

PART 2, CHAPTER 21

UTILITIES AND RAILROADS

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PART 2, CHAPTER 21

UTILITIES AND RAILROADS

21.1 OVERVIEW

This chapter provides guidance to the District Project Development and Environment (PD&E) Project Managers (PM), the District Utility Offices (DUO), and the District Railroad Coordinators (DRC) for identifying and documenting utility and railroad conflicts during the PD&E phase. A utility, as defined in the Florida Department of Transportation's (FDOT's) [Utility Accommodation Manual \(UAM\)](#), is all active, deactivated or out-of-service electric transmission lines, telephone lines, telegraph lines, other communication services lines, pole lines, ditches, sewers, water mains, heat mains, gas mains, pipelines, gasoline tanks, and pumps owned by the Utility Agency/Owner (UAO). The [UAM](#) is incorporated by reference into **Rule 14-46.001, F.A.C.**

Conflicts with utilities as well as railroad crossings affect both the cost and schedule of a project, and may influence the selection of the preferred alternative. FDOT must consider the potential for encountering utilities and rail lines within the limits of every project, including associated pond sites and other off-site improvements. Coordination between the District, the Railroads, and the UAOs should begin early and continue throughout the project development process to plan for the cost and time required for utility conflict resolution and relocations as well as railroad crossings.

For projects that do not have a PD&E phase, coordination with UAOs will be done by the DUO and the District's Design PM in accordance with the [FDOT Design Manual \(FDM\)](#), [Topic No. 625-000-002](#) and the [UAM/Rule 14-46.001 F.A.C.](#) Coordination with the Railroads will be conducted by the DRC.

21.2 PROCEDURE

Coordination, cooperation, and communication to eliminate, minimize, or mitigate utility or railroad related issues should be practiced throughout the PD&E phase. The District, through the PM, the DRC and the DUO, must coordinate with UAOs and Railroads and provide project information as early as possible.

Identification of Utilities and Railroads in a project area should begin prior to the PD&E phase during planning or corridor development. Calling Sunshine 811 along with site visits can help identify existing utilities within and adjacent to the project corridor. This information can be used to avoid major utility or railroad conflicts in choosing corridors or alternatives to carry forward to the PD&E phase. Existing utilities information will also be used in preparing the PD&E Scope of Services. Railroads do not fall under Sunshine 811, however early information on railroads can be obtained through coordination with the DRC.

During alternatives development, the DUO and PM should hold informational meetings with UAOs to discuss the PD&E Study as it relates to their existing and any proposed facilities. The goal of this early coordination is to assist with the development of concept plans that avoid conflicts with major utility facilities in the next phase of project development. All stakeholders will benefit from early coordination that identifies opportunities to reduce utility impacts, as well as impacts to the project schedule and cost. Similarly, early coordination with the DRC and Railroads impacted by PD&E projects is required to accommodate design changes and minimize delays. For projects that are with Design phase in the Five-Year Work Program or projects with combined PD&E and Design, utility locations will be shown on the preliminary engineering plans found in the ***Preliminary Engineering Report (PER)***.

UAOs and Railroads are project stakeholders and should be invited to public meetings and hearings, where they can receive direct feedback on potential issues. Attendance of UAOs and Railroads at public meetings also helps them to identify and resolve issues related to their facilities early in the process when adjustments to the project are more easily facilitated.

21.2.1 PD&E Project Scoping

The PM needs to coordinate with the DUO in preparing the Scope of Services for the PD&E Study. Information needed to prepare the scope includes: (a) the anticipated number of UAOs that may be within the PD&E Study limits, (b) the anticipated complexity of coordination with each UAO during the PD&E Study, and (c) the need to provide utility locations on the preliminary engineering plans. The UAOs in the project area may be identified using Sunshine 811 supplemented by site visits. When preparing the Scope of Services, requirements for UAO coordination and documentation in the ***Utility Assessment Package*** will be determined. The ***Utility Assessment Package*** (see [Section 21.2.2.3](#)) is prepared either in-house by the DUO or by the PD&E Consultant during the PD&E phase. The DUO must review the Consultant's prepared ***Utility Assessment Package***.

While it is important to know the location of all utility facilities within the PD&E Study limits, the PD&E team should focus their efforts on utility facilities that could: (a) impact development of the preferred alternative, (b) entail lengthy or drawn out coordination efforts, (c) may be cost prohibitive to relocate, or (d) rise beyond the level of ordinary utility coordination. These utility facilities may include substations and electrical transmission lines for power companies, large "hubs" for telecommunication lines, large gas or oil transmission mains, military communication lines, and other underground lines. Some UAOs have special agreements with FDOT [e.g., the Florida Gas Transmission (FGT) Global Agreement], some utility facilities are fragile (e.g., large clay pipes and pipes that have been underground for decades). Therefore, the level of engineering detail required for the PD&E Study should be discussed in depth with the DUO during PD&E scoping. Projects with substantial utility concerns or accelerated schedules may require detailed locations of utilities. Therefore, the DUO will request the PD&E Study to include

Quality Level “B” Survey (Designates) and/or Subsurface Utility Engineering (SUE) services for these projects.

