

CHAPTER 2

RESOURCES

General

This section will cover the resources that are available for the QCCS to use in the course of his/her duties. This manual will cover two types of resources that are readily available: ODOT personnel and written documents. As an experienced materials inspector you may have developed and/or acquired other resources outside of ODOT. It is important to make sure that they do not conflict with ODOT specifications.

The QCCS is responsible for the project documentation of all field-tested related materials for each project administered by the respective Project Manager's Office. In some cases, the QCCS may also be responsible for the documentation of non field-tested materials. This documentation is compiled as the project progresses. Monthly pay notes are approved by the QCCS on the basis of whether or not the correct data has been received and represents the quantity of material(s) incorporated into the project.

In addition to the documentation, the QCCS is also responsible for assuring that the proper procedures are followed by Quality Control testing technicians and that the QA has been conducted according to the QC/QA Program frequency and guidelines. If any IA/Verification test results are outside of the specified parameters; it will be the QCCS's responsibility to conduct the investigation. A resource to conduct this investigation can be found in the MFTP, Section 2A, Appendix E.

Personnel

ODOT personnel in general include but are not limited to personnel within the PM's office, other Quality Control Compliance Specialists, the QA Coordinator (QAC), QA Technician (QAT), Region Assurance Specialist (RAS), and the QA Engineer (QAE).

The QA Coordinators are located in each Region and are considered the "Region Experts" in materials. They have been set up in each Region so that PM Offices may contact them regarding the proper sampling, handling and testing of construction materials as well as construction procedures. In conjunction with the QACs, ODOT has a Training Coordinator and assistant who are available for questions regarding certifications and training.

There are also personnel within ODOT that have a more focused expertise and may also be used as a resource. These include the individuals in Structural Services, Laboratory Services, and Pavement Services. Presented in Appendix A at the end of

this section is a list of contacts and associated phone numbers for the personnel discussed.

Written Documentation and Publications

ODOT has many written resources available. There are times when the QCCS will be required to refer to other resources not mentioned in this manual such as AASHTO or AWS standards, however those occasions will be rare. This manual will strictly focus on those listed below:

- ODOT Special Provisions
- Project/Contract Drawings/Standard Drawings
- Manual of Field Test Procedure
- Supplemental Standard Specifications For Highway Construction (1998 or current)
- Oregon Standard Specifications For Construction (1996-2002-or current)
- Construction Manual
- Inspectors Manual
- Non field-tested Materials Acceptance Guide (NFTMAG)
- Qualified Products List (QPL, updated)
- Field Survey Manual

It is important to note that these resources do not always agree. ODOT has prescribed a hierarchy of what document shall supercede in the case of conflicting information/specifications. The above resources are listed in that hierarchy.

ODOT Special Provisions

The ODOT Special Provisions are the contractual agreement between ODOT or the contracting representative and the contractor. This document is where specifications (standard or supplemental) are changed to meet new standards of the industry or to accommodate individual project requirements. The bid item schedule can also be found in the Special Provisions. The bid item schedule will include the necessary basic information to begin the summary sheets (both "A" and "B"). The information included is as follows:

- ◆ Bid item number.
- ◆ Measurement of Quantity, i.e. Lump Sum, Each or weight.
- ◆ Quantity or estimated quantity of the bid item (some estimated quantities are found in the correlating section, i.e. concrete, rebar).
- ◆ Cost associated with the measurement of the bid item.
- ◆ Total cost of each bid item.

Project/Contract Drawings/Standard Drawings

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 & manholes, references 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)

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 PM, Region QA group, and Salem Construction Section are found here. Lab and technician certification programs are also described. In the **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 PM'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 subplot sizes, for each field-tested product.

Supplemental Standard Specifications (1998)

This document modifies the 1996 Standard Specifications only.

Construction Manual

This 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. Those sections are:

- ◆ *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 on *Quality, Quality Price Adjustments, Quantity, and Adjustments*.
- ◆ *Material on Hand*. Depending on the specific delegated duties in your office you will use all of these subsections, to a greater or lesser degree, in the daily performance of your job. Get to know these sections!
- ◆ *Contract Time* – Here you will find the definitions of First, Second, and Third Notification. Weekly Statement of Time Charges and Liquidated Damages are also explained here.
- ◆ *Change Orders* – 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.
- ◆ *Material Source* – This section outlines why the prime contractor needs to notify the PM 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.
- ◆ *Material Quantities* – 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.

- ◆ *Contract Payments* – 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.
- ◆ *Leftover Materials* – 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.
- ◆ *Final Documentation* – Because the QCCS is usually involved with putting the final documentation together, you should be very familiar with this section. It outlines exactly what documentation is required for final project submittal to the Construction Section in Salem. It also explains the procedures for Release of Subcontractor Retainage during the life of the contract.
- ◆ *Landscape Establishment* – This section explains the purpose of plant establishment periods, what they entail, and what the contractor and PM responsibilities are in accomplishing this work.

