Item #:	370	Level:	3	A/C Grade:	PG64-28
Matl Type:	1/2" ACP	Lift:	Wearing	Plant Type:	Drum

HMAC Price Determination:

HMAC Mix Formula								
Cement % / 100	x	Asphalt Cement Bid Price per Ton/Mg	=	Asphalt Cement Price per Ton/Mg of HMAC	+	HMAC Bid Price per Ton/Mg	=	HMAC Price per Ton/Mg
5.700 / 100	x	$0.10	=	0.01	+	$56.00	=	$56.01

HMAC Adjustment Calculations:

HMAC (Ton/Mg)	x	HMAC Price per Ton/Mg	x	(CPF - 1)	x	CPF Adjustment Factor	=	HMAC Adjustment
2372.27	x	$56.01	x	(1.0500 - 1)	x	1.00	=	$6,643.54

Asphalt Cement Pay Quantity Calculations: Calculations are for the entire lot

HMAC Quantity (Tons/Mgs) / (100 + % Moisture (mean))	x	100	x	% Asphalt Cement (mean) / 100	=	Pay Quantity (Tons or Mgs)
2372.27 / (100 + 0.000)	x	100	x	5.563 / 100		B.I. 0380 = Pay 131.98

Prepared by: Signature 8/7/18 Reviewed by: Office

Reviewed by Region ___:

RECEIVED AUG 07 2018

StatSpec 3.70

© 2000, Oregon Department of Transportation, all rights reserve

Note# 2 Est.# 1
Date Entered 8/7/18
Entered by

Example of a StatSpec Price Adjustment Calcliation

Smoothness Adjustment Calculation for Pavement Smoothness (IRI)

(ACP/PCC bonus/penalty for workmanship)

Note: Original document example 9 sheets. (Contact the Pavements Unit for a copy of the spreadsheet.)

PRICE ADJUSTMENT CALCULATION FOR PAVEMENT SMOOTHNESS (IRI) - **ACP**

SECTION:	US20: Jack Lake Rd - Pine St	CONTRACT No.:	15007	DATE OF REPORT:	8/10/2018
CONTRACTOR:	Oregon Mainline Paving	PROFILER MANUFACTURER:	Gocator 2342	PREPARED BY:	Brett Harris
PROJECT MANAGER:	Bill Martin	PROGRESS ESTIMATE No.:	3	PAGE X of X:	1 of 9
		JMF No.:	18-MD0045		

			MILEPOINTS	REPRESENTED
		ADJUSTMENT	BEGINNING	END
Sheet 1	EB/A	$10,464.00	88.187	92.287
Sheet 2	EB/A	$9,137.00	92.287	96.387
Sheet 3	EB/A	$7,917.60	96.387	99.245
Sheet 4	EB/B	$3,000.00	88.875	89.885
Sheet 5	WB/A	$8,695.60	99.208	95.108
Sheet 6	WB/A	$8,338.00	95.108	91.008
Sheet 7	WB/A	$8,913.80	91.008	87.670
Sheet 8	WB/B	$2,433.00	97.375	98.226

Total Price Adjustment	$58,899.00

Example of a Price Adjustment Calculation for ACP

Desiree Goodell corrected amount adding $7,904 for a total $58,899. Est06 Paynote03

PRICE ADJUSTMENT CALCULATION FOR PAVEMENT SMOOTHNESS (IRI) - **ACP**

SECTION:	US20: Jack Lake Rd - Pine St	CONTRACT No.:	15007	DATE OF REPORT:	8/10/2018
CONTRACTOR:	Oregon Mainline Paving	PROFILER MANUFACTURER:	Gocator 2342	PREPARED BY:	Brett Harris
PROJECT MANAGER:	Bill Martin	PROGRESS ESTIMATE No.:	3	PAGE X of X:	2 of 9
		JMF No.:	18-MD0045		