PD&E projects with advanced preliminary design or where the Design phase is concurrent with the PD&E phase will require a higher level of coordination with UAOs than projects that do not overlap phases. See [Part 1, Chapter 4, Project Development Process](#) for details. For these projects, the preliminary engineering plans will include the utility locations.

21.2.2 Utility Procedure

The process to address utilities during the PD&E phase consists of three stages: **PD&E Request Package**; UAO Coordination; and **Utility Assessment Package**. Each stage is discussed in the following sections.

21.2.2.1 PD&E Request Package

The PD&E PM is responsible for developing and submitting a **PD&E Request Package** to the DUO soon after the project alternatives are developed. The **PD&E Request Package** should consist of the project typical section(s) and concept plans for each alternative under evaluation. The typical section data should include, as appropriate, roadway and shoulder width, median width, sidewalks, border widths, and Right of Way (ROW) lines.

The concept plans should overlay viable project alternatives on an aerial photograph. At a minimum, the concept plans must contain the following information:

1. Travel lanes, shoulders, curb and gutter, swales, sidewalk/multi-use paths, barrier walls, and noise walls, if applicable;
2. Bridges;
3. Existing or proposed drainage structures;
4. ROW lines and width;
5. Access control lines;
6. Horizontal alignment stationing; and
7. Special landscaping or mitigation areas, if known.

21.2.2.2 Utility Coordination

Once the **PD&E Request Package** has been developed and submitted to the DUO, the DUO will notify the UAOs within the project area by forwarding them the **PD&E Request**

Package. This transmittal should request that the UAOs provide information for above ground and below ground utilities within the PD&E project area, and request information for both existing and planned utility facilities. The transmittal should also request that the UAOs provide information pertaining to any existing easements or other property interests that may be affected by the project. The UAOs contacted by the DUO should review the concept plans and typical section(s) to identify all major facilities, buildings, and other obstructions or encroachments of UAOs within or adjacent to the project. Each UAO should identify both existing and planned utility corridors and installations in, or adjacent to, each project alternative. Generally, the UAOs should respond in writing and delineate their facilities and any property interests on the concept plans, in accordance with the [**UAM/ Rule 14-46.001 F.A.C.**](#)

A meeting to discuss utility impacts related to the project alternatives should be held with each UAO approximately 30 days after sending the **PD&E Request Package**. In the meeting, the UAO, DUO, and PM should discuss alternatives that may minimize or avoid conflicts, evaluate and consider recommended mitigation/avoidance strategies, discuss timelines for new installations or relocations that are anticipated to be unavoidable, as well as possible potential amounts of relocation costs, and schedule impacts for those relocations. If a UAO's easements or property interests could be affected, the DUO will need to discuss potential conflicts and encroachments, as well as potential subordination of those interests to FDOT's ROW interest. However, no determinations should be made at this stage as to any compensation for a UAO's easement or property interest. The DUO shall take any inquires or requests for compensation to the District Office of General Counsel (OGC) for guidance. The possibility of a UAO entering into a Utility Work Agreement, should also be discussed with the District OGC.

The DUO may have additional meetings with any individual UAO that have the potential for major conflicts with the project to better understand those conflicts and discuss their resolutions.

If applicable, the PM and the DUO in conjunction with the District ROW Office, should consider the feasibility of joint ROW acquisition to minimize any utility ROW replacement costs. This should be discussed in the Utilities and Railroads section and in the Relocation Potential section of the Environmental Document. In addition, if FGT is anticipated to require ROW per the **August 21, 2013 Florida Gas Transmission Agreement and Global Settlement**, this should be discussed with the District OGC and documented in the Environmental Document.

A listing of agreements made between FDOT and UAOs, including the **August 21, 2013 Florida Gas Transmission Agreement and Global Settlement**, can be found on the FDOT Utility Office website on the [**Utility Agreements, Resolutions and Certificate of Incumbency**](#) Table.

