Oregon
Department
of Transportation

Project Delivery Quality Program Manual

Project Delivery QA/QC Program
Oregon Department of Transportation

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Oregon Department of Transportation

Statewide Project Delivery Branch – Engineering & Technical Services Branch

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Revision History (the current revision is first entry)

Date Published	Change made by	Section(s) Updated	Summary of what, why changed
2/8/2024	Kristie Gladhill, Project Delivery QA/QC program manager	All	Clarification of wording throughout. Use more general term "quality" rather than specifying QC, QA, or QV. Section 2 update Figure 3, add entries into Table 1. Section 5.3 add language to include chief engineer in decision whether to proceed with those types of QA reviews. Section 7.1 additional content bullets; Section 7.2 edits to leave more of the quality reviewer specifics to discipline quality plans; add content on escalation of review issues.
10/31/2022	Kristie Gladhill, Project Delivery QA/QC Program Manager	1.1, 1.2, 2, 3, 5.5, 6, 7.4, Appendix A	Section 1.1 wording to include more of 2019 audit findings. Section 1.2 minor word changes; Section 2 update Figure 3 and Table 1 adding Scoping, ODLAP quality plans; Section 3 update PD QA/QC Manager role wording; add responsibilities for review of consultant quality plans. Appendix A, additions to glossary for QV, technical sufficiency to match "Region Tech Center Quality Plan Template" ; update Project Delivery to include ODLAP; add ODLAP.
3/22/2022	Kristie Gladhill	All	Initial version.

1.   Project Delivery QA/QC Program

Quality in project delivery is the degree to which a product, service, or deliverable conforms with established project and design requirements and satisfies its intended purpose. Quality is the result of a cooperative partnership between the providers of project development services and those responsible for quality. Those providing project development services implement quality control (QC), quality assurance (QA), and quality verification (QV) to ensure products and services meet or exceed ODOT requirements and expectations. Quality assurance reviews the quality process to ensure quality plans are followed and checks that project and program efforts achieve desired results.

The Project Delivery QA/QC Program leads the development, management, communication, and implementation of the ODOT Project Delivery QA/QC program for STIP projects and ODOT delivered local agency program (ODLAP) projects, scoping through contract award. The ODOT chief engineer has authority over quality management requirements for the engineering and technical disciplines. The Statewide Project Delivery Branch (SPDB) manager has authority over quality management requirements for project management. The region technical centers and statewide disciplines (technical disciplines and project management) carry out the project quality management work, following the statewide technical and project management discipline quality plans.

The Project Delivery QA/QC Program fosters continuous improvement in the ongoing quest to provide high quality engineering and technical services and make efficient use of resources.

1.1. Quality Program Overview

The Oregon Department of Transportation's mission is to provide a safe and reliable multimodal transportation system that connects people and helps Oregon's communities and economy thrive. Project Delivery's part in that is to deliver high quality, successful projects, to meet the needs for Oregon's transportation system.

ODOT recognizes that its success will be determined, in part, by the quality of services and products that it provides. Assuring quality requires a commitment and a well-conceived and systematic approach. Benefits of having a quality management system include the following:

- Documenting and standardizing processes.
- Verifying what was done.
- Reducing project risk.
- Identifying and correcting mistakes, oversights, and logic errors.
- Learning from mistakes.
- Expanding our knowledge, building engineering and technical discipline expertise.
- Improving design packages, leading to improved bids and construction projects.

The 2019 ODOT internal audit findings highlighted the need for statewide consistency in quality management practices across all regions. The audit findings also recommended regular quality assurance reviews to provide ongoing assessments of regions practices, and the need to work towards consistent quality expectations both internally and for out-sourced project delivery work. Aligning quality management practices in all region technical centers, and statewide for disciplines, is a valuable step in ODOT's response to the audit findings. Consistent quality management practices from region to region help technical disciplines and consultants meet quality expectations during the project development processes. This audit response was completed and closed spring 2023 with statewide discipline quality plans and all five Region Technical Center quality plans in place; we continue to work on continuous improvement.