Calculate | Clear Sheet

SCHEDULE 2	MILEPOINTS				LENGTH	IRI INCHES/MILE LEFT WHEEL PATH	IRI INCHES/MILE RIGHT WHEEL PATH	IRI INCHES/MILE AVERAGE	CORRECTIVE ACTION (Y/N)	ADJUSTMENT	DATE PROFILED
DIR/LANE	BEGIN	EQU	EQU	END	(MILES)						
EB/A	88.187			88.287	0.10	50.2	44.5	47.3	N	300.00	
EB/A	88.287			88.387	0.10	37.2	37.4	37.3	N	300.00	
EB/A	88.387			88.487	0.10	39.2	41.3	40.3	N	300.00	
EB/A	88.487			88.587	0.10	45.5	38.4	41.9	N	300.00	
EB/A	88.587			88.687	0.10	43.0	42.0	42.5	N	300.00	
EB/A	88.687			88.787	0.10	61.8	64.4	63.1	N	38.00	
EB/A	88.787			88.887	0.10	65.0	50.4	57.7	N	146.00	
EB/A	88.887			88.987	0.10	31.9	31.2	31.5	N	300.00	
EB/A	88.987			89.087	0.10	32.6	29.0	30.8	N	300.00	
EB/A	89.087			89.187	0.10	48.5	39.7	44.1	N	300.00	
EB/A	89.187			89.287	0.10	44.6	41.2	42.9	N	300.00	
EB/A	89.287			89.387	0.10	30.6	26.9	28.8	N	300.00	
EB/A	89.387			89.487	0.10	27.2	27.9	27.6	N	300.00	
EB/A	89.487			89.587	0.10	35.6	30.0	32.8	N	300.00	
EB/A	89.587			89.687	0.10	35.1	28.6	31.9	N	300.00	
EB/A	89.687			89.787	0.10	36.4	33.1	34.8	N	300.00	
EB/A	89.787			89.887	0.10	39.2	30.2	34.7	N	300.00	
EB/A	89.887			89.987	0.10	61.0	53.2	57.1	N	158.00	
EB/A	89.987			90.087	0.10	48.4	38.8	43.6	N	300.00	
EB/A	90.087			90.187	0.10	81.0	77.5	79.3	N	0.00	
EB/A	90.187			90.287	0.10	90.8	115.4	103.1	Y	-300.00	
EB/A	90.287			90.387	0.10	50.5	52.1	51.3	N	274.00	
EB/A	90.387			90.487	0.10	42.1	44.2	43.1	N	300.00	
EB/A	90.487			90.587	0.10	53.5	51.6	52.6	N	248.00	
EB/A	90.587			90.687	0.10	50.1	49.0	49.5	N	300.00	
EB/A	90.687			90.787	0.10	50.3	45.8	48.0	N	300.00	
EB/A	90.787			90.887	0.10	39.1	44.1	41.6	N	300.00	
EB/A	90.887			90.987	0.10	46.4	41.9	44.1	N	300.00	
EB/A	90.987			91.087	0.10	45.7	43.1	44.4	N	300.00	
EB/A	91.087			91.187	0.10	39.8	36.0	37.9	N	300.00	
EB/A	91.187			91.287	0.10	57.6	73.7	65.7	Y	0.00	
EB/A	91.287			91.387	0.10	37.5	38.9	38.2	N	300.00	
EB/A	91.387			91.487	0.10	34.9	37.0	35.9	N	300.00	
EB/A	91.487			91.587	0.10	38.6	39.1	38.8	N	300.00	
EB/A	91.587			91.687	0.10	44.7	38.0	41.4	N	300.00	
EB/A	91.687			91.787	0.10	33.1	29.5	31.3	N	300.00	
EB/A	91.787			91.887	0.10	32.8	36.9	34.9	N	300.00	
EB/A	91.887			91.987	0.10	32.5	34.1	33.3	N	300.00	
EB/A	91.987			92.087	0.10	41.6	35.7	38.6	N	300.00	
EB/A	92.087			92.187	0.10	40.8	35.1	38.0	N	300.00	
EB/A	92.187			92.287	0.10	39.8	30.7	35.2	N	300.00	
									Sheet Total:	10464.00	

CON-CAL – Price Reduction Computation for Low Strength Concrete

(Price Reduction for non-specification concrete)

The Con-Cal program calculates the actual percentage strength of the concrete versus the specified strength. A price reduction factor is also calculated to determine if the failing concrete will either be assessed a price reduction, or if the concrete will be rejected. Contact Structure Services for guidance.

Non-Standard Adjustments

A non-standard adjustment is any adjustment that does not have a standard method for calculating a price reduction. A CCO **is required** whenever a non-standard adjustment is made allowing non-specification Material to remain in place.