21.2.2.3 Utility Assessment Package

The information provided by the UAOs through coordination is used in preparing the **Utility Assessment Package**. A **Utility Assessment Package** should be generated for each proposed alternative and include the following information:

1. Names of all identified UAOs;
2. One set of aerials denoting the location of major existing and planned utility facilities. Aerials should be developed in such a way that information regarding the major utility facilities is easily discernable. For example, to facilitate an understanding of the total impacts to the affected utilities, aerials should show multiple UAO facilities instead of each UAO being depicted on separate sets of aerials;
3. A description of all existing and planned utilities;
4. A discussion of mitigation/avoidance recommendations to reduce utility conflicts;
5. A cost estimate and anticipated time frames for relocation of major facilities where conflicts are anticipated to be unavoidable (including ROW costs);
6. A discussion of joint ROW acquisition;
7. A discussion of ROW needs for FGT, if applicable;
8. A discussion of which UAOs are likely to enter a **Utility Work by Highway Contractor Agreement (UWHCA)**, including whether existing facilities are affected by the project or are proposed installations. Include cost and schedule impacts;
9. A description of existing or proposed encroachments onto any UAO easement or property interest as well as any subordinations; and
10. Information concerning the UAO disposition if it is determined that a UAO will not be affected by the project.

Any discussion in the **Utility Assessment Package** regarding conversations with the UAO concerning compensation or legal determinations should be reviewed and approved by the District OGC before being included.

The **Utility Assessment Package** shall be provided to the PM for consideration in comparing alternatives and selecting a preferred alternative. The Environmental Document will include a summary of this package (see [Section 21.3](#)).

Should there be an opportunity for FDOT to enter into a formal agreement with a UAO during the PD&E phase, the DUO must inform the PM. Together, the DUO and the PM will coordinate with the District OGC as appropriate to negotiate and execute the agreement with the UAO. Agreements reached during the PD&E phase will be included in the **Utility Assessment Package** and documented in the project files. These agreements could include ROW acquisition, utility easements, or preliminary engineering.

21.2.3 Railroad Procedure

For projects that include a railroad crossing or work on or near a railroad corridor, it is the responsibility of the PM to initiate coordination with the DRC, who will provide information concerning present and future use of the rail line, and existing or proposed protection devices at the crossing. In addition, the DRC can provide information about rail crossings such as: crossing status (active or inactive), train speed, condition of the crossing, crash incidents, number of tracks, crossing purpose, railroad schedules, and the owner of the railway. If a project requires adding a new railroad crossing (at-grade or grade separated) additional coordination with the DRC as well as public involvement specific to railroad crossing may be required.

Coordination with Railroads and local governments is required for any project that requires construction or reconstruction of a highway-rail grade crossing, in accordance with **Section 337.11, Florida Statutes (F.S.)**, see also **Chapter 14-57, F.A.C.** The DRC is responsible for this coordination. For projects that require closing or constructing a new grade crossing, **Railroad Grade Crossing Application, Form No. 725-090-66a** or **Railroad Grade Crossing Application, Form No. 725-090-66b** must be completed. Some of the information required for this form includes:

1. A safety analysis of the grade crossing,
2. Discussion of land use and traffic generators served by the crossing,
3. Existing and projected traffic,
4. Effect on rail operations, and
5. Effect on emergency vehicles access.

See **Railroad Grade Crossing Application, Form No. 725-090-66a** or **Railroad Grade Crossing Application, Form No. 725-090-66b** for complete instructions.

For design requirements, including vertical and horizontal clearances, for grade separated crossings and at grade crossings refer to **Part 2, Section 220 Railroad Crossing** of the [FDOT Design Manual, Topic No. 625-000-002](#) and **Chapter 14-57, F.A.C.** The PM should also coordinate with the DRC to determine if there are any special requirements.

The PM and the DRC need to work closely together to maintain the project schedule. The level of coordination will vary depending on the level of engineering detail required for the PD&E phase. For standard PD&E projects followed by a traditional design-bid-build, it is important to begin coordination with the railroad to ensure both FDOT and the railroad company understand the impacts of each alternative when choosing the preferred alternative. If the railroad is listed or is eligible for listing on the National Register for Historic Places (NRHP), additional coordination with District Environmental Office as well as the State Historic Preservation Officer (SHPO) may be required. Refer to [Part 2, Chapter 8, Archeological and Historical Resources](#) for more guidance.

The PM, DRC, and railroad company should also work together to establish and anticipate any coordination efforts that may be needed as the project advances. For a project with advanced preliminary design or Design phase concurrent with the PD&E phase, or a project with the PD&E phase followed by an alternative contracting method such as design-build contract (see [Part 1 Chapter 4, Project Development Process](#)), coordination may require additional details such as deciding who will fund the at grade improvements, scheduling the work, and determining if the railroad company will perform construction. The DRC is responsible for this coordination.

Documentation of the coordination with the railroads must be included in the project file. The Environmental Document and *PER* (see [Part 2 Chapter 3, Engineering Analysis](#)) should discuss this coordination and involvement with any rail facilities to the appropriate level of detail required to address any issues identified.

For any work, including survey, within the railroad ROW a flagger must be present. Work with the DRC if access to the railroad ROW is needed.

