Chapter 18

Quality Assurance and Quality Control

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Quality Assurance and Quality Control

18.1 General

Quality Assurance and **Quality Control** are two processes used to ensure the public receives a quality product. Quality Assurance is the responsibility of, and performed by the Central Office. Quality Control is a responsibility of the District Offices, and is performed by the Districts and their Agents (Consultants), as appropriate.

18.2 Quality Assurance

Quality Assurance is the planned, coordinated and continued activities performed to measure processes against predetermined critical requirements. The objective of Quality Assurance is the continual improvement of the total delivery process to enhance quality, productivity and user satisfaction.

18.2.1 Authority

Section 20.23(4)(a) Florida Statutes (F.S.) requires a **Quality Assurance Process**. It requires the Central Office to establish departmental policies, rules, procedures and standards and to monitor the implementation in order to ensure uniform compliance and quality performance by the District and Central Office units that implement transportation programs. Also, ***Section 334.048, F.S.*** states the Legislative intent with respect to the Central Office role in the Department's management accountability and monitoring systems, including corrective actions when appropriate.

18.2.2 Accountability

The State Roadway Design monitoring plan identifies the process, critical areas, criteria used to measure compliance, report format, method of monitoring and tracking, and procedure for follow-up of unresolved issues. The results of the Quality Assurance monitoring activities are reported to management in exit interviews and reports. The reports identify areas needing improvement, provide feedback on the effectiveness and appropriateness of established policies, procedures and standards, and recognize areas of outstanding quality. The reports are also used to share improvement ideas between districts, and to maintain consistency in process and practice.

The Central Office shall furnish all the planned and systematic actions necessary to provide adequate direction to the Districts so that all design products will be the result of predetermined requirements. This involves the establishment of design policies, procedures, standards and guidelines, training, and the monitoring and review of District compliance with these items.

The Central Office shall review each design process and its associated components for assurance that the Districts have adequate control measures in place and are complying with policy, procedures, standards, guidelines and processes. It will also be used for identifying any areas of excellence, noncompliance and need.

18.2.3 Critical Areas to be Monitored

Critical areas to be monitored by the Central Office are based on well-established roadway design policy and practice. These policies, guidelines and accepted practices formulate the criteria used to measure compliance in the areas critical to quality. The minimum frequency of review for a critical area is three years. However, latitude is allowed for the depth and frequency of reviews, based on the individual District's observed performance, review findings or the needs of District management.

The State Roadway Design monitoring plan for Quality Assurance lists the following critical areas to be monitored.

1. Initial Engineering Design Process (See ***Chapter 13***, this volume)
    a. Quality Control Activities,
    b. Scope Activities,
    c. Standards Activities,
    d. Design Support Activities,
    e. Project Activities.
2. Final Engineering Design Process (See ***Chapter 14***, this volume)
    a. Quality Control Activities,
    b. Review Initial Engineering Design Activities,
    c. Engineering Activities,
    d. Support Activities.
3. Update Engineering Design Process (See ***Chapter 15***, this volume)
    a. Quality Control Activities,
    b. Scope Activities,
    c. Standards Activities,
    d. Engineering Activities,
    e. Support Activities.

18.2.4 Documentation

The Quality Assurance findings and recommendations will be documented in a report that will be distributed to the District Secretaries and other affected offices. A brief summary of the data will also be entered in the Quality Assurance Reporting (QAR) database. Summaries of significant issues will be prepared quarterly for upper management.

18.2.5 Training

Training and assistance are also a mandated role of the Central Office units and the Quality Assurance program.

1. Development: The Central Office Roadway Design will formulate a training plan based upon District requests or needs as determined by the Quality Assurance reviews.
2. Delivery: The Central Office will manage or conduct training courses for District and Consultant personnel as requested, with schedules and locations sensitive to budgets and production schedules.

18.3 Quality Control

Quality Control is the process performed to ensure conformance with valid requirements. This process includes quality planning, training, providing clear decisions and directions, constant supervision, immediate review of completed activities for accuracy and completeness, and documenting all decisions, assumptions and recommendations.

Each District shall have a **District Quality Control Plan for Roadway Design** and the other production units, which addresses broad overall quality initiative. The **District Quality Control Plan** shall identify the organization, responsibility, and accountability used to perform and document overall quality control, including the requirement for a Project Quality Control Plan on all projects. All **Project Quality Control Plans** must address any project specific scope of service needs and be approved by the Project Manager or District Design Engineer as appropriate.

In-house and consultant designers and reviewers must recognize quality is the result of several processes. It requires many individuals performing many appropriate activities at the right time during the plans development process. Quality control does not solely consist of a review after a product is completed. Quality requires performing all activities in conformance with valid requirements, no matter how large or small their overall contribution to the design process. Good CADD techniques, attention to details and ensuring the plans are correct and useful to the contractor are also essential to quality.

18.3.1 Authority

Section 334.048, F.S. requires a **Quality Control Process**. It requires that each District shall be accountable for ensuring their District's quality of performance and compliance with all laws, rules, policies, and procedures related to the operation of the department.

18.3.2 Accountability

1. The **District** shall follow established design policies, procedures, standards and guidelines in the review and preparation of all design products; and review Consultant prepared individual engineering and design for compliance and good engineering practice.
2. The **Consultant** is an agent for the District with the primary responsibility for preparation of contract plans. Consultants must ensure quality and adherence to established design policies, procedures, standards and guidelines in the review and preparation of all design products for compliance and good engineering practice as directed by the District Project Quality Control Plan.

18.3.3 Critical Areas to be Monitored

The District shall monitor the Quality Control efforts used by in-house staff and its consultant services units. The District shall assure project scopes include an adequate **Project Quality Control Plan.**

18.3.4 Documentation

The Districts shall maintain a file containing the current District Quality Control Plan and shall furnish Central Office Design with a copy to be used as part of the critical areas to be reviewed. Every project file will contain a Project Quality Control Plan at the beginning of the Initial Engineering Design Process.

18.3.5 Training

The District shall identify and coordinate training needs of in-house and Consultant services through the appropriate Central Office units.