1.2. Project Delivery QA/QC Program Mission

The mission for ODOT's Project Delivery QA/QC Program is to instill a culture of quality into every aspect of project delivery and develop and standardize statewide project delivery quality management practices to facilitate continuous quality improvement in each discipline and phase of project delivery. This has been distilled into three pillars for the program: quality culture, statewide consistency, and continuous improvement.

Figure 1: Pillars of the ODOT Project Delivery QA/QC Program
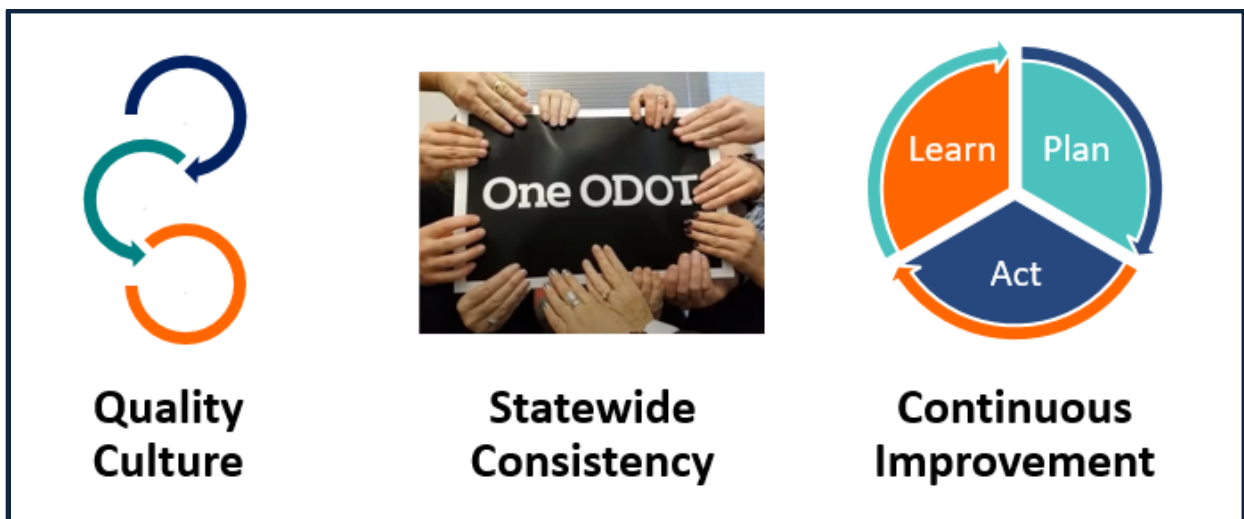
Instilling a quality culture into every aspect of project delivery will include, but is not limited to:

- Integrating quality into how we perform project management and technical discipline project delivery work within ODOT, and our expectations for consultants who provide deliverables to ODOT.
- Focusing on quality for projects holistically as well as at individual and discipline levels.
- Providing everyone working in project delivery a good understanding of the expectations and benefits of the quality program.
- Clarifying everyone's understanding of the Project Delivery QA/QC Program and their role(s) in the quality program.

Statewide consistency will include, but is not limited to:

- Developing and maintaining documented quality standards of practice: guidance; quality plans; and forms, checklists and templates.
- Implementing consistent quality practices statewide for project delivery across ODOT.
- Applying consistent quality expectations for internal work as well as work outsourced to consultants.

Continuous improvement will include, but is not limited to:

- Lessons learned and best practices shared for statewide benefit from ODOT and consultant project delivery.
- Performing regular project or program level independent quality assurance reviews to identify opportunities for continuous improvement (see Section 5).
- Implementing improvements from quality assurance reviews or lessons learned through collaboration and communication. Statewide peer groups are recommended to be the primary way for carrying out continuous improvement.
- Establishing and monitoring performance measures to quantify quality in project delivery and objectively measure effectiveness of improvement efforts.
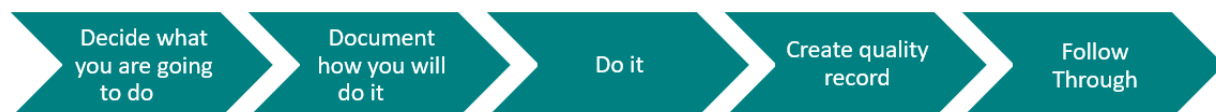
1.3.   Quality Management

The basics of a quality management system are straightforward:

- Decide what you are going to do.
- Document how you will do it.
- Do it.
- Create quality records that it was done.
- Follow through with quality assurance checks and quality process improvements for continuous improvement of the quality management program.

