Introduction

Quality Assurance (QA) and Quality Control (QC) are processes used to ensure project deliverables are complete, correct, orderly, meet project objectives and are of appropriate content and quality. The Project Manager (PM) is responsible for meeting both quality and schedule objectives. Poor quality work should not be accepted just to meet a schedule.

FDOT QA and QC

Two important parts of the FDOT PM's QA responsibility are to: (1) ensure the consultant's QC plan is being followed, and (2) review quality of project deliverables. For design projects, specific QA/QC requirements are specified in ***Chapters 124 & 125 of the FDOT Design Manual***.

The FDOT PM should meet with the consultant PM early in the project to reach a common understanding of QA/QC methodologies and submittal requirements. The consultant is responsible for conducting QC reviews before every submittal. Detailed, in-depth reviews are the responsibility of the consultant for the quality of their product. The FDOT PM should check the consultant's QC actions and review their QC documentation. Record all QA/QC activities and file marked-up copies of reviewed reports and plans. The consultant's project schedule must include adequate time for QC reviews. The FDOT PM may schedule an office visit to observe a QC review as it is taking place. The FDOT PM must ensure the individuals identified in the project QA/QC Staffing Plan are performing assigned QA/QC tasks. Another control technique is to require documentation of QC activities accompany submittals. Documentation could include completed checklists, certifications, or the reviewers' marked-up copy of the reviewed documents.

FDOT uses the Electronic Review Comment (ERC) system for review of submittals. Information about the ERC system is available at ***FDOT Electronic Review Comment System (ERC)***.

The FDOT PM should conduct a cursory review of each submittal. Submittals found to be of unacceptable quality require the FDOT PM to request a re-submittal. Pressures on the FDOT PM to maintain the project schedule may make the decision to require a re-submittal due to poor-quality work, however poor-quality work results in project delays, so it is better to correct the quality problem as soon as possible. It is prudent to allow for re-submittal time in the project schedule.

FDOT QA involves several reviewers who represent all technical areas included on the project. Technical skill areas may include highway design, drainage, traffic and maintenance of traffic, structures, and constructability. FDOT reviewers should focus on the important issues and on making value-added comments. Here are some helpful guidelines for reviewing and commenting on consultant submittals:

- Reviewer requirements and expectations should be established prior to the first submittal. Reviewers should have an understanding of the project scope of work, the consultant scope of services, general phase submittal requirements and the difference between value-added and non-value-added comments.
- The FDOT PM should assign the submittal to all appropriate reviewers as quickly as possible. Reviewers' comments should be returned directly to the FDOT PM with sufficient time for discussion or resolution if needed.
- When submittals are reviewed by several FDOT individuals, the FDOT PM should review all comments for consolidation of similar comments and resolution of conflicting comments before transmitting them to the consultant in ERC.

- The FDOT PM should also look for any non-value-added comments submitted by reviewers which may not be necessary or appropriate to be entered as a formal comment. Non-value-added comments can be time consuming and counter-productive.
- Value-added comments include comments on fatal flaws, engineering issues, safety issues, errors, violations, or enhance the overall cost, schedule or quality of the project. Value-added comments require a response.
- Non-value-added comments include comments which are informational, suggestions, complimentary (i.e., “Nice plans!”) or editorial. These types of comments may be brought to the attention of the FDOT PM for evaluation and could be addressed outside of being entered as a formal comment. If non-value-added comments are entered, they should be identified as not requiring a response.
- Because the consultant is professionally responsible for the work, personal preferences should not be imposed. If personal preference comments are forwarded, they should be clearly labeled and should not require a response.
- Reviewers with no comments must utilize the checkbox in ERC which states that. Reviewers must not submit a comment that states “No comment” or something similar.
- A comment requiring work beyond the scope of services should not be forwarded to the consultant. Such issues require evaluation by the Department to establish a valid need. Once so determined, the Scope of Work should be revised and a Supplemental Amendment should be processed in accordance with procedures explained in ***PMG 235 – Contract Amendments***.

Consultant QA and QC

A Consultant firm typically has a firm-wide Quality Assurance and Quality Control (QA/QC) plan that identifies general responsibilities and required actions to assure quality products. However, FDOT requires a consultant to either (1) create a project-specific QC plan, or (2) adopt the Quality Control Plan requirements outlined in ***FDM 124*** by submitting a declaration email to the FDOT PM with the proposed QA/QC Staffing Plan. The consultant’s QA/QC Staffing Plan requirements are outlined in ***FDM 124.2.1***.

Other Project Phases

For services other than design which are performed by professional services consultants, QA/QC requirements are typically included in the associated Scopes of Services. Each project phase has different QA/QC issues. QA/QC requirements for various deliverables are addressed in applicable procedures and manuals.

Planning: All submittals for planning projects should be subjected to a peer review in the same manner previous described. Common quality issues are data collection, study methodology, assurance that report conclusions and recommendations are supported by study findings and quality of the writing.

Project Development and Environment (PD&E): PD&E project quality issues are similar to those for planning projects. QC is required for all formal submittals and materials for public meetings and hearings. In many Districts, the consultant is required to provide the Department with a QC plan at the beginning of a project.

Right of Way (R/W): District R/W Offices have Core Process Measures and QC Plans in place to ensure compliance with laws, rules, procedures, and regulations related to R/W projects. The Office of R/W monitors these measures and plans (QA) to assure consistency with statewide requirements, determine the effectiveness of the district's quality control plans, and to make adjustments in the processes as necessary to maintain high levels of quality performance in providing right of way necessary for Construction. All functional areas of R/W are involved including Appraisal, Acquisition, Relocation Assistance, Property Management, Funds Management and Work Program. Consultants may be used for some of these functional areas, with the district offices being responsible for hiring consultants who are experienced, technically competent, and have adequate quality control measures in place to provide adequate work products.

Construction: For construction projects, QA/QC is detailed in ***Section 3.2*** the ***Construction Project Administration Manual*** (***CPAM***). QC is a primary responsibility of the Construction Engineering and Inspection (CEI) consultant who monitors and evaluates the contractor's product and performance. The FDOT Construction Project Manager (CPM) must ensure the CEI adequately performs its responsibilities and the Central Office performs QA reviews, as prescribed in the ***Statewide Construction QA/QC Plan***. The CEI consultant should have an internal QA/QC plan which addresses the following: (1) CEI operating procedures, (2) sufficient staff to ensure adequate inspection coverage, (3) checks to ensure that inspectors are performing properly, and (4) internal quality reviews of records and office procedures. The CEI's objective should be to find and correct performance problems before issues come to the attention of the FDOT CPM.

Maintenance: QA/QC processes include adequate inspection of the work and sufficient documentation to ensure compliance with contract specifications. Asset Management contracts should comply with the ***Asset Management Monitoring Plan,*** available on the ***Maintenance Office*** website.