

2014 UAM



**Florida Administrative Code Chapter 14-46.001
Utilities Installation or Adjustment
and
Incorporated Utility Accommodation Manual**

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FDOT Implementation Letter

To be inserted after rulemaking

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FHWA Approval Letter

To be inserted after rulemaking

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Rule 14-46 Florida Administrative Code

CHAPTER 14-46

UTILITIES INSTALLATION OR ADJUSTMENT

14-46.001 Utilities Installation or Adjustment

14-46.001 Utilities Installation or Adjustment.

(1) Purpose. This rule is established to regulate the location and manner for installation and adjustment of utility facilities on any Florida Department of Transportation (FDOT) right of way, in the interest of safety and the protection, utilization, and future development of such rights of way, with due consideration given to public service afforded by adequate and economical utility installations, and to provide procedures for the issuance of permits.

(2) Permits.

(a) FDOT will issue permits for the construction, alteration, operation, relocation, removal, and maintenance of utilities upon the right of way in conformity with the FDOT *Utility Accommodation Manual* (UAM), Revision 1-1, which is hereby incorporated by reference and made part of this rule. The UAM also incorporates by reference additional documents contained in the UAM Section 6.1, Incorporated References. Copies of the UAM are available from the FDOT Maps and Publications Office at 605 Suwannee Street, MS 12, Tallahassee, Florida 32399-0450, or the FDOT Utility Web Site: <http://www.dot.state.fl.us/specificationsoffice/utilities>.

(b) The Utility Permit, Revision 1-1, is incorporated herein by reference and available from the FDOT Utility Web Site listed above.

Rulemaking Authority 334.044(2), 337.401 FS. Law Implemented 337.401, 337.403 FS. History—New 5-13-70, Amended 8-10-78, 7-22-82, Formerly 14-46.01, Amended 7-5-90, 6-8-93, 10-15-96, 8-30-99, 11-10-05, 1-24-08, 1-30-11, X-XX-XX.

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UTILITY PERMIT

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FDOT
Utility Accommodation Manual
Revision 1-1

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1 General

1.1 Purpose

The purpose of the Utility Accommodation Manual (*UAM*) is to set the utility installations or adjustments requirements incorporated by reference into *Rule 14-46.001 F.A.C.*.

1.2 Terms and Acronyms

The following definitions of terms and acronyms apply only as used in the *UAM*:

Agreement: Any legally binding instrument between the UAO and FDOT.

Auxiliary Lane: The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic. They occasionally provide short capacity segments.

CFR: Code of Federal Regulations.

Casing: A pipe surrounding a carrier pipe and designed to resist potential impacts and carry imposed loads.

Conduit: An enclosure for protecting a utility (e.g., wires and cables).

Contractor: A legal entity (1) properly licensed in the State of Florida by the state, county or city, and (2) contracting with FDOT or a UAO to work or furnish materials.

District: One of the 7 geographical areas or the Turnpike Enterprise. District Map and Turnpike information are available at: <http://www.dot.state.fl.us/specificationsoffice/utilities/>

F.A.C.: Florida Administrative Code

FDOT: The Florida Department of Transportation:

F.S.: Florida Statutes.

Highway: A right of way corridor which contains or is to contain a roadway. Generally the highway is R/W line to R/W line.

LA R/W: Limited Access Right of Way.

Local Maintenance Engineer: The engineer in charge of the local maintenance or operation centers throughout the State.

Manhole: An opening in an underground system, providing access for installations, inspections, repairs, connections and tests.

Median: The portion of a divided highway or street that separates the traveled-ways for traffic moving in opposite directions.

Pull Box: An opening in an underground system, providing access for installations, inspections, repairs, connections and tests.

R/W: Right of way

Roadway: The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

TCP: Plans showing Traffic Control.

Service lines: Lines used by the UAO to carry services from a main line to individual recipients.

Traffic Control: Methods of controlling and maintaining a safe flow of traffic through construction or maintenance work areas. Also referred to as Maintenance of Traffic.

Traveled-Way: Also called traffic lane, is the designated widths of roadway pavement (exclusive of shoulders and marked bicycle lanes) marked to separate opposing traffic or vehicles traveling in the same direction. These lanes include through travel lanes, auxiliary lanes, turn lanes, weaving lanes, passing lanes and climbing lanes. They provide space for licensed motor vehicles and, in some cases, bicycles.

Travel Lane: The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes. Generally, traveled-ways or traffic lanes equate to the basic number of lanes for a facility.

UAO: Utility Agency/Owner. The entity that owns the utility.

UAM: This Utility Accommodation Manual

Utility: All active, deactivated or out-of-service lines such as pipes, wires, pole lines, and appurtenances used to transport or transmit, electricity, steam, gas, water, waste, voice or data communication, radio signals, or storm water not discharged onto the FDOT R/W.

Utility Appurtenances: Features or parts that are part of a utility, whether primary or secondary to its function.

1.3 References

References to sections internal to this manual are indicated in bold italics starting with "UAM". For example, these instructions are in ***UAM Section 1.3***. References to external documents are indicated by the generally used term for the document highlighted in bold italic text. For example, the "Design Standards for Design, Construction, Maintenance and Utility Operations On the State Highways System English Units -2014" is referenced as the ***FDOT 2014 Design Standards***. The published title and date for these external references are listed in ***UAM Section 6***. When a ***UAM*** section is referenced, it is intended that all subsections and all other references contained within the referenced section are included.

1.4 Delegation of Authority

Any authority or responsibility specifically attributed in this ***UAM*** to any FDOT employee implicitly extends to anyone that employee has explicitly delegated it to. In addition, the State Chief Engineer has authority to exercise any authority or responsibility attributed in the ***UAM*** to any FDOT employee.

1.5 Application of FDOT Drawings and Specifications

When an agreement exists between the UAO and FDOT, the UAO's work shall conform to the requirements of the agreement. Otherwise, while on the FDOT R/W or within FDOT projects, the UAO's work shall comply with the requirements of the ***UAM*** and the drawings and specifications listed in ***UAM Section 1.5.1*** and ***UAM Section 1.5.2***, or the UAO may elect to use the most current version of these standard drawings and specifications.

1.5.1 FDOT Drawings

The UAO shall use any drawings necessary to restore the FDOT R/W to the condition existing prior to the utility work. While working within the FDOT R/W, the UAO shall also comply with Indexes 201, 307, and 600 of the ***FDOT 2014 Design Standards***.

Additionally, the below indexes 601 through 660 are typical applications that apply to most traffic control situations.

Index	Title
601	Two-Lane, Two-Way, Work Outside Shoulder
602	Two-Lane, Two-Way, Work On Shoulder
603	Two-Lane, Two-Way, Work Within the Travel Lane
604	Two-Lane, Two-Way, Work In Intersection
605	Two-Lane, Two-Way, Work Near Intersection
611	Multilane, Work Outside Shoulder
612	Multilane, Work On Shoulder
613	Multilane, Work Within the Travel Lane - Median or Outside Lane
615	Multilane, Work In Intersections
616	Multilane, Work Near Intersection - Median or Outside Lane
625	Temporary Road Closure 5 Minutes or Less
635	Work In Vicinity of Rail Crossings
660	Pedestrian Control for Closure of Sidewalk

When the UAO does not obtain Florida storm water or environmental resource permits from the Florida Department of Environmental Protection or the Water Management Districts, the UAO shall comply with Index 102 and 103 of the ***FDOT 2010 Design Standards***.

1.5.2 FDOT Specifications

The UAO shall use any specification necessary to restore the FDOT R/W to the condition existing prior to the utility work. While working within the FDOT R/W, the UAO's work shall also comply with the sections of the ***FDOT Standard Specifications*** as listed below:

When working on FDOT projects the UAO and FDOT contractor shall coordinate their activities in accordance with all of the following sections:

- 4-3.8
- 7-11.6

When constructing and maintaining detours, the UAO shall provide pavement markings in accordance with the following sections:

- 102-1
- 102-2.1
- 102-5.9
- 102-7
- 102-8
- 102-9.1 (Paragraphs 1, 2, & 5 only)
- 102-9.2

For other various types of work, the UAO shall comply with the following sections:

- 121-1 through 121-6
- 125-6 through 125-8
- 160-1 through 160-4
- 425-6.7

- 522-1 through 522-8
- 555-1
- 555-.3.3 through 555.3.4
- 555-4 through 555-5
- 556-1
- 556-3.2 through 556-3.3
- 556-3.4.1
- 556-4 through 556-6
- 557-1
- 557-2.1
- 557-2.2.1
- 557-3 through 557-4
- 700-1.2.4

1.6 Other Agency Rules

If another agency's rule is applicable, the UAO is responsible for complying with those rules. When a FDOT rule is more stringent than those of other agencies, the UAO shall comply with the FDOT rule.