These are illustrated in Figure 2 below.

Figure 2: Quality Management Basics

The approach for developing ODOT's Project Delivery QA/QC Program for quality management is to keep benefit to the forefront as the program is built through collaboration, effective communication, and follow through.

2. Quality Standards of Practice

The Project Delivery QA/QC Program establishes and implements quality standards of practice to provide a structured, disciplined, and consistent statewide approach to quality and help retain institutional knowledge.

PD-25, Project Delivery QA/QC Program, sets policy and requirements for quality management in project delivery for ODOT delivered projects in all phases of the transportation system project lifecycle from scoping through construction contract award.

Figure 3 shows that the quality standards of practice include guidance, quality plans, and forms, checklists and templates which work together and complement each other.

- The Project Delivery Quality Program Manual defines the quality program.
- Program guidance covering quality program level topics.
- How we do the work is documented in the statewide discipline quality plans and the region technical center quality plans.

Table 1 provides more details on the quality plans and quality guidance documentation shown in Figure 3.

The [ODOT Project Delivery QA/QC Program website](#) provides access to the quality standards of practice and an overview of the Project Delivery QA/QC Program, resources and tools. Technical disciplines have quality documents and their manuals available from their discipline websites. Additional ODOT Project Delivery guidance includes technical directives, bulletins, advisories and [operational notices](#). ODOT users can access quality standards of practice documents on the [internal SharePoint quality site](#).

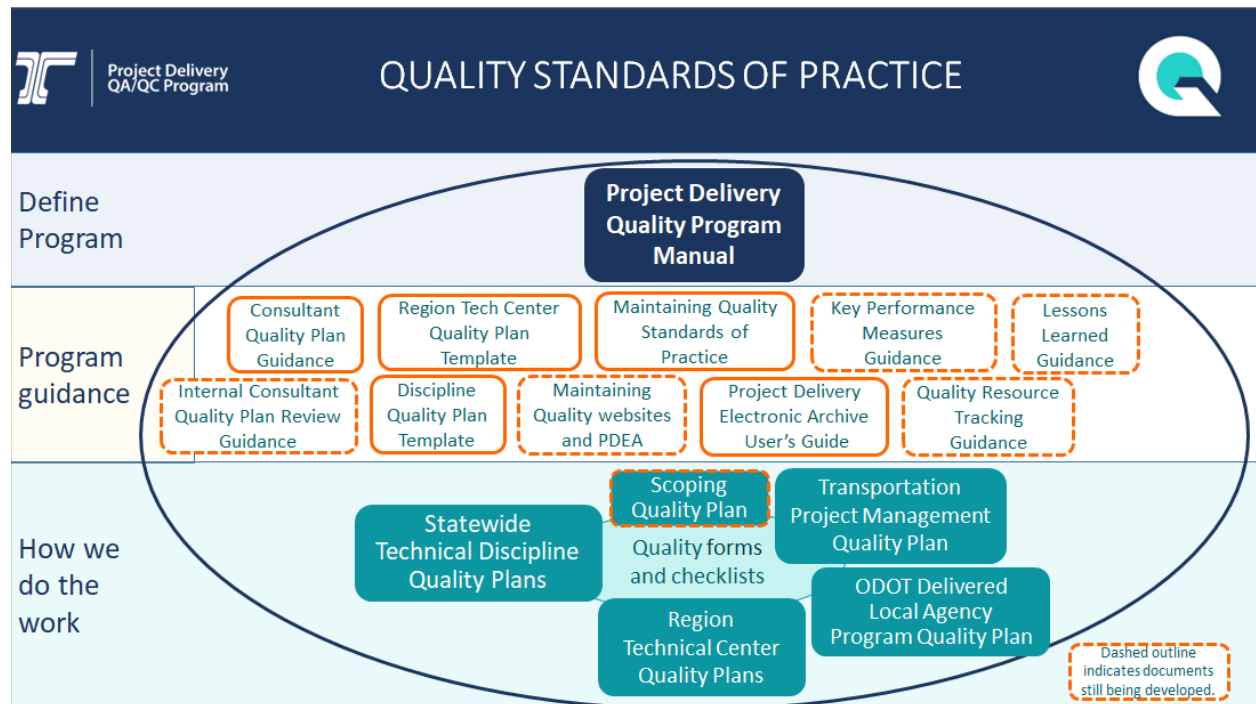Figure 3: ODOT Project Delivery QA/QC Program Quality Standards of Practice