If the Material is found suitable for the use intended, then an analysis of the reduction in useful life of the product should be performed, and a CCO should be written. This is done by considering one or more of the following:

- Based on the expected life of the specified Material, how much value is being lost because of the shorter expected useful life of the supplied Material?
- How much additional maintenance will be needed for repairs due to the lesser quality of the supplied Material?
- Any other impacts that may occur due to the lesser quality of the supplied material.

Assistance should be obtained from the engineer of record and the technical owner of the specification that the Material falls under. You may need to also contact your RAS for assistance in calculating the adjustments.

Example of a calculation for non-specification galvanized pipe:

A common method for figuring a non-standard adjustment is to calculate the percent out-of-spec the material is, and reduce the price accordingly. An example:

Galvanized pipe requires 1.8 oz. galvanizing. The pipe tested at 1.5 oz. galvanizing. The pipe cost $11.42/yard and 112 yards were used.

$\frac{1.8 - 1.5}{1.8} = 0.17$ $\quad 0.17 \times \$11.42 = \$1.90$ $\quad \$1.90 \times 112 = (\$213.17)$

A negative adjustment of $213.17 would be applied.

All non-standard adjustments **require** the review of your RAS and the Contract Administration Engineer **before** applying them to the contract.

Once the adjustment has been calculated, have the RE review and approve it. For non-standard adjustments, take the additional step of getting a review from your RAS. Give the Contractor written notice of the CCO price adjustment.

Attach copies of the failing tests as supporting documentation for the CCO. Submit the CCO for processing and approval. Once the CCO is approved, submit a paynote for the CCO to your Contract Payment Specialist. See Chapter 12-D Quantities in the Construction Manual for paynote instructions and examples.

Construction Materials Testing Fees – This link is to the estimated costs for testing services. It is used to calculate price adjustments to the Contractor for missed testing or may be used to estimate costs for additional testing for CCOs.

Additionally, the RE must issue a CCO if any of the Contract Work is changed, including changes to any of the quality requirements included in the Contract.

If you have any questions regarding whether or not a CCO is required, contact the Region Assurance Specialist (RAS) or Contract Administration Unit (CAU) for guidance.

Do I need an Exception or a Contract Change Order?

A CCO or Exception is NOT required when:

There are no changes to the Contract Documents.

The Standard price adjustments (6000 series payment CPS) are being applied.

Examples:

Concal, StatSpec, Adjustments on some failing materials (i.e. Tack, Asphalt binder, etc.).

Lump sum adjustments with estimated quantities found in Special Provisions.

A CCO is required when:

There are changes to the requirements, specifications or design.

There are changes in testing requirements.

Money is due to ODOT.

Money is due to the Contractor.

When there is a zero net cost and a change has been made to the contract.

Accepting a reduced quality product, also known as (Non Standard adjustment).

Allowing Non-Specification material to remain in place*.

Examples:

Concrete strength is less than 85%**.

Not Oregon certified Permanent seeding.

When accepting 3000 psi concrete in place of 4000 psi.

Note:

*Requires concurrence from the Specification Technical Resource. One may also need an adjustment in the CCO for the shortened life of the material over and above the standard adjustment (if there was one).

** Requires an adjustment for concrete less than 85% of required strength and concurrence from the Engineer of Record allowing the material to may remain in place. One may also need an adjustment in the CCO for the shortened life of the material over and above the adjustment for strength.

An Exception Letter/Form is required when:

Acceptance of the materials is done by an alternate means.

Examples:

Missing QC Tests***, Missing check weights, Missing Quality Certification, Missing Tare Weights, Missing Lab inspection, Missing weigh back for tack payment, Missing scale certification, and Missing Verification tests****.

Note:

***Requires a standard adjustment for missed tests and or reports to be made in the 6000 series in CPS. Also requires an Exception Letter. Contact Technical Resource immediately so that it can be determined if there are enough QC tests to accept with an Exception or if a CCO is needed for acceptance.

****ODOT internal issue requires concurrence from specification Technical Resource.

Technical Resource list Link: http://www.oregon.gov/ODOT/HWY/SPECS/Pages/manuals_forms_etc.aspx

ODOT provides a safe and reliable multimodal transportation system that connects people and helps Oregon's communities and economy thrive.

www.oregon.gov/ODOT