1.7 Other FDOT Permits

1.7.1 Overweight and Over-Dimensional Vehicle Permits

The UAO shall obtain permits for overweight and over-dimensional vehicles in accordance with *Rule 14-26, F.A.C.*

1.7.2 Storm Water and Drainage Permits

For the installation of drainage pipes or structures that convey storm water along, across or under the FDOT R/W and do not discharge any storm water onto the FDOT R/W or into an FDOT storm water system, the UAO shall obtain a utility permit in lieu of a drainage connection permit (see *UAM Section 2*).

For the installation of drainage pipes or structures that do discharge storm water onto the FDOT R/W or into an FDOT storm water system, the drainage facility owner shall obtain a drainage connection permit in lieu of a utility permit (See *Rule 14-86, F.A.C.*).

Obtaining an FDOT drainage connection permit or utility permit does not relieve the owner of their responsibility to comply with the Florida Department of Environmental Protection's (DEP) National Pollutant Discharge Elimination System (NPDES) permitting requirements (see *Chapter 373, F.S. Part IV* and *Rule 62-25, F.A.C.*) or any other authority's permitting requirements.

1.8 UAM Dispute Review

If the UAO desires to resolve a dispute with an FDOT district or the Turnpike Enterprise, the UAO shall request a review by the FDOT State Utilities Engineer.

1.9 Sunshine 811 Notification

The UAO shall notify the Sunshine State One-Call System (811) prior to any excavation or demolition activities in accordance with *Chapter 556, F.S.* This shall not relieve the UAO from their obligation to notify FDOT as required by the permit or by the *UAM*. FDOT contact information is provided on the utility permit.

1.10 Acquiring Existing Utilities

When a UAO acquires an existing utility that is within FDOT R/W, the UAO shall provide FDOT with an affidavit that (1) states the ownership transfer, (2) describes the boundaries and (3) acknowledges that the new UAO shall comply with the conditions and requirements of the original permit. A copy of the operative conveyance document shall be attached to the affidavit.

1.11 Utility Liaison

The State Utilities Engineer develops revisions and additions to the *UAM* in accordance with *Chapter 120, F.S.* and through periodic *UAM* reviews with the utility industry and others. The State Utilities Engineer is the chief liaison on utility accommodation. UAM users may submit to the State Utilities Engineer written suggestions to the address or URL below:

State Utilities Engineer
Florida Department of Transportation
605 Suwannee Street
Mail Station 32
Tallahassee, FL 32399-0450

The State Utilities Engineer publishes information about issues of interest to the utility industry at:

<http://www.dot.state.fl.us/specificationsoffice/utilities/>

1.12 Distribution

FDOT provides the *UAM* at no cost from the following web site at:

<http://www.dot.state.fl.us/specificationsoffice/utilities/>

Hardcopies of the *UAM* may be purchased from:

The Florida Department of Transportation
Maps and Publications Sales
605 Suwannee Street, Mail Station 12
Tallahassee, Florida 32399-0450
Phone: (850) 414-4050 Fax: (850) 487-4099

2 Utility Permits

2.1 General UAO Responsibilities

Unless otherwise specified in *UAM Section 2.2* or *UAM Section 2.3*, the UAO shall obtain a utility permit before working within FDOT R/W using the *FDOT Utility Permit Form* or the One-Stop Permitting website. Both the form and access to the online permitting website are available at the following website:

<http://www.dot.state.fl.us/specificationsoffice/utilities/>.

To expedite construction of FDOT projects, FDOT may determine an approved *FDOT Utility Work Schedule* requiring the UAO to meet all requirements of *Rule 14-46.001 F.A.C.* and the *UAM*, and which has a corresponding relocation agreement is equivalent to a utility permit.

Others may prepare and process permit applications for the UAO, however the UAO shall, in all cases, be a permit applicant and shall not deviate from an approved permit without approval by the Local Maintenance Engineer. The UAO shall have a complete copy of the approved permit at the job site when crews are present.

City or county utility owners, who do not have contractual control over the builder of their facilities, may elect to have the builder become a joint utility permit applicant with the city or county. In these cases, the utility builder and the city or county shall be severally liable such that the utility builder shall be required to comply with all the permit requirements applicable to the construction of the city or county utility facilities and the city or county shall be required to comply with permit requirements post construction, including, but not limited to those applicable to operation and maintenance. FDOT contractors doing utility work under an FDOT agreement, the FDOT contractor shall not be joint utility permit applicants. The post construction obligations of the city or county shall commence upon completion of final inspection by the FDOT. FDOT shall provide the city or county with written notice of such date. The city or county shall be entitled to observe FDOT's final inspection and shall inform FDOT of any apparent failure to comply with the terms of the permit by the utility builder; provided, the final determination of compliance by the utility builder shall be made by FDOT.

The UAO shall notify the FDOT Representative identified on the permit a minimum of 2 work days prior to starting work and again immediately upon completion of work. All work, materials, and equipment shall be subject to inspection and approval by FDOT.

The UAO shall not interfere with the property, and rights of a prior permittee.

It is expressly stipulated that the Utility Permit is a license for permissive use only and that the placing of utilities upon FDOT property pursuant to the permit shall not create or vest any property right in the UAO, except as provided in executed subordination agreements or railroad utility agreements.

Pursuant to *Section 337.403, F.S.*, any utility placed upon, under, over, or along any public road or publicly owned rail corridor that is found by FDOT to be unreasonably interfering in any way with the convenient, safe, or continuous use, or maintenance, improvement, extension, or expansion, of such public road or publicly owned rail corridor shall, upon thirty (30) days written notice to the utility or its agent by FDOT, be removed, relocated, or adjusted by the UAO at its own expense except as provided in *Section 337.403, F.S.*, and except for reimbursement rights set forth in previously executed subordination agreements or Railroad Utility Agreements, and shall apply to all successors and assigns for the permitted facility.

For any excavation, construction, maintenance, or support activities performed by or on behalf of the FDOT, within its R/W, the UAO may be required by the FDOT or its agents to perform the following activities with respect to a UAO's facilities: physically expose or direct exposure of underground facilities, provide any necessary support to facilities and/or cover, de-energize or alter aerial facilities as deemed necessary for protection and safety.

In the event the UAO is permitted to do utility work, which is not a relocation or an adjustment required by FDOT, and the work is to be done simultaneously with FDOT's construction work, the UAO shall coordinate with FDOT before proceeding and shall cooperate with the FDOT's contractor to obtain an approved Utility Work Schedule so as not to delay the work of the FDOT contractor. The UAO shall defend any legal claims of the FDOT's contractor due to delays caused by the UAO's failure to comply with the approved Utility Work Schedule, and shall comply with all provisions of the law.

In the case of non-compliance with the FDOT's requirements in effect as of the date the permit is approved, the permit is void and the facility will have to be brought into compliance or removed from the R/W at no cost to the FDOT, except for reimbursement rights set forth in previously executed subordination agreements or Railroad Utility Agreements. This provision shall not limit the authority of the FDOT pursuant to *Section 337.403, F.S.*

The privileges granted the UAO by the utility permit are only to the extent of the State's right, title and interest in the land to be entered upon and used by the UAO, and the UAO will, at all times, and to the extent permitted by law, assume all risk of and indemnify, defend, and save harmless the State of Florida and the FDOT from and against any and all loss,

damage, cost or expense arising in any manner on account of the exercise or attempted exercises by the UAO of the aforesaid privileges. However, said indemnification as applied to the UAO of city and county utility facilities is limited to that allowed by law.