Table 1: ODOT Project Delivery QA/QC Quality Standards of Practice

Standards of Practice	What is this?
Project Delivery Quality Program Manual	Defines the statewide Project Delivery QA/QC quality management program; provides an overview of the importance of the quality program, mission, approach, and requirements.
ODOT Consultant Quality Plan Guidance	Program guidance regarding consultant quality plan requirements and approval. • Template with requirements for consultant quality plans. • Includes that consultants provide Certification of quality of deliverables.
ODOT Internal Consultant Quality Plan Review Guidance[1,2]	ODOT internal document on how consultant quality plan reviews are handled: assigning reviewers, tracking, point of contact to consultants.
Discipline Quality Plan Template[1]	Template with requirements for statewide technical and project management discipline quality plans.
Region Technical Center Quality Plan Template[1]	Template for region technical center quality plan requirements.
Maintaining Quality Standards of Practice[1]	Program guidance with requirements regarding maintaining all the quality standards of practice: format, update and review processes, storage and access.

Standards of Practice	What is this?
Project Delivery Electronic Archive User's Guide[1]	Guidance for users and administrators of the PDEA, including how to get to the archive and access documents and metadata.
Key Performance Measures guidance[1]	Program guidance defining quality key performance metrics and Project Delivery QA/QC Program evaluation.
Lessons Learned guidance[1]	Program guidance regarding handling lessons learned, both within project delivery and between construction and project delivery.
Quality Resource Tracking guidance[1]	Program guidance on how we will track resources used on quality management, both internally and on outsourced work, to help us better plan quality resource needs going forward.
Region Technical Center Quality Plans and forms	How we do the work: quality standards of practice for how the region technical center carries out its role in project delivery quality management.
Statewide STR for DAP and PS&E, form 734-5365	Statement of technical review (STR) signed by ODOT discipline unit managers in each region to document that quality verification has been completed, used at DAP and PS&E.
Statewide Technical Discipline quality plans and forms	How we do the work: the statewide technical discipline quality plans set statewide discipline quality standards to assure statewide consistency as STIP projects are developed. Consultant quality plans and Region Technical Center quality plans refer to the statewide discipline quality plans.
Transportation Project Management Quality Plan	How we do the work: project management quality plan that provides discipline specific quality standards to assure statewide consistency for project management as STIP projects are developed.
Statewide ODOT Delivered Local Agency Program Quality Plan[1]	Quality plan for the ODOT Delivered Local Agency Program (ODLAP), providing guidance and highlighting differences from ODOT delivered state highway projects.
ODOT Scoping Quality Plan[1]	Quality plan for the ODOT scoping program.
ADA Program quality plans and forms	Quality standards of practice specific to the ADA Program.

[1] These quality standards of practice are published only internally to ODOT.

[2] As of this revision, this is a placeholder for a document for future release.

