Introduction

The term Design Project Manager (DPM) is a general term used throughout this chapter for the Florida Department of Transportation (FDOT) employee responsible for managing the design of a project. Unless specifically indicated otherwise, PM refers to the FDOT DPM.

PMG 320 provides references and guidance for PMs responsible for designing projects and preparing plans, specifications, and estimates. This covers the knowledge areas needed to manage the design and completion of contract documents for the construction letting of a project in addition to the basic project management knowledge areas.

The complete design process is explained in ***Procedure No. 625-000-002***, ***FDOT Design Manual (FDM)***. A DPM should be familiar with these references. Other useful references include:

- ***Standard Plans for Road and Bridge Construction*** ***(Procedure 625-010-003)***
- ***Drainage Manual*** ***(Procedure 625-040-002)***
- ***Utility Accommodation Manual (UAM)*** ***(Rule 14-46.001 F.A.C.)***
- ***Utility Procedures Manual (UPM) (Procedure No. 710-030-001)***
- ***Basis of Estimates Manual*** (***Procedure No. 600-000-002)***
- ***Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook)*** ***(Procedure No. 625-000-015)***
- ***Access Management Guidebook***
- ***Roadway Design Bulletins***
- ***Structures Manual***
- ***Structures Design Bulletins***
- ***Public Involvement Handbook***
- ***Standard Specifications for Road and Bridge Construction***
- ***AASHTO Policy for Geometric Design of Highways and Streets (Green Book)***
- ***AASHTO Roadside Design Guide***
- ***AASHTO Highway Safety Manual (HSM)***

Design Objectives and Criteria

The ***FDM*** sets forth geometric and other design criteria, as well as procedures, for FDOT projects. The information contained applies to the preparation of contract plans for roadways and structures. The DPM must be familiar with criteria and procedures contained in this manual and understand how they apply to the project. The DPM may depend on the discipline designer or specialist to be responsible for the selection and application of the appropriate design criteria; however, the DPM is responsible for ensuring that all disciplines and project activities come together in a set of contract plans for the project.

Many of the activities necessary to define a design project scope and its parameters are outlined in ***FDM 110,*** Initial Engineering Design Process. This chapter describes the expectation in the initial engineering phase, discusses initial data sources and the establishment of the project scope, objectives, budget, and schedule. The DPM should review the information in this chapter before finalizing the scope of work for the project, or prior to preparing a scope of services for any consultant services on the project.

Initial Data Collection

Required data collection should be specifically tailored for each individual project. Defining data necessary to support the design processes established by the project scope is the first step. Sources may vary, including any or all of the following:

- As-built plans and existing right of way maps
- Straight line diagrams
- Project Development & Environmental (PD&E) Reports and environmental documentation
- Planning Studies
- Efficient Transportation Decision Making (ETDM) Program Screen
- Project Concept Report
- Interchange Justification and Modification Reports
- Surveys (ground and/or aerial)
- Geotechnical reports
- Maintenance records for current maintenance rating data
- Field reviews
- Previous studies by others
- Preliminary engineering plans
- Traffic data
- Crash records
- Utility plans and other records
- Local agencies

A good practice before finalizing the scope is to conduct a field review with all the disciplines that might be involved in the project.

When available data have been collected, the additional project data collection requirements should be developed, to include a timeline and deliverables. The DPM should collect all the above information that is available and record it electronically, if possible. Assembled background information can then be presented to the consultant at the Notice to Proceed, meeting to allow a much faster start on the design work. Data collection is best done by a consultant and should be included in the scope of services. Coordination with appropriate disciplines and/or sub consultants should take place early in the process so that all interested parties have a clear understanding of their roles and responsibilities during the data collection phase.