The UAO shall ensure individuals responsible for placement, or maintenance of traffic control schemes and devices in work zones on the FDOT R/W have proper training. While on the jobsite, the UAO's employee responsible for traffic control shall carry either an FDOT maintenance of traffic training certificate, from an FDOT maintenance of traffic training provider, or a letter, or pocket size card, with the UAO's letterhead certifying the following:

"[Employee's Name] has been properly trained to control traffic in accordance the UAM's traffic control requirements."

Where practical, the UAO shall expeditiously allow passage of over-dimensional vehicles permitted by FDOT. When the UAO becomes aware of deficiencies in the Traffic Control Plan that affect traffic safety, the UAO shall take appropriate corrective actions. When notified by FDOT that immediate corrective actions are needed, the UAO shall immediately comply with FDOT instructions.

The UAO shall comply with *Section 119.07, F.S.*

2.2 Permit Applications for Emergency Work

Advance permit application approvals or notifications are not required for repairs performed in accordance with *UAM Section 3.1*. If the type of work would normally require a permit, the UAO shall submit a completed permit application and as-built plans within five (5) business days after the repairs are completed; however, a TCP does not need to be submitted.

2.3 Work Not Requiring New Permits

2.3.1 Work Types

The UAO may perform the work on the UAO's previously permitted utilities without obtaining a new permit for only the type of work is listed below when the work constraints in *UAM Section 2.3.2* are followed:

- 1) Placement of mid-span poles, replacement of existing poles, removal of existing poles or placement of service poles in compliance with *UAM Section 3.14.2*.
- 2) Placement of underground service lines in compliance with *UAM Section 3.16.8* provided trenching is perpendicular to the roadway.
- 3) Temporary utility work approved by the FDOT Resident/Project Engineer during FDOT construction projects.
- 4) Maintenance, replacement, alterations or additions of aerial components on existing pole lines.
- 5) Maintenance, but not the replacement, of existing underground facilities.
- 6) Placing and/or removing facilities within existing conduits, provided no additional pull-boxes or other utility appurtenances are installed.
- 7) Installation of antennae for remote communication or switching devices to operate the permitted utility provided no excavation is performed.
- 8) Vegetation control as described in *UAM Section 3.18*.
- 9) Potholing for physical exposure of underground utilities in accordance with *UAM Section 2.1 and UAM Section 5.1 6*.

The UAO shall be responsible under the original permit for any added lines or other utility modifications for which a new permit was not required. The UAO shall not add third party facilities or use on FDOT R/W without a utility permit.

2.3.2 Work Constraints

To perform the work in *UAM Section 3.3.1*, the UAO shall comply with all of the following conditions; otherwise, a new permit is required:

- 1) All work requires notification to the appropriate maintenance engineer of the location, general scope and timeframe of the work. Work anticipated to take two (2) hours or less to complete may commence immediately after notification. Work anticipated to take more than (2) hours to complete shall not commence sooner than forty-eight (48) hour after notification.
- 2) The work does not involve cutting any roadway pavement.
- 3) The work does not cut or otherwise damage more than ten (10) linear feet of sidewalk.
- 4) Vehicular and pedestrian traffic shall be maintained using the standards and typical applications listed in *UAM Section 1.5.1*.
- 5) The work does not conflict with any FDOT construction project, scheduled *community events*, other scheduled permitted activities, or district lane closure restrictions.

- 6) Excavation does not exceed eighty (80) cubic feet.
- 7) The utility is not on FDOT limited access R/W or a FDOT rail corridor.
- 8) The FDOT R/W will be restored to the condition prior to the work within 72 hours of completion of the work done on the UAO's facilities.

2.4 Permit Application Package

2.4.1 General Documentation

In addition to the information required on the *FDOT Utility Permit Form* or the One-Stop Permitting website, the UAO shall attach and incorporate as part of the utility permit application the following:

- 1) A key map showing the proposed installation's location and the approximate distance and direction from the proposed work area to the nearest town, major road intersection, bridges, or railroad crossings.
- 2) Plan view drawings (preferably to scale) showing all of the following:
 - a) The R/W Lines, limited access lines or easement lines.
 - b) The proposed utility and proposed utility appurtenances (except for utility appurtenances mounted at least fifteen (15) feet above the ground and less than eight (8) cubic feet).
 - c) The horizontal distance from the proposed utility to a well-defined feature of the transportation facility (such as the edge of travel lane).
 - d) A tie to roadway/railroad mileposts, or stationing (when available).
 - e) The limits of the work area (including staging, access points, or other areas to be used).
 - f) For trenchless installations, the proposed method of installation, materials, function, type, size of proposed installation and largest reamer when used.
 - g) Maximum allowable operating pressures of proposed gas mains and the locations of proposed shut-off valves.
 - h) Aboveground features such as existing utility poles within the work area.
 - i) Underground facilities such as utilities, drainage pipes, or ITS lines within the proposed work area as can reasonably be obtained by a review of existing records and a topographical survey of above ground features.
 - j) Significant physical features such as vegetation, wetlands or bodies of water.
- 3) When installing underground, the UAO shall provide profile view drawings showing all of the following:
 - a) The location and elevations of the proposed utility and proposed appurtenances larger than eight (8) cubic feet.
 - b) Benchmark information.
 - c) location of existing underground facilities such as utilities, drainage pipes, or ITS lines within the proposed work area as can reasonably be obtained by a review of existing records and a topographical survey of above ground features.
 - d) The proposed utility's minimum vertical clearance below the top of the pavement or existing unpaved ground.
 - e) Top of water table or confining layer when required per *UAM Section 3.16.11.1*.
- 4) Cross-sectional view showing one or more typical cross sections to adequately reflect the proposed installation's location.
- 5) Manufacturer's certifications of proposed underground appurtenance manufactured offsite such as manholes, splice boxes or vaults that are greater than eighty (80) cubic feet in accordance with *UAM Section 3.16.4.1*.
- 6) Signed and sealed plans and specifications for proposed attachments to structures suitable for inclusion in the Florida Bridge Management Inventory System (BMIS) file including a bridge load rating analysis where attachments affects the bridge's carrying capacity.
- 7) Not more than six photographs documenting work area conditions prior to the utility work as requested by the Local Maintenance Engineer. The Local Maintenance Engineer shall waive the requirement for photographs when unnecessary.
- 8) Justification and drawings showing proper replacement of the roadway for any open trenching, pavement cuts, or water supply line conflicts
- 9) For aboveground crossings of an operational LA R/W between interchanges, a list of any other anticipated crossings.
- 10) A completed standard railroad application package when within on FDOT rail corridors.
- 11) A tree replacement or mitigation plan in accordance with *UAM Section 3.157.2*
- 12) Any required approvals, waivers, or variances necessary for the permit to be approved.
- 13) FERC or FDEP Certification document in accordance with *UAM Section 2.6*.
- 14) If the utility lies within an easement, provide the easement documents and any subordination agreements.

2.4.2 Traffic Control Plan (TCP) Submittals

The UAO shall submit for its TCP either the appropriate traffic control standards and typical applications in *UAM Section 1.5.1* or the latest edition, or have TCP signed and sealed by a qualified, licensed Florida professional engineer with an FDOT Advanced Maintenance of Traffic Certification.

2.4.3 Other Engineering Documents

For all engineering documents other than those listed in *UAM Section 2.4.2*, that the UAO has determined to be exempt from the signing and sealing requirements of *Chapter 471, F.S.*, the UAO shall submit these documents under the UAO's letterhead or on plan sheets with the UAO's title block.

2.6 Certification from FERC or FDEP

When the UAO obtains a certification from the Federal Energy Regulatory Commission (FERC) or the Florida Department of Environmental Protection (FDEP) to install or adjust their facilities within the FDOT R/W, the UAO shall attach FDOT's condition for the certification to the utility permit application. FDOT shall issue a utility permit after verifying the utility work is in compliance with the conditions for certification.