3. Roles and Responsibilities

Table 2: Quality Management Program Roles and Responsibilities

Roles	Quality Management Program Responsibilities
Project Delivery QA/QC Program manager	• Lead statewide project delivery quality efforts: establish and implement governance for the Project Delivery QA/QC Program. This includes providing technical assistance, subject matter expertise, and review of all quality standards of practice. • Coordinate review and approval of consultant quality plans. • Serve as primary point of contact for program. • Develop and implement systems to report on the performance of the Project Delivery QA/QC Program to stakeholders, including SPDB and ETSB management, people performing STIP project delivery quality program work throughout the agency, and consultant partners through ACEC.
Statewide technical discipline (HQ) professionals, engineers and staff	• Develop and maintain standards and policies for technical discipline work throughout ODOT. • Maintain statewide technical discipline quality plan(s), forms, and templates. • Perform statewide technical discipline program quality assurance reviews. • Assist in review of consultant quality plans submitted for approval. • Ensure that QA/QC/QV training is provided.
Region and HQ staff performing Project Delivery work	• Assure consistent quality of technical discipline work as design deliverables are developed, scoping through construction contract award. • Produce deliverables following applicable regulations, design standards, ODOT manuals, and the statewide technical discipline quality plans. • Review consultant deliverables and make a recommendation to the contract administrator whether to accept.
TPM and RE-CP's	• Oversee the quality of the project management discipline, scoping through construction contract award, per the statewide Transportation Project Management Quality Plan. • Assure that the project schedule is up to date and has adequate time for quality reviews. *If consultant is a provider for part of the project:* • Review quality related language in SOW and ensure the consultant follows the SOW requirements. • Coordinate technical discipline reviews of consultant deliverables.
Area managers	• Review and ensure that project management quality practices have been followed on projects.
Project Management Office (PMO)	• Maintain the statewide Transportation Project Management Quality Plan, forms, and templates.

Roles	Quality Management Program Responsibilities
Region technical center unit managers	• Assure that QC was performed within the technical discipline. • Ensure that quality reviews were performed at each milestone as applicable. • Ensure that statement of technical review (STR) is prepared.
Region technical center manager (TCM)	• Responsible for overall quality management of region technical center projects. • Verify that technical discipline and cross-discipline quality processes were followed for the deliverables on each project. • Confirm that scoping, DAP, and PS&E packages meet technical sufficiency. • Ensure that adequate resources are provided for quality reviews. • Ensure that staff have training and appropriate competency to complete quality work and reviews.
Consultants providing out-sourced project delivery work	• Provide a consultant quality plan for approval by the Project Delivery QA/QC Program for use with contract(s). The consultant quality plan demonstrates that they have the capability to meet quality requirements for contract work for ODOT. • Follow their ODOT approved quality plan as they produce deliverables, doing both QC and QA. • Meet or exceed the ODOT technical discipline quality plan expectations for deliverables. • Meet applicable standards, manuals, directives and other procedural guidance for deliverables. • Submit complete deliverables to ODOT, including all deliverable quality records. • Certify the quality of deliverables they provide.
Project Controls Office (PCO)	• Perform QA review of PS&E packages before bid letting. • Can assist in QA review of advance and final plan milestone packages. • Assist in review of consultant quality plans submitted for approval.

4. Quality Control

Quality control (QC) is product-oriented and is defined as the part of quality management focused on fulfilling quality requirements for products and deliverables. QC takes place as the deliverable is being developed and refers to the procedures put in place to control, measure, and verify the quality of a deliverable related to established design requirements and to satisfy ODOT's needs. QC includes activities such as:

- Providing oversight by experienced individuals.
- Verifying that staff are adequately trained and capable of performing tasks related to project quality.
- Checking that deliverables are accurate and complete.
- Documenting all decisions, assumptions, and recommendations accurately.

Quality control procedures are required to ensure that the work is done correctly the first time. QC findings and responses to review comments are documented. QC review comments need to be addressed and it must be documented that changes made in response are accepted by the reviewer. The QC role is to verify that the quality of the deliverable meets ODOT's minimum requirements.

Quality control processes are defined in each of the statewide technical discipline quality plans, the Transportation Project Management Quality Plan, and region technical center quality plans. For clarity, the ODOT project delivery process has been broken down into a series of milestones or phases on projects that require QC review and the phases where review is warranted. Each statewide discipline quality plan calls out QC review requirements for that discipline at applicable phases.

