

CHAPTER 3 – PROJECT WORK PLAN

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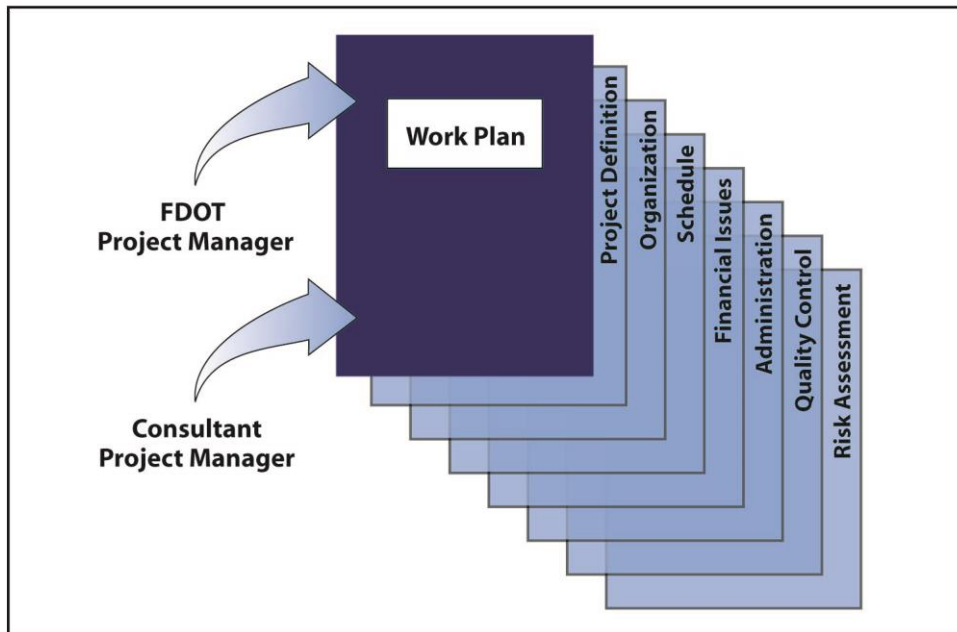
Introduction

One key to a successful project can be the development of a Project Work Plan. The purpose of the Project Work Plan is to promote the efficient, organized, and timely completion of the work product according to schedule, budget and contract requirements. The Project Work Plan details the job scope, defines the work product and establishes task sequencing, budget, resource allocation, and the schedule.

Who Should Prepare a Project Work Plan?

Project Managers in all project phases will benefit from the development of a Project Work Plan that addresses the criteria for a successful project. **Figure 1**, Work Plan Development, illustrates the typical Project Work Plan components. Although the following material is oriented primarily toward planning, Project Development and Environment (PD&E) and design projects, the concepts can also be applied to construction and maintenance projects. Some of the elements, however, will not apply directly to these projects and will need to be modified or eliminated.

Figure 1
Work Plan Development



The Project Work Plan Concept

In general, the Project Work Plan answers these questions: What must be done? Who will do it? How will it be done? How long will it take? How much will it cost? What are the deliverables? How will quality be maintained? What is the schedule?

The Project Work Plan is intended to be an internal tool for both the Florida Department of Transportation (FDOT) Project Manager (PM) and the consultant PM. Each PM should have a plan developed from his/her perspective that addresses the needs of each organization. If a consultant is performing the project, the Project Work Plan does not replace the contract and scope of services; it helps the PM prepare these documents and complete their requirements. If the project is being done with in-house forces, the Project Work Plan becomes a “contract” between the PM and others within FDOT.