2.6 Permit Application Review Process

FDOT shall process all permit applications in accordance with *Section 120.60, F.S.* FDOT shall review the proposed work for all of the following:

- 1) Compliance with the *UAM*,
- 2) Impacts to all of the following:
 - a) Public safety
 - b) The *FDOT Five-Year Work Program*
 - c) Safety improvement projects
 - d) FDOT maintenance activities
 - e) Scenic enhancement projects
 - f) Landscape projects
 - g) Local events and activities
 - h) Easements and agreements
 - i) Placement of future utilities.
 - j) Over-dimensional vehicle permits
- 3) The Chief Engineer shall review the proposed work for impacts to all plans and programs adopted pursuant to *Chapter 339, F.S.* and all other plans developed by FDOT where the permit application is for the placement of a utility within FDOT R/W, and either:
 - a) The abandonment of the utility is subject to the permission and approval of the Federal Energy Regulatory Commission, or
 - b) The construction or extension of the utility is subject to the authorization of the Federal Energy Regulatory Commission.

2.7 Special Instructions

FDOT shall indicate in the permit special instructions only the following as appropriate;

- 1) Instructions to address site specific or transaction specific conditions not addressed in *Rule 14-46.001 F.A.C.* or the *UAM*.
- 2) The FDOT representative to be notified prior to work commencing, or FDOT representatives required to be present during the UAO's permitted operations.
- 3) Any drawings not listed in *UAM Section 1.5.1* deemed necessary for restoration of the FDOT R/W to the condition prior to the UAO's work.
- 4) Any specifications not listed in *UAM Section 1.5.2* deemed necessary for restoration of the FDOT R/W to the condition prior to the UAO's work.

2.8 Permit Application Objections

When notified of a permit application by a utility permit applicant, any affected UAO shall, within ten (10) days of the notification letter, forward to the permit applicant and to the applicable Local Maintenance Engineer any specific written objections to the issuance of the permit.

2.9 Commencement of Work

By the UAO's commencement of permitted utility work, the UAO shall be bound by all requirements of the utility permit.

2.10 Final Inspection of Work

Upon completion, the UAO shall provide FDOT the all material certifications, test results, bore logs, approved plans changes, as-built plans or other required documentation.

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3 Utility Accommodation

This chapter contains requirement for accommodating utilities within limited access and non-limited access FDOT R/W. *UAM Section 4.8* contains additional requirements particular to limited access R/W.

3.1 Emergency Work

For situations of a serious nature, developing suddenly and unexpectedly, and demanding immediate action that will affect public safety, disruption of utility service, or damage to the FDOT R/W the UAO shall proceed immediately with all necessary actions. The UAO shall be responsible for safe and efficient traffic control and shall notify the Local Maintenance Engineer of all necessary actions being taken as soon as practical, but no later than the next scheduled FDOT working day. If the type of work would normally require a permit, the UAO shall submit a permit application in accordance with *UAM Section 3.2*. The UAO shall bear the expense of restoring the R/W to the condition prior to the emergency. When making emergency repairs to attachments to structures, the UAO shall obtain verbal approval from the District Maintenance Engineer prior to making the repairs.

3.2 Discovery of Archaeological or Historical Remains

If work operations encounter remains of an archaeological or historic nature, the UAO shall (1) temporarily discontinue all earth disturbing activity in the remains' immediate vicinity and (2) notify the Local Maintenance Engineer. FDOT shall determine the remains' disposition. The UAO shall not resume affected work until authorized by the Local Maintenance Engineer.

3.3 Utilities in Historic Sites and Other Scenic Areas

Scenic areas include scenic strips, overlooks, rest areas, recreation areas and FDOT R/W within the limits of public parks and historic sites. In such areas, the UAO shall not install utilities that do either of the following:

- 1) Require extensive removal or alteration of trees or other natural features visible to the transportation facility user.
- 2) Impair the visual quality of the lands being traversed.

3.4 Pedestrian Pathway Clearances

For new above ground installations within pedestrian pathways, the UAO shall provide minimum clear pathway widths of thirty-six (36) inches where practical. However, for distances of twenty-four (24) inches or less, where it is not practical to provide the thirty-six (36) inches clear pathway width, the UAO may reduce the width to thirty two (32) inches. For down guys traversing across a pedestrian pathway, the UAO shall maintain a minimum vertical clearance of seven (7) feet over the pathway.

3.5 Erosion & Sediment Controls

The UAO shall install any required erosion and sediment controls in compliance with local, state and federal requirements before beginning any utility work.

3.6 Relocation of FDOT Signs or Reflectors

To prevent signs and reflectors from conflicting with the UAO's work, the UAO shall be responsible for relocating or replacing all conflicting signs and reflectors as directed by FDOT.

3.7 Preservation of Sight Windows

The UAO shall not install new or replacement utilities that significantly reduce the field of vision within the limits of clear sight as described in *FDOT 2014 Design Standard* - Index 546.

3.8 Open Cutting

Unless FDOT determines it is impractical, the UAO shall not cut pavement less than five (5) years old.

When open cutting driveways, the UAO shall do all of the following:

- 1) Notify users seven (7) days in advance using door-hanger type notices or on-site signs as appropriate and approved by FDOT.
- 2) Maintain users' access to the property.
- 3) Restore the driveways to at least an equivalent condition and types of material to what existed prior to cutting.

3.9 Fuel Tanks

The UAO shall not install any new utility structure or cabinet containing any liquid petroleum fuel within the FDOT R/W.

3.10 Longitudinal Placement of Utilities

When underground and aerial utilities occupy the same roadside, the aerial utility should be placed outside the underground utility and in accordance with *UAM Section 3.14*. The underground utility should not be placed within three (3) feet of the R/W line to allow space for future aerial utilities.

3.11 Utilities Near Airports

When placing utilities on FDOT R/W and near airports, the UAO shall not create a hazard as defined by *Section 333.01(3), F.S.*

3.12 Contaminated Soil

Where contaminated soil is encountered within the UAO's work area, the UAO shall immediately cease work and notify FDOT. FDOT shall notify the UAO of any suspension or revocation of the utility permit. Said suspension or revocation shall remain in effect until otherwise notified by FDOT.

3.13 Damage to FDOT

Pursuant to *Section 337.402, F.S.*, when any public road or publicly owned rail corridor is damaged or impaired in any way because of the installation, inspection, or repair of a utility located on such road or publicly owned rail corridor, the UAO shall, at their own expense, restore the road or publicly owned rail corridor to its original condition before such damage. If the UAO fails to make such restoration, FDOT is authorized to do so and charge the cost thereof against the UAO under the provisions of *Section 337.404, F.S.*

Pursuant to *Section 337.401(2), F.S.*, the UAO is responsible for damage resulting from the issuance of the permit. FDOT may initiate injunctive proceedings as provided in *Section 120.69, F.S.* to enforce provisions of this subsection or any rule or order issued or entered into pursuant thereto.

3.14 Aboveground Installations, Relocations, and Adjustments

Aboveground Fixed Utilities (AFU) are utility objects more than four (4) inches above the grade and are not accepted by FDOT as crash worthy (such as strain poles, down guys, telephone load pedestals, temporary supports, etc.). The UAO shall install and relocate AFUs as described in this section. The UAO shall not install AFU's within the median. The UAO shall not install a pole line along a road where a pole line exists on the opposite roadside.

3.14.1 New AFU Installation

The UAO shall install new AFUs outside the AFU offsets in *UAM Section 3.14.4* and as close to the R/W line as practical with regard to the AFU practical considerations in *UAM Section 3.14.5*, however, these requirements do not apply to:

- 1) Mid-span poles addressed in *UAM Section 3.14.2*.
- 2) Existing AFUs within FDOT Projects addressed in *UAM Section 3.14.3*.

3.14.2 Mid-Span Pole Installation Requirements

The UAO shall install mid-span poles within the existing alignment as part of the existing pole line.

Where mid-span poles are placed within the R/W of an intersecting roadway, the UAO shall install these mid-span poles outside the AFU offsets in *UAM Section 3.2.4*. Where this is not practical or would create an unreasonable hardship for the UAO, the UAO may request approval of an alternate design. To request such approval the UAO shall submit a signed request to the State Utilities Engineer, stating the reasons the UAO believes the UAO's alternate design should be approved. The request shall be granted when the information supplied by the UAO clearly shows either:

- 1) Compliance with these requirements is not practical or would create an unreasonable hardship for the UAO, and that the UAO's alternative would not unreasonably interfere with the safety, operation, maintenance, future improvement, or expansion of the transportation facility, or
- 2) The alternate design provide a benefit to the safety, operation, maintenance, future improvement, or expansion of the transportation facility.