5. Quality Assurance

Quality assurance (QA) is process-focused and is defined as the planned and systematic activities and procedures implemented in a quality system so that quality requirements for a product or service will be fulfilled. QA maintains a desired level of quality in services and products. The QA process needs to be objective, transparent, and effectively communicated. QA seeks to provide tools and manage provider performance for the benefit of all concerned, but especially the citizens of Oregon.

Quality assurance reviews are documented activities performed in accordance with written procedures or checklists to ensure standards of quality are consistently met for transportation projects and to cultivate continuous improvement. Provide a copy of the QA review to the Project Delivery QA/QC Program so they can store it where it can be accessed by Project Delivery. Storage will be a SharePoint listing on the Internal Quality Program website, which will include metadata tracking review report date and contact person.

5.1. Project Quality Assurance Reviews

Technical discipline and project management statewide quality plans include guidance on project quality assurance of deliverables.

5.2. Discipline Quality Assurance Reviews

The purpose of a discipline QA review is to take a statewide look at a specific discipline quality program, examining quality records and quality standards of practice to evaluate how the discipline quality program has been developed and documented, and whether it is being implemented effectively. Discipline QA review will usually occur after project development is complete, either during or after construction. A discipline quality assurance review is an opportunity to look at whether procedures should be updated, revised, and/or clarified for continuous process improvements to assure quality deliverables. Projects to review may be selected based on risk, scope, schedule, or budget and should represent different regions. The reviews involve a collaboration between headquarters and region staff, including utilizing the discipline statewide peer groups. The discipline QA reviews should:

- Document how/why projects were selected for QA review.
- Provide feedback on what is being done well (best practices).
- Provide feedback on any gaps identified or needs for improvement.
- Note any unexpected or surprising outcomes.
- Review how well the quality plan(s) are being followed.

Quality assurance review guidelines and frequency are outlined in each discipline's statewide quality plan. Provide a copy of the QA review to the Project Delivery QA/QC Program so they can store it where it can be accessed by Project Delivery.

5.3. Project Risk Based QA Reviews

A project risk based QA review is a targeted method of mitigating risk and improving project or program risk management. The level of effort for the QA review should be proportionate to the risk profile. A risk based review can be requested for a high profile or high risk project to provide real time feedback to design teams during project development. The risk-based review request can be made to the Project Delivery QA/QC Program manager, who will work with the chief engineer to consider whether to proceed. If proceeding, the Project Delivery QA/QC program manager will work with the project Risk Program, region technical center and design team to put together the QA review team. Risk based QA reviews should:

- Review the risk register for the project to understand the risk profile (risk level) and assess the quality of the risk register.
- Provide feedback on what is being done well (best practices).
- Provide feedback on any gaps identified or needs for improvement.
- Note any unexpected or surprising outcomes (triggered risk).
- Review how well the quality plan(s) are being followed.
- Identify and articulate any project risks, relative to the project quality, which have not already been identified by the design team.

Reviews will be performed based on objective and defined standards. These standards will be developed at the review initiation and documented for both reviewers and providers. Review standards will include those listed above, but others may be added. Provide a copy of the QA review to the Project Delivery QA/QC Program so they can store it where it can be accessed by Project Delivery.

5.4. Program Level Quality Assurance Reviews

Program level project delivery quality assurance reviews provide an objective evaluation of projects under construction or after construction is complete, to give feedback to all disciplines. This practice ensures consistent quality and standards for all ODOT projects. Program level reviews will be initiated by the Project Delivery QA/QC Program or requested by headquarters, a region, or project management. The Project Delivery QA/QC Program manager will work with the chief engineer to consider whether to proceed. The Project Delivery QA/QC Program will define methods of project selection to ensure that all providers are scheduled for reviews on a consistent and fair basis. The program will establish review procedures, conduct reviews and document review process and procedures. The review team will include region and headquarters staff. Types of program level quality assurance reviews may include:

- Cross-regional reviews of region technical center quality plans for statewide consistency, consistent use of the template for region technical center quality plans, and maintenance of quality plans.
- Cross-discipline review of statewide technical discipline and project management quality plans for statewide consistency, consistent use of the template for statewide discipline quality plans, and maintenance of quality plans.
- Post-construction project review looking across all disciplines.
  Projects selection may be random (blind selection) or targeted selection. Reasons for targeted selection may include but are not limited to the project having had a lot of addenda during advertisement, multiple change orders during construction or major change orders affecting scope, or the resident project management narrative at the end of the project.
- Review of a collection of work from a provider – collection meaning more than one project.