The format and level of detail of a Project Work Plan varies according to the author (FDOT PM or consultant PM) and the type, size and complexity of the project. The suggested elements of a Project Work Plan discussed in this chapter should be modified to fit the project and the needs of the PM. In fact, both the FDOT and consultant firms routinely prepare many of the elements of a Project Work Plan outlined in this chapter. Assembling these elements into one document as a management tool will help ensure that all the essential issues are considered and that the individual elements are planned in a consistent and complementary fashion. However, the intent of the Project Work Plan is not to replace project files, which will contain detailed documentation of most of the items discussed in this chapter. The Project Work Plan is intended to be a summary of the most important project records for handy, daily use by the PM.

The FDOT PM should develop a Project Work Plan when a project is first assigned, ideally when the project is first scoped. This plan will be very helpful in preparing the scope of services for the contract. The consultant PM should develop a Project Work Plan after selection but before notice to proceed. An initial Project Work Plan will be excellent preparation for contract negotiations for both parties. Once the contract is negotiated, a fairly detailed plan should be in place by notice to proceed on a contract.

The Project Work Plan must be a living document, growing in detail as a project progresses. It is probably best placed in a loose-leaf binder to allow easy revisions and insertion of attachments.

Suggested Outline

Figure 2, Project Work Plan Outline, outlines all the elements that should be considered for a Project Work Plan. The text that follows explains the type of information that could be included. Many of the individual elements are discussed in more detail in other chapters of this handbook.

Figure 2
Project Work Plan Outline

1. Project Definition <ul style="list-style-type: none">a. Title and Identificationb. Project Descriptionc. Project Limitsd. Objectivese. Scope of Services (attach)f. Commitmentsg. Constraints and Assumptionsh. Expectationsi. Deliverables	5. Project Administration <ul style="list-style-type: none">a. Responsible Officeb. Administrative Staffc. Project Filesd. Special Needse. Communication Planf. Meeting Scheduleg. Internal Reportingh. Progress Reportsi. Project Closeout Requirements
2. Organization/Human Resources <ul style="list-style-type: none">a. Organization Chart (attach)b. Key Personnel (attach)c. Subconsultantsd. Staffing (attach)e. Delegation Plan	6. Quality Control (QC) <ul style="list-style-type: none">a. QC Plan (attach)b. Responsibilitiesc. Required Submittals
3. Schedule <ul style="list-style-type: none">a. Schedule (attach)b. Critical Path Elementsc. Major Milestones	7. Risk Assessment <ul style="list-style-type: none">a. High-Risk Elementsb. Contingency Plan
4. Financial Issues <ul style="list-style-type: none">a. Contract Valuesb. Method of Compensationc. Invoicingd. Optional Servicese. Contingenciesf. Budget	

1. Project Definition

- a. **Title and Identification** should include project titles and numbers to be used by the FDOT. For the consultant Project Work Plan, the firm's project number(s) should also be identified.
- b. **Project Description** should be a brief description of the project that can be used consistently in all project documents.
- c. **Project Limits** should be the same as what appears in the work program.
- d. **Project Objectives** should address what this project is to accomplish and how it relates to the organization's mission and values. Who are the stakeholders and clients?
- e. **Scope of Services** should be referenced and attached to the Project Work Plan. Include with the scope all significant understandings and agreements reached during negotiations.
- f. **Commitments** made in previous phases of work should be listed.
- g. **Constraints and Assumptions** should help establish the "rules of the game." These may include technical issues, project hand-off issues from prior phases of work, public concerns and politically sensitive "hot buttons." List concerned local agencies and other stakeholders. A brief description of the pertinent history may help explain the constraints and assumptions. Other common project constraints include:
 - Construction access
 - Traffic
 - Environmental
 - Right of way
 - Geotechnical
 - Utilities
 - Other transportation modes (such as airports and railroads)

The earlier constraints are identified, the more flexibility the PM will have in dealing with them.