The fact that UAO's alternate design is less costly will not necessarily be determinative of whether the alternate design is approved.

3.14.3 AFU Relocation, and Adjustment Requirements

FDOT may request the relocation or adjustment of existing AFUs in order to construct projects. When requested the utilities shall comply with the following:

- 1) On projects intended to correct specific safety issues and not intended to bring all conditions within the R/W to FDOT's standards, the UAO shall relocate or adjust the existing AFU's that interfere with the correction of the specific safety issue.
- 2) On projects designed to resurface the roadway, the UAO shall relocate the AFUs as close to the R/W line as practical with regard to the AFU practical considerations in *UAM Section 3.14.5* when the AFU meets either of the following conditions:
 - a) The AFU has been hit 3 or more times in the latest 5 year period,
 - b) The AFU is located where the edge of travel lane is being moved closer to the AFU.
- 3) On FDOT projects other than projects described in 1) and 2) above, the UAO shall relocate or adjust the existing AFUs to meet all the following conditions:
 - a) Where practical, behind existing barriers (such as guardrail, or concrete barriers), and not within the barrier's deflection area.
 - b) Not within in the median.
 - c) Outside the AFU offsets in *UAM Section 3.14.4* and
 - d) As close to the R/W line as practical with regard to the AFU practical considerations in *UAM Section 3.14.5*.

Where compliance with FDOT's request is not practical or would create an unreasonable hardship for the UAO, the UAO may request approval of an alternate design. To request such approval the UAO shall submit a signed request to the State Utilities Engineer, stating the reasons the UAO believes the UAO's alternate design should be approved. The request shall be granted when the information supplied by the UAO clearly shows either:

- 1) Compliance with these requirements is not practical or would create an unreasonable hardship for the UAO, and that the UAO's alternative would not unreasonably interfere with the safety, operation, maintenance, future improvement, or expansion of the transportation facility, or
- 2) The alternate design provide a benefit to the safety, operation, maintenance, future improvement, or expansion of the transportation facility.

The fact that UAO's alternate design is less costly will not necessarily be determinative of whether the alternate design is approved.

3.14.4 AFU Offsets

AFU offsets are dependent upon the roadside being restricted or non-restricted. Restricted roadsides are roadsides along predominantly curbed urban roadways with design speeds of 45 mph or less and narrower than the offsets in *UAM Table 3.14.4*. Non-Restricted Roadsides are all other roadsides. The AFU offset for restricted roadsides is four (4) feet from the face of curb. Where sections of curbs are missing, it is five and one-half (5.5) feet from the edge of the lane. The AFU offset within non-restricted roadsides is the distance obtained from the *UAM Table 3.14.4*. This offset is measured, perpendicular to the edge of lane, away from the roadway, and along slopes no steeper than 1v:4h.

To determine the appropriate AFU offset, select the distance from the table below based lane type, traffic volume, and design speed. When FDOT cannot provide, the design speed or traffic volume, the posted speed or a traffic volume > 1500 AADT shall be used respectively. When applying these distances in the field, slopes steeper than 1v:4h are sometimes present within a portion of the AFU offset. In those cases, the remaining portion of the AFU offset, or ten (10) feet whichever is greater, is extended beyond the toe of the steeper than 1v:4h slopes. In no case does the AFU offset extend beyond the R/W line.

Table 3.14.4 AFU Offsets for Non-Restricted Roadsides (feet)					
	Design Speed(mph)				
	<45	45	50	55	>55
Travel Lanes or Multiple-Lane Ramps with Traffic Volumes \geq 1500 AADT	18	24	24	30	36
Travel Lanes or Multiple-Lane Ramps with Traffic Volumes < 1500 AADT	16	20	20	24	30
Auxiliary Lanes or Single Lane Ramps with Traffic Volumes \geq 1500 AADT	10	14	14	18	24
Auxiliary Lanes or Single Lane Ramps with Traffic Volumes < 1500 AADT	10	14	14	14	18

3.14.5 AFU Practical Considerations

When determining whether any AFU is as close to the R/W line as practical, FDOT shall consider factors such as:

- 1) Aboveground encroachments onto private property.
- 2) National Electrical Safety Code (*NESC*), *UAM Section 4.1.4*, or other State or Federal applicable codes/regulations.
- 3) Conflicts with other existing overhead or underground facilities.
- 4) Trees on adjacent private property (where adequate future trimming would require encroachment on private property).
- 5) Down guying requirements.
- 6) Alignment of existing pole line.

3.15 Vertical Clearances

The UAO shall maintain sixteen (16) feet minimum vertical clearance. However, when the utility is above any roadway, the UAO shall maintain eighteen (18) feet minimum vertical clearance. Where provided by law, other governmental agencies, rail facilities and state, local and federal codes may require a greater clearance. The greater clearance required prevails as the rule. For vertical clearances for limited access R/W see *UAM Section 4.2*.

3.16 Underground Installations

3.16.1 FDOT Oversight

The UAO shall not begin underground operations until the FDOT representative indicated on the permit is on site or other satisfactory arrangements have been made. The UAO may begin underground operations after the required notification when the permit does not indicate an FDOT representative is required.

3.16.2 Excavation Near Pavement

Unless FDOT determines it is impractical, the UAO shall not excavate closer than eight (8) feet from the edge of pavement.

3.16.3 Electronic Detection of Underground Utilities

The UAO shall make all new or replaced underground utilities within the R/W electronically detectable using techniques available to the industry.

3.16.4 Design Requirements

The UAO shall only install underground utilities and at-ground appurtenances that meet or exceed all of the following:

- 1) The industry standard requirement for the intended use.
- 2) Static and dynamic loads during proposed construction of a projects within the *FDOT Five-Year Work Program*.
- 3) The post construction loads in *UAM 3.16.4.1*.

3.16.4.1 Post Construction Loads

When within thirty (30) feet of the edge of pavement of a flush shoulder roadway or within the curbs of a curbed roadway, new and relocated utilities shall support the greater of the following conditions for a design truck in accordance with the *AASHTO LRFD Specifications*:

- 1) One wheel load of sixteen-thousand (16,000) pounds.
- 2) One axle load of thirty-two-thousand (32,000) pounds.
- 3) Two axle loads of twenty-four-thousand (24,000) pounds each, spaced four (4) feet apart.

New and relocated utilities outside the above areas shall support FDOT maintenance equipment. FDOT does not guarantee the UAO's utilities will not be subject to greater loads.

3.16.5 Min. Depth Requirements for Open Trench or Trenchless Methods

The UAO shall install underground utilities (whether longitudinal or crossing) with at least the following minimum vertical clearances, as measured to the top of the utility:

- 1) Below the top of the pavement: thirty-six (36) inches minimum.
- 2) Below existing unpaved ground: thirty (30) inches minimum (including designed ditch grade which as verified from existing pipe inverts).

Directional drilling requirements in *UAM Section 3.16.11.1* may require greater clearance.

3.16.6 Longitudinal Placement

When installing utilities longitudinally, the UAO should maintain a clearance, from any existing vitrified clay sanitary pipe line or existing gas lines, of at least three and one half (3.5) times the existing pipe's diameter. The UAO shall place their utilities to not interfere with the operation and maintenance of the existing highway or any expansion of the highway within the *FDOT Five-Year Work Program*.

3.16.7 Casing Requirements

The UAO shall provide casing for carrier pipes (whether longitudinal or crossing) within toes of the front slopes when any the following conditions exist:

- 1) The carrier pipe does not meet the requirements in *UAM Section 3.16.4* or *UAM Section 3.16.5*.
- 2) The carrier pipe contains flammable gases or fluids and does not meet the requirements of *49 CFR, Part 192*, or *49 CFR, Part 195*.

When venting is necessary, the UAO shall vent the casing at or outside the R/W

3.16.8 Service Connection Points

To accommodate FDOT work, or provide new services, the UAO shall place service connection points at or beyond the R/W line to prevent the UAO's customers from having to enter FDOT R/W to make a connection. The UAO may provide service connection points to other facilities within the FDOT R/W owned by permitted service providers, FDOT, or other governmental agencies.