Program level quality assurance reviews should:

- Provide feedback on what is being done well (best practices).
- Provide feedback on any gaps or inconsistencies identified or needs for improvement.
- Try to identify causes for large number of CMR's or addenda.
- Note any unexpected or surprising outcomes.
- Review usability of quality plans and how well the quality plan(s) are being followed.
- Review whether quality expectations are verifiable.

Reviews will be performed based on objective and defined standards. These standards will be developed at the review initiation and documented both for reviewers and providers. Review standards will include those listed above, but others may be added. Provide a copy of the QA review to the Project Delivery QA/QC Program so they can store it where it can be accessed by Project Delivery.

5.5.   Agency Review of Consultant Quality

The ODOT Consultant Quality Plan Guidance calls out that ODOT may, at any time, perform a QA review of the consultant's QA/QC documentation to verify that the appropriate procedures have been followed while developing the deliverable. Provide a copy of the QA review to the Project Delivery QA/QC Program so they can store it where it can be accessed by Project Delivery.

6.   Quality Records

Quality records provide reviewable evidence documenting that quality work was done. Storage and access of quality records are important to be able to show that quality work was done, and as a basis for project or program level quality assurance reviews and/or audits (by audit professionals). Further guidance on quality records can be found in the statewide discipline and region technical center quality plans, as well as guidance on "Maintaining Quality Standards of Practice."

7.   Quality Best Practices

7.1.   Professional Standards

The agency has the right, responsibility, and authority to establish the procedures, policies, codes, standards of practice, and level of quality for work products and tasks.

- ODOT deliverables must be produced according to applicable laws or regulations, design standards, and ODOT manuals and quality plans.
- Check deliverable content for technical accuracy, completeness, appearance, organization, grammar, and readability.
- Provide an interdisciplinary review to check consistency across disciplines.
- Check design documents for constructability and materials compatibility.
- When required, documents must be sealed, signed, and dated by the responsible Oregon licensed professional.

7.2. Quality Reviewers

Individuals in the role of quality control or quality assurance reviewer are required to be technically competent in whatever discipline they are reviewing. If a provider is "one deep" in the staff competencies needed for quality control review, they shall seek out alternatives such as cross-region resourcing, HQ technical staff, or consultants.

When there are issues deemed to be complex and/or risk sensitive, secondary review might be sought from headquarters or another region.

Comments and disagreement resolutions within a technical discipline should be handled per their discipline specific quality plan. Comments that don't fit one specific discipline should be handled at the lowest level possible. First discuss the issue at the project development team level with the specific reviewer and if resolved, document in the comment log. If it can't be resolved at the designer/reviewer level, then engage discipline unit managers. At times, it may be necessary to involve the region Technical Center manager.

If the issue cannot be resolved at the region level, involve the Engineering Tech Services discipline managers. Ultimately, the issue may need to be resolved by the chief engineer.

Project management quality escalation involves the area managers and is escalated to the PMO.

7.3.   Communication and Collaboration

Good communication is essential for successful project delivery. Members of the project team are encouraged to freely communicate throughout the life of the project to assure a high level of service and quality and reduce significant amounts of rework, errors, or omissions.
We encourage frequent communication and remind people that communication requirements specified in the contract or quality standards of practice are the minimum that should be done.

Communication within technical disciplines is important.   Specific communication requirements between designer and reviewer and/or checker found in technical discipline quality plans are required to be documented as quality records. Communication facilitates the learning process from review and dispute resolution.

Communication is important between disciplines, such as between Pavement and Roadway. Communication is also important between in-house disciplines, the project manager (TPM or RE-CP), and consultants for out-sourced work.