- h. **Expectations** are those desired outcomes that are not expressed in the scope of services. Examples may include the importance of submittal dates and timely reviews; the interrelationships with the next project in the work program pipeline; and, for a consultant firm, the potential for future business opportunities. The PM should clearly understand the expectations of his/her management.
- i. **Deliverables** should be specifically listed. Frequently not all deliverables are specified in the scope of services, but they are required by reference to

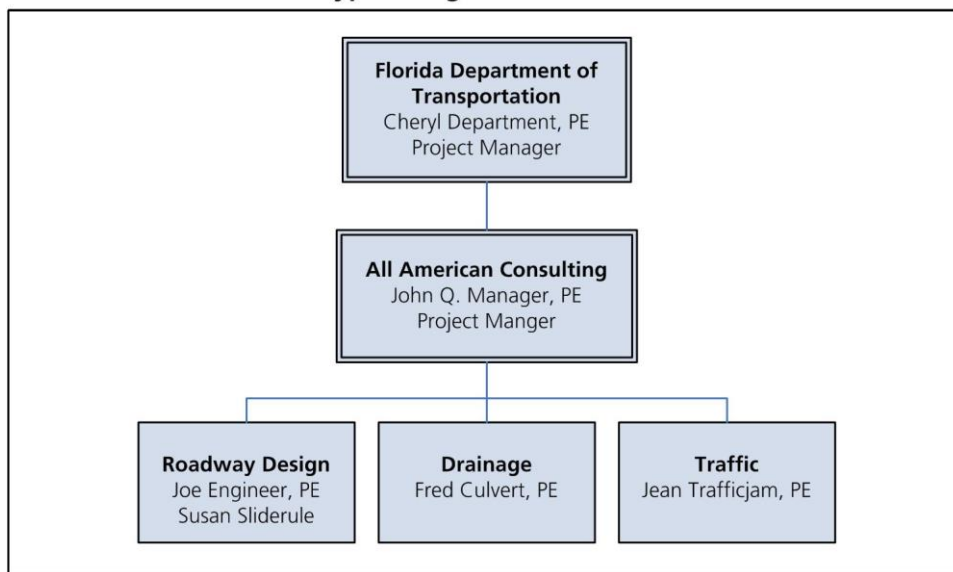
FDOT policy or manual. For example, the Plans Preparation Manual (PPM) contains requirements for deliverables that may not necessarily be repeated in the scope of services. The plan should list everything that must be delivered, including number of copies, printing and other requirements.

2. Organization/Human Resources

This part of the plan defines the project team members (including representatives of all participating departments, agencies and companies), identifies and quantifies personnel resources, and develops a hierarchy for problem resolution. Team members' qualifications should fit the needs of the project. Who are the members—formal and informal—of the project team?

- a. An *Organization Chart* for both the FDOT and the consultant should be attached. Organization charts should be simple, showing clear lines of responsibility. **Figure 3**, Typical Organization Chart, illustrates the information included on an organization chart.