3.16.9 Underground Lift Pumps or Power Generating Stations

The UAO shall not install any new utility lift pumps, or power generating stations in excess of eighty (80) cubic feet within FDOT R/W.

3.16.10 Utility Access

When pulling multiple conduits to construct new duct systems, the UAO shall only place access points, such as manholes or pull boxes, over the duct and shall minimize obstruction of the R/W use by others. The UAO shall install its multiple access points on a duct system at least fifty (50) feet apart to minimize overall R/W infrastructure impact. FDOT shall not require sharing of manholes between power and non-power users.

The UAO shall place manholes, splice boxes and valve boxes outside the travel way and bike lanes, to the greatest extent practical. When installing manholes, pull boxes, splice boxes, valve boxes, or vaults that are greater than eighty (80) cubic feet, the UAO shall supply a manufacturer's certification that they meet or exceed the design loads specified in the *UAM Section 3.16.4.1*.

3.16.11 Methods of Installation

For installations under roadway pavement the UAO shall use trenchless methods. For installation not under roadway pavement, the UAO shall use trenchless methods where feasible.

3.16.11.1 Directional Bore Installations Under Roadway Pavement with Reamer Sizes of Eight Inches (8") or More.

When using directional boring methods to install utilities under roadway pavement with reamer sizes of eight inches (8") or more without establishing the depth of the water table or confining layer, the UAO shall maintain a depth equal to ten (10) times the reamer diameter measured from the top of pavement to the top of the reamer. However, the UAO may obtain

soils data to establish the depth of the water table (anticipated at time of installation) or the confining layer (the confining layer being a two (2) feet thick layer of earth that resists thirty (30) blows per foot of a *Standard Penetration Test*). If either the depth of the water table or the confining layer is established, the minimum depth should be either two (2) feet below the top of the confining layer to the top of the reamer, or two (2) feet below the water table to the top of the reamer.

3.16.11.2 Other Installations Methods.

When using installation methods not addressed in *UAM Section 3.16.11.1*, the UAO shall maintain the required depths in *UAM Section 3.16.5*. When using open trench methods or other methods the UAO should minimize adverse effects on pavement, base, other permitted transportation facilities, or other permitted utilities.

3.16.12 Out-of-Service and Deactivated Utilities

The UAO may place its facilities out-of-service without removing them from the FDOT R/W. The UAO shall be responsible and shall maintain ownership of these facilities commensurate with these facilities being in-service. However, the UAO shall not leave an out-of-service or deactivated underground utilities in place that does any of the following:

- 1) Compromises safety for any transportation facility user during construction or maintenance operations.
- 2) Prevents other utilities from being placed in the area when alternatives are unavailable.
- 3) Creates a maintenance condition that would be disruptive to the transportation facility.
- 4) Adds costs to FDOT improvements which are not paid for by the UAO.
- 5) Is not in compliance with For underground gas line deactivation, see *49 CFR, Part 192.727* and the rules of the Public Service Commission.
- 6) Is not in the best interest of the public to remain in place.

3.17 Restoration

3.17.1 Restoration of Pavement

When restoring pavement, the UAO shall do all of the following:

- 1) Maintain temporary patches providing a smooth, all weather surfaces at all times until all other installation work is complete.
- 2) Notify the Local Maintenance Engineer at least forty-eight (48) hours prior to application of the permanent patches.
- 3) Install permanent patches as soon as all other installation work is completed.
- 4) Maintain the permanent patches for a period of two (2) years from the date of installation.

To reduce the time traffic is taken off of an existing facility, FDOT may approve the use of flowable fill.

3.17.2 Replacement and/or Mitigation of Trees

The UAO may designate, in the permit application, the boundaries of where the UAO needs to be free of trees in order to facilitate the installation, maintenance, and operation of the utility. The UAO shall maintain the area within these tree free boundaries. The UAO shall provide a replace and/or mitigate plan for large trees within these boundary before installation. For this section large trees are trees with trunks greater than twelve (12) inches in circumference measured four and one half (4.5) feet above the ground. The UAO may elect to mitigate all large trees in lieu of replacing them. The UAO shall make the replacement and/or mitigation plan part of their utility permit. Once the replacement and/or mitigation plan is approved and performed, no future mitigation will be required within the identified tree free boundaries.

For a replacement plan, the UAO shall do all of the following:

- 1) Supply a map of the tree free boundary.
- 2) Obtain a cumulative cross-sectional area, measured four and one half (4.5) feet above the ground, of each species graded Florida #1 as described in the *DPI Grades and Standards* for all large trees within the boundary.
- 3) Obtain approved replanting locations from the Local Maintenance Engineer.
- 4) Replant an equal cross-sectional area, measured six (6) inches above the ground of each species of trees in the approved replanting locations.
- 5) Maintain the replanted trees for a period of one year to Florida #1 as described in the *DPI Grades and Standards*.
- 6) When the replanting location are insufficient to allow an equal area of the UAO shall mitigate the remaining area.

For a mitigation plan, the UAO shall do all of the following:

- 1) Supply a map of the tree free boundary.
- 2) Have an appraisal prepared by an appraiser who possesses one of the following qualifications:
 - a) Certification from the International Society of Arboriculture (ISA) as a Certified Arborist with advanced training in roadside vegetation or equivalent credentials from another nationally recognized arboricultural organization,

- b) Registration as a Landscape Architect pursuant to *Chapter 481, Part II, F.S.*
- c) Approval from both FDOT and the UAO as an individual qualified to perform the tree mitigation appraisal.
- 3) Have the appraiser appraise the value of the trees within the boundary based upon the known, or estimated, condition of the trees prior to being removed. The UAO's appraiser shall follow the guidance as appropriate in the following documents:
 - a) *Determining the Mitigation Value of Roadside Vegetation,*
 - b) *Grades and Standards for Nursery Plants.*

3.17.3 Restoration of Turf

Immediately after the utility work is completed, the UAO shall begin sodding, or seeding and mulching operations on the front or back slopes. The UAO shall begin sodding, or seeding and mulching on all other areas within one (1) week after the utility work is completed. The UAO shall restore the R/W to the condition existing prior to the utility work. The UAO shall maintain that portion of the R/W affected by the utility work until vegetation is established.

3.18 Vegetation Control

3.18.1 General

Vegetation control includes any method intended to alter or regulate normal plant growth. The UAO may cut vegetation manually or mechanically on a routine or periodic basis provided the work does not exceed limits necessary for the proper facility maintenance. To the greatest extent practical, the UAO shall use vegetation maintenance that does not detract from the natural beauty of the roadside or cause an abrupt change in roadside vegetation conditions.

Where vegetation interferes with the safe utility maintenance and operation in areas, the UAO shall do all the following:

- 1) Remove or cut flush with the ground those trees less than four (4) inches in diameter.
- 2) Remove brush cuttings or debris discharged into routinely maintained area.
- 3) Stockpile debris outside the mowing limits and clear zone for later disposal.
- 4) Leave in place all undergrowth.

3.18.2 Tree Trimming

The UAO shall remove, not trim, trees within the tree free boundaries established in *UAM Section 3.17.2*. Outside of these boundaries, the UAO shall trim trees to ensure and maintain the safe operation of utilities. Such trimming shall employ recognized and approved methods of modern vegetation control, with emphasis on tree health. When trimming does irreparable damage to large trees, the UAO shall replace these trees as described in the *UAM Section 3.17.2*, however, replacing or mitigating these damaged trees does not expand or otherwise modify any existing tree free boundaries. The UAO may use mechanical tree trimming machines for routine maintenance. The UAO shall remove all waste and debris associated with the trimming from R/W unless FDOT specifies otherwise in writing.

3.18.3 Mowing

Where the UAO mows or cuts grass, the UAO shall mow or cut the grass (a) to a height of not less than five (5) inches and (b) in such a manner as to promote low growing ground cover species. The UAO shall equip and operate mowing equipment in a manner to preclude throwing debris that would create a safety hazard.

3.18.4 Chemical Control of Vegetation

When using chemical vegetation control, the UAO shall comply with all of the following:

- 1) Obtain written authorization from the Local Maintenance Engineer before applying vegetation control chemicals.
- 2) Give the Local Maintenance Engineer at least forty-eight (48) hours advance notice.