Collaboration is also essential for successful project delivery. The project comment log and responses are one key overall project documentation and communication tool. Reviews and issue resolution provide opportunities for learning, knowledge transfer, professional growth, and a means to strengthen core competencies within the agency. Collaboration expands our knowledge, building engineering and technical discipline expertise.

7.4.   Continuous Improvement

Follow through fosters continuous improvement in the Project Delivery QA/QC Program. Continuous improvement supports the success of each project, and the success of Project Delivery as a whole. Quality assurance reviews confirm that QC work was done and provide an opportunity to look for improvements to quality processes. Lessons learned, including within project development and feedback from construction, need be shared to provide statewide benefit. Program level quality reviews take a broad look across disciplines and regions. Performance measures will be developed and monitored to objectively measure the effectiveness of improvement efforts.

Appendix A - Glossary

Table 3: Glossary of Terms, Titles, and Acronyms

Term	Explanation
ACEC	American Council of Engineering Companies
Agency	ODOT
CMR	Change management request
Continuous improvement	The on-going effort that seeks to improve the processes and deliverables in project delivery. The central goals of continuous improvement are to reduce waste, increase effectiveness, and increase efficiency of the organization. This may be accomplished through quality assurance reviews, audit responses, or other means.
DAP	Design acceptance package; statewide phase gate project delivery milestone
Deliverable	The final required work product or service delivered in-house or by consultant design team.
Disciplines	Refers to project management and technical disciplines
ETSB	Engineering and Technical Services Branch
HQ	ODOT headquarters
LPA	Local public agency
ODOT	Oregon Department of Transportation
ODLAP	ODOT delivered local agency program
PCO	Project Controls Office
PDEA	Project Delivery electronic archive in FileNet
PDII	Project Development improvement initiative
PMO	Project Management Office
PS&E	Plans, specifications, and estimates; the final phase gate for project delivery designs; statewide phase gate project delivery milestone
Project Delivery	In this document it refers only to STIP projects and ODOT delivered local agency program (ODLAP) projects, scoping through contract award. Maintenance, planning, and construction are excluded.
Provider	As used in this document, "provider" includes anyone (ODOT or consultant staff) providing project delivery services or deliverables.

Term	Explanation
Quality assurance (QA)	Quality assurance, focused on the process and assurances that quality requirements are being fulfilled. • Verifying that QC was done following the quality processes. • Reviews of QC and QA processes, supporting continuous improvement. • Project and program level QA reviews.
Quality control (QC)	Quality control, focused on the product fulfilling quality requirements as it is developed.
Quality management	Policies, processes, activities, and responsibilities that ensure the overall quality of tasks and deliverables in project delivery. Quality management is implemented by means such as quality planning, quality control, quality assurance, and continuous improvement within the system.
Quality record	Quality documentation that shows quality review was done and that quality review was done and that quality processes were followed, i.e., forms, checklists, reports, drawings, calculations, comment log.
Quality reviewer	An individual designated to perform independent quality reviews following the statewide discipline-specific quality plans and the region Technical Center quality plan. Individuals in the role of quality control reviewer must be technically competent in the discipline.
Quality standards of practice	Documentation of how quality management will be done for ODOT project delivery. ODOT's project delivery quality standards of practice include the Project Delivery Quality Program Manual; region and discipline quality plans; forms, checklists, templates and other guidance
Quality verification (QV)	Review process to ensure technical sufficiency of all deliverables, verify performance of all quality tasks, and to document the completion of those tasks.
RE-CP	Resident engineer - consultant projects
SOW	Statement of work
SPDB	Statewide Project Delivery Branch
STIP	Statewide Transportation Improvement Program
STR	Statement of technical review
TCM	Region technical center manager
Technical sufficiency	Reviewing a deliverable for technical sufficiency means technical review, checking that the deliverable is in compliance with all applicable laws, rules, regulations, technical standards, guidance, policies and procedures, suitable for the milestone. An initial check of key elements can be used to decide whether review needs to look into more detail.
TPM	Transportation project manager

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

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