Figure 3
Typical Organization Chart

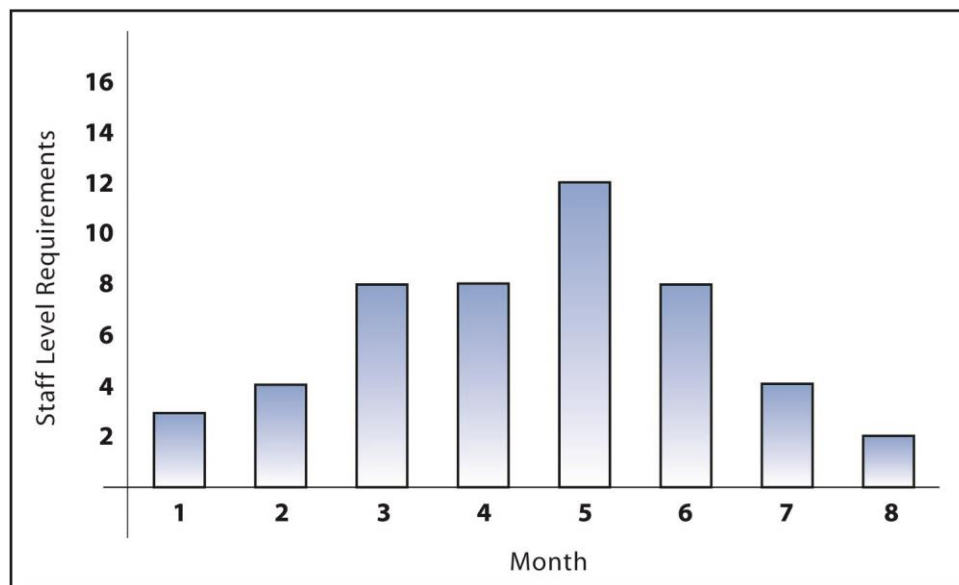


b. Key personnel include the PM and her/his supervisor and key assistants for both the FDOT and the consultant. A responsibility and contacts chart should be attached. (A sample form follows the internet references at the end of this chapter.) For design and other engineering projects, the engineer in responsible charge of the work, as defined in **Rule 61G15-18.011(1) F.A.C.**, should be clearly identified. The Code can be found at the [Florida Board of Professional Engineers](http://www.flsbar.org/) website. This identification is not necessary for right of way, planning and other non-engineering projects.

c. Subconsultants should be listed, along with a brief explanation of their role in the project and their key personnel.

d. Staffing may include important individuals by name or numbers of staff by categories. Staffing needs vary throughout the life of the project, as illustrated in **Figure 4**, Staff Level Requirements. Applying personnel resources to the schedule allows the PM to plan staff level requirements throughout the life of the project. Personnel experience and expertise should match project complexity. While it is almost inevitable that personnel will change during the course of a job, it is critical that equally qualified or better staff be substituted when changes occur. Possible substitutes should be identified as soon as changes are foreseen. The staffing plan should be attached.

Figure 4
Staff Level Requirements



e. A **Delegation Plan** should identify the individuals who will be delegated certain responsibilities and the terms of that delegation, such as levels of authority or phases of a project. A good PM understands that he cannot do everything on a project. Responsibility must be delegated in a clear, unambiguous manner. Managers of engineering projects should understand the provisions of Florida Administrative Code (F.A.C.), Rules 61G15-30.002, 005 and 006, pertaining to Professional Engineers, that explain the responsibilities of the Engineer of Record (EOR) and Delegated Engineers. If engineers other than the EOR will be in responsible charge of parts of a project, the EOR must delegate that responsibility in writing. For example, if a roadway design project includes a bridge and traffic signal design and the EOR is a roadway engineer, she/he will delegate those portions of the work to qualified structural and traffic engineers who will sign and seal the sheets for which they are responsible. The delegation plan can be used to fulfill these requirements.

3. Schedule

Every project should have a specific schedule. Project Management Handbook, Part I, Chapter 15, discusses scheduling in detail. The complexity of a schedule will vary with the complexity and duration of the project. The schedules for small, quick turn-around projects may be as simple as a bar chart showing the duration of each project activity. Large, complex projects require very sophisticated critical path analysis.

- a. The schedule should be attached to the Project Work Plan. The schedule is one of the PM's most powerful management tools. The schedule should include all the required production activities and necessary quality control, printing, reviews and revisions that are necessary for a project.
- b. A list of the **Critical Path Elements** should be summarized in the schedule to help the PM plan for the more important work activities.
- c. A list of Major **Milestones** will help the PM and the team to focus on important schedule events.

4. Financial Issues

FDOT PMs and consultant PMs will have different approaches to material in this portion of the Project Work Plan.

- a. **Contract Values** identify the amounts in the contract and include all contracted subtotals and limits.
- b. **Method of Compensation** should also be identified; whether lump sum, cost plus fixed fee, unit price or other. Any effect that the contract values and methods of payment will have on how the project will be managed should be discussed.