To obtain written authorization, the UAO shall submit a written proposal for chemical control of vegetation which includes all of the following:

- 1) The extent of the intended work.
- 2) The type of herbicides or plant (tree) growth regulators to be used (and shall include labels and material safety data sheets for the intended use).
- 3) The intended timing and techniques of application.
- 4) Documentation that the UAO's herbicide applicator (whether a utility employee or contractor) is certified to apply herbicides.
- 5) Identify each plant type to be chemically controlled.

The UAO shall apply chemical control of vegetation either a) in the first growing season after mowing, or b) before it has reached a height of six (6) feet. The UAO shall not apply chemical control on vegetation greater than six (6) feet in height if such application will either a) create an undesirable appearance, or b) cause undesired browning or color change. The UAO may request special consideration when manmade obstructions preclude or prevent reducing vegetation to the six

(6) feet height. The Local Maintenance Engineer may authorize applications at a height greater than six (6) feet either in areas with rapid plant growth or in the control of invasive exotic vegetation. If FDOT grants such permission, the UAO shall remove, chip or mulch dead plant material following successful performance of the herbicides. The UAO shall not use any herbicide containing the active ingredient sulfonyl urea, or containing any chemical of the sulfonyl urea family, or labeled as restricted use. The UAO shall not apply any non-selective or residual herbicides to roadside turf grasses. The UAO shall not apply any chemical of any type or rate that causes permanent injury to desirable vegetation or could result in bare ground. To control properly invasive vegetation, the District Maintenance Engineer may suspend these restrictions. The UAO may use individual stem and solid stream treatments that result in spot or narrow band control. The UAO shall protect specific selected and preserved plants from damage by herbicides. The UAO shall comply with all environmental considerations and associated regulations when applying herbicides. The UAO shall maintain and provide upon request complete records detailing the dates, location, materials, rates, weather, and other data relevant to herbicide application, as required by federal and state law. FDOT may deny any UAO future permission to use chemicals for vegetation control because of misuse, unsatisfactory performance results, or failure to comply with these provisions. The UAO shall allow only persons with all the following qualifications to apply chemicals:

- 1) Training, experience and competence in their work.
- 2) Licenses according to applicable federal and state law.
- 3) Understanding of herbicide application and the technical complexities in this field of expertise.

3.19 Attachments to Structures

3.19.1 General

The UAO shall not attach to FDOT structures any utility that does any of the following:

- 1) Creates a hazard to the public.
- 2) Affects the structure's integrity.
- 3) Unreasonably hinders inspection and maintenance operations of the structure.
- 4) Adversely affects the aesthetics of structures placed in aesthetically sensitive environments.
- 5) Damages any reinforcement or stressing ducts or strands.
- 6) Attaches to bridge girders.
- 7) Resides inside a box girder.
- 8) Lowers the vertical clearance.
- 9) Restricts the structures ability to expand and contract.

The UAO shall be responsible for the design, safety, inspection, and maintenance of utilities and supporting hardware it attaches to FDOT structures. The UAO's engineer shall be responsible for performing the analysis for determining if the structure will support the utility in addition to other loads in a safe manner while not significantly reducing the structure's live load capacity. The UAO shall use materials and methods for utility conduit, pipe coatings and concrete repairs that are a) approved by FDOT's State Materials Office, and b) are in accordance with the District Structures Design Engineer's site specific requirements.

When attaching utilities to bridge structures, the UAO shall comply with all of the following:

- 1) Utilities shall be placed under the cantilever portion of the deck overhang.
- 2) Utility cables or conductors shall be encased in conduit.
- 3) All electrical cables two (2) kilovolts and above shall be shielded cable with a concentric neutral grounded at both ends of the bridge.
- 4) All pressure lines shall have shut-off systems so that pipe segments at bridges can be isolated.

When FDOT determines that a bridge is in an extremely aggressive environment, the UAO shall incorporate the following in the design:

- 1) 316 stainless steel for all attachment hardware such as hangers and bolts, or equivalent material as determined by the State Corrosion Engineer.
- 2) Conduits fabricated from non-metallic materials or equivalent material as determined by the State Corrosion Engineer.

The UAO shall make metallic pipes and conduits a) electrically insulated from the structure by redundant insulators, and b) supported by insulating pipe rollers constructed from dielectric material. If loads would permanently strain the roller material beyond the elastic limit, the UAO shall use elastomeric bearings or specifically designed sliding supports. The UAO shall isolate and insulate all utilities from the structure to ensure that corrosion cells do not develop because of the attachment of the utility. The UAO shall use only welded or flange joint steel pipe conforming to *API Standard 1104* for

carrying hazardous material (flammable, toxic or corrosive). The UAO shall design all pipes carrying hazardous material for class four locations in compliance with *49 CFR, Part 192* and *49 CFR, Part 195*.

3.19.2 Mechanically Stabilized Earth (MSE) Walls

The UAO shall not disturb the area within or directly below the portion of the MSE wall's earth fill in which the wall's soil reinforcement is placed. Where this is not practical or would create an unreasonable hardship for the UAO, the UAO may request approval of an alternate design. To request such approval the UAO shall submit a signed request to the State Utilities Engineer, stating the reasons the UAO believes the UAO's alternate design should be approved. The request shall be granted when the information supplied by the UAO clearly shows either:

- 1) Compliance with these requirements is not practical or would create an unreasonable hardship for the UAO, and that the UAO's alternative would not unreasonably interfere with the safety, operation, maintenance, future improvement, or expansion of the transportation facility, or
- 2) The alternate design provide a benefit to the safety, operation, maintenance, future improvement, or expansion of the transportation facility.

The fact that UAO's alternate design is less costly will not necessarily be determinative of whether the alternate design is approved.

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4 Utilities Accommodation on FDOT Limited Access Right of Way

When placing utilities on Limited Access Right of Way (LA R/W), the UAO shall comply with this section in addition to all other sections of the *UAM*.

4.1 Longitudinal Utilities

The UAO shall not install any longitudinal utilities on LA R/W. Where compliance with FDOT's request is not practical or would create an unreasonable hardship for the UAO, the UAO may request approval of an alternate design. To request such approval the UAO shall submit a signed request to the State Utilities Engineer, stating the reasons the UAO believes the UAO's alternate design should be approved. The request shall be granted when the information supplied by the UAO clearly shows either:

- 1) Compliance with these requirements is not practical or would create an unreasonable hardship for the UAO, and that the UAO's alternative would not unreasonably interfere with the safety, operation, maintenance, future improvement, or expansion of the transportation facility, or
- 2) The alternate design provide a benefit to the safety, operation, maintenance, future improvement, or expansion of the transportation facility

The fact that UAO's alternate design is less costly will not necessarily be determinative of whether the alternate design is approved.

4.2 Vertical Clearance

The UAO shall provide at least twenty-four (24) feet vertical clearance for aerial facilities above any limited access roadway.

4.3 Crossings

4.3.1 New Crossings

In expanding areas adjacent to LA R/W, the UAO shall design and install utilities to minimize the need for crossing LA R/W. The UAO shall not cross LA R/W when other options are available within reasonable distances.

4.3.2 Existing Utilities and Limited Access Construction

When relocating or adjusting existing utilities in conjunction with construction of a LA R/W, the UAO shall a) provide for known and planned expansion of the utility, and b) plan future installations or new lines to not impede traffic.

4.3.3 Underground Crossings

The UAO shall provide at least forty-eight (48) inches vertical clearance below the pavement surface to the top of the facility. The UAO shall not open cut pavement. The UAO shall not place high-pressure gas or volatile fuel lines near or under FDOT bridges or MSE walls.

The UAO shall where practical perform all construction and maintenance outside the LA R/W fence line. The UAO shall place temporary fencing to enclose work areas within the LA R/W. The UAO shall not extend this fencing closer to the roadway than to the toe of the back slope.

The UAO shall not place utilities at interchanges that cannot be serviced or patrolled in accordance with *UAM Section 4.7*.

4.5 FDOT Railroad Corridors

All rail corridors are to be treated as LA R/W for utility accommodation purposes. When placing utilities on non-operating railroad corridors, the UAO shall comply with the *UAM* and the applicable corridor management plan.