And finally, the last two sections in the Construction Manual contain all the **Forms** used in the administration of the contract, and an **Index** for the major subjects discussed in the manual.

Inspectors Manual (2001 or current)

This document is designed for the ODOT inspector, but should be very useful to the QCCS. It is organized by sections corresponding to the Standard Specifications. It breaks down each major type of work by the requirements for:

- ◆ Quality.
- ◆ Construction.
- ◆ Measurement.

NFTMAG (Nonfield-Tested Materials Acceptance Guide)

The purpose of this document is to provide the documentation requirements for the most commonly used nonfield-tested materials used on our projects. It should be used in conjunction with the contract special provisions, which may add additional documentation requirements, or delete documentation listed in the NFTMAG that would otherwise be required. It is published and updated every six months.

When putting together a test summary, this is the primary resource for determining the documentation needed for items that are not field-tested. For items not listed – talk to

your RAS for direction. Note that some items show quantities that may be accepted by the Small Quantity method. Small Quantity Acceptance guidelines are listed at the bottom of each page.

QPL (Qualified Products List, updated)

The purpose of the QPL is to pre-qualify products that have been found to be of high quality by ODOT in specific applications. There are two categories of Qualified Products. The “A” list means “approved” and that no additional documentation or testing is required given that the product is used in the appropriate context. The “Q” list means “qualified” and that testing or other documentation may still be required. The remarks section for each product will spell out what those requirements are, if any.

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. An FIR is not required for final documentation if the product is for a temporary installation.

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

And finally, there is another list, unpublished, that is kept by Mike Dunning. It is the “C” list for “conditional” acceptance. If a contractor proposes to use a product that is not on the “A” or “Q” lists, one can call Mike and see if the product has some history and is on his “C” list. If it is, he may approve it conditionally and ask that a product report be filled out by the inspector indicating how the product worked in order to develop more history and possibly move the product to one of the published lists.

Field Survey Manual

Units six and seven have instruction for computing cross section areas, earthwork volumes and trench back-fills.

Inter/Intranet Links

Construction Section Sites:

<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/>

<http://intranet.odot.state.or.us/tsconstruction/>

<http://oregon.gov/ODOT/HWY/CONSTRUCTION/Resource.shtml>

Links include the following:

ODOT Standard Specifications, Supplemental

Construction Manual

Inspectors Manual

Qualified Products List

Non field-tested Material Acceptance Guide

STATSPEC Download

Price Adjustment calculation forms

Approved concrete mix designs

Certified Technician data base

Certified Lab data base

Test worksheets

HMAC Mix Design Guidelines

Quarry Database: <http://intranet.odot.state.or.us/asis/>

Material Source list maintained by ODOT Geologists' information on tested aggregate sources.

EXHIBIT A

POINTS OF CONTACT

Quality Control Compliance Specialists

Region 1

Tony Nguyen 503-793-2353
Jim Timm 503-731-3259
Jeannie Wixom 503-731-4343
Barb Worbington 503-731-3917

Region 2

Mike Luttrell 541-757-4104
Donna Pruett 541-744-8080

Region 3

Mike Merusi 541-774-6357
Jim Croff 541-396-1145
Mel Dunlap 541-957-3568

Region 4

Bruce Dunn 541-388-6216
Ira McCauley 541-296-2800
Doug Kirk 541-883-5665

Region 5

Jim Brown 541-963-7545
Fred Oswald 541-567-1423
Eric Knapp 541-889-8558

Quality Assurance Coordinators

Region 1: Buzz Kleemeyer 503-731-4287
Region 2: Scott Young 503-986-2775
Region 3: Andy Clark 541-957-3675
Region 4: Reid Meritt 541-388-6137
Region 5: Mark Kightlinger 541-963-1354

EXHIBIT A

POINTS OF CONTACT

ODOT Materials Specialists

Luci Moore, Constuction, QAE	503-986-3061
Norm Davis, Lab Mgr.	503-986-3030
Gary Barquist, Phys. Testing (Steel & Concrete Properties)	503-986-3089
Ken Scott, Chemistry	503-986-3065
Devon Test, Aggregate	503-986-3081
Wayne Brown, Petroleum	503-986-3074
Steve Christensen, Bituminous	503-986-3068
Ralph Borchert, Soils	503-986-3076
Dan Ziegler, Receiving	503-986-3057
Sean Parker, Training Coord.	541-686-7976
Randy FitzGerald, Lab Cert.	503-986-3087
Bruce Patterson, Pvmt. Mtls. Eng.	503-986-3052
Mike Remily, Pvmt. Qlty. Eng.	503-986-3120
Dick Dominick, Pvmt. Mtls.	503-986-3071
Keith Johnston, Str. Svc. Eng.	503-986-3053
Scott Nelson, Str. Mtls. Eng.	503-986-3056
Terry Thames, Str. Qual. Eng.	503-986-3019
Randy Kessler, Concrete Mtls.	541-388-6359

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