- c. **Invoicing** should include the frequency, dates, task breakouts and invoicing directions for sub-consultants. Most consultant projects are invoiced through the Consultant Invoice Transmittal System (CITS). If the project is in CITS, the invoicing directions must be consistent with the manner in which the contract data is loaded into CITS. If the project is not invoiced through CITS, the mechanism for invoicing should be explained.
- d. **Optional Services** should be identified along with trigger dates for timely actions.
- e. **Contingency funds** available in the budget should be identified for the FDOT PM. The FDOT PM should discuss any contingency with both the work programs staff and the Professional Services Unit staff to fully understand all restrictions and requirements.
- f. The **Budget** is perhaps the most important financial issue for the consultant PM. Project costs under the control of the consultant PM are labor, direct expenses and subcontracts. These costs must be controlled in order to achieve a profit. Each firm has its own project budgeting procedure that should be followed and included in the Project Work Plan.

5. Project Administration

The Project Work Plan should clearly identify how the project will be administered.

- a. The **Responsible Office** should be identified for consultants.
- b. **Administrative Staff** who will handle project actions such as filing, word processing, invoicing and accounting should be identified.
- c. **Project Files** should include a list of files to be used and the file numbering and naming system for both hard copies and computer files.
- e. **Special Needs** such as travel procedures; vehicles and special equipment should be included as appropriate.
- f. The **Communication Plan** may be the most important administrative issue. How will the PM communicate with his/her FDOT/ consultant counterpart, with the project team, subconsultants and others? The plan should include the use of e-mail, face-to-face meetings, phone calls and written correspondence. Objectives for frequency of consultant/client contacts should be identified. An example may be PM-to-PM phone contact at least weekly and firm principal contacts at least monthly. The plan could also include sample forms for letters, memos, transmittals, fax covers and other forms of written communication. Such samples will help ensure consistency in project titles and numbers and overall appearance of correspondence. A plan for communicating with the media is appropriate for complex or controversial projects.

- g. A **Meeting Schedule** for consultant-client meeting, as well as internal team meetings should be included. Remember to include subconsultants in the meetings plan. Even though there may not be a specific agenda item dealing with a subconsultant, it may be advantageous for him/her to understand important project issues.
- h. Routine **Internal Reports** to both the FDOT and the consultant firm should be listed, as appropriate. Include distribution of internal reports.
- i. **Progress Reports** should be submitted as required by the scope of services. Even if progress reports are not specifically discussed in the contract, they may be a useful communication tool for the consultant and the FDOT PM. Also identify the distribution of progress reports.
- j. The **Project Closeout Requirements** often are not completed in a timely manner, and administrative and financial problems result. The requirements of both the consultant and the FDOT PM to closeout the project completely should be listed. An index of archived files with specific instructions for retrieval should be included.

6. Quality Control

Quality assurance and quality control are discussed in detail in Project Management Handbook, Part I, Chapter 16. Every project should have a Quality Control (QC) plan. Although this has become the standard on design projects, it is not always formally done on other projects phases such as planning and PD&E. **Figure 5**, Quality Control Plan, shows basic requirements.

- a. The project **QC Plan** should be attached to the Project Work Plan. If a formal QC plan is not required, a simple one can be prepared as part of the Project Work Plan.
- b. Those with specific **Responsibilities** should be listed, including reviewers.
- c. Any **Required Submittals** related to the QC Plan should be listed.

7. Risk Assessment

Figure 5
Quality Control Plan



The hallmarks of a successful project normally are completing the project requirements on time, within budget and with an acceptable quality. The Project Work Plan itemizes the elements of project management that will lead to success. However, with any plan there are risks. Risk assessment involves identifying the definition of success on a project and what may go wrong to jeopardize that success.

Risk is the measure of the probability and consequence of not achieving a defined project goal. Risk management is the act or practice of dealing with risk and includes planning, assessing, and monitoring risks throughout the project. Risk is inherent in all projects.

Additional information is covered in Project Management Handbook, Part I, Chapter 19.