When placing utilities on operating railroad corridors, the UAO shall also comply with all requirements in the standard railroad application package for the railroad(s) operating in the corridor.

The UAO may obtain the standard railroad application package from the District Rail Coordinator or the District Corridor Rail Manager, where one exists. The UAO shall adhere to minimum horizontal offset or highest vertical clearance dimensions found in the following:

- 1) *UAM* for all LA R/W
- 2) *Rule 14-57, F.A.C.* for rail corridors.
- 3) *FDOT South Florida Rail Policy* for the South Florida Rail Corridors.

4.6 Utilities in R/W being Re-designated as LA R/W

The UAO may leave existing permitted utilities within R/W being re-designated as LA R/W; however, the UAO shall only leave utilities that do not unreasonably interfere with the safety, design, construction, operation, maintenance, or stability

of the proposed LA R/W. The UAO shall service, maintain, and operate the utility without interfering with traffic on through lanes or ramps.

4.7 Access for Servicing or Patrolling Utilities

Where practicable, the UAO shall access utilities only from nearby frontage roads, public roads, or trails leading outside of the LA R/W. For utilities placed along non-limited access overpasses or underpasses the UAO shall, where practicable, service these utilities from the non-limited access R/W and not impact traffic on the LA R/W.

4.8 Attachments to Structures

The UAO, shall not attach utilities to bridge structures.

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5 FDOT Project Design Coordination

This chapter covers the responsibilities of both FDOT and the UAO during the design phases of FDOT projects.

5.1 FDOT Design Coordination

Project coordination is a cooperative effort between FDOT and the UAOs. FDOT shall make arrangements for all the all of the following is done:

- 1) Coordinate advance planning of highway projects with affected UAOs no later than the project being placed in ***FDOT Five-Year Work Program***.
- 2) Provide the UAO with either hardcopy of project drawings or project CADD files for markup as appropriate for the UAO's capabilities.
- 3) Identify to the UAO utilities determined to be in conflict.
- 4) Provide reasonable lead-time for utility relocation.
- 5) Provide the UAO with two (2) business days prior notification when requesting the UAO to locate their facility.
- 6) Physically expose utilities in cases where it is suspected of being within three feet (3') of proposed construction operations which would threaten the utility and allow reasonable lead-time for the UAO to perform this work at their expense when they have elected to do this work.

5.2 UAO Design Coordination

The UAO shall do all the following:

- 1) Provide project work schedules to resolve all conflicts between the FDOT project and the UAO's utilities.
- 2)
- 3) Obtain permits for utility work in compliance with all applicable laws and the ***UAM***.
- 4) Identify to the designer utilities and service connections the UAO has determined to be in conflict that were not previously identified.
- 5) Mark the project drawings or project CADD files utility locations and elevations, existing and proposed, with ties to the project's survey points, as can reasonably be obtained by a review of existing records, topographic surveys and detection devices without physically exposing the utility. The UAO shall use the following color code:
 - Red: Existing utilities either (a) to be removed or relocated horizontally or (b) to be placed out-of-service (deactivated) but left in place
 - Green: Existing utilities to remain in place with no adjustment.
 - Brown: Either (a) existing utilities to be adjusted vertically but to remain in the same horizontal alignment, or (b) completely new utilities to be installed.

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6 References

6.1 Incorporated References

The following references are incorporated into this manual by reference and are requirements of this manual, but are limited to the scope of application specifically referenced on the **UAM** sections listed and are available at: <http://www.dot.state.fl.us/specificationsoffice/utilities/>

AASHTO LRFD Specifications - UAM Section 3.16.4.1
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 4TH EDITION WITH 2008 U.S. EDITION INTERIM as incorporated in Rule 14-15 F.A.C.
Published by the American Association of State Highway Officials

API Standard 1104 - UAM Section 3.19.1
API STD 1104 (API 1104) - Welding of Pipelines and Related Facilities
20th edition, October 2005. Published by the American Petroleum Institute

FDOT 2010 Design Standards - UAM Sections 1.5.1,
DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM 2010, ENGLISH UNITS

FDOT 2014 Design Standards - UAM Sections 1.3, 1.5.1
DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM 2014, ENGLISH UNITS

FDOT South Florida Rail Policy - UAM Section 4.5
SOUTH FLORIDA RAIL CORRIDOR CLEARANCE
Policy No. 000-725-003, Effective date 9/20/2007

FDOT Standard Specifications - UAM Sections 1.5.2,
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014

FDOT Utility Permit Form - UAM Sections 2.1, 2.2
Form No. 710-010-85 UTILITY PERMIT (Incorporated in Chapter 14-46 F.A.C.), dated OGC 08/10

FDOT Utility Work Schedule - UAM Sections 2.1
Form No. 710-010-05 UTILITY WORK SCHEDULE, Revision date 12/2009

Standard Penetration Test - UAM Section 3.16.11.1
ASTM D1586 - 08 Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils, published by the American Society for Testing and Materials (ASTM), February 1, 2008.

Section 337.401(2), F.S., Section 337.402, F.S., Section 337.403, F.S., Section 337.404, F.S. - UAM Sections 2.1, 3.13
Florida Statute - 337.401 Use of right-of-way for utilities subject to regulation; permit; fees
Florida Statute - 337.402 Damage to public road caused by utility
Florida Statute - 337.403 Relocation of utility; expenses
Florida Statute - 337.404 Removal or relocation of utility facilities; notice and order; court review.

6.2 Informational References

This manual contains references to Florida Statutes, Federal Codes, national codes and other documents. These are to assist the user with additional information pertinent to the topic being discussed in the body of this manual. These references are not requirements of this manual. However, the UAO may be bound by the requirements in these references through other means.

Chapter 120, F.S. - UAM Section 1.11
Florida Statute - 120, ADMINISTRATIVE PROCEDURE ACT

Section 120.60, F.S. - UAM Section 2.6

Florida Statute - 120.60 Licensing.

Rule 14-26, F.A.C.- UAM Section 1.7.1

Florida Administrative Code, Chapter 14-26, SAFETY REGULATIONS AND PERMIT FEES FOR OVERWEIGHT AND OVERDIMENSIONAL VEHICLES

Rule 14-46.001, F.A.C. - UAM Sections 1.1, 2.1, 2.7

Florida Administrative Code, Chapter 14-46.001, UTILITIES INSTALLATION OR ADJUSTMENT

Rule 14-57, F.A.C.- UAM Section 4.5

Florida Administrative Code, Chapter 14-57, RAILROAD SAFETY AND CLEARANCE STANDARDS, AND PUBLIC RAILROAD-HIGHWAY GRADE CROSSINGS

Rule 14-86, F.A.C. - UAM Section 1.7.2

Florida Administrative Code, Chapter 14-86, DRAINAGE CONNECTIONS

Section 333.01(3), F.S. - UAM Section 3.11

Florida Statute - 333.01(3) Airport hazards and uses of land in airport vicinities contrary to public interest.

Chapter 373, F.S. Part IV - UAM Section 1.7.2

Florida Statute - 373 MANAGEMENT AND STORAGE OF SURFACE WATERS

Chapter 471, F.S. - UAM Section 2

Florida Statute - 471 - Qualifications for practice; exemptions.

49 CFR, Part 192 - UAM Sections 3.16.7, 3.16.12.1, 3.19.1

Code of Federal Regulation, Title 49: Transportation part 192, TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS, Revised October 1, 2007

49 CFR, Part 195 - UAM Sections 3.16.7, 3.19.1

Code of Federal Regulation, Title 49--Transportation, part 195, TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE, Revised October 1, 2007

Chapter 556, F.S. - UAM Sections 1.9

Florida Statute - 556, UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY

Rule 62-25, F.A.C. - UAM Section 1.7.2

Florida Administrative Code, REGULATIONS OF STORMWATER DISCHARGE

FDOT Five-Year Work Program - UAM Sections 2.6, 3.16.4, 3.16.6, 5.1

FDOT Five-Year Work Program, Pursuant to Section 339.135(5), Florida Statutes

NESC - UAM Section 3.14.5

National Electrical Safety Code