For rail safety projects that are Type 1 Categorical Exclusions (CEs) use the **Type 1 Categorical Exclusion Checklist** per the guidance in [Part 1, Chapter 5, Categorical Exclusion](#). The DRC must coordinate with the District Environmental Office.

21.3 ENVIRONMENTAL DOCUMENT

The utilities and railroads impact evaluation and coordination is be summarized in the appropriate sections of the Environmental Document. The contact names and numbers and/or the estimated costs are not to be included in this summary. The **Utilities Assessment Package**, documentation of railroad coordination, and other relevant information that support the impact evaluation are uploaded to the StateWide Environmental Project Tracker (SWEPT) project file. It is recommended that these documents be placed within the Utilities and Railroads folder in SWEPT.

Commitments are documented in the Commitments section of the Environmental Document and documented and tracked in accordance with [Procedure No. 650-000-003, Project Commitment Tracking](#) and [Part 2, Chapter 22, Commitments](#).

21.3.1 Type 2 Categorical Exclusions

For Type 2 Categorical Exclusions (CEs), the results of the utilities and railroad impact evaluation and coordination is briefly summarized, including the names of the UAO and railroads, in the Utilities and Railroads section of the ***Type 2 Categorical Exclusion Determination Form*** in SWEPT. Any railroad coordination and/or ***Utilities Assessment Package*** is added as Technical Materials.

21.3.2 Environmental Assessments and Environmental Impact Statements

For Environmental Assessments (EAs) and Environmental Impact Statements (EISs), the results of the utilities and railroad impact evaluation and coordination is briefly summarized, including the names of the UAO and railroads, in the Utilities and Railroads section of the EA or the EIS.

21.3.3 FDOT State Projects

For State Environmental Impact Reports (SEIRs), the results of the utilities and railroad impact evaluation and coordination is briefly summarized, including the names of the UAO and railroads, in the Utilities and Railroads section of the SEIR form in SWEPT. Any railroad coordination and/or ***Utilities Assessment Package*** is added as Technical Materials.

21.4 RE-EVALUATION OF UTILITY AND RAIL IMPACTS

Project Re-evaluation should document changes to utilities and railroads in accordance with ***Part 1, Chapter 13, Re-evaluations***. The DUO and the DRC must be coordinated with during the Re-evaluation process.

21.5 REFERENCES

Chapter 335, F.S., State Highway System. <http://www.leg.state.fl.us/Statutes/>

Chapter 337, F.S., Contracting; Acquisition, Disposal, and Use of Property.
<http://www.leg.state.fl.us/Statutes/>

FDOT, Construction Project Administration Manual, Topic No. 700-000- 000.
<https://www.fdot.gov/construction/manuals/cpam/cpammanual.shtm>

FDOT, FDOT Design Manual, Topic No. 625-000-002.
<http://www.fdot.gov/roadway/fdm/>

FDOT, Standard Specifications for Road and Bridge Construction, Florida Department of Transportation. <https://www.fdot.gov/programmanagement/Specs.shtm>

FDOT, Utility Accommodation Manual.

<https://www.fdot.gov/programmanagement/utilities/default.shtm>

FDOT, Utility Agreements, Resolutions and Certificate of Incumbency.

<https://www.fdot.gov/programmanagement/utilities/97LaterUA.shtm>

Rule 14-46.001 F.A.C., Utilities Installation or Adjustment.

<https://www.flrules.org/gateway/ruleNo.asp?id=14-46.001>

Rule 14-57, F.A.C., Railroad Safety and Clearance Standards, and Public Railroad-Highway Grade Crossings Rule.

<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=14-57>

Title 23 CFR § 645(a), Utility Relocations Adjustments and Reimbursement.

http://www.ecfr.gov/cgi-bin/text-idx?SID=62260a79a5de349c9956cf878c41325f&mc=true&tpl=/ecfrbrowse/Title23/23cfr645_main_02.tpl

Title 23 CFR § 645(b), Accommodation of Utilities.

http://www.ecfr.gov/cgi-bin/text-idx?SID=62260a79a5de349c9956cf878c41325f&mc=true&tpl=/ecfrbrowse/Title23/23cfr645_main_02.tpl

Title 23 CFR § 646(b), Railroad-Highway Projects.

<https://www.ecfr.gov/cgi-bin/text-idx?SID=662c928e6d84c4a93d53ec5f220fcd8c&mc=true&node=pt23.1.646&rqn=div5>

Title 23 CFR Part 771, Environmental Impact and Related Procedures.

<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=3f0e8ae65ee76fc13c0bc7a240e9fc59&mc=true&r=PART&n=pt23.1.771>

21.6 FORMS

Railroad Grade Crossing Application, Form No. 725-090-66a

Railroad Grade Crossing Application, Form No. 725-090-66b

FDOT forms are found in the [FDOT Procedural Document Library](#)